

SECTION 01 51 05

TEMPORARY UTILITIES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. CONTRACTOR shall provide all temporary utilities required for the Project unless otherwise shown or noted.
1. Make all arrangements with utility service companies for temporary services and obtain required permits and approvals for temporary utilities.
 2. Pay all utility service costs, including cost of electricity, water, fuel, and other utility services required for the Work, with the exception that the OWNER shall pay for water costs, treatment chemical and power costs associated specifically with checkout and start-up and initial filling of chemical tanks.
 3. Continuously maintain adequate utilities for all purposes during the Project, until removal of temporary utilities and temporary facilities. At minimum, provide and maintain temporary utilities through Substantial Completion and removal of temporary field offices and sheds.
 4. Should OWNER occupy part of the Project prior to Substantial Completion of the entire Work, cost of utilities consumed via temporary utilities serving the portion occupied by OWNER will be shared proportionately between OWNER and CONTRACTOR as mutually agreed to by the parties.
 5. Maintain, including cleaning, temporary utilities and continuously provide consumables as required.
 6. Temporary utilities and temporary facilities shall be adequate for personnel using the Site and requirements of Project.
 7. Provide temporary utilities and temporary facilities in compliance with Laws and Regulations and, when applicable, requirements of utility owners.
- B. Provide the following temporary utilities:
1. Electricity.
 2. Lighting.
 3. Telephone and communications.
 4. Heating, ventilating, and temporary enclosures.
 5. Water.
 6. Sanitary facilities.
 7. First-aid facilities.
 8. Fire protection.

1.2 REQUIREMENTS FOR TEMPORARY UTILITIES AND TEMPORARY FACILITIES

- A. Electrical:
1. Temporary electrical supply to the construction trailer area and Reservoir Intake area shall be provided by others – in each case a transformer shall be

provided to which CONTRACTOR may connect to distribute power as needed. The transformer at the Reservoir Intake shall provide a minimum of 200A at 120/240V, while the transformer at the construction trailer area shall provide a minimum of 3,600A at 120/240V. Construction trailers are to be wired by CONTRACTOR. At the Reservoir Intake area, generators will initially be required, and permanent power may be made available as the work progresses.

2. Using the power service provided at the construction trailer area and Reservoir Intake area, provide any additional temporary electrical service required for the Work, including continuous power for temporary field offices and sheds. Provide temporary outlets with circuit breaker protection and ground fault protection.

B. Lighting.

1. Minimum lighting shall be five foot-candles for open areas and ten foot-candles for stairs and shops. Provide minimum of one, 300-watt lamp every 15 feet in indoor Work areas. Provide night security lighting in accordance with OSHA regulations.

C. Telephone and Communications.

1. Temporary telephone and communications will be provided by OWNER to the construction trailers at the main trailer area.
2. Provide any additional temporary telephone and communications required for CONTRACTOR's operations at the Site and for summoning emergency medical assistance.

D. Heating, Ventilating, and Enclosures.

1. Provide sufficient temporary heating, ventilating, and enclosures to ensure safe working conditions.
2. Except where otherwise specified, or required for protection of equipment or Work, temporary heating shall maintain temperature of the area served between 40 degrees F and maximum design temperature of building or facility and its contents.
3. Maintain temperature of areas occupied by OWNER's personnel or electronic equipment, including offices, lunch rooms, locker rooms, toilet rooms, and rooms containing computers, microprocessors, and control equipment, between 65 degrees F and 80 degrees F with relative humidity less than 75 percent.
4. Required temperature range for storage areas and certain elements of the Work, including preparation of materials and surfaces, installation or application, and curing as applicable, shall be in accordance with the Contract Documents for the associated Work and the Supplier's recommended temperature range for storage, application, or installation, as appropriate.
5. Provide temporary ventilation sufficient to prevent accumulation in construction areas and areas occupied by OWNER of hazardous and nuisance levels or concentrations of dust and particulates, mist, fumes or vapors, odors, and gases, associated with construction.
6. Provide temporary enclosures and partitions required to maintain required temperature and humidity.

- E. Water.
 - 1. Temporary water facilities will be provided by others near the construction trailer area for continuation by CONTRACTOR to construction trailers and other needs. Supply to this area will be via a 4-inch supply from Highway 61 up to the area generally north of the Maintenance Building location. The main temporary line will include backflow prevention.
 - 2. Provide any additional temporary water facilities required, including piping, valves, meters if not provided by owner of existing waterline, backflow preventers, pressure regulators, and other appurtenances. Provide freeze-protection as required.
 - 3. Provide water for temporary sanitary facilities, field offices, Site maintenance and cleaning and, when applicable, disinfecting and testing of systems.
 - 4. Continuously maintain adequate water flow and pressure for all purposes during the Project, until removal of temporary water system.

- F. Sanitary Facilities.
 - 1. Provide suitably-enclosed chemical or self-contained toilets for CONTRACTOR's employees and visitors to the Site. Location of temporary toilets shall be acceptable to OWNER.
 - 2. Provide, in coordination with requirements of Part 1.2.E, supply of potable drinking water and related facilities and consumables for all personnel using the Site.
 - 3. Provide suitable temporary washing facilities for employees and visitors.
 - 4. Provide suitably sized tank to hold sanitary flow from construction trailers and provide regular pumping to maintain tank.

- G. First-aid Facilities.
 - 1. Provide temporary first-aid stations at or immediately adjacent to the Site's major work areas, and inside CONTRACTOR's temporary field office. Locations of first-aid stations shall be determined by CONTRACTOR's safety representative.
 - 2. Provide list of emergency telephone numbers at each hardwired telephone at the Site. List shall be in accordance with the list of emergency contact information required in Section 01 31 19.13, Pre-Construction Conference.

- H. Fire Protection.
 - 1. Provide temporary fire protection, including portable fire extinguishers rated not less than 2A or 5B in accordance with NFPA 10, Portable Fire Extinguishers, for each temporary building and for every 3,000 square feet of floor area under construction.
 - 2. Comply with NFPA 241, Safeguarding Building Construction, Alteration, and Demolition Operations, and requirements of fire marshals and authorities having jurisdiction at the Site.

- I. Temporary Construction Trailers.
 - 1. Provide temporary construction trailers for use by CONTRACTOR, dam/reservoir contractor, and OWNER/Program Manager/ENGINEER.

Trailers shall include meeting space and OWNER trailer shall be outfitted as mutually agreed to with the OWNER.

1.3 USE OF OWNER'S SYSTEM

- A. Use of Permanent Utility Systems Provided Under the Project:
 - 1. Permanent electrical, lighting, water, heating, ventilating, and fire protection systems and first-aid facilities may be used to provide temporary utilities and temporary facilities if the following are met:
 - a. Obtain OWNER's written permission to use permanent systems.
 - b. Permanent systems to be used for temporary utilities or temporary facilities shall have achieved Substantial Completion, including complete functionality of all controls.
 - c. CONTRACTOR shall pay all costs while using permanent system, including operation, maintenance, replacement of consumables, and provide replacement parts.
 - 2. Do not use the following permanent facilities:
 - a. Telephone and communication facilities.
 - b. Sanitary facilities.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment for temporary systems may be new or used, but shall be adequate for purposes intended and shall not create unsafe conditions, and shall comply with Laws and Regulations.
- B. Provide required materials, equipment, and facilities, including piping, wiring, and controls.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install temporary facilities in neat, orderly, manner, and make structurally, mechanically, and electrically sound throughout.
- B. Location of Temporary Utilities and Temporary Facilities:
 - 1. Locate temporary systems for proper function and service.
 - 2. Temporary systems shall not interfere with or provide hazards or nuisances to: the Work under this and other contracts, movement of personnel, traffic areas, materials handling, hoisting systems, storage areas, finishes, and work of utility companies.

3. Do not install temporary utilities on the ground, with the exception of temporary extension cords, hoses, and similar systems in place for short durations.
- C. Modify and extend temporary systems as required by progress of the Work.

3.2 USE

- A. Maintain temporary systems to provide safe, continuous service as required.
- B. Properly supervise operation of temporary systems:
1. Enforce compliance with Laws and Regulations.
 2. Enforce safe practices.
 3. Prevent abuse of services.
 4. Prevent nuisances and hazards caused by temporary systems and their use.
 5. Prevent damage to finishes.
 6. Ensure that temporary systems and equipment do not interrupt continuous progress of construction.
- C. At end of each work day, check temporary systems and verify that sufficient consumables are available to maintain operation until work is resumed at the Site. Provide additional consumables if the supply on hand is insufficient.

3.3 REMOVAL

- A. Completely remove temporary utilities, facilities, equipment, and materials when no longer required. Repair damage caused by temporary systems and their removal and restore the Site to condition required by the Contract Documents; if restoration of damaged areas is not specified, restore to reasonable satisfaction of OWNER.
- B. Where temporary utilities are disconnected from existing utility, provide suitable, watertight or gastight (as applicable) cap or blind flange, as applicable, on service line, in accordance with requirements of utility owner.
- C. When permanent utilities and systems that were used for temporary utilities, upon Substantial Completion replace all consumables such as filters and light bulbs and parts used during the Work.

++ END OF SECTION ++