

## SECTION 01500

## TEMPORARY FACILITIES AND CONTROLS

## PART 1 GENERAL

## 1.01 SECTION INCLUDES

- A. Temporary facilities and necessary controls for the Project, including utilities, telephone, sanitary facilities, storage sheds and buildings, safety requirements, first aid equipment, fire protection, security measures, protection of the Work and property, access roads and parking, environmental controls, water runoff and erosion control (including all stormwater pollution prevention measures), pest and rodent control and disposal of trash, debris and excavated material.
- B. Facilities and controls specified in this section are considered minimum for the Project. Provide additional facilities and controls for proper execution of the Work and to meet Contractor's responsibilities for protection of persons and property.

## 1.02 MEASUREMENT AND PAYMENT

## A. UNIT PRICES

- 1. No separate payment will be made for any temporary facilities and controls required under this section. Include cost of such work in contract price listed for mobilization.

## 1.03 CONTRACTOR'S RESPONSIBILITY

- A. Comply with applicable requirements specified in other sections of Specifications.
  - 1. Maintain and operate temporary facilities and systems to assure continuous service.
  - 2. Modify and extend systems as the Work progress requires.
  - 3. Completely remove temporary materials and equipment when no longer required.
  - 4. Restore existing facilities used for temporary services to specified or original condition.

## PART 2 PRODUCTS – Not Used

## PART 3 EXECUTION

## 3.01 TEMPORARY UTILITIES

- A. Obtaining Temporary Service:
  - 1. Make arrangements with utility service companies for temporary services.

2. Abide by rules and regulations of the utility service companies or authorities having jurisdiction.
  3. Be responsible for utility service costs until Date of Substantial Completion. Included are fuel, power, light, heat, and other utility services necessary for execution, completion, testing, and initial operation of work.
- B. Water:
1. Provide water required for and in connection with work to be performed and for specified tests of piping, equipment, devices, or for other use as required for proper completion of the Work.
  2. Water to be drawn from public fire hydrants. Obtain temporary meter from City of Galveston and pay required deposit based on rates established by latest ordinance. Contractor shall operate fire hydrants only with an approved hydrant wrench.
  3. Provide and maintain an adequate supply of potable water for domestic consumption by Contractor personnel, Project Manager and representatives of the City.
- C. Electricity and Lighting
1. Provide electric power service required for the Work including required testing, lighting, operation of equipment, and other Contractor use.
  2. Electric power service includes temporary power or generators required to maintain plant operations during scheduled shutdowns.
  3. Minimum lighting level shall be 10 foot-candles for open areas; 20-foot-candles for stairs and shops. Provide a minimum of one 300-watt lamp for each 200 square feet of work area.
- D. Temporary Heat and Ventilation:
1. Provide temporary heat necessary for protection or completion of the Work.
  2. Provide temporary heat and ventilation to assure safe working conditions; maintain enclosed areas at a minimum of 50 degrees F.
- E. Telephone:
1. Provide emergency telephone service at Project site for use by Contractor personnel and others performing work or furnishing services at the site.
- F. Sanitary Facilities:
1. Provide and maintain sanitary facilities for persons on the site; comply with regulations of State and local departments of health.

2. Enforce use of sanitary facilities by construction personnel at site. Enclose sanitary facilities. Pit-type toilets are not permitted. No discharge will be allowed from these facilities. Collect and store sewage and waste so as not to cause nuisance or health problems. Haul sewage and waste off-site and properly dispose in accordance with applicable regulations.
3. Locate toilets near the Work site and secluded from view insofar as possible. Keep toilets clean and supplied throughout the course of the Work.

### 3.02 FIELD OFFICE

- A. Provision of a field office is not required unless specified in the conditions of this contract. If the Contractor chooses to provide one, locate it in a place approved by the City.

### 3.03 LAYDOWN YARD

- A. All contractors are required to secure and maintain a laydown yard for storage of materials and equipment for the term of the Project.
  1. For all projects in City ROW, contractor shall obtain a suitable laydown yard for storage of materials and equipment for the term of the Project. ROW and esplanades shall not be used without prior written consent from the City of Galveston. Lease agreements shall be submitted for the project files.
  2. For facility projects where the site size does not permit storage of materials and equipment, contractor shall obtain a suitable laydown yard for the term of the project. Lease agreements shall be submitted for the project files.
  3. Contractor shall be permitted to store materials and equipment in designated areas identified on the plans for facility projects where the site size permits storage of materials and equipment.
- B. All materials stored in approved laydown yard(s) shall be enclosed with temporary fencing. See Section 3.04 for additional materials storage requirements.
- C. Upon completion of the Project, contractor shall obtain and submit a written release from the laydown yard property owner certifying the lot has been restored to its original condition or better in accordance with the General Conditions of the Contract.

### 3.04 STORAGE OF MATERIALS

- A. Provide adequately ventilated, watertight storage facilities with floor above ground level for Products susceptible to weather damage.
- B. Storage of Products not susceptible to weather damage may be on blocks off the ground.
- C. Store Products in a neat and orderly manner. Place Products to permit easy access for identification, inspection and inventory.

- D. Fill and grade site for temporary structures to provide drainage away from temporary and existing buildings.
- E. Contractor is responsible for materials and equipment stored on and off site.

### 3.05 SAFETY REQUIREMENTS

- A. Submit a safety program at the Pre-construction Conference to be followed for the duration of the Project. Include documented response to trench safety requirements as specified in Section 01526 - Trench Safety System.
- B. Conduct operations in strict accord with applicable Federal, State and local safety codes and statutes and with good construction practice. The Contractor is fully responsible and obligated to establish and maintain procedures for safety of all work, personnel and equipment involved in the Project.
- C. Observe and comply with Texas Occupational Safety Act (Art. 5182a, V.C.S.) and with all safety and health standards promulgated by Secretary of Labor under Section 107 of Contract Work Hours and Standards Act, published in 29 CFR Part 1926 and adopted by Secretary of Labor as occupational safety and health standards under the Williams-Steiger Occupational Safety and Health Act of 1970, and to any other legislation enacted for safety and health of Contractor employees. Such safety and health standards apply to subcontractors and their employees as well as to the Contractor and its employees.
- D. Observe of and compliance with the regulations shall be solely and without qualification the responsibility of the Contractor without reliance or superintendence of or direction by the Project Manager. Immediately advise the Project Manager of investigation or inspection by Federal Safety and Health inspectors of the Contractor or subcontractor's work or place of work on the job site under this Contract, and after such investigation or inspection, advise the Project Manager of the results. Submit one copy of accident reports to Project Manager within ten (10) business days of occurrence.
- E. Protect areas occupied by workmen using the best available devices for detection of lethal and combustible gases. Test such devices frequently to assure their functional capability. Constantly observe infiltration of liquids into the Work area for visual or odor evidence of contamination, and immediately take appropriate steps to seal off entry of contaminated liquids to the Work area.
- F. Safety measures, including but not limited to safety personnel, first-aid equipment, ventilating equipment and safety equipment, in the specifications and shown on the Drawings are obligations of the Contractor.
- G. Maintain required coordination with the City Police and Fire Departments during the entire period covered by the Contract.
- H. Include Project safety analysis in safety plan. Itemize major tasks and potential safe hazards. Plan to eliminate hazards or protect workers and public from each hazard.

## 3.06 FIRST AID EQUIPMENT

- A. Provide a first aid kit throughout the construction period. List telephone numbers for physicians, hospitals, and ambulance services in each first aid kit.
- B. Have at least one person thoroughly trained in first aid procedures present on the site whenever Work is in progress. Contractor to conform to protocols and requirements for training and protection against “blood borne pathogens.

## 3.07 FIRE PROTECTION

## A. Fire Protection Standards.

- 1. Conform to specified fire protection and prevention requirements as well as those which may be established by Federal, State, or local governmental agencies.
- 2. Comply with all applicable provisions of NFPA Standard No. 241, Safeguarding Building Construction and Demolition Operations.
- 3. Provide portable fire extinguishers, rated not less than 2A or 5B in accordance with NFPA Standard No. 10, Portable Fire Extinguishers, for each temporary building, and for every 3,000 square feet of floor area of facilities under construction.
- 4. Locate portable fire extinguishers within 50 feet maximum from any point in the Project area in which work is performed.

## B. Fire Prevention and Safety Measures.

- 1. Prohibit smoking in hazardous areas. Post suitable warning signs in areas which are continuously or intermittently hazardous.
- 2. Use metal safety containers for storage and handling of flammable and combustible liquids.
- 3. Do not store flammable or combustible liquids in or near stairways or exits.
- 4. Maintain clear exits from all points within a structure.

## 3.08 SECURITY MEASURES

- A. Protect the Work, materials, equipment, and property from loss, theft, damage, or vandalism. Protect City property used in performance of the Contract.
- B. If existing fencing or barriers are breached or removed for purposes of construction. Provide and maintain temporary security fencing equal to existing.

## 3.09 PROTECTION OF UTILITIES AND PIPELINES

- A. Prevent damage to existing public utilities during construction. Approximate locations of known utilities are shown on Drawings, but all lines may not be shown. Excavate with caution and repair lines damaged by construction operations.
- B. Use the Utility Coordinating Committee One Call System, telephone number, (713) 223-4567, which must be called 48 hours in advance. The toll free telephone number is 1-800-669-8344, Texas One Call System.
- C. Before excavating, locate underground utilities by appropriate means including the use of metal detection equipment, and probes, or by excavation or surveys. Repair damage caused by investigative work and by failure to locate or to preserve underground utilities.
- D. Give utility owners a minimum five (5) days' notice before commencing excavation to allow time to locate utilities and make adjustments or relocations when they conflict with the Work. Include cost for temporary relocation of water, wastewater, and storm drainage lines, necessary to accommodate construction, in unit prices for utility construction unless otherwise noted. Bypassing of sanitary waste to storm drainage facilities is not allowed.
- E. Prior to excavation near pipelines, request a representative of the pipeline company to meet with Contractor and Project Manager at the site to discuss procedures to be used. Request pipeline company's representative to locate the pipelines in at least three locations: at each side and at centerline of proposed excavation of proposed utility. Also request representative and Project Manager to be present to observe Contractor operations when excavation is conducted within 15 feet of pipeline.
- F. Utility service lines are not typically shown on the Drawings. Contractor should anticipate that such service lines exist and repair them immediately if damaged due to any construction activity. No separate pay for repair of utility service lines. Include payment in unit price for work in appropriate sections.
- G. Prior to abandonment of utility, make appropriate arrangements with City and owner of utility to terminate service, remove meters, transformers, and poles as may be required by site conditions.

## 3.10 PROTECTION OF THE WORK AND PROPERTY

- A. Preventive Actions
  - 1. Take necessary precautions and actions to prevent damage, injury, or loss to the Work or public and private property, including:
    - a. Storage of apparatus, supplies, and Products in an orderly, safe manner to limit interference with progress of the Work or work of other contractors, utility service companies, or the City's operations.

- b. Suitable storage for Products subject to damage by exposure to weather, theft, breakage, etc.
  - c. Limitation of loading pressures imposed upon portions of the Work.
  - d. Frequent clean up of refuse, scrap materials, and debris from construction operations, necessary to maintain the site in a safe and orderly condition.
  - e. Provision of barricades and guard rails to protect pedestrian and traffic around openings, scaffolding, temporary stairs and ramps, excavations, elevated walkways, and other hazardous areas.
2. Protect public and private property adjacent to the site. Obtain written consent before entering or occupying privately-owned land exception easements provided for construction. Restore property damaged by construction operations to condition equal to or better than that existing before the damage.

#### B. Barricades and Warning Systems

1. Where work is performed on or adjacent to roadways, rights-of-ways, or public land, provide barricades, fences, lights, warning signs, danger signals, and other precautionary measures necessary for protection of persons or property and for protection of the Work.
  - a. Erect sufficient barricades to keep vehicles and pedestrians from entering the Work. Paint barricades to be visible at night. From sunset to sunrise, provide at least one light at each barricade.
  - b. Maintain barricades, signs, lights, and provide watchmen until Project Manager approves removal. Whenever work creates encroachment onto public roadways, station flagmen to manage traffic flow in accordance with approved traffic control plan.
  - c. Conform to requirements of Section 01570 – Traffic Control and regulation.

#### C. Tree and Plant Protection

1. Comply with requirements of Section 01535 – Tree and Plant Protection.

#### D. Protection of Existing Structures

1. Underground Facilities
  - a. Known Underground Facilities are shown on the Drawings but all Facilities may not be shown. Explore sufficiently ahead of trenching and excavation work to locate Underground Facilities in order to prevent damage to them and to prevent interruption of utility services. Restore

- damage to Underground Facilities to original condition at no additional cost to the City.
- b. If necessary to avoid unanticipated Underground Facilities, Project Manager may make changes in location of the Work.
  - c. If permanent relocation of an Underground Facility is required and not provided for in the Contract documents, City Engineer or Project Manager will direct Contractor in writing to perform the Work under Modification provisions in the General Conditions of the Agreement.
2. Surface Structures include buildings, tanks, walls, bridges, roads, dams, channels, open drainage, piping, poles, wires, posts, signs, markers, curbs, walks, guard cables, fencing, and other facilities that are visible above the ground level.
  3. Protection of Underground Facilities and Surface Structures:
    - a. Support in place and protect Underground Facilities and Surface Structures located within or adjacent to the limits of the Work from damage. Install supports as required by the owner of the structure. Satisfy Project Manager that the owner of the facility or structure has approved methods and procedures before installing structure supports.
    - b. Avoid moving or changing public utility or private corporation property without prior written consent of a responsible official of the facility or structure. Allow representatives of utilities to enter the construction site for maintenance and repair purposes or to make necessary changes.
    - c. Notify utility and pipeline owners and operators of the nature of construction operations and dates when operations will be performed. When construction operations are required in immediate vicinity of existing structures, pipelines, or utilities, give a minimum of five (5) working days advance notice. Probe and flag location of Underground Facilities prior to commencement of excavation. Keep flags in place until construction operations uncover the facility.
    - d. Assume risk for damages and expenses to Underground Facilities and Surface Structures within or adjacent to the Work.
- E. Employ a structural engineer to ensure protection measures are adequate for the safety and integrity of structures and facilities.
- F. Protection of Installed Products:
  1. Provide protection of Installed Products to prevent damage from subsequent operations. Remove protection facilities when no longer needed, prior to completion of the Work.

2. Control traffic to prevent damage to Products and surfaces.
3. Provide coverings to protect Products from damage. Cover projections, wall corners, jambs, sills, and exposed sides of openings in areas used for traffic and passage of materials in subsequent work.

### 3.11 ROADS AND PARKING

- A. Prevent interference with traffic and operations of the City on existing roads.
- B. Designate temporary parking areas to accommodate construction and City personnel. When site space is not adequate, provide additional off-site parking. Locate as approved by Project Manager.
- C. Minimize use by construction traffic on existing streets and driveways.
- D. Do not allow heavy vehicles or construction equipment in existing parking areas.

### 3.12 ENVIRONMENTAL CONTROLS

- A. Use methods, equipment, and temporary construction necessary for control of environmental conditions at the site and adjacent areas.
- B. Comply with statutes, regulations, and ordinances relating to prevention of environmental pollution and preservation of natural resources including National Environmental Policy Act of 1969, PL 91-190, Executive Order 11514.
- C. Minimize impact to the surrounding environment. Do not use construction procedures that cause unnecessary excavation and filling of terrain, indiscriminate destruction of vegetation, air or stream pollution, or harassment or destruction of wildlife.
- D. Limit disturbed areas to boundaries established by the Contract. Do not pollute on-site streams, sewers, wells, or other water sources.
- E. Do not burn rubbish, debris or waste materials.

### 3.13 POLLUTION CONTROL

- A. Provide methods, means, and facilities necessary to prevent contamination of soil, water or the atmosphere by discharge of Pollutants from construction operations.
- B. Provide equipment and personnel to perform emergency measures to contain spillage, and to remove contaminated soils or liquids. Excavate and dispose of contaminated earth off-site in accordance with laws and regulations, and replace with suitable compacted fill and topsoil.
- C. Provide systems necessary for control of Pollutants.
  1. Prevent toxic concentrations of chemicals.

2. Prevent harmful dispersal of Pollutants into the environment.
- D. Use equipment that conforms to current Federal, State, and local laws and regulations.
- 3.14 PEST AND RODENT CONTROL
- A. Provide rodent and pest control as necessary to prevent infestation of construction or storage areas.
  - B. Employ methods and use materials that will not adversely affect conditions at site or on adjoining properties.
- 3.15 NOISE CONTROL
- A. Provide vehicles, equipment, and construction activities that minimize noise to the greatest degree practicable. Noise levels shall conform to the latest OSHA standards and City Ordinances and in no case will noise levels be permitted which create a nuisance in the surrounding neighborhoods.
  - B. Conduct construction operations during daylight hours except as approved by Project Manager.
  - C. Select construction equipment that operates with minimum noise and vibration. When directed by Project Manager, correct objectionable noise or vibration produced by operation of equipment at no additional cost to the City. Sound Power Level (PWL) of equipment shall not exceed 85 dbA (re: 10-12 watts) measured five feet from the equipment, or at a lower level if prescribed by City Ordinances. Equipment noise requirements are contained in equipment specifications.
- 3.16 DUST CONTROL
- A. Use water or other methods approved by Project Manager to control amount of dust generated by vehicle and equipment operations.
- 3.17 WATER RUNOFF AND EROSION CONTROL
- A. Comply with requirements of section 01410 – TPDES Requirements.
  - B. Conduct fill, grading and ditching operations and provide adequate methods necessary to control surface water, runoff, subsurface water, and water from excavations and structures in order to prevent damage to the Work, the site, or adjoining properties.
    1. Plan and execute construction and earthwork by methods that control surface drainage from cuts and fills, and from borrow and waste disposal areas.
    2. Minimize area of bare soil exposed at one time.
    3. Provide temporary control measures, such as berms, dikes, and drains.

4. Provide, operate, and maintain equipment and facilities of adequate size to control surface water.
5. Construct fill and waste areas by selective placement of materials to eliminate erosion of surface silts or clays that may erode.
6. Direct water away from excavations, pits, tunnels, and other construction areas to prevent erosion, sedimentation or damage.
7. Maintain existing drainage patterns adjacent to the site by constructing temporary earth berms, sedimentation basins, retaining areas, and temporary ground cover.
8. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to the site or adjoining areas, in conformance with environmental requirements.
9. Inspect earthwork periodically to detect any evidence of erosion. Take corrective measures as required to control erosion.

END OF SECTION