

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary facilities and the necessary controls for the project including utilities, telephone, sanitary facilities, field office, storage sheds and building, safety requirements, first aid equipment, fire protection, security measures, protection of the Work and property, access roads and parking, environmental controls, disposal of trash, debris, and excavated material, pest and rodent control, water runoff and erosion control.

1.02 UNIT PRICES

- A. No separate payment for work under this section. Include the costs for performing the work in project costs.

1.03 CONTRACTOR'S RESPONSIBILITY

- A. The facilities and controls specified in this section are considered minimum for the Project. The Contractor may provide additional facilities and controls for the proper execution of the Work and to meet Contractor's responsibilities for protection of persons and property.
- B. Comply with applicable requirements specified in other sections of the Specifications.
  - 1. Maintain and operate temporary facilities and systems to assure continuous service.
  - 2. Modify and extend systems as Work progress requires.
  - 3. Completely remove temporary materials and equipment when their use is no longer required.
  - 4. Restore existing facilities used for temporary services to specified or original condition.

1.04 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 the Work is substantially complete. Included are fuel, power, light, heat, and other utility services necessary for execution, completion, testing, and initial operation of the 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. Contractor shall not operate any fire hydrants without first having a meter from the City of Galveston and having placed this meter on the hydrant. The Contractor shall operate fire hydrant(s) only with an approved hydrant wrench.
3. Provide and maintain an adequate supply of potable water for domestic consumption by Contractor personnel.

C. Electricity and Lighting.

1. Provide electric power service as required for the Work, including testing of Work. Provide power for lighting, operation of the Contractor's equipment, or for any other use by Contractor.
2. Electric power service includes temporary power service or generator to maintain plant operations during any scheduled shutdown.
3. Minimum lighting level shall be 5 foot-candles for open areas; 10-foot-candles for stairs and shops.

D. Temporary Heat and Ventilation

1. Provide temporary heat as 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°F.

E. Telephone

1. Provide emergency telephone service at the Contractor's field office, or by mobile telephone, 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 job site; comply with the regulations of State and local departments of health.

2. Enforce the use of sanitary facilities by construction personnel at the job site. Such facilities shall be enclosed. Pit-type toilets will not be permitted. No discharge will be allowed from these facilities. Collect and store sewage and waste so as not to cause a nuisance or health problem; have sewage and waste hauled off-site and properly disposed in accordance with local 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.

1.05 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 Owner Representative.

1.06 STORAGE OF MATERIALS

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

1.07 SAFETY REQUIREMENTS

- A. Submit and follow a safety program. Include in the safety program 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. Observance 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 Owner Representative. Immediately advise the Owner Representative 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 Owner Representative of the results. Submit one copy of accident reports to Owner Representative within 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 evidences of contamination, immediate 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 local 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.

#### 1.08 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."

#### 1.09 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 3000 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.

#### 1.10 SECURITY MEASURES

- A. Protect all Work materials, equipment, and property from loss, theft, damage, and vandalism. Contractor's duty to protect property includes Owner's property.
- B. If existing fencing or barriers are breached or removed for purposes of construction. Provide and maintain temporary security fencing equal to existing.

#### 1.11 PROTECTION OF PUBLIC UTILITIES

- A. Prevent damage to existing public utilities during construction. These utilities are shown on the Drawings at their approximate locations, but all lines may not be shown. Pre-locate, by whatever means may be required (metal detection equipment, probes, excavation, survey), all underground utilities before excavating in area. All investigative work will be done and all repairs required after investigation will be accomplished by Contractor. Contractor is responsible for damages caused by failure to locate and preserve these underground utilities. Give owners of these utilities at least 48 hours notice before commencing Work in area, for locating utilities during construction and allow adequate time for making adjustments or relocation of the utilities when they conflict with proposed Work. Any temporary relocation of utilities if necessary to accommodate construction will not be paid for separately. Bypassing of sanitary waste to storm drainage facilities is not allowed. Utility service lines are not shown on Drawings. Anticipate that such service lines exist and repair them if damaged due to any construction activity. No separate payment will be made for this repair work.
- B. 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.
- C. When excavating near pipelines and prior to start of excavation, request a representative of pipeline company to come to construction site(s) to meet representatives of Contractor and Owner Representative to discuss actual procedures that will be used. Request

pipeline company's representative to probe and locate the pipelines in at least three locations: one at each side of proposed excavation and one at centerline of proposed utility. The Contractor may be required to locate the pipeline as directed by the pipeline company at no cost to the project. Representative of pipeline company and Owner Representative must be present to observe activities of Contractor at all times when excavation is being conducted within 15 feet of pipeline company's pipeline.

## 1.12 PROTECTION OF THE WORK AND PROPERTY

### A. Preventive Actions.

1. Take precautions, provide programs, and take actions necessary to protect the Work and public and private property from damage.
2. Take action to prevent damage, injury or loss, including, but not limited to, the following:
  - a. Store apparatus, materials, supplies, and equipment in an orderly, safe manner that will not unduly interfere with progress of the Work or the Work of any other contractor, any utility service company, or the Owner's operations.
  - b. Provide suitable storage for materials which are subject to damage by exposure to weather, theft, breakage, or otherwise.
  - c. Place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work.
  - d. Frequently clean up refuse, rubbish, scrap materials, and debris caused by construction operations, keeping the Project site safe and orderly.
  - e. Provide safe barricades and guard rails around openings, for scaffolding, for temporary stairs and ramps, around excavations, elevated walkways, and other hazardous areas.
3. Obtain written consent from proper parties before entering or occupying with workers, tools, materials or equipment, privately-owned land except on easements provided for construction.
4. Assume full responsibility for the preservation of public and private property on or adjacent to the site. If any direct or indirect damage is done by or on account of any act, omission, neglect, or misconduct in execution of the Work by the Contractor, it shall be restored by the Contractor to a condition equal to or better than that existing before the damage was done.

### B. Barricades and Warning Signals.

1. Where work is performed on or adjacent to any roadway, right-of-way, or public place; furnish and erect barricades, fences, lights, warning signs, and danger signals; provide watchmen; and take other precautionary measures for the protection of persons or property and protection of the Work. Barricades shall be painted to be visible at night. From sunset to sunrise, furnish and maintain at least one light at each barricade. Erect sufficient barricades to keep vehicles from being driven and pedestrians from walking on or into Work under construction. Furnish watchmen in sufficient numbers to protect the Work. Responsibility of maintenance of barricades, signs, lights and for providing watchmen shall continue until the Project is accepted by the Owner. Comply with Section -1570 – Traffic Control and Regulation
- C. Tree and Plant Protection. Comply with requirements of Section 01535 – Tree and Plant Protection.
- D. Protection of Existing Structures
  1. Underground Structures:
    - a. Underground structures are defined to include, but not be limited to, sewer, water, gas, and other piping, and manholes, chambers, electrical and signal conduits, tunnels, and other existing subsurface installations located within or adjacent to the limits of the Work.
    - b. Known underground structures, including water, sewer, electric, and telephone services are shown on the Drawings in accordance with the best information available, but are not guaranteed to be correct or complete.
    - c. Explore ahead of trenching and excavation work and uncover obstructing underground structures sufficiently to determine their location, to prevent damage to them and to prevent interruption of utility services. Restore to original condition damages to underground structure at no additional cost to the Owner.
    - d. Necessary changes in location of the Work may be made by the Owner Representative to avoid unanticipated underground structures.
    - e. If permanent relocation of an underground structure or other subsurface installations is required and not otherwise provided for in the Contract Documents, the Owner Representative will direct Contractor in writing to perform the Work, which shall be paid for under the provisions for changes in the Contract Price as described in the General Conditions.
  2. Surface Structures:
    - a. Surface structures are defined as existing buildings, structures and other constructed installations above the ground surface. Included with such

structures are their foundations or any extension below the surface. Surface structures include, but are not limited to 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 surface.

3. Protection of Underground and Surface Structures:
  - a. Support in place and protect from direct or indirect injury to underground and surface structures located within or adjacent to the limits of the Work. Install such supports carefully and as required by the party owning or controlling such structure. Before installing structure supports, Contractor shall satisfy the Owner Representative that the methods and procedures to be used have been approved by the owner of the structure.
  - b. Avoid moving or in any way changing the property of public utilities or private service corporations without prior written consent of a responsible official of that service or public utility. Representatives of these utilities reserve the right to enter within the limits of this project for the purpose of maintaining their properties, or of making such changes or repairs to their property that may be considered necessary by performance of this Contract.
  - c. Notify the owners and/or operators of utilities and pipelines of the nature of construction operations to be performed and the date or dates on which those operations will be performed. When construction operations are required in the immediate vicinity of existing structures, pipelines, or utilities, give a minimum of 5 working days advance notice. Probe and flag the location of underground utilities prior to commencement of excavation. Keep flags in place until construction operation reach and uncover the utility.
  - d. Assume risks attending the presence or proximity of underground and surface structures within or adjacent to the limits to the Work including but not limited to damage and expense for direct or indirect injury caused by the Work to any structure. Immediately repair damage caused, to the satisfaction of the owner of the damaged structure.
- 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 Work.

2. Control traffic to prevent damage to equipment, materials, and surfaces.

### 1.13 ROADS AND PARKING

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

### 1.14 ENVIRONMENTAL CONTROLS

- A. Provide and maintain methods, equipment, and temporary construction as necessary for controls over environmental conditions at the construction site and adjacent areas.
- B. Comply with statutes, regulations, and ordinances which relate to the proposed Work for the prevention of environmental pollution and preservation of natural resources, including but not limited to the National Environmental Policy Act of 1969, PL 91-190, Executive Order 11514.
- C. Recognize and adhere to the environmental requirements of the Project. Disturbed areas shall be strictly limited to boundaries established by the Contract Documents. Particularly avoid pollution of "on-site" streams, sewers, wells, or other water sources. The City recognizes that the project area has considerable natural value and that construction of projects should be completed with a minimum of impact to the surrounding environment. Attention is directed to this concept. Adopt construction procedures that do not cause unnecessary excavation and filling of the terrain, indiscriminate destruction of vegetation, air or stream pollution, nor the harassment or destruction of wildlife.
- D. Burning of rubbish, debris or waste materials is not permitted.

### 1.15 POLLUTION CONTROL

- A. Provide methods, means, and facilities required to prevent contamination of soil, water or atmosphere by discharge of noxious substances from construction operations.
- B. Provide equipment and personnel to perform emergency measures required to contain any spillage, and to remove contaminated soils or liquids. Excavate and dispose of any contaminated earth off-site in accordance with laws and regulations, and replace with suitable compacted fill and topsoil.

- C. Take special measures to prevent harmful substances from entering public waters. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams, or in sanitary or storm sewers.
- D. Provide systems for control of atmospheric pollutants.
  - 1. Prevent toxic concentrations of chemicals.
  - 2. Prevent harmful dispersal of pollutants into the environment.
- E. Use equipment during construction that conforms to current Federal, State, and local laws and regulations.

1.16 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 which will not adversely affect conditions at the site or on adjoining properties.

1.17 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 Owner Representative.

1.18 DUST CONTROL

- A. Control objectionable dust caused by operation of vehicles and equipment. Apply water or use other methods, subject to approval of the Owner Representative, which will control the amount of dust generated.

1.19 WATER RUNOFF AND EROSION CONTROL

- A. Provide methods to control surface water, runoff, subsurface water, and water pumped from excavations and structures to prevent damage to the Work, the site, or adjoining properties.
- B. Control fill, grading and ditching to direct water away from excavations, pits, and other construction areas; and to direct drainage to proper runoff courses so as to prevent any erosion, sedimentation or damage.

- C. Provide, operate, and maintain equipment and facilities of adequate size to control surface water.
- D. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the site or to adjoining areas and in conformance with environmental requirements.
- E. Retain existing drainage patterns external to the construction site by constructing temporary earth berms, sedimentation basins, retaining areas, and temporary ground cover as needed to control conditions.
- F. Plan and execute construction and earth work by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation.
  - 1. Keep to a minimum the area of bare soil exposed at one time.
  - 2. Provide temporary control measures, such as berms, dikes, and drains.
- G. Construct fills and waste areas by selective placement to eliminate surface silts or clays which will erode.
- H. Inspect earthwork periodically to detect any evidence of the start of erosion. Apply corrective measures as required to control erosion.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION