

Section 01504

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SUMMARY

This Section includes:

- A. Temporary facilities and necessary controls for project including utilities, telephone, sanitary facilities, storage sheds and building, safety requirements, first aid equipment, fire protection, security measures, protection of Work and property, access roads and parking, environmental controls, pest and rodent control and disposal of trash, debris and excavated material.
- B. Facilities and controls specified in this section are considered minimum for Project. Provide additional facilities and controls for proper execution of 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.
- 2. No separate payment will be made for construction fencing.

- B. Stipulated Price (Lump Sum). If Contract is a Stipulated Price Contract, payment for Work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. Texas Occupational Safety Act (Art. 5182a, V.C.S.)
- B. U.S. Department of Labor 29 CFR Part 1926 – “Safety and Health Regulations for Construction” Section 107 of Contract Work Hours and Standards Act.
- C. U.S. Environmental Protection Agency, National Environmental Policy Act of 1969, PL 91-190, Executive Order 11514 – “Protection and enhancement of environmental quality.”

1.04 SUBMITALLS (NOT USED)

1.05 RELATED REQUIREMENTS

Document 00700 – “General Conditions”

1.06 QUALITY ASSURANCE (NOT USED)

1.07 SYSTEM DESCRIPTION

A. Contractor’s Responsibility

Comply with the following and all other 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 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 to original condition.

1.08 – 1.13 NOT USED

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 – 3.02 NOT USED

3.03 ERECTION/INSTALLATION APPLICATION AND/OR CONSTRUCTION

A. Temporary Utilities

1. Obtaining Temporary Service:
 - a. Make arrangements with utility service companies for temporary services.
 - b. Abide by rules and regulations of utility service companies or authorities having jurisdiction.
 - c. Be responsible for utility service costs until Work is substantially complete. Included are fuel, power, light, heat, and other utility services necessary for execution, completion, testing, and initial operation of Work.

2. Water:
 - a. Contractor to 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 Work.
 - b. Provide and maintain adequate supply of potable water for domestic consumption by Contractor personnel, Project Manager and representatives of the Owner.
3. Electricity and Lighting:
 - a. Provide electric powered service required for Work, including testing of Work. Provide power for lighting, operation of equipment, or other use.
 - b. Electric power service includes temporary power service or generator to maintain plant operations during scheduled shutdown.
 - c. Minimum lighting level shall be 10 foot-candles for open areas; 20 foot-candles for stairs and shops. Provide minimum of one 300-watt lamp for each 200 square feet in work area.
4. Temporary Heat and Ventilation:
 - a. Provide temporary heat as necessary for protection or completion of Work.
 - b. Provide temporary heat and ventilation to assure safe working conditions; maintain enclosed areas at minimum of 50°F.
5. Telephone:

Provide emergency telephone service at Project Site for use by Contractor personnel and others performing work or furnishing services at site.
6. Sanitary Facilities:
 - a. Provide and maintain sanitary facilities for persons on job site; comply with regulations of State and local departments of health.
 - b. Enforce use of sanitary facilities by construction personnel at job site. Enclose sanitary facilities. 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 nuisance or health problem. Haul sewage and waste off-site and properly dispose in accordance with applicable regulation.

- c. Locate toilets near Work site and secluded from view insofar as possible. Keep toilets clean and supplied throughout course of Work.

B. Storage Sheds and Buildings

1. Provide adequately ventilated, watertight storage facilities with floor above ground level for materials and equipment susceptible to weather damage.
2. Storage of materials not susceptible to weather damage may be on blocks off ground.
3. Store materials in neat and orderly manner. Place materials and equipment to permit easy access for identification, inspection, and inventory.
4. Fill and grade site for temporary structures to provide drainage away from temporary and existing buildings.

C. Safety Requirements

1. Conduct operations in strict accord with applicable Federal, State, and local safety codes and statutes and with good construction practice. Establish and maintain procedures for safety of all work, personnel, and equipment involved in Project.
2. 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 Williams-Steiger Occupational Safety and Health Act of 1970, and to other legislation enacted for safety and health of Contractor employees. Safety and health standards apply to subcontractors and their employees as well as to Contractor and its employees.
3. Comply with regulations without reliance or superintendence of or direction by the Owner or Project Manager. Immediately advise Project Manager of investigation or inspection by Federal Safety and Health Inspectors of Contractor or subcontractor's work or place of work on job site under this Contract, and after investigation or inspection, advise Project Manager of results. Submit one copy of accident reports to Project Manager within 10 days of occurrence.
4. Protect areas occupied by workmen using best available devices for detection of lethal and combustible gases. Test devices frequently to assure functional capability. Constantly observe infiltration of liquids into Work area for visual or odor evidences of contamination, immediately take appropriate steps to seal off entry of contaminated liquids to Work area.

5. Implement safety measures, including but not limited to safety personnel, first-aid equipment, ventilating equipment and other safety equipment, as specified or detailed on Plans.
6. Maintain required coordination with Police and Fire Departments during entire period covered by Contract.
7. In safety plan include project safety analysis. Itemize major tasks and potential safety hazards. Plan to eliminate hazards or protect workers and public from each hazard

D. First Aid Equipment

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

E. Fire Protection

Conform to specified fire protection and prevention requirements established by Federal, State, or local governmental agencies and as provided in Safety Program.

F. Security Measures

1. Protect all Work materials, equipment, and property from loss, theft, damage, and vandalism. Protect property of the Owner used in connection with performance of Contract.
2. If existing fencing or barriers are breached or removed for purposes of construction, provide and maintain temporary security fencing equal to existing.

G. Protection of Utilities and Pipelines

1. Prevent damage to existing public utilities during construction. Approximate locations of known utilities are shown on Plans, but all lines may not be shown. Excavate with caution and repair lines damaged by construction operations.
2. Use the Utility Coordinating Committee One Call System, telephone number, 811, which must be called 48 hours in advance. The toll free telephone number is 1-800-545-6005, Lone Star 811.

3. 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.
4. Give utility owners a minimum five days' notice before commencing excavation to allow time to locate utilities. 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.
5. 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.
6. Utility service lines are not shown on the construction document Plans. Contractor should anticipate that such service lines exist and should exercise extreme caution during construction. The utility service lines should be repaired and restored immediately as per the specification, if damaged due to any construction activities. No separate payment will be made for this repair and restoration work. Include payment in unit price for work in appropriate sections.
7. Prior to abandonment of utility, make appropriate arrangements with Project Manager and owner of utility to terminate service, remove meters, transformers, and poles as may be required by site conditions.

H. Protection of Work and Property

1. Preventive Actions:
 - a. Take necessary precautions, provide programs and actions necessary to prevent damage, injury or loss to Work, public and private property.
 - b. Take action to prevent damage, injury or loss, including, but not limited to, the following:
 - 1) Store apparatus, materials, supplies, and equipment in orderly, safe manner that shall not interfere with progress of Work or Work of others.

- 2) Provide suitable storage for materials subject to damage by exposure to weather, theft, breakage, or otherwise.
 - 3) Place upon Work or any part thereof only safe loads.
 - 4) Frequently clean up refuse, rubbish, scrap materials, and debris caused by construction operations, keeping Project site safe and orderly.
 - 5) Provide safe barricades, construction fencing and guard rails to protect pedestrian and vehicular traffic around openings, scaffolding, temporary stairs and ramps, excavations, elevated walkways, and other hazardous areas.
 - c. Obtain written consent from proper parties before entering or occupying privately-owned land except on easements provided for construction.
 - d. Assume full responsibility for preservation of public and private property on or adjacent to site. When direct or indirect damage is done by or on account of any act, omission, neglect, or misconduct in execution of Work by Contractor, restore to condition equal to or better than that existing before damage was done.
2. Barricades and Warning Signals: 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; and take other precautionary measures for protection of persons or property and of the Work. Barricades shall be visible at night. Erect sufficient barricades to keep vehicles and pedestrians from being driven on or into Work under construction. Maintain barricades, signs, lights, and provide watchmen until Project is accepted by the Owner. Whenever Work creates encroachment on public roadways, station flagmen to manage traffic flow in accordance with approved traffic control plan.
3. Protection of Existing Structures:
 - a. Underground Structures:
 - 1) Underground structures are defined to include, but not be limited to, sewer, water, gas, and other piping, manholes, chambers, electrical signal and communication conduits, tunnels, and other existing subsurface installations located within or adjacent to limits of Work.

- 2) Known underground structures including water, sewer, electric, and telecommunication service connections are shown on Plans. This information is not guaranteed to be correct or complete.
 - 3) Explore ahead of trenching and excavation work and sufficiently uncover obstructing underground structures to determine their location, to prevent damage to them and to prevent interruption of utility services. Restore damage to underground structure to original condition at no additional cost.
 - 4) Necessary changes in location of Work may be made by the Owner to avoid unanticipated underground structures.
 - 5) If permanent relocation of underground structure or other subsurface installations is required and not otherwise provided in Contract, the Owner will direct Contractor in writing to perform Work, which is paid for under provisions for changes as described in Document 00700 - General Conditions.
- b. Surface Structures: Surface structures are defined as existing buildings, structures and other constructed installations above ground surface. Included with structures are their foundations or 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 visible above ground surface.
- c. Protection of Underground and Surface Structures:
- 1) Support in place and protect from direct or indirect injury underground and surface structures located within or adjacent to limits of Work. Install supports carefully and as required by party owning or controlling structure. Before installing structure supports, satisfy Project Manager that methods and procedures have been approved by owner of structure.
 - 2) Avoid moving or changing property of public utilities or private corporations without prior written consent of responsible official of that service or public utility. Representatives of these utilities reserve the right to enter within limits of this Project for purpose of maintaining their properties, or of making changes or repairs to their property that may be considered necessary by performance of this Contract.
 - 3) Notify owners and/or operators of utilities and pipelines 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 minimum of 5 working days advance notice. Probe and flag location of underground utilities prior to commencement of excavation. Keep flags in place until construction operation reaches and uncovers utility.

- 4) Assume risks attending presence or proximity of underground and surface structures within or adjacent to Work including but not limited to damage and expense for direct or indirect injury caused by his work to structure. Immediately repair damage.
 - 5) Employ structural engineer to ensure safety and integrity of structures and facilities.
4. Protection of Installed Products:
- a. Provide protection of installed products to prevent damage from subsequent operations. Remove protection facilities when no longer needed, prior to completion of Work.
 - b. Control traffic to prevent damage to equipment, materials, and surfaces.
 - c. Provide coverings to protect equipment and materials 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.
- I. Roads and Parking
1. Prevent interference with traffic on existing roads.
 2. Designate temporary parking areas to accommodate construction and management personnel. When site space is not adequate, provide additional off-site parking. Locate as approved by Project Manager.
 3. Minimize use by construction traffic of existing streets and driveways.
 4. Do not allow heavy vehicles or construction equipment in existing parking areas.
- J. Environmental Controls
1. Provide and maintain methods, equipment, and temporary construction as necessary for controls over environmental conditions at construction site and adjacent areas.

2. Comply with statutes, regulations, and ordinances which relate to proposed Work for prevention of environmental pollution and preservation of natural resources, including but not limited to National Environmental Policy Act of 1969, PL 91-190, Executive Order 11514.
3. Work to minimize impact to surrounding environment. Adopt construction procedures that do not cause unnecessary excavation and filling of terrain, indiscriminate destruction of vegetation, air or stream pollution, nor harassment or destruction of wildlife.
4. Recognize and adhere to environmental requirements of Project. Limit disturbed areas to boundaries established by Contract. Avoid pollution of “on-site” streams, sewers, wells, or other water sources.
5. Do not burn rubbish, debris, or waste materials.

K. Pollution Control

1. Provide methods, means, and facilities required to prevent contamination of soil, water, or atmosphere by discharge of noxious substances from construction operations.
2. Provide equipment and personnel to perform required emergency measures to contain spillage, and to remove contaminated soils or liquids. Excavate and dispose of contaminated earth off-site, and replace with suitable compacted fill and topsoil.
3. Provide systems for control of atmospheric pollutants.
 - a. Prevent toxic concentrations of chemicals.
 - b. Prevent harmful dispersal of pollutants into atmosphere.
4. Use equipment that conforms to current Federal, State, and local laws and regulations.
5. Install or otherwise implement positive controls to prevent hazardous materials migrating from Work area.

L. Pest and Rodent Control

1. Provide rodent and pest control as necessary to prevent infestation of construction or storage areas.
2. Employ methods and use materials which will not adversely affect conditions at site or on adjoining properties.

M. Noise Control

1. Provide vehicles, equipment, and construction activities that minimize noise to greatest degree practicable. Conform noise levels to latest OSHA standards. Do not permit noise levels to interfere with Work or create nuisance in surrounding areas.
2. Conduct construction operations during daylight hours except as approved by Project Manager.
3. Select construction equipment to operate with minimum noise and vibration. When in opinion of Project Manager, objectionable noise or vibration is produced by equipment, rectify conditions without additional cost to Owner. Sound Power Level (PWL) of equipment shall not exceed 85 dbA (re: 10-12 watts) measured 5 feet from piece of equipment. Explicit equipment noise requirements are specified with equipment specifications.

N. Dust Control

Control objectionable dust caused by operation of vehicles and equipment. Apply water or use other methods, subject to approval of Project Manager, to control amount of dust generated.

O. Water Runoff and Erosion Control

1. Comply with Texas Pollutant Discharge Elimination System (TPDES) permit when required.
2. In addition to TPDES requirements:
 - a. Provide methods to control surface water, runoff, subsurface water, and water from excavations and structures to prevent damage to Work, site, or adjoining properties.
 - b. Control fill, grading and ditching to direct water away from excavations, pits, tunnels, and other construction areas; and to direct drainage to proper runoff courses so as to prevent 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 manner to prevent flooding, erosion, or other damage to portion of site or to adjoining areas and in conformance with environmental requirements.

- e. Retain existing drainage patterns external to 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) Minimize area of bare soil exposed at one time.
 - 2) Provide temporary control measures, as berms, dikes, and drains.
- g. Construct fills and waste areas by selective placement to eliminate erosion of surface silts or clays.
- h. Inspect earthwork periodically to detect evidence of start of erosion. Apply corrective measures as required to control erosion.

3.04 – 3.10 NOT USED

END OF SECTION