



LIFT STATIONS REHABILITATION PHASE 4
Solicitation Number: CO-00115
SAWS Job No.: 15-2512

ADDENDUM 1
June 23, 2017

To Respondent of Record:

This addendum, applicable to work referenced above, is an amendment to the bidding documents and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the addendum number and issue date in the space provided in submitted copies of the proposal.

RESPONSES TO QUESTIONS RECEIVED

Q1: "Can you please upload the SAWS Standard Specification, Article 850.2(5) for the interior wet well coating for this project? We have heard that there have been some changes to the systems listed in the spec and that there was a specific manufacturer that was removed from the list and no longer allowed."

Response: *"Bidders may download the specifications from the SAWS website, Business Center, Construction Materials and Specification at:*

http://www.saws.org/business_center/specs/constspecs/

Article 850 can be found at:

[http://www.saws.org/business_center/specs/constspecs/docs/Final_Spec_850%20\(2014\).pdf](http://www.saws.org/business_center/specs/constspecs/docs/Final_Spec_850%20(2014).pdf)."

Please be advised that the Spray Wall Polyurethane System product listed in this specification is suspended and cannot be used.

Q2: "Our company would like to a bid in on the electrical scope of this work. Do we need to bid to a general contractor or can we submit independently just on our scope?"

Response: *"Your company will need to Bid to a General Contractor. SAWS will not accept independent bids for pieces of work."*

Q3: "I am requesting plans and specifications for this project. Please advise as to how I can receive the documents. Also, are there any union requirements or an estimated project value?"

Response: *"Plans and specifications can be found on SAWS webstie at www.saws.org, Business Center, Contract Solicitations. No union requirements. Estimated project value is posted on SAWS website."*

Q4: "Specifications state SAWS will provide Top-End & Radio Programming, but do not mention local PLC Programming. Will SAWS be providing local PLC Programming or will the PCSI contractors need to provide?"

Response: *"Local PLC programming shall be done by the Contractor."*

Q5: “Will the contractors need to supply Geotechnical Reports & Engineer Stamped Foundation Design Drawings for the antenna towers?”

Response: Yes.

Q6: “Which Top-End System (ClearSCADA or Transdyne) will each lift station utilize?”

Response: SAWS central top-end system is Transdyne. There is no local Human Machine Interface (HMI) at each lift station.

Q7: “Would like to request your approval for Grundfos and Myers pumps as an acceptable manufacturer for the above referenced project via addendum. Attached for review at your convenience is data on our proposed Grundfos and Myers pumps. Your comments would be appreciated.”

Response: Follow the SAWS standards committee process to be able to get the new pump manufacturer to be an approved vendor for future projects.

CLARIFICATIONS TO BIDDERS

None with Addendum No. 1.

MODIFICATIONS TO THE SPECIFICATIONS

Item 1: Specification Section 02220 - Structural Excavation, Backfill and Compaction

REMOVE Section 02220 in its entirety and REPLACE with the attached Section 02220, Addendum No.1.

MODIFICATIONS TO THE PLANS

None with Addendum No. 1.

This Addendum, including these 2 pages, is 8 pages with attachments, in its entirety.

Attachments:

Specification Section 02220 – Structural Excavation, Compaction and Backfill (6 pages)



Approved by ENGINEER
WESTON SOLUTIONS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-3123



END OF ADDENDUM

SECTION 02220

STRUCTURAL EXCAVATION, BACKFILL, AND COMPACTION

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and related items required to remove all earth, rock, water and other materials to the extent required for the construction of the facilities shown on the Drawings; to prepare the subgrade or subbase for the foundation of the facilities; and backfill around the facilities to the lines and grades established on the Plans. All operations required for the proper completion of the excavation work, including sheet piling, shoring, bracing, dewatering of excavations, compaction of backfill and disposal of excavated material are included.
- B. Unless noted otherwise, the following are included in the Scope of Work:
1. The removal of all surface obstructions
 2. The making of all necessary excavations
 3. The providing of all necessary clearing.
 4. The furnishing and installing of all sheet piling, shoring, and bracing as necessary or directed.
 5. The pumping and bailing to keep trenches free of water during pipe laying and jointing, and thereafter until each joint, mortar, or concrete is set.
 6. The providing for uninterrupted surface water flow during work progress
 7. The providing for and disposing of flows from sewers, storm drains, creeks, or other sources.
 8. The protecting of all pipes, conduits, culverts, tracks, utility poles, wires, fences, buildings, and other public and private property adjacent to or in the line of work
 9. The removing of all sheet piling, shoring, and bracing not ordered or required to be left in place.
 10. The hauling away and disposing of excavated materials not necessary or else unsuitable for backfilling purposes.
 11. Backfilling.
 12. The installation of OSHA-compliant safety measures in, near, and around all open excavations regardless of depth.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 804 “Excavation, Trenching and Backfill” (San Antonio Water System)
- B. Section 03300 “Cast-in-place Concrete”
- C. Section 550 “Trench Excavation Safety Protection” (San Antonio Water System)

D. Section 02140 “Well Pointing”.

1.03 REFERENCE STANDARDS

A. The latest edition of specifications of the American Society for Testing and Materials (ASTM) listed below shall apply to this Section to the extent applicable in each reference:

1. ASTM D 424 Test for Plastic Limit and Plasticity Index of Soils.
2. ASTM D448 Standard Classification for Sizes of Aggregate for Road and Bridge Construction.
3. ASTM D 698 Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 fl-lbf/ft³[600 k~m/m³]).
4. ASTM D 1556 Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
5. ASTM D 1557 Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³[2,700 k~m/m³]).
6. ASTM D 2167 Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
7. ASTM D 2487 Standard Test Method for Classification of Soils for Engineering Purposes.
8. ASTM D 2922 Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
9. ASTM D 2937 Standard Test Method for Density of Soil in Place by the Drive- Cylinder Method.
10. ASTM D 2940 Standard Specification for Graded Aggregate Material for Bases or Subbases for Highways or Airports.
11. ASTM D 3017 Standard Test Methods for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
12. ASTM D 3740 Standard Practice for Evaluation of Agencies Engaged in the Testing and/or Inspection of Soil and Rock as used in Engineering Design and Construction.
13. ASTM D 4254 Standard Test Method for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.
14. ASTM D 4491 Standard Test Methods for Water Permeability of Geotextiles by Permittivity.
15. ASTM D 4632 Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
16. ASTM D 4751 Standard Test Method for Determining Apparent Opening Size of a Geotextile.

1.04 SUBMITTALS

- A. Submittals shall comply with the requirements in Section 01300 “Submittals.”
- B. The CONTRACTOR shall submit the following for review by the ENGINEER.

1. Contractor to submit an engineered system to support adjacent ground and structures such that lateral and vertical movements are limited to those that are tolerable by adjacent infrastructure. All systems designs should assume at rest lateral earth pressures and designs should consider all live loading from construction activities. All modes of failure, including but not limited to bearing capacity, overturning, toe, basal heave, bottom uplift, and piping failures, shall be considered and evaluated. The proposed system shall be submitted with plan and section drawings, manufacturer cut sheets, and calculation packages sealed by a Texas licensed structural engineer to the OWNER or ENGINEER for approval prior to use.
2. Submit calculations and drawings showing the design and details of proposed sheet piling, shoring and bracing, and the proposed sequence of excavation and backfill. The calculations shall be sealed by a Texas licensed Professional Engineer. Review of the calculations and drawings by the ENGINEER is for acceptance only insofar as it affects the completed work, and such acceptance will not relieve the CONTRACTOR of the responsibility for the adequacy of the design.
3. Submit evidence of successful completion of projects of comparable size and complexity, including the qualifications of its field superintendent and design engineer.
4. Evidence of bodily injury and property damage liability insurance shall be submitted by the CONTRACTOR or SUBCONTRACTOR installing the sheet piling.
5. Submit testing laboratory reports to show compliance with specifications for all materials from off-site locations. The specified tests shall be performed by a certified independent testing laboratory employed and paid by the CONTRACTOR.
6. Submit details of all proposed dewatering systems. Review and acceptance by the ENGINEER will not relieve the CONTRACTOR of any responsibility for the adequacy of the dewatering system.

1.05 PROTECTION OF EXISTING FACILITIES AND ENVIRONMENT

- A. Before the start of earthwork operations, adequately protect existing structures, utilities, trees, shrubs and other permanent objects from damage. CONTRACTOR shall be responsible for the repairs or replacement of any and all existing structures, pipes, facilities, trees, shrubs, etc. which are damaged or destroyed by his operations, all at no additional cost to the OWNER.
- B. Engineered systems used as earth retaining structures shall be considered sacrificial and must stay in place after use. Internal bracing may be removed once backfill reaches the bracing height, only if the system designer demonstrates adequate stability.
- C. Engineered systems requiring vibratory or otherwise disruptive installation techniques will not be considered.
- D. Environmental Safeguards and Regulations. The CONTRACTOR shall comply with all Local, State, and Federal regulations to prevent pollution of air and water.
- E. The CONTRACTOR shall conduct his operations in such fashion that trucks and other vehicles do not create a dirt nuisance in the streets. The truck beds shall be sufficiently tight, and shall be loaded in such a manner that objectionable materials will not be spilled onto the streets. Any dirt, mud, or other materials that are spilled onto the streets or deposited onto the streets by the tires of vehicles shall be promptly cleared away by the CONTRACTOR.

1.06 BLASTING

- A. Blasting will not be permitted

1.07 INSPECTION OF EXCAVATIONS

- A. Notify the ENGINEER at least 48 hours prior to completion of any excavation so that the ENGINEER may inspect the excavation. Do not place reinforcing steel or concrete in the excavation prior to inspection unless the ENGINEER has given approval to proceed without inspection.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Fills which will not support foundation, structure elements, or paving/parking shall be compacted to at least 95 percent of their maximum dry density as defined above. Where these fills are adjacent to foundations or structures, compact to at least 98 percent of their maximum dry density.
- B. All voids between earth retaining structures and new wet well shall be filled with light weight flowable fill or grout.
- C. Regular Material. Where no other material is specified or shown, use suitable soils from the excavation. Do not use rocks, boulders, peat or other organic matter, silt, muck, debris or similar materials.
- D. Vapor Barrier Membrane. Polyethylene sheeting shall conform to U.S. Department of Commerce, National Bureau of Standards (NBS), Product Standard PS-17, with a minimum 6-mil nominal thickness. Provide membrane in widest practical seamless widths. Use in locations indicated on the Drawings.

PART 3 - EXECUTION

3.01 EXCAVATION

- A. General
 - 1. Excavations shall be of such dimensions as to permit the construction of the work in the manner, shape and size shown on the Plans.
 - 2. Excavation and backfill work shall meet the requirements of the geotechnical report where applicable.
- B. Authorized Additional Excavation
 - 1. Where the existing subgrade material on which the foundation, footing or slab is to be placed is deemed unsatisfactory by the ENGINEER, carry the excavation to an additional depth specified by the ENGINEER and fill the excavated space with an approved material.
- C. Approved Additional Excavation
 - 1. Upon written request by the CONTRACTOR, the ENGINEER may approve additional excavation. Carry the excavation to a depth approved by the ENGINEER, and fill the excavated space below the structure foundation with an approved material. Such work shall be considered as a convenience to the CONTRACTOR and shall be done at no additional cost to the OWNER.

D. Unauthorized Excavation

1. Whenever the excavation is carried beyond or below the lines or grades shown on the Drawings, refill all such excavated space below the structure foundation with 3,000 psi concrete. This work shall be done at no additional cost to the OWNER.

E. Material Storage

1. Stockpile excavated materials classified as satisfactory soil material where directed by the OWNER until required for backfill or fill. Place, grade and shape stockpiles for proper drainage.

F. Shoring, Sheet Piling and Bracing

1. Excavations shall be properly shored, sheet piled and braced as the nature of the ground may require and as indicated on the Plans, to prevent shifting of material with possible damage to existing or uncompleted structures and attendant delay of work. The design of sheet piling, shoring, and bracing shall be the responsibility of the CONTRACTOR.

G. Structures

1. Wherever practicable, cut all footing excavations to neat lines with a tolerance of minus 1 inch or plus 3 inches, and place concrete to bear against earth sides. Excavate at sufficient distance from walls, shafts or similar elements of structures to allow for placing and removing forms and for inspection.
2. Excavate to the elevations shown on the drawings forming a level undisturbed surface free of mud or other soft material. When the bottom of the excavation at the elevation shown, is unsuitable for foundation bearing, notify the ENGINEER. Excavate to deeper levels, as directed by the ENGINEER. Remove all pockets of soft or otherwise unstable soils and replace with concrete or with suitable well- compacted soil as directed by the ENGINEER.
3. Protect all open excavations from rainfall or excessive drying so as to maintain the foundation subgrade in a satisfactory, undisturbed condition. Keep excavations free of water (accumulations exceeding one (1) inch) at all times. Soils below foundation, which become soft, loose or otherwise unsatisfactory for support of the foundation as a result of inadequate excavation, dewatering or other construction methods shall be removed and replaced with satisfactory material, as directed by the ENGINEER, at no additional cost to the OWNER.
4. All excavations should be protected so as not to affect water content of subgrade prior to placement of foundation.
5. The excavation for new wet wells shall be accomplished by use of an auger (size as required) unless otherwise approved by the ENGINEER.

3.02 DEWATERING OF EXCAVATION FOR STRUCTURES

- A. All excavations shall be kept dewatered in accordance with Section 804 and Section 02140 “Well Pointing”.

3.03 VAPOR BARRIER MEMBRANE

- A. As soon as practical after final grading, while the base material is still at its optimum moisture content, install a vapor barrier membrane over the prepared surface at locations shown on the drawings.

- B. Lay the membrane material continuous with the joints, lapped 6 inches in the direction of the concrete placement. Carefully fit the membrane tight around all penetrations.
- C. Before placing concrete, patch all holes and tears in membrane with patches cemented in place with adhesive. Seal around penetrations for conduit, piping, etc., with cold mastic.
- D. A vapor barrier membrane shall also be provided above the roof before backfilling operations.

3.04 EXISTING UTILITIES

- A. Locate existing underground utilities in the areas of work. Provide adequate means of protection during excavation operations in accordance with all local, state, and federal regulations related to trench safety.
- B. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult the utility owner immediately for directions. Cooperate with the owner and public and private utility companies in keeping their respective services and facilities in operation. Immediately repair damaged utilities to the satisfaction of the utility owner. An existing privately-owned underground sprinkler system is located on ground of LS# 026. The CONTRACTOR shall coordinate with the building management company at 1716 S. San Marcos and take additional precautions so as not to disrupt continuous water service.
- C. Do not interrupt existing utilities serving facilities occupied and used by others, except when permitted in writing by the OWNER, and then only after acceptable temporary utility services have been provided.

3.05 DISPOSAL OF EXCESS MATERIAL

- A. Excess excavation material or material unsuitable for select backfill in site grading shall be disposed of at a site licensed to receive such materials or at a site approved by the OWNER.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT AND PAYMENT

- A. Clearing, excavation for structures, and removal of unsuitable subgrade
 - 1. The work performed, materials furnished and all labor, tools, equipment and incidentals necessary to complete the work under this item shall not be measured or paid for directly, but considered subsidiary to the various bid items of the contract.

END OF SECTION 02220