

SPECIFICATIONS AND CONTRACT DOCUMENTS

FOR

BIG SANDY WATER DISTRICT
BOYD COUNTY, KENTUCKY

WATER TANK – PAINTING & REPAIRS

CONTRACT NO. F-1



J. F. Sisler
7/29/19

FOR CONSTRUCTION

JULY 2019

SME PROJECT CODE: 15030



SISLER-MAGGARD ENGINEERING, PLLC

220 EAST REYNOLDS ROAD, SUITE A3

LEXINGTON, KY 40517

(859) 271-2978

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BIG SANDY WATER DISTRICT
CONTRACT NO. F-1
WATER TANKS – PAINTING & REPAIRS

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SECTION 1

ADVERTISEMENT FOR BIDS

ADVERTISEMENT FOR BIDS

1. **INVITATION:** Sealed bids for the construction of the following **BIG SANDY WATER DISTRICT – PHASE V – WATER SYSTEM IMPROVEMENTS - F-1 Water Tank Painting & Repairs, G-1 Water Booster Pump Station Upgrades, H-1 Stream Crossing Replacements & Service Line Replacements and I-1 Office Building** will be received by the Big Sandy Water District Office, 18200 State Route 3, Catlettsburg, KY 41129, until **12:00 NOON**, local time **June 13, 2019** for furnishing all labor and materials and performing all work as set forth by this advertisement, conditions (general, supplemental, and special), specifications, and/or the drawings prepared by Sisler-Maggard Engineering, PLLC., 220 East Reynolds Road, Suite A3, Lexington, Kentucky 40517. Bids will be publicly opened and read at above time.

2. **PROJECT DESCRIPTION:** The project includes but is not limited to the following:

CONTRACT – “F-1” – Water Tank Painting & Repairs

- a) 7 EA. Sandblasting & Painting Existing Ground Storage Tanks (3 @ 60-75,000 gallon, 4 @ 100-150,000 gallon)
- b) 2 EA. Misc. Repairs at Tanks

CONTRACT – “G-1” – Water Booster Pump Station Upgrades

- a) 2 EA. Construct Duplex Pump Stations
- b) 2 EA. Add VFD’s to existing Water Booster Pump Stations

CONTRACT – “H-1” – Stream Crossing Replacements and Service Line Replacements

- a) 925 L.F. 6” & 8” HDPE Horizontal Direct Drilling
- b) 43,600 L.F. ¾” Service Line Replacement by Trenchless Replacement or HDD Method
- c) 3,600 L.F. 1” Service Line Replacement by Trenchless Replacement or HDD Method

CONTRACT – “I-1” – Office Building

- a) Construct 2100 S.F. Masonry Office Building with Metal Roof

3. **OBTAINING PLANS, SPECIFICATIONS AND BID DOCUMENTS:**

Contract documents may be reviewed and obtained at the following locations:

Lynn Imaging Lexington....(859) 255-1021	Lynn Imaging Louisville.....(502) 499-8400
328 Old Vine Street.....(800) 888-0693	11460 Bluegrass Parkway..... (502)499-0022 fax
Lexington, KY 40507.....(859) 233-1558 fax	Louisville, KY 40299

A **non-refundable** deposit will be required for **each** set of documents as follows:

Contract “F-1” – Water Tank Painting & Repairs: \$150.00

Contract “G-1” – Water Booster Pump Station Upgrades: \$150.00

Contract “H-1” – Stream Crossing Replacements & Service Line Replacements: \$250.00

Contract “I-1” – Office Building: \$200.00

Deposit **DOES NOT** include shipping. Partial sets of plans or specifications will **not** be issued.

Contract Documents may also be reviewed at the following locations:

Sisler-Maggard Engineering, PLLC
220 East Reynolds Road, Suite A3
Lexington, Kentucky 40517
(859) 271-2978

Big Sandy Water District
18200 State Route 3
Catlettsburg, Kentucky 41129
(606) 928-2075

Builders Exchange
1035 Strader Avenue, Suite100
Lexington, Kentucky 40505
(859) 288-0011

Builder's Exchange
2300 Meadow Lane
Louisville, Ky. 40218-1336
(502) 459-9800

- 4. METHOD OF RECEIVING BIDS: Bids will be submitted in the manner and subject to the conditions as set forth and described in the Instructions to Bidders and Contract Documents.
- 5. METHOD OF AWARD AND RIGHT TO REJECT: The Contract will be awarded by the Owner to the low responsive, responsible, best and qualified Bidder. Owner reserves the right to reject any and all bids and to waive all informalities and/or technicalities should it be in the best interest of the Owner.
- 6. BID WITHDRAWAL: No Bidder may withdraw his bid for a period of **(90) ninety** calendar days after receipt of bids. Errors and omissions will not be the cause for withdrawal of bid without forfeit of bid bond. Bids may be withdrawn in person prior to the closing time for receipt of bids.
- 7. FUNDING: This project is being funded by **U.S.D.A.- Rural Development and Big Sandy Water District**.
- 8. WAGE RATES: State and Federal wage rates **will not** apply to this project.
- 9. BID SECURITY: Bidders shall furnish (with bid) bid security equal to 5% of bid. A bid bond on Kentucky Resident insurance carrier or certified check is acceptable.
- 9. GENERAL REQUIREMENTS: Bidders who submit a Bid **must** be a Plan Holder of record at the issuing Office (Lynn Imaging). Bids from Bidders who are not on the Plan Holders List may be returned as not being responsive.

Plan Holders are requested to provide an e-mail address with their purchase of plans if they wish to receive addenda and other information electronically.

- 10. PERFORMANCE AND PAYMENT BOND: A Performance and Payment Bond each in the amount of 100 percent of the Contract Price issued by a responsible surety will be required of the successful Bidders.

"EQUAL EMPLOYMENT OPPORTUNITY"

OWNER: Big Sandy Water District

By: Paul E. Thomas
Paul E. Thomas, Chairman

SECTION 2

INSTRUCTIONS TO BIDDERS

INSTRUCTIONS TO BIDDERS

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ARTICLE 1 – DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office* – The office from which the Bidding Documents are to be issued

1. Sisler Maggard Engineering, PLLC
220 E. Reynolds Road, Ste. A3
Lexington, KY 40517
Phone – (859) 271-2978

2. Lynn Imaging
328 Old Vine Street
Lexington, KY 40503
Phone – (859) 255-1021

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the Advertisement for Bids.

2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, Bidder shall submit with its Bid written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and the following additional information:

A. Qualification forms @ end of Section 8 of these Specifications shall be used.

3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER’S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

4.02 *Existing Site Conditions*

A. Subsurface and Physical Conditions; Hazardous Environmental Conditions

1. The Supplementary Conditions identify:
 - a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
 - b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
 - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
4. Geotechnical Baseline Report: The Bidding Documents **may** contain a Geotechnical Baseline Report (GBR). The GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations (“Baseline Conditions”). The GBR is a Contract Document.

The Baseline Conditions in the GBR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on the Baseline Conditions. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GBR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.

Nothing in the GBR is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices, nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.

- B. **Underground Facilities:** Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.
- C. **Adequacy of Data:** Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.03 *Site Visit and Testing by Bidders*

- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.
- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.04 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.05 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 – BIDDER’S REPRESENTATIONS

- 5.01 It is the responsibility of each Bidder before submitting a Bid to:
- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
 - B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
 - C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
 - D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
 - E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder’s safety precautions and programs;
 - F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
 - G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
 - H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
 - I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
 - J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 – PRE-BID CONFERENCE (NOT USED)**ARTICLE 7 – INTERPRETATIONS AND ADDENDA**

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received less than seven days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

ARTICLE 8 – BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **5% (percent)** of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or **60 days** after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.
- The liquidated damage for **these** contracts shall be **\$500 per calendar day** that the contracts are NOT substantially complete.

ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 The Contract for the Work, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute materials and equipment

subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids in the case of a proposed substitute and 5 days prior in the case of a proposed "or-equal". Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not reply upon approvals made in any other manner. Substitutes and "or-equal" materials and equipment may be proposed by Contractor in accordance with Paragraphs 7.04 and 7.05 of the General Conditions after the Effective Date of the Contract.

- 11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.
- 11.03 If an award is made, Contractor shall be allowed to submit proposed substitutes and "or-equals" in accordance with the General Conditions.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 If required by the bid documents, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for any of the work.

If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or

entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

- 12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.
- 12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.
- 12.04 The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.06.

ARTICLE 13 – PREPARATION OF BID

- 13.01 The Bid Form is included with the Bidding Documents.

- A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
- 13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.
- 13.03 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 13.04 A Bid by an individual shall show the Bidder's name and official address.
- 13.05 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.
- 13.06 All names shall be printed in ink below the signatures.
- 13.07 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.08 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.09 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.
- 13.10 Each bid must be submitted on the prescribed forms accompanied by the following items which will constitute the submittal documents necessary for a complete bid package:
1. Bid Forms Including Subcontractors & Manufacturers List
 2. Bid Bond with Power Of Attorney
 3. Compliance Statement (Rd Form 400-6)
 4. Certificate for Contracts, Grants, & Loans (Rd Form 1940-Q)
 5. Certificate Regarding Debarment, Suspension, And Other Responsibilities (AD-1048)
 6. Equal Employment Opportunity Certification (RD Form 400-1)
 7. Bidder's Qualifications Statement
 8. Contractor's Certification Concerning Labor Standards and Prevailing Wage Requirements

- 13.11 Subcontracts: The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract:
- a. Must be acceptable to the Owner and have current eligibility status for federal programs; and
- Approval of the proposed subcontract award cannot be given by the Owner unless and until the proposed subcontractor has submitted the Certifications and/or other evidence showing that it has fully complied with any reporting requirements to which it is or was subject. Although the bidder is not required to attach such Certifications by proposed subcontractors to their bid,

the bidder is hereby advised of this requirement so that appropriate action can be taken to prevent subsequent delay in subcontract awards.

ARTICLE 14 – BASIS OF BID

14.01 *Unit Price*

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The “Bid Price” (sometimes referred to as the extended price) for each unit price Bid item will be the product of the “Estimated Quantity” (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding “Bid Unit Price” offered by the Bidder. The total of all unit price Bid items will be the sum of these “Bid Prices”; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 15 – SUBMITTAL OF BID

- 15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.
- 15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation “BID ENCLOSED.” A mailed Bid shall be addressed to the **Big Sandy Water District**
- 15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.
- 15.04 The **Big Sandy Water District** (herein called the “Owner”), invites bids on the forms attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the **Big Sandy Water District, 18200 State Route 3, Catlettsburg, Kentucky 41129** until **12:00 Noon**, local time, **June 13, 2019** and then at said office publicly opened and read aloud. The envelopes containing the bids must be sealed, addressed to the **Big Sandy Water District**, designated as bid for **Phase V – Water System Improvements – Contract “F-1 - Water Tank Painting & Repairs, Contract “G-1” – Water Booster Pump Station Upgrades, Contract “H-1” – Stream Crossings and Service Line Replacements, Contract “I-1” – Office Building.**

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid

received after the time and date specified shall not be considered. No bidder may withdraw a bid within 90 days after the actual date of the opening thereof.

- 15.05 Telegraphic/Facsimile Modification: Any bidder may modify their bid by telegraphic or facsimile communication at any time prior to the scheduled closing time for receipt of bids, provided such communication is received by the Owner prior to the closing time, and provided further, the Owner is satisfied that a written confirmation of the telegraphic/facsimile modification over the signature of the bidder was mailed prior to the closing time. The communication should not reveal the bid price but should provide the addition or subtraction or their modifications so that the final prices or terms will not be known by the Owner until the sealed bid is opened. If written confirmation is not received within two days from the closing time, no consideration will be given to the telegraphic/facsimile modification.

Method of Bidding: The Owner invites the following bid: **Phase V – Water System Improvements – Contract “F-1 - Water Tank Painting & Repairs, Contract “G-1” – Water Booster Pump Station Upgrades, Contract “H-1” – Stream Crossings and Service Line Replacements, Contract “I-1” – Office Building.**

Time of Completion and Liquidated Damages: Bidder must agree to commence work on or before a date to be specified in a written “Notice to Proceed” of the Owner and to fully complete the project as follows:

Phase V – Water System Improvements:

Contract “F-1 - Water Tank Painting & Repairs - 180 consecutive calendar days

Contract “G-1” - Water Booster Pump Station Upgrades - 150 consecutive Calendar days

Contract “H-1” - Stream Crossings & Service Line Replacements - 210 consecutive calendar days

Contract “I-1” - Office Building - 150 consecutive calendar days

thereafter. Bidder must agree also to pay as liquidated damages, the sum of **\$500.00** for each consecutive calendar day thereafter as hereinafter provided in Article 15 of the Special Conditions and in the Agreement.

- 15.06 Every request for such interpretation on **Phase V – Water System Improvements – Contract “F-1” - Water Tank Painting & Repairs, Contract “G-1” – Water Booster Pump Station Upgrades, Contract “H-1” – Stream Crossings and Service Line Replacements, Contract “I-1” – Office Building** should be in writing addressed to **Sisler - Maggard Engineering, PLLC, 220 East Reynolds Road, Suite A3, Lexington, Kentucky 40517** and to be given consideration must be received in writing at least **five days** prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the Specifications which, if issued, will be mailed by certified mail with return receipt requested to all prospective bidders (at the respective addresses furnished for such purposes), not later than three days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under their bid as submitted. All addenda so issued shall become part of the Contract Documents.

Security for Faithful Performance: Simultaneously with their delivery of the executed Contract, the Contractor shall furnish a 100% surety bond or bonds as security for faithful performance of this Contract and for the payment of all persons performing labor on the project under this Contract and furnishing materials in connection with this Contract, as specified in the General Conditions included

herein. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner.

- 15.07 Power of Attorney: Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney with Kentucky Resident agent.
- 15.08 Notice of Special Conditions: Attention is particularly called to those parts of the Contract Documents and Specifications which deal with the following:
- a. Inspection and testing of materials.
 - b. Insurance requirements.
 - c. Wage rates - State and Federal – **DO NOT APPLY**
- 15.09 Safety Standards and Accident Prevention: With respect to all work performed under this Contract, the Contractor shall:
- a. Comply with the safety standards provisions of applicable laws, building and construction codes and the “Manual of Accident Prevention in Construction” published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of Title 29 of the Code of Federal Regulations, Section 1518 as published in the “Federal Register”, Volume 36, No. 75, Saturday, April 17, 1971.
 - b. Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.
 - c. Maintain at their office or other well known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or a doctor’s care of persons (including employees), who may be injured on the job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor’s care.
- 15.10 **Federal and State Prevailing Wage Rates do not apply to this project.**

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

- 17.01 Bids will be opened at the time and place indicated in the Advertisement to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 19.03 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 20 – BONDS AND INSURANCE

- 20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 – SIGNING OF AGREEMENT

- 21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be

delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 22 – SALES AND USE TAXES, DO APPLY TO THIS CONTRACT

ARTICLE 23 – CONTRACTS TO BE ASSIGNED (NOT USED)

ARTICLE 24 - WAGE RATE REQUIREMENTS (NOT USED)

- 24.01 If the contract price is in excess of \$100,000, provisions of the Contract Work Hours and Safety Standards Act at 29 CFR 5.5 (b) apply.

SECTION 3

RURAL DEVELOPMENT GENERAL CONDITIONS & SUPPLEMENTAL CONDITIONS

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer

has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor’s plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or

computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

- A. Standards Specifications, Codes, Laws and Regulations
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

- A. *Reporting Discrepancies:*
 - 1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict,

error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
 3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.
- B. *Resolving Discrepancies:*
1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 2. abnormal weather conditions;
 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.

- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part

by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

- c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after

becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 2. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.H shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE**6.01 Performance, Payment, and Other Bonds**

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 Insurance—General Provisions

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is

maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).

4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result

of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
1. include at least the specific coverages provided in this Article.
 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
 4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 *Property Insurance*

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 - 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 - 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
 - 3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 - 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).

5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the

policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and

guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.04 "Or Equals"

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:

- a. in the exercise of reasonable judgment Engineer determines that:

- 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
- 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
- 3) it has a proven record of performance and availability of responsive service; and
- 4) it is not objectionable to Owner.

- b. Contractor certifies that, if approved and incorporated into the Work:

- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
- 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 *Substitutes*

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
 - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 - 3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and
 - 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and

- 2) available engineering, sales, maintenance, repair, and replacement services.
- d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.

- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

O. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work

7.09 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
 - C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
 - D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
 - E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
 - F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
 - G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or

exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to

provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.

2. *Samples:*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
 5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
 6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
 7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 6. the issuance of a notice of acceptability by Engineer;
 7. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.

- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop

Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. an itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. the extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.

- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents shall be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during

or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
 - 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an

adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

3. *Field Orders*: Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on

the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).

- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under

the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 Execution of Change Orders

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – CLAIMS

12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim

submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
 - F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
 - G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable

thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes

other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

- B. *Cash Allowances*: Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 2. there is no corresponding adjustment with respect to any other item of Work; and
 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to

cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will

include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- C. *Review of Applications:*
1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
 2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
- a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
- a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

- e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner:*

- 1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. the Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. the Contract Price has been reduced by Change Orders;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. there are other items entitling Owner to a set off against the amount recommended.
- 2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount

remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

- A. *Application for Payment:*
 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of

inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.

D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation,

including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 1. correct the defective repairs to the Site or such other adjacent areas;
 2. correct such defective Work;
 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses,

and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for

expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
 2. agree with the other party to submit the dispute to another dispute resolution process; or
 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18 – MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

CERTIFICATE OF OWNER'S ATTORNEY AND AGENCY CONCURRENCE

CERTIFICATE OF OWNER'S ATTORNEY

PROJECT NAME: Big Sandy Water District - Contract No. "F-1"

CONTRACTOR NAME: _____

I, the undersigned, Roger W. Hall, the duly authorized and acting legal representative of Big Sandy Water District, do hereby certify as follows: I have examined the attached Contract(s) and performance and payment bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements is adequate and has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions, and provisions thereof.

Name - Roger W. Hall

Date

AGENCY CONCURRENCE

As lender or insurer of funds to defray the costs of this Contract, and without liability for any payments thereunder, the Agency hereby concurs in the form, content, and execution of this Agreement.

USDA - Rural Development

Agency Representative

Date

Name - Julie Anderson - RD

Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract Funding Agency Edition (No. C-700, 2013 Edition). All provisions that are not so amended or supplemented, remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings indicated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

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ARTICLE 1 - DEFINITIONS AND TERMS

SC 1.01 Defined Terms

SC-1.01.A.3. Add the following language to the end of Paragraph 1.01.A.3:

The Application for Payment form to be used on this Project is Form RD 1924-18. The Agency must approve all Applications for Payment before payment is made.

SC-1.01.A.8. Add the following language to the end of Paragraph 1.01.A.8:

The Change Order form to be used on this Project is Form EJCDC C-941. Agency approval is required before Change Orders are effective.

SC-1.01.A.48 Add the following language at the end of the last sentence of Paragraph 1.01.A.48:

A Work Change Directive cannot change Price or Contract Times without a subsequent Change Order.

SC-1.01.A.49 Add the following new Paragraph after Paragraph 1.01.A.48:

Abnormal Weather Conditions - Conditions of extreme or unusual weather for a given region, elevation, or season as determined by Engineer. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered Abnormal Weather Conditions.

SC 1.01 Project Financing

SC 1.01.A.50 Add the following new Paragraph after Paragraph 1.01.A.49:

The project is financed by the **U.S.D.A - Rural Development and the Big Sandy Water District.**

SC 1.02 Terminology

SC-1.02.A.15. Delete in its entirety and replace with the following:

Contract Times: The number of days or date stated in the Agreement to achieve substantial completion, based on remaining work, weather and market conditions.

ARTICLE 2 - PRELIMINARY MATTERS

SC -2.02 Copies of Documents

SC-2.02.A. Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor **four** copies of the Contract Documents (including one fully executed counterpart of the Agreement). Additional printed copies of the conformed Contract Documents will be furnished upon request at the cost of reproduction.

SC 2.03 Before Starting Construction

SC-2.03.A. Delete Paragraph 2.03.A in its entirety and insert the following in its place:

A. The Contract Times will commence on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 10 days after the Effective Date of the Agreement.

ARTICLE 4 - COMMENCEMENT AND PROGRESS OF THE WORK

SC 4.01 - Commencement of Contract Times; Notice to Proceed

SC-4.01. Delete the following sentence from Paragraph 4.01A:

In no event will the Contract Times commence to run later than the **sixtieth** day after the day of Bid opening unless agreed to by all parties.

SC 4.05.C.2 Amend Paragraph 4.05.C.2 by striking out the following text:

“abnormal weather conditions;” and inserting the following text:
Abnormal Weather Conditions;

ARTICLE 5 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

SC 5.03 Subsurface and Physical Conditions

SC-5.03. Delete Paragraphs 5.03.A and 5.03B in their entirety and insert the following:

A. No reports of explorations or tests of subsurface conditions at or adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner.

SC 5.05 Underground Facilities

SC-5.05

Add the following new paragraphs immediately after Paragraph 5.05 A.1:

a. Special precautions shall be taken by the Contractor to avoid damage to existing overhead and underground utilities owned and operated by the owner or by public or private utility companies.

b. The available information concerning the location of existing underground utilities is show on the Drawings. While it is believed that the locations shown are reasonably correct, neither the Engineer nor the Owner can guarantee the accuracy of this information.

c. Before proceeding with the work, the Contractor shall confer with all public or private companies, agencies or departments that own and operate utilities in the vicinity of the construction work. The purpose of the conference, or conferences, shall be to notify said companies, agencies or departments of the proposed construction schedule, verify the location of, and possible interference with, the existing utilities that are shown on the Drawings, arrange for necessary suspension of service, and make arrangements to locate and avoid interference with all utilities (including house connections) that are not shown on the Drawings. The Engineer and Owner have no objection to the Contractor arranging for the said utility companies, agencies or departments to locate and uncover their own utilities; however, the Contractor shall bear the entire responsibility and cost of locating and avoiding, or repairing damage to said existing utilities.

SC 5.06 Hazardous Environmental Conditions

SC-5.06 Delete Paragraphs 5.06A and 5.06B in their entirety and insert the following:

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.**
- B. Not Used.**

ARTICLE 6 - BONDS AND INSURANCE

SC 6.01 Performance, Payment and Other Bonds

SC-6.01

Add the following new paragraph immediately after Paragraph 6.01.F:

G. The Performance Bond shall remain in full force and effect throughout the Guaranty period referred to in SC 6.03. All warranties and guarantees remaining in effect at and beyond the Guaranty expiration date shall be relinquished and transferred to the Owner. Copies of such warranty/guaranty shall be submitted to the Engineer prior to date of the start of the Guaranty period.

6.02 Insurance - General Provisions

SC-6.02

Add the following paragraph immediately after Paragraph 6.02.B:

1. Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the project is located, (b) is certified or authorized as a worker's compensation insurance provider by the appropriate state agency, and (c) has

been accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.

SC 6.03 Contractor's Insurance

SC 6.03 Contractor's Liability Insurance - add the following new paragraph immediately after Paragraph 6.03J:

K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amount or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

a. State:	Statutory
b. Federal, if applicable (e.g. Longshoreman's): (e.g., Longshoremen's)	Statutory
c. Employer's Liability	\$500,000
Bodily injury, each accident	\$500,000
Bodily injury by disease, each employee	\$500,000
Bodily injury/disease aggregate	\$500,000

2. Contractor's General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

a. General Aggregate	\$2,000,000
b. Products – Completed Operations Aggregate	\$1,000,000
c. Personal and Advertising Injury	\$1,000,000
d. Each Occurrence (Bodily Injury and property damage)	\$1,000,000
e. General Aggregate	\$5,000,000
f. Each Occurrence	\$2,000,000

3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:

a. Bodily Injury:

Each Person	\$1,000,000
Each Accident	\$1,000,000
b. Property Damage	
Each Accident	\$1,000,000
c. Combined Single Limit of	\$1,000,000
4. Excess or Umbrella Liability:	
a. Per Occurrence	\$1,000,000
b. General Aggregate	\$1,000,000
5. Contractor's Pollution Liability	
a. Each Occurrence	\$1,000,000
b. General Aggregate	\$1,000,000
6. Contractor's Professional Liability	
a. Each Claim	\$1,000,000
b. Annual Aggregate	\$1,000,000

SC 6.05 Property Insurance

Add the following paragraph immediately after Paragraph 6.05.F:

G. The Contractor shall provide INSTALLATION FLOATER INSURANCE when Builder's Risk Insurance is inappropriate, or when Builder's Risk Insurance will not respond, to cover damage or destruction to renovations, repairs, materials, or equipment being installed or otherwise being handled or stored by the Contractor, including off-site storage, transit and installation. The amount of coverage shall provide full replacement value (FRV) of the property, repairs, additions, materials, or equipment being installed, otherwise being handled or stored on or off premises. All risks coverage shall be provided. Coverage cannot be contingent on an external cause or risk, or limited to property for which the Contractor is legally liable. The Contractor will be solely responsible for any deductible carried under this coverage and claims on materials, supplies, machinery, fixture, and equipment that will be incorporated into the Work while in transit or in storage. This policy will include a waiver of subrogation applicable to Owner, Contractor, Engineer, all Subcontractors and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them.

ARTICLE 7 - CONTRACTOR'S RESPONSIBILITIES

SC 7.01 Supervision and Superintendence

Add the following new paragraph C after Paragraph 7.01.B:

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C. All General Contractors shall have the authority and be responsible for coordination of the activities among the other prime contractors and subcontractors on the Site to ensure a safe, efficient working environment. This authority covers scheduling delivery of materials, storage of materials, sequencing of construction involving different crafts, resolving interface issues between crafts, scheduling testing, and all other aspects of the Work that do not impact the design or function of the work.

SC 7.02 Labor; Working Hours

SC-7.02.A.1

Add the following new paragraphs immediately after Paragraph 7.02.B:

C. Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer's services, Owner's representative and construction observation services occasioned by the performance of work on Saturday, Sunday, any legal holiday, or as overtime on any work day. For purposes of administering the foregoing requirement, additional overtime costs are defined as \$75 per hour.

D. The Contractor shall employ workmen skilled in their various duties and shall remove from the project, at the request of the Engineer, any person employed in, about, or upon the work, who misconducts himself or is incompetent or negligent in the performance of the duties assigned to him. No person under the age of eighteen (18) years and no convict labor shall be employed to perform any work under this Contract. No person whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health or safety of others shall be employed to perform any work under this Contract, provided that this shall not operate against the employment of physically handicapped persons, otherwise employable, where such persons may be safely assigned to work which they can ably perform. There shall be no discrimination because of race, creed, color or political affiliation in the employment of persons for work under this Contract.

With respect to additional skilled, semi-skilled workers employed to perform work on the project, preference in employment shall be given first to persons who reside in the city in which the work is to be performed, and second to persons residing in the county in which the work is to be performed.

SC 7.03 Services, Materials and Equipment

Add the following new paragraph immediately after Paragraph 7.03.C:

D. The Contractor agrees that he will obtain from the manufacturers of equipment and materials furnished under this Contract guarantees against defective materials and workmanship, and if those guarantees furnished by the manufacturer do not extend for the term of one (1) year from and after the date upon which the final estimate of the Engineer is formally approved by the Owner or other established date as set forth herein (such as the substantial completion date), he shall make the necessary arrangements and assume all cost for extending this guarantee for the required period.

SC 7.04 "Or Equals"

SC 7.04.A Amend the third sentence of Paragraph 7.04.A by striking out the following words:

Unless the specification or description contains or is followed by words reading that no like, equivalent, or 'or-equal' item is permitted.

SC 7.04.A.1 Amend the last sentence of Paragraph a.3 by striking out "and;" and adding a period at the end of Paragraph a.3.

SC 7.04.A.1 Delete paragraph 7.04.A.1.a.4 in its entirety and insert the following in its place:

[Deleted]

SC 7.06 Concerning Subcontractors, Suppliers and Others

SC 7.06.B Delete paragraph 7.06.B in its entirety and insert the following in its place:

[Deleted]

SC 7.06.E Amend the second sentence of Paragraph 7.06.E by striking out "Owner may also require Contractor to retain specific replacements; provided, however, that".

Delete Paragraph 7.06.F in its entirety.

SC-7.06 Add a new paragraph immediately after Paragraph 7.06.O:

P. The Contractor shall not award work valued at more than (50%) percent of the Contract Price to Subcontractor(s), without prior written approval of the Owner.

SC 7.08 Permits

Delete Paragraph 7.08.A in its entirety and insert the following in its place.

Owner shall obtain and pay for all construction permits, including building permits. Contractor is responsible for all utility permits and fees for usage during the construction period. Contractor is responsible for any electrical, plumbing and/or building inspections and fees which may be required.

SC 7.16 Shop Drawings, Samples and Other Submittals

Add the following new paragraphs immediately after Paragraph 7.16D.8:

9. CONTRACTOR shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the ENGINEER'S approval thereof.

10. ENGINEER'S review of submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instruction for installation or performance of equipment of systems, all of which remain the responsibility of the Contractor as required by the Contract Documents.

11. ENGINEER'S review and approval of Shop Drawings or Samples do not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER'S attention to each such variation at the time of each submittal as required by paragraph 7.16.A.3 and ENGINEER has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval, or has issued a Change Order that authorizes the deviation.

ARTICLE 10 - ENGINEER'S STATUS DURING CONSTRUCTION

SC 10.03 Project Representative

SC-10.03

The Engineer will provide Resident Project Representative Services for this project. The Duties, Responsibilities, and Limitations of Authority of the Resident Project Representative will be as stated in Exhibit D of the Agreement Between Owner and Engineer, E-510, 2002 Edition, as amended and executed for this specific project. Owner or Engineer will make available upon request.

ARTICLE 11 - AMENDING THE CONTRACT DOCUMENTS: CHANGES IN THE WORK

SC 11.07 Execution of Change Orders

SC 11.07.C Add the following new Paragraph after Paragraph 11.07.B:

All Contract Change Orders must be concurred in by Agency before they are effective.

ARTICLE 13 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

SC 13.02 Allowances

SC 13.02.C Delete Paragraph 13.02.C in its entirety and insert the following in its place:

[Deleted]

ARTICLE 14 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

SC 14.03 Defective Work

SC-14.03

Add the following new paragraph immediately after Paragraph 14.03.D:

1. When the repairs or replacements involve one or more items of installed equipment, Contractor shall provide the services of qualified factory-trained servicemen in the employ of the equipment manufacturers to perform or supervise the repairs or replacements.

SC 14.07 Owner May Correct Defective Work

SC-14.07

Add the following new paragraph immediately after Paragraph 14.07.D:

E. When the Engineer or the Owner deems it necessary, and so orders, such replacements or repairs under this section shall be undertaken by the Contractor within twenty-four (24) hours after service of notice. If the Contractor unnecessarily delays or fails to make the ordered replacements or repairs within the time specified, or if any replacements or repairs within the time specified, or if any replacements or repairs are of such nature as not to admit /of the delay incident to the service of notice, then the Owner shall have the right to make such replacements or repairs and the expense thereof shall be paid by the Contractor or deducted from any moneys due to Contractor.

ARTICLE 15 - PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

SC 15.01 Progress Payments

SC 15.01.B Amend the second sentence of Paragraph 15.01.B.1 by striking out the following text: “a bill of sale, invoice, or other.”

**SC 15.01.B.3 Add the following language at the end of paragraph 15.01.B.3:
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No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest the retainage for the benefit of the Contractor.

SC 15.01.B.4 Add the following new Paragraph after Paragraph 15.01.B.3:

The Application for Payment form to be used on this Project is EJCDC C-620. The Agency must approve all Applications for Payment before payment is made.

SC-15.01 D

Add the following new paragraph immediately after 15.01 D.1

The Application for Payment with Engineer’s recommendations will be presented to the Owner and Agency for consideration. If both the Owner and Agency find the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 14.02.D will become due thirty days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.

SC 15.02 Contractor’s Warranty of Title

SC 15.02.A Amend Paragraph 15.02.A by striking out the following text:

“no later than seven days after the time of payment by Owner” and insert “no later than the time of payment by Owner.”

ARTICLE 18 - MISCELLANEOUS

SC-18.09 Add the following new paragraph:

A. If this Contract exceeds \$100,000, the Contractor shall comply with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 USC §1857(h)), Section 508 of the Clean Water Act (33 USC §1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15).

SC-18.10 Add the following new paragraph:

A. If the Contractor shall fail or refuse to complete the work within the Contract Time, or extension of time granted by the Owner, then the Contractor agrees as a partial consideration for the awarding of this Contract that the Owner may retain from the compensation otherwise to be paid to the Contractor the amount specified below, not as a penalty but as liquidated damages, for each and every calendar day that the Contractor shall be in default after the time stipulated in the Contract Documents.

SC-18.11 Add the following new paragraph:

18.11 Disruption of water or wastewater operations

A. The Contractor shall take all necessary precautions to minimize the disruption in water and/or wastewater system operations. When a disruption in the operations is required, the Contractor shall coordinate in advance (5 days minimum) the interruption with the Engineer and the Owner; the interruptions shall be held to a minimum by wise and prudent coordination of Contractor work efforts. The Contractor shall be held responsible for all damages brought about by disruption of the operations if such disruptions are a direct cause of Contractor negligence and or a failure of the Contractor to coordinate his work effort with the Engineer and Owner.

SC 18.12 Add the following new paragraph after Paragraph 18.11:

Tribal Sovereignty. No provision of this Agreement will be construed by any of the signatories as abridging or debilitating any sovereign powers of the {insert name of Tribe} Tribe; affecting the trust-beneficiary relationship between the Secretary of the Interior, Tribe, and Indian landowner(s); or interfering with the government-to-government relationship between the United States and the Tribe.

ARTICLE 19 - FEDERAL REQUIREMENTS

SC 19.01 Add the following language as Paragraph 19.01 with the title “Agency Not a Party”:

A. This Contract is expected to be funded in part with funds provided by Agency. Neither Agency, nor any of its departments, entities, or employees is a party to this Contract.

SC 19.02 Add the following sections after Article 19.01 with the title “Contract Approval”:

A. Owner and Contractor will furnish Owner’s attorney such evidence as required so that Owner’s attorney can complete and execute the following “Certificate of Owner’s Attorney” (Attachment GC-A) before Owner submits the executed Contract Documents to Agency for approval.

B. Concurrence by Agency in the award of the Contract is required before the Contract is effective.

SC 19.03 Add the following language after Article 19.02.B with the title “Conflict of Interest”: *RUS Bulletin 1780-26 Exhibit H Page 5*

A. Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the plans and specifications has a corporate or financial affiliation with the supplier or manufacturer. Owner’s officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (i) the employee, officer or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest in Contractor. Owner’s officers, employees, or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractor or subcontractors.

SC 19.04 Add the following language after Article 19.03.A with the title “Gratuities”:

A. If Owner finds after a notice and hearing that Contractor, or any of Contractor’s agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of Owner or Agency in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, Owner may, by written notice to Contractor, terminate this Contract. Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract.

B. In the event this Contract is terminated as provided in paragraph 19.04.A, Owner may pursue the same remedies against Contractor as it could pursue in the event of a breach of this Contract by Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, Owner may pursue exemplary damages in an amount (as determined by Owner) which shall not be less than three nor more than ten times the costs Contractor incurs in providing any such gratuities to any such officer or employee.

SC 19.05 Add the following language after Article 19.04.B with the title “Audit and Access to Records”:

A. Owner, Agency, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Contractor which are pertinent to the Agreement, for the purpose of making audits, examinations, excerpts, and transcriptions. Engineer shall maintain all required records for three years after final payment is made and all other pending matters are closed.

SC 19.06 Add the following language after Article 19.05.A with the title “Small, Minority and Women’s Businesses”:

A. If Contractor intends to let any subcontracts for a portion of the work, Contractor shall take affirmative steps to assure that small, minority and women’s businesses are used when possible as sources of supplies, equipment, construction, and services. Affirmative steps shall consist of: (1) including qualified small, minority and RUS Bulletin 1780-26 Exhibit H Page 6 women’s businesses on solicitation lists; (2) assuring that small, minority and women’s businesses are solicited whenever they are potential sources; (3) dividing total requirements when economically feasible, into small tasks or quantities to permit maximum participation of small, minority, and women’s businesses; (4) establishing delivery schedules, where the requirements of the work permit, which will encourage participation by small, minority and women’s businesses; (5) using the services and assistance of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce; (6) requiring each party to a subcontract to take the affirmative steps of this section; and (7) Contractor is encouraged to procure goods and services from labor surplus area firms.

SC 19.07 Add the following after Article 19.06.A with the title “Anti-Kickback”:

A. Contractor shall comply with the Copeland Anti-Kickback Act (18 USC 874 and 40 USC 276c) as supplemented by Department of Labor regulations (29 CFR Part 3, “Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants of the United States”). The Act provides that Contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities, to give up any part of the compensation to which they are otherwise entitled. Owner shall report all suspected or reported violations to Agency.

SC 19.08 Add the following after Article 19.07.A with the title “Clean Air and Pollution Control Acts”:

A. If this Contract exceeds \$100,000, compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h) and 42 USC 7401et. seq.), section 508 of the Clean Water Act (33 U.S.C. 1368) and Federal Water Pollution Control Act (33 USC 1251 et seq.), Executive Order 11738, and Environmental Protection Agency regulations is required. Contractor will report violations to the Agency and the Regional Office of the EPA.

SC 19.09 Add the following after Article 19.08 with the title “State Energy Policy”:

A. Contractor shall comply with the Energy Policy and Conservation Act (P.L. 94-163). Mandatory standards and policies relating to energy efficiency, contained in any applicable State Energy Conservation Plan, shall be utilized.

SC 19.10 Add the following after Article 19.09 with the title “Equal Opportunity Requirements”:

A. If this Contract exceeds \$10,000, Contractor shall comply with Executive Order 11246, “Equal Employment Opportunity,” as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and as supplemented by regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”
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B. Contractor’s compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative active obligations required by the Standard Federal Equal Employment Opportunity Construction Contract Specifications, as set forth in 41 CFR Part 60-4 and its efforts to meet the goals established for the geographical area where the Contract is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting Contractor’s goals shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR part 60-4. Compliance with the goals will be measured against the total work hours performed. C. Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the Contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the Contract is to be performed.

SC 19.11 Add the following after Article 19.10.C with the title “Restrictions on Lobbying”:

A. Contractor and each subcontractor shall comply with Restrictions on Lobbying (Public Law 101-121, Section 319) as supplemented by applicable Agency regulations. This Law applies to the recipients of contracts and subcontracts that exceed \$100,000 at any tier under a Federal loan that exceeds \$150,000 or a Federal grant that exceeds \$100,000. If applicable, Contractor must complete a certification form on lobbying activities related to a specific Federal loan or grant that is a funding source for this Contract. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. 1352. Each tier shall disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.

Certifications and disclosures are forwarded from tier to tier up to the Owner. Necessary certification and disclosure forms shall be provided by Owner.

SC 19.12 Add the following after Article 19.11.A with the title “Environmental Requirements”:

When constructing a Project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental conditions:
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A. Wetlands – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert wetlands. B. Floodplains – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert 100-year floodplain areas (Standard Flood Hazard Area) delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, e.g., alluvial soils on NRCS Soil Survey Maps. C. Historic Preservation – Any excavation by Contractor that uncovers an historical or archaeological artifact or human remains shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the State Historic Preservation Officer (SHPO). D. Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service. E. Mitigation Measures – The following environmental mitigation measures are

SECTION 4

SPECIAL CONDITIONS

SECTION 4 - SPECIAL CONDITIONS

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SPECIAL CONDITIONS
CONTRACT "F-1" – WATER TANK PAINTING & REPAIRS

1. Contract Change Order - All changes which affect the cost of the construction of the project must be authorized by means of a CONTRACT CHANGE ORDER. The CONTRACT CHANGE ORDER will include extra work, work for which quantities have been altered from those shown in the bidding schedule, as well as decreases or increases in the quantities of installed units which are different than those shown in the bidding schedule because of final measurements. All changes should be recorded on a CONTRACT CHANGE ORDER as they occur so that they may be included in the partial payment estimate.
2. Pre-Construction Conference - Following award of the CONTRACT, the CONTRACTOR will be required to attend a Pre-Construction Conference with OWNER & ENGINEER, during which items pertinent to performance and management of the project, will be thoroughly discussed and documented.
3. Equal Opportunity - If this contract exceeds \$10,000 the CONTRACTOR is subject to provisions of the equal opportunity requirements set forth in the Supplemental General Conditions, included herein with forms.
4. Labor Regulations - The CONTRACTOR and each of his subcontractors shall comply with the following statutes (and with regulations issued pursuant thereto which are incorporated herein by reference):

Title 18 U.S.C., Section 876: Kickback from public works employees. Whoever, by force, intimidation, or threat of procuring dismissal from employment, or by any other manner whatsoever induces any person employed in the construction, prosecution, completion or repair of any public building, public work, or building or work financed in whole or in part by loans (made, insured, or guaranteed) or grants from the United States, to give up any part of the compensation to which he is entitled under his contract of employment, shall be fined not more than \$5,000 or imprisoned not more than five years, or both.

Title 40 U.S.C., Section 276c: Regulations Governing Contractors and Subcontractors. The Secretary of Labor shall make reasonable regulations for Contractors and Subcontractors engaged in the construction, prosecution, completion or repair of public buildings, public works, or buildings or work financed in whole or in part by loans (made, insured, or guaranteed) or grant from the United States, including a provision that each Contractor and Subcontractor shall furnish weekly a statement with respect to the wages paid each employee during the preceding week. The OWNER shall report all suspected or reported violations to the funding agencies.

5. Protection of Lives and Property - In order to protect the lives and health of his employees under the CONTRACT, the CONTRACTOR shall comply with all pertinent provisions of the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of America, Inc., and shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment or work under the CONTRACT.

The CONTRACTOR alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance or operation.

6. Conflict of Interest - No member of or delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this CONTRACT or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this CONTRACT if made with a corporation for its general benefit.

No official of the OWNER who is authorized in such capacity and on behalf of the OWNER to negotiate, make, accept or approve, or to take part in negotiating, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in the CONTRACT or in any part thereof. No officer, employee, architect, attorney, engineer, or inspector of or for the OWNER who is authorized in such capacity and on behalf of the OWNER who is in any legislative, executive, supervisory, or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this CONTRACT or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

7. Partial Payments - Partial Payment estimate forms prepared by the ENGINEER shall be used when estimating periodic payments due the CONTRACTOR.

Computation of quantities that will be the basis for payment estimates, both monthly and final, will be made by the ENGINEER. All payment estimates may be checked and approved by the funding agencies before payment.

Where the computation of areas or volumes by exact geometric methods is unduly laborious or refined, the planimeter shall be held an instrument of precision and may be used in the determination of quantities upon which payments are based.

The measurements of the ENGINEER as to the amount of work done shall be final and conclusive.

Payments shall be made upon the work done within the lines prescribed by the drawings or specifications and in accordance with the unit prices for the items under which the work is done.

To insure the proper performance of the Contract, the OWNER shall retain an amount of each estimate as specified in the General Conditions and/or Supplemental General Conditions.

8. Withholding Payments - The OWNER may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any approved partial payment estimate to such extent as may be necessary to protect the OWNER from loss on account of:

- (a) Defective work not remedied.
- (b) Claims filed or reasonable evidence indicating probable filing of claims.
- (c) Failure of CONTRACTOR to make payments properly to Subcontractors or for material or labor.
- (d) A reasonable doubt that the work can be completed for the balance then unpaid.
- (e) Damage to another CONTRACTOR or the OWNER'S facilities.
- (f) Performance of work in violation of the terms of the CONTRACT DOCUMENTS.
- (g) Where work on unit price items are substantially complete but lack cleanup and/or corrections ordered by the ENGINEER, amounts shall be deducted from unit prices in partial payment estimates to amply cover such clean-up and/or corrections.

When the above grounds are removed, payment shall be made for amounts withheld because of them.

9. Sanitary Facilities - All necessary temporary sanitary facilities shall be provided for by the Prime

Contractor(s) and shall meet with current requirements of the State Environmental Protection Agency. After the completion of the work, all temporary sanitary facilities shall be properly disposed of by the Prime Contractor(s).

10. Final Inspection - Final inspection of the work shall be made for the OWNER by the ENGINEER in collaboration with the Representatives for the funding agencies. Such inspection shall be made as soon as practicable after the CONTRACTOR has notified the OWNER in writing that the work is ready for such inspection.
11. Project Signs – Contract “F-1” – Water Tank Painting & Repairs shall NOT furnish signs.
12. Conflicting Requirements - Should conflicting conditions exist within the Specifications, Contract Documents, or Construction Drawings, priorities shall be established as follows:
 - a) Written Contract
 - b) Written Proposal
 - c) Advertisement for Bids
 - d) Instruction to Bidders
 - e) Special Conditions
 - f) General Conditions
 - g) Written Technical Specifications
 - h) Standard Details
 - i) Large Scale Details on Drawings
 - j) General Arrangement Details on Drawings

13. Owner's Right to Award - The OWNER shall retain the right to award or not award any or all of the Contracts covered by these Contract Documents and Specifications.
14. Owner's Right to Increase or Decrease Units - The OWNER shall retain the right to increase or decrease or eliminate up to 20% of any of the units listed in the BID submitted by the

CONTRACTOR as may be required to complete the work at any time concurrent with or following the award of the Contract.

Unit prices previously approved in original bid are acceptable for pricing changes of original bid items. However, when changes in quantities exceed 20 percent of the original bid quantity and the total dollar change of that bid item is significant, the unit price may be reviewed by the OWNER to determine if a new unit price should be negotiated for added work performed after the original contract completion date.

15. Workmen's Compensation and Insurance - Workmen's Compensation: As required by State Statutes - See Supplementary Conditions
 - a) Public Liability and Property Damage Including Vehicular Liability: As listed in General Conditions and Supplementary Conditions.
 - b) Builder's Risk or Installation Floater: Full amount of Contract Price.
16. Wage Rates - All Contractors for this project **DO NOT HAVE TO** comply with **Federal or State codes** as they apply to wages and hours - public works projects.
17. Access to Records - Representatives of the funding agencies and the State D.O.W. shall have access to work whenever it is in preparation or progress. The Comptroller General of the United States, or any authorized representative, shall have access to any books, documents, papers, and records which are pertinent to the project for the purpose of making audit, examination, excerpts, and

transcriptions thereof.

18. Time of Completion and Liquidated Damages –

Contract “F-1” – Water Tank Painting & Repairs shall be completed within **150** calendar days from date of Notice to Proceed.

Liquidated Damages shall be **\$500.00** for each calendar day any Contract remains incomplete after the Time of Contract Completion.

19. Contractor's Obligations - The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified, in accordance with the provisions of this Contract and said Specifications and in accordance with the plans and drawings covered by this Contract and any and all supplemental plans and drawings, and in accordance with the directions of the ENGINEER as given from time to time during the progress of the work. He shall furnish, erect, maintain, and remove such construction plants and such temporary works as may be required. The CONTRACTOR shall observe, comply with, and be subject to all the terms, conditions, requirements, and limitations of the Contract and Specifications, and shall do, carry on, and complete the entire work to the satisfaction of the ENGINEER and the OWNER.

20. Quantities of Estimate - Whenever the estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of the documents including the BID, they are given for use in comparing bids and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the OWNER to complete the work contemplated by this Contract, and such increase or diminution shall not give cause for claims or liability for damages.

21. Liens - Neither the final payment nor any part of the retained percentage shall become due until the Contractor, if required, shall deliver to the OWNER, a complete release of all liens arising out of this Contract or receipt in full in lien thereof, and if required in either case, an affidavit that insofar as he has knowledge or information, the releases and receipts include all the labor and materials for which a lien could be filed; but the Contractor may, if any subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Owner to indemnify him against any lien. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the OWNER all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

22. Work Reasonably Inferred But Not Particularly Delineated or Specified - The Contractor shall make a thorough examination of the site and study all drawings and specifications and all conditions relating to the erection of the work, and if any materials or labor are evidently necessary for the proper and complete execution of the work which are not specifically mentioned and included in the drawings and specifications, although reasonably inferred therefrom, unless eliminated by special mention, or if any error or inconsistency appears therein, or in the event of any doubts arising as to the true intent and meaning of the drawings or specifications, he shall report it to the ENGINEER at least five (5) days in advance of receiving the proposals. The ENGINEER will then issue an addendum containing the proper information to all Contractors not later than three (3) days prior to the time for opening of bids, to assure fair competition.

In case the Contractor fails to make such report and the ENGINEER is not otherwise advised of such doubtful matters, the Contractor is hereby made responsible for the furnishing of the

necessary labor and material reasonably inferred for any additional work involved in the correction of apparent errors or inconsistencies and in executing the true intent and meaning of the drawings and specifications as interpreted by the ENGINEER, and all such labor and material shall be provided at the Contractor's expense and under no condition will any such labor and material be allowed as an extra.

23. Limit of Liability of Owner to Contractor for Delays, Extra Cost and Damage - If, through no wrongful act or neglect of the OWNER, the Contractor is delayed, stopped, or caused extra cost or damage by injunction, court orders, judgment, or requirements of some other authority or acts beyond the control of the OWNER, he shall not be liable to the Contractor except for extension of time and payments only as reflected in application of quantities, prices, and extra work set forth in these specifications and contract. If sufficient work is otherwise available for application of Contractor's forces, the Owner will not be required to grant extension of time.
24. Requirements for Highway and Railroad Crossings and Rights-of-Way - The specifications herein concerning trenching, pipe laying, jacket pipe crossings, backfilling, maintenance during construction, protection of public, maintaining traffic, tunneling, and re-paving are subject to revision to conform to such requirements as set forth by highway and railroad specifications and such crossings and rights-of-way.
25. Delays and Cost Due to Errors and/or Changes in Lines and Grades - When the OWNER'S engineering forces make errors or changes in lines and grades that cause items of construction to be removed and replaced, the extra cost of such removal and replacement over that of correct construction shall be chargeable as an extra per terms of Article 12 of the General Conditions.

Where the Contractor's forces are delayed only due to ENGINEER'S errors or changes in not more than five in fifty cases of location of points on the whole project, errors and changes will not be above normal to be expected in the execution of the work, and no claims for extra cost due to such delay will be granted. Layout work is considered a normal portion of a construction operation in which it is considered impractical to prevent delays of some of the required labor and equipment while others are performing their portion of the operation. Excessive delay due to such causes shall be chargeable as extra work per terms of Article 12 of the General Conditions. However, to be allowable, time, labor, and equipment delayed must be reported to and approved by the ENGINEER within 24 hours. Labor and equipment must have been applied at the time of stoppage and could not have been applied to other incomplete work during the stoppage.

26. Licenses and Permits - The Owner will secure and pay for permits required for permanent structures and State Highway Encroachment Bonds. The Contractor shall obtain and pay for all other necessary licenses and permits and shall faithfully comply with all laws, ordinances and regulations, Federal, State, or local, which may be applicable to the operations to be conducted hereunder.
27. Conflict With or Damage to Existing Utilities - Insofar as location data is available to the ENGINEER, existing underground utilities (such as water lines, sewer lines, natural gas lines, and underground telephone and electrical conduits) are located on the drawings. However, due to the approximate nature of such data and information, the locations of any particular utility cannot be certified as being correct. In general, locations and elevations are approximate only. The Contractor shall obtain the services of representatives of each of the utilities involved during construction to assist in the location of existing utilities. Lines and grades of lines have been established to minimize interference with utilities as far as possible. However, it shall be the responsibility of the Contractor to determine any relocations necessary for his performance of the contract, and to pay any fees associated therewith, with no additional cost or liabilities to the OWNER.

28. Shop or Setting Drawings - See Section 01300 of Technical Specifications for further detail. Submittals **must** meet all submittal requirements set out therein or they will be returned to Contractor.
29. Work Hours Beyond Regular Hours - The Contractor shall notify the ENGINEER in writing of any scheduled work beyond regular and normal working hours at least 48 hours in advance of the work. Work performed after regular working hours and without notice to the ENGINEER, shall be considered not in conformance with the Plans and Specifications and may be removed or not paid for.
30. Excavation - All excavation shall be considered unclassified. **Rock excavation is not a separate pay item**, and shall not be cause for claim of additional compensation due to the Contractor.
31. Air and Water Acts - If the contract exceeds \$100,000 the Contractor agrees to comply with all the requirements of Section 114 of the Air Act (41 U.S.C., Section 1857 C-9) and Section 308 of the Water Act (33 U.S.C., Section 1318) relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 of the Air Act and Section 308 of the Water Act and all regulations (40CFR 15.4) and guidelines issued thereunder after the award of the contract. In so doing, the Contractor further agrees to:
- a) As a condition for the Award of Contract, to notify the OWNER of the receipt of any communication from the Environmental Protection Agency (EPA) indicating that a facility to be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities. Prompt notification is required prior to contract award.
 - b) The Contractor will include, or cause to be included, the above criteria and requirements in every nonexempt subcontract and that he will take such action as the Government may direct as a means of enforcing such provisions.
 - c) To certify that any facility to be utilized in the performance of any nonexempt contractor is not listed on the EPA List of Violating Facilities pursuant to 40 CFR 15.20 as of the date of contract award.
32. Subcontracting - The following is in addition to and in conjunction with Article 6 of the General Conditions.

Prior to the execution and delivery of the Agreement, the successful Bidder will submit to the OWNER and the ENGINEER for acceptance a list of the names of Subcontractors and such other persons and organizations (including those who are to furnish materials or equipment fabricated to a special design) proposed for those portions of the Work as to which the identity of the Subcontractors and other persons and organizations must be submitted as specified in the Contract Documents. Prior to the execution and delivery of the Agreement, the ENGINEER will notify the successful Bidder in writing if either the OWNER or the ENGINEER, after due investigation, has reasonable objection to any Subcontractor, person or organization on such list. The failure of the OWNER or the ENGINEER to make objection to any Subcontractor, person or organization on the list prior to the execution and delivery of the Agreement shall constitute an acceptance of such Subcontractor, person or organization. Acceptance of any such Subcontractor, person or organization shall not constitute a waiver of any right of the OWNER or the ENGINEER to reject defective Work, material or equipment, not in conformance with the requirements of the Contract Documents.

If, prior to the execution and delivery of the Agreement, the OWNER or the ENGINEER has reasonable objection to and refuses to accept any Subcontractor, person or organization on such list,

the successful Bidder may, prior to such execution and delivery, either (a) submit an acceptable substitute without an increase in his Bid Price or (b) withdraw his Bid and forfeit his Bid security. If, after the execution and delivery of the Agreement, the OWNER or the ENGINEER refuses to accept any Subcontractor, person or organization on such list, the CONTRACTOR will submit an acceptable substitute and the Contract Price shall be increased or decreased by the difference in cost occasioned by such substitution and appropriate Change Order shall be issued; however, no such increase in the Contract Price shall be allowed in respect of any substitutions unless the CONTRACTOR has acted promptly and reasonably in submitting a name with respect thereto prior to the execution and delivery of the Agreement.

The CONTRACTOR will not employ any Subcontractor (whether initially or as a substitute) against whom the OWNER or the ENGINEER may have reasonable objection, nor will the CONTRACTOR be required to employ any Subcontractor against whom he has reasonable objection. The CONTRACTOR will not make any substitution for any Subcontractor who has been accepted by the OWNER and the ENGINEER, unless the ENGINEER determines that there is good cause for doing so.

The divisions and sections of the Specifications and the identifications of any drawings shall not control the Contractor in dividing the Work among Subcontractors or delineating the Work to be performed by any trade.

The CONTRACTOR agrees to specifically bind every Subcontractor to all of the applicable terms and conditions of the Contract Documents. Every Subcontractor, by undertaking to perform any of the Work, will thereby automatically be deemed to be bound by such terms and conditions.

All Work performed for the CONTRACTOR by a Subcontractor shall be pursuant to an appropriate agreement between the CONTRACTOR and the Subcontractor which shall contain provisions that waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by insurance provided in accordance with the General Conditions; except such rights as they may have to the proceeds of such insurance held by the OWNER as trustee under the General Conditions. The CONTRACTOR will pay each Subcontractor a just share of any insurance moneys received by the CONTRACTOR under the General Conditions.

33. Materials, Equipment and Labor; Substitute Material or Equipment - The following is in addition to and in conjunction with Article 6 of the General Conditions.

All materials and equipment will be new. If required by the ENGINEER, the CONTRACTOR will furnish satisfactory evidence as to the kind and quality of materials and equipment.

If it is indicated in the Specifications that the CONTRACTOR may furnish or use a substitute that is equal to any material or equipment specified, and if the CONTRACTOR wishes to furnish or use a proposed substitute, he will, promptly after the award of the contract, make written application to the ENGINEER for approval of such a substitute certifying in writing that the proposed substitute will perform adequately the duties imposed by the general design, be similar and of equal substance to that specified by the general design, be similar and of equal substance to that specified and be suited to the same use and capable of performing the same function as that specified. No substitute shall be ordered or installed without the written approval of the ENGINEER who shall be the judge of equality.

34. Availability of Lands, Physical and Subsurface Conditions; Reference Points - The following is in addition to and in conjunction with Article 4 of the General Conditions.

The OWNER will provide, as indicated in the Contract Documents and not later than the date when needed by the CONTRACTOR, the lands upon which the Work is to be done, rights-of-way for access thereto, and such other lands which are designated for the use of the CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be secured and paid for by the OWNER, unless otherwise specified in the Contract Documents. If the CONTRACTOR believes that any delay in the OWNER'S furnishing these lands or providing such easements entitles him to an extension of the Contract Time, he may make a claim therefore as provided in the General Conditions. The CONTRACTOR will provide all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

The OWNER will, upon request, furnish to the CONTRACTOR copies of all available boundary surveys and subsurface tests.

The CONTRACTOR will promptly notify the OWNER and ENGINEER in writing of any subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents. The ENGINEER will promptly investigate those conditions and advise the OWNER in writing if further surveys or subsurface tests are necessary. Promptly thereafter, the OWNER will obtain the necessary additional surveys and tests and furnish copies to the ENGINEER and the CONTRACTOR. If the ENGINEER finds that the results of such surveys or tests indicate subsurface or latent physical conditions differing significantly from those indicated in the Contract Documents, a Change Order shall be issued incorporating the necessary revisions.

The OWNER will establish such general reference points as in his judgment will enable the CONTRACTOR to proceed with the Work. The CONTRACTOR will be responsible for the layout of the Work and will protect and preserve the established reference points and will make no changes or relocations without the prior written approval of the OWNER. He will report to the ENGINEER whenever any reference point is lost or destroyed or requires relocation because of

necessary changes in grades or locations. The CONTRACTOR will replace and accurately relocate all reference points so lost, destroyed or moved.

35. Substantial Completion - Prior to final payment, the CONTRACTOR shall, in writing to the OWNER and the ENGINEER, certify that the entire Project is substantially complete and request that the ENGINEER issue a certificate of Substantial Completion. Within a reasonable time thereafter, the OWNER, CONTRACTOR AND ENGINEER will make an inspection of the Project to determine the status of completion. If the ENGINEER considers the Project substantially complete, he will prepare and deliver to the OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion and the responsibilities between the OWNER and the CONTRACTOR for maintenance, heat and utilities. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment, and the certificate shall fix the time within which such items shall be completed or corrected, said time to be within the Contract Time. The OWNER shall have seven days after receipt of the tentative certificate during which he shall make written objection to the ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, the ENGINEER concludes that the Project is not substantially complete, he shall notify the CONTRACTOR in writing, stating his reasons therefore. If, after said seven days and after consideration of the OWNER'S objections, the ENGINEER considers the Project substantially complete, he will execute and deliver to the OWNER and the CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as he believes justified after consideration of any objections from the OWNER.

The OWNER shall have the right to exclude the CONTRACTOR from the Project after the date of Substantial Completion, but the OWNER may allow the CONTRACTOR reasonable access to complete or correct items on the tentative list.

36. Cleaning Up - The CONTRACTOR will keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work, and at the completion of the Work he will remove all waste materials, rubbish and debris from and about the premises as well as tools, construction equipment and machinery, and surplus materials, and will leave the site clean and ready for occupancy by the OWNER. The CONTRACTOR will restore to their original condition those portions of the site not designated for alteration by the Contract Documents. Also see paragraph 7 of these Special Conditions pertaining to clean-up.

37. Miscellaneous - Whenever any provisions of the Contract Documents requires the giving of written notice it shall be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to him who gives the notice.

The duties and obligations imposed by the General Conditions and the rights and remedies available hereunder, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon the CONTRACTOR and the rights and remedies available to the OWNER and ENGINEER thereunder, shall be in addition to and not a limitation of any otherwise imposed or available by law, by special guarantee or other provisions of the Contract Documents.

Should the OWNER or the CONTRACTOR suffer injury or damage to its person or property because of any error, omission or act of the other or of any of his employees or agents or others for whose acts he is legally liable, claim shall be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The Contract Documents shall be governed by the law of the place of the Project.

38. Safety and Health Regulations - The Contractor shall comply with the Department of Labor Safety and Health Act of 1970 (P.L. 91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (P.L. 91-54).

39. Siltation and Soil Erosion - The Contractor shall make every effort possible to assure a minimum amount of siltation and erosion will occur on the job site during construction.

40. Permanent Reference Points, Bench Marks, and Property Markers - The CONTRACTOR alone will be responsible for the protection and preservation of all permanent reference points, permanent bench marks, property corners, and property line points. The CONTRACTOR will make no changes or relocations without the written approval from the OWNER. The CONTRACTOR will report to the ENGINEER whenever any reference point, etc., is lost, damaged or destroyed or requires relocation and/or establishment of temporary points for relocation of said permanent point. The CONTRACTOR will have a registered land surveyor replace and accurately relocate all permanent points so lost, damaged, destroyed, or moved. The re-establishment of any said point shall be considered incidental to the cost of construction and therefore at no additional cost to the OWNER.

41. Existing Utilities - Also see Technical Specifications, Section 02220. Special precautions shall be taken by the Contractor to avoid damage to existing overhead and underground utilities owned and operated by the Owner or by public or private utility companies. The available information concerning the location of existing underground utilities is shown on the Drawings. While it is believed that the locations shown are reasonably correct, neither

the Engineer nor the Owner can guarantee the accuracy or adequacy of this information.

Before proceeding with the Work, the Contractor shall confer with all public or private companies, agencies, or departments that own and operate utilities in the vicinity of the Construction Work. The purpose of the conference, or conferences, shall be to notify said companies, agencies, or departments of the proposed construction schedule, verify the location of and possible interference with the existing utilities that are shown on the Drawings, arrange for necessary suspension of service, and make arrangements to locate and avoid interference with all utilities (including house connections) that are not shown on the Drawings. The Engineer and Owner have no objection to the Contractor arranging for the said utility companies, agencies, or departments to locate and uncover their own utilities; however, the Contractor shall bear the entire responsibility and cost for locating and avoiding, or repairing damage to said existing utilities.

Where existing utilities or appurtenant structures, either underground or above-ground, are encountered, they shall not be displaced or disturbed unless necessary, and in such case shall be replaced in as good or better condition than found as quickly as possible. Relocation and/or replacement of all utilities and appurtenant structures to accommodate the construction work shall be at the Contractor's expense, unless such relocation and/or replacement is by statute or agreement the responsibility of the owner of the utility.

Where a sewer line is to be installed within 18 inches vertically or 10 feet horizontally of a water line, that section of the sewer line shall be encased in concrete, according to the requirements of Paragraph 3.10 B, Section 02700.

A list of the utility companies which service the project area are on the cover sheet of the drawings. The utilities are not limited to those on said list.

42. Coordination - All Contractors are advised that various Contracts will be awarded simultaneously with their Contracts. It is imperative that the various Contractors coordinate its activities and cooperate with the other Contractors to assure expedient completion of the Project. Any conflicts should be brought to the attention of the Engineer.
43. **Coordination with Owner – Painting Contractor MUST Coordinate draining and filling and flushing tanks.**
44. Care of Shrubbery - Reasonable care shall be taken during construction to avoid damage to vegetation. Ornamental shrubbery and tree branches shall be temporarily tied back, where appropriate, to minimize damage. Trees which receive damage to branches shall be trimmed of those branches to improve the appearance of the tree. Tree trunks receiving damage from equipment shall be treated with a tree dressing.
45. Water for Testing and Disinfecting Purposes - Where water is required for flushing or testing of water lines and flushing sewer lines, the Contractor shall be responsible for all costs of said water. In the case where test water is to be purchased, the Contractor shall arrange for the purchase and shall pay all costs associated with the purchase including tap fee if applicable. The rate for purchase of water for this project shall be \$4.50/1000 gallons and verified by ENGINEER.

SECTION 5

TECHNICAL SPECIFICATIONS

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TECHNICAL SPECIFICATIONS

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SECTION 01010

GENERAL REQUIREMENTS

PART 1 - GENERAL

1.0 WORK COVERED BY CONTRACT DOCUMENTS

1.1 SCOPE

Division 1 - General Requirements shall apply to all Divisions of the Specifications. Any conflict shall be called to the attention of the Engineer for clarification and ruling.

1.2 GENERAL DESCRIPTION

A. These specifications and drawings accompanying them describe the work to be done and the materials to be furnished for installation of all specified work, on **Contract No. "F-1" – Water Tank Painting & Repairs.**

B. By submission of his bid, the Contractor acknowledges that he has acquainted himself with all conditions which may affect the work as would be evident from a thorough investigation of the job site, and these specifications covering the work for the purpose of coordinating his work and cost, and agrees that the Owner will not be held liable for any additional costs incurred by the Contractor for causes or conditions which could or should have been determined by such an investigation.

1.3 MANAGER'S NAME AND PHONE NUMBER

Mr. Sherman "Randy" McDaniel
Big Sandy Water District
18200 S.R. No. 3
Catlettsburg, KY 41129
(606) 928-2075

1.4 The Drawings and Specifications are intended to be fully explanatory, however, should anything be shown, indicated or specified on one and not the other, it shall be done the same as if shown, indicated or specified in both.

1.5 It shall be the responsibility of all Contractors and subcontractors to carefully examine all Drawings, Specifications and Contract Documents pertaining to all phases of the construction in order that Contractor and Subcontractors may foresee all requirements for coordination of their work. Submission of a bid shall be construed as evidence that such an examination has been made. Claims based on unforeseen requirements will not be considered.

- 1.6 Should any error or inconsistency appear in Drawings or Specifications, the Contractor, before proceeding with the work, must make mention of the same to the Engineer for proper adjustment, and in no case proceed with the work in uncertainty or with insufficient drawings.
- 1.7 Contractors shall follow sizes in specifications or figures on drawings, in preference to scale measurements and follow detail drawings in preference to general drawings.
- 1.8 Where it is obvious that a drawing illustrates only a part of a given work or of a number of items, the remainder shall be deemed repetitious and so constructed.

PART 2 - SCOPE OF WORK

2.1 WORK COVERED BY CONTRACT DOCUMENTS

2.2 GENERAL

- A. The work to be performed consists of furnishing all materials, labor, equipment and the execution of all operations necessary for the completion of **Contract No. "F-1" – Water Tank Painting & Repairs**.

The major items of work include but are not limited to:

1. Construction of Water Distribution System Expansions, **Contract No. "F-1" – Water Tank Painting & Repairs** and appurtenances. All miscellaneous items of work shown by the drawings and/or described in the specifications.

2.3 CONTRACTS

2.4 NOTICE AND SERVICE THEREOF

- A. Any notice to the Contractor from the Owner relative to any part of this Contract, shall be in writing and considered delivered and the service thereof completed, when such notice is posted, by mail, to the Contractor at his last given address, or delivered in person to the Contractor or his authorized representative on the work site.

2.5 DIVISION OF SPECIFICATIONS

Division of specifications into sections is done for convenience of reference and is not intended to control Contractors in dividing work among subcontractors or to limit scope of work performed by any trade under any given section.

2.6 CONFLICTS

- A. If and when doubt exists in the mind of the Bidder as to the true meaning of any part of the Bidding Documents, the Bidder shall request interpretation thereof in accordance with the Instructions to Bidders. Alleged "answers by telephone" will not be adjudged as legitimate interpretations of conflicting information. Official interpretations shall be by Addendum only, within the time frame indicated in the Instructions to Bidders and/or the individual sections of the Specifications.
- B. If a conflict occurs in or between bidding documents regarding methods of performing the work or the material required, and the Bidder does not obtain a written decision (official Addendum) with respect thereto prior to submitting his proposal, he shall be deemed to have bid upon the more expensive way of doing the work and the better quality of material. If the Owner and/or Engineer later elects to use the less expensive method, less expensive quality or less quantity of material the Owner shall receive a suitable credit.
- C. Refer to the General Conditions and Special Conditions for Contract requirements.
- D. The intent of the contract documents is to include all items necessary for the proper execution and completion of the work. Anything called for in the specifications and not shown on the drawings or shown on the drawings and not called for in the specifications, shall be included in the Contractor's work, the same as if included in both. In the event of a doubt arising as to the true intent and meaning of the drawings and specifications, the Contractor shall report it at once to the Engineer. The Engineer shall furnish, with reasonable promptness, additional instructions, by means of drawings or otherwise, necessary for the proper execution of the work. All such drawings and instructions shall be consistent with the contract documents, true developments thereof and reasonably inferable therefrom. The work shall be executed in conformity therewith and the Contractor shall do no work without proper drawings and instructions. In case of conflicts between the various contract documents, the order of precedence will be set out in Special Conditions at paragraph 12.
- E. The Contractor shall make a thorough examination of the site and study all drawings and specifications and all conditions relating to the erection of the work. Materials or labor evidently necessary for the proper and complete execution of the work, which are not specifically mentioned although reasonably inferred therefrom, shall be included in the work.

2.7 BENEFICIAL USAGE (SUBSTANTIAL COMPLETION)

- A. The date of beneficial usage of the project, or a designated portion thereof, is the date where construction is sufficiently completed on the project for the use for which it is intended.
- B. Corrective work and the replacement of defective equipment or materials and the adjustment of control apparatus shall not delay the determination of beneficial usage.
- C. When the majority of the work is complete and ready for operation, but cannot be certified as substantially complete because of incomplete items impossible to complete due to weather conditions, payments will be authorized for the amount of work completed, withholding reasonable amounts to cover the incomplete work. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims, and shall not terminate the contract.
- D. When the Owner begins to use the facilities or any portion thereof, prior to contract completion, the operation, maintenance, utilities and insurance become the responsibility of the Owner.

2.8 LIQUIDATED DAMAGES

Should the Contractor fail to complete the work under his Contract and make the Project available for Beneficial Usage on or before the date stipulated for Beneficial Usage (or such later date as may result from extensions in the Contract Time granted by the Owner), the Contractor agrees that the Owner is entitled to, and shall pay the Owner, as liquidated damages, the sum of **Five Hundred Dollars (\$500.00) for each consecutive calendar day until Beneficial Usage (Substantial Completion) is reached as described herein.**

2.9 SUBSTITUTION - MATERIALS AND EQUIPMENT

- A. Substitution of major equipment and materials previously submitted by the Contractor and reviewed by the Engineer will be considered only for the following reasons:
 - 1. Unavailability of the material or equipment due to conditions beyond the control of the supplier.
 - 2. Inability of the supplier to meet contract schedule.
 - 3. Technical noncompliance to specifications.
- B. Substitution of other equipment and materials named in the specifications

will be considered, provided the proposed substitution will perform adequately the functions called for by the general design, be similar and of equal substance to that specified and be suited to the same use and capable of performing the same function of that specified. The burden for proving equality is that of the Contractor.

C. Inclusion of a certain make or type of materials or equipment in the Contractor's estimate shall not obligate the Owner to accept such material or equipment if it does not meet the requirements of the plans and specifications.

D. Also, see Section 01600.

PART 3 - CONTRACTOR USE OF PREMISES

3.1 RELEASE OF SITE

A. All access to the site shall be as defined by the Owner.

B. Contractor shall insure that no hazardous situations exist at the site during working hours or are left during non-working hours.

3.2 SCHEDULING OF WORK

A. The work shall be scheduled so the project can be put into service at the earliest possible date.

B. All work shall be completed within time limits established in other portions of the Contract Documents.

END OF SECTION

SECTION 01060

REGULATORY REQUIREMENTS

1.0 CODES

All construction work shall be done in strict accordance with the latest edition of the Kentucky Building Code, National Electrical Code (NEC) and supplements, the requirements of the local electrical utility company, local codes, and as specified herein. All work shall be performed by skilled workmen in a neat manner and all equipment shall be cleaned before final acceptance. A partial list of codes is as follows:

- Kentucky Building Code
- City and/or County Building Inspector
- National and Local Electrical Codes
- National Fire Protection Association (NFPA)
- State Fire Marshal
- Local Fire Marshal
- Standards of Safety
- O.S.H.A.
- KY Division of Water

END OF SECTION

SECTION 01070

ABBREVIATIONS AND SYMBOLS

PART 1 - GENERAL

1.1. REQUIREMENTS INCLUDED

Where any of the following abbreviations are used in the Contract Documents, they shall have the meaning set forth as follows.

1.2. QUALITY ASSURANCE

- A. For the products or workmanship specified by association, trade, or Federal Standards comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. The date of the standard is that in effect as of the Bid date, or date of Owner-Contractor Agreement when there are no bids, except when a specific date is specified.
- C. When required by individual Specifications section, obtain a copy of standard. Maintain a copy at job site during submittals, planning and progress of the specific work, until Substantial Completion.

1.3. SCHEDULE OF REFERENCES

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AFBMA	Anti-Friction Bearing Manufacturers Association.
AGA	American Gas Association
AGMA	American Gear Manufacturers Association
IEEE	Institute of Electrical and Electronic Engineers, Inc.
AISC	American Institute of Steel Construction
AMCA	Air Moving and Conditioning Association
ANS	American National Standards Institute

API	American Petroleum Institute
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
CS	Commercial Standard
IBR	Institute of Boiler and Radiator Manufacturers
IPS	Iron Pipe Size
JIC	Joint Industry Conference Standards
KDOH	Kentucky Department of Highways
NBS	National Bureau of Standards
NEC	National Electrical Code; latest edition
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
SMACNA	Sheet Metal and Air Conditioning Contractors National Association, Inc.
Fed.	Federal Specifications issued by the Federal Supply Spec. Service of the General Services Administration, Washington, D.C.
125lb ANS	American National Standard for Cast-Iron Pipe
150lb ANS	Flanges and Flanged Fittings, Designation B16.1-1975, for the appropriate class
AWG	American or Brown and Sharpe Wire Gage

NPT	National Pipe Thread
OS&Y	Outside screw and yoke
Stl.Wg	U. S. Steel Wire, Washburn and Moen, American Steel and Wire or Roebling Gage
UL	Underwriters' Laboratories
USS	United States Standard Gage
WOG	Water, Oil, Gas
WSP	Working Steam Pressure

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

NOT USED.

END OF SECTION

SECTION 01090

REFERENCE STANDARDS

PART 1 - GENERAL

1.1. QUALITY ASSURANCE

- A. For Products or workmanship specified by association, trade, or Federal Standards comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Material shall bear Underwriters' Laboratories label where such a standard has been established and listed by Underwriters' Laboratories, Inc. All materials, equipment and appliances shall conform to requirements of standards referenced here.
- C. Conform to reference standard by date of issue current on date of Contract Documents.
- D. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
- E. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.2. SCHEDULE OF REFERENCES

- ACI American Concrete Institute
Box 19150
Reford Station
Detroit, MI 48219
- AGC Associated General Contractors of America
1957 E Street, N.W.
Washington, DC 20006
- AITC American Institute of Timber Construction
333 W. Hampden Avenue
Englewood, CO 80110
- ANSI American National Standards Institute
1430 Broadway
New York, NY 10018

ASTM American Society for Testing and Materials
1916 Race Street
Philadelphia, PA 19103

CDA Copper Development Association
57th Floor, Chrysler Building
405 Lexington Avenue
New York, NY 10174

CRSI Concrete Reinforcing Steel Institute
933 Plum Grove Road
Schaumburg, IL 60195

FCC Federal Communications Commission
DOT, M443.2
Utilization and Storage Section
Washington, DC 20590

FM Factory Mutual System
1151 Boston-Providence Turnpike
Norwood, MA 02062

IEEE Institute of Electrical and Electronics Engineers
345 East 47th Street
New York, NY 10017

NEMA National Electrical Manufacturers' Association
2101 L Street, N.W.
Washington, DC 20037

NFPA National Fire Protection Association
1619 Massachusetts Avenue, N.W.
Washington, DC 20036

PCA Portland Cement Association
5420 Old Orchard Road
Skokie, IL 60077

REA Rural Electrification Administration
USDA-REA-ASD
Room 0180
ATTN: Publications
14th and Independence Avenue, S.W.
Washington, DC 20250

UL Underwriters' Laboratories, Inc.
333 Pfingston Road
Northbrook, IL 60062

PART 2 - REFERENCED STANDARDS

All work performed in connection with this contract shall be in accordance with the latest version of the following standards:

Occupational Safety and Health Administration (OSHA)

Applicable Telecommunications Standards

National Fire Protection Association

National Electrical Code (NEC)

National Electrical Safety Code (NESC)

Federal Communications Commission

National Telecommunications and Information Administration

Electronics Industries Association (EIA)

American National Standards Institute

Rural Electrification Administration

PART 3 - EXECUTION

NOT USED.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.1. WORK INCLUDED

Shop drawings, descriptive literature, project data and samples (when samples are specifically requested) for all manufactured or fabricated items shall be submitted by the Contractor to the Engineer for examination and review in the form and in the manner required by the Engineer. All submittals shall be furnished as set out in paragraph 1.5 hereinafter and shall be checked and reviewed and stamped and signed as approved by the Contractor before submission to the Engineer. The review of the Drawings by the Engineer shall not be construed as a complete check, but will indicate only that the general method of construction and detailing is satisfactory. Review of such drawings will not relieve the Contractor of the responsibility for any errors which may exist, as the Contractor shall be responsible for the dimensions and design of adequate connections, details, and satisfactory construction of all work.

1.2. RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. General Conditions.
- B. Section 01720 - Project Record Documents (As Builts).

1.3. DEFINITIONS

The term "submittals" shall mean shop drawings, manufacturer's drawings, catalog sheets, brochures, descriptive literature, diagrams, schedules, calculations, material lists, performance charts, test reports, office and field samples, and items of similar nature which are normally submitted for the Engineer's review for conformance with the design concept and compliance with the Contract Documents.

1.4. GENERAL CONDITIONS

Review by the Engineer of shop drawings or submittals of material and equipment shall not relieve the Contractor from the responsibilities of furnishing same of proper dimension, size, quality, quantity, materials, and all performance characteristics to efficiently perform the requirements and intent of the Contract Documents. Review shall not relieve the Contractor from the responsibility for errors of any kind on the shop drawings. Review is intended only to assure conformance with the design concept of the Project and compliance with the information given in the Contract Documents.

Review of shop drawings shall not be construed as releasing the Contractor from the responsibility of complying with the Specifications.

1.5. GENERAL REQUIREMENTS FOR SUBMITTALS

A. Shop Drawings

1. Shop drawings shall be prepared by a qualified detailer. Details shall be identified by reference to sheet and detail numbers shown on Contract Drawings. Where applicable, show fabrication, layout, setting, and erection details.
2. Shop drawings are defined as original drawings prepared by the Contractor, subcontractors, suppliers, or distributors performing work under this Contract. Shop drawings illustrate some portion of the work and show fabrication, layout, setting, or erection details of equipment, materials, and components. The Contractor shall, except as otherwise noted, have prepared the number of reviewed copies required for contractor distribution plus three (3), which will be retained by the Engineer. Shop drawings shall be folded to an approximate size of 8-1/2" x 11" and in such manner that the title block will be located in the lower right-hand corner of the exposed surface.

- B. Project data shall include manufacturer's standard schematic drawings modified to delete information which is not applicable to the Project, and shall be supplemented to provide additional information applicable to the Project. Each copy of descriptive literature shall be clearly marked to identify pertinent information as it applies to the Project.
- C. Where samples are required, they shall be adequate to illustrate materials, equipment, or workmanship, and to establish standards by which completed work is judged. Provide sufficient size and quantity to clearly illustrate functional characteristics of product and material, with integrally related parts and attachment devices, along with a full range of color samples.
- D. All submittals shall be referenced to the applicable item, section, and division of the Specifications, and to the applicable Drawing(s) or Drawing schedule(s). All submittals shall bear the Engineer's project code as noted in the upper right corner of this sheet.

- E. The Contractor shall review and check submittals. Including those of any subcontractor(s) and shall indicate his review and approval by placing and executing the following on all shop drawings:

This shop drawing has been reviewed by [Name of Contractor] and approved with respect to the mean, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incidental thereto. [Name of Contractor] also warrants that this shop drawing complies with contract documents and comprises no variation thereto.

By _____
Date _____

- F. If the submittals deviate from the Contract Drawings and/or Specifications, the Contractor shall advise the Engineer, in letter of transmittal of the deviation and the reasons therefore. All changes shall be clearly marked on the submittal with a bold red mark. Any additional costs for modifications shall be borne by the Contractor.
- G. In the event the Engineer does not specifically reject the use of material or equipment at variance to that which is shown on the Drawings or specified, the Contractor shall, at no additional expense to the Owner, and using methods reviewed by the Engineer, make any changes to structures, piping, controls, electrical work, mechanical work etc., that may be necessary to accommodate this equipment or material. Should equipment other than that on which design drawings are based be accepted by the Engineers, shop drawings shall be submitted detailing all modification work and equipment changes made necessary by the substituted items.
- H. Additional information on particular items, such as special drawings, schedules, calculations, performance curves, and material details, shall be provided when specifically requested in the technical Specifications.
- I. Submittals for all electrically operated items (including instrumentation and controls) shall include complete wiring diagrams showing leads, runs, number of wires, wire size, color coding, all terminations and connections, and coordination with related equipment.
- J. Equipment shop drawings shall indicate all factory or shop paint coatings applied by suppliers, manufacturers, and fabricators; the Contractor shall be responsible for ensuring the compatibility of such coatings with the field-applied paint products and systems.

- K. Fastener specifications of manufacturer shall be indicated on equipment shop drawings.
- L. Where manufacturers' brand names are given in the Specifications for building and construction materials and products, such as grout, bonding compounds, curing compounds, masonry cleaners, waterproofing solutions, and similar products, the Contractor shall submit names and descriptive literature of such materials and products he proposes to use in this Contract.
- M. No material shall be fabricated or shipped unless the applicable drawings or submittals have been reviewed by the Engineer and returned to the Contractor.
- N. All bulletins, brochures, instructions, parts lists, and warranties packaged with and accompanying materials and products delivered to and installed in the Project shall be saved and transmitted to the Owner through the Engineer.

1.6. CONTRACTOR RESPONSIBILITIES

- A. Verify field measurements, field construction criteria, catalog numbers, and similar data.
- B. Coordinate each submittal with requirements of Work and of Contract Documents.
- C. Notify Engineer, in writing at time of submission, of deviation in submittals from requirement of Contract Documents.
- D. Begin no work, and have no material or products fabricated or shipped which require submittals until return of submittals with Engineer's stamp and initials or signature indicating review.

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

NOT USED.

END OF SECTION

SECTION 01420
INSPECTION SERVICES

PART 1 - TEST AND INSPECTION

1.1. GENERAL

- A. The Engineer shall be notified forty-eight (48) hours in advance when Painting or repairs are to take place. Failing to comply with the above-mentioned notice, this Contractor may be required to add additional coatings. This Contractor shall provide these services without charge.
- B. Before requesting a final inspection, this Contractor shall inspect the installation to assure that the job is complete in every detail and that all requirements of the Contract Documents have been fulfilled.
- C. A punch list inspection shall be scheduled by this Contractor with the Engineer or his representative present.

PART 2 – PRODUCTS – See Painting Specification – 09900

PART 3 - EXECUTION

NOT USED.

END OF SECTION

SECTION 01440

CONTRACTOR QUALITY CONTROL

PART 1 - GENERAL

1.1. WORK INCLUDED

- A. The General Contractor shall set forth for immediate execution a detailed and well organized quality control plan and implementation program.

1.2. CODES, STANDARDS AND INDUSTRY SPECIFICATIONS

- A. Material or operations specified by reference to published specifications of a manufacturer, testing agency, society, association or other published standards shall comply with requirements in latest revisions thereof and amendments or supplements thereto in effect on date of (Advertisement for Bids).
- B. Discrepancies between referenced codes, standards, specifications and Contract Documents shall be governed by the latter unless written interpretation is obtained from Engineer.
- C. Material or work specified by reference to conform to a standard, code, law or regulation shall be governed by Contract Documents when they exceed requirements of such references; referenced standards shall govern when they exceed Contract Documents.
- D. Proof of Compliance

Whenever Contract Documents require that a project be in accordance with Federal Specification, ASTM designation, ANSI specification, or other association standard, at Engineer request, Contractor shall present an affidavit from manufacturer certifying that product complies therewith. Where requested or specified, submit supporting test data to substantiate.

E. PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices and/or lump-sum prices contained in the Bidding Schedule.

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices and/or lump-sum prices

contained in the Bidding Schedule.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

3.1. GENERAL

The General Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract. The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both on-site and off-site, and shall be keyed to the proposed construction sequence.

3.2. QUALITY CONTROL PLAN

A. General

The General Contractor shall furnish for review by the Engineer and Owner not later than 30 days after receipt of notice to proceed, a Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract. The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The Engineer will consider an interim plan for the first 30 days of operation.

B. Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Engineer/Owner reserves the right to require the Contractor to make changes in his CQC plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.3. SUBMITTALS

Submittals shall be as specified in Section 01300 SUBMITTAL. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

3.4. CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. The controls shall be adequate to cover all construction operations, including both on-site and off-site fabrication, and will be keyed to the proposed construction sequence.

3.5. TESTS

A. Testing Procedure

The Contractor shall perform tests specified or required to verify that control measures are adequate to provide a product which conforms to contract requirements. Testing includes operation and/or acceptance tests when specified. A list of tests to be performed shall be furnished as a part of the CQC plan. The list shall give the test name, frequency, specification paragraph containing the test requirements, the personnel and laboratory responsible for each type of test, and an estimate of the number of tests required. The Contractor shall perform the following activities and record and provide the following data:

1. Verify that testing procedures comply with contract requirements.
2. Verify that facilities and testing equipment are available and comply with testing standards.
3. Check test instrument calibration data against certified standards.
4. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
5. Results of all tests taken, both passing and failing tests, will be recorded on the Quality Control report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test will be given. Actual test reports may be submitted later, if approved by the Engineer, with a reference to the test number and date taken. An information copy of tests performed by an off-site or commercial test facility will be provided directly to the Engineer. Failure to submit timely test reports, as stated, may result in nonpayment for related work performed and disapproval of the test facility for this contract.

B. Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials will be borne by the Contractor.

3.6. COMPLETION INSPECTION

At the completion of all work or any increment thereof established by a completion time, the Contractor shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved plans and specifications. Such a list of deficiencies shall be included in the CQC documentation, and shall include the estimated date by which the deficiencies will be corrected. The Contractor shall make a second inspection to ascertain that all deficiencies have been corrected and so notify the Engineer. These inspections and any deficiency corrections required by this paragraph will be accomplished within the time stated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

3.7. DOCUMENTATION

The Contractor shall maintain current records of quality control operations, activities, and tests performed, including the work of subcontractors and suppliers. These records shall be on an acceptable form and shall include factual evidence that required quality control activities and/or tests have been performed, including but not limited to the following:

- A. Contractor/subcontractor and their area of responsibility.
- B. Operating plant/equipment with hours worked, idle, or down for repair.
- C. Work performed today, giving location, description, and by whom.
- D. Test and/or control activities performed with results and references to specifications/plan requirements.
- E. Material received with statement as to its acceptability and storage.
- F. Identify submittals reviewed, with contract reference, by whom, and action taken.
- G. Off-site surveillance activities, including actions taken.
- H. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- I. List instructions given/received and conflicts in plans and/or specifications.
- J. Contractor's verification statement.
- K. These records shall indicate a description of trades working on the project;

the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Engineer weekly within 20 hours after the date(s) covered by the report, except that reports need not be submitted for days on which no work is performed. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the Contractor. The report from the Contractor shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.8. SAMPLE FORMS

Sample forms for Daily Construction Quality Control Report and Deficiency shall be provided by the General Contractor and submitted to Engineer for acceptance.

END OF SECTION

SECTION 01700
PROJECT CLOSEOUT

PART 1 - GENERAL

1.1. RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Liquidated Damages: BID PROPOSAL, AGREEMENT AND GENERAL CONDITIONS
- B. Cleaning: Section 01710
- C. Project Record Documents: Section 01720

1.2. SUBSTANTIAL COMPLETION

- A. Contractor:
 - 1. Submit written certification to Engineer that Project is substantially complete.
 - 2. Submit list of items to be completed or corrected.
- B. Engineer will make an inspection within seven days after receipt of certification, together with Owner's and Contractor's Representatives.
- C. Should Engineer consider the project substantially complete:
 - 1. Contractor shall prepare and submit to Engineer a list of items to be completed or corrected, as determined by the inspection.
 - 2. Engineer will prepare and issue a Certificate of Substantial Completion containing:
 - a. Date of Substantial Completion.
 - b. Contractor's list of items to be completed or corrected, verified and/or amended by Engineer.
 - c. The time within which Contractor shall complete or correct work of listed items.
 - d. Time and date Owner will assume possession of project or designated portion thereof.
 - e. Responsibilities of Owner and Contractor for:
 - i. Insurance
 - ii. Utilities
 - iii. Operation of mechanical, electrical, and other systems
 - iv. Maintenance and cleaning
 - v. Security

- f. Signatures of:
 - i. Contractor
 - ii. Engineer
 - iii. Owner
- 3. Owner occupancy of Project or Designated Portion of Project:
 - a. Contractor shall:
 - i. Obtain certificate of occupancy.
 - ii. Perform final cleaning in accordance with Section 01710.
 - b. Owner will occupy Project under provisions stated in Certificate of Substantial Completion.
- 4. Contractor: Complete work listed for completion or correction, within designated time.
- D. Should Engineer consider that work is not substantially complete:
 - 1. He shall immediately notify Contractor, in writing, stating reasons.
 - 2. Contractor: Complete work, and send second written notice to Engineer, certifying that Project, or designated portion of Project is substantially complete.
 - 3. Engineer and Owner will re-inspect work.

1.3. FINAL INSPECTION

- A. Contractor shall submit written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Project has been inspected for compliance with Contract Documents.
 - 3. Work has been completed in accordance with Contract Documents.
 - 4. Equipment and systems have been tested in presence of Engineer and Owner's Representative and are operational.
 - 5. Project is completed and ready for final inspection.
- B. Engineer will make final inspection within seven (7) days after receipt of certification.
- C. Should Engineer consider that work is finally complete in accordance with requirements of Contract Documents, he shall request Contractor to make Project Closeout submittals.
- D. Should Engineer consider that work is not finally complete:

1. He shall notify Contractor, in writing, stating reasons.
2. Contractor shall take immediate steps to remedy the stated deficiencies, and send second written notice to Engineer certifying that work is complete.
3. Engineer and Owner will re-inspect work.

1.4. FINAL CLEANING UP

The Work will not be considered as completed and final payment made until all final clean up has been done by the Contractor in a manner satisfactory to the Engineer and Owner. See Section 01710 for detailed requirements.

1.5. CLOSEOUT SUBMITTALS

Project Record Documents: See requirements of Section 01720.

1.6. FINAL APPLICATION FOR PAYMENT

Contractor shall submit final applications for payment in accordance with requirements of GENERAL CONDITIONS (Section 19).

1.7. FINAL CERTIFICATE FOR PAYMENT

- A. Engineer will issue final certificate in accordance with provisions of GENERAL CONDITIONS.
- B. Should final completion be materially delayed through no fault of Contractor, Engineer may issue a Semi-Final Certificate for Payment.

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

NOT USED.

END OF SECTION

SECTION 01710

CLEANING

PART 1 - GENERAL

1.1. WORK INCLUDED

- A. During its progress, the work and the adjacent areas affected thereby shall be kept cleaned up and all rubbish, surplus materials, and unneeded construction equipment shall be removed and all damage repaired so that the public and property owners will be inconvenienced as little as possible.
- B. Where material or debris has washed or flowed into or been placed in existing watercourses, ditches, gutters, drains, pipes, structures, work done under this contract, or elsewhere during the course of the Contractor's operations, such material or debris shall be entirely removed and satisfactorily disposed of during the progress of the project. The ditches, channels, drains, pipes, structures, and any other work shall, upon completion of the work, be left in a clean and neat condition.
- C. On or before the completion of the project, the Contractor shall, unless otherwise specifically directed or permitted in writing, tear down and remove all temporary buildings and structures built by him; shall remove all temporary works, tools, and machinery or other construction equipment furnished by him; shall remove, acceptably disinfect, and cover all organic matter and material containing organic in, under, and around privies, hoses and other buildings used by him; shall remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operations in a neat and satisfactory condition.
- D. The Contractor shall thoroughly clean all materials and equipment installed by him and his subcontractors, and on completion of the project shall deliver it undamaged and in fresh and new appearing conditions.
- E. The Contractor shall restore or replace, when and as directed, any public or private property damaged by his work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end the Contractor shall do as required all necessary highway or driveway, walk, and landscaping work. Suitable materials, equipment, and methods shall be used for such restoration. The restoration of existing property or structures shall be done as promptly as practicable as work progresses and shall not be left until the end of the contract period.

1.2. DESCRIPTION

A. Related Requirements Specified Elsewhere:

Project Closeout: Section 01700.

- B. On a continuous basis, maintain premises free from accumulations of waste, debris, and rubbish caused by operations.
- C. At completion of project, remove waste materials, rubbish, tools, equipment, machinery, and surplus materials, and clean all sight-exposed surfaces; leave Project clean and ready for occupancy.

1.3. SAFETY REQUIREMENTS.

A. Hazards Control:

- 1. Store volatile wastes in covered metal containers, and remove from premises daily.
- 2. Prevent accumulation of wastes which create hazardous conditions.
- 3. Provide adequate ventilation during use of volatile or noxious substances.

B. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.

- 1. Do not burn or bury rubbish and waste materials on Project site without written permission from the Owner.
- 2. Do not dispose of volatile wastes such as mineral spirits, oil, or fuel in open drainage ditches or storm or sanitary drains.
- 3. Do not dispose of wastes in streams or waterways.

PART 2 - PRODUCTS

2.1. MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.1. DURING CONSTRUCTION

- A. Execute cleaning to ensure that grounds and public properties are maintained free from accumulations of waste materials and rubbish.
- B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- C. At reasonable intervals during progress of Work, clean site and public properties, and properly dispose of waste materials, debris, and rubbish.
- D. Provide on-site containers for collection of waste materials, debris, and rubbish.
- E. Remove waste materials, debris, and rubbish from site and legally dispose of at public or private dumping areas off Owner's property.
- F. The Contractor shall thoroughly clean all materials and equipment installed.

3.2. FINAL CLEANING

- A. Employ experienced workmen, or professional cleaners, for final cleaning.
- B. The Contractor shall restore or replace existing property or structures as promptly and practicable as work progresses.

END OF SECTION

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1. WORK INCLUDED

The contractor shall obtain from the Engineer one (1) set of blueline prints of the Contract Drawings. These prints shall be kept and maintained in good condition at the project site and qualified representative of the Contractor shall enter upon these prints, from day-to-day, the actual "as built" record of the construction progress. Entries and notations shall be made in a neat and legible manner and these prints shall be delivered to the Engineer upon completion of the construction. APPROVAL FOR FINAL PAYMENT WILL BE CONTINGENT UPON COMPLIANCE WITH THIS PROVISION.

1.2. RELATED REQUIREMENTS SPECIFIED ELSEWHERE:

- A. Maintain at job site, one copy of:
 - 1. Contract Drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Reviewed Shop Drawings
 - 5. Change Orders
 - 6. Other Modifications to Contract.
- B. Store documents in approved location, apart from documents used for construction.
- C. Provide files and racks for storage of documents.
- D. Maintain documents in clean, dry, legible condition.
- E. Do not use record documents for construction purposes.
- F. Make documents available at all times for inspection by Engineer and Owner.

1.3. MARKING DEVICES

Provide colored pencil or felt-tip pen for all marking.

1.4. RECORDING

- A. Label each document "PROJECT RECORD" in 2-inch high printed letters.
- B. Keep record documents current.
- C. Do not permanently conceal any work until required information has been recorded.
- D. Contract Drawings: Legibly mark to record actual construction:
 - 1. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
 - 2. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - 3. Field changes of dimension and detail.
 - 4. Changes made by Change Order or Field Order.
 - 5. Details not on original Contract Drawings.
- E. Specifications and Addenda: Legibly mark up each Section to record:
 - 1. Manufacturer, trade name, catalog number, and supplier or each product and item of equipment actually installed.
 - 2. Changes made by Change Order or Field Order.
 - 3. Other matters not originally specified.
- F. Shop Drawings: Maintain as record documents; legibly annotate Shop Drawings to record changes made after review.

1.5. SUBMITTAL

- A. At completion of project, deliver record documents to Engineer.
- B. Accompany submittal with transmittal letter, in duplicate, containing:
 - 1. Date Project Title and Number Contractor's Name and Address
 - 2. Title and Number of each Record Document
 - 3. Certification that each Document as Submitted is Complete and Accurate
 - 4. Signature of Contractor or his authorized Representative.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED.

END OF SECTION

SECTION 01740

BASIS FOR PAYMENT
CONTRACT NO. "F-1"
WATER TANK PAINTING & REPAIRS

PART 1 - GENERAL

All payment for work done under the provisions of this contract shall be in accordance with this basis for payment for the specific items listed herein and in the proposal. The item numbers in this section correspond with the item numbers in the Bid Schedule.

Item 1 thru 7 – Sandblasting & Painting ground storage tanks

Payment for these items shall be made at the lump sum price bid for each ground storage tank and shall include all work and materials necessary for the complete work included in the Technical Specifications, including but not limited to draining, cleaning, sandblasting, priming, painting, re-filling tanks and disinfection, then flushing tanks, etc. for each tank.

The cost of all associated items such as minor repairs not specifically listed for separate payment shall be included as an incidental expense.

Item 8 – Misc. Repairs/Calking glass lined ground storage tank (U.S. 23)

Payment for this item shall be made at the lump sum price bid and shall include all work and equipment necessary for the complete repair of the existing tank, such as epoxy repairs of pitting up to bolts on interior (as called for in Liquid Engineering Report); and seal small hole in roof; and the anodes for the tank shall be replaced, etc. Including but not limited to draining the tank, if necessary, refilling the tank and disinfection and flushing the tank and return to service.

The cost of all associated items such as these minor repairs not specifically listed for separate payment shall be included as an incidental expense. **The minor repairs, are listed in the Liquid Engineering inspection reports of November 2016 included in specifications at rear of Section 09900 Painting (49 Pages).**

Item 9 thru 13 - Misc. Repairs of Rush Tank

Payment for these items shall be made at the unit price bid and shall include all work and equipment necessary for the complete repair of the existing tank. Including but not limited to draining the tank if necessary, refilling the tank and disinfection and flushing the tank and return to service.

The cost of all associated items such as minor repairs not specifically listed for separate payment shall be included as an incidental expense. **The minor repairs, are listed in the Liquid Engineering inspection reports of November 2016 included in specifications at rear of Section 09900 Painting (49 pages).**

Item 14 – Review/Inspection/Recommendation at Quarry Branch Tank

Payment for this item shall be made at the lump sum price bid and shall include all work and equipment necessary for the complete review, inspection and recommendation of repairs of the existing tank. Including but not limited to draining the tank if necessary, refilling the tank and disinfection and flushing the tank and return to service.

The cost of all associated items such as minor repairs not specifically listed for separate payment shall be included as an incidental expense. **The deficiencies, are listed in the Liquid Engineering inspection reports of November 2016 included in specifications at rear of Section 09900 Painting (49 pages).**

END OF SECTION

SECTION 09900

EXISTING STEEL POTABLE WATER STORAGE TANK COATING

PART 1 GENERAL

1.1 SUMMARY

- A. This specification covers preparation of surfaces, performance requirement of protective coatings, and completion of painting of all exterior and interior surfaces as required by the drawings and as specified herein.
- B. All materials delivered to the job site shall be in original, sealed and labeled containers of the protective coating manufacturer.

1.2 APPLICABLE STANDARDS

- A. ANSI / NSF std. 61
- B. ASTM
- C. SSPC
- D. NACE
- E. AWWA D 102-03 and D102-97
- F. The zinc dust in Series 91H20 meets the requirements of ASTM D 520 Zinc Dust Pigment and contains less than 0.002% lead by weight.

1.3 ENVIRONMENTAL CONDITIONS

- A. Coating shall be applied during good weather. Air and surface temperatures shall be within limits prescribed by the manufacturer for the coating being applied. To increase contractor productivity and to enable coating operations to continue should the substrate temperature fall below 50 degrees F., Tnemec Series 44-710 Urethane Accelerator shall be used per data sheet instructions. Work areas shall be reasonably free of airborne dust at the time of application and while drying.
- B. PreTox 2000 shall be applied as an over coating to all surfaces, interior and exterior, to minimize leachable lead levels in spent residues produced in the removal, and disposal of lead based paint. PreTox 2000 shall be applied to a thickness of 20 wet mils to all surfaces prior to paint removal. For additional technical information call 1-800-338-8296.
- C. Contractor is responsible for complying with all federal, state, and local regulations regarding handling, storage-on-site, removal from tank site, disposal of all rust, paint, and other foreign matters during surface preparation.

1.4 CONTAINMENT

- A. During the abrasive blast cleaning of the exterior the Contractor shall furnish all materials, tools, labor, equipment, engineering or other professional services necessary to design, construct, operate, and use an abrasive blast cleaning residuals containment screen.

The containment structure shall contain all fugitive dust, debris and paint over-spray within the limits of the OWNER'S property and is described as follows:

1. Enclose the tank or individual work areas with permeable wind screens supported by a cable and framing system designed by the Contractor. Open seams and entryways are permissible provided acceptable emission levels are achieved utilizing natural air flow.
2. Containment system must be designed to be detached, lowered, dismantled, etc. within one (1) hour or less for the protection of the tank and containment system.

PART 2 PRODUCTS

2.1 MATERIALS

- A. All materials specified herein are manufactured by the TNEMEC COMPANY, INC. North Kansas City, MO (technical questions contact Ted Server@859-699-1378) and are approved for use on this project.
- B. Equivalent materials of other manufacturers may be substituted on written approval of the engineer. Requests for substitution shall include manufacturer's literature for each product giving the name, generic type, descriptive information and evidence of satisfactory past performance on water tanks. Submittals shall include the following performance data as certified by a qualified testing laboratory:
 1. ASTM D 870 Potable Water Immersion
 2. ASTM D 4541 Method for Pull Off Strength of Coats using Portable Adhesion Testers
 3. Galvanic Protection Optimum Potential - 850 Millivolts
- C. In the event the Contractor submits a different paint, they shall submit a price for the base bid in order for the Owner to review cost difference for using an alternate paint.
- D. Products for each specified system shall be of a single manufacturer. Only one manufacturer shall be used on the tank project.

2.2 INTERIOR COATING SYSTEMS - POTABLE WATER STORAGE TANK - WET SURFACES

- A. Surface Preparation: To ensure optimum long-term coating system performance, surfaces must be clean, dry and free from dirt, oil, grease, salts, welding flux, mill scale, rust, oxides, corrosion by-products or foreign matter.
- B. Remove all surface imperfections that have caused premature coating system failure. Chip or scrape off weld splatter or weld slag. Grind down sharp and rough edges of weld seams to create a smooth transition.
- C. Abrasive blast surface per specification SSPC-SP10 "Near White-Metal Blast Cleaning", or per NACE Standard No. 2 to an angular profile depth of 1.0 to 2.0 mils maximum with 1.5 mils being ideal.
- D. Prime Coat: Immediately after abrasive blasting and before any rusting occurs, apply one full coat of Tnemec Series 91H20 Hydro-Zinc 2000 Zinc-Rich Primer at a dry film

- thickness of 2.5 to 3.5 mils. The suggested ideal dry film thickness is 3.0 mils. Allow for proper air ventilation to remove solvents and promote film cure during drying stage.
- E. Stripe Coat: Brush apply one full coat of Tnemec Series 20HS-1255 beige Pota-Pox (Thinned 10%) at a dry film thickness of 2.0-3.5 mils to all weld seams. Allow to cure as per data sheet before applying intermediate coat.
 - F. Intermediate Coat: Apply one full coat of Tnemec Series 20HS-1255 beige Pota-Pox to a dry film thickness of 4.0 to 6.0 mils. Allow to cure as per data sheet before applying Finish Coat. Provide adequate ventilation for tank interior to remove solvents during drying phase.
 - G. Finish Coat: Apply one full coat of Tnemec Series 20HS-15BL Tank White Pota-Pox to a dry film thickness of 4.0 to 6.0 mils. Allow to cure as per data sheet before filling tank. Provide adequate ventilation for tank interior to remove solvents during drying phase.
 - H. The least minimum total dry film thickness shall be 10.5 mils.

2.3 EXTERIOR COATING SYSTEM - POTABLE WATER STORAGE TANK - EXTERIOR SURFACES

- A. Surface Preparation: To ensure optimum long-term system performance, surfaces must be clean, dry and free from dirt, oil, grease, salts, welding flux, mill scale, rust, oxides, corrosion by-products or foreign matter.
- B. Remove all surface imperfections that have caused premature coating system failure. Chip or scrape off weld splatter & weld slag. Grind down sharp and rough edges of weld seams to create a smooth transaction.
- C. Abrasive blast surface per specification SSPC-SP 6 "Commercial Blast Cleaning" or per NACE Standard No. 3 to an angular profile depth of 1.0 to 2.0 mils maximum with 1.5 mil being ideal.
- D. Prime Coat: Immediately after abrasive blasting and before any rusting occurs, apply one full coat of Tnemec Series 91H20 Hydro-Zinc 2000 Zinc-Rich Primer at a dry film thickness of 2.5 to 3.5 mils. The suggested ideal dry film thickness is 3.0 mils. Allow to cure per data sheet before applying intermediate coat.
- E. Intermediate Coat: Apply one full coat of Tnemec Series 66HS at a dry film thickness of 2.0 to 3.0 mils. Allow to cure as per data sheet before applying finish coat. To achieve complete finish coat coverage, the intermediate coat color may be different than the specified finish coat color.
- F. Finish Coat: Apply one full coat of Tnemec Series 740 Endurashield at a dry film thickness of 2.0 to 3.0 mils. Exterior colors shall be selected by the Engineer/Owner.

PART 3 EXECUTION

3.1 FIELD INSPECTION

- A. Examine all surfaces to be coated. All skip weld seams, roof lap plate seams not welded, and gouges in plate steel shall be caulked after priming with Tnemec Series 63-1500 Filler and Surfacer.

- B. Degree of surface cleanliness and blast profile of steel surfaces shall conform to the specifications detailed in Sections 3.1 A, 3.2 A, and 4.1 A. Reference SSPC or NACE visual standards and utilize Testex Tape to verify anchor pattern.
- C. Dry film thickness readings of primer on steel surfaces shall be taken prior to the application of successive coats with a nondestructive magnetic type gauge in accordance with SSPC-PA-2. Dry film thickness of the primer shall be at least that stated in 3.1, B.
- D. Wet film thickness readings for successive coats shall be taken as soon as possible at a frequency of at least one per 100 square feet.
- E. All wet interior coated steel surfaces shall receive holiday testing with a Tinker and Razor Model M-1, or equivalent, low voltage holiday detector. Any areas failing this test shall be marked and receive an additional repair coat in accordance with 3. 1, G Interior Coating System until satisfactory test results are achieved.

3.2 ACCEPTANCE OF WORK

- A. All field surface preparation shall be approved by the Engineer before primer is applied. The Contractor shall request acceptance of each coat before applying the next coat and shall correct work that is not acceptable and request re-inspection. All rigging to remain in place, and Contractor shall aid in use of rigging for all inspections by Engineer.

3.3 CLEANING AND DISINFECTION

- A. Cleaning: After painting, remove all materials not part of the structural or operating facilities of the tank
- B. Disinfecting: After cleaning, but before placing it in service, disinfect the inside of the tank in accordance with ANSI/AWWA Standard C652-92, Section 4.3.
- C. Sampling and Testing: After the chlorination is complete and before the tank is placed in service, water from the full facility shall be sampled and tested in accordance with ANSI/AWWA Standard C652-92, Section 4.4.
- D. Chemicals and Equipment: Provide all necessary chlorine-bearing compounds, solution tank, pumps, hoses, mops and other items required for cleaning, disinfecting and flushing operations.

3.4 CLEAN UP

- A. Remove all debris and leave site in pre-project condition.

3.5 GUARANTEE

- A. A first anniversary inspection shall be conducted with the Contractor present.
- B. The Contractor shall guarantee their work for a period of one year to the extent that they shall repair any defects due to faulty workmanship or materials, which may appear on the structure during this period.

Big Sandy Water District Tanks

Cunningham Hill (40,600 gal.) 48' H x 12' D = 40,443 gallons (Calculated)

Quarry Branch (75,000 gal.) 33' H x 20' D = 77,236 gallons (Calculated)

Fuller Ridge (23,500 gal.) 28' H x 12' D = 23,592 gallons (Calculated)

Rush Hill (137,000 gal.) 72' H x 18' D = 136,497 gallons (Calculated)

Bowling Drive (216,000 gal.) 65' H x 24' D = 219,070 gallons (Calculated)

Buchanan (106,000 gal.) 47' H x 20' D = 110,003 gallons (Calculated)

U.S. 23 (300,000 gal.) steel – paint 33' H x 40' D = 308,945 gallons (Calculated)

U.S. 23 (360,000 gal.) glass lined – repair 37' H x 40' D = 346,393 gallons (Calculated)

Attached hereafter are “Field Inspection Reports” (49 Pages) prepared by Liquid Engineering in November 2016. All tanks listed above were inspected with the exception of Buchanan Tank (106,000 gallon) which was inaccessible at the time.

END OF SECTION

Steel Potable Water Reservoir Inspection Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: CUNNINGHAM HILL 75KG

Inspector: ERIK POTTER

Dive Controller: MEG BUTAK

Date: 11/14/2016

**AMERICAN WATER WORKS ASSOCIATION
ANSI/AWWA M42 / D101-53**

SSPC Legend		NACE Legend		AWS Legend	
Grade	Description	Grade	Description	Grade	Description
10	No Rusting, or <0.01% of surface is rusted	A	None	L	Satisfactory
9	Minor rusting, or <0.03% of surface is rusted	B	Uniform Surface Corrosion	M	Spatter
8	Isolated rust, <.01% of surface is rusted	C	Pitting	N	Porosity
7	Isolated rust, <.03% of surface is rusted	D	Concentration Cell Corrosion	O	Convexity / Concavity
6	Extensive rusting, <1% of surface is rusted	E	Galvanic Corrosion	P	Cracks
5	Approximately 3% of the surface is rusted	F	Stress Corrosion Cracking	Q	Inclusions
4	Approximately 10% of the surface is rusted	G	Erosion Corrosion	R	Incomplete Fusion
3	Approximately 17% of the surface is rusted	H	Intergranular Corrosion	S	Incomplete Penetration
2	Approximately 33% of the surface is rusted	I	Dealloying	T	Undercut
1	Approximately 50% of the surface is rusted			U	Underfill
0	Approximately 100% of the surface is rusted			V	Overlap
				W	Unable to evaluate

QUADRANT 1 QUADRANT 2 QUADRANT 3 QUADRANT 4

INTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	8	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	8	B	L	8	B	L	8	B	L	8	B	L
Roof Support	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Gussets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Painting Ring	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating **Good** Average Blister Diameter **NONE** Average Pit Depth **NONE**
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof weld	8	B	L	8	B	L	8	B	L	8	B	L
Lower Ring Panels	2	B,D	L	2	B,D	L	2	B,D	L	2	B,D	L
Middle Ring Panels	1	B,D,H	L	1	B,D,H	L	1	B,D,H	L	1	B,D,H	L
Upper Ring Panels	8	B	L	8	B	L	8	B	L	8	B	L
Interior Ladder	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating **Good** Average Blister Diameter **3/8"** Average Pit Depth **1/16"**
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR FLOOR

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Perimeter Weld	5	B,D	L	5	B,D	L	5	B,D	L	5	B,D	L
Floor Panels	5	B,D	L	5	B,D	L	5	B,D	L	5	B,D	L

Overall Coating Rating **Good** Average Blister Diameter **1/4"** Average Pit Depth **1/8"**
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

DISCLAIMER

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: CUNNINGHAM HILL 75KG

Inspector: ERIK POTTER

Dive Controller: MEG BUTAK

Date: 11/14/2016

QUADRANT 1	QUADRANT 2	QUADRANT 3	QUADRANT 4
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~~INTERIOR RESERVOIR SUPPORT COLUMNS~~

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Column Structures	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column Bases	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column to Roof	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating ---- Average Blister Diameter Average Pit Depth
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR PLUMBING COMPONENTS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Inlet Plumbing	8	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Outlet Plumbing	N/A	N/A	N/A	8	D	L	N/A	N/A	N/A	N/A	N/A	N/A
Manways	N/A	N/A	N/A	5	D	L	N/A	N/A	N/A	4	D	L
Floor Drains	N/A	N/A	N/A	N/A	N/A	N/A	3	D	L	N/A	N/A	N/A
Interior Overflow	N/A	N/A	N/A	8	B	L	N/A	N/A	N/A	N/A	N/A	N/A

EXTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	7	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	9	B	L	9	B	L	9	B	L	9	B	L
Access Hatches	8	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Good Average Blister Diameter NONE Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

EXTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof Weld	8	B	L	8	B	L	8	B	L	8	B	L
Lower Ring Panels	9	B	L	9	B	L	9	B	L	9	B	L
Mid Ring Panels	9	B	L	9	B	L	9	B	L	9	B	L
Upper Ring Panels	9	B	L	9	B	L	9	B	L	9	B	L
Exterior Overflow	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Good Average Blister Diameter NONE Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

FOOTINGS / FOUNDATION

Footings / Foundations: Satisfactory <input checked="" type="checkbox"/>	Cracking <input type="checkbox"/>	Spalling <input type="checkbox"/>	Erosion/Exposed Aggregate <input type="checkbox"/>
Anchor Bolts: Satisfactory <input checked="" type="checkbox"/>	Loose <input type="checkbox"/>	Rusted Corroded <input checked="" type="checkbox"/>	(If excessive) Diameter =

~~TOWER SUPPORT STRUCTURES~~

Tower Legs/Columns: Satisfactory <input type="checkbox"/>	Alignment ----	Settling ----	Rust /Corrosion ----
Riser Pipe: Satisfactory <input type="checkbox"/>	Alignment ----	Frost Casing ----	Rust /Corrosion ----
Rods & Turnbuckles: Satisfactory <input type="checkbox"/>	Turnbuckle Tension ----	Rod Tension ----	Cotter Pins/Rod Nuts ----
Leg shoes/Brackets: Satisfactory <input type="checkbox"/>	Coating ----	Rust/Corrosion ----	Pitting/Cracking ----

DISCLAIMER

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Liquid Engineering Corporation
Potable Water Reservoir Contamination, Health and Safety Report

Job Number: 50463
 Inspector: ERIK POTTER

Utility: BIG SANDY WATER DISTRICT
 Dive Controller: MEG BUTAK

Tank: CUNNINGHAM HILL 75KG
 Date: 11/14/2016

Complies With: AWWA • OSHA • ANSI • NIOSH • NAVFAC • NFPAC

CONTAMINATION & HEALTH

Air Vents	Type: MUSHROOM	#: 1	Screen Condition(s): Good	
Hatches	Type: Square	#: 1	Secured Properly: Yes	Properly Sealed: Yes
Exterior Overflow	Flapper: Yes	Screen: Yes	Gasket: Yes	Condition: Good
Cathodic Covers	In- Place: ----	#:	Gasket: ----	Properly Sealed: ----
Roof to Wall Joint	Welded: Yes	Properly Sealed: Yes		
Roof Integrity	Holes: No	Cracking: No	Standing Water: No	
Wall Integrity	Holes: No	Cracking: No		
Manway Integrity	Leaks: No	Condition: Good		
Water Clarity	General Appearance: CLEAR		Odor: NONE	
Floating Surface Debris	Type: NONE		Source: N/A	
Hypalon Floating Cover	Condition: ----	Holes: ----	Tears: ----	
Telemetry Penetrations	Properly Sealed: ----			

FACILITY SAFETY COMPLIANCE

Exterior Ladder

Overall Ladder	Condition: Good	#: 1	Offset Landing: No	Height: 48'
Vandal Guard	Present: No	Vandal Guard Locked: ----		
Ladder Rails & Rungs	Condition: Good	Missing/Damaged Rungs: No		
Rung Spacing & Depth	Spacing: 12 in. (max 12")	Toe Depth: 10 in. (min 7")		
Rail Spacing & Size	Width: 2 in. (min 2")	Thickness: .375 in. (min 1/4")	Rail to Rail: 15.5 in. (min 16")	
Safety Climb System	Type: None	Condition: ----		
Number & Locations	Wall: 1	Leg:	Roof:	Riser Pipe: Other:
Ladder Attachments				

Manways

Type and size	Type: Round	#: 2	Size: 24 inches (24" – 18"x22" min)
Support Structure	Type: Bolted	Condition: Good	
Number & Locations	Wall: 2	Roof:	Riser Pipe: Other:

Hatches

Hatch Type & Size	Type: Square	#: 1	Size: 24x24 in. (24" – 24"x15" min)
Hatch & Lid Lip Height	Hatch: 5 in. (min 4")	Lid: 2 in. (min 2")	

Balconies & Railing

Deck / Walkways	Condition: Good	Width: 18"	
Hand Rails	Condition: Good	Height: 43 in. (min 42")	No. Rails: 2 (min 2)
Toe Rail	Condition: Good	Height: ---- in. (min 4")	
Welds / Attachments	Condition: Good		

Roof

Safety Tie-Off Points	Condition: Good	#: 5+
Antennas	Type: -----	#: ----

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Liquid Engineering Corporation
Circular Tank Diagram / Information Worksheet

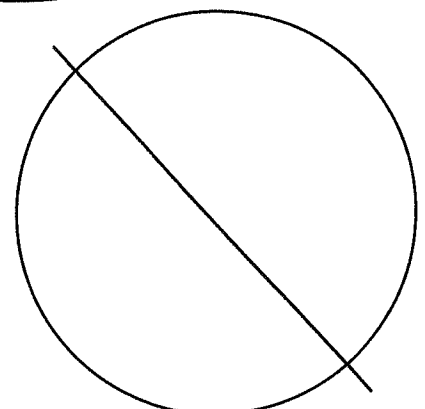
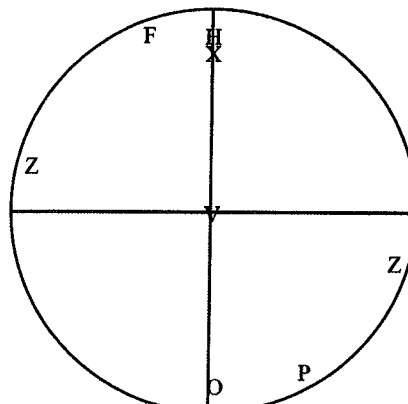
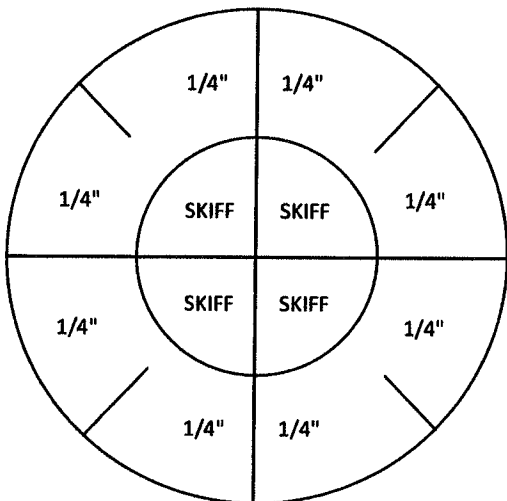
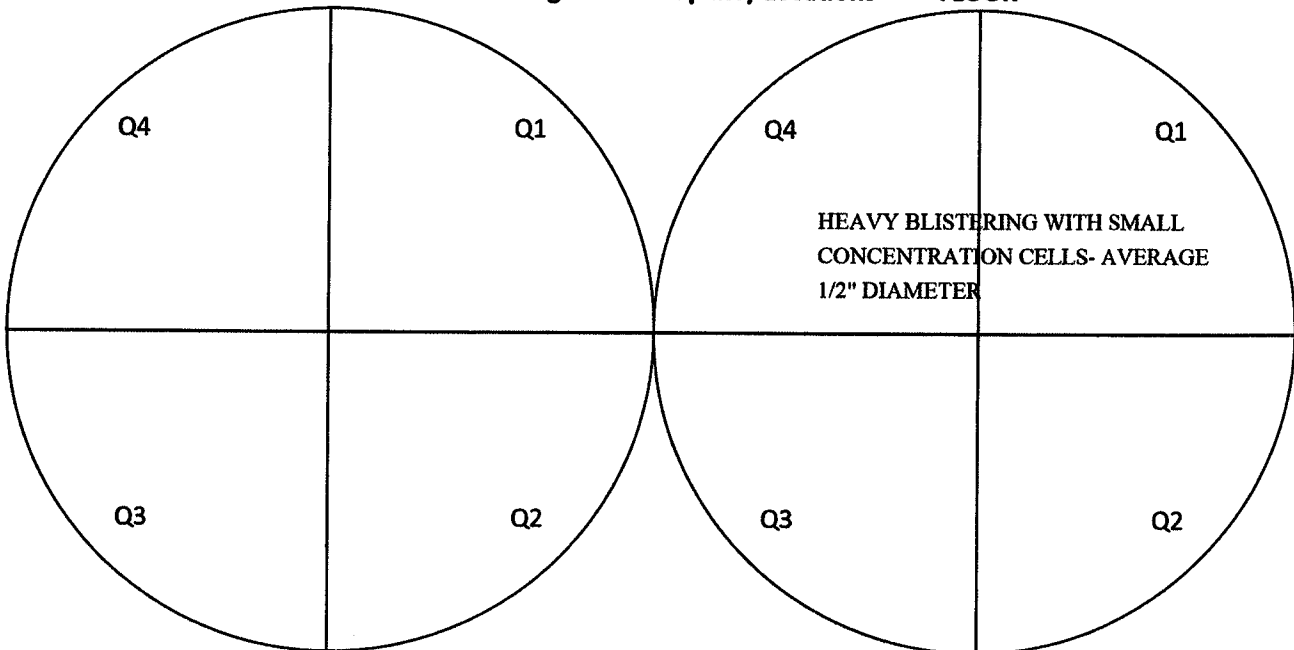
Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

Tank Name CUNNINGHAM HILL 75KG

Quadrant 1	Quadrant 2	Quadrant 3	Quadrant 4
HEAVY BLISTERING WITH CONCENTRATION CELL CORROSION AS WELL AS INTERGRANULAR CORROSION ON WELDS AND PANELS			

ROOF **Testing and Discrepancy Locations** **FLOOR**



Sediment Depth Measurements

Average Sediment Depth = The sum of all measurements taken, divided by the number of measurements taken

Avg. Depth Cubic Yardage Sediment Type

Plumbing & Structure location

Plumbing and structure codes
 O=Outlet X=Inlet Z=Manway
 V=Vent D=Drain S=Sump
 L=Ladder H=Hatch P=Overflow
 F=Float Level Indicator
 T=Telemetry

Column Placement

Type of Column ○ □ I
 Base Structure [] [] [] []
 Top Structure [] [] [] []
 Column Construction -----

DISCLAIMER

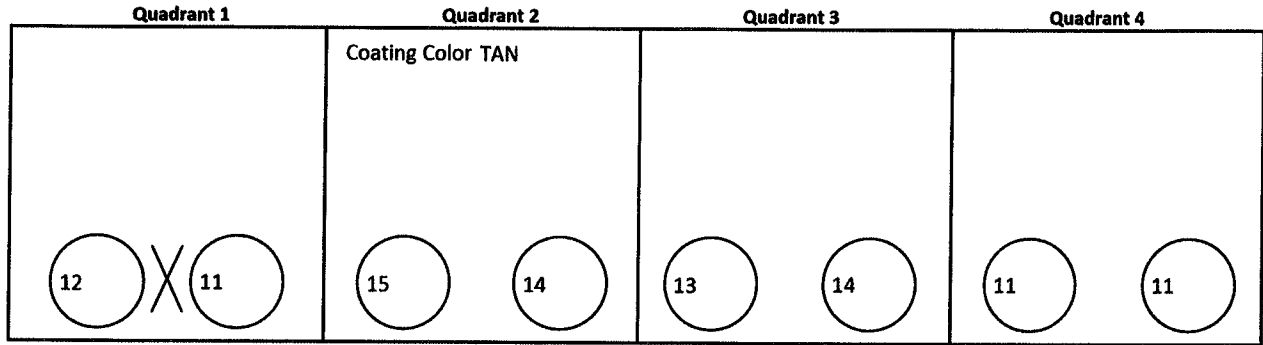
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Circular Tank Diagram / NDT DFT Coating Adhesion Presence of lead

Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

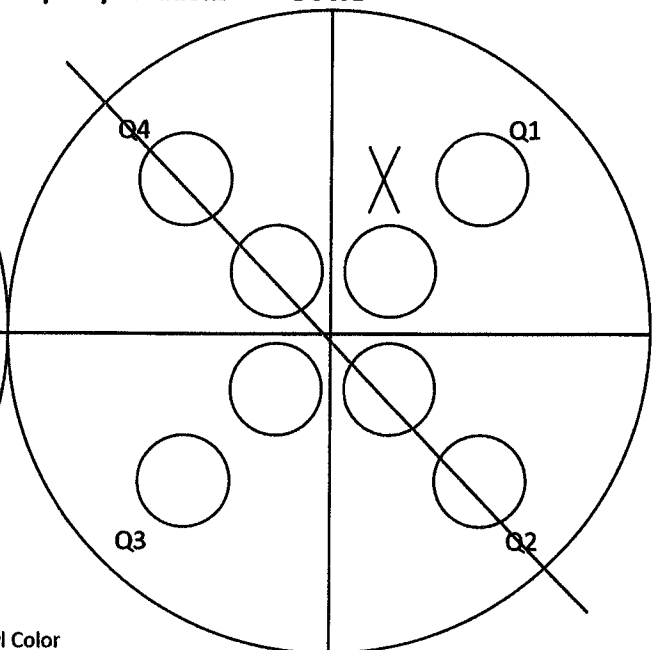
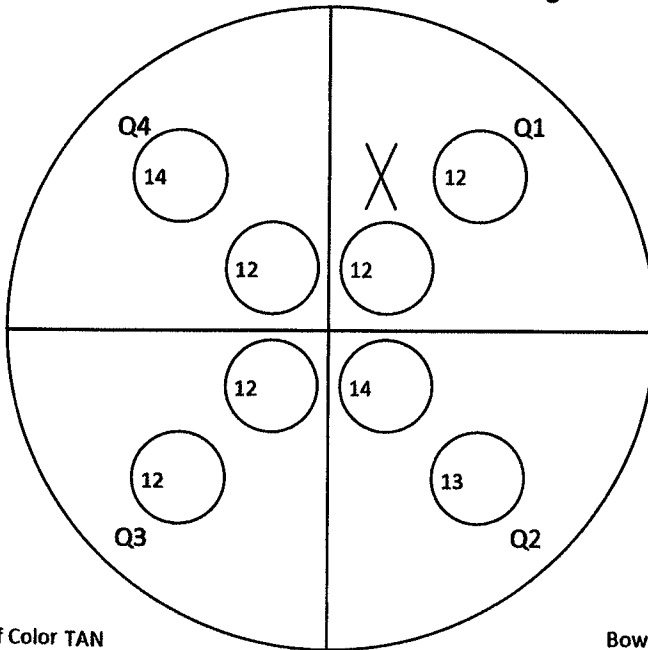
Tank Name CUNNINGHAM HILL 75KG



ROOF

Testing and Discrepancy Locations

BOWL



Roof Color TAN

Bowl Color

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Steel Potable Water Reservoir Security / Measurement Worksheet

Job Number 50463

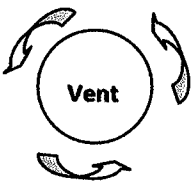
Utility Name BIG SANDY WATER DISTRICT

Tank Name CUNNINGHAM HILL 75KG

Security

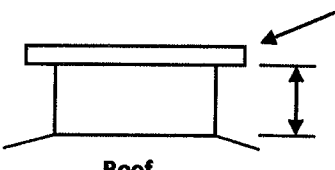
Is the area surrounding the tank well lit?	No
Is the tank surrounded by a Security Fence?	No
Are the access gates locked?	N/A
Is the tank equipped with a Vandal Guard on the primary access ladder?	No
If so, is the Vandal Guard locked?	N/A
Are the vents equipped with security vent shrouds?	No
Are all of the hatches equipped with electronic monitoring devices?	No
Are the external plumbing components housed in a secure vault or out-building?	Yes
Does the surrounding geography of the tank obscure it from public view?	No
Does the exterior of the tank show signs of trespass?	No

Measurements



Vent

Outside Circumference
65 Inches



Roof

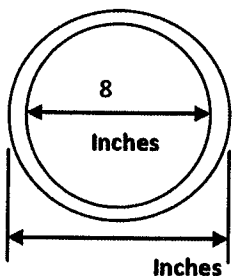
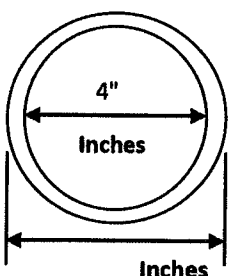
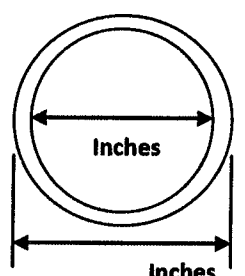
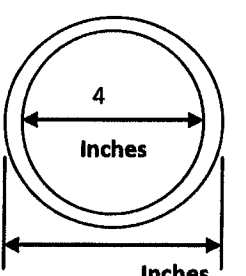
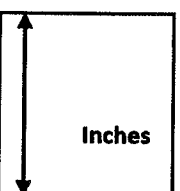
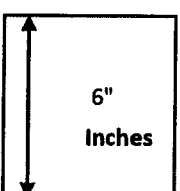
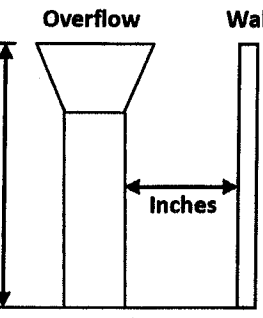
Flange Metal Thickness Inches

Roof to Screen or Flange 11 Inches

Flange No

Number of Bolt Holes Inches

Size of Bolts Inches

Inlet	Outlet	Drain	Overflow
 <p>8 Inches</p> <p>Inches</p>	 <p>4" Inches</p> <p>Inches</p>	 <p>Inches</p> <p>Inches</p>	 <p>4 Inches</p> <p>Inches</p>
<p>Inlet Riser</p>  <p>Inches</p> <p>Floor</p>	<p>Outlet Riser</p>  <p>6" Inches</p> <p>Floor</p>	<p>Overflow Wall</p>  <p>47' Feet/Inches</p> <p>Inches</p> <p>Floor</p>	

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Steel Potable Water Reservoir Immediate Needs Assessment

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: CUNNINGHAM HILL 75KG

Inspector: ERIK POTTER

Dive Controller: MEG BUTAK

Date: 11/14/2016

1. Health and Safety Items

- Safety Climb System Installation:
- Vent Screen Repairs:

2. Testing Items

- Dye Testing for Leak Evaluation:
- Presence of Lead Test (Interior/Exterior):

3. Destructive Testing Items

- % of Lead Test (Interior/Exterior) *(Coating samples are removed for laboratory analysis)*
- Coating Adhesion Test (Interior/Exterior):

Specific written authorization required to perform destructive testing. Destructive tests include touch-up of coating system.

4. Repair Items

- Epoxy Coating Repairs:
- Temporary Leak Repairs:
- Float Operated Level Indicator Repairs / Maintenance:
- Hypalon Repairs:

5. Security Related Items *(Critical security upgrade information is immediately available)*

- Tank vents are not equipped with a security vent shroud:
- Tank hatches are not equipped with a security hatch locking device:
- Tank perimeter not adequately secured:

The above mentioned additional work is considered immediately necessary and is recommended to be completed. Some items may be completed in conjunction with work currently being performed while the crew is on site.

Reservoir Inspection Condition Supplemental

CLEAN AND INSPECT EVERY 3-5 YEARS

FLOOR- SOME BLISTERING OF THE COATING WITH SMALL CONCENTRATION CELLS. PITTING WAS CHECKED ON TWO SEPERATE CELLS WITH ONE READING 3/16" AND THE OTHER 3/32" METAL LOSS.

WALLS- HEAVY BLISTERING WITH CONCENTRATION CELL CORROSION AS WELL AS INTERGRANULAR CORROSION ON WELDS AND PANELS. SOME WELDS HAVE HEAVY INTERGRANULAR CORROSION ABOUT 30' FROM BOTTOM THAT COULD BE A STRUCTURAL THREAT. LOWER WALLS HAVE HEAVY BLISTERING WITH SMALL CONCENTRATION CELLS.

ROOF- LIGHT SURFACE CORROSION ON WELD SEAMS AND ROOF TO WALL SEAM.

INLET- LIGHT SURFACE CORROSION ON THE UPPER PORTION OF THE PIPE NEAR THE J-TUBE.

OUTLET- SOME CONCENTRATION CELL CORROSION ON THE LIP AS WELL AS THE RISER AROUND THE OUTLET.

MANWAYS- HEAVY CONCENTRATION CELL CORROSION ON THE LIP WITH UP TO 1/2" METAL LOSS ON EDGE.

VENT- LIGHT SURFACE CORROSION AROUND THE VENT PENETRATION. SCREEN IS INTACT AND IN GOOD CONDITION.

OVERFLOW- MINIMAL SURFACE CORROSION WITH SOME BLEEDING.

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: QUARRY BRANCH 75KG

Inspector: ERIK POTTER

Dive Controller: MEG BUTAK

Date: 11/12/2016

**AMERICAN WATER WORKS ASSOCIATION
ANSI/AWWA M42 / D101-53**

SSPC Legend		NACE Legend		AWS Legend	
Grade	Description	Grade	Description	Grade	Description
10	No Rusting, or <0.01% of surface is rusted	A	None	L	Satisfactory
9	Minor rusting, or <0.03% of surface is rusted	B	Uniform Surface Corrosion	M	Spatter
8	Isolated rust, <.01% of surface is rusted	C	Pitting	N	Porosity
7	Isolated rust, <.03% of surface is rusted	D	Concentration Cell Corrosion	O	Convexity / Concavity
6	Extensive rusting, <1% of surface is rusted	E	Galvanic Corrosion	P	Cracks
5	Approximately 3% of the surface is rusted	F	Stress Corrosion Cracking	Q	Inclusions
4	Approximately 10% of the surface is rusted	G	Erosion Corrosion	R	Incomplete Fusion
3	Approximately 17% of the surface is rusted	H	Intergranular Corrosion	S	Incomplete Penetration
2	Approximately 33% of the surface is rusted	I	Dealloying	T	Undercut
1	Approximately 50% of the surface is rusted			U	Underfill
0	Approximately 100% of the surface is rusted			V	Overlap
				W	Unable to evaluate

QUADRANT 1

QUADRANT 2

QUADRANT 3

QUADRANT 4

INTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	7	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	8	B	L	8	B	L	8	B	L	8	B	N/A
Roof Support	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Gussets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Painting Ring	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Good

Average Blister Diameter NONE

Average Pit Depth NONE

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof weld	3	B	L	3	B	L	3	B	L	3	B	L
Lower Ring Panels	2	B,D	L	4	B,D	L	2	B,D	L	2	B,D	L
Middle Ring Panels	3	B,D	L	3	B,D	L	3	B,D	L	3	B,D	L
Upper Ring Panels	4	B	L	2	B	L	4	B	L	4	B	L
Interior Ladder	5	D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Good

Average Blister Diameter 1/2"

Average Pit Depth < 1/16"

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR FLOOR

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Perimeter Weld	3	B,D	L	3	B,D	L	3	B,D	L	3	B,D	L
Floor Panels	3	B,D	L	3	N/A	L	3	B,D	L	3	B,D	L

Overall Coating Rating Good

Average Blister Diameter 1/4"

Average Pit Depth NONE

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: QUARRY BRANCH 75KG

Inspector: ERIK POTTER

Dive Controller: MEG BUTAK

Date: 11/12/2016

QUADRANT 1	QUADRANT 2	QUADRANT 3	QUADRANT 4
------------	------------	------------	------------

~~INTERIOR RESERVOIR SUPPORT COLUMNS~~

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Column Structures	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column Bases	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column to Roof	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating ---- Average Blister Diameter _____ Average Pit Depth _____
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR PLUMBING COMPONENTS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Inlet Plumbing	5	B,D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Outlet Plumbing	5	B,D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manways	3	B,D	L	N/A	N/A	N/A	2	B,D	L	N/A	N/A	N/A
Floor Drains	N/A	N/A	N/A	3	B,D	L	N/A	N/A	N/A	N/A	N/A	N/A
Interior Overflow	N/A	N/A	N/A	5	B,H	L	N/A	N/A	N/A	N/A	N/A	N/A

EXTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	6	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	8	B	L	8	B	L	8	B	L	8	B	L
Access Hatches	7	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Good Average Blister Diameter NONE Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

EXTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof Weld	9	B	L	9	B	L	9	B	L	9	B	L
Lower Ring Panels	8	B	L	8	B	L	8	B	L	8	B	L
Mid Ring Panels	9	B	L	9	B	L	9	B	L	9	B	L
Upper Ring Panels	9	B	L	9	B	L	9	B	L	9	B	L
Exterior Overflow	N/A	N/A	N/A	8	B	L	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Good Average Blister Diameter NONE Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

FOOTINGS / FOUNDATION

Footings / Foundations: Satisfactory <input checked="" type="checkbox"/>	Cracking <input type="checkbox"/>	Spalling <input type="checkbox"/>	Erosion/Exposed Aggregate <input type="checkbox"/>
Anchor Bolts: Satisfactory <input checked="" type="checkbox"/>	Loose <input type="checkbox"/>	Rusted Corroded <input checked="" type="checkbox"/>	(If excessive) Diameter = _____

~~TOWER SUPPORT STRUCTURES~~

Tower Legs/Columns: Satisfactory <input type="checkbox"/>	Alignment ----	Settling ----	Rust /Corrosion ----
Riser Pipe: Satisfactory <input type="checkbox"/>	Alignment ----	Frost Casing ----	Rust /Corrosion ----
Rods & Turnbuckles: Satisfactory <input type="checkbox"/>	Turnbuckle Tension ----	Rod Tension ----	Cotter Pins/Rod Nuts ----
Leg shoes/Brackets: Satisfactory <input type="checkbox"/>	Coating ----	Rust/Corrosion ----	Pitting/Cracking ----

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Liquid Engineering Corporation
Potable Water Reservoir Contamination, Health and Safety Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: QUARRY BRANCH 75KG

Inspector: ERIK POTTER

Dive Controller: MEG BUTAK

Date: 11/12/2016

Complies With: AWWA • OSHA • ANSI • NIOSH • NAVFAC • NFPAC

CONTAMINATION & HEALTH

Air Vents	Type: MUSHROOM	#: 1	Screen Condition(s): Good	
Hatches	Type: Square	#: 1	Secured Properly: Yes	Properly Sealed: Yes
Exterior Overflow	Flapper: Yes	Screen: No	Gasket: No	Condition: Good
Cathodic Covers	In- Place: ----	#:	Gasket: ----	Properly Sealed: ----
Roof to Wall Joint	Welded: Yes	Properly Sealed: Yes		
Roof Integrity	Holes: No	Cracking: No	Standing Water: No	
Wall Integrity	Holes: No	Cracking: No		
Manway Integrity	Leaks: No	Condition: Good		
Water Clarity	General Appearance: CLEAR		Odor: NONE	
Floating Surface Debris	Type: NONE		Source: N/A	
Hypalon Floating Cover	Condition: ----	Holes: ----	Tears: ----	
Telemetry Penetrations	Properly Sealed: ----			

FACILITY SAFETY COMPLIANCE

Exterior Ladder

Overall Ladder	Condition: Good	#: 1	Offset Landing: No	Height: 33'
Vandal Guard	Present: Yes	Vandal Guard Locked: Yes		
Ladder Rails & Rungs	Condition: Good	Missing/Damaged Rungs: No		
Rung Spacing & Depth	Spacing: 12 in. (max 12")	Toe Depth: 9 in. (min 7")		
Rail Spacing & Size	Width: 2 in. (min 2")	Thickness: .375 in. (min 1/4")	Rail to Rail: 15 in. (min 16")	
Safety Climb System	Type: None	Condition: ----		
Number & Locations	Wall: 1	Leg:	Roof:	Riser Pipe: Other:
Ladder Attachments				

Manways

Type and size	Type: Round	#: 2	Size: 24 inches (24" – 18"x22" min)
Support Structure	Type: Bolted	Condition: Good	
Number & Locations	Wall: 2	Roof:	Riser Pipe: Other:

Hatches

Hatch Type & Size	Type: Square	#: 1	Size: 24x24 in. (24" – 24"x15" min)
Hatch & Lid Lip Height	Hatch: 4 in. (min 4")	Lid: 2 in. (min 2")	

Balconies & Railing

Deck / Walkways	Condition: Good	Width: 74"	
Hand Rails	Condition: Good	Height: 42 in. (min 42")	No. Rails: 2 (min 2)
Toe Rail	Condition: Good	Height: --- in. (min 4")	
Welds / Attachments	Condition: Good		

Roof

Safety Tie-Off Points	Condition: Good	#: 5+
Antennas	Type: -----	#: ----

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Liquid Engineering Corporation
Circular Tank Diagram / Information Worksheet

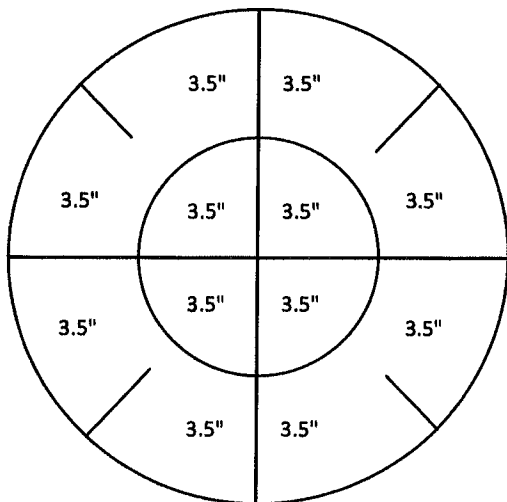
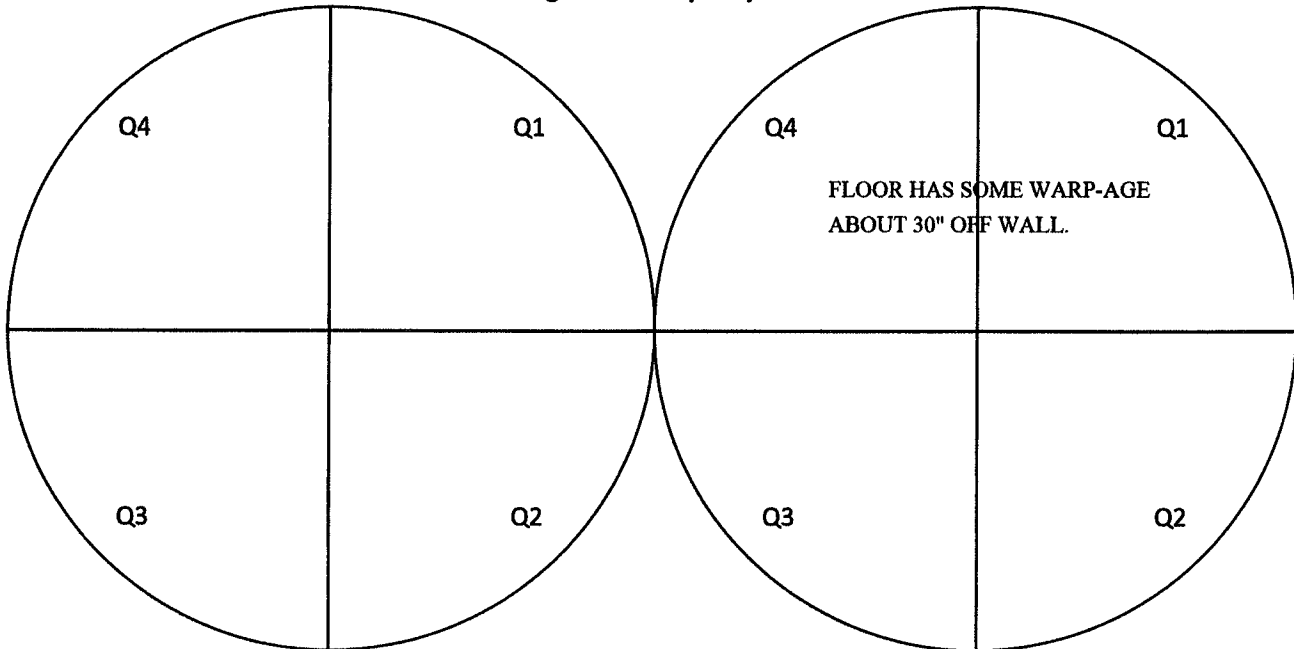
Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

Tank Name QUARRY BRANCH 75KG

Quadrant 1	Quadrant 2	Quadrant 3	Quadrant 4
HEAVY CONCENTRATION CELL CORROSION AT LOWER AND MID LEVELS			

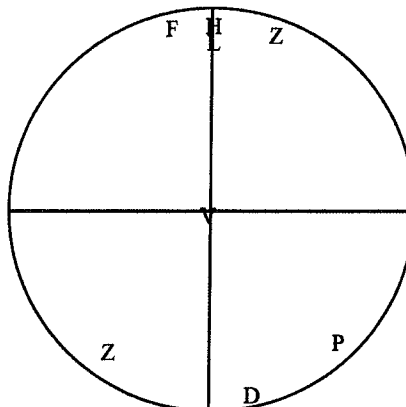
ROOF Testing and Discrepancy Locations FLOOR



Sediment Depth Measurements

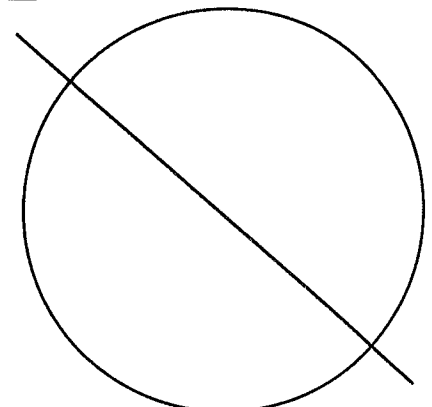
Average Sediment Depth = The sum of all measurements taken, divided by the number of measurements taken

Avg. Depth 3.5" Cubic Yardage Sediment Type IRON



Plumbing & Structure location

Plumbing and structure codes
 O=Outlet X=Inlet Z=Manway
 V=Vent D=Drain S=Sump
 L=Ladder H=Hatch P=Overflow
 F=Float Level Indicator
 T=Telemetry



Column Placement

Type of Column ○ □ I
 Base Structure
 Top Structure
 Column Construction -----

DISCLAIMER

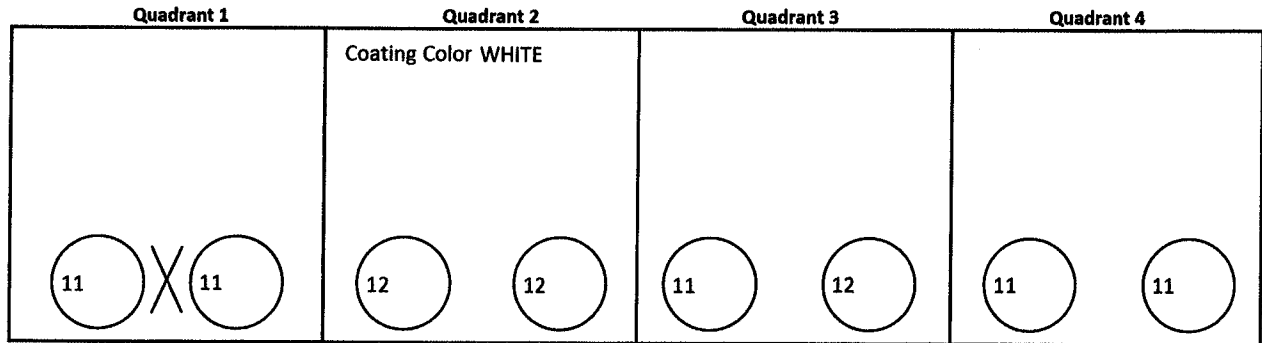
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Circular Tank Diagram / NDT DFT Coating Adhesion Presence of lead

Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

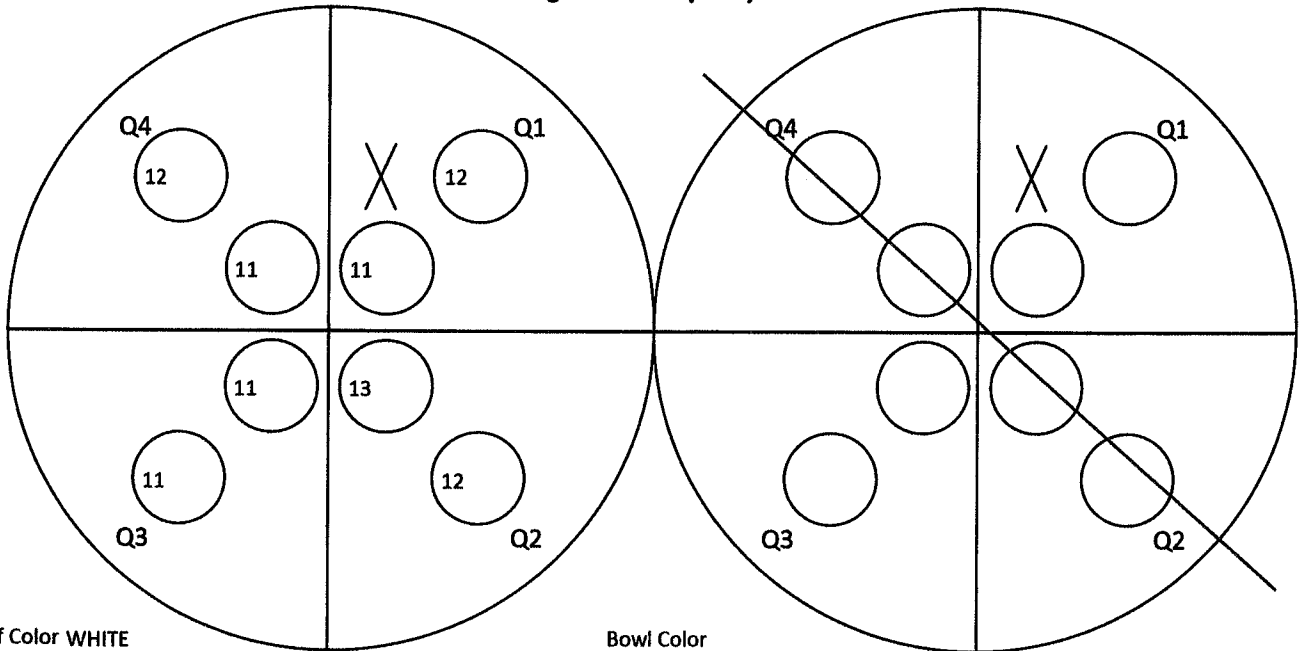
Tank Name QUARRY BRANCH 75KG



ROOF

Testing and Discrepancy Locations

BOWL



Roof Color WHITE

Bowl Color

DISCLAIMER

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Liquid Engineering Corporation
Steel Potable Water Reservoir Security / Measurement Worksheet

Job Number 50463

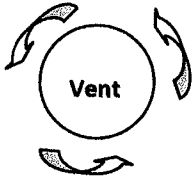
Utility Name BIG SANDY WATER DISTRICT

Tank Name QUARRY BRANCH 75KG

Security

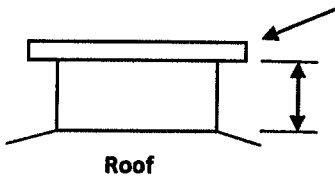
Is the area surrounding the tank well lit?	No
Is the tank surrounded by a Security Fence?	No
Are the access gates locked?	N/A
Is the tank equipped with a Vandal Guard on the primary access ladder?	Yes
If so, is the Vandal Guard locked?	Yes
Are the vents equipped with security vent shrouds?	No
Are all of the hatches equipped with electronic monitoring devices?	No
Are the external plumbing components housed in a secure vault or out-building?	Yes
Does the surrounding geography of the tank obscure it from public view?	No
Does the exterior of the tank show signs of trespass?	No

Measurements



Vent

Outside Circumference
42 Inches



Roof

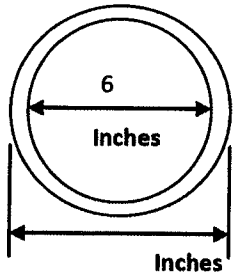
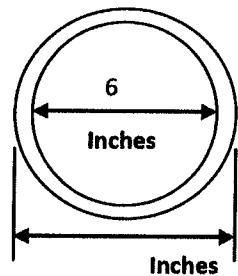
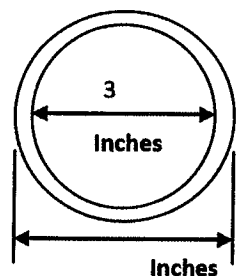
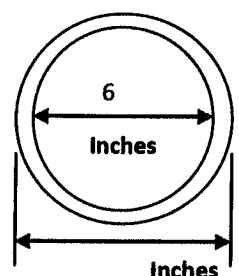
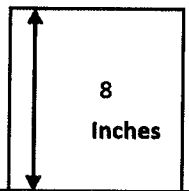
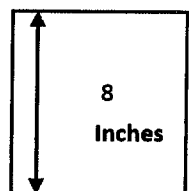
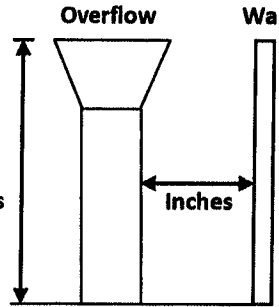
Flange Metal Thickness Inches

Roof to Screen or Flange 15 Inches

Flange No

Number of Bolt Holes Inches

Size of Bolts Inches

<p>Inlet</p> 	<p>Outlet</p> 	<p>Drain</p> 	<p>Overflow</p> 
<p>Inlet Riser</p>  <p>Floor</p>	<p>Outlet Riser</p>  <p>Floor</p>	<p>Overflow Wall</p>  <p>Floor</p>	

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Liquid Engineering Corporation
Steel Potable Water Reservoir Immediate Needs Assessment

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: QUARRY BRANCH 75KG

Inspector: ERIK POTTER

Dive Controller: MEG BUTAK

Date: 11/12/2016

1. Health and Safety Items

- Safety Climb System Installation:
- Vent Screen Repairs:

2. Testing Items

- Dye Testing for Leak Evaluation:
- Presence of Lead Test (Interior/Exterior):

3. Destructive Testing Items

- % of Lead Test (Interior/Exterior) *(Coating samples are removed for laboratory analysis)*
- Coating Adhesion Test (Interior/Exterior):

Specific written authorization required to perform destructive testing. Destructive tests include touch-up of coating system.

4. Repair Items

- Epoxy Coating Repairs:
- Temporary Leak Repairs:
- Float Operated Level Indicator Repairs / Maintenance:
- Hypalon Repairs:

5. Security Related Items *(Critical security upgrade information is immediately available)*

- Tank vents are not equipped with a security vent shroud:
- Tank hatches are not equipped with a security hatch locking device:
- Tank perimeter not adequately secured:

The above mentioned additional work is considered immediately necessary and is recommended to be completed. Some items may be completed in conjunction with work currently being performed while the crew is on site.

Reservoir Inspection Condition Supplemental

CLEAN AND INSPECT EVERY 3-5 YEARS

FLOOR- HAS HEAVY CONCENTRATION CELL CORROSION IN ALL QUADRANTS. FLOOR HAS SIGNIFICANT WARPAGE ABOUT 30" OFF WALL AND COULD SUGGEST A POOR FOUNDATION.

WALLS- HEAVY CONCENTRATION CELL CORROSION AT THE LOWER AND MID LEVELS. PITTING WAS LESS THAN 1/16".

ROOF- SOME CORROSION ON THE WELD SEAMS AS WELL AS THE ROOF TO WALL SEAM.

INLET/OUTLET- SOME CONCENTRATION CELL CORROSION WITH SOME SURFACE CORROSION.

MANWAYS- PLATES SURROUNDING MANWAYS HAVE EXTENSIVE CONCENTRATION CELL CORROSION MOSTLY AROUND THE LOWER SIDE.

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: FULLER RIDGE

Inspector: J. FAUROT

Dive Controller: E. POTTER

Date: 11/15/2016

AMERICAN WATER WORKS ASSOCIATION
ANSI/AWWA M42 / D101-53

SSPC Legend		NACE Legend		AWS Legend	
Grade	Description	Grade	Description	Grade	Description
10	No Rusting, or <0.01% of surface is rusted	A	None	L	Satisfactory
9	Minor rusting, or <0.03% of surface is rusted	B	Uniform Surface Corrosion	M	Spatter
8	Isolated rust, <.01% of surface is rusted	C	Pitting	N	Porosity
7	Isolated rust, <.03% of surface is rusted	D	Concentration Cell Corrosion	O	Convexity / Concavity
6	Extensive rusting, <1% of surface is rusted	E	Galvanic Corrosion	P	Cracks
5	Approximately 3% of the surface is rusted	F	Stress Corrosion Cracking	Q	Inclusions
4	Approximately 10% of the surface is rusted	G	Erosion Corrosion	R	Incomplete Fusion
3	Approximately 17% of the surface is rusted	H	Intergranular Corrosion	S	Incomplete Penetration
2	Approximately 33% of the surface is rusted	I	Dealloying	T	Undercut
1	Approximately 50% of the surface is rusted			U	Underfill
0	Approximately 100% of the surface is rusted			V	Overlap
				W	Unable to evaluate

QUADRANT 1

QUADRANT 2

QUADRANT 3

QUADRANT 4

INTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	7	H	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	9	A	L	9	A	L	9	A	L	9	B	L
Roof Support	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Gussets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Painting Ring	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Fair

Average Blister Diameter NONE

Average Pit Depth NONE

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof weld	7	H	L	7	H	L	7	H	L	7	H	L
Lower Ring Panels	8	D	L	8	D	L	8	D	L	8	D	L
Middle Ring Panels	8	D	L	8	D	L	8	D	L	8	D	L
Upper Ring Panels	9	D	L	9	D	L	9	D	L	9	D	L
Interior Ladder	6	H	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Poor

Average Blister Diameter .25"

Average Pit Depth NONE

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR FLOOR

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Perimeter Weld	8	D	L	8	D	L	8	D	L	8	D	L
Floor Panels	8	D	L	8	D	L	8	D	L	8	D	L

Overall Coating Rating Poor

Average Blister Diameter .25"

Average Pit Depth NONE

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: FULLER RIDGE

Inspector: J. FAUROT

Dive Controller: E. POTTER

Date: 11/15/2016

QUADRANT 1	QUADRANT 2	QUADRANT 3	QUADRANT 4
------------	------------	------------	------------

~~INTERIOR RESERVOIR SUPPORT COLUMNS~~

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Column Structures	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column Bases	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column to Roof	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating ---- Average Blister Diameter Average Pit Depth
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR PLUMBING COMPONENTS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Inlet Plumbing	8	D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Outlet Plumbing	8	D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manways	7	D	L	N/A	N/A	N/A	8	D	L	N/A	N/A	N/A
Floor Drains	9	D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Interior Overflow	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

EXTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	8	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	8	B	L	8	B	L	8	B	L	8	B	L
Access Hatches	8	H	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Fair Average Blister Diameter NONE Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

EXTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof Weld	9	A	L	9	A	L	9	A	L	9	A	L
Lower Ring Panels	7	B	L	7	B	L	7	B	L	7	B	L
Mid Ring Panels	8	B	L	8	B	L	8	B	L	8	B	L
Upper Ring Panels	9	B	L	9	B	L	9	B	L	9	B	L
Exterior Overflow	N/A	N/A	N/A	N/A	N/A	N/A	8	B	L	N/A	N/A	N/A

Overall Coating Rating Fair Average Blister Diameter NONE Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

FOOTINGS / FOUNDATION

Footings / Foundations: Satisfactory <input checked="" type="checkbox"/>	Cracking <input type="checkbox"/>	Spalling <input type="checkbox"/>	Erosion/Exposed Aggregate <input type="checkbox"/>
Anchor Bolts: Satisfactory <input checked="" type="checkbox"/>	Loose <input type="checkbox"/>	Rusted Corroded <input checked="" type="checkbox"/>	(If excessive) Diameter =

~~TOWER SUPPORT STRUCTURES~~

Tower Legs/Columns: Satisfactory <input checked="" type="checkbox"/>	Alignment ----	Settling ----	Rust /Corrosion ----
Riser Pipe: Satisfactory <input checked="" type="checkbox"/>	Alignment ----	Frost Casing ----	Rust /Corrosion ----
Rods & Turnbuckles: Satisfactory <input checked="" type="checkbox"/>	Turnbuckle Tension ----	Rod Tension ----	Cotter Pins/Rod Nuts ----
Leg shoes/Brackets: Satisfactory <input checked="" type="checkbox"/>	Coating ----	Rust/Corrosion ----	Pitting/Cracking ----

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Liquid Engineering Corporation
Potable Water Reservoir Contamination, Health and Safety Report

Job Number: 50463
 Inspector: J. FAUROT

Utility: BIG SANDY WATER DISTRICT
 Dive Controller: E. POTTER

Tank: FULLER RIDGE
 Date: 11/15/2016

Complies With: AWWA • OSHA • ANSI • NIOSH • NAVFAC • NFPAC

CONTAMINATION & HEALTH

Air Vents	Type: MUSHROOM	#: 1	Screen Condition(s): Fair	
Hatches	Type: Square	#: 1	Secured Properly: Yes	Properly Sealed: Yes
Exterior Overflow	Flapper: Yes	Screen: No	Gasket: No	Condition: Fair
Cathodic Covers	In- Place: ----	#:	Gasket: ----	Properly Sealed: ----
Roof to Wall Joint	Welded: Yes	Properly Sealed: Yes		
Roof Integrity	Holes: No	Cracking: No	Standing Water: No	
Wall Integrity	Holes: No	Cracking: No		
Manway Integrity	Leaks: No	Condition: Good		
Water Clarity	General Appearance: CLEAR		Odor: NONE	
Floating Surface Debris	Type: NONE		Source: N/A	
Hypalon Floating Cover	Condition: ----	Holes: ----	Tears: ----	
Telemetry Penetrations	Properly Sealed: Yes			

FACILITY SAFETY COMPLIANCE

Exterior Ladder

Overall Ladder	Condition: Good	#: 1	Offset Landing: No	Height: 32'
Vandal Guard	Present: Yes	Vandal Guard Locked: No		
Ladder Rails & Rungs	Condition: Good	Missing/Damaged Rungs: No		
Rung Spacing & Depth	Spacing: 12 in. (max 12")	Toe Depth: 8 in. (min 7")		
Rail Spacing & Size	Width: 2 in. (min 2")	Thickness: 1/4 in. (min 1/4")	Rail to Rail: 16 in. (min 16")	
Safety Climb System	Type: Rail	Condition: Good		
Number & Locations	Wall: 1	Leg:	Roof:	Riser Pipe: Other:
Ladder Attachments				

Manways

Type and size	Type: Round	#: 2	Size: 33" inches (24" – 18"x22" min)
Support Structure	Type: Bolted	Condition: Good	
Number & Locations	Wall: 2	Roof:	Riser Pipe: Other:

Hatches

Hatch Type & Size	Type: Square	#: 1	Size: 24"x24" in. (24" – 24"x15" min)
Hatch & Lid Lip Height	Hatch: 5 in. (min 4")	Lid: 2 in. (min 2")	

Balconies & Railing

Deck / Walkways	Condition: ----	Width:	
Hand Rails	Condition: Good	Height: 42 in. (min 42")	No. Rails: 2 (min 2)
Toe Rail	Condition: ----	Height: in. (min 4")	
Welds / Attachments	Condition: Good		

Roof

Safety Tie-Off Points	Condition: Good	#: 1
Antennas	Type: -----	#: 2

DISCLAIMER

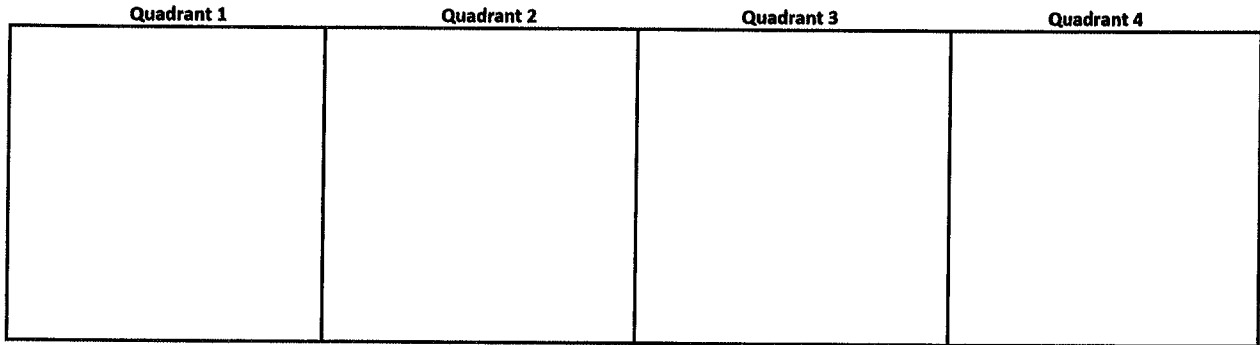
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Liquid Engineering Corporation
Circular Tank Diagram / Information Worksheet

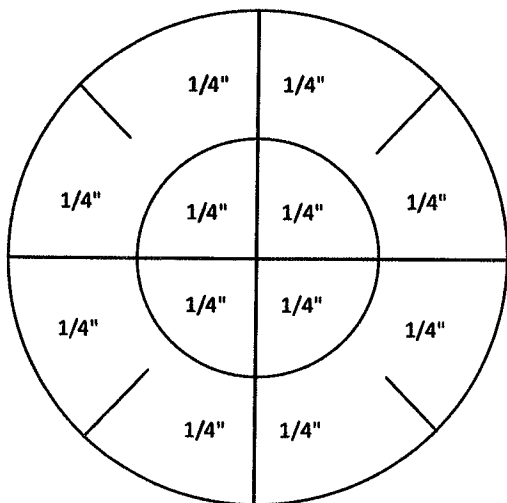
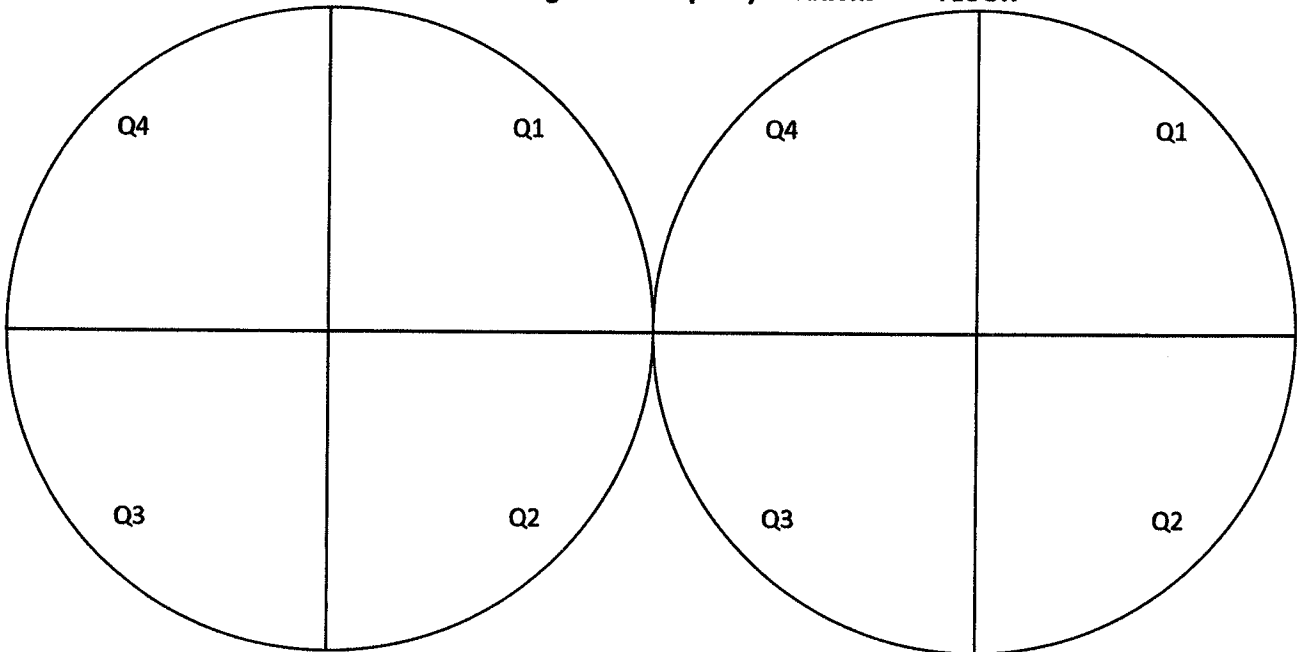
Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

Tank Name FULLER RIDGE



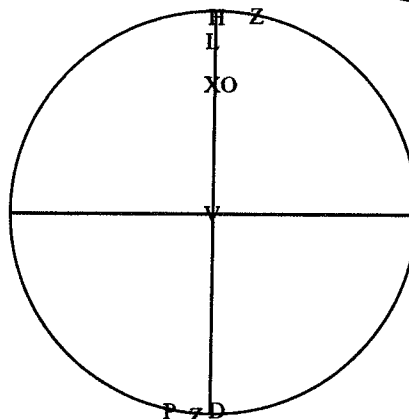
ROOF **Testing and Discrepancy Locations** **FLOOR**



Sediment Depth Measurements

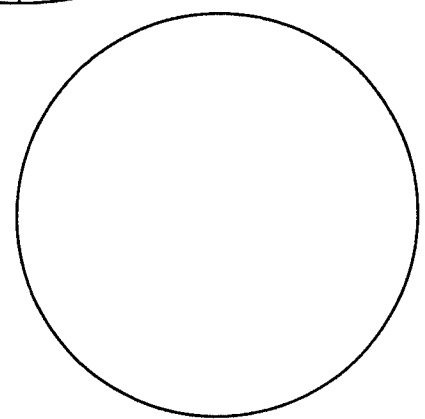
Average Sediment Depth = The sum of all measurements taken, divided by the number of measurements taken

Avg. Depth Cubic Yardage Sediment Type



Plumbing & Structure location

Plumbing and structure codes
 O=Outlet X=Inlet Z=Manway
 V=Vent D=Drain S=Sump
 L=Ladder H=Hatch P=Overflow
 F=Float Level Indicator
 T=Telemetry



Column Placement

Type of Column ○ □ I
 Base Structure [] [] [] []
 Top Structure [] [] [] []
 Column Construction -----

DISCLAIMER

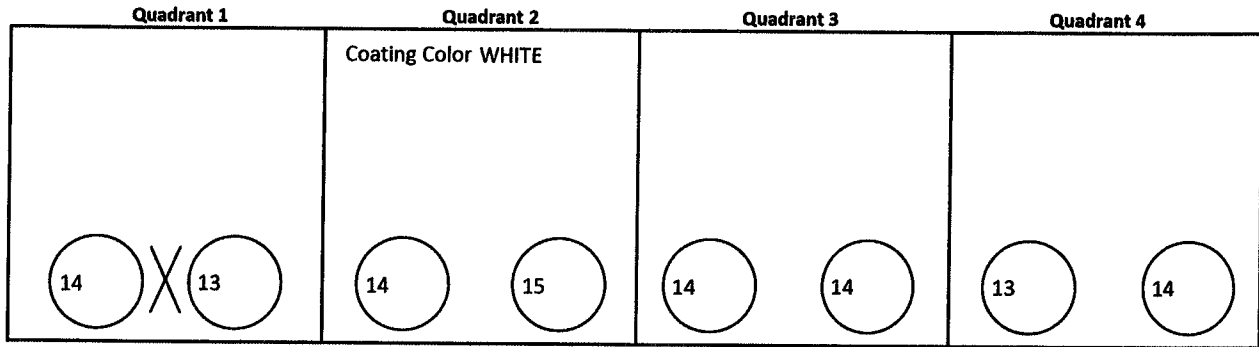
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Circular Tank Diagram / NDT DFT Coating Adhesion Presence of lead

Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

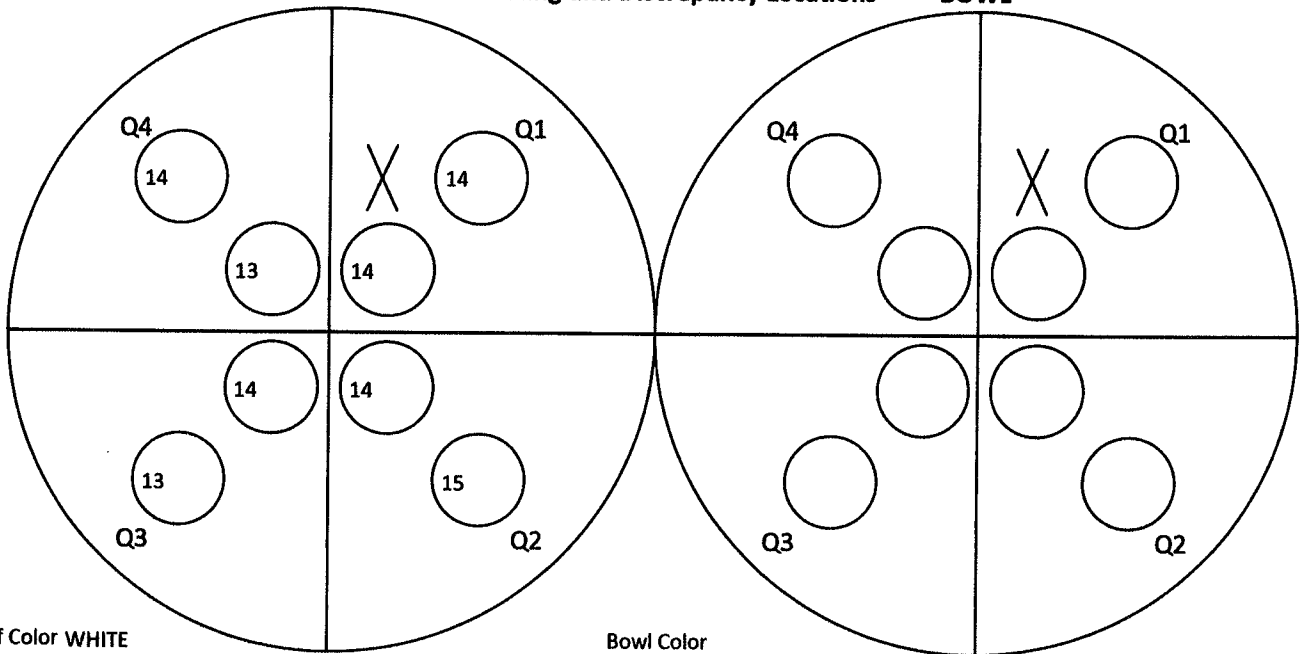
Tank Name FULLER RIDGE



ROOF

Testing and Discrepancy Locations

BOWL



Roof Color WHITE

Bowl Color

DISCLAIMER

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Steel Potable Water Reservoir Security / Measurement Worksheet

Job Number 50463

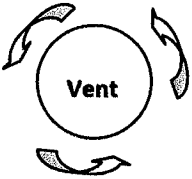
Utility Name BIG SANDY WATER DISTRICT

Tank Name FULLER RIDGE

Security

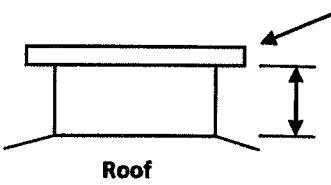
Is the area surrounding the tank well lit?	Yes
Is the tank surrounded by a Security Fence?	No
Are the access gates locked?	---
Is the tank equipped with a Vandal Guard on the primary access ladder?	Yes
If so, is the Vandal Guard locked?	No
Are the vents equipped with security vent shrouds?	No
Are all of the hatches equipped with electronic monitoring devices?	No
Are the external plumbing components housed in a secure vault or out-building?	No
Does the surrounding geography of the tank obscure it from public view?	No
Does the exterior of the tank show signs of trespass?	No

Measurements



Vent

Outside Circumference
40 Inches



Roof

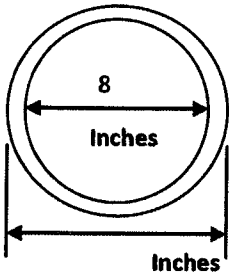
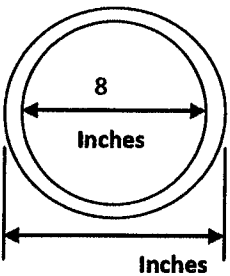
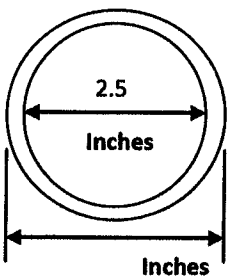
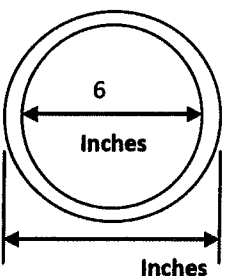
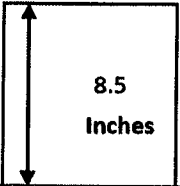
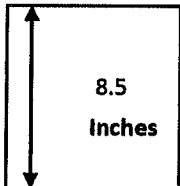
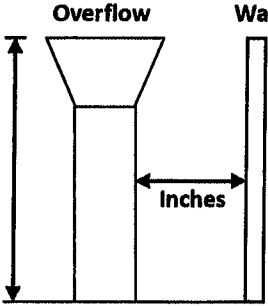
Flange Metal Thickness Inches

Roof to Screen or Flange 14 Inches

Flange ---

Number of Bolt Holes Inches

Size of Bolts Inches

Inlet	Outlet	Drain	Overflow
			
Inlet Riser	Outlet Riser		Overflow Wall
			
Floor	Floor		Floor

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Steel Potable Water Reservoir Immediate Needs Assessment

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: FULLER RIDGE

Inspector: J. FAUROT

Dive Controller: E. POTTER

Date: 11/15/2016

1. Health and Safety Items

- Safety Climb System Installation:
- Vent Screen Repairs:

2. Testing Items

- Dye Testing for Leak Evaluation:
- Presence of Lead Test (Interior/Exterior):

3. Destructive Testing Items

- % of Lead Test (Interior/Exterior) *(Coating samples are removed for laboratory analysis)*
- Coating Adhesion Test (Interior/Exterior):

Specific written authorization required to perform destructive testing. Destructive tests include touch-up of coating system.

4. Repair Items

- Epoxy Coating Repairs:
- Temporary Leak Repairs:
- Float Operated Level Indicator Repairs / Maintenance:
- Hypalon Repairs:

5. Security Related Items *(Critical security upgrade information is immediately available)*

- Tank vents are not equipped with a security vent shroud:
- Tank hatches are not equipped with a security hatch locking device:
- Tank perimeter not adequately secured:

The above mentioned additional work is considered immediately necessary and is recommended to be completed. Some items may be completed in conjunction with work currently being performed while the crew is on site.

Reservoir Inspection Condition Supplemental

CLEAN AND INSPECT EVERY 3-5 YEARS

FLOOR: CRACKING IN COATING AND CONCENTRATION CELL CORROSION IN ALL 4 QUADRENTS.

INLET/OUTLET: HEAVY CONCENTRATION CELLS ON INSIDE OF PLUMBING. CRACKING IN COATING AND CONCENTRATION CELLS ON OUTSIDE.

MANWAYS: CRACKING IN COATING AND CONCENTRATION CELL CORROSION. 1/8" METAL LOSS. GASKET IN GOOD CONDITION.

WALLS: CRACKING AND PINHOLES IN COATING. CONCENTRATION CELL CORROSION IN ALL 4 QUADRENTS.

ROOF: LIGHT CORROSION ON WELDS.

OVERFLOW: DELAMINATION OF COATING. INTERGRANULAR CORROSION.

VENTS: CRACKING OF COATING. INTERGRANULAR CORROSION.

HATCH: INTERGRANULAR CORROSION.

INTERIOR LADDER: DELAMINATION AND INTERGRANULAR CORROSION.

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: RUSH HILL 137KG

Inspector: M BUTAK

Dive Controller: E. POTTER

Date: 11/14/2016

**AMERICAN WATER WORKS ASSOCIATION
ANSI/AWWA M42 / D101-53**

SSPC Legend		NACE Legend		AWS Legend	
Grade	Description	Grade	Description	Grade	Description
10	No Rusting, or <0.01% of surface is rusted	A	None	L	Satisfactory
9	Minor rusting, or <0.03% of surface is rusted	B	Uniform Surface Corrosion	M	Spatter
8	Isolated rust, <0.01% of surface is rusted	C	Pitting	N	Porosity
7	Isolated rust, <.03% of surface is rusted	D	Concentration Cell Corrosion	O	Convexity / Concavity
6	Extensive rusting, <1% of surface is rusted	E	Galvanic Corrosion	P	Cracks
5	Approximately 3% of the surface is rusted	F	Stress Corrosion Cracking	Q	Inclusions
4	Approximately 10% of the surface is rusted	G	Erosion Corrosion	R	Incomplete Fusion
3	Approximately 17% of the surface is rusted	H	Intergranular Corrosion	S	Incomplete Penetration
2	Approximately 33% of the surface is rusted	I	Dealloying	T	Undercut
1	Approximately 50% of the surface is rusted			U	Underfill
0	Approximately 100% of the surface is rusted			V	Overlap
				W	Unable to evaluate

QUADRANT 1 QUADRANT 2 QUADRANT 3 QUADRANT 4

INTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	6	B,H	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	7	B	L	8	B	L	8	B	L	8	B	L
Roof Support	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Gussets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Painting Ring	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating **Good** Average Blister Diameter **NONE** Average Pit Depth **NONE**
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof weld	2	B,H	L	2	B,H	L	2	B,H	L	2	B,H	L
Lower Ring Panels	7	B,D	N/A*	7	B,D	N/A*	7	B,D	N/A*	7	B,D	N/A*
Middle Ring Panels	6	B,H	N/A*	6	B,H	N/A*	6	B,H	N/A*	6	B,H	N/A*
Upper Ring Panels	6	B,H	N/A*	6	B,H	N/A*	6	B,H	N/A*	6	B,H	N/A*
Interior Ladder	5	H	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating **Fair** Average Blister Diameter **NONE** Average Pit Depth
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR FLOOR

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Perimeter Weld	7	D	L	7	D	L	7	D	L	7	D	L
Floor Panels	8	D	L	8	D	L	8	D	L	8	D	L

Overall Coating Rating **Good** Average Blister Diameter **NONE** Average Pit Depth **3/16"**
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: RUSH HILL 137KG

Inspector: M BUTAK

Dive Controller: E. POTTER

Date: 11/14/2016

QUADRANT 1	QUADRANT 2	QUADRANT 3	QUADRANT 4
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~~INTERIOR RESERVOIR SUPPORT COLUMNS~~

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Column Structures	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column Bases	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column to Roof	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating --- Average Blister Diameter Average Pit Depth
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR PLUMBING COMPONENTS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Inlet Plumbing	N/A	N/A	N/A	6	D	L	N/A	N/A	N/A	N/A	N/A	N/A
Outlet Plumbing	6	D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manways	N/A	N/A	N/A	7	D	L	N/A	N/A	N/A	7	D	L
Floor Drains	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Interior Overflow	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

EXTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	8	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	9	B	L	9	B	L	9	B	L	9	B	L
Access Hatches	6	H	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Fair Average Blister Diameter .5" Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

EXTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof Weld	9	B	L	9	B	L	9	B	L	9	B	L
Lower Ring Panels	9	B	L	9	B	L	9	B	L	9	B	L
Mid Ring Panels	8	B	L	9	B	L	9	B	L	8	B	L
Upper Ring Panels	9	B	L	9	B	L	9	B	L	9	B	L
Exterior Overflow	N/A	N/A	N/A	N/A	N/A	N/A	9	B	L	N/A	N/A	N/A

Overall Coating Rating Good Average Blister Diameter NONE Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

FOOTINGS / FOUNDATION

Footings / Foundations: Satisfactory <input checked="" type="checkbox"/>	Cracking <input type="checkbox"/>	Spalling <input type="checkbox"/>	Erosion/Exposed Aggregate <input type="checkbox"/>
Anchor Bolts: Satisfactory <input checked="" type="checkbox"/>	Loose <input type="checkbox"/>	Rusted Corroded <input type="checkbox"/>	(If excessive) Diameter =

~~TOWER SUPPORT STRUCTURES~~

Tower Legs/Columns: Satisfactory <input type="checkbox"/>	Alignment ---	Settling ---	Rust /Corrosion ---
Riser Pipe: Satisfactory <input type="checkbox"/>	Alignment ---	Frost Casing ---	Rust /Corrosion ---
Rods & Turnbuckles: Satisfactory <input type="checkbox"/>	Turnbuckle Tension ---	Rod Tension ---	Cotter Pins/Rod Nuts ---
Leg shoes/Brackets: Satisfactory <input type="checkbox"/>	Coating ---	Rust/Corrosion ---	Pitting/Cracking ---

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Liquid Engineering Corporation
Potable Water Reservoir Contamination, Health and Safety Report

Job Number: 50463
 Inspector: M BUTAK

Utility: BIG SANDY WATER DISTRICT
 Dive Controller: E. POTTER

Tank: RUSH HILL 137KG
 Date: 11/14/2016

Complies With: AWWA • OSHA • ANSI • NIOSH • NAVFAC • NFPAC

CONTAMINATION & HEALTH

Air Vents	Type: MUSHROOM	#: 1	Screen Condition(s): Good	
Hatches	Type: Square	#: 1	Secured Properly: Yes	Properly Sealed: No
Exterior Overflow	Flapper: No	Screen: Yes	Gasket: No	Condition: Good
Cathodic Covers	In- Place: Yes	#: 6	Gasket: No	Properly Sealed: No
Roof to Wall Joint	Welded: Yes	Properly Sealed: Yes		
Roof Integrity	Holes: No	Cracking: No	Standing Water: No	
Wall Integrity	Holes: No	Cracking: No		
Manway Integrity	Leaks: No	Condition: Good		
Water Clarity	General Appearance: CLEAR		Odor: NONE	
Floating Surface Debris	Type: NONE		Source: N/A	
Hypalon Floating Cover	Condition: ----	Holes: ----	Tears: ----	
Telemetry Penetrations	Properly Sealed: ----			

FACILITY SAFETY COMPLIANCE

Exterior Ladder

Overall Ladder	Condition: Good	#: 1	Offset Landing: No	Height: 72'
Vandal Guard	Present: Yes	Vandal Guard Locked: No		
Ladder Rails & Rungs	Condition: Good	Missing/Damaged Rungs: No		
Rung Spacing & Depth	Spacing: 12 in. (max 12")	Toe Depth: 9 in. (min 7")		
Rail Spacing & Size	Width: 2.25 in. (min 2")	Thickness: .25 in. (min 1/4")	Rail to Rail: 19 in. (min 16")	
Safety Climb System	Type: Cage	Condition: Good		
Number & Locations	Wall: 1	Leg:	Roof:	Riser Pipe: Other:
Ladder Attachments				

Manways

Type and size	Type: Round	#: 2	Size: 38" inches (24" – 18"x22" min)
Support Structure	Type: Bolted	Condition: Good	
Number & Locations	Wall: 2	Roof:	Riser Pipe: Other:

Hatches

Hatch Type & Size	Type: Square	#: 1	Size: 24"x24" in. (24" – 24"x15" min)
Hatch & Lid Lip Height	Hatch: 5" in. (min 4")	Lid: 1.25" in. (min 2")	

Balconies & Railing

Deck / Walkways	Condition: ----	Width:	
Hand Rails	Condition: Good	Height: 42 in. (min 42")	No. Rails: 2 (min 2)
Toe Rail	Condition: Good	Height: 7 in. (min 4")	
Welds / Attachments	Condition: Good		

Roof

Safety Tie-Off Points	Condition: Good	#: 2
Antennas	Type: -----	#: 3

DISCLAIMER

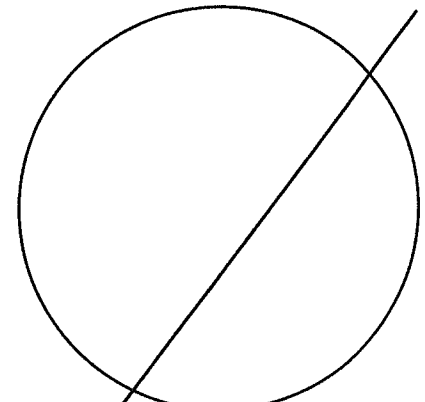
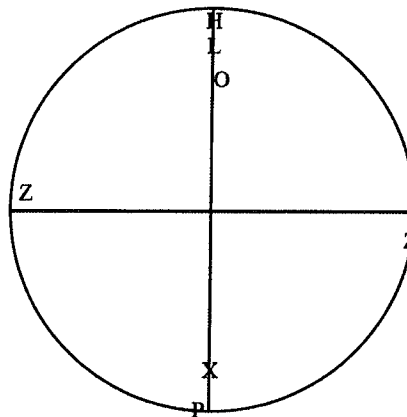
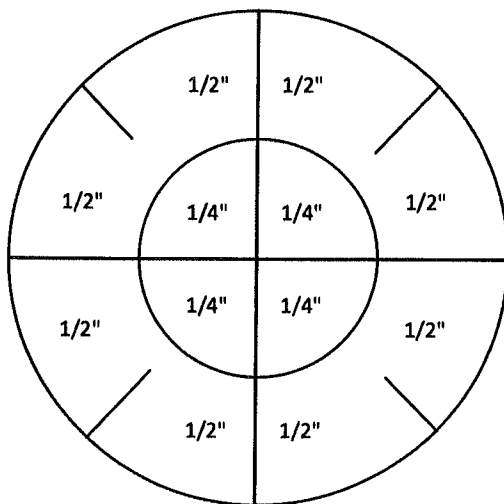
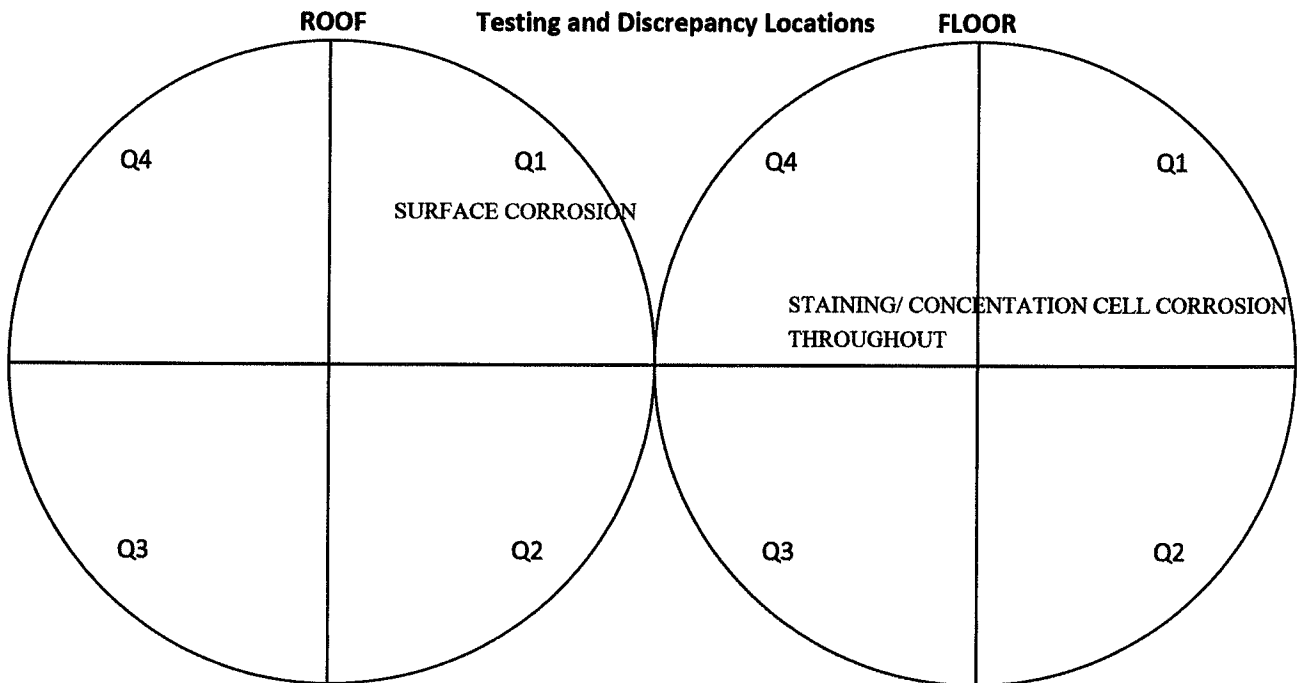
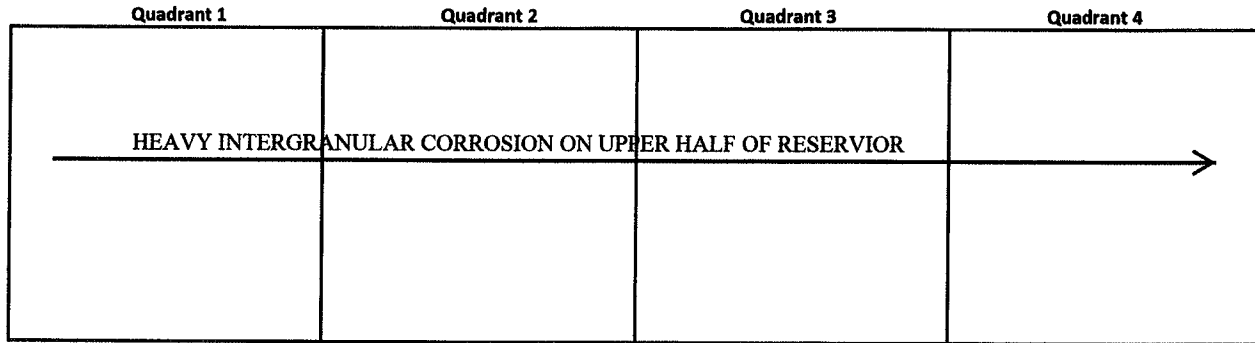
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Liquid Engineering Corporation
Circular Tank Diagram / Information Worksheet

Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

Tank Name RUSH HILL 137KG



Sediment Depth Measurements
 Average Sediment Depth = The sum of all measurements taken,
 divided by the number of measurements taken

Avg. Depth 3/8" Cubic Yardage Sediment Type IRON/CLAY

Plumbing & Structure location
 Plumbing and structure codes
 O=Outlet X=Inlet Z=Manway
 V=Vent D=Drain S=Sump
 L=Ladder H=Hatch P=Overflow
 F=Float Level Indicator
 T=Telemetry

Column Placement

Type of Column	○	□	I
Base Structure	⊞	⊞	⊞
Top Structure	⊞	⊞	⊞
Column Construction	-----		

DISCLAIMER

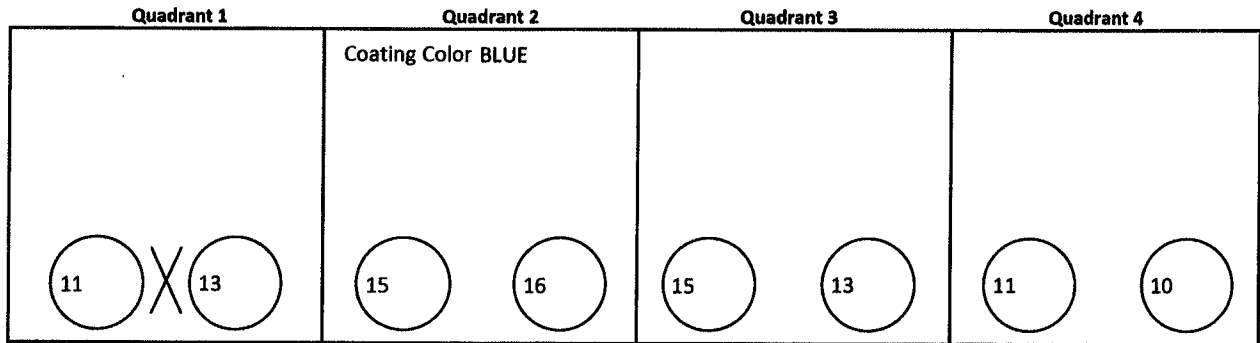
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Circular Tank Diagram / NDT DFT Coating Adhesion Presence of lead

Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

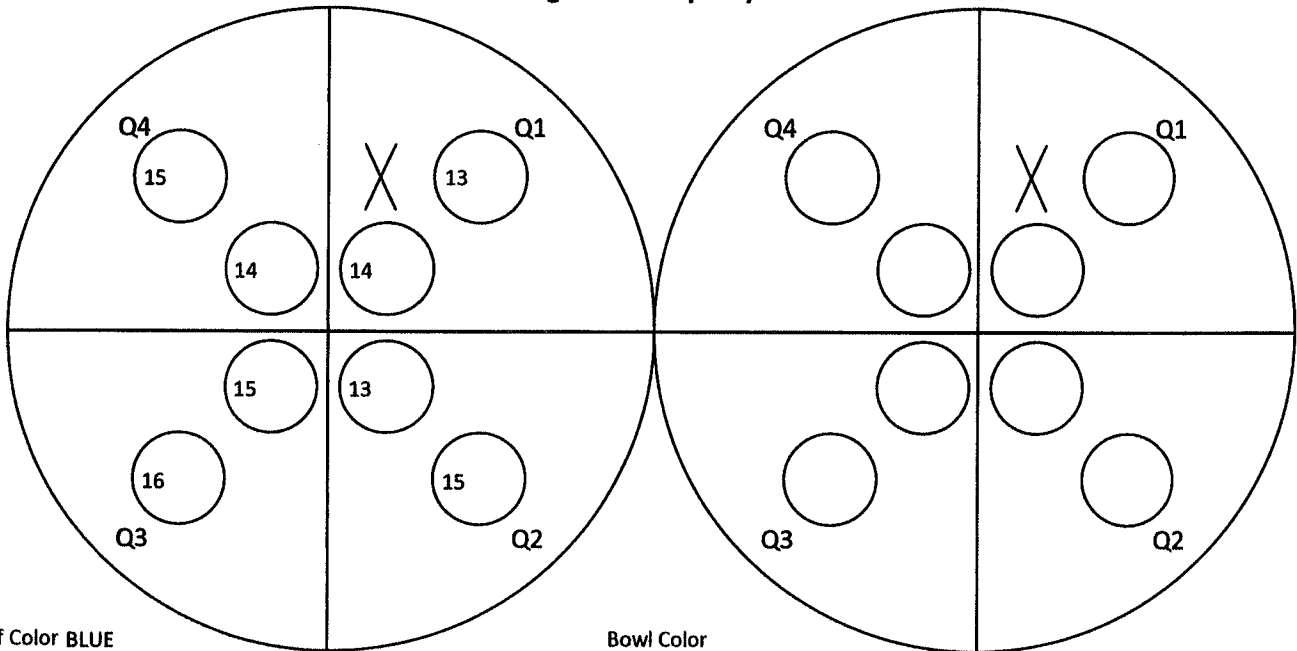
Tank Name RUSH HILL 137KG



ROOF

Testing and Discrepancy Locations

BOWL



Roof Color BLUE

Bowl Color

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Liquid Engineering Corporation
Steel Potable Water Reservoir Security / Measurement Worksheet

Job Number 50463

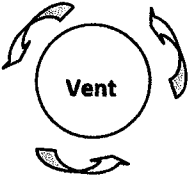
Utility Name BIG SANDY WATER DISTRICT

Tank Name RUSH HILL 137KG

Security

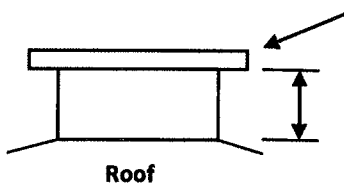
Is the area surrounding the tank well lit?	Yes
Is the tank surrounded by a Security Fence?	Yes
Are the access gates locked?	Yes
Is the tank equipped with a Vandal Guard on the primary access ladder?	Yes
If so, is the Vandal Guard locked?	N/A
Are the vents equipped with security vent shrouds?	No
Are all of the hatches equipped with electronic monitoring devices?	No
Are the external plumbing components housed in a secure vault or out-building?	Yes
Does the surrounding geography of the tank obscure it from public view?	No
Does the exterior of the tank show signs of trespass?	Yes

Measurements



Vent

Outside Circumference
43 Inches



Roof

Flange Metal Thickness 1/2" Inches

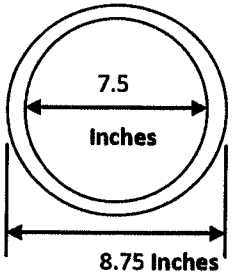
Roof to Screen or Flange 12" Inches

Flange Yes

Number of Bolt Holes 6

Size of Bolts .75 Inches

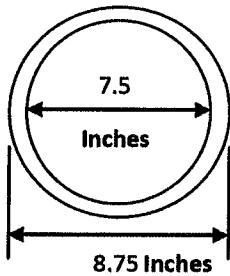
Inlet



7.5
Inches

8.75 Inches

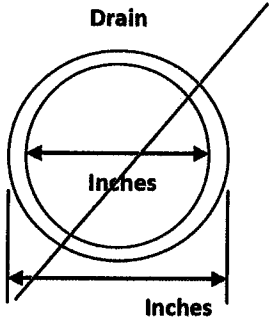
Outlet



7.5
Inches

8.75 Inches

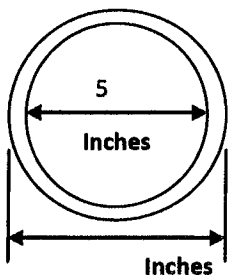
Drain



Inches

Inches

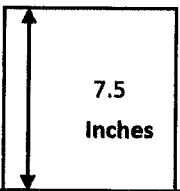
Overflow



5
Inches

Inches

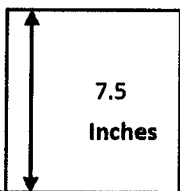
Inlet Riser



7.5
Inches

Floor

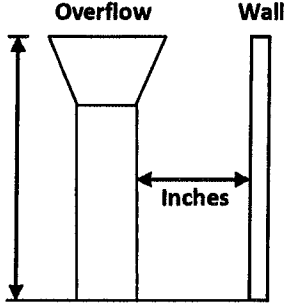
Outlet Riser



7.5
Inches

Floor

Overflow



70'
Feet/Inches

Floor

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Liquid Engineering Corporation
Steel Potable Water Reservoir Immediate Needs Assessment

Job Number: 50463
Inspector: M BUTAK

Utility: BIG SANDY WATER DISTRICT
Dive Controller: E. POTTER

Tank: RUSH HILL 137KG
Date: 11/14/2016

1. Health and Safety Items

- Safety Climb System Installation:
- Vent Screen Repairs:

2. Testing Items

- Dye Testing for Leak Evaluation:
- Presence of Lead Test (Interior/Exterior):

3. Destructive Testing Items

- % of Lead Test (Interior/Exterior) (*Coating samples are removed for laboratory analysis*)
- Coating Adhesion Test (Interior/Exterior):

Specific written authorization required to perform destructive testing. Destructive tests include touch-up of coating system.

4. Repair Items

- Epoxy Coating Repairs:
- Temporary Leak Repairs:
- Float Operated Level Indicator Repairs / Maintenance:
- Hypalon Repairs:

5. Security Related Items (*Critical security upgrade information is immediately available*)

- Tank vents are not equipped with a security vent shroud:
- Tank hatches are not equipped with a security hatch locking device:
- Tank perimeter not adequately secured:

The above mentioned additional work is considered immediately necessary and is recommended to be completed. Some items may be completed in conjunction with work currently being performed while the crew is on site.

Reservoir Inspection Condition Supplemental

CLEAN AND INSPECT EVERY 3-5 YEARS

N/A* WELDS: WELD SEAMS HAVE UNEVEN EDGES THAT PROTRUDE APPROXIMATELY 1/8" OFF OF WALLS. PROPER COATING IN THESE SEAMS WOULD BE DIFFICULT IF NOT IMPOSSIBLE. WELD SEAMS ON BOTTOM ARE COLLECTING SEDIMENT AND SHOWING LARGE STRETCHES OF CONCENTRATION CELL CORROSION WITH LIKELYHOOD OF METAL LOSS THAT IS DIFFICULT TO MEASURE DUE TO LOCATION. WELD SEAMS ON UPPER HALF OF RESERVOIR SHOW HEAVY INTERGRANULAR CORROSION AND ARE FLAKING OFF LARGE AMOUNTS OF CORRODED METAL. THE AMOUNT OF CORROSION/ METAL LOSS IN THESE AREAS MAKE THE STRUCTURAL INTEGRITY OF THE RESERVOIR QUESTIONABLE.
FLOOR: FLOOR SHOWS SPORADIC CONCENTRATION CELL CORROSION. PITTING MEASURED AT 3/16". TWO 6" STRETCHES OF CONCENTRATION CELL CORROSION ON FLOOR TO WALL SEAMS SHOW HEAVY CRACKS UNDERNEATH. POSSIBILITY OF LEAKING IN THE FUTURE. OVERALL FLOOR PANELS IN GOOD CONDITION WITH FEW NOTABLE DISCREPENCIES.

WALLS: HEAVY INTERGRANULAR CORROSION ON UPPER HALF OF RESERVOIR. MOST CONCERNING DISCREPENCIES NOTED ABOVE ON WELD SEAM NOTES.

ROOF: HEAVY INTERGRANULAR CORROSION ON ROOF TO WALL SEAM. SOME CORROSION ON ROOF SEAMS AS WELL WITH SLIGHT SURFACE CORROSION ON PANELS. SMALL BREACH IN 6 O CLOCK CATHODIC CAP. REPAIR JFA

PLUMBING: HEAVY CONCENTRATION CELL CORROSION ON INTERIOR OF BOTH INLET AND OUTLET. INTERIOR OVERFLOW SHOWS INTERGRANULAR CORROSION ON PIPE.

MANWAY: BOTH MANWAYS SHOW CONCENTRATION CELL CORROSION ON LIP AND INTERIOR OF PIPE, CLOSE TO GASKET. GASKET IS BEGINNING TO BREAK DOWN. NO LEAKING NOTED.

REPLACE

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463
Inspector: J. FAUROT

Utility: BIG SANDY WATER DISTRICT
Dive Controller: E. POTTER

Tank: BOWLING DRIVE 216KG
Date: 11/13/2016

AMERICAN WATER WORKS ASSOCIATION
ANSI/AWWA M42 / D101-53

SSPC Legend		NACE Legend		AWS Legend	
Grade	Description	Grade	Description	Grade	Description
10	No Rusting, or <0.01% of surface is rusted	A	None	L	Satisfactory
9	Minor rusting, or <0.03% of surface is rusted	B	Uniform Surface Corrosion	M	Spatter
8	Isolated rust, <0.01% of surface is rusted	C	Pitting	N	Porosity
7	Isolated rust, <0.03% of surface is rusted	D	Concentration Cell Corrosion	O	Convexity / Concavity
6	Extensive rusting, <1% of surface is rusted	E	Galvanic Corrosion	P	Cracks
5	Approximately 3% of the surface is rusted	F	Stress Corrosion Cracking	Q	Inclusions
4	Approximately 10% of the surface is rusted	G	Erosion Corrosion	R	Incomplete Fusion
3	Approximately 17% of the surface is rusted	H	Intergranular Corrosion	S	Incomplete Penetration
2	Approximately 33% of the surface is rusted	I	Dealloying	T	Undercut
1	Approximately 50% of the surface is rusted			U	Underfill
0	Approximately 100% of the surface is rusted			V	Overlap
				W	Unable to evaluate

QUADRANT 1 QUADRANT 2 QUADRANT 3 QUADRANT 4

INTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	7	H	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	8	B	L	8	B	L	8	B	L	8	B	L
Roof Support	8	H	L	8	H	L	8	H	L	8	H	L
Roof Gussets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Painting Ring	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Fair Average Blister Diameter NONE Average Pit Depth NONE
Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof weld	8	B	L	8	B	L	8	B	L	8	B	L
Lower Ring Panels	8	D	M	8	D	M	8	D	M	8	D	M
Middle Ring Panels	8	D	M	8	D	M	8	D	M	8	D	M
Upper Ring Panels	9	A	L	9	A	L	9	A	L	9	A	L
Interior Ladder	7	DH	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Good Average Blister Diameter NONE Average Pit Depth NONE
Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR FLOOR

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Perimeter Weld	9	A	L	9	A	L	9	A	L	9	A	L
Floor Panels	9	A	L	9	A	L	9	A	L	9	A	L

Overall Coating Rating Good Average Blister Diameter NONE Average Pit Depth NONE
Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: BOWLING DRIVE 216KG

Inspector: J. FAUROT

Dive Controller: E. POTTER

Date: 11/13/2016

QUADRANT 1	QUADRANT 2	QUADRANT 3	QUADRANT 4
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~~INTERIOR RESERVOIR SUPPORT COLUMNS~~

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Column Structures	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column Bases	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column to Roof	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating ---- Average Blister Diameter _____ Average Pit Depth _____
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR PLUMBING COMPONENTS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Inlet Plumbing	8	D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Outlet Plumbing	8	D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manways	6	D	L	N/A	N/A	N/A	8	D	L	N/A	N/A	N/A
Floor Drains	8	D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Interior Overflow	8	H	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

EXTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	9	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	9	B	L	9	B	L	9	B	L	9	B	L
Access Hatches	8	H	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Fair Average Blister Diameter NONE Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

EXTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof Weld	9	A	L	9	A	L	9	A	L	9	A	L
Lower Ring Panels	9	B	L	9	B	L	9	B	L	9	B	L
Mid Ring Panels	9	B	L	9	B	L	9	B	L	9	B	L
Upper Ring Panels	9	B	L	9	B	L	9	B	L	9	B	L
Exterior Overflow	9	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Fair Average Blister Diameter NONE Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

FOOTINGS / FOUNDATION

Footings / Foundations: Satisfactory <input checked="" type="checkbox"/>	Cracking <input checked="" type="checkbox"/>	Spalling <input type="checkbox"/>	Erosion/Exposed Aggregate <input type="checkbox"/>
Anchor Bolts: Satisfactory <input checked="" type="checkbox"/>	Loose <input type="checkbox"/>	Rusted Corroded <input type="checkbox"/>	(If excessive) Diameter = _____

~~TOWER SUPPORT STRUCTURES~~

Tower Legs/Columns: Satisfactory <input checked="" type="checkbox"/>	Alignment ----	Settling ----	Rust/Corrosion ----
Riser Pipe: Satisfactory <input checked="" type="checkbox"/>	Alignment ----	Frost Casing ----	Rust/Corrosion ----
Rods & Turnbuckles: Satisfactory <input checked="" type="checkbox"/>	Turnbuckle Tension ----	Rod Tension ----	Cotter Pins/Rod Nuts ----
Leg shoes/Brackets: Satisfactory <input checked="" type="checkbox"/>	Coating ----	Rust/Corrosion ----	Pitting/Cracking ----

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Liquid Engineering Corporation
Potable Water Reservoir Contamination, Health and Safety Report

Job Number: 50463
 Inspector: J. FAUROT

Utility: BIG SANDY WATER DISTRICT
 Dive Controller: E. POTTER

Tank: BOWLING DRIVE 216KG
 Date: 11/13/2016

Complies With: AWWA • OSHA • ANSI • NIOSH • NAVFAC • NFPAC

CONTAMINATION & HEALTH

Air Vents	Type: MUSHROOM	#: 1	Screen Condition(s): Good
Hatches	Type: Square	#: 1	Secured Properly: Yes Properly Sealed: Yes
Exterior Overflow	Flapper: Yes	Screen: No	Gasket: No Condition: Good
Cathodic Covers	In- Place: ----	#: ----	Gasket: ---- Properly Sealed: ----
Roof to Wall Joint	Welded: Yes	Properly Sealed: Yes	
Roof Integrity	Holes: No	Cracking: No	Standing Water: No
Wall Integrity	Holes: No	Cracking: No	
Manway Integrity	Leaks: No	Condition: Good	
Water Clarity	General Appearance: CLEAR		Odor: NONE
Floating Surface Debris	Type: NONE		Source: N/A
Hypalon Floating Cover	Condition: ----	Holes: ----	Tears: ----
Telemetry Penetrations	Properly Sealed: No		

FACILITY SAFETY COMPLIANCE

Exterior Ladder

Overall Ladder	Condition: Good	#: 1	Offset Landing: No	Height: 65'
Vandal Guard	Present: No	Vandal Guard Locked: ----		
Ladder Rails & Rungs	Condition: Good	Missing/Damaged Rungs: No		
Rung Spacing & Depth	Spacing: 12 in. (max 12")	Toe Depth: 8 in. (min 7")		
Rail Spacing & Size	Width: 2.5 in. (min 2")	Thickness: .25 in. (min 1/4")	Rail to Rail: 16 in. (min 16")	
Safety Climb System	Type: Cable	Condition: Good		
Number & Locations	Wall: 1	Leg:	Roof:	Riser Pipe: Other:
Ladder Attachments				

Manways

Type and size	Type: Round	#: 2	Size: 25" inches (24" – 18"x22" min)
Support Structure	Type: Bolted	Condition: Good	
Number & Locations	Wall: 2	Roof:	Riser Pipe: Other:

Hatches

Hatch Type & Size	Type: Square	#: 1	Size: 24"x24" in. (24" – 24"x15" min)
Hatch & Lid Lip Height	Hatch: 6 in. (min 4")	Lid: 2 in. (min 2")	

Balconies & Railing

Deck / Walkways	Condition: ----	Width:	
Hand Rails	Condition: Good	Height: 42 in. (min 42")	No. Rails: 2 (min 2)
Toe Rail	Condition: Good	Height: 5 in. (min 4")	
Welds / Attachments	Condition: Good		

Roof

Safety Tie-Off Points	Condition: Good	#: 2
Antennas	Type: ----	#: 1

DISCLAIMER

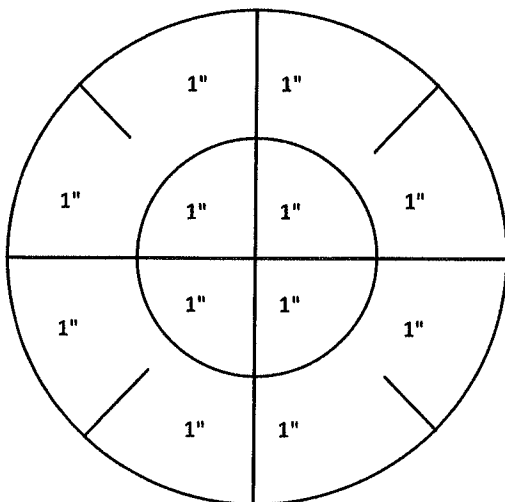
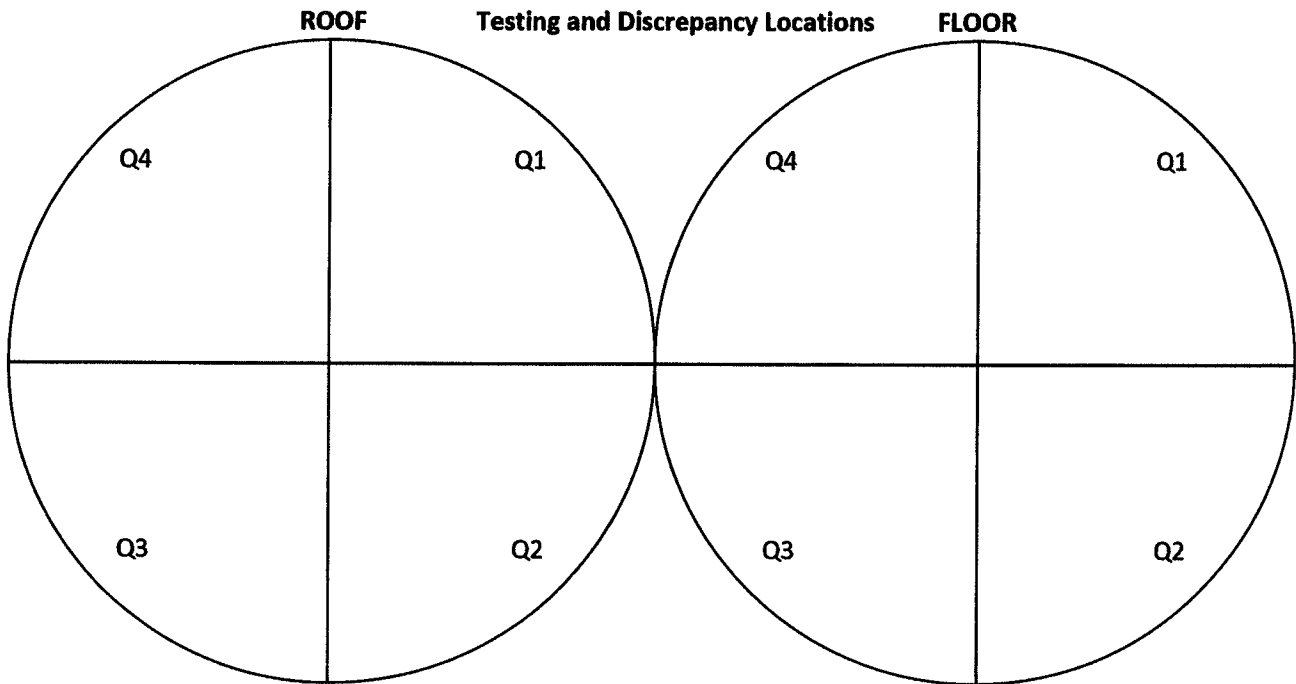
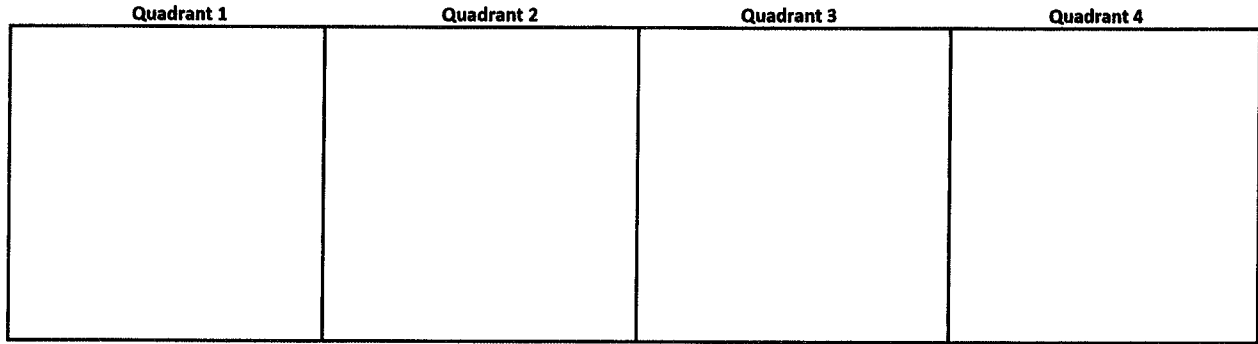
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Liquid Engineering Corporation
Circular Tank Diagram / Information Worksheet

Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

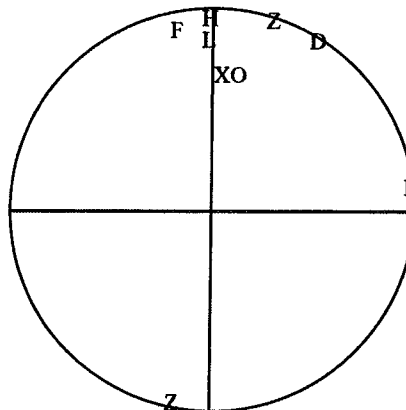
Tank Name BOWLING DRIVE 216KG



Sediment Depth Measurements

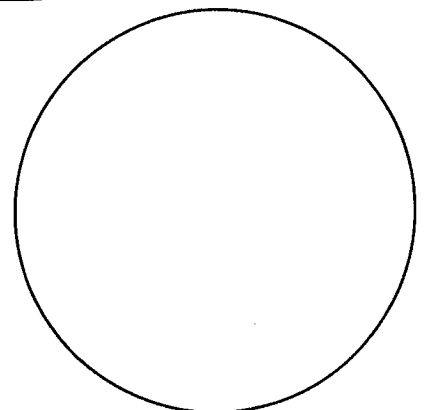
Average Sediment Depth = The sum of all measurements taken, divided by the number of measurements taken

Avg. Depth Cubic Yardage Sediment Type



Plumbing & Structure location

Plumbing and structure codes
 O=Outlet X=Inlet Z=Manway
 V=Vent D=Drain S=Sump
 L=Ladder H=Hatch P=Overflow
 F=Float Level Indicator
 T=Telemetry



Column Placement

Type of Column ○ □ I
 Base Structure I
 Top Structure I
 Column Construction -----

DISCLAIMER

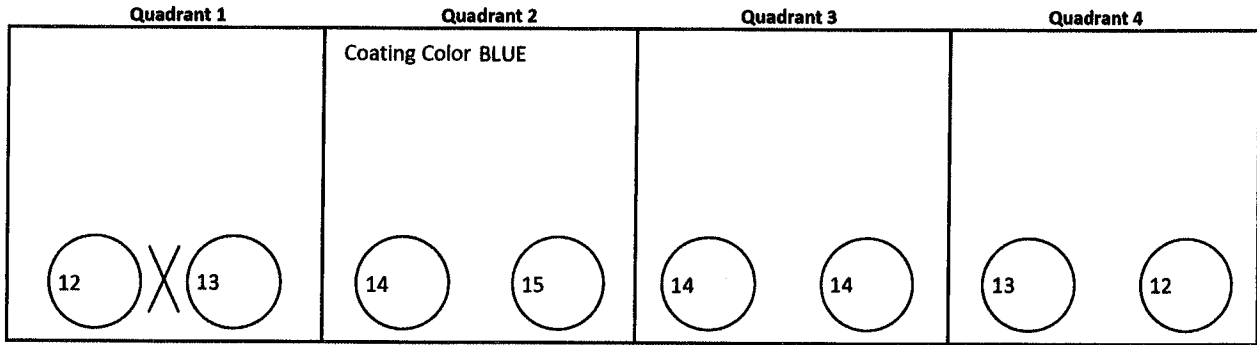
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Circular Tank Diagram / NDT DFT Coating Adhesion Presence of lead

Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

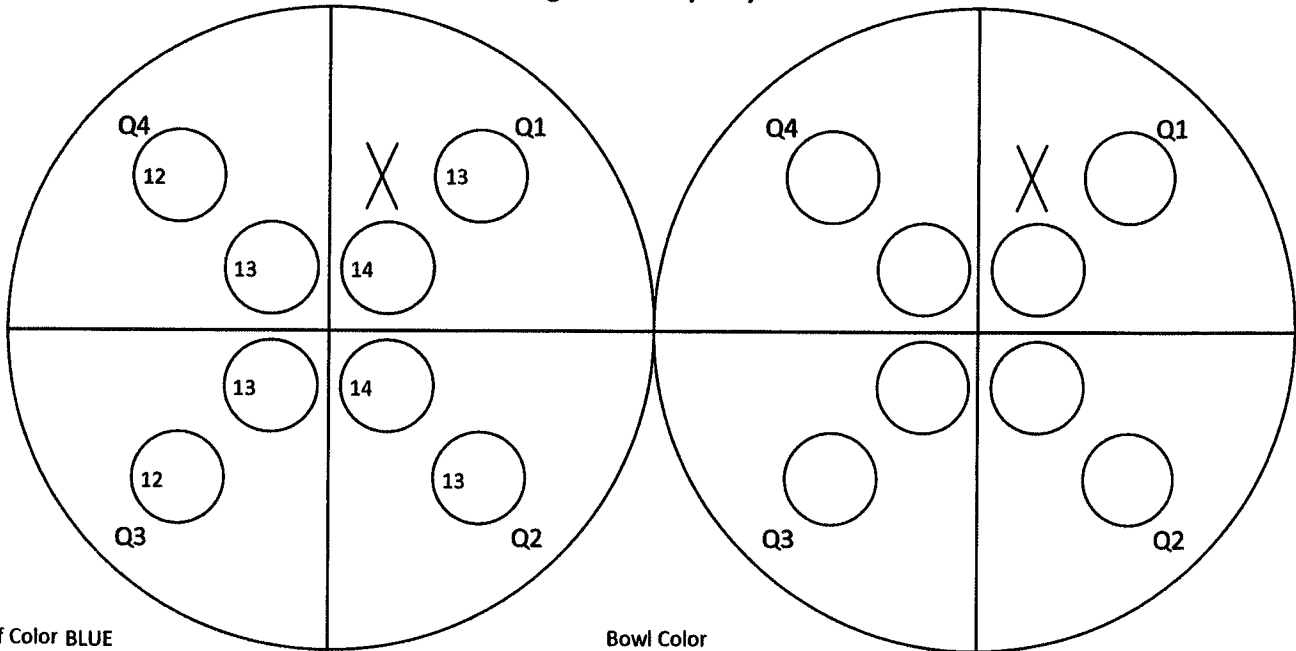
Tank Name BOWLING DRIVE 216KG



ROOF

Testing and Discrepancy Locations

BOWL



Roof Color BLUE

Bowl Color

DISCLAIMER

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Liquid Engineering Corporation
Steel Potable Water Reservoir Security / Measurement Worksheet

Job Number 50463

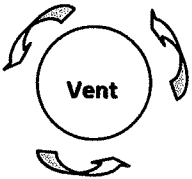
Utility Name BIG SANDY WATER DISTRICT

Tank Name BOWLING DRIVE 216KG

Security

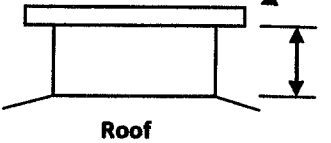
Is the area surrounding the tank well lit?	Yes
Is the tank surrounded by a Security Fence?	No
Are the access gates locked?	N/A
Is the tank equipped with a Vandal Guard on the primary access ladder?	No
If so, is the Vandal Guard locked?	N/A
Are the vents equipped with security vent shrouds?	No
Are all of the hatches equipped with electronic monitoring devices?	No
Are the external plumbing components housed in a secure vault or out-building?	Yes
Does the surrounding geography of the tank obscure it from public view?	No
Does the exterior of the tank show signs of trespass?	No

Measurements



Vent

Outside Circumference
44 Inches



Roof

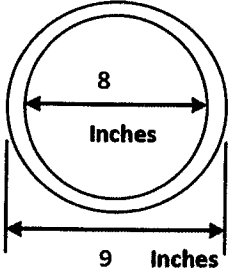
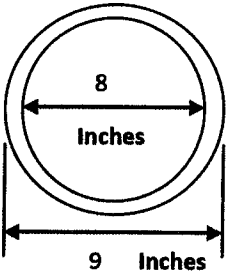
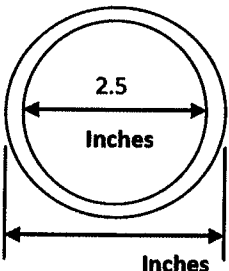
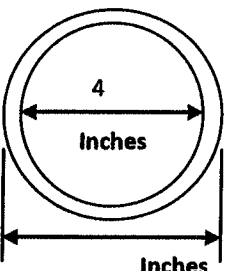
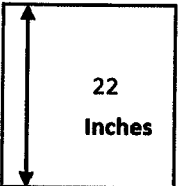
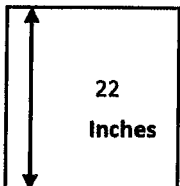
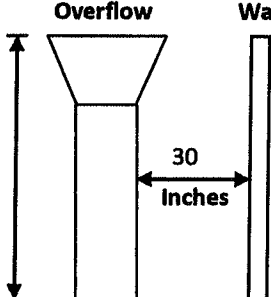
Flange Metal Thickness Inches

Roof to Screen or Flange 8 Inches

Flange Yes

Number of Bolt Holes 8

Size of Bolts 1 Inches

<p>Inlet</p> 	<p>Outlet</p> 	<p>Drain</p> 	<p>Overflow</p> 
<p>Inlet Riser</p>  <p>Floor</p>	<p>Outlet Riser</p>  <p>Floor</p>	<p>Overflow Wall</p>  <p>Floor</p>	

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Liquid Engineering Corporation
Steel Potable Water Reservoir Immediate Needs Assessment

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: BOWLING DRIVE 216KG

Inspector: J. FAUROT

Dive Controller: E. POTTER

Date: 11/13/2016

1. Health and Safety Items

- Safety Climb System Installation:
- Vent Screen Repairs:

2. Testing Items

- Dye Testing for Leak Evaluation:
- Presence of Lead Test (Interior/Exterior):

3. Destructive Testing Items

- % of Lead Test (Interior/Exterior) (*Coating samples are removed for laboratory analysis*)
- Coating Adhesion Test (Interior/Exterior):

Specific written authorization required to perform destructive testing. Destructive tests include touch-up of coating system.

4. Repair Items

- Epoxy Coating Repairs:
- Temporary Leak Repairs:
- Float Operated Level Indicator Repairs / Maintenance:
- Hypalon Repairs:

5. Security Related Items (*Critical security upgrade information is immediately available*)

- Tank vents are not equipped with a security vent shroud:
- Tank hatches are not equipped with a security hatch locking device:
- Tank perimeter not adequately secured:

The above mentioned additional work is considered immediately necessary and is recommended to be completed. Some items may be completed in conjunction with work currently being performed while the crew is on site.

Reservoir Inspection Condition Supplemental

CLEAN AND INSPECT EVERY 3-5 YEARS

FLOORS: GOOD CONDITION. LIGHT STAINING.

INLET/OUTLET: CONCENTRATION CELL CORROSION.

FLOAT LEVEL (EYES ON FLOOR BRACKET ARE BROKEN) CONCENTRATION CELL CORROSION ON REMAINING BRACKET. WIRES IN GOOD CONDITION.

WALLS: LOWER 2/3 OF TANK HAVE CONCENTRATION CELL CORROSION ON HORIZONTAL WELD SEAMS. UPPER 1/3 IN GOOD CONDITION.

WALL TO ROOF WELD: UNIFORM SURFACE CORROSION.

ROOF PANELS: UNIFORM SURFACE CORROSION ON WELD SEAMS.

ROOF SUPPORTS: UNIFORM SURFACE CORROSION.

OVERFLOW: DELAMINATION AND INTERGRANULAR CORROSION ON UPPER SIDE OF PIPE.

VENT: INTERGRANULAR CORROSION ON HARDWARE. SCREEN IN GOOD CONDITION.

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463
Inspector: M BUTAK

Utility: BIG SANDY WATER DISTRICT
Dive Controller: J FAUROT

Tank: US 23 B **STEEL**
Date: 11/12/2016

**AMERICAN WATER WORKS ASSOCIATION
ANSI/AWWA M42 / D101-53**

SSPC Legend		NACE Legend		AWS Legend	
Grade	Description	Grade	Description	Grade	Description
10	No Rusting, or <0.01% of surface is rusted	A	None	L	Satisfactory
9	Minor rusting, or <0.03% of surface is rusted	B	Uniform Surface Corrosion	M	Spatter
8	Isolated rust, <.01% of surface is rusted	C	Pitting	N	Porosity
7	Isolated rust, <.03% of surface is rusted	D	Concentration Cell Corrosion	O	Convexity / Concavity
6	Extensive rusting, <1% of surface is rusted	E	Galvanic Corrosion	P	Cracks
5	Approximately 3% of the surface is rusted	F	Stress Corrosion Cracking	Q	Inclusions
4	Approximately 10% of the surface is rusted	G	Erosion Corrosion	R	Incomplete Fusion
3	Approximately 17% of the surface is rusted	H	Intergranular Corrosion	S	Incomplete Penetration
2	Approximately 33% of the surface is rusted	I	Dealloying	T	Undercut
1	Approximately 50% of the surface is rusted			U	Underfill
0	Approximately 100% of the surface is rusted			V	Overlap
				W	Unable to evaluate

QUADRANT 1 QUADRANT 2 QUADRANT 3 QUADRANT 4

INTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	10	A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	10	A	N/A	10	A	N/A	10	A	N/A	10	A	N/A
Roof Support	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Gussets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Painting Ring	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating **Good** Average Blister Diameter **NONE** Average Pit Depth **NONE**
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof weld	8	B	N/A	8	B	N/A	8	B	N/A	8	B	N/A
Lower Ring Panels	7	D	N/A	7	D	N/A	7	D	N/A	7	D	N/A
Middle Ring Panels	7	D	N/A	7	D	N/A	7	D	N/A	7	D	N/A
Upper Ring Panels	8	D	N/A	8	D	N/A	8	D	N/A	8	D	N/A
Interior Ladder	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating **Good** Average Blister Diameter **NONE** Average Pit Depth **1/4"**
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR FLOOR

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Perimeter Weld	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Floor Panels	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating **Good** Average Blister Diameter **NONE** Average Pit Depth **NONE**
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: US 23 B

Inspector: M BUTAK

Dive Controller: J FAUROT

Date: 11/12/2016

QUADRANT 1	QUADRANT 2	QUADRANT 3	QUADRANT 4
------------	------------	------------	------------

~~INTERIOR RESERVOIR SUPPORT COLUMNS~~

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Column Structures	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column Bases	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column to Roof	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating ----

Average Blister Diameter

Average Pit Depth

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR PLUMBING COMPONENTS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Inlet Plumbing	6	B,D	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Outlet Plumbing	N/A	N/A	N/A	7	B,D	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manways	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6	B,D	N/A
Floor Drains	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Interior Overflow	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	B	N/A

EXTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	10	A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	10	A	N/A	10	A	N/A	10	A	N/A	10	A	N/A
Access Hatches	10	A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Good

Average Blister Diameter NONE

Average Pit Depth NONE

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

EXTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof Weld	9	B	N/A	9	B	N/A	9	B	N/A	9	B	N/A
Lower Ring Panels	9	B	N/A	9	B	N/A	9	B	N/A	9	B	N/A
Mid Ring Panels	9	B	N/A	9	B	N/A	9	B	N/A	9	B	N/A
Upper Ring Panels	9	B	N/A	9	B	N/A	9	B	N/A	9	B	N/A
Exterior Overflow	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10	B	N/A

Overall Coating Rating Good

Average Blister Diameter NONE

Average Pit Depth NONE

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

FOOTINGS / FOUNDATION

Footings / Foundations: Satisfactory <input checked="" type="checkbox"/>	Cracking <input type="checkbox"/>	Spalling <input type="checkbox"/>	Erosion/Exposed Aggregate <input type="checkbox"/>
Anchor Bolts: Satisfactory <input checked="" type="checkbox"/>	Loose <input type="checkbox"/>	Rusted Corroded <input type="checkbox"/>	(If excessive) Diameter =

~~TOWER SUPPORT STRUCTURES~~

Tower Legs/Columns: Satisfactory <input type="checkbox"/>	Alignment ----	Settling ----	Rust /Corrosion ----
Riser Pipe: Satisfactory <input type="checkbox"/>	Alignment ----	Frost Casing ----	Rust /Corrosion ----
Rods & Turnbuckles: Satisfactory <input type="checkbox"/>	Turnbuckle Tension ----	Rod Tension ----	Cotter Pins/Rod Nuts ----
Leg shoes/Brackets: Satisfactory <input type="checkbox"/>	Coating ----	Rust/Corrosion ----	Pitting/Cracking ----

DISCLAIMER

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Liquid Engineering Corporation
Potable Water Reservoir Contamination, Health and Safety Report

Job Number: 50463
 Inspector: M BUTAK

Utility: BIG SANDY WATER DISTRICT
 Dive Controller: J FAUROT

Tank: US 23 B
 Date: 11/12/2016

Complies With: AWWA • OSHA • ANSI • NIOSH • NAVFAC • NFPAC

CONTAMINATION & HEALTH

Air Vents	Type: MUSHROOM	#: ---	Screen Condition(s): Good
Hatches	Type: Square	#: 1	Secured Properly: Yes Properly Sealed: Yes
Exterior Overflow	Flapper: ----	Screen: ----	Gasket: ---- Condition: Good
Cathodic Covers	In-Place: ----	#: ---	Gasket: ---- Properly Sealed: ----
Roof to Wall Joint	Welded: No	Properly Sealed: Yes	
Roof Integrity	Holes: No	Cracking: No	Standing Water: No
Wall Integrity	Holes: No	Cracking: No	
Manway Integrity	Leaks: No	Condition: Good	
Water Clarity	General Appearance: CLEAR		Odor: NONE
Floating Surface Debris	Type: NONE		Source: N/A
Hypalon Floating Cover	Condition: ----	Holes: ----	Tears: ----
Telemetry Penetrations	Properly Sealed: Yes		

FACILITY SAFETY COMPLIANCE

Exterior Ladder

Overall Ladder	Condition: Good	#: 1	Offset Landing: Yes	Height: 37"
Vandal Guard	Present: None	Vandal Guard Locked: ----		
Ladder Rails & Rungs	Condition: Good	Missing/Damaged Rungs: No		
Rung Spacing & Depth	Spacing: 11" in. (max 12")	Toe Depth: 8" in. (min 7")		
Rail Spacing & Size	Width: 2" in. (min 2")	Thickness: 1.5" in. (min 1/4")	Rail to Rail: 17.5" in. (min 16")	
Safety Climb System	Type: Cage	Condition: Good		
Number & Locations	Wall: 1	Leg:	Roof:	Riser Pipe: Other:
Ladder Attachments				

Manways

Type and size	Type: Round	#: 1	Size: 30" inches (24" – 18"x22" min)
Support Structure	Type: Bolted	Condition: Good	
Number & Locations	Wall: 1	Roof:	Riser Pipe: Other:

Hatches

Hatch Type & Size	Type: Square	#: 1	Size: 30X30" in. (24" – 24"x15" min)
Hatch & Lid Lip Height	Hatch: 3.5" in. (min 4")	Lid: 2" in. (min 2")	

Balconies & Railing

Deck / Walkways	Condition: Good	Width: 30"	
Hand Rails	Condition: Good	Height: 43" in. (min 42")	No. Rails: 2 (min 2)
Toe Rail	Condition: Good	Height: 4.5" in. (min 4")	
Welds / Attachments	Condition: Good		

Roof

Safety Tie-Off Points	Condition: Good	#: 8
Antennas	Type: -----	#: ---

DISCLAIMER

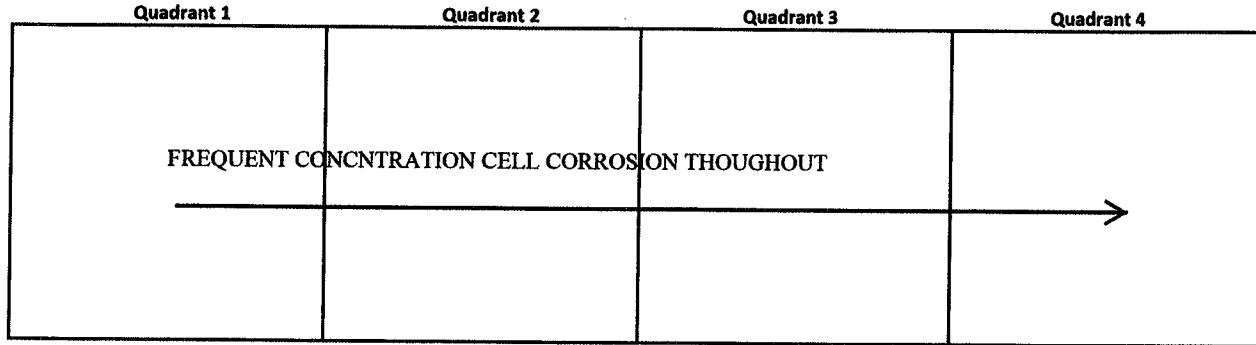
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Liquid Engineering Corporation
Circular Tank Diagram / Information Worksheet

Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

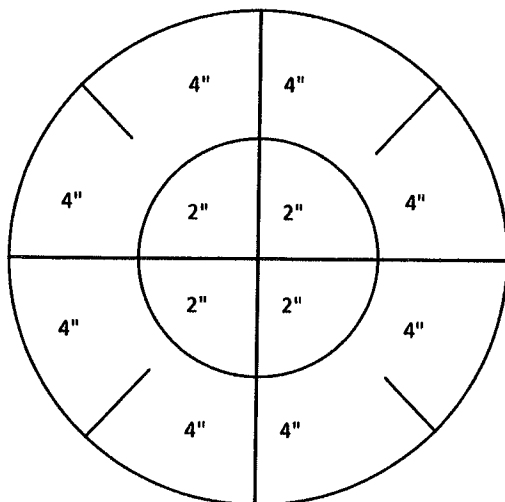
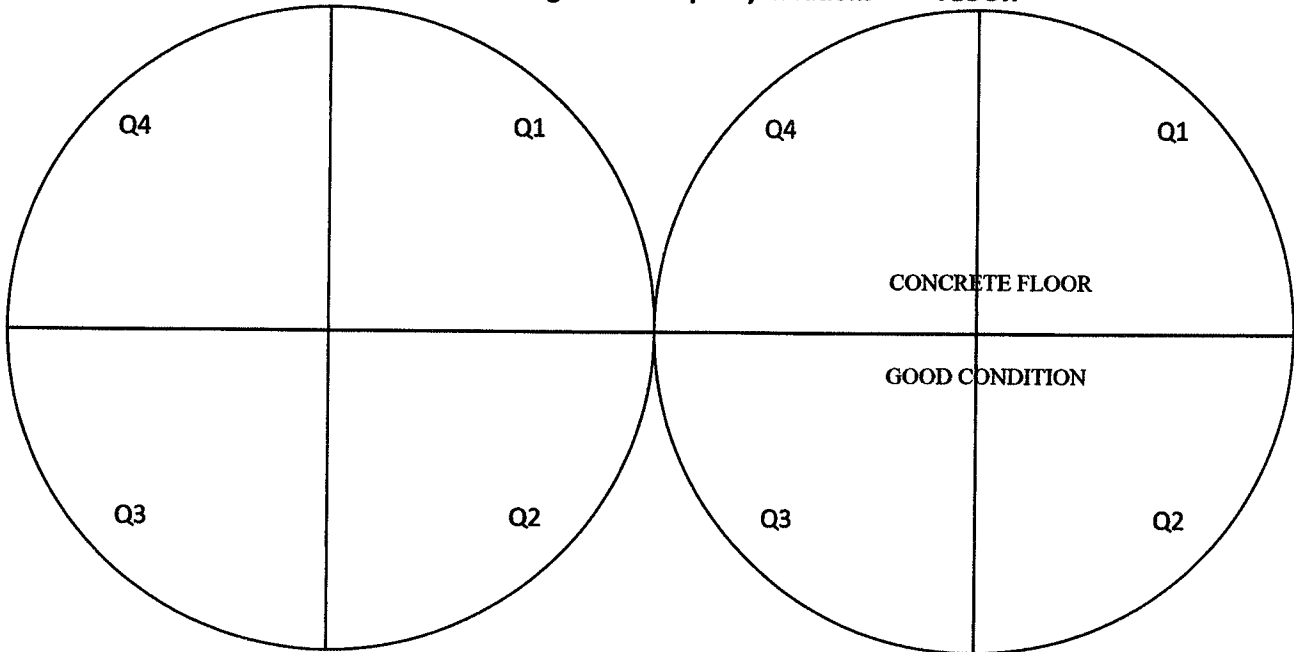
Tank Name US 23 B



ROOF

Testing and Discrepancy Locations

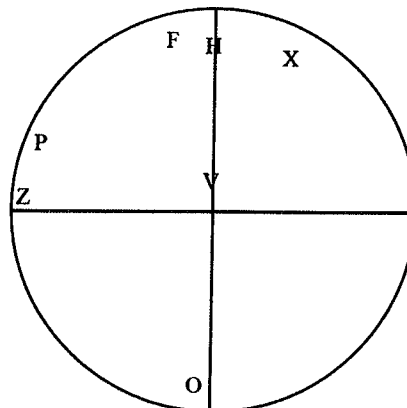
FLOOR



Sediment Depth Measurements

Average Sediment Depth = The sum of all measurements taken, divided by the number of measurements taken

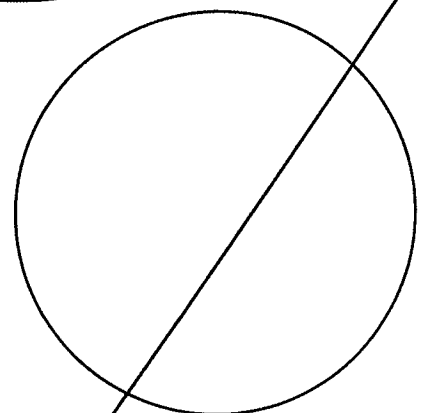
Avg. Depth Cubic Yardage Sediment Type IRON/FLOCCULANT



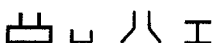

Plumbing & Structure location

Plumbing and structure codes

- O=Outlet X=Inlet Z=Manway
- V=Vent D=Drain S=Sump
- L=Ladder H=Hatch P=Overflow
- F=Float Level Indicator
- T=Telemetry



Column Placement

- Type of Column ○ □ I
- Base Structure  I
- Top Structure  I
- Column Construction -----

DISCLAIMER

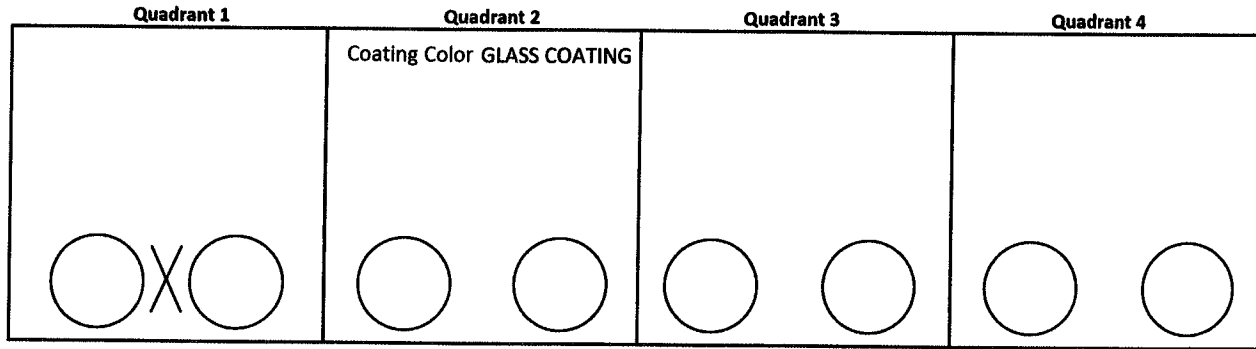
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Circular Tank Diagram / NDT DFT Coating Adhesion Presence of lead

Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

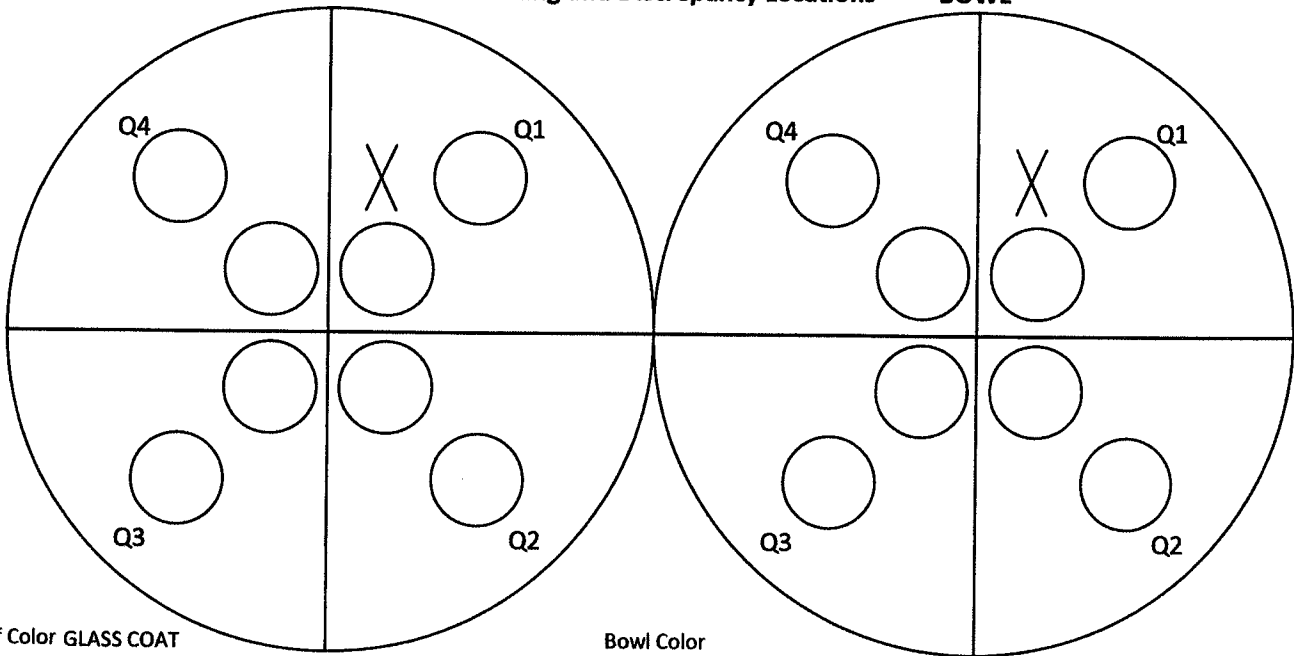
Tank Name US 23 B



ROOF

Testing and Discrepancy Locations

BOWL



Roof Color GLASS COAT

Bowl Color

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Steel Potable Water Reservoir Security / Measurement Worksheet

Job Number 50463

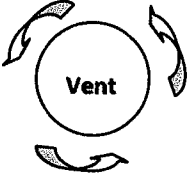
Utility Name BIG SANDY WATER DISTRICT

Tank Name US 23 B

Security

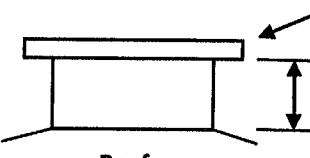
Is the area surrounding the tank well lit?	Yes
Is the tank surrounded by a Security Fence?	Yes
Are the access gates locked?	Yes
Is the tank equipped with a Vandal Guard on the primary access ladder?	No
If so, is the Vandal Guard locked?	N/A
Are the vents equipped with security vent shrouds?	No
Are all of the hatches equipped with electronic monitoring devices?	No
Are the external plumbing components housed in a secure vault or out-building?	Yes
Does the surrounding geography of the tank obscure it from public view?	Yes
Does the exterior of the tank show signs of trespass?	No

Measurements



Vent

Outside Circumference
70" Inches



Roof

Flange Metal Thickness Inches

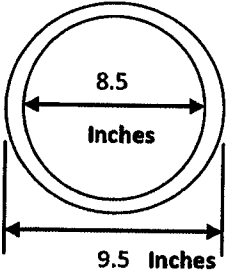
Roof to Screen or Flange 9" Inches

Flange ----

Number of Bolt Holes Inches

Size of Bolts Inches

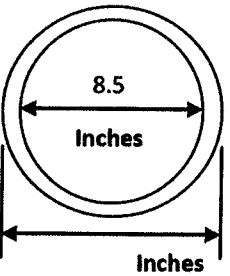
Inlet



8.5
Inches

9.5 Inches

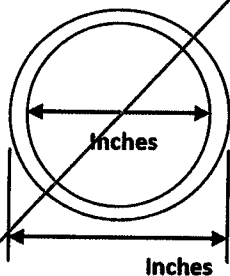
Outlet



8.5
Inches

Inches

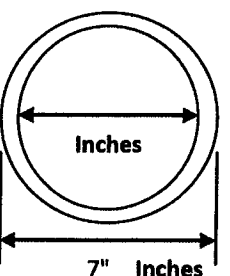
Drain



Inches

Inches

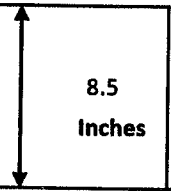
Overflow



Inches

7" Inches

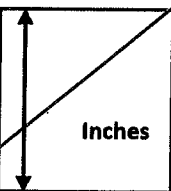
Inlet Riser



8.5
Inches

Floor

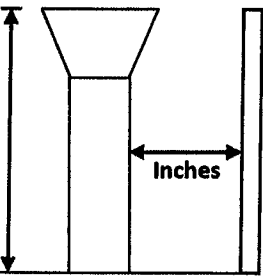
Outlet Riser



Inches

Floor

Overflow **Wall**



35'
Feet/Inches

Inches

Floor

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Liquid Engineering Corporation
Steel Potable Water Reservoir Immediate Needs Assessment

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: US 23 B

Inspector: M BUTAK

Dive Controller: J FAUROT

Date: 11/12/2016

1. Health and Safety Items

- Safety Climb System Installation:
- Vent Screen Repairs:

2. Testing Items

- Dye Testing for Leak Evaluation:
- Presence of Lead Test (Interior/Exterior):

3. Destructive Testing Items

- % of Lead Test (Interior/Exterior) *(Coating samples are removed for laboratory analysis)*
- Coating Adhesion Test (Interior/Exterior):

Specific written authorization required to perform destructive testing. Destructive tests include touch-up of coating system.

4. Repair Items

- Epoxy Coating Repairs: HEAVY METAL LOSS ON PANEL EDGES IN ALL 4 QUADRANTS. UP TO AND AROUND BOLTS IN SOME PLACES.
- Temporary Leak Repairs:
- Float Operated Level Indicator Repairs / Maintenance:
- Hypalon Repairs:

5. Security Related Items *(Critical security upgrade information is immediately available)*

- Tank vents are not equipped with a security vent shroud:
- Tank hatches are not equipped with a security hatch locking device:
- Tank perimeter not adequately secured:

The above mentioned additional work is considered immediately necessary and is recommended to be completed. Some items may be completed in conjunction with work currently being performed while the crew is on site.

Reservoir Inspection Condition Supplemental

CLEAN AND INSPECT EVERY 3-5 YEARS

FLOOR: CONCRETE FLOOR SHOWS STAINING, NO NOTABLE DISCREPENCIES. OVERALL GOOD CONDITON.

WALLS: PANEL EDGES SHOW HEAVY CONCENTRATION CELL CORROSION. HEAVY METAL LOSS WAS NOTED ON VIDEO. UP TO 1/4" PITTING, SOME METAL LOSS IS WORKING UP TO BOLTS ON INTERIOR. HIGH LIKELYHOOD OF LEAKING IN THE FUTURE. EPOXY REPAIRS ARE RECOMENDED AS SOON AS POSSIBLE. PANELS ARE IN OTHERWISE GOOD CONDITION. SOME CORROSION ON TOP ROW OF BOLTS AROUND PERIMETER OF RESERVIOR.

ROOF: NO NOTABLE DISCREPENCIES. SOME STAINING. PENETRATIONS ARE IN GOOD CONDITION. SMALL HOLE AT THE TOP OF VENT, COULD BE EASILY SEALED.

PLUMBING: HEAVY CONCNRATION CELLS ON EXTERIOR OF INLET AND OUTLET. BOTH APPEAR TO BE FREE AND CLEAR OF BLOCKAGE. INTERIOR OVERFLOR STRUCTURE SHOWS SOME SURFACE CORROSION ON BOLTS, BUT APPEARS TO BE IN GOOD CONDITION.

MANWAY: HEAVY CONCNRATION CELL CORROSION AROUND LIP OF INTERIOR MANWAY. NO SIGNS OF LEAKING, APPEARS TO BE IN FAIR CONDITION.

ANODES: ALL ANODES IN RESERVIOR ARE ENTIRELY DEPLETED. REPLACEMENT RECOMENDED AS SOON AS POSSIBLE.

TO BE DONE JJA

TO BE DONE JJA

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463
Inspector: J. FAUROT

Utility: BIG SANDY WATER DISTRICT
Dive Controller: E.POTTER

Tank: US 23 A 300KG
Date: 11/12/2016

**AMERICAN WATER WORKS ASSOCIATION
ANSI/AWWA M42 / D101-53**

SSPC Legend		NACE Legend		AWS Legend	
Grade	Description	Grade	Description	Grade	Description
10	No Rusting, or <0.01% of surface is rusted	A	None	L	Satisfactory
9	Minor rusting, or <0.03% of surface is rusted	B	Uniform Surface Corrosion	M	Spatter
8	Isolated rust, <.01% of surface is rusted	C	Pitting	N	Porosity
7	Isolated rust, <.03% of surface is rusted	D	Concentration Cell Corrosion	O	Convexity / Concavity
6	Extensive rusting, <1% of surface is rusted	E	Galvanic Corrosion	P	Cracks
5	Approximately 3% of the surface is rusted	F	Stress Corrosion Cracking	Q	Inclusions
4	Approximately 10% of the surface is rusted	G	Erosion Corrosion	R	Incomplete Fusion
3	Approximately 17% of the surface is rusted	H	Intergranular Corrosion	S	Incomplete Penetration
2	Approximately 33% of the surface is rusted	I	Dealloying	T	Undercut
1	Approximately 50% of the surface is rusted			U	Underfill
0	Approximately 100% of the surface is rusted			V	Overlap
				W	Unable to evaluate

QUADRANT 1 QUADRANT 2 QUADRANT 3 QUADRANT 4

INTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	8	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	7	B	L	7	B	L	7	B	L	7	B	L
Roof Support	7	B	L	7	B	L	7	B	L	7	B	L
Roof Gussets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Painting Ring	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Good Average Blister Diameter NONE Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof weld	7	BD	L	7	BD	L	7	BD	L	7	BD	L
Lower Ring Panels	9	A	L	9	A	L	9	A	L	9	A	L
Middle Ring Panels	9	A	L	9	A	L	9	A	L	9	A	L
Upper Ring Panels	9	A	L	9	A	L	9	A	L	9	A	L
Interior Ladder	7	DH	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Good Average Blister Diameter NONE Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR FLOOR

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Perimeter Weld	9	A	L	9	A	L	9	A	L	9	A	L
Floor Panels	9	A	L	9	A	L	9	A	L	9	A	L

Overall Coating Rating Good Average Blister Diameter 1/8" Average Pit Depth NONE
 Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

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Steel Potable Water Reservoir Inspection Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: US 23 A 300KG

Inspector: J. FAUROT

Dive Controller: E.POTTER

Date: 11/12/2016

QUADRANT 1	QUADRANT 2	QUADRANT 3	QUADRANT 4
-------------------	-------------------	-------------------	-------------------

INTERIOR RESERVOIR SUPPORT COLUMNS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Column Structures	8	D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column Bases	7	D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column to Roof	8	B	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Fair

Average Blister Diameter

Average Pit Depth

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

INTERIOR RESERVOIR PLUMBING COMPONENTS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Inlet Plumbing	8	D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Outlet Plumbing	8	D	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manways	N/A	N/A	N/A	8	D	L	N/A	N/A	N/A	7	D	L
Floor Drains	9	A	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Interior Overflow	7	H	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

EXTERIOR RESERVOIR ROOF

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Vents	8	A	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Panels	8	A	L	8	A	L	8	A	L	8	B	L
Access Hatches	6	H	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Good

Average Blister Diameter NONE

Average Pit Depth NONE

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

EXTERIOR RESERVOIR WALLS

	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS	SSPC	NACE	AWS
Wall to Roof Weld	9	A	L	9	A	L	9	A	L	9	A	L
Lower Ring Panels	9	A	L	9	A	L	9	A	L	9	A	L
Mid Ring Panels	9	A	L	9	A	L	9	A	L	9	A	L
Upper Ring Panels	9	A	L	9	A	L	9	A	L	9	A	L
Exterior Overflow	9	A	L	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Overall Coating Rating Good

Average Blister Diameter NONE

Average Pit Depth NONE

Coating Deficiencies: Blistering Delamination Chalking Checking Cracking Growth Pinholes Staining Sags/Runs

FOOTINGS / FOUNDATION

Footings / Foundations: Satisfactory <input checked="" type="checkbox"/>	Cracking <input type="checkbox"/>	Spalling <input type="checkbox"/>	Erosion/Exposed Aggregate <input type="checkbox"/>
Anchor Bolts: Satisfactory <input type="checkbox"/>	Loose <input type="checkbox"/>	Rusted Corroded <input type="checkbox"/>	(If excessive) Diameter =

TOWER SUPPORT STRUCTURES

Tower Legs/Columns: Satisfactory <input type="checkbox"/>	Alignment ----	Settling ----	Rust /Corrosion ----
Riser Pipe: Satisfactory <input type="checkbox"/>	Alignment ----	Frost Casing ----	Rust /Corrosion ----
Rods & Turnbuckles: Satisfactory <input type="checkbox"/>	Turnbuckle Tension ----	Rod Tension ----	Cotter Pins/Rod Nuts ----
Leg shoes/Brackets: Satisfactory <input type="checkbox"/>	Coating ----	Rust/Corrosion ----	Pitting/Cracking ----

DISCLAIMER

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Liquid Engineering Corporation
Potable Water Reservoir Contamination, Health and Safety Report

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: US 23 A 300KG

Inspector: J. FAUROT

Dive Controller: E.POTTER

Date: 11/12/2016

Complies With: AWWA • OSHA • ANSI • NIOSH • NAVFAC • NFPAC

CONTAMINATION & HEALTH

Air Vents	Type: MUSHROOM	#: 1	Screen Condition(s): Good	
Hatches	Type: Square	#: 1	Secured Properly: Yes	Properly Sealed: Yes
Exterior Overflow	Flapper: Yes	Screen: No	Gasket: Yes	Condition: Good
Cathodic Covers	In- Place: ----	#:	Gasket: ----	Properly Sealed: ----
Roof to Wall Joint	Welded: Yes	Properly Sealed: Yes		
Roof Integrity	Holes: Yes	Cracking: No	Standing Water: Yes	
Wall Integrity	Holes: No	Cracking: No		
Manway Integrity	Leaks: No	Condition: Good		
Water Clarity	General Appearance: CLEAR		Odor: NONE	
Floating Surface Debris	Type: NONE		Source: N/A	
Hypalon Floating Cover	Condition: ----	Holes: ----	Tears: ----	
Telemetry Penetrations	Properly Sealed: ----			

FACILITY SAFETY COMPLIANCE

Exterior Ladder

Overall Ladder	Condition: Good	#: 1	Offset Landing: No	Height: 33'
Vandal Guard	Present: Yes	Vandal Guard Locked: No		
Ladder Rails & Rungs	Condition: Good	Missing/Damaged Rungs: No		
Rung Spacing & Depth	Spacing: 12 in. (max 12")	Toe Depth: 8 in. (min 7")		
Rail Spacing & Size	Width: 2.5 in. (min 2")	Thickness: .25 in. (min 1/4")	Rail to Rail: 16 in. (min 16")	
Safety Climb System	Type: Cable	Condition: Good		
Number & Locations	Wall: 1	Leg:	Roof:	Riser Pipe: Other:
Ladder Attachments				

Manways

Type and size	Type: Round	#: 2	Size: 33" inches (24" – 18"x22" min)
Support Structure	Type: Bolted	Condition: Fair	
Number & Locations	Wall: 2	Roof:	Riser Pipe: Other:

Hatches

Hatch Type & Size	Type: Square	#: 1	Size: 24"x24" in. (24" – 24"x15" min)
Hatch & Lid Lip Height	Hatch: 5.5 in. (min 4")	Lid: 2 in. (min 2")	

Balconies & Railing

Deck / Walkways	Condition: ----	Width:	
Hand Rails	Condition: Good	Height: 42 in. (min 42")	No. Rails: 2 (min 2)
Toe Rail	Condition: Good	Height: 4 in. (min 4")	
Welds / Attachments	Condition: Good		

Roof

Safety Tie-Off Points	Condition: Good	#: 5+
Antennas	Type: -----	#: 2

DISCLAIMER

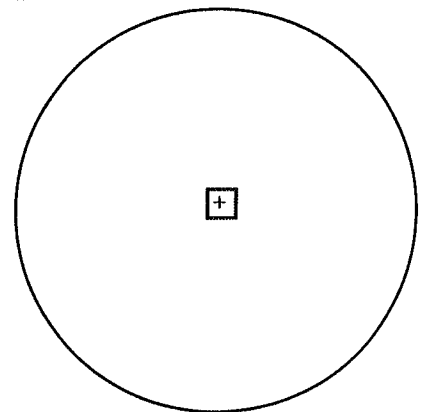
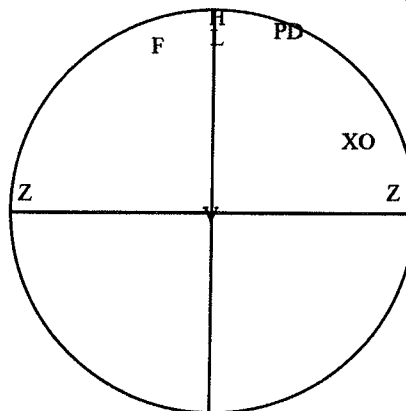
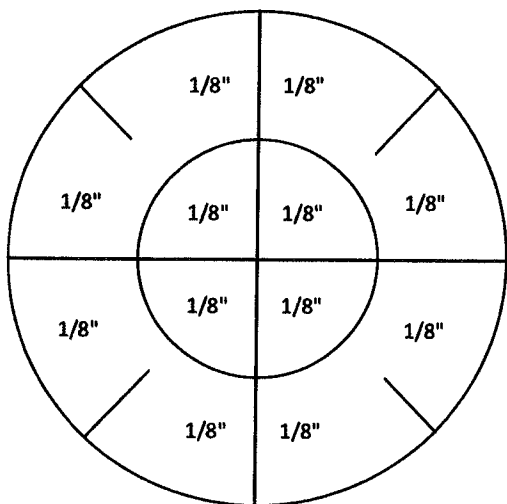
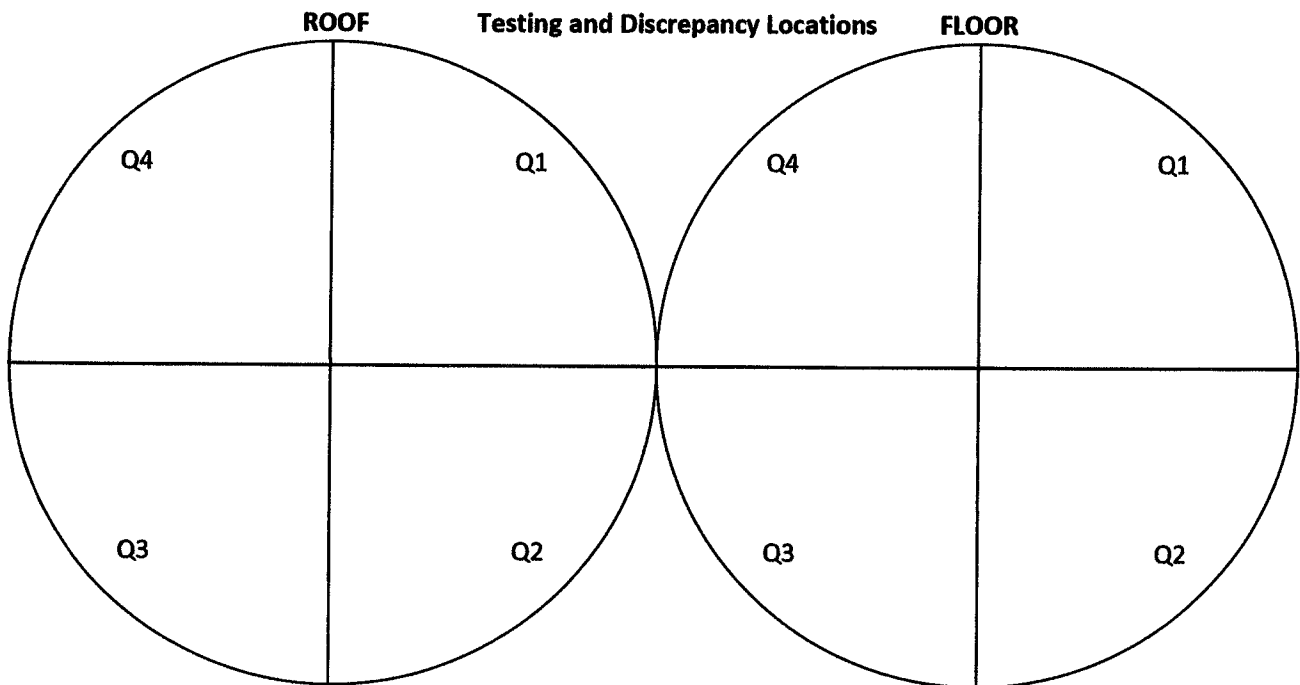
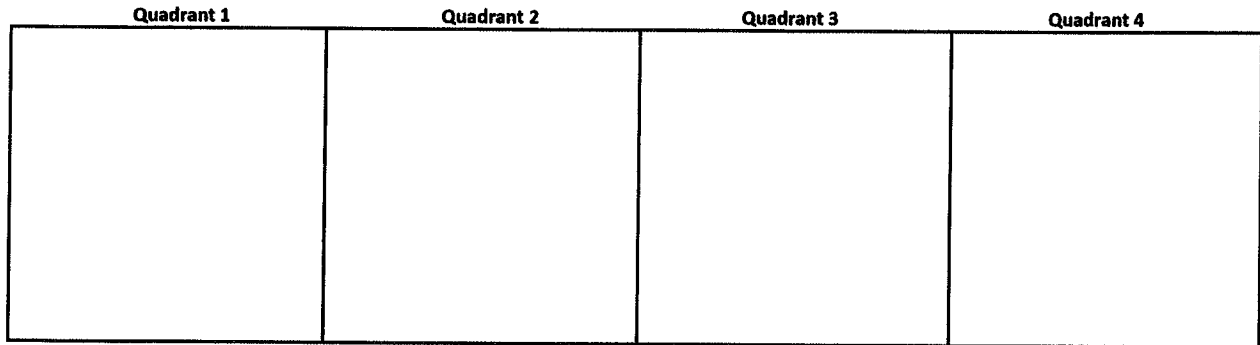
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Liquid Engineering Corporation
Circular Tank Diagram / Information Worksheet

Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

Tank Name US 23 A 300KG



Sediment Depth Measurements

Average Sediment Depth = The sum of all measurements taken, divided by the number of measurements taken

Avg. Depth 1/8" Cubic Yardage Sediment Type IRON

Plumbing & Structure location

Plumbing and structure codes
 O=Outlet X=Inlet Z=Manway
 V=Vent D=Drain S=Sump
 L=Ladder H=Hatch P=Overflow
 F=Float Level Indicator
 T=Telemetry

Column Placement

Type of Column

Base Structure

Top Structure

Column Construction Steel

DISCLAIMER

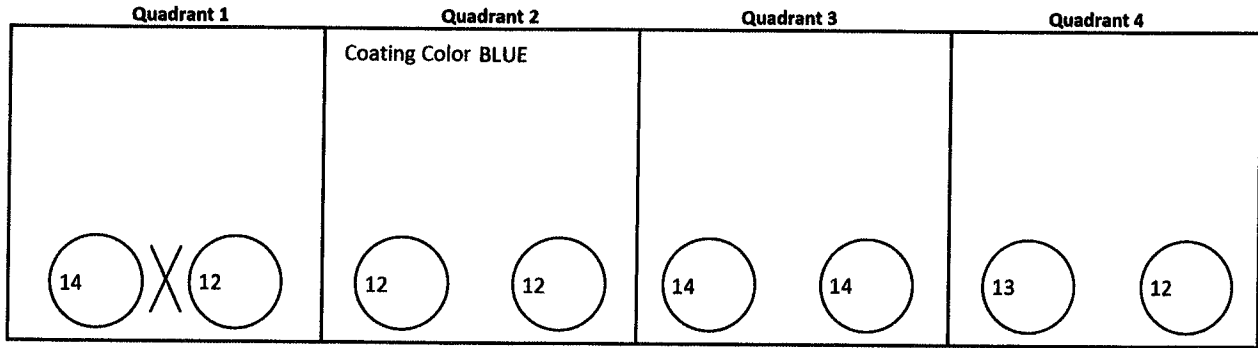
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Circular Tank Diagram / NDT DFT Coating Adhesion Presence of lead

Job Number 50463

Utility Name BIG SANDY WATER DISTRICT

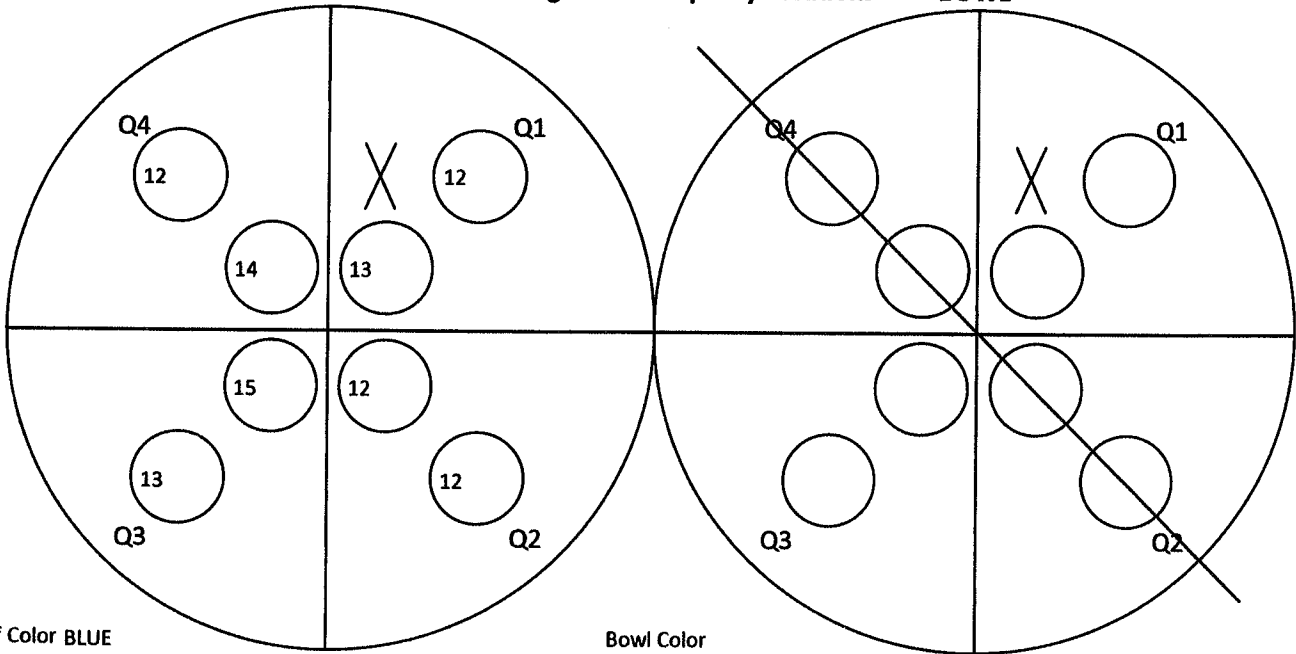
Tank Name US 23 A 300KG



ROOF

Testing and Discrepancy Locations

BOWL



Roof Color BLUE

Bowl Color

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Liquid Engineering Corporation
Steel Potable Water Reservoir Security / Measurement Worksheet

Job Number 50463

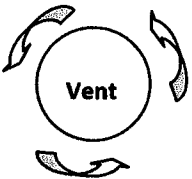
Utility Name BIG SANDY WATER DISTRICT

Tank Name US 23 A 300KG

Security

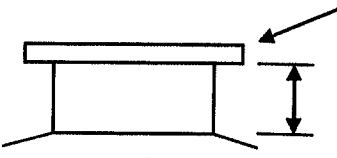
Is the area surrounding the tank well lit?	Yes
Is the tank surrounded by a Security Fence?	Yes
Are the access gates locked?	Yes
Is the tank equipped with a Vandal Guard on the primary access ladder?	Yes
If so, is the Vandal Guard locked?	N/A
Are the vents equipped with security vent shrouds?	No
Are all of the hatches equipped with electronic monitoring devices?	No
Are the external plumbing components housed in a secure vault or out-building?	Yes
Does the surrounding geography of the tank obscure it from public view?	Yes
Does the exterior of the tank show signs of trespass?	No

Measurements



Vent

Outside Circumference
45 Inches



Roof

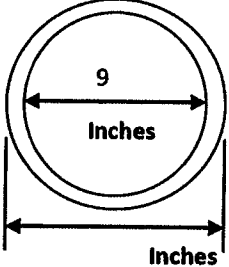
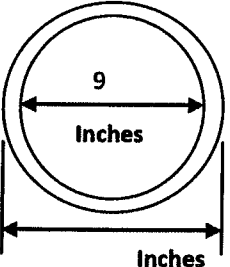
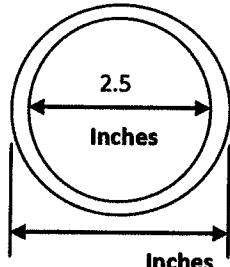
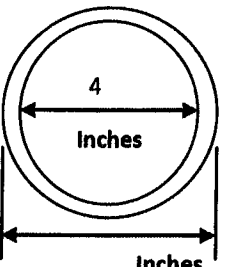
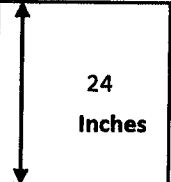
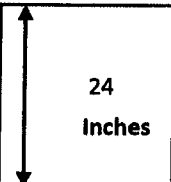
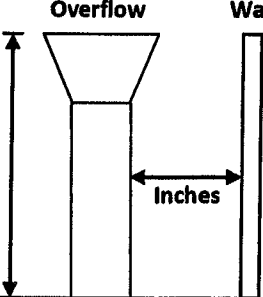
Flange Metal Thickness 3/8 Inches

Roof to Screen or Flange 8 Inches

Flange Yes

Number of Bolt Holes 8 Inches

Size of Bolts 1 Inches

<p>Inlet</p>  <p>9 Inches</p> <p>Inches</p>	<p>Outlet</p>  <p>9 Inches</p> <p>Inches</p>	<p>Drain</p>  <p>2.5 Inches</p> <p>Inches</p>	<p>Overflow</p>  <p>4 Inches</p> <p>Inches</p>
<p>Inlet Riser</p>  <p>24 Inches</p> <p>Floor</p>	<p>Outlet Riser</p>  <p>24 Inches</p> <p>Floor</p>	<p>Overflow Wall</p>  <p>Feet/Inches Inches</p> <p>Floor</p>	

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Liquid Engineering Corporation
Steel Potable Water Reservoir Immediate Needs Assessment

Job Number: 50463

Utility: BIG SANDY WATER DISTRICT

Tank: US 23 A 300KG

Inspector: J. FAUROT

Dive Controller: E.POTTER

Date: 11/12/2016

1. Health and Safety Items

- Safety Climb System Installation: INTERIOR LADDER SAFETY CABLE IS NOT INTACT
- Vent Screen Repairs:

2. Testing Items

- Dye Testing for Leak Evaluation:
- Presence of Lead Test (Interior/Exterior):

3. Destructive Testing Items

- % of Lead Test (Interior/Exterior) (*Coating samples are removed for laboratory analysis*)
- Coating Adhesion Test (Interior/Exterior):

Specific written authorization required to perform destructive testing. Destructive tests include touch-up of coating system.

4. Repair Items

- Epoxy Coating Repairs:
- Temporary Leak Repairs:
- Float Operated Level Indicator Repairs / Maintenance:
- Hypalon Repairs:

5. Security Related Items (*Critical security upgrade information is immediately available*)

- Tank vents are not equipped with a security vent shroud:
- Tank hatches are not equipped with a security hatch locking device:
- Tank perimeter not adequately secured:

The above mentioned additional work is considered immediately necessary and is recommended to be completed. Some items may be completed in conjunction with work currently being performed while the crew is on site.

Reservoir Inspection Condition Supplemental

CLEAN AND INSPECT EVERY 3-5 YEARS

FLOOR: POSSIBLE BLISTERING, AREAS TESTED WERE NOT SOFT AND DID NOT CRACK, POSSIBLE PAINT DRIPS. NO CORROSION.

INLET/OUTLET: MINOR CONCENTRATION CELL CORROSION.

MANWAYS: CONCENTRATION CELL CORROSION. 4TH QUADRANT HAS CORROSION NEXT TO GASKET MATERIAL.

COLUMN: HEAVY CONCENTRATION CELL CORROSION ON BASE. CONCENTRATION CELL CORROSION ON COLUMN.

WALLS: HEAVY SAGGING AND RUNNING IN COATING, BUT NO DEFICIENCIES OR CORROSION.

ROOF SUPPORTS: UNIFORM SURFACE CORROSION.

ROOF PANELS: UNIFORM SURFACE CORROSION. HEAVIER ON WELD SEAMS. 2 PENETRATION POINTS ALLOWING IN LIGHT.

WALL TO ROOF WELD: HEAVY CONCENTRATION CELL CORROSION.

TO BE REPAIRED

JJD

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SECTION 6

CONTRACT NO. "F-1"

CONTRACT AND BOND FORMS

AGREEMENT

PAYMENT BOND

PERFORMANCE BOND

CERTIFICATE OF INSURANCE

NOTICE OF AWARD

NOTICE TO PROCEED

CHANGE ORDER

PARTIAL PAYMENT REQUEST

CERTIFICATE OF SUBSTANTIAL COMPLETION

FORM OF WAIVER AND RELEASE OF LIEN

(General Contractor)

FORM OF WAIVER AND RELEASE OF LIEN

(Sub-Contractor)

AGREEMENT BETWEEN OWNER AND CONTRACTOR

THIS AGREEMENT is by and between the **Big Sandy Water District** ("Owner") and ("Contractor"), doing business as (an individual, corporation, or partnership). Owner and Contractor in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 –WORK

Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: **Contract No. "F-1" - Water Tank Painting & Repairs.**

ARTICLE 2 – THE PRODUCT

2.01. The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: **Contract No. "F-1" - Water Tank Painting & Repairs.**

ARTICLE 3 - ENGINEER

3.01. The Project has been designed by **Sisler-Maggard Engineering, PLLC**, who is to act as the Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Days to Achieve Substantial Completion and Final Payment*

- A. The Work will be substantially completed within **180** days after the date when the Contract Time commence to run as provided in Paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions within **180** days after the date when the Contract Time commence to run.

4.03 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner **\$500** for each day that expires after the time specified in Paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner **\$500** for each day that expires after the time specified in Paragraph 4.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A, 5.01.B, and 5.01.C below:

- A. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in this paragraph 5.01.A:

As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions. Unit prices have been computed as provided in Paragraph 11.03 of the General Conditions.

BID SCHEDULE

TO BE FILLED IN AFTER BIDS AND AS PART OF FINAL CONTRACT DOCUMENTS

Contractor agrees to perform all of the Work described in the Specifications and shown on the Plans for the bid price of: _____ Dollars and _____ Cents (\$_____).
The Unit Price shall govern. The Owner will make corrections in extensions and additions to determine the Total Bid Amount for Award.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 Progress Payments; Retainage

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 20th day of each month during performance of the Work as provided in Paragraphs 6.02.A.1 and 6.02.A.2 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions:
 - a. 95 percent of Work completed (with the balance being retainage); and
 - b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
2. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions.

6.03 Final Payment

A. Upon receipt of the final Application for Payment accompanied by Engineer's recommendation of payment in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay Contractor as provided in Paragraph 14.07 of the General Conditions the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages.

ARTICLE 7 – INTEREST

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the maximum legal rate.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Agreement Contractor makes the following representations:

- A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
- B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

- C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions.
- E. Contractor has obtained and carefully studied (or assumes responsibility for doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto.
- F. Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
- I. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

- A. The Contract Documents consist of the following:
 - 1. Advertisement for Bids
 - 2. Instructions to Bidders
 - 3. Agreement (pages 1 to 6 inclusive).
 - 4. Performance bond (pages 1 to 3, inclusive).
 - 5. Payment bond (pages 1 to 3, inclusive).
 - 6. Bid bond with Power of Attorney (pages 1 to 2, inclusive)
 - 7. Certificate of Insurance
 - 8. General Conditions (pages 1 to 66, inclusive).
 - 9. Supplementary Conditions (pages 1 to 15, inclusive).
 - 10. Special Conditions (pages 1 to 11, inclusive).
 - 11. Specs. as listed in the table of contents of the Project Booklet

12. Drawings consisting of 3 sheets with each sheet bearing the following general title:

Contract No. "F-1" Water Tank Painting & Repairs and dated May 2019.

13. Addenda (numbers ___ to ___, inclusive).
14. Exhibits to this Agreement (enumerated as follows):
a) Contractor's Bid (pages 1 to 5, inclusive) with Certifications.
b) Subcontractor's List
c) Manufacturer's List
15. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
a. Notice of Award (1 page)
b. Notice to Proceed (1 page)
c. Work Change Directives.
d. Change Order(s).
e. Certificate of Substantial Completion

- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
C. There are no Contract Documents other than those listed above in this Article 9.
D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 Terms

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 Assignment of Contract

- A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

- A. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 Severability

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 Other Provisions: NONE

IN WITNESS WHEREOF, Owner and Contractor, Engineer, and Agencies. All portions of the Contract Documents have been signed, initialed, or identified by Owner and Contractor or identified by Engineer on their behalf. Contractor have signed this Agreement in six copies. One counterpart each has been delivered to Owner

This Agreement is dated _____. This Agreement shall not be effective unless and until Agency's designated representative concurs.

OWNER: Big Sandy Water District

CONTRACTOR

By: Paul E. Thomas

By: _____

Title: Chairman

Title: _____

[CORPORATE SEAL]

[CORPORATE SEAL]

Attest: _____

Attest: _____

By: David Salisbury

Title: Secretary

Title: _____

Address for giving notices:

Address for giving notices:

Big Sandy Water District

18200 State Route 3

Catlettsburg, KY 41129-9325

Agent for service of process:

(If Contractor is a corporation or a partnership, attach evidence of authority to sign.)

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal,
(Corporation, Partnership or Individual)

and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

Big Sandy Water District
(Name of Owner)

18200 S. R. 3, Catlettsburg, Ky. 41129
(Address of Owner)

hereinafter called OWNER, and unto all persons, firms, and corporations who or which may furnish labor, or who furnish materials to perform as described under the contract and to their successors and assigns in the total aggregate penal sum of _____ Dollars (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the PRINCIPAL entered into a certain contract with the OWNER, dated the ____ day of _____, 2019, a copy of which is hereto attached and made a part hereof for the construction of: **Contract "F-1" - Water Tank Painting & Repairs.**

NOW, THEREFORE, if the PRINCIPAL shall promptly make payment to all persons, firms, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extensions or modifications thereof, including all amounts due for materials, lubricants, oil, gasoline, coal, and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and for all labor cost incurred in such WORK including that by a SUBCONTRACTOR, and to any mechanic or materialman lienholder whether it

acquires its lien by operation of State or Federal law; then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, that beneficiaries or claimants hereunder shall be limited to the SUBCONTRACTORS, and persons, firms, and corporations having a direct contract with the PRINCIPAL or its SUBCONTRACTORS.

PROVIDED, FURTHER, that the said Surety for value received stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder of the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no suit or action shall be commenced hereunder by any claimant: (a) Unless claimant, other than one having a direct contract with the PRINCIPAL (or with the GOVERNMENT in the event the GOVERNMENT is performing the obligations of the OWNER), shall have given written notice to any two of the following: The PRINCIPAL, the OWNER, or the SURETY above named within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the PRINCIPAL, OWNER, or SURETY, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer. (b) After the expiration of one (1) year following the date of which PRINCIPAL ceased work on said CONTRACT, is being understood, however, that if any limitation embodied in the BOND is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

PROVIDED, FURTHER, that it is expressly agreed that this BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the contract price more than 20 percent, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the Contract as so amended. The term "Amendment", wherever used in this BOND and whether referring to this BOND, the contract or the loan documents shall include any alteration, addition, extension, or modification of any character whatsoever.

PROVIDED, FURTHER, that no financial settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in 6 (six) counterparts,
(number)

each one of which shall be deemed an original, this the _____ day of _____, 2019.

ATTEST:

(Principal)

(Principal Secretary)

(SEAL)

BY: _____ (s)

(Witness as to Principal)

(Address)

(Address)

(Surety)

ATTEST:

BY: _____
Attorney-in-Fact

(Witness to Surety)

(Address)

(Address)

NOTE: Date of BOND must not be prior to date of CONTRACT. If CONTRACTOR is a partnership, all partners shall execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in Kentucky.

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

_____, hereinafter called Principal, and
(Corporation, Partnership or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

Big Sandy Water District
(Name of Owner)

18200 S. R. 3, Catlettsburg, Ky. 41129
(Address of Owner)

hereinafter called OWNER in the total aggregate sum of _____
Dollars (\$_____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the ____ day of _____, 2019 a copy of which is hereto attached and made a part hereof for the construction of:

Contract "F-1" – Water Tank Painting & Repairs

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the SURETY and during the one year guaranty period, and if the PRINCIPAL shall

satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then his obligation shall be void otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that it is expressly agreed that the BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the contract price more than 20 percent, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the CONTRACT as so amended. The term "Amendment", wherever used in this BOND, and whether referring to this BOND, the Contract or the Loan Documents shall include any alteration, addition, extension, or modification of any character whatsoever.

PROVIDED, FURTHER, that no financial settlement between the OWNER and the PRINCIPAL shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied. The OWNER are the only beneficiaries hereunder.

IN WITNESS WHEREOF, this instrument is executed in 6 (six) counterparts, each
(Number)

one of which shall be deemed an original, this the _____ day of _____, 2019.

ATTEST:

(Principal)

(Principal Secretary)
(SEAL)

BY: _____(s)

(Witness as to Principal)

(Address)

(Address)

ATTEST:

(Surety)

(Surety Secretary)
(SEAL)

BY: _____(s)

(Witness to Surety)

(Attorney-in-Fact)

(Typed Name)

(Address)

(Phone)

NOTE: Date of BOND must not be prior to date of CONTRACT.

If CONTRACTOR is a partnership, all partners shall execute BOND.
IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the Project is located.

CERTIFICATE OF INSURANCE

TO BE FURNISHED

BY SUCCESSFUL BIDDER

NOTICE OF AWARD

TO: _____

PROJECT Description: The project includes but is not limited to, the construction of:

Contract "F-1" – Water Tank Painting & Repairs.

The OWNER has considered the BID submitted by you for the above described WORK in response to its Bids received _____ 2019, and Instructions for Bidders.

You are hereby notified that your BID has been accepted for items in the amount of \$_____.

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance BOND, and Payment BOND and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within ten (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your BID as abandoned and as a forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this ____ day of _____, 2019.

Big Sandy Water District
OWNER

BY: _____
Paul E. Thomas

TITLE: Chairman

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

by _____

this the _____ day of _____, 2019.

By: _____

Title: _____

NOTICE TO PROCEED

TO: _____, 2019
(Contractor)

ADDRESS:

OWNER'S PROJECT NO. 15030
PROJECT Contract "F-1" - Water Tank Painting & Repairs

OWNER'S CONTRACT NO. "F-1"

You are hereby notified to commence WORK in accordance with the Agreement dated _____, 2018 on or before _____, 2019 and you are to complete the WORK within **180** consecutive calendar days thereafter. The date of completion of all WORK is therefore _____, 2019.

Big Sandy Water District
Owner

By: _____

Name: Paul E. Thomas

Title: Chairman

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

this the ____ day of _____, 2019.

By: _____

Name: _____

Title: _____

Date of Issuance: Owner: Contractor: Engineer: Project:	Effective Date: Owner's Contract No.: Contractor's Project No.: Engineer's Project No.: Contract Name:
---	--

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments: [List documents supporting change]

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. ___ to No. ___: \$ _____	[Increase] [Decrease] from previously approved Change Orders No. ___ to No. ___: Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:

ACCEPTED:

ACCEPTED:

By: _____ Title: _____ Date: _____ Engineer (if required)	By: _____ Title: _____ Date: _____ Owner (Authorized Signature)	By: _____ Title: _____ Date: _____ Contractor (Authorized Signature)
--	--	---

Approved by Funding Agency (if applicable)

By: _____ Date: _____
 Title: _____

PARTIAL PAYMENT REQUEST

**DISC WILL BE FURNISHED
TO SUCCESSFUL BIDDER
AT TIME OF CONTRACT AWARD**

CERTIFICATE OF SUBSTANTIAL COMPLETION

OWNER's Project No: _____ ENGINEER's Project No.: 15030
Project Contract "F-1" – Water Tank Painting & Repairs

CONTRACTOR
Contract For Contract "F-1" – Water Tank Painting & Repairs

This Certificate of Substantial completion applies to all Work under the Contract Documents or to the following specified parts thereof:

ALL

To Big Sandy Water District
OWNER

And To _____
CONTRACTOR

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER, CONTRACTOR and ENGINEER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

DATE OF SUBSTANTIAL COMPLETION

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by CONTRACTOR within ____ days of the above date of Substantial Completion.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance, and warranties shall be as follows:

RESPONSIBILITIES:

OWNER: ALL

CONTRACTOR: NONE

The following documents are attached to and made a part of this Certificate:

NONE

This certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of CONTRACTOR's obligation to complete the Work in accordance with the Contract Documents.

Executed by ENGINEER on _____

Sisler-Maggard Engineering, PLLC
ENGINEER

By: _____
Joseph F. Sisler, P.E., P.L.S., President

CONTRACTOR accepts this Certificate of Substantial Completion on _____ 2019

CONTRACTOR

By: _____

OWNER accepts this Certificate of Substantial Completion on _____ 2019

Big Sandy Water District
OWNER

By: _____
Paul Thomas, Chairman

FORM OF WAIVER AND RELEASE OF LIEN

(General Contractor)

TO WHOM IT MAY CONCERN:

WHEREAS, the undersigned has performed or furnished, is performing, or furnishing, or will perform or furnish labor or material, fuel, equipment, tools, etc., in connection with the construction of Contract No. "F-1" Water Tank Painting & Repairs

_____ for Big Sandy Water District
_____ at Boyd County, Catlettsburg, Ky.

NOW, THEREFORE, THESE PRESENTS WITNESS, that the undersigned, for a good and valuable consideration to the undersigned well and truly paid at or before the signing and delivery hereof, the receipt whereof is hereby acknowledged, does hereby waive, release and relinquish any and all claims, liens and rights and claims of liens which the undersigned now has, or may hereafter have, on or against the said premises and the building, plant, equipment and machinery of their Owner, Big Sandy Water District _____, or on or against Big Sandy Water District _____, on account of labor performed or to be performed or material, fuel, equipment, tools, etc., furnished or to be furnished by the undersigned for use in or in connection with the construction and erection of said project; so that Big Sandy Water District _____, its successors and assigns, shall and my have, hold and enjoy the same freed and discharged now has or might or could have if these presents had not been made.

IN WITNESS WHEREOF, the undersigned has hereunto set his hand and seal this _____ day ____ of _____, 2019

Name of General Contractor

By _____
Signature of Officer or Partner

Title or Officer

WITNESS:

- *Insert name of building or project
- **Insert address of building project
- ***Insert name of Owner

FORM OF WAIVER AND RELEASE OF LIEN

(Sub-Contractor)

TO WHOM IT MAY CONCERN:

WHEREAS, the undersigned has performed or furnished, is performing, or furnishing, or will perform or furnish labor or material, fuel, equipment, tools, etc., in connection with the construction of **Contract "F-1" - Water Tank Painting & Repairs** at Boyd County Catlettsburg, Kentucky.

NOW, THEREFORE, THESE PRESENTS WITNESS, that the undersigned, for a good and valuable consideration to the undersigned well and truly paid at or before the signing and delivery hereof, the receipt whereof is hereby acknowledged, does hereby waive, release and relinquish any and all claims, liens and rights and claims of liens which the undersigned now has, or may hereafter have, on or against the said premises and the building, plant, equipment and machinery of their Owner, **Big Sandy Water District**, or on or against **Big Sandy Water District**, its successors and assigns, or on or against the General Contractor Big Sandy Water District, his or its heirs, executors, administrators, successors and assigns, under the laws of the Commonwealth of Kentucky, on account of labor performed or to be performed, or material, fuel, equipment, tools, etc., furnished or to be furnished by the undersigned for use in or in connection with the construction and erection of said building; so that the said **Big Sandy Water District**, its successors and assigns, shall may have, hold and enjoy same freed and discharged from all liens, claims and demands whatsoever which the undersigned now has or might or could have if these presents had not been made.

IN WITNESS WEREOF, the undersigned has hereunto set his hand and seal this _____ day of _____, 2019.

Name of Sub-Contractor

By _____
Signature of Officer or Partner

Title or Officer

WITNESS:

- *Insert name of building or project
- **Insert address of building project
- ***Insert name of Owner
- ****Insert name of General Contractor

SECTION 7

CONTRACT NO. "F-1"

BID FORMS AND BID BONDS

**BID FORMS INCLUDING
SUBCONTRACTORS & MANUFACTURERS LIST**

BID BOND WITH POWER OF ATTORNEY

BIDDER'S QUALIFICATIONS STATEMENT

RURAL DEVELOPMENT FORMS

COMPLIANCE STATEMENT – RD 400-6
NOTICE OF REQUIREMENTS FOR CERTIFICATIONS OF NON-SEGREGATED FACILITIES
CERTIFICATION FOR CONTRACTS, GRANTS AND LOANS – 1940-Q
EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION – EEO-1
USDA – CERTIFICATION REGARDING DEBARMENT AND SUSPENSION – AD-1048
INSTRUCTIONS FOR CERTIFICATION
USDA – EQUAL OPPORTUNITY AGREEMENT – RD 400-1
CONTRACTOR'S CERTIFICATE CONCERNING LABOR STANDARDS AND PREVAILING WAGE
REQUIREMENTS

**Forms presented in this Section 7 must be used. No Substitutes will be allowed.
An extra set of the above forms will be furnished to each plan holder for preparation
of bids.**

All of the above forms must be submitted with bids on each contract.

BID FORM**BIG SANDY WATER DISTRICT****CONTRACT NO. "F-1" – WATER TANK PAINTING & REPAIRS****BIDDER'S PROPOSAL**

Proposal of _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of _____, doing business as (a partnership, or a corporation, or an individual) _____, to **Big Sandy Water District** (hereinafter called "OWNER").

In compliance with the Advertisement for Bids, BIDDER hereby proposes to furnish all equipment, materials, and labor for the work required to construct the **Contract No. "F-1" – Water Tank Painting & Repairs** in strict accordance with the Contract Documents, within the time set forth therein, and at the prices stated below.

BID SCHEDULE

ITEM NO.	ITEM DESCRIPTION	UNIT QUANTITY		UNIT COST	TOTAL COST
1	Sandblasting & Painting – 23,500 gallon steel ground storage tank (Fuller Ridge)	1	EA.		
2	Sandblasting & Painting - 40,600 gallon steel ground storage tank (Cunningham Hill)	1	EA.		
3	Sandblasting & Painting - 75,000 gallon steel ground storage tank (Quarry Branch)	1	EA.		
4	Sandblasting & Painting - 137,000 gallon steel ground storage tank (Rush Hill)	1	EA.		
5	Sandblasting & Painting - 216,000 gallon steel ground storage tank (Bowling Drive)	1	EA.		
6	Sandblasting & Painting - 106,000 gallon steel ground storage tank (Buchanan)	1	EA.		
7	Sandblasting & Painting - 300,000 gallon steel ground storage tank (U.S. 23)	1	EA.		

See Liquid Engineering Report @ Section 09900 of Specifications

8	Misc. Repairs/Caulking - 360,000 gallon (glass lined) ground storage tank (U.S. 23)	1	EA.		
9	General Grinding (as needed – Rush Hill Tank)	20	Man - Hour		
10	Welding Seams (as needed – Rush Hill Tank)	40	L.F.		
11	Pit Filler (as needed – Rush Hill Tank)	5	GAL.		
12	Pit Welding (as needed – Rush Hill Tank)	20	Pits		
13	Seam Rolling w/extra coat of epoxy (as needed – Rush Hill Tank)	100	L.F.		
14	Quarry Branch Tank (review & recommend floor warpage repair)	1	L.S.		
TOTAL ITEMS BID (1 – 14)					

BIDDER agrees to perform all of the Work described in the Specifications and shown on the Plans for the bid price of: _____ Dollars and _____ Cents (\$_____). Amount shall be shown in both words and figures. The Unit Price shall govern. The Owner will make corrections in extensions and additions to determine the Total Bid Amount for Award.

No bid will be considered unless all **Items 1 thru 14** in the Bid Schedule are priced, and only one contract will be awarded.

The quantities of each item on the bid, as finally ascertained at the close of the contract, will determine the total payments to accrue under the contract.

No bid will be considered unless all items in the Bid Schedule are priced, and only one contract will be awarded.

The bid will be awarded in the aggregate total of the Bid Schedule.

The above price shall include all labor, materials, overhead, profit, insurance, and other costs necessary to cover the finished work of the several kinds called for including incidentals not set out as specific bid items and in accordance with Basis for Payment (Section 01740 of Specifications). The price per foot for pipe installation includes all labor, materials, excavation backfill, clean-up, seeding, testing etc., for a finished product.

By submission of this Bid, the BIDDER certifies, and in the case of a joint Bid, each party thereto certifies as to its own organization, that this Bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this bid, with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence work under this Contract on or before a date to be specified in the Notice to Proceed and to fully complete the project within 180 consecutive calendar days thereafter. BIDDER further agrees to pay as liquidated damages, the sum of \$ 500.00 for each consecutive calendar day thereafter.

Accompanying this Proposal is a certified check or standard Bid Bond in the sum of _____ Dollars (\$_____) in accordance with the Information for Bidders to the OWNER that the amount of the bid security deposited with this Bid fairly and reasonably represents the amount of damages the OWNER will suffer due to the failure of this BIDDER to fulfill his agreements as provided in this Proposal.

BIDDER acknowledges receipt of the following Addenda:

<u>Addenda #1</u>	<u>Dated</u>	<u>Addenda #5</u>	<u>Dated</u>
<u>Addenda #2</u>	<u>Dated</u>	<u>Addenda #6</u>	<u>Dated</u>
<u>Addenda #3</u>	<u>Dated</u>	<u>Addenda #7</u>	<u>Dated</u>
<u>Addenda #4</u>	<u>Dated</u>	<u>Addenda #8</u>	<u>Dated</u>

BIDDER agrees that the OWNER reserves the right to delete the whole or any part of the Project from the Contract.

BIDDER understands that the OWNER reserves the right to reject any or all Bids and to waive any informalities in the Bidding.

BIDDER agrees that this Bid shall be good and may not be withdrawn for a period of 90 (ninety) calendar days after the actual date of bid opening.

Within ten (10) calendar days after receiving written notice of the acceptance of this Bid by the OWNER, the Bidder will execute and deliver to the OWNER 6 (six) copies of the Agreement and such other required Contract Documents.

BIDDER: _____

BY: _____

TYPED NAME: _____

TITLE: _____

(Seal - If bid is by a corporation)

ADDRESS: _____

DATE SIGNED: _____

PHONE NO.: _____

FAX NO.: _____

SUBCONTRACTORS- Contract No. "F-1" – Water Tank Painting & Repairs

Proposed subcontractors are listed below for each branch of work included in the proposed Contract. (All Subcontractors are subject to the approval of the Owner. Failure to submit a completed list may be cause for rejection of the Bid.)

BRANCH OF WORK

NAME AND ADDRESS OF SUBCONTRACTOR

BRANCH OF WORK	NAME AND ADDRESS OF SUBCONTRACTOR

TO CONTRACTORS: THIS FORM MUST BE USED

BID BOND

Any singular reference to Bidder, Surety, Owner, or other party shall be considered plural where applicable.

BIDDER (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

**BIG SANDY WATER DISTRICT
18200 State Route 3
Catlettsburg, KY 41129**

BID

Bid Due Date:

Project (Brief Description Including Location):

CONTRACT "F-1" – WATER TANK PAINTING & REPAIRS

BOND

Bond Number:

Date (Not later than Bid due date):

Penal sum

_____ (Words)

_____ (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER

SURETY

Bidder's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature and Title

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title

Attest: _____
Signature and Title

Note: Above addresses are to be used for giving required notice.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Surety's liability.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

BIDDER'S QUALIFICATIONS

The Bidder's Qualifications are required by the Owner to be submitted as set forth herewith:

1. Name of Firm : _____

2. This Firm is Corporation or _____Partnership or _____Proprietorship.

3. A permanent place of business is maintained at:

Street	City	State	Zip Code
--------	------	-------	----------

4. The following construction plant and equipment will be made available for use on this contract:

5. In the event the contract is awarded the undersigned, surety bonds will be furnished by:

6. Experience of Contractor on other similar work:

Total Contract	Client Name & Address	Phone	Reference
----------------	-----------------------	-------	-----------

Contract No. _____

Type _____ \$ _____

Contract No. _____

Type _____ \$ _____

Contract No. _____

Type _____ \$ _____

Contract No. _____

Type _____ \$ _____

7. We now have the following jobs under contract and bonded:

Total Contract	Percent Completed	Client Name & Address	Phone	Name of Reference
----------------	-------------------	-----------------------	-------	-------------------

Contract No. \$ _____

Location _____

Contract No. \$ _____

Location _____

Contract No. \$ _____

Location _____

Contract No. \$ _____

Location _____

8. FINANCIAL STATEMENT: SEE ATTACHED BALANCE SHEET

Statement of Assets and Liabilities as of _____, 2018.

This Statement should be prepared by applicant, his bookkeeper, or accountant. Audit report by CPA or licensed accountant may be required.

ASSETS	LIABILITIES
--------	-------------

Cash in Bank
Cash on Hand

Notes Payable
(a) Banks
(b) Material men
(c) Other

Accounts Receivable (Including Retentions)

(a) Completed Contracts
(b) Uncompleted Contracts

Accounts Payable
Unbilled Job Costs

(a) Sub-Contractors

(b) Material men

Other Accounts Receivable	
Marketable Securities	Billings in Excess of Job Costs
Materials in Stock Not Included in Items above	Current Debt (Due in 1 Year)
(a) For Jobs underway	(a) Equipment
(b) Other	(b) Real Estate
Income Tax	
(a) Current	
Automobiles	
Sub-Total Current Assets	Sub-Total Current Liabilities
Notes Receivable	Equipment Debt-Over 1 year
Cash Value Life Insurance	Real Estate Debt-Over 1 year
Equipment at Book Value	
Real Estate at Book Value	
(a) Business	
(b) Homestead	
(c) Investment	
Automobiles	
Furniture & Fixtures	Capital Stock Surplus & Undivided Profits
Total Assets	Total Liabilities

TOTAL ASSETS MUST EQUAL TOTAL LIABILITIES

Respectfully Submitted: _____

Company Name

Signature Address

Name Typed

Title Date

Phone Fax

ATTEST: _____

COMPLIANCE STATEMENT

This statement relates to a proposed contract with _____

(Name of borrower or grantee)

who expects to finance the contract with assistance from either the Rural Housing Service (RHS), Rural Business-Cooperative Service (RBS), or the Rural Utilities Service (RUS) or their successor agencies, United States Department of Agriculture (whether by a loan, grant, loan insurance, guarantee, or other form of financial assistance). I am the undersigned bidder or prospective contractor, I represent that:

1. I have, have not, participated in a previous contract or subcontract subject to Executive Order 11246 (regarding equal employment opportunity) or a preceding similar Executive Order.
2. If I have participated in such a contract or subcontract, I have, have not, filed all compliance reports that have been required to file in connection with the contract or subcontract.

If the proposed contract is for \$50,000 or more and I have 50 or more employees, I also represent that:

3. I have, have not previously had contracts subject to the written affirmative action programs requirements of the Secretary of Labor.
4. If I have participated in such a contract or subcontract, I have, have not developed and placed on file at each establishment affirmative action programs as required by the rules and regulations of the Secretary of Labor.

I understand that if I have failed to file any compliance reports that have been required of me, I am not eligible and will not be eligible to have my bid considered or to enter into the proposed contract unless and until I make an arrangement regarding such reports that is satisfactory to either the RHS, RBS or RUS, or to the office where the reports are required to be filed.

I also certify that I do not maintain or provide for my employees any segregated facilities at any of my establishments, and that I do not permit my employees to perform their services at any location, under my control, where segregated facilities are maintained. I certify further that I will not maintain or provide for my employees any segregated facilities at any of my establishments, and that I will not permit my employees to perform their services at any location, under my control, where segregated facilities are maintained. I agree that a breach of this certification is a violation of the Equal Opportunity clause in my contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and wash rooms, restaurants and other eating areas time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. I further agree that (except where I have obtained identical certifications for proposed subcontractors for specific time periods) I will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause; that I will retain such certifications in my files; and that I will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods): (See Reverse).

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays the valid OMB control number. The valid OMB control number for this information collection is 0575-0018. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

**NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR
CERTIFICATIONS OF NON-SEGREGATED FACILITIES**

A certification of Nonsegregated Facilities, as required by the May 9, 1967, order (32F.R. 7439, may 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$ 10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

Date _____

(Signature of Bidder or Prospective Contractor)

Address (including Zip Code)

CERTIFICATION FOR CONTRACTS, GRANTS AND LOANS

The undersigned certifies, to the best of his or her knowledge and belief that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant or Federal loan, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant or loan.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant or loan, the undersigned shall complete and submit Standard Form – LLL, “Disclosure of Lobbying Activities,” in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including contracts, subcontracts, and subgrants under grants and loans) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

(name)

(date)

(title)

o0o

EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION
FOR
BIG SANDY WATER DISTRICT
CATTLETTSBURG, KENTUCKY
CONTRACT No. "F-1"
WATER TANK PAINTING & REPAIRS
PROJECT NO. 15030

I, _____, _____,

(print name) (title)

of _____,

(firm)

hereby certify that my firm is an equal opportunity employer and is in compliance with all applicable local, state, and federal Equal Employment Opportunity laws.

Respectfully submitted,

By: _____

(Signature required)

(Name printed or typed)

Title: _____

Date: _____

STATE OF]
] SS
 COUNTY OF]

I, the undersigned notary public within and for the state and county aforesaid, do hereby certify that the foregoing instrument of writing was this day produced to me in said state, and county by _____, and was acknowledged and delivered by him/her to be his/her act and deed.

WITNESS by my hand this _____ day of _____, 20__.

My Commission expires _____, 20__.

 Notary Public (signature)

 Notary Public (Name typed or printed)

U.S. DEPARTMENT OF AGRICULTURE

**Certification Regarding Debarment, Suspension, Ineligibility
and Voluntary Exclusion - Lower Tier Covered Transactions**

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 7 CFR part 3017, Section 3017.510, Participants' responsibilities. The regulations were published as Part IV of the January 30, 1989, Federal Register (pages 4722-4733). Copies of the regulations may be obtained by contacting the Department of Agriculture agency with which this transaction originated.

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON REVERSE)

- (1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Organization Name

PR/Award Number or Project Name

Name(s) and Title(s) of Authorized Representative(s)

Signature(s)

Date

Instructions for Certification

1. By signing and submitting this form, the prospective lower tier participant is providing the certification set out on the reverse side in accordance with these instructions.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this form that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this form that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," without modification, in all lower tier covered transaction and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

EQUAL OPPORTUNITY AGREEMENT

This agreement, dated _____ between _____

(herein called "Recipient" whether one or more) and United States Department of Agriculture (USDA), pursuant to the rules and regulations of the Secretary of Labor (herein called the "Secretary") issued under the authority of Executive Order 11246 as amended, witnesseth:

In consideration of financial assistance (whether by a loan, grant, loan guaranty, or other form of financial assistance) made or to be made by the USDA to Recipient, Recipient hereby agrees, if the cash cost of construction work performed by Recipient or a construction contract financed with such financial assistance exceeds \$10,000 - unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965.

1. To incorporate or cause to be incorporated into any contract for construction work, or modification thereof, subject to the relevant rules, regulations, and orders of the Secretary or of any prior authority that remain in effect, which is paid for in whole or in part with the aid of such financial assistance, the following "Equal Opportunity Clause":

During the performance of this contract, the contractor agrees as follows:

- (a) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited, to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the USDA setting forth the provisions of this nondiscrimination clause.
- (b) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
- (c) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the USDA, advising the said labor union or workers' representative of the contractor's commitments under this agreement and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (d) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of all rules, regulations and relevant orders of the Secretary of Labor.
- (e) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, rules, regulations, and orders, or pursuant thereto, and will permit access to his books, records, and accounts by the USDA Civil Rights Office, and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (f) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by Law.
- (g) The contractor will include the provisions of paragraph 1 and paragraph (a) through (g) in every subcontract or purchase order, unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the USDA may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the USDA, the contractor may request the United States to enter into such litigation to protect the interest of the United States.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collections is 0575-0018. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

2. To be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the organization so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.
3. To notify all prospective contractors to file the required 'Compliance Statement', Form RD 400-6, with their bids.
4. Form AD-425, Instructions to Contractors, will accompany the notice of award of the contract. Bid conditions for all nonexempt federal and federally assisted construction contracts require inclusion of the appropriate "Hometown" or "Imposed" plan affirmative action and equal employment opportunity requirements. All bidders must comply with the bid conditions contained in the invitation to be considered responsible bidders and hence eligible for the award.
5. To assist and cooperate actively with USDA and the Secretary in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary, that it will furnish USDA and the Secretary such information such as, but not limited to, Form AD 560, Certification of Nonsegregated Facilities, to submit the Monthly Employment Utilization Report, Form CC-257, as they may require for the supervision of such compliance, and that it will otherwise assist USDA in the discharge of USDA's primary responsibility for securing compliance.
6. To refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by USDA or the Secretary of Labor pursuant to Part II, Subpart D, of the Executive Order.
7. That if the recipient fails or refuses to comply with these undertakings, the USDA may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the organization under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such organization; and refer the case to the Department of Justice for appropriate legal proceedings.

Signed by the Recipient on the date first written above.

Recipient

Recipient

(CORPORATE SEAL)

Name of Corporate Recipient

Attest:

By _____
President

Secretary

**CONTRACTOR'S CERTIFICATION CONCERNING
LABOR STANDARDS AND PREVAILING WAGE REQUIREMENTS**

CONTRACTOR'S CERTIFICATION CONCERNING
LABOR STANDARDS AND PREVAILING WAGE REQUIREMENTS

TO (Appropriate Recipient):	DATE
C/O	PROJECT NUMBER (if any)
	PROJECT NAME

1. The undersigned, having executed a contract with _____ for the construction of the above identified project, acknowledges that:

(a) The Labor Standards provisions are included in the aforesaid contract;

(b) Correction of any infractions of the aforesaid conditions, including infractions by any of his subcontractors and any lower tier subcontractors, is his responsibility.

2. He certifies that:

(a) Neither he nor any firm, partnership or association in which he has substantial interest is designated as an ineligible contractor by the Comptroller of the United States pursuant to Section 5.6(b) of the Regulations of the Secretary of Labor., Part 5 (29 CFR, Part 5) or pursuant to Section 3(a) of the Davis-Bacon Act, as amended (40 U.S. C. 276a-2(a)).

(b) No part of the aforementioned contract has been or will be subcontracted to any subcontractor if such subcontractor or any firm, corporation, partnership or association in which such subcontractor has a substantial interest is designated as an ineligible contractor pursuant to any of the aforementioned regulatory or statutory provisions.

3. He agrees to obtain and forward to the aforementioned recipient within ten days after the execution of any subcontract, including those executed by his subcontractors and any lower tier subcontractors, a Subcontractor's Certification Concerning Labor Standards and Prevailing Wage Requirements executed by the subcontractors.

4. He certifies that:

(a) The legal name and the business address of the undersigned are:

(b) The undersigned is:

(1) A SINGLE PROPRIETORSHIP	(3) A CORPORATION ORGANIZED IN THE STATE OF:
(2) A PARTNERSHIP	(4) OTHER ORGANIZATION (Describe)

(c) The name, title and address of the owner, partners, or officers of the undersigned are:

NAME	TITLE	ADDRESS

(d) The names and addresses of all other persons, both natural and corporate, having a substantial interest in the undersigned, and the nature of the interest are (if none, so state)

NAME	ADDRESS	NATURE OF INTENT

(e) The names, addresses and trade classifications of all other building construction contractors in which undersigned ha a substantial interest (if none, so state):

NAME	ADDRESS	TRADE CLASSIFICATION

Date _____
_____ (Contractor)

By: _____

WARNING

U.S. Criminal Code, Section 1010, Title 18, U.S. C., provides in part: "Whoever makes, passes, utters, or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both