

SIMPSON COUNTY WATER DISTRICT  
SIMPSON COUNTY, KENTUCKY

SPECIFICATIONS AND  
CONTRACT DOCUMENTS

**FRITZ-WINTER CAPACITY IMPROVEMENTS**

50% of project funding provided by: USDC-EDA (Investment #04-01-07240)

50% of project funding provided by: USDA-RD

**(DAVIS-BACON WAGE RATES REQUIRED)**



Simpson County  
Water District

August 23, 2019



8/23/19

Prepared by  
Engineering Staff  
Simpson County Water District

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## ADVERTISEMENT FOR BIDS

Sealed Bids for **Project #1: Fritz-Winter Capacity Improvements and Project #2: Water Line Replacements and Extensions** will be received by the Owner, Simpson County Water District, at their office located at 523 U.S. 31W Bypass, Bowling Green, KY 42101 until 2:00 p.m. local time on September 19, 2019, at which time the Bids received will be publicly opened and read. The Projects generally consists of installation of 50,000 feet of water line ranging in size from 4” to 12”, a pump station and appurtenances. Bids will be received for two prime Contracts. Bids shall be on a unit price basis as indicated in the Bid Form.

**Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A – Agriculture, Rural Development, Food and Drug Administration, and Related Agencies, Appropriations Act, 2017) and subsequent statutes mandating domestic preference applies to American Iron and Steel requirement to this project. All listed iron and steel products used in this project must be produced in the United States. The term “iron and steel products” means the following products made primarily of iron and steel: lines or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.**

The U.S. Department of Commerce Economic Development Administration is providing 50% funding for Project #1 (EDA Investment No. 04-01-07240). The U.S. Department of Agriculture Rural Development Administration is providing 50% funding for Project #1 and 100% funding for Project #2.

The issuing Office for the Bidding Documents is Simpson County Water District 523 U.S. 31W Bypass, Bowling Green, KY 42101. Questions may be directed to:

Ryan J. Leisey, P.E.  
[ryanl@warrenwater.com](mailto:ryanl@warrenwater.com), (270) 842-0052 ext. 512

Bidding Documents may be obtained from the Issuing Office for a non-refundable charge of \$300. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than the Issuing Office.

Bid security shall be furnished in accordance with the Instructions to Bidders.

**END OF DOCUMENT**

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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.

## 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 or invitation to bid.

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, after submitting its Bid and within **five** days of Owner's request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:

- A. Evidence of Bidder's authority to do business in the state where the Project is located.
- B. Bidder's state or other contractor license number, if applicable.
- C. Subcontractor and Supplier qualification information; coordinate with provisions of Article 12 of these Instructions, "Subcontractors, Suppliers, and Others."
- D. Past experience on projects of similar size and scope.

~~{or}~~

3.01 ~~Prospective Bidders shall submit required information regarding their qualifications by  **[insert deadline for prequalification submittals]**. Owner will review the submitted information to determine which contractors are qualified to bid on the Work. Owner will issue an Addendum listing those contractors that Owner has determined to be qualified to construct the project. Bids will only be accepted from listed contractors. The information that each prospective Bidder must submit to seek prequalification includes (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:~~

- A. ~~{Evidence of prospective Bidder's authority to do business in the state where the Project is located.}~~
- B. ~~{Prospective Bidder's state or other contractor license number, if applicable.}~~
- C. ~~{Subcontractor and Supplier qualification information; coordinate with provisions of Article 12 of these Instructions, "Subcontractors, Suppliers, and Others."}~~
- D. ~~{Other required information regarding qualifications}~~

~~{or}~~

- 3.01 ~~To demonstrate Bidder's qualifications to perform the Work, Bidder shall submit with its Bid (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:~~
- A. ~~{Evidence of Bidder's authority to do business in the state where the Project is located.}~~
  - B. ~~{Bidder's state or other contractor license number, if applicable.}~~
  - C. ~~{Subcontractor and Supplier qualification information; coordinate with provisions of Article 12 of these Instructions, "Subcontractors, Suppliers, and Others."}~~
  - D. ~~{Other required information regarding qualifications}~~
- 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 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; **"included but not limited to the AIS requirements as mandated and any subsequent statutes mandating domestic preference which apply to the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.**
- 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**

- 6.01 A pre-Bid conference will be held at the time and location stated in the invitation or advertisement to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

#### **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 (five)** 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 **91** 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.

~~{or}~~

- 9.01 Bidder shall set forth in the Bid the time by which Bidder shall achieve Substantial Completion, subject to the restrictions established in Paragraph 14.04 of these Instructions. The Owner will take Bidder's time commitment regarding Substantial Completion into consideration during the evaluation of Bids, and it will be necessary for the apparent Successful Bidder to satisfy Owner that it will be able to achieve Substantial Completion within the time such Bidder has designated in the Bid. ~~[If applicable include the following: Bidder shall also set forth in the Bid its commitments regarding the achievement of Milestones and readiness for final payment.]~~ The Successful Bidder's time commitments will be entered into the Agreement (or incorporated in the Agreement by reference to the specific terms of the Bid).

#### 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.

#### ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 ~~The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or equal" items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or "or equal" item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.~~

#### NOTE(S) TO USER:

*The EJCDC presumptive practice is that no substitute or "or equal" materials or equipment will be considered until after the Effective Date of the Contract. However, some practitioners do consider, and some Laws and Regulations require, evaluations of substitutions and "or equals" during the bidding period and issuance of Addenda when a substitute or "or equal" is accepted. In such cases, use the second alternative Paragraph 11.01, immediately below.*

~~{or}~~

~~11.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those “or-equal” or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified 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 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. Each such such proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.~~

*NOTE(S) TO USER:*

*Note that the General Conditions draw a distinction between “or-equal” and substitute items of materials and equipment. Paragraph 7.04 of the General Conditions addresses “or-equals”; Paragraph 7.05 addresses substitutes.*

~~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.~~

**11.01 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 rely 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. "Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. Each such request shall include the Manufacturer's Certification Letter (Exhibit D) for compliance with AIS requirements and any subsequent statutes mandating domestic preference, if applicable.**

**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 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents (most commonly —~~

~~in the Specifications) to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.~~

~~12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.~~

12.03 **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 the following portions 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.

12.04 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.

12.05 **Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.**

12.06 **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.

B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

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.

#### **ARTICLE 14 – BASIS OF BID**

##### 14.01 ~~Lump Sum~~

- A. ~~Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.~~

**{or}**

##### 14.01 Base Bid with Alternates

- A. Bidders shall submit a Bid on a lump sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents and as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate.
- B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form.

**{or}**

##### 14.01 ~~Sectional Bids~~

- A. ~~Bidders may submit a Bid on any individual section or any combination of sections, as set forth in the Bid Form.~~
- B. ~~Submission of a Bid on any section signifies Bidder's willingness to enter into a Contract for that section alone at the price offered.~~
- C. ~~If Bidder submits Bids on individual sections and a Bid based on a combination of those sections, such combined Bid need not be the sum of the Bids on the individual sections.~~
- D. ~~Bidders offering a Bid on one or more sections shall be capable of completing the Work covered by those sections within the time period stated in the Agreement.~~

**{or}**

##### 14.01 ~~Cost-Plus-Fee Bids~~

- A. ~~Bidders shall submit a Bid on the Contractor's fee, which shall be in addition to compensation for Cost of the Work. Such fee shall be either (1) a fixed fee or (2) percentages of categories of costs, as set forth in the Bid Form.~~
- B. ~~If the Contractor's fee, as set forth in the Bid Form, is to be based on percentages of categories of cost, Bidders shall enter a maximum amount limiting the total fee if required by the Bid Form to do so.~~
- C. ~~Bidders shall submit a Bid on the Guaranteed Maximum Price, setting a maximum amount on the compensable Cost of the Work plus Contractor's fee, if required by the Bid Form to do so.~~

#### 14.02 *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.

#### 14.03 *Allowances*

- A. For cash allowances the Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

#### 14.04 *Price-Plus-Time Bids*

- A. ~~The Owner will consider the time of Substantial Completion commitment made by the Bidder in the comparison of Bids.~~
- B. ~~Bidder shall designate the number of days required to achieve Substantial Completion of the Work and enter that number in the Bid Form as the total number of calendar days to substantially complete the Work.~~
- C. ~~The total number of calendar days for Substantial Completion designated by Bidder shall be less than or equal to a maximum of [ ], but not less than the minimum of [ ]. If Bidder purports to designate a time for Substantial Completion that is less than the allowed minimum, or greater than the allowed maximum, Owner will reject the Bid as nonresponsive.~~
- D. ~~The Agreement as executed will contain the Substantial Completion time designated in Successful Bidder's Bid, and the Contractor will be assessed liquidated damages at the rate stated in the Agreement for failure to attain Substantial Completion within that time.~~
- E. ~~[Bidder shall also designate the time in which it will achieve Milestones, and achieve readiness for final payment. Such time commitments shall be consistent with the "Time of Substantial Completion" to which Bidder commits. The Agreement as executed will contain,~~

~~as binding Contract Times, Successful Bidder's time commitments regarding Milestones, as applicable, and readiness for final payment.]~~

#### **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 John Dix, General Manager, 523 U.S. 31W Bypass, Bowling Green, KY 42101.
- 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.

#### **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 or invitation 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.

~~{or}~~

- 17.01 ~~Bids will be opened privately.~~

## 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.
- B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner shall announce to all bidders a “Base Bid plus alternates” budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.

~~{or}~~

- B. ~~For determination of the apparent low Bidder(s) when sectional bids are submitted, Bids will be compared on the basis of the aggregate of the Bids for separate sections and the Bids for combined sections that result in the lowest total amount for all of the Work.~~

~~{or}~~

- B. ~~For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.~~

~~{or}~~

- B. ~~For the determination of the apparent low Bidder when cost plus bids are submitted, Bids will be compared on the basis of the Guaranteed Maximum Price set forth by Bidder on the Bid Form.~~
- C. ~~Bid prices will be compared after adjusting for differences in time of Substantial Completion (total number of calendar days to substantially complete the Work) designated by Bidders.~~



~~The adjusting amount will be determined at the rate set forth in the Agreement for liquidated damages for failing to achieve Substantial Completion, or such other amount that Owner has designated in the Bid Form.~~

- ~~1. The method for calculating the lowest bid for comparison will be the summation of the Bid price shown in the Bid Form plus the product of the Bidder specified time of Substantial Completion (in calendar days) times the rate for liquidated damages **[or other Owner designated daily rate]** (in dollars per day).~~
- ~~2. This procedure is only used to determine the lowest bid for comparison and contractor selection purposes. The Contract Price for compensation and payment purposes remains the Bid price shown in the Bid Form.~~

**NOTE(S) TO USER:**

- ~~1. The monetary value of each calendar day to complete the Work will typically be the liquidated damages amount set forth in the Agreement for failing to achieve Substantial Completion. Thus note the importance of setting and documenting the liquidated damages for late completion to a realistic value accurately reflecting the daily effect of delays to the project or benefits of earlier completion. In appropriate cases (for example, if there are no liquidated damages stated) an alternative per day amount can be used, such as "Monetary Value for each Calendar Day." Regardless of the label, Owner or its representative (drafter) should specify the per day amount in the Bid Form before distribution to Bidders.~~
- ~~2. The required payment and performance bonds will be based on the total construction cost shown in the Bid Form—the Successful Bidder's Bid Price including any accepted alternates.~~
- ~~3. This provision must be closely coordinated with the corresponding content of the Bid Form and the Agreement.~~

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**

22.01 ~~Owner is exempt from Kentucky state sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid. Refer to Paragraph SC-7.09 of the Supplementary Conditions for additional information.~~

#### **ARTICLE 23 – CONTRACTS TO BE ASSIGNED      NONE**

#### **ARTICLE 24 – WAGE RATE REQUIREMENTS**

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.

24.02 ~~The USDA, Rural Utilities Service, Water and Waste Disposal program does not require the use of Davis Bacon Wage rates.~~

24.03 A portion of the project is funded by the U.S. Department of Commerce Economic Development Administration (EDA). Davis Bacon Wage Rates are Required on all portions of the project. The Davis Bacon Wage Rates to be used on this project are attached in the next section of the specifications.

**ARTICLE 24.03: Section 746 of Title VII Consolidated Appropriations Act of 2017 (Division A - Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and any subsequent statues mandating domestic preference applies an American Iron and Steel requirement to this project. All iron and steel products used in this project must be procured in the United States. "Iron and Steel Products" is defined in Section 1.b.2. The de minimis and minor components waivers {add project specific waivers as applicable} apply to this contract."**

General Decision Number: KY190058 05/10/2019 KY58

Superseded General Decision Number: KY20180137

State: Kentucky

Construction Type: Heavy

Counties: Adair, Barren, Casey, Clinton, Cumberland, Green, Hart, Knox, Laurel, Logan, Marion, McCreary, Metcalfe, Pulaski, Russell, Simpson, Taylor, Wayne and Whitley Counties in Kentucky.

HEAVY CONSTRUCTION PROJECTS (including sewer/water construction).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019
1	05/10/2019

CARP0064-007 05/01/2015

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 27.50	16.06

\* ELEC0369-004 09/03/2018

	Rates	Fringes
LINE CONSTRUCTION		
Equipment Operator.....	\$ 32.27	20%+5.965
Groundman.....	\$ 38.06	20%+5.965
Lineman.....	\$ 36.12	20%+5.965

ENGI0181-010 07/01/2018

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 32.88	15.75

GROUP 2.....	\$ 31.68	15.75
GROUP 4.....	\$ 28.41	15.75

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Crane; Drill; Grader/Blade; Mechanic; Scraper

GROUP 2 - Bobcat/Skid Steer/Skid Loader; Forklift

GROUP 4 - Oiler

Operators on cranes with booms 150 feet and over (including jib) shall receive \$1.00 above Group 1 rate; 250 feet and over including jib shall receive \$1.50 above Class 1 rate. Combination Rate: All crane operators operating cranes, where the length of the boom in combination with the length of the piling leads equal or exceeds 150 feet, shall receive \$1.00 above the Group 1 rate.

Employees assigned to work below ground level are to be paid 10% above basic wage rate. This does not apply to open cut work.

-----  
IRON0782-010 05/01/2018

	Rates	Fringes
IRONWORKER (Reinforcing & Structural)		
Projects over \$20,000,000.00.....	\$ 28.79	24.17
Projects under \$20,000,000.00.....	\$ 27.20	22.75

-----  
LABO0189-014 07/01/2018

	Rates	Fringes
LABORER		
Concrete Saw (Hand Held/Walk Behind).....	\$ 23.32	14.21
Concrete Worker.....	\$ 23.07	14.21

-----  
SUKY2011-014 06/25/2014

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 21.60	10.35
ELECTRICIAN.....	\$ 32.35	2.18
LABORER: Common or General.....	\$ 20.60	9.39
LABORER: Flagger.....	\$ 18.31	8.89
LABORER: Pipelayer.....	\$ 20.13	8.63
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 23.60	12.65
OPERATOR: Bulldozer.....	\$ 21.72	7.45
OPERATOR: Loader.....	\$ 30.35	0.00

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates

the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
 Wage and Hour Division  
 U.S. Department of Labor  
 200 Constitution Avenue, N.W.  
 Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
 U.S. Department of Labor  
 200 Constitution Avenue, N.W.  
 Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

**BID FORM**

**FRITZ-WINTER CAPACITY IMPROVEMENTS**

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**ARTICLE 1 – BID RECIPIENT**

1.01 This Bid is submitted to:

***Simpson County Water District, 523 U.S. 31W Bypass, Bowling Green, KY 42101.***

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

**ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS**

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for ~~60~~90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

**ARTICLE 3 – BIDDER’S REPRESENTATIONS**

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work **and including AIS requirements.**

D. Bidder has carefully studied 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. Bidder has considered 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 any 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. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this 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. Bidder 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 Bidding Documents.
  - H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
  - I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
  - J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and 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 4 – BIDDER'S CERTIFICATION**

##### 4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
  - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
  - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices or lump sum:

NOTE: BIDS shall include sales tax and all other applicable taxes and fees.

**BASE BID SCHEDULE – FRITZ-WINTER CAPACITY IMPROVEMENTS**

NO.	ITEM	UNIT	UNIT PRICE	QTY.	TOTAL PRICE
1	8"x8" Tap Sleeve & Valve on PVC	EA	_____	2	_____
2	6"x6" Tap Sleeve & Valve on PVC	EA	_____	1	_____
3	6"x6" Tap Sleeve & Valve on ACP	EA	_____	1	_____
4	12" Gate Valve	EA	_____	2	_____
5	8" Gate Valve	EA	_____	3	_____
6	3" Gate Valve	EA	_____	2	_____
7	Domestic Ductile Iron Fittings	LB	_____	3,150	_____
8	Crushed Stone	TN	_____	1,750	_____
9	Concrete	CY	_____	15	_____
10	Asphalt	TN	_____	10	_____
11	18" Stl. Casing, by Bore, w/12" Rest. Jt. DIP Carrier	LF	_____	343	_____
12	14" Stl. Casing, by Bore, w/8" Rest. Jt. DIP Carrier	LF	_____	60	_____
13	12" Stl. Casing, by Bore, w/8" PVC Carrier	LF	_____	76	_____
14	8" PVC - Uncased Bore	LF	_____	125	_____
15	10" HDPE Directional Bore Water Line Creek Crossing	LS	_____	1	_____
16	12" Class 200 PVC Water Line	LF	_____	1,972	_____
17	8" Class 200 PVC Water Line	LF	_____	11,063	_____
18	6" Class 200 PVC Water Line	LF	_____	24	_____
19	3" Class 200 PVC Water Line	LF	_____	82	_____
20	Master Meter Lump Sum	LS	_____	1	_____
21	Pump Station Lump Sum	LS	_____	1	_____
22	1" Meter Set – Creek Crossing	LS	_____	1	_____

**BASE BID SCHEDULE – FRITZ-WINTER CAPACITY IMPROVEMENTS (CONT.)**

<b>NO.</b>	<b>ITEM</b>	<b>UNIT</b>	<b>UNIT PRICE</b>	<b>QTY.</b>	<b>TOTAL PRICE</b>
23	5-1/4" Fire Hydrant Assembly	EA	_____	1	_____
24	Silt Fence	LF	_____	300	_____
25	Rip-Rap Check Dam	TN	_____	30	_____
26	Final Cleanup	LF	\$1.00	13,141	\$ 13,141.00

**TOTAL – FRITZ-WINTER CAPACITY IMPROVEMENTS**

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Respectfully submitted:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Address

\_\_\_\_\_  
Title

\_\_\_\_\_  
City, State, Zip

\_\_\_\_\_  
Date

\_\_\_\_\_  
Phone Number

\_\_\_\_\_  
License No. (If Applicable)

\_\_\_\_\_  
Facsimile Number

SEAL - (if BID is by a corporation)

ATTEST: \_\_\_\_\_

## ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

## ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security;
  - B. List of Proposed Subcontractors;
  - C. List of Proposed Suppliers;
  - D. List of Project References;
  - E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;
  - F. Contractor's License No.: XXXXXXXXXX
  - G. Required Bidder Qualification Statement with supporting data; and
  - H. **If Bid amount exceeds \$10,000, signed Compliance Statement (RD 400-6). Refer to specific equal opportunity requirements set forth in the Supplemental General Conditions;**
  - I. **If Bid amount exceeds \$25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions (AD-1048);**
  - J. **If Bid amount exceeds \$100,000, signed RD Instruction 1940-Q, Exhibit A-1, Certification for Contracts, Grants, and Loans.**
  - K. **"Manufacturer's Certification Letter (Exhibit D) on any approved "or equal" or substitute request to ensure compliance with AIS requirements and any subsequent statutes mandating domestic preference.**

**ARTICLE 8 – DEFINED TERMS**

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

**ARTICLE 9 – BID SUBMITTAL**

BIDDER: *[Indicate correct name of bidding entity]*

\_\_\_\_\_  
By:  
*[Signature]* \_\_\_\_\_

*[Printed name]* \_\_\_\_\_  
*(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest:  
*[Signature]* \_\_\_\_\_

*[Printed name]* \_\_\_\_\_

Title: \_\_\_\_\_

Submittal Date: \_\_\_\_\_

Address for giving notices:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

Contact Name and e-mail address: \_\_\_\_\_  
\_\_\_\_\_

Bidder's License No.: \_\_\_\_\_  
*(where applicable)*

## 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*):

BID

Bid Due Date:

Description (*Project Name— Include Location*):

BOND

Bond Number:

Date:

Penal sum

\$

(Words)

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

**BIDDER**

**SURETY**

(Seal)

(Seal)

\_\_\_\_\_  
Bidder's Name and Corporate Seal

\_\_\_\_\_  
Surety's Name and Corporate Seal

By:

\_\_\_\_\_  
Signature

By:

\_\_\_\_\_  
Signature (Attach Power of Attorney)

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest:

\_\_\_\_\_  
Signature

Attest:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

*Note: Addresses are to be used for giving any required notice.*

*Provide execution by any additional parties, such as joint venturers, if necessary.*

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 Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
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 of 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 the 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 the 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.



NOTICE OF AWARD

TO: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PROJECT Description: \_\_\_\_\_  
\_\_\_\_\_

The OWNER has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids dated \_\_\_\_\_, 20\_\_\_\_, and Information 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 enclosed Agreement and furnish the required CONTRACTOR'S Performance BOND, Payment BOND and certificates of insurance within fifteen (15) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within fifteen (15) 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.

Within ten (10) days of your compliance of the above conditions, Owner will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Owner: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

By \_\_\_\_\_, this the \_\_\_\_\_ day  
of \_\_\_\_\_, 20\_\_\_\_\_.

Title \_\_\_\_\_

**AGREEMENT  
BETWEEN OWNER AND CONTRACTOR  
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)**

THIS AGREEMENT is by and between Simpson County Water District (“Owner”) and  
\_\_\_\_\_ (“Contractor”).

Owner and Contractor hereby agree as follows:

**ARTICLE 1 – WORK**

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

**ARTICLE 2 – THE PROJECT**

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Fritz-Winter Capacity Improvements.

**ARTICLE 3 – ENGINEER**

3.01 The Project has been designed by Warren County Water District

3.02 The Owner has retained Warren County Water District (“Engineer”) to act as 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 Contract Times: Dates~~

~~A. The Work will be substantially completed on or before \_\_\_\_\_, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before \_\_\_\_\_.~~

4.02 *Contract Times: Days*

A. The Work will be substantially completed within 270 days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 300 days after the date when the Contract Times commence to run.

B. ~~Parts of the Work shall be substantially completed on before the following Milestone(s):~~

~~1. Milestone 1 [event & date/days]~~

2. Milestone 2 [event & date/days]
3. Milestone 3 [event & date/days]

#### 4.03 Liquidated Damages

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. 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):
1. Substantial Completion: Contractor shall pay Owner **\$400** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
  2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **\$400** for each day that expires after such time until the Work is completed and ready for final payment.
  3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.
  4. Milestones: Contractor shall pay Owner \$\_\_\_\_\_ for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved.
- B. ~~Bonus: Contractor and Owner further recognize the Owner will realize financial and other benefits if the Work is completed prior to the time specified for Substantial Completion. Accordingly, Owner and Contractor agree that as a bonus for early completion, Owner shall pay Contractor \$\_\_\_\_\_ for each day prior to the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract) that the Work is substantially complete. The maximum value of the bonus shall be limited to \$\_\_\_\_\_.~~

---

#### 4.04 Special Damages Deleted

- A. ~~In addition to the amount provided for liquidated damages, Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.~~
- B. ~~After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), 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 the amounts that follow, subject to adjustment under the Contract:

A. ~~For all Work other than Unit Price Work, a lump sum of: \$ \_\_\_\_\_.~~

~~All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.~~

B. ~~For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item):~~

<b>Unit Price Work</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Estimated Quantity</b>	<b>Unit Price</b>	<b>Extended Price</b>
Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities)					\$ _____

~~The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.~~

C. Total of Lump Sum Amount and Unit Price Work (subject to final Unit Price adjustment) \$ \_\_\_\_\_.

D. For all Work, at the prices stated in Contractor’s Bid, attached hereto as an exhibit.

**ARTICLE 6 – PAYMENT PROCEDURES**

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 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 10<sup>th</sup> day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in 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 elsewhere in the Contract.

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 Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract
  - a. 90 percent of Work completed (with the balance being retainage).~~If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and~~
  - b. 90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, **of the entire construction to be provided under the Contract Documents**, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

#### 6.03 Final Payment

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

### ARTICLE 7 – INTEREST

7.01 All amounts not paid when due shall bear interest at the rate of 0 percent per annum.

### ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
  - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, 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 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 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. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract 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 Contractor; and (3) Contractor's safety precautions and programs.
- F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no 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.
- 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 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.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

## ARTICLE 9 – CONTRACT DOCUMENTS

### 9.01 *Contents*

- A. The Contract Documents consist of the following:
  - 1. This Agreement (pages 1 to [ ] , inclusive).
  - 2. Performance bond (pages [ ] to [ ] , inclusive).
  - 3. Payment bond (pages [ ] to [ ] , inclusive).
  - 4. Other bonds.
    - a. [ ] (pages [ ] to [ ] , inclusive).
  - 5. General Conditions (pages [ ] to [ ] , inclusive).
  - 6. Supplementary Conditions (pages [ ] to [ ] , inclusive).
  - 7. Specifications as listed in the table of contents of the Project Manual.
  - 8. Drawings (not attached but incorporated by reference) consisting of [ ] sheets with each sheet bearing the following general title: [ ] [or] the Drawings listed on the attached sheet index.
  - 9. Addenda (numbers [ ] to [ ] , inclusive).
  - 10. Exhibits to this Agreement (enumerated as follows):
    - a. Contractor's Bid (pages [ ] to [ ] , inclusive).

11. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
  - a. Notice to Proceed.
  - ~~b. Work Change Directives.~~
  - c. Change Orders.
  - ~~d. Field Orders.~~
- 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 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. Unless expressly agreed to elsewhere in the Contract, 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, money that may become due and money that is 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 successors, assigns, and legal representatives to the other party hereto, its 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 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;
2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

#### 10.06 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.



IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on \_\_\_\_\_ (which is the Effective Date of the Contract).

OWNER:

CONTRACTOR:

By: Simpson County Water District

By: \_\_\_\_\_

Title: General Manager

Title: \_\_\_\_\_

*(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest: \_\_\_\_\_

Attest: \_\_\_\_\_

Title: Manager of Engineering

Title: \_\_\_\_\_

Address for giving notices:

Address for giving notices:

523 U.S. 31W Bypass, Bowling Green, KY 42101

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

License No.: \_\_\_\_\_  
*(where applicable)*

*(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*

*NOTE TO USER: Use in those states or other jurisdictions where applicable or required.*

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

## STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by



These General Conditions have been prepared for use with the Agreement Between Owner and Contractor for Construction Contract (EJCDC® C-520, Stipulated Sum, or C-525, Cost-Plus, 2013 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other.

To prepare supplementary conditions that are coordinated with the General Conditions, use EJCDC's Guide to the Preparation of Supplementary Conditions (EJCDC® C-800, 2013 Edition). The full EJCDC Construction series of documents is discussed in the Commentary on the 2013 EJCDC Construction Documents (EJCDC® C-001, 2013 Edition).

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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 consider 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.

## SUPPLEMENTARY CONDITIONS

The Engineer will develop Supplementary Conditions using the guidance from the Guide to the Preparation of Supplementary Conditions (EJCDC C-800 (Rev 1), 2013), instructions provided in this Bulletin, and by adding other project-specific supplementary conditions as required for the project.

The Supplementary Conditions document that is developed for a specific Project is the contractual means by which the Standard General Conditions (EJCDC C-700 (Rev 1, 2013) are modified and supplemented for the Project. The references in the Supplementary Conditions items below (and in EJCDC C-800 (Rev 1) (2013) as published to adding, amending, or supplementing are referring to the paragraphs of C-700 (Rev 1) (2013). Thus the first item below, SC-1.01.A.8, is contractual provision that adds the stated language ("The Change Order form to be used etc.") to Paragraph 1.01.A.8 of C-700 (Rev 1) (2013).

As in C-800 (rev 1) (2013) itself, the actual Supplementary Conditions (contract terms) are shown in bold as modified below. Also included below are a few Guidance Notes to assist in development of the Project-specific Supplementary Conditions document. The Guidance Notes are not in bold.

The Supplementary Conditions items that follow are mandatory for each specific Project, unless noted otherwise. In most cases they are new (supplemental) SC items; in a few cases, they replace or expand on a Supplementary Condition item that is in EJCDC C-800 (Rev 1) (2013), as published.

In addition to including the items that follow in the Supplementary Conditions document for the specific Project, the Engineer (in cooperation with the Owner) also should follow the guidance of EJCDC C-800 (Rev 1) (2013), as published, to develop other SC items for inclusion in the Project-specific Supplementary Conditions document; as the published guidance indicates, some of the published SC items are mandatory, or require additional Project-specific input, such as insurance coverage limits. Other SC items in C-800 (Rev 1) (2013) as published are optional but in many cases will be useful for the specific Project.

Include the following RUS-mandated Supplementary Conditions (or follow the Guidance Notes provided) in the Supplementary Conditions document for the specific Project:

- SC 1.01.A.3 Add the following at the end of last sentence of Paragraph 1.01.A.3

**The Application for Payment form to be used on this project is EJCDC C-620(2013), or RD Form 1927-7.**

- SC 1.01.A.8 Add the following language at the end of last sentence of Paragraph 1.01.A.8

**The Change Order form to be used on this Project is EJCDC C-941 or RD Form 1927-7. Agency approval is required before Change Orders are effective or eligible for payment.**

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

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

- SC 1.01.A.49 Add the following new Paragraph

**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.A.50 Add the following new Paragraph after Paragraph 1.01.A.49**

**Agency – The Project is financed in whole or in part by the USDA Rural Utilities Services pursuant to the Consolidated Farm and Rural Development Act (7 USC Section 1921 et seq.). The Rural Utilities Service programs are administered through the USDA Rural Development offices; therefore, the Agencies for these documents is USDA Rural Development and USDC EDA. The most stringent agency requirement shall govern any aspect of the project.**

**SC 1.01.A.51**

**“Manufacturer’s Certification Letter (Exhibit D) is documentation provided by the manufacturer, supplier, distributor, vendor, fabricator, etc. to various entities stating that the AIS products to be used in the project are produced in the U.S. in accordance with the AIS Requirements.**

**SC 1.01.A.52**

**AIS refers to requirements mandated by Section 746 Title VII of the Consolidated Appropriations Act of 2017 and any subsequent statutes mandating domestic preference. “Iron and Steel Products” is defined in Section 1.b.2.**

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

**Owner shall furnish to Contractor five copies of the Contract Documents (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF).**

**SC 2.06.B (non-mandatory). Guidance Note. If the parties do not intend to develop electronic or digital transmittal protocols, the Paragraph 2.06B of the General Conditions may be deleted. Use the following Supplementary Condition in such case:**

**SC 2.06.B Delete Paragraph 2.06.B and replace it with the term [~~deleted~~].**

Guidance note, continued: If the use of electronic data, electronic media, or electronic project monitoring is planned for this Project, then the parties may develop a protocol with the assistance of the Engineer or Consensus DOCS form 200.2 may be added to the Construction Contract as an Exhibit. If Consensus DOCS form 200.2 will be used, then include the following Supplementary Condition:

**SC 2.06.B Add the following language to the end of 2.06B:**

**Special requirements for electronic data apply to this Project. See attached Exhibit entitled “Electronic Communications Protocol Addendum,” Consensus DOCS form 200.2.**

**SC 4.01.A Amend the last sentence of Paragraph 4.01.A by striking out the following words:**

**In no event will the Contract Times commence to run later than the ninetieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.**

**SC 5.03 Guidance Note: Amend Paragraph 5.03 using one of the suggested Paragraphs in SC 5.03 in ECJDC C-800, concerning reports and drawings of conditions at the Site, and any Technical Data in the reports and drawings whose accuracy the Contractor may rely.**

**EJCDC C-800 (Rev 1) (2013), concerning reports and drawings of conditions at the Site, and any Technical Data in the reports and drawings whose accuracy the Contractor may rely.**

- SC 5.06 Guidance Note: Amend Paragraph 5.06 using one of the suggested Paragraphs in SC 5.06 from ECJDC C-800, concerning reports and drawings regarding Hazardous Environmental Conditions at the Site, and any Technical Data in those reports and drawings on whose accuracy the Contractor may rely. EJCDC C-800 (Rev 1) (2013), concerning reports and drawings regarding Hazardous Environmental Conditions at the Site, and any Technical Data in those reports and drawings on whose accuracy the Contractor may rely.
- SC 6.03 Guidance Note: Amend Paragraph 6.03 identifying specific insurance coverage requirements using guidance from EJCDC C-800.  
requirements using guidance from EJCDC C-800 (Rev 1) (2013).
- SC 7.03 “All iron and steel must meet AIS requirements.**
- 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 “Deleted” in its place
- SC 7.04.B.1 “Contractor shall include the Manufacturer’s Certification Letter (Exhibit D) for compliance with AIS requirements to support data, if applicable. In addition, Contractor shall maintain an updated AIS Materials List (Exhibit J), to ensure that for de minimis waiver, cost is less than 5% of total materials cost for project and for minor components waiver, the cost of the non-domestically produced component is less than 5% of the total materials cost of the product.” An excel version that will compute all totals can be obtained from the RD State Office that can be used as a working copy.**
- SC 7.05.A.3.a4: “4) comply with AIS by providing the Manufacturer’s Certification Letter (Exhibit D), if applicable.**
- SC 7.06.A Amend Paragraph 7.06.A by adding the following text to the end of the Paragraph:  
**The Contractor shall not award work valued at more than fifty percent of the Contract Price to Subcontractor(s), without prior written approval of the Owner.**
- SC 7.06.B Delete paragraph 7.06.B in its entirety and insert “Deleted” in its place:
- 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”.**
- SC 7.11.A Modify by inserting the following after “written interpretations and clarifications,”; “Manufacturer’s Certification Letter (Exhibit D) is documentation provided by the manufacturer, supplier, distributor, vendor, fabricator, etc. to various entities stating that the iron and steel products to be used in the project are produced in the U.S. in accordance with AIS requirements.**

- SC 7.16.A.1.e: “e. obtain the Manufacturer’s Certification Letter (Exhibit D) for any item in the submittal subject to AIS requirements and include the certificate in the submittal.**
- SC 7.16.D.9 “Engineer’s review and approval of shop drawings or sample shall include review of compliance with AIS requirements, as applicable.”**
- SC 7.17.E: “Contractor shall certify upon substantial completion that all work and materials has complied with AIS requirements as mandated and any subsequent statutes mandating domestic preference. Contractor shall provide Contractor’s Certification Letter 9Exhibit C) to Owner.**
- SC 10.03 Guidance Note: Amend Paragraph 10.03 using one of the two alternatives presented in C-800’s (Rev1) (2013) section on SC 10.03 (either the Engineer will provide Resident Project Representative services on the Project, with specific authority and responsibilities, or Engineer will not provide Resident Project Representative services).**
- SC 10.10.A: “A: Services required to determine and certify that, to the best of the Engineer’s knowledge and belief, all iron and steel products referenced in the engineering analysis, the plans, specifications, bidding documents, and associated bid addenda requiring design revisions are either produced in the U.S. or are the subject of an approved waiver. Services required to determine, to the best of the Engineer’s knowledge and belief, that approved substitutes, equals, and all iron and steel products proposed in the shop drawings, change orders, and partial pay estimates are either produced in the U.S. or are the subject of an approved waiver under the Consolidate Appropriations Act of 2017.**
- SC 11.06.A.1: Modify by inserting the following sentence after “within 15 days after the submittal of the change proposal...” “Include supporting data (project name, name of manufacturer, city and state where the product was manufactured, description of product, signature of authorized manufacturer’s representative) in the Manufacturer’s Certification Letter (Exhibit D), as applicable.**
- 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 or can be eligible for reimbursement.**
- SC 13.02.C Delete Paragraph 13.02.C in its entirety and insert “Deleted” in its place:**
- SC 14.03.G: Installation of materials that are non-compliant with AIS requirements shall be considered defective work.**
- 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:  
  
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 the Project is EJCDC C-620 unless another form is agreed upon by the Engineer, Owner, and Agency. The Agency must approve all Applications for Payment before payment is made.**

- SC 15.01.B.4: **“4. By submitting materials for payment, Contractor is certifying that the submitted materials are compliant with AIS requirements. Manufacturers’ Certification letter for Materials satisfy this certification. Refer to Manufacturer’s Certification Letter provided in these Contract Documents.**

- SC 15.01.C.2d: **“d. The materials presented for payment comply with AIS requirements.**

- SC 15.01.D.1 Delete Paragraph 15.01.D.1 in its entirety and insert the following in its place:

**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 15.01.E will become due and payable twenty (20) days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.**

- SC 15.02.A Amend Paragraph 15.02A by striking out the following text: **“not later than seven days after the time of payment by Owner”** and insert **“no later than the time of payment by Owner.”**

- SC 15.03.A: **Modify by adding the following “Services required to determine and certify that, to the best of the Contractor’s knowledge and belief, all substitutes, equals, and iron and steel products proposed in the shop drawings, change orders, and partial payment estimates are produced in the U.S. or are the subject of an approved waiver. Services required to certify that, to the best of the Contractor’s knowledge, all those products installed for the project are either produced in the U.S. or are the subject of an approved waiver.**

- SC 18.09 Add the following new paragraph after Paragraph 18.08:

**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.**

- SC 19 Add Article 19 titled **“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 are 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 the Owner’s attorney can complete and execute the following "Certificate of Owner’s Attorney" (Exhibit F) before Owner submits the executed Contract Documents to Agency for approval.**

that Owner's attorney can complete and execute the following "Certificate of Owner's Attorney" (Exhibit I of RUS Bulletin 1780-26) 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.**

**B. Guidance Note: Amend paragraph 10.03 using one of the two alternatives presented in C-800's section 10.03 (Either the Engineer will provide RPR services on the Project, with specific authority and responsibilities, or Engineer will not provide RPR services).**

SC 19.03 Add the following language after Article 19.02B with the title "Conflict of Interest":

**A. Contractor may not knowingly contract with 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 or other interest in or a tangible personal benefit from the 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":

**B. Owner, Agency, the Comptroller General of the United States, or any of their duly authorized 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 "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 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; (5) using the services and assistance of the Small Business Administration and the Minority Business Development Agency of the US 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 service from labor surplus area firms.

- SC 19.07 Add the following language after Article 19.06A with "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 language after Article 19.07.A with "Clean Air and Pollution Control Acts";

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

- SC 19.09 Add the following after Article 19.08.A with the title "State Energy Policy":

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

- SC 19.10 Add the following after Article 19.09 with "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 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."



**D. Contractor's compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action 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 may 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, Executive Order, and the regulations in 41 CFR part 60-4. Compliance with the goals will be measured against the total work hours performed.**

**E. Contractor shall provide written notification to the Director of the Office of Federal Contractor Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any time for construction work under the Contract resulting from this solicitation. The notifications shall list the name, address, and telephone number for the subcontractor; employee identification number; estimated starting and completion date of the subcontract; and the geographical area in which the Contract is to be performed.**

SC 19.11 Add the following language after **Article 19.10.C with "Restrictions of 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 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 the 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 or 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 USC 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 language after Article 19.11.A with the title **"Environmental Requirements";**

When constructing a Project involving trenching and/or other related earth excavation, Contractor shall comply with the following environmental conditions:

**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 immediately report to the Owner and a representative of the 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 other threatened species and critical habitat. Should any evidence of the presence of endangered and/or other threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and representative Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the US fish and Wildlife Service.**

**E. Mitigation Measures - The following environmental mitigation measures are required on this Project: (*Insert mitigation measures here*).**

- SC 19.14: Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A-Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and any subsequent statutes mandating domestic preference applies in AIS requirement to this project. All iron and steel products used in this project must be produced in the U.S. The term “iron and steel products” is defined in Section 1.b.2 The de minimis and minor components waivers {add project specific waivers as applicable} apply to this contract."**

- SC 19.15: add Definitions:**

**“Assistance recipient” is the entity that received funding assistance from programs required to comply with AIS requirements in the Consolidated Appropriations Act of 2017 and any subsequent statutes mandating domestic preference. This term includes owner and/or applicant.**

**“Certifications” means the following:**

- ***Manufacturers’* certification is the documentation provided by the manufacturer or fabricator to various entities stating that the iron and steel products to be used in the project are produced in the U.S. in accordance with AIS requirements. If items are purchased via a supplier, distributor, vendor, etc. vs. direct from the manufacturer or fabricator directly, then the supplier, distributor, vendor, etc. will be responsible for obtaining and providing these certification letters to the parties purchasing the product.**
- ***Engineer’s* certification is documentation that plans, specifications, and bidding documents comply with AIS.**
- ***Contractors’* certification is documentation submitted upon substantial completion of the project that all iron and steel products installed were produced in the U.S.**

**“Coating” means a covering that is applied to the surface of an object. If a coating is applied to the external surface of a domestic iron or steel component, and the application takes place outside of the U.S., said product will be considered a compliant product under the AIS requirements. Any coating processes that are applied to the external surface of iron and steel components that would otherwise be AIS compliant would not disqualify the product from meeting the AIS requirements regardless of where the coating processes occur, provided that**

final assembly of the product occurs in the U.S. This exemption only applies to coatings on the external surface of iron and steel products, such as the lining of lined pipes. All manufacturing processes for lined pipes, including the application of pipe lining, must occur in U.S. for the product to be compliant with AIS requirement.

**“Contractor”** is the individual or entity with which the applicant has contracted (or is expected to) to perform construction services (or for water and waste projects funded by the programs which are subject to AIS requirements).

**“Construction materials”** are those articles, materials, or supplies made primarily of iron and steel, that are permanently incorporated into the project, not included mechanical and/or electrical components, equipment and systems. Some of these products may overlap with what is also considered **“structural steel”**.

*Note:* Mechanical and electrical components, equipment, and systems are not considered construction materials. See definition of mechanical and electrical equipment.

**“De minimis incidental components”** are various miscellaneous low-cost components that are essential for, but incidental to, the construction and are incorporated into the physical structure of the project. Examples of incidental components could include small washers, screws, fasteners (such as **“off the shelf”** nuts and bolts, miscellaneous wire, corner bead, ancillary tube, signage, trash bins, door hardware etc.)

Costs for de minimis incidental components cumulatively may comprise no more than a total of five percent of the total cost of the materials used in and incorporated into a project. The cost of an individual item may not exceed one percent of the total cost of the materials used in and incorporated into a project.

**“Engineer”** is an individual or entity with which the owner has contracted to perform engineering/architectural services for water and waste projects funded by the programs subject to AIS requirements.

**“Iron and Steel Products”** are defined as the following products made primarily of iron and steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials. Only items on the above list made of primarily iron or steel, permanently incorporated into the project must be produced in the U.S. for example; trench boxes, scaffolding or equipment, which are removed from the project site upon completion of the project, are not required to be made of U.S. Iron or Steel.

**“Manufacturers”** meaning supplier, fabricator, distributor, materialman, or vendor is an entity with which the applicant, general contractor or with any subcontractor has contracted to furnish materials or equipment to be incorporated in the project by the applicant, contractor or subcontractor.

**“Manufacturing processes”** are processes such as melting, refining, forming, rolling, drawing, finishing, and fabricating. Further, if a domestic iron and steel product is taken out of the U.S. for any part of the manufacturing process, it becomes foreign source material. However, raw materials such as iron ore, limestone, and iron and steel scrap are not covered by the AIS requirements, and the material(s), if any, being applied as coating are similarly not covered. Non-iron or steel components of an iron and steel product may come from non-U.S. sources.

For example, for products such as valves and hydrants, the individual non-iron and steel components do not have to be of domestic origin. Raw materials such as iron ore, limestone, scrap iron, and scrap steel, can come from non-U.S. sources.

“Mechanical equipment” is typically that which has motorized parts and/or is powered by a motor. “Electrical equipment” is typically any machine powered by electricity and included components that are part of the electrical distribution system. AIS does not apply to mechanical equipment.

“Minor components” are components within any iron or steel product otherwise compliant with the AIS requirements. This is different from the de minimis definition where de minimis pertains to the entire project and the minor component definition pertains to a single product. This waiver would allow non- domestically produced miscellaneous minor components comprising up to five percent of the total material cost of an otherwise domestically produced iron and steel product to be used. However, unless a separate waiver for a product has been approved, all other iron and steel components in said product must still meet the AIS requirements. This waiver does not exempt the whole product from the AIS requirements. Only minor components within said product and the iron or steel components of the product must be produced domestically. Valves and hydrants are also subject to the cost ceiling requirements described here. Examples of minor components could include items such as pins and springs in valves/hydrants, bands/straps in couplings, and other low cost items such as small fasteners etc.

“Municipal castings” are cast iron and steel infrastructure products that are melted and cast. They typically provide access, protection, or housing for components incorporated into utility owned drinking water, storm water, wastewater, and solid waste infrastructure.

“National Office” refers to the office responsible for the oversight and administration of the program nationally. The National Office sets policy, develops program regulations, and provides training and technical assistance to help the state offices administer the program. The National Office is located in Washington, D.C.

“Owner” is the individual or entity with which the general contractor has contracted regarding the work, and which has agreed to pay the general contractor for the performance of the work pursuant to the terms of the contract for water and waste projects funded by the programs subject to AIS requirement. For the purpose of this Bulletin, the term is synonymous with the term “applicant” as defined in 7 CFR 1780.7(a)(1), (2), and (3), and is an entity receiving financial assistance from the programs subject to AIS requirements.

“Primarily iron or steel” is defined as a product made of greater than 50 percent iron or steel, measured by cost. The cost should be based on the material costs. An exception to this definition is reinforced precast concrete (see Definition). All technical specifications and applicable industry standards (e.g. NIST, NSF, AWAS) must be met. If a product is determined to be less than 50 percent iron and steel, the AIS requirements do not apply.

For example, the cost of a fire hydrant includes:

1. The cost of materials used for the iron portion of the fire hydrant (e.g. bonnet, body, and shoe); and
2. The cost to pour and cast and create those components (e.g. labor and energy).

Not included in the cost are:

1. The additional material costs for the non-iron and steel internal working of the hydrant (e.g. stem, coupling, valve, seals, etc.); and
2. The cost to assemble the internal workings into the hydrant body.

**“Produced in the United States”** means that the production in the United States of the iron or steel products used in the project requires that all manufacturing processes must take place in the United States, with the exception of metallurgical processes involving refinement of steel additives.

**“Project”** is the total undertaking to be accomplished for the applicant by consulting engineers, general contractors, and others, including the planning, study, design, construction, testing, commissioning, and start-up of which the work to be performed under the contract is a part. A project includes all activity that an applicant is undertaking to be financed in whole or part by programs subject to AIS requirements. The intentional splitting of projects to separate into smaller contracts or obligations to avoid AIS requirements is prohibited.

**“Reinforced Precast Concrete”** may not consist of at least 50 percent iron or steel, but the reinforcing bar and wire must be produced in the United States and meet the same standards for any other iron or steel product. Additionally, the casting of the concrete product must take place in the United States. The cement and other raw materials used in concrete production are not required to be of domestic origin. If the reinforced concrete is cast at the construction site, the reinforcing bar and wire are considered to be a construction material and must be produced in the United States.

**“Steel”** means an alloy that includes at least 50 percent iron between 0.02 and 2 percent carbon, and may include other elements. Metallic elements such as chromium, nickel, molybdenum, manganese, and silicon may be added during the melting of steel for the purpose of enhancing properties such as corrosion, resistance, hardness, or strength. The definition of steel covers carbon steel, alloy steel, stainless steel, tool steel, and other specialty steels.

**“Structural steel”** is rolled flanged shapes, having at least on dimension of their cross-section three inches or greater, which are used in the construction of bridges, buildings, ships, railroad rolling stock, and for numerous other constructional purposes. Such shapes are designated as wide-flange shapes, standard I beams, channels, angles, tees, and zees. Other shapes include but are not limited to H-piles, sheet piling, tie plates, cross ties, and those for other special purposes.

**“United States”** means each of the several states, the District of Columbia, and each Federally Recognized Indian Tribe.

**U. S. DEPARTMENT OF COMMERCE  
ECONOMIC DEVELOPMENT ADMINISTRATION**



**EDA CONTRACTING PROVISIONS  
FOR CONSTRUCTION PROJECTS**

These EDA Contracting Provisions for Construction Projects (EDA Contracting Provisions) are intended for use by recipients receiving federal assistance from the U. S. Department of Commerce - Economic Development Administration (EDA). They contain provisions specific to EDA and other federal provisions not normally found in non-federal contract documents. The requirements contained herein must be incorporated into all construction contracts and subcontracts funded wholly or in part with federal assistance from EDA.

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## 1. **DEFINITIONS**

*Agreement* – The written instrument that is evidence of the agreement between the Owner and the Contractor overseeing the Work.

*Architect/Engineer* - The person or other entity engaged by the Recipient to perform architectural, engineering, design, and other services related to the work as provided for in the contract.

*Contract* – The entire and integrated written agreement between the Owner and the Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

*Contract Documents* – Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents.

*Contractor* – The individual or entity with whom the Owner has entered into the Agreement.

*Drawings or Plans* – That part of the Contract Documents prepared or approved by the Architect/Engineer that graphically shows the scope, extent, and character of the Work to be performed by the Contractor.

*EDA* - The United States of America acting through the Economic Development Administration of the U.S. Department of Commerce or any other person designated to act on its behalf. EDA has agreed to provide financial assistance to the Owner, which includes assistance in financing the Work to be performed under this Contract. Notwithstanding EDA's role, nothing in this Contract shall be construed to create any contractual relationship between the Contractor and EDA.

*Owner* – The individual or entity with whom the Contractor has entered into the Agreement and for whom the Work is to be performed.

*Project* – The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

*Recipient* – A non-Federal entity receiving a Federal financial assistance award directly from EDA to carry out an activity under an EDA program, including any EDA-approved successor to the entity.

*Specifications* – That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

*Subcontractor* – An individual or entity having direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.



*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 and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

## 2. **APPLICABILITY**

The Project to which the construction work covered by this Contract pertains is being assisted by the United States of America through federal assistance provided by the U.S. Department of Commerce - Economic Development Administration (EDA). Neither EDA, nor any of its departments, entities, or employees is a party to this Contract. The following EDA Contracting Provisions are included in this Contract and all subcontracts or related instruments pursuant to the provisions applicable to such federal assistance from EDA.

## 3. **FEDERALLY REQUIRED CONTRACT PROVISIONS**

(a) All contracts in excess of the simplified acquisition threshold - currently fixed at \$150,000 (*see* 41 U.S.C. §§ 134 and 1908) must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate.

(b) All contracts in excess of \$10,000 must address termination for cause and for convenience by the Recipient including the manner by which it will be effected and the basis for settlement.

(c) All construction contracts awarded in excess of \$10,000 by recipients of federal assistance and their contractors or subcontractors shall contain a provision requiring compliance with Executive Order 11246 of September 24, 1965, *Equal Employment Opportunity*, as amended by Executive Order 11375 of October 13, 1967, and Department of Labor implementing regulations at 41 C.F.R. part 60.

(d) All prime construction contracts in excess of \$2,000 awarded by Recipients must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. §§ 3141-3148) as supplemented by Department of Labor regulations at 29 C.F.R. part 5. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. § 874 and 40 U.S.C. § 3145) as supplemented by Department of Labor regulations at 29 C.F.R. part 3.

(e) All contracts awarded by the Recipient in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704 (the Contract Work Hours and Safety Standards Act) as supplemented by Department of Labor regulations at 29 C.F.R. part 5.

(f) All contracts must include EDA requirements and regulations that involve a requirement on the contractor or sub-contractor to report information to EDA, the Recipient or any other federal agency.

- (g) All contracts must include EDA requirements and regulations pertaining to patent rights with respect to any discovery or invention which arises or is developed in the course of or under such contract.
- (h) All contracts must include EDA requirements and regulations pertaining to copyrights and rights in data.
- (i) All contracts and subgrants in excess of \$150,000 must contain a provision that requires compliance with all applicable standards, orders, or requirements issued under the Clean Air Act (42 U.S.C. § 7401 *et seq.*) and the Federal Water Pollution Control Act (Clean Water Act) (33 U.S.C. § 1251 *et seq.*), and Executive Order 11738, *Providing for Administration of the Clean Air Act and the Federal Water Pollution Control Act With Respect to Federal Contracts, Grants, or Loans.*
- (j) Contracts must contain mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. § 6201).
- (k) Contracts must contain a provision ensuring that contracts are not to be made to parties on the government wide Excluded Parties List System in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 C.F.R. part 180.
- (l) Contracts must contain a provision ensure compliance with the Byrd Anti-Lobbying Amendment (31 U.S.C. § 1352) under which contractors that apply or bid for an award of \$100,000 or more must file the required certification. 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, officer or employee 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 must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.
- (m) If the Recipient is a state agency or agency of a political subdivision of a state, any contract awarded must contain a provision ensuring compliance with section 6002 of the Solid Waste Disposal Act (42 U.S.C. § 6962), as amended by the Resource Conservation and Recovery Act related to the procurement of recovered materials.

#### 4. **REQUIRED PROVISIONS DEEMED INSERTED**

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion of correction.

5. **INSPECTION BY EDA REPRESENTATIVES**

The authorized representatives and agents of EDA shall be permitted to inspect all work, materials, payrolls, personnel records, invoices of materials, and other relevant data and records.

6. **EXAMINATION AND RETENTION OF CONTRACTOR'S RECORDS**

(a) The Owner, EDA, or the Comptroller General of the United States, or any of their duly authorized representatives shall, generally until three years after final payment under this contract, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this contract for the purpose of making audit, examination, excerpts, and transcriptions.

(b) The Contractor agrees to include in first-tier subcontracts under this contract a clause substantially the same as paragraph (a) above. "Subcontract," as used in this clause, excludes purchase orders that do not exceed \$10,000.

(c) The periods of access and examination in paragraphs (a) and (b) above for records relating to (1) appeals under the disputes clause of this contract, (2) litigation or settlement of claims arising from the performance of this contract, or (3) costs and expenses of this contract to which the Owner, EDA, or Comptroller General or any of their duly authorized representatives has taken exception shall continue until disposition of such appeals, litigation, claims, or exceptions.

7. **CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES**

Immediately after execution and delivery of the contract, and before the first partial payment is made, the Contractor shall deliver to the Owner an estimated construction progress schedule in a form satisfactory to the Owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract Documents and the anticipated amount of each monthly payment that will become due to the Contractor in accordance with the progress schedule. The Contractor also shall furnish the Owner (a) a detailed estimate giving a complete breakdown of the contract price and (b) periodic itemized estimates of work done for the purpose of making partial payments thereon. The costs employed in making up any of these schedules will be used only to determine the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the contract price.

8. **CONTRACTOR'S TITLE TO MATERIAL**

No materials, supplies, or equipment for the work shall be purchased by the Contractor or by any subcontractor that is subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants and guarantees that he/she has good title to all work, materials, and equipment used by him/her in the Work, free and clear of all liens, claims, or encumbrances.

9. **INSPECTION AND TESTING OF MATERIALS**

All materials and equipment used in the completion of the Work shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be selected by the Owner. Materials of construction, particularly those upon which the strength and durability of any structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for intended uses.

10. **"OR EQUAL" CLAUSE**

Whenever a material, article, or piece of equipment is identified in the Contract Documents by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard. Any material, article, or equipment of other manufacturers and vendors that will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed is, in the opinion of the Architect/Engineer, of equal substance and function. However, such substitution material, article, or equipment shall not be purchased or installed by the Contractor without the Architect/Engineer's written approval.

11. **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 that 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 Architect/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 the Owner in the Contract Documents.

(b) To the fullest extent permitted by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner and the Architect/Engineer, and the officers, directors, 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.

12. **CLAIMS FOR EXTRA COSTS**

No claims for extra work or cost shall be allowed unless the same was done in pursuance of a written order from the Architect/Engineer approved by the Owner.

### 13. CONTRACTORS AND SUBCONTRACTORS INSURANCE

(a) The Contractor shall not commence work under this Contract until the Contractor has obtained all insurance reasonably required by the Owner, nor shall the Contractor allow any subcontractor to commence work on his/her subcontract until the insurance required of the subcontractor has been so obtained and approved.

(b) Types of insurance normally required are:

- (1) Workmen's Compensation
- (2) Contractor's Public Liability and Property Damage
- (3) Contractor's Vehicle Liability
- (4) Subcontractors' Public Liability, Property Damage and Vehicle Liability
- (5) Builder's Risk (Fire and Extended Coverage)

(c) **Scope of Insurance and Special Hazards:** The insurance obtained, which is described above, shall provide adequate protection for the Contractor and his/her subcontractors, respectively, against damage claims that may arise from operations under this contract, whether such operations be by the insured or by anyone directly or indirectly employed by him/her and also against any of the special hazards that may be encountered in the performance of this Contract.

(d) **Proof of Carriage of Insurance:** The Contractor shall furnish the Owner with certificates showing the type, amount, class of operations covered, effective dates, and dates of expiration of applicable insurance policies.

### 14. CONTRACT SECURITY BONDS

(a) If the amount of this Contract exceeds \$150,000, the Contractor shall furnish a performance bond in an amount at least equal to one hundred percent (100%) of the Contract price as security for the faithful performance of this Contract and also a payment bond in an amount equal to one hundred percent (100%) of the Contract price or in a penal sum not less than that prescribed by State, Territorial, or local law, as security for the payment of all persons performing labor on the Work under this Contract and furnishing materials in connection with this Contract. The performance bond and the payment bond may be in one or in separate instruments in accordance with local law. Before final acceptance, each bond must be approved by EDA. If the amount of this Contract does not exceed \$150,000, the Owner shall specify the amount of the payment and performance bonds.

(b) All bonds shall be in the form prescribed by the Contract Documents except as otherwise provided in applicable laws or regulations, and shall be executed by such sureties as are named in the current list of *Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies* as published in Treasury Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's

authority to act. Surety companies executing the bonds must also be authorized to transact business in the state where the Work is located.

15. **LABOR STANDARDS - DAVIS-BACON AND RELATED ACTS**  
**(as required by section 602 of PWEDA)**

(a) **Minimum Wages**

(1) All laborers and mechanics employed or working upon the site of the Work in the construction or development of the Project will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act at 29 C.F.R. part 3, the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at the time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor, which is attached hereto and made a part hereof, regardless of any contractual relationship that may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 C.F.R. § 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 C.F.R. § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates determined under 29 C.F.R. § 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(2) (i) Any class of laborers or mechanics to be employed under the Contract, but not listed in the wage determination, shall be classified in conformance with the wage determination. EDA shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(A) The work to be performed by the classification requested is not performed by a classification in the wage determination;

(B) The classification is utilized in the area by the construction industry; and

(C) The proposed wage rate, including any bona fide fringe benefits, bears a

reasonable relationship to the wage rates contained in the wage determination.

(ii) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and EDA or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by EDA or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210.

(iii) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and EDA or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), EDA or its designee shall refer the questions, including the views of all interested parties and the recommendation of EDA or its designee, to the Administrator for determination.

(iv) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(2)(ii) or (iii) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(3) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(4) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(b) **Withholding**

EDA or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this Contract or any other federal contract with the same prime Contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the Contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper employed or working on the site of the Work in the construction or development of the Project, all or part of the wages required by the Contract, EDA or its designee may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations

have ceased. EDA or its designee may, after written notice to the Contractor, disburse such amounts withheld for and on account of the Contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

(c) **Payrolls and basic records**

(1) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the Work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the Work in the construction or development of the Project. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 C.F.R. § 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, the plan or program is financially responsible, and the plan or program has been communicated in writing to the laborers or mechanics affected, and provide records that show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(2) (i) For each week in which Contract work is performed, the Contractor shall submit a copy of all payrolls to the Owner for transmission to EDA or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 C.F.R. part 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose. It may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402; or downloaded from the U.S. Department of Labor's website at <https://www.dol.gov/whd/forms/wh347.pdf>. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors

(ii) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the Contract and shall certify the following:

(A) That the payroll for the payroll period contains the information required to be maintained under 29 C.F.R. § 5.5(a)(3)(i) and that such information is correct and complete;



(B) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the Contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 C.F.R. part 3; and

(C) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the Contract.

(iii) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 15(c)(2)(ii) of this section.

(iv) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under section 1001 of Title 18 and section 3729 of Title 31 of the U.S. Code.

(3) The Contractor or subcontractor shall make the records required under paragraph 15(c)(1) of this section available for inspection, copying, or transcription by authorized representatives of EDA or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, EDA or its designee may, after written notice to the Contractor or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 C.F.R. § 5.12.

(d) **Apprentices and Trainees.**

(1) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training (Bureau), or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any

apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a Project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) **Trainees.** Except as provided in 29 C.F.R. § 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program that has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman's hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(3) **Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity

requirements of Executive Order 11246, *Equal Employment Opportunity*, as amended, and 29 C.F.R. part 30.

(e) **Compliance with Copeland Anti-Kickback Act Requirements.** The Contractor shall comply with the Copeland Anti-Kickback Act (18 U.S.C. § 874 and 40 U.S.C. § 3145) as supplemented by Department of Labor regulations (29 C.F.R. 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 the Contractor and any subcontractors shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which they are otherwise entitled. The Owner shall report all suspected or reported violations to EDA.

(f) **Subcontracts.** The Contractor and any subcontractors will insert in any subcontracts the clauses contained in 29 C.F.R. §§ 5.5(a)(1) through (10) and such other clauses as EDA or its designee may require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 C.F.R. § 5.5.

(g) **Contract termination; debarment.** The breach of the contract clauses in 29 C.F.R. § 5.5 may be grounds for termination of the contract, and for debarment as a Contractor and a subcontractor as provided in 29 C.F.R. § 5.12.

(h) **Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 C.F.R. parts 1, 3, and 5 are herein incorporated by reference in this contract.

(i) **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this Contract shall not be subject to the general disputes clause of this Contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 C.F.R. parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and EDA or its designee, the U.S. Department of Labor, or the employees or their representatives.

(j) **Certification of Eligibility.**

(1) By entering into this Contract, the Contractor certifies that neither it nor any person or firm that has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 C.F.R. § 5.12(a)(1).

(2) No part of this Contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 C.F.R. § 5.12(a)(1).

(3) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. § 1001.

16. **LABOR STANDARDS - CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

As used in this paragraph, the terms “laborers” and “mechanics” include watchmen and guards.

(a) **Overtime requirements.** No Contractor or subcontractor contracting for any part of the Contract work, which may require or involve the employment of laborers or mechanics, shall require or permit any such laborer or mechanic in any workweek in which that person is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(b) **Violation; liability for unpaid wages, liquidated damages.** In the event of any violation of the clause set forth in paragraph (a) of this section, the Contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a) of this section.

(c) **Withholding for unpaid wages and liquidated damages.** EDA or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any monies payable on account of work performed by the Contractor or subcontractor under any such Contract or any other federal contract with the same prime Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b) of this section.

(d) **Subcontracts.** The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (a) through (c) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a) through (c) of this section.

17. **EQUAL EMPLOYMENT OPPORTUNITY**

(a) The Recipient hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 C.F.R. chapter 60, which is paid for in whole or in part with funds obtained from EDA, the following equal opportunity clause:

During the performance of this contract, the Contractor agrees as follows:

Economic Development Administration  
Contracting Provisions for Construction Projects

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, 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, sexual orientation, gender identity, 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 setting forth the provisions of this nondiscrimination clause.

(2) 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, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers representatives of the Contractor's commitments hereunder, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965 and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by EDA and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) 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 canceled, 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 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.

(8) The Contractor will include the portion of the sentence immediately preceding paragraph 17(a)(1) and the provisions of paragraphs 17(a)(1) through (8) in every subcontract or purchase order 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, 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 EDA or the Secretary of Labor 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 EDA or the Secretary of Labor, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

(9) The Recipient further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally-assisted construction work. Provided, however, that if the Recipient 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 that does not participate in work on or under the Contract.

(10) The Recipient agrees that it will assist and cooperate actively with EDA and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish EDA and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist EDA in the discharge of the EDA's primary responsibility for securing compliance.

(11) The Recipient further agrees that it will 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 EDA or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the Recipient agrees that if it fails or refuses to comply with these undertakings, EDA may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this EDA financial assistance; refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case

to the Department of Justice for appropriate legal proceedings.

(b) Exemptions to Above Equal Opportunity Clause (41 C.F.R. chapter 60):

(1) Contracts and subcontracts not exceeding \$10,000 (other than Government bills of lading, and other than contracts and subcontracts with depositories of Federal funds in any amount and with financial institutions which are issuing and paying agents for U.S. savings bonds and savings notes) are exempt. The amount of the Contract, rather than the amount of the federal financial assistance, shall govern in determining the applicability of this exemption.

(2) Except in the case of subcontractors for the performance of construction work at the site of construction, the clause shall not be required to be inserted in subcontracts below the second tier.

(3) Contracts and subcontracts not exceeding \$10,000 for standard commercial supplies or raw materials are exempt.

18. **CONTRACTING WITH SMALL, MINORITY AND WOMEN'S BUSINESSES**

(a) If the Contractor intends to let any subcontracts for a portion of the work, the 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.

(b) Affirmative steps shall consist of:

(1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(2) Ensuring that small and minority businesses and women's business enterprises are solicited whenever they are potential sources;

(3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses and women's business enterprises;

(4) Establishing delivery schedules, where the requirements of the contract permit, which encourage participation by small and minority businesses and women's business enterprises;

(5) Using the services and assistance of the U.S. Small Business Administration, the Minority Business Development Agency of the U.S. Department of Commerce, and State and local governmental small business agencies;

(6) Requiring each party to a subcontract to take the affirmative steps of this section; and

(7) The Contractor is encouraged to procure goods and services from labor surplus area firms.

19. **HEALTH, SAFETY, AND ACCIDENT PREVENTION**

(a) In performing this contract, the Contractor shall:

(1) Ensure that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to their health and/or safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation;

(2) Protect the lives, health, and safety of other persons;

(3) Prevent damage to property, materials, supplies, and equipment; and

(4) Avoid work interruptions.

(b) For these purposes, the Contractor shall:

(1) Comply with regulations and standards issued by the Secretary of Labor at 29 C.F.R. part 1926. Failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 3701 – 3708); and

(2) Include the terms of this clause in every subcontract so that such terms will be binding on each subcontractor.

(c) The Contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this Contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment, and shall report this data in the manner prescribed by 29 C.F.R. part 1904.

(d) The Owner shall notify the Contractor of any noncompliance with these requirements and of the corrective action required. This notice, when delivered to the Contractor or the Contractor's representative at the site of the Work, shall be deemed sufficient notice of the noncompliance and corrective action required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to take corrective action promptly, the Owner may issue an order stopping all or part of the Work until satisfactory corrective action has been taken. The Contractor shall not base any claim or request for equitable adjustment for additional time or money on any stop order issued under these circumstances.

(e) The Contractor shall be responsible for its subcontractors' compliance with the provisions of this clause. The Contractor shall take such action with respect to any subcontract as EDA, or the Secretary of Labor shall direct as a means of enforcing such provisions.



20. **CONFLICT OF INTEREST AND OTHER PROHIBITED INTERESTS**

(a) 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, making, accepting, or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the Project, shall become directly or indirectly interested personally in this Contract or in any part hereof.

(b) 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 to exercise 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.

(c) The Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the Contract Documents has a corporate or financial affiliation with the supplier or manufacturer.

(d) The 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, may be involved. Such a conflict may 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 the Contractor. The Owner's officers, employees, or agents shall neither solicit nor accept gratuities, favors, or anything of monetary value from the Contractor or subcontractors.

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

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

## 21. RESTRICTIONS ON LOBBYING

(a) This Contract, or subcontract is subject to 31 U.S.C. § 1352, regarding lobbying restrictions. The section is explained in the common rule, 15 C.F.R. part 28 (55 FR 6736-6748, February 26, 1990). Each bidder under this Contract or subcontract is generally prohibited from using federal funds for lobbying the Executive or Legislative Branches of the Federal Government in connection with this EDA Award.

(b) **Contract Clause Threshold:** This Contract Clause regarding lobbying must be included in each bid for a contract or subcontract exceeding \$100,000 of federal funds at any tier under the EDA Award.

(c) **Certification and Disclosure:** Each bidder of a contract or subcontract exceeding \$100,000 of federal funds at any tier under the federal Award must file Form CD-512, *Certification Regarding Lobbying – Lower Tier Covered Transactions*, and, if applicable, Standard Form-LLL, *Disclosure of Lobbying Activities*, regarding the use of any nonfederal funds for lobbying. Certifications shall be retained by the Contractor or subcontractor at the next higher tier. All disclosure forms, however, shall be forwarded from tier to tier until received by the Recipient of the EDA Award, who shall forward all disclosure forms to EDA.

(d) **Continuing Disclosure Requirement:** Each Contractor or subcontractor that is subject to the Certification and Disclosure provision of this Contract Clause is required to file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by such person. Disclosure forms shall be forwarded from tier to tier until received by the Recipient of the EDA Award, who shall forward all disclosure forms to EDA.

(e) **Indian Tribes, Tribal Organizations, or Other Indian Organizations:** Indian tribes, tribal organizations, or any other Indian organizations, including Alaskan Native organizations, are excluded from the above lobbying restrictions and reporting requirements, but only with respect to expenditures that are by such tribes or organizations for lobbying activities permitted by other federal law. An Indian tribe or organization that is seeking an exclusion from Certification and Disclosure requirements must provide EDA with the citation of the provision or provisions of federal law upon which it relies to conduct lobbying activities that would otherwise be subject to the prohibitions in and to the Certification and Disclosure requirements of 31 U.S.C. § 1352, preferably through an attorney's opinion. Note, also, that a non-Indian subrecipient, contractor, or subcontractor under an award to an Indian tribe, for example, is subject to the restrictions and reporting requirements.

## 22. HISTORICAL AND ARCHAEOLOGICAL DATA PRESERVATION

The Contractor agrees to facilitate the preservation and enhancement of structures and objects of historical, architectural or archaeological significance and when such items are found and/or unearthed during the course of project construction. Any excavation by the Contractor that uncovers an historical or archaeological artifact shall be immediately reported to the Owner and a representative of EDA. Construction shall be temporarily halted pending the notification process and further directions issued by EDA after consultation with the State Historic

Preservation Officer (SHPO) for recovery of the items. *See* the National Historic Preservation Act of 1966 (54 U.S.C. § 300101 *et seq.*, formerly at 16 U.S.C. § 470 *et seq.*) and Executive Order No. 11593 of May 31, 1971.

23. **CLEAN AIR AND WATER**

Applicable to Contracts in Excess of \$150,000

(a) **Definition.** “Facility” means any building, plant, installation, structure, mine, vessel, or other floating craft, location, or site of operations, owned, leased, or supervised by the Contractor or any subcontractor, used in the performance of the Contract or any subcontract. When a location or site of operations includes more than one building, plant, installation, or structure, the entire location or site shall be deemed a facility except when the Administrator, or a designee, of the United States Environmental Protection Agency (EPA) determines that independent facilities are collocated in one geographical area.

(b) In compliance with regulations issued by the EPA, 2 C.F.R. part 1532, pursuant to the Clean Air Act, as amended (42 U.S.C. § 7401 *et seq.*); the Federal Water Pollution Control Act, as amended (33 U.S.C. § 1251 *et seq.*); and Executive Order 11738, the Contractor agrees to:

(1) Not utilize any facility in the performance of this contract or any subcontract which is listed on the Excluded Parties List System, part of the System for Award Management (SAM), pursuant to 2 C.F.R. part 1532 for the duration of time that the facility remains on the list;

(2) Promptly notify the Owner if a facility the Contractor intends to use in the performance of this contract is on the Excluded Parties List System or the Contractor knows that it has been recommended to be placed on the List;

(3) Comply with all requirements of the Clean Air Act and the Federal Water Pollution Control Act, including the requirements of section 114 of the Clean Air Act and section 308 of the Federal Water Pollution Control Act, and all applicable clean air and clean water standards; and

(4) Include or cause to be included the provisions of this clause in every subcontract and take such action as EDA may direct as a means of enforcing such provisions.

24. **USE OF LEAD-BASED PAINTS ON RESIDENTIAL STRUCTURES**

(a) If the work under this Contract involves construction or rehabilitation of residential structures over \$5,000, the Contractor shall comply with the Lead-based Paint Poisoning Prevention Act (42 U.S.C. § 4831). The Contractor shall assure that paint or other surface coatings used in a residential property does not contain lead equal to or in excess of 1.0 milligram per square centimeter or 0.5 percent by weight or 5,000 parts per million (ppm) by weight. For purposes of this section, “residential property” means a dwelling unit, common areas, building exterior surfaces, and any surrounding land, including outbuildings, fences and play equipment affixed to the land, belonging to an owner and available for use by residents, but not

including land used for agricultural, commercial, industrial or other non-residential purposes, and not including paint on the pavement of parking lots, garages, or roadways.

- (b) As a condition to receiving assistance under PWEDA, recipients shall assure that the restriction against the use of lead-based paint is included in all contracts and subcontracts involving the use of federal funds.

25. **ENERGY EFFICIENCY**

The Contractor shall comply with all standards and policies relating to energy efficiency which are contained in the energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. § 6201) for the State in which the Work under the Contract is performed.

26. **ENVIRONMENTAL REQUIREMENTS**

When constructing a Project involving trenching and/or other related earth excavations, the Contractor shall comply with the following environmental constraints:

- (1) **Wetlands.** When disposing of excess, spoil, or other construction materials on public or private property, the Contractor shall not fill in or otherwise convert wetlands.
- (2) **Floodplains.** When disposing of excess, spoil, or other construction materials on public or private property, the Contractor shall not fill in or otherwise convert 100 year floodplain areas delineated on the latest Federal Emergency Management Agency (FEMA) Floodplain Maps, or other appropriate maps, i.e., alluvial soils on Natural Resource Conservation Service (NRCS) Soil Survey Maps.
- (3) **Endangered Species.** The 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 the Contractor, the Contractor will immediately report this evidence to the Owner and a representative of EDA. Construction shall be temporarily halted pending the notification process and further directions issued by EDA after consultation with the U.S. Fish and Wildlife Service.

27. **DEBARMENT, SUSPENSION, INELIGIBILITY, AND VOLUNTARY EXCLUSIONS**

As required by Executive Orders 12549 and 12689, *Debarment and Suspension*, 2 C.F.R. Part 180 and implemented by the Department of Commerce at 2 C.F.R. part 1326, for prospective participants in lower tier covered transactions (except subcontracts for goods or services under the \$25,000 small purchase threshold unless the subrecipient will have a critical influence on or substantive control over the award), the Contractor agrees that:

- (1) By entering into this Contract, the Contractor and subcontractors certify, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared Economic Development Administration Contracting Provisions for Construction Projects

ineligible, or voluntarily excluded from participation in this Contract by any federal department or agency.

(2) Where the Contractor or subcontractors are unable to certify to any of the statements in this certification, the Contractor or subcontractors shall attach an explanation to this bid.

*See also 2 C.F.R. part 180 and 2 C.F.R. § 200.342.*

28. **EDA PROJECT SIGN**

The Contractor shall supply, erect, and maintain in good condition a Project sign according to the specifications provided by EDA. To the extent practical, the sign should be a free standing sign. Project signs shall not be located on public highway rights-of-way. Location and height of signs will be coordinated with the local agency responsible for highway or street safety in the Project area, if any possibility exists for obstructing vehicular traffic line of sight. Whenever the EDA site sign specifications conflict with State law or local ordinances, the EDA Regional Director will permit such conflicting specifications to be modified so as to comply with State law or local ordinance.

29. **BUY AMERICA**

To the greatest extent practicable, contractors are encouraged to purchase American-made equipment and products with funding provided under EDA financial assistance awards.

## PERFORMANCE BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

### CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):*

### BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form:  None  See Paragraph 16

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Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

### CONTRACTOR AS PRINCIPAL

### SURETY

\_\_\_\_\_  
Contractor's Name and Corporate Seal *(seal)*

\_\_\_\_\_  
Surety's Name and Corporate Seal *(seal)*

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature *(attach power of attorney)*

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature

Attest: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

**Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.**

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence,

to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

#### 14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims

for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:



## PAYMENT BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

### CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*:

### BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:

Modifications to this Bond Form:  None  See Paragraph 18

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Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

### CONTRACTOR AS PRINCIPAL

### SURETY

\_\_\_\_\_ *(seal)*

Contractor's Name and Corporate Seal

\_\_\_\_\_ *(seal)*

Surety's Name and Corporate Seal

By: \_\_\_\_\_

Signature

By: \_\_\_\_\_

Signature *(attach power of attorney)*

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_

Signature

Attest: \_\_\_\_\_

Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

**Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.**

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
  - 5.1 Claimants who do not have a direct contract with the Contractor,
    - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
    - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
  - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
  - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
  - 7.2 Pay or arrange for payment of any undisputed amounts.
  - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. **Definitions**
  - 16.1 **Claim:** A written statement by the Claimant including at a minimum:
    1. The name of the Claimant;
    2. The name of the person for whom the labor was done, or materials or equipment furnished;
    3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
    4. A brief description of the labor, materials, or equipment furnished;
    5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
    6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
    7. The total amount of previous payments received by the Claimant; and
  - 16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
  - 16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
  - 16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
  - 16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.
18. Modifications to this Bond are as follows:



## Contractor's Application for Payment No.

	Application Date:
To (Owner):	Via (Engineer):
Project:	Engineer's Project No.:
Owner's Contract No.:	Contractor's Project No.:

### Application For Payment Change Order Summary

Approved Change Orders	Additions	Deductions
<b>TOTALS</b>		
<b>NET CHANGE BY CHANGE ORDERS</b>		

1. ORIGINAL CONTRACT PRICE..... \$ \_\_\_\_\_
2. Net change by Change Orders..... \$ \_\_\_\_\_
3. Current Contract Price (Line 1 ± 2)..... \$ \_\_\_\_\_
4. TOTAL COMPLETED AND STORED TO DATE  
(Column F total on Progress Estimates)..... \$ \_\_\_\_\_
5. RETAINAGE:
 

a. X	X	Work Completed.....	\$ _____
b. X	X	Stored Material.....	\$ _____
c. Total Retainage (Line 5.a + Line 5.b).....		\$ _____	
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c)..... \$ \_\_\_\_\_
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application)..... \$ \_\_\_\_\_
8. AMOUNT DUE THIS APPLICATION..... \$ \_\_\_\_\_
9. BALANCE TO FINISH, PLUS RETAINAGE  
(Column G total on Progress Estimates + Line 5.c above)..... \$ \_\_\_\_\_

<p><b>Contractor's Certification</b></p> <p>The undersigned Contractor certifies, to the best of its knowledge, the following:</p> <ol style="list-style-type: none"> <li>(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;</li> <li>(2) Title to all Work materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment, free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and</li> <li>(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.</li> </ol>	<b>Contractor Signature</b> By: _____ Date: _____
---	---

Payment of: \$ _____	(Line 8 or other - attach explanation of the other amount)
is recommended by: _____ (Engineer) (Date)	
Payment of: \$ _____	(Line 8 or other - attach explanation of the other amount)
is approved by: _____	(Owner) (Date)
Approved by: _____	Funding or Financing Entity (if applicable) (Date)

**Progress Estimate - Lump Sum Work**

**Contractor's Application**

For (Contract):		Application Number:					
Application Period:		Application Date:					
Specification Section No.	A Description	B Scheduled Value (\$)	C Work Completed		E Materials Presently Stored (not in C or D)	F Total Completed and Stored to Date (C + D + E)	G Balance to Finish (B - F)
			D From Previous Application (C-D)	D This Period			
<b>Totals</b>							

**Progress Estimate - Unit Price Work**

**Contractor's Application**

For (Contract):											Application Number:	
Application Period:											Application Date:	
A		B				C	D	E	F			
Item		Contract Information				Estimated Quantity Installed	Value of Work Installed to Date	Materials Presently Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F / B)	Balance to Finish (B - F)	
Bid Item No.	Description	Item Quantity	Units	Unit Price	Total Value of Item (\$)							
<b>Totals</b>												

**Stored Material Summary**

**Contractor's Application**

For (Contract):							Application Number:		
Application Period:							Application Date:		
A	B	C		D		E	F		G
Bid Item No.	Supplier Invoice No.	Submittal No. (with Specification Section No.)	Storage Location	Description of Materials or Equipment Stored		Amount Stored this Month (\$)	Subtotal Amount Completed and Stored to Date (D + E)	Incorporated in Work Amount (\$)	Materials Remaining in Storage (\$) (D + E - F)
				Date Placed into Storage (Month/Year)	Stored Previously Amount (\$)				
<b>Totals</b>									

**PAYROLL**

**(For Contractor's Optional Use; See Instructions at [www.dol.gov/whd/forms/wh347instr.htm](http://www.dol.gov/whd/forms/wh347instr.htm))**



Rev. Dec. 2008

*Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.*

OMB No.:1235-0008  
Expires: 04/30/2021

NAME OF CONTRACTOR <input type="checkbox"/> OR SUBCONTRACTOR <input type="checkbox"/>	ADDRESS	OMB No.:1235-0008 Expires: 04/30/2021
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PAYROLL NO.	FOR WEEK ENDING	PROJECT AND LOCATION	PROJECT OR CONTRACT NO.
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(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	OT. OR ST.	(4) DAY AND DATE							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS					(9) NET WAGES PAID FOR WEEK
				HOURS WORKED EACH DAY										FICA	WITH- HOLDING TAX		OTHER	TOTAL DEDUCTIONS	
			O																
			S																
			O																
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at



Date \_\_\_\_\_

I, \_\_\_\_\_  
(Name of Signatory Party) (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

\_\_\_\_\_ on the  
(Contractor or Subcontractor)

\_\_\_\_\_ ; that during the payroll period commencing on the  
(Building or Work)

\_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, and ending the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_,

all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

\_\_\_\_\_ from the full  
(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

— in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

— Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE

SIGNATURE

THE WILLEFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR

Date of Issuance:

Effective Date:

Owner:

Owner's Contract No.:

Contractor:

Contractor's Project No.:

Engineer:

Engineer's Project No.:

Project:

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

<p><b>RECOMMENDED:</b></p> <p>By: _____           Engineer (if required)</p> <p>Title: _____</p> <p>Date: _____</p>	<p><b>ACCEPTED:</b></p> <p>By: _____           Owner (Authorized Signature)</p> <p>Title: _____</p> <p>Date: _____</p>	<p><b>ACCEPTED:</b></p> <p>By: _____           Contractor (Authorized Signature)</p> <p>Title: _____</p> <p>Date: _____</p>
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Approved by Funding Agency (if applicable)

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Title: \_\_\_\_\_

NOTICE TO PROCEED

TO: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DATE: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_  
\_\_\_\_\_

You are hereby notified to commence WORK in accordance with the Agreement dated \_\_\_\_\_, 20\_\_\_\_, on or before \_\_\_\_\_, 20\_\_\_\_. In accordance with the Agreement, the date of substantial completion is \_\_\_\_\_, and the date of readiness for final payment is \_\_\_\_\_, 20\_\_\_\_. OR , and the number of days needed to achieve readiness for final payment is \_\_\_\_\_.

Before starting work at the site, Contractor must comply with the following:  
(Note any access limitations, security procedures, or other restrictions)

Owner: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PRO-  
CEED is hereby acknowledged on behalf of

\_\_\_\_\_  
(Company Name)

This, the \_\_\_\_\_ day of 20\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

**CERTIFICATE OF SUBSTANTIAL COMPLETION**

Owner:

Owner's Contract No.:

Contractor:

Contractor's Project No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

**This [preliminary] [final] Certificate of Substantial Completion applies to:**

All Work

The following specified portions of the Work:

**Date of Substantial Completion**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows: *[Note: Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.]*

Amendments to Owner's responsibilities:

None

As follows

Amendments to

Contractor's responsibilities:

None

As follows:

The following documents are attached to and made a part of this Certificate: *[punch list; others]*

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.

EXECUTED BY ENGINEER:

RECEIVED:

RECEIVED:

By: \_\_\_\_\_  
(Authorized signature)

By: \_\_\_\_\_  
Owner (Authorized Signature)

By: \_\_\_\_\_  
Contractor (Authorized Signature)

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

COMPLIANCE STATEMENT

This statement relates to a proposed contract with Simpson County Water District

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(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: or \_\_\_ If the proposed nonconstruction 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):

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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.

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**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)*

**NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION  
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY  
(EXECUTIVE ORDER 11246 AND 41 CFR PART 60-4)**

The following Notice shall be included in, and shall be a part of all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of \$10,000.

The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

<b>Timetables</b>	<b>Goals for minority participation for each trade</b>	<b>Goals for female participation for each trade</b>
	12 %	<b>6.9%</b>

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade and the 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 the 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.

The 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 of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is:

State of Kentucky

County of Simpson

City of Franklin

**U.S. DEPARTMENT OF AGRICULTURE**

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**Certification Regarding Debarment, Suspension, Ineligibility  
and Voluntary Exclusion - Lower Tier Covered Transactions**

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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 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.

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Organization Name PR/Award Number or Project Name

---

Name(s) and Title(s) of Authorized Representative(s)

---

Signature(s) Date

**Clear Form**



**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.

CERTIFICATION FOR CONTRACTS. GRANTS ADD 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

## CERTIFICATION REGARDING LOBBYING LOWER TIER COVERED TRANSACTIONS

Applicants should review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 28, "New Restrictions on Lobbying."

### LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000 or a loan or loan guarantee over \$150,000 as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that 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 in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(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, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," 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 subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) 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 occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

### Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

In any 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 commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

Submission of this statement 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 statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

**As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.**

NAME OF APPLICANT

AWARD NUMBER AND/OR PROJECT NAME

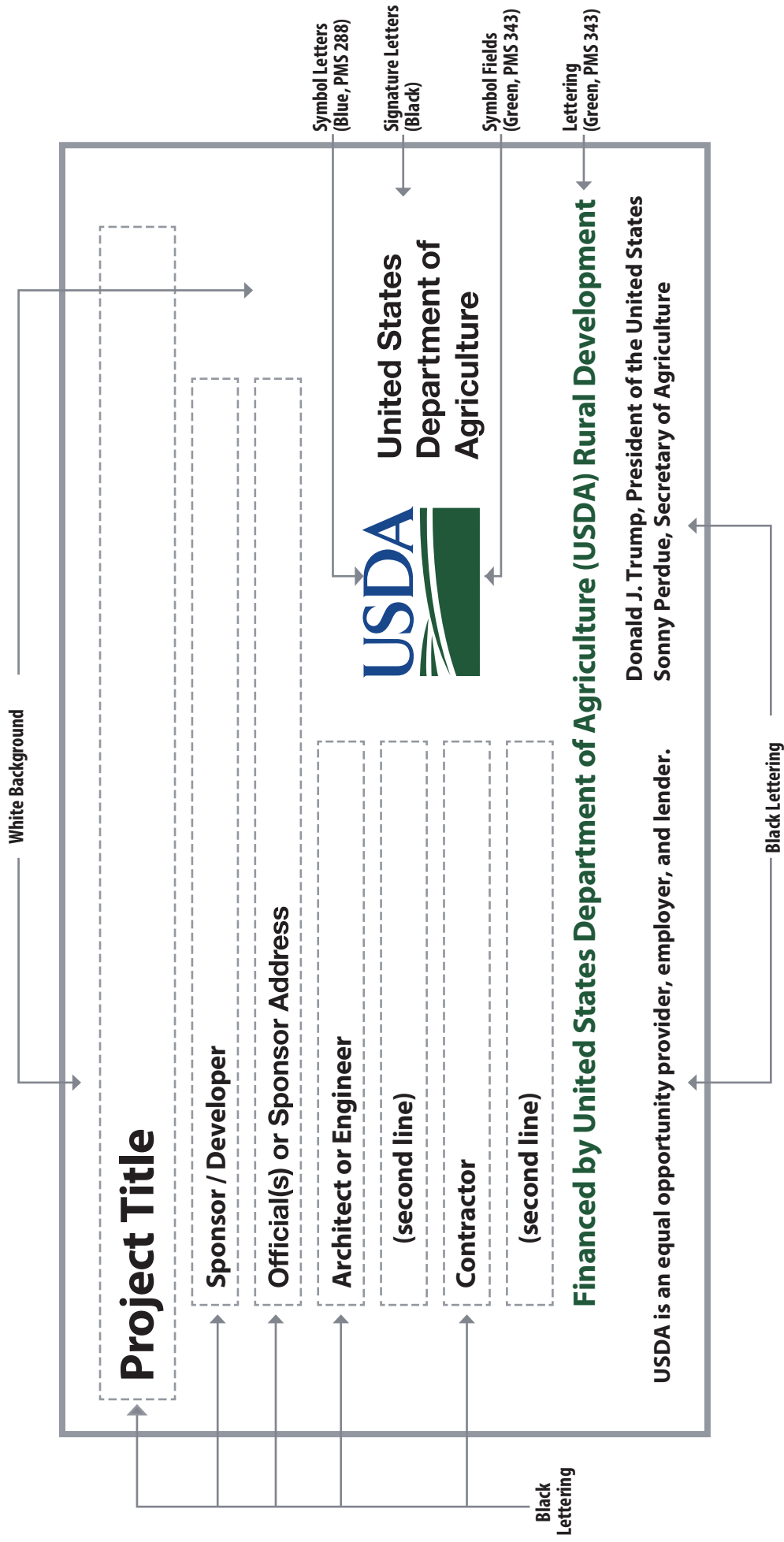
PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

SIGNATURE

DATE

# TEMPORARY CONSTRUCTION SIGN FOR RURAL DEVELOPMENT PROJECTS

Recommended Fonts: Helvetica, Arial, or Myriad Pro



**SIGN DIMENSIONS** : 1200 mm x 2400 mm x 19 mm (approx. 4' x 8' x 3/4")  
**PLYWOOD PANEL (APA RATED A-B GRADE--EXTERIOR)**

## EDA PROJECT SIGN

The Contractor shall supply, erect, and maintain in good condition a project sign according to the specifications set forth below:

### EDA SITE SIGN SPECIFICATIONS

Size: 4' x 8' x ¾"

Materials: Exterior grade/MDO plywood (APA rating A-B)

Supports: 4" x 4" x 12' posts with 2" x 4" cross branching

Erection: Posts shall be set a minimum of three feet deep in concrete footings that are at least 12" in diameter.

Paint: Outdoor enamel

Colors: Jet Black, Blue (PMS300), and Gold (PMS7406). Specifically, on white background the following will be placed:

The U. S. Department of Commerce seal in blue, black, and gold;

“EDA” in blue;

“U. S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT

ADMINISTRATION” in black;

“In partnership with” in blue;

(Actual name of the) “EDA Grant Recipient” in black;

Lettering: Specific fonts are named below; positioning will be as shown on the attached illustration.

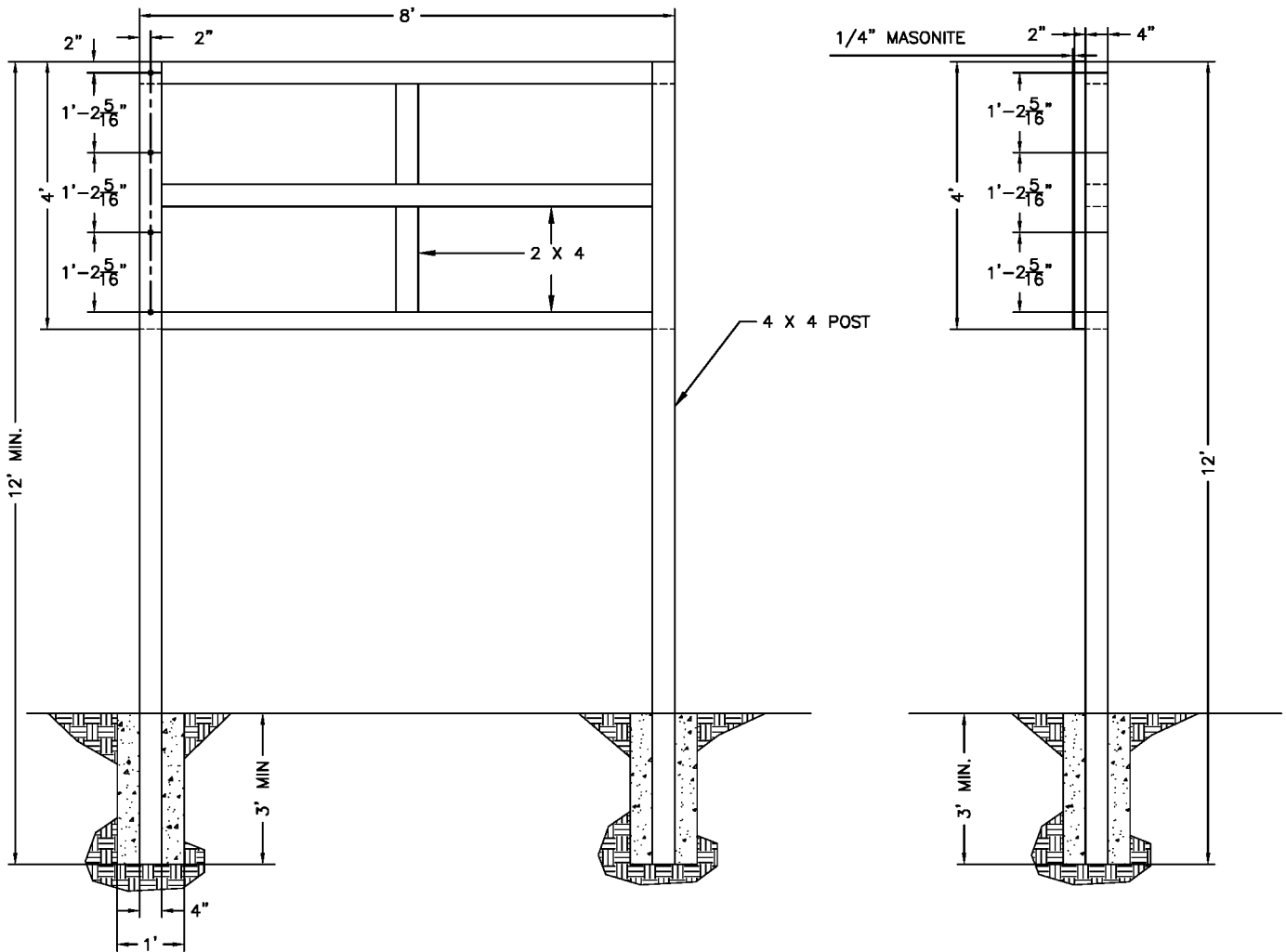
“U. S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT  
ADMINISTRATION” use Bank Gothic Medium - **BANK GOTHIC MED**

“In partnership with” use Univers™ 55 Oblique - *Univers 55*

(Name of) “EDA Grant Recipient” use Univers™ Extra Black 85 **Univers 85**

Project signs will not be erected on public highway rights-of-way. If any possibility exists for obstruction to traffic line of sight, the location and height of the sign will be coordinated with the agency responsible for highway or street safety in the area.

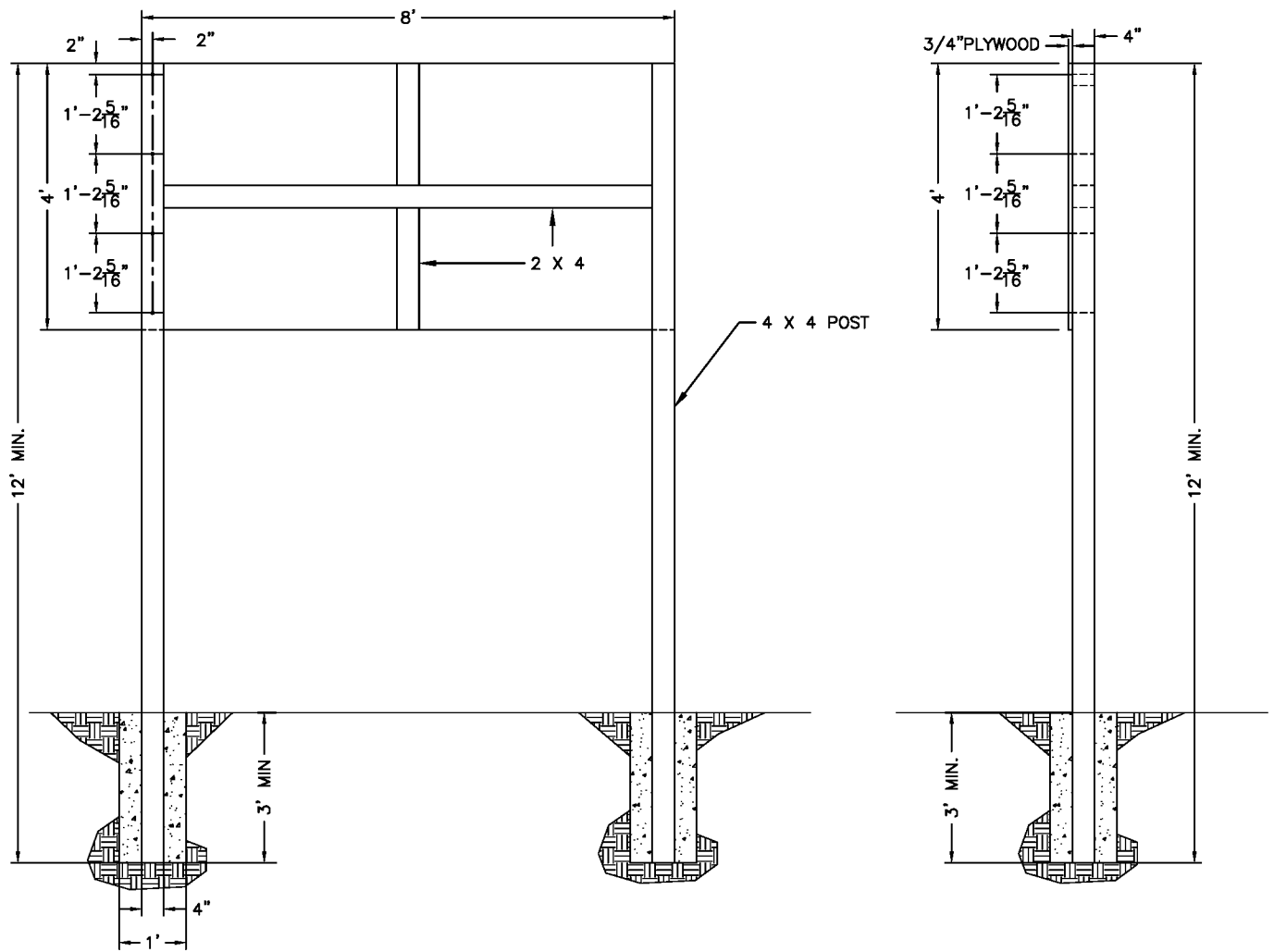
The EDA Regional Director may permit modifications to these specifications if they conflict with state law or local ordinances.



SIGN A  
MASONITE SIGN  
SCALE: 3/8" = 1'

PROJECT - SIGN A

ECONOMIC DEVELOPMENT ADMINISTRATION



SIGN B  
 PLYWOOD SIGN  
 SCALE: 3/8" = 1'

PROJECT - SIGN B

ECONOMIC DEVELOPMENT ADMINISTRATION



# EDA

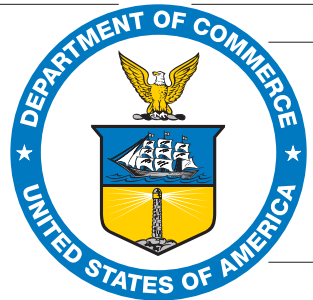
U.S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT ADMINISTRATION

*In partnership with*

**<EDA Grant Recipient Name>**



Black  
Blue= PMS300  
Gold= PMS7406



EDA

U.S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT ADMINISTRATION

*In partnership with*

**<EDA Grant Recipient Name>**

2.25"

13.5"

1.75"

1.75"

10"

2.0"

1.5"

4.0"

3.0"

3.0"

3.75"

15.0"

48"

CERTIFICATE OF OWNER'S ATTORNEY AND AGENCY CONCURRENCE

CERTIFICATE OF OWNER'S ATTORNEY

PROJECT NAME: \_\_\_\_\_

CONTRACTOR NAME: \_\_\_\_\_

I, the undersigned, \_\_\_\_\_, the duly authorized and acting legal representative of \_\_\_\_\_, 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; and that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the forgoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions and provisions thereof.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date

AGENCY CONCURRENCE

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

\_\_\_\_\_  
Agency Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name

ENGINEER'S CERTIFICATION ON FINAL PLANS AND SPECIFICATIONS

PROJECT NAME: Fritz-Winter Capacity Improvements, Line Replacements, and Extensions

The final Drawings and Specifications, other assembled Construction Contract Documents, bidding-related documents (or request for proposals or other construction procurement documents), and any other Final Design Phase deliverables, comply with all requirements of the US Department of Agriculture, Rural Utilities Service, to the best of my knowledge and professional judgement.

If the EJCDC documents have been used, all modifications required by Kentucky Bulletin 1780-1 have been made in accordance with the terms of the license agreement, which states in part that the Engineer "must plainly show all changes to the Standard EJCDC text, using "Track Changes" (redline/strikeout), highlighting, or other means of clearly indicating additions and deletions." Such other means may include attachments indicating changes (e.g. Supplementary Conditions modifying the General Conditions).

  
\_\_\_\_\_  
Engineer

5/17/2019  
\_\_\_\_\_  
Date

Ryan J. Leisey, P.E. Manager of Engineering  
Name and Title

**AMERICAN IRON AND STEEL COMPLIANCE STATEMENT**

"Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A- Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference applies an American Iron and Steel requirement to this project.

All parties are required to comply with these requirements and to ensure that all iron and steel products used on this project are produced in the United States. The term "iron and steel products" means the following products made of primarily iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials."

\_\_\_\_\_  
**RD Specialist Signature**

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

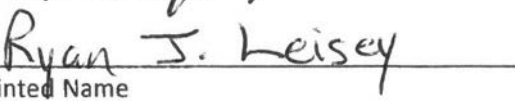
\_\_\_\_\_  
**Borrower Signature or Approved Representative**

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

  
\_\_\_\_\_  
Engineer's Signature

\_\_\_\_\_  
5/17/2019  
Date

  
\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
**Contractor's Signature**

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

**ENGINEER'S CERTIFICATION LETTER**


DATE:

RE: APPLICANT  
PROJECT NAME  
CONTRACT NUMBER

I hereby certify that to the best of my knowledge and belief, iron and steel products referenced in the Plans, Specifications, and Bidding Documents for this project comply with Section 746 of Title VII of the Consolidated Appropriations Act of 2017 and any subsequent statutes mandating domestic preference or are the subject of a waiver approved by the Secretary of Agriculture or designee. This certification is not intended to be a warranty in any way, but rather the designer's professional opinion that to the best of their knowledge, the products comply.

I hereby commit that to the best of my ability, all iron and steel products that will be referenced in the Bid Addenda, Executed contracts, and Change Orders will comply with Section 746 of the Title VII of the Consolidated Appropriations Act, 2017 and any subsequent statutes mandating domestic preference or are/will be the subject of a waiver approved by the Secretary of Agriculture or designee.

Wasson County Water District  
Name of Engineering Firm (Print)

  
By Authorized Representative (Signature)

Manager of Engineering  
Title

This document is to be submitted prior to Agency authorization for Advertisement for Bids.

**CONTRACTOR'S CERTIFICATION LETTER**

DATE:

RE: **APPLICANT**  
**PROJECT NAME**  
**CONTRACT NUMBER**

I hereby certify that, to the best of my knowledge and belief, all iron and steel products installed for this project by my company and by any and all subcontractors and manufacturers my company has contracted with for this project, comply with Section 746 of Title VII of the Consolidated Appropriations Act of 2017 and any subsequent statutes mandating domestic preference or are the subject of a waiver approved by the Secretary of Agriculture or designee.

\_\_\_\_\_  
Name of Construction Company (Print)

\_\_\_\_\_  
By Authorized Representative (Signature)

\_\_\_\_\_  
Title

This certification is to be submitted upon completion of the project to the project engineer.

**MANUFACTURER'S CERTIFICATION LETTER**

Date:

Company Name:

Company Address:

Subject: AIS Step Certification for Project (X), Owner's Name, and Contract Number

I, (company representative), certify that the (melting, bending, galvanizing, cutting, etc.) processes for (manufacturing or fabricating) the following products and/or material shipped or provided for the subject project is in full compliance with the mandated AIS requirements.

Item, Products and/or Materials, and location of delivery (City, State)

- 1.
- 2.
- 3.

Such process for AIS took place in the following location:

\_\_\_\_\_  
City, State

This certification is to be submitted upon request to interested parties (e.g. municipalities, consulting engineers, general contractors, etc.)

If any of the above compliance statements change while providing materials to this project, please immediately notify the person(s) who is requesting to use your product(s).

\_\_\_\_\_  
Authorized Company Representative

(Note: Authorized signature shall be manufacturer's representative and not the materials distributor or supplier)

**SECTION 1**  
**GENERAL SCOPE AND SPECIAL PROVISIONS**

1. Scope

The instructions and information set out in the paragraphs of the Detailed Specifications shall supersede the instructions and information set out in the Information for Bidders, General Conditions, and Supplemental General Conditions if and when differences occur.

2. Shop Drawings, Product Data, and Samples

Shop drawings, product data, and samples as discussed in Paragraph 5 of the General Conditions shall be furnished by the CONTRACTOR to the ENGINEER. Unless otherwise set out, all shop drawings shall be furnished in five copies. It shall be clearly understood by the CONTRACTOR that the ENGINEER will examine the shop drawings for general design only, and that his approval stamped on such drawings shall be approval only for general design, and the CONTRACTOR shall in all cases be held responsible for detailed dimensions. In case of discrepancy between the shop drawings and the requirements of the Drawings, Specifications, and Contract Documents, the provisions of the Drawings, Specifications, and Contract Documents shall prevail even though the shop drawings have been approved by the ENGINEER, unless the conflict therein has been specifically waived in writing by a Change Order.

3. Owner's Right to Carry Out the Work

If the CONTRACTOR defaults or neglects to carry out the work in accordance with the Contract Documents and fails within ten days after receipt of written notice from the OWNER to commence and continue correction of such default or neglect with diligence and promptness, the OWNER may, (without prejudice to any other remedy he may have) make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the CONTRACTOR the cost of correcting such deficiencies. If the payments then or thereafter due the CONTRACTOR are not sufficient to cover such amount, the CONTRACTOR shall pay the difference to the OWNER.

4. Execution and Coordination of the Work

4.1 It is intended that the work covered by this Contract be done so as to cause the minimum amount of interference with traffic and/or existing utilities. The CONTRACTOR will be required to organize and schedule his work so as to keep the existing facilities in full operation during the construction period insofar as is consistent with the nature of the construction work to be performed. The manner in which shutdowns will be made and the work schedule of the CONTRACTOR during shutdowns will be subject to the approval of the OWNER. The CONTRACTOR shall



## General Scope and Special Provisions

schedule a proposed shutdown with the OWNER at least three days prior to the outage. All shutdowns shall be made by employees of the OWNER. Although every effort will be made to cause the minimum amount of interference with the CONTRACTOR's work, the interest of the OWNER in regard to the existing facilities must always take precedence over the construction work. Therefore, the right is reserved by the OWNER to put any lines or other facilities (that may be shut down for the construction work) back into service when an emergency arises.

4.2 The work on the project shall be scheduled so as to expedite service to new customers. The CONTRACTOR shall install meters and perform testing as each section of new water main is constructed. Water lines or sections of lines thus completed shall be placed in service while work proceeds on other lines or sections.

4.3 Following installation of the pipeline, "rough cleanup" work shall be performed. This shall consist of grading the trench to create a neat, low mound of backfill material and disposing of any excavated material, rubbish, etc. (See Section 1, Paragraph 16 and Section 3, Paragraph 22) Crushed stone shall be added to driveways where necessary and fences repaired to the satisfaction of the property owners. After trenches have had adequate time to settle, final grade work and seeding shall be performed as described in Section 3, Paragraph 23.

### 5. Progress Schedule, Construction Records, and Reports

5.1 The CONTRACTOR shall furnish the OWNER with proof that all payrolls for services rendered and invoices for materials supplied have been duly paid as herein required, and such other data as the OWNER may require.

5.2 The CONTRACTOR shall furnish (and keep current) a suitable progress chart or schedule showing the estimated (and actual) progress on the work. The progress chart or schedule shall be subject to the approval of the ENGINEER.

5.3 The CONTRACTOR shall furnish all the necessary information for and prepare the partial payment estimates on forms approved by the ENGINEER.

5.4 The OWNER, or his authorized representatives and agents, shall be permitted to inspect all payrolls, records of personnel, invoices of materials, and other relevant data and records.

### 6. Lines and Grades

6.1 The CONTRACTOR shall be held totally responsible for construction of the work according to the lines and grades shown on the Drawings. The CONTRACTOR shall also insure that the work is constructed in proper relation to proposed highway construction where applicable.

6.2 The CONTRACTOR shall furnish all labor, equipment, stakes, and grade boards. The CONTRACTOR also shall be required to furnish equipment and aides when required by the ENGINEER in checking lines and grades. The labor and

equipment shall be available to the ENGINEER on call, and the labor shall be fully capable of performing the duties of rodman and/or chainman.

7. Access to and Inspection of the Work

Representatives of the OWNER shall at all time have full access for inspection of the work and the CONTRACTOR shall provide proper facilities for such access and inspection.

8. Work on Private Property

8.1 In connection with work performed on private property, the CONTRACTOR shall take every precaution to avoid damage to the property owners' buildings, grounds, and facilities. Fences, hedges, shrubs, etc., within the construction limits shall be removed carefully, preserved, and replaced when the Construction is completed in accordance with the requirements set out hereinafter in these specifications. When construction is completed, the private property owner's facilities and grounds shall be restored to as good (or better) condition than found as quickly as possible at the CONTRACTOR's expense. The OWNER reserves the right to require the CONTRACTOR to obtain a signed Release from each property owner affected by the work. Said Release shall indicate that the property owner is satisfied with the restoration of his land. However, the execution of such a release shall not relieve the CONTRACTOR from any of his contractual obligations or other claims that may arise at a later date. The widths of construction easements obtained by the OWNER from property owners is normally 15 feet each side of the pipeline and the CONTRACTOR shall confine his activities to the area within the limits of the easements unless specific permission is obtained by the CONTRACTOR from property owners.

8.2 Large trees, or other facilities within the actual construction limits that cannot be preserved and replaced shall be removed by the CONTRACTOR but the OWNER will assume the responsibility for settling with the property owner for the loss of said trees or facilities. However, trees and facilities for which the OWNER has made such settlement will be designated on the Drawings and the CONTRACTOR shall be solely and entirely responsible for any damage to trees and facilities not so designated.

8.3 All trees and brush cleared along the route of the pipeline shall be disposed of by the CONTRACTOR in a manner suitable to the ENGINEER and property owner. If such trees and brush are left on the property the CONTRACTOR shall obtain a release for same from the property owner.

9. Traffic Control and Work in Highway Rights of Way

9.1 The CONTRACTOR shall (before beginning work on any public highway right-of-way) make arrangements for maintaining the traffic on said highways and/or roadways, or rerouting traffic as may be required. The applicable regulations of the Kentucky Department of Transportation (Ky D.O.T.) must be followed in this regard.

## General Scope and Special Provisions

9.2 The CONTRACTOR shall furnish proper equipment which shall be available at all times for maintaining streets and roads upon which work is being performed. All such streets and roads shall be maintained suitable for traffic until complete and final acceptance of the work.

9.3 When the CONTRACTOR is cutting across a street or highway, he is to cut half of the street at one time, lay the pipe, and complete the backfilling operation so that traffic may pass over this trench before the opening of the trench for the other half of the street or highway. In lieu of the above, bridging of the trench may be required. The time and method of making these crossings shall be approved by the ENGINEER, and the agency or legal entity having responsibility for the maintenance of the street or highway.

9.4 The CONTRACTOR shall be responsible for erecting signs, providing flagmen, providing any other such items, and performing all work as required by Kentucky D.O.T. regulations, the Kentucky D.O.T. permit granted to the OWNER for construction of this specific project, and/or regulations of other agencies having jurisdiction over the right-of-way.

9.5 The CONTRACTOR shall plan his operations so as to cause a minimum of inconvenience to property owners and to traffic. No road, street or alley may be closed unless absolutely necessary, and then only if the following conditions are met:

9.5.1 Permit is secured from appropriate, State, County or Municipal authorities having jurisdiction.

9.5.2 Fire and Police Departments are notified before road is closed.

9.5.3 Suitable detours are provided and are clearly marked.

9.6 No driveways shall be cut or blocked without first notifying the occupants of the property. Every effort shall be made to schedule the blocking of drives to suit to occupants' convenience, and except in case of emergency, drives shall not be blocked for a period of more than 8 hours.

## 10. Shoring, Sheeting, and Bracing of Excavations

10.1 Where unstable material is encountered or where the depth of excavation warrants it, the sides of the trench or excavation shall be supported by substantial sheeting, bracing, and shoring, or the sides sloped to the angle of repose. The design and installation of all sheeting, sheet piling, bracing, and shoring shall be based on computations of pressure exerted by the materials to be retained under existing conditions. Adequate and proper shoring of all excavations and safety of workmen shall be the entire responsibility of the CONTRACTOR; however, the OWNER may require the submission of shoring drawings (accompanied by

supporting computations) for approval prior to the CONTRACTOR undertaking any portion of the work.

10.2 Foundations, adjacent to where the excavation is to be made below the depth of the foundation, shall be supported by shoring, bracing, or underpinning as long as the excavation shall remain open and the CONTRACTOR shall be held strictly responsible for any damage to said foundations.

10.3 Care shall be taken to avoid excessive backfill loads on the completed pipe lines and the requirements regarding the width of the ditch as specified herein be strictly observed.

10.4 Trench sheeting shall not be removed until sufficient backfill has been placed to protect the pipe.

10.5 All sheeting, planking, timbering, bracing, and bridging, shall be placed, renewed, and maintained, as long as is necessary. Sheeting is not a pay item unless the CONTRACTOR is required and/or instructed by the OWNER to leave same in place.

## 11. Existing Utilities

11.1 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 other public or private utility companies.

11.2 With particular respect to existing underground utilities, all available information concerning their location has been shown on the drawings. While it is believed that the locations shown are reasonably correct, the OWNER cannot guarantee the accuracy or adequacy of this information.

11.3 The location of buried telephone cable often differs from the preliminary information given the OWNER by phone companies and shown on the drawings. Therefore, in order to construct a pipeline that is parallel to the highway right-of-way as specified, the CONTRACTOR may be required to cross buried telephone cable at various locations not indicated on the drawings. The CONTRACTOR shall consider these crossings as incidental to the pipeline construction.

11.4 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). The OWNER has no objection to the CONTRACTOR arranging for the said utilities companies, agencies, or departments to locate and uncover their own utilities; however, the CONTRACTOR shall bear the

## General Scope and Special Provisions

entire responsibility for locating and avoiding, or repairing damage to said existing utilities.

11.5 Where existing utilities or other underground structures are encountered, they shall not be displaced or molested unless necessary and then only with the approval of the respective owner. In such cases they shall be replaced in as good (or better) condition than found as quickly as possible. All such utilities that are so displaced or molested shall be replaced at the CONTRACTOR's expense.

11.6 Should it become necessary to provide additional guying or support of power, lighting, or telephone facilities, the CONTRACTOR shall consult with the authorities of these utilities so that suitable arrangements can be made for the protection of same.

11.7 All costs for temporary or permanent work necessary for the protection of utilities, private or public, shall be included in the contract amount to which the items of work pertain, or may be considered to be incidental thereto. In addition, the CONTRACTOR shall be responsible for any damage to the existing utilities resulting from the construction operations and shall bear the cost of all repair or replacement necessary for correction.

11.8 It is expected that the CONTRACTOR will be diligent in his efforts and use every possible means to locate existing utilities. Any claims for unavoidable damage, based on improper or unknown locations, will be examined thoroughly in the light of the CONTRACTOR's efforts to locate the said utilities or obstructions prior to beginning construction.

### 12. Utilities Required by CONTRACTOR

All electrical current and/or any utility service required by the CONTRACTOR shall be furnished at his own expense except as noted hereinafter.

### 13. Supervision of Installation

All special equipment or materials shall be installed under the supervision of a qualified installation engineer and/or representative furnished by the manufacturer of such equipment or materials.

### 14. Execution of the Contract

The construction Contract and the Performance Bonds shall be executed within the time specified in the Information for Bidders and in at least three (3) copies.

### 15. Permits, Codes, Etc.

Unless otherwise set out in the Specifications or required by the agencies involved, the CONTRACTOR shall make application for, obtain, and pay for all licenses and permits, and shall pay all fees and charges in connection therewith. The

CONTRACTOR shall be required to comply with all state or municipal ordinances, laws, and/or codes insofar as the same is binding upon the OWNER.

16. Cleaning up and Removal of Rubbish

16.1 The CONTRACTOR shall at all times keep the premises free from accumulations of waste materials or rubbish caused by his employees or work and shall keep the work site in a clean and useable condition satisfactory to the ENGINEER. The CONTRACTOR shall direct his forces to promptly clean up streets, sidewalks, drainage channels, or private property, affected by his construction operations, when in the opinion of the ENGINEER such clean up is needed. At the completion of the work the CONTRACTOR shall remove all his rubbish from and about the site of the work and all of his tools, equipment, and surplus materials.

16.2 The Contract shall not be considered complete until all construction structures, equipment and rubbish from construction are cleaned from the site of the work. All damage to existing paving, grounds, and structures caused by the CONTRACTOR's operations must be repaired or the owners compensated for such damage before the contract will be considered complete. This includes the removal of rock from blasting (1 1/2 inches or over in size), and the broom sweeping, or water removal, of dirt from pavement.

17. Items Deleted and Quantity Changes

The OWNER reserves the right to delete any bid item or in the case of unit price items, the OWNER may delete, reduce, or increase the quantities involved. BIDDERS shall be aware of this possibility and shall base their BIDS accordingly.

## **SECTION 2** **QUALITY ASSURANCE**

### 1. Approval of Testing Agencies and Reports

When in these Contract Documents inspection and testing services are required, bureaus, laboratories, and/or agencies selected for such inspection and testing shall be approved by the ENGINEER. If inspection and testing services are provided by the OWNER or are performed in accordance with Section 7.8 of the General Conditions, the OWNER shall select the laboratories and/or agencies for such inspection and testing.

### 2. Suitability of Materials and Test Reports

Where prior inspection and testing of materials is required, documentary evidence in the form of test reports, in the form and number required by the ENGINEER, shall be furnished prior to the time the material is incorporated into the work. All rejected material shall be removed promptly from the premises.

### 3. Governing Specifications

It is the intention of the ENGINEER in the preparation of these Specifications to define properly the kind and quality of materials to be furnished. The standards of the American Society of Testing Materials (ASTM); standards of the American Water Works Association (AWWA); or other such agencies may be referred to in the Specifications. Where such standards are referred to, said references shall be construed to mean the latest amended and/or revised versions of the said standard specifications. In the selection of samples and the routine testing of materials, the testing laboratory shall follow the standard procedure as outlined by the ASTM, unless otherwise set out.

### 4. Extent of Inspection and Testing Service

It is intended that materials of construction, particularly those upon which the strength and durability of the work may depend, shall be inspected and tested to establish conformance with specifications and suitability for uses intended. The following is a schedule showing the extent of testing, and requirements and methods of reporting. If it is found that this list does not cover all items that will require testing, then such materials shall be tested as directed by the ENGINEER.

### 5. Requirements and Methods of Reporting

In general, four copies of all test reports will be required with two copies to the CONTRACTOR, one to the ENGINEER, and one to the OWNER. All copies shall be forwarded to the ENGINEER.

## Quality Assurance

### 6. Coarse Aggregate (Backfill and Surfacing)

Regarding coarse aggregates for use in backfill and surfacing, certifications, which state that the aggregates comply with the Specifications and give the gradation for each size used, will be required from the material supplier.

### 7. Concrete (Kickers, Anchors, Encasement and Pavement)

The mix design and a certification that the concrete supplied for this project is designed for a 28 day compressive strength of 2,500 psi shall be submitted by the supplier.

### 8. Fine Aggregate (For Use In Cement Concrete)

Standard tests shall be made in advance of concreting by an approved independent laboratory per ASTM C33, Paragraphs 2, 3, 4, and 5, and ASTM C40 on each fine aggregate proposed to be used. Other tests being satisfactory, the aggregate may be used pending results of 28 day concrete strength tests.

### 9. Coarse Aggregate (For Use In Cement Concrete)

Standard tests shall be made in advance of concreting by an approved laboratory on each grading of each coarse aggregate proposed to be used per ASTM C33, Paragraphs 6, 7, 8, 9, 10, and 11.

### 10. Concrete Tests (For Concrete Used In Structures)

#### 10.1. Standard Slump Tests

Slump tests shall be made per ASTM C143. Not less than one such test shall be made for each 50 cubic yards of concrete placed at one operation.

#### 10.2. Concrete Control Tests

10.2.1 During the progress of the work and for each different mix of concrete, standard concrete cylinders shall be made and tested. The testing shall be done per ASTM C39, and ASTM C31 (Paragraphs 7a and 7c). When field curing will be used in lieu of, or supplementing laboratory curing, care shall be exercised to avoid mistreatment of the cylinders in the field and testing shall be the same as specified for laboratory cured samples.

10.2.2 Test cylinders shall be made from each day's pour at the frequency specified by ACI 318 with a maximum of two (2) from each batch or ready-mix truck load. The maximum requirement will be imposed only when the ENGINEER deems necessary due to wide fluctuations in the concrete quality. A minimum of three (3) cylinders will be required for each day's pour if the concrete is used in structures or otherwise in a load-carrying capacity.



10.2.3 Each cylinder shall be numbered and logged, so as to adequately identify the representative concrete in the structure. Where three (3) cylinders are made from each day's pour, one (1) cylinder shall be tested at 7 days and two (2) at 28 days. Where more than three (3) cylinders per day are required, the "break" schedule shall be as requested by ENGINEER.

11. Reinforcing Steel

Reinforcing steel shall undergo a field inspection for section, rust, shape, and dimensions, plus certified test report for heat number(s).

12. Ductile Iron Pipe

Each piece of pipe shall bear the manufacturer's name or trademark and the date manufactured. Each piece of pipe shall also be certified by the manufacturer to have met the requirements of the governing standard specifications. Manufacturer Certifications and test reports shall be forwarded to the ENGINEER. Also, each piece shall be visually inspected in the field for any defects and specification conformance.

13. PVC and PVC(MO) Pipe for Water Lines and Force Mains (Not Applicable to C905 PVC Pipe)

13.1 PVC or PVC (MO) pipe shall be marked in accordance with ASTM D-2241. PVC or PVC (MO) pipe shall be certified in accordance with NSF/ANSI 14 – 2012. The manufacturer shall supply certifications indicating that all pipe to be supplied for the project meets the applicable Specification and Standard. This information shall be furnished to the ENGINEER with the shop drawings.

13.2 The total quality system of the pipe manufacturer shall meet the requirements set forth in ISO/IEC 17025: 2005 and the pipe manufacturer shall be capable of maintaining the specified requirements of both the pipe and material. Pipe manufacturer compliance shall be required prior to approval of any shop drawings for PVC or PVC (MO) pipe.

13.3 Each truckload of pipe delivered to the project shall be subject to whatever field measurements and tests deemed necessary by the OWNER. These tests may be conducted by the OWNER or his representative. The cost of field testing shall be the responsibility of the OWNER, but the cost of any pipe destroyed during such testing shall be the responsibility of the CONTRACTOR.

13.4 In addition to the requirements and specifications of ASTM D-2241, all PVC pipe supplied under this Contract shall be concentric from spigot to bell. Any PVC pipe delivered to the project that fails this concentricity requirement will be rejected. The cost of replacement of rejected pipe shall be the responsibility of the CONTRACTOR.

## Quality Assurance

### 14. Testing Water Lines

14.1 Water lines shall be tested at a pressure equal to the rated working pressure of the pipe for a period of four hours. Line segments between gate valves shall be tested separately. During the duration of the test, the line segment shall display leakage not exceeding ten gallons per day per inch of pipe diameter per mile of pipeline. This rate of leakage is given below for 1,000 feet of pipeline and various diameters of pipe:

**TABLE 2.1**  
MAXIMUM RATE OF LEAKAGE FOR GIVEN DIAMETER OF PIPE

Pipe Diameter	Max. Leakage in 4 hrs. for 1,000 feet of pipe
4"	1.26 gallons
6"	1.89 gallons
8"	2.53 gallons
10"	3.16 gallons
12"	3.79 gallons
14"	4.42 gallons
16"	5.05 gallons
20"	6.13 gallons

14.2 Lines which fail to meet these criteria shall be repaired and retested as necessary until requirements are met. If the initial pressure test indicates that repairs must be made to a particular line segment, the ENGINEER may require a 24-hour pressure test to verify soundness of the construction work. This test shall be performed at no additional expense to the OWNER. Pressure tests shall be performed only after service line taps are completed.

14.3 The pressure gauge and/or recorder used for testing pipelines will be supplied by the OWNER. The CONTRACTOR shall supply the necessary pump, taps, connections, water meter, and all piping and fittings required for testing. All methods and equipment for pressure testing shall be as approved by the ENGINEER.

14.4 The CONTRACTOR shall schedule his work so that each section of water line or force main between gate valves shown on the Drawings shall be pressure tested in sequence as the pipeline work progresses. The CONTRACTOR's schedule in this regard shall be as approved by the ENGINEER.

### 15. Testing Tapping Sleeves

All tapping sleeves and valves shall be subjected to a pressure test while in place on the existing water line, prior to the existing line being tapped. The tapping sleeve and valve shall be tested at the rated working pressure of the sleeve over a period of 15 minutes. The connection being tested shall maintain 100 percent of the test pressure throughout the test period. The CONTRACTOR shall supply all necessary equipment for testing sleeves. Other details of the test shall be as directed by the ENGINEER.

**SECTION 3**  
**WATER LINES AND WATER SERVICES**

1. Scope of Work

The work to be accomplished under this section of the Specifications consists of the furnishing of all materials and labor necessary for the construction of water lines, including all services, meters, fittings, blow-offs, valves, accessories, and appurtenances in strict accordance with the Specifications and the applicable Drawings.

2. Location of Water Lines

2.1 The approximate location of water lines in relation to the limits of rights-of-way, pavement, etc. is shown on the Drawings but is not guaranteed. The location shown was chosen to minimize the overall project cost with respect to rock excavation, pavement replacement, crushed stone for traffic bound roadway, customer water services, etc. Water lines shall generally be constructed in easements on private property parallel to and within 10 feet of highway rights-of-way.

2.2 The final location (as constructed) may be varied upon approval by the ENGINEER, provided: (1) the proposed location is approved by the Kentucky Department of Transportation (Bureau of Highways), the County Highway Department, or other agency, legal entity or property owner having jurisdiction, and (2) the effect reduces the project cost. The final location may be varied by necessity due to construction conditions at the direction of the ENGINEER, or due to the requirements of the Kentucky Department of Transportation (Bureau of Highways), the County Highway Department, or other agency, legal entity or property owner having jurisdiction. The construction of pipelines in the highway, road, or street right of way will not be allowed except where shown on the Drawings.

3. Excavation of Pipeline Trenches

**3.1 Unless otherwise directed by the ENGINEER or as shown on the Drawings, trenches in which pipes 12 inches or less in diameter are to be laid shall be excavated in open cut to a depth which will allow a minimum of 2 feet 6 inches of cover above the top of the pipe or 2 feet 6 inches below the elevation of the proposed roadway, whichever is lower.** The roadway based elevation provision is excluded in residential lawns. For pipes greater than 12 inches in diameter, the trenches shall be excavated in open cut to a depth which will allow a minimum of 4 feet of cover above the top of the pipe. The diameter of the pipe, proper bedding and construction of bell holes must be considered in determining the depth of excavation. Extra depth excavation may be required by the Kentucky Department of Transportation (Bureau of Highways) or as shown on the Drawings. All water lines installed on county right-of-way shall be installed with 36" min. cover.

**3.2 Topsoil shall be stripped from the top of the trench and placed to the side for reuse during the final layer of backfill to facilitate productive growth of lawns, crops, and other vegetation.** Trenches shall be of sufficient width to provide free working space on each side of the pipe and to permit proper backfilling around the pipe, but unless specifically authorized by the ENGINEER, trenches shall in no case be excavated or permitted to become wider (as measured at the top of the pipe) than 2 feet plus the nominal diameter of the pipe. The desired width shall be the nominal diameter of the pipe plus 16 inches. The minimum allowable trench width in rock excavation shall be the nominal diameter of the pipe plus 12 inches. The minimum allowable trench width in earth excavation shall be the nominal diameter of the pipe plus 6 inches. Trenching equipment that cannot maintain these minimum widths will not be allowed for use on the project.

3.3 Trench excavation shall proceed far enough ahead of pipe laying to reveal any obstructions that might necessitate changing the line or grade of the pipeline. The trench shall be reasonably straight and uniform in grade. Trenches shall be kept free of water during the construction of the pipeline and removal of water shall be at the CONTRACTOR's expense. Trench excavation shall proceed in a continuous manner from the beginning of the pipeline to the end.

3.4 Unless specifically authorized by the ENGINEER, no skipping by obstacles such as rock, road crossings, existing utilities, etc. shall be permitted. If skips are authorized by the ENGINEER and the CONTRACTOR does not close the resulting gaps in the pipeline in a timely manner, the ENGINEER may require the CONTRACTOR to discontinue all other operations until the gaps are closed.

3.5 Unless specifically directed otherwise by the ENGINEER, not more than 500 feet of trench shall be opened ahead of the pipe laying, and not more than 500 feet of open ditch shall be left behind the pipe laying. All barricades, lanterns, watchmen, and other such signs and signals as may be necessary to warn the public of the dangers in connection with open trenches, excavations, and other obstructions, shall be provided by and at the expense of the CONTRACTOR.

3.6 At the close of each working day all trenches that have been excavated shall be refilled unless exceptions are granted by the ENGINEER. All public or private drives shall be promptly backfilled or bridged at the direction of the ENGINEER.

3.7 All excavation shall be "unclassified" and therefore there will be no separate payment for rock excavation. The cost of all excavation should be merged into the cost of constructing the water line.

4. Blasting

4.1. General

4.1.1 All blasting operations shall conform to Kentucky Department of Mines and Minerals code for explosive disintegration of rock. CONTRACTOR shall obtain permits from local authorities having jurisdiction before explosives are brought to site or drilling is started.

4.1.2 The CONTRACTOR shall keep explosives on the site only in such quantity as may be needed for the Work under way and only during such time as they are being used. He shall notify the ENGINEER, in advance, of his intention to store and use explosives. Explosives shall be stored in a secure manner and separate from all tools. Caps or detonators shall be safely stored at a point over 100 feet distance from the explosives. When the need for explosives has ended, all such materials remaining on the Work shall be promptly removed from the premises.

4.1.3 The CONTRACTOR shall observe all state, federal and municipal laws, ordinances and regulations relating to the transportation, storage, handling and use of explosives. In the event that any of the above-mentioned laws, ordinances or regulations require a licensed blaster to perform or supervise the Work of blasting, said licensed blaster shall, at all times have his license on the Work and shall permit examination thereof by the ENGINEER or other officials having jurisdiction.

4.1.4 No explosives shall be used within 20 feet of buildings and/or structures existing, constructed or under construction; or underground and/or overhead utilities whether existing or partially constructed.

4.1.5 Permission for any deviation from the restriction set forth above shall be secured from the ENGINEER, in writing; however, permission for any such deviations shall not relieve the CONTRACTOR from any responsibility in the event of damage to buildings, structures or utilities.

4.1.6 All operations involving explosives shall be conducted with all possible care to avoid injury to persons and property. Blasting shall be done only with such quantities and strengths of explosives and in such a manner as will break the rock approximately to the intended lines and grades and yet will leave the rock not to be excavated in an un-shattered condition. Care shall be taken to avoid excessive cracking of the rock upon or against which any structure will be built, and to prevent injury to existing pipes or other structures and property above or below ground. Rock shall be well covered with logs or mats, or both, where required. Sufficient warning shall be given to all persons in the vicinity of the Work before a charge is exploded.

4.1.7 The CONTRACTOR shall be solely responsible for his blasting operations. The CONTRACTOR shall not hold the OWNER and/or the

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ENGINEER liable for any damages resulting from his blasting operations on this project.

4.1.8 Blasting will not be permitted under or on CSXT's right-of-way.

### 4.2. Pre-blast Structure Survey

4.2.1 CONTRACTOR shall perform a pre-blast survey to determine and document with pictures the condition of adjacent structures, utilities, wells, buried cables, and other features within a minimum of 400 ft. of the blast area unless otherwise required by applicable regulatory authorities. Determine safe distances to structures or other facilities according to NFPA 495, Appendix B. Where facilities are closer than these distances, and natural barriers are not present, or when the amount of explosive cannot be reduced economically, blasting mats shall be used. Provide mats to protect environmentally sensitive areas, trees within 20 feet from the blasting area, streams, and rock formations from throw rock.

4.2.2 Purpose of survey is to document existing condition of structures prior to blasting, and is intended to be used as evidence in ascertaining whether and to what extent damage may have occurred as result of blasting. Survey shall be conducted prior to start blasting operations.

4.2.3 CONTRACTOR shall record information for each structure surveyed including:

- 4.2.3.1 Age and type of construction.
- 4.2.3.2 Location and character of cracks.
- 4.2.3.3 Evidence of settlement and leakage.
- 4.2.3.4 Other pertinent information.

4.2.4 Record pre-blast survey information on forms prepared specifically for pre-blast surveys. Supplement written records with photographs or videotape recordings. Submit copies of written records and photographs or videotapes to OWNER, and ENGINEER, prior to start of blasting.

### 4.3. Blast Design

4.3.1 Design each blast to avoid damage to existing facilities, adjacent property, and completed Work. Consider effects of blast-induced vibrations, air blast, and fly rock potential in design of each blast.

4.3.2 Establish appropriate maximum limit for vibration for each structure or facility that is adjacent to or near blast sites. Base maximum limits on expected sensitivity of each structure or facility to vibration, and federal, state, or local regulatory requirements, but not to exceed 1.25 in/sec. Whenever peak particle velocity exceeds vibration limits, change design of subsequent blasts, as necessary to reduce peak particle velocity to within

limits established by Blaster-in-charge (BIC).

4.3.3 Establish appropriate maximum limit for air blast for each structure or facility that is adjacent to or near blast sites. Base maximum limits on expected sensitivity of each structure or facility to air blast, and federal, state, or local regulatory requirements, but not to exceed 0.015 psi peak overpressure (133 decibels). Whenever air blast exceeds limits, change design of subsequent blasts or provide controls necessary to reduce air blast to within specified limits.

4.4. Fly Rock Containment

Where fly rock may damage existing facilities, adjacent property, or completed Work, cover area to be blasted with blasting mats or provide other means that will contain and prevent scattering of blast debris.

4.5. Vibration and Air-Blast Monitoring

4.5.1 Monitor and record blast-induced vibrations and air blast using suitable sensors and recording equipment for each blast.

4.5.2 CONTRACTOR shall provide two (2) seismographs during blasting operations capable of the following:

4.5.2.1 Designed for monitoring blast-induced vibrations and air blast. Capable of recording particle velocity in three mutually perpendicular directions in range from 0 to 6 inches per second.

4.5.2.2 Flat vibration frequency response between 4 and 200-Hz.

4.5.2.3 Capable of recording air-blast overpressure up to 140 decibels.

4.5.2.4 Flat air-blast frequency response between 2- and 500-Hz.

4.5.3 Monitor on, or at, structures or other facilities that are closest to point of blasting. Monitoring more distant facilities that are expected to be sensitive to blast-induced vibrations and air blast.

4.5.4 BIC shall supervise establishment of monitoring programs and initial operation of equipment; review interpretation of records and recommend revisions of blast designs.

4.5.5 Include following information in blasting plan:

4.5.5.1 Vibration and air-blast limits as recommended by BIC.

4.5.5.2 Name of qualified BIC who will be responsible for monitoring program and interpretation of records.

4.5.5.3 Types and models of equipment proposed for monitoring.

4.5.5.4 Numbers and locations of proposed monitoring stations.

4.5.5.5 Procedures to be used for coordinating recording of each

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blast.

4.5.5.6 Steps to be taken if blasting vibrations or air blast exceed limits.

### 4.6. Blasting Records

4.6.1 For each blast, document the following:

4.6.1.1 Location of blast in relation to Project stationing or state plane coordinate system and elevation.

4.6.1.2 Date and times of loading and detonation of blast.

4.6.1.3 Name of person in responsible charge of loading and firing.

4.6.1.4 Details of blast design, as previously specified.

4.6.1.5 Vibration records including location and distance of seismograph geophones to blast and to nearest structure, and measured peak particle velocity. Report peak particle velocity in units of inches per second.

4.6.1.6 Air-blast records. Report peak air blast values in units of pounds per square inch overpressure above atmospheric or in decibels at linear response.

4.6.1.7 Comments by BIC regarding damage to existing facilities, adjacent property, or completed Work, misfires, fly rock occurrences, unusual results, or unusual effects as required.

### 4.7. Suspension of Blasting

4.7.1 In event damage to existing facilities, adjacent property, or completed Work occurs due to blasting, immediately suspend blasting and report damage to ENGINEER and OWNER. CONTRACTOR shall be responsible for all costs of repairs or replacement due to damage from blasting.

4.7.2 Before resuming blasting operations, adjust design of subsequent blasts, or take other appropriate measures to control effects of blasting, and submit complete description of proposed changes for reducing potential for future damage.

4.7.3 Do not resume blasting until authorized by OWNER and applicable regulatory authorities.

## 5. Pipe Bedding and Initial Backfill

For all pipe 14 inches in diameter and larger, or where rock excavation is encountered or in rocky soil as directed by the ENGINEER, the pipe shall be bedded with six (6) inches of crushed stone under the pipe. Crushed stone shall be used in the initial backfill from the bottom of the pipe to the centerline of the pipe. Initial backfill material shall be placed and thoroughly compacted by hand



tamping. Initial backfill material shall be deposited in the trench for its full width on each side of pipe, fittings and appurtenances simultaneously. Care must be taken to compact fill along the sides of the pipe and appurtenances adjacent to pipe wall. Crushed stone shall be No. 9-M or #57 as described in the *Standard Specifications for Road and Bridge Construction* as published by the Kentucky Department of Transportation, Bureau of Highways. In certain cases the CONTRACTOR may be required to move earth of good quality from previous trench excavation for use as bedding material.

## 6. Pipe Laying

### 6.1. General

6.1.1 The CONTRACTOR shall notify the ENGINEER as to the date and time of all pipe deliveries and shall not unload any pipe except in the presence of the Inspector. Pipe shall be transported and handled in strict conformance with the manufacturer's recommendations.

6.1.2 The CONTRACTOR will be required to stockpile all pipe in central locations. Pipe strung along the route of the pipeline, shall be limited to the current day's expected production.

6.1.3 Pipe laying shall be in strict accordance with the manufacturer's recommended practice. Special tools, lubricant and equipment for proper laying shall be provided by the manufacturer. If the CONTRACTOR proposes a method of installation not covered by the manufacturer's recommended procedures, the CONTRACTOR shall obtain written certification from the manufacturer that installation by this proposed method will in no way affect the manufacturer's warranty of the pipe.

6.1.4 Pipe shall not be rolled, or dropped, into the trench.

6.1.5 All angles or bends in the pipe lines, either vertical or horizontal shall be satisfactorily braced or anchored against the tendency of movement with concrete anchors to the satisfaction of the ENGINEER.

6.1.6 Open ends of unfinished pipelines shall be securely plugged or closed at the end of each day's work, or when the line is left temporarily at any other time.

### 6.2. Ductile Iron Pipe

6.2.1 The trench shall be excavated to the required depth and width, bell holes and/or joint holes shall be dug in advance of the pipe laying.

6.2.2 The beds of each piece of pipe shall be prepared carefully so that each individual piece of pipe shall have a uniform bearing. Pipe shall be laid in a straight line and grade without kinks or sags, and shall be laid in a

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workmanlike manner. Bell holes and/or jointing holes shall be large enough so that the bell or hub will clear the ground and leave ample room for making and inspection of joints.

6.2.3 Before each piece of pipe is lowered into the trench, it shall be swabbed out thoroughly to insure its being clean. Each piece of pipe shall be lowered into the trench separately.

6.2.4 Care shall be taken to prevent injury to the pipe coating both inside and outside. No piece of pipe or fitting which is known to be defective shall be laid or placed in the lines. If any defective pipe or fittings shall be discovered after the pipe line is laid, they shall be removed and replaced with a satisfactory pipe or fitting without additional charge. In case a length of pipe is cut to fit in a line, it shall be so cut as to leave a smooth end at right angles to the longitudinal axis of the pipe.

### 6.3. Plastic Pipe

6.3.1 Plastic pipe shall be installed in accordance with manufacturer's recommendations. A representative who is a direct employee of the pipe manufacturer shall conduct training sessions for CONTRACTOR's personnel regarding proper pipe installation. The manufacturer's representative shall certify to the ENGINEER the names of CONTRACTOR's personnel who have attended such training. Pipe laying and assembly work shall be performed only by personnel who appear on the manufacturer's certified list.

6.3.2 Backfilling shall be done in accordance with Paragraph 7, Backfilling Pipeline Trenches, where not in conflict with manufacturer's recommendations.

## 7. Backfilling Pipeline Trenches

7.1 Backfilling shall be conducted at all times in a manner to prevent damage to the pipe and the exterior protection on the pipe. Placing of backfill shall be done only in the presence of the ENGINEER after his final inspection and acceptance of the pipe in place. If material for backfilling is not available at the construction site, the CONTRACTOR shall "import" earth of good quality from a site approved by the ENGINEER. This will not be a separate pay item.

7.2 In areas of earth excavation of the pipeline trench, earthen material reasonably free from rock and acceptable to the ENGINEER shall be used in the backfilling of the trench. Backfill material free of rock over one inch in diameter shall be placed around the pipe up to the point where the pipe is thoroughly covered with at least one foot of material. Walking or working on the completed pipe (except as may be necessary in backfilling) shall not be permitted until the trench has been backfilled to a height of at least one foot above the top of the pipe. The filling of the trench shall be carried on simultaneously on both sides of the pipe

in such a manner that the completed pipeline will not be disturbed and injurious side pressures do not occur.

7.3 In areas of rock excavation of the pipeline trench, crushed stone as used for bedding shall be used as backfill material to a level 6 inches above the top of the pipe. Placement of this backfill material shall be performed as described above. In certain cases in lieu of or in addition to the crushed stone backfill the CONTRACTOR may be required to use earth of good quality as backfill material to a depth of 12 inches above the pipe as described above.

7.4 In filling the remainder of the trench above the initial backfill described above, whether in earth or rock excavation, earth backfill material reasonably free of rock may be shoved into the trench without compacting and heaped over, then compacted by rolling with the wheel of a grader or front-end loader. Earth backfill material containing rocks greater than 6 inches in diameter shall not be acceptable.

7.5 The final step in the backfill operation shall be to windrow good quality earthen material over the top of the ditch. The windrow shall be no higher than one foot and no wider than the width of the ditch plus 4 feet. All other excavated material except that required for the above described windrow shall be considered excess and shall be disposed of as described hereinafter.

7.6 Where street, driveway and highway crossings are made and where streets or highways are proposed, the CONTRACTOR will be required to tamp all backfill as described hereinafter and backfill the trench with No. 9-M crushed stone.

7.7 Where tamping is required, the backfilling shall all be done in layers not exceeding 6 inches and firmly tamped into place by tampers or rammers. The ENGINEER may permit puddling of ditches to compact the backfill in lieu of tamping with mechanical tampers except where street paving is to be replaced immediately after the backfilling is completed. The ENGINEER may also require puddling where (in his opinion) it is necessary for proper compaction.

8. Disposition of Excess Excavated Material

Excavated materials not used for backfill including "shot rock" and boulders shall be disposed of within one week of the adjacent trench being backfilled. Disposal of excavated material shall be performed so as to cause the least interference with the completed pipeline and operations of the OWNER, property owners, etc. and in a manner satisfactory to the ENGINEER.

9. Replacing Streets and Roadways

9.1 The CONTRACTOR shall replace all streets, alleys, driveways, and roadways which may be removed, disturbed, or damaged in connection with his operations under this Contract. CONTRACTOR shall reconstruct same to the satisfaction of the Kentucky Department of Transportation, the County Highway Department, or other legal entity or property owner having jurisdiction. The reuse

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of materials removed in making excavations will be permitted, provided said materials are in good condition and acceptable to the ENGINEER.

9.2 The CONTRACTOR will be paid for street replacement only where the line is constructed within the paved surfaces. Care shall be exercised to minimize damage to graveled shoulders and paved surfaces.

9.3 Gravel, crushed limestone, bituminous materials, or other materials used in the resurfacing of streets, shall meet the current requirements of the Kentucky Department of Transportation (Bureau of Highways) Specifications.

### 9.4. Traffic-Bound Base Course

9.4.1 On all trenches where replacing streets or drives is required, it shall be handled in the following manner:

9.4.2 After the backfill has been compacted (by mechanical tamping) and brought up to approximately finish grade, the CONTRACTOR then shall place crushed stone when and as directed by the ENGINEER as a traffic-bound base course, at the proper elevation to allow for settlement but not in such a way as to prevent traffic from using it. Crushed stone shall be Kentucky Department of Transportation, dense graded aggregate.

9.4.3 The CONTRACTOR may be required by the ENGINEER to maintain the traffic-bound base course (by adding crushed stone as specified hereinbefore) in a safe and passable condition for a period of 60 days (or until such time as sufficient settlement has taken place in the opinion of the ENGINEER) and the trenches are ready for final resurfacing. Crushed stone will be paid for at the unit bid price specified in the Contract.

### 9.5. Subgrade for Final Resurfacing

9.5.1 The traffic-bound course hereinbefore described shall comprise the base course for all types of resurfacing.

9.5.2 When, in the opinion of the ENGINEER, the trench has reached a condition of settlement satisfactory for final resurfacing, the CONTRACTOR shall first strip the base course or backfill with crushed stone (size as specified hereinbefore) to obtain the proper subgrade elevation. The subgrade then shall be rolled with an approved type roller or tamped until thoroughly compacted. Any depressions shall be filled with crushed stone (as specified hereinbefore) and the process of rolling or tamping continued until the subgrade has a smooth and uniform surface.

### 9.6. Portland Cement Concrete Pavement

Where Portland Cement Concrete Pavement is to be replaced, or is required under bituminous pavement replacement, it shall conform to the

existing pavement and/or the ENGINEER'S instructions (not less than 6 inches thickness), and the type concrete required by the Kentucky Department of Transportation shall be used.

9.7. Asphaltic Concrete Pavement

9.7.1 Where asphaltic concrete pavement is to be replaced, the subgrade shall be prepared as hereinbefore specified, and this subgrade shall comprise the base course upon which the concrete subslab and/or the bituminous pavement shall be laid. Asphaltic concrete shall be as required by the Kentucky Department of Transportation.

9.7.2 Where no Portland cement concrete subslab is required, the subgrade or base shall be cleaned and broomed thoroughly and a prime coat of medium tar shall be applied uniformly at the rate of 0.20 to 0.25 gallons per square yard. Where Portland cement concrete subslab is required, the prime shall be applied at the rate of approximately 0.05 gallons per square yard. The prime shall be applied by a pressure distributor or other approved pressure spray method.

9.8. Bituminous Surfacing (Surface Treatment)

9.8.1 Where bituminous surfacing is to be replaced as shown on the Drawings, or as directed by the ENGINEER, the traffic-bound base shall comprise the subgrade upon which the bituminous surfacing shall be constructed. After the subgrade or base has been prepared, thoroughly cleaned and broomed, a prime coat of medium tar shall be applied at the rate of 0.30 to 0.35 gallons per square yard.

9.8.2 When the prime coat has become tacky but not hard, the bituminous material (asphalt of the grade directed by the ENGINEER) shall be applied in two applications at the rate of 0.35 to 0.45 gallons per square yard for each application. The CONTRACTOR shall apply approximately 50 pounds of crushed stone chips per square yard between the two applications of bituminous material, and 35 to 40 pounds of chips per square yard after the final application of bituminous materials.

9.9. Untreated Surface

9.9.1 Where the existing surface is untreated gravel or stone, the CONTRACTOR shall reuse all native materials possible using crushed stone as required, replacing the surfacing that is disturbed or removed with crushed stone equal to the grade present prior to construction.

9.9.2 Prior to final acceptance, the CONTRACTOR shall fill in all depressions with crushed stone as hereinbefore specified, and shall thoroughly roll and grade to the existing surface.

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### 9.10. General

The CONTRACTOR shall be held responsible for any and all damage occurring to street and road paving due to his operations outside the actual limits of his work, and shall replace any such damage to as good, or better, condition than that which existed prior to the CONTRACTOR's operations and at no additional expense to the OWNER.

### 10. Concrete Kickers, Anchors, Cradles, and/or Encasement

10.1 Concrete kickers, anchors, cradles, and/or encasement of water lines shall be placed where and as shown on the Drawings, or as directed by the ENGINEER.

10.2 Concrete for anchors, kickers, cradle, and/or encasement shall be 2,500 psi concrete and shall be mixed sufficiently wet to permit it to flow under the pipe to form a continuous bed. In tamping concrete, care shall be taken not to disturb the grade or line of the pipe, or to injure the joints. Concrete placed outside the specified limits or without authorization from the ENGINEER will not be subject to payment.

10.3 Thrust blocks shall be provided in accordance with details shown on Drawings and must bear against an undisturbed trench face. Thrust blocks must be used even when special locked-joint fittings, anchoring fittings, or pipe clamps with tie rods are employed. Fitting bolts shall be protected from the concrete being poured for thrust blocks by using plastic sheeting to cover the area of the bolts.

### 11. Pipe and Fittings for Water Lines

#### 11.1. General

Pipe for water mains shall be nominal diameter and material indicated on the Drawings. The pipe shall be as specified herein and shall be either PVC or ductile iron.

#### 11.2. Fittings

11.2.1 Ductile iron mechanical joint fittings shall be required for all sizes of PVC and ductile iron pipe. Ductile iron mechanical joint fittings shall conform to AWWA specification C 153 and shall have a rated working pressure of 350 psi up to 24-inch diameter and 250 psi above 24-inch. Ductile iron fittings shall be furnished with a bituminous coating outside in accordance with AWWA specification C 153 and shall be cement mortar lined inside in accordance with AWWA specification C 104.

11.2.2 Only high strength low alloy steel T-bolts shall be used with all mechanical joints including fittings, valves, etc. All glands, T-bolts and other accessories shall be manufactured and provided by the same manufacturer as the fittings on which the accessories are used.

11.2.3 Fittings used in pipeline sections noted on the Drawings to be restrained shall be slip joint type fittings that incorporate the specified type of restraining system used with ductile iron pipe or mechanical joint type fittings with approved restraining devices listed below.

11.2.4 Fittings shown on the Drawings are intended to convey the general configuration only. The CONTRACTOR shall be required to furnish fittings at each abrupt change (vertical or horizontal) in the pipeline alignment, as determined by the ENGINEER. The CONTRACTOR shall also be required to furnish any special gaskets, adaptors, etc. necessary for construction.

11.2.5 All vertical bends and all bends greater than 12 inches in diameter shall include approved restraining devices. Approved restraining devices are Megalug by EBBA Iron, Inc., GripRing by Romac Industries, Inc., or approved equal.

**11.2.6 Fittings and accessories shall be manufactured in the United States and shall be Union/Tyler, ACIPCO, U.S. Pipe, or approved equal.**

### 11.3. Ductile Iron Pipe

11.3.1 Ductile iron pipe shall conform to AWWA specifications C 150 and C 151 with a rated working pressure of 350 psi for 4-inch through 12-inch diameter pipe and 250 psi for pipe 14-inch and larger, under the laying conditions and depth of cover specified herein.

11.3.2 Ductile iron pipe shall be furnished with an outside bituminous coating approximately one mil thick and shall be cement mortar lined inside according to AWWA specification C 104.

11.3.3 The joints for ductile iron pipe shall be in accordance with AWWA specification C 111 and shall be the "push-on" type. The allowable deflection in each joint shall be a minimum of 3 degrees and gasket lubricant shall be used as recommended by the pipe manufacturer.

11.3.4 Ductile iron pipe shall be "Fastite" as manufactured by American, "Super Bell-tite" as manufactured by Clow Corp., "Tyton" as manufactured by U.S. Pipe Corp., or approved equal.

11.3.5 In certain locations as described herein, ductile iron pipe and fittings shall be provided and installed with restrained joints. The restrained joint system for pipe shall be similar to "Flex-Grip" by American Ductile Iron Pipe, "Field-Lok" by U.S. Pipe or approved equal. If mechanical joint fittings are used in lieu of push-on-joints, joint restraint shall be accomplished as specified in the preceding subsection.

11.3.6 The locations where restrained joints are required are as follows:

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11.3.6.1 All ductile iron carrier pipes used in casing pipe for road crossings. Restrained joints shall be used between and include the adjacent fitting on each side of the crossing.

11.3.6.2 At all fittings used in the ductile iron water line, fittings, and joints shall be restrained to result in the following restrained footage each side of the fitting, as specified herein.

**TABLE 3.1**

MINIMUM RESTRAINED LENGTH  
EACH SIDE OF DUCTILE IRON PIPE

Fitting	Restrained Pipe Length
90° Bend	87 LF
45° Bend	36 LF
22 ½° Bend	17 LF
11 ¼° Bend	17 LF
Tee	64 LF
Dead End	65 LF

### 11.4. Plastic (PVC) Pipe

11.4.1 Plastic pipe shall be polyvinyl chloride (PVC) and shall meet the requirements set forth by ASTM D1784 for Type 1, Grade 1. All plastic pipe shall bear the National Sanitation Foundation Testing Laboratory seal for potable water. All plastic pipe shall be certified in accordance with NSF/ANSI 14 – 2012. The pipe shall also meet the requirements of ASTM D-2241, ASTM D-3139, and all other specifications referred to therein.

11.4.2 In general and unless indicated otherwise on the Drawings, PVC pipe shall be Class 200 (SDR-21). However, in certain areas Class 250 (SDR-17) PVC pipe may be required.

11.4.3 Provision shall be made for contraction and expansion at each joint with either twin gasketed couplings or integral bell joints. Gasket systems shall be Reiber or other locked-in type as approved by the ENGINEER. Twin gasketed couplings shall be rated for working pressure equal to that of pipe and shall be as manufactured by the pipe manufacturer.

11.4.4 PVC pipe shall be manufactured by a company that has made pipe in accordance with ASTM D-2241 under the brand name to be supplied on this project continuously over the previous five (5) year period. Pipe shall be manufactured at a plant that has been owned, operated and controlled by the same manufacturing company and has produced PVC pipe in accordance with ASTM D-2241 as a routine standard procedure for the last three (3) years. The plant shall be certified in accordance with NSF/ANSI 14 – 2012 for the PVC pipe specified. PVC pipe shall be Vulcan, National, Royal, Pipelife-Jetstream, or North American.



11.4.5 Pipe manufactured with Molecular Oriented Poly (vinyl Chloride), PVC (MO), may be substituted for the PVC pipe described above. PVC (MO) pipe shall conform to ASTM F1483 and shall be Ultra-Blue as manufactured by JM Eagle, Inc.

11.4.6 Note special PVC and PVC (MO) pipe testing requirements, Section 2 Paragraph 13.

12. Gate Valves, Butterfly Valves, and Boxes

12.1 Gate valves shall comply with AWWA specification C 509 and shall be of the resilient wedge type, epoxy coated, iron body, non-rising stem and fully bronze mounted. Valves shall be suitable for water working pressures of 250 psi. Valves shall be of standard manufacture and of the highest quality both as to materials and workmanship. Gate valves shall be either the A-2360 series by Mueller Company, Style A067 by M & H Valve Company, or US Pipe equivalent.

12.2 All gate valves shall have the name or monogram of the manufacturer, the year the valve casting was made, the size of the valve, and the working water pressure cast on the body of the valve. Unless otherwise indicated on the Drawings, all gate valves shall be provided with a 2-inch square operating nut and shall open by turning counterclockwise.

12.3 Butterfly valves shall be Muller Linesal III, M&H #4500, or #1450 Class 150B meeting the requirements of AWWA C504. They shall have mechanical joint connections with a 2-inch square operating nut and shall be suitable in all respects for underground service.

12.4 All gate valves and butterfly valves installed in Ductile Iron water mains shall be restrained against movement by either rodding the valve to adjacent fittings or use of "Megalugs" or equal.

12.5 Valve boxes shall be cast iron, two piece, screw type 24-inch to 36-inch extension with drop covers marked "WATER" and they shall be set vertically, properly adjusted so that the cover will be in the same plane as the finished surface of the street or ground. The box shall have a 5 1/4-inch shaft. Valve boxes shall be as manufactured by Mueller, Clow, M & H, or an approved equal.

12.6 **Any valve that is installed at a depth to the operating nut greater than 3 feet below the final elevation of the valve box top shall be fitted with a valve operator extension.** The length of the extension shall place the operating nut 12 to 24 inches from the valve box top. The extension shall be secured to the valve nut with a set screw. The extension shall include a 1-inch solid steel shaft, 2-inch square top nut, and centering ring near the top. Valve operator extensions shall be manufactured by an entity regularly engaged in the manufacture of such equipment, and be Water Key Model VE-XX, or approved equal.

13. Tapping Sleeves and Valves

## Water Lines and Water Services

13.1 Tapping sleeves for cast iron or ductile iron pipe shall be mechanical joint and shall be Mueller H615 or M & H Style 1174. Tapping sleeves for A.C. pipe shall be mechanical joint and shall be Mueller H-619 or approved equal. Tapping sleeves for 4-inch through 8-inch PVC pipe shall be Mueller H-304 or Smith Blair No. 622. Tapping sleeves for 10-inch and 12-inch PVC pipe shall be Smith-Blair No. 622 fabricated steel sleeves, epoxy coated with stainless steel bolts and nuts.

13.2 Tapping valves shall meet the same general specifications as described herein for gate valves.

### 14. Blowoffs

Blowoff valves and appurtenances shall be constructed where shown on the Drawings and as detailed on the standard detail sheet. Gate valves as specified hereinbefore and the meter boxes described below shall be used in the blowoff assembly. Bends used in blowoff assemblies may be PVC with gasketed joints, as approved by the ENGINEER.

### 15. Fire Hydrants

15.1 Fire hydrants shall be "dry barrel," cast iron bodied, fully bronze mounted, suitable for a working pressure of 150 psi, and shall meet all requirements of the latest AWWA C502 specifications. Each hydrant shall be given a 300 psi hydrostatic test in the shop. Hydrants shall be Mueller Model A-423.

15.2 The waterways of hydrants shall be as free as possible of obstructions, sharp turns, corners, or other causes for resistance. The base of the hydrant shall have a bell connection to admit a proper connection with a standard mechanical joint. Bury depth shall be 3 feet 6 inches minimum or as required to bring the hydrant to the proper grade.

15.3 Hydrants shall have a 6-inch connection to 6-inch and larger mains, 2 1/2-inch brass nozzles with threads for steamer couplings, together with caps fastened securely to each hydrant and threaded to fit nozzles. The main valve of the hydrant shall be not less than 5 1/4 inches in diameter with 7-inch inside diameter riser barrel. All connection threads shall comply with standard specifications of the National Board of Fire Underwriters.

15.4 The hydrant main valve shall be of the compression type, closing with pressure. The valve shall be faced with heavy impregnated waterproof balata or other approved material. The main valve of the hydrant shall be not less than 5 1/4 inches in diameter when installed on 6-inch or larger mains and 4 1/2 inches in diameter on 4-inch mains.

15.5 Hydrants shall have a safety "breakable flange" section located above the ground line. The distance from the ground line of the hydrant to the top of the hydrant head shall be not less than 30 inches. A maximum of one section of vertical riser shall be accepted. Vertical riser, if required, shall be incidental to hydrant

installation. In most situations the CONTRACTOR shall be required to turn the hydrant top 180 degrees so that the pumper nozzle will face the street.

**15.6 Hydrants shall be supplied with factory applied paint. The color shall be Safety Yellow.** The factory applied paint shall be protected during transport and installation. Any hydrants which have excessive chips, scratches, or other abrasions, in the opinion of the ENGINEER, shall be subject to rejection. After installation, exposed surfaces of hydrants shall be painted with two (2) coats of the paint indicated below. The bonnets of the hydrants shall be painted with two (2) coats of a contrasting color to indicate potential flow rate as directed by the ENGINEER. The paint shall be Rust-oleum 9800 System DTM Mastic. Barrel color shall be Safety Yellow. Bonnet colors shall be Safety Red, Safety Orange, Safety Green, or Safety Blue. **No Safety Chains Required.**

## 16. Meters, Meter Boxes and Meter Equipment

### 16.1. General

16.1.1 Where shown on the Drawings, existing water meters shall be relocated in new meter settings. The CONTRACTOR shall install on the new mains entire new meter settings as shown on the standard detail sheet and as specified herein. When all new meter settings are installed and pressure testing, disinfection and bacteriological testing is completed, the water meters which are in existing settings shall be removed and installed in the new settings. (In special situations where new meters are required in a particular location, it shall be so noted on the Drawings.)

16.1.2 At the time the water meter is relocated the CONTRACTOR shall also connect the new meter setting to the existing customer's service line which is between the meter and the house or business. Pipe used in making this connection shall be of the same size, material, and type as the existing customer service line, unless otherwise indicated on the Drawings, but in general will be either Sch 40 PVC pipe or P.E. tubing to match existing customer service line. The connection at the meter setting to the new customer service line shall be made with a galvanized or brass compression coupling on a brass nipple which is to be threaded into the yoke. The method and materials used to connect new customer service pipe to existing customer service pipe shall be Style 65 Dresser couplings, or as approved by the ENGINEER. The work of relocating existing meter installations shall be performed in such a way that interruptions of service to each customer are minimized.

### 16.2. Meter Boxes

16.2.1 Meter boxes shall be cylindrical with a height of 24 inches. The meter box diameter for 3/4 inch services shall be 18 inches. Boxes with a diameter of 20 inches shall be used for all 1-inch and regulated 3/4-inch services.

## Water Lines and Water Services

16.2.2 Boxes shall be a PVC "shell" meter box manufactured from SDR 51 PVC irrigation pipe as manufactured by Mueller Company.

16.2.3 Meter box covers shall be cast iron with locking lid using "large" pentagon bolts. Covers shall have an 18-inch or 20-inch inside diameter as required and an 11 1/2-inch lid opening. The lid shall be marked "Water Meter". Meter box covers shall be ProSource Plastic Lids.

16.2.4 Meter boxes and covers for meters larger than 1-inch shall be as shown on the standard detail sheet.

### 16.3. Meter Fittings

16.3.1 The necessary corporation stops, curb valves, and all other fittings and accessories shall be furnished as indicated on the Drawings. Service saddles shall be Mueller Series H-134 for PVC pipe and Mueller Series BR-1-B for ductile iron pipe. Corporation stops shall be Mueller # H-15008 or Ford equivalent.

16.3.2 Service saddles for 2-inch taps shall be Mueller, Smith Blair, or approved equal, double strap type with 1.P threads for use with a 2-inch by 4-inch brass nipple. A 2-inch Mueller A-2360 gate valve, or approved equal, with threaded connections shall be used in lieu of a cooperation stop.

16.3.3 For 3/4-inch services, yokes shall be Mueller #H-1404-2 except where a regulator is required and then yokes shall be Mueller #H-1404-012. All 1-inch yokes shall be Mueller #H-1404-2 (See the Standard Detail Sheet). All yokes shall include a lock wing stop and check valve. Inlet connections shall be either Mueller #H-14227 or #H-14222 as required by the particular situation and all outlet connections shall be #H-14222. See the standard detail sheet for additional information regarding fittings for services or Ford Equivalent.

16.3.4 Pressure regulators, where required, shall be Wilkins 600DM-HR, or approved equal for 3/4-inch services and Watts 223HP-Z3, or approved equal or 1-inch services. The adjusting screw on pressure regulators shall remain at the factory setting.

### 16.4. Service Connection Tubing

16.4.1 Service connection tubing shall be 3/4-inch or 1-inch plastic tubing of the length necessary to run a direct and continuous line from the main to the meter at property line. The service tubing shall be manufactured from very high molecular weight polyethylene as PE 4710; the material cell classification shall be 445574E as defined by ASTM D-3350; and it shall bear the name of the National Sanitation Foundation Testing Laboratory

Seal for potable water. Tubing dimensions shall be copper tubing size in accordance with the provisions of ASTM D-2737. Tubing shall be SDR 9, rated for 200 psi working pressure and shall be covered by a lifetime warranty. The service tubing shall be Endopure PE-4710 by Endot Industries, Inc. Special care shall be taken to protect the service tubing (with earthen materials) from sharp and/or hard objects. Cover is to be at least 30 inches at all points. Rigid liners (inserts) shall be used with PE tubing where compression connections are made. Liners shall be stainless steel as manufactured by Mueller Co., Part #504281 or #504385.

16.4.2 Where indicated on the Drawings, copper or brass service line shall be utilized. Service line tubing for 1-inch copper connections shall be Type K. Service line for 1 1/2- and 2-inch connections shall be stick brass, field threaded to appropriate lengths.

16.4.3 Where it is necessary to cross a street, highway, or railroad, the CONTRACTOR shall install service tubing under said street, highway, or railroad by the method indicated on the Drawings and the Bid Form. Such service line shall be installed at least 4 feet under the surface. Road crossings for both 5/8-inch x 3/4-inch and 1-inch meters shall be made with 1-inch tubing as shown on the standard detail sheet.

17. Highway and/or Railroad Crossings (Water Mains)

17.1 All water line crossings of County, State and United States Highways, and/or railroads, shall be in smooth wall steel casing pipe (0.25-inch minimum wall thickness). Joints in casing pipe shall be welded continuously all around. The minimum depth of cover shall be 42 inches for highway and road crossings, as measured from the top of the casing pipe to the low point of the crossing cross section. The minimum depth of cover shall be 48 inches, as measured from the top of the casing pipe to the low point of the crossing cross section and 66 inches as measured from the top of the casing pipe to the bottom of the rails for railroad crossings. Carrier pipe used inside steel casing shall generally be the material shown on the Drawings and the Bid Schedule. Where PVC carrier pipe is used, and for bores beneath railroads the carrier pipe shall be supported on casing spacers (Advance, Calpico, CCI, or approved equal) inside the casing at intervals that are in accordance with the spacer manufacturer's recommendations. Casing spacers for ductile iron pipe shall be Advance Model SI.

17.2 The spacer manufacturer shall be supplied the following information when ordering the spacers: carrier pipe O.D., carrier pipe bell O.D., casing pipe I.D., type of pipe being used and SDR information. All carrier pipe shall be centered with maximum clearance of 1-inch between spacer runner and casing. For PVC carrier, the spacer shall be a polyethylene spacer and for DIP carrier the spacer shall be a stainless steel spacer. The CONTRACTOR shall also supply end seals for all steel casings. End seals may be pull-on or wrap around types with stainless steel bands.

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17.3 Split casing for ductile iron pipe shall be sized to match existing casing. The two sides of the split casing shall be field butt welded one to the other and to existing casing to provide a water-tight seal. Lugs shall be provided as required to provide for proper pipe alignment. All appurtenances shall be provided as indicated above.

### 18. Air Release Stations

18.1 Automatic air release stations shall be located and constructed as shown on the Drawings and the Standard Detail Sheet. The Air Release Stations shall include an Apco Model 200A, or approved equal. The valve shall be supplied with a 2-inch NPT inlet, 5/32-inch orifice, and be complete with a blow-off valve. Inlet valve shall be a 2-inch ball valve as specified below.

18.2 Manual air release stations shall include a 2-inch ball valve and 10-feet of polybutylene tubing. The tubing shall be connected to the ball valve by a Mueller IP x PE Adaptor. Ball valves shall be Apollo, or approved equal, with bronze body and 316 stainless steel ball and stem.

18.3 All piping, nipples and fittings used in air release stations shall be brass. Saddles shall be Power Seal model 3416AS.

### 19. Inspection of the Lines

Before the CONTRACTOR backfills any of the lines, they first shall be inspected by the ENGINEER's Representative and the ENGINEER's Representative shall give the CONTRACTOR permission to proceed with the backfilling. If any joints, pipes, fittings, or materials or workmanship are found to be defective, they shall be removed and replaced by the CONTRACTOR without any additional compensation.

### 20. Connecting to the Existing Lines

20.1 Work under this item shall include the connecting of new water lines to the existing water lines in the manner shown on the Drawings, and as directed by the ENGINEER. The work of connecting new lines to existing lines is not a separate pay item under this Contract.

20.2 Where such a connection will result in an interruption of service, the CONTRACTOR shall propose the schedule for such a connection to the ENGINEER several days in advance. The ENGINEER will present the proposal to the OWNER for approval. The interest of the OWNER in regards to service to existing customers shall take precedence over the new construction. The CONTRACTOR's schedule shall permit the OWNER to provide notification to customers at least 24 hours before the suspension of service.

### 21. Disinfection and Flushing of the Lines

21.1 The new water lines shall not be placed in service either temporarily or permanently until they have been disinfected thoroughly in accordance with the following requirements to the satisfaction of the ENGINEER.

21.2 After pressure testing procedures have been completed, the CONTRACTOR shall flush the line thoroughly, removing all foreign material, dirt, etc. Then a solution of hypochlorite using HTH or equal, sufficient to insure a chlorine dosage of at least 50 parts per million through the entire length of the line, shall be introduced into the line.

21.3 The chlorine solution shall remain in the line for 24 hours and a residual of at least 25 parts per million should be present in the pipe at the end of the 24-hour period. The line shall be flushed until 2 parts per million chlorine residual remains, then bacteriological samples taken. One sample shall be taken per mile of pipeline with a minimum of 2 samples per line. Each sample shall be collected from a different point along the line. If negative samples are obtained, the lines may be put into service. If a positive sample is obtained however, the disinfection procedure shall be repeated until negative samples are obtained. Bacteriological test costs shall be paid by the CONTRACTOR.

21.4 Disinfection, pressure testing, other required testing and flushing are not pay items. The CONTRACTOR shall pay for all water used for testing, disinfection, and flushing, except the amount required to fill the pipelines twice. This amount will be computed and deducted from the total amount metered.

21.5 The CONTRACTOR shall install a temporary bypass with a meter around a valve at the point of connection to the existing water system. This meter will be for the purpose of measuring water used by the CONTRACTOR for flushing, testing, and disinfecting the new water lines. The meter shall be large enough to pass the required flows. It shall be tested for accuracy before being installed.

22. Rough Grade Work and Cleanup

22.1 Rough Grade Work and Cleanup (Rough Cleanup) shall be defined to include the final backfill and windrowing of the ditch line, disposal of excess excavated material, level grading of the disturbed areas adjacent to the ditch line, filling and leveling street and driveway cuts, cleaning up and removal of rubbish, repair of fences and structures, and any other such work that may be required to result in a neat, orderly project area. Rough Cleanup shall be performed as other construction progresses and must be completed within one week of the adjacent pipeline construction.

22.2 Rough Cleanup is not a separate pay item. The cost for this work shall be included in the unit bid price for water lines. If Rough Cleanup is not performed as specified, the OWNER will require deductions from partial payment estimates in accordance with the Supplemental General Conditions, Sections 3.3 and 18.

23. Final Cleanup (Also See Basis of Payment)

## Water Lines and Water Services

23.1 Final cleanup, grade work and seeding shall be performed on each line when backfilled trenches have had adequate time to settle, but at least within 2 months from the date each line is constructed. Final grade work and seeding on Kentucky Bureau of Highways rights-of-way shall be done in accordance with said Bureau's specifications and the permit granted to the OWNER specifically for this project.

23.2 Where work was performed on private property in lawns, earth of good quality, free from rock shall be spread over the disturbed area and graded and compacted to match adjacent ground contours. The previously removed topsoil shall be used for the final layer of backfill to facilitate productive growth of lawns, crops, and other vegetation. The graded area shall be hand raked until smooth and free from rock, potholes, and humps. The disturbed area shall then be seeded with the seed variety used on the original lawn (e.g., a bluegrass lawn shall be reseeded with bluegrass seed) and the seed raked in lightly. The seeded area shall be fertilized and then uniformly covered with straw to a depth of approximately 1 1/2 inches. **Final Cleanup in lawns must be completed within 2 weeks after Rough Cleanup.**

23.3 Where work was performed on private property and not in lawns the trench line shall be graded and filled if necessary to match adjacent contours. All rock larger than 1 1/2 inches in diameter shall be removed from the disturbed area. The previously removed topsoil shall be used for the final layer of backfill to facilitate productive growth of lawns, crops, and other vegetation. In general, pasture and fallow land shall be fertilized and seeded with Kentucky 31 Fescue and plowed fields shall be left unseeded, however, the desire of each property owner shall govern regarding seeding. Disturbed areas not in lawns are not required to be strawed unless erosion problems are anticipated by the ENGINEER.

23.4 In all cases on private property the rate of seed and fertilizer application shall be that recommended by the University of Kentucky Cooperative Extension Service for new plantings of the variety of grass seed used.

23.5 If the trench line settles following final grade work or if grass seed fails to germinate within a reasonable time, the CONTRACTOR shall regrade or reseed the area in question as specified above and as directed by the ENGINEER.

23.6 Final cleanup is a separate pay item.



**SECTION 4**  
**PUMP STATION - MECHANICAL**

1. Scope of Work

- 1.1 The **contractor shall furnish** and install one (1) - factory built, factory delivered, below-ground water booster pump station, in a modular equipment capsule with base frame with all necessary internal piping, valves, fittings, supports, meter, pumps, motors, controls and other necessary appurtenances as shown on the plans and specified herein.
- 1.2 The station **shall be complete when delivered and will not require internal contractor construction except to install the power service through the service conduit provided for that purpose and to connect the main water service to the required points** and other work as may be listed in the Section for **Contractor Installation Requirements**.
- 1.3 The above-ground water booster pump station shall be manufactured Engineering Fluid, Inc. (EFI), Centralia, Illinois, or pre-approved equal.

2. Contractor Installation Requirements

The **contractor shall be required** to set the station on the foundation designed by the engineer shown in the plan set, following all manufacturer specifications. **The foundation shall be built by the contractor and as directed by the engineer. Following setting of the station, the contractor will be required to anchor the station to the foundation. The contractor shall supply the anchor bolts. Additionally, contractor shall install & connect telemetry remote terminal unit (RTU). OWNER will assist contractor with terminal connections.**

3. Manufacturer's Responsibility for Performance

The Specifications and Drawings for the Factory-built equipment do not necessarily include all the details for the design and fabrication for the factory-built equipment. The Drawings are generally schematic but the specifications do call out strict requirements to known methods, components and assemblies that must be in a full, complete and functional pumping station. As such, the Manufacturer shall accept and hold complete responsibility for the functionality of the pump station and its workings.

4. Post Bid Submittal

- 4.1 Equipment submittals shall be bound and in a minimum of two (2) hard paper copy bound and electronic copy. The submittals shall contain a minimum of two (2) full size drawings, size 24" x 36"; one (1) each covering the booster pump station and the electrical control schematic.

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The booster pump station drawing shall be specific to this project, in at least three (3) different views, be to scale and illustrate the National Electrical Code (NEC) clearances per Section 110-26 of the Code. The submittal booklets will be complete with data sheets covering all major components that make up the booster pump station and the UL/ETL file number under which the manufacturer is listed, service department personnel statement as detailed in the specifications and be complete with the manufacturer's formal warranty policy.

- 4.2 Two (2) submittal reviews of this item will be accomplished at no cost to the submitting **contractor**. However, all subsequent reviews will be charged to the submitting **contractor** at the design engineer's standard hourly billing rate.

### 5. Quality Assurance

The equipment furnished shall be designed, constructed, and installed in accordance with the best practices and methods and shall operate satisfactorily when installed as shown on the contract drawings and operated per manufacturer's recommendations.

### 6. Third Party Inspection Listing (Stations 600V Max.)

The station manufacturer shall be required to affix to the station an UNDERWRITERS LABORATORIES (UL) LABEL attesting to the compliance of the station equipment under the PACKAGED PUMPING SYSTEMS (QCZJ) UL Listing Category and/or INTERTEK TESTING SERVICES (ETL) LABEL attesting to the compliance of the station equipment under PACKAGED PUMPING SYSTEMS. The ETL label shall state the station conforms to UL STD 778 and is certified to CAN/CSA STD C22.2 NO. 108.

### 7. Shipping and Delivery

7.1 The specified equipment shall be delivered by the manufacturer FOB DESTINATION and thereby the station manufacturer shall hold the full responsibility for the condition and completeness of the equipment upon its delivery. The Engineer shall hold the right to inspect the equipment prior to unloading and setting so as to assure the quality and condition of the equipment is in no way deficient. If in the view of the Engineer or Engineer's inspector, the equipment is deficient when delivered, delivery shall be refused.

7.2 The **installing contractor** shall follow all station manufacturer specifications for proper unloading and installation of station.

### 8. Factory Start-up and Training Service

8.1 Without exception, the station manufacturer is directly responsible for

station start-up and operator training. Third party contractors, agents or representatives are not to be allowed to start up the station nor the equipment therein. As such;

- 8.2 Start-up Factory Service Technician shall be a regular employee of the station manufacturer.
- 8.3 The manufacturer shall provide three (3) hard copies and an electronic copy of the complete Operation & Maintenance Manual.

9. Manufacturer's Warranty

- 9.1 The warranty is the sole responsibility of the station manufacturer and that manufacturer's warranty shall be provided in written form, being placed in both the Submittal documents covering the specified equipment and the O&M manuals provided with that equipment.
- 9.2 It is required the station warranty provide the Owner with a single source responsibility for all components specified herein and the system as a whole. That single source shall be none other than the station manufacturer. Third party suppliers, service contractors, "Pass-through" warranties and service by the representative are not acceptable. Said manufacturer's warranty shall at a minimum cover:
  - 9.2.1 A period of one (1) year commencing upon successful start-up, after authorized manufacturer's start-up, not to exceed eighteen (18) months from the date of shipment.
  - 9.2.2 The warranty period shall be inviolate regardless of any component manufacturer's warranty for equipment and components within the station.
  - 9.2.3 The manufacturer's warranty shall cover all equipment, components and systems provided in or with the station by the manufacturer of the station, exclusive of those components supplied by and/or installed by others independent of the manufacturer of record for this station.
  - 9.2.4 The warranty shall provide for the station manufacturer to bear the full cost of labor and materials for replacement and/or repair of faulty or defective components so there shall be no cost incurred by the Owner for this work during the warranty period.
  - 9.2.5 The manufacturer's warranty policy is amended only by the items considered consumable, i.e., light bulbs, pump seals, pump packing, lubricants and other maintenance items consumed by usage.

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- 9.2.6 No assumption of contingent liabilities for any component failure during manufacturer's warranty is made.
- 9.2.7 The warranty pertains only where the equipment has been operated in strict accordance with the manufacturer's instructions and requirements. Evidence of misuse or modification to the equipment voids the warranty.

### 10. General Liability Insurance

The water distribution station manufacturer shall furnish premises/operations and products/completed operations general liability insurance from an insurance company with a rating of A-V according to the most recent Best's Key Rating Guide, in an amount equal to \$10,000,000 per occurrence. The insurance certificate must be included with the manufacturer's submittal. The coverage must be provided by an insurance carrier licensed and admitted in the state of manufacture.

### 11. Equipment Capsule Design Criteria

- 11.1 The plate steel employed throughout the equipment capsule shall meet or exceed the requirements for ASTM-283, Grade D. The structural shall meet or exceed the requirements for A-36. The design of all members shall be in accordance with the recommended practice for design as specified in the MANUAL OF STEEL CONSTRUCTION, published by the American Institute of Steel Construction, Inc.
- 11.2 The equipment capsule shall be one completed unit when delivered. Field welding to complete the structure or attach the entrance tube will not be allowed. Steel plate of 1/4" minimum thickness will be used throughout the equipment capsule walls, top and bottom.
- 11.3 The plate forming the top and bottom of the equipment capsule will be knuckle radiused prior to assembly so as to form a lap joint with the wall. The average lap dimension will be 1 inches measured center of the internal weld to the center of the exterior weld at both the top and bottom joints. The lap joint will be continuously welded on the interior by hand and the exterior by machine to form an airtight seal.
- 11.4 All equipment capsule joints shall be welded both inside and outside. Any ferrous metal device passing through the equipment capsule wall will be welded fully along its circumference or length on both sides of the capsule wall.
- 11.5 The equipment capsule after installation of all components and completion of all penetrations shall be subject to an air test to assure the watertight integrity of the weld system. A test pressure of 3 psi shall be

maintained while a soap solution is applied to all welded joints on the exterior of the equipment capsule. The test pressure shall be measured by means of a tested and properly calibrated pressure gauge. Openings in the capsule shall be sealed against leakage.

- 11.6 All welds found to be defective shall be repaired and the capsule shall be retested. Six certified copies of a report covering each test shall be prepared by the Contractor and delivered to the ENGINEER not less than 10 days prior to shipment of the package pumping station, at the ENGINEER'S request.
- 11.7 The equipment capsule shall be a rolled, vertical cylinder with dimensions shown on the plans.
- 11.8 The bottom of the equipment capsule shall be reinforced by two (2) 8-inch channels in parallel. There shall also be three (3) 6-inch channels in parallel, placed perpendicularly to the 8-inch channels. The top of the equipment capsule shall be reinforced by a minimum of five (5) 4-inch by 4-inch by 1/4-inch angles.
- 11.9 Four (4) lifting plates of 3/8 inch minimum thickness shall be placed about the perimeter of the equipment capsule to facilitate the lifting and handling of the station. These lifting plates shall be so located as to insure proper balance of the entire pumping station during the setting operation. Interior lifting eyes shall be placed over each piece of equipment in excess of 60 pounds in weight.
- 11.10 The equipment capsule entrance manway shall be a prefabricated metal roof scuttle, rectangular in shape with a minimum clear inside opening of thirty (30) inches by fifty-four (54) inches. The scuttle cover shall be made of 11 gauge aluminum on the exterior with a three (3) inch beaded, vertical flange, neatly welded and sized to cover the scuttle riser section. The scuttle cover shall be insulated with a minimum of one (1) inch of fiberglass insulation, covered and protected by an 18 gauge aluminum liner. The scuttle riser section shall be formed with an integral 3-inch flange with holes provided for securing the entrance manway to the angle framing on the top of the equipment capsule. The scuttle riser shall be provided with an integral metal cap-flashing of the same gauge and material as the riser, full welded at the corners for absolute weather tightness.
- 11.11 The scuttle shall be completely assembled with heavy pintle hinges, compression spring operators, enclosed in telescopic tubes and a full perimeter, foam draft seal. The cover shall be equipped with an automatic hold open arm complete with red vinyl grip handle to permit easy, one hand release. When the scuttle cover is in the open position, the hold open arm will engage a lock-open device to prevent accidental

## Pump Station - Mechanical

closing of the scuttle cover. All entrance manway hardware shall be zinc plated with the exception of the entrance lock which shall be brass.

- 11.12 The entrance manway shall be connected to the top of the equipment capsule by an attachment system. Neither factory nor field welding of the entrance manway will be permitted. The attachment system shall include but not be limited to ten (10) 3/8" diameter flange bolts with nuts and two (2) flat washers each, bedding compound sealant, 4504 Scotch polyfoam, single side adhesive coated 1/4" by 3" gasket material and four (4) each 3x2x3/16" flange reinforcement cap angles.
- 11.13 The entrance manway attachment system shall whenever possible be factory installed. If because of shipping restrictions the entrance manway cannot be factory installed, field attachment is permitted only if performed by factory personnel.
- 11.14 The entrance manway shall be provided with keyed entry. The entry lock shall be flush mounted, in the scuttle riser, in position to be protected from the elements by the cover skirt. The lock will be of the pin tumbler type as manufactured by Ilco, P/N 7016Y8-25-KA2, dead bolt, with an inside safety release. Two (2) keys will be provided, on a key ring complete with the manufacturer's identification. Locking mechanism shall be lockable from the outside by only closing the hatch.
- 11.15 Data sheets detailing the entrance manway and the attachment system are to be included in the manufacturer's equipment submittal.
- 11.16 An all-aluminum access ladder will be provided. The ladder will meet UL and OSHA approval under the Type I, Heavy Duty Specifications. The ladder will have 1-1/4" diameter, tempered, and serrated rungs with 3" by 1-1/8" full I-Beam side rails. The uppermost ends of the side rails will be protected by plastic caps bolted into place. The complete access ladder will be bolted into place, at a minimum of two (2) points both top and bottom, so as to be easily removable or facilitate equipment maintenance.
- 11.17 The equipment capsule will be complete with a sump to accommodate the automatic sump pump specified elsewhere herein. The sump shall be a minimum of eighteen (18) inches in diameter by eight (8) inches deep and shall be fabricated of plate 1/4 inch minimum thickness. The sump shall be located so as to insure proper and complete drainage of the equipment capsule floor.
- 11.18 The equipment capsule floor walkway area shall be covered with a ridged, neoprene floor mat. The floor mat shall not be glued to the floor surface.

12. Pump Operating Conditions – Pump Station

The pump station shall be capable of delivering the fluid medium at the following capacities and heads. The pumps shall be Close Coupled End Suction by Grundfos Paco Model 20501 LC or approved equal.

PUMP(S) #1, #2:

Design Point: 200 GPM @ 65 feet TDH;

Pump Efficiency at Design Point: 75%

Pump Power: 5 HP

Motor Speed: 3530 rpm nominal.

13. Pumps – Close Coupled Horizontal End Suction, Centrifugal

13.1 The pumps employed within the pump station shall be of the close coupled, horizontal end suction, centrifugal configuration.

13.2 The pumps shall be of close grain cast iron construction complete with Bronze trim. The pumps shall conform to the detailed specifications as set forth below:

13.3 The pumps shall be Volute style with the pump casing bolted to adapter, with recessed lock fit to insure alignment. No stud or bolt holes are tapped through casing to liquid ways. Tapping openings provided for priming, venting, draining and suction and discharge gauge connections. Piping connection are to be as shown on the pump data sheets.

13.4 Impellers are to be single suction type, cast in one piece. All impellers are to be statically balanced to insure smooth operation, also hydraulically balanced except in some small sizes where end thrust is but a minor factor.

13.5 Wearing rings shall be renewable, be set on both the impeller and body and be set maintain proper running clearance with impeller hubs to minimize leakage between the suction and discharge.

13.6 Shaft sleeves shall be shouldered onto the shaft near impeller to cover the full length of shaft from impeller hub to motor end bracket by being in compression over the shaft protecting shaft from contact with liquid.

13.7 The stuffing box shall be cast integral with the pump casing. The stuffing box shall contain a single face type mechanical seal. The seal shall have a carbon rotating head against a Ni-Resist stationary face and be complete with a Buna-N boot with stainless steel spring and spring retainer.

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- 13.8 The motor adaptor shall maintain a rigid, bolted, registered assembly between motor and the casing by a machined lock between adapter and motor end bracket keeping the adapter and casing in permanent alignment with motor and motor shaft.
- 13.9 Motor configuration shall be as a close-coupled assembled as an integral part of the complete units. The extended motor shaft carries the impeller and shaft sleeve. Motor bearings are ball bearing type, designed to carry all radial and thrust loads, and are installed in sealed housings which retain lubricant and exclude dirt and moisture.

### 14. Pump/Motor Vibration Isolation Pads

The pump/motor assembly shall be mounted to a fabricated steel base built specifically for the pump/motor to be mounted. Each mounting or attachment point shall be complete with a vibration isolation pad. The pad will be in two (2) parts, a 1/4" base layer followed by a 5/8" upper layer and be a nominal 2" x 2" square size for pump/motor combinations weighing up to 1500 pounds.

### 15. Pump Support Stands

The pump support stands shall be weld fabricated of structural and plate steel with double "H" configuration of solid, continuous legs and double webbing between the legs for rigidity. The base of the legs shall be flanged and continuously welded to the steel floor. The upper end of the legs shall be flanged and continuously welded to a 3/8" thick pump motor leg bolt-down plate.

### 16. Pump Motor Configuration

- 16.1 The pump driver shall be a NEMA Design B, three phase, alternating current, (squirrel cage) induction motor, continuous duty rated, with motor insulation as Class F for Class B Heat Rise.
- 16.2 Motor efficiencies shall be Premium Efficient as stated in NEMA MG 1, 2011 Part 12, Table 12-12 for the motor enclosure, open or closed.
- 16.3 Motor Service factor shall be 1.15 on the nameplate, reduced to 1.0 when used with variable frequency drives per NEMA MG 1 – 2011, Part 31.3.7.
- 16.4 The motor enclosure shall be Open Drip Proof.
- 16.5 Motors of 600 volts or less shall meet the requirements of NEMA MG 1 2011 Part 31.4.4.2 for ability to sustain voltage spikes when used with variable frequency drives under usual conditions
- 16.6 These motors are for use with variable frequency drives.



17. Piping - Transmission

- 17.1 Piping shall be steel and conform to material specification ASTM A-53(CW) for nominal pipe size four (4) inch and smaller and ASTM A-53(ERW) Grade B for nominal pipe size five (5) inches and larger. Steel butt-welding fittings shall conform to material specification ASTM A-234 Grade WPB and to the dimensions and tolerances of ANSI Standards B16.9 and B16.28 respectively.
- 17.2 Forged steel flanges shall conform to material specification ASTM A-105 Class 60 and/or ASTM A-181 for carbon steel forgings and to the dimensions and tolerances of ANSI Standards B16.5 as amended in 1992 for Class 150 and Class 300 flanges.
- 17.3 The piping sizes shall be as shown on the drawing.
- 17.3.1 Size 10 inch and below - Schedule 40
- 17.3.2 Size 12 inch thru 20 inch - Standard weight (.375" wall)
- 17.3.3 Size 24 inch and above - Standard weight (.500" wall)

18. Pipe Welding Certification

- 18.1 All pipe welds shall be performed by certified welders employed by the pump station manufacturer. As part of the equipment submittal, the pump station manufacturer shall provide copies of the welding certificates of the employees who are to perform the pipe welds.
- 18.2 Shop welders shall be certified in accordance with ASME BPVC Section IX or AWS D1.1. Certification shall be done by an independent testing laboratory giving certification for the weld positions for which the tests were performed.

19. Pipe Surface Preparation

All piping inside and outside surfaces shall be prepared by grit blasting, or other abrasive blasting, prior to any welds taking place to minimum SP-6 finish.

20. Pipe Cutting

- 20.1 Piping of 4" diameter and smaller may be cut by saw.
- 20.2 Piping of 6" diameter and larger shall be bevel cut, and Oxyfuel or Plasma-arc cutting techniques shall be used to assure and facilitate bevel pipe cuts.

21. Saddle Cuts and Welds

Saddle cuts in pipe made in preparation for a saddle weld of a pipe at an angle to

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a pipe shall be made with numerically controlled, plasma cutting machines. Similarly, saddle end cuts to pipes to make a saddle mating piece shall be done with the same numerically controlled plasma cutting equipment. When the two saddle cut pieces are mated and welded with the MIG process, the internal finished weld shall be smooth and free of inclusions, crevices and other corrosion sites.

### 22. Pipe Welding Techniques

- 22.1 Pipe welds shall be performed by metal added, inert gas shielded arc welding (MIG) techniques wherein the weld heat settings, the wire feed speed and the traverse speed of the work below the welding are numerically set to assure proper weld fusion and penetration and repeatable welds.
- 22.2 In all cases, short circuit transfer, spray transfer or pulse-arc transfer modes of the gas metal arc welding process shall be used.
- 22.3 When utilizing the short circuit mode, shielding gas consisting of 50% carbon dioxide and 50% argon gas shall be used. When utilizing the spray or pulse-arc transfer modes, a shielding gas consisting of 5% carbon dioxide and 95% argon shall be used.
- 22.4 In all cases, welding wire with a minimum tensile strength of 70,000 psi shall be employed.
- 22.5 All flange welds and butt welds of equal size pipe shall be a single continuous nonstop weld around the complete circumference of the pipe. Whenever possible, vertical up weld passes will be applied to all pipe welds. No vertical down weld passes will be allowed.
- 22.6 Completed pipe welded assemblies shall create no internal obstruction, restriction or create any unintended sources of water deflection.
- 22.7 Piping of six (6) inch diameter and larger shall require a minimum of two (2) weld passes to complete each weld. The first pass, or root pass, shall be applied at the bottom of the bevel cut using the short circuit transfer welding mode, and the second pass, or cap pass, shall be applied over the root pass using the spray or pulse arc transfer welding modes to insure that at a minimum the total weld thickness shall be equal to thinnest of the two pieces being welded together.
- 22.8 The pipe shall be sand blasted, as specified elsewhere, before pipe weld and after pipe weld, before fusion bonded epoxy is applied.

### 23. Weld Standoffs

No welding shall be performed on fusion bonded coated piping after the coating

process has been performed. Where any piping is to be welded after the application of fusion bonded epoxy coating to the inside of the pipe, at the point of the weld, a weld standoff must be welded to the pipe prior to the coating. The weld shall be made to the standoff and not onto the pipe.

24. Pipe Supports

24.1 Pipe supports by minimum sizing for:

- 24.1.1 8" and smaller piping shall be 2" x 3" x 3/16" wall rectangular tubing;
- 24.1.2 10" and larger piping shall be 3" x 4" x 1/4" wall rectangular tubing;
- 24.1.3 6" and larger piping shall be provided with "kick" bracing projecting fully from the underside of the pipe to the floor at an angle of no less than 15E from vertical out at a right angle to the run of the pipe being supported. These "kick" braces shall be in addition to the vertical pipe supports called out above.

24.2 Pipe supports are to be fully welded at both end points to the pipe and steel floor where required.

24.3 Where components are to be supported and may require disassembly at some time, the supports for these components shall be welded at the bottom and bolted at the top by use of a bolt yoke welded to the top of the support and bolted into the flange connection picking up at least three bolts.

25. Fusion Bonded Epoxy Internal Pipe Coating

25.1 The internal surfaces of piping to be fusion bonded coated shall be grit blasted to an SP-10 finish with the finish profile required by the coating material manufacturer.

25.2 The internal, wetted surfaces of the steel transmission piping shall have applied to it a Fusion Bonded Epoxy Coating on the interior pipe surface. The coating shall be applied and meet the testing requirements of Table 1 and Table 2 with the exception of Table 2 section 7 per AWWA C-213.

25.3 The powder coating product shall be National Sanitation Foundation (NSF) Standard 61 certified material.

25.4 The epoxy powder coating shall be Powdura NSF-61 ELS8-80003 from Sherwin Williams.

25.5 Prior to shipment of the station, the station manufacturer shall provide in writing to the Engineer certification that the fusion bonded epoxy coating

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has been applied to all internal surfaces of the steel piping using the proper method. Said certification shall show under the station manufacturer's letterhead:

- 25.5.1 Date of application;
- 25.5.2 Material manufacturer and product designation including a product data sheet for the coating;
- 25.5.3 Applier of the fusion bonded coating, name, address and phone number;
- 25.5.4 Notarized signature of an officer of the station manufacturing company stating the fusion bonded epoxy coating was applied to AWWA Standard C213-91 or the latest revision.

## 26. Corrosion Protection

- 26.1 All interior and exterior surfaces of the exposed steel structure, transmission piping, and fittings shall be gritblasted equal to commercial blast cleaning (SSPC-SP6). Following fabrication all exposed surfaces of the station, interior and exterior, shall be coated according to the following requirements.
- 26.2 *Weldment Prime Coating:* All weldments will be pretreated by hand to provide additional corrosion protection using the same product as the base coat. Following the pretreatment full coating application shall take place.
- 26.3 *Base Coating:* The base coating shall take place immediately after surface preparation. The protective coating shall consist of a two-component, high solids, high build, fast drying epoxy system for protection and finishing of steel and having excellent corrosion resistant properties. The epoxy system shall be self-priming and require no intermediate coatings.
- 26.4 *Top Coating:* Following the base coating application, a full finish coating application shall take place. The protective coating shall consist of a two-component, high solids, high build, fast drying epoxy system for protection and finishing of steel and having excellent corrosion resistant properties. The epoxy system shall be self-priming and require no intermediate coatings. The base and finish coats shall provide a total dry mil thickness of 8.0 mils.
- 26.5 *Post-Assembly Coating:* Following assembly and just prior to shipping, there shall take place a thorough cleaning of the floor of the station followed by a rolled on coating of the two part epoxy coating to cover over any scuffing or scaring that might have occurred during assembly.
- 26.6 *Cathodic Protection:* The station manufacturer shall furnish four (4) seventeen (17) pound packaged magnesium anodes for cathodic

protection. The anodes shall be buried equally spaced around the station and connected by heavy copper wire to lugs on the station provided for that purpose.

27. Service Connections on Internal Piping

All plumbed devices within the station eventually requiring service, such as meters, control valves, pumps and like equipment, shall be easily removed from the piping by the presence of appropriately placed and sufficient quantity of adaptors and couplings as shown on the drawings; no less than the quantity of couplings and adaptors shown shall be allowed.

28. Restraining Points

The main inlet and outlet piping to the station shall each be provided with two (2) or four (4) restraining points as welded on "eyes" or similar device welded to the capsule or framing to facilitate the attachment of joint restraint tie rods or other device to be used in retarding any pipe movement at the connections.

29. Compression Couplings

29.1 The station piping shall include a variety of compression type, flexible coupling to prevent binding and facilitate removal of associated equipment. These couplings are to be where shown on the plans. In lieu of a compression coupling, a flanged coupling adapter (FCA) may be used. FCA shall be Smith-Blair 912 or approved equal. Refer to drawings restraint requirements.

29.2 Grooved fittings may not be used under any circumstance.

29.3 Compression couplings or flanged coupling adapters (FCA), and flexible connectors/expansion joints shall include a minimum of two (2) zinc coated steel threaded rods across the joint with appropriate bolted restraining points as shown on drawings.

30. Elastomer Pipe Connector

30.1 The inlet side of each booster pump shall include an elastomer connector to help isolate vibration and noise in the piping system. The elastomer connector shall be of single sphere design, constructed of neoprene and nylon with bias-ply tire reinforcing cord to provide a 225 psi working pressure rating to a minimum of 120 degrees F. The elastomer connector shall pass through the plate steel flanges designed to grip the connector so the connector seals without gaskets when the flange bolts are drawn up.

30.2 A control joint limiting pipe connector movement shall be supplied with

## Pump Station - Mechanical

each pipe connector.

### 31. Line Pressure Gauges

- 31.1 Combination pressure gauges shall have a built-in pressure snubber and have 4-1/2" minimum diameter faces and turret style case, black fiberglass-reinforced thermoplastic with a clear acrylic window with Buna-N gasket. The movement shall be rotary; the bourdon tube shall be copper alloy C-type. The gauge shall have a 1/4" MNPT lower mount process connection and contain a 0.6mm copper alloy restrictor. Combination pressure gauge range and scale graduations shall be in psi and feet of water as follows:
- 31.2 Gauge ranges shall be established by the Engineer for each of the suction and discharge gauges for each pump station.
- 31.3 All gauges will be panel mounted off the pipeline and be connected to their respective sensing point. The gauge trim tubing shall be complete with both isolating and vent valves and the tubing shall be so arranged as to easily vent air and facilitate gauge removal. Gauges mounted directly to the pipeline or at the sensing point will not be accepted.
- 31.3 Gauge ranges, markings and gauge location shall be identified in the submittal documents.
- 31.4 Additionally, 1/4" PE tubing for both suction and discharge shall be plumbed to proposed RTU location.

### 32. Static and Sensing Lines

- 32.1 All gauge, switch and transmitter sensing lines shall be minimum 1/4" OD white polypropylene tubing run from the sensing point and a ball valve to the point of device mounting.
- 32.2 The pilot tubing shall be run in a workmanlike manner with elastomeric/stainless steel mounting straps to securely hold the tubing to be free of stress and vibration. The alignment and organization of the sensing lines shall be continuously rising.

### 33. Sample Tap

A single, right angle outlet, smooth nose, brass sample tap shall be affixed to a manual vent ball valve.

### 34. Hose Bibb with Vacuum Breaker

There shall be provided a standard hose bibb with valve and vacuum breaker on the suction piping. The hose bibb connection shall be through a pressure

regulator if the header pressure would exceed 60 psi.

35. Ball Valves

The ball valves will be 2-piece, full-port design with blow-out proof stem. The seats, packing and seal shall be PTFE. Ball valves shall be provided with an adjustable stem packing nut. The body and retainer shall be lead free brass (DZR). The ball shall be lead free brass (DZR), chrome plated for sizes 1/4"-1" and 316SS for sizes 1-1/4"-4". The handle shall have a distinctive white "lead free" handle grip and blue "lead free" hanging tag. The valves will be NPTxNPT threaded pattern. Maximum working pressure shall be 600 psi up to 2" and 400 PSI for sizes 2-1/2" to 4".

36. Butterfly Valves

36.1 Valve body shall be one-piece wafer or lug design with extended neck to allow for 2" of piping insulation. Flange locating holes shall be provided on wafer bodies to allow for quick and precise alignment during valve installation. Flange hole drilling per international flange standard as specified. A non-corrosive bushing and a self-adjusting stem seal shall be provided. No field adjustment shall be necessary to maintain optimum field performance.

36.2 The disc edge and hub on metal discs shall be spherically machined and hand polished for torque and maximum sealing capability. Disc shall be Nylon 11 coated ductile iron.

36.3 The stem shall be one-piece design. Disc to stem connection shall be and internal double "D" design with no possible leak paths in the disc-to-stem connection. External disc-to-stem connections such as disc screws or pins are not allowed. Stem shall be mechanically retained in the body neck and no part of the stem shall be exposed to the line media.

36.4 The seat shall be tongue-and-groove seat with a primary hub seal and a molded flange O-ring for weld-neck and slip-on flanges. The seat shall totally encapsulate the body isolating it from the line media and no flange gaskets shall be required.

36.5 The valve shall be rated for bubble-tight shut-off at pressures of 175 PSI for 2"-12" and 150 PSI for 14"-20".

36.6 Valve manufacturer:

36.6.1 DeZURIK

36.6.2 Keystone

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### 37. Manual Valve Actuators

37.1 Manually operated butterfly valves size 6" and smaller shall be equipped with lever style operators capable of withstanding 450 ft. lbs. of input torque and mounted to the valve trunnion with 4 bolts.

37.2 Manually operated butterfly valves size 8" and larger shall be equipped with travelling nut style handwheel operators capable of withstanding 450 ft. lbs. of input torque and mounted to the valve trunnion with 4 bolts.

### 38. Check Valve

38.1 Check valves shall be Apco Model 600 series, Val-matic or approved equal, globe style silent check valve with bronze seat and plug, stainless steel helical spring. The valve plug shall be center guided at both ends through an integral shaft.

### 39. Isolating Gate Valve

39.1 The isolating valve as shown shall be a full ported gate valve meeting the requirements of AWWA C-515. The body, bonnet, wedge and seal plate shall be ductile iron in accordance with ASTM A536. The wedge shall be totally encapsulated in rubber. The rubber coating shall be permanently bonded to the ductile iron wedge casting and shall meet ASTM D429 tests for rubber to metal bonding. No paint shall be allowed in the wedge and the wedge must not be hollow. All gaskets shall be O-ring seals. All fasteners are to be 304 stainless steel. The body, bonnet and seal plate shall be epoxy coated in accordance with ANSI/AWWA C550 certified to NSF 61. The coating shall be on the interior and exterior of the valve.

39.2 The valves are to be non-rising stem with handwheel operator, opening left.

39.3 The valve body shall be flanged and drilled to ANSI B16.1, Class 125.

39.4 Valve maximum working pressure rating shall be 250 psi.

39.5 Valve manufacturer:

39.5.1 M&H 4067-02

39.5.2 Mueller A-2360-6

### 40. Pump Control Valve

The pump control valve shall be pilot controlled, hydraulically operated, diaphragm type automatic control valve. The main valve shall be furnished with a resilient, replaceable seat. The pilot control pilot shall be a direct-acting, adjustable, spring loaded, normally closed pilot designed to close the main valve



whenever the sensed pressure is below the pilot spring setting. The relief valve shall function to limit the discharge header pressure to the value set into the control pilot. The valve shall be sized as shown on the plan and be angle/globe pattern, flanged to meet ANSI Class 125 and have a maximum pressure rating of 175 psi.

The pump control valve shall be complete with a hydraulic, cushioned check feature so as to automatically close the main control valve on a pressure reversal, thereby prohibiting backflow. The control valve shall be globe pattern, flanged to meet 125 pound ANSI standards and be sized as shown on the drawings. The pump control valve shall be CLA-VAL Model 50A-01BD.

41. Flow Meter

Flow Meter shall be a 4" Omni Sensus T2 Turbo Meter.

42. Pressure Testing

42.1 When the station plumbing is completed, the pressure piping within the station (including valves, pumps, control valves, and fittings), connections as make up the entire system shall be hydrostatically tested at a pressure of 150 psi or a pressure equal to the lowest test pressure rating of the equipment within the tested system, whichever is lesser pressure. The test pressure shall be applied for a minimum of 20 minutes, during which time all joints, connections and seams shall be checked for leaking. Any deficiencies found shall be repaired and the system shall be retested.

42.2 The results of this testing shall be transmitted in writing to the Engineer prior to shipment of the station and shall note test pressure, time at full pressure and be signed by the Quality Control Manager or test technician.

43. Peripheral Equipment

43.1 Exhaust Fan

43.1.1 There shall be included in the equipment capsule one (1) exhaust fan, flange mounted to the exhaust air piping as near the equipment capsule roof as is practical. The fan capacity shall be 232 cfm at 0.2 inch static pressure (inches of water). The fan shall feature a shaded pole motor with a squirrel cage blower. The blower wheel shall be statically balanced to assure quiet performance and maximum air delivery.

43.1.2 The fan motor will be complete with a conduit box. The exhaust fan shall operate on an independent 120 volt, single phase A.C. power source with single pole, 15 amp circuit breaker protection, hard wired in conduit to conduit box on motor. Automatic control

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of the exhaust fan shall be by thermostat, air conditioning type (make on the rise) wired in parallel with a three (3) position maintained (H-O-A) selector switch located on the face of the main control panel. The exhaust fan control equipment shall be wall mounted, in a receptacle box expressly designated for that purpose and in a location convenient for the use intended. Also included shall be a limit switch installed at the hatch to activate exhaust fan whenever the entrance hatch is open.

- 43.1.3 The exhaust air piping system shall be size three (3) inch and be welded through the roof and terminate at a point sixteen (16) inches above the roof. The cold air return piping system shall also be size three (3) inch and on the exterior begin sixteen (16) inches above the capsule roof and terminate on the interior as near the equipment capsule floor as is practical. Both exterior air system pipes will be complete with white, PVC 180 degree return bends that are equipped with removable aluminum wire mesh insect screening. The cold air return pipe will be complete on the interior with a white, PVC 180 degree bend at its lower terminus. The purpose of this lower return bend is to prevent incidental condensation from entering the station via the return air system. Exhaust and return air piping must be rigid and permanently fixed. Flexible, spiral wound, cloth ducts will not be accepted.

### 43.2 Dehumidifier

A packaged dehumidifier with a sealed refrigeration type compressor rated at 1/5 horsepower, 4.7 full load amps and 430 watts shall be wall mounted within the equipment capsule in such a manner that the condensate shall discharge to the sump through tubing provided for that purpose. The dehumidifier shall operate on a 120 volt, single phase A.C. power source and be provided with a safety protected power cord of UL approved three wire construction with three spade plug. The dehumidifier shall be capable of removing twenty-seven (27) pints of water in twenty-four (24) hours when the room temperature is 80 degrees Fahrenheit and at 60 percent relative humidity. (AHAM Standard DH-1) The dehumidifier shall be actuated by a dial-controlled adjustable humidistat which will automatically cycle the unit at pre-selected moisture levels. The humidistat shall also have "Off" and "Continuous Run" positions. The dehumidifier shall be listed by Underwriters Laboratories.

### 43.3 Heater

- 43.3.1 The equipment capsule will be provided with an electric heater. The heater will have a rating of 3,000 watts, 10,240 BTU/HR output when operating on a 240 volt, single phase A.C. power source. The heater will be equipped with a 600 rpm low speed axial vane blower designed to deliver 175 cfm of down flow air

and be driven by a four (4) pole motor. The heating element shall be of the sealed tubular type with large parallel steel fins for quick heat transfer. The heater will be complete with a thermal overload cut off and a built-in thermostat calibrated to provide a range of 55 degrees Fahrenheit to 85 degrees Fahrenheit.

- 43.3.2 The heater shall be wall mounted, hard wired and complete with an individual 240-volt circuit, protected by a 2 pole, 15 amp circuit breaker. The heater will be listed with Underwriters Laboratories, NEMA Standard 3-9-1967, HE2-2-02 Type I.

#### 43.4 Sump Pump

- 43.4.1 One (1) automatic submersible sump pump, with a rate capacity of nineteen (19) gpm at fifteen (15) feet TDH shall be installed in the equipment capsule sump. The sump pump shall be complete with a fractional horsepower motor, oil filled and hermetically sealed, designed to operate at 1,550 rpm, on a 120 volt, single phase, A.C. power source and draw no more than 7.7 amps. A carbon and ceramic shaft seal shall prohibit the pumped fluid from entering the motor housing. The switch cap, pump and motor housing shall be made of cast iron, the impeller shall be glass filled Valox and the base and strainer plate shall be glass filled polypropylene. A safety protected power cord of UL approved three (3) wire construction with 3 spade plug will be provided. The actuating float switch shall be NEMA 6 rated, replaceable without removing the pump or motor and adjustable so as to operate within a six (6) inch differential.

- 43.4.2 The sump pump discharge piping within the equipment capsule shall be size 1 1/2 inch below the vertical check valve and size 1 1/4 inch above the check valve to the coupling in the equipment capsule side sheet. The sump pump discharge piping material will be Schedule 40 PVC, grey in color with solvent weld connections. The discharge piping system will be complete with a vertical check valve that employs a union on both upper and lower connection points. The vertical check shall have a resilient seat, designed to be easily field replaceable. An optional dewatering drain system for freeze protection shall be designed into the sump pump discharge piping system. The dewatering line shall be included with the equipment and will be field installed, if required, by the start-up technician.

#### 44. Site Work and Installation

- 44.1 **Contractor is responsible for preparing site for installation of**

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**package pump station** including excavation, grading, providing site access and constructing a station foundation meeting manufacturer & OWNER specifications and requirements.

- 44.2 **Contractor shall install Permanent Access drive** as shown on plans and directed by the Engineer. Access drive shall be graded as needed and include filter fabric & 6" of compacted Dense Graded Aggregate (DGA).
- 44.3 **Contractor shall perform excavation, grading and final cleanup in a manner similar to that described in Section 3, hereinbefore.** Surplus excavation material shall be removed from the site and disposed of in a manner satisfactory to the ENGINEER. Removal of water from excavations shall be at the Contractor's expense. Blasting shall conform to requirements of applicable paragraphs of Detailed Specifications – Section 3.
- 44.4 **Contractor shall conform to applicable paragraphs of Section 3** for all items of work related to underground water line construction (outside piping) on the pumping station sites.
- 44.5 **Contractor shall follow all manufacturer guidelines** for all package pump station installation procedures.

**SECTION 5**  
**PUMP STATION - ELECTRICAL AND CONTROLS**

1. Scope of the Work

The work to be accomplished under this section of the Specifications consists of the furnishing of labor, materials, equipment, and services associated with the electrical and control work for a Water Booster Pump Station. This work is described more fully on the Drawings and specified herein.

2. General

2.1 **It is recommended that BIDDERS visit the site and contact Warren Rural Electric Cooperative Corp. (WRECC) for any utility requirements that might arise from the electrical Drawings included with these Specifications.** The service entrances are to be provided with adequate capacity for the operation of motors, controls, and other facilities, including future operations as applicable.

2.2 **All work shall be done in a neat workmanlike manner. Electrical codes of the utility involved, as well as the NEC shall be observed. All materials and equipment installed shall be guaranteed for a period of one year.** Replacement of any such items that fail to operate properly in this period of time shall be replaced at no added cost to the OWNER.

2.3 **The CONTRACTOR shall be responsible for installing all equipment as shown on the Drawings. The CONTRACTOR shall mount the provided RTU as shown on the Drawings and shall install all required interconnect wiring. The CONTRACTOR shall also install the antenna as shown on the Drawings including antenna riser, coax cable and suppressor to RTU.**

3. Control & Power Distribution Panel

3.1 The pump station control & power distribution panel shall be sized and wired to accommodate power distribution, controls, and auxiliary circuits for two (2) high performance **5 HP** pumps. All components incorporated into the station control panel shall be Square D or as specified hereinafter, or approved equal. All control work shall conform to the NEC and only U.L. listed devices shall be used. The front panel layout shall be as shown at the end of this section.

3.2 The electrical service provided to this station shall be 240-volt, 3-phase, 60-cycle, 4-wire and sized for all noted equipment required.

## Pump Station - Electrical and Controls

### 3.3 Enclosure

- 3.3.1 The enclosure used to house all station control components shall be a Hoffman NEMA 12, continuous hinge enclosure, or approved equal, and shall be service entrance rated. The CONTRACTOR shall furnish the enclosure with all components mounted onto a separate back plate onto which din rails and wire ways are to be installed. The enclosure shall be sized to accommodate all required components with reasonable additional space for future control relays.
- 3.3.2 The enclosure shall incorporate four (4) mounting tabs that are factory welded to the enclosure. The mounting tabs shall allow for the mounting of the panel flush with the wall. Alternatively, the enclosure may be floor mounted with matching legs.

### 3.4 Power Distribution

- 3.4.1 The station control panel shall contain circuit breakers as shown on the schematic. Three phase breakers shall be Square D, or approved equal. The main circuit breaker shall be service entrance rated. Single phase breakers shall be Square D Type QO, or approved equal.
- 3.4.2 Separate neutrals shall be provided for each circuit.
- 3.4.3 A phase monitor shall be supplied to protect three-phase equipment against phase loss, undervoltage and phase reversal conditions. When a fault is detected, the monitor output relay opens within two seconds or less to turn the equipment off. Both Delta and Wye systems may be monitored. The monitor shall have an automatic reset and shall also include an adjustable voltage delay. The monitor shall have an indicator LED (glows when all conditions are normal and shall monitor phase sequence: ABC operate (will not operate CBA). The phase monitor shall be UL approved and CSA certified. The relay shall be The phase loss relay shall be Diversified Electronics SLA-230-ASA, or approved equal.
- 3.4.4 The Transient Voltage Surge Suppressor (TVSS) shall provide 100 kA of surge suppression and be complete with EMI/RFI filtering. The TVSS shall be Sycom Model SYC-240-3D or approved equal.

### 3.5 Control Components

- 3.5.1 **Control relays shall be Square D Class 8501 Type KP or approved equal. Timer relays shall be Square D 9050 Type JCK70V20 or approved equal.**

3.5.2 Selector switches shall be Square D Type K, 120 VAC, 30 mm, Class 9001, black, maintained, non-illuminated selector switches. 3-position selector switches: P/N KS43BH13 (NO/NC, as applicable); 2-position selector switch: P/N KS88BH13 (NO/NC, as applicable). Each selector switch base shall have auxiliary contacts for the connection of the selector switches to the RTU.

### 3.5.3 Pushbuttons

3.5.3.1 The station control panel shall be equipped with three (3) momentary pushbuttons to act as resets for the Control Valve and Pump Fail pilot lights. The momentary pushbuttons shall be located as detailed on the pump control panel drawing. Pushbuttons shall be Square D Type 9001 KR1, 120 VAC, non-illuminated.

3.5.3.2 The station control panel shall be equipped with a single E-Stop button, 2 1/4-inch mushroom head, pull to reset. The E-stop button shall be located as detailed on the station control panel drawing.

### 3.5.4 Pilot Lights

3.5.4.1 Pilot lights shall be located on the station control panel as detailed on the control panel drawing. Pilot lights shall be Square D Type 9001 KP with fresnel lenses operating at 120 VAC. Red: P/N KP1R31, Green: P/N KP1G31, and Amber: P/N KP1A31.

3.5.4.2 The station control panel shall be equipped with pilot lights for the following:

3.5.4.2.1 Pump 1 Call – Amber

3.5.4.2.2 Pump 2 Call – Amber

3.5.4.2.3 Pump 1 Run – Green

3.5.4.2.4 Pump 2 Run – Green

3.5.4.2.5 Pump 1 Motor Fail – Red

3.5.4.2.6 Pump 2 Motor Fail – Red

3.5.4.2.7 Low Suction Lockout Alarm – Red

3.5.4.2.8 High Discharge Lockout Alarm – Red

3.6 A running time meter shall be supplied for each pump to show the number of hours of operation. The meter shall be enclosed in a dust and moisture proof molded plastic case, suitable for flush mounting on the main control panel. The meter dial shall register in hours and tenths of hours up to 99999.9 hours before repeating. The meter shall be suitable for operation from a 115 volt, 60 cycle supply.

## Pump Station - Electrical and Controls

- 3.7 Indicator lights switches shall be identified with engraved, mechanically attached nameplates.
- 3.8 The station control panel shall incorporate a terminal strip to allow for the interconnection of the station control panel to the RTU. Terminal strip connections shall be as shown on the station control panel schematic.

### 4. Control Panel Wiring

- 4.1 Station control panel wiring shall conform to high quality assembly standards. All components shall be UL listed where available.
- 4.2 Panel wiring shall conform to standard color-coding practices for easy identification. Color coding scheme shall be clearly stated on system drawings.
- 4.3 All internal back plate wiring shall be in slotted wire way. Duct shall be neatly installed in vertical and horizontal runs. Duct installed at angles other than vertical or horizontal shall not be accepted. Exposed wiring shall only be acceptable where wiring transitions to the intended device or termination point. All exposed wiring crossing door panels or similar transitions shall be wrapped in plastic wire wrap or flexible duct.
- 4.4 Proper grounding practice for personnel and equipment protection shall apply.
- 4.5 All field wiring shall terminate at DIN rail mounted terminal strips. Direct field termination to RTU devices shall not be allowed. Terminal strips shall be feed through type rated @ 600 V/ 20 Amp.
- 4.6 All terminals and wiring shall be clearly marked using machine printed permanent marking labels. Wires shall be clearly identified on both ends of termination points and clearly identified on system drawings.

### 5. Variable Speed Drives

Variable speed AC drives shall be supplied in a NEMA 1 (or equivalent) enclosure. The drive shall be rated for **5 HP** with input voltage of 240. Class A EMC filtering shall be provided. Keypad shall be LCD type. Variable speed drives shall be Square D ATV61, or approved equal, and shall include all associated accessories for a complete installation, including conduit kit.

### 6. Convenience Receptacles

Convenience receptacles shall be located in appropriate locations, as noted on the drawings. Receptacles shall be 20 amp and commercial grade.



7. Lighting

7.1 Indoor Lights - There shall be one or more vapor-tight LED light fixtures as shown on the drawing. The fixture shall have reinforced fiberglass housing with a full metal fixture liner, high impact diffuser and be a minimum of forty-eight (48) inch in length. Also to include an internal prismatic lens/15%/DR High impact additive, 4000K LED lamps and rated for wet location. The output is to be a minimum of 6000 lumens. The light switch shall be of the night glow type and be located conveniently adjacent to the door.

7.2 Outdoor Lights - An exterior light shall be provided as located on the drawing. The light shall be 50 watt metal halide. Housing shall be one piece, injection molded, bronze polycarbonate. A button type photo control shall be provided.

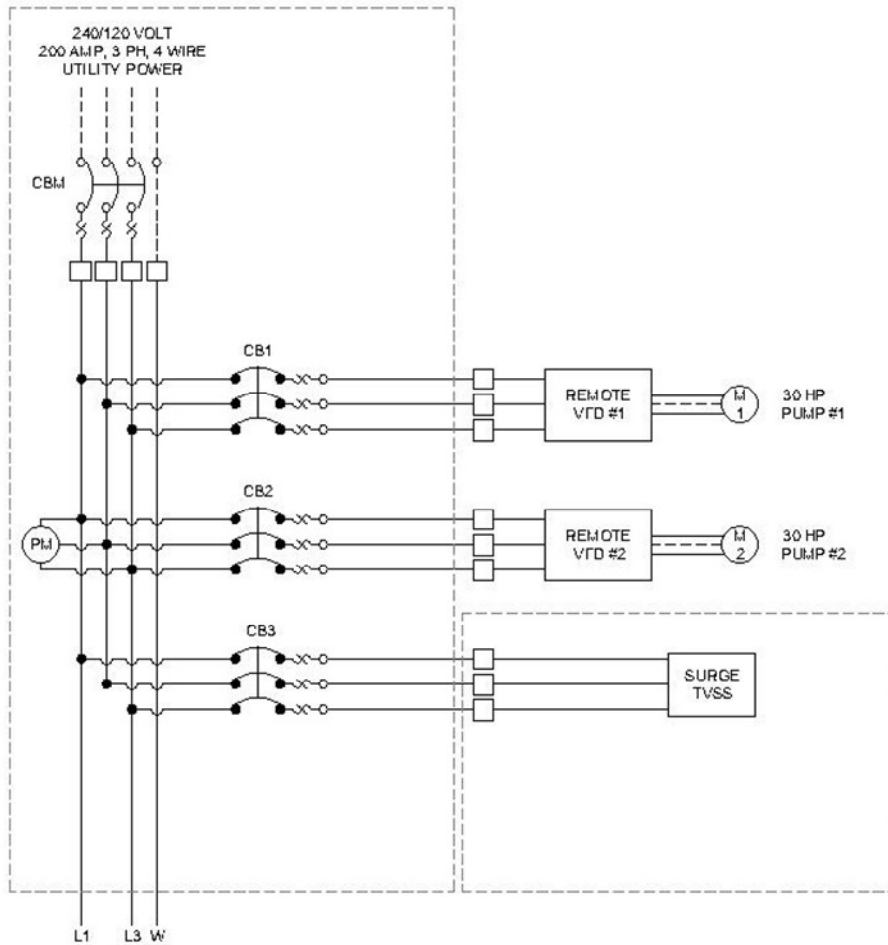
8. SCADA Remote Terminal Unit (WCWD / SCWD Generation 2.0)

**The CONTRACTOR shall furnish the Remote Terminal Unit (RTU) for mounting and power wiring. The on-site electrical contractor shall complete the wiring of the system with the assistance of the OWNER.** The RTU shall be as manufactured by HTI, Inc. of Horse Branch, Kentucky, or approved equal. Contact information for HTI, Inc. is as follows:

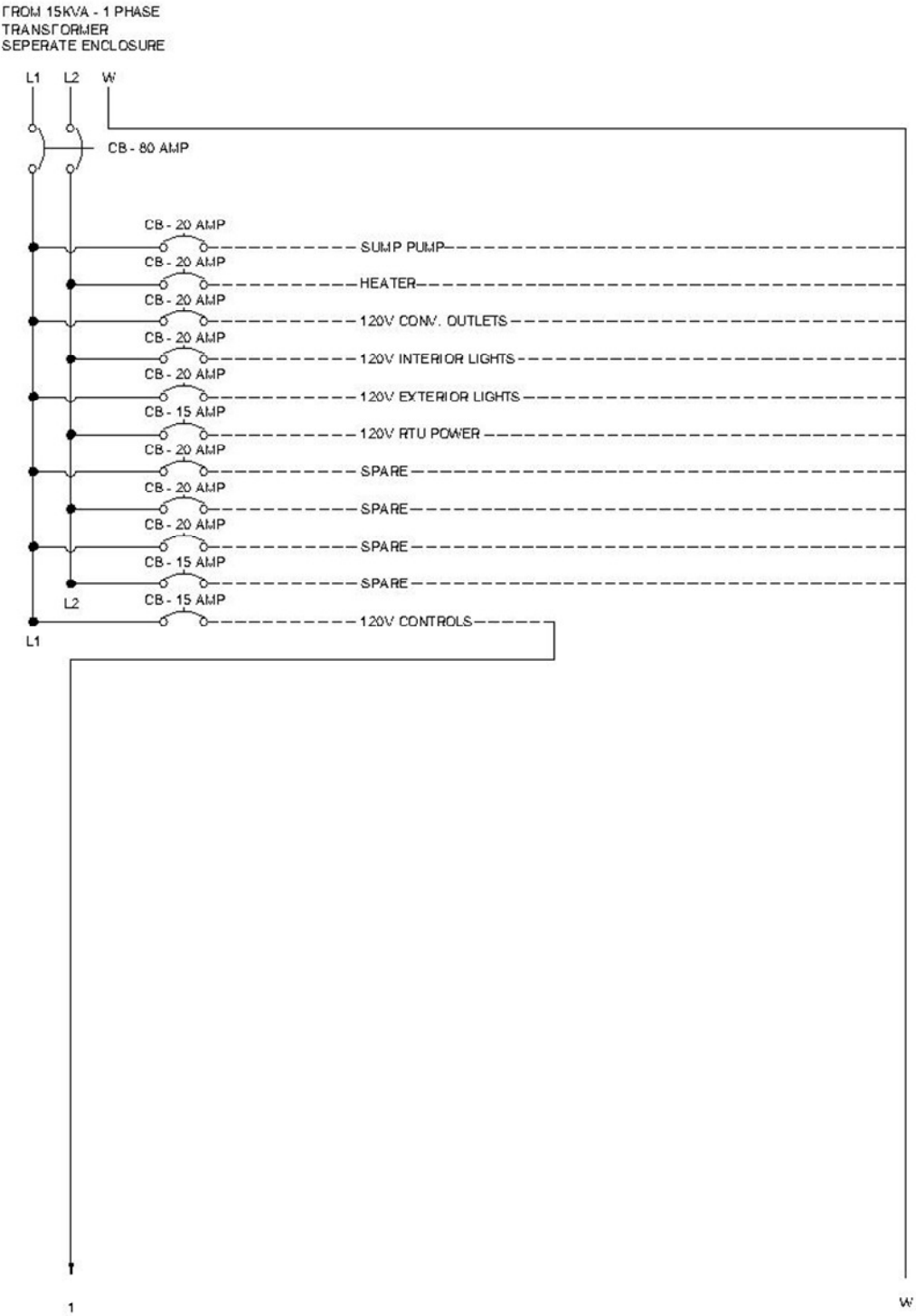
HTI, Inc.  
Attn: Jeff Morris  
9560 Hwy 62 E.  
Horse Branch, KY 42349  
Phone: 270-274-4632  
Fax: 270-274-9885

**CONTROL PANEL & POWER DISTRIBUTION SCHEMATIC**

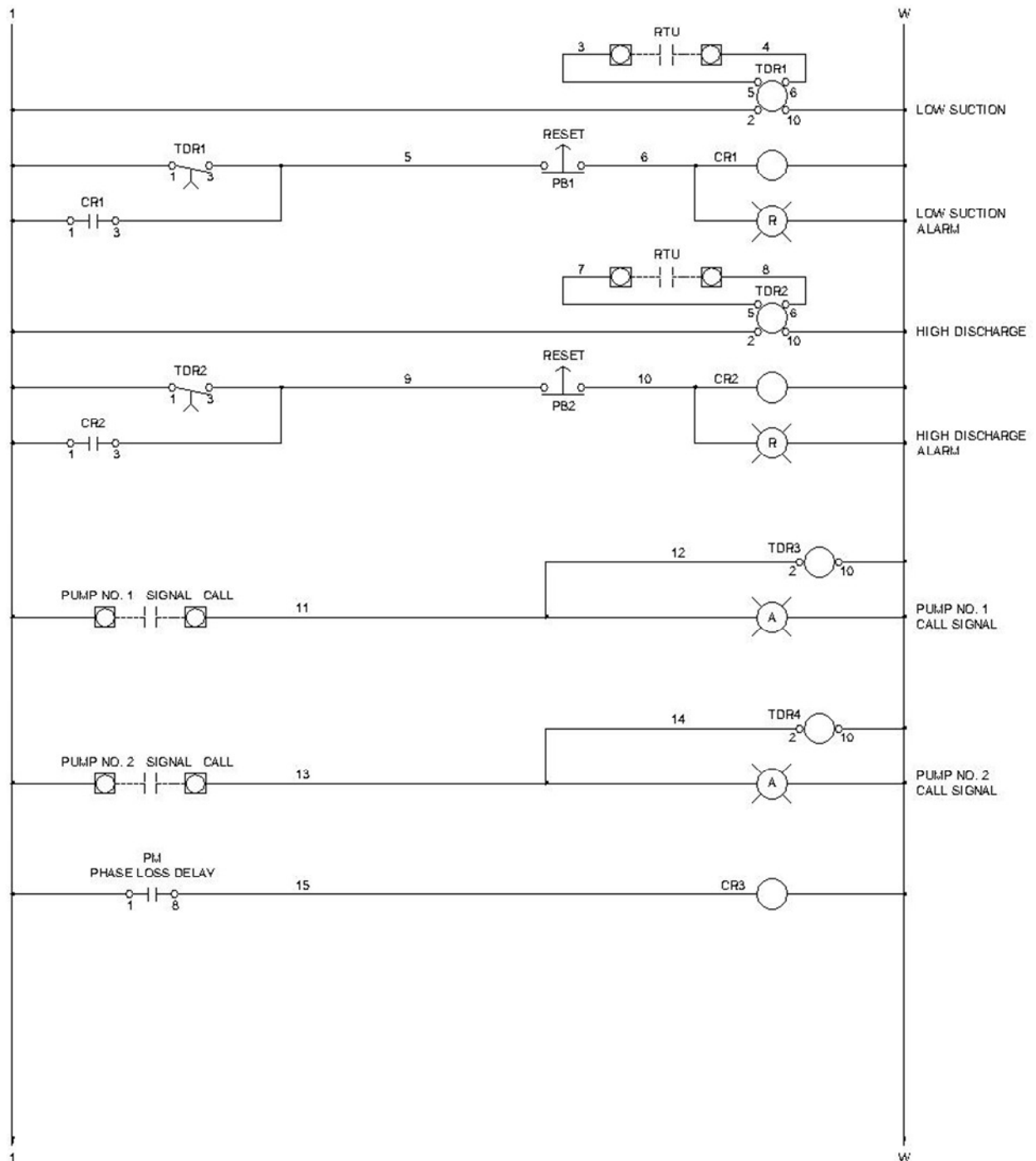
**Utility Power Service to be sized as needed based on load sheet, Pump size shall be 5HP as noted in Pump Station mechanical specifications.**



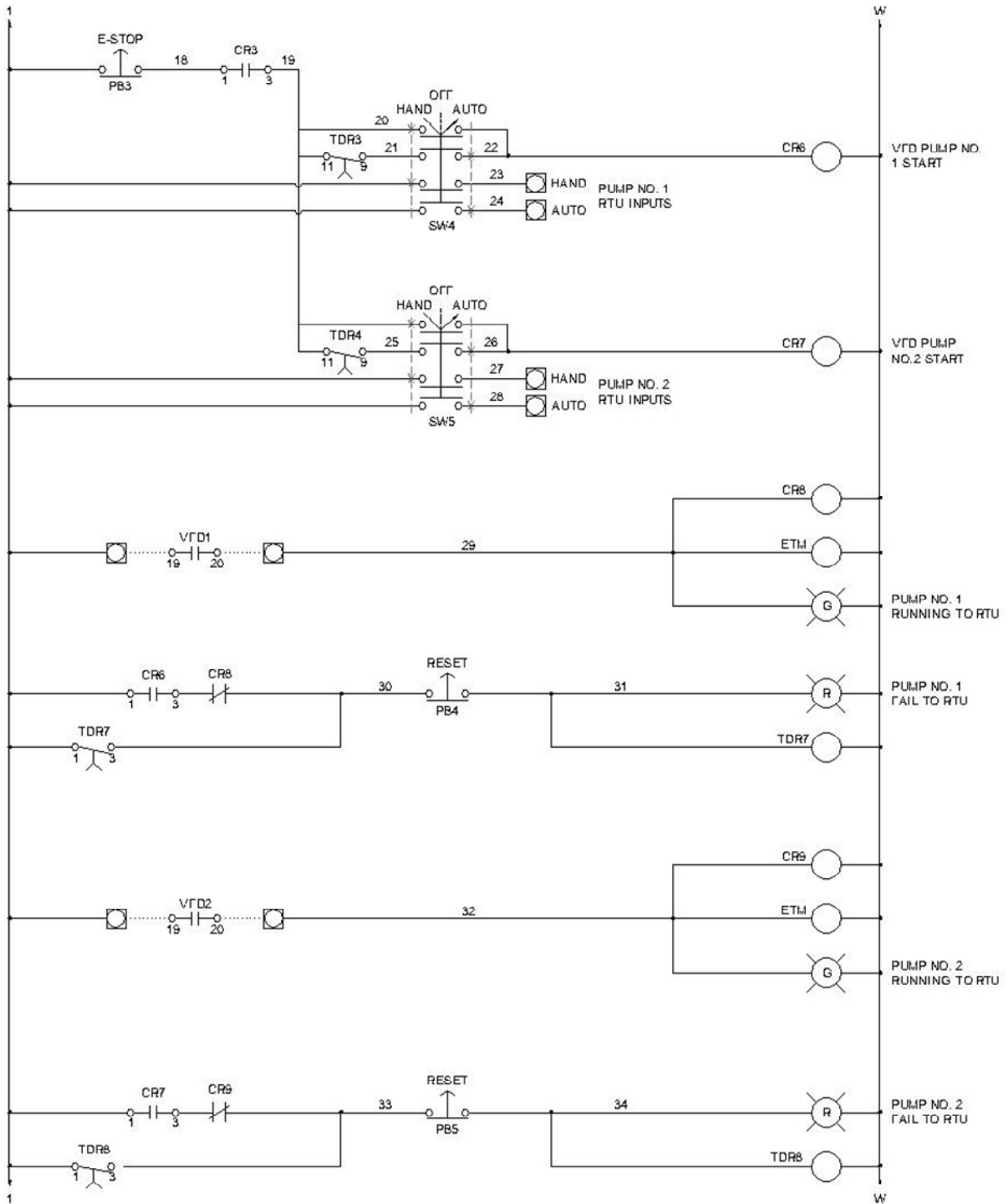
**CONTROL PANEL & POWER DISTRIBUTION SCHEMATIC (CONTINUED)**



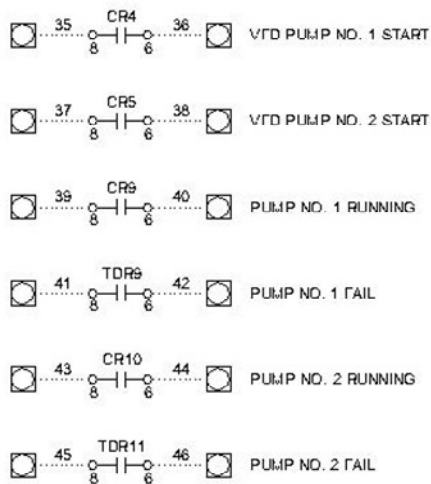
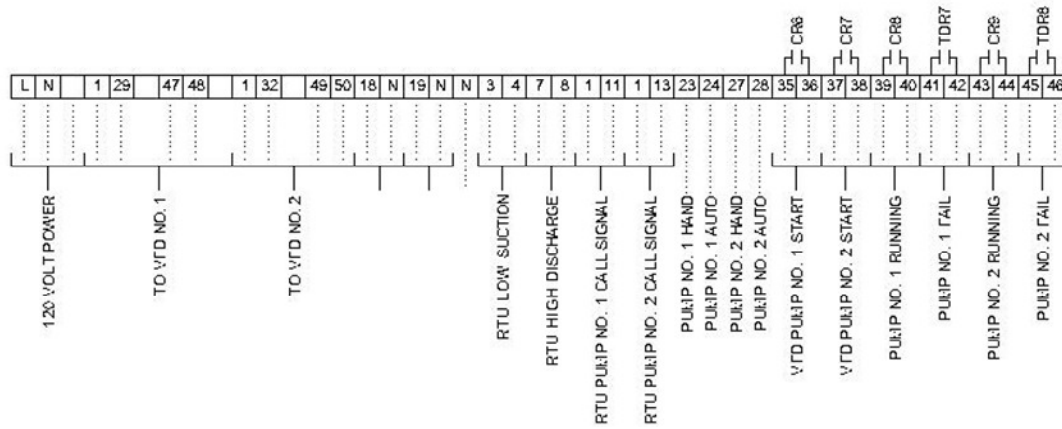
**CONTROL PANEL & POWER DISTRIBUTION SCHEMATIC (CONTINUED)**



**CONTROL PANEL & POWER DISTRIBUTION SCHEMATIC (CONTINUED)**



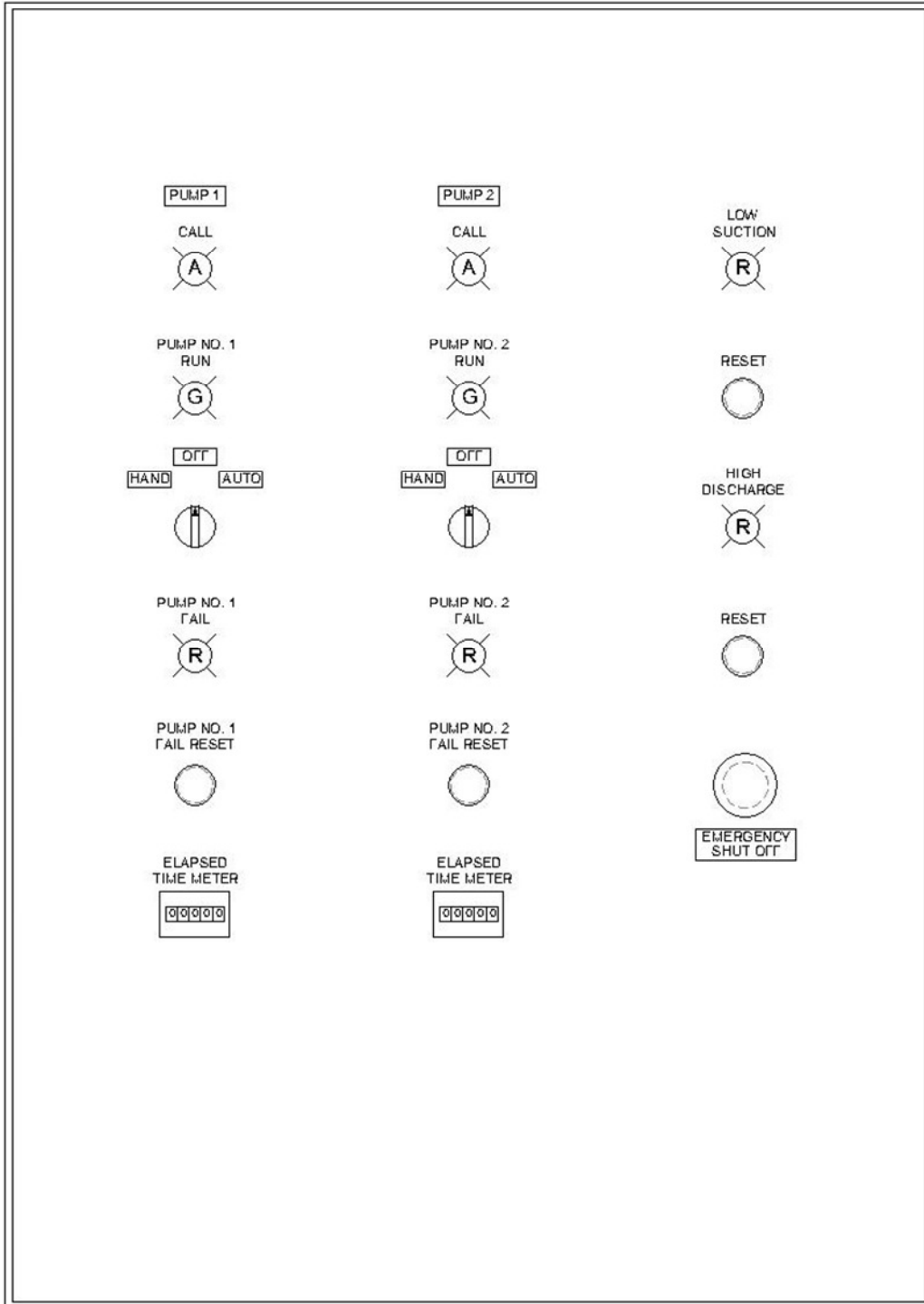
**CONTROL PANEL & POWER DISTRIBUTION SCHEMATIC (CONTINUED)**



**NOTES:**

- 1.) PANEL GROUND TERMINAL MUST BE CONNECTED TO EARTH GROUND PER NEC.
- 2.) FACTORY WIRING SHOWN; FIELD WIRING SHOWN.
- 3.) RECOMMENDED TIGHTENING TORQUES FOR TERMINALS: 120 VOLT POWER: 35 POUND INCHES. 120 VOLT CONTROL & LOW VOLTAGE: 18 POUND INCHES.
- 4.) THIS CIRCUIT DIAGRAM IS DRAWN WITH NO ELECTRICAL POWER, THAT IS, WITH ALL COMPONENTS IN A DE-ENERGIZED STATE.
- 5.) HASP & STAPLE PROVIDED ON OUTER DOOR OF ENCLOSURE FOR PADLOCK.
- 6.) WARNING LABEL TO BE YELLOW BACKGROUND, WITH BLACK LETTERS. 'WARNING - LOCK OUT ELECTRICAL SERVICE TO THIS ENCLOSURE BEFORE OPENING DOOR OR SERVICING EQUIPMENT.'

**CONTROL PANEL LAYOUT**



## **SECTION 6**

### **BASIS OF PAYMENT**

1. General

The CONTRACTOR shall furnish all necessary labor, machinery, tools, apparatus, materials, equipment, services, and other necessary supplies and do and perform all Work including all excavation and backfilling (without additional compensation except where specifically set out in these Specifications) at the unit or lump sum prices for the following items.

2. Tapping Sleeves, Valves, and Boxes

Payment for furnishing and installing tapping sleeves, valves, and boxes of the sizes shown on the Bid Form will be made at the Contract unit price per sleeve and valve complete in place. This item shall also include the valve appurtenances shown on the Standard Detail Sheet and tapping existing lines.

3. Valves and Boxes

Payment for furnishing and installing gate and/or butterfly valves and boxes in the pipelines of the sizes shown on the Bid Form will be made at the Contract unit price per valve and box, complete in place, as shown on the Standard Detail Sheet.

4. Water Service Line

Payment for furnishing and installing service line from the main to the meter (of the sizes shown in the Bid Form and the materials specified) will be made at the Contract unit price per linear foot, complete in place, **including all cleanup**.

5. Ductile Iron Fittings

5.1 Payment for ductile iron fittings will be made at the Contract unit price per pound, complete in place, and shall constitute compensation in full for furnishing and installing the fittings together with all incidental and related work.

5.2 Payment for pipe fittings for water mains will be based in the manufacture's published weight tables as approved by the ENGINEER. Weights of fittings shall be inclusive of bolts, gaskets, or other appurtenances and shall be as shown in the approved weight tables rather than invoice weights.

5.3 The bid price for fittings shall apply to both mechanical joint and restrained joint fittings.



## Basis of Payment

### 6. Crushed Stone for Bedding, Backfill, and Surfacing

The crushed stone specified herein for bedding, backfill, and surfacing for water line construction will be paid for at the Contract unit price per ton of material furnished and placed as specified. The CONTRACTOR shall furnish the ENGINEER with a duplicate weigh slip for all such materials delivered on the job, but the pay quantities may be computed at the discretion of the ENGINEER using unit weight of crushed stone and the following trench cross-section. Payment for crushed stone for water line installation shall be limited to a cross-section having a width of 16 inches plus the nominal pipe diameter and a depth of 12 inches plus the nominal pipe diameter, minus the area of the pipe. The density of crushed stone shall be assumed to be 120 lb per cubic foot. Crushed stone for bore pits and other miscellaneous construction uses shall be part of the contractors unit price for the base item.

### 7. Concrete Cradles, Surface, Anchors, and Kickers

Concrete as specified for cradles, surface, anchors, and kickers shall be paid for at the Contract unit price per cubic yard complete in place.

### 8. Fire Hydrants or Relocation of Existing Fire Hydrants

8.1 Payment for fire hydrant installations will be made at the Contract unit price per fire hydrant, complete in place, including the tee or tapping sleeve and valve (as applicable), the 6-inch auxiliary gate valve with box, and the new fire hydrant as shown on the Standard Detail Sheet.

8.2 Where the relocation of an existing fire hydrant is shown on the Drawings, it is intended that a new fire hydrant be installed and the existing hydrant shall not actually be moved. The existing fire hydrant shall be removed once the new fire hydrant is in service. The existing fire hydrant shall remain property of the OWNER.

### 9. Blow-offs

Payment for blow-offs (side outlet or at end of line) will be made at the Contract unit price per blow-off complete in place including the tee (if necessary), the auxiliary gate valve with box, and the meter box as shown on the Standard Detail Sheet.

### 10. Relocate Water Meters

Payment for the relocation of existing water meters will be made at the Contract unit price per each complete in place. This item includes tapping the main and furnishing new meter boxes, meter yoke, and all fittings required for both the connection to the new or existing main and for the connection of the new meter installations to the existing customer service line to the house or business where applicable. Service line shall be the only separate pay item. This item shall also

include removing the existing yoke, meter box and lid and backfilling the excavation. Any salvaged yokes and lids shall remain the property of the OWNER. The CONTRACTOR shall dispose of the old meter boxes. Distinction will be made on the Bid Form for meter relocations with and/or without pressure regulators.

11. Reconnect Water Meters

Payment for the reconnection of existing water meters will be made at the Contract unit price per each complete in place. This item includes tapping the main and furnishing all fittings required for the connection to the main and reconnection to the existing meter yoke. Service line shall be the only separate pay item.

12. Water Lines

12.1 Payment for the construction of new water lines of the sizes and materials shown on the Bid Form shall be made at the Contract unit price per linear foot, complete in place and in operating condition, including testing, and rough cleanup work.

12.2 **The cost of the specified crushed stone bedding and backfill is a separate pay item and shall NOT be included in the Contract unit price for water lines.**

13. Master Meter Vaults

Payment for master meter vaults, complete in place and in full operating condition, shall be made at the Contract lump sum price, including the meter and all valves, piping, fittings, complete vault, electrical, cleanup, and all other work required to result in a complete, fully operational installation as shown on the Drawings and specified herein.

14. Cased Highway and Railroad Crossings

Payment for furnishing and installing (by bore or open cut), as shown on the Bid Schedule, casing pipe for highway and railroad crossings will be made at the Contract unit price per linear foot, complete in place, and shall include the carrier pipe for the crossings as shown on the Drawings and on the Bid Form.

15. Uncased Driveway Bore

Payment for driveway crossings by uncased bore will be made at the Contract unit price per linear foot, complete in place, and shall include the water carrier pipe as shown on the Bid Form. Uncased driveway bores shall be installed at

## Basis of Payment

locations directed by the ENGINEER and may not necessarily be shown on the Drawings.

### 16. Final Cleanup

15.1 Payment for the performance of final cleanup work shall be made at the Contract unit price per linear foot as specified on the Bid Form. However, quantities for final cleanup shall be added to partial payment estimates only after final cleanup work is totally completed for an entire water line. Payment for final cleanup shall not be made where the water line is constructed in paved streets, driveways, sidewalks, or other areas where final cleanup is not performed.

15.2 The unit price specified on the Bid Form is an assigned allotment for the work specified in Detailed Specifications, Section 3.23, "Final Cleanup". The BIDDER shall not modify either the unit price or extended total for this item and modification of these figures may be cause for rejection of the Bid. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER that the assigned allotment for final cleanup work is a reasonable amount for the work to be performed.

### 17. Creek Crossings

Payment for the Creek Crossings, complete in place and in full operating condition, shall be made at the Contract lump sum price, including all HDPE river crossing piping, reinforced anchors, and all other work required to result in a complete installation as shown on the Drawings and specified herein.

### 18. Geotextile Fabric

Payment for furnishing and installing geotextile fabric will be made at the Contract unit price per square yard, complete in place.

### 19. Pre-Packaged Pump Station

Payment for Pre-Packaged Pump Station Unit, complete in place and in full operating condition, shall be made at the Contract lump sum price, including all necessary piping, motors, valves, meters, controls as specified, and installation.

### 20. Summary

The above items, 2 through 19 inclusive, refer to and are the same items as listed on the Bid Form, and constitute all of the pay items for this Contract. Any other items of work listed in the Specifications, or shown on the Drawings, shall be considered to be incidental to the above items or other items listed in the proposal.

**SECTION 7**  
**PROJECT NARRATIVE**  
**FRITZ-WINTER CAPACITY IMPROVEMENTS**

The water line project referred to as **Fritz-Winter Capacity Improvements** and as illustrated on the enclosed plans is being constructed in order to improve capacity to the northern part of the system.

The project will be funded through multiple sources. A USDA Rural Development loan has been secured, a USDC Economic Development Agency grant has been secured, the Simpson County Water District will contribute internal funds, and Kentucky Rural Water Finance Corporation will be utilized for interim financing. Each agency has project stipulations and requirements. The most stringent requirements will govern the entire project. For example, the following federal requirements will be part of the project:

1. Davis-Bacon Wage Rates
2. Certified Weekly Payrolls
3. American Iron and Steel Requirements
4. A Project Sign for Each Agency
5. Minority and Female Participation Goals
6. Storm Water Pollution Prevention Plan
7. Numerous Certifications

**SECTION 8**  
**HORIZONTAL DIRECTIONAL DRILLING (HDD) / HDPE PIPE**

1. General

1.1 It is the intent of this specification to define the acceptable methods and materials for installing sanitary sewer and water mains by the horizontal directional drilling method and the requirements for high density polyethylene (HDPE) pipe installed by horizontal directional drilling (HDD).

2. Installation Plan

2.1 At least 7 days prior to mobilizing equipment Contractor shall submit his detailed installation plan to the Engineer. The plan shall include a detailed plan and profile of the bores and be plotted at a scale no smaller than 1 inch equals 20 feet horizontal and vertical.

2.2 The plan shall also include a listing of major equipment and supervisory personnel and a description of the methods to be used.

3. Variations in Plan or Profile

3.1 The Contractor may request changes to the proposed vertical and horizontal alignment of the installation and the location of the entry and exit points. Proposed changes shall be submitted in writing to the Engineer and receive approval of the Engineer prior to construction.

4. Alignment

4.1 The proposed plan and profile installation locations are based on alignments to accommodate acquired easements, to avoid obstructions, and to properly maintain operational flow velocities.

5. Qualifications

5.1 Directional drilling and pipe installation shall be done only by an experienced Contractor specializing in directional drilling and whose key personnel have at least five (5) years' experience in this work. Furthermore, the Contractor shall have installed directionally drilled pipe at least as large as 12 inches in diameter, have performed crossings at least 1,500 feet in length, and successfully installed at least 20,000 feet in length.

## 6. Materials

### 6.1 General

6.1.1 All piping system components shall be the products of one manufacturer and shall conform to the latest edition of ASTM D1248, ASTM D3350, and ASTM F714.

## 7. Piping and Bends

7.1 Piping and Bends shall be extruded from a polyethylene compound and shall conform to the following requirements:

7.1.1 The polyethylene resin shall meet or exceed the requirements of ASTM D3350 for PE 3408 material with a cell classification of 335434C, or better.

7.1.2 The polyethylene compound shall be suitably protected against degradation by ultraviolet light by means of carbon black, well dispersed by pre-compounding in a concentration of not less than 2 percent.

7.1.3 The maximum allowable hoop stress shall be 800 psi at 73.4 degrees F.

7.1.4 The pipe manufacturer shall be listed with the Plastic Pipe Institute as meeting the recipe and mixing requirements of the resin manufacturer for the resin used to manufacture the pipe in this project.

7.1.5 The pipe and bends shall have a minimum standard dimension ratio (SDR) wall thickness as specified by the Engineer.

7.1.6 Joining shall be performed by thermal butt-fusion in accordance with the manufacturer's recommendations.

7.1.7 Sanitary sewer pipe exterior shall be green in color or contain green striping.

7.1.8 Water pipe exterior shall be blue in color or contain blue striping.

## 8. Procedures

### 8.1 General

8.1.1 All polyethylene pipe shall be cut, fabricated, and installed in

strict conformance with the pipe manufacturer's recommendations. Joining, laying, and pulling of polyethylene pipe shall be accomplished by personnel experienced in working with polyethylene pipe. The pipe supplier shall certify in writing that the Contractor is qualified to join, lay, and pull the pipe or a representative of the pipe manufacturer shall be on site to oversee the pipe joining. Expense for the representative shall be paid for by the Contractor.

## 8.2 Transportation

8.2.1 Care shall be taken during transportation of the pipe to ensure that it is not cut, kinked, or otherwise damaged.

## 8.3 Storage

8.3.1 Pipes shall be stored on level ground, preferably turf or sand, free of sharp objects which could damage the pipe. Stacking of the polyethylene pipe shall be limited to a height that will not cause excessive deformation of the bottom layers of pipes under anticipated temperature condition. Where necessary due to ground conditions, the pipe shall be stored on wooden sleepers, spaced suitably and of such widths as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.

## 8.4 Handling Pipe

8.4.1 The handling of the joined pipeline shall be in such a manner that the pipe is not damaged by dragging it over sharp and cutting objects. Ropes, fabric, or rubber-protected slings and straps shall be used when handling pipes. Chains, cables, or hooks inserted into the pipe ends shall not be used. Two slings spread apart shall be used for lifting each length of pipe. Pipe or fittings shall not be dropped onto rocky or unprepared ground. Slings for handling the pipeline shall not be positioned at butt-fused joints. Sections of the pipes with cuts and gouges exceeding 10 percent of the pipe wall thickness or kinked sections shall be removed and the ends rejoined.

8.4.2 The open ends of all sections of joined and/or installed pipe (not in service) shall be plugged at night to prevent animals or foreign material from entering the pipe line or pipe section.

8.4.3 Waterproof nightcaps of approved design may be used but they shall also be so constructed that they will prevent the entrance of any type of natural precipitation into the pipe and will be fastened to the pipe in such a manner that the wind cannot blow them loose.

8.4.4 The practice of stuffing cloth or paper in the open ends of the pipe will be considered unacceptable.

8.4.5 Where possible, the pipe shall be raised and supported at a suitable distance back from the open end such that the open end will be below the level of the pipe at the point of support.

## 9. Installation

### 9.1 General

9.1.1 The Contractor shall install the pipelines by means of horizontal directional drilling. The Contractor shall assemble, support, and pretest the pipeline prior to installation in the directional drill tunnel.

9.1.2 Horizontal directional drilling shall consist of the drilling of a small diameter pilot hole from one end of the alignment to the other, followed by enlarging the hole diameter for the pipeline insertion. The exact method and techniques for completing the directionally drilled installation will be determined by the Contractor, subject to the requirements of these Specifications.

9.1.3 The Contractor shall prepare and submit a plan to the Engineer for approval for insertion of the HDPE pipe into the opened bore hole. This plan shall include pullback procedure, ballasting, use of rollers, side booms and side rollers, coating protection, internal cleaning, internal gauging, hydrostatic tests, dewatering, and purging.

9.1.4 The required piping shall be assembled in a manner that does not obstruct adjacent roadways or public activities. The Contractor shall erect temporary fencing around the entry and exit pipe staging areas.

## 10. Joining Pipe Sections

10.1 Each length of pipe shall be inspected and cleaned as necessary to be free of debris immediately prior to joining.

10.2 Pipes shall be joined to one another by means of thermal butt-fusion. Polyethylene pipe lengths to be joined by thermal butt-fusion shall be of the same type, grade, and class of polyethylene compound and supplied from the same raw material supplier.

10.3 Mechanical connections of the polyethylene pipe to auxiliary equipment shall be through mechanical joint adaptors.

10.4 Butt-Fusion Joining: Butt-fusion of pipes shall be performed in



accordance with the manufacturer's recommendations as to equipment and technique. Butt-fusion joining shall be 100% efficient offering a joint weld strength equal to or greater than the tensile strength of the pipe.

## 11. Testing

11.1 The pipe shall be hydrostatically tested after joining into continuous lengths, prior to installation and again after installation. Pressure and temperature shall be monitored with certified instruments during the test.

11.2 Hydrostatic testing shall be performed in accordance with the Owner's Standard Specifications.

## 12. Tolerances

12.1 Pipe installed by the directional drilled method must be located in plan as shown on the Drawings, and must be no shallower than shown on the Drawings unless otherwise approved. The Contractor shall plot the actual horizontal and vertical alignment of the pilot bore at intervals not exceeding 30 feet. This "as built" plan and profile shall be updated as the pilot bore is advanced. The Contractor shall at all times provide and maintain instrumentation that will accurately locate the pilot hole and measure drilling fluid flow and pressure. The Contractor shall grant the Engineer access to all data and readouts pertaining to the position of the bore head and the fluid pressures and flows.

12.1.1 When requested, the Contractor shall provide explanations of this position monitoring and steering equipment. The Contractor shall employ experienced personnel to operate the directional drilling equipment and, in particular, the position monitoring and steering equipment. No information pertaining to the position or inclination of the pilot bores shall be withheld from the Engineer.

12.2 Each exit point shall be located as shown with an over-length tolerance of 20 feet for directional drills of 1,000 linear feet or less and 40 feet for directional drills of greater than 1,000 linear feet and an alignment tolerance of 10 feet left/right with due consideration of the position of the other exit points and the required permanent easement. For gravity sanitary sewer installations, sags in the pipeline shall not exceed 25 percent of the nominal pipe diameter. Sags will only be allowed where the entering and exiting grades are adequate to provide velocities through the sag area sufficient for moving solids. No more than one (1) sag area shall occur between two (2) manholes. The alignment of each pilot bore must be approved by the Engineer before pipe can be pulled. If the pilot bore fails to conform to the above tolerances, the Engineer may, at his option, require a new pilot boring to be made.

12.3 After the pipe is in place, cleaning pigs shall be used to remove residual water and debris. After the cleaning operation, the Contractor shall provide and run a sizing pig to check for anomalies in the form of buckles, dents, excessive out-of-roundness, and any other deformations. The sizing pig run shall be considered acceptable if the survey results indicate that there are no sharp anomalies (e.g. dents, buckles, gouges, and internal obstructions) greater than 2 percent of the nominal pipe diameter, or excessive ovality greater than 5 percent of the nominal pipe diameter. For gauging purposes, dent locations are those defined above which occur within a span of five feet or less. Pipe ovality shall be measured as the percent difference between the maximum and minimum pipe diameters. For gauging purposes, ovality locations are those defined above which exceed a span of five feet.

### 13. Ream and Pullback

13.1 **Reaming:** Reaming operations shall be conducted to enlarge the pilot after acceptance of the pilot bore. The number and size of such reaming operations shall be conducted at the discretion of the Contractor.

13.2 **Pulling Loads:** The maximum allowable pull exerted on the HDPE pipelines shall be measured continuously and limited to the maximum allowed by the pipe manufacturer so that the pipe or joints are not over stressed.

13.3 **Torsion and Stresses:** A swivel shall be used to connect the pipeline to the drill pipe to prevent torsional stresses from occurring in the pipe.

13.4 The lead end of the pipe shall be closed during the pullback operation.

13.5 **Pipeline Support:** The pipelines shall be adequately supported by rollers and side booms and monitored during installation so as to prevent over stressing or buckling during the pullback operation. Such support/rollers shall be spaced at a maximum of 60 feet on centers, and the rollers to be comprised of a non-abrasive material arranged in a manner to provide support to the bottom and bottom quarter points of the pipeline allowing for free movement of the pipeline during pullback. Surface damage shall be repaired by the Contractor before pulling operations resume.

13.6 The contractor shall at all times handle the HDPE pipe in a manner that does not over stress the pipe. Vertical and horizontal curves shall be limited so that wall stresses do not exceed 50% of yield stress for flexural bending of the HDPE pipe. If the pipe is buckled or otherwise damaged, the damaged section shall be removed and replaced by the Contractor at his expense. The Contractor shall take appropriate steps during pullback to ensure that the HDPE pipe will be installed without damage.

### 14. Handling Drilling Fluids and Cuttings

14.1 During the drilling, reaming, or pullback operations, the Contractor shall make adequate provisions for handling the drilling fluids, or cuttings at the entry and exit pits. To the greatest extent possible, these fluids must not be discharged into the waterway. When the Contractor's provisions for storage of the fluids or cuttings on site are exceeded, these materials shall be hauled away to a suitable legal disposal site. The Contractor shall conduct his directional drilling operation in such a manner that drilling fluids are not forced through the sub-bottom into the waterway. After completion of the directional drilling work, the entry and exit pit locations shall be restored to original conditions. The Contractor shall comply with all permit provisions.

14.2 Pits constructed at the entry or exit point area shall be so constructed to completely contain the drill fluid and prevent its escape to the beach or waterway.

14.3 The Contractor shall utilize drilling tools and procedures which will minimize the discharge of any drill fluids. The Contractor shall comply with all mitigation measures listed in the required permits and elsewhere in these Specifications.

14.4 To the extent practical, the Contractor shall maintain a closed loop drilling fluid system.

14.5 The Contractor shall minimize drilling fluid disposal quantities by utilizing a drilling fluid cleaning system which allows the returned fluids to be reused.

14.6 As part of the installation plan specified herein before, the Contractor shall submit a drilling fluid plan which details types of drilling fluids, cleaning and recycling equipment, estimated flow rates, and procedures for minimizing drilling fluid escape.

## 15. Drilling Operations

### 15.1 General

15.1.1 The Contractor shall prepare a plan to be submitted for Engineer approval which describes the noise reduction program, solids control plant, pilot hole drilling procedure, the reaming operation, and the pullback procedure. All drilling operations shall be performed by supervisors and personnel experienced in horizontal directional drilling. All required support, including drilling tool suppliers, survey systems, mud cleaning, mud disposal, and other required support systems used during this operation shall be provided by the Contractor.

15.1.2 Drill pipe shall be API steel drill pipe, Range 2, Premium Class or higher, Grade S-135 in a diameter sufficient for the torque and longitudinal loads and fluid capacities required for the work. Only drill pipe inspected under API's Recommended Practice Specification API RP 7G within 30

days prior to start and certified as double white band or better shall be used.

15.1.3 A smoothly drilled pilot hole shall follow the design centerline of the pipe profile and alignment described on the construction drawings.

15.1.4 The position of the drill string shall be monitored by the Contractor with the downhole survey instruments. Contractor shall compute the position in the X, Y and Z axis relative to ground surface from downhole survey data a minimum of once per length of each drilling pipe (approximately 31 foot interval). Deviations from the acceptable tolerances described in the Specifications shall be documented and immediately brought to the attention of the Engineer for discussion and/or approval. The profile and alignment defined on the construction drawings for the bores define the minimum depth and radius of curvature. At no point in the drilled profile shall the radius of curvature of the bore be less than 320 feet. The Contractor shall maintain and provide to the Engineer, upon request, the data generated by the downhole survey tools in a form suitable for independent calculation of the pilot hole profile.

15.1.5 Between the water's edge and the entry or exit point the Contractor shall provide and use a separate steering system employing a ground survey grid system, such as "TRU-TRACKER" or equal wherever possible. The exit point shall fall within a rectangle 10 feet wide and 20 feet long centered on the planned exit point.

15.1.6 During the entire operation, waste and leftover drilling fluids from the pits and cuttings shall be dewatered and disposed of in accordance with all permits and regulatory agencies requirements. Remaining water shall be cleaned by Contractor to meet permit requirements.

15.1.7 Technical criteria for bentonite shall be as given in API Spec. 13A, Specification for Oil Well Drilling Fluids Material for fresh water drilling fluids. Any modification to the basic drilling fluid involving additives must describe the type of material to be used and be included in Contractor's drilling plan presented to the Engineer. The Owner retains the right to sample and monitor the waste drilling mud, cuttings and water.

## 16. Environmental Provisions

16.1 The Horizontal Directional Drilling operation is to be operated in a manner to eliminate the discharge of water, drilling mud and cuttings to the adjacent creek or land areas involved during the construction process. The Contractor shall provide equipment and procedures to maximize the recirculation or reuse of drilling mud to minimize waste. All excavated pits used in the drilling operation shall be lined by Contractor with heavy duty

plastic sheeting with sealed joints to prevent the migration of drilling fluids and/or ground water.

16.2 The Contractor shall visit the site and must be aware of all structures and site limitations at the directional drill crossing and provide the Engineer with a drilling plan outlining procedures to prevent drilling fluid from adversely affecting the surrounding area.

16.3 The general work areas on the entry and exit sides of the crossing shall be enclosed by a berm to contain unplanned spills or discharge.

16.4 Waste cuttings and drilling mud shall be processed through a solids control plant comprised as a minimum of sumps, pumps, tanks, desalter/desander, centrifuges, material handlers, and haulers all in a quantity sufficient to perform the cleaning/separating operation without interference with the drilling program. The cuttings and excess drilling fluids shall be dewatered and dried by the Contractor to the extent necessary for disposal in offsite landfills. Water from the dewatering process shall be treated by the Contractor to meet permit requirements and disposed of locally. The cuttings and water for disposal are subject to being sampled and tested. The construction site and adjacent areas will be checked frequently for signs of unplanned leaks or seeps.

16.5 Equipment (graders, shovels, etc.) and materials (such as groundsheets, hay bales, booms, and absorbent pads) for cleanup and contingencies shall be provided in sufficient quantities by the Contractor and maintained at all sites for use in the event of inadvertent leaks, seeps or spills.

16.6 Waste drilling mud and cuttings shall be dewatered, dried, and stock piled such that it can be loaded by a front end loader, transferred to a truck and hauled offsite to a suitable legal disposal site. The maximum allowed water content of these solids is 50% of weight.

16.7 Dewatering and disposal work shall be concurrent with drilling operations. Treatment of water shall satisfy regulatory agencies before it is discharged.

**END OF SECTION**

## STORM WATER POLLUTION PREVENTION PLAN

Project Name: Fritz-Winter Capacity Improvements

Project Location: Simpson County, Kentucky

Owner: Simpson County Water District  
PO Box 10180  
Bowling Green, KY 42102  
270-842-0052

### 1. General

- 1.1. This Storm Water Pollution Prevention Plan (SWPPP) includes erosion prevention measures, sediment controls measures, and other site management practices necessary to prevent the discharge of sediment and other pollutants into waters of the Commonwealth. It is intended that the site management practices be adequately protective to minimize receiving waters from being degraded and failing to support their designated uses. These sediment control measures may include retention basins, erosion control measures, and other site management practices, as required, based on site-specific conditions. Appropriate installation and maintenance will be provided to effectively minimize such discharges for storm events up to an including a 2-year, 24- hour event.
- 1.2. Erosion prevention measures have been developed and will be implemented in accordance with sound practices and have been developed specific to the project. The goal of these devices are 80% removal of Total Suspended Solids that exceed predevelopment levels. The Kentucky Erosion Prevention and Sediment Control Field Guide and the Kentucky Best Management Practices Technical Manual shall provide general guidelines for this project.
- 1.3. The primary sediment control measure for this project is vegetative buffer strips along the pipeline alignment.

### 2. Site Description

- 2.1. The project site consists of a ten (10) foot wide construction easement, centered along a proposed water or sewer pipeline(s).
- 2.2. Soil disturbing activities will include excavation of a trench along the proposed pipeline alignment, installation of the pipeline, backfill of the excavation, and cleanup/restoration of surface. These activities will be performed concurrently to minimize areas of open excavation.
- 2.3. The estimated total project area is 10 acres. It is estimated that approximately 50 percent of this project area will be disturbed.

2.4. The water quality classification of the receiving waters for this project is: impaired, non construction related.

### 3. Site Map

3.1. Project plans act as the site map. Generally, the project plans include the following:

3.1.1. Property lines.

3.1.2. Drainage patterns within the project area.

3.1.3. Soil will be disturbed along the proposed pipeline alignment.

3.1.4. Locations of sediment control measures and erosion control measures. Note that the primary sediment control measure is vegetative buffer strips along the entire length of the project (where practical), and stabilization measures will be re-vegetation in all location where vegetation existed prior to construction.

3.1.5. Locations of surface waters within the project area.

3.1.6. Locations of karst features within the project area.

3.1.7. Locations of discharge points.

3.1.8. The location of equipment and material storage areas is to be determined. Once determined by the Contractor, appropriate BMP's will be identified and indicated on the Drawings.

3.1.9. The use of concrete is very limited for this project. Equipment wash out shall occur in the trench, adjacent to the underground locations where concrete is installed.

3.1.10. Areas in which final stabilization has been completed will be shown on the Drawings.

3.1.11. Other potential pollutant sources, as applicable.

4. There are no known industrial discharges in the project area other than construction.

### 5. Stormwater Controls

5.1. Erosion prevention measures, sediment controls, and other site management practices shall be as described in *Best Management Practices Manual for Erosion Prevention and Sediment Control, City of Bowling Green, KY*, dated December 2004 and as shown on the Drawings.

5.2. The primary sediment control measure for this project is vegetative buffer strips along the pipeline alignment.

5.3. Stabilization will be employed as soon as practicable in critical areas.

#### 5.4. Erosion Control Measures

##### 5.4.1. General

5.4.1.1. The total disturbed area shall be minimized.

5.4.1.2. Trenching, backfill, and restoration shall be performed concurrently along the pipeline alignment so that only a portion of the alignment is disturbed at one time.

5.4.1.3. Clearing and grading should be scheduled to reduce the probability that bare soils will be exposed to rainfall.

##### 5.4.2. Managing Stormwater flows on the Site

5.4.2.1. When practicable, soil from the pipeline trench should be placed on the upslope side of the trench to form diversion berms or conveyance channels.

5.4.2.2. Vegetated buffers shall remain in place whenever practicable.

5.4.2.3. Slope drains or other adequately protective alternate practices may be required.

##### 5.4.3. Energy Dissipation Approaches

5.4.3.1. Vegetated filter strips shall remain in place whenever practicable.

5.4.3.2. Other adequately protective alternate practices may be required.

##### 5.4.4. Minimization of Exposure of Bare Soils

5.4.4.1. Vegetation shall be used as required to stabilize bare soils. Vegetation may include annual grasses, perennial grasses, or other measures.

5.4.4.2. Other measures to minimize exposure to bare soils may include mulch, straw, geotextiles, rolled erosion control mats, etc.



## 5.5. Sediment Control Measures

### 5.5.1. General

5.5.1.1. Sediment control measures shall be utilized as required to control and trap sediment that is entrained in stormwater runoff.

### 5.5.2. Sediment Barriers

5.5.2.1. Sediment barriers shall be utilized as required including: silt fences, fiber rolls, etc.

### 5.5.3. Slope Protection

5.5.3.1. Slope protection shall be utilized as required including: tread tracking, erosion blankets, mulching, etc.

### 5.5.4. Conduit/Ditch Protection

5.5.4.1. Conduit/ditch protection shall be utilized as required including: inlet protection, outlet protection, etc.

### 5.5.5. Stabilizing Drainage Ditches

5.5.5.1. Ditches shall be stabilized as required through the use of check dams, ditch lining, etc.

### 5.5.6. Sediment Trapping Devices

5.5.6.1. Sediment trapping devices shall be utilized as required to settle out sediment eroded from disturbed areas. These devices include: sediment traps, sediment basins, adequate mechanical or chemical settlement enhancers, etc.

### 5.5.7. Perimeter Controls

5.5.7.1. Perimeter controls shall be utilized as required including: silt fences, berms, swales, etc. However, due to the nature of this pipeline project's area and associated disturbed areas, perimeter controls are generally impractical to surround the entirety of the site.

## 5.6. Other Construction Site Management Practices

5.6.1. Construction materials shall be handled, stored, maintained, and disposed of properly to avoid contamination of runoff to the maximum extent practicable.

- 5.6.2. Construction materials, chemicals, and lubricants shall be protected from exposure to rainfall.
- 5.6.3. Litter, construction debris, and construction chemicals shall not enter receiving waters.
- 5.6.4. Exposure of freshly placed concrete rainfall shall be limited.
- 5.6.5. Stormwaters and other wastewaters from fuels, lubricants, sanitary wastes, and other chemicals such as pesticides, herbicides, and fertilizers shall be segregated to prevent runoff being contaminated.
- 5.6.6. Chemicals, pesticides, herbicides, fertilizers and fuels shall be stored in a neat, orderly fashion.
- 5.6.7. Trash and sanitary waste shall be collected and managed promptly.
- 5.6.8. Spills of liquids and solid materials that could pose a pollutant risk shall be cleaned promptly.
- 5.6.9. Off-site accumulations of sediment shall be removed regularly to minimize the potential for discharge
- 5.7. Any alternate protective practices will be described on the Drawings with locations indicated.
- 5.8. Stormwater controls will be installed, as necessary, for each section of the project as the pipeline construction progresses. Sections will be determined by the direction of natural stormwater flow. Stormwater controls will be removed as final stabilization is completed.
- 5.9. Permanent stabilization shall occur as soon as practical for each section of the project after sufficient time is allowed for trench line settlement. Allowing for settlement reduces the overall disturbance required. Where required, interim stabilization will be required.
- 5.10. Proposed off-site locations of equipment and material storage will be marked on the Drawings.
- 5.11. The estimated construction schedule shall be as indicated on the NOI.
- 5.12. All materials shall be stored in accordance with manufacturers' recommendations regarding contamination of stormwater. Construction materials consist of polyvinyl chloride or ductile iron pipe and associated appurtenances. Materials for water distribution must be NSF Standard 61 approved for drinking water use.

5.13. There are no known pollutant sources from areas untouched by construction. Therefore, no stormwater controls are anticipated to be required in undisturbed areas.

## 6. Maintenance of Stormwater Controls

6.1. Erosion prevention measures, sediment controls measures, and other site management practices shall be maintained in accordance with manufacturers' recommendations at an interval as required to maintain effective, operating condition. Sediment control devices shall be maintained at no more than 1/3 capacity to allow for sediment capture.

6.2. If site inspections identify sediment controls measures, erosion control measures, and other site management practices that are not operating effectively or otherwise require maintenance, maintenance shall be performed, prior to the next storm event. If maintenance before the next storm event is impracticable, the required maintenance shall be completed as soon as possible.

## 7. Non-Stormwater Discharge Management

7.1. The following non-stormwater discharges shall *not* be combined with stormwater discharges.

7.1.1. Discharges from fire-fighting activities.

7.1.2. Fire hydrant flushing.

7.1.3. Waters used for vehicle washing where detergents are not used.

7.1.4. Water used for dust control.

7.1.5. Potable water including uncontaminated water-line flushing.

7.1.6. Routine external building wash down that does not use detergents.

7.1.7. Pavement wash waters where spills or leaks or toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used.

7.1.8. Landscape irrigation.

7.1.9. Clean, non-turbid water-well discharges of groundwater.

7.1.10. Construction dewatering provided the requirements of this permit are met.

## 8. Inspections

8.1. **The CONTRACTOR shall be responsible for conducting EPSC inspections as indicated herein.**

### 8.2. Scope

8.2.1. Inspections will generally be conducted at least every seven (7) calendar days. Alternatively, inspections will be conducted at least

every fourteen (14) calendar days and within 24 hours of the end of a rain event resulting in 0.5 inches of precipitation or greater.

8.2.2. For sections of the project area which have undergone temporary or final stabilization, inspections will be performed at least every thirty (30) days.

8.2.3. Inspections shall be performed by personnel knowledgeable and skilled in assessing conditions at the construction site that could impact stormwater quality and assessing the effectiveness of erosion prevention measures, sediment control measures, and other site management practices chosen to control the quality of the stormwater discharges. Inspectors shall have training in stormwater construction management.

8.2.4. Visual inspections will be performed to determine whether erosion prevention measures, sediment controls measures, and other site management practices are properly installed, properly maintained, and effective. Visual inspection will be made to determine if excessive pollutants are entering the drainage system.

8.2.5. Visual inspection shall comprise erosion prevention measures, sediment control measures, other site management practices, points of site egress, and disturbed areas.

8.2.6. Discharge points will be inspected, if accessible, to ascertain whether erosion prevention measures, sediment control measures, other site management practices, and points of site egress are effective in preventing impacts to waters of the Commonwealth by inspecting the receiving water bodies for evidence of new erosion and/or the introduction of newly deposited sediment or other pollutants. If discharge points are not accessible, nearby downstream points can be inspected.

8.2.7. Representative inspections can be made of the project area 0.25 miles above and below each point where a roadway, undisturbed right-of-way, or other similar feature intersects the construction site and allows access to the construction site.

### 8.3. Reporting

8.3.1. **The CONTRACTOR shall be responsible for reporting EPSC inspections as indicated herein.**

8.3.2. Inspection reports shall be prepared for all inspections and shall be retained with the SWPPP. Inspection reports will generally include:

8.3.2.1. The date and of inspection.

- 8.3.2.2. The name and title of the inspector.
- 8.3.2.3. A synopsis of weather information for the period since the last inspection (or since start of construction for the initial inspection) including an estimate of the beginning of each storm event, the duration of each storm event, and the approximate amount of rainfall for each storm event (in inches).
- 8.3.2.4. Weather conditions and a description of any discharges occurring at the time of the inspection.
- 8.3.2.5. Location(s) of discharges of sediment or other pollutants from the site.
- 8.3.2.6. Location(s) of sediment controls measures, erosion control measures, or other site management practices that require maintenance.
- 8.3.2.7. Location(s) of any erosion prevention measures, sediment controls measures, or other site management practices that failed to operate as designed or proved inadequate for a particular location.
- 8.3.2.8. Location(s) where additional erosion prevention measures, sediment controls measures, or other site management practices are needed that did not exist at the time of the inspection.
- 8.3.2.9. Identify any actions taken in response to inspection findings.
- 8.3.2.10. Identify any incidents of non-compliance with the SWPPP.
- 8.3.2.11. A certification that the site is in compliance with the SWPPP, if no incidents of non-compliance are identified.
- 8.3.2.12. A signature in accordance with the requirements of 401 KAR 5:065, Section 1(11).

## 9. Plan Maintenance

### **9.1. The CONTRACTOR shall maintain the plan Drawings as provided by the OWNER.**

9.2. SWPPP will be revised whenever erosion prevention measures, sediment controls measures, or other site management practices are significantly modified in response to a change in design, construction method, operation, maintenance procedure, etc., that may cause a significant effect on the discharge of pollutants to receiving waters or municipal separate storm sewer systems.

9.3. The SWPPP will be amended if inspections or investigations by site staff or by local, state, or federal officials determine that the existing sediment controls measures, erosion control measures, or other site management practices are ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the construction site.

- 9.4. If an inspection reveals design inadequacies, the site description and sediment controls measures, erosion control measures, or other site management practices identified in the SWPPP will be revised.
- 9.5. All necessary modifications to the SWPPP will be made within seven (7) calendar days following the inspection unless granted an extension of time by Kentucky Division of Water (DOW).
- 9.6. If existing sediment controls measures, erosion control measures, or other site management practices need to be modified or if additional sediment controls measures, erosion control measures, or other site management practices are necessary, implementation shall be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, the situation will be documented in an inspection report and the changes shall be implemented as soon as practicable.

## 10. Plan Availability

- 10.1. A current copy of the SWPPP will be made readily available to the construction site from the date of project initiation to the date of Notice of Termination.
- 10.2. The person with day-to-day operational control over the plan's implementation will keep a copy of the SWPPP readily available whenever on site.
- 10.3. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the plan's location shall be posted in a convenient location at the construction site.
- 10.4. The SWPPP will be made available to DOW or its authorized representative for review and copying during on-site inspections.
- 10.5. Upon request, the SWPPP will be made available to the Environmental Protection Agency and other federal agencies or their contractor, and local governmental agencies and officials approving sediment and erosion plans, grading plans or stormwater management plans.

## 11. Critical Areas

- 11.1. No "critical areas" have been identified in the project area.

## 12. Stabilization

- 12.1. Final stabilization for portions of the project where construction has permanently ceased will be initiated within fourteen (14) days of the date of cessation of construction. Final stabilization will be initiated on portions of the project area where construction has been suspended for more than 180 days.

12.2. Temporary stabilization for portions of the project where construction has temporarily ceased will be initiated, as required, within fourteen (14) days of the date of cessation of construction activities.

### 13. Buffer Zones

13.1. No waters categorized as High Quality Waters or Impaired Waters (Non-construction related impairment) have been identified within the project area.

13.2. No waters categorized as Impaired Waters (Sediment impaired, but no TMDL) have been identified within the project area.

### 14. Notice of Intent (NOI-SCWA)

14.1. The NOI-SCWA shall be completed and submitted in accordance with the requirements set forth by the DOW. When available, a copy of the Notice of Intent and all attachments will be appended to the SWPPP.

# SWPPP APPENDIX A

## EPSC INSPECTION REPORT

Project Name: Fritz-Winter Capacity Improvements

NOI #: TBD

Date: \_\_\_\_\_

Inspection Type:  Weekly Inspection  
 Post Rain Inspection

Amount of Rain: \_\_\_\_\_ inches

	<b>Parameter of Inspection</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>
1	Is the Erosion Control Plan on site?			
2	Are all modifications and deviations up to date and noted on the Drawings?			
3	Is the Storm Water Pollution Prevention Plan (SWPPP) being followed?			
4	Are required sediment controls in place at storm drain inlets and other required areas?			
5	Are sufficient measures in place to prevent mud from entering roadways and/or is sediment, debris, and/or mud cleaned from public roads as required?			
6	Are required slit fences in place properly and maintained on a regular schedule?			
7	Are required temporary sediment traps maintained according to the Drawings?			
8	Are required inlet protection devices installed and maintained properly?			
9	Are required check dams installed and maintained according to the Drawings?			
10	Are all disturbed areas stabilized according to the Drawings?			
11	Are all temporary stockpiles or construction materials located in approved areas and protected according to the Drawings?			
12	Are dust control measures being appropriately implemented?			
13	Are all discharge points where water is leaving the site maintained properly?			
14	Are all material storage and secondary containment properly maintained and shown on the Drawings?			

For any item marked "NO" above, see corresponding note with matching number below or on additional pages.

Issues of Non-compliance, other comments, and corrective action summary:

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By signing below, Inspector certifies that except for items listed hereon, the project site is in compliance with the SWPPP.

\_\_\_\_\_  
Site Foreman's Name (Print)

\_\_\_\_\_  
Inspector's Name (Print)

\_\_\_\_\_  
Site Foreman's Signature

\_\_\_\_\_  
Inspector's Signature

\_\_\_\_\_  
Inspector's Qualifications



# SWPPP APPENDIX B

## EPSC CERTIFICATION

Project Name: Fritz-Winter Capacity Improvements

Project Location(s): Simpson County, Kentucky

Contractor Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Check One:  Prime Contractor  Sub-Contractor

"I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification."

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

State of Kentucky  
County of \_\_\_\_\_

I, \_\_\_\_\_, a Notary Public in and for the State of Kentucky at Large, do hereby certify that the foregoing certification from \_\_\_\_\_ was duly produced before me on this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
NOTARY PUBLIC, STATE OF KENTUCKY

My Commission Expires: \_\_\_\_\_