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January 22, 2013

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PUBLIC SERVICE
COMMISSION

Mr. Jeff Derouen
Executive Director
KY Public Service Commission
211 Sower Blvd.
PO Box 615
Frankfort, Kentucky 40602-0615

Re: Columbia/Adair Utilities District
Case No. 2013-00016
Plans and Specifications

Dear Mr. Derouen:

Please find enclosed two sets of plans and specifications, signed and dated, for the above referenced project.

Should you have any questions or need additional information, please advise.

Sincerely,

A handwritten signature in black ink, appearing to read 'Deron S. Byrne', is written over the typed name and title.

Deron S. Byrne, P.E.
Project Engineer

/dsb

Enclosures

CASE NO: 2013-00016

CONTAINS

LARGE OR OVERSIZED

MAP(S)

RECEIVED ON: January 23, 2013

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PUBLIC SERVICE
COMMISSION

**CONTRACT DOCUMENTS AND SPECIFICATIONS
FOR THE
COLUMBIA-ADAIR UTILITIES DISTRICT
ADAIR COUNTY, KENTUCKY**

**PHASE 11-2 WATER LINE EXTENSIONS
&
CONNECTOR LINES**

This project funded by:

**Commonwealth of Kentucky
Drinking Water State Revolving Fund F**

Project No. 1049

November 2012

M
Monarch Engineering, Inc.



ADDENDUM NO. 1

COLUMBIA/ADAIR UTILITIES DISTRICT PHASE 11-2 WATER LINE EXTENSIONS & CONNECTOR LINES

DECEMBER 10, 2012

CONTRACT DOCUMENTS and TECHNICAL SPECIFICATIONS

- 1) BID SCHEDULE, ALTERNATE BID NO. 1, page B-8; ITEM NO. 4 – Bore & Case for 8-Inch Water Line quantity shall be 80 LF in lieu of 40 LF.
- 2) BID SCHEDULE, ALTERNATE BID NO. 2, page B-9; ITEM NO. 10 – Meter Setting shall be Tandem Meter Setting.
- 3) ADD the attached SECTION 13 – DIRECTIONAL DRILLING/BORING; pages SECTION 13-1-ADD-1 through SECTION 13-8-ADD-1. HDPE pipe shall be 8-Inch HDPE DR 9.

PLAN SHEETS

- 1) PLAN SHEET G-1, WATER LINE CROSSING GAS MAIN; The 8-Inch water line carrier pipe shall be 8-Inch PVC SDR 21 in lieu of 8-Inch PVC SDR 17 as shown on the plan sheet.

End Addendum

Deron S. Byrne, P.E.
Monarch Engineering, Inc.

SECTION 13 -DIRECTIONAL DRILLING / BORING

13.0 Scope of Work. It is intent of this specification to define the acceptable methods and materials for installing water lines by the horizontal directional drilling method and the requirements for high density polyethylene (HDPE) pipe installed by directional drilling or in open cut trenches.

13.1 Installation Plan.

At least 7 days prior to mobilizing equipment, Contractor shall submit his detailed installation plan to the Engineer.

The plan shall also include a listing of major equipment and supervisory personnel and a description of the methods to be used.

13.2 Variations in Plan or Profile. 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.

13.3 Alignment. The proposed plan and profile installation locations are based on alignments to accommodate acquired right-of-way, to avoid obstructions, and to properly maintain operation flow velocities.

13.4 Qualifications. 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 directional drilled pipe at least as large as 12 inches in diameter, have performed crossings at least 650 feet in length, and successfully installed at least 2000 feet in length.

13.5 Products. High density polyethylene pipe in accordance to these specifications shall be used in HDD installations. All piping system components shall be the products of one manufacturer and shall conform to the latest edition of ASTM D2447, ASTM D3350, and ASTM F714.

13.6 Piping. Piping shall be extruded from a polyethylene compound and shall conform to the following requirements:

The polyethylene resin shall meet or exceed the requirements of ASTM D3350 for PE 3408 material with a cell classification of 335434C, or better. The polyethylene compound shall be suitably protected against degradation by ultraviolet light by means of carbon black, well dispersed by precompounding in a concentration of not less than 2 percent.

The maximum allowable hoop stress shall be 800 psi at 73.4 degrees F.

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.

Joining shall be performed by thermal butt-fusion in accordance with the manufacturer's recommendations.

13.7 Execution. All polyethylene pipes 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 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.

13.8 Transportation. Care shall be taken during transportation of the pipe to ensure that it is not cut, kinked, or otherwise damaged.

13.9 Storage. Pipes shall be stored on level ground, preferable 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.

13.10 Handling Pipes. The handling of the jointed 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.

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.

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.

The practice of stuffing cloth or paper in the open ends of the pipe will be considered unacceptable.

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.

13.11 Installation.

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.

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.

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 procedures, ballasting, use of rollers, side booms and side rollers, coating protection, internal cleaning, internal gauging, hydrostatic tests, dewatering, and purging.

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.

13.12 Joining Pipe Sections.

Each length of pipe shall be inspected and cleaned as necessary to be free of debris immediately prior to joining.

Pipes shall be jointed 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.

Mechanical connections of the polyethylene pipe to auxiliary equipment shall be through flanged connections which shall consist of the following:

- a. A polyethylene "sub end" shall be thermally butt-fused to the ends of the pipe.
- b. Provide ASTM A240, Type 304 stainless steel backing flange, 125-pound, ANSI B16.1 standard, and gaskets as required by the manufacturer.

c. Stainless Steel bolts and nuts of sufficient length to show a minimum of three complete threads when the joint is made and tightened to the manufacturer's standard. Retorque the nuts after 40 hours.

d. 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.

13.13 Testing.

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. After this test, the water will be removed with pigs. Erosion prevention procedures will be used during removal and discharge of the water. Hydrostatic testing shall be performed in accordance with Section 1 of the Specifications. All costs associated with acquiring water for testing shall be included in the established contract unit bid prices.

13.14 Tolerances.

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 readout pertaining to the position of the bore head and the fluid pressures and flows.

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.

Sags in the pipeline shall not exceed 5 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 (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 new pilot boring to be made.

After the pipe is in place, cleaning pigs shall be use 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 shaper anomalies (e.g. dens, buckles, gouges, and internal obstruction) 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.

13.15 Ream and Pullback.

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.

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.

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.
The lead end of the pipe shall be closed during the pullback operation.

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 nonabrasive 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.

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.

13.16 Handling Drilling Fluids and Cuttings.

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. 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 subbottom 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.

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 waterway. 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.

To the extent practical, the Contractor shall maintain a closed loop drilling fluid system.

The Contractor shall minimize drilling fluid disposal quantities by utilizing a drilling fluid cleaning system which allows the returned fluids to be used.

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.

13.17 Drilling Operations.

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.

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.

A smoothly drilled pilot hole shall follow the design centerline of the pipe profile and alignment described on the construction drawings.

Between 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 5 feet wide and 10 feet long centered on the planned exit point.

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.

Technical criteria for bentonite shall be as given in API Spec. 13A, Specification of 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.

13.18 Environmental Provisions.

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 immigration of drilling fluids and/or groundwater.

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.

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.

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 cutting 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 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.

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.

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. Due to a limited storage space at the worksite, dewatering and disposal work shall be

concurrent with drilling operations. Treatment of water shall satisfy regulatory agencies before it is discharged.

13.19 Payment. Payment shall be included in the payment for the work as shown on the plan sheets and to which it is subsidiary in the Bid Schedule.

**CONTRACT DOCUMENTS AND SPECIFICATIONS
FOR THE
COLUMBIA-ADAIR UTILITIES DISTRICT
ADAIR COUNTY, KENTUCKY**

**PHASE 11-2 WATER LINE EXTENSIONS
&
CONNECTOR LINES**

This project funded by:

**Commonwealth of Kentucky
Drinking Water State Revolving Fund F**

Project No. 1049

November 2012

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ADVERTISEMENT FOR BIDS

COLUMBIA-ADAIR UTILITIES DISTRICT, ADAIR COUNTY, KENTUCKY

Separate Sealed BIDS for the construction of the 10,400 LF of 8-inch water line replacement, 4,400 LF of 3-inch water line extension, and a 250 GPM Water Booster Pump Station, and appurtenances will be received by the Columbia-Adair Utilities District at the District Water Office, 109 Grant Lane, Columbia, Kentucky until 3:00 PM, local time, December 13, 2012 and then at said Office publicly opened and read aloud.

The CONTRACT DOCUMENTS may be examined at the following locations:

Columbia-Adair Utilities District, 109 Grant Lane, Columbia, Kentucky 42728
MONARCH ENGINEERING, INC., 556 Carlton Drive, Lawrenceburg, Kentucky 40342

Copies of the CONTRACT DOCUMENTS may be obtained at the office of Monarch Engineering, Inc., 556 Carlton Drive, Lawrenceburg, KY 40342, upon request in writing and payment of \$150.00 non-refundable for each set. Bidders must purchase plans from the Engineer and payment shall be made via check in the name of the Bidder. Plans purchased by one party and bid by another party shall not be accepted. Plans will be available for purchase until 4:00 PM (E.D.T.), December 11, 2012.

Each Bidder must accompany his bid with a BID BOND in amount of not less than five (5) percent of the base bid. No Bidder may withdraw his bid for a period of 90 days. The Bidder awarded the CONTRACT shall execute a 100% PERFORMANCE BOND and a 100% PAYMENT BOND and shall furnish insurance as required, in the GENERAL CONDITIONS. CONTRACTS shall be completed within 180 calendar days after date of authorization to start work. Liquidated damages will be \$1,000.00 per calendar day.

Attention of bidders is particularly called to the requirements as to conditions of employment to be observed and minimum wage rates to be paid under the contract, Title VI, Section 3, Segregated Facility, Section 109 and E.O. 11246. Local firms, minority firms, small and female businesses are particularly encouraged to participate. Also, if BIDDER anticipates the use of subcontractors as a part of this project, the use of local firms, minority firms, small and female businesses are encouraged. Any bid that is obviously unbalanced may be rejected. The Columbia-Adair Utilities District reserves the right to reject any and all bids and waive informalities.

Federal law prohibits discrimination on the grounds of race, color, national origin, religion, age, handicap and sex in this project.

This project is being funded in part with a KIA DWSRF loan. The award will be made to the lowest, responsive, responsible bidder.

COLUMBIA-ADAIR UTILITIES DISTRICT, ADAIR COUNTY, KENTUCKY

BY: _____
Robert Flowers, Chairman

Instructions to Bidders

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ARTICLE 1 - DEFINED TERMS

1.01 Terms used in these Instructions to Bidders will 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 and where the bidding procedures are to be administered.

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Advertisement for Bids may be obtained from the Issuing Office.
- 2.02 Complete sets of Bidding Documents must 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 confer a license or grant for any other use.

ARTICLE 3 - QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, within five days of Owner's request, Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be called for below.

- A. Each Bidder must accompany his BID with a list of at least three projects, similar in scope and cost to this project, with references in which his company has performed work. The company, which performed the work as shown on the list of references must be the same company submitting the BID. The references shall include the name of the job, approximate date the job was completed, name of the utility company including contact person, and the name of the engineer including contact person.

ARTICLE 4 - EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 Subsurface and Physical Conditions

- A. The Supplementary Conditions identify:
 - 1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Bidding Documents.
 - 2. Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Bidding Documents.
- B. Copies of reports and drawings referenced in paragraph 4.01.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in paragraph 4.02 of the General Conditions has been identified and established in paragraph 4.02 of 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.

4.02 Underground Facilities

- A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.03 Hazardous Environmental Condition

- A. The Supplementary Conditions identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that ENGINEER has used in preparing the Bidding Documents.
- B. Copies of reports and drawings referenced in paragraph 4.03.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which Bidder is entitled to rely as provided in paragraph 4.06 of the General Conditions has been identified and established in paragraph 4.06 of 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.

4.04 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 conditions appear in paragraphs 4.02, 4.03, and 4.04 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 4.06 of the General Conditions.

4.05 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. 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. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.06 Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

4.07 It is responsibility of each Bidder before submitting a Bid to:

- A. Examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents, and any Addenda;
- B. Visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

- C. Become familiar with and satisfy Bidder as to all Federal, State, and local Laws and Regulations that may affect cost, progress, or performance of the Work;
 - D. Carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of Hazardous Environmental Conditions at the Site which have been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions;
 - E. Obtain and carefully study (or accept consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;
 - F. Agree at the time of submitting its Bid that 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(s) bid and within the times 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. Correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
 - I. 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; and
 - J. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.
- 4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the

Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 - PRE-BID CONFERENCE

5.01 A pre-Bid conference will not be held.

ARTICLE 6 - SITE AND OTHER AREAS

6.01 The Site is identified in the Bidding Documents. Easement for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

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 mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than five 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, or change the Bidding Documents as deemed advisable by Owner or Engineer.

ARTICLE 8 - BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 % of Bidder's maximum Bid price and in the form of a certified check or a Bid bond (EJCDC No. C-430, 2002 Edition) issued by a surety meeting the requirements of paragraphs 5.01 and 5.02 of the General Conditions.

8.02 The Bid security of the Successful Bidder will be retained until 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 returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 10 days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom 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

Agreement or 91 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.

- 8.03 Bid security of other Bidders whom OWNER believes do not have a reasonable chance of receiving the award will be returned 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. (Upon substantial completion, if necessary, a date for final completion and payment should be determined between the Owner, Contractor, and Engineer based on remaining work, market and weather conditions.)

ARTICLE 10 - LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages are set forth in the Agreement.

ARTICLE 11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or "or-equal" materials and equipment as defined in paragraph 6.05 of the General Conditions, or those substitute materials and equipment approved by the Engineer and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function, and quality to be met by any proposed substitute or "or-equal" item. No item of material or equipment will be considered by Engineer as a substitute or equal until after the bids have been opened and the contract has been awarded. The burden of proof of the merit of the proposed item, and cost for review of a proposed substitute item, is upon the Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. Bidders shall not rely upon approvals made in any other manner. Any reduction made in contract price due to approval of a substitute item or equal, will be subtracted from the bidders contract and placed into contingency funds for the project.

ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. 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, individual, or entity if requested by Owner. 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 a substitute, without an increase in the Bid.

- 12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest responsible Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner and Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in paragraph 6.06 of the General Conditions.
- 12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.
- 12.04 The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 6.06.

ARTICLE 13 - PREPARATION OF BID

- 13.01 The Bid form is included with the Bidding Documents. Additional copies may be obtained from Engineer.
- 13.02 All blanks on the Bid form shall be completed by printing in ink or by typewriter and the Bid 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 Bid Item listed therein, or the words "No Bid," "No Change," or "Not Applicable" entered.
- 13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. If required by State where work is to be performed, the corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporation business address and state of incorporation shall be provided on the Bid Form.
- 13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The business address of the partnership shall be provided on the Bid Form.
- 13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the business address of the firm must be provided on the Bid Form.
- 13.06 A Bid by an individual shall show the Bidder's name and business address.
- 13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The business address of the joint venture must be provided on the Bid Form.

- 13.08 All names shall be typed or printed in ink below the signatures.
- 13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers and dates of which shall be filled in on the Bid form.
- 13.10 The address and telephone number for communication regarding the Bid shall be shown.
- 13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number for the state of the Project, if any, shall also be shown on the Bid Form.

ARTICLE 14 - BASIS OF BID; COMPARSION OF BIDS

14.01 Unit Price

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.
- B. The total of all bid prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with paragraph 11.03 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. Discrepancies between words and figures will be resolved in favor of the words.

ARTICLE 15 - SUBMITTAL OF BID

- 15.01 Bidder shall submit one copy of Bid Form, Bid Bond and Bid Submittal Reference List.
- 15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement for Bids and shall be enclosed in an opaque sealed envelope plainly marked 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 envelope plainly marked on the outside with the notation "BID ENCLOSED." When using the mail or other delivery system, the Bidder is totally responsible for the mail or other delivery system delivering the Bid at the place and prior to the time indicated in the Advertisement for Bid. A mailed Bid shall be addressed to Owner.

ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the 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.
- 16.02 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 or negotiated, that Bidder will be disqualified from further bidding on the Work. This provision to withdraw a Bid without forfeiting the Bid security does not apply to Bidder's errors in judgment in preparing the Bid.

ARTICLE 17 - OPENING OF BIDS

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

ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for 90 days.

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 further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsible. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.
- 19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 19.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of

Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the contract Documents.
- 19.06 If the Contract is to be awarded, Owner will award the Contract to the responsible Bidder whose Bid, conforming with all the material terms and conditions of the Instructions to Bidders, is lowest in price and in the best interest of the Owner by considering other factors such as work history, recommendations, etc... In cases where the low bidder is not awarded the contract, submit an explanation of the selection process used, along with the recommendation for award, in order for all bidding requirements to be met for RD to concur in award of contract.

ARTICLE 20 - CONTRACT SECURITY AND INSURANCE

- 20.01 Article 5 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 executed Agreement to Owner, it must be accompanied by such bonds.

ARTICLE 21 - SIGNING OF AGREEMENT

- 21.01 When Owner gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 10 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.
- 21.02 This Contract is expected to be funded in part with funds provided by the United States Department of Agriculture, Rural Development (RD). Refer to Article 18 of the General Conditions for information on the Federal Requirements.
- 21.03 Concurrence by RD in the award of the Contract is required before the Contract is effective.

SPECIAL NOTES FOR CONTRACTORS

Each Bidder must accompany his bid with a list of at least three projects, similar in scope and cost to this project, with references in which his company has performed work. The company which performed the work as shown on the list of references must be the same company submitting the bid. The references shall include the name of the job, approximate date the job was completed, name of the utility company including contact person, and the name of the engineer including contact person.

The Contract Documents specify that the Contract shall be completed within 180 calendar days, but no work shall be performed on weekends and Federal holidays unless requested in writing at least seven days prior to any one weekend or holiday, and approved by the Engineer. This Contract is to be constructed during the weekdays of Monday through Friday and the period of 180 calendar days should allow the Contractor ample time to complete the project.

The Contractor shall not be allowed to maintain permanent residency for any employees on the construction site.

The Owner reserves the right to request and obtain information regarding the Contractor's financial status such as a financial statements or any other information relative to the financial capability of the Contractor to perform the work.

When performing work along or across any public roadway, the Contractor shall post warning signs painted orange and they shall be four feet by four feet mounted on posts in accordance with the Kentucky Transportation Cabinet's Uniform Traffic Control Devices. Furthermore, all other signs, barricades, lights, and traffic control procedures shall be installed in accordance with the Kentucky Transportation Cabinet's Manual on Uniform Traffic Control Devices.

The Contractor shall maintain two flag men at all times where machinery is in operation when working where the flow of traffic will be disturbed. There is no exception to this requirement. The use of radios will be required when visual contact between the flagmen does not exist.

At the completion of each work day, the Contractor shall backfill all open trenches and install all required traffic control signs, barricades, and lights in accordance with the Kentucky Transportation Cabinet's Manual on Uniform Traffic Control Devices.

The Contractor shall be responsible for keeping entire roadway free and clear at the end of each working day. No equipment shall be left on or parked along the road right of way.

All necessary steps shall be taken to prevent erosion or siltation of the public right-of-way, adjoining property and waterways. The Contractor shall practice "Best Management Practices" (BMPs) that will minimize siltation and erosion in or near streams. Contractor shall provide adequate control of siltation and erosion by limiting unnecessary excavation, disturbing or uprooting trees and vegetation, dumping of soil or debris, or pumping silt-laden water into a nearby stream. In addition to these typical erosion control measures, a temporary construction boundary fence is required in some areas of the project. Plan Sheet EC-1 outlines the specific site requirements and depicts recommended soil erosion control devices. All erosion control measures shall be incidental to the cost of installing other project components and no additional payment will be made.

The Contractor shall be responsible for complying with all requirements relating to the Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Storm Water Discharges Associated with Construction Activities (KYR10). This includes, but is not limited to, filing the Notice of Intent (NOI) with the Kentucky Division of Water and developing a Stormwater Pollution Prevention Plan (SWPPP) for the project. A copy of the Notice of Intent has been included in these documents for the Contractor's use. However, it is recommended that the Contractor utilize the Division of Water's e-permitting web site (<http://eppdepts01/eforms/depdefault.aspx>) as it greatly reduces the time required for acceptance of the Notice of Intent.

All pavement replacement shall be incidental to the cost of installing the water mains. No separate pay item is included for pavement replacement and no additional payment will be made.

All paved areas that are disturbed shall be backfilled with No. 9 stone, no exception. Again, this requirement shall be incidental to the cost of installing the water mains no additional payment will be made.

The minimum width of the pipe trench shall not be less than 24-Inches plus the diameter of the pipe being installed. Excavation of the pipe trench in rock areas shall be via the use of bucket and hoe type equipment and the use of any trencher type equipment shall not be allowed.

A complete bid package consist of the Bid Form, Bid Bond, Bid Submittal Reference List, and other forms as requested in Article 7 of the Bid Form. Any other documents or forms shall be requested at a later date.

The Owner reserves the right to increase, reduce, or eliminate any of the quantities of the Bid Items.

The Contract shall be awarded on the basis of the Base Bid.

BID SUBMITTAL REFERENCE LIST
PHASE 11-2 WATER LINE EXTENSIONS & CONNECTOR LINES
COLUMBIA-ADAIR UTILITIES DISTRICT
BID OPENING: December 13, 2012, 3:00 PM, LOCAL TIME

JOB NAME	APPROXIMATE DATE OF COMPLETION	APPROXIMATE COST	NAME OF UTILITY & CONTACT PERSON	NAME OF ENGINEER & CONTACT PERSON
JOB NO. 1				
JOB NO. 2				
JOB NO. 3				

Bid Form

Project Identification: Phase 11-2 Water Line Extensions & Connector Lines

Contract Identification and Number: _____

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ARTICLE 1 - BID RECIPIENT

- 1.01 This Bid Is Submitted To: Robert Flowers, Chairman
Columbia-Adair Utilities District
109 Grant Lane
Columbia, Kentucky 42728
- 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 the Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

- 2.01 Bidder accepts all of the terms and conditions of the Advertisement and Instructions to Bidders, including without limitations those dealing with the dispositions of Bid security. The Bid will remain subject to acceptance for 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, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all Federal, State, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in SC-4.02, and (2) reports and drawings of a Hazard Environmental Condition, if any, which has been identified in SC-4.06.
- E. Bidder has obtained and carefully studied (or accepts the consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by the Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.
- F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is 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. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

- I. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.
- K. Bidder will submit written evidence of its authority to do business in the State where the Project is located not later than the date of its execution of the Agreement.

ARTICLE 4 - FURTHER REPRESENTATIONS

4.01 Bidder further represents that:

- A. This Bid is genuine and not made in the interest of or on the behalf of any undisclosed individual or entity and is not submitted in conformity with any 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 sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

ARTICLE 5 - BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

BID SCHEDULE

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

The CONTRACT shall be awarded based on the lowest BASE BID.

BASE BID (Plan Sheets 1 through 6 and 19)

Item No.	Description	Quantity	Unit Cost	Total Cost
1	8-Inch PVC SDR 21 Water Line	10,400 LF	\$ _____	\$ _____
2	3-Inch PVC SDR 17 Water Line	4,400 LF	_____	_____
3	Bore & Case for 8-Inch Water Line	100 LF	_____	_____
4	Directional Bore for 8-Inch Water Line	150 LF	_____	_____
5	8-Inch Gate Valve	1 EA	_____	_____
6	6-Inch Gate Valve	1 EA	_____	_____
7	3-Inch Gate Valve	4 EA	_____	_____
8	3-Inch Blowoff Assembly	1 EA	_____	_____
9	Connection	6 EA	_____	_____
10	Tandem Meter Setting	25 EA	_____	_____
11	1-Inch Service Tubing	800 LF	_____	_____
12	¾-Inch Service Tubing	1,000 LF	_____	_____
13	Booster Pump Station	1 LS	_____	_____
14	Exploration	20 HR	_____	_____
TOTAL BASE BID				\$ _____

ALTERNATE BID NO. 1 (Plan Sheets 7 through 10)

Item No.	Description	Quantity	Unit Price	Total Cost
1	8-Inch PVC SDR 21 Water Line	8,300 LF	\$ _____	\$ _____
2	8-Inch Ductile Iron Ball & Socket WL	1,600 LF	_____	_____
3	8-Inch Ductile Iron CL350 Water Line	800 LF	_____	_____
4	Bore & Case for 8-Inch Water Line	40 LF	_____	_____
5	Gas Line Crossing for 8-Inch Water Line	350 LF	_____	_____
6	8-Inch Gate Valve	6 EA	_____	_____
7	6-Inch Gate Valve	1 EA	_____	_____
8	4-Inch Gate Valve	1 EA	_____	_____
9	Air Release Valve	2 EA	_____	_____
10	8-Inch Blowoff Assembly	4 EA	_____	_____
11	Connection	2 EA	_____	_____
12	Exploration	10 HR	_____	_____
TOTAL ALTERNATE BID NO. 1			\$ _____	_____

ALTERNATE BID NO. 2 (Plan Sheets 11 through 18)

Item No.	Description	Quantity	Unit Price	Total Cost
1	4-Inch Ductile Iron CL350 Water Line	10,200 LF	\$ _____	\$ _____
2	4-Inch PVC SDR 17 Water Line	14,000 LF	_____	_____
3	3-Inch PVC SDR 17 Water Line	2,000 LF	_____	_____
4	Bore & Case for 4-Inch Water Line	140 LF	_____	_____
5	Creek Crossing for 4-Inch Water Line	150 LF	_____	_____
6	4-Inch Gate Valve	6 EA	_____	_____
7	3-Inch Gate Valve	2 EA	_____	_____
8	3-Inch Blowoff Assembly	1 EA	_____	_____
9	Connection	3 EA	_____	_____
10	Meter Setting	14 EA	_____	_____
11	¾-Inch Service Tubing	600 LF	_____	_____
12	Exploration	20 HR	_____	_____
TOTAL ALTERNATE BID NO. 2			\$ _____	_____

The above unit prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

- A. Unit Prices have been computed in accordance with paragraph 11.03.A of the General Conditions.
- B. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the contract Documents.

ARTICLE 6 - TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete in accordance with paragraph 14.04 of the General Conditions on or before the contract date or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work within the Contract Times.

ARTICLE 7 - ATTACHMENTS TO THIS BID

- 7.01 The following documents are attached to and made a condition of the Bid:
 - A. Required Bid security in the form of a Bid Bond (EJCDC No. C-430) or Certified Check (circle type of security provided);
 - B. If Bid amount exceeds \$10,000, signed Compliance Statement (RD 400-6). Refer to specific equal opportunity requirements set forth in paragraph 18.10 of the General Conditions;
 - C. If Bid amount exceeds \$25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions (AD-1048);
 - D. If Bid amount exceeds \$100,000, signed RD Instruction 1940-Q, Exhibit A-1, Certification for Contracts, Grants, and Loans. Refer to paragraph 18.11 of the General Conditions;

ARTICLE 8 - DEFINED TERMS

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

ARTICLE 9 - BID SUBMITTAL

9.01 This Bid submitted by:

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

Bidder's Business address:

Business Phone No. (_____) _____ Business FAX No. (_____) _____

Business E-Mail Address _____

State Contractor License No. _____ . (If applicable)

Employer's Tax ID No. _____

Phone and FAX Numbers, and Address for receipt of official communications, if different from Business contact information:

9.02 Bid submitted on _____, 2012.

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:

Project (Brief Description Including Location):

BOND

Bond Number:

Date (Not later than Bid due date):

Penal sum

_____ (Words)

_____ (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER

SURETY

Bidder's Name and Corporate Seal
Corporate Seal

(Seal)

Surety's Name and

(Seal)

By: _____
Signature and Title

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title

Attest: _____
Signature and Title

Note: Above addresses are to be used for giving required notice.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Surety's liability.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder fails 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, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

CERTIFICATION FOR CONTRACTS, GRANTS AND LOANS

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

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant or Federal loan, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant or loan.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant or loan, the undersigned shall complete and submit Standard Form - LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including contracts, subcontracts, and subgrants under grants and loans) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transmission 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)

U.S. DEPARTMENT OF AGRICULTURE

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY
AND VOLUNTARY EXCLUSION – LOWER TIER COVERD TRANSACTIONS**

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 7 CFR Part 3017, Section 3017.510, Participants' responsibilities. The regulations were published as Part IV of the January 30, 1989, Federal Register (pages 4722-4733). Copies of the regulations may be obtained by contacting the Department of Agriculture agency with which this transaction originated.

**(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON
REVERSE)**

- (1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Organization Name

PR/Award Number or Project Name

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

Signature(s)

Date

Form AD-1048 (1/92)

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 Transactions," without modification, in all lower tier covered transactions 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 it 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.

COMPLIANCE STATEMENT

This statement relates to a proposed contract with _____

_____,
(Name of Borrower or Grantee)

who expects to finance the contract with assistance from either the Rural Housing Service (RHS), Rural Business-Cooperative Service (RBS), or the Rural Utilities Service (RUS) or their successor agencies, United States Department of Agriculture (whether by a loan, grant, loan insurance, guarantee, or other form of financial assistance). I am the undersigned bidder or prospective contractor. I represent that:

1. I have, have not, participated in a previous contract or subcontract subject to Executive Order 11246 (regarding equal employment opportunity) or a preceding similar Executive Order.
2. If I have participated in such a contract or subcontract, I have, have not, filed all compliance reports that I have been required to file in connection with the contract or subcontract.

If the proposed contract is for \$50,000 or more and I have 50 or more employees, I also represent that:

3. I have, have not previously had contracts subject to the written affirmative action program 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, rest rooms 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):

**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 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 AWARD

TO: _____

PROJECT Description: Construction of the Phase 11-2 Water Line Extensions & Connector Lines.

The OWNER has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids dated _____, 2012, 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 Agreement and furnish the required CONTRACTOR'S Performance BOND, Payment BOND and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within ten (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER's acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

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

Dated this _____ day of _____, 2012.

Owner
By _____
Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by _____, this the _____ day of _____, 2012.

By _____
Title _____

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

THIS AGREEMENT is by and between Columbia-Adair Utilities District (Owner)

and _____ (Contractor).

Owner and Contractor, in consideration of the mutual covenants set forth herein, 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: Phase 11-2 Water Line Extensions & Connector Lines.

ARTICLE 2 - THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: Phase 11-2 Water Line Extensions & Connector Lines.

ARTICLE 3 - ENGINEER

3.01 The Project has been designed by Monarch Engineering, Inc., 556 Carlton Drive, Lawrenceburg, KY 40342, telephone number 502/839-1310.

ARTICLE 4 - CONTRACT TIMES

4.01 Time of the Essence

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 Days to Achieve Substantial Completion and Final Payment

A. The Work will be substantially completed within 180 days after the date when the Contract Time commences to run as provided in Paragraph 2.03 of the General Conditions, and completed and ready for final payment at a date determined by Owner, Contractor, and Engineer after substantial completion, based on remaining work, weather and market conditions.

4.03 Liquidated Damages

- A. Contractor and Owner recognize that time is of the essence on this Project and that the Owner will suffer financial loss if the Work is not substantially completed within the times specified in Paragraph 4.02 above, plus any extensions allowed in accordance with Article 12 of the General Conditions. Accordingly, Contractor shall pay Owner \$1,000.00 for each day that expires after the time specified in Paragraph 4.02 until the work is substantially complete. After substantial completion, retainage may be reduced to an amount agreed upon by Owner, Contractor, and Engineer. It should be no less than 150% of the amount required for the completion and ready for final payment. Liquidated damages may not be assessed after substantial completion has been achieved.

ARTICLE 5 - CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A. All specific cash allowances are included in the prices and have been computed in accordance with Paragraph 11.02 of the General Conditions.

As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions. Unit prices have been computed as provided in Paragraph 11.03 of the General Conditions.

- A. For all Work at the prices stated in Contractor's Bid, included in Contract Documents.

Contract Amount _____
_____ (\$ _____).

ARTICLE 6 - PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments

- A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 Progress Payments; Retainage

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 10th day of each month during performance of the Work as provided in Paragraphs 6.02.A.1 and 6.02.A.2 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions:
 - a. 95 percent of Work completed (with the balance being retainage); and
 - b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
2. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, plus any reduction in retainage that has been agreed upon by Owner, Contractor and Engineer.

6.03 Final Payment

- A. Upon receipt of the final Application for Payment accompanied by Engineer's recommendation of payment in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay Contractor as provided in Paragraph 14.07 of the General Conditions the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages.

ARTICLE 7 - INTEREST

- 7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the maximum legal rate.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Agreement Contractor makes the following representations:
 - A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
 - B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

- D. Contractor has obtained and carefully studied (or assumes responsibility for doing so) all examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto.
- E. Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- F. 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.
- G. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
- 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.

ARTICLE 9 - CONTRACT DOCUMENTS

9.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement
 - 2. Performance Bond
 - 3. Payment Bond
 - 4. Other bonds
 - 5. General Conditions

6. Supplementary Conditions
 7. Specifications as listed in the table of contents of the Project Manual.
 8. Drawings consisting of 22 sheets.
 9. Addenda, if applicable
 10. Exhibits to this Agreement (enumerated as follows):
 - a. Notice to Proceed
 - b. Contractor's Bid
 - c. Documentation submitted by Contractor prior to Notice of Award
 - d. _____.
 11. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Notice to Proceed
 - b. Work Change Directives.
 - c. Change Order(s).
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 - MISCELLANEOUS

10.01 Terms

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 Assignment of Contract

- A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment,

no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

- A. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 Severability

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement in four copies. One counterpart each has been delivered to Owner, Contractor, Engineer, and Agency. All portions of the Contract Documents have been signed, initialed, or identified by Owner and Contractor or identified by Engineer on their behalf.

This Agreement will be effective _____, _____ (which is the Effective Date of the Agreement). This Agreement shall not be effective unless and until Agency's designated representative concurs.

OWNER:

CONTRACTOR:

By: Robert Flowers, Columbia-Adair Utilities District

By:

Title: Chairman

Title:

[CORPORATE SEAL]

[CORPORATE SEAL]

Attest:

Attest:

Title:

Title:

Designated Representatives:

Designated Representatives:

Name:

Name:

Title:

Title:

Address for giving notices:

Address for giving notices:

109 Grant Lane

Columbia, Kentucky 42728

Phone: 270-789-2133 FAX: 270-465-3581

Phone: _____ FAX: _____

(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 Owner-Contractor Agreement.)

License No.:

(Where applicable)

Agent for service or process:

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

Agency Concurrence:

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

Agency:

By:

Date:

Title:

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address): SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONTRACT

Date:
Amount:
Description (Name and Location):

BOND

Bond Number:
Date (Not earlier than Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL
Company:

Signature: _____ (Seal)
Name and Title:

SURETY

Surety's Name and Corporate Seal (Seal)

By: _____
Signature and Title
(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

Attest: _____
Signature and Title

CONTRACTOR AS PRINCIPAL
Company:

Signature: _____ (Seal)
Name and Title:

SURETY

Surety's Name and Corporate Seal (Seal)

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title:

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

2. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 3.1.

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

3.1. Owner has notified Contractor and Surety, at the addresses described in Paragraph 10 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and

3.2. Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 3.1; and

3.3. Owner has agreed to pay the Balance of the Contract Price to:

1. Surety in accordance with the terms of the Contract;
2. Another contractor selected pursuant to Paragraph 4.3 to perform the Contract.

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

4.1. Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or

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

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and Contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or

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

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

2. Deny liability in whole or in part and notify Owner citing reasons therefor.

5. If Surety does not proceed as provided in Paragraph 4 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 4.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.

6. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of Surety to Owner shall not be greater than those of

Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To a limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

6.1. The responsibilities of Contractor for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions or failure to act of Surety under Paragraph 4; and

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

7. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the 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 Owner or its heirs, executors, administrators, or successors.

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

9. 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 Contractor Default or within two years after Contractor ceased working or within two years after 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 period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.

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

12. Definitions.

12.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.

12.2. Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

12.3. Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

12.4. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.

**FOR INFORMATION ONLY – Name, Address and Telephone
Surety Agency or Broker:
Owner's Representative (engineer or other party):**

PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Bond Number:

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Company:

Signature: _____ (Seal)

Name and Title:

Surety's Name and Corporate Seal (Seal)

By:

Signature and Title

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

Attest:

Signature and Title

CONTRACTOR AS PRINCIPAL

SURETY

Company:

Signature: _____ (Seal)

Name and Title:

Surety's Name and Corporate Seal (Seal)

By:

Signature and Title

(Attach Power of Attorney)

Attest:

Signature and Title:

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to Owner, this obligation shall be null and void if Contractor:

2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2. Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.

4. Surety shall have no obligation to Claimants under this Bond until:

4.1. Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the addresses described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2. Claimants who do not have a direct contract with Contractor:

1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and

2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and

3. Not having been paid within the above 30 days, have sent a written notice to Surety and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.

5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.

6. When a Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at Surety's expense take the following actions:

6.1. Send an answer to that Claimant, with a copy to Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

6.2. Pay or arrange for payment of any undisputed amounts.

7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.

8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any

performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

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

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, 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.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

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

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS

15.1. Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and 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.

15.2. Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.

FOR INFORMATION ONLY – Name, Address and Telephone Surety Agency or Broker: Owner's Representative (engineer or other party):
--

NOTICE TO PROCEED

TO: _____

DATE: _____
Project: Phase 11-2 Water Line Extensions &
Connector Lines

You are hereby notified to commence WORK in accordance with the Agreement dated _____, 20____, on or before _____, 20____, and you are to complete the WORK within 180 consecutive calendar days thereafter. The date of completion of all WORK is therefore _____, 20____.

Owner

By _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by _____

this the _____, 20____

By _____

Title _____

Employer Identification
Number _____

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT FUNDING AGENCY EDITION

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



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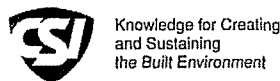
This document has been approved and endorsed by

The Associated General Contractors of America



and the

Construction Specification Institute



These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Funding Agency Edition No. C-521 (2002 Edition). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001, 2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800, 2002 Edition).

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GENERAL CONDITIONS

DEFINITIONS AND TERMINOLOGY

Defined Terms

Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. 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.

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.

Agency – The Federal or state agency named as such in the Agreement.

Agreement – The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

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.

Asbestos – Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

Bid – The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

Bidder – The individual or entity who submits a Bid directly to Owner.

Bidding Documents – The Bidding Requirements and the proposed Contract Documents (including all Addenda).

Bidding Requirements – The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

Change Order – A document recommended by Engineer which is signed by Contractor and Owner and Agency and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

Claim – A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

Contract – The entire and integrated written agreement between the Owner and 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. Approved Shop Drawings, other

Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

Contract Price – The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

Contract Times – The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

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

Cost of the Work – See Paragraph 11.01.A for definition.

Drawings – That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

Effective Date of the Agreement – The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

Engineer – The individual or entity named as such in the Agreement.

Field Order – A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

General Requirements – Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

Hazardous Environmental Condition – The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

Hazardous Waste – The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

Laws and Regulations; Laws or Regulations – Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

Liens – Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

Milestone – A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

Notice of Award – The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

Notice to Proceed – A written notice given 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 under the Contract Documents.

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

PCBs – Polychlorinated biphenyls.

Petroleum – Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

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.

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

Project Manual – The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

Radioactive Material – Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

Related Entity – An officer, director, partner, employee, agent, consultant, or subcontractor.

Resident Project Representative – The authorized representative of Engineer who may be assigned to the Site or any part thereof.

Samples – Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

Schedule of Submittals – A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

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.

Shop Drawings – All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

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 for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

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 a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

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.

Successful Bidder – The Bidder submitting a responsive Bid to whom Owner makes an award.

Supplementary Conditions – That part of the Contract Documents which amends or supplements these General Conditions.

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 any Subcontractor.

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 those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

Unit Price Work – Work to be paid for on the basis of unit prices.

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.

Work Change Directive – A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and Agency upon recommendation of the Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

Terminology

The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

Intent of Certain Terms or Adjectives

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 requirements of and information in the Contract Documents and conformance with the design concept of the completed 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 Paragraph 9.09 or any other provision of the Contract Documents.

Day

The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

Defective

The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

does not conform to the Contract Documents, or

does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or

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 14.04 or 14.05).

Furnish, Install, Perform, Provide

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.

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.

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.

When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

PRELIMINARY MATTERS

Delivery of Bonds and Evidence of Insurance

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.

Evidence of Insurance: Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional

insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

Copies of Documents

Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

Commencement of Contract Times; Notice to Proceed

The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement 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 Agreement.

Starting the Work

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 the date on which the Contract Times commence to run.

Before Starting Construction

Preliminary Schedules: Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

a preliminary Progress Schedule;

a preliminary Schedule of Submittals; and

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.

Preconstruction Conference

Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, Agency, 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 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

Initial Acceptance of Schedules

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 2.05.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.

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.

Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

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 component parts of the Work.

CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

Intent

The Contract Documents are complementary; what is required by one is as binding as if required by all.

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. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

Reference Standards

Standards, Specifications, Codes, Laws, and Regulations

Reference to standards, specifications, manuals, 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, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

No provision of any such standard, specification, manual 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 Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of their Related Entities, 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 Contract Documents.

Reporting and Resolving Discrepancies

Reporting Discrepancies

Contractor's Review of Contract Documents Before Starting Work: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

Contractor's Review of Contract Documents During Performance of Work: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, 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 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

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 knew or reasonably should have known thereof.

Resolving Discrepancies

Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

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).

Amending and Supplementing Contract Documents

The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

A Field Order;

Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3)
or

Engineer's written interpretation or clarification.

Reuse of Documents

Contractor and any Subcontractor or Supplier shall not:

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 Engineer's consultants, including electronic media editions; or

reuse any of 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 adaption by Engineer.

The prohibition 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.

Electronic Data

Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

Availability of Lands

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. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed 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.

Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

Subsurface and Physical Conditions

Reports and Drawings: The Supplementary Conditions identify:

those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary

Conditions. Except for such reliance on such “technical data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

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

other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions, or information.

Differing Subsurface or Physical Conditions

Notice: If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

is of such a nature as to require a change in the Contract Documents; or

differs materially from that shown or indicated in the Contract Documents; or

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 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

Engineer’s Review: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

Possible Price and Times Adjustments

The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:

such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

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 Paragraphs 9.07 and 11.03.

Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

Contractor knew of the existence of such conditions at the time Contractor made a final 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

the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

Contractor failed to give the written notice as required by Paragraph 4.03.A.

If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

Underground Facilities

Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous 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:

Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

reviewing and checking all such information and data,

locating all Underground Facilities shown or indicated in the Contract Documents,

coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

Not Shown or Indicated

If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, 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 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

Reference Points

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.

Hazardous Environmental Condition at Site

Reports and Drawings: Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

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

other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) 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.

Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. 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, either party may make a Claim therefor as provided in Paragraph 10.05.

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. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and 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 a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and 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 a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

BONDS AND INSURANCE

Performance, Payment, and Other Bonds

Contractor shall furnish performance and payment bonds, 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 Documents. 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 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by 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 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.

If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, 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 requirements of Paragraphs 5.01.B and 5.02.

Licensed Sureties and Insurers

All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

Certificates of Insurance

Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

Contractor's Liability Insurance

Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which 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:

claims under workers' compensation, disability benefits, and other similar employee benefit acts;

claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

claims for damages insured by reasonably available personal injury liability coverage which are sustained:

by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

by any other person for any other reason;

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; and

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 policies of insurance required by this Paragraph 5.04 shall:

with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, 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;

include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

include completed operations insurance;

include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

Owner's Liability Insurance

In addition to the insurance required to be provided by Contractor under Paragraph 5.04, 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.

Property Insurance

Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (Contractor shall be responsible for any deductible or self-insured retention.). This insurance shall:

include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners,

employees, agents, consultants and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

be written on a Builder's Risk "all-risk" or open peril or special causes of loss 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, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

allow for partial utilization of the Work by Owner;

include testing and startup; and

be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

Contractor shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

Waiver of Rights

Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies 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 of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, 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 Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, 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 Contractor as trustee or otherwise payable under any policy so issued.

Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

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

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 utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.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, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

Receipt and Application of Insurance Proceeds

Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Contractor and made payable to Contractor as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Contractor shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof.

Contractor as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Contractor's exercise of this power. If such objection be made, Contractor as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Contractor as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Contractor as fiduciary shall give bond for the proper performance of such duties.

Acceptance of Bonds and Insurance; Option to Replace

If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either

party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, 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. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

Partial Utilization, Acknowledgment of Property Insurer

If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

CONTRACTOR'S RESPONSIBILITIES

Supervision and Superintendence

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. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

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. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

Labor; Working Hours

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.

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. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

Services, Materials, and Equipment

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.

All materials and equipment incorporated into the Work shall be as specified or, if not specified, 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.

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.

Progress Schedule

Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

Substitutes and "Or-Equals"

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 specification or description 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 or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

"Or-Equal" Items: If in Engineer's sole discretion 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, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

in the exercise of reasonable judgment Engineer determines that:

it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

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;

it has a proven record of performance and availability of responsive service; and

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

there will be no increase in cost to the Owner or increase in Contract Times, and

it will conform substantially to the detailed requirements of the item named in the Contract Documents.

Substitute Items

If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

The procedure requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

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:

shall certify that the proposed substitute item will:

will perform adequately the functions and achieve the results called for by the general design,

be similar in substance to that specified, and

be suited to the same use as that specified;

will state:

the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

whether or not 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

whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

will identify:

all variations of the proposed substitute item from that specified, and

available engineering, sales, maintenance, repair, and replacement services;

and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or

utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the 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.

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

Concerning Subcontractors, Suppliers, and Others

Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. 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 any right of Owner or Engineer to reject defective Work.

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. Nothing in the Contract Documents:

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

shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

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.

All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, 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 such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

Patent Fees and Royalties

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.

To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and 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.

Permits

Unless otherwise provided in the Supplementary Conditions, 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 opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

Laws and Regulations

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.

If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear 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. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

Taxes

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.

Use of Site and Other Areas

Limitation on Use of Site and Other Areas

Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and 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 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 by or based upon Contractor's performance of the Work.

Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other 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.

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 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.

Loading 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 property to stresses or pressures that will endanger it.

Record Documents

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

Safety and Protection

Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

all persons on the Site or who may be affected by the Work;

all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

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 owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.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 (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or

Engineer or , 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).

Contractor's duties and responsibilities for safety and for protection of the Work 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 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

Safety Representative

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.

Hazard Communication Programs

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.

Emergencies

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.

Shop Drawings and Samples

Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

Shop Drawings

Submit number of copies specified in the General Requirements.

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 6.17.D.

Samples

Submit number of Samples specified in the Specifications.

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 6.17.D.

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.

Submittal Procedures

Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

- all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

- the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

- all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

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 and approval of that submittal.

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 both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

Engineer's Review

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.

Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

Engineer's review and approval 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 6.17.C.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's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

Resubmittal Procedures

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.

Continuing the Work

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, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

Contractor's General Warranty and Guarantee

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 Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

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

normal wear and tear under normal usage.

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:

observations by Engineer;

recommendation by Engineer or payment by Owner of any progress or final payment;

the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

use or occupancy of the Work or any part thereof by Owner;

any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

any inspection, test, or approval by others; or

any correction of defective Work by Owner.

Indemnification

To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and 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 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.

In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees 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 6.20.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.

The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

Delegation of Professional Design Services

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 law.

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, Shop Drawings 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.

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.

Pursuant to this Paragraph 6.21, 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 6.17.D.1.

Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

OTHER WORK AT THE SITE

Related Work at Site

Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

written notice thereof will be given to Contractor prior to starting any such other work; and

if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. 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 their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, 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.

Coordination

If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

the specific matters to be covered by such authority and responsibility will be itemized; and

the extent of such authority and responsibilities will be provided.

Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

Legal Relationships

Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

OWNER'S RESPONSIBILITIES

Communications to Contractor

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

Replacement of Engineer

In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

Furnish Data

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

Pay When Due

Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

Lands and Easements; Reports and Tests

Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

Insurance

Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

Change Orders

Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

Inspections, Tests, and Approvals

Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

Limitations on Owner's Responsibilities

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.

Undisclosed Hazardous Environmental Condition

Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

Evidence of Financial Arrangements

If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ENGINEER'S STATUS DURING CONSTRUCTION

Owner's Representative

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 Documents and will not be changed without written consent of Owner and Engineer.

Visits to Site

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.

Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. 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.

Project Representative

If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. 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.

Authorized Variations in Work

Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which 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. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

Rejecting Defective Work

Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

Shop Drawings, Change Orders and Payments

In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

In connection with 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, see Paragraph 6.21.

In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

In connection with Engineer's authority as to Applications for Payment, see Article 14.

Determinations for Unit Price Work

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 Paragraph 10.05.

Decisions on Requirements of Contract Documents and Acceptability of Work

Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

Limitations on Engineer's Authority and Responsibilities

Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents 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.

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.

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.

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 14.07.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.

The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

CHANGES IN THE WORK; CLAIMS

Authorized Changes in the Work

Without invalidating the Contract and without notice to any surety, Owner may, subject to written approval by Agency at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

Unauthorized Changes in the Work

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 as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

Execution of Change Orders

Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

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; and

changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

Notification to Surety

If notice 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) is required by the provisions of any bond to be given to a surety, 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.

Claims

Engineer's Decision Required: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

Notice: Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

Engineer's Action: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

deny the Claim in whole or in part,

approve the Claim, or

notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

Cost of the Work

Costs Included: The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

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 at the Site. 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, 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.

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.

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 11.01.

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.

Supplemental costs including the following:

The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

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.

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.

Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

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.

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 5.06.D), 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.

The cost of utilities, fuel, and sanitary facilities at the Site.

Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressages, and similar petty cash items in connection with the Work.

The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

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

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 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

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.

Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

Contractor's Fee: When all the Work 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 or when a Claim for an 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 12.01.C.

Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, 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.

Allowances

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.

Cash Allowances

Contractor agrees that:

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

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.

Contingency Allowance

Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

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.

Unit Price Work

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.

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. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

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.

Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

the Bid price of a particular item of Unit Price Work amounts to more than 5 percent of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and

there is no corresponding adjustment with respect to any other item of Work; and

Contractor believes that Contractor 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.

CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

Change of Contract Price

The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

Contractor's Fee: The Contractor's fee for overhead and profit shall be determined as follows:

a mutually acceptable fixed fee; or

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:

for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

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 Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

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

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 12.01.C.2.a through 12.01.C.2.e, inclusive.

Change of Contract Times

The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

Delays

Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, 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 Price or the Contract Times, or both. 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.

If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is 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 described in this Paragraph 12.03.B.

delays caused by or within the control of Contractor; or

Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

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

Notice of Defects

Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

Access to Work

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

Tests and Inspections

Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

as otherwise specifically provided in the Contract Documents.

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.

Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

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, it must, if requested by Engineer, be uncovered for observation.

Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

Uncovering Work

If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, 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, furnishing all necessary labor, material, and equipment.

If it is found that the uncovered Work is defective, 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 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 Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

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, Contractor may make a Claim therefor as provided in Paragraph 10.05.

Owner May Stop the Work

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, 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.

Correction or Removal of Defective Work

Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. 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 removal (including but not limited to all costs of repair or replacement of work of others).

When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

Correction Period

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 land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

repair such defective land or areas; or

correct such defective Work; or

if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

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. 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) will be paid by Contractor.

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.

Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, 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.

Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

Acceptance of Defective Work

If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. 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) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and

Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

Owner May Correct Defective Work

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 in accordance with Paragraph 13.06.A, 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, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

In exercising the rights and remedies under this Paragraph 13.09, 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, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, 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.

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) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. 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.

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 13.09.

PAYMENTS TO CONTRACTOR AND COMPLETION

Schedule of Values

The Schedule of Values established as provided in Paragraph 2.07.A 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.

Progress Payments

Applications for Payments

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 or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

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.

The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

Review of Applications

Engineer will, within 10 days after receipt of each Application for Payment, 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.

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 on the Site 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:

the Work has progressed to the point indicated;

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, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

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.

By recommending any such payment Engineer will not thereby be deemed to have represented that:

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 Documents; or

that 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.

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:

to supervise, direct, or control the Work, or

for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

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 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

the Work is defective, or completed Work has been damaged, requiring correction or replacement;

the Contract Price has been reduced by Change Orders;

Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

Payment Becomes Due

Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

Reduction in Payment

Owner may refuse to make payment of the full amount recommended by Engineer because:

claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

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;

the Contractor's performance or furnishing of the Work is inconsistent with funding Agency requirements;

there are other items entitling Owner to a set-off against the amount recommended; or

Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action 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, when Contractor corrects to Owner's satisfaction the reasons for such action.

If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

Contractor's Warranty of Title

Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

Substantial Completion

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 (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

Promptly after Contractor's notification, Owner, Agency, Contractor, and Engineer shall make a prefinal 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.

If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

Partial Utilization

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.

Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

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 14.04 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.

No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

Final Inspection

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, Agency, and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

Final Payment

Application for Payment

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, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

The final Application for Payment shall be accompanied (except as previously delivered) by:

all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

consent of the surety, if any, to final payment;

a list of all Claims against Owner that Contractor believes are unsettled; and

complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible 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.

Engineer's Review of Application and Acceptance

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 Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. 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 14.09. 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.

Payment Becomes Due

Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

Final Completion Delayed

If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims. The remaining balance of any sum included in the final Application for Payment but held by OWNER for Work not fully completed and accepted will become due when the Work is fully completed and accepted.

Waiver of Claims

The making and acceptance of final payment will constitute:

a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

SUSPENSION OF WORK AND TERMINATION

Owner May Suspend Work

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 notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

Owner May Terminate for Cause

The occurrence of any one or more of the following events will justify termination for cause:

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 established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

Contractor's disregard of the authority of Engineer; or

Contractor's violation in any substantial way of any provisions of the Contract Documents.

If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

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.

If Owner proceeds as provided in Paragraph 15.02.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 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) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed 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.

Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to

perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

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. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

Owner May Terminate For Convenience

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):

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;

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;

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) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

reasonable expenses directly attributable to termination.

Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

Contractor May Stop Work or Terminate

If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) 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 15.03.

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 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 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.

DISPUTE RESOLUTION

Methods and Procedures

Owner and Contractor may mutually request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

If the claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

agrees with the other party to submit the Claim to another dispute resolution process, or

gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

MISCELLANEOUS

Giving Notice

Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

Computation of Times

When any period of time is referred to in the Contract Documents 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.

Cumulative Remedies

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 Documents. 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.

Survival of Obligations

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

Controlling Law

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

Headings

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

FEDERAL REQUIREMENTS

Agency Not a Party

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

Contract Approval

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

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

Conflict of Interest

Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the plans and specifications has a corporate or financial affiliation with the supplier or manufacturer.

Owner's officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (i) the employee, officer or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest in Contractor. Owner's officers, employees, or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractor or subcontractors.

Gratuities

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.

In the event this Contract is terminated as provided in paragraph 18.04.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.

Audit and Access to Records

For all negotiated contracts and negotiated modifications (except those of \$10,000 or less), Owner, Agency, the Comptroller General, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Contractor, which are pertinent to the Contract, for the purpose of making audits, examinations, excerpts and transcriptions. Contractor shall maintain all required records for three years after final payment is made and all other pending matters are closed.

Small, Minority and Women's Businesses

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; (4) establishing delivery schedules, where the requirements of the work permit, which will encourage participation by small, minority and women's businesses; (5) using the services and assistance of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce; (6) requiring each party to a subcontract to take the affirmative steps of this section; and (7) Contractor is encouraged to procure goods and services from labor surplus area firms.

Anti-Kickback

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.

Clean Air and Pollution Control Acts

If this Contract exceeds \$100,000, Contractor shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 USC 7401 *et seq.*) and the Federal Water Pollution Control Act as amended (33 USC 1251 *et seq.*). Contractor will report violations to the Agency and the Regional Office of the EPA.

State Energy Policy

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

Equal Opportunity Requirements

If this Contract exceeds \$10,000, Contractor shall comply with Executive Order 11246, "Equal Employment Opportunity," as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

Contractor's compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative active obligations required by the Standard Federal Equal Employment Opportunity Construction Contract Specifications, as set forth in 41 CFR Part 60-4 and its efforts to meet the goals established for the geographical area where the Contract is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting Contractor's goals shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

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

Restrictions on Lobbying

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

Environmental Requirements

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

Wetlands – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.

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 delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, i.e., alluvial soils on NRCS Soil Survey Maps.

Historic Preservation – Any excavation by Contractor that uncovers an historical or archaeological artifact shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the State Historic Preservation Officer (SHPO).

Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service.

EXHIBIT GC-A

Certificate of Owner's Attorney

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; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions, and provisions thereof.

Date: _____

Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract Funding Agency Edition (No. C-710, 2002 Edition) and other provisions of the Contract Documents as indicated below. All provisions not so amended or supplemented remain in full force and effect.

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

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SC-1.01.A.2. Add the following language to the end of Paragraph 1.01.A.2:

The Project is financed in whole or in part by USDA Rural Development pursuant to the Consolidated Farm and Rural Development Act (7 USC Section 1921 et seq.). *{add other funding sources and modify when necessary.}*

SC-1.01.A.4. Add the following language to the end of Paragraph 1.01.A.4:

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

SC-1.01.A.10. Add the following language to the end of Paragraph 1.01.A.10:

The Change Order form to be used on this Project is Form RD1927-7. Agency approval is required before Change Orders are effective.

SC-1.01.A.15. Delete in it's entirety and replace with the following:

Contract Times: The number of days or date stated in the Agreement to achieve substantial completion. Final completion date will be determined by Contractor, Owner, and Engineer, after substantial completion, based on remaining work, weather and market conditions.

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

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

{SC-4.02. Add the following new paragraphs immediately after Paragraph 4.02.B:

- C *In the preparation of Drawings and Specifications, Engineer relied upon the following reports of exploration and tests of subsurface conditions at the Site:*

1. See EJCDC No.C-800 for examples.

- D. *In the preparation of Drawings and Specifications, Engineer relied upon the following drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities) which are at or contiguous to the Site:*

1. See EJCDC No. C-800 for examples.

- E. *Copies of reports and drawings itemized in SC-4.02.C and SC-4.02.D that are not included with Bidding Documents may be examined at _____ during regular business hours. These reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which the Contractor may rely as identified and established above are incorporated therein by reference. Contractor is not entitled to rely upon other information and data utilized by Engineer in the preparation of the Drawings and Specifications.*

{OR}

SC-4.02. Delete Paragraphs 4.02.A and 4.02.B in their entirety and insert the following:

- A. *No reports or explorations or tests of subsurface conditions at or contiguous to the Site are known to the Owner or Engineer.*

{SC-4.06. Add the following new paragraphs immediately after Paragraph 4.06.A:

1. *In the preparation of Drawings and Specifications, Engineer relied upon the following reports of Hazardous Environmental Conditions at the Site:*

a. See EJCDC No.C-800 for examples.

2. *In the preparation of Drawings and Specifications, Engineer relied upon the following drawings of Hazardous Environmental Conditions which are at or contiguous to the Site:*

a. See EJCDC No. C-800 for examples.

3. *Copies of reports and drawings itemized in SC-4.06.A.1 and SC-4.06.A.2 that are not included with Bidding Documents may be examined at _____ during regular business hours. These reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which the Contractor may rely as identified and established above are incorporated therein by reference. Contractor is not entitled to rely upon other information and data utilized by Engineer in the preparation of the Drawings and Specifications.*

{OR}

SC-4.06. Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

- A. No reports or explorations or tests of subsurface conditions at or contiguous to the Site are known to the Owner or Engineer.
- B. {Not used.}

SC-5.03. Add the following new paragraph immediately after Paragraph 5.03.B:

- C. Failure of the Owner to demand such certificates or other evidence of full compliance with these insurance requirements or failure of the Owner to identify a deficiency from evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

{The amounts of coverage for each type of insurance under paragraph 5.04 are recommended amounts that should be used to provide the Owner adequate protection. These amounts should be reviewed in the context of the specific project and adjusted accordingly.}

SC-5.04. Add the following new paragraph immediately after Paragraph 5.04.B:

- C. The limits of liability for insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

- 1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and A.2 of the General Conditions:

- a. State: Statutory
- b. Applicable Federal (e.g., Longshoremen's) Statutory
- c. Employer's Liability {\$ 500,000}

- 2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody, and control of the Contractor:

- a. General Aggregate {\$ 2,000,000}
- b. Products – Completed Operations Aggregate {\$ 1,000,000}
- c. Personal and Advertising Injury {\$ 1,000,000}
- d. Each Occurrence (Bodily Injury and Property Damage) {\$ 1,000,000}
- e. Property Damage liability insurance will provide Explosion, Collapse, and Underground coverages where applicable.
- f. Excess or Umbrella Liability
 - 1) General Aggregate {\$ 5,000,000}
 - 2) Each Occurrence {\$ 5,000,000}

3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:
 - a. Bodily Injury:

Each Person	{\$ 1,000,000}
Each Accident	{\$ 1,000,000}
 - b. Property Damage:

Each Accident	{\$ 1,000,000}
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 - c. Combined Single Limit of

	{\$ 1,000,000}
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4. The Contractual Liability coverage required by paragraph 5.04.B.4 of the General Conditions shall provide coverage for not less than the following amounts:
 - a. Bodily Injury:

Each Person	{\$ 2,000,000}
Each Accident	{\$ 2,000,000}
 - b. Property Damage:

Each Accident	{\$ 2,000,000}
Annual Aggregate	{\$ 2,000,000}

{5. List additional types and amounts of insurance that may be required by Owner.}

{6. List by name other persons or entities to be included on policy as additional insureds.}

{SC-5.06.A. In the case of multiple prime contractors on a single Site (multiple prime contractors for the Project may each need to provide property insurance), it is necessary to define the Contractor responsible for providing the Property Insurance. If there is only one contractor on the site, do not modify paragraph 5.06.A of the General Conditions.}

{SC-5.06.A.1. List by name other persons or entities to be included on policy as additional insureds.}

SC-6.06 Add a new paragraph immediately after Paragraph 6.06.G:

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

{When multiple prime contractors are working on a single Site, the following modification should be made.}

SC-7.02.A.1. Delete paragraphs 7.02.A.1-3 in their entirety and insert the following:

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

SC-9.03.A. Add the following language at the end of paragraph 9.03.A:

The Engineer will provide Resident Project Representative services for this project. The Duties, Responsibilities, and Limitations of Authority of the Resident Project Representative will be as stated in Exhibit D of the Agreement Between Owner and Engineer, E-510, 2002 Edition, as amended and executed for this specific Project. *{If anyone other than the Engineer is providing the Resident Project Representative, this language must be modified.}*

SC-14.02.A.3 Add the following language at the end of paragraph 14.02.A.3:

No payments will be made that would deplete the retainage prior to substantial completion, nor place in escrow any funds that are required for retainage, or invest the retainage for benefit.

SC-14.02.C.1. Delete Paragraph 14.02.C.1 in its entirety and insert the following in its place:

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

SC-18.08 Delete paragraph 18.08.A in its entirety and insert the following in its place:

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

SUPPLEMENTAL GENERAL CONDITIONS

FOR

CLEAN WATER STATE REVOLVING FUND

DRINKING WATER STATE REVOLVING FUND

(Drinking Water and Wastewater)

**Project Name: COLUMBIA-ADAIR UTILITIES DISTRICT
PHASE 11-2 WATER LINE EXTENSIONS &
CONNECTOR LINES**

Project Number: WX21001025 / DWL1146 / F11-10

The attached instructions and regulations as listed below shall be incorporated into the Specifications and comprise Special Conditions.

	<u>Attachment No.</u>
SRF Special Provisions	1
40 CFR 31.36 (Procurement)-grants only	2
KRS Chapter 45A-Kentucky Model Procurement Code-loans only	3
Equal Employment Opportunity (EEO) Documents:	
Notice of Requirement for Affirmative Action	4
Contract Specifications (Executive Order 11246)	5
EEO Goals for Region 4 Economic Areas	6
Special Notice #1 - Check List of EEO Documentation	7
Employer Information Report EEO-1 (SF 100)	8
Labor Standards Provisions for Federally Assisted Construction, EPA Form 5720-4	9
Certifications	
Debarment, Suspension and Other Responsibility Matters	10
Anti-lobbying	11
Region 4 Disadvantaged Business Enterprise (DBE)	12
Negotiated Rates as of October 1, 2010	13
Bonds and Insurance	14
Outlay Management Schedule	15
Storm Water General Permit	16
Davis Bacon Requirements	17
Wage Rate Requirements under FY 2013 Appropriations	18

SRF SPECIAL PROVISIONS

- (a) Line crossings of all roads and streets shall be done in accordance with the Kentucky Transportation Cabinet requirements as may be set forth in the Special Conditions.
- (b) Construction is to be carried out so as to prevent by-passing of flows during construction unless a schedule has been approved by the State or EPA, whichever is applicable. Siltation and soil erosion must be minimized during construction. All construction projects with surface disturbance of more than 1 acre during the period of construction must have a KPDES Storm Water General Permit. The permit can be found at the following web address: <https://dep.gateway.ky.gov/eForms/default.aspx?FormID=7>.

If you have any questions regarding the completion of this form call the Surface Water Permits Branch at (502) 564-3410.
- (c) Restore disturbed areas to original or better condition.
- (d) Use of Chemicals: All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, must show approval of either DOW or EPA. Use of all such chemicals and disposal of residues shall be in conformance with instructions on the manufacturer's label.
- (e) The construction of the project, including the letting of contracts in connection therewith, shall conform to the applicable requirements of state, territorial, and local laws and ordinances to the extent that such requirements do not conflict with Federal laws and this subchapter.
- (f) The owner shall provide and maintain competent and adequate supervision and inspection.
- (g) The Kentucky Infrastructure Authority and Kentucky Division of Water shall have access to the site and the project work at all times.
- (h) In the event Archaeological materials (arrowheads, stone tools, stone axes, prehistoric and historic pottery, bottles, foundations, Civil War artifacts, and other types of artifacts) are uncovered during the construction of this project, work is to immediately cease at the location and the Kentucky Heritage Council shall be contacted. The telephone number is (502) 564-7005. Construction shall commence at this location until a written release is received from the Kentucky Heritage Council. Failure to report a find could result in legal action.
- (i) This procurement will be subject to DOW Procurement Guidance including the Davis-Bacon Act.
- (j) Reasonable care shall be taken during construction to avoid damage to vegetation. Ornamental shrubbery and tree branches shall be temporarily tied back, where appropriate, to minimize damage. Trees which receive damage to branches shall be trimmed of those branches to improve the appearance of the tree. Tree trunks receiving damage from equipment shall be treated with a tree dressing.
- (k) No wastewater bypassing will occur during construction unless a schedule has been approved by the Kentucky Division of Water.
- (l) Change orders to the construction contract (if required) must be negotiated pursuant to DOW/KIA Procurement Guidance for Construction and Equipment Contracts.

**TITLE 40--PROTECTION OF ENVIRONMENT
CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY**

**PART 31--UNIFORM ADMINISTRATIVE REQUIREMENTS FOR GRANTS AND
COOPERATIVE AGREEMENTS TO STATE AND LOCAL GOVERNMENTS**

Subpart C--Post-Award Requirements

Sec. 31.36 Procurement.

(a) States. When procuring property and services under a grant, a State will follow the same policies and procedures it uses for procurements from its non-Federal funds. The State will ensure that every purchase order or other contract includes any clauses required by Federal statutes and executive orders and their implementing regulations. Other grantees and sub-grantees will follow paragraphs (b) through (i) in this section.

(b) Procurement standards. (1) Grantees and sub-grantees will use their own procurement procedures which reflect applicable State and local laws and regulations, provided that the procurements conform to applicable federal law, the standards identified in this section, and if applicable, Sec. 31.38.

(2) Grantees and sub-grantees will maintain a contract administration system which ensures that contractors perform in accordance with the terms, conditions, and specifications of their contracts or purchase orders.

(3) Grantees and sub-grantees will maintain a written code of standards of conduct governing the performance of their employees engaged in the award and administration of contracts. No employee, officer or agent of the grantee or sub-grantee shall participate in selection, or in the award or administration of a contract supported by Federal funds 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 his immediate family,

(iii) His or her partner, or

(iv) An organization which employs, or is about to employ, any of the above, has a financial or other interest in the firm selected for award. The grantee's or sub-grantee's officers, employees or agents will neither solicit nor accept gratuities, favors or anything of monetary value from contractors, potential contractors, or parties to sub-agreements. Grantee and sub-grantees may set minimum rules where the financial interest is not substantial or the gift is an unsolicited item of nominal intrinsic value. To the extent permitted by State or local law or regulations, such standards or conduct will provide for penalties, sanctions, or other disciplinary actions for violations of such standards by the grantee's and sub-grantee's officers, employees, or agents, or by contractors or their agents. The awarding agency may in regulation provide additional prohibitions relative to real, apparent, or potential conflicts of interest.

(4) Grantee and sub-grantee procedures will provide for a review of proposed procurements to avoid purchase of unnecessary or duplicative items. Consideration should be given to consolidating or breaking out procurements to obtain a more economical purchase. Where appropriate, an analysis will be made of lease versus purchase alternatives, and any other appropriate analysis to determine the most economical approach.

(5) To foster greater economy and efficiency, grantees and sub-grantees are encouraged to enter into State and local intergovernmental agreements for procurement or use of common goods and services.

(6) Grantees and sub-grantees are encouraged to use Federal excess and surplus property in lieu of purchasing new equipment and property whenever such use is feasible and reduces project costs.

(7) Grantees and sub-grantees are encouraged to use value engineering clauses in contracts for construction projects of sufficient size to offer reasonable opportunities for cost reductions. Value engineering is a systematic and creative analysis of each contract item or task to ensure that its essential function is provided at the overall lower cost.

(8) Grantees and sub-grantees will make awards only to responsible contractors possessing the ability to perform successfully under the terms and conditions of a proposed procurement. Consideration will be given to such matters as contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

(9) Grantees and sub-grantees will maintain records sufficient to detail the significant history of procurement. These records will include, but are not necessarily limited to the following: rationale for the method of procurement, selection of contract type, contractor selection or rejection, and the basis for the contract price.

(10) Grantees and sub-grantees will use time and material type contracts only--

(i) After a determination that no other contract is suitable, and

(ii) If the contract includes a ceiling price that the contractor exceeds at its own risk.

(11) Grantees and sub-grantees alone will be responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements. These issues include, but are not limited to source evaluation, protests, disputes, and claims. These standards do not relieve the grantee or sub-grantee of any contractual responsibilities under its contracts. Federal agencies will not substitute their judgment for that of the grantee or sub-grantee unless the matter is primarily a Federal concern. Violations of law will be referred to the local, State, or Federal authority having proper jurisdiction.

(12) Grantees and sub-grantees will have protest procedures to handle and resolve disputes relating to their procurements and shall in all instances disclose information regarding the protest to the awarding agency. A protestor must exhaust all administrative remedies with the grantee and sub-grantee before pursuing a protest with the Federal agency. Reviews of protests by the Federal agency will be limited to:

(i) Violations of Federal law or regulations and the standards of this section (violations of State or local law will be under the jurisdiction of State or local authorities) and

(ii) Violations of the grantee's or sub-grantee's protest procedures for failure to review a complaint or protest. Protests received by the Federal agency other than those specified above will be referred to the grantee or sub-grantee.

(c) Competition. (1) All procurement transactions will be conducted in a manner providing full and open competition consistent with the standards of Sec. 31.36. Some of the situations considered to be restrictive of competition include but are not limited to:

(i) Placing unreasonable requirements on firms in order for them to qualify to do business,

(ii) Requiring unnecessary experience and excessive bonding,

(iii) Noncompetitive pricing practices between firms or between affiliated companies,

(iv) Noncompetitive awards to consultants that are on retainer contracts,

(v) Organizational conflicts of interest,

(vi) Specifying only a "brand name" product instead of allowing "an equal" product to be offered and describing the performance of other relevant requirements of the procurement, and

(vii) Any arbitrary action in the procurement process.

(2) Grantees and sub-grantees will conduct procurements in a manner that prohibits the use of statutorily or administratively imposed in-State or local geographical preferences in the evaluation of bids or proposals, except in those cases where applicable Federal statutes expressly mandate or encourage geographic preference. Nothing in this section preempts State licensing laws. When contracting for architectural and engineering (A/E) services, geographic location may be a selection criteria provided its application leaves an appropriate number of qualified firms, given the nature and size of the project, to compete for the contract.

(3) Grantees will have written selection procedures for procurement transactions. These procedures will ensure that all solicitations:

(i) Incorporate a clear and accurate description of the technical requirements for the material, product, or service to be procured. Such description shall not, in competitive procurements, contain features, which unduly restrict competition. The description may include a statement of the qualitative nature of the material, product or service to be procured, and when necessary, shall set forth those minimum essential characteristics and standards to which it must conform if it is to satisfy its intended use. Detailed product specifications should be avoided if at all possible. When it is impractical or uneconomical to make a clear and accurate description of the technical requirements, a "brand name or equal" description may be used

as a means to define the performance or other salient requirements of a procurement. The specific features of the named brand which must be met by offerers shall be clearly stated; and

(ii) Identify all requirements which the offerers must fulfill and all other factors to be used in evaluating bids or proposals.

(4) Grantees and sub-grantees will ensure that all pre-qualified lists of persons, firms, or products which are used in acquiring goods and services are current and include enough qualified sources to ensure maximum open and free competition. Also, grantees and sub-grantees will not preclude potential bidders from qualifying during the solicitation period.

(5) Construction grants awarded under Title II of the Clean Water Act are subject to the following "Buy American" requirements in paragraphs (c)(5) (i)-(iii) of this section. Section 215 of the Clean Water Act requires that contractors give preference to the use of domestic material in the construction of EPA-funded treatment works.

(i) Contractors must use domestic construction materials in preference to nondomestic material if it is priced no more than 6 percent higher than the bid or offered price of the nondomestic material, including all costs of delivery to the construction site and any applicable duty, whether or not assessed. The grantee will normally base the computations on prices and costs in effect on the date of opening bids or proposals.

(ii) The award official may waive the Buy American provision based on factors the award official considers relevant, including:

(A) Such use is not in the public interest;

(B) The cost is unreasonable;

(C) The Agency's available resources are not sufficient to implement the provision, subject to the Deputy Administrator's concurrence;

(D) The articles, materials or supplies of the class or kind to be used or the articles, materials or supplies from which they are manufactured are not mined, produced or manufactured in the United States in sufficient and reasonably available commercial quantities or satisfactory quality for the particular project; or

(E) Application of this provision is contrary to multilateral government procurement agreements, subject to the Deputy Administrator's concurrence.

(iii) All bidding documents, subagreements, and, if appropriate, requests for proposals must contain the following "Buy American" provision: In accordance with section 215 of the Clean Water Act (33 U.S.C. 1251 et seq.) and implementing EPA regulations, the contractor agrees that preference will be given to domestic construction materials by the contractor, subcontractors, materialmen and suppliers in the performance of this subagreement.

(d) Methods of procurement to be followed--(1) Procurement by small purchase procedures. Small purchase procedures are those relatively simple and informal procurement methods for securing services, supplies, or other properties that do not cost more than the simplified acquisition threshold fixed at 41 U.S.C. 403(11) (currently set at \$100,000). If small purchase procedures are used, price or rate quotations shall be obtained from an adequate number of qualified sources.

(2) Procurement by sealed bids (formal advertising). Bids are publicly solicited and a firm-fixed-price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price. The sealed bid method is the preferred method for procuring construction, if the conditions in 31.36(d)(2)(i) apply.

(i) In order for sealed bidding to be feasible, the following conditions should be present:

(A) A complete, adequate, and realistic specification or purchase description is available;

(B) Two or more responsible bidders are willing and able to compete effectively and for the business; and

(C) The procurement lends itself to a firm fixed price contract and the selection of the successful bidder can be made principally on the basis of price.

(ii) If sealed bids are used, the following requirements apply:

(A) The invitation for bids will be publicly advertised and bids shall be solicited from an adequate number of known suppliers, providing them sufficient time prior to the date set for opening the bids;

(B) The invitation for bids, which will include any specifications and pertinent attachments, shall define the items or services in order for the bidder to properly respond;

(C) All bids will be publicly opened at the time and place prescribed in the invitation for bids;

(D) A firm fixed-price contract award will be made in writing to the lowest responsive and responsible bidder. Where specified in bidding documents, factors such as discounts, transportation cost, and life cycle costs shall be considered in determining which bid is lowest. Payment discounts will only be used to determine the low bid when prior experience indicates that such discounts are usually taken advantage of; and

(E) Any or all bids may be rejected if there is a sound documented reason.

(3) Procurement by competitive proposals. The technique of competitive proposals is normally conducted with more than one source submitting an offer, and either a fixed-price or cost-reimbursement type contract is awarded. It is generally used when conditions are not appropriate for the use of sealed bids. If this method is used, the following requirements apply:

(i) Requests for proposals will be publicized and identify all evaluation factors and their relative importance. Any response to publicized requests for proposals shall be honored to the maximum extent practical;

(ii) Proposals will be solicited from an adequate number of qualified sources;

(iii) Grantees and sub-grantees will have a method for conducting technical evaluations of the proposals received and for selecting awardees;

(iv) Awards will be made to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered; and

(v) Grantees and sub-grantees may use competitive proposal procedures for qualifications-based procurement of architectural/engineering (A/E) professional services whereby competitors' qualifications are evaluated and the most qualified competitor is selected, subject to negotiation of fair and reasonable compensation. The method, where price is not used as a selection factor, can only be used in procurement of A/E professional services. It cannot be used to purchase other types of services though A/E firms are a potential source to perform the proposed effort.

(4) Procurement by noncompetitive proposals is procurement through solicitation of a proposal from only one source, or after solicitation of a number of sources, competition is determined inadequate.

(i) Procurement by noncompetitive proposals may be used only when the award of a contract is infeasible under small purchase procedures, sealed bids or competitive proposals and one of the following circumstances applies:

(A) The item is available only from a single source;

(B) The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation;

(C) The awarding agency authorizes noncompetitive proposals; or

(D) After solicitation of a number of sources, competition is determined inadequate.

(ii) Cost analysis, i.e., verifying the proposed cost data, the projections of the data, and the evaluation of the specific elements of costs and profits, is required.

(iii) Grantees and sub-grantees may be required to submit the proposed procurement to the awarding agency for pre-award review in accordance with paragraph (g) of this section.

(e) Contracting with small and minority firms, women's business enterprise and labor surplus area firms.

(1) The grantee and sub-grantee will take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.

(2) Affirmative steps shall include:

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

(ii) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

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

(iv) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises;

(v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and

(vi) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (e)(2) (i) through (v) of this section.

(f) Contract cost and price.

(1) Grantees and sub-grantees must perform a cost or price analysis in connection with every procurement action including contract modifications. The method and degree of analysis is dependent on the facts surrounding the particular procurement situation, but as a starting point, grantees must make independent estimates before receiving bids or proposals. A cost analysis must be performed when the offerer is required to submit the elements of his estimated cost, e.g., under professional, consulting, and architectural engineering services contracts. A cost analysis will be necessary when adequate price competition is lacking, and for sole source procurements, including contract modifications or change orders, unless price reasonableness can be established on the basis of a catalog or market price of a commercial product sold in substantial quantities to the general public or based on prices set by law or regulation. A price analysis will be used in all other instances to determine the reasonableness of the proposed contract price.

(2) Grantees and sub-grantees will negotiate profit as a separate element of the price for each contract in which there is no price competition and in all cases where cost analysis is performed. To establish a fair and reasonable profit, consideration will be given to the complexity of the work to be performed, the risk borne by the contractor, the contractor's investment, the amount of subcontracting, the quality of its record of past performance, and industry profit rates in the surrounding geographical area for similar work.

(3) Costs or prices based on estimated costs for contracts under grants will be allowable only to the extent that costs incurred or cost estimates included in negotiated prices are consistent with Federal cost principles (see Sec. 31.22). Grantees may reference their own cost principles that comply with the applicable Federal cost principles.

(4) The cost plus a percentage of cost and percentage of construction cost methods of contracting shall not be used.

(g) Awarding agency review.

(1) Grantees and sub-grantees must make available, upon request of the awarding agency, technical specifications on proposed procurements where the awarding agency believes such review is needed to ensure that the item and/or service specified is the one being proposed for purchase. This review generally will take place prior to the time the specification is incorporated into a solicitation document. However, if the grantee or sub-grantee desires to have the review accomplished after a solicitation has been developed, the awarding agency may still review the specifications, with such review usually limited to the technical aspects of the proposed purchase.

(2) Grantees and sub-grantees must on request make available for awarding agency pre-award review procurement documents, such as requests for proposals or invitations for bids, independent cost estimates, etc. when:

(i) A grantee's or sub-grantee's procurement procedures or operation fails to comply with the procurement standards in this section; or

(ii) The procurement is expected to exceed the simplified acquisition threshold and is to be awarded without competition or only one bid or offer is received in response to a solicitation; or

(iii) The procurement, which is expected to exceed the simplified acquisition threshold, specifies a "brand name" product; or

(iv) The proposed award is more than the simplified acquisition threshold and is to be awarded to other than the apparent low bidder under a sealed bid procurement; or

(v) A proposed contract modification changes the scope of a contract or increases the contract amount by more than the simplified acquisition threshold.

(3) A grantee or sub-grantee will be exempt from the pre-award review in paragraph (g)(2) of this section if the awarding agency determines that its procurement systems comply with the standards of this section.

(i) A grantee or sub-grantee may request that its procurement system be reviewed by the awarding agency to determine whether its system meets these standards in order for its system to be certified. Generally, these reviews shall occur where there is a continuous high-dollar funding, and third-party contracts are awarded on a regular basis.

(ii) A grantee or sub-grantee may self-certify its procurement system. Such self-certification shall not limit the awarding agency's right to survey the system. Under a self-certification procedure, awarding agencies may wish to rely on written assurances from the grantee or sub-grantee that it is complying with

these standards. A grantee or sub-grantee will cite specific procedures, regulations, standards, etc., as being in compliance with these requirements and have its system available for review.

(h) Bonding requirements. For construction or facility improvement contracts or subcontracts exceeding the simplified acquisition threshold, the awarding agency may accept the bonding policy and requirements of the grantee or sub-grantee provided the awarding agency has made a determination that the awarding agency's interest is adequately protected. If such a determination has not been made, the minimum requirements shall be as follows:

(1) A minimum bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.

(2) A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.

(3) A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

(i) Contract provisions. A grantee's and sub-grantee's contracts must contain provisions in paragraph (i) of this section. Federal agencies are permitted to require changes, remedies, changed conditions, access and records retention, suspension of work, and other clauses approved by the Office of Federal Procurement Policy.

(1) 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. (Contracts more than the simplified acquisition threshold)

(2) Termination for cause and for convenience by the grantee or sub-grantee including the manner by which it will be effected and the basis for settlement. (All contracts in excess of \$10,000)

(3) Compliance with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60). (All construction contracts awarded in excess of \$10,000 by grantees and their contractors or sub-grantees)

(4) Compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR part 3). (All contracts and sub-grants for construction or repair)

(5) Compliance with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor regulations (29 CFR part 5). (Construction contracts in excess of \$2000 awarded by grantees and sub-grantees when required by Federal grant program legislation)

(6) Compliance with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR part 5). (Construction contracts awarded by grantees and sub-grantees in excess of \$2000, and in excess of \$2500 for other contracts which involve the employment of mechanics or laborers)

(7) Notice of awarding agency requirements and regulations pertaining to reporting.

(8) Notice of awarding agency 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.

(9) Awarding agency requirements and regulations pertaining to copyrights and rights in data.

(10) Access by the grantee, the sub-grantee, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions.

(11) Retention of all required records for three years after grantees or sub-grantees make final payments and all other pending matters are closed.

(12) Compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15). (Contracts, subcontracts, and sub-grants of amounts in excess of \$100,000)

(13) 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 (Pub. L. 94-163, 89 Stat. 871).

(j) Payment to consultants.

(1) EPA will limit its participation in the salary rate (excluding overhead) paid to individual consultants retained by grantees or by a grantee's contractors or subcontractors to the maximum daily rate for a GS-18. (Grantees may, however, pay consultants more than this amount). This limitation applies to consultation services of designated individuals with specialized skills who are paid at a daily or hourly rate. This rate does not include transportation and subsistence costs for travel performed; grantees will pay these in accordance with their normal travel reimbursement practices. (Pub. L. 99-591).

(2) Sub-agreements with firms for services which are awarded using the procurement requirements in this part are not affected by this limitation.

(k) Use of the same architect or engineer during construction.

(1) If the grantee is satisfied with the qualifications and performance of the architect or engineer who provided any or all of the facilities planning or design services for a waste-water treatment works project and wishes to retain that firm or individual during construction of the project, it may do so without further public notice and evaluation of qualifications, provided:

(i) The grantee received a facilities planning (Step 1) or design grant (Step 2), and selected the architect or engineer in accordance with EPA's procurement regulations in effect when EPA awarded the grant; or

(ii) The award official approves noncompetitive procurement under Sec. 31.36(d)(4) for reasons other than simply using the same individual or firm that provided facilities planning or design services for the project; or

(iii) The grantee attests that:

(A) The initial request for proposals clearly stated the possibility that the firm or individual selected could be awarded a sub-agreement for services during construction; and

(B) The firm or individual was selected for facilities planning or design services in accordance with procedures specified in this section.

(C) No employee, officer or agent of the grantee, any member of their immediate families, or their partners have financial or other interest in the firm selected for award; and

(D) None of the grantee's officers, employees or agents solicited or accepted gratuities, favors or anything of monetary value from contractors or other parties to sub-agreements.

(2) However, if the grantee uses the procedures in paragraph (k)(1) of this section to retain an architect or engineer, any Step 3 sub-agreements between the architect or engineer and the grantee must meet all of the other procurement provisions in Sec. 31.36.

[53 FR 8068 and 8087, Mar. 11, 1988, and amended at 53 FR 8075, Mar. 11, 1988; 60 FR 19639, 19644, Apr. 19, 1995; 66 FR 3794, Jan. 16, 2001]

KRS Chapter 45A
Kentucky Model Procurement Code

45A.075 Methods of awarding state contracts.

Except as otherwise authorized by law, all state contracts shall be awarded by:

- (1) Competitive sealed bidding, pursuant to KRS 45A.080; or
- (2) Competitive negotiation, pursuant to KRS 45A.085 and 45A.090 or 45A.180; or
- (3) Noncompetitive negotiation, pursuant to KRS 45A.095; or
- (4) Small purchase procedures, pursuant to KRS 45A.100.

Effective: June 24, 2003

History: Amended 2003 Ky. Acts ch. 98, sec. 4, effective June 24, 2003. -- Created 1978 Ky. Acts ch. 110, sec. 16, effective January 1, 1979.

45A.080 Competitive sealed bidding.

(1) Contracts exceeding the amount provided by KRS 45A.100 shall be awarded by competitive sealed bidding unless it is determined in writing that this method is not practicable. Factors to be considered in determining whether competitive sealed bidding is not practicable shall include:

- (a) Whether specifications can be prepared that permit award on the basis of best value; and
- (b) The available sources, the time and place of performance, and other relevant circumstances as are appropriate for the use of competitive sealed bidding.

(2) The invitation for bids shall state that awards shall be made on the basis of best value. In any contract which is awarded under an invitation to bid which requires delivery by a specified date and imposes a penalty for late delivery, if the delivery is late, the contractor shall be given the opportunity to present evidence that the cause of the delay was beyond his control. If it is the opinion of the purchasing officer that there is sufficient justification for delayed delivery, the purchasing officer may adjust or waive any penalty that is provided for in the contract.

(3) Adequate public notice of the invitation for bids shall be given a sufficient time prior to the date set forth for the opening of bids. The notice may include posting on the Internet or publication in a newspaper or newspapers of general circulation in the state as determined by the secretary of the Finance and Administration Cabinet not less than seven (7) days before the date set for the opening of the bids. The provisions of this subsection shall also apply to price contracts and purchase contracts of state institutions of higher education.

(4) Bids shall be opened publicly at the time and place designated in the invitation for bids. At the time the bids are opened, the purchasing agency shall announce the agency's engineer's estimate, if applicable, and make it a part of the agency records pertaining to the letting of any contract for which bids were received. Each bid, together with the name of the bidder and the agency's engineer's estimate, shall be recorded and be open to public inspection. Electronic bid opening and posting of the required information for public viewing shall satisfy the requirements of this subsection.

(5) The contract shall be awarded by written notice to the responsive and responsible bidder whose bid offers the best value.

(6) Correction or withdrawal of bids shall be allowed only to the extent permitted by regulations issued by the secretary.

Effective: July 14, 2000

History: Amended 2000 Ky. Acts ch. 509, sec. 1, effective July 14, 2000. -- Amended 1998 Ky. Acts ch. 120, sec. 10, effective July 15, 1998. -- Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 4, sec. 27, effective May 30, 1997. -- Amended 1996 Ky. Acts ch. 60, sec. 2, effective July 15, 1996. -- Amended 1994 Ky. Acts ch. 278, sec. 1, effective July 15, 1994. -- Amended 1982 Ky. Acts ch. 282, sec. 1, effective July 15, 1982. -- Amended 1979 (1st Extra.

45A.085 Competitive negotiation.

(1) When, under administrative regulations promulgated by the secretary or under KRS 45A.180, the purchasing officer determines in writing that the use of competitive sealed bidding is not practicable, and except as provided in KRS 45A.095 and 45A.100, a contract may be awarded by competitive negotiation.

(2) Adequate public notice of the request for proposals shall be given in the same manner and circumstances as provided in KRS 45A.080(3).

(3) Contracts other than contracts for projects utilizing an alternative project delivery method under KRS 45A.180 may be competitively negotiated when it is determined in writing by the purchasing officer that the bids received by competitive sealed bidding either are unreasonable as to all or part of the requirements, or were not independently reached in open competition, and for which each competitive bidder has been notified of the intention to negotiate and is given reasonable opportunity to negotiate.

(4) Contracts for projects utilizing an alternative project delivery method shall be processed in accordance with KRS 45A.180.

(5) The request for proposals shall indicate the relative importance of price and other evaluation factors.

(6) Award shall be made to the responsible offerer whose proposal is determined in writing to be the most advantageous to the Commonwealth, taking into consideration price and the evaluation factors set forth in the request for proposals.

(7) Written or oral discussions shall be conducted with all responsible offerers who submit proposals determined in writing to be reasonably susceptible of being selected for award. Discussions shall not disclose any information derived from proposals submitted by competing offerers. Discussions need not be conducted:

(a) With respect to prices, where the prices are fixed by law or administrative regulation, except that consideration shall be given to competitive terms and conditions;

(b) Where time of delivery or performance will not permit discussions; or

(c) Where it can be clearly demonstrated and documented from the existence of adequate competition or prior experience with the particular supply, service, or construction item, that acceptance of an initial offer without discussion would result in fair and reasonable best value procurement, and the request for proposals notifies all offerers of the possibility that award may be made on the basis of the initial offers.

Effective: June 24, 2003

History: Amended 2003 Ky. Acts ch. 98, sec. 5, effective June 24, 2003. – Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 4, sec. 28, effective May 30, 1997. – Amended 1979 (1st Extra. Sess.) Ky. Acts ch. 9, sec. 2, effective February 10, 1979. -- Created 1978 Ky. Acts ch. 110, sec. 18, effective January 1, 1979.

45A.090 Negotiation after competitive sealed bidding when all bids exceed available funds.

(1) In the event that all bids submitted pursuant to competitive sealed bidding under KRS 45A.080 result in bid prices in excess of the funds available for the purchase, and the chief purchasing officer determines in writing:

(a) That there are no additional funds available from any source so as to permit an award to the responsive and responsible bidder whose bid offers the best value; and

(b) The best interest of the state will not permit the delay attendant to a resolicitation under revised specifications, or for revised quantities, under competitive sealed bidding as provided in KRS 45A.080, then a negotiated award may be made as set forth in subsections (2) or (3) of this section.

(2) Where there is more than one (1) bidder, competitive negotiations pursuant to KRS 45A.085(3) shall be conducted with the three (3) (two (2) if there are only two (2)) bidders determined in writing to be the most responsive and responsible bidders, based on criteria contained in the bid invitation. Such competitive negotiations shall be conducted under the following restrictions:

(a) If discussions pertaining to the revision of the specifications or quantities are held with any potential offerer, all other potential offerers shall be afforded an opportunity to take part in such discussions; and

(b) A request for proposals, based upon revised specifications or quantities, shall be issued as promptly as possible, shall provide for an expeditious response to the revised requirements, and shall be awarded upon the basis of best value.

(3) Where, after competitive sealed bidding, it is determined in writing that there is only one (1) responsive and responsible bidder, a noncompetitive negotiated award may be made with such bidder in accordance with KRS 45A.095.

Effective: June 24, 2003

History: Amended 2003 Ky. Acts ch. 98, sec. 6, effective June 24, 2003. – Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 4, sec. 29, effective May 30, 1997. – Created 1978 Ky. Acts ch. 110, sec. 19, effective January 1, 1979.

45A.095 Noncompetitive negotiation.

(1) A contract may be made by noncompetitive negotiation only for sole source purchases, or when competition is not feasible, as determined by the purchasing officer in writing prior to award, under administrative regulations promulgated by the secretary of the Finance and Administration Cabinet or the governing boards of universities operating under KRS Chapter 164A, or when emergency conditions exist. Sole source is a situation in which there is only one (1) known capable supplier of a commodity or service, occasioned by the unique nature of the requirement, the supplier, or market conditions. Insofar as it is practical, no less than three (3) suppliers shall be solicited to submit written or oral quotations whenever it is determined that competitive sealed bidding is not feasible. Award shall be made to the supplier offering the best value. The names of the suppliers submitting quotations and the date and amount of each quotation shall be placed in the procurement file and maintained as a public record. Competitive bids may not be required:

(a) For contractual services where no competition exists, such as telephone service, electrical energy, and other public utility services;

(b) Where rates are fixed by law or ordinance;

(c) For library books;

(d) For commercial items that are purchased for resale;

(e) For interests in real property;

(f) For visiting speakers, professors, expert witnesses, and performing artists;

(g) For personal service contracts executed pursuant to KRS 45A.690 to 45A.725; and

(h) For agricultural products in accordance with KRS 45A.645.

(2) The chief procurement officer, the head of a using agency, or a person authorized in writing as the designee of either officer may make or authorize others to make emergency procurements when an emergency condition exists.

(3) An emergency condition is a situation which creates a threat or impending threat to public health, welfare, or safety such as may arise by reason of fires, floods, tornadoes, other natural or man-caused disasters, epidemics, riots, enemy attack, sabotage, explosion, power failure, energy shortages, transportation emergencies, equipment failures, state or federal legislative mandates, or similar events. The existence of the emergency condition creates an immediate and serious need for services, construction, or items of tangible personal property that cannot be met through

normal procurement methods and the lack of which would seriously threaten the functioning of government, the preservation or protection of property, or the health or safety of any person.

(4) The Finance and Administration Cabinet may negotiate directly for the purchase of contractual services, supplies, materials, or equipment in bona fide emergencies regardless of estimated costs. The existence of the emergency shall be fully explained, in writing, by the head of the agency for which the purchase is to be made. The explanation shall be approved by the secretary of the Finance and Administration Cabinet and shall include the name of the vendor receiving the contract along with any other price quotations and a written determination for selection of the vendor receiving the contract. This information shall be filed with the record of all such purchases and made available to the public. Where practical, standard specifications shall be followed in making emergency purchases. In any event, every effort should be made to effect a competitively established price for purchases made by the state.

Effective: July 15, 2002

History: Amended 2002 Ky. Acts ch. 344, sec. 9, effective July 15, 2002. – Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 4, sec. 30, effective May 30, 1997. – Amended 1990 Ky. Acts ch. 496, sec. 4, effective July 13, 1990. -- Created 1978 Ky. Acts ch. 110, sec. 20, effective January 1, 1979.

45A.100 Small purchases.

(1) Procurements may be made in accordance with small purchase administrative regulations promulgated by the secretary of the Finance and Administration Cabinet, pursuant to KRS Chapter 13A, as follows:

(a) Up to ten thousand dollars (\$10,000) per project for construction and one thousand dollars (\$1,000) for purchases by any state governmental body, except for those state administrative bodies specified in paragraph (b) of this subsection; and

(b) Up to forty thousand dollars (\$40,000) per project for construction or purchases by the Finance and Administration Cabinet, state institutions of higher education, and the legislative branch of government.

(2) Procurement requirements shall not be artificially divided so as to constitute a small purchase under this section. At least every two (2) years, the secretary shall review the prevailing costs of labor and materials and may make recommendations to the next regular session of the General Assembly for the revision of the then current maximum small purchase amount as justified by intervening changes in the cost of labor and materials.

(3) The secretary of the Finance and Administration Cabinet may grant to any state agency with a justifiable need a delegation of small purchasing authority, which exceeds the agency's small purchase limit, provided in subsection (1) of this section. Delegations of small purchasing authority shall be granted or revoked by the secretary of the Finance and Administration Cabinet, in accordance with administrative regulations promulgated by the cabinet pursuant to KRS Chapter 13A. These administrative regulations shall establish, at a minimum, the criteria for granting and revoking delegations of small purchasing authority, including the requesting agency's past compliance with purchasing regulations, the level of training of the agency's purchasing staff, and the extent to which the agency utilizes the Kentucky Automated Purchasing System. The administrative regulations may permit the secretary of the Finance and Administration Cabinet to delegate small purchase procurements up to the maximum amount specified in subsection (1)(b) of this section.

Effective: July 15, 2002

History: Amended 2002 Ky. Acts ch. 320, sec. 2, effective July 15, 2002. – Amended 2000 Ky. Acts ch. 225, sec. 1, effective July 14, 2000. -- Amended 1996 Ky. Acts ch. 60, sec. 1, effective July 15, 1996. -- Amended 1994 Ky. Acts ch. 323, sec. 1, effective July 15, 1994. -- Amended 1990 Ky. Acts ch. 496, sec. 5, effective July 13, 1990. -- Amended 1986 Ky. Acts ch. 384, sec. 1, effective July 15, 1986. -- Amended 1984 Ky. Acts ch. 384, sec. 1, effective July 13, 1984. -- Amended 1982 Ky. Acts ch. 282, sec. 2, effective July 15, 1982. -- Amended 1980 Ky. Acts ch. 242, sec. 1, effective July 15, 1980; and ch. 250, sec. 19, effective April 9, 1980.-- Created 1978 Ky. Acts ch. 110, sec. 21, effective January 1, 1979.

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE
EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)**

The following excerpts are from 45 FR 65984 (October 3, 1980):

The minority and female goals apply to Federal and federally assisted construction contractors and subcontractors which have covered contracts. The goals are expressed as a percentage of the total hours worked by such a covered or subcontractor's entire onsite construction workforce, which is working on any construction site within a relevant area. The goal applies to each construction craft and trade in the contractor's entire workforce in the relevant area including those employees working on private non-federally involved projects.

Until further notice, the following goals for minority utilization in each construction craft and trade shall be included in all Federal or federally assisted construction contracts and subcontracts in excess of \$10,000 to be performed in the respective geographic area. The goals are applicable to each nonexempt contractor's total onsite construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, federally assisted or non-federally related project, contract or subcontract.

Construction contractors which are participating in an approved Hometown Plan (see 41 CFR 60-4.5) are required to comply with the goals of the Hometown Plan with regard to construction work they perform in the area covered by the Hometown Plan. With regard to all their other covered construction work, such contractors are required to comply as follows:

Goals for female participation in each trade.....6.9%
Goals for minority participation in each trade.....Insert goals for each year
(see Attachment Number 6)

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.

The following excerpts are from 45 FR 65977 (October 3, 1980):

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 established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and 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.

3. 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; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the covered area is (insert description of the geographical areas where the contract is to be performed giving the state, country, and city, if any).

**STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION
CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)**

EEO Specifications

Following is the standard language, which must be incorporated into all solicitations for offers and bids on all Federal and Federally assisted construction contracts or subcontracts in excess of \$10,000 to be performed in designated geographical areas:

1. As used in these specifications:
 - (a) Covered Area means the geographical area described in the solicitation from which this contract resulted.
 - (b) Director means Director, Office of Federal Contract Compliance Program, United States Department of Labor, or any person to whom the Director delegates authority;
 - (c) Employer identification number means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - (d) Minority includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take a good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7-a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female

utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative actions steps at least as extensively as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligation.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7-b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO

obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, lay-off, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative actions obligations (7 a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant may be asserted as fulfilling any one or more of its obligations under 7 a through p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example: even though the Contractor has achieved its goal for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables for affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation, if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

EEO Goals for Economic Areas in Region 4

Source: Appendix B-80 in 45 FR 65984 (October 3, 1980)

Kentucky:

056 Paducah, KY:

Non-SMSA Counties

IL Hardin; IL Massac; IL Pope; KY Ballard; KY Caldwell; KY Calloway; KY Carlisle;
KY Crittenden; KY Fulton; KY Graves; KY Hickman; KY Livingston; KY Lyon. KY
McCracken; KY Marshall.

5.2

057 Louisville, KY:

SMSA Counties:

4520 Louisville, KY-IN

IN Clark; IN Floyd; KY Bullitt; KY Jefferson; KY Oldham.

11.2

Non-SMSA Counties

IN Crawford; IN Harrison; IN Jefferson; IN Orange; IN Scott; IN Washington;
KY Breckinridge; KY Grayson; KY Hardin; KY Hart; KY Henry; KY Larue; KY Marion;
KY Meade; KY Nelson; KY Shelby; KY Spencer; KY Trimble; KY Washington.

9.6

058 Lexington, KY

SMSA Counties

4280 Lexington-Fayette, KY

KY Bourbon; KY Clark; KY Fayette; KY Jessamine; KY Scott; KY Woodford.

10.8

Non-SMSA Counties

KY Adair; KY Anderson; KY Bath; KY Boyle; KY Breathitt; KY Casey; KY Clay;
KY Estill; KY Franklin- KY Garrard; KY Green; KY Harrison- KY Jackson; KY Knott;
KY Lee; KY Leslie; KY Letcher; KY Lincoln; KY Madison; KY Magoffin; KY Menifee;
KY Mercer; KY Montgomery; KY Morgan. KY Nicholas; KY Owsley; KY Perry;
KY Powell; KY Pulaski; KY Rockcastle; KY Russell; KY Taylor; KY Wolfe.

7.0

**CHECK LIST OF EEO DOCUMENTATION FOR BIDDERS
ON GRANT/LOAN CONSTRUCTION
(Required by Executive Order 11246 as amended)**

The low, responsive responsible bidder must forward the following items, in duplicate, to the owner no later than ten (10) days after bid opening. The owner shall have one (1) copy available for inspection by the Office of Federal Contracts Compliance within 14 days after the bid opening. The web site for the OFCC is http://www.dol.gov/esa/ofcp_org.htm.

1. Project Number. Project Location. Type of Construction.
2. Proof of registration with the Joint Reporting Commission. (See Attachment Number 8.)
3. Copy of Affirmative Action Plan of contractor. Indicate company official responsible for EEO.
4. List of current construction contracts, with dollar amount. List contracting Federal Agency, if applicable.
5. Statistics concerning company percent workforce, permanent and temporary, by sex, race, trade, handicapped, and age. 40 CFR Part 7.
6. List of employment sources for project in question. If union sources are utilized, indicate percentage of minority membership within the union crafts.
7. Anticipated employment needs for this project, by sex, race and trade, with estimate of minority participation in specific trades.
8. List of subcontractors (name, address and telephone) with dollar amount and duration of subcontract. Subcontractor contracts over \$10,000 must submit items 1- 8. The following information must be provided for all supplier contracts regardless of contract size: name of company, contact person, address, telephone number, dollar value of the contract, and a list of the materials to be supplied to the prime contractor.
9. List of any subcontract work yet to be committed with estimate of dollar amount and duration of contract.
10. Contract Price. Duration of prime contract.
11. DBE Documents - See special instructions regarding use of Minority, and Women Owned, and Small Businesses.

Employer Information Report EEO-1

Under the direction of the US Equal Employment Opportunity Commission, the Joint Reporting Committee is responsible for the full-length, multi-phase processing of employment statistics collected on the Employer Information Report EEO-1. This report, also termed Standard Form 100, details the sex and race/ethnic composition of an employer's work force by job category.

The Employer Information EEO-1 survey is conducted annually under the authority of Public Law 88-352, Title VII of the Civil Rights Act of 1964, as amended by the Equal Employment Opportunity Act of 1972. All employers with 15 or more employees are covered by Public Law 88-352 and are required to keep employment records as specified by Commission regulations. Based on the number of employees and federal contract activities, certain large employers are required to file an EEO-1 Report on an annual basis.

The EEO-1 Report must be filed by:

(A) All private employers who are: (1) subject to Title VII of the Civil Rights Act of 1964 (as amended by the Equal Employment Opportunity Act of 1972) with 100 or more employees EXCLUDING State and local governments, primary and secondary school systems, institutions of higher education, Indian tribes and tax-exempt private memberships clubs other than labor organizations; OR (2) subject to Title VII who have fewer than 100 employees if the company is owned or affiliated with another company, or there is centralized ownership, control or management (such as central control of personnel policies and labor relations) so that the group legally constitutes a single enterprise and the entire enterprise employs a total of 100 or more employees.

(B) All federal contractors (private employers), who: (1) are not exempt as provided for by 41 CFR 60-1.5, (2) have 50 or more employees, and (a) are prime contractors or first-tier subcontractors, and have a contract, subcontract, or purchase order amounting to \$50,000 or more; or (b) serve as depository of Government funds in any amount, or (c) is a financial institution which is an issuing an paying agent for U.S. Savings Bonds and Notes.

Only those establishments located in the District of Columbia and the 50 states are required to submit the EEO-1 Report. No Reports should be filed for establishments in Puerto Rico, the Virgin Islands or other American Protectorates.

When filing for the EEO-1 Report for the first time, go to the web site at: <http://www.mimdms.com/jrc.html> and select "Filing for the first time" from the box labeled INFORMATION. File out the electronic questionnaire to enter your company into Joint Reporting Committee (JRC) system. Once you have completed the registration process, you will be contacted on how to proceed with the EEO-1 Report. If you have previously registered with the JRC, follow their instructions to update your information.

Labor Standards Provisions for Federally Assisted Construction

Labor standards provisions applicable to contracts covering federally financed and assisted construction (29 CFR 5.5, Contract Provisions and Related Matters) that apply to EPA Special Appropriations Projects grants are:

(a)(4)(iii) 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, as amended, and 29 CFR Part 30.

(a)(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

(a)(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5 (a) (1) through (10) and such other clauses as the U.S. Environmental Protection Agency may by appropriate instructions 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 CFR 5.5.

(a)(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(b) Contractor Work Hours and Safety Standards Act. The Administrator, EPA shall cause or require the contracting officer to insert the following clauses set forth in paragraph (b)(1),(2),(3), and (4) of this section in full in any contract subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by *Section 5.5(a) of this title. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) 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 work week in which he or she is employed on such work to 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.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b) (1) 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 unliquidated 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 (b)(1) 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 (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The U.S. Environmental Protection Agency 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 moneys 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 liabilities of such contractor or

subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b) (2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) 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 (b)(1) through (4) of this section.

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in section 5.1, the Administrator of EPA shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly worked, deductions made, and actual wages paid. Further, the Administrator of EPA shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the U.S. Environmental Protection Agency and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job. (Approved by the Office of Management and Budget under OMB control numbers 1215-0140 and 1215-0017.)

CERTIFICATIONS

Debarred Firms

All prime Construction Contractors shall certify that Subcontractors have not and will not be awarded to any firm that is currently on the EPA Master List of Debarred, Suspended and Voluntarily Excluded Persons in accordance with the provisions of 40 CFR 32.500(c). Debarment action is taken against a firm for noncompliance with Federal Law.

All bidders shall complete the attached certification (Attachment Number 10) and submit to the owner with the bid proposal.

Anti-lobbying Certification

All prime Construction Contractors must certify (Attachment Number 11) that no appropriated funds were or will be expended for the purpose of lobbying the Executive or Legislative Branches of the Federal Government or Federal Agency concerning this contract (contract in excess of \$100,000). If the Contractor has made or agreed to make payment to influence any member of Congress in regard to award of this contract, a Disclosure Form must be completed and submitted to the owner with the bid proposal.

All prime Contractors must require all Subcontractors to submit the certification, which must also be submitted to the owner.

CERTIFICATION REGARDING LOBBYING
Certification for Contracts, Grants,
Loans, and Cooperative Agreements

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 an 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, 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 sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients 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.

TYPED NAME & TITLE OF AUTHORIZED REPRESENTATIVE

SIGNATURE OF AUTHORIZED REPRESENTATIVE DATE

____ I am unable to certify to the above statements. My explanation is attached.

EPA DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

EPA's Disadvantaged Business Enterprise Program rule applies to contract procurement actions funded in part by EPA assistance agreements awarded after May 27, 2008. The rule is found at Federal regulation Title 40, Part 33. Specific responsibilities are highlighted below.

Grant recipient responsibilities:

- Conduct an Availability Analysis and negotiate fair share objectives with EPA (§ 33.411), or adopt the fair share objectives of the oversight state agency revolving loan fund for comparable infrastructure. (§ 33.405(b)(3)).
- Include the Appendix A term and condition in each contract with a primary contractor (§ 3.106). The term and condition is included in the EPA Region 4 contract specifications insert *FEDERAL REQUIREMENTS AND CONTRACT PROVISIONS FOR SPECIAL APPROPRIATION ACT PROJECTS US ENVIRONMENTAL PROTECTION AGENCY, Region III, June 2008*.
- Employ the six Good Faith Efforts during prime contractor procurement (§ 33.301).
- Require prime contractor to comply with the following prime contractor requirements of Title 40 Part 33:
 - To employ the six Good Faith Efforts steps in paragraphs (a) through (e) of § 33.301 if the prime contractor awards subcontracts (§ 33.301(f)).
 - To provide EPA form 6100-2 – *DBE Subcontractor Participation Form* to all DBE subcontractors (§ 33.302(e)).
 - To submit EPA forms 6100-3 – *DBE Program Subcontractor Performance Form* and 6100-4 – *DBE Program Subcontractor Utilization Form* with bid package or proposal. (§ 33.302 (f) and (g)).
 - To pay its subcontractor for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the recipient (§ 33.302(a)).
 - To notify recipient in writing by its prime contractor prior to any termination of a DBE subcontractor for convenience by the prime contractor (§ 33.302(b)).
 - To employ the six good faith efforts described in § 33.301 if soliciting a replacement subcontractor after a DBE subcontractor fails to complete work under the subcontract for any reason. (§ 33.302(c)).
 - To employ the six good faith efforts described in § 33.301 even if the prime contractor has achieved its fair share objectives under subpart D of Part 33. (§33.302(d)).

- Semiannually complete and submit to Charles Hayes, EPA Region 4 DBE Coordinator EPA form 5700-52A summarizing DBE participation achieved during the previous six months (§ 33.502).
- Maintain records documenting its compliance with the requirements of Title 40 Part 33, including documentation of its, and its prime contractors', good faith efforts (§ 33.501(a)).

Prime Contractor Responsibilities:

- Employ the six Good Faith Efforts steps in paragraphs (a) through (e) of § 33.301 if the prime contractor awards subcontracts (§ 33.301(f)).
- Provide EPA form number 6100-2 – *DBE Program Subcontractor Participation Form* and form number 6100-3 – *DBE Program Subcontractor Performance Form* to each DBE subcontractor prior to opening of the contractor's bid or proposal (§ 33.302(e) and (f)).
- Complete EPA form number 6100-4 – *DBE Program Subcontractor Utilization Form* (§ 33.302(g)).
- Submit to recipient with its bid package or proposal the completed EPA form number 6100-4, plus an EPA form number 6100-3 for each DBE subcontractor used in the contractor's bid or proposal (§ 33.302(f) and (g)).
- Pay subcontractors for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the recipient (§ 33.302(a)).
- Notify the recipient in writing prior to prime contractor termination of a DBE subcontractor for convenience (§ 33.302(b)).
- Employ the six good faith efforts described in § 33.301 if soliciting a replacement subcontractor after a DBE subcontractor fails to complete work under the subcontract for any reason. (§ 33.302(c)).
- Employ the six good faith efforts described in § 33.301 even if the prime contractor has achieved its fair share objectives under subpart D of Part 33. (§33.302(d)).
- Semiannually inform recipient of DBE participation achieved (§ 33.502).
- Maintain records documenting its compliance with the requirements of Title 40 Part 33, including documentation of its, and its prime contractors', good faith efforts (§ 33.501(a)).

Subcontractor Responsibilities:

- May submit EPA form 6100-2 – *DBE Subcontractor Participation Form* to Charles Hayes, EPA Region 4 DBE Coordinator (§ 33.302(e)).
- Must complete EPA form 6100-3 – *DBE Program Subcontractor Performance Form*, and submit it to the prime contractor soliciting services from the subcontractor prior to the opening of bids for the prime contract.

SPAP Requirements:

Form	Requirement	Provided By:	Completed By:	Submitted To:
EPA Form 6100-2	Grant Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	EPA Region 4 DBE Coordinator Charles Hayes
EPA Form 6100-3	Grant Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	Grant Recipients as part of a bid or proposal package
EPA Form 6100-4	Grant Recipients required to have prime contractors complete the form	Grant Recipients	Prime Contractors	Grant Recipients as part of a bid or proposal package

SRF Requirements:

Form	Requirement	Provided By:	Completed By:	Submitted To:
EPA Form 6100-2	Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	DOW Project Administrator
EPA Form 6100-3	Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	Dow Project Administrator w/ ATA Package
EPA Form 6100-4	Recipients required to have prime contractors complete the form	Recipients	Prime Contractors	DOW Project Administrator w/ ATA Package
Pay Request DBE Form	Recipients required to have prime contractors complete the form	Recipients	Prime Contractors	DOW Project Administrator w/ EACH PAYMENT

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION POLICY

PROJECT NAME: _____

BID DATE: _____

1. Name, address and telephone number of contact person on all DBE matters:

Prime Contractor's Name: _____

Contact Person: _____

Address: _____

Phone: _____

Cell Phone: _____

Email: _____

Total Contract Amount: _____

2. Total dollar amount/percent of contract of MBE participation: _____

3. Total dollar amount/percent of contract of WBE participation: _____

4. Are certifications* for each MBE/WBE/DBE subcontractor enclosed; if no, please explain: Yes No _____

5. Are MBE/WBE/DBE subcontracts or letters of intent signed by both parties enclosed; if no, please explain: Yes No _____

6. List of MBE Subcontractors:

Name: _____

Contact Person: _____

Address: _____

Phone: _____

Cell Phone: _____

Email: _____

Type of Contract: _____

Work to be Done: _____

Amount: _____

7. List of WBE Subcontractors:

Name: _____

Contact Person: _____

Address: _____

Phone: _____

Cell Phone: _____

Email: _____

Type of Contract: _____

Work to be Done: _____

Amount: _____

Attach Additional Sheets, If Necessary

*Self-certification: Self certification of MBE/WBE/DBE firms will NOT be accepted as a valid form of certification of MBE/WBE/DBE status.

8. **Information and documentation concerning efforts taken to comply with EPA's "six good faith efforts"**

- (i). Ensure DBE construction firms or material suppliers are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities; including placing DBEs on solicitation lists and soliciting them whenever they are potential sources. A good source for a list of DBEs is the Kentucky Transportation's website: <http://transportation.ky.gov/Civil-Rights-and-Small-Business-Development/Pages/Certified-DBE-Directory.aspx>.

The prime contractor certifies that a bidders list (see example sheet below) of qualified vendors, including DBEs, was developed for current and future solicitations and that the list will be maintained. *Submit a copy of the list as documentation.*

- (ii). Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process; including, whenever possible, posting solicitation for bids or proposals for a sufficient amount of time as to receive a competitive bid or proposal pool.

The prime contractor certifies that every opportunity was provided to a number of DBEs to encourage their participation in the competitive process and that an adequate amount of time was provided for response.

- a. List each DBE construction firm or material supplier to which a solicitation was attempted. *Submit copies of letters, emails, faxes, telecommunication logs, certified mail receipts, returned envelopes, certified mail return receipts, etc. as documentation.*

Company name and phone number: _____

Area of work expertise: _____

Date of any follow-ups and person spoke to: _____

- b. Advertisements, if applicable: List each publication in which an announcement or notification was placed. *Submit a tear sheet of each announcement from each publication as documentation.*

Name of publication: _____

Date(s) of advertisement: _____

Specific subcontract areas announced: _____

- c. Other, if applicable: List each notification method in which an announcement or outreach was used; list serve, public meeting, etc. *Submit applicable information to document effort.*

Method of notification: _____

Date(s) of notification: _____

- (iii). Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs; including dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.

The prime contractor certifies that the project was broken into its basic elements (i.e., dirt hauling, landscaping, painting, pipe installation, material supplies, etc.) and that a determination was made whether it's economically feasible to bid the elements separately and that the analysis of this effort was documented with a short memo to the project file.

- (iv). Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women’s business enterprises.
- The prime contractor certifies that they established delivery schedules which would allow DBEs to participate in the projects.
- (v). Use the services and assistance of the Small Business Administration (SBA) and the Minority Business Development Agency (MBDA) of the U.S. Department of Commerce. The easiest way to utilize the services of SBA and MBDA is to visit their websites: www.sba.gov and www.mbda.gov and use the electronic tools available there or you may send the nearest SBA and MBDA office a certified letter that generally describes the solicitation, the dates it will be open, the types of vendors you are seeking and applicable SIC or NAIC codes if known. You may also use the services and assistance of the Kentucky Procurement Assistance Program (KPAP). The easiest way to utilize the services of KPAP is to send an email: ced.kpap@ky.gov and provide information on forthcoming opportunities available to DBEs.
- The prime contractor certifies that the assistance of the SBA, MBDA, and/or KPAP was utilized. *Submit pages printed off the SBA and MBDA websites which evidence efforts to register a solicitation on those sites or submit copies of the letter sent and certified mail receipt as documentation; submit copies of emails with KPAP as documentation.*
- (vi). If a subcontractor awards any subcontracts, require the subcontractor to take the steps in numbers (i) through (v) above.
- The prime contractor certifies that subcontractors used for this project will be required to follow the steps of the “six good faith efforts” as listed above.

9. Signature and date:

To the best of my knowledge and belief, all “six good faith efforts” have been met and the information contained in this document is true and correct; the document has been duly authorized by the legal representative.

Signature

Print name and title

Date

BIDDER'S LIST FORM

OWNER: _____

LOAN NO: _____

PROJECT TITLE: _____

BID DATE: _____

Instructions:

- 1. This list must include all firms that were solicited for participation, bid on, or quoted for a prime contract or subcontracts under EPA assisted projects, included both DBE's and non DBE's.
- 2. SRF loan participants must keep the Bidder's List until the project period for the identified loan has ended and no funds are remaining.
- 3. This list must be submitted to DOW in the ATA Package. Contract Award Approval cannot be given until this form has been received by DOW.
- 4. The following information must be obtained from all prime and subcontractors. Please complete the form below:

ENTITY'S NAME	MAILING ADDRESS	CONTACT PERSON	PHONE#	E-MAIL ADDRESS	M/WBE?

REGION 4
DISADVANTAGED BUSINESS ENTERPRISE (DBE) NEGOTIATED RATES
(Subject to change - refer to grant award for specific fair share objectives)

KENTUCKY

Construction: (both programs)	4.10% MBE and 4.60% WBE
Equipment:	1.10% MBE and 1.20% WBE
Services:	10.8% MBE and 18.6% WBE
Supplies:*	3.40% MBE and 6.30% WBE

BONDS AND INSURANCE

The minimum requirements shall be as follows:

Bonding requirements for contracts of \$100,000 or less are contained in 40 CFR 31.36(h).

Bond requirements for contracts in excess of \$100,000 are:

- < Bid guarantee equivalent to five percent of the bid price. The bid guarantee shall consist of a firm commitment such as a certified check or bid bond submitted with the bid;
- < Performance bond equal to 100 percent of the contract price, and
- < Payment bond equal to 100 percent of the contract price. Bonds must be obtained from companies holding Certificates of Authority as acceptable sureties, issued by the U.S. Treasury.

Insurance requirements are contained in the General Conditions of the contract. In addition to the other required insurance, the owner or the contractor, as appropriate, must acquire any flood insurance made available by the Federal Emergency Management Agency as required by 44 CFR Parts 59-79, if construction will take place in a flood hazard area identified by the Federal Emergency Management Agency. The owners requirements on Flood Insurance are contained in the Special Conditions Section of the Contracts Documents.

OUTLAY MANAGEMENT

The contractor must provide a contract progress schedule of percentage of work in place and costs against time; and a schedule of projected payments (cumulative) for construction and for the architectural/engineering contract when the contract is awarded. The payment schedule must be submitted, in a format similar to the attached sample, to the owner for forwarding to the State when the contract is awarded, and whenever actual payments on a project vary beyond -5 percent and +10 percent from the schedule, as determined by the grantee.

Contractor will be required to review each of these contract schedules during the month of June and to submit revised schedules, as necessary, no later than July 1st of each year.

CONSTRUCTION AND OUTLAY SCHEDULE

Project No.: _____

Applicant: _____

Contract Identification: _____

Description of Contract: _____

(INSTRUCTIONS FOR USE ON REVERSE SIDE)

SCHEDULE I - CONSTRUCTION SCHEDULE

Date for Advertisement: _____

Date for Opening Bids: _____

Pre-Construction Conference Date: _____

Date of Contract Award: _____

Contract Period: _____ days Projected Contract Completion Date: _____

Total Eligible Contract Amount: _____

Work Order Date: _____

Start Construction Date: _____

Contract Completed: _____

SCHEDULE II - CUMULATIVE OUTLAY SCHEDULE (55% EPA Share) - Projection
only for quarters that remain in the fiscal year (FY) plus cumulative
annual amount for the next FY.

Cum EPA Amount thru 1 st Qtr. Oct./Dec.:	\$ _____
Cum EPA Amount thru 2 nd Qtr. Jan./Mar.:	\$ _____
Cum EPA Amount thru 3 rd Qtr. Apr./June:	\$ _____
Cum EPA Amount thru 4 th Qtr. July/Sept.:	\$ _____
Cum EPA Amount for Next Fiscal Year:	\$ _____

INSTRUCTIONS (Construction and Outlay Schedules)

To insure timely achievement of the grant objectives the owner (grantee) must provide EPA with a grants activities schedule, contract construction schedules and corresponding payment outlay schedules for the grant and each contract under the grant. One copy of information similar to that showing the Construction and Outlay Schedule Form will be submitted for the grant schedule with the grant acceptance. A separate form will accompany each contract at time of contract award.

- A. The grant activities schedule shall depict the period from grant award through grant closeout and cover all major milestone date. The grant activities schedule shall include Schedule I information items as well as other appropriate items necessary to monitor the grant. Schedule II shall be filled out to estimate the cumulative (all construction and architectural/engineering contracts) payment schedule to be requested by the grantee from EPA during the grant period, and whenever actual outlays vary beyond -5% and +10% from the schedule.
- B. Individual contractor's construction schedules for each contract will be submitted to support the grant activities schedule. The Schedule I shall be submitted prior to date of advertisement of each contract and Schedule II along with the contractor's construction schedule shall be submitted seven (7) calendar days prior to the dates of the pre-construction conference. The contractor's construction schedule shall depict the contractor's plan for completing all contract requirements and show work placement in dollars versus contract time. Schedule II shall depict the contract payment outlay by month or quarter. The contract schedule will be coordinated with all parties at the pre-construction conference.

The grants activities schedule, contractor construction schedules, will be the basis for monitoring progress towards completion of the project. The schedules shall be maintained at the available for inspection and updated at least monthly. The schedules shall be revised to incorporate approved change orders as they occur.

All of the schedules will be submitted to the State Division of Water.

NOTICE OF INTENT

All construction projects with surface disturbance of more than 1 acre during the period of construction must have a KPDES Storm Water General Permit. The permit can be found at the following web address: [**https://dep.gateway.ky.gov/eForms/default.aspx?FormID=7**](https://dep.gateway.ky.gov/eForms/default.aspx?FormID=7).

If you have any questions regarding the completion of this form call the Surface Water Permits Branch, at (502) 564-3410.

DAVIS BACON REQUIREMENTS

Federal Davis-Bacon rates are applicable for these funds. This determination applies only to the loan portion of this project. Please contact the other funding sources, if applicable, for their requirements pertaining to federal wage rates. You must contact the Kentucky Labor Cabinet for determination of applicable state wages.

(a) The Agency head shall cause or require the contracting officer to insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in §5.1, the following clauses (or any modifications thereof to meet the particular needs of the agency, Provided, That such modifications are first approved by the Department of Labor):

(1) Minimum wages. (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 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 (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at 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 which 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 paragraph (a)(1)(iv) of this section; 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 §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 conformed under paragraph (a)(1)(ii) of this section) 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.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

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

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

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer 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 the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will

approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) 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.

(iii) 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.

(iv) 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.

(2) Withholding. The (write in name of Federal Agency or the loan or grant recipient) 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 (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the (Agency) 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.

(3) Payrolls and basic records. (i) 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 (or under the United States Housing Act of 1937, or under the Housing Act of 1949, 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 CFR 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, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which 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.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency), the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) 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:

(1) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) 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 Regulations, 29 CFR part 3;

(3) 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.

(C) 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 (a)(3)(ii)(B) of this section.

(D) 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 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the (write the name of the agency) 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, the Federal agency 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. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees —(i) 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, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, 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 Office of Apprenticeship Training, Employer and Labor Services 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 Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, 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.

(ii) Trainees. Except as provided in 29 CFR 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 which 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 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.

(iii) 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, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions 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 CFR 5.5.

(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) 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 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility. (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who 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 CFR 5.12(a)(1).

(ii) 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 CFR 5.12(a)(1).

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

(b) Contract Work Hours and Safety Standards Act. The Agency Head shall cause or require the contracting officer to insert the following clauses set forth in paragraphs (b)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by §5.5(a) or 4.6 of part 4 of this title. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) 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 he or she 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.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor 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 (b)(1) 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 (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The (write in the name of the Federal agency or the loan or grant recipient) 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 moneys 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)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) 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 (b)(1) through (4) of this section.

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in §5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly

number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

- (a). The subrecipient shall periodically interview, a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The subrecipient must use Standard Form 1445 or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.
- (b) The subrecipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, the subrecipient should conduct interviews with a representative group of covered employees within two weeks of each contractor or subcontractor's submission of its initial weekly payroll data and two weeks prior to the estimated completion date for the contract or subcontract. Subrecipients must conduct more frequent interviews if the initial interviews or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. Subrecipients shall immediately conduct necessary interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.
- (c). The subrecipient shall conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The subrecipient shall establish and follow a spot check schedule based on an assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the subrecipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date of the contract or subcontract. Subrecipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the subrecipient shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.
- (d). The subrecipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.
- (e) Subrecipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office.

WAGE RATE REQUIREMENTS UNDER FY2013 APPROPRIATIONS

CWSRF: The recipient agrees to include in all agreements to provide assistance for the construction of treatment works carried out in whole or in part with such assistance made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.), or with such assistance made available under section 205(m) of that Act (33 U.S.C. 1285(m)), or both, a term and condition requiring compliance with the requirements of section 513 of that Act (33 U.S.C. 1372) in all procurement contracts and sub-grants, and require that loan recipients, procurement contractors and sub-grantees include such a term and condition in subcontracts and other lower tiered transactions. All contracts and subcontracts for the construction of treatment works carried out in whole or in part with assistance made available as stated herein shall insert in full in any contract in excess of \$2,000 the contract clauses as set forth below entitled "Wage Rate Requirements Under FY 2013 Appropriations." This term and condition applies to all agreements to provide assistance under the authorities referenced herein, whether in the form of a loan, bond purchase, grant, or any other vehicle to provide financing for a project, where such agreements are executed on or after October 30, 2009 and before October 1, 2010.

DWSRF: The recipient agrees to include in all agreements to provide assistance for any construction project carried out in whole or in part with such assistance made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12), a term and condition requiring compliance with the requirements of section 1450(e) of the Safe Drinking Water Act (42 U.S.C.300j-9(e)) in all procurement contracts and sub-grants, and require that loan recipients, procurement contractors and sub-grantees include such a term and condition in subcontracts and other lower tiered transactions All contracts and subcontracts for any construction project carried out in whole or in part with assistance made available as stated herein shall insert in full in any contract in excess of \$2,000 the contract clauses as set forth below entitled "Wage Rate Requirements Under FY 2013 Appropriations." This term and condition applies to all agreements to provide assistance under the authorities referenced herein, whether in the form of a loan, bond purchase, grant, or any other vehicle to provide financing for a project, where such agreements are executed on or after October 30, 2009 and before October 1, 2010.

Wage Rate Requirements Under FY 2013 Appropriations**Preamble**

With respect to the Clean Water and Safe Drinking Water State revolving Funds, EPA provides capitalization grants to each State which in turn provides subgrants or loans to eligible entities within the State. Typically, the subrecipients are municipal or other local governmental entities that manage the funds. For these types of recipients, the provisions set forth under Roman Numeral I, below, shall apply. Although EPA and the State remain responsible for ensuring subrecipients' compliance with the wage rate requirements set forth herein, those subrecipients shall have the primary responsibility to maintain payroll records as described in Section 3(ii)(A), below and for compliance as described in Section I-5.

Occasionally, the subrecipient may be a private for profit or not for profit entity. For these types of recipients, the provisions set forth in Roman Numeral II, below, shall apply. Although EPA and the State remain responsible for ensuring subrecipients' compliance with the wage rate requirements set forth herein, those subrecipients shall have the primary responsibility to maintain payroll records as described in Section II-3(ii)(A), below and for compliance as described in Section II-5.

I. Requirements under FY 2013 Appropriations Act For Subrecipients That Are Governmental Entities:

The following terms and conditions specify how recipients will assist EPA in meeting its Davis-Bacon (DB) responsibilities when DB applies to EPA awards of financial assistance under the FY 2013 Appropriations Act with respect to State recipients and subrecipients that are governmental entities. If a subrecipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient. If a State recipient needs guidance, the recipient may contact **(insert name or organizational unit Regional EPA DB contact)** for guidance. The recipient or subrecipient may also obtain additional guidance from DOL's web site at <http://www.dol.gov/esa/whd/recovery/>

1. Applicability of the Davis- Bacon (DB) prevailing wage requirements.

Under the FY 2013 Appropriations Act, DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund and to any construction project carried out in whole or in part by assistance made available by a drinking water treatment revolving loan fund. If a subrecipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the subrecipient must discuss the situation with the recipient State before authorizing work on that site.

2. Obtaining Wage Determinations.

(a) Subrecipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.

(i) While the solicitation remains open, the subrecipient shall monitor www.wdol.gov weekly to ensure that the wage determination contained in the solicitation remains current. The subrecipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the subrecipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the subrecipient.

(ii) If the subrecipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the subrecipient, obtains an extension of the 90 day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The subrecipient shall monitor www.wdol.gov on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.

(b) If the subrecipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the subrecipient shall insert the appropriate DOL wage determination from www.wdol.gov into the ordering instrument.

(c) Subrecipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.

(d) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a subrecipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the subrecipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the subrecipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The subrecipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions.

(a) The Recipient shall insure that the subrecipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project under the DWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or the FY 2013 appropriation , the following clauses:

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work 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 (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at 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 which 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 paragraph (a)(1)(iv) of this section; 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 § 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 conformed under paragraph (a)(1)(ii) of this section) 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.

Subrecipients may obtain wage determinations from the U.S. Department of Labor's web site, www.dol.gov.

(ii)(A) The subrecipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the subrecipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the subrecipient (s) to the State award official. The State award official will transmit the request, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the subrecipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request and the local wage determination, including the views of all

interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) 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.

(iii) 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.

(iv) 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.

(2) Withholding. The subrecipient(s), shall upon written request of the EPA Award Official or 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, all or part of the wages required by the contract, the (Agency) 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.

(3) Payrolls and basic records.

(i) 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. 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 CFR 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, that

the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which 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.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the subrecipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the subrecipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the subrecipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the subrecipient(s).

(B) 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:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) 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 Regulations, 29 CFR part 3;

(3) 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.

(C) 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 (a)(3)(ii)(B) of this section.

(D) 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 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA 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, the Federal agency or State 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. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--

(i) 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, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, 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 Office of Apprenticeship Training, Employer and Labor Services 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 Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, 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.

(ii) Trainees. Except as provided in 29 CFR 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 which 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 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.

(iii) 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, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, 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 CFR 5.5.

(7) Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) 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

CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Subrecipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who 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 CFR 5.12(a)(1).

(ii) 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 CFR 5.12(a)(1).

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

4. Contract Provision for Contracts in Excess of \$100,000.

(a) Contract Work Hours and Safety Standards Act. The subrecipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) 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 he or she 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.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) 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)(1) 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)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The subrecipient, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall withhold or cause to be withheld, from any moneys 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)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) 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)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Subrecipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Subrecipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

(a) The subrecipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The subrecipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

(b) The subrecipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, the subrecipient should conduct interviews with a representative group of covered employees within two weeks of each contractor or subcontractor's submission of its initial weekly payroll data and two weeks prior to the estimated completion date for the contract or subcontract. Subrecipients must conduct more frequent interviews if the initial interviews or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. Subrecipients shall immediately conduct necessary interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

(c) The subrecipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The subrecipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the subrecipient should spot check payroll

data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract . Subrecipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the subrecipient shall verify evidence of fringe benefit plans and payments thereunder by contractors and subcontractors who claim credit for fringe benefit contributions.

(d) The subrecipient shall periodically review contractors and subcontractor's use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

(e) Subrecipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <http://www.dol.gov/esa/contacts/whd/america2.htm>.

II. Requirements under FY 2013 Appropriations Act For Subrecipients That Are Not Governmental Entities

The following terms and conditions specify how recipients will assist EPA in meeting its DB responsibilities when DB applies to EPA awards of financial assistance under the FY2010 Appropriations Act with respect to subrecipients that are not governmental entities. If a subrecipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient for guidance. If a State recipient needs guidance, the recipient may contact **Grants, Finance and Cost Recovery Branch, Regional EPA DB contact at (404) 562-9278** for guidance. The recipient or subrecipient may also obtain additional guidance from DOL's web site.

Under these terms and conditions, the subrecipient must submit its proposed DB wage determinations to the State recipient for approval prior to including the wage determination in any solicitation, contract task orders, work assignments, or similar instruments to existing contractors.

1. Applicability of the Davis- Bacon (DB) prevailing wage requirements.

Under the FY 2013 Appropriation, Davis-Bacon prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund and to any construction project carried out in whole or in part by assistance made available by a drinking water treatment revolving loan fund. If a subrecipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the subrecipient must discuss the situation with the recipient State before authorizing work on that site.

2. Obtaining Wage Determinations.

(a) Subrecipients must obtain proposed wage determinations for specific localities at www.wdol.gov. After the Subrecipient obtains its proposed wage determination, it must submit the wage determination to (insert contact information for State recipient DB point of contact for

wage determination) for approval prior to inserting the wage determination into a solicitation, contract or issuing task orders, work assignments or similar instruments to existing contractors (ordering instruments unless subsequently directed otherwise by the State recipient Award Official.

(b) Subrecipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.

(i) While the solicitation remains open, the subrecipient shall monitor www.wdol.gov on a weekly basis to ensure that the wage determination contained in the solicitation remains current. The subrecipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the subrecipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the subrecipient.

(ii) If the subrecipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the subrecipient, obtains an extension of the 90 day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The subrecipient shall monitor www.wdol.gov on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.

(c) If the subrecipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the subrecipient shall insert the appropriate DOL wage determination from www.wdol.gov into the ordering instrument.

(c) Subrecipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.

(d) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a subrecipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the subrecipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the subrecipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The subrecipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions.

(a) The Recipient shall insure that the subrecipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project under the DWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or the FY 2013 appropriation , the following clauses:

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work, 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 (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at 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 which 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 paragraph (a)(1)(iv) of this section; 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 § 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 conformed under paragraph (a)(1)(ii) of this section) 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.

Subrecipients may obtain wage determinations from the U.S. Department of Labor's web site, www.dol.gov.

(ii)(A) The subrecipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

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

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

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the subrecipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the subrecipient(s) to the State award official. The State award official will transmit the report, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the and the subrecipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request, and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) 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.

(iii) 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.

(iv) 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.

(2) Withholding. The subrecipient(s) shall upon written request of the EPA Award Official or 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, all or part of the wages required by the contract, the (Agency) 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.

(3) Payrolls and basic records.

(i) 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. 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 CFR 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, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which 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.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the subrecipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the subrecipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered

worker, and shall provide them upon request to the subrecipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the subrecipient(s).

(B) 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:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) 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 Regulations, 29 CFR part 3;

(3) 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.

(C) 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 (a)(3)(ii)(B) of this section.

(D) 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 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA 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, the Federal agency or State 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. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--

(i) 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, Office of Apprenticeship Training, Employer and Labor Services, or

with a State Apprenticeship Agency recognized by the Office, 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 Office of Apprenticeship Training, Employer and Labor Services 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 Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, 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.

(ii) Trainees. Except as provided in 29 CFR 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 which 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 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.

(iii) 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, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, 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 CFR 5.5.

(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) 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 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Subrecipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who 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 CFR 5.12(a)(1).

(ii) 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 CFR 5.12(a)(1).

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

4. Contract Provision for Contracts in Excess of \$100,000.

(a) Contract Work Hours and Safety Standards Act. The subrecipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) 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 he or she 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.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) 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 (b)(1) 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 (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The subrecipient shall upon the request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld, from any moneys 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)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) 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 (b)(1) through (4) of this section.

(c) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Subrecipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Subrecipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

(a). The subrecipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The subrecipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

(b) The subrecipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, the subrecipient should conduct interviews with a representative group of covered employees within two weeks of each contractor or subcontractor's submission of its initial weekly payroll data and two weeks prior to the estimated completion date for the contract or subcontract. Subrecipients must conduct more frequent interviews if the initial interviews or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. Subrecipients shall immediately conduct necessary interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

(c). The subrecipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The subrecipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable the subrecipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Subrecipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB . In addition, during the examinations the subrecipient shall verify evidence of fringe benefit plans and payments thereunder by contractors and subcontractors who claim credit for fringe benefit contributions.

(d). The subrecipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

(e) Subrecipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <http://www.dol.gov/esa/contacts/whd/america2.htm>.



Steven L. Beshear
Governor

KENTUCKY LABOR CABINET
DEPARTMENT OF WORKPLACE STANDARDS
DIVISION OF EMPLOYMENT STANDARDS,
APPRENTICESHIP & MEDIATION
1047 US Hwy 127 S - Suite 4
Frankfort, Kentucky 40601
Phone: (502) 564-3534
Fax (502) 696-1897
www.labor.ky.gov

Mark S. Brown
Secretary

Michael L. Dixon
Commissioner

November 20, 2012
Jennifer Cummins
Monarch Engineering Inc
556 Carlton Dr
Lawrenceburg KY 40342

Re: Columbia/Adair Utilities District, Phase 11-2 Water Line Extensions

Advertising Date as Shown on Notification: December 13, 2012

Dear Jennifer Cummins:

This office is in receipt of your written notification on the above project as required by KRS 337.510 (1).

I am enclosing a copy of the current prevailing wage determination number CR 6-017, dated June 22, 2011 for ADAIR County. This schedule of wages shall be attached to and made a part of the specifications for the work, printed on the bidding blanks, and made a part of the contract for the construction of the public works between the public authority and the successful bidder or bidders.

The determination number assigned to this project is based upon the advertising date contained in your notification. There may be modifications to this wage determination prior to the advertising date indicated. In addition, if the contract is not awarded within 90 days of this advertising date or if the advertising date is modified, a different set of prevailing rates of wages may be applicable. It will be the responsibility of the public authority to contact this office and verify the correct schedule of the prevailing rates of wages for use on the project. Your project number is as follows: 001-H-00067-11-6, Heavy/Highway

Sincerely,

Michael L. Dixon
Commissioner



KENTUCKY LABOR CABINET
PREVAILING WAGE DETERMINATION
CURRENT REVISION
LOCALITY NO. 017

Determination No. CR-6-017

Date of Determination: June 22, 2011

PROJECT NO. 001-H-00067-11-6

_____BLDG _____x_____HH

This schedule of the prevailing rate of wages for Locality No. 017, which includes Adair, Casey, Pulaski and Russell Counties, has been determined in accordance with the provisions of KRS 337.505 to 337.550. This determination shall be referred to as Prevailing Wage Determination No. CR-6-017.

Apprentices shall be permitted to work as such subject to Administrative Regulations adopted by the Executive Director of Workplace Standards. Copies of these regulations will be furnished upon request to any interested person.

Overtime is to be computed at not less than one and one-half (1 1/2) times the indicated base rate for all hours worked in excess of eight (8) per day, or in excess of forty (40) per week. However, KRS 337.540 permits an employee and employer to agree, in writing, that the employee will be compensated at a straight time base rate for hours worked in excess of eight (8) hours in any one workday, but not more than ten (10) hours worked in any one workday, if such written agreement is prior to the over eight (8) hours in a workday actually being worked, or where provided for in a collective bargaining agreement. The fringe benefit rate is to be paid for each hour worked at a straight time rate for all hours worked. Fringe benefit amounts are applicable for all hours worked except when otherwise noted. Welders will receive rate for craft in which welding is incidental.

No laborer, workman or mechanic shall be paid at a rate less than that of the General Laborer except those classified as bona fide apprentices registered with the Kentucky State Apprenticeship Supervisor unless otherwise specified in this schedule of wage rates.

NOTE: The type of construction shall be determined by applying the following definitions.

BUILDING CONSTRUCTION

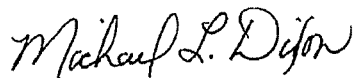
Building construction is the construction of sheltered enclosures with walk-in access for the purpose of housing persons, machinery, equipment, or supplies. It includes all construction of such structures, the installation of utilities and the installation of equipment, both above and below grade level, as well as incidental grading, utilities and paving.

HIGHWAY CONSTRUCTION

Highway construction includes the construction, alteration or repair of roads, streets, highways, runways, taxiways, alleys, trails, paths, parking areas, and other similar projects not incidental to building or heavy construction. It includes all incidental construction in conjunction with the highway construction project.

HEAVY CONSTRUCTION

Heavy projects are those projects that are not properly classified as either "building" or "highway". For example, dredging projects, water and sewer line projects, dams, flood control projects, sewage treatment plants and facilities, and water treatment plants and facilities are considered heavy.



Michael L. Dixon, Commissioner
Department of Workplace Standards
Kentucky Labor Cabinet

ASBESTOS/INSULATION WORKERS:		BASE RATE	\$24.41
		FRINGE BENEFITS	9.81

BOILERMAKERS:		BASE RATE	\$34.34
		FRINGE BENEFITS	20.51

BRICKLAYERS:		BASE RATE	\$22.33
Bricklayers:		FRINGE BENEFITS	10.03

Refractory & Firebrick:		BASE RATE	\$23.54
		FRINGE BENEFITS	10.07

****Sawmen & Layoutmen add \$.25 per hour to base rate of pay for both classifications.**

CARPENTERS:		BASE RATE	\$20.63
Carpenters:	BUILDING	FRINGE BENEFITS	11.70

Piledrivers:	BUILDING	BASE RATE	\$21.13
		FRINGE BENEFITS	11.70

Carpenters:	HEAVY & HIGHWAY	BASE RATE	\$25.45
		FRINGE BENEFITS	12.35

Divers:	HEAVY & HIGHWAY	BASE RATE	\$38.55
		FRINGE BENEFITS	12.35

Piledrivermen:	HEAVY & HIGHWAY	BASE RATE	\$25.70
		FRINGE BENEFITS	12.35

CEMENT MASONS:		BASE RATE	\$14.10
		FRINGE BENEFITS	4.65

Suspended scaffold over 25 feet, add \$.25 to base rate

ELECTRICIANS:		BASE RATE	\$29.27
		FRINGE BENEFITS	13.08

When working from Bosum chairs, trusses, stacks, tanks, scaffolds, catwalks, radio and TV towers, structural steel-open, unprotected, unfloored raw steel, bridges, or similar hazardous locations where workmen are subject to a direct fall (except for work performed using JLG's and bucket trucks up to 75 ft.): 50' to 75' - add 25% to base rate; over 75' - add 50% to base rate.

LINEMAN:		BASE RATE	\$30.09
		FRINGE BENEFITS	10.94

OPERATOR:		BASE RATE	\$26.90
		FRINGE BENEFITS	10.31

GROUNDSMEN:		BASE RATE	\$17.79
		FRINGE BENEFITS	8.51

ELEVATOR CONSTRUCTORS:		BASE RATE	\$23.93
		FRINGE BENEFITS	10.10

GLAZIERS:		BASE RATE	\$7.25
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IRONWORKERS:		BASE RATE	\$25.77
		FRINGE BENEFITS	18.54

LABORERS / BUILDING:

BUILDING GROUP 1: Laborers, general carpenter tenders, cement finisher tenders, placing of concrete, wrecking on buildings by laborers, hand digging and hand back filling of ditches, clearing of rights of way and building site, curing of concrete and application of hardener, handling of chemically treated lumber, installing of wood sheeting and shoring, signal laborers for concrete bucket, cleaning and moving of general purpose materials, general clean-up of all scrap and debris:

BUILDING	*BASE RATE	\$18.07
	FRINGE BENEFITS	8.38

BUILDING GROUP 2: Mason tender, side rail setter (metal), stackman, fork lift operators, masonry and plastering contractors only, power driven georgia buggy, chain saw, vibrator operator, mesh handler, power tools (air, diesel, electric, gasoline), wagon drill, pipe layer, wall man treatment of exposed concrete (chip, bush hammer, and rub), concrete saw, gasoline tamper machine, walk behind trenching machine, burner man, joint maker, asphalt raker, mobile sweeper:

BUILDING	*BASE RATE	\$18.27
	FRINGE BENEFITS	8.38

BUILDING GROUP 3: Airtrack driller, Introflax burning rod, gunnite nozzle man operator, sewer tunnel laborers (free air), sand hog or mucker (free air), welder:

BUILDING	*BASE RATE	\$18.47
	FRINGE BENEFITS	8.38

BUILDING GROUP 4: Holeman drilled piers, augurad, caissons, sand miner (tunnel free air), caisson workers, powderman, and construction specialist:

BUILDING	*BASE RATE	\$19.07
	FRINGE BENEFITS	8.38

BUILDING GROUP 5: Tunnel man and tunnel miners (pressure and free air), hole man, environmental worker, toxic and hazardous waste, asbestos removal, and lead abatement:

BUILDING	*BASE RATE	\$19.57
	FRINGE BENEFITS	8.38

***All of the Building above: Any free hanging scaffold above 30 feet, add \$.25 to base rate.**

LABORERS / HEAVY HIGHWAY:

HEAVY HIGHWAY GROUP 1: Aging and curing of concrete (any mode or method); asbestos abatement worker; asphalt plant laborers; asphalt laborers; batch truck dumpers; carpenter tenders; cement mason tenders; cleaning of machines; concrete laborers; demolition laborers; dredging laborers; drill helper; environmental laborer-nuclear, radiation, toxic and hazardous waste-Level D; flagmen; grain checkers; all hand digging and hand back filling; highway marker pacers; landscaping laborers; mesh handlers and placers; puddler; railroad laborers; rip rap and grouters; right of way laborers; sign, guardrail and fence installers (all types); signal men; sound barrier installer; storm and sanitary sewer laborers; swamper; truck spotters and dumpers; wrecking of concrete forms; general cleanup:

HEAVY HIGHWAY	BASE RATE	\$20.91
	FRINGE BENEFITS	10.05

HEAVY HIGHWAY GROUP 2: Batter board men (sanitary and storm sewer); brickmason tenders; mortar mixer operator; scaffold builders; burner and welder; bushammers; chain saw operator; concrete saw operators, deckhand scow man; dry cement handlers; environmental laborers-nuclear, radiation, toxic and hazardous waste-Level C; forklift operators for masonry; form setters; green concrete cutting; hand operated grouter and grinder machine operator; jack hammers; lead paint abatement; pavement breakers; paving joint machine; pipe layers-laser operators(non metallic); plastic pipe fusion; power driven Georgia buggy and wheel barrow; power post hole diggers; precast manhole setters; walk behind tampers; walk behind trenchers; sand blasters; concrete chippers; surface grinders; vibrator operators; wagon drillers:

	HEAVY HIGHWAY	BASE RATE	\$21.16
		FRINGE BENEFITS	10.05

HEAVY HIGHWAY GROUP 3: Asphalt luteman and rakers, gunnite nozzelman, gunnite operators and mixers, grout pump operaor, side rail setters, rail paved ditches, screw operators tunnel laborers (free air), and water blasters:

	HEAVY HIGHWAY	BASE RATE	\$21.21
		FRINGE BENEFITS	10.05

HEAVY HIGHWAY GROUP 4: Caisson workers (free air), cement finishers, environmental laborers-nuclear, radiation, toxic and hazardous waste Levels A & B, miners and drillers (free air), tunnel blasters and tunnel muckers (free air), directional and horizontal boring, air track drillers (all types), powder man and blasters, troxler and concrete tester if laborer is utilized:

	HEAVY HIGHWAY	BASE RATE	\$21.81
		FRINGE BENEFITS	10.05

MARBLE, TILE & TERRAZZO SETTERS:		BASE RATE	\$22.64
		FRINGE BENEFITS	6.10

MARBLE, TILE & TERRAZZO FINISHERS:		BASE RATE	\$15.42
		FRINGE BENEFITS	5.42

MILLWRIGHTS:		BASE RATE	\$23.73
		FRINGE BENEFITS	15.12

OPERATING ENGINEERS / BUILDING:

BUILDING CLASS A-1: Crane, dragline, hoist (1drum when used for stack or chimney construction or repair), hoisting engineer (2 or more drums), orangepeel bucket, overhead crane, piledriver, truck crane, tower crane, hydraulic crane:

	BUILDING	BASE RATE	\$26.55
		FRINGE BENEFITS	13.00

BUILDING CLASS A: Articulating Dump, auto patrol, batcher plant, bituminous paver, cableway, central compressor plant, clamshell, concrete mixer (21 cu. ft. or over), concrete pump, crane, crusher plant, derrick, derrick boat, ditching and trenching machine, dragline, dredge operator, dredge engineer, elevating grader and all types of loaders, heavy equipment robotics operator/mechanic, hoe type machine, hoist (1 drum when used for stack or chimney construction or repair), hoisting engineer (2 or more drums), horizontal directional drill operator, hydraulic boom trucks, locomotive, mechanically operated laser screed, motor scraper, carry-all scoop, bulldozer, heavy duty welder, mechanic, orangepeel bucket, overhead crane, piledriver, power blade, motor grader, roller (bituminous), scarifier, shovel, tractor shovel, truck crane, winch truck, push dozer, highlift, forklift (regardless of lift height and except when used for masonry construction), telescoping type forklift, all types of boom cats, core drill, hopto, tow or push boat, A-frame winch truck, concrete paver, gradeall, hoist, hyster, pumpcrete, Ross carrier, boom, tail boom, rotary drill, hydro hammer, mucking machine, rock spreader attached to equipment, scoopmobile, KeCal loader, tower cranes (French, German and other types), hydrocrane, backfiller, gurries, sub-grader, tunnel mining machines including moles, shields, or similar types of tunnel mining equipment:

	BUILDING	BASE RATE	\$25.55
		FRINGE BENEFITS	13.00

OPERATING ENGINEERS / BUILDING: CONTINUED

BUILDING CLASS B: All air compressors (over 900 CFM), bituminous mixer, joint sealing machine, concrete mixer (under 21 cu. ft.), form grader, roller (rock), tractor (50 HP and over), bull float, finish machine, outboard motor boat, flexplane, fireman, boom type tamping machine, truck crane oiler, greaser on grease facilities servicing heavy equipment, switchman or brakeman, mechanic helper, whirley oiler, self-propelled compactor, tractair and road widening trencher and farm tractor with attachments (except backhoe, highlift and endloader), elevator (regardless of ownership when used for hoisting any building material), hoisting engineer (1-drum or buck hoist), forklift (when used for masonry construction, Firebrick masonry excluded), well points, grout pump, throttle-valve man, tugger, electric vibrator compactor, and caisson drill helper:

BUILDING	BASE RATE	\$22.81
	FRINGE BENEFITS	13.00

BUILDING CLASS C: Bituminous distributor, cement gun, conveyor, mud jack, paving joint machine, roller (earth), tamping machine, tractors (under 50 HP), vibrator, oiler, concrete saw, burlap and curing machine, hydro-seeder, power form handling equipment, deckhand steersman, hydraulic post driver, and drill helper:

BUILDING	BASE RATE	\$22.04
	FRINGE BENEFITS	13.00

OPERATING ENGINEERS / HEAVY & HIGHWAY:

HEAVY HIGHWAY CLASS A-1: Cableway, carry deck crane, cherry picker, clamshell, crane, derrick, derrick boat, dragline, hoist engine (2 or more drums), hydraulic boom truck, hydrocrane, orangepeel bucket, overhead crane, piledriver, rough terrain crane, tower cranes (French, German & other types), truck crane:

HEAVY HIGHWAY	BASE RATE	\$27.50
	FRINGE BENEFITS	13.00

HEAVY HIGHWAY CLASS A: A-Frame Winch Truck, Auto Patrol, Backfiller, Batch Plant, Bituminous Paver, Bituminous Transfer Machine, All types of Boom Cats, Bulldozer, Cableway, Carry-All Scoop, Carry Deck Crane, Central Compressor Plant Operator, Clamshell, Concrete Mixer (21 cu. ft. or over), Concrete Paver, Truck-Mounted Concrete Pump, Core Drills, Crane, Crusher Plant, Derrick, Derrick Boat, Ditching and Trenching Machine, Dragline, Dredge Operator, Dredge Engineer, Earth Movers, Elevating Grader and all types of Loaders, Grade-All, Gurries, Heavy Equipment Robotics Operator/Mechanic, Highlift, Hoe-Type Machine, Hoist (two or more drums), Hoisting Engine (two or more drums), Horizontal Directional Drill Operator, Hydraulic Boom Truck, Hydrocrane, Hyster, KeCal Loader, Letourneau, Locomotive, Mechanic, Mechanically Operated Laser Screed, Mechanic Welder, Mucking Machine, Motor Scraper, Orangepeel Bucket, Piledriver, Power Blade, Pumpcrete, Push Dozer, Rock Spreader attached to Equipment, All Rotary Drills, Roller (bituminous), Scarifier, Scoopmobile, Shovel, Side Boom, Subgrader, Tailboom, Telescoping Type Forklift, Tow or Push Boat, Tower Cranes (French, German and other types), Tractor Shovel, Truck Crane, Tunnel Mining Machines including Moles, Shields, or Similar types of Tunnel Mining Equipment:

HEAVY & HIGHWAY	BASE RATE	\$26.50
	FRINGE BENEFITS	13.00

Operators on cranes with booms one hundred fifty feet (150') and over including jib shall receive \$.50 above base rate.

HEAVY HIGHWAY CLASS B: All Air Compressors (over 900 cu. ft. per min.), Bituminous Mixer, Boom Type Tamping Machine, Bull Float, Concrete Mixer (under 21 cu. ft.), Electric Vibrator Compactor/Self-Propelled Compactor, Elevator (one drum or buck hoist), Elevator (regardless of ownership when used to hoist building material), Finish Machine, Firemen, Flex-Plane, Forklift (regardless of lift height), Form Grader, Hoist (one drum), Joint Sealing Machine, Mechanic Helper, Outboard Motor Boat, Power Sweeper (riding type), Roller (rock), Ross Carrier, Skid Mounted or Trailer Mounted Concrete Pumps, Switchman or Brakeman, Throttle Valve Man, Tractair and Road Widening Trencher, Tractor (50 HP and over), Truck Crane Oiler, Tugger, Welding Machine, Well Points, and Whirley Oiler:

HEAVY & HIGHWAY	BASE RATE	\$24.08
	FRINGE BENEFITS	13.00

OPERATING ENGINEERS / HEAVY & HIGHWAY: CONTINUED

HEAVY HIGHWAY CLASS B2: Greaser on Grease Facilities servicing Heavy Equipment:
HEAVY & HIGHWAY

BASE RATE	\$24.46
FRINGE BENEFITS	13.00

HEAVY HIGHWAY CLASS C: Bituminous Distributor, Burlap and Curing Machine, Caisson Drill and Core Drill Helper (track or skid mounted), Cement Gun, Concrete Saw, Conveyor, Deckhand Oiler, Grout Pump, Hydraulic Post Driver, Hydro Seeder, Mud Jack, Oiler, Paving Joint Machine, Power Form Handling Equipment, Pump, Roller (earth), Steermers, Tamping Machine, Tractors (under 50 H.P.) and Vibrator:
HEAVY & HIGHWAY

BASE RATE	\$23.82
FRINGE BENEFITS	13.00

All Heavy Highway above: Employees assigned to work below ground level are to be paid ten percent (10%) above base wage rate. This does not apply to open cut work.

PAINTERS:	BASE RATE	\$15.50
	FRINGE BENEFITS	2.98

PLASTERERS:	BASE RATE	\$7.25
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PLUMBERS & PIPEFITTERS:	BASE RATE	\$30.20
	FRINGE BENEFITS	14.86

ROOFERS:	BASE RATE	\$13.50
	FRINGE BENEFITS	2.25

SHEETMETAL WORKERS: (includes sheet metal roofs)	BASE RATE	\$25.91
	FRINGE BENEFITS	8.06

SPRINKLER FITTERS:	BASE RATE	\$29.00
	FRINGE BENEFITS	16.75

TRUCK DRIVERS:	BASE RATE	\$7.89
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END DOCUMENT
CR-6-017
JUNE 22, 2011

UNITED STATES DEPARTMENT OF AGRICULTURE
RURAL DEVELOPMENT AND
FARM SERVICE AGENCY

ORDER NO.	1
DATE	
STATE	KY
COUNTY	ADAIR

CONTRACT CHANGE ORDER

CONTRACT FOR:
PHASE 11-2 WATER LINE EXTENSIONS & CONNECTOR LINES

OWNER:
COLUMBIA-ADAIR UTILITIES DISTRICT

TO:

(Contractor)

You are hereby requested to comply with the following changes in the contract plans and specifications:

Description of Changes (Supplemental Plans and Specifications Attached)	DECREASE in Contract Price	INCREASE in Contract Price
TOTALS		
NET CHANGE IN CONTRACT PRICE		

JUSTIFICATION:

The amount of the Contract will be (Decreased) (Increased) By the Sum of: _____ Dollars _____

The Contract Total Including this and previous Change Orders will be: _____ Dollars _____

The Contract Period Provided for Completion will be (Increased) (Decreased) (Unchanged): _____ Days

This document will become a supplement to the contract and all provisions will apply hereto.

Requested	_____ (Columbia-Adair Utilities District)	_____ (Date)
Recommended	_____ (Monarch Engineering, Inc.)	_____ (Date)
Accepted	_____ (Contractor)	_____ (Date)
Approved	_____ (KIA)	_____ (Date)

This information will be used as a record of any changes to the original construction contract.

MONARCH ENGINEERING, INC.
LAWRENCEBURG, KENTUCKY

PERIODIC ESTIMATE FOR PARTIAL PAYMENT
SHEET 1 OF 2

PROJECT: Phase 11-2 Water Line Extensions & Connector Lines
PROJECT NO.: 1049
ESTIMATE NO.
CONTRACT COMPLETION DATE:

OWNER: Columbia-Adair Utilities District
CONTRACTOR:
FOR PERIOD:
Percent Complete

CONTRACT ESTIMATE						PAY QUANTITIES			
Item No.	Item Description	Bid Quantity	Unit	Unit Price	Amount	Previous Estimate	Current Estimate	Total To Date	Total Amount

SUMMARY OF ALL ESTIMATES

Estimate No. 1

CONTRACTOR'S CERTIFICATION:

The undersigned Contractor certifies that to the best of their knowledge, information and belief the work covered by this payment estimate has been completed in accordance with the contract documents, that all amounts have been paid by the contractor for work for which previous payment estimates was issued and payments received from the owner, and that current payments shown herein is now due.
(CONTRACTOR) By: _____ Date: _____

APPROVED BY RESIDENT INSPECTOR:

MONARCH ENGINEERING, INC. By: _____ Date: _____

ENGINEER'S CERTIFICATION:

The undersigned certifies that the work has been carefully inspected and to the best of their knowledge and belief, the quantities shown in this estimate are correct and the work has been performed in accordance with the contract documents.
MONARCH ENGINEERING, INC. By: _____ Date: _____

APPROVED BY OWNER:

COLUMBIA-ADAIR UTILITIES DISTRICT By: _____ Date: _____

Total Work to Date	\$0.00
Stored Materials	\$0.00
Retainage @ 5%	\$0.00
Total Due Contractor to Date	\$0.00
Less Previous Payments	\$0.00
Amount Due From This Estimate	\$0.00

PP-1

**DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMITS TO BE
INSERTED HERE PRIOR TO THE BIDDING
PROCESS**

**Columbia Gulf Transmission
Letter of No Objection**

Date: September 2, 2011

Right-of-Way/Lease #: KX-224

Columbia Gulf Transmission, (Grantor) agrees to permit

Columbia/Adair Utilities District
109 Grant Lane
Columbia, Kentucky 42728
270-384-2181

for and in contemplation of the project by

_____ (Developer / Contractor Name)
_____ (Company)
_____ (Address)
_____ (City, State, Zip Code)
_____ (Phone Number)

to conduct activities within Grantor's 100, 200, and 300 pipeline(s) right-of-way(s) between Pipeline Mile Post 73.51 and Mile Post 73.61 located in Columbia District, Adair County, Kentucky for the purpose of Water Systems Extensions, Project 1003.

Grantor has no objection to the foreign facility line crossing under lines 100 and 200 and over line 300 as shown on the plans entitled Water Systems Extensions and dated January 2010, subject to the following conditions:

- Except as specifically noted herein, Grantee shall comply with all of Grantor's *Minimum Guidelines for Construction near Natural Gas Pipeline Facilities* (Exhibit A.)
- Grantee shall notify Grantor according to the state one-call regulations prior to undertaking any construction in the vicinity of Grantor's facilities.
- When any construction activity is conducted within Grantor's facilities or rights-of-way, a Grantor on-site inspector must be present.
- This Letter of No Objection is based on Grantor's review of Grantee's project plans, titled Water Systems Extensions, dated January 2010 and received in this office on August 23, 2011. In the event that Grantee makes changes to the above-referenced project plans after the date of this document, Grantee shall promptly notify Grantor and provide amended plans for review. **Note:** Plan Changes after the date of this document will require a **full review** by Grantor. Based on the results of that review, a new Letter of No Objection may or may not be issued. No construction activity will be allowed within Grantor's right-of-way until said review is complete and a new Letter of No Objection is issued, if warranted.
- Columbia reserves the right to require additional submission, review and possible revision of plans associated with this project if, for any reason, this project is not completed within twelve (12) months of the date of this letter. An updated Letter of No Objection will be reissued, if warranted, after reassessment has been completed and/or waived by Columbia.

THIS AGREEMENT IS NOT RECORDABLE IN ANY MANNER WITH ANY PUBLIC BODY, NOR IS IT ASSIGNABLE, EITHER IN PART OR IN WHOLE, TO ANY THIRD PARTY. ANY ATTEMPT TO EITHER RECORD OR ASSIGN IMMEDIATELY RENDERS THE SAME NULL AND VOID WITHOUT REQUIREMENT OF NOTICE BY GRANTOR AND WITHOUT ANY CLAIM FOR OFFSET, DETRIMENTAL RELIANCE, DAMAGES OR ANY OTHER ACTION FOUND AT LAW OR IN

EQUITY, WHETHER BY GRANTEE OR DEVELOPER OR ANYONE OR ENTITY CLAIMING THROUGH EITHER OR BOTH.

GRANTEE AGREES THAT IT WILL DISCLOSE THE EXISTENCE OF THIS AGREEMENT TO ANY FUTURE OWNER AND WILL NOTIFY COMPANY IN WRITING PRIOR TO CLOSING WITH RESPECT THERETO.

Other provisions or comments:

Underground Utilities permitted by NGT&S to cross above the pipeline, shall be encased in 4-inch minimum diameter, standard inch wall thickness, coated steel pipe across the full width of the NGT&S right-of-way. Water shut-off valve(s) shall be placed outside of NGT&S right-of-way.

1 Grantee acknowledges that it has freely chosen to construct and maintain the Grantee's facilities within the boundaries of Grantor's land rights and/or facilities and that it is aware of, and fully appreciates, the nature and extent of the risks associated with doing so. Accordingly, Grantee hereby agrees, understands and acknowledges that it: (a) assumes all risk of loss, damage or injury to persons or property, arising from, growing out of, or in any way relating to the construction, installation, placement, existence, use, maintenance or repair of Grantee's facilities within Grantor's right-of-way; and (b) covenants and agrees that Grantor, and each of its officers, managers, agents, servants, employees, predecessors, successors, subsidiaries, parents, affiliates, representatives, indemnitors, insurers and assigns, and each of them shall not be liable for any claims, demands, actions, causes of action, rights of action, liability, losses, expenses, costs, attorneys' fees, interest, court costs and damages of any kind or character whatsoever (including consequential damages), arising from, growing out of, or in any way relating to the construction, installation, placement, existence, use, maintenance or repair of Grantee's facilities within Grantor's right-of-way and/or any acts or omissions of Grantee, or its officers, employees, agents and contractors, incident thereto.

2. In consideration of the foregoing Letter of No Objection provided by the Grantor, Grantee and/or Developer, except to the extent of Grantor's gross negligence or willful misconduct, agree that it shall indemnify and hold harmless Grantor, its parent, subsidiaries, affiliates, owner, agents, officers, directors, employees, contractors and subcontractors and each of them, from and against any and all losses, including, but not limited to, business interruption, income loss, special or consequential damages, and/or liability for claims, demands, suits or causes of action at law or in equity for damages and injury, including death, attorneys fees, costs, expenses of every kind and nature whether to persons or property, arising out of or in any manner related to the use of Grantor's property within the right-of-way for which the Letter of No Objection is tendered. Grantee and Developer further agree to defend all such claims, demands, suits or causes of action at its own cost and expense without reimbursement from Grantor pursuant to this Letter of No Objection.

3. Grantor shall have the right to disturb, move or remove Grantee's facilities within Grantor's right-of-way, or as much thereof as Grantor determines is reasonable, to inspect, maintain, repair, alter, replace and/or upgrade Grantor's pipelines, facilities, and/or appurtenances. Grantor shall not be responsible to compensate Grantee for damage to Grantee's facilities or related improvements resulting from any of these activities. Grantor's sole obligation will be to restore all excavations made by Grantor to the original grade which existed prior to the construction of Grantee's facilities. Grantee acknowledges that surface conditions may be altered by erosion or earth subsidence. Grantee shall, at its own cost and expense, repair, replace, maintain, and restore its own facilities and related improvements, maintaining the minimal vertical clearance from Grantor's pipelines (as described in Exhibit A).

Please indicate your receipt, approval and acceptance of this agreement as well as the Grantor's *Minimum Guidelines for Construction Near Natural Gas Facilities* document, dated September 2, 2011, (attached hereto and marked as "Exhibit A") by signing both copies of the document. Please return one fully countersigned agreement to the Grantor office indicated below.

Agreed to this _____ day of _____, 20____.

Grantee

By: _____
 Danny Downey
Title: _____
 Chairman
Company: Columbia/Adair
 Utilities District

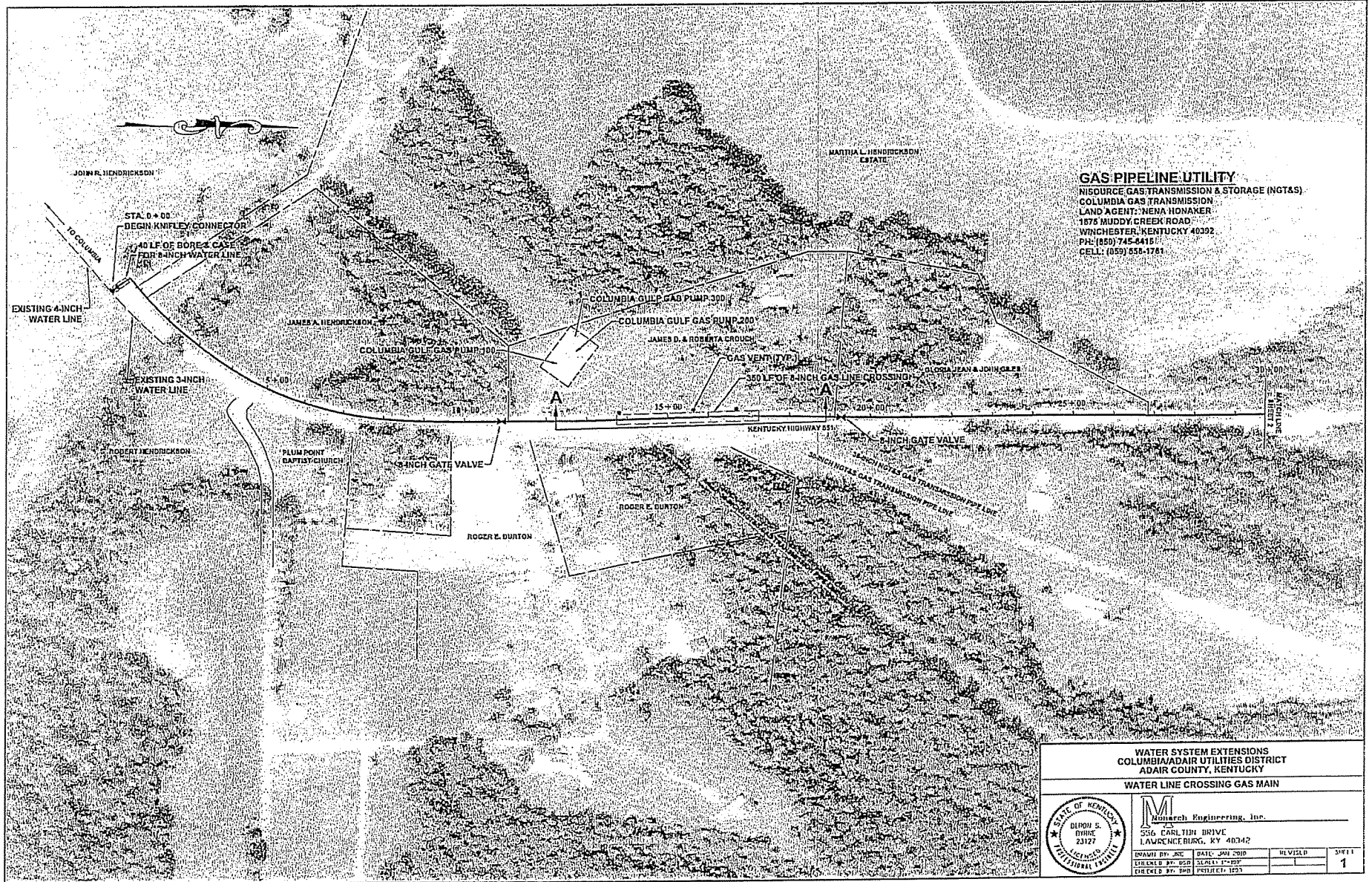
Grantor:

By: _____
Title: _____
Company: Columbia Gulf Transmission

Developer

By: _____
Title: _____
Company: _____

GAS-4



GAS PIPELINE UTILITY
 NISOURCE GAS TRANSMISSION & STORAGE (NGT&S)
 COLUMBIA GAS TRANSMISSION
 LAND AGENT: NENA HONAKER
 1675 MUDDY CREEK ROAD
 WINCHESTER, KENTUCKY 40392
 PH: (859) 745-4416
 CELL: (859) 658-1781

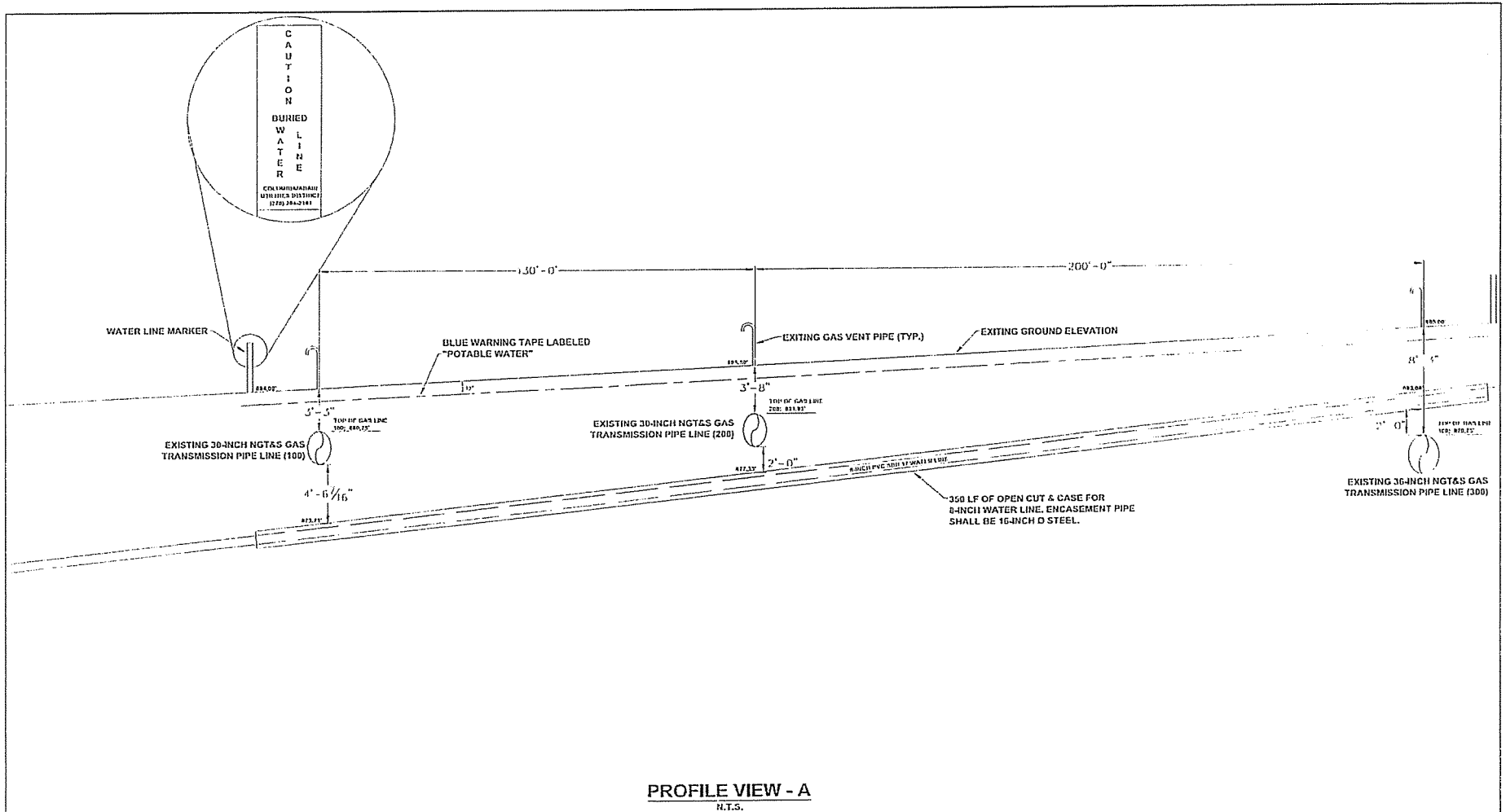
WATER SYSTEM EXTENSIONS
 COLUMBIA/ADAIR UTILITIES DISTRICT
 ADAIR COUNTY, KENTUCKY
 WATER LINE CROSSING GAS MAIN



M Minnerath Engineering, Inc.
 556 CARLTON DRIVE
 LAWRENCEBURG, KY 40342

DRAWN BY: JBC	DATE: JAN 2010	REVISION	SHEET
CHECKED BY: BSB	DATE: 1/20/10		1
DIRECTOR: RY: BSB	PROJECT: 1023		

GAS-5



PROFILE VIEW - A
N.T.S.

WATER SYSTEM EXTENSIONS COLUMBIA/ADAIR UTILITIES DISTRICT ADAIR COUNTY, KENTUCKY			
WATER LINE CROSSING GAS MAIN			
	M Monroch Engineering, Inc. 556 CAMDEN DRIVE LAWRENCEBURG, KY 40342		
	DRAWN BY: JSC CHECKED BY: JSC PROJECT NO:	DATE: JAN 2010 SCALE: N.T.S. PROJECT:	SHEET NO: 2 OF:

NiSource Gas Transmission and Storage
Minimum Guidelines for construction near natural gas pipeline facilities

This document provides guidelines for acceptable land uses near facilities owned by Columbia Gas Transmission, LLC, Columbia Gulf Transmission Company, Crossroads Pipeline Company, and all other pipeline facilities operated and maintained by any of the aforementioned companies, collectively known as NiSource Gas Transmission and Storage (NGTS.)

Interstate natural gas pipelines are an important part of the nation's energy infrastructure. Pipelines and related facilities operated by NGTS safely transport much of the clean-burning fuel used in homes, businesses and factories of the United States.

These guidelines are intended to protect public safety and help ensure the continuous safe flow of the nation's natural gas supplies. They provide a basic overview of NGTS's requirements. NGTS also has a technical document, entitled "Right-of-Way Use Specifications," which contains more detailed information on many of the topics discussed here. Section references for the Right-of-Way Use Specifications document are listed after various sections of this brochure. You may request a copy of the Right-of-Way Use Specifications document by contacting NGTS at the phone number listed on the back of this brochure.

Consult NGTS early in your plans

To expedite construction or excavation projects safely and without delay, property owners and developers planning any such activities in the vicinity of NGTS pipelines should consult with NGTS in the design phase of the project. Have your construction plans reviewed by company personnel before you apply for zoning permits or commit to construction schedules.

For more information, call NGTS at 1-304-357-3625.

***Note:** These guidelines supersede any and all prior guidelines pertaining to activities and placements on or near gas transmission facilities owned by an NGTS company. Existence of, or the ramifications from, the implementation of prior guidelines will not dictate, direct or provide for exemption of any of the above guidelines.*

May 2009

EXHIBIT "A"

September 2, 2011

GAS-6

Notify NGTS before construction begins

Before any preliminary field work or construction begins in the vicinity of NGTS's pipeline facilities, the exact location and elevation of the pipeline must be determined. To coordinate this procedure, dial the national "Call Before You Dig" number (811) or call your state's specific One Call Phone Number. Request that both location and depth of the pipeline be determined.

No construction or excavation activities of any kind, including blasting, shall be done on NGTS's right-of-way area before NGTS personnel have established the actual location of all affected facilities and the limits of the right-of-way. **NGTS personnel must be present during any construction or excavation activities on or around its facilities or rights-of-way, unless otherwise permitted by NGTS.** Excavation within 3 feet of NGTS facilities is strictly forbidden without an NGTS representative on site.

Excavation near pipelines/buried facilities

No excavation (including hand digging) shall be made on the pipeline right-of-way without prior notification to NGTS through "Call Before You Dig (811)" or the state One-Call notification service. Subsequent follow-up must be made to NGTS to seek approval for the proposed construction. Within 36 inches of the outer edge of the pipe (on all sides) only hand excavation, air cutting, and vacuum excavation are permitted. (Right-of-Way Use Specifications, Section 3.2.)

Crossing pipelines with heavy equipment

NGTS may require heavy equipment operators to install mats, dirt pads, or other approved protective materials to adequately protect NGTS pipelines from potential damage by heavy equipment crossing the right-of-way. All proposed road crossings of buried facilities must be evaluated by NGTS personnel. Any additional over-burden must be removed after construction unless otherwise directed by NGTS personnel. (Right-of-Way Use Specifications, Section 3.7.)

Blasting plans must be approved

Any blasting proposed within 300 feet of NGTS facilities must be submitted to NGTS in advance along with a blasting plan outlining such proposed activity. No blasting may begin unless and until NGTS provides written confirmation that it does not object to such blasting. Any modifications to the blasting plan must also be submitted to NGTS for review and should not be implemented unless and until NGTS provides written confirmation that it does not object to such modifications. The blasting contractor may be required to monitor and record seismic shock at the facilities. (Right-of-Way Use Specifications, Section 3.10)

Allow adequate clearance for directional drilling

Any directional drilling or boring proposed under NGTS's buried facilities must be submitted to NGTS for review and approval. A minimum of 24" of vertical clearance must be maintained from NGTS's facilities and additional excavations may be required to ensure adequate clearance. As-built plans are required for all borings. (Right-of-Way Use Specifications, Section 3.6.)

Maintain up to 300-foot clear area around storage well heads

Property owners or developers must notify NGTS of any proposed construction or excavation within 300 feet in any direction of a natural gas storage well. For safety, NGTS reserves the right to object to any such proposed activities or placement of objects closer than 300 feet to a storage wellhead. (Right-of-Way Use Specifications, Section 4.1.)

Construction requirements within a right-of-way

NGTS may allow certain property improvements in its rights-of-way. However, NGTS will not assume responsibility, financial or otherwise, for any such improvements directly or indirectly damaged as a result of its operation and maintenance of its facilities. The requirements listed below are minimum guidelines for construction in the vicinity of NGTS pipeline rights-of-way to protect public safety and the integrity of NGTS's facilities. Upon review of individual plans and property rights, NGTS may identify additional restrictions or requirements.

1. The existing cover over pipelines and rights-of-way shall not be modified without NGTS's written permission. The minimum earth cover over pipelines shall be 36-inches; NGTS will perform external load evaluations as necessary to determine if additional protective measures are required. (Right-of-Way Use Specifications, Sections 3.3 and 3.5.1)
2. Above-ground or below-ground structures or obstructions of any type shall not be placed within the easement area of any pipeline, (Right-of-Way Use Specifications, Section 3.4.1.)
3. Pipeline easements shall not be shared longitudinally with other pipelines or utilities. All water valves, curb boxes, manholes, etc. must be outside the easement. All crossings must be approved by NGTS before installation begins and must meet the following criteria (Right-of-Way Use Specifications, Section 3.6):
 - Cross as near 90 degrees as possible, but in no case less than a 45 degree angle.
 - Minimum of 24-inches vertical clearance.
 - Must cross below NGTS's pipeline, unless prior written consent is granted by NGTS.
 - Cable/wire crossings (excluding single telephone and single television drops) must be encased with a minimum of 2-inch Schedule 40 PVC pipe. Additionally, electric and fiber optic lines must be encased in a 6-inch envelope of colored 2,000 psi concrete (red for electric, orange for fiber) or 4-inch minimum diameter, standard wall thickness, coated steel pipe across the entire width of the right-of-way. **Note:** All cables/wires permitted to cross above NGTS's pipeline (excluding single telephone and single television drops) must be encased in Schedule 40 PVC and coated steel pipes, as outlined above – no concrete shall be used.
 - All crossings shall be marked with above ground markers installed on either side of NGTS right-of-way boundaries.
 - Metallic warning flags shall also be buried above all cable, wire utility, or fiber optic lines crossing an NGTS right-of-way.
4. Roads shall cross pipelines at or as near 90 degrees as practical, but at angles not less than 45 degrees. The entity constructing the road must pay for any measures required by NGTS to inspect and protect its pipeline(s). Such protective measures shall be designed and/or approved by NGTS personnel. (Right-of-Way Use Specifications, Section 3.5.)
5. Walking/bicycling paths require NGTS's written permission prior to construction. Paths must be constructed at the outside edge of NGTS's right-of-way, and may extend no more than 6 feet into the right-of-way. Paths shall cross NGTS pipeline as close to 90 degrees as possible, but in no case less than 45 degrees. NGTS shall have sole determination of number of path crossings to be permitted. No motorized vehicles of any type, other than power driven wheelchairs, are permitted to utilize paths which run longitudinally inside the right-of-way. Landowner shall be responsible for maintaining the

path to prevent right-of-way damage (including erosion, illegal dumping, etc.) (Right-of-Way Use Specifications, Section 3.5.4.)

6. Parking lots require written permission and shall not be allowed over the easement unless the lot can be designed / altered so as not to impact the safe and reliable operation and maintenance of NGTS's pipeline. In no case shall lots be designed such that vehicles will be parking directly over or within 5 feet of a pipeline. Paving for parking lots shall be limited to asphalt only and must meet all requirements set forth in Right-of-Way Use Specifications, Section 3.5.
7. All plans for pavement within an NGTS right-of-way must be submitted and approved by NGTS personnel before paving can begin. Concrete paving is permitted for sidewalks, curbs, and residential driveways. However, continuously poured, steel reinforced concrete is prohibited within NGTS's right-of-way. All residential concrete driveways must meet the requirements set forth in the Right-of-Way Use Specifications attachment entitled "Residential Concrete driveway within NGTS Right-of-Way." (Right-of-Way Use Specifications, Section 3.5.)
8. Detention ponds, lakes, or any other type of water impoundment is prohibited within the right-of-way. Septic tanks and leach fields should be placed so they drain away from the pipeline where practical. In no case shall they be placed in the easement area. (Right-of-Way Use Specifications, Section 3.3.2)
9. The right-of-way may be planted in lawn, flowerbeds, or vegetable gardens, or used for normal agricultural purposes. Shrubs maturing at less than 5 feet tall are permitted in the right-of-way. However, they must be planted such that the branches at maturity are a minimum of 5 feet away from the pipeline. Shrubs greater than 5 feet tall and trees, including fruit or nut bearing trees of any kind and "Christmas Tree farms," are prohibited within the right-of-way. *NGTS is not responsible for replacement of or reimbursement for any plantings within the right-of-way, unless the applicable land rights document states otherwise.* (Right-of-Way Use Specifications, Section 3.4.2.)
10. Fences or continuous hedges that block visual inspection or interfere with access to NGTS's facilities are prohibited within NGTS rights-of-way. Fences permitted by NGTS to cross its rights-of-way must be designed to allow at least a 16-foot opening centered on the pipelines and must cross at or near to 90 degrees. Gates are permissible, as long as they allow for at least a 16-foot opening. If gates are to be locked, NGTS must be allowed to install its own locks on the gates. Locks will be installed in such a manner as to allow both the landowner and NGTS unimpeded access to the property. Fences or continuous hedges may not run longitudinally inside the right-of-way area. (Right-of-Way Use Specifications, Section 3.4.3.)

National “Call Before You Dig” Service – dial “811”

State One-Call Notification Services

Delaware, Maryland:	1-800-257-7777
Kentucky:	1-800-752-6007
Louisiana	1-800-272-3020
Mississippi	1-800-227-6477
New Jersey:	1-800-272-1000
New York:	1-800-962-7962
North Carolina:	1-800-632-4949
Ohio:	1-800-362-2764
Pennsylvania:	1-800-242-1776
Tennessee	1-800-351-1111
Virginia:	1-800-552-7001
West Virginia:	1-800-245-4848

**For more information, contact NGTS at 1-866-701-9582
or email pipelinelandowners@nisource.com**

NOTE:

“Minimum Guidelines for construction near natural gas pipeline facilities” addresses the most common issues concerning land use on/near NGTS rights-of-way. Right-of-Way Use Specifications provides additional technical information as well as guidance on various areas not covered here, and should be consulted as needed. In rare cases, NGTS may determine that adherence to a specific provision of the Minimum Guidelines/Right-of-Way Use Specifications is not feasible for a particular project. In such instances, NGTS may, at its sole discretion, elect to modify specific requirements for that project. Said modifications shall be made by appropriate NGTS personnel and shall be properly documented.

In the event that the provisions of an applicable land rights document conflict with the requirements set forth herein, the land rights document shall supersede these requirements.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
LOUISVILLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 59
LOUISVILLE, KENTUCKY 40201-0059

September 20, 2011

Real Estate Division
Civil & Support Branch

Mr. Danny Downey, Chairman
Columbia/Adair Utilities District
109 Grant Lane
P.O. Box 567
Columbia, Kentucky 42728

Dear Mr. Downey:

Enclosed is a fully copy of Department of the Army Easement No. DACW27-2-11-448, which grants Columbia/Adair Utilities District permission to install, operate and maintain a buried waterline, across, in and upon property of the United States, located at Green River Lake project, Kentucky.

If you have any questions pertaining to the easement, please contact Ms. Patty Drees at (502) 315-6993; any questions regarding the Regulatory Permit should be addressed to Jane Archer, CELRL-OP-FS, at (502) 315-6682

Sincerely,

A handwritten signature in cursive script that reads "Patty Drees".

Patty Drees
Realty Specialist
Civil & Support Branch

Enclosure

DEPARTMENT OF THE ARMY
EASEMENT FOR PIPELINE RIGHT-OF-WAY
LOCATED ON
GREEN RIVER LAKE PROJECT
ADAIR COUNTY, KENTUCKY

THE SECRETARY OF THE ARMY, under and by virtue of the authority vested in the Secretary by Title 10 United States Code, Section 2668, having found that the granting of this easement will be in the public interest and will not substantially injure the interests of the United States, hereby grants to **COLUMBIA/ADAIR UTILITIES DISTRICT**, 109 Grant Lane, P.O. Box 567, Columbia, Kentucky 42728, hereinafter referred to as the grantee, a twenty (20) foot wide easement (10 feet on either side of the centerline) for the installation, maintenance and use of approximately 6,600 LF of 8-inch public waterline, hereinafter referred to as the facilities, over, across, in and upon lands of the United States as identified as Tract Nos. 1915-2, 1919, 1930 and 2002 in Exhibits "A" and "B" hereinafter referred to as the premises, and which are attached hereto and made a part hereof.

THIS EASEMENT is granted subject to the following conditions.

1. TERM

This easement is hereby granted in perpetuity.

2. CONSIDERATION

The consideration for this easement shall be the construction, operation and maintenance of the waterline for the benefit of the general public in accordance with the terms and conditions hereinafter set forth.

3. NOTICES

All correspondence and notices to be given pursuant to this easement shall be addressed, if to the Grantee, to **COLUMBIA/ADAIR UTILITIES DISTRICT**, 109 Grant Lane, P.O. Box 567, Columbia, Kentucky 42728; and, if to the United States, to the District Engineer, ATTN: Chief, Real Estate Division, U. S. Army Corps of Engineers, Post Office Box 59, Room 137, Louisville, Kentucky 40201-0059, or as may from time to time otherwise be directed by the parties. Notice shall be deemed to have been duly

given if and when enclosed in a properly sealed envelope, or wrapper, addressed as aforesaid, and deposited postage prepaid in a post office regularly maintained by the United States Postal Service.

4. AUTHORIZED REPRESENTATIVES

Except as otherwise specifically provided, any reference herein to "Secretary", "District Engineer", "Installation Commander", or "said officer" shall include their duly authorized representatives. Any reference to "grantee" shall include assignees, transferees and their duly authorized representatives.

5. SUPERVISION BY THE DISTRICT ENGINEER

The construction, operation, maintenance, repair or replacement of said facilities, including culverts and other drainage facilities, shall be performed at no cost or expense to the United States and subject to the approval of the District Engineer, Louisville District, hereinafter referred to as said officer. Upon the completion of any of the above activities, the Grantee shall immediately restore the premises to the satisfaction of said officer. The use and occupation of the premises for the purposes herein granted shall be subject to such rules and regulations as said officer prescribes in writing from time to time.

6. APPLICABLE LAWS AND REGULATIONS

The grantee shall comply with all applicable Federal, state, county and municipal laws, ordinances and regulations wherein the premises are located.

7. CONDITION OF PREMISES

The grantee acknowledges that it has inspected the premises, knows the condition, and understands that the same is granted without any representation or warranties whatsoever and without any obligation on the part of the United States.

8. INSPECTION AND REPAIRS

The grantee shall inspect the facilities at reasonable intervals and immediately repair any defects found by such inspection or when required by said officer to repair any such defects.

9. PROTECTION OF GOVERNMENT PROPERTY

The grantee shall be responsible for any damage that may be caused to the property of the United States by the activities of the grantee under this easement and

shall exercise due diligence in the protection of all property located on the premises against fire or damage from any and all other causes. Any property of the United States damaged or destroyed by the grantee incident to the exercise of the privileges herein granted shall be promptly repaired or replaced by the grantee to a condition satisfactory to said officer, or at the election of said officer, reimbursement made therefor by the grantee in an amount necessary to restore or replace the property to a condition satisfactory to said officer.

10. RIGHT TO ENTER

The right is reserved to the United States, its officers, agents, and employees to enter upon the premises at any time and for any purpose necessary or convenient in connection with government purposes, to make inspections, to remove timber or other material, except property of the grantee, to flood the premises and/or to make any other use of the lands as may be necessary in connection with government purposes, and the grantee shall have no claim for damages on account thereof against the United States or any officer, agent, or employee thereof.

11. TRANSFERS AND ASSIGNMENTS

Without prior written approval by said District Engineer, the grantee shall neither transfer nor assign this easement or any part thereof nor grant any interest, privilege or license whatsoever in connection with this easement. The provisions and conditions of this easement shall extend to and be binding upon and shall inure to the benefit of the representatives, successors and assigns of the grantee.

12. INDEMNITY

The United States shall not be responsible for damages to property or injuries to persons which may arise from or be incident to the exercise of the privileges herein granted, or for damages to the property or injuries to the person of the grantee's officers, agents, or employees or others who may be on the premises at their invitation or the invitation of any one of them, and the grantee shall hold the United States harmless from any and all such claims not including damages due to the fault or negligence of the United States or its contractors.

13. SUBJECT TO EASEMENTS

This easement is subject to all other existing easements, or those subsequently granted as well as established access routes for roadways and utilities located, or to be located, on the premises, provided that the proposed grant of any new easement or route will be coordinated with the grantee, and easements will not be granted which will, in the opinion of said officer, interfere with the use of the premises by the grantee.

14. REQUIRED SERVICES

The grantee shall furnish through said facilities such services as may be required from time to time for governmental purposes, provided that payment for such service will be made by the United States at rates which shall be mutually agreeable but which shall never exceed the most favorable rates granted by the grantee for similar service.

15. RELOCATION OF FACILITIES

In the event all or any portion of the premises occupied by the said facilities shall be needed by the United States, or in the event the existence of said facilities is determined to be detrimental to governmental activities, the grantee shall from time to time, upon notice to do so, and as often as so notified, remove said facilities to such other location on the premises as may be designated by said officer. In the event said facilities shall not be removed or relocated within ninety (90) days after such notice, the United States may cause such relocation at the sole expense of the grantee.

16. TERMINATION

This easement may be terminated by the Secretary upon 30 days written notice to the grantee if the Secretary shall determine that the right-of-way hereby granted interferes with the use or disposal of said land by the United States, or it may be revoked by the Secretary for failure of the grantee to comply with any or all of the conditions of this easement, or for non-use for a period of two (2) years, or for abandonment.

17. SOIL AND WATER CONSERVATION

The grantee shall maintain, in a manner satisfactory to said officer, all soil and water conservation structures that may be in existence upon said premises at the beginning of or that may be constructed by the grantee during the term of this easement, and the grantee shall take appropriate measures to prevent or control soil erosion within the right-of-way herein granted. Any soil erosion occurring outside the premises resulting from the activities of the grantee shall be corrected by the grantee as directed by said officer.

18. ENVIRONMENTAL PROTECTION

a. Within the limits of their respective legal powers, the parties hereto shall protect the premises against pollution of its air, ground, and water. The grantee shall promptly comply with any laws, regulations, conditions or instructions affecting the activity hereby authorized if and when issued by the Environmental Protection Agency,

or any Federal, state, interstate or local governmental agency having jurisdiction to abate or prevent pollution. The disposal of any toxic or hazardous materials within the premises is strictly prohibited. Such regulations, conditions, or instructions in effect or prescribed by the said Environmental Protection Agency or any Federal, state, interstate or local governmental agency are hereby made a condition of this easement. The grantee shall not discharge waste or effluent from the premises in such a manner that the discharge will contaminate streams or other bodies of water or otherwise become a public nuisance.

b. The use of any pesticides or herbicides within the premises shall be in conformance with all applicable Federal, state and local laws and regulations. The grantee must obtain approval in writing from said officer before any pesticides or herbicides are applied to the premises.

c. The grantee will use all reasonable means available to protect the environment and natural resources, and where damage nonetheless occurs arising from the grantee's activities, the grantee shall be liable to restore the damaged resources.

19. HISTORIC PRESERVATION

The grantee shall not remove or disturb, or cause or permit to be removed or disturbed, any historical, archeological, architectural or other cultural artifacts, relics, remains or objects of antiquity. In the event such items are discovered on the premises, the grantee shall immediately notify said officer and protect the site and material from further disturbance until said officer gives clearance to proceed.

20. NON-DISCRIMINATION

a. The grantee shall not discriminate against any person or persons because of race, color, age, sex, handicap, national origin or religion.

b. The grantee, by acceptance of this easement, is receiving a type of Federal assistance and, therefore, hereby gives assurance that it will comply with the provisions of Title VI of the Civil Rights Act of 1964 as amended (42 U.S.C. § 2000d); the Age Discrimination Act of 1975 (42 U.S.C. § 6102); the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794); and all requirements imposed by or pursuant to the Directive of the Department of Defense (32 CFR Part 300) issued as Department of Defense Directive 5500.11 and 1020.1, and Army Regulation 600-7. This assurance shall be binding on the grantee, its agents, successors, transferees, and assignees.

21. RESTORATION

On or before the expiration or termination of this easement, the grantee shall, without expense to the United States, and within such time as said officer may indicate, remove said facilities and restore the premises to the satisfaction of said officer. In the event the grantee shall fail to remove said facilities and restore the premises, the United States shall have the option to take over said facilities without compensation, or to remove said facilities and perform the restoration at the expense of the grantee, and the grantee shall have no claim for damages against the United States or its officers or agents for such action.

22. SPECIAL CONDITIONS

a Adequate measures shall be taken to prevent erosion and runoff into streams and lake. Where possible, straw bales or other acceptable practices shall be used to prevent erosion.

b All disturbed areas will be reseeded and returned to the pre-existing conditions, i.e. contour, drainage, etc.

c Adequate flagging and signage shall be used in accordance with State regulations for work along roadways.

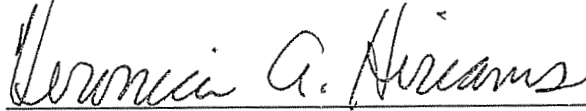
d Boat traffic control shall be implemented during installation of water line in the lake.

23. DISCLAIMER

This instrument is effective only insofar as the rights of the United States in the property are concerned, and the grantee shall obtain such permission as may be required on account of any other existing rights. It is understood that the granting of this easement does not eliminate the necessity of obtaining any Department of the Army permit which may be required pursuant to the provisions of Section 10 of the Rivers and Harbors Act of 3 March 1899 (30 Stat. 1151; 33 U.S.C. § 403), Section 404 of the Clean Water Act (33 U.S.C. § 1344) or any other permit or license which may be required by Federal, state or local statute in connection with use of the premises.

THIS EASEMENT is not subject to Title 10, United States Code, Section 2662, as amended.

IN WITNESS WHEREOF, I have hereunto set my hand by authority of the
Secretary of the Army, this 19th day of September, 2011.



VERONICA A. HIRIAMS
Real Estate Contracting Officer
Louisville District, Corps of
Engineers
Louisville, Kentucky

ACKNOWLEDGEMENT


COMMONWEALTH OF KENTUCKY

SS

COUNTY OF JEFFERSON

BEFORE me a Notary Public in and for the State of Kentucky, personally
appeared VERONICA A. HIRIAMS to me known to be the identical person and officer
whose name is subscribed to the foregoing instrument and acknowledged to me that
she executed the said instrument in the capacity therein stated for the purpose therein
expressed as the act and deed of the United States of America.

GIVEN under my hand and seal this 19th day of September, 2011.



Notary Public

My Commission expires: 27 June 2015

Sept **THIS EASEMENT** is also executed by the grantee this 8 day of _____, 2011.

COLUMBIA/ADAIR UTILITIES DISTRICT

BY: Danny Downey
TITLE: Chairman

ACKNOWLEDGEMENT

COMMONWEALTH OF KENTUCKY

SS

COUNTY OF ADAIR

BEFORE me, a Notary Public, in and for the County of ADAIR personally appeared Danny Downey, to me known to be the identical person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that he/she executed the said instrument in the capacity therein stated for the purpose therein expressed as the act and deed of the **COLUMBIA/ADAIR UTILITIES DISTRICT**.

GIVEN under my hand and seal this 8 day of Sept, 2011.

Jennifer Carter
Notary Public

My Commission expires on 4-21-12

CANE VALLEY
QUADRANGLE

KNIFLEY
QUADRANGLE



GREEN RIVER
LAKE

EXISTING 6-INCH
WATER LINE

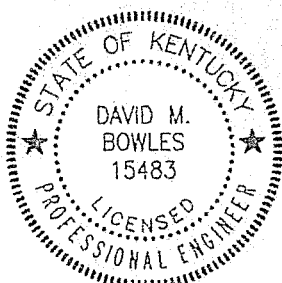
LAT: 37° 12' 18" N
LONG: 85° 14' 50" W

PROPOSED 10,700 LF OF
8-INCH WATER LINE

EXISTING 4-INCH
WATER LINE

EXHIBIT 'A'
DACW27-2-11-448
GREEN RIVER LAKE, KY

SCALE 1" = 2,000'



KNIFLEY CONNECTION/
GREEN RIVER CROSSING
COLUMBIA/A DAIR UTILITIES DISTRICT



Monarch Engineering, Inc.
556 Carlton Drive
Lawrenceburg, KY

SAFETY & BOAT TRAFFIC PLAN
for the
COLUMBIA/ADAIR UTILITIES DISTRICT
GREEN RIVER LAKE WATER LINE CROSSING
ALONG KENTUCKY HIGHWAY 551

- 1) Prior to construction of the water line across the Green River Lake, approximately 1,600 LF of ductile iron ball-in-socket pipe water line will be connected together perpendicular to the shoreline of the Green River Lake. At the point at which the water line will enter the lake and the point at which the water line will exit the lake, an area on each side of the shore line will be blocked off by buoy's (see attached example of plan) to allow boat traffic to stay near the middle of the channel as they pass through. At no point during construction will boat traffic be interrupted or prevented from passing through. Once the water line has been connected, the ball-in-socket water line will then be pulled by boat/small barge along the bottom of the lake until it reaches the opposite shore.
- 2) During the time of extending the pipe line across the bottom of the lake, boat traffic shall be navigated by the Contractor and proper signs located to indicate that a water line is being constructed across the lake channel.
- 3) Life jackets/personal floating devices shall be worn by all contractor personnel while working from a barge platform and/or boating craft on the submerged water line.
- 4) The U.S. Army Corps of Engineers shall be contacted a day or two prior to any construction being performed on the submerged water line. This shall include the days in which the water line will be connected together along the Green River Lake shoreline and the day in which the water line will be extended across the lake bottom.



SOUTH SHORELINE

NORTH SHORELINE

GREEN RIVER LAKE

8-INCH D.I. BALL & SOCKET
WATER LINE SUBMURGED
ALONG BOTTOM OF LAKE
CHANNEL WHILE BEING
DRAGGED.

AREA OF ENTRY

AREA OF EXIT

BUOY (TYP.)

POINT OF ENTRY
FOR 8-INCH D.I.
BALL & SOCKET

POINT OF EXIT
FOR 8-INCH D.I.
BALL & SOCKET

BOAT
TRAFFIC

BRIDGE

KENTUCKY HIGHWAY 551

BOAT
TRAFFIC

POSTED SIGN TO READ
"CAUTION: WATER LINE
CONSTRUCTION ACROSS
LAKE CHANNEL"

GREEN RIVER CROSSING



Monarch Engineering, Inc.

556 Carlton Drive
Lawrenceburg, KY 40342

COE-12

N.T.S.



ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

Ernie Fletcher
Governor

Capital Plaza Tower
500 Mero Street, 5th Floor
Frankfort, Kentucky 40601
Phone: (502) 564-5525
Fax: (502) 564-3354
www.eppc.ky.gov

Teresa J. Hill
Secretary

General Certification--Nationwide Permit # 12 Utility Line Activities

This General Certification is effective March 19, 2007, in conformity with the requirements of Section 401 of the Clean Water Act of 1977, as amended (33 U.S.C. §1341), as well as Kentucky Statute KRS 224.16-050.

Agricultural operations, as defined by KRS 224.71-100(1) conducting activities pursuant to KRS 224.71-100 (3), (4), (5), (6), or (10) are deemed to have certification if they are implementing an Agriculture Water Quality Plan pursuant to KRS 224.71-145.

For all other operations, the Commonwealth of Kentucky hereby certifies under Section 401 of the Clean Water Act (CWA) that it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 5, established pursuant to Sections 301, 302, 304, 306 and 307 of the CWA, will not be violated for the activity covered under NATIONWIDE PERMIT 12, namely Utility Line Activities, provided that the following conditions are met:

1. This general Water Quality Certification is limited to the crossing of intermittent and perennial streams by utility lines. The length of a single utility line stream crossing shall not exceed twice the width of the stream. This document does not authorize the installation of utility lines in a linear manner within the stream channel or below the top of the stream bank.
2. The construction of permanent or temporary access roads will impact less than 300 linear feet of intermittent and perennial streams and less than one acre of jurisdictional wetlands.
3. The provisions of 401 KAR 5:005 Section 8 are hereby incorporated into this General Water Quality Certification. Namely, "Sewer lines shall be located at least 50 feet away from a stream which appears as a blue line on a USGS 7 ½ minute topographic map except where the sewer alignment crosses the stream. The distance shall be measured from the top of the stream bank. The cabinet may allow construction within the 50' buffer if adequate methods are used to prevent soil from entering the stream. Gravity sewer lines and force mains that cross streams shall be

General Certification--Nationwide Permit # 12
Utility Line Activities
Page Two

constructed by methods that maintain normal stream flow and allow for a dry excavation. Water pumped from the excavation shall be contained and allowed to settle prior to re-entering the stream. Excavation equipment and vehicles shall operate outside of the flowing portion of the stream. Spoil material from the sewer line excavation shall not be allowed to enter the flowing portion of the stream." The provisions of this condition shall apply to all types of utility line stream crossings.

4. The activities do not result in any permanent changes in pre-construction elevation contours in waters or wetlands or stream dimension, pattern or profile.
5. Utility line construction projects through jurisdictional wetlands shall not result in conversion of the area to non-wetland status.
6. Stream impacts covered under this nationwide permit and undertaken by those persons defined as an agricultural operation under the Agricultural Water Quality Act must be completed in compliance with the Kentucky Agricultural Water Quality Plan.
7. The activity will not occur within waters of the Commonwealth identified by the Kentucky Division of Water as Outstanding State or National Resource Waters, Cold Water Aquatic Habitat, or Exceptional Waters.
8. Activities that do not meet the conditions of this general certification require an individual Section 401 water quality certification.
9. Activities qualifying for coverage under this general water quality certification are subject to the following conditions:
 - Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse.
 - Removal of riparian vegetation in the utility line right-of-way shall be limited to that necessary for equipment access. Effective erosion and sedimentation control measures must be employed at all times during the project to prevent degradation of waters of the Commonwealth. Site regrading and reseeding will be accomplished within 14 days after disturbance.
 - To the maximum extent practicable, all in stream work under this certification shall be performed during low flow.

General Certification--Nationwide Permit # 12
Utility Line Activities
Page Three

- Heavy equipment, e.g. bulldozers, backhoes, draglines, etc., if required for this project, should not be used or operated within the stream channel. In those instances where such in stream work is unavoidable, then it shall be performed in such a manner and duration as to minimize turbidity and disturbance to substrates and bank or riparian vegetation.
- Any fill shall be of such composition that it will not adversely affect the biological, chemical, or physical properties of the receiving waters and/or cause violations of water quality standards. If riprap is utilized, it is to be of such weight and size that bank stress or slump conditions will not be created because of its placement.
- If there are water supply intakes located downstream that may be affected by increased turbidity and suspended solids, the permittee shall notify the operator when work will be done.
- Removal of existing riparian vegetation should be restricted to the minimum necessary for project construction.
- Should evidence of stream pollution or jurisdictional wetland impairment and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the Kentucky Division of Water shall be notified immediately by calling 800/928-2380.

Non-compliance with the conditions of this general certification or violation of Kentucky state water quality standards may result in civil penalties.

This general certification will expire on March 19, 2012, or sooner if the USACE makes significant changes to this nationwide permit.

TERMS FOR NATIONWIDE PERMIT NO. 12

Utility Line Activities

Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2 acre of waters of the United States.

Utility lines: This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for the utility lines, in all waters of the United States, provided there is no change in pre-construction contours. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2 acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the total discharge from a single and complete project does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade

corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR Part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP also authorizes temporary structures, fills, and work necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 27.) (Sections 10 and 404)

Note 1: Where the proposed utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters), copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, accordance with the requirements for temporary fills.

Note 3: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

NATIONWIDE PERMIT GENERAL CONDITIONS

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.
(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.
3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.
6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).
10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.
12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.
13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

17. Endangered Species. (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at <http://www.fws.gov/> and <http://www.noaa.gov/fisheries.html> respectively.

18. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106

consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

22. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

26. Compliance Certification. Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

(b) A statement that any required mitigation was completed in accordance with the permit conditions; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

27. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity:

(1) Until notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) If 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is “no effect” on listed species or “no potential to cause effects” on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin

mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

28. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory

TECHNICAL SPECIFICATIONS

COLUMBIA/ADAIR UTILITIES DISTRICT
ADAIR COUNTY, KENTUCKY

PHASE 11-2 WATER LINE EXTENSIONS
&
CONNECTOR LINES

PROJECT NO. 1049

NOVEMBER 2012

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SECTION 1 - WATER MAINS

1.0 Work Included. Under this item the Contractor shall provide all labor, tools, equipment, and materials to furnish and install the water mains as shown on the drawings and as directed

1.1 Water Pipe Materials. All pipe materials shall conform to the manufacturer's standard lengths and diameters. Testing when required by the Owner shall be done in accordance with the appropriate ASTM specifications for the material selected. The water main type shall be PVC water pipe or ductile iron.

1.1.1 Polyvinyl Chloride Pipe PVC SDR 17 or SDR 21. PVC pipe shall comply with ASTM D-1784 for material and shall be Class 250 (SDR 17) or Class 200 (SDR 21) as shown on the drawings or indicated on the bid form. All PVC pipe shall conform to the latest revisions of the following specifications:

ASTM D2241 (PVC Plastic Pipe SDR-PR and Class T)
National Sanitation Foundations Testing Laboratories (NSF)

The name of the manufacturer of the plastic pipe to be used must be found on the current listing of Plastic Materials for Potable Water Application, published by the NSF (National Sanitation Foundation), and must meet the requirements of the Standard Specification for Polyvinyl Chloride (PVC) Plastic Pipe, D1784, 12454-B (PVC 1120) published by ASTM. Rubber gaskets shall conform to ASTM D3139.

Wall thickness shall be in accordance with ASTM D-2241. Pipe ends shall be beveled to accept the coupling with gasket. The bell section shall be designed to be as strong as the pipe wall.

Samples of pipe physical and chemical data sheets shall be submitted to the Engineer for approval prior to the pipe being purchased.

The pipe shall be homogeneous throughout and free from cracks, holes, foreign inclusions, or other defects. The pipe shall be as uniform as commercially practical in color and shall have a ring painted around the spigot ends in such a manner as to allow field checking of setting depth of the pipe in the socket. Pipe must be delivered to the job site by means that will adequately support it and not subject it to undue stresses. In particular, the load shall be so supported such that the bottom rows of pipe are not damaged by crushing. The pipe shall be unloaded carefully and stored as close to the final point of placement as is practical.

Pipe markings shall include the following marked continuously down the length:

Manufacturer's Name

Nominal Size
Class Pressure Rating
PVC 1120
NSF Logo
Identification Code

The lubricant shall be that as recommended and supplied by the pipe manufacturer.

1.1.2 Polyvinyl Chloride Pipe (PVC) Cast Iron Pipe Size. This pipe shall meet the requirements of AWWA C900-75, latest revision, "Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 inch through 12 inch for Water" and shall be furnished in cast iron pipe equivalent outside diameters with separate couplings including gaskets.

The pipe shall be made from Class 12454-A or Class 12454-B virgin compounds as defined in ASTM D-1784. The standard code designation shall be PVC 1120. The PVC compounds shall be tested and certified as suitable for potable water products by the NSF approval marking.

Solvent cement couplings or joints shall not be used. PVC joints using elastomeric gaskets shall be tested as assembled joints and shall meet the laboratory performance requirements specified in ASTM D-3139.

Pipe shall be pressure Class 200, DR 14 or Class 150, DR 18 as shown on the drawings or the bid form.

Pipe and Couplings shall be marked as follows:

Nominal Size and OD Base
Material Code Designation (PVC 1120)
Dimension Ratio Number
AWWA Pressure Class
AWWA Designation Number (AWWA C900)
Manufacturers Name or Trade Mark and Production Record Code
Seal of the NSF Laboratory

Each standard and random length of pipe shall be proof tested at four times its rated class pressure for a minimum of 5 seconds. Bells or couplings shall be tested with the pipe.

The pipe shall not split, crack, or break when tested by the parallel plato method, and it shall not flake or disintegrate when tested by the acetone immersion method as specified by ASTM D-2241.

1.1.3 Ductile Iron Pipe. Ductile Iron Pipe shall be designed in accordance with AWWA (ASA A21.50) and for the conditions as stated in these specifications and the pressure rating for the pipe shall be 350 PSI. Ductile iron pipe shall conform to AWWA

C-151 (ASA A21.51). Pipe shall be cement lined in accordance with AWWA C104 (ASA A21.4) and all exposed pipe and fittings shall have a shop prime coat applied that is compatible with subsequent field enamel paint coats.

The specified thickness will be determined for the given internal and external loading requirements in accordance with ASA A21.50 and will be shown on the drawings or the bid form.

The net weight, class or nominal thickness and sampling period shall be marked on each pipe.

Pipe joints shall be mechanical joint, rubber ring slip joint, flanged, or locked mechanical joint equal to AWWA C-111.

1.1.4 Fittings. Ductile Iron mechanical joint fittings with appropriate adapters shall be used with PVC pipe and ductile iron pipe. Fittings shall comply with AWWA C-110 or C-111 and shall be manufactured for the size and pressure class of the line on which they are used. Compact fittings are acceptable and they shall conform to the latest AWWA specifications.

Mechanical joint fittings shall be used with ductile iron pipe for below ground burial and flange fittings shall be used for all interior piping where ductile iron pipe is used.

1.2 Pipe Handling. Pipe delivered to the site shall be stored, handled, distributed, placed, joined together, etc. in accordance with the manufacturer's recommendation unless directed otherwise by the Engineer.

1.3 Water Main Location. The water main shall be installed in the locations as shown on the drawings and as directed by the Engineer. The Contractor and Engineer shall agree as to the exact location of the water line and there shall be no disputes unless it is clear that the proposed location significantly deviates from the drawings. At those locations where the drawings indicate that a fitting must be installed either by declaration on the drawings or by a defined bend as shown on the drawings, the Contractor shall do so and shall avoid over deflection of the pipe.

1.4 Excavation. The Contractor shall make trench excavations to only such width to provide ample room for proper construction. Sheeting and shoring shall be provided as required for proper safety and compliance with OSHA regulations. Rock excavation shall be taken to a depth of 6 inches below the bottom of the pipe. If poor foundation conditions exist due to unstable subsurface conditions, the trench shall be under excavated to the depth required and filled with stone to obtain proper bearing capacity.

Watchmen or barricades, lanterns, and other such signs and signals as is necessary to warn the public of the dangers in connection with open trenches, excavations and other

obstructions shall be provided by and properly maintained at the expense of the Contractor.

Only one half of street crossings and road crossings shall be excavated before placing temporary bridges over the excavation.

1.5 Blasting and Rock Excavation. The Contractor shall make his own investigation as he deems necessary to ascertain the sub surface conditions to be encountered in the work.

All blasting operations shall be conducted in accordance with municipal ordinances, state and federal laws and the applicable blasting codes. Soil particle velocity shall not exceed the limit set by Kentucky law. All explosives shall be stored in conformity with the applicable ordinances, laws and safety regulations. No blasting shall be done within five feet of any water mains, sewer lines, natural or manufactured gas lines, liquid petroleum lines, or other utilities.

The Contractor shall use delay caps or other approved methods to reduce earth vibrations and noise. Mud capping shall not be permitted as a method to breaking boulders. No blasting shall be permitted on Sundays or after dark.

Prior to commencing with the work, the Contractor shall, during a preconstruction conference with the Owner and Engineer, state clearly his approach to performing the excavations on the project. He shall be familiar with the laws and ordinances covering blasting and shall also give consideration to the use of hydraulically operated rock breaking devices in lieu of blasting where considered necessary. If blasting is not handled in an expert manner at all times the Engineer reserves the right to suspend blasting and require the work to proceed without it. Prior to blasting, the Contractor shall make his own detailed preblast survey of adjacent walks, curbs, retaining walls, house foundations, etc. to determine conditions prior to the work. Such a file of information, including photographs, may be certified in such a manner as the Contractor believes necessary. This information if required or performed shall be supplied to the Engineer prior to performing the work.

1.6 Storage of Excavated Material. All excavated material shall be stored in a manner that will not endanger the work and that will avoid obstructing roadways, sidewalks, and driveways. Hydrants under pressure, valve pit covers, valve boxes, curb stop boxes, fire and police call boxes, or other utility controls shall be left unobstructed and accessible. Gutters shall be kept clear or other satisfactory provisions made for street drainage, and natural watercourses shall not be obstructed.

1.7 Shoring Sheeting and Bracing. The Contractor shall furnish place and maintain such sheeting and bracing as may be required to support the sides of the excavation or to protect other structures from possible damage. All sheeting and bracing shall be removed upon completion of the work unless permitted to be left in place by the Engineer. Any sheeting or bracing left in place shall be cut off at least two feet below the finished

ground surface elevation. The cost of furnishing, placing, maintaining, and removing sheeting and bracing shall be included in the unit price bid for water lines and all work shall conform the OSHA requirements.

1.8 Bedding and Backfill. All water mains shall be bedded with select earth backfill or six inches of #9 or approved equal stone under and on both sides of the pipe where it is installed along the unpaved areas. Where the water line is installed along the paved areas the water line shall be backfilled with #9 or approved equal stone. Trenches shall be backfilled immediately after the water main has been installed. No rock larger than two inches will be permitted within six inches of the pipe. In unpaved or unsurfaced areas the remainder of the fill may be mounded over the top of the trench. Where trenches are in paved or traveled areas, or yard areas, compaction shall be performed during backfill. The Contractor at no time shall open up more than 500 feet of trench.

Any damage to underground structures, pipes wires, drains, etc., shall not be backfilled until they have been satisfactorily repaired or replaced to the original serviceability at the Contractor's expense and as approved by the Engineer. Settlement of backfill may be done with water furnished by the Contractor under the direction of the Engineer where such will not endanger traffic or damage property. When excavated rock is used for backfilling, it shall have sufficient dirt or fine material to fill all voids and shall not be used within twelve inches of the pipe.

To be accepted as final cleanup all excess rock one inch and larger shall be removed from the disturbed site.

1.9 Thrust Blocks and Anchorage. Thrust blocks shall be installed at all tees, bends, crosses, dead ends, valves, hydrants, blowoff assemblies, and as directed by the Engineer. The size of the thrust block shall depend on the soil and type of fitting, and shall conform to the pipe manufacturer's recommendations. At any location where a vertical bend is required the Contractor shall install the anchorage as directed by the Engineer in conjunction with the pipe manufacturer.

Thrust blocks shall be constructed of Class B concrete conforming to KBH Specification 601 and placed between the fitting and the trench wall. At no time will sack-crete or pre bagged concrete mixtures be allowed. All thrust block and anchorage concrete shall be delivered to the job site by means of a ready mix concrete truck and placed immediately upon arrival.

The thrust blocks shall be sized as shown on the detail drawings or as directed by the Engineer.

1.10 Temporary Surfacing. All trenches in paved areas shall, following compacted backfill, receive a top layer of compacted dense grade stone as shown on the detailed drawings. Such temporary surfacing shall be maintained and shall be paved as soon as conditions permit.

1.11 Hydrostatic Testing. The water line and appurtenances, as rapidly as valves are installed, shall be hydrostatically tested in accordance with these specifications. Defective joints of pipe shall be replaced as directed by the Engineer. Cracked or defective pipe, fittings, valves, or hydrants shall be replaced by the Contractor and the test shall be repeated until the test results are satisfied. All meter settings and service tubing as shown on the drawings shall be included in the hydrostatic test.

The test pressure shall not be less than 1.25 times the working pressure at the highest point along the test section and the hydrostatic test shall be of at least a two hour duration. The test pressure shall not vary by more than five psi. for the duration of the test.

1.11.1 Pressurization. After the pipe has been installed all or any valved section shall be subjected to the hydrostatic test. Each valved section of the pipe shall be slowly filled with water and the specified test pressure, corrected to the elevation of the test gauge, shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Engineer. As part of the testing equipment a meter shall be installed to measure all water added to the tested section.

1.11.2 Air Removal. Before applying the specified test pressure, air shall be expelled completely from the pipe, valves, and hydrants. If permanent air vents are not located at all high points, the Contractor shall install corporation cocks at such points so that the air can be expelled as the line is filled with water. After all the air has been expelled, the corporation cocks shall be closed and the test pressure applied. At the conclusion of the pressure test, the corporation cocks shall be removed and plugged or left in place at the discretion of the Owner.

1.11.3 Leakage Defined. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe or any valved section thereof to maintain pressure within five psi. of the specified test pressure after the pipe has been filled with water and the air has been expelled. Leakage shall not be measured by a drop in pressure in a test section over a period of time.

1.11.4 Allowable Leakage. No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$L = \frac{SD\sqrt{P}}{133,200}$$

Where:

L = allowable leakage in gallons per hour

S = length of pipe tested in feet

D = nominal diameter of the pipe in inches

P = average test pressure during the leakage test in pounds per square inch

This formula is based on an allowable leakage of 11.65 gpd./mi./in. of nominal diameter at a pressure of 150 psi.

All leaks shall be repaired whenever or wherever there is evidence of a leak. Water used by the Contractor shall be paid for by the Contractor at the rate of \$2.00 per 1,000 gallons.

1.12 Sterilization. Upon completion and acceptance of the hydrostatic test of a section of the water main that section shall be thoroughly disinfected before being placed in service by the use of chlorine or chlorine compounds in such amounts as to produce a concentration of not less than 50 ppm and a residual of not less than 25 ppm at the end of 24 hours and followed by thorough flushing. Putting small amounts of chlorine in each joint will not be acceptable.

1.13 Other Utilities. Other utilities encountered in the work shall be preserved and protected. Where relocation or repair is required to accommodate the work it shall be made in a manner acceptable to the utility having jurisdiction over the service connection. Accommodation of service connections shall not constitute any basis for extra payment.

Prior to construction, the Contractor shall arrange to meet with representatives of all utilities, and provide them with his anticipated work schedule. The Contractor shall have the utility companies make their best determination of utility locations in the areas in which he is working. Throughout the progress of the work such field markings of utilities shall be kept current.

1.14 Payment for Water. All water used from the Owner shall be metered by meters supplied by the Contractor. The Contractor shall pay for such water at the rate of \$2.00 per 1,000 gallons. This shall include any unmetered water lost which shall be computed on the basis of a discharge velocity of seven feet per second, the diameter of the line, and the estimated duration of free uncontrolled discharge or the approved method.

1.15 Cleanup. The Contractor shall provide effective cleanup of the work as it progresses. At the time of final inspection no trenches shall show any undue evidence of the construction. All areas shall be left free of ruts due to construction and shall have a clean and neat appearance without rubble or debris. The areas shall not be mounded and shall be completely restored, and all yards and fields shall be reseeded. Straw and fertilizing shall accompany the seeding and the seed mixture shall match the existing ground cover. If necessary to hasten proper restoration of terraces, principally along ditch lines, the Contractor shall sod such areas at the Engineer's direction.

1.16 Protection of Adjacent Landscape. Reasonable care shall be taken during construction of the process lines to avoid damage to vegetation. Ornamental shrubbery and tree branches shall be temporarily tied back, where appropriate, to minimize damage. Trees which receive damage to branches shall be trimmed of those branches. Tree trunks receiving damage from equipment shall be treated with a tree dressing.

1.17 Underground Tracer Wire. At all locations where plastic water line piping is utilized, one strand of Number 12 stranded copper wire shall be placed in the trench approximately six inches below the finished grade.

1.18 Payment. Payment shall be included in the payment for the work to which it is subsidiary in the Bid Schedule.

SECTION 2 - CASING PIPE

2.0 Work Included. Under this item the Contractor shall provide all labor, tools, equipment, and materials to furnish and install casing pipes as shown on the drawings.

2.1 Materials. Bored and jacked casing pipe shall be plain end steel pipe conforming to AWWA Specification C200 with a minimum yield strength of 35,000 psi. The inside diameter of the casing pipe shall be a minimum of four inches greater than the largest outside diameter of the water pipe, joint or coupling.

The minimum wall thickness shall be in accordance with the following table:

<u>Diameter of Casing-Inches</u>	<u>Minimum Wall Thickness-Inches</u>	
	<u>Under Railroads</u>	<u>All Other Uses</u>
12-3/4 and under	0.188	0.188
14	0.250	0.250
16	0.281	0.250
18	0.312	0.250
20 and 22	0.344	0.250

Casing pipe shall have continuously welded joints. Any field welding shall be performed by a certified welder and shall be in accordance with AWWA Specifications C206

2.2 Prior Approvals. Prior to boring and jacking under roadways the Contractor shall submit drawings and other necessary information regarding the proposed construction to the Engineer for approval by the proper authorities if requested.

2.3 Bore and Jack Construction. The Contractor shall investigate the subsurface conditions which will be encountered and shall base his bid on his findings. No distinction shall be made between boring through earth and boring through rock.

The Contractor shall provide a jacking pit, bore through the earth and or rock, and jack the casing pipe into place at the proper line and grade as the bore is being made. "Free boring" will not be allowed unless directed by the Engineer. The carrier pipe shall be pushed through the casing pipe with care being taken to insure that the pipe joints are tight and properly made. Shims attached to the carrier pipe to prevent floating shall be redwood or that as specifically made for the application.

The approach trench shall be large enough to accommodate one section of casing pipe and the jacks and blocking. Two rails or sills shall be laid in the bottom of the trench to keep the casing at the established line and grade.

The installation procedure must be such that the casing pipe is placed concurrently with the removal of the soil. The outside diameter of the lead auger section must not be less than one half inch smaller in diameter than the casing inside diameter.

The ends of the casing pipe shall be plugged and made watertight prior to backfilling. A neoprene gasket that will slip over the cover pipe and allow the carrier pipe to pass through will be considered water tight.

2.4 Traffic Control Devices and Maintenance of Traffic. The proper placement and maintenance of traffic control devices and the maintenance of traffic flows shall comply with the standards set forth under the General Specifications.

The Contractor shall notify the proper City, County, or State officials prior to the commencement of boring and jacking or tunnel operations.

2.5 Open Cut Construction. Where steel casing pipe is to be installed by open cutting rather than by boring or jacking the same casing pipe as described above will be utilized.

2.6 Measurement and Payment. The unit price bid per linear foot for boring and jacking, as measured from end to end of the casing pipe, shall constitute full compensation for the work as specified. Open cut steel casing pipe as measured from end to end of the casing pipe shall constitute full compensation for the work as specified. Carrier pipes shall be furnished under the item as described in other portions of these technical specifications.

SECTION 3 – CREEK, RIVER & GAS LINE CROSSINGS

3.0 Work Included. Under this item the Contractor shall provide all labor, tools, equipment, and materials to install creek, river, and gas line crossings as shown on the drawings and as directed by the Engineer.

3.1 Creek and Gas Line Crossing Materials. The creek and gas line crossings shall be installed as per the detailed drawings or as described herein and the casing pipe shall be PVC pipe. In the event where a casing pipe is not required for a creek crossing it shall be installed with ductile iron piping. All carrier pipe and casing pipe shall be that as described in other sections of these technical specifications or as shown on the plan sheets.

3.2 River Crossing Materials. The river crossing pipe shall be ductile iron constructed with a flexible joint that is self restraining without the use of bolts. The pipe shall be comprised of a centrifugally cast ball-end pipe and a statically cast bell and retainer ring. The ball and bell shall be threaded and screwed onto the threaded ends of the barrel. The pipe shall be that as manufactured by U.S. Pipe, Usiflex type, Class 350, or approved equal.

3.3 Installation. All creek crossings shall be installed with plastic carrier pipe placed within a plastic casing pipe or ductile iron carrier pipe without a casing pipe unless specified otherwise. Where a plastic casing pipe is used it shall be of the minimum size to accommodate the carrier pipe. The casing pipe or water line pipe without casing pipe shall be placed a minimum of 30 inches below the bed of the stream, creek, or river and a twelve inch minimum layer of crushed stone shall be placed above the pipe where a casing pipe is not required. Class B concrete shall be placed between the crushed stone and the base of the stream, creek, or river, or between the casing pipe and the base of the waterway. Where concrete is placed, all water from the stream shall be diverted away from the area of concrete placement by means of diversion pipes or temporary embankments.

All gas line crossings shall be installed with plastic carrier pipe placed within a plastic casing pipe unless specified otherwise. The casing pipe shall be of the minimum size to accommodate the carrier pipe and be placed a minimum of 30 inches below the gas line.

3.4 Payment. The unit bid shall constitute full compensation for furnishing and installing the creek, river, and gas line crossings.

SECTION 4 – VALVE AND VALVE BOX

4.0 Work Included. Under this item the Contractor shall provide all labor, tools, equipment, and materials to install gate valves, isolation valves, and valve boxes at the locations as shown on the drawings and as directed.

4.1 Materials. Valves shall be resilient type and shall be designed for a minimum water working pressure of not less than 200 pounds per square inch. Valves shall have ends required for the piping in which they are installed. Gate valves shall have a clear water way equal to the nominal diameter, and shall be opened by turning to the left. The operating nut or wheel shall have an arrow cast in the middle indicating the direction of the opening. Each valve shall have the manufacturer's initials, pressure rating, and the year in which manufactured, cast onto the body.

Valves two inches and larger shall be iron body, bronze mounted, non rising stem, double disc, parallel seated gate valves and shall conform to the standard specifications of the AWWA.

Valve boxes shall be of cast iron extension type with screw or slide adjustments and flared base. The minimum thickness of metal shall be 3/16". The cover shall have the word "WATER" cast in the metal. Valve boxes shall be installed over each outside gate valve unless otherwise shown on the drawings. The boxes shall be of such length as to provide a depth of cover of not less than 30 inches over the pipe.

Isolation valves shall consist of a gate valve and valve box along with a meter setting and two service taps with polyethylene tubing located on both sides of the valve. The meter setting shall be that as described in that portion of the Specifications with the exception that it shall have a shutoff on both sides of the meter setter.

4.2 Installation. Valve boxes shall be set plumb and straight and with the operating nut directly in the center in thoroughly compacted earth with the top of the box level and projecting one fourth inch above paved streets and one inch above other areas. The valve boxes in unpaved areas shall have a four inch thick concrete slab three feet in diameter around and sloping away from the valve box.

The isolation valve shall be placed in the location as shown on the plans and as directed by the Engineer. The meter setting shall be placed adjacent to the gate valve and the taps to the main line shall be made on both sides of the valve. The service tubing shall connect the meter setting to the main line taps and the setter will be placed with shutoffs in the 'Off' position. There meter shall not be required, nor delivered to the Owner.

4.3 Payment. The unit price bid shall constitute full compensation for furnishing and installing gate valves, isolation valves, valve boxes, and other related appurtenances.

SECTION 5 – BLOWOFF ASSEMBLY

5.0 Work Included. Under this item the Contractor shall provide all labor, tools, equipment, and materials to install the blowoff assemblies as shown on the drawings and as directed.

5.1 Materials. Blowoff assemblies consist of the valve, pipe, and fittings and shall be in accordance with these specifications. The gate valve and piping shall be the same size and pressure class as the line it is connected to.

5.2 Installation. The blowoff assembly shall be installed at the locations as shown on the drawings and as outlined on the detailed drawings.

5.3 Payment. The unit price bid shall constitute full compensation for the furnishing and installation of the blowoff assembly to include gate valve, piping, blocking, valve box, fittings and gravel.

SECTION 6 – FLUSH HYDRANT

6.0 Work Included. Under this item the Contractor shall provide all labor, tools, equipment, and materials to install the hydrants as shown on the drawings and as directed.

6.1 Materials. The hydrant shall conform to all of the applicable requirements of ANSI/AWWA C502 Standard. They shall have a sealed oil reservoir that will provide positive lubrication of the stem threads and bearing surfaces each time the hydrant is opened. The hydrant shoe shall be designed for maximum full flow and the hydrant working pressure shall be 200 PSI. The hydrant shall be three way type with two 2 1/2-inch openings and one 4 1/2-inch opening as shown on the drawings and outlined in the Bid Schedule.

6.2 Installation. The hydrants shall be set in accordance with the detailed drawings complete with gate valve and connecting pipe. The hydrant shall be installed perpendicular to the surrounding ground surface and the hydrant riser shall be completely buried. The depth of bury shall be the same as the adjoining water line. The shoe of the hydrant shall be encased in Class B concrete and the concrete shall extend to undisturbed earth. Gravel shall be placed around the hydrant on top of the concrete thrust restraint and at the weep hole a minimum depth of twelve inches in depth. Select earth backfill shall be compacted to fill the remaining excavated void and the surface shall match the surrounding surface. The hydrant shall be secured to the companion gate valve by means of threaded rods secured to the valve and hydrant or by other approved means. The hydrant shall be coated with a prime coat and two finish coats of paint as suggested by the manufacturer and approved by the Engineer. The shop drawings shall indicate the coating and color proposal.

6.3 Payment. The unit price bid shall constitute full compensation for furnishing and installing the hydrant, gate valve, up to ten feet of water line, and any associated pipe fittings required to install the hydrant to the main water line.

SECTION 7 - CONNECTION

7.0 Work Included. Under this item the Contractor shall provide all labor, tools, equipment, and materials to connect and disconnect water mains as shown on the drawings and as directed.

7.1 Materials. The connections and disconnects shall be performed by the use of ductile iron mechanical joint fittings, approved tapping valves and sleeves, and water main pipe as shown on the drawings described elsewhere in these technical specifications. Concrete for thrust restraint shall be Class B concrete and sack-crete shall not be allowed.

7.2 Installation. The connections shall be made with a tapping sleeve and valve and done so in accordance with the Owners schedule of operation. Once the main line has been tapped the new section of water main shall be valved off from the rest of the system by closing the tapping valve. The tapping valve shall remain closed until the Engineer has been satisfied that the new water main has been installed correctly, met the requirements of the hydrostatic test, been sanitized in accordance with the regulatory requirements, and any water main to be abandoned has been disconnected from the water system. The disconnection of a water main that is to be abandoned shall be accomplished by installing a blind flange at the point of abandonment and secured by means of a concrete thrust block. In the event where the thrust block shall be installed in the area of the abandoned water main a minimum three foot section of the abandoned water main shall be removed and the void replaced with concrete.

7.3 Payment. The unit price bid shall constitute full compensation for furnishing and installing the connections including any abandonment or disconnections of the water mains. This shall include all fittings but water mains and gate valves shall be paid as per the bid schedule for those respective items.

SECTION 8 - METER SETTINGS

8.0 Work Included. Under this item the Contractor shall provide all labor, tools, equipment, and materials to install the meter settings/vaults as shown on the drawings and as directed by the Engineer.

8.1 5/8-inch x 3/4-inch Meters

8.1.1 Materials. The meter settings shall consist of a saddle, corporation stop, service tubing, coppersetter, meter, meter box, and appurtenances. The corporation stops shall be as manufactured by Ford F-Series with a pack joint for polyethylene pipe. Saddles shall be equal to the Ford S60 Series with a hinged pin for PVC and 202 Series for ductile iron. The coppersetter shall be tandem type equal to the Mueller, Model No. B-2404-R-2-22 with a seven inch rise for a 5/8 inch by 3/4 inch meter and be complete with an inlet ball valve and outlet check valve. The pressure reducing valve shall be Honeywell Model No. DS05C-1030 with dial setting and integral strainer, or approved equal. Each regulator is to have an adjustable pressure range of 60-125 psi and to be set at 60 psi.

The meters shall be a displacement type magnetic drive cold water meter complying with ANSI/AWWA Standard C700, latest revision. They shall be manufactured by Badger Meter, Inc. and they shall be the Sealed Register Series type meter. The size of the meter shall be 5/8 inch by 3/4 inch or as shown otherwise on the Plans. The meter shall have a straight reading dial in U. S. gallons and must have a working pressure of 150 psi. Serial numbers shall be stamped on both the lid and meter body. Each meter shall be equipped with the Orion AMR system compatible with the Owners current system.

The meter boxes shall be Jumbo Utility Box as manufactured by Pentek Access Boxes by Highline Products, or approved equal. The meter box shall be supplied in three pieces with a 2-inch and 6-inch extension to be used on each setting and the lid shall be black cast iron. For tandem meter settings the box shall be furnished with two 6-inch extensions.

Service tubing shall be 3/4 inch polyethylene or type K copper tubing with a minimum pressure rating of 200 PSI.

8.1.2 Installation. Meters shall be set as shown on the detail drawings with backfill neatly compacted in place. The top of the meter box shall be set 1/2 inch above grade. The meter shall be at least 18 inches below the ground surface.

Where applicable, the contractor is also responsible under this bid item for the abandonment of the existing meter settings. This includes disconnection at the direction of the engineer, removing all remnants of the meter box and all other related appurtenances to a point two feet below existing ground level. All existing interior

pipng, meters, valves, and other appurtenances shall be removed and delivered to the owner prior to demolition and removal of the existing meter box.

Where applicable, the contractor is also responsible under this bid item for making the connection to the existing service line on the user side of the meter

8.2 1-inch and larger Meters

8.2.1 Materials. The meter settings shall consist of a saddle, corporation stop, service tubing or piping, coppersetter, meter, meter vault, and appurtenances. The corporation stops shall be as manufactured by Ford F-Series with a pack joint for polyethylene pipe. Saddles shall be equal to the Ford S60 Series with a hinged pin for PVC and 202 Series for ductile iron. For 1-inch meters, the coppersetter shall be tandem type equal to the Mueller, Model No. B-2404-R-2-22 with a twelve inch rises for a 1-inch meter and be complete with an inlet ball valve and outlet check valve. The pressure reducing valve shall be Honeywell Model No. DS05C-1030 with dial setting and integral strainer, or approved equal. Each regulator is to have an adjustable pressure range of 60-125 psi and to be set at 60 psi. For 2-inch and larger meters, the coppersetter shall be equal to the Mueller Co. coppersetter Model No. B2423-2-63 having a maximum rise of twelve inches and being appropriate for the meter and pressure reducing valve specified herein. The 2-inch coppersetter shall be complete with an inlet ball valve, outlet dual check valve and a bypass equipped with an inline ball valve and dual check valve. The pressure reducing valve shall be Bermad, Model No. 720, or approved equal equipped with an approved strainer. Each pressure regulator is to have an adjustable pressure range of 60-125 psi and to be set at 60 psi.

The meters shall be a displacement type magnetic drive cold water meter complying with ANSI/AWWA Standard C700, latest revision. They shall be manufactured by Badger Meter, Inc. and they shall be the Sealed Register Series type meter. The size of the meter shall be indicated on the Plans. The meter shall have a straight reading dial in U. S. gallons and must have a working pressure of 150 psi. The meter shall have a test plug to facilitate testing of the meter. Serial numbers shall be stamped on both the lid and meter body. Each meter shall be equipped with the Orion AMR system compatible with the Owners current system.

The meter vaults shall be as shown on the drawings. It shall of the dimensions shown on the plans and be made up of 1-inch thick HDPE flat stock. The cover & hatch shall be made of aluminum with a load rating of 125 PSF. The hatch shall be 30"x30" with a continuous hinge and a locking latch.

The meter vaults shall be entirely pre-fabricated and the completed assembly shall be delivered to the site ready for installation. Meter vaults shall be as supplied by the C.I. Thornburg Company or approved equal.

Service tubing shall be the appropriate size PVC, polyethylene or type K copper tubing with a minimum pressure rating of 250 PSI. For 1-inch and larger meters, all service tubing material and installation, regardless of length shall be included in the respective bid item for those meters.

8.2.2 Installation. Meters shall be set as shown on the detail drawings with backfill neatly compacted in place. The top of the meter vault shall be set 1/2 inch above grade and the meter itself shall be at least 18 inches below the ground surface.

Where applicable, the contractor is also responsible under this bid item for the abandonment of the existing meter settings. This includes disconnection at the direction of the engineer, removing all remnants of the meter box/vault and all other related appurtenances to a point two feet below existing ground level. Any void created by removal of items shall be backfilled with the adjacent area being restored to match the surrounding ground conditions including any incidental pavement replacement which may be required. All existing interior piping, meters, valves, and other appurtenances shall be removed and delivered to the owner prior to demolition and removal of the existing meter box/vault.

For 1-inch and larger meters, all service tubing or piping material and installation shall be included in the respective bid item for those meters. The new service tubing/piping shall be installed parallel to the existing service tubing as directed by the owner and the engineer.

Where applicable, the contractor is also responsible under this bid item for making the connection to the existing service line on the user side of the meter

8.3 Payment. The unit price bid shall constitute full compensation for furnishing and installing the meter setting/vault with the above described appurtenances and procedures. For meters smaller than 1-inch, service tubing shall be paid by the linear foot. For 1-inch and larger meters, all service tubing material and installation shall be included in the unit price bid for those meters. Installation of the service tubing through or beneath paved surfaces shall be considered as an incidental cost for the installation of the service tubing and there shall be no compensation for pavement replacement.

SECTION 9 - PAVEMENT REPLACEMENT

9.0 Work Included. Under this item the Contractor shall provide all labor, tools, equipment, and materials to install the concrete and bituminous pavement replacement that is disturbed during construction.

9.1 Materials. The Contractor shall use Class A concrete for all concrete pavement that is to be replaced and it shall be reinforced with No. 4 reinforcing bars placed on twelve inch centers both ways unless directed otherwise.

Pavement replacement for bituminous surfaces shall consist of a prime coat of emulsified asphalt, Class 1 Bituminous Binder, and Class 1 Bituminous Concrete as specified by the Kentucky Bureau of Highways latest specifications.

Support gravel shall be No. 4 stone, No. 57 stone, and dense grade aggregate.

9.2 Installation. Immediately upon placement of the water lines and appurtenances the disturbed traveled way shall be backfilled with No. 57 stone or dense grade aggregate extending from the top of the pipe to the traveled way surface. The area of disturbance will be repaved once settlement has subsided or once installation of the water line has been completed as directed by the Engineer.

Where concrete pavement replacement is required the top twelve inches of stone backfill shall be tamped with a mechanical tamping machine and the lifts shall not exceed twelve inches. The use of rubber tire or track driven equipment such as backhoes or dozers shall not satisfy the requirement for final tamping. The reinforcing steel shall be placed within three inches of the surface of the concrete to be replaced and it shall be supported with concrete support pieces. The area to be repaved shall be formed to coincide with the adjoining concrete surfaces and the edges of the repaved area shall be smooth and uniform. The concrete shall be placed on top of the compacted gravel at a depth of six inches minimum and the surface shall be flush with the adjoining surface. The surface finish shall match the adjoining surface finish and the locations where the repaved surface connect to the existing surface shall be smooth and uniform such that ponding shall not occur.

Where bituminous pavement replacement is required the pipe trench shall be backfilled and the surface prepared as describe above for concrete pavement replacement. Upon placement of the bituminous the surface shall be prepared with a prime coat applied at the rate of 0.35 gallons per square yard. A 2-inch thick layer of bituminous binder shall then be placed above the prime coat. The final coat of bituminous concrete shall then be placed at a depth of 1 1/2 inches and rolled to a smooth finish connecting with the existing pavement.

9.3 Final Acceptance. All pavement that is replaced shall be inspected prior to the final warranty period expiration. Any pavement replacement found to be deteriorated or not uniform due to settlement of the disturbed subsurface shall be repaired before the work is recommended for final acceptance. It is anticipated that this inspection shall take place on or about the eleventh month of the one year warranty period. The warranty period for all pavement replacement shall not commence until the final warranty period for the project in its entirety is initiated.

9.4 Payment. Pavement Replacement shall be incidental to the installation of the water line and open cut & case. There shall be no separate pay item for pavement replacement.

SECTION 10 - EXPLORATION

10.0 Work Included. Under this item the Contractor shall provide all labor, tools, equipment, and materials to explore for existing water lines and appurtenances that are not as shown on the Drawings.

10.1 Description of Work. In those locations where the existing water lines and appurtenances are not in the locations as shown on the Drawings the Contractor shall explore for the utility at the direction of the Engineer. The Contractor shall utilize all equipment necessary to search for the water line or appurtenance and any disturbance of other utilities shall be the responsibility of the Contractor. Any other work or disturbance created by the Contractor as a result of the exploration shall be incidental to this item.

In locations where new water lines are to be installed parallel to existing lines, the contractor shall locate existing water lines in 100 foot intervals. This particular requirement shall be considered incidental to the installation of the water lines and it shall not be included in the calculation of this pay item.

10.2 Payment. The unit price bid shall constitute full compensation for the exploration of the water lines and appurtenances. The Resident Engineer shall approve the Contractor to initiate and terminate the exploration and the Resident Engineer shall monitor the amount of time in 15 minute increments.

SECTION 10 - BOOSTER PUMP STATION

10.0 Work Included. The contractor shall furnish and install one factory built, factory delivered, above ground water booster pump station, with all the necessary internal piping, pumps, motors, valves, and controls and other necessary appurtenances installed on a fabricated steel base and enclosed in a modular structure as shown on the plans and as specified herein. The booster 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.

The above ground water booster pump station shall be manufactured by Engineered Fluid, Inc., Centralia, Illinois, represented by Mr. Jerry Delaney of Delaney and Associates, Erlanger, Kentucky, telephone (859)342-4944 or approved equal.

10.1 Quality Assurance. The equipment and materials covered by these specifications are intended to be standard equipment of proven reliability and as manufactured by reputable manufacturers having experience in the production of such equipment. 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.

It is intended that the manufacturer of the selected equipment shall be a business regularly engaged in the manufacture, assembly, construction, start-up and maintenance of water distribution equipment of the type required for this project. The manufacturer shall have at least ten years of successful experience in providing stations of the type, design, function and quality as required for this project. As such, the pump station manufacturer shall be required to affix an Underwriter's Laboratories Label (UL) attesting to the compliance of that assembled equipment under the Packaged Pumping Systems (QCZJ) UL Listing Category. This label shall be inclusive of the entire station with enclosure so as to demonstrate compliance with the National Electrical Code (NEC) requirements for working clearances and wiring procedures. Equipment manufactured without this third party certification label or equipment manufactured by an outside source or "brokered equipment" defined as systems not assembled on the premises of the named manufacturer by that company's employees shall not be allowed.

10.2 Kentucky Building Code By Kentucky Commonwealth Law, all Modular Buildings Manufactured in or imported into the state must have Model Plan Approval by the Kentucky Office of Housing, Buildings & Construction (State Fire Marshal) as administered by the Kentucky Industrialized Building System (K.I.B.S.) Program. An authorized Manufacturer will have an assigned KIBS Factory Number, and each unit will bear a serialized label certifying it is "In Compliance with the Standards Adopted by the Authority of the 2002 Kentucky Residential Code or the 2002 Kentucky Building Code." The pump station Manufacturer will be required to provide in the submittal the assigned KIBS Factory Number, and the Serial Number for each label which will be attached to the Modular Station. Submittals lacking this information will not be reviewed.

10.3 Submittals. Equipment submittals shall be bound and in a minimum of six copies. The submittals shall contain a minimum of two full size drawings, size 24-inch x 36-inch; one each covering the booster pump station and the electrical control schematic. The booster pump station drawing shall be specific to this project, in at least three 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 individual components that make up the booster pump station and the UL 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. The submittal booklets shall be complete with a full size photocopy of the manufacturer's combination UL/manufacturer logo Packaged Pumping Systems label.

10.4 Equipment Enclosure. The equipment enclosure size as shown on the drawings for this project is appropriate for National Standard mandated clearances and for proper clearances above, below and around equipment to provide for safe servicing, removal and reinstallation of that equipment.

The drawing for this equipment illustrates centerline and clearance/maintenance dimensions about major equipment items. These dimensions are minimum. Dimensions less than those shown shall not be accepted.

10.5 Building Enclosure. The station building enclosure shall be a factory assembled, modular structure attached to the pump station base structure and requiring no additional assembly at the job site. The building design criteria shall be: (1.) To withstand 90 mph wind load; (2.) To support 30 psf live roof load; (3.) Be designed for seismic zone 4.

The materials specified are specifically chosen to be resistant to moisture degradation and infestation and be maintainable.

Insulation values for the walls and roof structure shall be a minimum R-21 in the walls and the roof. Insulation within the roof and wall panels shall be foam-in-place polyurethane material applied between the interior and exterior sheathing forming a closed cell bounded by the steel framing. The insulation shall have a minimum density of 2.2 lbs/cu. ft. nominal and shall be applied to the thickness required to provide a minimum R value of 21. The insulation shall have a ASTM E-84 flame spread index of 20 and smoke developed of 450.

Building framing materials shall comply with the A.I.S.I. Specification for the Design of Cold-formed Steel Structural Members and to Standards ASTM C-955, ASTM C-1007, ASTM C-645, ASTM C-754 and ICBO 4782P. and 4784P. A framing design incorporating the members covered by the listed specifications and standards shall develop a structure meeting or exceeding the building design criteria listed above. Structural insulated panels or SIPS will not be allowed.

The building structure shall be fabricated using steel C-studs as wall framing members and C-joists as roof trusses. The size, placement and spacing of studs and joists shall be in accordance with the design criteria and material standards. The wall C-studs shall be a minimum 2" x 3 5/8" size of 20 gauge material minimum. The roof C-joists shall be a minimum 2" x 8" size of 16 gauge material minimum.

The exterior wall sheathing shall be ½" thick, exterior, CDX grade plywood.

The exterior roof sheathing shall be ¾" thick, exterior, CDX grade plywood.

The interior wall sheathing shall be ¾" thick, exterior, CDX grade plywood.

The interior roof/ceiling sheathing shall be ¾" thick, exterior, CDX grade plywood.

OSB or particle board sheathing will not be allowed.

All interior wall & ceiling surfaces shall be covered with .090" thick FRP (fiberglass reinforced plastic) sheeting of pebble grain, gloss, white finish. The individual wall faces shall be covered with one continuous sheet. The FRP sheets shall be glued to the plywood sheathing requiring no fasteners. Corner moldings of like FRP material shall be installed & finished in a workmanlike manner.

Openings in the sidewalls and/or roof shall be as shown and be fully framed out and supported using single or multiple framing members sufficient to support and fasten those devices or equipment items requiring a framed opening, these being access hatches, HVAC equipment, pipe passages, conduit passages, door and window openings and other special purpose openings as might be shown and required.

The attaching of devices or equipment to the building at a framed opening shall be done fully according to the device manufacturers mounting instructions.

10.5.1 Heavy Duty Aluminum Doors. Doors are manufactured of 18-gauge galvanealed steel. All doors shall be full flush construction and 1-3/4 inches thick. Doors shall be reinforced, stiffened, insulated, and sound deadened with a solid polystyrene foam board permanently bonded to the inside of each face skin. The lock and hinge edge of each door shall be welded with a center hairline seam the full height of the door. The lock edge shall be reinforced full height by a 14-gauge continuous one-piece channel x extruded templating. The hinge edge shall be reinforced full height by a 14-gauge continuous one-piece channel, formed and tapped for hinges. Top and bottom of the door shall be closed with 16-gauge channels. Doors shall have beveled 1/8-inch (3) in 2-inch (51) lock edge and square hinge edge. Doors shall be thoroughly cleaned and receive an iron phosphate treatment prior to receiving one coat of prime paint. Door closures and rim panics are reinforced with 14-gauge channels.

Doors shall be fully-mounted in frames produced for pre-hanging of commercial 1-3/4" doors. Frames are formed to 16-gauge commercial quality cold rolled steel conforming to ASTM A366 or A620 and A568. Frames are produced in two welded units, to be mechanically joined during installation. The base side is prepared for all required hardware. Both units, base and trim, are furnished with welded mitered faces. Frame anchoring includes compression anchors and stud screws. Door hinges shall be continuous gear hinges, fabricated of extruded 6063-T6 aluminum alloy/temper with pinless assembly. The doors shall have a lockset, exterior handle, interior panic type exit device, and top mounted-door closer with hold-open device.

Doors and frames shall be finished with a two-component, aliphatic/acrylic polyurethane coating, white in color, with a high gloss finish. The coating shall be resistant to a wide range of solvents and chemicals under splash and spill conditions. The coating system is V.O.C. compliant.

10.5.2 Mounting and Fastening. The building shall be fabricated up from and securely attached to a framework fabricated of 2" x 6" steel tubing welded at each corner to form a base frame serving as a stable base for handling and transporting the building prior to attaching the building to the station base skid. To hold the building framing to the 2" x 6" base frame, 5/8" anchor studs will be welded to the base frame. In assembling the building framing to the base frame a 3 1/4" x 4" x 1/4" thick anchor plate under a flat washer, lock washer and 5/8" bolt shall be used to fasten the building framing to the framing base as shown. The base frame shall be grit blasted to a SP-6 finish and coated with the specified coating material.

The building enclosure shall be firmly and securely attached to the steel base structure by lag bolting from inside the station, through evenly spaced 9/32" holes pre-drilled into a 2" by 1-1/2" by 1/8" thick angle piece that has been continuously welded to the steel floor. The lag bolts shall screw into the 2" x 6" tubular base frame upon which the building has been built.

The lag bolts shall be plated steel, size 3/8" diameter x 2" long. The number and location of the lag bolts shall be as determined by structural analysis so as to maintain the live load and wind load ratings as specified and to resist shearing and tearing in the process of transporting and placing the finished station.

10.5.3 Exterior Treatment. The exterior finish will be field-applied brick, not by the station manufacturer. The station manufacturer shall apply a layer of "housewrap" to the exterior of the building. The "housewrap" shall reduce air infiltration and moisture damage.

10.5.4 Wood Rafter/Shingle Roof System. The wood rafter/shingled roof system will be installed at the factory. The roof shall be a wood hip rafter system on 16" centers, deck with 5/8 CDX plywood, covered with 30 lb. felt underlayment and 24 ga., 30 year, shadow, shingled roof with aluminum fascia and soffit. The roof system shall have a 4:12 minimum pitch.

10.5.5 Building Substructure. The Water-Shed base/floor system substructure shall be made up of steel plate and standard structural steel shapes of the sizes and weights as shown on the plans for this item. The substructure shall be designed to support the building live and dead loads plus the burden imposed by loading, transporting and unloading of this equipment. All steel plates used in the substructure shall meet or exceed the requirements of ASTM-A36. The structural shapes (channels and angles) shall be of the thickness/weight as shown on the plans for this item and shall meet or exceed the requirements for ASTM A-36. The structural rectangular or square tubing shall be of the wall gauge as shown on the plans for this item and shall meet or exceed the requirements for ASTM A-500 Grade B.

The station shall have floor drains as shown on the drawing.

10.5.6 Piping Penetrations. Where suction and discharge piping, or any other pressure piping, passes through the station base/floor system substructure that area of the floor shall be provided with a grout sleeve. The installing contractor shall be responsible for furnishing and installing grout.

10.5.7 Safety Floor Matting. The walkway areas (that space from the entrance ladder to the control panel and the entire NEC clearance area) shall be covered with a rubber drainage runner. The runner shall be medium duty, 1/2 inch minimum thickness of open slot design allowing fluids to drain under standing or walking surfaces. The runner shall have a tread design to promote sure

footing. The underside of the runner shall have a raise knob design to permit aeration and drainage, and to reduce runner fatigue. The runner shall not be glued to the floor.

10.6 Delivery – Lifting Device. An adjustable spreader type lifting device, built to lift the building structure without impinging the lifting chains/cables on the building sidewalls, shall be provided by the pumping station manufacturer for use by the installing contractor for the purpose of unloading station from trailer.

10.7 Corrosion Protection. All surfaces of the exposed steel structure, interior and exterior, shall be gritblasted equal to commercial blast cleaning (SSPC-SP6).

Following grit blasting, all weldments will be pretreated by hand with brush using Tnemec Series 69 Hi-Build Epoxoline II coating to provide additional corrosion protection. Following the pretreatment full coating application shall take place.

The base coating shall take place immediately after surface preparation. The protective coating shall be Tnemec Series 69 Hi-Build Epoxoline II consisting of a two-component, high solids, epoxy system formulated for high build application for protection and finishing of steel and having excellent chemical and corrosion resistant properties. The epoxy system shall be self-priming and require no intermediate coatings.

Following the base coating application, a full finish coating application shall take place. The protective coating shall be Tnemec Series 61 Hi-Build Epoxoline, gray in color, consisting of a two-compartment, high solids, epoxy system formulated for high build application for protection and finishing of steel and having excellent chemical and 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.

The floor area of the completed Water-Shed, not protected by the floor matting, shall receive an additional top of "non-skid" Tnemec Series 61 Hi-Build Epoxoline. The total dry mil thickness on the unprotected floor area shall provide a 14.0 mil coverage.

10.8 Operating Conditions. The pump station shall be capable of delivering the fluid medium at the following capacities and heads when operating at 0 feet minimum suction pressure.

PUMP #1 & #2

Design GPM 250 @ 180 feet TDH;
Maximum GPM 310 @ 150 feet TDH;
Efficiency at design GPM 76%.

The pump driver shall be a standard, A.C. induction motor, open drip-proof construction, of the horizontal extended shaft, normal thrust type and shall be 30 h.p., 3,520 rpm nominal and suitable for 3 phase, 60 cycle, 480 volt electrical service.

The pump motor shall be sized so that the nameplate horsepower rating, without consideration of the service factor, shall not be exceeded at any point along the pump performance profile. The pump motor shall be complete with a 1.15 service factor when operated with constant speed

starters (sine wave power). The service factor shall be 1.00 when operated with variable frequency drives (inverter power).

10.9 Booster Pumps – Vertical Multistage Centrifugal Type. The pumps employed within the pump station shall be of the vertical multistage, centrifugal type. 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:

10.9.1 Casing. Volute type, 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 to be as shown per pump data sheets.

10.9.2 Impeller. Enclosed, 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.

10.9.3 Wearing Rings. Renewable type; maintain proper running clearance with impeller hubs to minimize leakage between suction and discharge.

10.9.4 Shaft Sleeves. To be shouldered on shaft near impeller and covers full length of shaft from impeller hub to motor end bracket. Seals by compression between shaft sleeve and impeller hub, also between sleeve and shoulder on shaft, protecting shaft from contact with liquid.

10.9.5 Stuffing Box. 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.

10.9.6 Adapter. Maintains rigid assembly between motor and casing. Machined lock between adapter and motor end bracket keeps adapter & casing in permanent alignment with motor and extended motor shaft.

10.9.7 Motor. Assembled as integral part of the complete units. Shaft carries impeller and 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. Motors shall be open drip proof. Motors shall be suitable for use with VFD's.

The Booster Pumps shall be manufactured by Grundfos, Series CR 64-3-2 A-G-A-E-KUHE, or approved equal.

10.10 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.

10.11 Elastomer Pipe Connector. 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 120EF. 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.

A control joint limiting pipe connector movement shall be supplied with each pipe connector.

10.12 Piping. 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.

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.

The piping sizes shall be as shown on the drawing.

Size 10 inch and below - Schedule 40

Size 12 inch thru 20 inch - Standard weight (.375" wall)

Size 24 inch and above - Standard weight (.500" wall)

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.

All piping surfaces shall be prepared by gritblasting, or other abrasive blasting, prior to any welds taking place. Piping of 5" diameter and smaller may be cut by saw. 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. No saw cuts or other form of abrasive cut-offs are allowed on 6" and larger diameter pipe.

In all cases, short circuit transfer, spray transfer or pulse-arc transfer modes of the gas metal arc welding process shall be applied semi-automatically. 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. In all cases, welding wire with a minimum tensile strength of 70,000 psi shall be employed. 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. Completed welding assemblies shall create no internal obstruction, restriction or create any unintended sources of water deflection.

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.

10.13 Pipe Supports. Pipe supports by minimum sizing for:

- 8" and smaller piping shall be 2" x 3" x 3/16" wall rectangular tubing;
- 10" and larger piping shall be 3" x 4" x 1/4" wall rectangular tubing;
- 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.

Pipe supports are to be fully welded at both end points to the pipe and steel floor where required.

Simple pipe stands made of pipe welded only at the floor and upholding a bracket with or without a threaded jack bolt or a U-bolt are not acceptable, as no lateral or transverse support is provided.

10.14 Fusion Bonded Epoxy Coating-Steel Piping. Steel piping shall have applied to it a Fusion Bonded Epoxy Coating on the interior pipe surface that conforms to AWWA C-213-91 for steel water pipelines. The powder coating product shall be National Sanitation Foundation (NSF) Standard 61 certified material. The final product shall be capable of meeting Salt Spray Resistance ASTM B117 (1000 hour) with no blistering, undercutting or rust bleed; Humidity Resistance ASTM D2247 (1000 hour) with no blistering, undercutting or rust bleed; and Impact Resistance of ASTM G14-72 (160 in. lbs.). The Fusion Bonded Epoxy Coating shall provide a minimum total dry mil thickness of 12-16 mils. The epoxy powder coating shall be Pipe Clad® 1500 Red latest revision from Valspar, Inc.

Prior to shipment of the station, the station manufacturer shall provide in writing to the Engineer certification that the fusion bonded epoxy coating 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:

- Date of application;
- Material manufacturer and product designation including a product data sheet for the coating;
- Applier of the fusion bonded coating, name, address and phone number;
- 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.

10.15 Service Connection 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.

10.16 Restrained Joints. 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 framing to facilitate the attachment of joint restraint tie rods or other device to be used in retarding any pipe movement at the connections.

10.17 Compression Couplings. The booster station piping shall include a compression type, flexible coupling to prevent binding and facilitate removal of associated equipment where shown on the plans for this item. In lieu of a compression coupling, a Uni-Flange or a flanged coupling adapter (FCA) may be used. All compression couplings, Uni-Flanges, flanged coupling adapters (FCA), and flexible connectors/expansion joints shall include a minimum of two (2) control joint rods with appropriate restraining points.

10.18 Combination Pressure Gauges. Combination pressure gauges shall have a built-in pressure snubber and 4-1/2 inch minimum diameter faces and be turret style, black phenolic case with clear glass face. The movement shall be rotary, of 400 Series stainless steel with teflon coated pinion gear and segment. The gauge shall be bottom connected & accept a 1/4" NPT female thread. Combination pressure gauge range and scale graduations shall be in psi and feet of water as follows:

Suction Pressure - 0 to 200 psi, 20 psi figure intervals, with graduating marks every 2 psi (0-460 feet).

Discharge Pressure - 0 to 300 psi, 25 psi figure intervals, with graduating marks every 5 psi (0-690 feet).

All gauges will be panel mounted off the pipeline and be flexible 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.

Gauges shall be manufactured by WIKA Model 212.34.

10.19 Sample Tap. A single, right angle outlet, smooth nose, brass sample tap shall be affixed to the manual vent ball valve for the low suction lockout and suction pressure gauge assembly.

10.20 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.

10.21 Butterfly Valves. Valve body shall be wafer style and meet ANSI Class 125/150 flange standards. Metal reinforced dovetail seat shall ensure drop tight, bi-directional shutoff. The stem shall be one piece. The disc and stem shall be connected by a stainless steel torque plug which shall provide positive engagement. The valve shall have upper and lower RTFE inboard stem bearings, isolated from the line media, and a heavy-duty upper stem bushing.

The valve body shall be cast iron; aluminum bronze disc; stainless steel stem; EPDM seat; acetal upper stem bushing; BUNA-N V-cup stem seal.

Valve sized six (6) inches and smaller shall be equipped with lever operator and 10 degree increment throttling plate. Valve sized eight (8) inches and larger shall be equipped with a weather-proof, heavy-duty, gear operator complete with a position indicator.

The butterfly valves shall be manufactured by Keystone, Model 221-786.

10.22 Non-Slam Check Valve. Each pump discharge pipe run shall include a wafer-type, non-slam check valve. The body of the check valve shall be cast iron. The plug and seat shall be bronze and conform to ASTM Designation B-584. The seat shall contain a Buna-N seal to provide zero leakage. The seal design shall provide zero leakage at both low and high pressure without over-loading or damaging the Buna-N seal. The guide bushings shall be bronze copper alloy and conform to ASTM Designation B-584. The valve spring and seat retainers shall be stainless steel and conform to ASTM Designation A-313. The valve plug shall be guided at both ends by a center shaft integral with the valve plug. Alignment of the center shaft shall be provided by guide bushings.

Non-slam check valves shall be Val-Matic Series 1400-BN.

10.23 Relief Valve. The relief valve shall be pilot controlled, hydraulically operated, diaphragm type automatic control valve. The main valve shall be furnished with a resilient, replaceable seat. The 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 globe pattern, flanged to meet ANSI Class 125 and have a maximum pressure rating of 250 psi.

The Relief Valve shall be manufactured by Cla-Val, Model 50G-01BKC.

10.24 Gate Valve. The meter inlet isolating valve where shown and as sized on the plan sheet covering this item shall be a gate valve meeting or exceeding AWWA Standard C-500. The gate valve will be cast iron body, bronze mounted, resilient seat, NRS (non-rising stem). The valve will be flanged pattern with flange and drilling complying to ANSI B16.1, Class 125. The valve will be complete with handwheel operator and shall be constructed so as to open left (counter-clockwise). Maximum working pressure shall be 200 psi.

The gate valve shall be manufactured by M & H Valve, model 4067-02.

10.25 Magnetic Flow Meter. The magnetic flowmeter shall be microprocessor-based, and flanged. It shall indicate, totalize, and transmit flow in full pipes. The magnetic flowmeter shall utilize DC bi-polar pulsed coil excitation, automatically re-zeroing after every cycle. The accuracy shall be at least 0.5% of flow rate over a 33:1 turndown at all flow rates above 1 fps. Accuracy shall be verified by calibration in a flow laboratory traceable to the NIST.

The flow sensor liner shall be Tefzel as approved by both the EPA and the FDA. The housing shall be steel. The integrally-mounted flow sensor and transmitter shall be FM approved and CSA approved. The electronics shall be remote mounted in a Nema 4X enclosure as shown on the plans.

The meter shall incorporate HI-Z circuitry. The preamplifier input impedance shall not be less than 10^{12} ohms. External ultrasonic electrode cleaners shall not be acceptable. Isolated outputs shall be 4-20 mA dc. Low flow cutoff shall be adjustable from 0-9% FS and there shall be two flow alarms settable from 0-99% of span.

The 2-line, 16-character alphanumeric display shall indicate user-defined flow units and total flow. All menu advice and commands shall be viewed on this display. The flowmeter shall incorporate

the MAG-COMMAND feature allowing menu selection and changes to be made from outside the housing via Hall-effect sensors. It shall not be necessary to remove covers, panels or fasteners to accomplish calibration or program changes. The meter software shall incorporate a password feature preventing inadvertent program changes. All printed circuit boards shall be contained in a plug-in module and be interchangeable for any size without requiring test equipment. Totalized flow and programmed configuration shall be maintained in memory for the meters lifetime.

The flow meter shall be manufactured by Sparling Instruments, Inc., model FM656 TIGERMAGEP.

The design is based on the Sparling Model 656 Magnetic Flow Meter, requiring 3 upstream and zero downstream straight pipe diameter lengths for maintaining stated accuracy limits. Specification or of any other manufacturers flow meter will not keep this design within the accuracy limits of that flow meter.

10.26 Meter Test Port. The meter installation shall be complete with a meter test port as shown on the plans for this item. The test port shall be installed a minimum of two (2) diameters downstream of the meter. The test port shall consist of a NPT coupling in the pipe downstream of the meter capable of accommodating a threaded by hose connection adapter. The connection shall be plugged.

10.27. Pressure Testing. 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.

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.

10.28 Electrical Apparatus – Design, Assembly & Test. The electrical apparatus and control panel design, assembly, and installation, and the integration of component parts will be the responsibility of the manufacturer of record for this booster pumping equipment. That manufacturer shall maintain at his regular place of business a complete electrical design, assembly and test facility to assure continuity of electrical design with equipment application. Control panels designed, assembled or tested at other than the regular production facilities or by other than the regular production employees of the manufacturer of record for this booster pumping equipment **will not** be approved.

10.29 Conformance to Basic Electrical Standards. The manufacturer of electrical control panels and their mounting and installation shall be done in strict accordance with the requirements of UL Standard 508 and the National Electrical Code (NEC) latest revision so as to afford a measure of

security as to the ability of the eventual owner to safely operate the equipment. No exceptions to the requirements of these codes and standards will be allowed; failure to meet these requirements will be cause to remove the equipment and correct the violation.

10.30 U.L. Listing. All service entrance, power distribution, control and starting equipment panels shall be constructed and installed in strict accordance with Underwriter's Laboratories (UL) Standard 508 "Industrial Control Equipment." The UL label shall also include an SE "Service Entrance" rating stating that the main distribution panel is suitable for use as service entrance equipment. The panels shall be shop inspected by UL, or constructed in a UL recognized facility. All panels shall bear a serialized UL label indicating acceptance under Standard 508 and under Enclosed Industrial Control Panel or Service Equipment Panel. In addition, a photocopy of the UL labels for this specific project shall be transmitted to both the project engineer and the contractor for installation within their permanent project files, prior to shipment of the equipment covered under these specifications.

10.31 E.T.L. Listing. All control panels shall be E.T.L. Listed by Interek Testing Services (ITS) under Category 4 - Industrial Control Equipment. Each completed panel shall bear an E.T.L. listing label. The listing label shall include the station manufacturer's name, address and telephone number. The station manufacturer shall have quarterly inspections performed by ITS at the manufacturer's facilities to ensure that the products being listed comply with the report and procedural guide for that product.

10.32 Equipment Grounding. Each electrical equipment item in the station shall be properly grounded per Section 250 of the National Electrical Code. Items to be grounded include, but are not limited to, pump motor frames, control panel, transformer, convenience receptacles, dedicated receptacle for heater, air conditioner, dehumidifier, lights, light switch, exhaust fans and pressure switches.

All ground wires from installed equipment shall be in conduit and shall lead back to the control panel to a copper ground buss specific for grounding purposes and so labeled. The ground buss shall be complete with a lug large enough to accept the installing electrician's bare copper earth ground wire. The bus shall serve as a bond between the earth ground and the equipment ground wires.

10.33 Panel Mounting Hardware. Metal framing channel shall be used exclusively for mounting of all electrical panels and electrical components except for those specifically designated otherwise.

10.34 Electrical Service. The contractor shall provide a 480 volt, 3 phase, 60 cycle, 4 wire electrical service for this station.

10.35.1 Electrical Apparatus – Distribution Panel. The distribution panel shall be a NEMA 1 enclosure designed for surface mounting bottom feed. The main circuit breaker shall be rated for 300 amp service. The distribution panel shall be complete with the following branch circuit

breakers:

- One (1) 3-pole, 300 amp main breakers;
- Three (3) 3-pole, 125 amp pump motor breakers;
- One (1) 3-pole, 15 amp phase monitor breaker;
- One (1) 2-pole, 30 amp primary transformer breaker;
- One (1) 3-pole, 30 amp surge arrester breaker;
- With space for one (1) 3-pole, 125 amp spare breaker.

10.35.2 Electrical Apparatus – Control Panel. All circuit breakers, motor starters, time delay relays and control relays shall be incorporated into one (1) NEMA 4/12 control panel.

There shall be provided, thermal-magnetic trip circuit breakers as follows:

- One (1) Transformer Breaker, Secondary Side, 60 amps;
- One (1) 2-pole 30 amp HVAC breaker;
- Six (6) Auxiliary Circuit Breakers, as follows:
 1. Controls
 2. Lights
 3. Dehumidifier
 4. Convenience Outlets
 5. Telemetry
 6. Spare

10.35.3 Electrical Apparatus – Adjustable Frequency AC Controllers. The station manufacturer shall furnish and install a complete Adjustable Frequency Controller System as described in this specification and as detailed on the applicable drawings.

The station manufacturer shall be responsible for the installation and start-up of the equipment covered by this specification.

The Adjustable Frequency Controller shall be furnished by a single vendor who has actively been manufacturing Adjustable Frequency Controllers for a period of at least five (5) years.

The Adjustable Frequency Controller shall be UL and CSA certified and shall comply with the latest applicable standards of ANSI, IEEE and NEMA. The controllers shall be rated as shown on drawings. As a minimum the full load output current of the controller shall be equal to the equivalent motor horsepower as listed by National Electrical Code Table 430-150.

The Adjustable Frequency Controller manufacturer shall maintain, as part of a national network, engineering service facilities within 250 miles of project, to provide start-up service, emergency service calls, repair work, service contracts, maintenance, and troubleshooting training of customer personnel.

There shall be provided three (3) Variable Frequency Drive (VFD) units for the following motor loads:

1. 50 horsepower HP
2. 50 horsepower HP
3. 50 horsepower HP

The VFD(s) shall be rated for operation at 480 volts. The unit(s) shall tolerate a 10% overvoltage and 15% undervoltage, a line frequency between 57-63 Hz, and have a 100% load rating.

The VFD shall operate at 100% rated capacity, without derating, up to 3,300 feet MSL. The unit shall operate in environments of 5%-95% noncondensing humidity, at an ambient temperature between -10E and +40EC (+14EF to +122EF).

The VFD shall have a displacement power factor of no less than 95%. The drive shall have a 98% efficiency at FLA.

The VFD shall output a coded pulse width modulation power output to the load over a frequency range of 0-400 Hz, 1Hz stop settings. The drive shall have a frequency regulation of $\pm 0.2\%$ of maximum output frequency.

The drive shall have the following protective features: overcurrent, ground fault, undervoltage, overvoltage, input phase loss, overheating of heatsink, external alarm, overheating internally, overheating of braking resistor, motor 1 overload, motor 2 overload, inverter overload, blown fuse, memory error, keypad panel communication error, CPU error, option error, operating error, output wiring error, and modbus RTU error.

The drive shall have a keypad through which operator personnel can manually start/stop drive, manual control speed, job drive motor, and adjust drive parameters.

The drive shall have a bypass/load isolation contactor set which will isolate the load side of the drive and allow across-the-line starting of load by manual selection. Bypass will have thermal overload protection.

The drive shall be manufactured by Fuji Frenic Model FRN050P11S-4UX.

10.35.4 Electrical Apparatus – Running Time Meter. 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.

10.35.5 Electrical Apparatus – Phase Monitor. A phase monitor shall be supplied to protect three-phase equipment against phase loss, undervoltage and phase reversal conditions. When a fault is sensed, the monitor output relay opens within two seconds or less to turn the equipment off and/or cause an audio or visual alarm. 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.

10.35.6 Electrical Apparatus – Surge Arrester. A secondary surge arrester shall be provided. Housing shall be Noryl and be ultrasonically sealed. Valve blocks shall be metal oxide with an insulating ceramic collar. Gap design shall be annular. The lead wire shall be permanently crimped to the upper electrode forming part of the gap structure. Arresters shall be UL and CSA listed Lightning Protective Devices.

10.35.7 Electrical Apparatus – Power Transformer. Balanced 115/230 single phase power for the auxiliary circuits within the scope of the booster station shall be obtained by use of a 7.5 KVA dry, step down transformer. The transformer shall be wall mounting type, in a NEMA 3R non-ventilated weatherproof enclosure. Transformer shall operate with noise levels equal to or less than ANSI and NEMA standards. Transformer insulation shall be Class 180c. The unit shall be "UL" approved for indoor/outdoor application.

10.35.8 Electrical Apparatus – Suction Pressure Control. Suction control of the pumping operation shall be provided by a bellows type, adjustable differential pressure switch. The switch shall be complete with a single pole, double throw contact block with 5 amp non-inductive rated contacts at 230 volts AC. The set points of the on/off cycle shall be independently adjustable through the full range of the switch rating.

1. Low Suction Cut-out, 4-150 psi.
- 1A. Adjustable Differential, 2-25 psi.

A pressure gauge shall be sub-panel mounted adjacent to the low suction pressure switch. The gauge and switch shall be so plumbed with the suction header sensing line that a common blow-off valve can relieve pressure in both simultaneously for purposes of checking and calibrating the low suction lock-out.

10.35.9 Electrical Apparatus – Telemetry Control – Interface. It will be the responsibility of the booster station manufacturer to provide the following as an adjunct to the supplied telemetry equipment.

1. 3/4" telemetry entrance conduit complete to telemetry panel.
2. Size 12" x 12" NEMA 1 telemetry interface panel.
3. Separate 120 volt single phase power circuit in conduit to the telemetry interface panel.
4. Telemetry control circuits made up and in conduit from main control panel to telemetry interface panel terminal strip.
5. Metal framing channel to mount telemetry equipment.

10.35.10 Electrical Apparatus – Devices. Ten (10) solid state time delay relays shall be provided to perform the following functions:

1. Low Suction Timer

2. Start Control Timer Pump #1
3. Stop Control Timer Pump #1
4. Start Control Timer Pump #2
5. Stop Control Timer Pump #2
6. Start Control Timer Pump #3
7. Stop Control Timer Pump #3
8. Parallel Start Pump #1
9. Parallel Start Pump #2
10. Parallel Start Pump #3

The solid state time delay relay shall have an adjustable time range of 10 seconds to 10 minutes. The relays shall be constructed to use a DIN rail mount socket so that the relays can be replaced without disturbing the wiring. The relay shall be complete with LED indicators for output and power.

Hand-Off-Automatic switches shall be oil tight, 3-position maintained and be located on the main control panel door.

1. Pump #1
2. Pump #2
3. Pump #3
4. Exhaust Fan

Indicating lights shall be oil tight, with a full voltage pilot light and be provided:

1. Red - Low Suction Pressure
2. Green - Pump #1 in Operation
3. Green - Pump #2 in Operation
4. Green - Pump #3 in Operation

Nameplates shall be furnished on all panel front mounted switches and lights.

The control panel door shall be complete on the interior with a stick-on transparency containing an "as-built" reproduction of the electrical control panel schematic. The wiring diagram shall be a corrected "as-built" copy & contain individual wire numbers, circuit breaker numbers, switch designation & control function explanations.

10.35.11 Electrical Apparatus – Conduit & Wiring. The service entrance conduits shall be rigid steel conduit, individually sized to accept the inbound service conductors and telemetry/telephone/radio cables, and shall be installed from the main power or control panel through the equipment enclosure floor and terminate exterior to the equipment enclosure. The service entrance exterior conduit connection points shall be capped or plugged for shipment.

All wiring within the equipment enclosure and outside of the control panel or panels shall be run in conduit except for the watertight flexible conduit and fittings properly used to connect pump drivers, fan motors, solenoid valves, limit switches, etc., where flexible connections are best

utilized. Only the dehumidifier where furnished by the original manufacturer with a UL approved rubber cord and plug, may be plugged into a receptacle.

10.35.11.1 Equipment Enclosure Conduit. Rigid, heavy wall, Schedule 40 PVC with solvent weld moisture-proof connections, in minimum size 3/4" or larger, sized to handle the type, number and size of equipment conductors to be carried - in compliance with Article 347 of the National Electrical Code and NEMA TC-2, Federal WC-1094A and UL-651 Underwriters Laboratory Specifications.

10.35.11.2 Flexible Connections. Where flexible conduit connections are necessary, the conduit used shall be liquid-tight, flexible, totally nonmetallic, corrosion resistant, nonconductive, U.L. listed conduit sized to handle the type, number and size of equipment conductors to be carried - in compliance with Article 351 of the National Electrical Code.

10.35.11.3 Motor Circuit Conductors. Sized for load. All branch circuit conductors supplying a single motor of one (1) horsepower or more shall have an ampacity of not less than 125 percent of the motor full load current rating, dual rated type THHN/THWN, as set forth in Article 310 and 430-B of the National Electrical Code, Schedule 310-13 for flame retardant, heat resistant thermoplastic, copper conductors in a nylon or equivalent outer covering.

10.35.11.4 Control & Accessory Wiring. Sized for load, type MTW/AWM (Machine tool wire/appliance wiring material) as set forth in Article 310 and 670 of the National Electrical Code, Schedule 310-13 and NFPA Standard 79 for flame retardant, moisture, heat and oil resistant thermoplastic, copper conductors in compliance with NTMA and as listed by Underwriters Laboratories (AWM), except where accessories are furnished with a manufacturer supplied UL approved rubber cord and plug.

10.35.12 Electrical Apparatus – Receptacles. Two (2) duplex, ground fault circuit interrupter type receptacles shall be furnished about the periphery of the equipment enclosure, with one (1) receptacle adjacent to the main control panel.

10.36.1 Convenience Group – Lighting. There shall be one or more two-tube, 32 watt per tube, electronic start, enclosed and gasketed, forty-eight (48) inch minimum length fluorescent light fixtures installed within the equipment enclosure, as shown on the plan for this item. One (1) light fixture shall be located directly over the main control panel. The light switch shall be of the night glow type and be located conveniently adjacent to the door. Open fluorescent or incandescent fixtures will not be accepted.

10.36.2 Convenience Group – Heating/Cooling/Exhaust Fan. The unit shall be one piece, wall mounted, factory assembled, precharged, prewired, tested and ready to operate. The unit shall have a limited warranty of five years on parts and five years on the compressor. The unit shall be approved and listed by Underwriters' Laboratories, Inc., and Canadian Underwriters' Laboratories (CUL). Unit performance shall be certified in accordance with Air Conditioning and Refrigeration Institute Standard 210/240-89 for Unitary Air-Source air conditioners or latest standard.

1. One (1) each exterior wall mounted, hard-wired as shown;

2. Enclosed weatherproof casing constructed of 20 gauge galvanized steel, finished with baked-on polyester enamel paint;
3. One (1) washable filter;
4. Remote adjustable thermostat;
5. Cooling capacity in tons: 2.5;
6. Cooling Capacity: 31,000 BTUH at 480 volts, 3 phase;
7. Amps: 20;
8. Twin indoor blowers, SCFM maximum/minimum: 1285/885 at 0.2" static pressure;
9. Electrical supplemental heater: 15 kW;

10.36.3 Convenience Group – Dehumidifier.

1. One (1) each, installed as shown.
2. Capacity 30 pints per 24 hours.
3. Compressor rated 115 volts, 60 Hz, 3.4 operating amps.
4. 126 CFM fan, 2 fan speed.
5. Humidity range 35 to 90% RH, ambient temperature range of 42 to 105 F, Type R22 refrigerant.
6. Washable filter.
7. Condensate piped direct to sump.
8. UL listed rubber cord.
9. EPA compliant.

10.37 Factory Start-Up Service.

1. Start-up service technician shall be a regular employee of booster station manufacturer.
2. As part of the submittal covering this equipment, list the factory service manager, his employee number, his telephone number with extension and his number of years with the company. List also each start-up service technician, his employee number and years of service with the company.
3. Verify that one (1) or more of the service technicians listed above will perform the required start-up service on the equipment covered in the submittal.
4. One (1) full day at job site for start-up and training.
5. Start-up service to include two (2) bound O&M manuals.
6. Start-up service report attested to by start-up technician and representative of owner or engineer.
7. Service report distributed to:
 - A. Manufacturer's File
 - B. Engineer's File
 - C. Contractor's File
 - D. Owner's File

10.38 Manufacturer's Warranty. The warranty is the sole responsibility of the station manufacturer and that manufacturer's warranty shall be provided in written form for inclusion with both the submittal covering the specified equipment and the O&M manuals provided with that equipment.

Said manufacturer's warranty shall at a minimum cover:

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.
2. The one (1) year period shall be inviolate regardless of any component manufacturer's warranty for equipment and components within the station.
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.
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.
5. The manufacturer's warranty policy is amended only by the items considered consumables, i.e., light bulbs, pump seals, pump packing, lubricants and other maintenance items consumed by usage.
6. No assumption of contingent liabilities for any component failure during manufacturer's warranty is made.

It is the intent of this manufacturer's warranty to gain for the owner a single source responsible party for all components specified herein. "Second party" or "pass through" warranties will not be accepted.

If the submitted written manufacturer's warranty does not meet the minimum requirements set forth above, that submittal will forthrightly be rejected.

10.39 Payment. The unit price bid shall constitute full compensation for the complete and functioning booster pump station.

SECTION 11 – EROSION CONTROL

11.0 Scope of Work. It is intent of this specification to define the acceptable methods and materials for preparing storm water Best Management Plan and Notice of Intent, installing all applicable erosion control measures in accordance with Best Management Practice Plan and as specified and maintain erosion control measures as needed.

11.1 Installation Plan.

11.1.1 Minimize Disturbance and Buffer Strips Only areas necessary for construction shall be disturbed, cleared or graded. Vehicles and construction equipment shall be excluded from these areas so to preserve all natural vegetation. All areas that are disturbed during construction, including slopes, shall be protected during clearing and construction in accordance with the approved erosion and sediment control plan until they are permanently stabilized.

If top soil is needed for the re-establishment of vegetation, it shall be piled until the necessary amount needed to finish grading of all exposed areas. Areas that are to be filled shall be cleared, grubbed to remove trees, vegetation, roots and other objectionable material, and stripped of topsoil.

Areas to receive topsoil shall be scarified to a minimum depth of three inches prior to the placement of topsoil. All fills shall be compacted as required by building standards to reduce erosion, slippage, settlement, subsidence and other related problems. Fill intended to support buildings, structures, conduits, etc., shall be compacted in accordance with local requirements or codes.

11.1.2 Land Grading for Minimizing Erosion. Only areas necessary for construction shall be disturbed, cleared or graded. Vehicles and construction equipment shall be excluded from these areas so to preserve all natural vegetation. All areas that are disturbed during construction, including slopes, shall be protected during clearing and construction in accordance with the approved erosion and sediment control plan until they are permanently stabilized. All sediment control measures shall be constructed and maintained in accordance with the approved erosion and sediment control plan and according to the standards and specifications for the appropriate erosion control practices.

If top soil is needed for the re-establishment of vegetation, it shall be piled until the necessary amount needed to finish grading of all exposed areas. Areas to receive topsoil shall be scarified to a minimum depth of three inches prior to the placement of topsoil.

The outer face of the fill slope should always be allowed to stay loose, not rolled, compacted, or bladed smooth. A bulldozer may run up and down the fill slope so the dozer treads create groves perpendicular to the slope. Use slope breaks, such as diversions, benches, or contour furrows as appropriate, to reduce the length of cut-and-fill slopes to limit sheet and rill erosion and prevent gullyng. The finish cut-and-fill slopes,

which are to be vegetated with grass and legumes, should not be steeper than two horizontal to one vertical.

Roughen the surface of all slopes during the construction operation to retain water, increase infiltration, and facilitate vegetation establishment.

Seeps or springs encountered during construction shall be handled in accordance with approved methods.

Stabilize all graded areas with vegetation, crushed stone, rip-rap, or other ground cover as soon as grading is completed or if work is interrupted for 21 working days or more.

Use mulch to stabilize areas temporarily where final grading must be delayed. Stockpiles, borrow areas and spoil areas shall be shown on the plans and shall be stabilized to prevent erosion and sedimentation.

11.1.3 Erosion Control Blankets and Matting.

A. Site Preparation. Proper Site Preparation is essential to ensure complete contact of the protection matting with the soil. Grade and shape area of installation. Remove all rocks, clods, vegetation or other obstructions so that the installed blankets, or mats will have direct contact with the soil. Prepare seedbed by loosening two to three inches of topsoil above final grade. Incorporate amendments, such as lime and fertilizer, into soil according to soil test and the seeding plan.

B. Seeding. Seed area before blanket installation for erosion control and re-vegetation or seed after mat installation for turf reinforcement. When seeding prior to blanket installation, all check slots and other areas disturbed during installation must be re-seeded. Where soil filling is specified, seed the matting and the entire disturbed area after installation and prior to filling the mat with soil.

C. Anchoring. U-shaped wire staples, metal geotextile stake pins or triangular wooden stakes can be used to anchor mats to the ground surface. Wire staples should be a minimum of 11 gauge. Metal stake pins should be 3/16 inch diameter steel with a 1 ½ inch steel washer at the head of the pin. Wire staples and metal stake should be driven flush to the soil surface. Two inches of wood staking should remain above the soil surface. All anchors should be six to eight inches long and have sufficient ground penetration to resist pullout. Longer anchors may be required for loose soils.

D. Installation on Slopes. Begin at the top of the slope and anchor its blanket in a six inches deep by six inches wide trench. Backfill trench and tamp earth firmly. Unroll blanket down slope in the direction of the water flow. Lay blankets loosely and maintain direct contact with the soil. Do not stretch. The edges of adjacent parallel rolls must be overlapped two to three inches and be stapled every three feet. When blankets must be spliced, place blankets end over end (shingle style) with six inches overlap. Staple through overlapped area, approximately twelve inches apart.

Blankets shall be stapled sufficiently to anchor blanket and maintain contact with the soil. Staples shall be placed down the center and staggered with the staples placed along the edges. Steep slopes, 1:1 to 2:1, require 2 staples per square yard. Moderate slopes, 2:1 to 3:1, require 1 ½ staples per square yard (1 staple three feet on center). Gentle slopes require 1 staple per square yard.

E. Installation in Channels. Dig initial anchor trench twelve inches deep and six inches wide across the channel at the lower end of the project area. Excavate intermittent check slots, six inches deep and six inches wide across the channel at twenty five to thirty five foot intervals along the channel. Cut longitudinal channel anchor slots four inches deep and four inches wide along each side of the installation to bury edges of matting, whenever possible extend matting two to three inches above the crest of channel side slopes.

Beginning at the downstream end and in the center of the channel, place the initial end of the first roll in the anchor trench and secure with fastening devices at one foot intervals. Note: matting will initially be upside down in anchor trench.

In same manner, position adjacent rolls in anchor trench, overlapping the preceding roll a minimum of three inches. Secure these initial ends of the mats with anchors at one foot intervals, backfill and compact soil. Unroll center strip of matting upstream. Stop at next check slot or terminal anchor trench. Unroll adjacent mats upstream in similar fashion, maintaining three inch overlap.

Fold and secure all rolls of matting snugly into all transverse check slots. Lay mat in the bottom of the slot the fold back against itself. Anchor through both layers of mat at one foot intervals the backfill and compact soil. Continue rolling all mat widths upstream to the next check slot or terminal anchor trench. Alternate method for non-critical installations: place two rows of anchors on six inch centers at twenty five to thirty foot intervals in lieu of excavated check slots.

Shingle-lap spliced ends by a minimum of one foot with upstream mat on top to prevent uplifting by water or begin new rolls in a check slot. Anchor overlapped area by placing two rows of anchors, one foot apart on one foot intervals.

Place edges of outside mats in previously excavated longitudinal slots, anchor using prescribed staple pattern, backfill and compact soil.

Anchor, fill and compact upstream end of map in a twelve inch by six inch terminal trench. Secure mat to ground surface using U-shaped wire staples geotextile pins or wooden stakes. Seed and fill turf reinforcement matting with soil, if specified. After seeding, spread and lightly rake ½ inch to ¾ inch of fine topsoil into the mat apertures to completely fill mat thickness. Use backside of rake or other flat implement.

Spread topsoil using lightweight loader, backhoe, or other power equipment. Avoid sharp turns with equipment. Do not drive tracked or heavy equipment over mat. Avoid any

traffic over matting if loose or wet soil conditions exist. Use shovels, rakes or brooms for fine grading and touch up. Smooth out soil filling just exposing top netting of matrix.

F. Inspection and Maintenance. All blanket and mats should be inspected periodically following installation. Inspect installation after significant rainstorms to check for erosion and undermining. Any failure should be repaired immediately. If washout or breakage occurs, reinstall the material after repairing the damage to the slope or drainage way.

11.1.4 Topsoiling. Determine whether the quality and quantity of available topsoil justifies selective handling. Soils of the textural class of loam, sandy loam, and silt loam are best; sandy clay loam, silty clay loam, clay loam, and loamy sand are fair. Do not use heavy clay and organic soils such as peat or muck as topsoil.

Strip topsoil only from those areas that will be disturbed by excavation, filling, road building, or compaction by equipment. Determine depth of stripping by taking soil cores at several locations within each area to be stripped. Put sediment basins, diversions, and other controls into place before stripping. Select stockpile location to avoid slopes, natural drainage ways, and traffic routes. Use sediment fences or other barriers where necessary to retain sediment.

Protect topsoil stockpiles by temporarily seeding and/or mulching as soon as possible to assure the stored material is not exposed and allowed to erode.

If stockpiles will not be used within twelve months they must be stabilized with permanent vegetation to control erosion and weed growth.

Before spreading topsoil, establish erosion and sedimentation control practices such as diversions, berms, dikes, waterways, and sediment basins.

Where the pH of the existing subsoils 6.0 or less, or the soil is composed of heavy clays, incorporate agricultural limestone in amounts recommended by soil tests or specified for the seeding mixture to be used. Incorporate lime to a depth of at least two inches by disking.

Immediately prior to spreading the topsoil, loosen the subgrade by disking or scarifying to a depth of at least three inches, to ensure bonding of the topsoil and subsoil. If no amendments have been incorporated, loosen the soil to a depth of at least six inches before spreading topsoil.

Uniformly distribute topsoil to a minimum compacted depth of two inches on 3:1 slopes and four inches on flatter slopes.

Do not spread topsoil while it is frozen or muddy or when the subgrade is wet or frozen.

Correct any irregularities in the surface that result from topsoiling or other operations to prevent the formation of depressions or water pockets.

Compact the topsoil enough to ensure good contact with the underlying soil, but avoid excessive compaction, as it increases runoff and inhibits seed germination. Light packing with a roller is recommended where high maintenance turf is to be established.

11.1.5 Temporary Gravel Construction Entrance. The aggregate size for construction of the pad shall be two to three inch stone. Place the gravel to the specific grade and dimensions shown on the plans, and smooth it.

The thickness of the pad shall not be less than six inches. Use geotextile fabrics, if necessary, to improve stability of the foundation in locations subject to seepage or high water table.

The width of the pad shall not be less than the full width of all points of ingress or egress and in any case shall not be less than twelve feet wide.

The length of the pad shall be as required, but not less than fifty feet.

Locate construction entrances and exits to limit sediment leaving the site and to provide for maximum utility by all construction vehicles. Avoid entrances which have steep grades and entrances at curves in public roads.

The entrance shall be maintained in a condition that will prevent tracking or flowing of sediment onto public rights of way. This may require periodic top dressing with additional stone as conditions demand, and repair and/or clean out of any measures used to trap sediment.

All sediment spilled, dropped, washed or tracked onto public rights-of-way shall be removed immediately. Provide drainage to carry water to a sediment trap or other suitable outlet.

When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.

All sediment shall be prevented from entering any storm drain, ditch or watercourse through use of sand bags, gravel, straw bales, or other approved methods.

Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. Replace gravel material when surface voids are visible. After each rainfall, inspect any structure used to trap sediment and clean it out as necessary. Immediately remove all objectionable material spilled, washed, or tracked onto public roadways. Remove all sediment deposited on paved roadways within 24 hours.

11.1.6 Rock, Log and Straw Bale Check Dams. The maximum spacing between the dams shall be such that the toe of the upstream dam is at the same elevation as the top of the downstream dam.

Rock dams shall be constructed of two to fifteen inch rock. Keep the center rock (spill way) section at least six inches lower than the outer wall edges. Extend the abutments eighteen inches into the channel bank.

Straw bales shall be placed in a single row, lengthwise, oriented perpendicular to the flow, with the ends of adjacent bales tightly abutting one another. Straw bales shall be extended such that the bottoms of the end bales are higher in elevation than the top of the middle bale spillway to ensure that sediment-laden runoff will flow over the barrier, and not around it.

Each straw bale shall be embedded in the soil a minimum of four inches. Use straw, rocks, or filter fabric to fill any gaps between the bales and tamp the backfill material to prevent erosion under or around the bales. If the straw bales are wire bound, they should be oriented so the bindings are around the sides rather than along the top and bottom. Wire bindings that are placed in contact with the soil soon disintegrate and may allow the bale to fall apart.

Construct an energy dissipater to reduce downstream erosion.

The check dams shall be inspected for damage periodically during the winter and after each significant storm (one inch in 24 hours). Prompt repairs shall be made to ensure that the dam is functioning properly. Any erosion caused by flows around edges of the dam or under the structure shall be corrected immediately.

Remove sediment from behind the dams when they become sixty percent full, or as needed. The removed sediment shall be deposited in an area that will not contribute sediment off site and can be permanently stabilized. Remove check dams and stakes when stabilization is complete.

11.1.7 Straw Bale Dike. The bales shall be placed on the slope contour at the base of the slope or around the perimeter of the construction site. If the dike is constructed at the toe of a slope, place it five to six feet away from the slope if possible.

Do not construct the dike more than one bale high. Bales shall be placed in a row with the ends tightly abutting. Each bale shall be embedded in the soil a minimum of four inches. Use straw, rocks, or filter fabric to fill any gaps between the bales and tamp the backfill material to prevent erosion under or around the bales.

If the bales are wire bound, they should be oriented so the bindings are around the sides rather than along the top and bottom. Wire bindings that are placed in contact with the soil soon disintegrate and may allow the bale to fall apart.

The bales shall be securely anchored in place by two wooden stakes or rebar driven through the bales. The first stake in each bale shall be driven toward the previously laid bale to force the bales tightly together. Drive the stakes at least eighteen inches into the ground.

The straw bale dikes shall be inspected weekly and after each significant storm (one inch in 24 hours). Repairs and/or replacement shall be made promptly. Remove the straw bales when the upslope areas have been permanently stabilized. Remove sediment behind barrier when it reaches a depth of 6 inches.

11.1.8 Silt Fence. The height of a silt fence shall not exceed thirty six inches. Storage height shall never exceed eighteen inches. The fence line shall follow the contour as closely as possible. If possible, the filter fabric shall be cut from a continuous roll to avoid the use of joints. When joints are necessary, filter cloth shall be spliced only at a support post, with a maximum six inch overlap and both ends securely fastened to the post.

Posts shall be spaced a maximum of ten feet apart and driven securely into the ground (minimum of twelve inches). When extra strength fabric is used without the wire support fence, post spacing shall not exceed six feet. Turn the ends of the fence uphill.

A trench shall be excavated approximately four inches wide and six inches deep along the line of posts and upslope from the barrier.

When standard-strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one inch long, tie wires or hog rings. The wire shall extend into the trench a minimum of two inches and shall not extend more than thirty six inches above the original ground surface.

The standard-strength filter fabric shall be stapled or wired to the fence, and six inches of the fabric shall extend into the trench. The fabric shall not extend more than thirty six inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

When extra-strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts.

The trench shall be backfilled and the soil compacted over the toe of the filter fabric.

Silt fences placed at the toe of a slope shall be at least six feet from the toe in order to increase ponding volume.

Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized, and any sediment stored behind the silt fence has been removed.

Silt fences and filter barriers shall be inspected weekly and after each significant storm (one inch in 24 hours). Any required repairs shall be made immediately. Sediment shall be removed when it reaches 1/3 height of the fence or nine inches maximum.

11.1.9 Drop Inlet Sediment Barriers.

A. Straw Bale Barrier. Excavate a four inch deep trench around the inlet and make the trench as wide as a straw bale in order to embed the bales properly. Orient the straw bales with the bindings around the sides of the bales so the wire does not come in contact with the soil.

Place bales lengthwise around the inlet and press the ends of adjacent bales together. The bales may be loosely joined if more gravel is utilized.

Drive two by two inch stakes through each bale to anchor the bale securely in place.

Utilize ¾ inch to two inch gravel to fill the void spaces between the bales if necessary to dewater the ponded area more rapidly.

B. Silt Fence Sediment Barrier. Support posts for a silt fence must be steel fence posts or two inch by four inch wood, length three feet minimum, spacing three feet maximum, with a top frame support recommended. Excavate a trench four inches wide and six inches deep and bury the bottom of the silt fence in the trench. Backfill the trench with gravel or soil. Compact backfill well. The height of the silt fence shall be a maximum of eighteen inches measured from the top of the inlet.

Inspect the barrier after each rain and promptly make repairs as needed. Sediment shall be removed after each significant storm (one inch in 24 hours) to provide adequate storage volume for the next rain. The removed sediment shall be deposited in an area that will not contribute sediment off-site and can be permanently stabilized. For gravel filters, if the gravel becomes clogged with sediment it must be carefully removed from the inlet and either cleaned or replaced.

11.1.10 Curb Inlet Sediment Barriers. Place the barriers on gently sloping streets where water can pond. The barriers must allow for overflow from a severe storm event. Slope runoff shall be allowed to flow over blocks and gravel and not be bypassed over the curb. A spillway shall be constructed with the sandbag structures to allow overflow.

The sandbags should be of woven-type geotextile fabric since burlap bags deteriorate rapidly. Sandbags shall be filled with ¾ inch drain rock or ¼ inch pea gravel.

The sandbag shall be placed in a curved row from the top of the curb at least three feet into the street. The row should be curved at the ends, pointing uphill.

Several layers of bags should be overlapped and packed tightly. Leave a one-sandbag gap in the top row to act as a spillway.

Inspect and clean the barrier after each significant storm (one inch in 24 hours) and remove sediment from behind the structure after every storm. Any sediment and gravel shall be immediately removed from the traveled ways of roads. The removed sediment shall be placed where it cannot enter a storm drain, stream, or be transported off site.

SECTION 12 - EXPLORATION

12.0 Work Included. Under this item the Contractor shall provide all labor, tools, equipment, and materials to explore for existing water lines and appurtenances that are not as shown on the Drawings.

12.1 Description of Work. In those locations where the existing water lines and appurtenances are not in the locations as shown on the Drawings the Contractor shall explore for the utility at the direction of the Engineer. The Contractor shall utilize all equipment necessary to search for the water line or appurtenance and any disturbance of other utilities shall be the responsibility of the Contractor. Any other work or disturbance created by the Contractor as a result of the exploration shall be incidental to this item.

In locations where new water lines are to be installed parallel to existing lines, the contractor shall locate existing water lines in 100 foot intervals. This particular requirement shall be considered incidental to the installation of the water lines and it shall not be included in the calculation of this pay item.

12.2 Payment. The unit price bid shall constitute full compensation for the exploration of the water lines and appurtenances. The Resident Engineer shall approve the Contractor to initiate and terminate the exploration and the Resident Engineer shall monitor the amount of time in 15 minute increments.