STIGALL ENGINEERING ASSOCIATES, INC.

4117 Hillsboro Pike, Suite 206 • Nashville, Tennessee 37215 • Telephone: 615-460-7515 • Facsimile: 615-460-7517

March 12, 2007

Ms. Beth O'Donnell, Executive Director
Commonwealth of Kentucky
Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40601

RECEIVED
MAR 16 2007
PUBLIC SERVICE
COMMISSION

Re: Crittenden-Livingston County Water District
Phase XIII Water System Improvements
PSC Case No. 2007-00094
SEA Project No. 0357

Dear Ms. O'Donnell:

Please find enclosed two sets of plans and specifications for your use concerning the referenced project.

We and the District greatly appreciate of all the assistance you have provided on this and other projects and please contact me if additional information would be helpful.

Sincerely,
STIGALL ENGINEERING ASSOCIATES, INC.

Robert D. Stigall, P.E.
President

Enclosures

RDS/mac

cc: Mr. W. Randall Jones, Esquire
Rubin & Hays

PRELIMINARY ENGINEERING REPORT

Case No 2007-00094

CRITTENDEN-LIVINGSTON
COUNTY WATER DISTRICT

XIII
WATER SYSTEM IMPROVEMENTS

Prepared By:

STIGALL ENGINEERING ASSOCIATES, INC.
4117 Hillsboro Pike, Suite 206
Nashville, Tennessee 37215

June, 2006
SEA Project No. 0357

STATE OF KENTUCKY
ROBERT D. STIGALL
15,006
LICENSED
PROFESSIONAL ENGINEER

6-30-06

STIGALL ENGINEERING ASSOCIATES, INC.

4117 Hillsboro Pike, Suite 206 • Nashville, Tennessee 37215 • Telephone: 615-460-7515 • Facsimile: 615-460-7517

ADDENDUM I

CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT
PHASE XIII WATER SYSTEM IMPROVEMENTS

SEA Project No. 0357
October 24, 2006

Bid Opening: Thursday, November 9, 2006
11:00 a.m., Local Time

The attention of all prospective bidders, suppliers, subcontractors, manufacturers, etc. is directed to the following additions, deletions, corrections, and clarifications to the contract documents:

- **Information for Bidders, Bid Schedule, Agreement & Notice to Proceed:** The time of completion shall be revised to 400 consecutive calendar days.

- **Bid Schedule:** Item 25 of the bid schedule; directional bore (shown on plans sheet number 8); material shall be Class 200 polyethylene pipe.

END OF ADDENDUM
STIGALL ENGINEERING ASSOCIATES, INC.

for Robert D. Stigall, P.E.
President

RDS/mac

Crittenden-Livingston County Water District
Phase XIII Water System Improvements

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** A separate table of contents precedes each section of the technical specifications.*

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ADVERTISEMENT FOR BIDS

CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT
620 EAST MAIN STREET
SALEM, KENTUCKY 42078

Separate sealed BIDS for the construction of the PHASE XIII WATER SYSTEM IMPROVEMENTS will be received by the CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT at the CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT office until 11:00 a.m., (Local Time), Thursday, November 9, 2006, and then at said office publicly opened and read aloud.

The CONTRACT DOCUMENTS may be examined at the following locations:

Crittenden-Livingston Co. Water Dist.
620 East Main Street
Salem, Kentucky 42078

Stigall Engineering Associates, Inc.
4117 Hillsboro Pike, Suite 206
Nashville, Tennessee 37215

McGraw Hill Dodge Corporation
1604 Elm Hill Pike, Suite 200
Nashville, Tennessee 37210

West Kentucky Const. Assoc.
2201 McCracken Boulevard
Paducah, Kentucky 42001

Copies of the CONTRACT DOCUMENTS may be obtained at the office of STIGALL ENGINEERING ASSOCIATES, INC., 4117 HILLSBORO PIKE, SUITE 206, NASHVILLE, TENNESSEE 37215 upon payment of a $200.00 non-refundable deposit.

Bids shall be accompanied by a certified check or bid bond in the amount equal to Five percent (5%) of the bid to insure the execution of the contract for which the bid is made. In case the bid is not accepted, the check or bid bond will be returned to the bidder, but if the bid is accepted and the bidder shall refuse or neglect to enter into a contract with the CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT within ten (10) days after the time he has been notified of the acceptance of his bid, the said check or bid bond shall be forfeited to the CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT as liquidated damages for the failure so to do.

No bidder may withdraw his bid for a period of ninety (90) days after the closing time schedule for the receipt of bids.

The CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT reserves the right to waive informalities and to reject any and all bids.

October, 2006

Randell O'Bryan, Chairman
Crittenden-Livingston Co. Water Dist.

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INFORMATION FOR BIDDERS

1. Receipt and Opening of Bids

The CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT (herein called the "OWNER"), invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the office of the CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT; 620 EAST MAIN STREET; SALEM, KENTUCKY 42078 until 11:00 a.m., (Local Time), Thursday, November 9, 2006. All bids are to be sealed and addressed to the CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT and designated as bid for:

PHASE XIII WATER SYSTEM IMPROVEMENTS

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 60 days after the actual date of the opening thereof.

2. Preparation of Bid

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his address, the name of the project for which the bid is submitted and all other information required by State Law. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form.

All bidders must be licensed General Contractors as required by the Contractor's Licensing Act of 1976 of the General Assembly of the State of Tennessee, and qualified for the type of construction being bid upon. Each bidder shall write on the outside of the envelope containing its bid: 1) its Contractor's license number; and, 2) that part of the classification applying to the bid. If this is not done, the bid will not be opened.

3. Subcontracts

The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this contract:

a. Must be acceptable to the Owner after verification by the State of the current eligibility status;

4. Telegraphic Modification

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

5. Method of Bidding

The Owner invites bids for the following: UNIT PRICE BIDS

6. Qualification of Bidder

The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bids if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

7. Bid Security

Each bid must be accompanied by cash, certified check of the bidder, or a bid bond prepared on the form of bid bond attached thereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of five (5) percent of the bid. Such cash, checks, or bid bonds will be returned to all except the three lowest bidders within three days after the opening of bids, and the remaining cash, checks, or bid bonds will be returned promptly after the Owner and the accepted bidder have executed the contract, or, if no award has been made within sixty days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he/she has not been notified of the acceptance of his/her bid.

8. Liquidated Damages for Failure to Enter Into Contract

The successful bidder, upon his/her failure or refusal to execute and deliver the contract and bonds required within ten (10) days after he/she has received notice of the acceptance of his/her

bids, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his/her bid.

9. Time of Completion and Liquidated Damages

Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within 360 consecutive calendar days thereafter. Bidder also must agree to liquidated damages for each consecutive calendar day thereafter that the work remains incomplete as liquidated damages as hereinafter provided in the Supplemental General Conditions.

10. Condition of Work

Each bidder must inform himself/herself fully of the conditions relating to the construction of the project and the employment of labor thereof. Failure to do so will not relieve a successful bidder of his/her obligation to furnish all material and labor necessary to carry out the provisions of his/her contract. Insofar as possible, the contractor in carrying out the work, must employ such methods as will not cause any interruption of, or interference with, the work of any other contractor.

11. Addenda and Interpretations

No interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder orally. Every request for such interpretation should be made in writing addressed to STIGALL ENGINEERING ASSOCIATES, INC., 4117 HILLSBORO ROAD, SUITE 206, NASHVILLE, TENNESSEE 37215 and to be given consideration must be received at least five days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be mailed by certified mail with return receipt requested to all prospective bidders (at the respective addresses furnished for such purposes), not later than three days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bids as submitted. All addenda so issued shall be come part of the contract documents.

12. Security for Faithful Performance

Simultaneously with his/her delivery of the executed contract, the Contractor shall furnish a surety bond or bonds as security for the faithful performance of this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner.

13. Power of Attorney

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

14. Notice of Special Conditions

Attention is particularly called to those parts of the contract documents and specifications which deal with the following:

a. inspection and testing of materials,
b. insurance requirements,
c. wage rates, and
d. stated allowances.

15. Laws and Regulations

The bidder's attention is directed to the fact that all applicable State Laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract, the same as though herein written our in full.

16. Obligation of Bidder

At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect of his bid.

17. Safety Standards and Accident Prevention

With respect to all work performed under this contract, the contractor shall:

a. Comply with the safety standards provisions of applicable laws, building and construction codes, and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of Title 29 of the Code of Federal Regulations, Section 1518 as published in the "Federal Register," Volume 36, No. 75, Saturday, April 17, 1971.

b. Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.

c. Maintain at his/her office or other well known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or a doctor's care of persons (including employees),

who may be injured on the job site. In no case shall employees be permitted to work at a job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.

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Ernie Fletcher
Governor

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT OF LABOR
OFFICE OF WORKPLACE STANDARDS
1047 US Hwy 127 S STE 4
Frankfort, Kentucky 40601
Phone: (502) 564-3070
www.labor.ky.gov

Teresa J. Hill
Secretary

Philip J. Anderson
Commissioner

Christopher H. Smith
Executive Director

October 4, 2006

Robert Stigall
Stigall Engrg. Assoc.
4117 Hillsboro Pike
Nashville TN 37215-2728

Re: Crittenden Livingston Co. Water District, Phase XIII Water System Improvements
070-H-00011-06-2, Heavy/Highway

Advertising Date as Shown on Notification: October 11, 2006

Dear Robert Stigall:

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-2-004, dated August 14, 2006 for LIVINGSTON 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:
070-H-00011-06-2, Heavy/Highway

Sincerely,

Jan Peters-Haynes
Prevailing Wage Specialist

KENTUCKY DEPARTMENT OF LABOR
PREVAILING WAGE DETERMINATION
CURRENT REVISION
LOCALITY NO. 04

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES

Determination No. CR-2-004 2006

Date of Determination: August 14, 2006

Project No. 070-H-00011-06-2, Heavy/Highway

This schedule of the prevailing rate of wages for Caldwell, Crittenden, Henderson, Livingston, Union, &, Webster 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-2-004 2006

Apprentices shall be permitted to work as such subject to Administrative Regulations adopted by the Executive Director of the Office 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) hours per day, and/or in excess of forty (40) hours 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 calendar day, but not more than ten (10) hours worked in any one calendar day, if such written agreement is prior to the over eight (8) hours in a calendar day 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.

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.

Christopher H. Smith, Executive Director
Office of Workplace Standards
Kentucky Department of Labor

Determination No. CR-2-004 2006
August 14, 2006

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES:

ASBESTOS/ INSULATION WORKERS:

Asbestos/Insulation Workers: (Includes application of all insulating materials, protective coverings, coating and finishings of all types of mechanical systems):

BASE RATE	$25.05
FRINGE BENEFITS	10.65

Hazardous Material Handler: (Includes preparation, wetting, stripping, removal, strapping, vacuuming, bagging, and disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems):

BASE RATE	$17.55
FRINGE BENEFITS	8.40

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES:

BOILERMAKERS:

BASE RATE	$31.29
FRINGE BENEFITS	15.47

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES:

BRICKLAYERS:

Bricklayers:

BASE RATE	$25.25
FRINGE BENEFITS	10.20

Marble Setters, Terrazzo Workers, & Tile Setters:

BUILDING	BASE RATE	$24.22
	FRINGE BENEFITS	9.41

Marble Setters Finishers, Terrazzo Workers Finishers, & Tile Setters Finishers:

BUILDING	BASE RATE	$18.09
	FRINGE BENEFITS	9.24

CALDWELL, CRITTENDEN, & LIVINGSTON COUNTIES:

CARPENTERS:

Carpenters: (Including Drywall Hanging, Batt Insulation & Formwork):

BUILDING	BASE RATE	$18.11
	FRINGE BENEFITS	9.70

UNION & WEBSTER COUNTIES:

CARPENTERS:

Carpenters: (Including Drywall Hanging, Batt Insulation & Formwork):

BUILDING	BASE RATE	$19.24
	FRINGE BENEFITS	8.24

HENDERSON COUNTY:

CARPENTERS:

Carpenters, Soft Floor Layers:	BUILDING	BASE RATE	$19.24
		FRINGE BENEFITS	8.24
Piledrivermen:	BUILDING	BASE RATE	$19.49
		FRINGE BENEFITS	8.24

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES:

CARPENTERS:

Carpenters:	HEAVY & HIGHWAY	BASE RATE	$23.30
		FRINGE BENEFITS	8.02
Piledrivermen:	HEAVY & HIGHWAY	BASE RATE	$23.55
		FRINGE BENEFITS	8.02
Divers:	HEAVY & HIGHWAY	BASE RATE	$35.33
		FRINGE BENEFITS	8.02

CALDWELL, CRITTENDEN & LIVINGSTON COUNTIES:

CEMENT MASONS & CONCRETE FINISHERS:

BUILDING	BASE RATE	$18.85
	FRINGE BENEFITS	8.15

HENDERSON, UNION & WEBSTER COUNTIES:

CEMENT MASONS & CONCRETE FINISHERS:

BUILDING	BASE RATE	$21.00
	FRINGE BENEFITS	9.49

CALDWELL, CRITTENDEN & LIVINGSTON COUNTIES:

ELECTRICIANS:

Electricians:		BASE RATE	$26.32
		FRINGE BENEFITS	11.47
Cable Splicers:	HEAVY & HIGHWAY	BASE RATE	$26.57
		FRINGE BENEFITS	11.47

HENDERSON, UNION & WEBSTER COUNTIES:

ELECTRICIANS:

Electricians:	BASE RATE	$25.12
	FRINGE BENEFITS	11.92
Heilarc Welding; & Cable Splicing:	BASE RATE	$25.37
	FRINGE BENEFITS	11.98

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES:

ELEVATOR CONSTRUCTORS:	BASE RATE	$21.51
	FRINGE BENEFITS	6.12

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES:

GLAZIERS:	BASE RATE	$22.93
	FRINGE BENEFITS	8.42

CALDWELL (Northeastern third, including the township of Creswell), CRITTENDEN (Northeastern half, including Townships of Grove, Matoon, Repton, Shady Grove & Tribune), HENDERSON, UNION & WEBSTER COUNTIES:

IRONWORKERS:

Structural:	BASE RATE	$23.50
	FRINGE BENEFITS	12.475

CALDWELL (Southwestern two-thirds, including the Townships of Cedar Bluff, Cider, Claxton, Cobb, Crowtown, Dulaney, Farmersville, Fredonia, McGowan, Otter Pond & Princeton), CRITTENDEN (Southwestern half, including Townships of Crayne, Dycusburg, Frances, Marion, Mexico, Midway, Sheridan & Told), & LIVINGSTON COUNTIES:

IRONWORKERS:

Structural:	BUILDING	BASE RATE	$21.60
		FRINGE BENEFITS	11.84
Projects with a total contract cost of $20,000,000.00 or above:			
	HEAVY & HIGHWAY	BASE RATE	$22.90
		FRINGE BENEFITS	12.90
All Other Work:	HEAVY & HIGHWAY	BASE RATE	$21.60
		FRINGE BENEFITS	11.84

CALDWELL COUNTY:

LABORERS/ BUILDING:

GROUP 1:
General Laborers, watchman, water boy, wrecking labor on building and structures, clearing right-of-way and building site, carpenter tender, deck hand flagging traffic, truck spotters and dumpers, axe and cross cut saw filer, concrete puddlers and form strippers, asbestos abatement laborers, toxic waste removal laborer, lead abatement laborer:

BUILDING	*BASE RATE	$17.52
	FRINGE BENEFITS	8.33

* Powderman or Blasters wages to be $.50 above base rate.

GROUP 2:
All power driven tools, hod carriers, mason tenders, finishing tenders, mortar mixers, jack hammer, vibrators, soil compactors, wagon drill, core drill, test drill, well drill, concrete pump machine, tunnel boring machine, men in tunnel and crib ditch work, signal men, riprap rock setters and handlers, asphalt rakers, tampers and smoothers, pipe layers, grout pump man, chain saw, pipe clearing, doping and wrapping, swampers and straight cable hooking, cement guns, grade checkers machine excavating, tool room checkers, batch plant scale man, sand hog free air, sand hog compressed air, cutting torch man on salvage work, road form setters, brick slingers, hand spikers, power buggy, handling of creosote material, sandblasters, curing of concrete and apply hardener, air and gas tampers, concrete saw, power post hole diggers and green cut men on concrete work. Request that two men be used on pavement breakers, multi-craft tender:

BUILDING	BASE RATE	$17.72
	FRINGE BENEFITS	8.33

LIVINGSTON COUNTY:

LABORERS/ BUILDING:

GROUP 1:
General Laborers, watchman, water boy, wrecking labor on building and structures, clearing right-of-way and building site, carpenter tender, deck hand flagging traffic, truck spotters and dumpers, axe and cross cut saw filer, concrete puddlers and form strippers, asbestos abatement laborers, toxic waste removal laborer, lead abatement laborer:

BUILDING	*BASE RATE	$17.42
	FRINGE BENEFITS	8.43

* Powderman or Blasters wages to be $.50 above base rate.

GROUP 2:
All power driven tools, hod carriers, mason tenders, finishing tenders, mortar mixers, jack hammer, vibrators, soil compactors, wagon drill, core drill, test drill, well drill, concrete pump machine, tunnel boring machine, men in tunnel and crib ditch work, signal men, riprap rock setters and handlers, asphalt rakers, tampers and smoothers, pipe layers, grout pump man, chain saw, pipe clearing, doping and wrapping, swampers and straight cable hooking, cement guns, grade checkers machine excavating, tool room checkers, batch plant scale man, sand hog free air, sand hog compressed air, cutting torch man on salvage work, road form setters, brick slingers, hand spikers, power buggy, handling of creosote material, sandblasters, curing of concrete and apply hardener, air and gas tampers, concrete saw, power post hole diggers and green cut men on concrete work. Request that two men be used on pavement breakers, multi-craft tender:

BUILDING	BASE RATE	$17.62
	FRINGE BENEFITS	8.43

CRITTENDEN, HENDERSON, UNION & WEBSTER COUNTIES:

LABORERS/ BUILDING:

GROUP 1:
Building & Construction, Scaffold Builder (Other than for Masons or Plasterers), Window Washer & Cleaner, Railroad Worker, Masonry Wall Washer (interior & exterior), Cement Finisher Tender, Carpenter Tender, Portable Water Pump with discharge up to 3", Flagperson, Signalperson, Wire Mesh, Fire Prevention, Fire Watch, Fire Stop Tender:

BUILDING	*BASE RATE	$18.99
	FRINGE BENEFITS	7.00

CRITTENDEN, HENDERSON, UNION & WEBSTER COUNTIES:

LABORERS/ BUILDING: (Continued)

GROUP 2:
Waterproofing, Handling of Creosote Lumber or like treated material (Excluding Railroad Material), Handling of Toxic Materials Damaging to Clothing, Asphalt Raker & Luteman, Kettleman, Air Tool Operator, Vibrator, Chipping Hammer Operator, Pneumatic tool Operator & Earth Compactor, Jack Man & Sheeting Man Working in Ditches deeper than 6 Feet, Working in Ditches 6 Feet in depth or deeper, Assembly of Unicrete Pump, Chain Saw Operator, Tile Layer (Sewer or Field), Sewer Pip Layer (Metallic and Non-Metallic) 5ft. outside the building foundation, Motor Driven Wheelbarrow & Concrete Buggy, Hyster Operator, Pumpcrete Assembler, Conveyor Assembler, Core Drill Operator, Cement/Lime/Silica Clay Handler (Bulk or Bag), Pneumatic Spiker, Deck Engine & Winch Operator, Water Main & Cable Ducking (Metallic or Non-Metallic), Water Line Layers 5 ft. outside the building foundation, & Grout Pump Operator":

	BUILDING	*BASE RATE	$19.19
		FRINGE BENEFITS	7.00

GROUP 3:
Plaster Tender, Mason Tender, Mortar Mixer, Cutting Torch or Burner, Cement Gun Operator, Scaffold Builder (When working for Plasterer or Mason), & Fork Lift Operator, Asbestos Abatement, Hazardous Materials & Lead Abatement handling and removal; Gunman or Potman:

	BUILDING	*BASE RATE	$19.49
		FRINGE BENEFITS	7.00

GROUP 4:

Gunite or shot Crete Nozzle:	BUILDING	*BASE RATE	$19.99
		FRINGE BENEFITS	7.00

GROUP 5:

Dynamite Man:	BUILDING	*BASE RATE	$20.74
		FRINGE BENEFITS	7.00

*Caisson & Tunnel work in Free Air --$1.00 over base rate, Caisson Bottom Man - $2.00 over base rate, Caisson & Tunnel work in Compressed Air: 0-15 lbs. - $1.00 over base rate, 16-20 lbs - $1.50 over base rate, 21-26 lbs - $2.00 over base rate, 27-33 lbs - $3.00 over base rate, 34 & over lbs - $4.00 over base rate

CRITTENDEN, HENDERSON, UNION & WEBSTER COUNTIES:

LABORERS/ HEAVY & HIGHWAY:

GROUP 1:
Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental – Nuclear, Radiation, Toxic & Hazardous Waste – Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; & Wrecking of Concrete Form:

HEAVY & HIGHWAY	BASE RATE	$19.56
	FRINGE BENEFITS	8.05

GROUP 2:
Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental – Nuclear, Radiation, Toxic & Hazardous Waste – Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; & Wagon Driller:

HEAVY & HIGHWAY	BASE RATE	$19.81
	FRINGE BENEFITS	8.05

GROUP 3:
Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditch; Screw Operator; Tunnel (Free air); & Water Blaster:

HEAVY & HIGHWAY	BASE RATE	$19.86
	FRINGE BENEFITS	8.05

GROUP 4:
Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powderman & Blasters:

HEAVY & HIGHWAY	BASE RATE	$20.08
	FRINGE BENEFITS	8.05

CALDWELL COUNTY

LABORERS/ HEAVY & HIGHWAY:

GROUP 1:
Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental – Nuclear, Radiation, Toxic & Hazardous Waste – Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; & Wrecking of Concrete Form:

HEAVY & HIGHWAY	BASE RATE	$19.18
	FRINGE BENEFITS	8.43

GROUP 2:
Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental – Nuclear, Radiation, Toxic & Hazardous Waste – Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; & Wagon Driller:

HEAVY & HIGHWAY	BASE RATE	$19.43
	FRINGE BENEFITS	8.43

GROUP 3:
Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditch; Screw Operator; Tunnel (Free air); & Water Blaster:

HEAVY & HIGHWAY	BASE RATE	$19.48
	FRINGE BENEFITS	8.43

GROUP 4:
Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powderman & Blasters:

HEAVY & HIGHWAY	BASE RATE	$20.08
	FRINGE BENEFITS	8.43

LIVINGSTON COUNTY

LABORERS/HEAVY & HIGHWAY:

GROUP 1:
Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental – Nuclear, Radiation, Toxic & Hazardous Waste – Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; & Wrecking of Concrete Form:

HEAVY & HIGHWAY	BASE RATE	$18.40
	FRINGE BENEFITS	9.21

GROUP 2:
Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental – Nuclear, Radiation, Toxic & Hazardous Waste – Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; & Wagon Driller:

HEAVY & HIGHWAY	BASE RATE	$18.65
	FRINGE BENEFITS	9.21

GROUP 3:
Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditch; Screw Operator; Tunnel (Free air); & Water Blaster:

HEAVY & HIGHWAY	BASE RATE	$18.70
	FRINGE BENEFITS	9.21

GROUP 4:
Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powderman & Blasters:

HEAVY & HIGHWAY	BASE RATE	$19.30
	FRINGE BENEFITS	9.21

CALDWELL, CRITTENDEN, & LIVINGSTON COUNTIES:

MILLWRIGHTS:	BASE RATE	$21.59
	FRINGE BENEFITS	11.64

HENDERSON, UNION & WEBSTER COUNTIES:

MILLWRIGHTS:	BASE RATE	$21.58
	FRINGE BENEFITS	11.90

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES:

OPERATING ENGINEERS/ BUILDING:

Auto Patrol; Batcher Plant; Bituminous Paver; Cable Way; Carrydeck Crane; Central Compressor Plant; Clamshell; Concrete Mixer (21 cu. ft. or over); Concrete Pump; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching & Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loader; Heavy Equipment Robotics Operator/Mechanic; Hoe type Machine; Hoist (1-drum when used for stack or chimney construction or repair); Hoisting Engine (2-drums or more); Horizontal Directional Drill Operator; Hydraulic Boom Truck; Locomotive; Mechanically Operated Laser Screed; Motor Scraper; Carry-all Scoop; Bulldozer; Mechanic; Orangepeel Bucket; Overhead Crane; Pile Driver; Power Blade; Roller (Bituminous); Scarifier; Shovel; Tractor Shove; Truck Crane; Winch Truck; Push Dozer; High Lift; Fork Lift (regardless of lift height & except when used for masonry construction); Telescoping Type Forklift; Boom Cat; 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 Crane, (French, German & other types); Hydro Crane; Backfiller; Gurries; Subgrader; & Tunnel Mining Machine, including Moles, Shields or similar types of Tunnel Mining Equipment:

BUILDING	*BASE RATE	$21.85
	FRINGE BENEFITS	10.40

***Crane with boom 150 feet and over, including jib, shall receive $1.00 above Base Rate; 225 feet or over, including jib, shall receive $1.50 over Base Rate. Crane using piling leads shall receive $1.00 over Base Rate regardless of boom length.**

Air Compressor (over 900 cu. ft. per min.); Bituminous Mixer; Joint Sealing Machine; Concrete Mixer (under 21 cu. ft.); Form Grader; Roller (rock); Tractor (50 HP & over); Bull Float; Finish Machine; Outboard Motor Boat; Flexplane; Fireperson; Boom type Tamping Machine; Truck Crane Oiler; Greaser on Grease facilities servicing heavy equipment; Switchman or Brakeman; Whirley Oiler; Self-Propelled Compactor; Tractair & Road Widening Trencher & Farm Tractor with attachments (except Backhoe, Highlift, End Loader); Elevator (when used to hoist building materials), Hoisting Engine (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:

BUILDING	BASE RATE	$19.11
	FRINGE BENEFITS	10.40

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES:

OPERATING ENGINEERS/ BUILDING: (Continued)

Bituminous Distributor, Cement Gun, Conveyor, Mud Jack, Paving Joint Machine, Roller (earth), Tamping Machine, Tractor (under 50 HP), Vibrator, Oiler, Concrete Saw, Burlap & Curing Machine, Hydro-Seeder, Power Form Handling Equipment, Deckhand Steersman, & Hydraulic Post Driver:

BUILDING	BASE RATE	$18.34
	FRINGE BENEFITS	10.40

HAZARDOUS PAY FOR ALL OPERATORS: Personal Protective Equipment, Level A $1.00 Premium over Base Rate, Level B $.75 Premium over Base Rate, Level C $.50 Premium over Base Rate and Level D No Premium.

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES:

OPERATING ENGINEERS/ HEAVY HIGHWAY:

GROUP A:
A-Frame Winch Truck; Auto Patrol; Backfiller; Batcher Plant; Bituminous Paver; Bituminous Transfer Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-all Scoop; Carry Deck Crane; Central Compressor Plant; Clamshell; Concrete Mixer (21 cu. ft. or Over); Concrete Paver; Truck-Mounted Concrete Pump; Core Drill; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching & Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loaders; Grade-All; Gurries; Heavy Equipment Robotics Operator/Mechanic; High Lift; Hoe-Type Machine; Hoist (Two or More Drums); Hoisting Engine (Two or More Drums); Horizontal Directional Drill Operator; 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; Rotary Drill; Roller (Bituminous); Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment:

HEAVY & HIGHWAY	*BASE RATE	$22.80
	FRINGE BENEFITS	10.90

GROUP B:
Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor; Elevator (One Drum or Buck Hoist); Elevator (when used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Concrete Pump;

Continued on next page

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES:

OPERATING ENGINEERS/ HEAVY HIGHWAY: (Continued)

GROUP B:
Continued from previous page
Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 HP or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler:

	HEAVY & HIGHWAY	*BASE RATE	$20.38
		FRINGE BENEFITS	10.90

GROUP B2:
All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment:

	HEAVY & HIGHWAY	*BASE RATE	$20.76
		FRINGE BENEFITS	10.90

GROUP C:
Bituminous Distributor; Burlap & Curing Machine; 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); Steerman; Tamping Machine; Tractor (Under 50 HP); & Vibrator:

	HEAVY & HIGHWAY	*BASE RATE	$20.12
		FRINGE BENEFITS	10.90

***Cranes with booms 150 ft. & over (including jib) $1.00 premium. Employees assigned to work below ground level are to be paid 10% above basic wage rate. This does not apply to open cut work.**

CALDWELL, CRITTENDEN & LIVINGSTON COUNTIES:

PAINTERS:

Painters: (Including Drywall Finishing)

	BUILDING	BASE RATE	$17.75
		FRINGE BENEFITS	8.25
Bridges & Dams	HEAVY & HIGHWAY	*BASE RATE	$24.00
		FRINGE BENEFITS	8.25
All Other Work	HEAVY & HIGHWAY	*BASE RATE	$17.75
		FRINGE BENEFITS	8.25

***Waterblasting units with 3500 PSI and above - $.50 premium; Spraypainting and all abrasive blasting - $1.00 premium; Work 40 ft. and above ground level – $1.00 premium**

HENDERSON COUNTY:

PAINTER/ BUILDING

Sign Painter & Erector:	BUILDING	BASE RATE	$17.57
		FRINGE BENEFITS	4.55

Steam Generating & Power Plants:

Brush, Roller & Paperhanger:	BUILDING	BASE RATE	$22.90
		FRINGE BENEFITS	9.53
Drywall Finisher, Plasterer:	BUILDING	BASE RATE	$23.15
		FRINGE BENEFITS	9.53

Spray, Sandblast, Power Tools, Waterblast, Steamcleaning, Brush & Roller of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy:

BUILDING	BASE RATE	$23.90
	FRINGE BENEFITS	9.53

Spray of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy:

BUILDING	BASE RATE	$24.90
	FRINGE BENEFITS	9.53

All Other Work:

Brush, Roller & Paperhanger:	BUILDING	BASE RATE	$21.75
		FRINGE BENEFITS	9.53
Drywall Finisher, Plasterer:	BUINDING	BASE RATE	$22.00
		FRINGE BENEFITS	9.53

Spray, Sandblast, Power Tools, Waterblast, Steamcleaning, Brush & Roller of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy:

BUILDING	BASE RATE	$22.75
	FRINGE BENEFITS	9.53

Spray of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy:

BUILDING	BASE RATE	$23.75
	FRINGE BENEFITS	9.53

UNION & WEBSTER COUNTIES:

PAINTERS/ BUILDING

Painters:	BUILDING	BASE RATE	$21.75
		FRINGE BENEFITS	9.53

UNION & WEBSTER COUNTIES:

PAINTERS: (Continued)

Drywall Finishers	BUILDING	BASE RATE	$22.00
		FRINGE BENEFITS	9.53

HENDERSON, UNION & WEBSTER COUNTIES:

PAINTERS/ HEAVY & HIGHWAY

Steam Generating & Power Plants:

Brush, Roller & Paperhanger:	HEAVY & HIGHWAY	BASE RATE	$22.90
		FRINGE BENEFITS	9.53
Drywall Finisher, Plasterer:	HEAVY & HIGHWAY	BASE RATE	$23.15
		FRINGE BENEFITS	9.53

Spray, Sandblast, Power Tools, Waterblast, Steamcleaning, Brush & Roller of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy:

HEAVY & HIGHWAY	BASE RATE	$23.90
	FRINGE BENEFITS	9.53

Spray of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy:

HEAVY & HIGHWAY	BASE RATE	$24.90
	FRINGE BENEFITS	9.53

All Other Work:

Brush, Roller & Paperhanger:	HEAVY & HIGHWAY	BASE RATE	$21.75
		FRINGE BENEFITS	9.53
Drywall Finisher, Plasterer:	HEAVY & HIGHWAY	BASE RATE	$22.00
		FRINGE BENEFITS	9.53

Spray, Sandblast, Power Tools, Waterblast, Steamcleaning, Brush & Roller of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy:

HEAVY & HIGHWAY	BASE RATE	$22.75
	FRINGE BENEFITS	9.53

Spray of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy:

HEAVY & HIGHWAY	BASE RATE	$23.75
	FRINGE BENEFITS	9.53

CALDWELL, CRITTENDEN, LIVINGSTON, UNION & WEBSTER COUNTIES:

PLASTERERS:	BUILDING	BASE RATE	$16.63

HENDERSON COUNTY:

PLASTERERS:	BUILDING	BASE RATE	$21.90
		FRINGE BENEFITS	6.99

CALDWELL, CRITTENDEN & LIVINGSTON COUNTIES:

PLUMBERS & STEAMFITTERS: (Including HVAC Pipe):	BASE RATE	$27.18
	FRINGE BENEFITS	11.20

HENDERSON, UNION & WEBSTER COUNTIES:

PLUMBERS & PIPEFITTERS: (Including HVAC Pipe):	BASE RATE	$25.42
	FRINGE BENEFITS	8.85

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES:

ROOFERS:

Slate, Tile, Concrete Slab & Gypsum Plank:	BASE RATE	$24.19
	FRINGE BENEFITS	8.45
All Other Work (excluding metal roofs):	BASE RATE	$23.69
	FRINGE BENEFITS	8.45

CALDWELL, CRITTENDEN & LIVINGSTON COUNTIES:

SHEETMETAL WORKERS: (Including HVAC duct and metal roofs)	BASE RATE	$28.40
	FRINGE BENEFITS	11.52

HENDERSON, UNION & WEBSTER COUNTIES:

SHEETMETAL WORKERS: (Including HVAC Duct)	BASE RATE	$24.61
	FRINGE BENEFITS	11.39

CALDWELL, CRITTENDEN, HENDERSON, LIVINGSTON, UNION & WEBSTER COUNTIES:

SPRINKLER FITTERS	BASE RATE	$27.05
	FRINGE BENEFITS	11.65

CALDWELL, CRITTENDEN & LIVINGSTON COUNTIES:

TRUCK DRIVERS/ BUILDING:

Single-Axle:	BUILDING	BASE RATE	$18.28
		FRINGE BENEFITS	6.22
Semi-Axle:	BUILDING	BASE RATE	$18.93
		FRINGE BENEFITS	6.22
Tandem:	BUILDING	BASE RATE	$18.88
		FRINGE BENEFITS	6.22

TRUCK DRIVERS/ HEAVY & HIGHWAY:

Greaser, Tire Changer:	HEAVY & HIGHWAY	BASE RATE	$23.89
		FRINGE BENEFITS	4.15
Truck Mechanic:	HEAVY & HIGHWAY	BASE RATE	$24.12
		FRINGE BENEFITS	4.15

Single Axle Dump & Flatbed; All Terrain Vehicle when used to haul materials; Semi-Trailer or Pole Trailer when used to pull building materials & equipment; Tandem Axle Dump; Distributor; & Mixer All Types:

HEAVY & HIGHWAY	BASE RATE	$24.19
	FRINGE BENEFITS	4.15

Euclid, Other Heavy Earthmoving Equipment & Lowboy; Articulator Cat & 5 Axle Vehicle; Winch & A-Frame when used in transporting materials; and Ross Carrier:

HEAVY & HIGHWAY	BASE RATE	$24.20
	FRINGE BENEFITS	4.15

HENDERSON, UNION & WEBSTER COUNTIES:

TRUCK DRIVERS/ BUILDING:

One-half Ton (Except when used by a superintendent or a foreman for own transportation or the use of a mechanic for transportation of self or tools):

BUILDING	BASE RATE	$13.14
	FRINGE BENEFITS	4.38

Greasers, Tire Men & Tending Batch Boards:

BUILDING	BASE RATE	$13.89
	FRINGE BENEFITS	4.38

Single Axle Straight Trucks, Batch Trucks, Wet or Dry 3 (34E) Batches or less & Three-quarter Ton & One Ton:

BUILDING	BASE RATE	$13.98
	FRINGE BENEFITS	4.38

Bituminous Distributor two-man:

BUILDING	BASE RATE	$14.03
	FRINGE BENEFITS	4.38

Tandem Trucks or Dog Legs, Trucks over 15 ton Payload, single Axle Semi-Trucks (3-axle unit), Low Boys, single Axle (3-axle unit), Winch Trucks or A-frames when transporting materials, Batch Trucks, Wet or Dry, over 3 (34E) Batchers, & Farm Tractors Pulling Trailers:

BUILDING	BASE RATE	$14.09
	FRINGE BENEFITS	4.38

Bituminous Distributors on-man:

BUILDING	BASE RATE	$14.14
	FRINGE BENEFITS	4.38

Tandem Axle Semi-Trucks (4-axle unit), Equipment not self-loaded or pusher loaded, such as Koehring or Similar Dumpsters, Track Trucks, Euclid Bottom Dump & Hug Bottom Dump, Tournatrailers, Tournarockers or Similar Equipment 12 cu. yds. & Under, Low-Boy, Tandem Axle (4 axle unit) & Pavement Breakers:

BUILDING	BASE RATE	$14.19
	FRINGE BENEFITS	4.38

Tandem-Tandem Semi-Truck (5 axle unit), & Low-Boys Tandem-Tandem (5 axle unit):

BUILDING	BASE RATE	$14.26
	FRINGE BENEFITS	4.38

HENDERSON, UNION & WEBSTER COUNTIES

TRUCK DRIVERS/ BUILDING: (Continued)

Equipment not self-loaded or pusher loaded, such as Koehring or Similar Dumpsters, Track Trucks, Euclid Bottom Dump & Hug Bottom Dump, Tournatrailers, Tournarockers or Similar Equipment over 12 cu. yds. Truck Mechanics & Mixer Trucks:

	BUILDING	BASE RATE	$14.29
		FRINGE BENEFITS	4.38
Hazardous Waste:	BUILDING	BASE RATE	$14.94
		FRINGE BENEFITS	4.38

TRUCK DRIVERS/ HEAVY & HIGHWAY:

Greaser, Tire Changer:	HEAVY & HIGHWAY	BASE RATE	$19.23
		FRINGE BENEFITS	9.20
Truck Mechanic:	HEAVY & HIGHWAY	BASE RATE	$19.46
		FRINGE BENEFITS	9.20

Single Axle Dump & Flatbed; Terrain Vehicle when used to haul materials; Semi-Trailer or Pole Trailer when used to pull building materials & equipment; Tandem Axle Dump; Distributor; & Mixer All Types:

HEAVY & HIGHWAY	BASE RATE	$19.53
	FRINGE BENEFITS	9.20

Euclid, Other Heavy Earthmoving Equipment & Lowboy; Articulator Cat Truck & 5 Axle Vehicle; Winch & A-Frame when used in transporting materials; Ross Carrier; Fork Lift Truck when used to transport building materials; & Drivers on Pavement Breaker:

HEAVY & HIGHWAY	BASE RATE	$19.54
	FRINGE BENEFITS	9.20

End of Document
CR-2-004 2006
August 14, 2006

BID FOR UNIT PRICES

Proposal of

_____

(hereinafter called "BIDDER"), organized and existing under the laws of the State of _____, and doing business as (a corporation), (a partnership), or (an individual).

To the CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT (hereinafter called "OWNER").

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all WORK for the procurement of the PHASE XIII WATER SYSTEM IMPROVEMENTS project in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

By submission of this BID, each BIDDER certifies (and in the case of a joint BID, each party hereto certifies as to his own organization) that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter related to this BID with any other BIDDER or with any competitor.

Bidder acknowledges receipt of the following addendum:

_____ Date _____

_____ Date _____

_____ Date _____

BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED and fully complete the PROJECT within 360 consecutive calendar days thereafter. BIDDER further agrees to pay as liquidated damages, the sum $525.00 for each consecutive calendar day thereafter.

The BIDDER agrees to provide ALL the necessary equipment as described herein for the following lump sum price. The amounts are to be shown in BOTH words and figures. In case of a discrepancy, the amount shown IN WORDS will govern.

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

No.	Description	Quantity	Unit Price	Bid Amount
01.	6-inch PVC Water Line (Class 250), for _____ _____ _____ dollars _____ cents per linear foot	70,000 L.F.	$_____	$_____
02.	6-inch PVC Water Line (Class 200), for _____ _____ _____ dollars _____ cents per linear foot	214,000 L.F.	$_____	$_____
03.	4-inch PVC Water Line (Class 250), for _____ _____ _____ dollars _____ cents per linear foot	46,300 L.F.	$_____	$_____
04.	4-inch PVC Water Line (Class 200), for _____ _____ _____ dollars _____ cents per linear foot	142,300 L.F.	$_____	$_____
05.	8 x 6-inch tapping sleeve and valve, for _____ _____ dollars _____ cents per each	1 EA.	$_____	$_____
06.	8 x 4-inch tapping sleeve and valve, for _____ _____ dollars _____ cents per each	2 EA.	$_____	$_____

No.	Description	Quantity	Unit Price	Bid Amount
07.	6 x 4-inch tapping sleeve and valve, for _____ _____ dollars _____ cents per each	1 EA.	$_____	$_____
08.	6-inch tapping sleeve and valve, for _____ _____ dollars _____ cents per each	23 EA.	$_____	$_____
09.	4-inch tapping sleeve and valve, for _____ _____ dollars _____ cents per each	17 EA.	$_____	$_____
10.	3-inch tapping sleeve and valve, for _____ _____ dollars _____ cents per each	5 EA.	$_____	$_____
11.	6-inch gate valve, for _____ _____ dollars _____ cents per each	66 EA.	$_____	$_____
12.	4-inch gate valve, for _____ _____ dollars _____ cents per each	45 EA.	$_____	$_____
13.	3-inch gate valve, for _____ _____ dollars _____ cents per each	44 EA.	$_____	$_____

No.	Description	Quantity	Unit Price	Bid Amount
14.	Unencased bores for 6-inch pipe, for _____ _____ dollars _____ cents per linear foot	9,000 L.F.	$_____	$_____
15.	Unencased bores for 4-inch pipe, for _____ _____ dollars _____ cents per linear foot	9,000 L.F.	$_____	$_____
16.	12-inch steel casing pipe, bore and jack, for _____ _____ dollars _____ cents per linear foot	765 L.F.	$_____	$_____
17.	8-inch steel casing pipe, bore and jack, for _____ _____ dollars _____ cents per linear foot	250 L.F.	$_____	$_____
18.	6-inch pressure reducing valve vault, for _____ _____ dollars _____ cents per each	7 EA.	$_____	$_____
19.	4-inch pressure reducing valve vault, for _____ _____ dollars _____ cents per each	7 EA.	$_____	$_____
20.	Flushing hydrants, for _____ _____ dollars _____ cents per each	41 EA.	$_____	$_____

No.	Description	Quantity	Unit Price	Bid Amount
21.	Creek crossing, for _____ _____ dollars _____ cents per linear foot	140 L.F.	$_____	$_____
22.	Customer service assembly with PRV, for _____ _____ _____ dollars _____ cents per each	225 EA.	$_____	$_____
23.	¾-inch service line, open cut, for _____ _____ dollars _____ cents per linear foot	7,000 LF.	$_____	$_____
24.	¾-inch service line, bore and jack, for _____ _____ dollars _____ cents per linear foot	5,000 LF.	$_____	$_____
25.	Directional bore (sheet 8) _____ _____ dollars _____ cents per lump sum	1 LS.	$_____	$_____
	TOTAL AMOUNT BID; ITEMS 1 – 25 INCLUSIVE			**$_____**

NOTE: 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.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 60 days after the schedule closing time for receiving bids.

Upon receipt of written notice of the acceptance of this bid, bidder will execute the formal contract attached within 10 days and deliver a Surety Bond or Bonds as required by Article 5 of the General Conditions. The bid security attached in the sum of 5%; _____ _____ ($_____) is to become the property of the Owner in the event the contract and bonds are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Respectfully submitted:
Contractor:

_____
By:_____
Title: _____
Address:_____
_____
KY License No.: _____
Expiration Date: _____

(SEAL - if bid is by a corporation)

Attest:_____
Title: _____

Date:_____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____ _____as Principal, and _____, as Surety, are hereby held and firmly bound unto the CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT as OWNER in the penal sum of _____ _____ ($_____) for the payment which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this _____ day of _____, 2006. This Condition of the above obligation is such that whereas the Principal has submitted to the CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the PHASE XIII WATER SYSTEM IMPROVEMENTS project.

NOW, THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attachment hereto (properly completed in accordance with said BID) and shall furnish a BOND for faithful performance of said contract, and for the payment of all persons performing labor furnishing materials in connection therewith, and shall in all in other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such bid; and said Surety does hereby waive notice of any such extension.

(This portion of the page was intentionally left blank.)

IN WITNESS WHEREOF, the Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____ (L.S.)
Principal

_____
Surety

By: _____

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

AGREEMENT

THIS AGREEMENT, made this ____ day of _____, 2006 by and between the CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT, hereinafter called OWNER and

_____
Name of Contractor

_____
Address of Contractor

doing business as a (Corporation) (Partnership) (Limited Liability Corporation) (Individual doing Business as _____), hereinafter called CONTRACTOR.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of:

   CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT
   PHASE XIII WATER SYSTEM IMPROVEMENTS

2. The CONTRACTOR will furnish all of the materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the project described herein.

3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within 10 calendar days after the date of the NOTICE TO PROCEED, and will complete the same within 360 calendar days, unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.

4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of _____ & XX/100 DOLLARS ($_____) or as shown on the BID SCHEDULE.

5. The term "CONTRACT DOCUMENTS" means and includes the following:

   A. Advertisement for Bids
   B. Information for Bidders
   C. Bid
   D. Bid Bond
   E. Agreement
   F. Performance Bond
   G. Payment Bond
   H. Notice of Award/Acceptance
   I. Notice to Proceed/Acceptance
   J. General Conditions

K. Supplemental General Conditions - SEA
L. Certificate of Insurance
M Certificate of Owner's Attorney
N. Drawings prepared or issued by STIGALL ENGINEERING ASSOCIATES, INC., dated June, 2006.
O. General and Technical Specifications prepared by STIGALL ENGINEERING ASSOCIATES, INC. and dated July, 2006.
P. Addendum
No. _____; Dated _____
No. _____; Dated _____
No. _____; Dated _____

6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the GENERAL CONDITIONS such amounts as required by the CONTRACT DOCUMENTS.

7. This AGREEMENT shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in six (6) counterparts, each of which shall be deemed an original on the date first above written.

CRITTENDEN-LIVINGSTON
COUNTY WATER DISTRICT

(Seal)
ATTEST:

By:_____
Randell O'Bryan, Chairman

By:_____

Title:_____
(Seal)

CONTRACTOR

By:_____
Name & Title

_____
Street Address

ATTEST:
Secretary

_____
City, State & Zip

_____
Witness

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____
Name of Contractor

_____
Address of Contractor

doing business as a (Corporation) (Partnership) (Limited Liability Corporation) (Individual doing Business as _____), herein called Principal, and.

_____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held firmly bound unto

CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT
620 EAST MAIN STREET
SALEM, KENTUCKY 42078

hereinafter called Owner in the penal sum of _____ _____ & XX/100 DOLLARS ($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the ____ day of _____, 2006, a copy of which is hereto attached and made a part hereof for the construction of:

CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT
PHASE XIII WATER SYSTEM IMPROVEMENTS

NOW, THEREFORE, if the Principal shall well, truly, and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages

which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alternation or addition to the terms of the contract or to work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in Six (6) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 2006.

ATTEST:

_____
Principal

_____
(Principal) Secretary

(SEAL)

By_____(S)

_____
Address

_____
City, State & Zip

_____
Witness to Principal

Address:

_____

_____

Surety

ATTEST:

Attorney-in-Fact

(Surety) Secretary

(SEAL)

Address:

Witness as to Surety

Address:

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

IMPORTANT: Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570, as amended) and be authorized to transact business in the state where the project is located.

(This page was intentionally left blank.)

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____
Name of Contractor

_____
Address of Contractor

doing business as a (Corporation) (Partnership) (Limited Liability Corporation) (Individual doing Business as _____), herein called Principal, and.

_____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held firmly bound unto

CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT
620 EAST MAIN STREET
SALEM, KENTUCKY 42078

hereinafter called Owner in the penal sum of _____ _____ & XX/100 DOLLARS ($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, 2006, a copy of which is hereto attached and made a part hereof for the construction of:

CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT
PHASE XIII WATER SYSTEM IMPROVEMENTS

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs of machinery, equipment, and tools consumed or used in connection with the construction of such

work, and all insurance premiums on said work, and for all labor performed in such work whether by subcontractor or otherwise, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, that beneficiaries or claimants hereunder shall be limited to the SUBCONTRACTORS, and persons, firms, and corporations having a direct contract with the PRINCIPAL or its SUBCONTRACTORS.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alternation or addition to the terms of the contract or to work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDE, FURTHER, that no suit or action shall be commenced hereunder by any claimant: (a) Unless claimant, other than one having a direct contract with the PRINCIPAL (or with the GOVERNMENT in the event the GOVERNMENT is performing the obligations of the OWNER), shall have given written notice to any two of the following: The PRINCIPAL, the OWNER, or the SURETY above names within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the PRINCIPAL, OWNER, or SURETY, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer. (b) After the expiration of one (1) year following the date of which PRINCIPAL ceased work on said CONTRACT, is being understood, however, that if any limitation embodied in the BOND is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

PROVIDED, FURTHER, that no final settlement between the OWNER or GOVERNMENT and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

(This section of the page was intentionally left blank.)

IN WITNESS WHEREOF, this instrument is executed in Six (6) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 2006.

ATTEST:

_____
(Principal) Secretary

(SEAL)

_____
Principal

By_____(S)

Address:

_____

_____

_____
Witness to Principal

Address:

_____

_____

(This portion of page was intentionally left blank.)

Surety

ATTEST:

Attorney-in-Fact

(Surety) Secretary

(SEAL)

Address:

Witness as to Surety

Address:

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

IMPORTANT: Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570, as amended) and be authorized to transact business in the state where the project is located.

NOTICE OF AWARD

To: _____
_____
_____
_____

PROJECT Description:

CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT
PHASE XIII WATER SYSTEM IMPROVEMENTS

The OWNER has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids dated August, 2006 and Information for Bidders. You are hereby notified that your BID has been accepted for items in the amount of _____ _____ & XX/100 DOLLARS ($_____).

You are required by the Instructions to 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 _____, 2006.

CRITTENDEN-LIVINGSTON CO. WATER DIST.

By: _____
Randell O'Bryan, Chairman

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by _____ _____ this, the _____ day of _____, 2006.

CONTRACTOR

By:_____
Name & Title

(This page was intentionally left blank.)

NOTICE TO PROCEED

To: _____
_____
_____
_____

Date: _____
Project: Crittenden-Livingston County Water Dist.
Phase XIII Water System Improvements

You are hereby notified to commence Work in accordance with the Agreement dated _____ _____, 2006, on or before _____, 2006 and you are to complete the Work within 360 consecutive calendar days thereafter. The date of completion of all work is therefore _____, 2007.

CRITTENDEN-LIVINGSTON CO. WATER DIST.

By:_____
Randell O'Bryan, Chairman

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by _____, this the _____ day of _____, 2006.

CONTRACTOR.

By:_____
Name & Title

(This page was intentionally left blank.)

GENERAL

CONDITIONS

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

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By

ACEC
American Council of Engineering Companies

National Society of Professional Engineers
Professional Engineers in Private Practice

ASCE American Society of Civil Engineers

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by

The Associated General Contractors of America

Knowledge for Creating and Sustaining the Built Environment

Construction Specifications Institute

National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314

American Council of Engineering Companies
1015 15th Street, N.W., Washington, DC 20005

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). 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

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. 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.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

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

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *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.

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

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *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.

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

10. *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.

11. *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.

12. *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.

13. *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).

14. *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.

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

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *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.

18. *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.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *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.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *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.

23. *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.

24. *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.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *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.

27. *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.

28. *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.

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

30. *PCBs*--Polychlorinated biphenyls.

31. *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.

32. *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.

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

34. *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.

35. *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.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

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

38. *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.

39. *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.

40. *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.

41. *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.

42. *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.

43. *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.

44. *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.

45. *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.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *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.

49. *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.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *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.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by 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.

1.02 *Terminology*

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

B. *Intent of Certain Terms or Adjectives*

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered", "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the 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.

C. *Day*

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

D. *Defective*

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

a. does not conform to the Contract Documents, or

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

c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. 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.

F. 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.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of 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.

2.02 *Copies of Documents*

A. 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.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the 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. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

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

2.05 *Before Starting Construction*

A. *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:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

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

2.06 *Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.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.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

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

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

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

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. 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.

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

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. 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.

2. 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.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *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.

2. *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.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. 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:

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

b. the provisions of any Laws or Regulations applicable to the performance of the Work

(unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. 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.

B. 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:

1. A Field Order;

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

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. 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.

B. 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.

3.06 *Electronic Data*

A. 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.

B. 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..

C. 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.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. 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.

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

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

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* 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 Contract Documents; and

2. 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.

B. *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:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

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

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

4.03 *Differing Subsurface or Physical Conditions*

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

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

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

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

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 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.

B. *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.

C. Possible Price and Times Adjustments

1. 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:

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

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

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

a. 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

b. 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

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

3. 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.

4.04 *Underground Facilities*

A. *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:

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

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

a. reviewing and checking all such information and data,

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

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

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

B. *Not Shown or Indicated*

1. 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.

2. 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.

4.05 *Reference Points*

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

4.06 *Hazardous Environmental Condition at Site*

A. *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.

B. *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:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

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

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

C. Contractor shall not be responsible for 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.

D. 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.

E. 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.

F. 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.

G. 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.

H. 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.

I. 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.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. 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.

B. 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.

C. 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.

5.02 *Licensed Sureties and Insurers*

A. 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.

5.03 *Certificates of Insurance*

A. 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.

B. 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.

5.04 *Contractor's Liability Insurance*

A. 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:

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

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

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

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

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

b. by any other person for any other reason;

5. 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

6. 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.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (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;

2. 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;

3. include completed operations insurance;

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

5. 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);

6. 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

7. 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.

a. 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.

5.05 *Owner's Liability Insurance*

A. 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.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the 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;

2. 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, false work, 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;

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

4. 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;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. 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.

B. Owner 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.

C. 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.

D. 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.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. 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 Owner as trustee or otherwise payable under any policy so issued.

B. 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:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. 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.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner 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. Owner 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, and the Work and the cost thereof covered by an appropriate Change Order .

B. Owner 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 Owner's exercise of this power. If such objection be made, Owner 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, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. 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.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. 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.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. 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.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. 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.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. 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.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. 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.

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

6.04 *Progress Schedule*

A. 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.

1. 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.

2. 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.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the 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.

1. *"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:

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

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

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

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

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

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

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

2. Substitute Items

a. 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.

b. 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.

c. The 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.

d. 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:

1) shall certify that the proposed substitute item will:

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

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

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

b) 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

c) 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;

3) will identify:

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

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

4) 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,

B. *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.

C. *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.

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

E. *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.

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

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. 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.

B. 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.

C. 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:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall 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.

D. 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.

E. 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.

F. 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.

G. 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.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, 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.

6.08 *Permits*

A. 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.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work 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.

C. 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.

6.10 *Taxes*

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

6.11 *Use of Site and Other Areas*

A. Limitation on Use of Site and Other Areas

1. 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.

2. 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.

3. 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.

B. *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.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading 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.

6.12 *Record Documents*

A. 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.

6.13 *Safety and Protection*

A. 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:

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

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

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

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify 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.

C. 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 Draw-

ings 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).

D. 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).

6.14 *Safety Representative*

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

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

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

6.17 *Shop Drawings and Samples*

A. 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.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:* Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. 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.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals , any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

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

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

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

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

d. 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.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents

with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's 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.

D. *Engineer's Review*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (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.

3. 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.

E. *Resubmittal Procedures*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

A. 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.

6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

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

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

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

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

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

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

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. 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 .

B. 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.

C. 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:

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

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

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, 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.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 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.

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

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. 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:

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

2. 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.

B. 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.

C. 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.

7.02 *Coordination*

A. 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:

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

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

3. the extent of such authority and responsibilities will be provided.

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

7.03 *Legal Relationships*

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

B. 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.

C. 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.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

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

8.02 *Replacement of Engineer*

A. 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.

8.03 *Furnish Data*

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

8.04 *Pay When Due*

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

8.05 *Lands and Easements; Reports and Tests*

A. 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.

8.06 *Insurance*

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

8.07 *Change Orders*

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

8.08 *Inspections, Tests, and Approvals*

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

8.09 *Limitations on Owner's Responsibilities*

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

8.10 *Undisclosed Hazardous Environmental Condition*

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

8.11 *Evidence of Financial Arrangements*

A. 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.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

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

9.03 *Project Representative*

A. 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.

9.04 *Authorized Variations in Work*

A. 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.

9.05 *Rejecting Defective Work*

A. 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.

9.06 *Shop Drawings, Change Orders and Payments*

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

B. 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.

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

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

9.07 *Determinations for Unit Price Work*

A. 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.

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

A. 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

B. 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.

C. 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.

D. 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.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. 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.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 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.

E. 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.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work 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).

B. 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.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented 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.

10.03 *Execution of Change Orders*

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

1. 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;

2. 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

3. 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.

10.04 *Notification to Surety*

A. 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.

10.05 *Claims*

A. *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.

B. *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).

C. *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:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. 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.

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

E. 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.

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

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *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.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time 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.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

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

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

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

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 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.

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

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

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

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

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, 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.

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

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

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

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

C. *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.

D. *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.

11.02 *Allowances*

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

B. *Cash Allowances*

1. Contractor agrees that:

a. 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

b. Contractor's costs for unloading and handling on the Site, labor, installation , overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

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

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. 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.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

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

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

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

3. 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.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. 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.

B. 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:

1. 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

2. 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

3. 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).

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

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

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

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

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of 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;

d. 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;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. 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.

B. 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.

12.03 *Delays*

A. 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.

B. 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.

C 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.C.

D. 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.

E. 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.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. 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.

13.02 *Access to Work*

A. 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.

13.03 *Tests and Inspections*

A. 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.

B. 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:

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

2. 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

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging 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.

E. 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.

F. 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.

13.04 *Uncovering Work*

A. 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.

B. 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.

C. 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.

D. 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.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, 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.

13.06 *Correction or Removal of Defective Work*

A. 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).

B. 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.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the 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:

1. repair such defective land or areas; or

2. correct such defective Work; or

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

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

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. 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.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

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

E. 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.

13.08 *Acceptance of Defective Work*

A. 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.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer 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.

B. 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.

C. 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.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. 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.

14.02 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

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

B. *Review of Applications*

1. 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.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations 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:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, 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

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

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

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. 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.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

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

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

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

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

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 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:

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

b. the Contract Price has been reduced by Change Orders;

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

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

C. *Payment Becomes Due*

1. 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.

D. *Reduction in Payment*

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

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

b. 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;

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

d. 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.

2. 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.

3. 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.

14.03 *Contractor's Warranty of Title*

A. 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.

14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a 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.

D. 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.

E. 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.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. 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.

2. 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.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 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.

4. 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.

14.06 *Final Inspection*

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

14.07 *Final Payment*

A. Application for Payment

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

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

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

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

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

d. 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.

3. 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.

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

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations

under the Contract 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.

C. Payment Becomes Due

1. 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.

14.08 *Final Completion Delayed*

A. 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.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. 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

2. 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.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by 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.

15.02 *Owner May Terminate for Cause*

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

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

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

3. Contractor's disregard of the authority of Engineer; or

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

B. 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:

1. 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),

2. 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

3. complete the Work as Owner may deem expedient.

C. 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.

D. 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.

E. 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.

F. 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.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. 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

4. reasonable expenses directly attributable to termination.

B. 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.

15.04 *Contractor May Stop Work or Terminate*

A. 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.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 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.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may 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 and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. 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.

C. 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:

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

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

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

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

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

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

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

17.02 *Computation of Times*

A. 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.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract 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.

17.04 *Survival of Obligations*

A. 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.

17.05 *Controlling Law*

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

17.06 *Headings*

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

SUPPLEMENTAL

GENERAL

CONDITIONS

SUPPLEMENTAL GENERAL CONDITIONS

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SUPPLEMENTAL GENERAL CONDITIONS

Supplemental General Conditions

These Supplemental General Conditions amend or supplement the Standard General Conditions of the Construction Contract (Form No. 1910-8, 1983 Ed.) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

The paragraphs below are cross-referenced to the General Conditions, keyed to similar paragraph numbers in the General Conditions.

Article SC-1

The terms used in these Supplementary General Conditions which are defined in the Standard General Conditions of the Construction Contract (No. 1910-8, 1983 Ed.) have the meanings as assigned to them in Article 1 of the General Conditions.

Paragraph SC-3.2.1, Re: Intent of Documents

Add a new paragraph immediately after Paragraph 3.2 of the General Conditions to read as follows:

> If there is any conflict between the provisions of the Contract Documents and any referenced provisions within the Contract Specifications, the language of the Contract Documents will take precedence over that of any standard trade specification, manual, or code.

Paragraph SC-4.1.1

> OWNER shall furnish highway encroachment permits.

Paragraph SC-4.3.3

Add a new paragraph immediately after Paragraph 4.3.2 of the General Conditions to read as follows:

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

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

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

The Contractor shall locate all unknown metallic hazards, namely buried pipe, metals, etc., by using an electronic pipe locator. The pipe locator shall immediately precede the trench ditching and all hazards located shall be marked in such manner as to notify the machine operator of such hazard.

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

Article SC-5: Insurance

The following paragraphs shall augment or amend the requirements of Article 5 of the General Conditions:

SC-5.3.1.1

The Contractor shall procure and maintain, at his own expense (during the Contract Time) in accordance with the provisions of the laws of the state in which the work is performed, Workmen's Compensation Insurance including occupational disease provisions for all of his employees at the site of the Project and, in case any work is sublet, the Contractor shall require such Subcontractor

similarly to provide Workmen's Compensation Insurance including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor. In case any class of employees engaged in hazardous work under this contract at the site of the protect is not protected under Workmen's Compensation statute, the Contractor shall provide and shall cause each Subcontractor to provide adequate and suitable insurance for the protection of his employees not otherwise protected.

SC-5.3.8 The Contractor will not be permitted to commence work until he has obtained all insurance required by these documents and such insurance has been approved by the Engineer and/or Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all insurance required has been so obtained and approved.

SC-5.3.9 Insurance shall be secured from a company authorized to write casualty insurance in the state where the work is located.

SC-5.3.10 The Contractor shall furnish the Owner and the Engineer with satisfactory proof of carriage of all required insurance by completing the Certificate of Insurance included with the Specifications and Contract Documents.

SC-5.3.11 Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. Certificate of Insurance coverage shall include a statement of alteration or cancellation provisions of the policy, sufficient to show definitely that such provisions comply with the requirements stated herein.

SC-5.3.12 Each policy of insurance covering the Contractor's operations under the Contract shall provide either in the body of the policy, or by appropriate endorsement (rider) to the policy, that such policy cannot be altered or canceled in less than thirty (30) days after the mailing of written notice of such alteration or cancellation to the Owner (Insured) and the Engineer.

SC-5.3.13

The insurance required shall include the specific coverage's and be written for not less than the following limits of liability and coverage's:

Comprehensive General Liability
- Coverage A - Bodily Injury Liability
  - $500,000 each occurrence
  - $500,000 aggregate
- Coverage B - Property Damage Liability
  - $100,000 each occurrence
  - $300,000 aggregate

Comprehensive Automobile Liability

Coverage A - Bodily Injury Liability

$ 500,000 each person

$1,000,000 each accident

Coverage B - Property Damage Liability

$ 200,000 each occurrence

Workmen's Compensation

Applicable State Statutory requirements

Employer's Liability

$ 200,000 Limit of Liability

Builder's Risk Insurance

See Paragraph SC-5.6.1 following

Railroad Protective Insurance
(where work is to be across or within
Railroad right-of-way)

Loss of Life or Injury to Person
(As required by Railroad)

Property Damage
(as required by Railroad)

Paragraph SC-5.3.14

Liability coverage is to be written on a comprehensive general liability policy basis and must include (a) premises-operations, manufacturers, contractors, owners, landlords and tenants, (b) contractor's protective, (c) products-completed operations, and (d) contractual liability. General liability shall also include "underground property damage by mechanical equipment," and when blasting is done, coverage must be provided for the explosion hazard.

Paragraph SC-5.3.15

The Contractor shall take out and maintain during the life of this contract such Blasting Insurance (Bodily Injury and Property Damage) as shall protect him and any subcontractor performing work covered by these contracts from claims for damages due to bodily injury, including accidental death, and from claims for

property damage which may arise from blasting operation under these contracts, whether such blasting operations be by him or by any subcontractor, or by anyone directly or indirectly employed by either of them. The limits of liability of blasting operations shall be:

Bodily Injury or Death	- $250,000 each person
	- $500,000 each accident
Property Damage	- $250,000 each accident

Paragraph SC-5.3.16

Where work on railroad rights-of-way is involved, the Contractor shall also be covered by Railroad Protective Liability Insurance with limits of liability as required by the Railroad Company on whose property the work is being performed.

Paragraph SC-5.6.1

Fire and extended coverage shall be included in Builder's Risk Insurance to be provided for construction contracts relating to above-ground construction including buildings and treatment plants. Coverage shall not be less than 100 percent insurable value of materials and accessories used in conjunction with the project. Builder's Risk coverage shall include losses due to fire, explosion, lightning, hail, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke on all work in place and/or materials stored at the site where there is any considerable risk from such causes for damage and shall serve for the benefit of the Owner, Contractor, and Subcontractors as their interests may appear. Such insurance shall provide coverage at all times for the full cash value of all completed construction and/or material stored until the WORK is accepted by the Owner. The policy shall name as the insured the Contractor, the Engineer, and the Owner. The coverage shall in no way release the Contractor, or Contractor's surety from obligations under the Contract Documents to fully complete the Project.

Paragraph SC-6.3

Add the following language to the end of the third sentence of Paragraph 6.3 of the General Conditions:

The Contractor shall employ workmen skilled in their various duties and shall remove from the project (at the request of the Engineer) any person employed in, about, or upon the work, who misconduct's himself or who is deemed by the

Engineer to be incompetent or negligent in the performance of the duties assigned to him.

No person under the age of 18 years and no convict labor shall be employed to perform any work under this Contract. No person whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health or safety of others shall be employed to perform any work under this Contract provided that this shall not operate against the employment of physically handicapped persons (otherwise employable) where such persons may be safety assigned to work which they can ably perform. There shall be no discrimination because of race, creed, color, or political affiliation in the employment of persons for work under this Contract.

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

The Contractor and each of his subcontractors shall pay each of his employees engaged in work on the project in full (less deductions made mandatory by law) in cash or by check once each week.

Paragraph SC-12.4

Add a new paragraph immediately after Paragraph 12.3 of the General Conditions which is to read as follows:

The Contractor shall make no claim for extra compensation due to delays of the project beyond his control. Such delays may include those caused by any act or neglect on the part of the Owner or Engineer, or by any employee of either, or by any separate contractor employed by the Owner, or by changes ordered in the work, or by labor disputes, fire, unusual delays in transportation, adverse weather conditions not reasonably anticipatable, unavoidable casualties, or by delay authorized by the Owner pending arbitration, or by any other cause which the Engineer determines may justify the delay. Additional costs incurred in accelerating the work to compensate for such delays (as defined above) shall also not form the basis for such compensation claims.

Paragraph SC-12.5

Add an additional paragraph to read as follows:

If the Contractor shall fail or refuse to complete the WORK within the CONTRACT TIME, or extension of time granted by the OWNER, then the

CONTRACTOR agrees as a partial consideration for the awarding of this CONTRACT that the OWNER may retain from the compensation otherwise to be paid to the CONTRACTOR the amount specified below, not as a penalty but as liquidated damages, for each and every calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS.

SCHEDULE OF LIQUIDATED DAMAGES

Original Amount of Contract	Liquidated Damages Per Day
Up To $ 100,000	$150
$ 100,000 to $ 500,000	$200
$ 500,000 to $1,000,000	$250
$1,000,000 to $2,000,000	$300
Over $2,000,0000	$300 plus $150 per each additional million dollars, or any fraction thereof

The said amount is fixed and agreed upon by and between the CONTRACTOR and OWNER because of the impracticality and extreme difficulty of fixing and ascertaining the actual damages the OWNER would in such event sustain.

Paragraph SC-13.11.1

Add a new paragraph immediately after Paragraph 13.11 of the General Conditions which is to read as follows:

The Contractor shall promptly make such repairs or replacements as may be required under the above specified guarantee, and when the repairs or replacements involve one or more items of installed equipment, shall provide the services of qualified factory-trained servicemen in the employ of the equipment manufacturer(s) to perform or supervise the repairs or replacements.

Paragraph SC-13.11.2

Add an additional paragraph to read as follows:

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

Paragraph SC-13.12.1

Add an additional paragraph immediately after Paragraph 13.12 of the General Conditions which is to read as follows:

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

Paragraph SC-13.12.2

Add an additional paragraph to read as follows:

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

Paragraph SC-16.1

Change first sentence from "...will be decided by arbitration..." to read "...may be decided by arbitration if agreed to by both parties..."

CERTIFICATE OF INSURANCE

This certificate is to be completed and returned to:

Stigall Engineering Associates, Inc.
4117 Hillsboro Pike, Suite 206
Nashville, Tennessee 37215-2728

Named Insured:				
Address:				
Location of Project:				
Type of Insurance	Policy Number	Dates	Insurance Co.	Limits of Liability
( ) Workers Compensation ( ) Employers Liability		From: _____ To: _____		Statutory $_____ Each Occurrence
( ) Auto Liability ( ) Non-Owned ( ) Hired		From: _____ To: _____		Bodily Injury $_____ Per Person $_____ Each Occurrence Property Damage $_____ Each Occurrence
General Liability ( ) Manufacturers & Contractors ( ) Broad Form Property Damage ( ) Coverage U Underground Damage ( ) Coverage XC Explosion and Collapse ( ) Independent Contractors ( ) Products – Completed Operations ( ) Contractual Liability (per paragraphs 6.11 & 6.20 of the General Conditions		From: _____ To: _____		Bodily Injury $_____ Per Person $_____ Each Occurrence $_____ Aggregate Property Damage $_____ Each Occurrence $_____ Aggregate
( ) Umbrella Liability		From: _____ To: _____		$_____ Each Occurrence $_____ Aggregate

This is to certify that:

1. Policies of insurance described above have been issued to the above insured and are in force; and,
2. This certificate of insurance does not extend, amend, or otherwise alter the terms and conditions of the insurance coverage identified in the policies above; and,
3. If any such policy is cancelled or changed so as to affect the coverage evidenced by this certificate, at least thirty days prior written notice of such cancellation or change will be sent to: Stigall Engineering Associates, Inc.
   4117 Hillsboro Pike, Suite 206
   Nashville, Tennessee 37215-2728

Dated this _____ Day of _____, _____ at _____
City State

_____
Name of Agent or Broker

_____
Address of Agent or Broker City State

By: _____ Authorized Representative

FORM APPROVED
OMB NO. 0575-0042

Form RD 1924-7
(Rev. 2-97)

UNITED STATES DEPARTMENT OF AGRICULTURE
RURAL DEVELOPMENT AND
FARM SERVICE AGENCY

CONTRACT CHANGE ORDER

ORDER NO.	
DATE	
STATE	
COUNTY	

CONTRACT FOR

OWNER

To

(Contractor)

You are hereby requested to comply with the following changes from 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 _____ _____
(Owner) (Date)

Recommended _____ _____
(Owner's Architect/Engineer) (Date)

Accepted _____ _____
(Contractor) (Date)

Approved by Agency _____ _____
(Name and Title) (Date)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0575-01042. The time required to complete this information collection is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

- ☐ ORIGINAL-BORROWERS CASE FOLDER
- ☐ COPY-CONTRACTOR
- ☐ COPY-BORROWER

POSITION 6

FORM APPROVED
OMB NO. 0575-0042

Form RD 1924-18
(Rev. 6-97)

UNITED STATES DEPARTMENT OF AGRICULTURE
RURAL DEVELOPMENT
FARM SERVICE AGENCY

PARTIAL PAYMENT ESTIMATE

CONTRACT NO.

PARTIAL PAYMENT ESTIMATE NO.

PAGE _____ OF _____

OWNER: _____

CONTRACTOR: _____

PERIOD OF ESTIMATE
FROM _____ TO _____

CONTRACT CHANGE ORDER SUMMARY

No.	Agency Approval Date	Amount	
		Additions	Deductions
TOTALS			
NET CHANGE			

ESTIMATE

1. Original Contract ..... _____
2. Change Orders ..... _____
3. Revised Contract (1 + 2) ..... _____
4. Work Completed* ..... _____
5. Stored Materials* ..... _____
6. Subtotal (4 + 5) ..... _____
7. Retainage* ..... _____
8. Previous Payments ..... _____
9. Amount Due (6-7-8) ..... _____

* *Detailed breakdown attached*

CONTRACT TIME

Original (days) _____
Revised _____
Remaining _____

On Schedule ☐ Yes ☐ No

Starting Date _____
Projected Completion _____

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 payment shown herein is now due.

Contractor _____

By _____

Date _____

ARCHITECT OR 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.

Architect or Engineer _____

By _____

Date _____

APPROVED BY OWNER:

Owner _____

By _____

Date _____

ACCEPTED BY AGENCY:
The review and acceptance of this estimate does not attest to the correctness of the quantities shown or that the work has been performed in accordance with the contract documents.

By _____

Title _____

Date _____

TYPICAL UNIT PRICE BREAKDOWN *

ITEM	DESCRIPTION	CONTRACT *(revised)*			THIS PERIOD		TOTAL TO DATE		% COM-PLETE
		QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	
			$	$		$		$	
	TOTALS								

TYPICAL LUMP SUM PRICE BREAKDOWN *

ITEM	DESCRIPTION	SCHEDULED VALUE	WORK COMPLETED		% COM-PLETE
			THIS PERIOD	TO DATE	
		$	$	$	
	TOTALS				

TYPICAL STORED MATERIALS AND RETAINAGE BREAKDOWN *

MATERIALS STORED AT END OF THIS PAYMENT PERIOD			
DESCRIPTION	QUANTITY	UNIT VALUE	AMOUNT
		$	$

RETAINAGE			
	THIS ESTIMATE	PERCENT	RETAINED
WORK COMPLETED:	$	%	$
STORED MATERIALS:			
OTHER *(explain)*			
TOTAL			

* As a minimum, detailed breakdowns should contain this information.

*U.S.GPO:1997-554-007/61502

TECHNICAL

SPECIFICATIONS

SECTION 1

GENERAL REQUIREMENTS

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SECTION 1

GENERAL REQUIREMENTS

1.01 SUMMARY OF WORK

The work to be accomplished under this contract consists of the construction of approximately 396,000 feet of 6-inch and 4-inch water line, pressure reducing valves and pits and customer service assemblies as shown on the drawings and specified as follows.

1.02 DESIGNATION OF PARTIES

All references in the specifications, contract documents, and drawings to OWNER shall mean the Crittenden-Livingston County Water District; Post Office Box 495; Salem, Kentucky 42078-0495.

All references to ENGINEER shall mean Stigall Engineering Associates, Inc.; 4117 Hillsboro Pike, Suite 206; Nashville, Tennessee 37215.

1.03 ENUMERATION OF DRAWINGS, SPECIFICATIONS, AND ADDENDA

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1.04 ACCESS TO, OR INSPECTION OF, THE WORK

The Kentucky Division of Water and local public health agencies shall at all times have full access to the project site for inspection of the work accomplished under this contract and for inspection of all materials intended for use under this contract. The contractor shall provide proper facilities for such access and inspection.

1.05 UTILITIES REQUIRED BY CONTRACTOR

ALL water, electric current, and/or utility service required by the contractor shall be furnished at his own expense.

1.06 TAXES

Proposals shall be made to include any applicable taxes on payrolls, materials, equipment, vehicles, utilities, etc., including the Kentucky State Sales Taxes, and shall include compensation for such taxes on all work under this contract.

1.07 PROPERTY RESTORATION

Where fences, walls, etc. are removed, damaged, or disturbed in the process of the work in this Contract, they shall be replaced at the contractor's expense to as good (or better) condition as existed prior to disturbance.

Where ditches or excavations cross lawns, the sod shall be removed carefully and replaced when backfilling has been completed. If sod is damaged or not handled properly, it shall be replaced with new sod equal to or suitable grass seed with straw cover at the contractor's expense. This sodding or seeding is NOT a separate pay item.

1.08 TRAFFIC MAINTAINED

Traffic shall be maintained on all highways and streets at all times during construction of pipe lines across or along said highways and streets. Access to all existing facilities shall also be kept open.

1.09 SANITARY FACILITIES

The contractor shall furnish, install, and maintain ample sanitary facilities for the workmen. As the needs arise, enclosed temporary toilets, meeting Federal and State safety and health standards (in sufficient numbers) shall be placed as directed by the Engineer.

Drinking water shall be provided from a proven safe source so piped or transported as to be kept clean and fresh and served from single service containers of satisfactory type.

1.10 "AS BUILT" DRAWINGS

The contractor shall obtain from the Engineer one set of blue line prints of the Drawings. These prints shall be kept and maintained in good condition at the project site and a qualified representative of the contractor shall enter upon these prints, from day to day, the actual "as built" records of the construction progress. Entries and notations shall be made in a neat and legible manner and these prints shall be delivered to the Engineer upon completion of the construction. Approval for final payment will be contingent upon compliance with this provision.

1.11 DRAWINGS AND INFORMATION TO BE FURNISHED BY CONTRACTOR

The contractor shall furnish to the Engineer for a review SIX (6) SETS OF SHOP DRAWINGS and descriptive literature for all manufactured or fabricated items. Performance curves and detailed information on materials shall be provided when requested by the Engineer. Additional information, such as special drawings, schedules, calculations, and curves shall be provided when requested by the Engineer or when specifically required in the technical specifications. Submittals for all electrically operated items (including instrumentation and controls) shall include complete wiring diagrams showing leads, runs, number of wires, wire size, color coding, all terminations and connections, and coordination with related equipment.

The term shop drawings shall mean drawings, prints, descriptive literature, test reports, samples, calculations, schedules, materials lists and information, and items of similar meaning. NO material shall be fabricated or shipped unless the applicable drawings or submittals have been reviewed by the Engineer.

The contractor shall review and check drawings and submittals. He shall indicate his approval by initials and date, and shall also REFERENCE EACH TO THE APPLICABLE ITEM, SECTION, OR DIVISION OF THE SPECIFICATIONS. If the drawings or submittals deviate from the Drawings, the contractor shall advise the Engineer (in writing) of the deviation and the reasons therefor.

In the event the contractor obtains the Engineer's acceptance for the use of materials or equipment other than that which is shown on the Drawings or specified, the contractor shall (at his own expense and using methods acceptable to the Engineer) make any changes to structures, piping, electrical work, etc., that may be necessary to accommodate this equipment.

Review by the Engineer of shop drawings or submittals of material and equipment shall not relieve the contractor from the responsibility of furnishing same of proper dimension, size, quality, quantity, materials, and all performance characteristics to

efficiently perform the requirements and intent of the Drawings. Review shall not relieve the contractor from responsibility for errors of any kind on the shop drawings. Review is intended only to assure conformance with the design concept of the project and compliance with the information given in the Drawings.

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

1.12 COMPLIANCE WITH SAFETY REGULATIONS

The equipment items furnished shall comply with all governing Federal and State laws regarding safety, including all requirements of the Occupational Safety and Health Act of 1970 (OSHA), and including the 1985 revisions.

1.13 BLASTING

All blasting operations shall be conducted in strict accordance with Municipal and County ordinances and State Laws.

All explosives shall be stored in conformity with said ordinances, laws, and safety regulations. No blasting shall be done within five feet or any water mains, gas lines, telephone, electric, or any other underground utility lines, except with light charges of explosives. Any damage done by blasting is the responsibility of the contractor and shall be promptly and satisfactorily repaired by him.

To implement these requirements, and unless otherwise required by ordinance or law, each excavation crew shall be provided with two metal boxes equipped with suitable locks. One of these boxes shall always be locked except when in actual use. They shall be painted a bright color and stenciled with appropriate warning signs. At night, explosives and caps shall be stored in separate magazines.

All shots shall be covered with rope, heavy timber, or steel blasting mats to prevent flying material. Unless otherwise specified or directed, delay caps shall be used to reduce earth vibrations and noise. In sparsely populated areas, the Engineer may permit the contractor to use regular type caps.

The contractor shall keep a blasting log and (for each blast) shall record the date, time of blast, number of holes, type of explosive, number of delays, amount of charge per delay, stemming, and number and type of caps. An inventory of all explosives handled and stored also shall be kept.

Blasting operations shall be covered by comprehensive general liability insurance or separate public liability insurance to cover blasting as set forth in Paragraph 4

of the Supplemental General Conditions.

All blasting shall be supervised and performed by qualified personnel.

1.14 LINES AND GRADES

The Engineer will set a bench mark, or marks, near the site of all structures and furnish the contractor with the elevation of same, if required by the contractor. The contractor shall be responsible for all other lines and grades required for the construction of structures.

When water lines and other such pressure pipelines are involved, the Engineer will mark the location of these lines on the ground, however any detailed layout (including that required for establishing the grade of the pipeline) shall be accomplished by the contractor. If bench levels are required for reference, these will be established by the Engineer.

The contractor shall furnish all materials, stakes, and grade boards that are required for layout by the contractor's forces. In addition, the contractor shall furnish any aides required in marking the locations of the various facilities on the ground, establishing bench levels, and determining as-built conditions after the work is completed. The contractor's personnel engaged in the layout work described herein and the aides furnished to the Engineer shall be fully capable of performing the duties set out herein and shall be fully qualified as chief and/or chainmen, as required.

1.15 OBSTRUCTIONS

In cases where storm sewers, sanitary sewers, gas lines, water lines, telephone lines, electric lines, or other underground structures are encountered, they shall not be disturbed, displaced, or molested unless necessary, in which case they shall be replaced in as good condition as found as quickly as possible. All such lines or underground structures damaged or molested in the construction shall be replaced at the contractor's expense.

The contractor shall notify the utility companies prior to excavation adjacent to their facilities.

1.16 TESTING

Testing shall be in accordance with the requirements of Part I of the General Specifications except that the cost of ALL testing shall be borne by the contractor.

1.17 GUARANTEE

The contractor shall guarantee all workmanship and materials and shall comply with the requirements of Article 13 of the General Conditions and Paragraph SC-13.11.1 of the Supplemental General Conditions.

1.18 FINAL CLEANING UP

The work will not be considered as completed and final payment made until all final cleaning up has been done by the contractor in a manner satisfactory to the Engineer.

1.19 STORED MATERIALS

Any stored materials remaining at the jobsite upon completion of the project are the property of the Contractor. In addition, any stored materials claimed on previous payment requests will be "zeroed out" on the final payment request. As such, the contractor is responsible for ordering the correct quantities of material required to perform the project.

END OF SECTION

SECTION 2
WATER LINES

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SECTION 2

WATER LINES

2.01 SCOPE

The work to be accomplished under this Section of the Specifications consists of the providing of all labor, materials, equipment, and services necessary for the construction of water mains and appurtenances shown on the drawings and more fully described hereinafter.

2.02 POLYVINYL CHLORIDE PIPE (PVC)

Plastic pipe shall meet the following minimum standards:

ASTM Specification D2241, D1784, D2122, D3139 Product Standard PS 22-70 NBS Standard Dimension Ratio (SDR-21 200 psi) (SDR 17250 psi) Max Lgth - 40' 40', or AWWA C900 DR 14, Pressure Class 200

Health Properties - The Seal of the National Sanitation

Testing Laboratory must appear on each pipe

Jointing materials shall be non-toxic.

Joints shall be made with the use of rubber O-ring gasket couplings, or integral bell joints.

2.03 BASIS OF ACCEPTANCE/PVC PIPE CERTIFICATIONS

The basis of acceptance of PVC plastic water main pipe will be a written certification, accompanied by a copy of test results that the pipe and pipe material has been sampled, tested, and inspected in accordance with the designated standard specifications. Contractor shall obtain these certifications from the manufacturer and deliver them to the Engineer's representative on the project site. A sufficient number of tests and certifications shall be made so as to be representative of the complete project. Copies of the test results shall be kept on file by the manufacturer, and shall be available for review by the Engineer upon request.

Pipe and fittings shall be visually inspected on the project site for proper markings which shall include manufacturer's name, or trademark, nominal pipe size, pressure rating for water at 73.4° F., plastic pipe material designation code (e.g. PVC 1120), standard dimension ratio, this ASTM

Designation D2241 with which pipe complies, and the National Sanitation Foundation (NSF) Seal of Approval for drinking water.

2.04 UNDERGROUND MARKING TAPE

Install underground marking tape in trench with all main water lines. Marking tape shall be installed at a depth of 12 inches minimum above the top of the pipe.

The underground marking tape shall be TERRA-TAPE (detectable) or an approved equal and shall be two inches in width. All underground marking tape shall be blue in color and shall be imprinted to read "CAUTION BURIED WATER LINE BELOW."

No separate pay item will be made for the installation of marking tape. The cost is to be included in the unit price for water line installation.

2.05 DUCTILE IRON PIPE

Ductile iron pipe shall conform to AWWA C151 (ANSI A21.51), pressure class 350.

The interior of the pipe shall be cement-mortar lined and bituminous seal coated in accordance with AWWA C104 (ANSI A21.4). Thickness of the lining shall be as set forth in Section 4.8.1 of the aforementioned specification unless otherwise directed by the Engineer. The exterior of all pipe, unless otherwise specified, shall receive either coal tar or asphalt base coating a minimum of 1 mil thick.

Each piece of pipe shall bear the manufacturer's name or trademark, the year in which it was produced, and the letters "DI" or the word "DUCTILE." Pipe manufacturer shall furnish notarized certificate of compliance to the above AWWA or ANSI specifications.

2.06 FITTINGS FOR WATER MAINS (DUCTILE IRON AND PVC)

Fittings for all water mains shall be **ductile iron** in accordance with ANSI A21.53 and shall conform to the details and dimensions shown therein. Fittings shall have interior cement-mortar lining as specified for ductile iron pipe.

Plugs, where required, shall be mechanical joint dished or flat plugs in accordance with AWWA C110. Joints for plugs shall be restrained with the use of ductile iron mechanical joint retainer glands.

Joints for fittings shall be mechanical joint type only.

2.07 JOINTS FOR DUCTILE IRON PIPE

The joints for ductile iron pipe shall be of the push-on or mechanical joint type conforming to AWWA C111 (ANSI A21.11).

Push-on type joints shall have an annular recess in the pipe socket to accommodate a single rubber gasket. Plain ends shall be suitably beveled to permit easy entry into the bell. The gasket and annular recess of the socket shall be so designed and shaped that the gasket is locked in place against displacement as the joint is assembled.

Mechanical joints shall be bolted and of the stuffing box type and shall consist of a bell, with exterior flange and interior recess for the sealing gasket, a pipe or fitting plain end, a sealing gasket, a follower gland, tee-head bolts, and hexagon nuts.

The cleaning and assembly of pipe and fitting joints shall be in accordance with the manufacturer's recommendations.

2.08 CASING PIPE

Casing pipe shall be steel, plain end, uncoated and unwrapped, have a minimum yield point strength of 35,000 psi and conform to ASTM A252 Grade 2, or ASTM A139 Grade B, without hydrostatic tests. The steel pipe shall have welded joints and be in at least 18-foot lengths.

The wall thickness of the pipe shall be a minimum of 0.250 inches The diameter of the pipe shall be as noted in the Bid Proposal.

2.09 HIGHWAY AND RAILROAD CROSSINGS

Steel casing pipe for highway and railroad crossings shall be bored and/or jacked in place to the elevations shown on the drawings. All joints between lengths shall be solidly welded with a smooth non-obstructing joint inside. The casing pipe shall be installed without bends. The water line pipe shall be installed after the casing pipe is in place.

At each end of the casing pipe, the water main pipe shall be wrapped with two layers of roofing felt. The wrapping shall extend a minimum of 12 inches in each direction from the end of the casing pipe. After the water main has been installed, inspected, tested and wrapped as specified, both ends of the casing pipe shall be closed with brick or concrete block masonry in a manner acceptable to the Engineer.

2.10 GATE VALVES

All gate valves shall be of the resilient seat type, iron body, non-rising stem, fully bronze mounted and suitable for water working pressures of 200 psi. Valves shall be of standard manufacture and of the highest quality both as to materials and workmanship.

Gate valves for buried water main service may be furnished with mechanical joint or push-on end connections. Gate valves for other duty shall be as shown on the Drawings or specified hereinafter.

All gate valves shall have the name or monogram of the manufacturer, the year the valve casting was made, the size of the valve, and the working water pressure cast on the body of the valve.

Each gate valve shall be installed in a vertical position with a valve box. Gate valves set with valve boxes shall be provided with a 2-inch square operating nut and shall be opened by turning counter-clockwise.

All valves shall conform with the latest edition of AWWA C509.

2.11 CONNECTION OF NEW WATER MAINS TO EXISTING MAINS

The contractor shall connect new water mains to existing water mains where shown on the drawings or directed by the Engineer, and shall furnish all necessary equipment and material required to complete the connection. Tapping sleeves and valves for "wet" connections shall be as specified hereinbefore and WILL BE SEPARATE PAY ITEMS. Connections made without tapping sleeve and valves will NOT be a separate pay item, but shall be merged into the unit price for the water mains.

The contractor shall locate existing mains and check outside diameters of pipe prior to ordering sleeves and accessories. NO additional payment will be allowed for machining pipe and/or accessories if the proper size is not ordered.

2.12 VALVE BOXES

Valve boxes shall be of 5-1/4 inch standard cast iron, two or three pieces, screw type valve box with drop cover marked "WATER." Valve box for gate valves shall be three-piece type. Valve boxes shall be accurately centered over valve operating nut, and backfill thoroughly tamped about them. Valve box bases shall not be set on the valves, but shall be supported on crushed stone fill. They shall be set vertically and properly cut and/or adjusted so that the tops of boxes will be at grade in any paving, walk, or road surface, and two and three inches above ground in grass plots, fields,

woods, or other open terrain. Valve boxes and covers shall be as manufactured by Tyler Corporation, Opelika Foundry, Bingham & Taylor, or equal.

2.13 FIRE HYDRANTS

Install fire hydrants where shown on the drawings or directed by the Engineer. Fire hydrants shall conform in all respects to the requirements of AWWA C502. Hydrants barrel shall have safety breakage feature above the ground line. All hydrants shall have six inch mechanical joint shoe connection, two 2-1/2 inch discharge nozzles and one pumper nozzle with caps fitted with cap chains. Connection threads shall conform to local standards. Main valve shall have 5-1/4 inch full opening and be of the compression type opening against water pressure so that valve remains closed should barrel be broken off.

Fire hydrants shall be fully bronze mounted. Main valves shall have a threaded bronze seat ring assembly of such design that it is easily removable by unscrewing from a threaded bronze drain ring. Bronze drain ring shall have multiple ports providing positive automatic drainage as the main valve is opened or closed. Drainage waterways shall be completely bronze to prevent rust and corrosion.

Operating stem shall be equipped with anti-friction thrust bearing to reduce operating torque and assure easy opening. Stop shall be provided to limit stem travel. Stem threads shall be enclosed in a permanently sealed lubricant reservoir protected from weather and the waterway with O-ring seals.

Fire hydrants shall be designed for 150 psi working pressure and shop tested to 300 psi pressure with main valve both opened and closed. Under test, the valve shall not leak, the automatic drain shall function, and there shall be no leakage into the bonnet.

Hydrants shall be set plumb with not less than two cubic feet of crushed stone and backed with at least one cubic foot of Class "C" concrete or equivalent. Set hydrants so that centerline of pumper nozzle is minimum 18 inches above finished grade. An operating wrench and traffic damage repair kit shall be provided with every 15 hydrants. Provide one set where quantity of hydrants is less than 15.

Fire hydrants shall be M&H, Mueller, Darling, Kennedy or approved equal.

2.14 FLUSHING HYDRANTS

For blow-off or line flushing service, furnish and install post-type dry barrel hydrants where shown on the drawings or as directed by the Engineer. Flushing hydrants shall conform to AWWA C502 and the following features and specifications:

- Pressure Rating: 150 psi working, 300 psi test.
- Valve Type: Close with pressure.
- Direction of Opening: Counterclockwise unless existing standards have been established otherwise.
- Operating Nut: Standard 1-1/2 inch pentagon. Provision for oiling the operating nut and hold down nut.
- Barrel Drain: Bronze bushed openings & other requirements per AWWA C502.
- Depth of Bury: 2'-6" standard. Greater depth if directed.

Hydrants to be factory enameled red color above finish grade line. Nozzles to be 18 inches minimum above finish grade line.

Hydrant lateral pipe and fittings shall be mechanical joint, and shall match the approved overall pipe jointing system on this project.

For flushing service on water mains 2 inches through 4 inches in diameter, hydrant shall have 2-1/8 inch internal valve and one 2-1/2 inch outlet. Lateral pipe shall be 3 inch diameter ductile iron. Use an increasing fitting at the main to lateral tee when the main is less than 3 inches in diameter.

For flushing service on water mains 5 inches in diameter and larger, hydrant shall have 5-1/4 inch internal valve and two 2-1/2 inch outlets. Lateral pipe shall be 6 inch ductile iron or PVC pipe.

Outlet threads to be National Standard unless existing standards have been established otherwise. Outlets to be equipped with cap and chain.

Flushing hydrants, which are called for on the Drawings, shall be set within five feet of the dead end of water mains. Set hydrants plumb with a minimum of two cubic feet of crushed stone around and below the drain ports, and brace the hydrant shoe against undisturbed earth making a kicker of poured concrete. In soft or yielding earth, tie the hydrant shoe to the water main with steel rods.

2.15 CLEARING AND GRUBBING

Pipelines are to be installed on private properties as well as upon the rights-of-way of highways, railways, and other utilities. The contractor shall familiarize himself with all special requirements of the respective right-of-way holders before commencing work. No clearing shall be

done until the Owner has secured proper authorization or permission from the holders of rights-of-way.

In addition, the contractor shall acquaint himself with all federal, state, and/or local regulations for preventing forest fires, and these regulations shall govern in all cases. Brush and undergrowth shall be piled and burned only at locations reviewed by the Engineer. Fire spreading beyond clearance limits causing property damage shall be the contractor's responsibility. Burning, to the extent that it will not conflict with such regulations, shall directly follow clearing work and shall be completed to the Engineer's satisfaction before line materials are distributed along the pipe route.

Stumps in the way of the pipe trench shall be grubbed or otherwise removed and the course of the line shall generally be grubbed and graded to allow passage of equipment and to allow the ditch to be excavated to the line and grade established by the Engineer.

Additionally, reasonable care shall be taken during construction to avoid damage to vegetation. Ornamental shrubbery and tree braches shall be temporarily tied back, where appropriate, to minimize damage. Trees which receive damage to branches shall trimmed of those branches to improve the appearance of the tree. Tree trunks receiving damage from equipment shall be treated with a tree dressing.

2.16 GRADING

Slopes within highway rights-of-way that are cut down or notched to facilitate operation of construction equipment shall be rebuilt to original height and slope to the satisfaction of the Engineer and the State Highway Division Maintenance Engineer. Spoil banks from grading operations shall not be placed where surface drainage will be affected.

2.17 EXCAVATION FOR PIPELINE TRENCHES

No extra or separate payment will be made for rock excavation. All excavation costs shall be merged into the cost of pay items for the pipe.

A minimum cover of 30 inches shall be provided for all water main and services, except that within zero to three feet from customer meter box, trench shall be same depth as meter box parts.

Trenches installed through rock shall have a minimum width of 24 inches to facilitate future maintenance and connections to the line.

2.18 PIPE BEDDING

All water main pipe shall be supported on a bed of well compacted earth, dirt, sand, fine gravel, or Size #9 crushed stone as shown in the details on of the plans. Bedding material shall be free from rock and be acceptable to the Engineer. In no case shall pipe be supported directly on the rock bottom of trenches, boulders, or loose rock in the trench. When rock is encountered in the trench bottom, bedding shall consist of fine gravel or Size #9 crushed stone only. Pipe bedding will NOT be a separate pay item.

2.19 SPECIAL PIPE BEDDING

Crushed stone when necessary for the following uses (as determined by the Engineer) SHALL BE a separate pay item and listed as "special pipe bedding" or "special granular bedding."

A. In wet, yielding mucky locations where pipe is in danger of sinking below grade or floating out of line or grade, or where backfill materials are of such a fluid nature that such movements of the pipe might take place during the placing of the backfill, the pipe must be weighted or secured permanently in place by such means as will prove effective. When ordered by the Engineer, yielding and mucky materials in subgrades shall be removed below ordinary trench depth and replaced with crushed stone to provide a proper bed for the pipe.

B. Crushed stone pipe bedding and envelopment shall be considered as "special pipe bedding" when called for on the drawings or ordered by the Engineer at designated creek crossings in rock or earthen trenches.

Crushed stone for "special pipe bedding" where required as set out under this paragraph of the Detailed Specifications, shall be Kentucky Department of Highways crushed stone, Size No. 57.

2.20 PIPE INSTALLATION

Pipe shall be laid true to line and grade when given, or as directed by the Engineer. Supporting of pipe shall be as specified under "Pipe Bedding" hereinbefore and in no case will the supporting of pipes on blocking be permitted.

Fittings for the water mains shall be provided and placed as and where directed by the Engineer or as shown on the Drawings. Dead ends of pipes and of branches shall be permanently sealed and plugged using manufactured units compatible with the pipe system.

Before each piece of pipe is lowered into the trench, it shall be thoroughly inspected to insure its being clean. Any piece of pipe or fitting which is known to be defective shall not be laid or

placed in the lines. Any defective pipe or fitting discovered after the pipe is laid shall be removed and replaced until satisfactory without additional charge. In case a length of pipe is cut to fit in a line, it shall be so cut as to leave a smooth end at right angles to the longitudinal axis of the pipe.

Granular pipe bedding material shall be used to correct irregularities in the earth trench subgrade and shall be furnished at the contractor's expense as specified hereinbefore.

The interior of the pipe, as the work progresses, shall be clean. When laying of any pipe is stopped for any reason, the exposed end of such pipe shall be temporarily closed with a plywood plug fitted into the pipe bell so as to exclude earth or other material.

No backfilling (except for securing pipe in place) over pipe will be allowed until the Engineer has had an opportunity to make an inspection of the joints, alignment, and grade in the section laid, but such inspection shall not relieve the contractor of further liability in case of defective joints, misalignment caused by backfilling, and other such deficiencies that are noted later.

2.21 JOINTING

Jointing of pipe and fittings shall be according to manufacturer's published recommendations or manufacturer's field representative directions unless modified in these Specifications or in the field by the Engineer.

2.22 BACKFILLING PIPELINE TRENCHES

Trenches outside existing sidewalks, driveways, streets, and highways shall be backfilled in accordance with Method "A." Trenches within the limits of sidewalks and unpaved driveways shall be backfilled in accordance with Method "B."

Trenches within the paving limits of existing streets, highways and driveways shall be backfilled in accordance with Method "C." When directed by the Engineer, the contractor shall wet backfill material to assure maximum compaction.

Before final acceptance, the contractor will be required to level off all trenches or to bring the trench up to grade and restore surface. The contractor shall also remove from roadways, rights-of-way, and/or private property all excess earth or other materials resulting from construction.

In the event that pavement is not placed immediately following trench backfilling in streets and highways, the contractor shall be responsible for maintaining the trench surface in a level condition at proper pavement grade at all times.

2.23 SETTLEMENT OF TRENCHES

Wherever water lines are in, or cross, driveways and streets the contractor shall be responsible for any trench settlement which occurs within these rights-of-way within one year from the time of final acceptance of the work. If paving shall require replacement because of trench settlement within this time, it shall be replaced by the contractor at NO EXTRA COST to the Owner. Repair of settlement damage shall meet the approval of the Engineer and, as applicable, of Crittenden County, Livingston County, or the Crittenden-Livingston County Water District, or the Kentucky Department of Highways.

2.24 CONCRETE CRADLE, ANCHORS, AND ENCASEMENT

Concrete cradle, anchors, encasement or caps over water mains and fittings shall be placed where shown on the drawings, required by the specifications or as directed by the Engineer.

Concrete shall be 2500 psi and shall be mixed sufficiently wet to permit it to flow under the pipe to form a continuous bed. In tamping concrete, care shall be taken not to disturb the grade or line of the pipe or injure the joints. Concrete placed outside the specified limits or without authorization from the Engineer will NOT be subject to payment.

Water mains and fittings shall have concrete thrust or "kicker" blocks at all pipe intersections and changes of direction to resist forces acting upon the pipeline. Thrust blocking and anchors shall NOT be a pay item.

All valves shall be anchored in accordance with the details. Valve anchoring will NOT be a separate pay item but will be included in payment for the valve.

Encasement or capping of water mains under creeks and drainage waterways shall be constructed as shown on the drawings and SHALL BE a separate pay item listed as "Concrete Cradle and Encasement." Crushed stone for the encasement or enveloping shall be as specified under "Special Pipe Bedding."

2.25 STREAM CROSSINGS

The location and length of designated stream crossings are shown on the drawings, however the Engineer may delete or add stream crossings according to his discretion, or he may shorten or lengthen the stream crossings as field conditions require.

The Engineer may permit the crossing of minor drainageways, ditches, or depressions by using ordinary pipeline trenching and installation methods, so long as minimum pipe cover and proper backfilling are maintained. Earthen trench crossings which are not to be encased in concrete shall utilize regular pipeline pipe.

To avoid the use of fittings insofar as possible, trenches shall be gradually deepened as they approach drainageways or depressions to provide the specified pipe cover under the drainage course. When fittings are directed or allowed by the Engineer, they shall be of the restrained or lock-joint pattern except where they are totally encased in concrete as an integral part of the pipeline encasement.

Designated stream crossings in earthen trenches shall be of ductile iron pipe encased in concrete, or enveloped in crushed rock and capped as shown in detailed drawings according to the decision of the Engineer. Crushed rock for crossing envelopment SHALL BE PAID FOR as "special pipe bedding."

Where the bottom and banks of the drainageway channel are backfilled with earth or crushed rock as a result of the crossing, these surfaces shall be protected against erosion with rip-rap as shown in the detailed drawings. Rip rap shall be machine or hand-placed.

2.26 RIP RAP

Riprap material shall meet Kentucky Department of Transportation Standard Specifications for Road and Bridge Construction. No less than 80 percent by volume, of individual stones shall range in size from 0.25 to 1.5 cubic feet. Stones of small size are permissible for filling of voids or dressing after placement of larger stones.

2.27 BITUMINOUS CONCRETE HIGHWAY, STREET, AND DRIVEWAY REPLACEMENT

The contractor shall replace those sections of existing roads, streets, and driveways required to be removed to install the pipelines under this contract. He shall construct same to the original lines and grades and in such manner as to leave all such surfaces in fully as good or better condition than that which existed prior to his operations.

Prior to trenching, the pavement shall be scored or cut to straight edges at least 12 inches outside each edge of the proposed trench to avoid unnecessary damage to the remainder of the paving. Edges of the existing pavement shall be recut and trimmed to square, straight edges after the pipeline has been installed and prior to placing the new base and pavement.

Backfilling of the trench shall be in accordance with Method "C" as described hereinbefore. Base course for the paving shall be dense graded crushed limestone furnished and placed in accordance with the current requirements of the Standard Specifications for Road and Bridge Construction of the Tennessee Department of Transportation to a depth of six inches in roads and streets and four inches in driveways.

A subslab of reinforced concrete shall be placed for state maintained highways as indicated in the drawings. The subslab shall have a minimum thickness of 6 inches. Concrete for the subslab shall be 2500 psi.

The wearing surface of roads, streets, and driveways shall be plant mix bituminous concrete furnished and placed in accordance with the current requirements of the aforementioned Standard Specifications to a depth of two inches in roads and streets and 1-1/2 inches in driveways.

2.28 PORTLAND CEMENT CONCRETE HIGHWAY, STREET, AND DRIVEWAY REPLACEMENT

Wherever Portland cement concrete streets and driveways are removed, they shall be reconstructed to the original lines and grades and in such manner as to leave all such surfaces in fully as good (or better) condition that which existed prior to the contractor's operations.

The existing concrete paving shall be sawed or cut to straight edges 12 inches outside the edges of the trench or broken out to an existing joint as directed by the Engineer. The maximum width of the trench at pavement level shall be as shown in maximum pay width schedule on the Standard Details unless otherwise specified by the Engineer. The concrete pavement shall be equal to the existing pavement thickness but not less than six inches and four inches in thickness for street and driveways respectively.

Pavement replacement shall be accomplished with 2500 psi concrete in accordance with the details shown on the Drawings.

2.29 UNPAVED DRIVEWAYS

Where unpaved driveways and parking areas are disturbed during the construction work, they shall be replaced in fully as good or better condition than that which existed prior to the contractor's operations.

Backfilling of the pipeline trench shall be with dense graded aggregate in accordance with Method "B" Paragraph 18, Part II, of the General Specifications; then trench shall be topped to grade with six inches compacted thickness KDOH #57 crushed stone surface course.

2.30 REMOVING AND REPLACING CONCRETE SIDEWALKS

Where concrete sidewalks are cut or disturbed during the construction work, they shall be replaced in fully as good or better condition than that which existed prior to the contractor's operations.

In general, concrete sidewalks shall not be tunneled under when encountered in trenching. Except in cases where tunneling is approved, the contractor shall cut sidewalk with a saw or other approved method to provide a smooth even edge. When concrete sidewalk is tunneled under (with the approval of the Engineer only) it shall be back-filled with granular material or mechanically tamped earth under the portion undermined so as to prevent settlement.

When replacing concrete sidewalks, the existing concrete edges shall be trimmed to straight edges six inches back of the trench sides. The existing edges shall be cleaned and kept moist during pouring to insure a good bond.

After the trench has been backfilled and tamped, a base course of crushed stone shall be shall be placed to a compacted thickness of three inches. Immediately prior to pouring of the concrete, the crushed stone base shall be thoroughly wetted or the concrete shall be poured on a layer of heavy building paper.

The paving shall consist of four inches of Class "BB" concrete, struck off to accurately placed screens and worked with a wooden float until the mortar appears on the top. After the surface has been thoroughly floated, it shall be brushed to leave markings of a uniform type similar to the existing walk. All joints and edges shall be finished with an edging tool. The allowable variation shall be 1/8 inch to 10 feet transversely and longitudinally.

2.31 TESTING WATER PIPELINES

Testing of the water mains shall be accomplished as noted hereinafter.

(a) All water mains and components shall be given a hydrostatic test to rated working water pressure of the pipe under which leakage shall not exceed 10 gallons per 24 hours per inch of diameter per mile of pipe. Loss of water pressure during test shall not exceed 10 psi in a 24-hour period, 5 psi in a 10-hour period or 2 psi in a 4-hour period.

(b) Contractor shall furnish a recording gauge and water meter for measuring water used during leakage test and recording pressure charts for duration of test. Recording pressure charts shall be turned over to the Engineer at conclusion of the tests. The pressure recording device shall be suitable for outside service with a range from 0-200 psig, 24-hour spring wound clock, designed for 9-inch charts, and shall be approved by the Engineer. For contractor's information only, such pressure recording devices may be available from the Foxboro Company, Foxboro, Massachusetts, Bristol Division of ACCO, Waterbury, Connecticut, or Weksler Instruments Corporation, Freeport, New York.

(c) The Owner will provide initial water for testing and disinfecting the water mains. Should the first test fail to pass all additional water required for subsequent tests

shall be furnished at the contractor's expense.

(d) Testing of water lines is NOT a pay item.

2.32 DISINFECTION OF WATER LINES

New potable water lines shall not be placed in service (either temporarily or permanently) until they have been thoroughly disinfected in accordance with the following requirements and to the satisfaction of the Engineer.

After pressure testing, a solution of hypochlorite using HTH or equal shall be introduced into the section of the line being disinfected sufficient to insure a chlorine dosage of at least 25 ppm in the main. While the solution is being applied, the water should be allowed to escape at the ends of the line until tests indicate that a dosage of at least 50 ppm has been obtained throughout the pipe. Open and close all valves and cocks while chlorinating agent is in the piping system. The chlorinated water shall be allowed to remain in the pipe for 24 hours after which a residual of at least 25 ppm shall be obtained. The disinfection shall be repeated until 25 ppm is obtained after which time the main shall be thoroughly flushed until the residual chlorine content is not greater than 1.0 ppm, and then may be connected to the system. Disinfection of water lines IS NOT a pay item. Also NO additional payment will be allowed for providing taps for chlorine injection and/or flushing if necessary. Before the new line is placed in service, a negative bacteriological sample must be obtained from the line as analyzed by a State approved laboratory.

2.33 TAPPING SLEEVES AND VALVES

Tapping sleeves for connections to existing water lines shall be of the mechanical joint type suitable for working pressures of 200 psi and shall be Mueller No. H-615, American Darling No. 1004, M&H No. 1174, Kennedy Fig. 920, or approved equal.

Tapping valves shall be of the mechanical joint type suitable for working pressures of 200 psi and shall be Mueller No. H-667, American-Darling No. 565, M&H No. 751, Kennedy Fig. 950, or approved equal.

2.34 PRESSURE REDUCING VALVES AND VAULTS

Pressure reducing valves shall be Cla-Val pressure reducing and check valves having a globe pattern and a adjustment range of 30-300 psi. Valve shall be Cla-Val 90-01 or equal.

The contractor shall construct the pressure reducing vaults at the locations indicated and install ALL piping and valves as specified herein and shown on the drawings.

Vaults may be of precast concrete or concrete block with concrete top slab (as shown on the drawings).

Submit shop drawings on any precast concrete vaults proposed to be furnished and installed.

Concrete block shall be 8"x8"x16" nominal dimensioned solid manhole and catch basin masonry units, ASTM C139, or approved equal. Packaged mortar mixes shall meet the requirements of ASTM C387 for unit masonry mortar.

Concrete shall be 3500 psi; reinforcing steel shall be ASTM A615, Grade 60. All concrete work shall be in accordance with the applicable provisions of Part III of the General Specifications and/or Section 5 of the Detailed Specifications herein. In cases of conflict, provisions of the Detailed Specifications shall govern over provisions of the General Specifications.

In lieu of a field-built concrete block vault and upon the approval of the Engineer, the contractor may furnish and install a precast concrete vault equal to Type A Universal Telephone Utility Manhole (8" long x 6" wide x 6' deep) as manufactured by Cloud Concrete Products, Inc., Bowling Green, Kentucky, with all knock-out panels left intact and pulling irons eliminated. Provide standard stock vault sizes if suitable but check and verify all inside dimensions required for the piping to be installed. The contractor shall coordinate all pipeline opening requirements with the vault supplier and these openings shall be clearly indicated on shop drawing submittals. Any necessary extra piping required to accommodate inadequately located pipe openings shall be furnished and installed at NO extra cost to the Owner.

Field patching of openings around pipe through walls (both block and precast concrete) shall be as follows: Coat the contact surface of the pipe hole with SIKA DUR HI-MOD, or equal, then patch with Embeco 636 grout. (No pre-soak required, epoxy bonding compound eliminates moisture loss from fresh grout.)

Precast vaults with solid bottoms shall include provisions for adequate drainage; such arrangements shall be clearly indicated on shop drawings to be approved by the Engineer. The contractor may furnish and install precast concrete vaults without bottoms, then place stone fill bottom as shown on the drawings.

Concrete piers in the vault shall be field located by contractor. The contractor shall have the Engineer's approval of design, configuration and location of the piers prior to construction.

Access hatch cover shall be aluminum single leaf design of the dimensions shown on the drawings. Hatch frames shall be extruded aluminum with continuous concrete anchor around the complete opening. Door shall be 1/4 inch thick diamond pattern aluminum plate reinforced and stiffened to support a 300 lbs/sq ft live load. Door shall have 180° hinges with stainless steel hinge pin and stainless steel drop handle. Hatch cover shall be Type "S" with Type "A" Lev-L-Lok locking

device (for top opening) as manufactured by Washington Aluminum Company, Inc., Baltimore, Maryland, or approved equal.

All piping in the vaults shall be ductile iron or cast iron. Ductile cast iron faced and drilled ANSI B16.1, Class 125.

2.35 CUSTOMER SERVICE CONNECTIONS

Water service connections shall be made in accordance with the details shown on the drawings and/or set forth herein. Sizes shall be as listed in the proposal.

Customer Service Connection Materials:

- ¾" Corporation Stops; Ford F1000-3
- 1" Corporation Stops; Ford F1000-4
- ¾" Tandem Copperseters; Ford TVVBHH72-7W-41-33
- 1" Tandem Copperseters; Ford TVHH74-10W-41-44
- ¾" Saddles; S70
- 1" Saddles; S70
- Meter Boxes for ¾" Service; Plastic Box 1015-24; Plastic Top with Cast Iron Reader Lid – 1015-6
- Meter Boxes for 1" Service; Plastic Box 30 x 30 A2000; Top Extension Ring 3 – Vestal RME-18H
- ¾ PRV; Honeywell Braukmann D05A-1130
- 1" PRV; Honeywell Braukmann D05A-1148
- ¾" Copper Tubing; Type "K"
- 1" Copper Tubing; Type "K"
- Invensys Meters; 5/8" x ¾" SRII with Bronze Bottom
- Invensys Meters; 1" SRII with Bronze Bottom
- ¾" Schedule 80 PVC Pipe
- 1" Schedule 80 PVC Pipe
- ¾" Plastic Inserts
- 1" Plastic Inserts

2.36 PIPE AND FITTINGS FOR HOUSE SERVICE CONNECTIONS

Water service tubing shall be 3/4" polyethylene tubing, Class 200.

2.37 COMPLIANCE WITH SAFETY REGULATIONS

The equipment items furnished shall comply with all governing Federal and State laws regarding safety, including all requirements of the Occupational Safety and Health Act of 1970 (OSHA), and including the 1985 revisions including, but not limited to, OSHA (P.L.-596) and the Contract Work Hours and Safety Standards Act (P.L. 91-54).

2.38 SEEDING

Lawns and other grassed areas shall be reseeded as outlined herein. Bring the line and grade to original, feather to match the surrounding cover. The final six inches of soil shall be topsoil free of rock, construction debris, and other objectionable matter. Spread commercial fertilizer (10-10-10) at 20 pounds per 1,000 square feet. Spread agricultural grade limestone at a rate of one ton per acre. Scarify as necessary by rake or other approved method. Spread seed (Kentucky 31 Fescue 75%, Chewing Red Fescue 10%, Italian Rye Grass 10%, and Dutch White Clover 5%) at a rate of four pounds per 1,000 square feet, lightly rake, roll with a 200 pound roller, and water with a fine spray. If in a lawn or lawnlike area (not pasture), mulch at the rate of 200 pounds (2 bales) per 1,000 square feet, or as required to cover 75 percent of the ground.

Planting shall take place only within the season extending from March 1st to May 15th and from September 1st to October 15th unless other seasons may be approved by the Owner. It is the Contractor's responsibility to secure a viable grass cover (at least 100 seedlings per square foot or any given square foot). If planting is less that fifty percent effective, rework the ground, refertilize, relime and reseed, and remulch (if originally mulched).

2.39 TRACER WIRE

Install 12-gauge underground tracer wire in trench with all main water lines. The contractor is not required to install marking tape.

No separate pay item will be made for the installation of tracer wire. The cost is to be included in the unit price for water line installation.

2.40 CLEAN UP

Upon completion of the water mains and appurtenances, the contractor shall remove all debris and surplus construction materials resulting from the work. The contractor shall grade the ground along each side of pipe trenches in a uniform and neat manner, leaving construction areas as near as possible to the original ground line.

END OF SECTION

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SECTION 3

BASIS OF MEASUREMENT AND PAYMENT

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SECTION 3

BASIS OF MEASUREMENT AND PAYMENT

3.01 SCOPE

The successful contractor shall furnish all necessary labor, machinery tools, apparatus, equipment, materials, service and other necessary supplies and perform all work shown on the Drawings and/or described in the Specifications and Contract Documents at the lump sums or the unit prices of the executed Contract Documents.

The Contractor declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the Plans, Specifications, and Contract Documents for the work, and has read all special provisions furnished prior to the opening of Bids; and that he has further satisfied himself relative to the work to be performed. The Contractor further declares that he understands the unit quantities shown in the Bid Form are approximate only, are subject to increase or decrease, and agrees that should the quantities of any of the items be decreased no claim will be made for anticipated profits nor will the Owner honor such claims.

3.02 WATER MAINS (OPEN CUT)

Payment for furnishing and installing water mains and fittings (including adapters) of the various sizes and types of pipe will be made at the contract unit price per linear foot, complete in place, which shall include compensation for furnishing, hauling, trenching (including rock excavation), bedding, concrete thrust blocking and anchors for fittings and pipe, laying, jointing, installing marking tape, testing, backfilling, ground restoration (except pavement replacement), disinfecting and clean up. The quantity of water main to be paid for shall be the length of the completed water main measured along its centerline without any deduction for lengths of fittings or valves.

Pipe fittings will NOT be a separate pay item.

3.03 WATER MAINS (PUNCHED UNDER PAVED AREAS)

Payment for unencased pipe bores will be made at the contract unit price for the various sizes of unencased bore. This item includes all labor and equipment required to perform the unencased bore and will be measured edge-to-edge of the road or driveway which is punched or bored. This pay item does NOT include the water carrier pipe which will also be paid at the open cut price.

3.04 CONNECTION TO EXISTING WATER LINE

Payment for connection to existing water line will be made at the unit price for "connection to existing water line." This pay item will include cutting in a fitting or tapping sleeve to the existing water line. This pay item DOES NOT include the gate valves which will be located near the connection.

3.05 WATER LINE IN STEEL COVER PIPE (BORED)

Payment for water line in steel cover pipe (bored) will be made at the contract unit price per linear foot. Price shall include boring, steel encasement pipe, boring pits, and clean up. The carrier pipe will be paid for under Section 4.02 hereinbefore.

3.06 VALVES AND BOXES

Payment for furnishing and installing valves of the various sizes and types shall include furnishing and installing valve boxes and will be made at the contract unit price complete in place. Price shall include compensation for each size (or type) of gate valves, furnishing, hauling, excavation, installation, blocking and backfilling.

3.07 FLUSH HYDRANT ASSEMBLIES

Payment for the flush hydrant assemblies as specified will be at the contract unit price for each type or size, complete and in place. Price shall include all pipe, gate valves, and all fitting(s) for connection into the water main, all excavation, blocking, drainage gravel or stone, backfilling, testing, finish painting, and all other items as specified. The contract price shall include up to ten feet of lateral pipe from main to hydrant.

3.08 PRESSURE REDUCING VALVE ASSEMBLY

Payment for the pressure reducing valve assembly as shown on the Drawings will be made at the contract unit price for each type and size, complete in place.

3.09 CUSTOMER SERVICE ASSEMBLIES

Payment for customer service assemblies will be made at the contract unit price listed for the appropriate type and size, complete in place. Price shall include compensation for tapping the water main, furnishing and installing service connector or corporation stop, furnishing and setting meter box and cover, and furnishing and placing meter and meter setters, including angle check valve and meter stop. The 18-inch long service line with cap specified to extend beyond the meter box IS included in this pay item.

3.10 3/4-INCH SERVICE LINE (OPEN CUT)

Payment for service piping of the various sizes and types, installed by open cut, will be made at the contract unit price per linear foot, complete in place, which shall include compensation for furnishing, hauling, trenching (including rock excavation), laying, jointing, testing, and backfilling. The quantity of service piping to be paid for shall be the length of the completed service line measured along its centerline. Some residents will have service line installed to their houses and connected to their existing plumbing. These connections are included in the unit price for 3/4-inch service line.

3.11 3/4-INCH SERVICE LINE (JACKED UNDER HIGHWAY)

Payment for service line installed by jacking under highways will be made at the contract unit price per linear foot. Price shall include jacking service line under highway and includes all excavation and backfill of pits. Maximum length for payment on this item is five feet outside both ditch lines of the road.

3.12 SPECIAL PIPE BEDDING (CRUSHED STONE)

Payment for the granular material shall be at the contract unit price. The price shall include all costs relating to the furnishing and placing of the special pipe bedding as specified. The material shall be measured in place and paid for in tons as shown on the Bid Schedule. The contractor shall furnish the Engineer with duplicate weigh slips for all such material delivered to the job.

3.13 AGGREGATE SURFACE REPLACEMENT

Payment for replacing unpaved highways, roads, gravel driveways, and shoulders will be made at the contract unit price per linear foot, complete in place, which price shall include compensation for Method "C" backfill (Drawing WD-1) from the top of the pipe bedding to six inches below the grade line and then the six inch dense graded aggregate course to the top of the trench.

3.14 PUMP STATIONS

Payment for the Pump Station will be made at the contract lump sum price for each station. This pay item is to include the pump building structure and all contents including fittings, electrical work, sitework and start-up.

3.15 PAY ITEMS

The PAY ITEMS listed in this Section refer to the same items listed in the Bid Form and constitute all of the pay items of this Contract. Any other elements of work listed in the Specifications or shown on the Drawings shall be considered incidental to the above PAY ITEMS and the cost of such elements shall be merged into the appropriate PAY ITEMS.

END OF SECTION