

**PROJECT MANUAL  
(SPECIFICATIONS & CONTRACT DOCUMENTS)**

**FOR**

**SOUTH MONROE WATER SYSTEM IMPROVEMENTS  
OUACHITA PARISH POLICE JURY  
FY 2025 LCDBG PROGRAM**

**LCDBG CONTRACT NO. 2000989699**

**OUACHITA PARISH, LOUISIANA**

**L & A PROJECT NO. 23E091.01**

**SEPTEMBER, 2025**



**LAZENBY & ASSOCIATES, INC.**

*CONSULTING ENGINEERS & LAND SURVEYORS*

2000 North 7th Street

West Monroe, Louisiana 71291

Phone: (318) 387-2710 ~ [www.lazenbyengr.com](http://www.lazenbyengr.com)

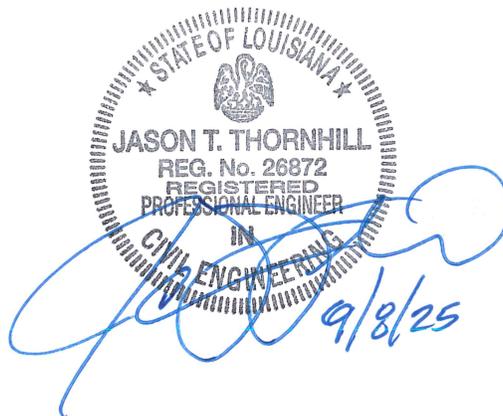
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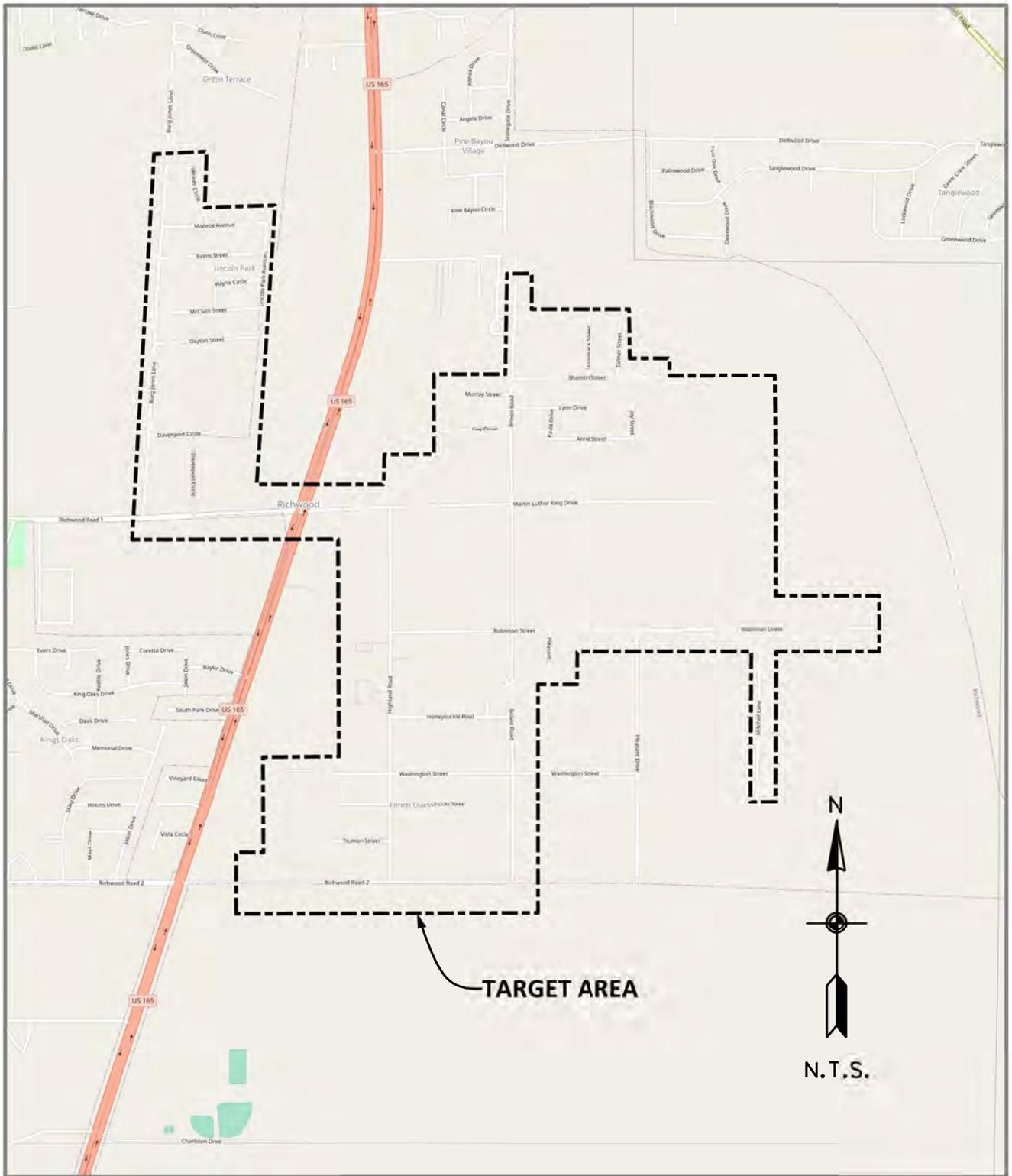
Prepared by:

LAZENBY & ASSOCIATES, INC.  
Consulting Engineers and Land Surveyors  
2000 North Seventh Street  
West Monroe, Louisiana 71291  
L & A, Inc. Project No. 23E091.01  
SEPTEMBER, 2025

## **PROJECT DESCRIPTION**

This project involves improvements to the South Monroe Water System and primarily includes replacement of existing aged, undersized and deteriorating water mains. Many of the mains targeted for replacement were installed in the 1950's and are either 4" or 6" asbestos cement or 2" and smaller galvanized piping. Major construction items include, but are not limited to, installation of new 4" and 6" PVC water mains, valves, fire hydrants, and related items. The Ouachita Parish Police Jury will own the proposed improvements with Greater Ouachita Water Company being responsible for future operation and maintenance. The proposed work will be performed within existing Ouachita Parish Police Jury or Greater Ouachita Water Company rights-of-way.

Only items listed in the Contract Bid Schedule will be paid for. All other items to be performed in the Project Plans are considered incidental and shall be included in the prices bid for items listed in the Contract Bid Schedule.



**LEGEND**

----- TARGET AREA

**OUACHITA PARISH POLICE JURY**

**FY 2024-2025 LCDBG APPLICATION**

**SOUTH MONROE WATER SYSTEM**

**TARGET AREA MAP**



**LAZENBY  
& ASSOCIATES, INC.**

CONSULTING ENGINEERS & LAND SURVEYORS  
2000 NORTH 7TH STREET WEST MONROE, LOUISIANA (318) 387-2710

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**ADVERTISEMENT FOR BIDS**  
**AND**  
**INFORMATION FOR BIDDERS**

**ADVERTISEMENT FOR BIDS**

LCDBG Contract No. 2000989699

Ouachita Parish Police Jury (hereinafter referred to as the “Owner”)

Sealed bids marked “Sealed Bid – Ouachita Parish Police Jury Community Development Block Grant Project for Fiscal Year 2025 (South Monroe Water System Improvements) to be financed by the State of Louisiana CDBG Program” will be received by the Owner for the construction of the project described as follows:

South Monroe Water System Improvements  
FY 2025 LCDBG Program  
Ouachita Parish Police Jury

Proposals shall be addressed to the Ouachita Parish Police Jury, and delivered to the Ouachita Parish Administrative Building, located at, 100 Bry Street, Monroe, Louisiana 71201 (Phone (318) 327-1340) not later than 10:00 o'clock A.M., on the 26th day of February, 2026. Sealed bids to be marked “Sealed Bid – Ouachita Parish Police Jury Community Development Block Grant Project for Fiscal Year 2025 (South Monroe Water System Improvements) to be financed by the State of Louisiana CDBG Program”. All bids must be submitted on the Bid Forms provided in the Specifications and Contract Documents. Any bids received after the specified time and date will not be considered. The sealed bids will be publicly opened and read aloud at 10:00 A.M. on the 26th day of February, 2026, in the Ouachita Parish Police Jury conference room. The Information for Bidders, Form of Bid Proposal, Form of Contract, Plans, Specifications, and Forms of Bid Bond, Performance Bond and Payment Bond, and other contract documents may be examined at the Office of Lazenby & Associates, Inc., 2000 North 7<sup>th</sup> Street, West Monroe, Louisiana 71291 (Phone (318) 387-2710). Copies may be obtained at this office upon payment of a deposit of \$50.00. This deposit will be refunded upon request in accordance with R.S. 38:2212.

Electronic bids will be received via [www.bidsync.com](http://www.bidsync.com) prior to bid closing time.

The Owner reserves the right to reject any and all bids for just cause; such actions will be in accordance with Title 38 of the Louisiana Revised Statutes.

Each bidder must have an active UEI Number, as verified on [www.sam.gov](http://www.sam.gov), prior to the beginning of construction.

Each Bidder must deposit with his/her bid, security in the amount, form, and subject to the conditions provided in the Information for Bidders. Sureties used for obtaining bonds must appear as acceptable on the U.S. Department of Treasury Circular 570.

No bidder may withdraw his/her bid within forty-five (45) days after the actual date of the opening thereof.

The Contractor shall begin mobilization and procurement of materials within ten (10) working days of the receipt of the Notice to Proceed.

The Attention to Bidders is called particularly to the requirements for conditions of employment to be observed and minimum wage rates to be paid under the Contract, Section 3 Employment Opportunities, Build America Buy America (BABA), Segregated Facilities, Executive Order 11246, Public Law 17758, and all applicable laws and regulations of the Federal government and State of Louisiana and bonding and insurance requirements.

All Contractors bidding on this work shall comply with all provisions of the State Licensing Law for Contractors, LA RS 37:2150-2192, as amended, for all public contracts. It shall be the responsibility of the Contractor to assure that all subcontractors comply with this law. Contractors must hold an active license issued by the State of Louisiana Licensing Board for Contractors in the classification of MUNICIPAL AND PUBLIC WORKS CONSTRUCTION. Contractors must provide their license number when requesting plans, specifications and contract documents and place their license number on the face of the envelope containing their bid.

Any person with disabilities requiring special accommodations must contact the Ouachita Parish Police Jury at (318) 327-1340 no later than seven (7) days in advance of the scheduled bid opening.

The Owner hereby notifies all offerors that in regard to any contract entered into pursuant to this advertisement, that Minority Business Enterprises will be afforded equal opportunity to submit offers in response to this invitation and will not be discriminated against on the grounds of race, color, sex, national origin or disability in consideration for an award.

OWNER: Ouachita Parish Police Jury

BY: /s/ Shane Smiley  
Shane Smiley, President

PUBLICATION DATES:

January 29, 2026

February 5, 2026

February 12, 2026

## INFORMATION FOR BIDDERS

### 1. Receipt and Opening of Bids

The Ouachita Parish Police Jury (herein called the "Owner"), invites bids on the form attached hereto; all blanks must be appropriately filled in. Bids will be received by the Owner at the Ouachita Parish Administrative Building, 100 Bry Street, Monroe, LA 71201 until 10:00 o'clock A.M. on the 26<sup>th</sup> day of February, 2026, and then at said office publicly opened and read aloud. The envelopes containing the bids must be sealed, addressed to Ouachita Parish Police Jury at 100 Bry Street, Monroe, LA 71201 and designated as “Sealed Bid – Ouachita Parish Police Jury Community Development Block Grant Project for Fiscal Year 2025 (South Monroe Water System Improvements) to be financed by the State of Louisiana CDBG Program”.

The Owner may reject any and all bids for just cause; such actions will be in accordance with Title 38 of the Louisiana Revised Statutes. 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 45 days after the actual date of the opening thereof.

### 2. Preparation of Bid: Each bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures, and the foregoing certifications must be fully completed and executed when submitted.

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

### 3. 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 of other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened. If written confirmation is not received within two days from the closing time, no consideration will be given to the telegraphic modification.

### 4. Method of Bidding: The Owner invites the following bid(s): Unit Price Bid

### 5. Qualifications of Bidder: The Owner may make such investigations deemed 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 bidder must complete the Past Criminal Convictions of Bidders**

- form.** The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is responsible and is properly qualified to carry out the obligations of the contract and complete the work contemplated therein. Any conditions placed on a submitted bid shall result in rejection of such bid.
6. 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 hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of 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 of 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 45 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.
  7. 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 within 10 days after he/she receives notice of the acceptance of his/her bid, shall forfeit to the Owner, as Liquidated Damages for such failure or refusal, the security deposited with his/her bid.
  8. 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 330 consecutive calendar days thereafter. Bidder must agree to pay as Liquidated Damages the sum of \$400.00 for each consecutive calendar day thereafter until acceptance as hereinafter provided in the General Conditions.
  9. Conditions of Work: Each bidder must inform him/herself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his/her obligation to furnish all materials 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 or means as will not cause any interruption of or interference with the work of any other contractor.
  10. 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 in writing addressed to Lazenby & Associates, Inc., at 2000 North 7<sup>th</sup> Street, West Monroe, LA 71291 and to be given consideration must be received at least five (5) 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 (3) 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/her bid as submitted. All addenda so issued shall become part of the contract documents.

11. 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 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. Only those surety companies currently on the U. S. Department of Treasury Financial Management Services list of approved bonding companies will be accepted. The agent selling the bond must be currently licensed to do business in Louisiana. This will be verified by the Owner.
12. 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.
13. 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. Federal wage determinations.
  - d. Stated allowances.
14. Laws and Regulations: The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances and rules and regulations of authorities having jurisdiction over construction of the project shall apply to the contract throughout and will be deemed to be included in the contract the same as written herein in full.
15. Method of Award - Lowest Qualified Bidder: If at the time this contract is to be awarded, the lowest base bid submitted by a responsible bidder does not exceed the amount of funds then estimated by the Owner as available to finance the contract, the contract will be awarded on the base bid only. If such bid exceeds such amount, the Owner may reject all bids or may award the contract on the base bid combined with such deductible alternates applied in numerical order in which they are listed in the Form of Bid, as produces a net amount which is within the available funds.
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 with respect to his/her bid.

17. Buy America Preference: The bidder's attention is directed to the fact that this agreement is for services related to a project that is subject to the Build America, Buy America Act (BABAA) requirements under Title IX of the Infrastructure Investment and Jobs Act ("IIJA"), Pub. L. 177-58. Pursuant to HUD's Notice, "Public Interest Phased Implementation Waiver for FY 2022 and 2023 of Build America, Buy America Provisions as Applied to Recipients of HUD Federal Financial Assistance" (88 FR 17001), any funds obligated by HUD on or after the applicable listed effective dates, are subject to BABA requirements, unless excepted by a waiver.

Any request for substitute or "or equal" shall include the Manufacturer's Certification of compliance with the Build America, Buy America Act (BABAA) requirements mandated by Title IX of the Infrastructure Investment and Jobs Act ("IIJA"), Pub. L. 177-58.

18. 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.

## BONDING AND INSURANCE REQUIREMENTS

1. This attachment sets forth bonding and insurance requirements for grants. No other bonding and insurance requirement shall be imposed other than those normally required by the grantee.
2. Except as otherwise required by law, a grant that requires the contracting (or sub-contracting) for construction of facility improvements shall provide for the grantee to follow its own requirements relating to bid guarantees, performance bonds, and payment bonds unless the construction contract or subcontract exceeds \$150,000. For those contracts or subcontracts exceeding \$150,000, the State may accept the bonding policy and requirements of the grantee provided the State has made a determination that the State's interest is adequately protected. If such a determination has not been made, the minimum requirements shall be as follows:
  - (a) A bid guarantee from each bidder equivalent to five (5) percent of the bid price. The "bid guarantee" shall consist of a firm commitment such as a bid bond, certified check or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his/her bid, execute such contractual documents as may be required within the time specified. (See Section 6 of "Information for Bidders".)
  - (b) A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all of the contractor's obligations under such contract.
  - (c) A payment bond on the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and materials in the execution of the work provided for in the contract.
3. Where the Federal Government guarantees or insures the repayment of money borrowed by the grantee, the State, at its discretion, may require adequate bonding and insurance if the bonding and insurance requirements of the grantee are deemed inadequate to protect the interest of the Federal Government.
4. Where bonds are required in the situations described above, the bonds shall be obtained from companies holding certificates of authority as acceptable sureties (31 CFR223).

**BID DOCUMENTS**

# LOUISIANA UNIFORM PUBLIC WORK BID FORM

**TO:** Ouachita Parish Police Jury  
100 Bry Street  
Monroe, LA 71201  
\_\_\_\_\_

**BID FOR:** South Monroe Water System Improvements  
FY 2025 LCDBG Program  
Ouachita Parish, Louisiana  
L&A, Inc. Project No. 23E091.01

The undersigned bidder hereby declares and represents that she/he: a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: Lazenby & Associates, Inc. and dated: August, 2025.

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:** (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) \_\_\_\_\_ .

**TOTAL BASE BID:** For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" \* but not alternates) the sum of:  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

**ALTERNATES:** For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

**Alternate No. 1** (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:  
N/A Dollars (\$ \_\_\_\_\_)

**Alternate No. 2** (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:  
N/A Dollars (\$ \_\_\_\_\_)

**Alternate No. 3** (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:  
N/A Dollars (\$ \_\_\_\_\_)

**NAME OF BIDDER:** \_\_\_\_\_

**ADDRESS OF BIDDER:** \_\_\_\_\_  
\_\_\_\_\_

**LOUISIANA CONTRACTOR'S LICENSE NUMBER:** \_\_\_\_\_

**NAME OF AUTHORIZED SIGNATORY OF BIDDER:** \_\_\_\_\_

**TITLE OF AUTHORIZED SIGNATORY OF BIDDER:** \_\_\_\_\_

**SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER \*\*:** \_\_\_\_\_

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

**THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:**

\* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

\*\* **A CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

**BID SECURITY** in the form of a bid bond, certified check or cashier's check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.

# LOUISIANA UNIFORM PUBLIC WORK BID FORM

## UNIT PRICE FORM

**TO:** Ouachita Parish Police Jury  
100 Bry Street  
Monroe, LA 71201

*(Owner to provide name and address of owner)*

**BID FOR:** South Monroe Water System Improvements  
FY 2025 LCDBG Program  
Ouachita Parish, Louisiana  
L&A, Inc. Project No. 23E091.01

*(Owner to provide name of project and other identifying information)*

**UNIT PRICES:** This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>6" PVC, CLASS 160 WATER MAIN (OPEN CUT)</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>1</b>	<b>16,947</b>	<b>LINEAR FEET</b>		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>4" PVC, CLASS 160 WATER MAIN (OPEN CUT)</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>2</b>	<b>18,925</b>	<b>LINEAR FEET</b>		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>6" PVC, CLASS 160 WATER MAIN (JACK &amp; BORE)</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>3</b>	<b>1,845</b>	<b>LINEAR FEET</b>		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>4" PVC, CLASS 160 WATER MAIN (JACK &amp; BORE)</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>4</b>	<b>3,395</b>	<b>LINEAR FEET</b>		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>6" HDPE, SDR 11 WATER MAIN (DIRECTIONAL BORE)</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>5</b>	<b>540</b>	<b>LINEAR FEET</b>		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>4" HDPE, SDR 11 WATER MAIN (DIRECTIONAL BORE)</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>6</b>	<b>1,105</b>	<b>LINEAR FEET</b>		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>2" HDPE, SDR 11 WATER MAIN (DIRECTIONAL BORE)</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>7</b>	<b>30</b>	<b>LINEAR FEET</b>		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>6" GATE VALVE ASSEMBLY</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>8</b>	<b>43</b>	<b>EACH</b>		

**Wording for "DESCRIPTION" is to be provided by the Owner.**

**All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.**

# LOUISIANA UNIFORM PUBLIC WORK BID FORM

## UNIT PRICE FORM

**TO:** Ouachita Parish Police Jury  
100 Bry Street  
Monroe, LA 71201

*(Owner to provide name and address of owner)*

**BID FOR:** South Monroe Water System Improvements  
FY 2025 LCDBG Program  
Ouachita Parish, Louisiana  
L&A, Inc. Project No. 23E091.01

*(Owner to provide name of project and other identifying information)*

**UNIT PRICES:** This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>4" GATE VALVE ASSEMBLY</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>9</b>	<b>38</b>	<b>EACH</b>		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>2" GATE VALVE ASSEMBLY</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>10</b>	<b>3</b>	<b>EACH</b>		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>2" HDPE, CLASS 200 SERVICE TUBING</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>11</b>	<b>150</b>	<b>LINEAR FEET</b>		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>1" HDPE, CLASS 200 SERVICE TUBING (SYSTEM SIDE OF METER)</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>12</b>	<b>10,630</b>	<b>LINEAR FEET</b>		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>1" HDPE, CLASS 200 SERVICE TUBING (CUSTOMER SIDE OF METER)</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>13</b>	<b>6,005</b>	<b>LINEAR FEET</b>		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>RELOCATE EXISTING WATER METER &amp; METER BOX</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>14</b>	<b>45</b>	<b>EACH</b>		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>SERVICE TAP &amp; METER RECONNECTION</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>15</b>	<b>397</b>	<b>EACH</b>		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ___ <b>FIRE HYDRANT ASSEMBLY</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>16</b>	<b>12</b>	<b>EACH</b>		

**Wording for "DESCRIPTION" is to be provided by the Owner.**

**All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.**



# LOUISIANA UNIFORM PUBLIC WORK BID FORM

## UNIT PRICE FORM

**TO:** Ouachita Parish Police Jury  
100 Bry Street  
Monroe, LA 71201

*(Owner to provide name and address of owner)*

**BID FOR:** South Monroe Water System Improvements  
FY 2025 LCDBG Program  
Ouachita Parish, Louisiana  
L&A, Inc. Project No. 23E091.01

*(Owner to provide name of project and other identifying information)*

**UNIT PRICES:** This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ <b>FINAL GRADING, CLEAN-UP &amp; EROSION CONTROL</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>25</b>	<b>100%</b>	<b>LUMP SUM</b>		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ <b>TEMPORARY TRAFFIC CONTROL DEVICES</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>26</b>	<b>100%</b>	<b>LUMP SUM</b>		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ <b>PROJECT SIGN</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>27</b>	<b>100%</b>	<b>LUMP SUM</b>		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ <b>MOBILIZATION</b>			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>
<b>28</b>	<b>100%</b>	<b>LUMP SUM</b>		

DESCRIPTION:	<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>

DESCRIPTION:	<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>

DESCRIPTION:	<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>

DESCRIPTION:	<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i>

**Wording for "DESCRIPTION" is to be provided by the Owner.**

**All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.**

**BID BOND**  
FOR

**SOUTH MONROE WATER SYSTEM IMPROVEMENTS  
FY 2025 LCDBG PROGRAM  
OUACHITA PARISH POLICE JURY**

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

KNOW ALL MEN BY THESE PRESENTS, that we \_\_\_\_\_, as the Principal (hereinafter referred to as the "Principal"), a \_\_\_\_\_ duly authorized to do business as a \_\_\_\_\_ in the State of Louisiana, and \_\_\_\_\_, a corporation duly authorized to do a surety business under the laws of the State of Louisiana as Surety (hereinafter referred to as "Surety"), are held and firmly bound unto the Ouachita Parish Police Jury, (hereinafter referred to as "Obligee"), in the full and just sum of five (5%) percent of the total amount of this bid, including all alternates, lawful money of the United States, for payment of which sum, well and truly be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents.

Surety represents that it is listed on the current U. S. Department of the Treasury Financial Management Service list of approved bonding companies as approved for an amount equal to or greater than the amount for which it obligates itself in this instrument.

Surety further represents that it is licensed to do business in the State of Louisiana and that this Bond is signed by Surety's agent or attorney-in-fact. This Bid Bond is accompanied by appropriate power of attorney.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas said Principal is herewith submitting its proposal to the Obligee on a Contract for:

South Monroe Water System Improvements, FY 2025 LCDBG Program, Ouachita Parish Police Jury

NOW, THEREFORE, if the said Contract be awarded to the Principal and the Principal shall, within such time as may be specified, enter into the Contract in writing and give a good and sufficient bond to secure the performance of the terms and conditions of the Contract with surety acceptable to the Obligee, then this obligation shall be void; otherwise this obligation shall become due and payable.

\_\_\_\_\_  
PRINCIPAL (BIDDER)

\_\_\_\_\_  
SURETY

BY: \_\_\_\_\_  
AUTHORIZED OFFICER-OWNER-PARTNER

BY: \_\_\_\_\_  
AGENT OR ATTORNEY-IN-FACT(SEAL)

# NON-COLLUSION DECLARATION

A sworn statement shall be submitted in the form of an affidavit as indicated below, executed and sworn to by the bidder before persons authorized by laws of the State to administer oaths. The original of such sworn statement shall be submitted with the contract documents.

## Affidavit

LCDBG Contract Number: \_\_\_\_\_

Name of Project: South Monroe Water System Improvements – FY 2025 LCDBG Program

Parish: Ouachita

(an individual)  
(a partnership)  
(a corporation)

certify that:

(1) That affiant employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for affiant, and

(2) That no part of the contract price received by affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for affiant.

(an individual)  
(a partnership)  
(a corporation)

Signed \_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

Parish or county \_\_\_\_\_

State of Louisiana

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

My commission expires the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

STATE OF \_\_\_\_\_

PARISH OF \_\_\_\_\_

**ATTESTATIONS AFFIDAVIT**

**Before me**, the undersigned notary public, duly commissioned and qualified in and for the parish and state aforesaid, personally came and appeared Affiant, who after being duly sworn, attested as follows:

**LA. R.S. 38:2227 PAST CRIMINAL CONVICTIONS OF BIDDERS**

A. No sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes:

- |                                       |                                   |
|---------------------------------------|-----------------------------------|
| (a) Public bribery (R.S. 14:118)      | (c) Extortion (R.S. 14:66)        |
| (b) Corrupt influencing (R.S. 14:120) | (d) Money laundering (R.S. 14:23) |

B. Within the past five years from the project bid date, no sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes, during the solicitation or execution of a contract or bid awarded pursuant to the provisions of Chapter 10 of Title 38 of the Louisiana Revised Statutes:

- |  |  |
|--|--|
| (a) Theft (R.S. 14:67)                           | (f) Bank fraud (R.S. 14:71.1)                                |
| (b) Identity Theft (R.S. 14:67.16)               | (g) Forgery (R.S. 14:72)                                     |
| (c) Theft of a business record<br>(R.S.14:67.20) | (h) Contractors; misapplication of<br>payments (R.S. 14:202) |
| (d) False accounting (R.S. 14:70)                | (i) Malfeasance in office (R.S. 14:134)                      |
| (e) Issuing worthless checks<br>(R.S. 14:71)     |  |

**LA. R.S. 38:2212 VERIFICATION OF EMPLOYEES**

A. At the time of bidding, Bidder is registered and participates in a status verification system to verify that all new hires in the state of Louisiana are legal citizens of the United States or are legal aliens.

B. If awarded the contract, Bidder shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.

C. If awarded the contract, Bidder shall require all subcontractors to submit to it a sworn affidavit verifying compliance with Paragraphs (A) and (B) of the Subsection.

South Monroe Water System Improvements  
NAME OF PROJECT

LCDBG Contract No. 2000989699  
PROJECT NUMBER

**LA. R.S. 23:1726(B) CERTIFICATION REGARDING UNPAID WORKERS  
COMPENSATION INSURANCE**

- A. R.S. 23:1726 prohibits any entity against whom an assessment under Part X of Chapter 11 of Title 23 of the Louisiana Revised Statutes of 1950 (Alternative Collection Procedures & Assessments) is in effect, and whose right to appeal that assessment is exhausted, from submitting a bid or proposal for or obtaining any contract pursuant to Chapter 10 of Title 38 of the Louisiana Revised Statutes of 1950 and Chapters 16 and 17 of Title 39 of the Louisiana Revised Statutes of 1950.
- B. By signing this bid/proposal, Bidder certifies that no such assessment is in effect against the bidding/proposing entity.

\_\_\_\_\_  
NAME OF BIDDER

\_\_\_\_\_  
NAME OF AUTHORIZED SIGNATORY OF BIDDER

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TITLE OF AUTHORIZED SIGNATORY OF BIDDER

\_\_\_\_\_  
**SIGNATURE OF AUTHORIZED  
SIGNATORY OF BIDDER / AFFIANT**

Sworn to and subscribed before me by Affiant on the \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public

**CONTRACT DOCUMENTS**

**NOTICE OF AWARD**

To: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Description: South Monroe Water System Improvements, FY 2025 LCDBG Program, Ouachita Parish Police Jury

The OWNER has considered the BID submitted by you for the above described WORK dated \_\_\_\_\_, 2026 in response to its Advertisement for Bids and Information for Bidders.

You are hereby notified that your BID has been accepted for items in the sum of \_\_\_\_\_ (\$ \_\_\_\_\_).

You are required by the Information for Bidders to execute the Contract 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 Contract 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 \_\_\_\_\_, 2026.

Ouachita Parish Police Jury  
Owner

By: \_\_\_\_\_  
Shane Smiley  
Title: President

**ACCEPTANCE OF NOTICE**

Receipt of the above NOTICE OF AWARD is hereby acknowledged by \_\_\_\_\_ this the \_\_\_\_\_ day of \_\_\_\_\_, 2026.

By \_\_\_\_\_  
Title \_\_\_\_\_



**SECTION 3 CLAUSE**

*(To be included in all contracts and subcontracts)*

All Section 3 covered contracts shall include the following clause (referred to as the Section 3 Clause).

- A. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that economic opportunities, most importantly employment, generated by certain HUD financial assistance shall be directed to low- and very low-income persons, particularly those who are recipients of government assistance for housing or residents of the community in which the Federal assistance is spent.
- B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 75, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 75 regulations.
- C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this Section 3 clause and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- D. The contractor agrees to engage in qualitative efforts including but not limited to:
  - a. Engaging in outreach efforts to generate job applicants who are Targeted Section 3 Workers.
  - b. Providing training or apprenticeship opportunities.
  - c. Providing or referring Section 3 Workers to services supporting work readiness and retention (e.g., work readiness activities, interview clothing, test fees, transportation, childcare).
  - d. Engaging in outreach efforts to identify and secure bids from Section 3 business concerns.
  - e. Promoting the use of business registries designed to create opportunities for disadvantaged and small businesses.
  - f. Engaging in outreach and referrals with the Louisiana Workforce Commission,

American Job Centers.

- E. The contractor agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 75, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this Section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 75. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 75.
- F. The contractor must meet the requirements of 24 CFR part 75.19, regardless of whether Section 3 language is included in agreements, program regulatory agreements, or contracts. These requirements include:
- a. Employment and Training
    - i. To the greatest extent feasible, and consistent with existing Federal, state, and local laws and regulations, contractors covered by this subpart will ensure that employment and training opportunities arising in connection with Section 3 projects are provided to Section 3 Workers within the Cincinnati-Middletown-OH-IN-KY metropolitan statistical area.
    - ii. Where feasible, priority for employment and training should be given to:
      1. Section 3 Workers residing within a one-mile radius of the project area (or a radius that includes 5,000 people); and
      2. YouthBuild participants.
  - b. Contracting
    - i. To the greatest extent feasible, and consistent with existing Federal, state, and local laws and regulations, recipients covered by this subpart shall ensure contracts for work awarded in connection with Section 3 projects are provided to business concerns that provide economic opportunities to Section 3 Workers residing within the Cincinnati- Middletown-OH-IN-KY metropolitan statistical area.
    - ii. Where feasible, priority for contracting opportunities should be given to:
      1. Section 3 business concerns that provide economic opportunities to Section 3 Workers residing within the service area or the neighborhood of the project; and
      2. YouthBuild programs.
- G. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 75 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 75.

- H. Noncompliance with HUD's regulations in 24 CFR part 75 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- I. With respect to work performed in connection with Section 3 covered Indian housing assistance, Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of Section 3 and section 7(b) agree to comply with Section 3 to the maximum extent feasible, but not in derogation of compliance with Section 7(b).
- J. Contractor will retain all documentation, contracts, and records for a minimum of five years.

**STATEMENT OF ASSURANCES**  
**INTENT TO COMPLY WITH SECTION 3 REQUIREMENTS**  
*(To be returned with all submitted bids)*

\_\_\_\_\_ (Contractor) agrees to implement affirmative steps to comply with the Section 3 requirements set forth at 24 CFR 75 directed at increasing the utilization of lower income residents and businesses within the Parish of Ouachita.

1. To implement Section 3 requirements by seeking the assistance of local officials in determining the exact boundaries of the applicable project area.
2. To attempt to recruit from within Ouachita Parish the necessary number of lower income residents through local advertising media, signs placed at the proposed site for the project, and community organizations and public or private institutions operating within or serving the project area.
3. To maintain a list of all lower income residents who have applied either on their own or on referral from any source, and to employ such persons, if otherwise eligible and if a vacancy exists.
4. To insert this Section 3 plan in all bid documents, and to require all bidders to submit a Section 3 affirmative action plan including utilization goals and the specific steps planned to accomplish these goals. To formally contact unions, subcontractors and trade associations to secure their cooperation for this program.
5. To maintain records, including copies of correspondence, memoranda, etc., which document that all the above affirmative action steps have been taken.
6. To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of this Section 3 plan.
7. To list all workforce for this project.

**Please complete the following:**

1. If awarded a contract, do you agree to insert the HUD Section 3 Clause into all Section 3 covered sub-contracts?  
Yes  No
2. If awarded a contract for this CDBG funded project, do you anticipate hiring new employees to complete the project? (Hiring would be specific to this project)  
Yes  No   
If yes, please estimate the number of employees to be hired: \_\_\_\_\_
3. Is your business a Section 3 Business? Yes  No
4. Is the bidder willing to consider hiring Section 3 residents for future employment opportunities that are a direct result of this CDBG funded project?  
  
Yes  No
5. Is the bidder willing to consider subcontracting with Section 3 Businesses for this project?  
  
Yes  No

Indicate the efforts that will be made to direct any employment and other economic opportunities generated by this CDBG funded project, to the greatest extent feasible, to low-and very low-income persons.

(Check all that apply.)

- Engage in outreach efforts to generate job applicants who are Section 3 workers. Attempt to recruit from the project area through local advertising media, community-based organizations, and public/private agencies operating within or serving the project area, such as the [Louisiana Workforce Commission American Job Centers](#).
- Post job opportunities at the project site and in the project area.
- Provide training or apprenticeship opportunities.
- Provide assistance to apply for/or attend community college, a four-year educational institution, or vocational/technical training.
- Engage in outreach efforts to identify and secure bids from Section 3 business concerns.
- Provide technical assistance to help Section 3 business concerns understand and bid on contracts.
- Divide contracts into smaller jobs to facilitate participation by Section 3 business concerns.
- Outreach, engagement, or referrals with the state one-stop system as defined in Section 121(e)(2) of the Workforce Innovation and Opportunity Act.
- Other: [Click or tap here to enter text.](#)

6. No segregated facilities will be maintained by the bidder as required by Title VI of the Civil Rights Act of 1964.

Agree

I understand that this contracting opportunity is subject to HUD Section 3 requirements (24 CFR Part 75). I have read and understand the Section 3 requirements as generally described above and presented in the Section 3 contract language included in the procurement documents for this project. If awarded a contract, the business commits to following Section 3 requirements, as they apply to this project. If awarded a contract for this project, the business agrees to provide reports to the Ouachita Parish Police Jury on Section 3 efforts and accomplishments.

\_\_\_\_\_  
Contractor/Subcontractor Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Typed Name of Authorized Representative

\_\_\_\_\_  
Title

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## D-5: Section 3 Final Labor Hours Compliance Report

Updated April 2023

*To be provided with final closeout documents.*

Date Report Submitted to County:		
Project Name:		
Contractor Name:		
Contact Person:		
Project Address:		
Phone:		

### PART 1: EMPLOYMENT AND TRAINING (All fields are mandatory)

	A	B	C	D	E
Job Category	Total Labor Hours Worked on Project*	Total Labor Hours Worked on Project by Section 3 Workers	Total Labor Hours Worked on Project by Targeted Section 3 Workers	% of Total Labor Hours Worked by Section 3 Workers*	% of Total Labor Hours Worked by Targeted Section 3 Workers
Professionals	0	0	0	0%	0%
Technicians	0	0	0	0%	0%
Office/Clerical	0	0	0	0%	0%
Officials/Managers	0	0	0	0%	0%
Sales	0	0	0	0%	0%
Craft Workers (skilled)	0	0	0	0%	0%
Operatives (semiskilled)	0	0	0	0%	0%
Laborers (unskilled)	0	0	0	0%	0%
Service Workers	0	0	0	0%	0%
Other	0	0	0	0%	0%
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0%</b>	<b>0%</b>

\* Includes hours worked by Section 3 Workers and Targeted Section 3 Workers

### PART 2: SUMMARY OF EFFORTS

*Indicate the efforts made to direct the employment and other economic opportunities generated by HUD financial assistance for housing and community development programs, to the greatest extent feasible, Section 3 Workers and Targeted Section 3 Workers. Check all that apply.*

	Attempted to recruit low-income workers through local advertising, signs prominently displayed at the project site, contacts with community organizations and public or private agencies operating within the metropolitan area in which the Section 3 covered program or project is located (Butler County), or similar methods.
	Provided training or apprenticeship programs.
	Coordinated with YouthBuild Programs administered in the area in which the Section 3 covered project is located.
	Provided or connected Section 3 Workers with employment search assistance such as resume writing, interview preparations, or connecting with placement services.
	Engaged in outreach efforts to identify and secure bids from Section 3 business concerns.
	Provided technical assistance to help Section 3 business concerns understand and bid on contracts.
	Divided contracts into smaller jobs to facilitate participation by Section 3 business concerns.
	Provided bonding assistance, guaranties, or other efforts to support viable bids from Section 3 business concerns.
	Promoted use of business registries designed to create opportunities for disadvantaged and small businesses.
	Outreach, engagement, or referrals with the state one-stop system as defined in Section 121(e)(2) of the Workforce Innovation and Opportunity Act.

Is there any supplemental information you would like to provide?

--

--

Contractor Authorized Signature:	
----------------------------------	--

--

Printed Name:	
---------------	--

--

Date:	
-------	--

### Section 3 Worker and Targeted Worker Certification Form

(To be submitted as applicable)

A Section 3 Worker seeking the preference in training and employment provided by this part shall certify, or submit evidence to the recipient contractor or subcontractor, if requested, that the person is a Section 3 Worker, as defined in Section 75.5.

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

Worker Name: \_\_\_\_\_

Worker Apartment Complex Name (if applicable): \_\_\_\_\_

Worker Address (will be verified):  
\_\_\_\_\_  
\_\_\_\_\_

Worker Email Address: \_\_\_\_\_

To meet the income qualifications, you must earn 80% or below of the median income for Ouachita Parish.

Section 3 Income Limit for Parish or MSA Residents (as of June 1, 2021)	
Annual Income	\$47,850

Place a check mark beside any of the following that apply:

- My income for the previous year was below the amount listed above\*
- I am employed by a Section 3 Business
- I am a YouthBuild participant
- I reside in public housing or Section 8-assisted housing
- I reside within one mile of the work site
- I am *not* a resident of \_\_\_\_\_. My Parish is \_\_\_\_\_ and my annual income is \$\_\_\_\_\_.

**\*Section 3 income qualification limits are based on where the worker lives and not the location of the project.**

I hereby certify that the information provided by me to be true and correct and understand any falsification of any of the information could subject me to disqualification from participation and punishment under the law.

\_\_\_\_\_  
Signature of Worker

\_\_\_\_\_  
Date

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







<p><i>I certify the above employees are permanent employees of <b>INSERT CONTRACTOR NAME</b> . I certify the above employees are on our regular monthly payroll and have their W-2 tax forms for our records. These records will be available to the <b>INSERT GRANTEE NAME</b> for the above referenced project for verification purposes. I understand that falsifying information is perjury and subject to legal ramifications.</i></p>	
Contractor Authorized Signature:	
Printed Name:	
Date:	

**CONTRACT**

THIS AGREEMENT, made this \_\_\_ day of \_\_\_\_\_, 2026, by and between       Ouachita Parish Police Jury      , hereinafter called “OWNER”, acting herein through its       President      , and \_\_\_\_\_, a \_\_\_\_\_ whose address is \_\_\_\_\_, hereinafter called “CONTRACTOR”.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction described as follows:

South Monroe Water System Improvements  
FY 2025 LCDBG Program  
Ouachita Parish Police Jury

hereinafter called the project, for the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_ ) and all extra work in connection therewith, under the terms as stated in the General and Special Conditions of the CONTRACT; and at his/her (its/their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the General Conditions and Supplemental General Conditions and Special Conditions, Construction Plans, and other drawings and printed or written explanatory matter thereof, the specifications and contract documents therefore as prepared by Lazenby & Associates, Inc., 2000 North 7<sup>th</sup> Street, West Monroe, Louisiana 71291, herein entitled the Architect/Engineer, and as enumerated in Paragraph 1 of the Supplemental General Conditions, all of which are made a part hereof and collectively evidence and constitute the CONTRACT.

The CONTRACTOR hereby agrees to commence work under this CONTRACT on or before a date to be specified in a written “Notice to Proceed” of the OWNER to fully complete the project within 330 consecutive calendar days thereafter. The CONTRACTOR further agrees to pay, as Liquidated Damages, the sum of \$ 400.00 for each consecutive calendar day thereafter as hereinafter provided in Paragraph 19 of the General Conditions.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the CONTRACT, subject to additions and deductions, as provided in Paragraph 25, “Payments to CONTRACTOR”, of the General Conditions.

IN WITNESS WHEREOF, the parties to these present have executed this CONTRACT in six (6) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

(Seal)  
ATTEST:

Ouachita Parish Police Jury  
(OWNER)

\_\_\_\_\_  
(Secretary)

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

\_\_\_\_\_  
(Witness)

President  
(Title)

(Seal)  
ATTEST:

\_\_\_\_\_  
(CONTRACTOR)

\_\_\_\_\_  
(Secretary)

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

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Address and Zip Code)

NOTE: Secretary of the OWNER should attest. If CONTRACTOR is a corporation, Secretary should attest.

**CERTIFICATE OF OWNER'S ATTORNEY**

I, the undersigned, \_\_\_\_\_, the duly authorized and acting legal representative of the Ouachita Parish Police Jury do hereby certify as follows:

I have examined the attached contract(s) and surety bonds and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements have been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
TYPE OR PRINT NAME

\_\_\_\_\_  
DATE

**PERFORMANCE BOND**

**KNOW ALL MEN BY THESE PRESENTS:** that \_\_\_\_\_ (Name of Contractor)

\_\_\_\_\_ (Address of Contractor)

a \_\_\_\_\_ (Corporation, Partnership, or Individual),

hereinafter called Principal, and \_\_\_\_\_ (Name of Surety)

\_\_\_\_\_ (Address of Surety)

hereinafter called Surety, and held and firmly bound unto Ouachita Parish Police Jury (Name of Owner)

100 Bry Street, Monroe, Louisiana 71201 (Address of Owner)

hereinafter called Owner, in the penal sum of \_\_\_\_\_

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_) in lawful money of the United States for

the payment of which sum well and truly to be made, we bind ourselves, 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 \_\_\_\_\_, 2026, a copy of which is hereto attached and made a part hereof for the construction of:

SOUTH MONROE WATER SYSTEM IMPROVEMENTS

FY 2025 LCDBG PROGRAM, OUACHITA PARISH POLICE JURY

**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, alteration or addition to the terms of the contract or to the 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 \_\_\_\_\_, 2026.

ATTEST:

\_\_\_\_\_  
(PRINCIPAL) SECRETARY

(SEAL)

\_\_\_\_\_  
WITNESS AS TO PRINCIPAL

ATTEST:

\_\_\_\_\_  
PRINCIPAL (BIDDER)

By: \_\_\_\_\_  
AUTHORIZED Officer-Owner-Partner

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
SURETY

By: \_\_\_\_\_ (SEAL)  
ATTORNEY-IN-FACT

\_\_\_\_\_  
WITNESS AS TO SURETY

\_\_\_\_\_  
TYPED OR PRINTED NAME

**COUNTERSIGNATURE**

I certify that I am, as of the date of this Bond, contracted with the surety company or bond issuer as an agent of the company or issuer as a licensed agent in the State of Louisiana in good standing with the Louisiana Insurance Commission.

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

\_\_\_\_\_  
NAME OF AGENCY

\_\_\_\_\_  
TYPED OR PRINTED NAME

\_\_\_\_\_  
AGENT LICENSE NUMBER

\_\_\_\_\_  
ADDRESS

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

**PAYMENT BOND**

**KNOW ALL MEN BY THESE PRESENTS:** that \_\_\_\_\_ (Name of Contractor)

\_\_\_\_\_ (Address of Contractor)

a \_\_\_\_\_ (Corporation, Partnership, or Individual),

hereinafter called Principal, and \_\_\_\_\_ (Name of Surety)

\_\_\_\_\_ (Address of Surety)

hereinafter called Surety, and held and firmly bound unto Ouachita Parish Police Jury (Name of Owner)

100 Bry Street, Monroe, Louisiana 71201 (Address of Owner)

hereinafter called Owner, in the penal sum of \_\_\_\_\_

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_) in lawful money of the United States for

the payment of which sum well and truly to be made, we bind ourselves, 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 \_\_\_\_\_, 2026, a copy of which is hereto attached and made a part hereof for the construction of:

SOUTH MONROE WATER SYSTEM IMPROVEMENTS

FY 2025 LCDBG PROGRAM, OUACHITA PARISH POLICE JURY

**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 on 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, FURTHER**, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the 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 \_\_\_\_\_, 2026.

ATTEST:

\_\_\_\_\_  
(PRINCIPAL) SECRETARY

(SEAL)

\_\_\_\_\_  
WITNESS AS TO PRINCIPAL

ATTEST:

\_\_\_\_\_  
PRINCIPAL (BIDDER)

By: \_\_\_\_\_  
AUTHORIZED Officer-Owner-Partner

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
SURETY

By: \_\_\_\_\_ (SEAL)  
ATTORNEY-IN-FACT

\_\_\_\_\_  
WITNESS AS TO SURETY

\_\_\_\_\_  
TYPED OR PRINTED NAME

**COUNTERSIGNATURE**

I certify that I am, as of the date of this Bond, contracted with the surety company or bond issuer as an agent of the company or issuer as a licensed agent in the State of Louisiana in good standing with the Louisiana Insurance Commission.

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

\_\_\_\_\_  
NAME OF AGENCY

\_\_\_\_\_  
TYPED OR PRINTED NAME

\_\_\_\_\_  
AGENT LICENSE NUMBER

\_\_\_\_\_  
ADDRESS

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

**CERTIFICATE AS TO CORPORATE PRINCIPAL**

I, \_\_\_\_\_, certify that I am the Secretary of the Corporation named as Principal in the within bond; that \_\_\_\_\_ who signed the said bond on behalf of the Principal was then \_\_\_\_\_ of said corporation; that I know his/her signature, and his/her signature thereto is genuine; and that said bond was duly signed, sealed, and attested to, for, and on behalf of said corporation by authority of this governing body.

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

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

(Corporate Seal)

**CERTIFICATE AS TO SURETY**

I, \_\_\_\_\_, certify that I am the \_\_\_\_\_ (Title) of the Surety who signed the bond. I certify that we are licensed to do business in the State of Louisiana and are currently recognized by the U.S. Department of the Treasury as acceptable sureties.

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

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

Power of Attorney for person signing for surety company must be attached to bond.

**NOTICE TO PROCEED**

TO: \_\_\_\_\_ DATE: \_\_\_\_\_  
\_\_\_\_\_  
PROJECT: FY 2025 LCDBG Program  
\_\_\_\_\_  
South Monroe Water System Improvements

You are hereby notified to commence WORK in accordance with the Contract dated \_\_\_\_\_, on or before \_\_\_\_\_ and you are to complete the WORK within 330 consecutive calendar days thereafter. The date of completion of all WORK is therefore \_\_\_\_\_.

\_\_\_\_\_  
**OUACHITA PARISH POLICE JURY**  
Owner

BY \_\_\_\_\_  
TITLE President

**ACCEPTANCE OF NOTICE**

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by \_\_\_\_\_  
\_\_\_\_\_ this \_\_\_\_\_, 20\_\_\_\_.

By \_\_\_\_\_  
Title \_\_\_\_\_  
Employer Identification No. \_\_\_\_\_

**GENERAL & SUPPLEMENTAL CONDITIONS**

LOUISIANA COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM  
GENERAL CONDITIONS

1. Contract and Related Contract Documents

The project to be constructed and pursuant to this contract will be financed with the assistance of the Louisiana Community Development Block Grant Program and is subject to all applicable Federal laws and regulations.

The plans, specifications and addenda, hereinafter enumerated in Paragraph 1 of the Supplemental General Conditions shall form part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth. The Table of Contents, titles, headings, running headlines and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or cast light on the interpretation of the provisions to which they refer.

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49. Photographs of the Project
50. Suspension of Work
51. Federal Labor Standards Provision

## 2. Definitions

The following terms as used in this contract are respectively defined as follows:

- (a) "Contractor": A person, firm or corporation with whom the contract is made by the Owner.
- (b) "Subcontractor": A person, firm, or corporation supplying labor and materials or only labor for work at the site of the project for, and under separate contract or agreement with the Contractor.
- (c) "Work on (at) the project": Work to be performed at the location of the project, including the transportation of materials and supplies to or from the location of the project by employees of the Contractor and any Subcontractor.

## 3. Additional Instructions and Detail Drawings

The Contractor will be furnished additional instructions and detail drawings. The drawings and instructions thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions. The Contractor and the Architect/Engineer will prepare jointly (a) a schedule, fixing the dates at which special detail drawings will be required, such drawings, if any, are to be furnished by the Architect/Engineer in accordance with said schedule, and (b) a schedule fixing the respective dates for the submission of shop drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment, and the completion of the various parts of the work; each such schedule to be subject to change from time to time in accordance with the progress of the work.

## 4. Shop or Setting Drawings

The Contractor shall submit promptly to the Architect/Engineer two copies of each shop or setting drawing prepared in accordance with the schedule predetermined as aforesaid. After examination of such drawings by the Architect/Engineer and the return thereof, the Contractor shall make such corrections to the drawings as have been indicated and shall furnish the Architect/Engineer with two corrected copies. If requested by the Architect/Engineer, the Contractor must furnish additional copies.

Regardless of corrections made in or approval given to such drawings by the Architect/Engineer, the Contractor will nevertheless be responsible for the accuracy of such drawings and for their conformity to the Plans and Specifications, unless he notifies the Architect/Engineer in writing of any deviations at the time he furnishes such drawings.

## 5. Materials, Services, and Facilities

- (a) It is understood that except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to execute, complete, and deliver the work within the specified time.

(b) Any work necessary to be performed after regular working hours, on Sundays or legal holidays, shall be performed without additional expense to the Owner.

6. Contractor's Title to Materials

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

7. Inspection and Testing of Materials

(a) All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be selected by the Owner. The Owner will pay for all laboratory inspection services direct and not as a part of the contract.

(b) Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for uses intended.

8. "Or Equal" Clause

Whenever a material, article or piece of equipment is identified on the plans or in the specification by reference to manufacturer's or vendor's names, trade names, catalogue numbers, etc., it is intended merely to establish a standard, and, any material, article, or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed, is, in the opinion of the Architect/ Engineer, of equal substance and function. It shall not be purchased or installed by the contractor without the Architect/Engineer's written approval.

9. Patents

(a) The Contractor shall hold and save the Owner and its officers, agents, servants, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the contract including its use by the Owner, unless otherwise specifically stipulated in the Contract Document.

(b) License or Royalty Fees: License and/or Royalty Fees for the use of a process which is authorized by the Owner of the project must be reasonable, and paid to the holder of the patent, or his authorized license, direct by the Owner and not by or through the Contractor.

(c) If the Contractor uses any design device or materials covered by letters, patent or copyright, he shall provide for such use by suitable agreement with the owner of such patented or copy-righted design device or material. It is mutually agreed and understood, that without exception the contract prices shall include all royalties or costs arising from the use of such design, device or materials, in any way involved in the work. The Contractor and/or his Sureties shall indemnify and save harmless the Owner of the project from any and all claims for infringement by reason of the use of such patented or copy-righted design, device or materials or any trademark or copy-

right in connection with work agreed to be performed under this contract, and shall indemnify the Owner for any cost, expense, or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

10. Surveys, Permits, and Regulations

Unless otherwise expressly provided for in the Specifications, the Owner will furnish to the Contractor all surveys necessary for the execution of the work.

The Contractor shall procure and pay all permits, licenses and approvals necessary for the execution of his contract.

The Contractor shall comply with all laws, ordinances, rules, orders, and regulations relating to performance of the work, the protection of adjacent property, and the maintenance of passageways, guard fences or other protective facilities.

11. Contractor's Obligations

The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified in accordance with the provisions of this contract and said specifications and in accordance with the plans and drawings covered by this contract any and all supplemental plans and drawings, and in accordance with the directions of the Architect/Engineer as given from time to time during the progress of the work. He shall furnish, erect, maintain, and remove such construction plant and such temporary works as may be required.

The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the contract and specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Architect/Engineer and the Owner.

12. Weather Conditions

In the event of temporary suspension of work, or during inclement weather, or whenever the Architect/Engineer shall direct, the Contractor will, and will cause his subcontractors to protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Architect/Engineer, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his Subcontractors to so protect his work, such materials shall be removed and replaced at the expense of the Contractor.

13. Protection of Work and Property - Emergency

The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this contract. He shall at all times safely guard and protect his own work, and that of adjacent property from damage. The Contractor shall replace or make good any such damage, loss or injury unless such be caused directly by errors contained in the contract or by the Owner, or his duly authorized representatives.

In case of an emergency which threatens loss or injury of property, and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Architect/Engineer, in a diligent manner. He shall notify the Architect/Engineer immediately

thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Architect/Engineer for approval.

Where the Contractor has not taken action but has notified the Architect/Engineer of an emergency threatening injury to persons or damage to the work or any adjoining property, he shall act as instructed or authorized by the Architect/Engineer.

The amount of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided in Paragraph 17 of the General Conditions.

14. Inspection

The authorized representatives and agents of the Department of Housing and Urban Development shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records.

15. Reports, Records, and Data

The Contractor shall submit to the Owner such schedule of quantities and cost, progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed under this contract.

16. Superintendence by Contractor

At the site of the work, the Contractor shall employ a construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such representation shall be acceptable to the Architect/Engineer and shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on the Contractor's payroll.

17. Changes in Work

No changes in the work covered by the approved Contract Document shall be made without having prior written approval of the Owner. Charges or credits for the work covered by the approved change shall be determined by one or more, or a combination of the following methods:

(a) Unit bid prices previously approved.

(b) An agreed lump sum.

(c) The actual cost of:

1. Labor, including foremen;
2. Materials entering permanently into the work;
3. The ownership or rental cost of construction plant and equipment during the time of use on the extra work;
4. Power and consumable supplies for the operation of power equipment;
5. Insurance;
6. Social Security and old age and unemployment contributions.

To the cost under (c) there shall be added a fixed fee to be agreed upon but not to exceed fifteen percent (15%) of the actual cost of the work. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any

other general expenses.

18. Extras

Without invalidating the contract, the Owner may order extra work or make changes by altering, adding to or deducting from the work, the contract sum being adjusted accordingly, and the consent of the Surety being first obtained where necessary or desirable. All the work of the kind bid upon shall be paid for at the price stipulated in the proposal, and no claims for any extra work or materials shall be allowed unless the work is ordered in writing by the Owner or its Architect/Engineer, acting officially for the Owner, and the price is stated in such order.

19. Time for Completion and Liquidated Damages

It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are ESSENTIAL CONDITIONS of this contract; and it is further mutually understood and agreed that the work embraced in this contract shall be commenced on a date to be specified in the "Notice to Proceed".

The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will ensure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

If the said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a partial consideration for the awarding of this contract, to pay to the Owner the amount specified in the contract, not as a penalty but as Liquidated Damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the contract for completing the work.

The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and said amount shall be retained from time to time by the Owner from current periodical estimates.

It is further agreed that time is of the essence of each and every portion of this contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever: and where under the contract any additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract. Provided, that the Contractor shall not be charged with Liquidated Damages or any excess cost when the Owner determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the Owner; Provided, further, that the Contractor shall not be charged with Liquidated Damages or any excess cost when the delay in completion of the work is due:

- (a) To any preference, priority or allocation order duly issued by the Government;
- (b) To unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and
- (c) To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article.

Provided, further, that the Contractor shall, within ten (10) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the contract, notify the Owner, in writing of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

20. Correction of Work

All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Architect/Engineer who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture, and methods of construction for the purposes for which they are used. Should they fail to meet his approval they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor at the Contractor's own expense. Rejected material shall immediately be removed from the site. If, in the opinion of the Architect/ Engineer, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgment of the Architect/Engineer shall be equitable.

21. Subsurface Conditions Found Different

Should the contractor encounter subsurface and/or latent conditions at the site materially differing from those shown on the Plans or indicated in the Specifications, he shall immediately give notice to the Architect/Engineer of such conditions before they are disturbed. The Architect/Engineer will thereupon promptly investigate the conditions, and if he finds that they materially differ from those shown on the Plans and/or in the Specifications, he will at once make such changes in the Plans and/or Specifications as he may find necessary, any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in Paragraph 17 of the General Conditions.

22. Claims for Extra Cost

No claim for extra work or cost shall be allowed unless the same was done in pursuance of a written order of the Architect/Engineer, approved by the Owner, as aforesaid, and the claim presented with the first estimate after the changed or extra work is done.

When work is performed under the terms of subparagraph 17(c) of the General Conditions, the Contractor shall furnish satisfactory bills, payrolls and vouchers covering all items of cost and when requested by the Owner, give the Owner access to accounts relating thereto.

23. Right of Owner to Terminate Contract for Cause and Convenience

In the event that any of the provisions of this contract are violated by the Contractor, or by any of his subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the contract, such notice to contain the reason for such intention to terminate the contract, and unless within ten (10) days after the serving of such notice upon the Contractor, such violation or delay shall cease and satisfactory arrangement of correction be made, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the Surety and Contractor and the Surety shall have the right to take over and perform the contract. Provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the work and prosecute the same to completion by contract or by force account for the account and at the expense of the Contractor and the Contractor and his Surety shall be liable to the Owner for any excess cost occasioned the Owner thereby, and in such event the Owner may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore.

24. Construction Schedule and Periodic Estimates

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

25. Payments to Contractor (This section must be prepared in accordance with the requirements of the State's bid law.)

(a) The Owner shall take measures to facilitate a progress payment to the Contractor not later than 25 days after receipt and approval of a duly certified estimate of work performed. The Owner's approval may be contingent upon the receipt of timely payrolls, written inspection reports, compliance with labor regulations and the Contractor's performance under the terms of the contract. The Owner may withhold up to 10 percent of the contract price on projects of less than \$500,000 and 5 percent of the contract price on projects of \$500,000 or more until the expiration of 45 days after the recordation of formal Notice of Substantial Completion, or notice of default by the Contractor or Subcontractor.

(b) In preparing estimates the material delivered on the site and preparatory work done may be taken into consideration.

- (c) All material and work covered by partial payments made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of material and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the Owner to require the fulfillment of all of the terms of the contract.
- (d) Owner's Right to Withhold Certain Amounts and Make Application Thereof: The Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, material men, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature herein above designated have been paid, discharged, or waived. If the Contractor fails so to do, then the Owner may, after having served written notice on the said Contractor, either pay unpaid bills, of which the Owner has written notice, direct, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed, in accordance with the terms of this contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor or his Surety. In paying any unpaid bills of the Contractor, the Owner shall be deemed the agent of the Contractor, and any payment so made by the Owner shall be considered as a payment made under the contract by the Owner to the Contractor and the Owner shall not be liable to the contractor for any such payments made in good faith.

26. Acceptance of Final Payment Constitutes Release

The acceptance by the Contractor of final payment shall be and shall operate as release to the Owner of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owner and others relating to or arising out of this work. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from any obligation under this contract or the Performance Bond or the Payment Bond.

27. Payments by Contractor

The Contractor shall pay (a) for all transportation and utility services not later than the 20th day of the calendar month following that in which services are rendered, (b) for all materials, tools, and other expendable equipment to the extent of ninety percent (90%) of the cost thereof, not later than the 20th day of the calendar month following that in which such materials, tools, and equipment are delivered at the site of the project, and the balance of the cost thereof, not later than the 30th day following the completion of that part of the work in or on which such materials, tools, and equipment are incorporated or used, and (c) to each of his subcontractors, not later than the 5th day following each payment to the Contractor, the respective amounts allowed the Contractor on account of the work performed by his subcontractors to the extent of each subcontractor's interest therein.

28. Insurance

The Contractor shall not commence work under this contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until the insurance required of the subcontractor has been so obtained and approved.

- (a) Compensation Insurance: The Contractor shall procure and shall maintain during the life of this contract Workmen's Compensation Insurance as required by applicable State or territorial law for all of his employees to be engaged in work at the site of the project under this contract and, in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Workmen's Compensation Insurance. In case any class of employees engaged in hazardous work on the project under this contract is not protected under the Workmen's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of such of his employees as are not otherwise protected.
- (b) Contractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance: The Contractor shall procure and shall maintain during the life of this contract Contractor's Public Liability Insurance, Contractor's Property Damage Insurance and Vehicle Liability Insurance in the amounts specified in the Supplemental General Conditions.
- (c) Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance: The Contractor shall either (1) require each of his subcontractors to procure and to maintain during the life of his subcontract, subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance of the type and in the amounts specified in the Supplemental General Conditions specified in subparagraph (b) hereof or, (2) insure the activities of his policy, specified in subparagraph (b) hereof.
- (d) Scope of Insurance and Special Hazards: The insurance required under subparagraphs (b) and (c) hereof shall provide adequate protection for the Contractor and his subcontractors, respectively, against damage claims which may arise from operations under this contract, whether such operations be by the insured or by anyone directly or indirectly employed by him and, also against any of the special hazards which may be encountered in the performance of this contract as enumerated in the Supplemental General Conditions.
- (e) Builder's Risk Insurance (Fire and Extended Coverage): Until the project is completed and accepted by the Owner, the Owner, or Contractor (at the Owner's option as indicated in the Supplemental General Conditions, Form HUD-4328-N) is required to maintain Builder's Risk Insurance (fire and extended coverage) on a 100 percent completed value basis on the insurable portion of the project for the benefit of the Owner, the Contractor, subcontractors as their interests may appear. The Contractor shall not include any costs for Builder's Risk Insurance (fire and extended coverage) premiums during construction unless the Contractor is required to provide such insurance: however, this provision shall not release the Contractor from his obligation to complete, according to plans and specifications, the project covered by the contract, and the Contractor and his Surety shall be obligated to full performance of the Contractor's undertaking.

- (f) Proof of Carriage of Insurance: The Contractor shall furnish the Owner with certificates showing the type, amount, class of operations covered, effective date and date of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered, except after ten (10) days written notice has been received by the Owner."

29. Contract Security

The Contractor shall furnish a performance bond in an amount at least equal to one hundred percent (100%) of the contract price as security for the faithful performance of this contract and also a payment bond in an amount not less than one hundred percent (100%) of the contract price or in a penal sum not less than that prescribed by State, territorial or local law, as security for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract. The performance bond and payment bond may be in one or in separate instruments in accordance with local law.

30. Additional or Substitute Bond

If at any time the Owner for justifiable cause shall be or become dissatisfied with any surety or sureties then upon the Performance or Payment Bonds, the Contractor shall within five (5) days after notice from the Owner so to do, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished such an acceptable bond to the Owner.

31. Assignments

The Contractor shall not assign the whole or any part of this contract or any moneys due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or any part of any moneys due or to become due under this contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the Contractor shall be subject to prior claims of all persons, firms, and/or corporations of services rendered or materials supplied for the performance of the work called for in this contract.

32. Mutual Responsibility of Contractor

If, through acts of neglect on the part of the Contractor, any other Contractor or any subcontractor shall suffer loss or damage on the work, the Contractor agrees to settle with such other Contractor or subcontractor by agreement or arbitration if such other Contractor or subcontractors will so settle. If such other Contractor or subcontractor shall assert any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against any such claim.

33. Separate Contract

The Contractor shall coordinate his operations with those of other Contractors. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the work. The Contractor, including his subcontractors, shall keep informed of the progress and the detail work of other Contractors and shall notify the Architect/Engineer immediately of lack of progress or defective workmanship on the part of the other Contractors. Failure of a Contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by him of the status of the work as being satisfactory for proper coordination with his own work.

34. Subcontracting

- (a) The Contractor may utilize the services of specialty subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.
- (b) The Contractor shall not award any work to any subcontractor without prior written approval of the Owner, which approval will not be given until the Contractor submits to the Owner a written statement concerning such information as the Owner may require.
- (c) The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- (d) The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and other contract documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the contract documents.
- (e) Nothing contained in this contract shall create any contractual relation between any subcontractor and the Owner.

35. Architect/Engineer's Authority

The Architect/Engineer shall give all orders and directions contemplated under this contract and specifications relative to the execution of the work. The Architect/ Engineer shall determine the amount, quality, acceptability, and fitness of the several kinds of work and materials which are to be paid for under this contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Architect/ Engineer's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said contract or specifications, the determination or decision of the Architect/Engineer shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this contract affected in any manner or to any extent by such question.

The Architect/Engineer shall decide the meaning and intent of any portion of the specifications and of any plans or drawings where the same may be found obscure or be in dispute. Any differences or conflicts in regard to their work which may arise between the Contractor under this contract and other Contractors performing work for the Owner shall be adjusted and determined by the Architect/Engineer.

36. Stated Allowances

The Contractor shall include in his proposal the cash allowances stated in the Supplemental General Conditions. The Contractor shall purchase the "Allowed Materials" as directed by the Owner on the basis of the lowest and best bid of at least three competitive bids. If the actual price for purchasing the "Allowed Materials" is more or less than the "Cash Allowance", the contract price shall be adjusted accordingly. The adjustment in contract price shall be made on the basis of the purchase price without additional charges for overhead, profit, insurance or any other incidental expenses. The cost of installation of the "Allowed Materials" shall be included in the applicable sections of the Contract Specifications covering this work.

37. Use of Premises and Removal of Debris

The Contractor expressly undertakes at his own expense:

- (a) to take every precaution against injuries to persons or damage to property;
- (b) to store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other Contractors;
- (c) to place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work;
- (d) to clean up frequently all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance;
- (e) before final payment to remove all surplus material, false-work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations, and to put the site in a neat, orderly condition; and
- (f) to effect all cutting, fitting, and/or patching of his work required to make the same to conform to the plans and specifications and, except with the consent of the Architect/Engineer, not to cut or otherwise alter the work of any other Contractor.

38. Quantities of Estimate

Wherever the estimated quantities of work to be done and materials to be furnished under this contract are shown in any of the documents including the proposal, they are given for use in comparing bids and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete the work contemplated by this contract, and such increase or diminution shall in no way vitiate this contract, nor shall any such increase or diminution give cause for claims or liability for damages.

39. Lands and Rights-of-Way

Prior to the start of construction, the Owner shall obtain all lands and rights-of-way necessary for the carrying out and completion of work to be performed under this contract.

40. General Guaranty

Neither the final certificate of payment nor any provision in the Contract Documents, nor partial or entire occupancy of the premises by the Owner, shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting there from, which shall appear within a period of one year from the date of final acceptance of the work unless a longer period is specified.

The Owner will give notice of observed defects with reasonable promptness.

41. Conflicting Conditions

Any provisions in any of the Contract Documents which may be in conflict or inconsistent with any of the paragraphs in these General Conditions shall be void to the extent of such conflict or inconsistency.

42. Notice and Service Thereof

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

43. Provisions Required by Law Deemed Inserted

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

44. Protection of Lives and Health

"The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The safety provisions

of applicable laws and building and construction codes, in addition to specific safety and health regulations described by Chapter XIII, Bureau of Labor Standards, Department of Labor, Part 1518, Safety and Health Regulations for Construction, as outlined in the Federal Register, Volume 36, No. 75, Saturday, April 17, 1971. Title 29 - LABOR, shall be observed and the Contractor shall take or cause to be taken, such additional safety and health measures as the Contracting Authority may determine to be reasonably necessary."

45. Subcontracts

"The Contractor will insert in any subcontracts the Federal Labor Standards Provisions contained herein and such other clauses as the Department of Housing and Urban Development may, by instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made."

46. Interest of Member of or Delegate to Congress

No member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise there from, but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

47. Other Prohibited Interests

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

48. Use and Occupancy Prior to Acceptance by Owner

The Contractor agrees to the use and occupancy of a portion or unit of the project before formal acceptance by the Owner, provided the Owner:

- (a) Secures written consent of the Contractor except in the event, in the opinion of the Architect/Engineer, the Contractor is chargeable with unwarranted delay in final cleanup of punch list items or other contract requirements.
- (b) Secures endorsement from the insurance-carrier and consent of the surety permitting occupancy of the building or use of the project during the remaining period of construction, or,
- (c) When the project consists of more than one building, and one of the buildings is occupied, secures permanent fire and extended coverage insurance, including a permit to complete construction. Consent of the surety must also be obtained.

49. Photographs of the Project

If required by the Owner, the Contractor shall furnish photographs of the project, in the quantities and as described in the Supplemental General Conditions.

50. Suspension of Work

Should the Owner be prevented or enjoined from proceeding with work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Owner, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay; but time for completion of the work will be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay with such determination to be set forth in writing.

51. Federal Labor Standards Provisions

The Federal Labor Standards Provisions must be reviewed periodically and included in the Contract.

**A. APPLICABILITY**

The Project or Program to which the construction work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

**1. Minimum wages and fringe benefits**

- i. All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in 29 CFR 5.5(d) and (e), the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(v) of these contract clauses; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under 29 CFR 5.5(a)(1)(iii)) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

**ii. Frequently recurring classifications**

- A. In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to 29 CFR 5.5(a)(1)(iii), provided that:
  1. The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;
  2. The classification is used in the area by the construction industry; and
  3. The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.
- B. The Administrator will establish wage rates for such classifications in accordance with 29 CFR 5.5(a)(1)(iii)(A)(3). Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

**iii. Conformance**

- A. The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be

classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

1. The work to be performed by the classification requested is not performed by a classification in the wage determination; and
  2. The classification is used in the area by the construction industry; and
  3. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- B. The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.
- C. If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to [DBAconformance@dol.gov](mailto:DBAconformance@dol.gov). The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- D. In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to [DBAconformance@dol.gov](mailto:DBAconformance@dol.gov), refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- E. The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under 29 CFR 5.5 (a)(1)(iii)(C) and (D). The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to 29 CFR 5.5 (a)(1)(iii)(C) or (D) must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

**iv. Fringe benefits not expressed as an hourly rate**

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

**v. Unfunded plans**

If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in 29 CFR 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

- vi. Interest** In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

## 2. Withholding

### i. Withholding requirements

The U. S. Department of Housing and Urban Development may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in 29 CFR 5.5(a) for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work (or otherwise working in construction or development of the project under a development statute) all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in 29 CFR 5.5(a)(3)(iv), HUD may on its own initiative and after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

### ii. Priority to withheld funds

The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:

- A. A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- B. A contracting agency for its procurement costs;
- C. A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- D. A contractor's assignee(s);
- E. A contractor's successor(s); or
- F. A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

## 3. Records and certified payrolls

### i. Basic record requirements

- A. **Length of record retention.** All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.
- B. **Information required** Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.
- C. **Additional records relating to fringe benefits.** Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(v) that the wages of any laborer or mechanic include the amount of any

costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

**D. Additional records relating to apprenticeship** Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

**ii. Certified payroll requirements**

**A. Frequency and method of submission** The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to HUD if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the certified payrolls to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to HUD. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system

**B. Information required** The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i)(B), except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.*, the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the sponsoring government agency (or the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records).

**C. Statement of Compliance** Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

1. That the certified payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information and basic records are being maintained under 29 CFR 5.5 (a)(3)(i), and such information and records are correct and complete;
2. That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly

from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

3. That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.
  - D. **Use of Optional Form WH-347** The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the “Statement of Compliance” required by 29 CFR 5.5(a)(3)(ii)(C).
  - E. **Signature** The signature by the contractor, subcontractor, or the contractor’s or subcontractor’s agent must be an original handwritten signature or a legally valid electronic signature.
  - F. **Falsification** The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.
  - G. **Length of certified payroll retention** The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.
- iii. **Contracts, subcontracts, and related documents** The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.
- iv **Required disclosures and access**
- A. **Required record disclosures and access to workers** The contractor or subcontractor must make the records required under 29 CFR 5.5(a)(3)(i)–(iii), and any other documents that HUD or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by 29 CFR 5.1, available for inspection, copying, or transcription by authorized representatives of HUD or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.
  - B. **Sanctions for non-compliance with records and worker access requirements** If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to 29 CFR 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.
  - C. **Required information disclosures** Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to HUD if the agency is a party to

the contract, or to the Wage and Hour Division of the Department of Labor. If the Federal agency is not such a party to the contract, the contractor, subcontractor, or both, must, upon request, provide the full Social Security number and last known address, telephone number, and email address of each covered worker to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to HUD, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

#### 4. **Apprentices and equal employment opportunity**

##### i. **Apprentices**

- A. Rate of pay** Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- B. Fringe benefits** Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.
- C. Apprenticeship ratio** The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to 29 CFR 5.5(a)(4)(i)(D). Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in 29 CFR 5.5(a)(4)(i)(A), must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.
- D. Reciprocity of ratios and wage rates** Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

- ii Equal employment opportunity** The use of apprentices and journeyworkers under this part must be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

#### 5 **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

**6 Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (11), along with the applicable wage determination(s) and such other clauses or contract modifications as the U.S. Department of Housing and Urban Development may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate.

**7 Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8 Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

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

**10. Certification of eligibility.**

i. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

ii. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

iii. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

**11 Anti-retaliation** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

i. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;

ii. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;

iii. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5; or

iv. Informing any other person about their rights under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5.

**B. Contract Work Hours and Safety Standards Act (CWHSSA)**

The Agency Head must cause or require the contracting officer to insert the following clauses set forth in 29 CFR 5.5(b)(1), (2), (3), (4), and (5) in full, or (for contracts covered by the Federal Acquisition Regulation) by reference, in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses must

be inserted in addition to the clauses required by 29 CFR 5.5(a) or 4.6. As used in this paragraph, the terms “laborers and mechanics” include watchpersons and guards.

- 1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- 2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in 29 CFR 5.5(b)(1) the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchpersons and guards, employed in violation of the clause set forth in 29 CFR 5.5(b)(1), in the sum of \$31 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in 29 CFR 5.5(b)(1).
- 3. Withholding for unpaid wages and liquidated damages**
  - i. Withholding process** The U.S Department of Housing and Urban Development or the recipient of Federal assistance may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in 29 CFR 5.5(b) on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.
  - ii Priority to withheld funds** The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:
    - A.** A contractor’s surety(ies), including without limitation performance bond sureties and payment bond sureties;
    - B.** A contracting agency for its procurement costs;
    - C.** A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor’s bankruptcy estate;
    - D.** A contractor’s assignee(s);
    - E.** A contractor’s successor(s); or
    - F.** A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.
- 4. Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses set forth in 29 CFR 5.5(b)(1) through (5) and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in 29 CFR 5.5(b)(1) through (5). In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss,

due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

- 5 Anti-retaliation** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:
- i. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in 29 CFR part 5;
  - ii. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or 29 CFR part 5;
  - iii. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or 29 CFR part 5; or
  - iv. Informing any other person about their rights under CWHSSA or 29 CFR part 5.
- C. CWHSSA required records clause** In addition to the clauses contained in 29 CFR 5.5(b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other laws referenced by 29 CFR 5.1, the Agency Head must cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor must maintain regular payrolls and other basic records during the course of the work and must preserve them for a period of 3 years after all the work on the prime contract is completed for all laborers and mechanics, including guards and watchpersons, working on the contract. Such records must contain the name; last known address, telephone number, and email address; and social security number of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid; daily and weekly number of hours actually worked; deductions made and actual wages paid. Further, the Agency Head must cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph must be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview workers during working hours on the job.
- D. Incorporation of contract clauses and wage determinations by reference** Although agencies are required to insert the contract clauses set forth in this section, along with appropriate wage determinations, in full into covered contracts, and contractors and subcontractors are required to insert them in any lower-tier subcontracts, the incorporation by reference of the required contract clauses and appropriate wage determinations will be given the same force and effect as if they were inserted in full text.
- E. Incorporation by operation of law** The contract clauses set forth in this section (or their equivalent under the Federal Acquisition Regulation), along with the correct wage determinations, will be considered to be a part of every prime contract required by the applicable statutes referenced by 29 CFR 5.1 to include such clauses, and will be effective by operation of law, whether or not they are included or incorporated by reference into such contract, unless the Administrator grants a variance, tolerance, or exemption from the application of this paragraph. Where the clauses and applicable wage determinations are effective by operation of law under this paragraph, the prime contractor must be compensated for any resulting increase in wages in accordance with applicable law.

## **F. HEALTH AND SAFETY**

The provisions of this paragraph (F) are applicable where the amount of the prime contract exceeds **\$100,000**.

1. No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety, as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
2. The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96), 40 U.S.C. § 3701 et seq.
3. The contractor shall include the provisions of this paragraph in every subcontract, so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

SUPPLEMENTAL GENERAL CONDITIONS

1. Enumeration of Plans, Specifications and Addenda
2. Stated Allowances
3. Copyright and Patent Rights
4. Contractor's and Subcontractor's Public Liability, Vehicle Liability, and Property Damage Insurance
5. Photographs of Project
6. Schedule of Occupational Classifications and Minimum Hourly Wage Rates as Required Under Paragraph 51 of the General Conditions
7. Builder's Risk Insurance
8. Special Equal Opportunity Provisions
9. Compliance with Air and Federal Water Pollution Acts
10. Special Conditions Pertaining to Hazards, Safety Standards, and Accident Prevention
11. Flood Disaster Protection
12. Access to Records - Maintenance of Records
13. Conflict of Interest of Officers or Employees of the Local Jurisdiction, Members of the Local Governing Body or Other Public Officials
14. Minority and Female Contractor Associations
15. Retention of Records
16. Energy Efficiency Standards
17. Copeland "Anti-Kickback" Act
18. Davis Bacon Act
19. Contract Work Hours and Safety Standards Act
20. Debarment and Suspension
21. Byrd Anti-Lobbying Amendment
22. Procurement of Recovered Materials
23. Build America, Buy America
24. Federal Registration Requirements (UEI)
25. Federal Wage Decision

1. ENUMERATION OF PLANS, SPECIFICATIONS AND ADDENDA

Following are the Plans, Specifications and Addenda which form a part of this contract, as set forth in Paragraph 1 of the General Conditions, "Contract and Related Contract Documents":

DRAWINGS:

General Construction: Nos. 1 - 47  
 Heating and Ventilating: Nos. \_\_\_\_\_  
 Plumbing: Nos. \_\_\_\_\_  
 Electrical: Nos. \_\_\_\_\_

SPECIFICATIONS:

General Construction: Page all pages to \_\_\_\_\_, incl.  
 Heating and Ventilating: Page \_\_\_\_\_ to \_\_\_\_\_, incl.  
 Plumbing: Page \_\_\_\_\_ to \_\_\_\_\_, incl.  
 Electrical: Page \_\_\_\_\_ to \_\_\_\_\_, incl.

ADDENDA:

No. \_\_\_\_\_ Date \_\_\_\_\_ No. \_\_\_\_\_ Date \_\_\_\_\_  
 No. \_\_\_\_\_ Date \_\_\_\_\_ No. \_\_\_\_\_ Date \_\_\_\_\_

2. STATED ALLOWANCES

Pursuant to Paragraph 36 of the General Conditions, the Contractor shall include the following cash allowances in his proposal:

- (a) For \_\_\_\_\_ (Page \_\_\_\_\_ of Specifications) \$ \_\_\_\_\_
- (b) For \_\_\_\_\_ (Page \_\_\_\_\_ of Specifications) \$ \_\_\_\_\_
- (c) For \_\_\_\_\_ (Page \_\_\_\_\_ of Specifications) \$ \_\_\_\_\_
- (d) For \_\_\_\_\_ (Page \_\_\_\_\_ of Specifications) \$ \_\_\_\_\_
- (e) For \_\_\_\_\_ (Page \_\_\_\_\_ of Specifications) \$ \_\_\_\_\_
- (f) For \_\_\_\_\_ (Page \_\_\_\_\_ of Specifications) \$ \_\_\_\_\_

3. COPYRIGHT AND PATENT RIGHTS

No materials, to include but not limited to reports, maps, or documents produced as a result of this contract, in whole or in part, shall be available to CONTRACTOR for copyright or patent purposes. Any such materials produced as a result of this contract that might be subject to copyright or patent shall be the property of the Ouachita Parish Police Jury and all such rights shall belong to the Ouachita Parish Police Jury and the Ouachita Parish Police Jury shall be sole and exclusive entity who may exercise such rights.

4. CONTRACTOR'S AND SUBCONTRACTOR'S PUBLIC LIABILITY, VEHICLE LIABILITY, AND PROPERTY DAMAGE INSURANCE

As required under Paragraph 28 of the General Conditions, the Contractor's Public Liability Insurance and Vehicle Liability Insurance shall be in an amount not less than \$1,000,000 for injuries, including accidental death, to any one person, and subject to the same limit for each person, in an amount not less than \$2,000,000 on account of one accident, and Contractor's Property Damage Insurance in an amount not less than \$1,000,000.

The Contractor shall either (1) require each of his subcontractors to procure and to maintain during the life of his subcontract, Subcontractor's Public Liability and Property Damage of the type and in the same amounts as specified in the preceding paragraph, or (2) insure the activities of his subcontractors in his own policy.

5. PHOTOGRAPHS OF PROJECT

As provided in Paragraph 49 of the General Conditions, the Contractor will furnish photographs in the number, type, and stage as enumerated below:

N/A

6. SCHEDULE OF OCCUPATIONAL CLASSIFICATIONS AND MINIMUM HOURLY WAGE RATES AS REQUIRED UNDER PARAGRAPH 51 OF THE GENERAL CONDITIONS

Given on Pages at the end of this section.

7. BUILDER'S RISK INSURANCE

As provided in the General Conditions, Paragraph 28(e), the Contractor ~~will~~/will not\* maintain Builder's Risk Insurance (fire and extended coverage) on a \_\_\_\_\_ percent completed value basis on the insurable portions of the project for the benefit of the Owner, the Contractor, and all subcontractors, as their interest may appear.

\*Strike out one.

8. SPECIAL EQUAL OPPORTUNITY PROVISIONS

A. Activities and Contracts Not Subject to Executive Order 11246, as Amended (Applicable to federally assisted construction contracts and related subcontracts of \$10,000 and under.)

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

1. The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following:

employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

2. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by Contracting Officer setting forth the provisions of this non-discrimination clause. The Contractor shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
3. Contractors shall incorporate foregoing requirements in all subcontracts.

**B. Executive Order 11246 (contracts/subcontracts above \$10,000)**

Compliance with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60).

**1. Section 202 Equal Opportunity Clause**

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

- (1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration without regard to race, color, religion, sex, or national origin.
- (3) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the Contract Compliance Officer advising the said labor union or workers' representatives of the Contractor's commitment under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and the rules, regulations, and relevant

orders of the Secretary of Labor.

- (5) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Department and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and others.
  - (6) In the event of the Contractor's noncompliance with the non-discrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
  - (7) The Contractor will include the provisions of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Department may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Department, the Contractor may request the United States to enter into such litigation to protect the interest of United States.
2. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246). (Applicable to contracts/subcontracts exceeding \$10,000).

- (1) The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
- (2) The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation	Goals for female participation
<u>22.8%</u>	<u>6.9%</u>
(Insert goals)	(Insert goals)

These goals are applicable to all the Contractor's construction work (whether or not it is federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographic area located outside of the covered area, it shall apply the goals established for such geographic area where the work is actually performed.

With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction. The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a) and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed.

The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

- (3) The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the sub- contract; and the geographical area in which the contract is to be performed.
  - (4) As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is (Ouachita Parish, Louisiana):
3. Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)
- (1) As used in these specifications:
    - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
    - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or

any person to whom the Director delegates authority;

- c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
  - d. "Minority" includes:
    - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
    - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South America or other Spanish Culture or origin, regardless of race);
    - (iii) Asian and Pacific Islander (all persons having origins in any of the original people of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
    - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
- (2) When the Contractor, or any subcontractor, at any time, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract, in excess of \$10,000, the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
  - (3) If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in compliance with the provisions of any such Hometown Plan. Each Contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
  - (4) The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these

specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing contracts in geographical areas where they do not have a federal or federally-assisted construction contract shall apply the minority and female goals established for the geographic area where the contract is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

- (5) Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
- (6) In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
- (7) The Contractor shall take specific affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
  - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

- b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.
- c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
- d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement have not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly includes minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on a bulletin board accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment,

layoff, termination, or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure

privacy between the sexes.

- o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitation to minority and female contractor associations and other business associations.
  - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- (8) Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation shall not be a defense for the Contractor's non-compliance.
- (9) A single goal for minorities and a separate single goal for women has been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
- (10) The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any persons because of race, color, religion, sex, or national origin.
- (11) The Contractor shall not enter into any subcontract with any person or firm debarred from government contracts pursuant to E.O. 11246.
- (12) The Contractor shall not carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to E.O. 11246, as

amended.

- (13) The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
- (14) The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records shall at least include for each employee, the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number where assigned, social security number, race, sex, status (e.g., mechanic, apprenticeship trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and location at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.
- (15) Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application or requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

C. Certification of Nonsegregated Facilities (Over \$10,000) (41 CFR 60-1.9)

By the submission of this bid, the bidder, offeror, applicant or subcontractor certifies that he/she does not maintain or provide for his/her establishments, and that he/she does not permit employees to perform their services at any location, under his/her control, where segregated facilities are maintained. He/she certifies further that he/she will not maintain or provide for employees any segregated facilities at any of his/her establishments, and he/she will not permit employees to perform their services at any location under his/her control where segregated facilities are maintained. The bidder, offeror, applicant or subcontractor agrees that a breach of this certification is a violation of the equal opportunity clause of this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms, and other storage or dressing areas, transportation and housing facilities provided for employees which are segregated on the basis of race, color, religion, or otherwise. He/she further agrees

that (except where he/she has obtained for specific time periods) he/she will obtain identical certification from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the equal opportunity clause; that he/she will retain such certifications in his/her files; and that he/she will forward the following notice to such proposed subcontractors (except where proposed subcontractors have submitted identical certifications for specific time periods).

D. "Section 3" Compliance in the Provision of Training, Employment and Business Opportunities

1. The work to be performed under this contract, subcontract, memorandum of understanding, cooperative agreement or similar legally binding agreement, is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968 (Section 3). The purpose of Section 3 is to ensure, to the greatest extent feasible, that training, employment, contracting, and other economic opportunities generated by Section 3 covered financial assistance shall be directed to low- and very low-income residents of the neighborhood where the financial assistance is spent, particularly to those who are recipients of government assistance for housing, and to businesses that are either owned by low- or very low-income residents of the neighborhood where the financial assistance is spent, or substantially employ these persons.
2. The parties to this contract, subcontract, memorandum of understanding, cooperative agreement, or similar legally binding agreement agree to comply with HUD's regulations in 24 CFR Part 75, which implement Section 3. As evidenced by execution of this contract or subcontract memorandum of understanding, cooperative agreement or similar legally binding agreement the parties certify that they are under no contractual or other impediment that would prevent them from complying with the requirements of 24 CFR Part 75.
3. The contractor agrees to identify current employees on its payroll when the contract or subcontract was awarded who will be working on the Section 3 covered project or activity and certify that any vacant employment opportunities, including training positions, that are filled:
  - (1) After the contractor is selected; and
  - (2) With persons other than those that meet the definition of a Section 3 resident, were not filled to circumvent the contractor's Section 3 obligations.
4. The contractor agrees to maintain records documenting Section 3 residents that were hired to work on previous Section 3 covered projects or activities that were retained by the contractor for subsequent Section 3 covered projects or activities.
5. The contractor agrees to post signs advertising new employment, training, or Sub- contracting opportunities that will be available as a result of the Section 3

covered projects and activities in conspicuous places at the work site where potential applicants can review them.

6. The contractor agrees to hire, to the greatest extent feasible, Section 3 residents as new hires, or provide written justification to the recipient that is consistent with 24 CFR Part 75, describing why it was unable to meet minimum numerical hiring goals, despite its efforts to comply with the provisions of this clause.
7. The contractor agrees that in order for a Section 3 resident to be counted as a new hire, the resident must work a minimum of 50 percent of the average staff hours worked for the category of work for which they were hired throughout the duration of time that the category of work is performed on the covered project.
8. The contractor agrees to award, to the greatest extent feasible, 10 percent of the total dollar amount of subsequent subcontracts awarded in connection with the Section 3 covered project or activity to Section 3 businesses, or provide written justification that is consistent with 24 CFR Part 75 describing why it was unable to meet that goal, despite their efforts to comply with the provisions of this clause.
9. The contractor agrees to notify Section 3 residents and businesses about the availability of new employment, training, or contracting opportunities created as a result of the receipt of Section 3 covered financial assistance, as stipulated by the awarding agency.
10. The contractor agrees to verify the eligibility of prospective Section 3 residents and businesses for employment, training, or subcontracting opportunities, in accordance with the recipient's policies and procedures.
11. The contractor agrees to provide priority consideration to eligible residents and businesses in accordance with 24 CFR Part 75, as applicable.
12. The contractor agrees to notify potential bidders on subcontracts that are associated with Section 3 covered projects and activities about the requirements of Section 3 and include this Section 3 clause in its entirety into every subcontract awarded.
13. The contractor agrees to impose sanctions upon any subcontractor that has violated the requirements of this clause in accordance with the awarding agency's Section 3 policies and procedures.
14. The contractor agrees to comply with all monitoring, reporting, recordkeeping, and other procedures specified by the awarding agency.
15. If applicable, the contractor agrees to notify each labor organization or

representative of workers with which the recipient, sub-recipient, or contractor has a collective bargaining or similar labor agreement or other understanding, if any, about its obligation to comply with the requirements of Section 3 and ensure that new collective bargaining or similar labor agreements provide employment, registered apprenticeship, training, subcontracting, or other economic opportunities to Section 3 residents and businesses, and to post notices in conspicuous places at the work site advising the labor union, organization, or workers' representative of the contractor's commitments under this part.

16. Failure to comply with this clause shall result in the imposition of sanctions. Appropriate sanctions for noncompliance may include: Requiring additional certifications or assurances of compliance; termination or cancelation of the contract, subcontract, memorandum of understanding, cooperative agreement, or similar legally binding arrangement for default; refraining from entering into subsequent contracts, subcontracts, memoranda of understanding, cooperative agreements, or similar legally binding arrangement; repayment of funds, and withholding a portion of contract awards, subcontracts, memoranda of understanding, cooperative agreements, or similar legally binding arrangements.

9. COMPLIANCE WITH AIR AND FEDERAL WATER POLLUTION CONTROL ACTS

(Applicable to federally assisted construction contracts and related subcontracts exceeding \$150,000.)

Compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 7401-7671(q)), and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

10. SPECIAL CONDITIONS PERTAINING TO HAZARDS, SAFETY STANDARDS AND ACCIDENT PREVENTION

A. Lead-Based Paint Hazards

*(Applicable to contracts for construction or rehabilitation of residential structures)*

The construction or rehabilitation of residential structures is subject to the HUD Lead- Based Paint regulations, 24 CFR Part 35. The Contractor and subcontractors shall comply with the provisions for the elimination of lead-based paint hazards under Subpart B of said regulations. The Owner will be responsible for the inspections and certifications required under Section 35.14 (f) thereof.

B. Use of Explosives (Modify as required)

When the use of explosives is necessary for the prosecution of the work, the Contractor shall observe all local, state and federal laws in purchasing and

handling explosives. The Contractor shall take all necessary precaution to protect completed work, neighboring property, water lines, or other underground structures. Where there is danger to structures or property from blasting, the charges shall be reduced and the material shall be covered with suitable timber, steel or rope mats.

The Contractor shall notify all owners of public utility property of intention to use explosives at least 8 hours before blasting is done close to such property. Any supervision or direction of use of explosives by the engineer, does not in any way reduce the responsibility of the Contractor or his Surety for damages that may be caused by such use.

C. Danger Signals and Safety Devices (Modify as Required)

The Contractor shall make all necessary precautions to guard against damages to property and injury to persons. He shall put up and maintain in good condition, sufficient warning lights, suitable barricades and other devices necessary to protect the public. In case the Contractor fails or neglects to take such precautions, the Owner may have such lights and barricades installed and charge the cost of this work to the Contractor. Such action by the Owner does not relieve the Contractor of any liability incurred under these specifications or contract.

11. FLOOD DISASTER PROTECTION

This contract is subject to the requirements of the Flood Disaster Protection Act of 1973 (P.L. 93-234). Nothing included as a part of this contract is approved for acquisition or construction purposes as defined under Section 3(a) of said Act, for use in an area identified by the Secretary of HUD as having special flood hazards which is located in a community not then in compliance with the requirements for participation in the National Flood Insurance Program pursuant to Section 201(d) of said Act; and the use of any assistance provided under this contract for such acquisition for construction in such identified areas in communities then participating in the National Flood Insurance Program shall be subject to the mandatory purchase of flood insurance requirements or Section 102(a) of said Act.

Any contract or agreement for the sale, lease, or other transfer of land acquired, cleared or improved with assistance provided under this Contract shall contain, if such land is located in an area identified by the Secretary as having special flood hazards and in which the sale of flood insurance has been made available under the National Flood Insurance Act of 1968, as amended, 42 U.S.C. 4001 et seq., provisions obligating the transferee and its successors or assigns to obtain and maintain, during the ownership of such land, such flood insurance as required with respect to financial assistance for acquisition or construction purposes under Section 102(a) of Flood Disaster Protection Act of 1973.

12. ACCESS TO RECORDS - MAINTENANCE OF RECORDS

The State grantor agency, the Department of Housing and Urban Development, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers and records of the

- Contractor which are directly pertinent to this specific contract, for the purpose of audits, examinations, and making excerpts and transcriptions. All records connected with this contract will be maintained in a central location by the unit of local government and will be maintained for a period of four (4) years from the official date of the State's final closeout of the grant.
13. CONFLICT OF INTEREST OF OFFICERS OR EMPLOYEES OF THE LOCAL JURISDICTION, MEMBERS OF THE LOCAL GOVERNING BODY, OR OTHER PUBLIC OFFICIALS.
- No officer or employee of the local jurisdiction or its designees or agents, no member of the governing body, and no other public official of the locality who exercises any function or responsibility with respect to this contract, during his/her tenure or for one year thereafter, shall have any interest, direct or indirect, in any contract or subcontract, or the proceeds thereof, for work to be performed. Further, the Contractor shall cause to be incorporated in all subcontracts the language set forth in this paragraph prohibiting conflict of interest.
14. MINORITY AND FEMALE CONTRACTOR ASSOCIATIONS
- Lists of minority and female owned businesses are available from various sources including the Louisiana Department of Transportation and Development and the U.S. Department of Housing and Urban Development, New Orleans Area Office. These lists are available solely for the benefit of the Contractor for the purpose of assisting him/her in meeting the equal opportunity provisions contained in these supplemental General Conditions. The lists do not contain a complete listing of minority and female businesses. The information may in some cases be out of date.
15. RETENTION OF RECORDS
- All records connected with this contract will be maintained in a central location by the unit of local government and will be maintained for a period of 3 years from the official date of close out of the grant by the state.
16. ENERGY EFFICIENCY STANDARDS
- Contractor shall recognize mandatory standards and policies relating to energy efficiency that are contained in the State Energy Conservation Plan issued in compliance with the Energy Policy and conservation Act (P.L. 94-163).
17. COPELAND “ANTI-KICKBACK” ACT
- Compliance with Copeland “Anti-Kickback” Act (40 U.S.C. 3145) as supplemented in Department of labor regulations (29 CFR part 3). (All contracts and subgrants for construction or repair.)
18. DAVIS-BACON ACT
- Compliance with the Davis-Bacon Act (40 U.S.C. 3141-3148) as supplemented by Department of Labor regulations (29 CFR part 5). (Construction contracts in excess of \$2,000 awarded by grantees and subgrantees when required by Federal grant program legislation.)

19. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Compliance with the Contract Work Hours and Safety Standards Act (40 U.S.C. 3701- 3708) as supplemented by Department of labor regulations (29 CFR part 5). (Construction contracts awarded by grantees and subgrantees of \$100,000, which involve the employment of mechanics or laborers.)

20. DEBARMENT AND SUSPENSION (Executive Orders 12549 and 12689)

A contract award (see 2 CFR 180.220) must not be made to parties listed on the government-wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

21. BYRD ANTI-LOBBYING AMENDMENT (31 U.S.C. 1352)

Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

22. PROCUREMENT OF RECOVERED MATERIALS (2 CFR 200.322)

A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

23. BUILD AMERICA BUY AMERICA

This agreement is subject to the Build America Buy America Act (BABAA) requirements under Title IX of the Infrastructure Investment and Jobs Act (“IIJA”), Pub. L. 177-58. For all projects exceeding \$250,000, all iron, steel, manufactured products, and construction materials used in this project must be produced in the United States, as further outlined by the Office of Management and Budget’s Memorandum M-22-11, Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure, April 18, 2022. HUD has waived the application of the BAP for a De Minimis portion of an infrastructure project, meaning a cumulative total of no more than 5 percent of the total cost of the iron, steel, manufactured products, and construction materials used in and incorporated into the infrastructure project, up to a maximum of \$1 million. The requirements of this section must be included in all subcontracts.

24. REGISTRATION

All direct recipients of CDBG from OCD-LGA are required to be registered on SAM.gov and have a Unique Entity Identifier (UEI). All sub-recipients and all contractors and/or consultants under direct contract with the Grantee also be registered in SAM.gov with a UEI. Sub-contractors for prime contractors do not need to be fully registered in SAM.gov but must have a UEI. Information on registering in SAM.gov or receiving a UEI only can be found [here](#). The requirements of this section must be included in all subcontracts.

25. FEDERAL WAGE DECISION

**FEDERAL WAGE DECISION INSERTED HERE**

The most recent update of the wage decision(s) applicable to this project should be inserted.



(formbuilding/formsetting).....\$ 32.59 11.06

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CARP1098-016 07/01/2024

BOSSIER, CADDO, OUACHITA, RAPIDES AND WEBSTER PARISHES

Rates Fringes

CARPENTER  
(formbuilding/formsetting).....\$ 32.59 11.06

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CARP1846-008 07/01/2024

LAFOURCHE and TERREBONNE PARISHES

Rates Fringes

CARPENTER  
(formbuilding/formsetting).....\$ 32.59 10.52

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ELEC0130-009 12/02/2024

LAFOURCHE AND TERREBONNE PARISHES

Rates Fringes

ELECTRICIAN.....\$ 35.00 16.03

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ELEC0194-007 09/02/2025

BOSSIER, CADDO, and WEBSTER PARISHES

Rates Fringes

ELECTRICIAN.....\$ 35.85 15.58

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ELEC0446-007 03/01/2025

OUACHITA PARISH

Rates Fringes

ELECTRICIAN.....\$ 29.55 2%+13.77

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ELEC0576-006 09/01/2025

RAPIDES PARISH

Rates Fringes

ELECTRICIAN.....\$ 30.00 4.25%+10.75

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ELEC0861-006 09/01/2024

ACADIA, CALCASIEU, LAFAYETTE, AND ST. MARTIN PARISHES

Rates Fringes

ELECTRICIAN.....\$ 31.98 4.34%+13.75

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ELEC0995-006 01/01/2025

ASCENSION, EAST BATON ROUGE, LIVINGSTON, ST. LANDRY, AND WEST  
BATON ROUGE PARISHES

Rates Fringes

ELECTRICIAN.....\$ 29.47 13.50

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SULA2004-006 04/29/2004

Rates Fringes

CARPENTER (all other work).....\$ 12.81 0.00

Cement Mason/Concrete Finisher...\$ 13.77 0.00

Laborers

Common.....\$ 8.20 0.00

Pipelayer.....\$ 9.45 0.00

Power Equipment Operators

Backhoe/Excavator.....\$ 13.01 0.00

Bulldozer.....\$ 13.83 0.00

Crane.....\$ 16.62 3.28

Dragline.....\$ 15.16 0.00

Front End Loader.....\$ 11.50 0.00

Motor Grader/Blade.....\$ 11.75 0.00

Oiler.....\$ 8.59 2.50

Trackhoe.....\$ 12.64 0.00

Water Well Driller.....\$ 11.91 2.44

Winch.....\$ 11.38 0.00

Truck Driver, Dump.....\$ 10.25 0.00

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

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

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

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

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The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular

rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

#### Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

#### Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

#### Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union

prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

#### State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

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#### WAGE DETERMINATION APPEALS PROCESS

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

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to [davisbaconinfo@dol.gov](mailto:davisbaconinfo@dol.gov) or by mail to:

Branch of Wage Surveys  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.

Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to [BCWD-Office@dol.gov](mailto:BCWD-Office@dol.gov) or by mail to:

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

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to [dba.reconsideration@dol.gov](mailto:dba.reconsideration@dol.gov) or by mail to:

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

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

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

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

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END OF GENERAL DECISION

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**PROJECT SIGN**

3/8" PLYWOOD, PAINTED WHITE

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# **OUACHITA PARISH POLICE JURY**

## **FY 2025 LCDBG PROGRAM SOUTH MONROE WATER SYSTEM IMPROVEMENTS**

### **LCDBG CONTRACT NO. TBD**

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**This Project is Being Funded by the  
U. S. Department of Housing and Urban Development  
Through the Louisiana Office of the Governor  
Division of Administration**

**Jeff Landry  
Governor**

**Taylor Barras  
Commissioner**

**Katrina R. Jackson-Andrews  
State Senator**

**Shane Smiley, President  
Ouachita Parish Police Jury**

**Patricia "Pat" Moore  
State Representative**

**Heather Paul  
LCDBG Director**

**Liza Bergeron  
LCDBG Representative**

\_\_\_\_\_  
**Contractor**

**Lazenby & Associates, Inc.  
Consulting Engineers**

**"Benefiting Ouachita Parish and all of Louisiana"**

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**SIGN SIZE 48" X 72"**

**All recipients of funds under the FY 2020 LCDBG Program must post a sign in each target area for the purpose of informing the public that the work is being financed with a grant from the Louisiana Division of Administration. One sign required this bid.**

**PRINTING IN BLUE**

**TECHNICAL SPECIFICATIONS**

## SECTION 01 10 00

### SUMMARY OF WORK

#### PART 1 GENERAL

##### 1.1 GENERAL

- A. The work of this Contract is generally described in this section and further specified in following individual sections. The Drawings include information about the existing water mains, valves, and wells.
- B. The Contractor shall perform the Work complete, in place, and ready for continuous service, and shall include repairs, replacements and restoration required as a result of damages caused during this construction.
- C. The Contractor shall furnish and install all materials which are reasonably and properly inferable and necessary for the proper completion of the Work, whether specifically indicated in the Contract Documents or not.
- D. The Contractor shall comply with all municipal, county, state, federal, and other codes which are applicable to the proposed construction work.
- E. The Contractor must maintain water service to the water system utilizing the existing water mains until the new water mains and treatment systems have been successfully pressure tested and disinfected, and a negative bacteriological test report has been received from the Louisiana Department of Health and Hospitals.
- F. Excavations shall not remain open overnight, without the permission of the Engineer.

##### 1.2 SCOPE OF WORK

- A. The Contractor shall furnish all labor, materials, equipment, tools, services, supervision and incidentals required to complete the work as shown on the Drawings and specified herein.
- B. The Work includes, but is not necessarily limited to, the following:
  - 1. Installation of new water mains
  - 2. Installation of new gate valves
  - 3. Installation of new fire hydrants
  - 4. Installation of new water service lines
- C. Any part or item of the Work which is reasonably implied or normally required to make each installation satisfactorily and completely operable shall be performed by the Contractor and the expense thereof shall be included in the applicable unit prices or lump sum prices bid for the various items of Work. It is the intent of the Contract Documents to provide the Owner with complete

operable systems, subsystems, and other items of Work. All miscellaneous appurtenances and other items of Work that are incidental to meeting the intent of these Contract Documents shall be considered as having been included in the applicable unit prices or lump sum prices bid for the various items of Work even though these appurtenances and items may not be specifically called for in the Specifications or shown on the Drawings.

- D. The Contractor shall comply with all City, State, Federal and other codes which are applicable to the proposed work.

### 1.3 WORK SEQUENCE

- A. Construct work in stages to accommodate the use of the premises during the construction period; coordinate the construction schedule and operations with the Engineer.
- B. Construct the work in stages to provide for public convenience. Do not close off public use of facilities without the consent of the Owner.

### 1.4 CONTRACTOR'S USE OF PREMISES

- A. Coordinate use of premises with the Owner.
- B. Contractor shall assume full responsibility for security of all materials and equipment stored on the site under this Contract, including those items salvaged and stored by contractor for later delivery to Owner.
- C. If directed by the Owner, move any stored items, which interfere with operations of Owner.
- D. Obtain and pay for use of additional storage or work areas if needed to perform the Work.

PART 2 PRODUCTS (NONE THIS SECTION)

PART 3 EXECUTION (NONE THIS SECTION)

END OF SECTION

## SECTION 01 32 13

### CONSTRUCTION SEQUENCE

#### PART 1 GENERAL

##### 1.1 GENERAL

- A. Some areas of construction under this contract must be coordinated with the Owner and accomplished in a logical order to minimize disruption of water service and to allow construction to be completed within the time allowed by the Contract Documents. Contractor will also coordinate his activities with the other contractors, if any, to allow orderly and timely completion of all the work and to provide adequate access to the site for completion of the work.
- B. No work shall be done between 6:00 p.m. and 7:00 a.m., nor on Saturdays or Sundays or legal state holidays except with the written permission of the Owner. Normal working hours shall be considered 40 hours per week, Monday through Friday, eight (8) hours each day. Contractor shall submit a request to work outside of normal working hours to the Owner 72 hours in advance of such work. Emergency work may be accomplished without obtaining prior permission. The Contractor shall pay the expenses for extra inspection (extra inspection is defined as anything over 40 hours per week) at the rate given in the Owner's Contract with the Engineer for Resident Inspection Services, for each hour of inspection required for work outside normal working hours due to an emergency situation, when the Contractor was not scheduled to work, or for reasons requiring an extension to the contract time. The charges for the extra inspection shall be deducted from the Contractor's invoice. The Contractor will not be required to pay the expenses for extra inspection when specific allotted work times are required as directed within these specifications.

##### 1.2 CONSTRUCTION SCHEDULE

- A. The Contractor shall develop a schedule in order to complete the project within the contract time allotted.
- B. Prior to commencing construction activities, the Contractor shall perform an inspection, including video/audio recording and written descriptions, of the project site and adjacent private properties and structures that may be subjected to damage resulting from construction activities. This inspection data shall be used to ensure that the project site and adjacent private properties are properly restored following construction activities.

END OF SECTION

## SECTION 01 35 13

### SPECIAL PROJECT PROCEDURES

#### PART 1 GENERAL

##### 1.1 WORKMANSHIP, MATERIAL AND EQUIPMENT

- A. All apparatus, mechanism, equipment, machinery and manufactured articles for incorporation into the Work shall be the new and unused standard products of recognized reputable manufacturers.
- B. All equipment, machinery, parts and assemblies thereof, entering into the work shall be tested as specified. Unless waived in writing by the Engineer, all field and operating tests shall be made in the presence of the Engineer or his authorized representative. When such a waiver is issued, sworn statement in duplicate of the tests made and the results thereof shall be furnished to the Engineer by the Contractor or manufacturer. Costs of all tests and trials specified hereto, other than laboratory tests, and with the exception of the Engineer's expenses shall be borne by the Contractor and shall be included in the Contract price.
- C. All workmanship and materials shall be of the highest quality. The equipment shall be the product of manufacturers who are experienced and skilled in the field with an established record of research and development. No equipment will be considered unless the manufacturer has designed and manufactured equipment of comparable type and size for at least ten (10) years.
- D. Contractor must provide his own disposal of excavation that he removes from the site.

##### 1.2 EXISTING UNDERGROUND PIPING, STRUCTURES, AND UTILITIES

- A. The attention of the Contractor is drawn to the fact that during excavation, the possibility exists of the Contractor encountering various water, gas, telephone, electrical, or other utility lines not shown on the Drawings. The Contractor shall exercise extreme care before and during excavation to locate and flag these lines so as to avoid damage to the existing lines. Should damage occur to an existing line, the Contractor shall repair the line at no cost to the Owner.
- B. The locations are shown without express or implied representation, assurance, or guarantee that they are complete or correct or that they represent a true picture of underground piping to be encountered.
- C. The existing piping and utilities that interfere with new construction shall be rerouted as shown or specified, as directed by the Engineer or required. Before any piping and utilities not shown on the Drawings are disturbed, the Contractor

shall notify the Engineer of the location of the pipeline or utility and shall reroute or relocate the pipeline or utility as directed.

- D. The Contractor shall exercise care in any excavation to locate all existing piping and utilities. All utilities which do not interfere with complete work shall be carefully protected against damage. Any existing utilities damaged in any way by the Contractor shall be restored or replaced by the Contractor at his expense as directed by the Engineer.
- E. It is intended that wherever existing utilities such as water, gas, telephone, electrical, or other service lines must be crossed, deflection of the pipe within recommended limits and cover shall be used to satisfactorily clear the obstruction unless otherwise indicated on the Drawings. However, when in the opinion of the Owner or Engineer this procedure is not feasible, he may direct the use of fittings for a utility crossing as detailed on the Drawings. The Contractor shall verify utility crossings with test pits prior to construction as required by the Engineer.

### 1.3 OBSTRUCTIONS

- A. It is the responsibility of the Contractor to ensure that all utility or other poles, the stability of which may be endangered by the proximity of excavation, are temporarily stayed in position while work proceeds in the vicinity of the pole and that the utility or other companies concerned be given reasonable advance notice of any such excavation by the Contractor.

### 1.4 PROVISIONS FOR CONTROL OF EROSION

- A. Sufficient precautions shall be taken during construction to minimize the run-off of polluting substances such as silt, clay, fuels, oils, bitumens, calcium chloride, or other polluting materials harmful to humans, fish, or other life, into the supplies and surface waters of the state. The Contractor shall be responsible for prevention, control, and abatement of erosion, siltation, and water pollution resulting from construction of the Project until final acceptance of the Project.
- B. Control measures must be adequate to assure that turbidity in receiving waters will not be increased more than 10 nephelometric turbidity units (NTU), or as otherwise required by the state or other controlling agency, in water used for public water supply or fishing unless limits have been established for the particular water. In surface water used for other purposes, the turbidity must not exceed 25 NTU unless otherwise required by the state or other controlling agency. Special precautions shall be taken in the use of construction equipment to prevent operations which promote erosion.

### 1.5 INCLEMENT WEATHER

- A. In the event of inclement weather, or whenever Engineer shall direct, Contractor will, and will cause Subcontractors to, protect carefully the Work and materials against damage or injury from the weather, including sudden rises in sewer flows due to storms outside the immediate construction zone. If, in the opinion of Engineer, any portion of Work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or Subcontractors to so protect

the Work, such Work and materials shall be removed and replaced at the expense of Contractor and no additional time will be given by the Owner.

#### 1.6 WATER SUPPLY

- A. There is an existing potable water supply system in the project area. It shall be the Contractor's responsibility to arrange with utility company for use of this source of water, approved by the Engineer, to the site for testing, flushing, and construction purposes. The Contractor shall provide all equipment and labor necessary for temporary water needed for construction, testing, etc. The Contractor will be required to pay for water used in completion of the Work.

#### 1.7 ITEMS SPECIFIED IN DRAWINGS

- A. Items of material, equipment, machinery and the like may be specified on the Drawings and not in the Specifications. Such items shall be provided by the Contractor in accordance with the specification on the Drawings.
- B. Construction Drawings are provided as a component of this Contract. The Drawings are bound separately.

#### 1.8 CONSTRUCTION CONDITIONS, SURFACE AND SUBSURFACE INVESTIGATION

- A. The Contractor shall strictly adhere to the specific requirements of the governmental unit(s) or agency(ies) having jurisdiction over the work. Whenever there is a difference in the requirements of a jurisdictional body and these Specifications, the more stringent shall apply.
- B. All Work within streets and highways shall be subject to the regulations and requirements of the appropriate agencies. Streets and highways are under the jurisdiction of Ouachita Parish and/or the Louisiana Department of Transportation and Development for this Project. Methods and materials of construction used in restoration within such streets and highways shall conform to the requirements, inspection, and approval of the duly authorized representatives of the appropriate agency having jurisdiction.
- C. The Contractor shall be responsible for having determined to his satisfaction, prior to the submission of his bid, the nature and location of the work, the conformation of the ground, the character and quality of the substrata, the types and quantity of materials to be encountered, the nature of the groundwater conditions, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions, site access and all other matters which can in any way affect the work under this contract. The prices established for the work to be done will reflect all costs pertaining to the work. Any claims for extras based on substrata, groundwater table, seasonal surface water, and other such conditions will not be allowed.

## 1.9 PUBLIC NUISANCE

- A. The Contractor shall not create a public nuisance, including, but not limited to, encroachment on adjacent lands, flooding of adjacent lands, or excessive noise.
- B. Sound levels from Contractor operations shall not exceed 45 dBA 7 P.M. to 7 A.M. or 55 dBA between 7 A.M. to 7 P.M. This sound level to be measured at the exterior of the nearest exterior wall of the nearest residence. Levels at operating equipment shall not exceed 85 dBA at the equipment at any time. Sound levels in excess of these values are sufficient cause to have the work halted until equipment can be quieted to these levels. Work stoppage by the Engineer for excessive noise shall not relieve the Contractor of any obligations under the contract, including, but not limited to, performance of the work at the contract time and contract price.
- C. No extra payment will be made for time lost due to work stoppage resulting from the creation of a public nuisance.
- D. All equipment to be furnished under this Contract, unless specified otherwise in the technical specifications, shall be designed to insure that the sound pressure level does not exceed 85 decibels over a frequency range of 37.8 to 9600 cycles per second at a distance of three feet from any portion of the equipment, under any load condition, when tested using standard equipment and methods. Noise levels shall include the noise from the motor. Mufflers or external baffles shall not be acceptable for the purpose of reducing noise.

## 1.10 HAZARDOUS LOCATIONS

- A. The existing wet wells, manholes and related areas are hazardous locations, in that explosive and/or toxic concentrations of sewage gas may be present. The Contractor is cautioned that the above areas may be deficient in oxygen. Checks shall be made by the Contractor whenever personnel are working in these areas to determine if adequate oxygen is available. Contractor shall perform work in accordance with OSHA, state and local safety requirements.
- B. The Contractor shall also instruct and caution his employees and the employees of his subcontractors to avoid smoking while in the hazardous areas, especially wet well and manholes. Suitable prominent "No Smoking" signs shall be placed at locations indicated by the Engineer.
- C. In his operations in hazardous locations, the Contractor shall use spark-proof tools and explosion-proof temporary lighting and shall not use electric power tools, open flame devices, electric welding or any device or methods which might conceivably cause ignition or explosion.
- D. If a working area atmosphere is unsafe, the Contractor shall furnish, install, operate, and later remove such temporary auxiliary ventilating facilities as are necessary to provide a safe atmosphere.

## 1.11 SUSPENSION OF WORK DUE TO WEATHER

- A. No work shall be done when the weather is unfit for good and careful work to be performed. Should the severity of the weather continue, the Contractor, upon the direction of the Engineer shall suspend all work indefinitely. Work damaged during periods of suspension due to inclement weather shall be repaired and/or replaced by the Contractor at no cost to the Owner.
- B. The Engineer shall have the authority to suspend work wholly or in part, for such period or periods as he may deem necessary due to unsuitable weather or such other similar conditions considered unfavorable for the suitable prosecution of the work, or for such time as is necessary due to the failure on the part of the Contractor to perform any or all provisions of the Contract. The authority of the Engineer to issue such an order shall not be interpreted as a requirement to do so. If it should become necessary to suspend the work for an indefinite period, the Contractor shall at his own cost, take every precaution to prevent damage or deterioration of the work performed and provide suitable temporary structures where necessary.

## 1.12 SPECIAL REQUIREMENTS

- A. The following requirements shall govern:
  - 1. No additional payment will be made for pumping or other difficulties encountered due to groundwater or surface runoff water.
  - 2. The Contractor shall, prior to interrupting a utility service (water, sewer, etc.) for the purpose of making cut-ins to the existing lines or for any other purposes, contact the Owner and make arrangements for the interruption which will be satisfactory to the Owner.
  - 3. All equipment and materials delivered to the job site shall be properly protected from dirt, dust, dampness, water and any other condition detrimental to the life of the equipment from the date of delivery to the time that control of the equipment is assumed by the Owner.
  - 4. From investigations, including surveys made at the site, physical conditions are approximately as indicated on the Drawings, but the nature of the materials below the surface, the depth to satisfactory foundations, or the stability of beds or banks, are not guaranteed.
  - 5. Certain information regarding the reputed presence, size, character and location of existing underground structures, pipes and conduits has been shown on the Contract Drawings. There is no certainty of the accuracy of this information, and the location of underground structures shown may be inaccurate and other obstructions than those shown may be encountered. The Contractor hereby distinctly agrees that the Owner is not responsible for the correctness or sufficiency of the information given; that in no event is this information to be considered as a part of the Contract; that he shall have no claim for delay or extra compensation on account of incorrectness of information regarding obstructions either revealed or not revealed by the Drawings; and that he shall have no claim for relief from any obligation or responsibility under this Contract in case the location, size, or character of any pipe or other underground structure is not as indicated on the Drawings, or in case any pipe or other underground structure is encountered that is not shown on the Drawings.

#### 1.13 RESPONSIBILITY OF CONTRACTOR

- A. The Contractor shall be responsible for the entire Work determined by the Drawings, Specifications and Contract from the date of the starting of the Work until it is accepted as evidence of approval of the Completion Certificate by the Owner. He shall be responsible for removals, renewals and replacements due to action of the elements and all other causes except as otherwise provided in the Specifications. The Contractor shall keep the Contract under his own control and it shall be his responsibility to see that the Work is properly supervised and carried on faithfully and efficiently. The Contractor shall supervise the work personally or shall have a competent, English speaking superintendent or representative, who shall be on the site of the project at all working hours, and who shall be clothed with full authority by the Contractor to direct the performance of the work and make arrangements for all necessary materials, equipment and labor without delay.
- B. Renewals or repairs necessitated because of defective materials or workmanship, or due to action of the elements or other natural causes, including fire and flood, prior to the acceptance as determined by the Completion Certificate, shall be done anew in accordance with the Contract and Specifications at the expense of the Contractor.

#### 1.14 GUARANTEE

- A. The Contractor shall guarantee that all materials, equipment, structures and work performed are free from defects in workmanship, design and materials for a period of one (1) year, and if any part of the work shall fail within this period, it shall be replaced and the unit restored to operation at no cost to the Owner. The Surety Bond shall cover this guarantee.

#### 1.15 JURISDICTIONAL DISPUTES

- A. It shall be the responsibility of the Contractor to pay all costs that may be required to perform any of the work shown on the Drawings or specified herein in order to avoid any work stoppages due to jurisdictional disputes. The basis for subletting work in question, if any, shall conform with precedent agreements and decisions on record with the Building and Construction Trades Department, AFL-CIO, dated June, 1973, including any amendments thereto.

#### 1.16 RELOCATIONS

- A. The Contractor shall be responsible for the relocation of structures, including but not limited to light poles, signs, sign poles, fences, piping, conduits and drains that interfere with the positioning of the work as set out on the Drawings. The cost of all such relocations shall be included in the bid.

#### 1.17 SALVAGE

- A. Any existing equipment or material, including but not limited to, valves, pipes, fittings, couplings, etc., which is removed or replaced as a result of construction under this project may be designated as salvage by the Engineer or Owner and if

so, shall be excavated, if necessary and delivered, to the Owner at a location directed by the Owner, at the Contractor's expense. All other equipment shall become the property of the Contractor and hauled off site at his expense.

#### 1.18 PERMITS

- A. Upon notice of award, the Contractor shall immediately apply for all applicable permits not previously obtained by the Owner to do the work from the appropriate governmental agency or agencies. No work shall commence until all applicable permits have been obtained and copies delivered to the Engineer. There will be no cost to the Contractor for permits issued from the Owner.

#### 1.19 PUMPING

- A. The Contractor with his own equipment shall do all pumping necessary to prevent flotation of any part of the structures during construction operations.
- B. The Contractor shall, for the duration of the contract and with his own equipment, pump out water and wastewater which may seep or leak into the excavations or structures. Galleries and other operating areas shall be kept dry at all times. The extent of pumping required in the tanks, channels and other non-operating areas will be determined by the Owner/Engineer.

#### 1.20 REMOVAL OF WATER

- A. Before commencing any excavation at the site of the Work, the Contractor shall submit to the Engineer for review, the methods, equipment, and arrangement of facilities proposed for the removal and disposal of water at the site and of all water entering any excavation or other part of the Work from any source whatsoever. Adequate standby facilities shall be provided to ensure that the excavation will be kept dry in the event of power failure or mechanical breakdown. Facilities for the removal and disposal of water shall be of sufficient capacity to keep the excavation dry under all circumstances with one-half of the facilities out of service. If well points are used, provision shall be made for removing and resetting individual well points without taking the system of which they are a part out of service. The cost of removal of water shall be included in the unit quantity for each appropriate item bid.
- B. The Contractor shall implement all appropriate turbidity management practices at the point of discharge into a storm sewer, gutter, or other conveyance to ensure that state water quality standards are not violated at the point where the storm drain, gutter, or other conveyance discharges into a surface water.

#### 1.21 SIGNIFICANT ARCHEOLOGICAL MATERIALS

- A. In the advent that ground-disturbing work uncovers significant archaeological materials, such as stone arrowheads, ceramics, or early building foundations, or if work uncovers human burials or human remains, ground disturbing activities will immediately be stopped within a 300 foot radius and the materials protected. The State Historic Preservation Officer and the Choctaw Nation of Oklahoma

Historic Preservation Department will be contacted as soon as possible, and given an opportunity to provide input before construction resumes.

- B. If any archaeological or cultural materials are discovered during the project undertaking, neither the construction team or the applicant will disclose this information to the general public or the media in any manner. Discoveries of archaeological material will be kept private and confidential.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

## SECTION 01 35 43

### ENVIRONMENTAL PROTECTION REQUIREMENTS

#### PART 1 GENERAL

##### 1.1 SCOPE OF WORK

- A. The work covered by this Section consists of furnishing all labor, materials and equipment and performing all work required for the prevention of environmental pollution in conformance with applicable laws and regulations, during and as the result of construction operations under this Contract. For the purpose of this Specification, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic and/or recreational purposes.
- B. The control of environmental pollution requires consideration of air, water and land, and involves management of noise and solid waste, as well as other pollutants.
- C. Schedule and conduct all work in a manner that will minimize the erosion of soils in the area of the work. Provide erosion control measures such as diversion channels, sedimentation or filtration systems, berms, staked hay bales, seeding, mulching or other special surface treatments as are required to prevent silting and muddying of streams, rivers, impoundments, lakes, etc. All erosion control measures shall be in place in an area prior to any construction activity in that area. If specific requirements for erosion and sedimentation controls are specified, those specifications are included in Section 31 25 13.
- D. These Specifications are intended to ensure that construction is achieved with a minimum of disturbance to the existing ecological balance between a water resource and its surroundings. These are general guidelines. It is the Contractor's responsibility to determine the specific construction techniques to meet these guidelines.
- E. All phases of sedimentation and erosion control shall comply with and be subject to the approval of the Louisiana Department of Environmental Quality. Contractor shall prepare a sedimentation and erosion control drawing meeting the requirements for approval by that agency. Upon approval, furnish two copies of the approved Drawing to the Engineer.
- F. The Contractor will not be allowed to use any of the Owner's permitted outfalls for disposal of his/her wastes.

## 1.2 APPLICABLE REGULATIONS

- A. Comply with all applicable Federal, state and local laws and regulations concerning environmental pollution control and abatement.

## 1.3 NOTIFICATIONS

- A. The Engineer will notify the Contractor in writing of any non-compliance with the foregoing provisions or of any environmentally objectionable acts and corrective action to be taken. State or local agencies responsible for verification of certain aspects of the environmental protection requirements shall notify the Contractor in writing, through the Engineer, of any non-compliance with State or local requirements. The Contractor shall, after receipt of such notice from the Engineer or from the regulatory agency through the Engineer, immediately take corrective action. Such notice, when delivered to the Contractor or his/her authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor unless it is later determined that the Contractor was in compliance.

## 1.4 IMPLEMENTATION

- A. Prior to commencement of the work, meet with the Engineer and Owner to develop mutual understandings relative to compliance with this provision and administration of the environmental pollution control program.
- B. Remove temporary environmental control features, when approved by the Engineer and incorporate permanent control features into the project at the earliest practicable time.

## PART 2 PRODUCTS - (NOT USED)

## PART 3 EXECUTION

### 3.1 EROSION CONTROL

- A. Provide positive means of erosion control such as shallow ditches around construction to carry off surface water. Erosion control measures, such as siltation basins, hay check dams, mulching, jute netting and other equivalent techniques, shall be used as appropriate. Offsite surface water shall be diverted around the site, to a downstream channel ahead of siltation barriers. Flow of surface water into excavated areas shall be prevented. Ditches around construction area shall also be used to carry away water resulting from dewatering of excavated areas. At the completion of the work, ditches shall be backfilled and the ground surface restored to original condition.

### 3.2 PROTECTION OF STREAMS AND DISPOSAL OF TESTING WATER

- A. Care shall be taken to prevent, or reduce to a minimum, any damage to any stream from pollution by debris, sediment or other material, or from the manipulation of equipment and/or materials in or near such streams. Water that has been used for washing or processing, or that contains oils or sediments that will reduce the quality of the water in the stream, shall not be directly returned to the stream. Such waters will be diverted through a settling basin or filter before being directed into the streams.
- B. The Contractor shall not discharge water from dewatering operations directly into any live or intermittent stream, channel, wetlands, surface water or any storm sewer without the consent of the Engineer and Owner. Sediment levels in water from dewatering operations will have to be reduced to acceptable levels before discharge. All requirements of State, Federal and local regulatory agencies shall govern the discharge of sediment.
- C. All preventative measures shall be taken to avoid spillage of petroleum products and other pollutants. In the event of any spillage, prompt remedial action shall be taken in accordance with a contingency action approved by the Louisiana Department of Environmental Quality. Contractor shall submit two copies of approved contingency plans to the Engineer.
- D. Water used in hydrostatic or performance testing shall be disposed of in a manner approved by the Louisiana Department of Environmental Quality and all other applicable regulatory agencies.

### 3.3 PROTECTION OF LAND RESOURCES

- A. Land resources within the project boundaries and outside the limits of permanent work shall be restored to a condition, after completion of construction, that will appear to be natural and not detract from the appearance of the project. Confine all construction activities to areas shown on the Drawings.
- B. Outside of areas requiring earthwork for the construction of the new facilities, the Contractor shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without prior approval. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorage unless specifically authorized by the Engineer. Where such special emergency use is permitted, first wrap the trunk with a sufficient thickness of burlap or rags over which softwood cleats shall be tied before any rope, cable, or wire is placed. The Contractor shall in any event be responsible for any damage resulting from such use.
- C. Where trees may possibly be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment, dumping or other operations, protect such trees by placing boards, planks, or poles around them. Monuments and markers shall be protected similarly before beginning operations near them.
- D. Any trees or other landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition. The Engineer will decide what method of restoration shall be used and

whether damaged trees shall be treated and healed or removed and disposed of. All scars made on trees by equipment, construction operations, or by the removal of limbs larger than 1-in, in diameter shall be coated as soon as possible with an approved tree wound dressing. All trimming or pruning shall be performed in an approved manner by experienced workmen with saws or pruning shears. Tree trimming with axes will not be permitted. Climbing ropes shall be used where necessary for safety. Trees that are to remain, either within or outside established clearing limits, that are subsequently damaged by the Contractor and are beyond saving in the opinion of the Engineer, shall be immediately removed and replaced in kind.

- E. The locations of the Contractor's storage and other construction buildings required temporarily in the performance of the work shall be cleared portions of the job site or areas to be cleared as shown on the Drawings and shall require written approval of the Engineer and shall not be within wetlands or floodplains. The preservation of the landscape shall be an imperative consideration in the selection of all sites and in the construction of buildings. Drawings showing storage facilities shall be submitted for approval of the Engineer.
  
- F. If the Contractor proposes to construct temporary roads or embankments and excavations for plant and/or work areas, he/she shall submit the following for approval at least ten days prior to scheduled start of such temporary work.
  - 1. A layout of all temporary roads, excavations and embankments to be constructed within the work area.
  - 2. Details of temporary road construction.
  - 3. Drawings and cross sections of proposed embankments and their foundations, including a description of proposed materials.
  - 4. A landscaping drawing showing the proposed restoration of the area. Removal of any trees and shrubs outside the limits of existing clearing area shall be indicated. The drawing shall also indicate location of required guard posts or barriers required to control vehicular traffic passing close to trees and shrubs to be maintained undamaged. The drawing shall provide for the obliteration of construction scars as such and shall provide for a natural appearing final condition of the area. Modification of the Contractors approved drawings shall be made only with the written approval of the Engineer. No unauthorized road construction, excavation or embankment construction including disposal areas will be permitted.
  
- G. Remove all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess of waste materials, or any other vestiges of construction as directed by the Engineer. It is anticipated that excavation, filling and plowing of roadways will be required to restore the area to near natural conditions which will permit the growth of vegetation thereon. The disturbed areas shall be prepared and seeded as approved by the Engineer.
  
- H. All debris and excess material will be disposed of outside wetland or floodplain areas in an environmentally sound manner.

### 3.4 PROTECTION OF AIR QUALITY

- A. Burning - The use of burning at the project site for the disposal of refuse and debris will not be permitted.
- B. Dust Control - The Contractor will be required to maintain all excavations, embankment, stockpiles, access roads, plant sites, waste areas, borrow areas and all other work areas within or without the project boundaries free from dust which could cause the standards for air pollution to be exceeded and which would cause a hazard or nuisance to others.
- C. An approved method of stabilization consisting of sprinkling or other similar methods will be permitted to control dust. The use of petroleum products is prohibited. The use of chlorides may be permitted with approval from the Engineer.
- D. Sprinkling, to be approved, must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times, and the Contractor must have sufficient competent equipment on the job to accomplish this if sprinkling is used. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs, as determined by the Engineer.

### 3.5 MAINTENANCE OF POLLUTION CONTROL FACILITIES DURING CONSTRUCTION

- A. During the life of this Contract, maintain all facilities constructed for pollution control as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created.

### 3.6 NOISE CONTROL

- A. The Contractor shall make every effort to minimize noises caused by his/her operations. Equipment shall be equipped with silencers or mufflers designed to operate with the least possible noise in compliance with Local, State and Federal regulations.

END OF SECTION

SECTION 01 42 19

REFERENCE STANDARDS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Abbreviations and acronyms used in Contract Documents to identify reference standards are as indicated herein.

1.2 QUALITY ASSURANCE

- A. Application: When a standard is specified by reference, comply with requirements and recommendations stated in that standard, except when requirements are modified by the Contract Documents, or applicable codes establishing stricter standards.
- B. Publication Date: The publication in effect on the date of issue of Contract Documents, except when a specific publication date is specified.

1.3 ABBREVIATIONS, NAMES AND ADDRESSES OF ORGANIZATIONS

- A. The following standards are referenced in the Contract Documents. The Contractor shall obtain copies of reference standards directly from the publication source when needed for proper performance of Work or when required for submittal by Contract Documents.

- AA Aluminum Association  
900 19th Street N.W., Suite 300  
Washington, DC 20006  
(202) 862-5100
- AAN American Association of Nurserymen  
1250 I Street N.W., Suite 500  
Washington, DC 20005  
(202) 789-2900
- AASHTO American Association of State Highway  
and Transportation Officials  
444 North Capitol Street N.W., Suite 225  
Washington, DC 20001  
(202) 624-5800
- ACI American Concrete Institute  
P.O. Box 19150  
22400 W. Seven Mile Road  
Detroit, MI 48219  
(313) 532-2600

ACPA	American Concrete Pipe Association 8320 Old Courthouse Road, Suite 201 Vienna, VA 22180 (703) 821-1990
AGMA	American Gear Manufacturers Association 1500 King Street, Suite 201 Alexandria, VA 22314 (703) 684-0211
AI	Asphalt Institute Asphalt Institute Building College Park, MD 20740-1802 (301) 277-4258
AISC	American Institute of Steel Construction 400 N. Michigan Avenue Chicago, IL 60611 (312) 670-2400
AISI	American Iron and Steel Institute 1133 15th Street N.W., Suite 300 Washington, DC 20005 (202) 452-7100
AMCA	Air Movement and Control Association 30 W. University Drive Arlington Heights, IL 60004. (312) 394-0150
ANSI	American National Standards Institute 1430 Broadway New York, NY 10018 (212) 354-3300
API	American Petroleum Institute Attn: Publication and Distribution Dept. 1220 L. Street, NW Washington, DC 20005 (202) 682-8000
ASCE	American Society of Civil Engineers 345 East 47th Street New York, NY 10017 1 -800-548-ASCE
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017 (212) 705-7722

ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103 (215) 299-5400
AWPA	American Wood Preservers Association P.O. Box 849 Stevensville, MD 21666 (301)643-4163
AWS	American Welding Society P.O. Box 351040 550 LeJeune Road, N.W. Miami, FL 33126 1-800-443-9353
AWWA	American Water Works Association 6666 W. Quincy Avenue Denver, CO 80235. (303) 794-7711
CLFMI	Chain Link Fence Manufacturers Institute 1776 Mass Avenue N.W., Suite 500 Washington, DC 20036 (202) 659-3537
CRSI	Concrete Reinforcing Steel Institute 933 N. Plum Grove Road Schaumburg, IL 60173 (312) 517-1200
DIPRA	Ductile Iron Pipe Research Association 245 Rivercase Parkway E., Suite 100 Birmingham, AL 35244 (205) 988-9870
FS	Federal Specification General Services Administration Specifications and Consumer Information & Distribution Section (WFSIS) 7 and D Street S.W., Room 654 Washington, DC 20407 (202) 472-2140
IEEE	Institute of Electrical and Electronic Engineers Service Center 345 E. 47th Street New York, NY 10017 (212)705-7900

ISA Instrument Society of America  
67 Alexandria Dr.  
P.O. Box 12277  
Research Triangle Park, NC 27709  
(919) 549-8411

LADOTD Louisiana Department of Transportation & Development  
1201 Capital Access Road  
Baton Rouge, LA 70804  
(504) 379-1200

MIL Department of the Navy  
Naval Publications and Forms Center  
5801 Torbor Avenue  
Philadelphia, PA 19120-5099  
(215) 697-2667

NEC National Electric Code  
National Fire Protection Association  
Batterymarch Park  
Quincy, MA 02269  
(617)770-3000

NEMA National Electrical Manufacturer's Association  
2101 L Street N.W., Suite 300  
Washington, DC 20037  
(202) 457-8400

NSPE National Society of Professional Engineers  
1420 King Street  
Alexandria, VA 22314  
(703) 684-2835

OSCI Office of Standards Code and Information  
National Bureau of Standards  
Gaithersberg, MD 20899  
(301) 975-4029

PCA Portland Cement Association  
5420 Old Orchard Road  
Skokie, IL 60077  
(312)966-6200

PCI Prestressed Concrete Institute  
175 W. Jackson Blvd., Suite 1859  
Chicago, IL 60604  
(312) 786-0300

SMACNA Sheet Metal and Air Conditioning Contractors' National Association  
P.O. Box 70  
Merrifield, VA 22116  
(703) 790-9890

SSPC Steel Structures Painting Council  
4400 5th Avenue  
Pittsburgh, PA 15213  
(412) 268-3327

UL Underwriters' Laboratories, Inc.  
333 Pfingsten Road  
Northbrook, IL 60062  
(312) 272-8800

UNI-BELL Uni-Bell PVC Pipe Association  
2655 Villa Creek Drive, Suite 155  
Dallas, TX 75234  
(214) 243-3902

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

## SECTION 01 50 00

### TEMPORARY FACILITIES AND CONTROLS

#### PART 1 GENERAL

##### 1.1 MOBILIZATION AND PROGRESS OF THE WORK

- A. The Owner will issue a written Notice to Proceed, indicating the date when the Contract Time shall begin. The Work shall progress as required to prevent delaying completion of the Project.
- B. The Contractor shall furnish labor and equipment which will be efficient, appropriate and large enough to secure a satisfactory quality of work and a rate of progress which will ensure the completion of the Work within the time stipulated in the Contract Documents. If at any time such labor and equipment appears to the Owner or Engineer to be inefficient, inappropriate or insufficient for securing the quality of work required or for producing the rate of progress specified, he may order the Contractor to increase the efficiency, change the character or increase the plant equipment at the expense of the Contractor, and the Contractor shall conform to such order. Failure of the Owner or Engineer to give such order shall in no way relieve the Contractor of his obligations to secure the quality of work and rate of progress required.
- C. The Contractor shall be fully responsible for providing all temporary diversion and dewatering pumping and piping, plumbing, lighting, temporary structures, and such other items required to complete all indicated work in these contract specifications and drawings.

##### 1.2 TEMPORARY FACILITIES

- A. Layout of Temporary Facilities:
  - 1. Before starting the Work, the Contractor shall submit to the Engineer for approval, his proposed plan and layout for all temporary offices, sanitary facilities, temporary construction roads, storage buildings, storage yards, temporary water service and distribution, temporary power service and distribution, and temporary telephone service. The Contractor shall make his own arrangements for storage of materials, equipment, & temporary facilities in locations off the construction site.
  - 2. Contractor to provide written certification that the chosen location is approved for his use by the legal owner.
- B. Contractor's Work Area:
  - 1. The Contractor shall limit his operations and storage of equipment and materials to the chosen location and/or as directed by the Engineer/Owner.
  - 2. The Contractor, subcontractors, and their employees are not allowed in any building, structure, or facility unless construction work is being done at that building, structure, or facility.

3. Except as provided herein, no sidewalk, private property, or other area outside the established rights-of-way shall be used for storage of the Contractor's equipment and materials unless prior written approval is obtained from the legal owner.
4. The Contractor shall maintain the area during construction in a manner that will not obstruct operations on street areas. He shall proceed with his work in an orderly manner, maintaining the construction site free of debris, plant overgrowth,, and unnecessary equipment or materials.
5. The Contractor shall protect all trees and bushes in the Contractor's work areas. If any trees or bushes are damaged or destroyed without Owner's written permission, the Contractor shall replace the trees or bushes at the Contractor's expense.
6. At all times, maintain areas covered by the Contract and public properties free from accumulations of waste, debris, and rubbish caused by construction operations.
7. Excavated materials which are not to be stockpiled on site shall be removed from the site in a manner that will cause the least damage to adjacent lawns, grassed areas, trees, gardens, shrubbery, or fences regardless of whether these are on private property or on public rights-of-way.
8. Provide approved containers for collection and disposal of waste materials, debris, and rubbish.

C. Temporary Offices:

1. The Engineer's office is located at 2000 North 7<sup>th</sup> Street, West Monroe, LA. 71291. Instructions received there from the Engineer shall be considered as delivered to the Contractor.

1.3 TEMPORARY UTILITIES

A. Temporary Telephone Service:

1. The Contractor shall furnish separate on-site telephone services for his own use as required during the period of construction of the Contract. The cost of installation and monthly bills for the telephone services shall be borne by the Contractor.

B. Temporary Sanitary Facilities:

1. The Contractor shall provide and maintain toilets and other sanitary facilities for his employees and his subcontractors' employees that will comply with the regulations for the State and local health departments and as directed by the Owner. Chemical toilets, if used, shall be of watertight construction. A minimum of one toilet per 20 employees shall be provided by the Contractor. Chemical toilets shall be maintained by the Contractor until the completion of construction or as directed by the Owner. Upon completion of the work, all sanitary facilities shall be removed and the area restored to its original condition.
2. Contractor shall not use Owner facilities.

C. Water For Construction:

1. The Contractor shall arrange for the necessary temporary water service, including the securing of any necessary permits.

2. The Contractor shall make the necessary arrangement to supply water required for testing the work prior to acceptance of the work, unless otherwise specifically stated in the Specifications for the equipment, system, or facility.
  3. The Contractor shall provide, or otherwise arrange with the utility company for the utilization of, proper backflow prevention devices to protect the public water supply from potential contamination.
  4. The Contractor shall be responsible for any costs associated with water connections.
- D. Electric Power for Construction:
1. The Contractor shall provide a meter and pay for all power costs for his / her use during construction. All temporary systems and their components shall be furnished and installed in conformance with the requirements of the National Electric Code and all local authorities having jurisdiction.
- E. Temporary Light and Power:
1. Provide connections to existing facilities, sized to provide service required for power and lighting as required.
  2. Install circuit and branch wiring, with area distribution boxes located so that power and lighting is available throughout the site by use of construction type power cords.
  3. Provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. For connection of power tools and equipment, provide outlets equipped with ground-fault circuit interrupters, reset button and pilot light.
  4. Provide grounded extension cords. Use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if more than one length is required.
  5. Provide general service incandescent lamps as required for adequate illumination. Provide guard cages or tempered glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- F. Temporary Heat:
1. Provide all heat as may be necessary for thawing out and heating materials and for proper execution, protection and drying out of the Work.
- G. Fire Extinguishers:
1. Provide portable UL-rated Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide portable UL-rated class ABC dry chemical extinguishers or a combination of NFPA recommended Classes for the exposure.
  2. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposure.

#### 1.4 TEMPORARY PARKING SPACE

- A. The Contractor shall park as directed by the Owner and maintain temporary parking facilities.
- B. At the completion of the Work, the Contractor shall remove temporary parking facilities and restore the areas to the original condition as approved by the Owner.

#### 1.5 TEMPORARY CONSTRUCTION

- A. Open Excavations:
  - 1. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons, and damage to property. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen. Bridges provided for access during construction shall be removed when no longer required. The length or size of excavation will be controlled by the particular surrounding conditions, but shall always be confined to the limits prescribed by the Owner. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the Owner may require special construction procedures such as limiting the length of the open trench, prohibiting stacking excavated material in the street, and requiring that the trench shall not remain open overnight.
  - 2. The Contractor shall take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment, or other obstacles which could be dangerous to the public shall be well lighted at night.
- B. Test Pits:
  - 1. Test pits for the purpose of locating underground pipelines or structures in advance of the construction shall be excavated and backfilled by the Contractor at the direction of the Engineer. Test pits shall be backfilled immediately after their purpose has been satisfied and the surface restored and maintained in a manner satisfactory to the Owner.

#### 1.6 TEMPORARY CONTROLS

- A. Maintenance of Flow:
  - 1. The Contractor shall at his own cost, provide for the flow of drains and water courses interrupted during the progress of the Work, and shall immediately haul away and remove all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the Owner well in advance of the interruption of any flow.
- B. Protection of Sewers:
  - 1. Take adequate measures to prevent the impairment of the operation of the existing sewer system. Prevent construction material, pavement, concrete, earth, or other debris from entering a sewer or sewer structure.

2. All sewage flow interfering with construction and requiring diversion shall be diverted to a point acceptable to the Owner.

C. Protection of Waterways:

1. The Contractor shall observe the rules and regulations of the State of Louisiana and agencies of the U.S. Government prohibiting the pollution of any lake, stream, river, or wetland by the dumping of any refuse, rubbish, dredge material, or debris therein.
2. The Contractor is specifically prohibited from disposal of materials into any waters of the State.
3. The Contractor shall be responsible for providing holding ponds or an approved method which will handle, carry through, or divert around his work all flows, including storm flows and flows created by construction activity, so as to prevent excessive silting of waterways or flooding damage to the property.
4. The Contractor shall comply with the procedures outlined in the U.S. Environmental Protection Agency manuals entitled, "Guidelines for Erosion and Sedimentation Control Planning and Implementation" and "Processes, Procedures and Methods to Control Pollution Resulting from All Construction Activity", as well as erosion control measures indicated on the Drawings.
5. Water used during the course of this project shall be disposed of in accordance with the rules and regulations of the State of Louisiana's Department of Environmental Quality, the U.S. EPA and any other local, state or federal agencies governing the protection of groundwater or waterways.

D. Disposal of Excess Excavated and Other Waste Materials:

1. Excess excavated material not required or suitable for backfill and other waste material shall be disposed of off site as approved by the Owner.
2. Unacceptable disposal sites include, but are not limited to, sites within a wetland or critical habitat and sites where disposal will have a detrimental effect on surface water or groundwater quality.
3. The Contractor shall make his own arrangements for disposal subject to submission of proof to the Owner that the owner(s) of the proposed sites(s) has a valid fill permit issued by the appropriate governmental agency and submission of a haul route plan including a map of the proposed route(s).
4. The Contractor shall provide watertight conveyance of any liquid, semi-liquid, or saturated solids which tend to bleed or leak during transport. No liquid loss from transported materials will be permitted whether being delivered to the construction site or being hauled away for disposal. Fluid materials hauled for disposal must be specifically acceptable at the selected disposal site.
5. The Owner may suspend operations of the Contractor, at their discretion, for alleged non-compliance with the State of Louisiana or Environmental Protection Agency regulations.

E. Protection of Air Quality:

1. Air pollution shall be minimized by wetting down bare soils during windy periods or, as requested by Owner, by requiring the use of

Temporary Facilities and Controls

properly operating combustion emission control devices on construction vehicles and equipment used by Contractor and by encouraging the shutdown of motorized equipment not actually in use.

2. Trash burning will not be permitted on the construction site.
3. If temporary heating devices are necessary for protection of the Work, such devices shall be of a type that will not cause pollution of the air.

F. Use of Chemicals:

1. All chemicals used during Project construction or furnished for Project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture or any other applicable regulatory agency. Use of all such chemicals and disposal of residues shall be in conformance with the manufacturers instructions.
2. The Contractor shall maintain Material Safety Data Sheets (MSDS) on site and available for review by the Contractor's employees and utility company employees.

G. Noise and Dust Control:

1. The Contractor shall so conduct all his operations that they will cause the least annoyance to the residents in the vicinity of the work, and shall comply with all applicable local ordinances. Compressors, hoists, and other apparatus shall be equipped with such mechanical devices as may be necessary to minimize noise and dust. Compressors shall be equipped with silencers on intake lines. All gasoline or oil operated equipment shall be equipped with silencers or mufflers on intake and exhaust lines. Storage bins and hoppers shall be lined with material that will deaden the sounds if directed by Owner. The operation of dumping rock and of carrying rock away in trucks shall be so conducted as to cause a minimum of noise and dust. Vehicles carrying rock, concrete, or other material shall be routed over such streets as will cause the least annoyance to the public and shall not be operated on public streets between the hours of 5 p.m. and 8 a.m. or on Sundays or legal holidays unless approved by the Owner.
2. All unpaved streets, roads, detours, or haul roads used in the construction area shall be given an approved dust-preventive treatment or periodically watered to prevent dust. Applicable environmental regulations for dust prevention shall be strictly enforced.
3. Blasting shall not be permitted for any excavations.

H. Nighttime Work:

1. No nighttime work will be allowed on this project.

I. Care and Protection of Property:

1. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the Work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a

condition equal to that existing before the damage was done, or he shall repair the damage in a manner acceptable to the Owner.

2. The Contractor shall not enter or occupy private land outside of easements, except by written permission of the respective landowner.

J. Protection of the Finished Construction:

1. The Contractor shall assume the responsibility for the protection of all finished construction and shall repair and restore any and all damage to finished work to its original or better state.
2. Wheeling of any loads over finished floors, either with or without plank protection, shall not be permitted in anything except rubber tired wheelbarrows, buggies, trucks, or dollies. This applies to all finished floors and to all concrete floors, as well as those covered with composition tile or other applied surfacing, and shall apply to all trades.
3. Where structural concrete is also the finished surface, care shall be taken to avoid marking or damaging those surfaces.

K. Cleanup:

1. During the course of the Work, the Contractor shall keep the site of his operation as clean and neat as is possible. He shall dispose of all residue resulting from the construction work and, at the conclusion of the work, he shall remove and haul away any surplus excavation, broken pavement, concrete, lumber, equipment, temporary structures, and any other refuse remaining from the construction operations, and shall leave the entire site of the work in a neat and orderly condition.
2. Contractor shall remove all debris and waste daily so as not to interfere with plant operations.

1.7 REMOVAL OF TEMPORARY FACILITIES AND UTILITIES

- A. At such time or times any temporary construction facilities and utilities are no longer required for the work, the Contractor shall notify the Owner of his intent and schedule for removal of the temporary facilities and utilities, and obtain the Owner's approval before removing the same. As approved, the Contractor shall disconnect and/or dismantle the temporary facilities and utilities and remove them from the site as his property. Leave the site in such condition as specified, as directed by the Owner, and/or as shown on the Drawings.
- B. In unfinished areas, the condition of the site shall be left in a condition that will restore original drainage, evenly graded, seeded or planted and left with an appearance equal to, or better than, original.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 60 00  
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.
- E. Product substitution procedures.

1.2 PRODUCTS

- A. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise.
- B. This project is subject to the requirements of the Build America, Buy America Act (BABA) requiring that all iron, steel, manufactured products and construction materials used for federally funded infrastructure projects are produced in the United States, unless otherwise exempt or subject to an approved waiver. This requirement is known as the "Buy America Preference (BAP)" and the specific requirements are codified in 2 CFR 184.

1.3 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

- D. For exterior storage of fabricated products, place on sloped supports above ground.
- E. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- F. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- G. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- H. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

#### 1.5 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of one of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit request for substitution for any manufacturer not named in accordance with the following article.

#### 1.6 PRODUCT SUBSTITUTION PROCEDURES

- A. Engineer will consider requests for Substitutions only within 15 days after date of Owner-Contractor Agreement.
- B. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that Contractor:
  - 1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
  - 2. Will provide same warranty for Substitution as for specified product.
  - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
  - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
  - 5. Will reimburse Owner and Engineer for review or redesign services associated with re-approval by authorities having jurisdiction.

- E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals, without separate written request, or when acceptance will require revision to Contract Documents.
- F. Substitution Submittal Procedure:
  - 1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
  - 2. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
  - 3. Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

## SECTION 02 41 00

### DEMOLITION

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Scope of Work:
  - 1. Section includes removal and disposal and/or salvage of fencing, pavement, minor structures, utilities and other miscellaneous existing features affecting the project as identified in the Drawings.
  - 2. The Contractor shall furnish all materials, tools, equipment, devices, appurtenances, facilities and services as required for performing the demolition work.

##### 1.2 QUALITY ASSURANCE

- A. Conform to applicable code for demolition of structures, safety of adjacent structures, dust control, and disposal.
- B. Conform to applicable State of Louisiana code requirements for procedures when hazardous or contaminated materials are discovered.
- C. Obtain required permits from authorities having jurisdiction.

##### 1.3 SITE CONDITIONS

- A. Protection of Persons and Property:
  - 1. Erect and maintain temporary bracing, shoring, lights, barricades, signs and other measures as necessary to protect the public, workers and adjoining property from damage from demolition work.
  - 2. Open depressions and excavations occurring as part of this work shall be barricaded and posted with warning lights when accessible through adjacent property or through public access. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
  - 3. Protect utilities, pavements and facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by demolition operations.
- B. Protection of Utilities:
  - 1. Protect active sewer, water, gas, electric and other utilities as well as drainage and irrigation lines indicated, or when not indicated, found or otherwise made known to the Contractor before or during demolition work. If utility is damaged, immediately notify the utility owner to schedule corrective action.
  - 2. Arrange with and perform work required by Owner, utility companies and municipal departments for discontinuance or interruption of utility services due to demolition work.

- C. Unknown Conditions:
  - 1. The Drawings and related documents may not represent all surface conditions at the site and adjoining areas. The known surface conditions are as indicated, and shall be compared with actual conditions before commencement of work.
  - 2. Existing utilities and drainage systems below grade are located from existing documents and from surface utilities such as manholes, valve boxes, area drains and other surface fixtures.
  - 3. If existing active services encountered are not indicated or otherwise made known to the Contractor and interfere with the permanent facilities under construction, notify the Engineer in writing, requesting instructions on their disposition. Take immediate steps to ensure that the service provide is not interrupted.

## PART 2 PRODUCTS (NOT USED)

## PART 3 EXECUTION

### 3.1 PREPARATION

- A. Call Louisiana One Call at 1-800-272-3020 not less than three working days before performing Work.
  - 1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. Notify affected utility companies before starting work and comply with utility's requirements.
- C. Erect, and maintain temporary barriers and security devices , including warning signs and lights, and similar measures, for protection of the public and existing improvements indicated to remain.

### 3.2 DEMOLITION REQUIREMENTS

- A. Use of explosives is not permitted.
- B. Conduct demolition to minimize interference with adjacent facilities.
- C. Cease operations immediately when adjacent facilities appear to be in danger. Notify Engineer and do not resume operations until directed.
- D. Conduct operations with minimum interference to public or private accesses to occupied adjacent facilities.

### 3.3 DEMOLITION

- A. Perform demolition of miscellaneous items as indicated in the Drawings.

- B. Empty underground wetwells or tanks located within demolition area.
- C. Remove underground wetwell, manholes, tanks, components, and piping from site as indicated in the drawings.
- D. Remove materials to be re-installed or retained in manner to prevent damage.
- E. Rough grade and compact areas affected by demolition to maintain site grades and contours.
- F. Continuously clean-up and remove demolished materials from site. Do not allow materials to accumulate on site.
- G. Do not burn or bury materials on site. Leave site in clean condition.

END OF SECTION

## SECTION 31 11 00

### CLEARING AND GRUBBING

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Scope of Work.
  - 1. Work to be performed under this section includes clearing and grubbing of incidental paving and curbs, debris, grass, trees, roots and other plant life in the preparation of the site for proposed improvements.
  
- B. Section Includes:
  - 1. Removing surface debris.
  - 2. Removing designated trees, shrubs, and other plant life.
  - 3. Tree trimming and removal of tree branches.
  - 4. Removal of miscellaneous structures.
  - 5. Topsoil excavation.
  - 6. Disposal of removed materials.
  - 7. Excavating topsoil.
  
- C. Related Sections:
  - 1. Section 01 35 43 – Environmental Protection Requirements.
  - 2. Section 01 50 00 – Temporary Facilities and Controls.
  - 3. Section 02 41 00 – Demolition.

##### 1.2 QUALITY ASSURANCE

- A. Conform to applicable regulatory codes for environmental requirements, disposal of debris and burning debris on site if permitted.

#### PART 2 PRODUCTS (NOT USED)

#### PART 3 EXECUTION

##### 3.1 PREPARATION

- A. Call Louisiana One Call at 1-800-272-3020 not less than three working days before performing Work to schedule location of existing underground utilities.
  - 1. Request underground utilities to be located and marked within and surrounding construction areas.

### 3.2 PROTECTION

- A. Locate, identify, and protect existing utilities indicated to remain from damage. Notify the Engineer immediately of damage to or an encounter with an unknown existing utility line. The Contractor shall be responsible for the repairs of damage to existing utility lines that are indicated or made known to the Contractor prior to start of construction operations.
- B. Keep roads and walks free of dirt and debris at all times during construction.
- C. Protect trees, plant growth, and features designated to remain as final landscaping.
- D. Trees and plants indicated in the Contract Documents to remain and to be preserved shall be protected from damage by constructing suitable barriers or fences at, or near, the driplines of the trees and plants. Vehicles, equipment, materials and debris shall not be placed or parked in these areas or under trees to remain. Maintain protected trees and plants in a healthy, growing condition during the construction period.
- E. Protect bench marks, survey control points, and existing structures from damage or displacement.

### 3.3 CLEARING

- A. Clearing shall consist of felling, trimming and cutting of trees into sections and the satisfactory disposal of the trees and other vegetation designated for removal, including downed timber, snags, brush and rubbish occurring within the areas to be cleared.
- B. Trees, stumps, roots, brush and other vegetation in areas to be cleared shall be cut off flush with or below the original ground surface, except such trees and vegetation as may be indicated or directed to be left standing.
- C. Trees designated to remain standing within the cleared areas shall be trimmed of dead branches 1-1/2 in. or more in diameter and shall be trimmed of all branches to the heights indicated or directed. Limbs and branches to be trimmed shall be neatly cut close to the bole of the tree or main branches. Cuts of more than 1-1/2 in. diameter shall be painted with an approved tree-wound paint.
- D. Apply herbicide in accordance with the manufacturer's label to the top surface of all stumps designated not to be removed.

### 3.4 TREE REMOVAL

- A. Where indicated or directed, trees and stumps that are designated as trees shall be removed from areas outside those areas designated for clearing and grubbing. This work shall include felling of such trees and the removal of their stumps and roots as specified for grubbing herein.

### 3.5 PRUNING

- A. Prune and/or trim trees designated to be left standing within the cleared areas of dead branches 1-1/2 in. or more in diameter. Remove tree branches overhanging trackways, roadways and other designated areas of the site to within 20 feet of finish grade. Neatly cut limbs and branches to be trimmed close to the bole of the tree or main branches. Paint cuts more than 1-1/2 inches in diameter with an approved tree wound paint.

### 3.6 GRUBBING

- A. Grubbing shall consist of the removal and disposal of stumps, buried logs, roots and root balls from the designated grubbing areas.
- B. Material to be grubbed, together with logs and other organic debris not suitable for foundation purposes, shall be removed to a depth of not less than 18 inches below the original surface level of the ground in areas indicated to be grubbed and in areas indicated as construction areas under this contract, such as building areas and areas to be paved.
- C. Depressions made by grubbing shall be filled with suitable material and compacted to make the surface conform with the original adjacent surface of the ground.
- D. Do not begin earthwork operations in areas where grubbing has not been completed except that stumps and large roots may be removed concurrently with excavation.

### 3.7 REMOVAL

- A. Remove extracted plant life, debris and rock from site.
- B. Partially remove paving, curbs, and other miscellaneous structures as indicated on Drawings. Neatly saw cut edges at right angle to surface prior to removal.
- C. Remove abandoned utilities as designated in the Drawings. Indicate removal termination point for underground utilities on Record Documents.
- D. Remove walls and masonry construction as directed to a minimum depth of 2 feet below existing ground level in areas where such items do not interfere with new construction.
- E. Continuously clean-up and remove waste materials from site. Remove trash and debris from the site at frequent intervals so that its presence will not delay the progress of the Work or cause hazardous conditions for workers and the public. Do not allow materials to accumulate on site.
- F. Do not burn or bury materials on site without permission of the Engineer and Owner. Leave site in clean condition.
- G. Should burning be accepted as a disposal method, debris shall be burned only at specified locations and in a manner to prevent damage to existing structures, appurtenances, construction in progress, trees and other vegetation. The Contractor shall be responsible

for compliance with all Federal and State laws and regulations and with reasonable practice relative to the building of fires. Burning or other disposal of refuse and debris and any accidental loss or damage attendant thereto shall be the Contractor's responsibility.

- H. Dispose of removed materials, waste and debris in a safe, acceptable manner, in accordance with applicable laws and ordinances as prescribed by authorities having jurisdiction.

### 3.8 TOPSOIL EXCAVATION

- A. Excavate topsoil from areas to be further excavated, relandscaped, cleared or regraded without mixing with foreign materials for use in finish grading.
- B. Do not excavate wet topsoil.
- C. Stockpile topsoil in area designated on site to depth not exceeding 8feet and protect from erosion. Stockpile material until disposal or reuse.
- D. Remove excess topsoil not intended for reuse, from site.

END OF SECTION

## SECTION 31 23 00

### EXCAVATION AND FILL

#### PART 1 GENERAL

##### 1.1 SUMMARY

###### A. Scope of Work:

1. The Contractor shall furnish all labor, materials, equipment and incidentals necessary to perform all excavation, backfill, grading and wall protection required to complete the work shown on the Drawings and specified herein. The Work shall include, but not necessarily be limited to excavation, filling and grading to attain subgrades and grades indicated on the Drawings including all backfilling, grading, disposal of surplus or unsuitable materials and all related work such as sheeting, bracing and water handling. All sheeting, bracing and water handling, whether for safety of workmen or to protect structures, will be performed as part of required work with no additional cost to the Owner.

###### B. Related Sections:

1. Section 31 23 17 – Trenching Excavation and Backfill.

##### 1.2 REFERENCES

###### A. ASTM International:

1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>)).
2. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft<sup>3</sup> (2,700 kN-m/m<sup>3</sup>)).
3. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
4. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

##### 1.3 QUALITY ASSURANCE

- A. The Contractor shall perform Work in compliance with applicable requirement codes and standards of governing authorities having jurisdiction.
- B. The Owner will engage and pay for soil testing and inspection services for quality control testing during trenching and backfill operations.

##### 1.4 JOB CONDITIONS

- A. The Contractor shall examine the site and review the available test borings or undertake his own soil borings prior to submitting his bid, taking into consideration all conditions that may affect his work.

- B. Existing Utilities: Locate existing underground utilities in the areas of the work. If utilities are to remain in place, provide adequate means of protection during earthwork operations.
1. The locations of all pipes, ducts, or underground structures is not warranted to be exact, nor is it warranted that all underground pipes, ducts, or structures or shown. The Contractor shall contact Louisiana One-Call or the appropriate utility company for location of their underground service a minimum of 48 hours prior to beginning construction in each area. It is the Contractor's responsibility to verify and locate all utilities in the field at no additional cost to the Owner.
  2. Cooperate with the Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to the satisfaction of the utility owner or make the site available to the utility owner for his work crews to make the necessary repairs at no additional cost to the Owner.
  3. Examine the areas and conditions under which excavating, filling and grading are to be performed. Do not proceed with the work until unsatisfactory conditions have been corrected.
  4. It is determined that existing utilities are to be relocated by the owner of those utilities, the Contractor shall be responsible for that coordination. The Contractor shall notify the utility owner in sufficient time as to avoid any delays to the Contractor's schedule. The Contractor is solely responsible for this coordination, and no delay or extension of time will be allowed as a result of or the cause of inaction by the Contractor or utility owner.

## 1.5 PROTECTION

- A. Slope sides of excavations to comply with OSHA regulations and any applicable local codes and ordinances. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.
- B. Dewatering, Drainage and Flotation:
1. The contractor shall furnish all materials and equipment and perform all work required to install and maintain the drainage system he proposes for handling groundwater and surface water encountered during construction of structures, pipelines and compacted fills.
  2. The Contractor shall construct and place in-the-dry all pipelines, concrete work, compacted fill and bedding. In addition, the Contractor shall make the final 24-inches of excavation for this work in-the-dry and not until the water level is a minimum of twelve inches below proposed bottom of excavation.
  3. The Contractor shall, at all times during construction, provide and maintain proper equipment and facilities to promptly remove and dispose of all water entering excavations and keep such excavations dry so as to obtain a satisfactory undisturbed subgrade foundation condition until the fill, structure, utility or drainage pipe to be built thereon have been completed to such extent that they will not be floated or otherwise damaged by allowing water levels to return to natural elevations.

4. Dewatering shall at all times be conducted in such a manner as to preserve the natural undisturbed bearing capacity of the subgrade soils at proposed bottom of excavations.
- C. Protection of Persons and Property:
1. Barricade open excavations occurring as part of this work and post with warning lights in accordance with local requirements. Operate warning lights as recommended by authorities having jurisdiction.
  2. Protect structures, utilities, sidewalks, pavements and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.

## PART 2 PRODUCTS

### 2.1 SOIL MATERIALS

- A. Definitions:
1. Select Fill: Select fill shall conform to Louisiana DOTD designation TR 423 Classes A-1-a, A-1-b, A-2-4, A-2-6, A-3, A-4 or A-6 having a maximum liquid limit of 35 and a maximum plasticity index of 15. This material is referred to as “selected soils” in the Louisiana DOTD Specifications. Based on an approved geotechnical engineering report, particularly A-6 soils, a higher elasticity index of up to 25 will be considered. Select fill can be used for backfill in over-excavated areas, for backfill from 12 inches above the top of the utility or pipe to the top of the subgrade and as structural fill/backfill.
  2. Bedding Materials: Bedding materials shall conform to Louisiana DOTD Specifications Section 1003.08; however, shell will not be allowed as bedding material. These materials shall be used for placement under the utilities or drainage pipes in the trench and as a bedding material as defined on the Drawings and shall have a minimum thickness of 6 inches. These materials shall also be used for backfill in over-excavated trench areas and may be used for backfill from above the top of the utility or pipe to the top of subgrade and as structural fill/backfill.
  3. Granular Fill: Granular fill shall conform to Louisiana DOTD Specifications Section 1003.07. These materials shall be used for backfilling around pipes from the bedding material up to at least 12 inches above the top of the pipes or to subgrade and in confined areas around structures. These materials may also be used as structural fill/backfill.
  4. Usable Excavated Soils: Usable excavated soils, referred to as “usable soils” in Louisiana DOTD Specifications, shall conform to Classes A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-3, A-4, A-5, A-6, A-7-5 and/or A-7-6 except for soils in Classes A-5, A-6, A-7-5 and A-7-6 which may be considered unusable by the Engineer. Any soil with a plasticity index exceeding 60 will not be accepted in accordance with paragraph 203.06 in the Louisiana DOTD Specifications. Usable excavated soils can be used for backfill from 12 inches above the top of the pipe up to surface grades in unimproved areas only.
- B. General

1. Materials used as fill and backfill shall be as described above. The Contractor shall notify the Engineer of the source of each material and shall furnish to the Engineer for testing and approval a representative sample of each material weighing approximately 20 pounds. Sample shall be furnished at least ten (10) calendar days prior to the date of anticipated use of such material.
  2. Additional materials shall be furnished as required from off-site sources and hauled to the site.
- C. Structural Fill
1. Structural fill shall be used below spread footing foundations, slab-on-grade floors and other structures and as backfill within three feet of the below grade portions of structures, except that, when stabilization layers of courses are shown on the drawings, stabilization material shall be placed and compacted over the structural fill material in accordance with the requirements for structural fill.
  2. Material falling within the above specification which is encountered during the excavation may be stored in segregated stockpiles for reuse. All material which, in the opinion of the Engineer, is not suitable for reuse shall be spoiled as specified herein for disposal of unsuitable materials.

## PART 3 EXECUTION

### 3.1 LINES AND GRADES

- A. Perform earthwork operations to lines and grades indicated on Drawings.
  1. Owner reserves right to make changes in lines and grades when changes are required for Project conditions.
- B. Use laser-beam instrument with qualified operator to establish lines and grades.

### 3.2 PREPARATION

- A. Call Louisiana One Call at 1-800-272-3020 not less than three working days before performing Work.
  1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. The Contractor shall examine the site and review available test borings or undertake his own soil borings prior to submitting his bid, taking into consideration all conditions that may affect his work.
- C. Identify required lines, levels, contours, and datum locations.
- D. Protect plant life, lawns, and other features remaining as portion of final landscaping.
- E. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

- F. Maintain and protect above and below grade utilities indicated to remain.
- G. Establish temporary traffic control when trenching is performed in public right-of-way. Relocate controls as required during progress of Work.

### 3.3 EXCAVATION

- A. Excavate existing material as required to establish required grade elevations and dimensions as indicated on drawings.
- B. Slope sides of excavations to comply with OSHA regulations and any applicable local codes and ordinances. When side walls can not be sloped, provide sheeting and shoring to protect excavation as specified in this section. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.
- C. When subsurface materials at bottom of excavations are loose or soft, excavate to greater depth as directed by Engineer until suitable material is encountered.
- D. Cut out soft areas of subgrade not capable of compaction in place. Backfill with select fill and compact to density equal to or greater than requirements for subsequent backfill material.
- E. Unsuitable and surplus excavated materials, unless otherwise specified, shall become the property of the Contractor to be removed from the site and disposed of by the Contractor off the project site in an approved manner.

### 3.4 SHEETING AND SHORING

- A. Sheet, shore, and brace excavations to prevent danger to persons, structures and adjacent properties and to prevent caving, erosion, and loss of surrounding subsoil.
- B. Support trenches more than 5 feet deep excavated through unstable, loose, or soft material. Provide sheeting, shoring, bracing, or other protection to maintain stability of excavation.
- C. Design sheeting and shoring to be removed at completion of excavation work.
- D. Repair damage caused by failure of the sheeting, shoring, or bracing and for settlement of filled excavations or adjacent soil.
- E. Repair damage to new and existing Work from settlement, water or earth pressure or other causes resulting from inadequate sheeting, shoring, or bracing.

### 3.5 FILL PLACEMENT

- A. Material placed in fill areas shall be deposited within the lines and to the grades shown on the drawings or as directed by the Engineer, making due allowance for settlement of the material. Fill shall be placed only on properly prepared surfaces which have been

inspected and approved by the Engineer. If sufficient fill material is not available from on site excavations, the Contractor shall provide borrows as required to establish final grades.

- B. Remove vegetation, debris, unsatisfactory soil materials, obstructions and deleterious materials from ground surface prior to placement of fills. Plow strip or break-up sloped surfaces steeper than 1 vertical to 4 horizontal so that fill material will bond with existing surface.
- C. Fill shall be brought up in substantially level lifts throughout the site, starting in the deepest portion of the fill. Place fill material in continuous layers not exceeding 8 inches in thickness and compact to 95% of the maximum density as determined by ASTM D698. The entire surface of the work shall be maintained free from ruts, and in such condition that construction equipment can readily travel over any section.
- D. Fill shall be dumped and spread in layers by a bulldozer or other approved method. During the process of dumping and spreading, all roots, debris, and other objectionable material shall be removed from the fill areas, and the Contractor shall assign a sufficient number of men to this work to insure satisfactory compliance with these requirements.
- E. Systematically place fill to allow maximum time for natural settlement. Do not place fill over porous, wet, frozen, or spongy subgrade surfaces.
- F. Maintain optimum moisture content of fill materials to attain required compaction density.
- G. If the compacted surface of any layer of material is determined to be too smooth to bond properly with the succeeding layer, it shall be loosened by harrowing or by another approved method before the succeeding layer is placed.
- H. All fill materials shall be placed and compacted "in-the-dry". The Contractor shall dewater excavated areas and is required to perform the work in such a manner as to preserve the undisturbed state of natural inorganic soils.

### 3.6 COMPACTION

#### A. GENERAL

1. Contractor shall control soil compaction during construction and obtain the minimum required percentage of the total maximum dry densities as specified herein and as shown on the drawings. The Contractor shall maintain the fill for a period of one (1) year after final acceptance and shall restore any fill that fails and repair any pavement or other structures which may be damaged as a result of fill failure. It shall be the Contractor's responsibility to notify the Engineer in writing that compaction tests can be performed.
2. The frequency of density tests will be a minimum of one (1) test per lift per 1,000 linear feet under pavements, within street right-of-way and under building slabs and one (1) test per lift per 2,500 linear feet for open areas. If the density tests indicate that the work does not meet specified density requirements, the Engineer may require additional density tests to determine the extent of the deficient Work. The Contractor will not be allowed an extension of contract time as a result of any density testing.

3. It is the Contractor's responsibility to provide equipment and labor as needed to achieve the required compaction as specified herein. Should the rates of compaction fall below the values specified herein, the Engineer has the right to instruct the Contractor to alter his work to assure that the required fill quality is consistently achieved. Any decision by the Engineer to forgo such instructions shall in no way relieve the Contractor of his responsibility to provide fill of the specified quality.
4. Compaction as required pertains to undisturbed earth as well as fill material.

**B. MOISTURE CONTROL**

1. Condition subgrade or layer material as required to correct moisture content.
2. When the material is too dry to be compacted efficiently, the Contractor shall uniformly apply water to surface of layer of soil material and thoroughly mix the soil to achieve a moisture content near the optimum level to facilitate compaction.
3. Remove and replace or scarify and air dry soil material that is too wet to permit compaction to specified density.
4. Soil material that has been removed because it is too wet to permit compaction but is otherwise satisfactory may be stockpiled or spread and allowed to dry. The Contractor may assist the drying process by disking, harrowing or pulverizing to reduce the moisture content to a satisfactory level.

- C.** Areas adjacent to structures and other confined areas inaccessible to roller type equipment shall be compacted with approved hand guided mechanical compaction equipment. Compaction of fill by such means shall be to the same degree of compaction as obtained by roller type equipment and the Engineer may make the necessary tests to determine the amount of compactive effort necessary to obtain compaction. Unless such test indicated that modifications may be made, the fill compacted by mechanical compactors shall be placed in 6-inch layers and thoroughly tamped over the entire surface. Compaction equipment is subject to approval by the Engineer.

**3.7 FILLING AROUND STRUCTURES**

- A.** Fill shall be placed in layers having a maximum thickness of eight inches in loose state and shall be compacted sufficiently to prevent settlement. If compaction is by rolling or ramming, material shall be wet down as required. Where material can be suitably compacted by flooding, the Contractor may use this method.
- B.** Filling shall be carried up evenly on all walls of an individual structure simultaneously. A longitudinal variation of two feet and a horizontal variation of three inches in elevation will be the maximum allowable. No fill shall be allowed against the walls until the walls and their supporting slabs, if applicable, have attained sufficient strength. Fill shall be subjected to approval of the Engineer.
- C.** In locations where pipes pass through structure walls, the Contractor shall take the following precautions to consolidate the filling up to an elevation of at least one foot above the bottom of the pipes:
1. Place fill in such areas for a distance of not less than three feet either side of the centerline of the pipe in level layers not exceeding six inches in thickness.

2. Wet each layer to the extent directed by the Engineer and thoroughly compact each layer with a power tamper to the satisfaction of the Engineer.
- D. The final finished surface of the filled areas shall be graded to smooth true lines, strictly conforming to the grades indicated on the drawings, and no soft spots or uncompacted areas will be allowed in the work.
  - E. Temporary bracing shall be provided as required during construction of all structures to protect partially completed structures against all construction loads, hydraulic pressure, and earth pressure. The bracing shall be capable of resisting all loads applied to the walls as a result of the fill operation.

### 3.8 GRADING

- A. Uniformly grade areas within limits of grading under this Section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are shown or between such points and existing grades as are required or shown on the Drawings.
- B. Grading Outside Building Lines: Grad areas adjacent to building lines, as shown on the Drawings, to drain away from structures and to prevent ponding. Finish surface free from irregular surface changes and as follows:
  1. Lawn or Unpaved Areas: Finish areas to within not more than 0.10 feet above or below the required elevation.
  2. Walks: Shape surface of areas under walks to line, grad and cross-section, with finish surface not more than 0.10 feet above or below the required subgrade.
- C. Grading Surface of Fill Under Building Slabs: Grad smooth and even, free of voids, compacted as specified, and to required elevation. Provide final grades within a tolerance of ½ inch when tested with a 10 foot straightedge.
- D. Compaction: After grading, compact surfaces to the depth and percentage of maximum dry density for each area classification.
- E. Grading shall be performed at such places as are indicated on the Drawings, to the lines, grades and elevations shown or as directed by the Engineer and shall be made in such a manner that the requirements for formation of embankments can be followed. All unacceptable material encountered, of whatever nature within the limits indicated, shall be removed and disposed of in accordance with this Section. During the process of excavation, the grade shall be maintained in such condition that it will be well drained at all times. When directed, temporary drains and drainage ditches shall be installed to intercept or divert surface water which may affect the prosecution or condition of the work.
- F. If at the time of excavation it is not possible to place any material in its proper section of the permanent structure, it shall be stockpiled in approved areas for later use. No extras will be considered for the stockpiling or double handling of excavated material.

- G. The right is reserved to make adjustments or revisions in lines or grades if found necessary as the work progresses, due to discrepancies on the Drawings or in order to obtain satisfactory construction.
- H. All fill slopes shall be uniformly dressed to the slope, cross-section and alignment shown on the Drawings, or as directed by the Engineer.
- I. In cuts, all loose material on the back slopes shall be barred loose or otherwise removed to the line or finished grade of the slope. All cut and fill slopes shall be uniformly dressed to the slope, cross-section and alignment shown on the Drawings or as directed by the Engineer.
- J. No grading is to be done in areas where there are existing pipelines that may be uncovered or damaged until such lines, which must be maintained, are relocated, or where lines are to be abandoned, all required valves are closed and drains plugged at manholes.

### 3.9 DISPOSAL OF UNSUITABLE AND SURPLUS MATERIAL

- A. Unsuitable and surplus excavated materials, unless otherwise specified herein, and pavement shall become the property of the Contractor to be removed and disposed of by the Contractor off the project site in an approved manner.
- B. Usable, excavated material may be used for fill or backfill if it meets the specifications and is approved by the Engineer. Excavated material so approved may be neatly stockpiled at the site where designated by the Engineer provided there is an area available that will not interfere with the Engineer's access nor inconvenience traffic or adjoining property owners.
- C. Surplus suitable excavated material shall be used to fill depressions as the Engineer may direct.

### 3.10 PROTECTION OF FINISHED WORK

- A. Protect newly graded areas from traffic and erosion. Keep areas free of trash and debris and repair and re-establish grades in settled, eroded and rutted areas to specified tolerances.
- B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape and compact to required density prior to further construction.

END OF SECTION

## SECTION 31 23 17

### TRENCHING EXCAVATION & BACKFILL

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Scope of Work: The Contractor shall furnish all labor, materials, equipment and incidentals necessary to perform all excavation, backfill, grading and wall protection required to complete the utility or drainage installation shown on the Drawings and specified herein. The Work shall include, but not necessarily be limited to excavation, filling and grading under and around precast and cast in place structures to attain subgrades and grades indicated on the Drawings; trenching operations to install utility or drainage piping, manholes, catch basins and other structures including all backfilling, grading, disposal of surplus or unsuitable materials and all related work such as sheeting, bracing and water handling. All sheeting, bracing and water handling, whether for safety of workmen or to protect structures, will be performed as part of required work with no additional cost to the Owner.
- B. Section Includes:
  - 1. Excavating trenches for utilities and drainage piping including manholes, catch basins and other structures.
  - 2. Compacted fill from top of utility bedding to finish grade.
  - 3. Backfilling and compaction.
- C. Related Sections:
  - 1. Section 31 23 00 – Excavation and Fill.

##### 1.2 MEASUREMENT AND PAYMENT

- A. All cost associated with trenching and backfilling for utilities shall be included in bid price for utility line or drainage piping for which trenching and backfilling is being performed.

##### 1.3 REFERENCES

- A. ASTM International:
  - 1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>)).
  - 2. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft<sup>3</sup> (2,700 kN-m/m<sup>3</sup>)).
  - 3. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
  - 4. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

#### 1.4 DEFINITIONS

- A. Utility: Any buried pipe, duct, conduit, or cable.

#### 1.5 SUBMITTALS

- A. Excavation Protection Plan: Describe sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property; include structural calculations to support plan.
- B. Product Data: Submit data for any required geotextile fabric indicating fabric and construction.
- C. Samples: Submit, in air-tight containers, 20 lb sample of each type of proposed fill to testing laboratory for approval. Samples shall be furnished a minimum of ten (10) calendar days prior to the date of anticipated use of fill.
- D. Materials Source: Submit name of imported fill materials suppliers and location of borrow pit.

#### 1.6 QUALITY ASSURANCE

- A. The Contractor shall perform Work in compliance with applicable requirement codes and standards of governing authorities having jurisdiction.
- B. The Owner will engage and pay for soil testing and inspection services for quality control testing during trenching and backfill operations.

#### 1.7 COORDINATION

- A. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities.
- B. Cooperate with Owner and utility companies in keeping existing services and facilities in operation. Repair damaged utilities to satisfaction of utility owner or make the site available to the utility owner for his work crews to make the necessary repairs at no additional cost to the Owner.

### PART 2 PRODUCTS

#### 2.1 FILL MATERIALS

- A. Select Fill: Select fill shall conform to Louisiana DOTD designation TR 423 Classes A-1-a, A-1-b, A-2-4, A-2-6, A-3, A-4 or A-6 having a maximum liquid limit of 35 and a maximum plasticity index of 15. This material is referred to as "selected soils" in the Louisiana DOTD Specifications. Based on an approved geotechnical engineering report, particularly A-6 soils, a higher elasticity index of up to 25 will be considered. Select fill

can be used for backfill in over-excavated areas, for backfill from 12 inches above the top of the utility or pipe to the top of the subgrade and as structural fill/backfill.

- B. Bedding Materials: Bedding materials shall conform to Louisiana DOTD Specifications Section 1003.08; however, shell will not be allowed as bedding material. These materials shall be used for placement under the utilities or drainage pipes in the trench and as a bedding material as defined on the Drawings and shall have a minimum thickness of 6 inches. These materials shall also be used for backfill in over-excavated trench areas and may be used for backfill from above the top of the utility or pipe to the top of subgrade and as structural fill/backfill.
- C. Granular Fill: Granular fill shall conform to Louisiana DOTD Specifications Section 1003.07. These materials shall be used for backfilling around pipes from the bedding material up to at least 12 inches above the top of the pipes or to subgrade and in confined areas around structures. These materials may also be used as structural fill/backfill.
- D. Usable Excavated Soils: Usable excavated soils, referred to as “usable soils” in Louisiana DOTD Specifications, shall conform to Classes A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-3, A-4, A-5, A-6, A-7-5 and/or A-7-6 except for soils in Classes A-5, A-6, A-7-5 and A-7-6 which may be considered unusable by the Engineer. Any soil with a plasticity index exceeding 60 will not be accepted in accordance with paragraph 203.06 in the Louisiana DOTD Specifications. Usable excavated soils can be used for backfill from 12 inches above the top of the pipe up to surface grades in unimproved areas only.

## PART 3 EXECUTION

### 3.1 LINES AND GRADES

- A. Lay pipes to lines and grades indicated on Drawings.
  - 1. Owner reserves right to make changes in lines, grades, and depths of utilities when changes are required for Project conditions.
- B. Use laser-beam instrument with qualified operator to establish lines and grades.

### 3.2 PREPARATION

- A. Call Louisiana One Call at 1-800-272-3020 not less than three working days before performing Work.
  - 1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. The Contractor shall examine the site and review available test borings or undertake his own soil borings prior to submitting his bid, taking into consideration all conditions that may affect his work.
- C. Identify required lines, levels, contours, and datum locations.
- D. Protect plant life, lawns, and other features remaining as portion of final landscaping.

- E. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- F. Maintain and protect above and below grade utilities indicated to remain.
- G. Establish temporary traffic control when trenching is performed in public right-of-way. Relocate controls as required during progress of Work.

### 3.3 TRENCHING

- A. Excavate subsoil as required for utility or drainage pipe installation.
- B. Do not advance open trench more than 200 feet ahead of installed pipe.
- C. Cut trenches sufficiently wide to enable installation and allow inspection. Remove water or materials that interfere with Work.
- D. Excavate bottom of trenches maximum 2 feet wider than outside diameter of pipe.
- E. Excavate trenches to depth indicated on Drawings. Provide uniform and continuous bearing and support for bedding material and pipe or other utility.
- F. Slope sides of excavations to comply with OSHA regulations and any applicable local codes and ordinances. When Project conditions permit, slope side walls of excavation starting 2 feet above top of pipe. When side walls can not be sloped, provide sheeting and shoring to protect excavation as specified in this section. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.
- G. When subsurface materials at bottom of trench are loose or soft, excavate to greater depth as directed by Engineer until suitable material is encountered.
- H. Cut out soft areas of subgrade not capable of compaction in place. Backfill with select fill and compact to density equal to or greater than requirements for subsequent backfill material.
- I. Unsuitable and surplus excavated materials, unless otherwise specified, shall become the property of the Contractor to be removed from the site and disposed of by the Contractor off the project site.

### 3.4 SHEETING AND SHORING

- A. Sheet, shore, and brace excavations to prevent danger to persons, structures and adjacent properties and to prevent caving, erosion, and loss of surrounding subsoil.
- B. Support trenches more than 5 feet deep excavated through unstable, loose, or soft material. Provide sheeting, shoring, bracing, or other protection to maintain stability of excavation.
- C. Design sheeting and shoring to be removed at completion of excavation work.

- D. Repair damage caused by failure of the sheeting, shoring, or bracing and for settlement of filled excavations or adjacent soil.
- E. Repair damage to new and existing Work from settlement, water or earth pressure or other causes resulting from inadequate sheeting, shoring, or bracing.

### 3.5 DEWATERING, DRAINAGE AND FLOTATION

- A. The contractor shall furnish all materials and equipment and perform all work required to install and maintain the drainage system he proposes for handling groundwater and surface water encountered during construction.
- B. The Contractor shall construct and place in-the-dry all utilities, drainage piping, structures and bedding. In addition, the Contractor shall make the final 24-inches of excavation for this work in-the-dry and not until the water level is a minimum of twelve inches below proposed bottom of excavation.
- C. The Contractor shall, at all times during construction, provide and maintain proper equipment and facilities to promptly remove and dispose of all water entering excavations and keep such excavations dry so as to obtain a satisfactory undisturbed subgrade foundation condition until the fill, structure, utility or drainage pipe to be built thereon have been completed to such extent that they will not be floated or otherwise damaged by allowing water levels to return to natural elevations.

### 3.6 BACKFILLING

- A. Backfill trenches to contours and elevations with unfrozen fill materials of the types specified herein.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
- C. Place fill material in continuous layers not exceeding 8 inches in thickness and compact to 95% of the maximum density as determined by ASTM D698.
- D. Employ placement method that does not disturb or damage utilities or drainage piping in trench.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Protect all open trenches to prevent danger to the public.

### 3.7 TOLERANCES

- A. Top Surface of Backfilling Under Paved Areas: Plus or minus 0.05 feet from required finish grades.

- B. Top Surface of General Backfilling: Plus or minus 0.10 feet from adjacent natural grades or required finish grades.

### 3.8 FIELD QUALITY CONTROL

- A. Perform laboratory material tests in accordance with ASTM D698.
- B. Perform in place compaction tests in accordance with the following:
  - 1. Density Tests: ASTM D2922.
  - 2. Moisture Tests: ASTM D3017.
- C. When tests indicate Work does not meet specified requirements, remove Work, replace, compact, and retest at no additional cost to the Owner.
- D. The frequency for density tests will be a minimum of one (1) test per lift per 1,000 linear feet under pavements, within street and highway rights-of-way and under building slabs and one (1) randomly selected test per 2,500 linear feet for open areas (testing of each lift in open areas is not required). If the density tests indicated that the work does not meet specified density requirements, the Engineer may require additional density tests to determine the extend of the deficient Work. The Contractor will not be allowed an extension of contract time as a result of any density testing.

### 3.9 PROTECTION OF FINISHED WORK

- A. Protect newly graded areas from traffic and erosion. Keep areas free of trash and debris and repair and re-establish grades in settled, eroded and rutted areas to specified tolerances.
- B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape and compact to required density prior to further construction.

END OF SECTION

## SECTION 31 25 13

### TEMPORARY EROSION AND SEDIMENTATION CONTROL

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. The work specified in this Section consists of designing, providing, maintaining and removing temporary erosion and sedimentation controls as necessary.
- B. Temporary erosion controls include, but are not limited to, grassing, mulching, setting, watering, and reseeded onsite surfaces and spoil and borrow area surfaces and providing interceptor ditches at ends of berms and at those locations which will ensure that erosion during construction will be either eliminated or maintained within acceptable limits as established by the Owner.
- C. Temporary sedimentation controls include, but are not limited to, silt dams, traps, barriers, and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the Owner.
- D. Contractor is responsible for providing effective temporary erosion and sediment control measures during construction or until final controls become effective.
- E. It shall be the responsibility of the Contractor to attain all permits and associated documentation necessary to provide a Stormwater Pollution Prevention Plan for the construction site as required by the Louisiana Department of Environmental Quality.

##### 1.2 REFERENCE DOCUMENTS

- A. Applicable State of Louisiana or City Building Code and Standard Building Code.

#### PART 2 PRODUCTS

##### 2.1 EROSION CONTROL

- A. Netting — fabricated of material acceptable to the Owner.
- B. Straw mulch shall be utilized on all newly graded areas to protect areas against washouts and erosion. Straw mulch shall be comprised of threshed straw of oats, wheat, barley, or rye that is free from noxious weeds, mold or other objectionable material. The straw mulch shall contain at least 50 percent by weight of material to be 10-in, or longer. Straw shall be in an air-dry condition and suitable for placement with blower equipment.

## 2.2 SEDIMENTATION CONTROL

- A. Bales - clean, seed-free cereal-hay type.
- B. Netting - fabricated of material acceptable to the Owner.
- C. Filter stone - crushed stone conforming to State D.O.T.D. Specifications.
- D. Concrete block - hollow, non-load-bearing type.
- E. Concrete - exterior grade not less than one inch thick.

## 2.3 SILT FENCE

- A. Steel posts shall be a minimum of 5-ft in. length, 2-1/2-in, by 2-1/2-in, by 1/4in. angle post with self-fastening tabs and a 5-in, by 4in. (nominal) steel anchor plate at bottom.
- B. Welded wire fabric shall be 4-in, by 4-in, mesh of 12 gauge by 12 gauge steel wire.
- C. Silt fence fabric shall be a woven, polypropylene, ultraviolet resistant material such as Mirafi 100X as manufactured by Mirafi, Inc., Charlotte, NC or equal.
- D. Tie wires for securing silt fence fabric to wire mesh shall be light gauge metal clips (hog rings), or 1/32-in, diameter soft aluminum wire.
- E. Prefabricated commercial silt fence may be substituted for built-in-field fence. Prefabricated silt fence shall be "Envirofence" as manufactured by Mirafi Inc., Charlotte, NC or equal.

## PART 3 EXECUTION

### 3.1 EROSION CONTROL

- A. Minimum procedures for grassing are:
  - 1. Scarify slopes to a depth of not less than six inches and remove large clods, rock, stumps, roots larger than 2-inch in diameter and debris.
  - 2. Sow seed within twenty-four (24) hours after the ground is scarified with either mechanical seed drills or rotary hand seeders.
  - 3. Apply mulch loosely and to a thickness of between 3/4-inch and 1-1/2-inches.
  - 4. Apply netting over mulched areas on sloped surfaces.
  - 5. Roll and water seeded areas in a manner which will encourage sprouting of seeds and growing of grass. Reseed areas which exhibit unsatisfactory growth. Backfill and seed eroded areas.

### 3.2 SEDIMENTATION CONTROL

- A. Install and maintain silt dams, traps, barriers, and appurtenances as shown on the approved descriptions and working drawings. Hay bales which deteriorate and filter stone which is dislodged shall be replaced.
- B. Silt Fence Installation
  - 1. Silt Fences shall be positioned as necessary to prevent off site movement of sediment produced by construction activities as directed by the Engineer.
  - 2. Dig trench 6-in wide and 6-in deep along proposed fence lines.
  - 3. Drive metal-stakes, 8-ft on center (maximum) at back edge of trenches. Stakes shall be driven 2-ft (minimum) into ground.
  - 4. Hang 4 by 4 woven wire mesh on posts, setting bottom of wire in bottom of trench. Secure wire to posts with self-fastening tabs.
  - 5. Hang filter fabric on wire carrying to bottom of trench with about 4-in, of fabric laid across bottom of trench. Stretch fabric taut along fence length and secure with tie wires 12-in. O.C. both ways.
  - 6. Backfill trench with excavated material and tamp.
  - 7. Install pre-fabricated silt fence according to manufacturer's instructions.
- C. Staging areas and access ways shall be surfaced with a minimum depth of 4-in, crushed stone.

### 3.3 MAINTENANCE AND INSPECTIONS

- A. Inspections:
  - 1. Make a visual inspection of all sedimentation control devices once per week and promptly after every rainstorm. If such inspection reveals that additional measures are needed to prevent movement of sediment to offsite areas, promptly install additional devices as needed. Sediment controls in need of maintenance shall be repaired promptly.
- B. Device Maintenance:
  - 1. Silt Fences:
    - a. Remove accumulated sediment once it builds up to one-half of the height of the fabric.
    - b. Replace damaged fabric or patch with a 2-ft minimum overlap.
    - c. Make other repairs as necessary to ensure that the fence is filtering all runoff directed to the fence.
  - 2. Add crushed stone to access ways and staging area as necessary to maintain a firm surface free of ruts and mud holes.

### 3.4 PERFORMANCE

- A. Should any of the temporary erosion and sediment control measures employed by the Contractor fail to produce results which comply with the requirements of the State of Louisiana and the Owner, Contractor shall immediately take whatever steps are necessary to correct the deficiency at his own expense.

END OF SECTION

## SECTION 32 05 23

### CEMENT & CONCRETE FOR EXTERIOR IMPROVEMENTS

#### PART 1 GENERAL

##### 1.1 SUMMARY

###### A. Scope of Work:

1. This section includes all materials, equipment, labor and incidentals to provide cast-in-place concrete to the lines, grades, thicknesses and strengths indicated in the plans as required to complete the project. Formwork, reinforcement, jointing, accessories, finishing and curing are all included in this section.

##### 1.2 REFERENCES

###### A. American Concrete Institute (ACI):

1. ACI 116R – Cement and Concrete Terminology
2. ACI 117 – Standard Specifications for Tolerances for Concrete Construction and Materials.
3. ACI 221.1 – Standard Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete.
4. ACI 211.2 – Standard Practice for Selecting Proportions for Structural Lightweight Concrete.
5. ACI 301 – Standard Specifications for Structural Concrete.
6. ACI 302.1R – Guide for Concrete Floor and Slab Construction.
7. ACI 303.1 – Standard Specification for Cast-In-Place Architectural Concrete.
8. ACI 304R – Guide for Measuring, Mixing, Transporting, and Placing Concrete.
9. ACI 304.2R – Placing Concrete by Pumping Methods.
10. ACI 305R – Hot Weather Concreting.
11. ACI 306.1 – Standard Specification for Cold Weather Concreting.
12. ACI 308 – Standard Practice for Curing Concrete.
13. ACI 309R – Guide for Consolidation of Concrete.
14. ACI 315 – Details and Detailing of Concrete Reinforcement.
15. ACI 318 – Building Code Requirements for Structural Concrete.
16. ACI 347 – Formwork for Concrete.
17. ACI 502.4 – Standard Specification for Repairing Concrete with Epoxy Mortars.

###### B. American Society for Testing and Materials (ASTM):

1. ASTM A185 – Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement.
2. ASTM A615 – Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
3. ASTM C31 – Standard Practice for Making and Curing Concrete Test Specimens in the Field.
4. ASTM C33 – Specification for Concrete Aggregates.
5. ASTM C39 – Test Method for Compressive Strength of Cylindrical Concrete Specimens.

6. ASTM C40 – Test Method for Organic Impurities in Fine Aggregates for Concrete.
7. ASTM C42 – Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
8. ASTM C94 – Specification for Ready-Mixed Concrete.
9. ASTM C114 – Test Methods for Chemical Analysis of Hydraulic Cement.
10. ASTM C117 – Test Method for materials finer than No. 200 Sieve in Mineral Aggregates by Washing.
11. ASTM C123 – Test Method for Lightweight Particles in Aggregate.
12. ASTM C127 – Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate.
13. ASTM C128 – Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate.
14. ASTM C136 – Test Method for Sieve Analysis of Fine and Coarse Aggregates.
15. ASTM C142 – Test Method for Clay Lumps and Friable Particles in Aggregates.
16. ASTM C143 – Test Method for Slump of Hydraulic Cement Concrete.
17. ASTM C150 – Specification for Portland Cement.
18. ASTM C171 – Specification for Sheet Materials for Curing Concrete.
19. ASTM C172 – Standard Practice for Sampling Freshly Mixed Concrete.
20. ASTM C309 – Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
21. ASTM C330 – Specification for Lightweight Aggregates for Structural Concrete.
22. ASTM C470 – Specification for Molds for Forming Concrete Test Cylinders Vertically.
23. ASTM C494 – Specification for Chemical Admixtures for Concrete.
24. ASTM C618 – Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete.
25. ASTM C979 – Specification for Pigments for Integrally Colored Concrete.
26. ASTM C1017 – Specification for Chemical Admixtures for Use in Producing Flowing Concrete.
27. ASTM D994 – Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
28. ASTM D1190 – Specification for Concrete Joint Sealer, Hot-Applied Elastic Type.
29. ASTM D1751 – Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
30. ASTM D3405 – Specification for Joint Sealant, Hot-Applied, for Concrete and Asphalt Pavements.
31. ASTM D3406 – Specification for Joint Sealant, Hot-Applied, Elastomeric-Type, for Portland Cement Concrete Pavements.
32. ASTM E329 – Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction.

C. American Welding Society (AWS):

1. AWS D1.4 – Structural Welding Code – Reinforcing Steel.

D. Concrete Reinforcing Steel Institute (CRSI):

1. CRSI Manual of Standard Practice
2. CRSI Publication – Placing Reinforcing Bars

- E. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

### 1.3 DESCRIPTION

- A. Portland cement concrete shall be composed of Portland cement, fine aggregate, coarse aggregate and water, with or without admixtures as approved by the Engineer, proportioned and mixed as specified herein.

### 1.4 SUBMITTALS

- A. Concrete mix designs: Submit mix designs including laboratory test reports of trial strength and shrinkage tests.
- B. Submit Shop Drawings:
  - 1. Indicate pertinent dimensioning, form materials, arrangement of joints and ties, location of bracing and temporary supports, schedule of erection and stripping.
  - 2. Indicate reinforcement sizes, spacings, locations, and quantities, bending and cutting schedules, supporting and spacing devices.
  - 3. Indicate the location of all joints in concrete, including construction joints, expansion joints, isolation joints and contraction joints.
- C. Product Data: Submit manufacturer's product data for proposed concrete admixtures.
- D. Affidavits/Certificates: For each shipment of materials, submit evidence of compliance with specification requirements for cement, aggregate and admixtures. Mill tests and manufacturer's certification of compliance with ASTM Specifications will be accepted in lieu of testing of cement and analysis of aggregates. Certificates of Compliance shall be signed by the materials manufacturer and the Contractor.
- E. Batch Tickets: Submit a delivery ticket with each batch of concrete delivered to the site in accordance with the requirements of ASTM C94.

### 1.5 QUALITY ASSURANCE

- A. Design, construct, erect and maintain concrete formwork in accordance with ACI 301, ACI 318 and ACI 347, as applicable.
- B. Perform concrete reinforcing work in accordance with ACI 301, ACI 318 and CRSI Manual of Practice, as applicable.
- C. Perform cast-in-place concrete work in accordance with ACI 301 and ACI 318, as applicable.
- D. Cold joints in concrete will not be permitted unless planned and treated properly as construction joints.
- E. Concrete tolerances shall comply with the requirements of ACI 117 as applicable.
- F. The Contractor shall select a qualified concrete supplier capable of meeting project requirements and the requirements of these specifications.

- G. The concrete supplier shall be certified by the National Ready Mix Concrete Association and shall hold a valid certificate of conformance for concrete production facilities.
- H. Finishing of and finishes for concrete surfaces shall conform to the applicable requirements of ACI 301.

#### 1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver reinforcing bars to the fabricator in bundles, limited to one size and length of bar, securely tied and identified with plastic tags in an exposed position indicating the mill, the melt or heat number and the grade and size of bars.
- B. Deliver steel reinforcement to the jobsite, store and cover in a manner which will ensure that no damage shall occur to it from moisture, dirt, grease, oil or other cause which might impair bond with concrete.
- C. Store form panels to prevent warping. Protect panels from damage and contamination which could adversely affect concrete.
- D. Lift form panels by methods that will protect panels from damage and distortion.

#### 1.7 ENVIRONMENTAL REQUIREMENTS

- A. Hot Weather Concreting:
  - 1. Batching, mixing and delivering of concrete in hot weather shall conform to the applicable requirements of ACI 305R.
  - 2. Maximum ambient temperature for placing concrete shall be 90 degrees F. If the ambient temperature exceeds 90 degrees F, the mix shall be cooled by an appropriate method approved by the Engineer. Maintain uniform concrete temperature for succeeding batches placed.
- B. Cold Weather Concreting:
  - 1. Batching, mixing and delivering of concrete in cold weather shall conform to the applicable requirements of ACI 306.1.
  - 2. No concrete shall be placed when the ambient temperature drops below 35 degrees F, or is below 40 degrees F and falling except by written approval by the Engineer.
  - 3. All concrete shall be protected against freezing for at least 36 hours after placing.
- C. Do not place concrete in, or adjacent to, any structure where piles are required until all piles in the structure have been driven or installed.
- D. Do not place concrete when the rate of evaporation of surface moisture from concrete exceeds 0.2 pounds per square foot per hour as indicated in Figure 2.1.5 of ACI 305R.

## PART 2 PRODUCTS

### 2.1 PORTLAND CEMENT CONCRETE MATERIALS

- A. Portland Cement: ASTM C150, Type I or Type II, low alkali. Type III Portland cement may be used where high early strength concrete is a requirement as approved by the Engineer.
- B. Aggregates:
  - 1. Coarse Aggregate: ASTM C33, clean and uniformly graded from 3/8 inch to the maximum size indicated or specified. If not specified, provide 1 inch maximum size (ASTM C33, Size No. 57). Deleterious materials in aggregates shall not exceed the limits specified in ASTM C33.
  - 2. Fine Aggregate: ASTM C33, uniformly graded from 3/8 inch to fines, washed clean. Deleterious materials in fine aggregates shall not exceed the limits specified in ASTM C33.
  - 3. Lightweight Aggregates: ASTM C330, uniformly graded to a maximum size indicated or specified. When not specified, provide 3/4 inch to No. 4 coarse aggregate combined with ASTM C33 graded fine aggregate.
  - 4. Aggregate for Exposed Concrete: Aggregate for concrete which will be exposed to the public shall be obtained from one source for each type of aggregate required in order to produce uniform color.
- C. Concrete Admixtures and Cementitious Materials: The Contractor may include accepted concrete admixtures and cementitious materials in the mix to improve the water-cement ratio or water-cementitious ratio or workability of the concrete, providing the strengths specified and other desirable characteristics of the concrete can be achieved and maintained. Admixtures require the Engineer's acceptance before they may be used, and shall be included in the design mix, introduced in solution form. Admixtures shall be added at the batch plant, except as otherwise noted herein.
  - 1. Chemical Admixtures, Water-Reducing: ASTM C494, Type A.
  - 2. Pozzolanic Admixtures: ASTM C618, Class N or F.
  - 3. Fly Ash: ASTM C618, Class F, with a maximum of 25 percent retained on the No. 325 mesh sieve and a loss on ignition of 1.0 percent maximum.
  - 4. Pigments for Integrally Colored Concrete: ASTM C979, for synthetic or natural iron oxides (red).
  - 5. Chemical Admixtures, Plasticizing: ASTM C1017, or ASTM C494 Type F or Type G, high-range water-reducing admixtures.
  - 6. Prohibited Admixtures: Admixtures containing chlorides or sulfides are not acceptable.
- D. Water: Water for concrete mixes, curing and cleaning shall be clean and potable, free of impurities detrimental to concrete.
- E. Reinforcement Fibers: Chopped strands of alkali-resistant polypropylene fibers added to the concrete mix for protection against shrinkage cracks where indicated or required.

### 2.2 CONCRETE MIX

- A. Mix and deliver concrete in accordance with ASTM C94, Option A.

- B. Furnish concrete of the following strengths as specified in the construction plans:
1. Class A(M) Concrete:
    - a. Compressive strength 4,400 psi (28 day).
    - b. Slump 2 to 5 inches.
    - c. Minimum Cement Content: 564 lbs/cu yd.
    - d. Maximum water-cement ratio: 0.53 lbs/lb.
  2. Class A Concrete:
    - a. Compressive strength 3,800 psi (28 day).
    - b. Slump 2 to 5 inches.
    - c. Minimum Cement Content: 564 lbs/cu yd.
    - d. Maximum water-cement ratio: 0.53 lbs/lb.
  3. Class F Concrete:
    - a. Compressive strength 3,400 psi (28 day).
    - b. Slump 2 to 5 inches.
    - c. Minimum Cement Content: 517 lbs/cu yd.
    - d. Maximum water-cement ratio: 0.44 lbs/lb.
  4. Class M Concrete:
    - a. Compressive strength 3,000 psi (28 day).
    - b. Slump 2 to 5 inches.
    - c. Minimum Cement Content: 545 lbs/cu yd.
    - d. Maximum water-cement ratio: 0.53 lbs/lb.
  5. Class R Concrete:
    - a. Compressive strength 1,800 psi (28 day).
    - b. Slump 2 to 5 inches.
    - c. Minimum Cement Content: 376 lbs/cu yd.
    - d. Maximum water-cement ratio: 0.70 lbs/lb.
- C. Select admixture proportions for normal weight concrete in accordance with ACI 318.
- D. Each class of concrete shall be proportioned to result in the minimum compressive strength as specified and shall have the minimum amount of water necessary to produce a plastic, workable mix that will enter into the corners and angles of the forms and voids to be filled and around the reinforcement by utilizing placing methods which are as specified herein and as is considered good practice.
- E. If concrete is to be placed by pumping, concrete mixes shall be designed in accordance with the applicable requirements of ACI 304R and ACI 304.2R, and shall include strengths and slumps.

### 2.3 BATCHING, MIXING AND TRANSPORTING

- A. Batching, mixing and transporting Portland cement concrete shall conform to the applicable requirements of ACI 301 and ACI 304R.
- B. Concrete shall be central-mixed concrete from a central batch plant, to be transported to the jobsite in a truck mixer, in accordance with the requirements of ASTM C94. Equipment used in the manufacture of concrete shall be kept clean at all times.
- C. Mixers shall be equipped with automatic device for recording the number of revolutions of the drum prior to completion of the mixing operation. Each transit mixer shall also be

equipped with water measuring devices consisting of either accurately calibrated water tanks or water meters.

- D. Concrete in truck mixer shall be mixed continuously until discharged. The discharge time for concrete after introduction of mixing water shall not exceed 60 minutes. The discharge time for concrete after cement has been mixed with aggregate shall not exceed 90 minutes. Delivery tickets shall show departure time from plants.
- E. Ready-mixed concrete shall be mixed for a period of not less than 10 minutes and at least 3 minutes of the mixing period shall be immediately prior to discharging at the job site.

#### 2.4 FORM MATERIALS AND ACCESSORIES

- A. Forms shall be of wood, steel, masonite or other approved material. Formwork shall meet the requirements of ACI 301, ACI 318 and ACI 347.
- B. All form material shall be of good quality, free from loose knots, holes, dents or other irregularities. All forms shall be true to line and grade, mortar tight and rigid to prevent objectionable deformation. The Contractor will be required to remove and replace any concrete that has bulged or sagged as a result of inadequate forms. Forms or form lumber to be re-used shall be maintained clean and in good condition so as not to warp, deteriorate or otherwise change properties which might result in an inferior finished product.
- C. Falsework: All falsework shall be true to line and grade and shall be sufficiently rigid including any necessary bracing to carry the implied loads without excessive or objectionable settlement or deformation.
- D. Steel Forms: Forms shall be proprietary, patented or fabricated steel forms, using standard or commercial quality, uncoated steel sheet or plate, 3/16 inch minimum thickness, for panel facings. Use material which is clean, smooth and free from warps, bends, kinks, rust, cracks and matter which may stain concrete. Provide surfaces that will not impart corrosion residue to concrete. Include panel framing, reinforcement and erection accessories.
- E. Round Column Forms: Forms shall be pressed or molded fiber-reinforced plastic or steel manufactured round column forms. The forms shall be seamless or one-piece (one vertical seam) with smooth surface. Provide forms that will not deflect under pressure of concrete placement.
- F. Form Ties: Rod type, with ends or end fasteners which can be removed without spalling the concrete and which leave a hole equal in depth to the required reinforcement clearance. Form ties shall be of a design in which the hole left by the removed end or end fastener is easily filled to match the surface of the hardened concrete. Provide removable cones 1-1/4 inches in diameter by 1-1/2 inches deep. Provide preformed mortar plugs to match the color of concrete exposed to the public, recessed 1/4 inch, adhered with an approved epoxy adhesive.
- G. Water stops: Water stops shall be of polyvinyl chloride (PVC) and shall be 6 inches wide with 3/16 inch web similar to "Durajoint" as manufactured by Electronvent, Inc.

- H. Chamfer Strips: 3/4 inch by 3/4 inch triangular fillets milled from clear, straight-grain pine, surfaced on each side.
- I. Form Release Agent: Commercial formulation, silicone-free form-release agent, designed for use on all types of forms, which will not bond with, stain nor adversely affect concrete surfaces, and which will not impair subsequent treatment of concrete surfaces requiring bond or adhesion nor impede wetting of surfaces which will be cured with water, steam or curing compounds.
- J. Formed Construction Joints for Slab-on-Grade: Galvanized steel, tongue and groove type profile, knockout holes to receive doweling as detailed in construction plans.

## 2.5 REINFORCEMENT MATERIALS AND FABRICATION

- A. Deformed Reinforcement Bars: ASTM A615; Grade 60, steel bars. ASTM A615 bars may be welded only if more stringent requirements of AWS D1.4 are followed.
- B. Welded Plain Wire Fabric: ASTM A185; in flat sheets or coiled rolls, with wire sizes and center-to-center spacings as indicated.
- C. Accessories: Provide reinforcement accessories, consisting of bar supports, spacers, hangers, chairs, ties and similar items as required for spacing, assembling and supporting reinforcement in place. Conform with SRSI referenced standards and the following requirements:
  - 1. For footings, grade beams, and slabs on grade, provide supports with precast concrete or mortar bases or plates or horizontal runners where wetted base materials will not support chair legs.
  - 2. For exposed-to-view concrete surfaces, where legs of supports are in contact with forms or are in close proximity to finished surfaces, provide supports with legs which are galvanized, plastic-coated or stainless steel.
- D. Tie Wire: No. 16 gage or heavier, black or galvanized, soft or commercial grade steel tie wire.
- E. Fabricate concrete reinforcement in accordance with applicable requirements of ACI 301, ACI 318 and CRSI Manual of Standard Practice.
- F. Cutting and bending shall be performed at a central location, equipped and suitable for the purpose. Bars shall be accurately cut and bent as indicated. Bars shall be bent cold. Heating of bars for bending or straightening will not be permitted. Bars shall not be bent or straightened in any manner which will injure the material.
- G. Weld reinforcement in accordance with AWS D1.4 using E90XX low hydrogen electrodes (for shielded metal arc welding).

## 2.6 FINISHING TOOLS AND EQUIPMENT

- A. The Contractor shall furnish all materials, tools, equipment, facilities and services as required for performing the required concrete finishing work.
- B. Repair and Finishing Materials:

1. Portland Cement: ASTM C150, Type II, of the same brand as used in the work. Furnish white Portland cement where required to produce color matching color of surrounding concrete.
2. Aggregate:
  - a. For Bonding Grout: ASTM C33, washed clean sand passing a No. 30 sieve.
  - b. For Patching Mortar: ASTM C33, washed clean, graded fine aggregate of suitable size for areas to be repaired. Clean coarse aggregate up to Size No. 8 may be added for repair of larger pockets or voids.
3. Commercial Patching Mortar: A structural repair mortar may be furnished if appropriate for the use and approved by the Engineer.
4. Epoxy Patching Mortar: As specified in ACI 503.4 for Epoxy Mortar.
5. Epoxy Adhesive: ASTM C881, Type II or Type V, epoxy-based bonding agent.
6. Anti-Slip Abrasive Grit: Virgin grain Aluminum Oxide or Silicon Carbide particles, or a mixture of the two.

## 2.7 COMPOUNDS, HARDENERS AND SEALERS

- A. Curing Compound: ASTM C309, liquid membrane-forming curing compound, Type 1, Class A or B as appropriate for the use or location.
- B. Waterproof Sheet Materials: ASTM C171, waterproof paper with white paper face, polyethylene film pigmented white, or white burlap-polyethylene sheeting.
- C. Joint Filler: Pre-molded, of sizes and thicknesses indicated, conforming to ASTM D994 or ASTM D1751, as applicable. For structural joints and joints subject to movement, provide elastomeric joint seals conforming to ASTM D2628 or ASTM D3542, as applicable.
- D. Joint Sealing Compound: Concrete joint sealant, conforming to ASTM D1190, ASTM D3405 or ASTM D3406, as applicable, for sealing of expansion (isolation) and contraction (control) joints in slabs and pavement and at junction of slabs and pavement with other poured concrete. Color of joint sealant shall blend in with finished concrete surface. For asphalt pavements, provide ASTM D3405 sealant only. For concrete pavements and roadways, provide ASTM D3406 sealant only.

## PART 3 EXECUTION

### 3.1 FORMWORK ERECTION

- A. Erect formwork, shoring and bracing in a manner that will produce finished concrete surfaces conforming to indicated design and within specified tolerances.
- B. Make joints and seams mortar-tight. Install leakage control materials in accordance with the manufacturer's installation instructions, and in a manner that will maintain a smooth continuity of plane between abutting form panels and which will resist displacement by concreting operations

- C. Provide bracing to ensure stability of formwork. Support joints with extra studs or girts in a manner that will ensure true square intersections.
- D. Assemble forms in a manner that will facilitate their removal without damage to the concrete.
- E. Provide camber in formwork as required to compensate for deflections caused by weight and pressures of fresh concrete and construction loads and as otherwise indicated. Provide camber strips to compensate for deflections due to permanent loads and long-term deflections due to shrinkage and creep as required.
- F. Provide construction openings in forms where required for concrete pour pockets, vibrator access holes and inspection openings to aid in proper placement and consolidation of concrete. Close up openings during placement of concrete as applicable.
- G. Form external corners of exposed concrete with 3/4 inch chamfer.
- H. Apply form release agent to formwork prior to placing form accessories and reinforcement. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings affected by agent.
- I. Clean forms as erection proceeds, to remove foreign matter.
- J. Locate concrete joints as indicated in the construction plans. Support forms for joints in concrete so as to rigidly maintain their positions during placement, vibration and curing of concrete.
- K. Locate and install joints, for which locations are not indicated, so as not to impair strength and appearance of the finished product. Changes to the proposed joint layout require Engineer's approval.
- L. Provide keyed construction joints as indicated in the construction drawings. Continue reinforcement across construction joints.

### 3.2 INSERTS, EMBEDDED COMPONENTS, AND OPENINGS

- A. Install conduit, pipe sleeves, water stops, appliance boxes, frames for items recessed in walls, door frames, drains, metal ties, inserts, nailing strips, blocking, grounds and other fastening devices required for anchorage or attachment of other work. Firmly secure products in position, located accurately as indicated, before beginning concrete placement.
- B. Coordinate work of other sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.
- C. Install concrete accessories straight, level, and plumb.
- D. Install water stops continuous without displacing reinforcement.

### 3.3 REINFORCEMENT PLACEMENT

- A. **Placing Standards:** Reinforcing steel shall be placed in accordance with the Contract Drawings, approved Shop Drawings, and the applicable requirements of ACI 301, ACI 318, CRSI Manual of Standard Practice and SRSI Placing Reinforcing Bars. Install reinforcement accurately and secure against movement, particularly under the weight of workers and the placement of concrete.
- B. **Reinforcing Supports:** Bars shall be supported on metal or plastic chairs, spacers and hangers, accurately placed and securely fastened to steel reinforcement in place. Support legs of accessories in forms with out embedding in the form surface. Hoops and stirrups shall be accurately spaced and wired to the reinforcement.
- C. **Placing and Tying:** Reinforcing steel shall be installed in place, spaced and rigidly and securely tied or wired with tie wire at all splices and a crossing points and intersections in the positions indicated. It is not necessary to tie bars at every intersection. Comply with the requirements of CRSI Placing Reinforcing Bars, Chapter 10. Rebending of bars on the job to fit different conditions will not be permitted. Point ends of wire ties away from adjacent surfaces.
- D. **Spacing:** Center-to-center distance between parallel bars shall be in accordance with the Contract Drawings or, where not indicated, the minimum clear spacing shall be in accordance with ACI 318. Where bars are indicated in multiple layers, place upper bars directly above lower bars.
- E. **Longitudinal Location of Bends and Ends of Bar:** A maximum of plus or minus 3 inches from the indicated location will be permitted, provided that the specified protective concrete cover at ends of members is not reduced by more than 1/2 inch.
- F. **Lapped Splices:**
  - 1. Laps of splices shall be securely tied together to maintain the alignment of the bars, to provide the required clearances, and to transfer stress by bond. Lapped splices and development lengths not shown shall be detailed to develop Class B lapping lengths and development lengths in tension, respectively, in accordance with ACI 318.
  - 2. Splices of alternate bars shall be staggered a minimum clear offset of 2 feet between splices. Splices shall be tied with tie wire, or splices may be lap welded in accordance with AWS D1.4. Lapped splices are not permitted for No. 14 and No. 18 bars, or when specifically excluded by Contract provisions regardless of size.
- G. **Dowels:** Provide dowels where indicated or required for connecting construction and for maintaining structural and reinforcement continuity. Dowels shall be tied securely in place before concrete is deposited. Provide additional bars for proper support and anchorage where required. Do not bend dowels after embedment.
- H. **Welded Wire Fabric:**
  - 1. Wire fabric shall be installed in lengths as long as practicable and shall be wire-tied at all laps and splices. End laps shall be offset in adjacent widths. Lap welded wire fabric in accordance with applicable requirements of ACI 318.

2. Where required, welded wire fabric shall be secured in position with suitable supports, accessories and tie wire as indicated and required to ensure against movement from workers and placement of concrete to assure proper embedment at position indicated.
- I. Ensure reinforcing is clean, free of loose scale, dirt, or other foreign coatings.
- J. Weld reinforcement in accordance with AWS D1.4. Do not weld crossing reinforcement bars for assembly.
- K. Maintain minimum concrete cover around reinforcement in accordance with ACI 301, ACI 318 and CRSI Manual of Standard Practice. If there is a conflict between the standards specified, the thicker concrete coverage shall govern.

### 3.4 PLACING CONCRETE

- A. Inspect forms, earth bearing surfaces, reinforcement and embedded items and obtain the Engineer's approval before placing concrete.
- B. Place concrete under the observation of the Engineer.
- C. Whenever possible, place concrete during normal working hours. When concrete placement schedules require concrete placement at times other than normal working hours, ensure that the Engineer is notified and is present at the time of placement.
- D. Prior to placement of concrete, the subgrade shall be in a firm, well-drained condition, and of adequate and uniform load-bearing nature to support construction personnel, construction materials, construction equipment and steel reinforcing mats without tracking, rutting, heaving or settlement. All weak, soft, saturated or otherwise unsuitable material shall be removed and replaced with approved backfill.
- E. Earth bottoms or bearing surfaces for footings and slabs shall be dampened but not saturated or muddied just before placement of concrete.
- F. Transporting:
  1. Concrete shall be central-mixed concrete from a central batch plant, transported to the jobsite in a truck mixer, in accordance with the requirements specified herein and ASTM C94.
  2. Transport concrete to the jobsite in a manner that will assure efficient delivery of concrete to the point of placement without adversely altering specified properties with regard to water-cement ratio, slump, air entrainment and homogeneity.
- G. Placement Standards: Conveying and placing of concrete shall conform with applicable requirements of ACI 301, ACI 302.1R, ACI 304R and ACI 318.
- H. Handling and Depositing:
  1. Concrete placing equipment shall have sufficient capacity to provide a placement rate that will preclude cold joints and that shall deposit the concrete without segregation or loss of ingredients
  2. Concrete placement, once started, shall be carried on as a continuous operation until the section of approved size and shape is completed.

3. Concrete shall be handled as rapidly as practicable from the mixer to the place of final deposit by methods that prevent the separation or loss of ingredients. Concrete shall be deposited, as nearly as practicable, in its final horizontal position to avoid redistribution or flowing.
4. Concrete shall not be dropped freely where reinforcing will cause segregation, nor shall it be dropped freely more than 5 feet. Concrete shall be deposited to maintain a plastic surface approximately horizontal.
5. In placing wall, columns or thin sections (6 inches or less in thickness) or heights greater than 10 feet, concrete placement rate, lift thickness and time intervals between lifts shall be as indicated on approved Shop Drawings. Openings in the form, elephant trunk tremies, or other approved devices shall be used that will permit the concrete to be placed without segregation or accumulation of hardened concrete on the forms or metal reinforcement above the level of the fresh concrete.
6. Concrete that has partially hardened shall not be deposited in the work. The discharge of concrete shall be started no later than 60 minutes after the introduction of mixing water.

I. Pumping:

1. Concrete may be placed by pumping if the maximum slump can be maintained and if accepted in writing by the Engineer for the location proposed.
2. Placing concrete by pumping methods shall conform with applicable requirements of ACI 304R and ACI 304.2R.
3. Equipment for pumping shall be of such size and design as to ensure a continuous flow of concrete at the delivery end without separation of materials. Concrete from end of hose shall have a free fall of less than 5 feet. Pump hosed shall be supported on horses or similar devices so that reinforcement or post-tensioning ducts or tendons are not moved from their original position.
4. The concrete mix shall be designed to the same requirements as specified herein and may only be altered for placement purposes with the prior approval of the Engineer.

J. Consolidation:

1. Concrete shall be thoroughly consolidated and compacted by mechanical vibration during placement in accordance with the requirements of ACI 309R.
2. The Engineer will inspect concrete placement to confirm that proper placing methods are being employed, and that special techniques are being used in congested areas and around obstructions such as pipes and other embedded items.
3. Conduct vibration in a systematic manner by competent, skilled and experienced workers, with regularly maintained vibrators, and with sufficient back-up units at the jobsite. Use the largest and most powerful vibrator that can be effectively operated in the given work, with a minimum frequency of 8,000 vibrations or impulses per minute, and of sufficient amplitude to effectively consolidate the concrete.
4. Insert and withdraw the vibrator vertically at uniform spacing over the entire area of the placement. Space the distance between insertions such that "spheres of influence" of each insertion overlap.
5. Conduct vibration so as to produce concrete that is of uniform texture and appearance, free of honeycombing, air and rock pockets, streaking, cold joints and visible lift lines.

- K. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent.
- L. Separate slabs-on-grade from vertical surfaces with preformed expansion joint filler, extended from bottom of slab to within 1/2 inch of finished slab surface.
- M. Place concrete continuously between predetermined expansion, control and construction joints. Do not break or interrupt successive pours creating cold joints.
- N. Where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack with non-shrink grout as detailed in the construction plans.
- O. Screed slabs-on-grade level.

### 3.5 FORM REMOVAL

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.
- B. Remove forms by methods which will not injure, mar, gouge or chip concrete surfaces, overstress concrete members or distort formwork. Do not pry against concrete. Cut off nails flush. Leave surfaces clean and unblemished.

### 3.6 CURING AND PROTECTION

- A. Curing of concrete shall conform with applicable requirements of ACI 301 and ACI 308.
- B. Concrete shall be cured with waterproof sheet materials, damp burlap or curing compounds.
- C. Application of curing compounds shall conform to the applicable requirements of ACI 308.
- D. Vertical surfaces shall be cured by keeping the forms wet at all times and by leaving the forms in place as long as possible. Protect exposed surfaces by covering with sheet materials or burlap kept continuously moist.
- E. Horizontal surfaces shall be cured and protected by covering the finished surfaces with waterproof sheet materials or damp burlap kept continuously moist.
- F. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- G. Protect fresh concrete from hot sun, drying winds, rain, damage or soiling. Fog spray freshly placed slabs after bleed water dissipates and until finishing operations commence. Allow no slabs to become dry at any time until finishing operations are complete.
- H. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete for not less than 7 days.

- I. Protect concrete from injurious action of the elements and defacement of any kind. Project exposed concrete corners from traffic or use that will damage them in any way.
- J. Protect concrete during the curing period from mechanical and physical stresses that may be caused by heavy equipment movement, subjecting the concrete to load stress, load shock, or excessive vibration.

### 3.7 JOINT SEALING

- A. Verify that joint surfaces are dry to the extent necessary for successful sealant application and long service life as recommended by the sealant manufacturer.
- B. Verify that ambient and concrete surface temperatures and humidity are within the ranges recommended by the manufacturer for successful sealant application.
- C. Thoroughly clean joints free of dirt, debris, dust and laitance.
- D. Prime joint surfaces, where required, as recommended by the manufacturer of the joint sealing compound or elastomeric joint seal.
- E. Joint fillers and sealing compound shall be installed in accordance with the respective manufacturer's installation and application instructions. Comply with ASTM D1190, ASTM D3405 and ASTM D3406 for application of sealants, as applicable.
- F. Expansion (Isolation) Joints: Provide pre-molded joint filler to full depth of slabs, less 1/2 inch. Install joint filler with top edge 1/2 inch below finished surface and tool adjacent concrete edges to a 1/4 inch radius. After a minimum of 28 days after concrete has been placed and finished, fill expansion joints with joint sealing compound to 1/8 inch below finished surface. No traffic shall be permitted to travel over sealed joints until sealing compound has properly cured.
- G. Contraction (Control) Joints: Saw-cut contraction joints and weekend plane joints shall be filled with joint sealing compound in areas and locations indicated. Joints shall be filled and tooled flush to within 1/16 inch of the finished concrete surface.

### 3.8 FINISHING OF CONCRETE SURFACES

- A. Unexposed Formed Surfaces: Concrete that will not be exposed in the completed structure shall be any form finish as specified herein and in ACI 301 for "rough form finish."
- B. Exposed Formed Surfaces: Unless indicated otherwise, concrete that will be exposed in the completed structure shall receive a "smooth rubbed finish" conforming with the requirements of ACI 301.
- C. Slabs and Flatwork: Slabs and flatwork shall be placed, consolidated and finished in accordance with applicable requirements of ACI 301.
  - 1. Slabs and flatwork shall be placed and finished monolithically. Strike off and screed slabs to true, plane surfaces at required elevations, and thoroughly compact concrete with vibrators, floats and tampers to force coarse aggregate

below the surface. Finish slab and flatwork within four hours of concrete placement.

2. Slab Finishes: Unless otherwise indicated, slabs and flatwork shall receive the following finishes as indicated:
  - a. Scratched Finish: Conform to ACI 301; provide “scratched finish” for slab substrates to receive cementitious toppings or finishes, such as terrazzo or mortar setting bed for ceramic tile.
  - b. Floated Finish: Conform to ACI 301; provide “floated finish” for track slabs and mud slabs and for slabs and flatwork to receive roofing and membrane waterproofing.
  - c. Troweled Finish: Conform to ACI 301; provide “troweled finish” for interior slabs and flatwork to be exposed in the completed structure, for slabs to receive resilient floor coverings and for flatwork to receive elastomeric bearing pads.
  - d. Broom Finish: Conform to ACI 301; exact texture and coarseness of the broom finish shall be as approved by the Engineer. Provide fine or medium-coarse “broom finish” as indicated for exterior sidewalks and paving, exterior ramps, and equipment and transformer pads.
  - e. Non-slip Finish: Conform to ACI 301; non-slip materials shall be aluminum oxide and silicone carbide grit particles. Provide “non-slip finish” for interior pedestrian ramps, walkways and other floor areas where indicated.
3. Surface Tolerances: Surface tolerances shall be as specified herein.
  - a. Flat Tolerance: Slabs and flatwork with “troweled finish” and with “non-slip finish.”
  - b. Straightedge Tolerance: Slabs and flatwork with “broom finish” or medium-coarse “broom finish.”
  - c. Bull-Floated Tolerance: Slabs and flatwork with “scratched finish”, “floated finish” and with coarse “broom finish”.
4. Joints:
  - a. Construction, expansion, isolation and contraction joints shall be located as indicated in the construction plans. Construction joints shall act as contraction joints. Where additional contraction joints are required to prevent shrinkage cracks, saw-cut such joints. All joints shall be straight and true to line.
  - b. Mark-off lines or edges at formed construction and expansion joints shall be finished with 1/4 inch radius curved edging tool, neat and true to line, uniform throughout.

### 3.9 TOLERANCES

- A. Formed Surfaces: Conform with applicable requirements of ACI 117.
- B. Slabs and Flatwork: Conform with applicable classification requirements of ASTM E1155, as follows:
  1. Very Flat Tolerance: True plane with maximum variation of 1/8 inch in 10 feet when measured with a 10-foot straightedge placed anywhere on the slab in any direction.

2. Flat Tolerance: True plane with maximum variation of 3/16 inch in 10 feet when measured with a 10-foot straightedge placed anywhere on the slab in any direction.
3. Straightedge Tolerance: True plane with maximum variation of 5/16 inch in 10 feet when measured with a 10-foot straightedge placed anywhere on the slab in any direction.
4. Bull-Floated Tolerance: True plane with maximum variation of 1/2 inch in 10 feet when measured with a 10-foot straightedge placed anywhere on the slab in any direction.

### 3.10 REPAIR OF SURFACE DEFECTS

- A. Repair Standards: Repair of surface defects shall conform with applicable requirements of ACI 301. When using epoxy mortar, conform with applicable requirements of ACI 503.4.
- B. Surface Defects:
  1. Repair of surface defects shall begin immediately after form removal. For repair with epoxy mortar, concrete shall be dry.
  2. Surface defects are defined to include: form-tie holes, air voids or pockets, bug holes with a nominal diameter or depth greater than 1/4 inch, honeycombed areas, rock pockets, visible construction joints, fins and burs.
  3. Repair of surface defects shall be tightly bonded and shall result in concrete surfaces of uniform color and texture, matching adjacent surfaces and free of shrinkage cracks.
- C. Repair Work:
  1. Remove honeycombed and other defective concrete down to sound concrete. Saw-cut the edges perpendicular to the surface or slightly undercut. Feather-edges will not be permitted. Dampen the area to be patched and an area of at least 6 inches wide surrounding the repair to prevent absorption of water from the patching mortar.
  2. Where rock pockets or similar defects or voids expose steel reinforcement, cut out to solid surface behind reinforcing steel to provide suitable key-lock for patching mortar. Patching mortar shall envelope the exposed reinforcing bar.
  3. Bond patching mortar to concrete with bonding grout or epoxy adhesive. Bonding grout shall consist of 1 part Portland cement to 1 part No. 30 mesh sand, mixed to the consistency of a thick cream, and then well brushed onto the concrete. Bond commercial patching mortar to concrete in accordance with the manufacturer's instructions.
  4. Make the patching mortar of the same materials and of approximately the same proportions as used for the concrete, except omit the coarse aggregate. Use not more than 1 part Portland cement to 2-1/2 parts sand by damp loose volume, and substitute white Portland cement for a portion of the regular gray Portland cement to produce patching mix matching the surrounding concrete in color when dry.
  5. After surface water has evaporated from the area to be patched, brush the bond coat well into the surface. When the bond coat begins to lose the water sheen, apply the patching mortar. Compact the mortar into place and strike off so as to leave the patch slightly higher than the surrounding surface. To permit initial

shrinkage, leave the patch undisturbed for at least 1 hour before being finally finished.

6. Neatly finish patched surfaces to match adjacent surrounding surface texture of concrete. Grind or fill surfaces to produce level and plumb, true planes.
7. For walls exposed in the finished work, form tie holes shall be patched and finished flush with adjacent surface. For holes passing entirely through walls, a plunger type injection gun or other suitable device shall be used to completely fill the holes.
8. Patching of honeycombed areas or rock pockets that are too large and unsatisfactory for mortar patching shall be cut out to solid surface, keyed, and packed solid with matching concrete to produce firm bond and flush surface. Patching shall match texture of adjacent surfaces where exposed in the finished work.
9. Completed repairs shall be cured as specified in other paragraphs of this section.

### 3.11 FIELD QUALITY CONTROL

- A. Before placing concrete, check lines and grades of erected formwork and positioning of embedded inserts, blockouts and joints for correctness. Verify that embedded piping and conduit are free from obstructions. Make corrections or adjustments to ensure proper size and location of concrete members and stability of forming systems.
- B. While placing concrete, provide quality control to assure that formwork and related supports have not been displaced, that loss of cement paste through joints is prevented and that completed work will be within specified tolerances.
- C. Before placing concrete perform a visual inspection of reinforcing steel in place, including bar supports, tied laps and intersections and welded wire fabric to insure proper placement.
- D. Concrete Inspection and Testing Services:
  1. Visual inspections and acceptance of concrete mix designs will be by the Engineer. The Engineer will observe concrete batching, mixing and placing operations as deemed necessary by the Engineer.
  2. Testing services shall be provided by an independent testing laboratory or agency employed by the Owner, and shall be performed in accordance with the applicable requirements of ACI 301. If, as a result of these tests, it is determined that the specified concrete properties are not being obtained, the Engineer will order such changes as may be necessary to secure the specified properties.
  3. Failure of the Engineer to detect defective work or material shall not prevent later rejection when such defect is discovered, nor shall it obligate the Engineer for final acceptance.
  4. Additional inspection and testing services required by the Engineer because of changes in materials, sources or proportions or due to failure of inspections and tests shall be paid for by the Contractor.
  5. The Contractor shall provide materials, labor and services for sampling and testing of concrete including the following:
    - a. Preparation, handling, storage and delivery of concrete test specimens.
    - b. Suitable containers for the storage, curing and delivery of concrete test specimens in accordance with ASTM C31 and ASTM C470.

- c. Suitable storage for a supply of test cylinder molds, test specimens to be cured at the jobsite and other items required for sampling and testing.

E. Methods of Sampling and Testing of Concrete:

1. Sampling: Representative composite samples shall be taken by the Contractor or testing laboratory representative in accordance with ASTM C172. Each sample shall be obtained from a different batch of concrete on a random basis.
2. Slump Tests: The testing laboratory shall perform slump tests of concrete during placing of concrete, as required, in accordance with ASTM C143. At least one test shall be performed at the delivery trucks for each 50 cubic yards of concrete delivered.
3. Temperature Tests: The concrete temperature shall be recorded on all compression test cylinders made.
4. Strength Tests:
  - a. The Contractor shall prepare, cast and deliver to the testing laboratory cylinders for laboratory-cured compression test samples. Cylinders shall be made and cured in accordance with ASTM C31. Cylinders shall be tested in accordance with ASTM C39.
  - b. The minimum number of test cylinders to be made for each class of concrete and for each placement shall be four (4) cylinders for each 100 cubic yards or fraction thereof.
  - c. All cylinders in a set shall be marked with a unique number on one end. The Contractor shall record this number on the record of concrete placed indicating the date and use. All cylinders shall be cured by the testing laboratory.
  - d. From each set of cylinders cast, one cylinder shall be tested at seven days and two cylinders at 28 days in accordance with ASTM C39. If the 28-day tests are satisfactory, the fourth cylinder shall be discarded.
  - e. In the event the 28-day tests are below the specified strength requirements, the laboratory shall then test the fourth cylinder at the age selected by the Engineer.

F. Evaluation and Acceptance of Tests:

1. Acceptance of Concrete: The strength of the concrete shall be considered satisfactory, provided the averages of strength test results equal or exceed the specified 28-day compressive strength, and no individual strength test result falls below the specified 28-day compressive strength by more than 500 psi.
2. Test Cores:
  - a. When laboratory test results indicate concrete to be more than 300 psi below the specified strength, or if there is a likelihood of low strength concrete, a significant reduction in load-carrying capacity, or absence of desired durability in the concrete, the Engineer will require tests of cores to be drilled from the areas in question.
  - b. Test cores shall be obtained from each member or area of suspect strength, from locations designated by the Engineer, and test specimens shall be prepared by the Contractor in accordance with ASTM C42.
  - c. Three cores shall be taken for each determination of in-place strength. Concrete in the area represented by the core tests will be considered structurally adequate if the average of the three cores is equal to at least

90 percent of the specified design strength and no single core is less than 80 percent of the design strength.

d. The Contractor shall be responsible for adequate patching of all test core holes.

3. Rejection of Concrete: The Engineer shall have the authority to reject concrete work which does not meet specification requirements and to require repair or replacement as necessary to complete the Work.

G. Reinforcement Inspection:

1. Inspect for correct materials, fabrication, sizes, locations, spacing, concrete cover, and splicing.

END OF SECTION

## SECTION 32 11 23

### AGGREGATE BASE COURSES

#### PART 1 GENERAL

##### 1.1 SUMMARY

###### A. Scope of Work:

1. Work under this section consists of furnishing all equipment, labor and materials as required to provide an aggregate base course for paving or an exposed aggregate surface course for drives, walks, parking areas and shoulders as indicated in the Drawings.

##### 1.2 REFERENCES

###### A. American Association of State Highway and Transportation Officials:

1. AASHTO M288 - Standard Specification for Geotextile Specification for Highway Applications.
2. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

###### B. ASTM International:

1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>)).
2. ASTM D1556 - Standard Test Method for Density of Soil in Place by the Sand-Cone Method.
3. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
4. ASTM D2940 - Standard Specification for Graded Aggregate Material For Bases or Subbases for Highways or Airports.
5. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

##### 1.3 QUALITY ASSURANCE

###### A. Furnish each aggregate material from single source throughout the Work.

###### B. Perform Work in accordance with Louisiana Department of Transportation Standard Specifications for Roads and Bridges, 2000 Edition.

#### PART 2 PRODUCTS

##### 2.1 AGGREGATE MATERIALS

- A. Aggregate for Paving Base: Aggregate for pavement base courses shall meet the requirements of LDOTD Standard Specifications for Roads and Bridges, 2000 Edition, Section 302, Class II Base Course (Stone).
- B. Exposed Aggregate Surfacing: Aggregate for exposed finished surfaces shall meet the requirements of LDOTD Standard Specifications for Roads and Bridges, 2000 Edition, Section 401, Aggregate Surface Course (Stone).

## 2.2 ACCESSORIES

- A. Geogrid: Aggregate surfaces shall be placed on Tensar Filtergrid F60.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Prior to placement of aggregate courses verify that the compacted subgrade is dry and ready to support paving and imposed loads.
  - 1. Proof roll subgrade with a loaded tandem-axle truck in minimum two perpendicular passes to identify soft spots. A representative of the Owner shall be on site during proof rolling operation.
  - 2. Remove any soft or substandard subgrade materials and replace with compacted fill as specified in Section 31 23 00 – Excavation & Fill.
- B. Prior to placement of aggregate courses, verify that subgrade has been inspected and that gradients and elevations are correct.

### 3.2 PREPARATION

- A. Correct irregularities in subgrade gradient and elevation by scarifying, reshaping, and re-compacting.
- B. Do not place aggregate on soft, muddy, or frozen surfaces.

### 3.3 AGGREGATE PLACEMENT

- A. Install geotextile fabric over subgrade as directed in the Drawings and in accordance with manufacturer's instructions.
  - 1. Lap ends and edges minimum 6 inches.
  - 2. Anchor fabric to subgrade when required to prevent displacement until aggregate is installed.
- B. Place aggregate in equal thickness layers to total compacted thickness as indicated on the Drawings.
  - 1. Maximum Layer Compacted Thickness: 6 inches.
  - 2. Minimum Layer Compacted Thickness: 4 inches.
- C. Roller compact aggregate to 95 percent maximum density.

- D. Level and contour surfaces to elevations, profiles, and gradients indicated.
- E. Maintain optimum moisture content of fill materials to attain specified compaction density.
- F. Use mechanical tamping equipment in areas inaccessible to larger compaction equipment.

#### 3.4 TOLERANCES

- A. Maximum Variation From Flat Surface: 1/2 inch measured with 10 foot straight edge.
- B. Maximum Variation From Thickness: 1/2 inch.
- C. Maximum Variation From Elevation: 1/2 inch.

#### 3.5 FIELD QUALITY CONTROL

- A. Compaction testing will be performed in accordance with ASTM D698.
- B. When tests indicate aggregate surface does not meet specified requirements, remove the substandard area, replace and retest.
- C. Frequency of Tests: One test for every 1000 square yards of each layer of compacted aggregate surface.

END OF SECTION

## SECTION 32 61 13

### MISCELLANEOUS WORK AND CLEANUP

#### PART 1 GENERAL

##### 1.1 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required to do the miscellaneous work not specified in other sections but obviously necessary for the proper completion of the work as shown on the Drawings.
- B. When applicable the Contractor shall perform the work in accordance with other sections of this Specification. When no applicable specification exists the Contractor shall perform the work in accordance with the best modern practice and/or as directed by the Engineer.
- C. The work of this Section includes, but is not limited to, the following:
  - 1. Protection and/or removal and reinstallation of signs, lampposts and mailboxes.
  - 2. Crossing and relocating existing utilities.
  - 3. Restoring of roadways and pavement.
  - 4. Protection and bracing of utility poles.
  - 5. Restoring easement and right-of-ways.
  - 6. Temporary facilities.
  - 7. Cleaning up.
  - 8. Incidental work.
- D. The Contractor's bid price shall include costs associated with this Section. The work specified herein is not shown on the Contract Drawings. It shall be the Contractor's responsibility to develop his/her costs for this work based on site/field investigations prior to the bid.

#### PART 2 PRODUCTS

##### 2.1 MATERIALS

- A. Materials required for this Section shall be the same quality of materials that are to be restored. Where possible, the Contractor may re-use existing materials that are removed and acceptable for reuse.

#### PART 3 EXECUTION

##### 3.1 RESTORATION AND REPLACEMENT OF SIGNS, LAMPPOSTS AND MAILBOXES

- A. Existing signs, lampposts and mailboxes which may be damaged by the Contractor or removed by the Contractor during the course of installing the new

pipelines shall be reinstalled in a vertical position at the same location from which they were removed. Damaged items shall be replaced with an item equal to or better than the damaged items. A concrete anchor shall be provided as necessary, at no additional cost, to ensure a rigid alignment. Care shall be exercised in the reinstallation of all items to prevent damage to the newly installed pipelines.

### 3.2 CROSSING AND RELOCATING EXISTING UTILITIES

- A. The Contractor shall furnish all labor, materials, equipment, and incidentals required in crossing and/or relocating culverts; water courses, including brooks and drainage ditches; storm drains; sewers; water mains; and other utilities and obstructions including, but not limited to, electric, telephone and gas services. This work shall include, but is not limited to, the following: bracing, hand excavation and backfill, sheeting and shoring, dewatering, compaction, restoration, location and protection of existing utilities, erosion and sedimentation control, traffic control, clean-up, and all else incidental thereto for which separate payment is not provided under other items in the Bid Form.
- B. In locations where existing utilities cannot be crossed without interfering with the construction of the work as shown on the Drawings, the Contractor shall remove and relocate the utility as directed by the Engineer or cooperate with the utility companies concerned if they relocate their own utility.
- C. At pipe crossings and where designated by the Engineer, the Contractor shall furnish and place compacted granular bedding material so that the existing utility or pipe is firmly supported for its entire exposed length. The bedding shall extend to the mid- diameter of the pipe crossed.

### 3.3 RESTORATION OF ROADWAYS AND PAVEMENT

- A. The Contractor shall repair and/or replace existing roadways disturbed by the construction. Paved drives shall be repaved to the limits and thicknesses existing prior to construction. Gravel drives shall be replaced and regraded to the limits and thicknesses existing prior to construction.

### 3.4 PROTECTION AND BRACING OF UTILITY POLES

- A. The Contractor shall be responsible for making all arrangements with the proper utility companies for the bracing and protection of all utility poles that may be damaged or endangered by the Contractors operations. Work under this item shall include the related removal and reinstallation of guy wires, or support poles whether shown on the Drawings or not.

### 3.5 RESTORING EASEMENTS AND RIGHT-OF-WAYS

- A. The Contractor shall be responsible for all damage to private property due to his operations. The Contractor shall protect from injury all walls, fences, cultivated shrubbery and vegetables, fruit trees, pavement, underground facilities, such as water pipe, or other utilities which may be encountered along the route. If

removal and replacement are required, it shall be done in a workmanlike manner so that replacement is equivalent to that which existed prior to construction.

- B. Existing lawn and sod surfaces damaged by construction shall be regraded and reseeded. These areas shall be maintained and reseeded, if necessary, until all work under this Contract has been completed and accepted. Any additional work required to restore property to the original condition shall be performed by the Contractor.
- C. Existing trees, shrubs, plants, and bushes outside of easements shall be fully protected during construction.

### 3.6 TEMPORARY FACILITIES

- A. The Contractor shall furnish, install, maintain and remove all temporary facilities required for the proper completion of the Contract as shown on the Drawings and as specified herein.

### 3.7 CLEANING UP

- A. The Contractor shall remove all construction material, excess excavation, buildings, equipment and other debris remaining on the job as a result of construction operations and shall restore the site of the work to a neat and orderly condition.

### 3.8 INCIDENTAL WORK

- A. The Contractor shall perform all incidental work not otherwise specified, but obviously necessary, for the proper completion of the Contract as shown on the Drawings and as specified herein.

END OF SECTION

## SECTION 33 05 23

### TRENCHLESS UTILITY INSTALLATION

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Casing and jacking pipe materials.
  - 2. Carrier pipe materials.
  - 3. Grout and cover materials.
  - 4. Accessories.
- B. Related Sections:
  - 1. Section 31 23 00 – Excavation & Fill.
  - 2. Section 31 23 17 – Trenching Excavation & Backfill.
  - 3. Section 32 05 23 – Cement & Concrete for Exterior Improvements.
  - 4. Section 33 11 13 – Public Water Utility Distribution Piping.

##### 1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Jacked Pipe:
  - 1. Basis of Measurement: By linear foot measured on invert of jacked pipe from face to face of jacked pipe.
  - 2. Basis of Payment: Includes excavation, jacked pipe, carrier pipe, grout, accessories, tests, and backfill.

##### 1.3 REFERENCES

- A. American Association of State Highway and Transportation Officials:
  - 1. AASHTO M133 - Standard Specification for Preservatives and Pressure Treatment Processes for Timber.
  - 2. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.
- B. American Railway Engineering and Maintenance-of-Way Association:
  - 1. AREMA - Manual for Railway Engineering.
- C. ASTM International:
  - 1. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
  - 2. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
  - 3. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.
  - 4. ASTM A449 - Standard Specification for Quenched and Tempered Steel Bolts and Studs.

5. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
  6. ASTM C33 - Standard Specification for Concrete Aggregates.
  7. ASTM C76 - Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
  8. ASTM C150 - Standard Specification for Portland Cement.
  9. ASTM C361 - Standard Specification for Reinforced Concrete Low-Head Pressure Pipe.
  10. ASTM C404 - Standard Specification for Aggregates for Masonry Grout.
  11. ASTM C443 - Standard Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets.
  12. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>)).
  13. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft<sup>3</sup> (2,700 kN-m/m<sup>3</sup>)).
  14. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
  15. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
- D. American Wood-Preservers' Association:
1. AWWA C1 - All Timber Products - Preservative Treatment by Pressure Process.
  2. AWWA C3 - Piles - Preservative Treatment by Pressure Process.
- E. American Welding Society:
1. AWS D1.1 - Structural Welding Code - Steel.
- F. National Utility Contractors Association:
1. NUCA - Pipe Jacking & Microtunneling Design Guide.
  2. NUCA - Trenchless Excavation Construction Equipment & Methods Manual.

#### 1.4 DESIGN REQUIREMENTS

- A. Design casing pipe joints of leakproof construction. Design for earth and/or other pressures present.
- B. Design bracing, backstops, and use jacks of sufficient rating for continuous jacking without stoppage, except for adding pipe sections and as conditions permit, to minimize tendency of ground material to "freeze" around casing pipe.

#### 1.5 QUALITY ASSURANCE

- A. Perform work in accordance with NUCA Trenchless Excavation Construction Equipment & Methods Manual, NUCA Pipe Jacking & Microtunneling Design Guide, and AREMA guidelines.
- B. Perform Work in accordance with the Louisiana Department of Transportation and Development Standard Specification for Road and Bridges.

## 1.6 QUALIFICATIONS

- A. The Contractor performing the work shall be fully qualified, experienced and equipped to complete this work expeditiously and in a satisfactory manner. The Contractor shall provide documentation to the Owner, at the Owner's request, that he has prior experience with the required installation techniques.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- C. Protect piping system pieces from entry of foreign materials and water by temporary covers, completing sections of work, and isolating parts of completed system.
- D. Accept system components on site in manufacturer's original containers or configuration. Inspect for damage.
- E. Use wooden shipping braces between layers of stacked pipe. Stack piping lengths no more than 3 layers high.
- F. Store field joint materials indoors in dry area in original shipping containers. Maintain storage temperature of 60 to 85 degrees F.
- G. Support casing and carrier pipes with nylon slings during handling.

## 1.8 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements: Environmental conditions affecting products on site.
- B. Conduct operations so as not to interfere with, interrupt, damage, destroy, or endanger integrity of surface or subsurface structures or utilities, and landscape in immediate or adjacent areas.

## 1.9 FIELD MEASUREMENTS

- A. Verify invert elevations prior to excavation and installation of casing.

## 1.10 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Requirements for coordination.
- B. Coordinate work with Louisiana Department of Transportation and Development and utilities within construction area.

## PART 2 PRODUCTS

### 2.1 CASING AND JACKING PIPE MATERIALS

- A. Furnish materials in accordance with the Louisiana Department of Transportation and Development Standard Specification for Road and Bridges.
- B. Steel Casing Pipe: ASTM A53/A53M, 35,000 psi minimum yield strength, minimum wall thickness of 0.375 inch, full circumference welded joints in accordance with AWS D1.1 to withstand excavation forces.

### 2.2 CARRIER PIPE MATERIALS

- A. Public Water Utility Distribution Piping: As specified in Section 33 11 13.
- B. Sanitary Utility Sewerage Force Mains: As specified in Section 33 34 00.

### 2.3 GROUT AND COVER MATERIALS

- A. Soil backfill for trench approaches and pits shall be as specified in Section 31 23 17.
- B. Fill and Seal Grout at Pipe Ends: Concrete grout fill as specified in Section 32 05 23.
- C. Pressure Grout Mix: One part portland cement, and 6 parts mortar sand mixed with water to consistency applicable for pressure grouting.

### 2.4 ACCESSORIES

- A. Supports and Insulators:
  - 1. Timber:
    - a. Construction: Cross-sectional size to allow placement of carrier pipe in casing and to support barrel of carrier pipe. Provide notches to accommodate fastening. Treat notches at time of pipe installation.
    - b. Timber supports are to be treated in accordance with AASHTO M133.
  - 2. Steel and Plastic: 14 gage stainless steel band, 5/16 inch stainless steel flange bolts, heavy duty PVC liner, polyethylene or phenolic skids.
  - 3. Plastic: Polyethylene casing insulator band and skids with stainless steel bolts.
- B. Steel Strapping: ASTM A36/A36M.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.

- B. Verify connection to existing piping system size, location, and invert elevations are in accordance with Drawings.

### 3.2 PREPARATION

- A. Identify required lines, levels, contours, and datum locations.
- B. Locate, identify, and protect utilities indicated to remain from damage.
- C. Protect plant life, lawns, and other features remaining as portion of final landscaping.
- D. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- E. Establish elevations of casing with not less than 3 ft of cover.
- F. Establish minimum separation from sanitary sewer piping.

### 3.3 DEWATERING

- A. Intercept and divert surface drainage precipitation and groundwater away from excavation through use of dikes, curb walls, ditches, pipes, sumps or other means.
- B. Develop substantially dry subgrade for prosecution of subsequent operations.
- C. Comply with Louisiana Department of Environmental Quality requirements for dewatering to any watercourse, prevention of stream degradation, and erosion and sediment control.

### 3.4 EXISTING WORK

- A. Maintain access to existing facility and other remaining active installations requiring access. Modify installation as necessary to maintain access.

### 3.5 PITS OR APPROACH TRENCHES

- A. Excavate approach trenches or pits in accordance with installation plan and as site conditions require.
- B. Ensure casing entrance faces as near perpendicular to alignment as conditions permit.
- C. Establish vertical entrance face at least 1 foot above top of casing.
- D. Install dewatering measures and excavation supports as specified in Section 31 23 17.

### 3.6 CASING PIPE INSTALLATION

- A. Boring:

1. Push pipe into ground with boring auger rotating within pipe to remove spoil. Do not advance cutting head ahead of casing pipe except for distance necessary to permit cutting teeth to cut clearance for pipe. Arrange machine bore and cutting head to be removable from within pipe. Arrange face of cutting head to provide barrier to free flow of soft material.
2. When unstable soil is encountered during boring retract cutting head into casing to permit balance between pushing pressure and ratio of pipe advancement to quantity of soil.
3. When voids develop greater than outside diameter of pipe by approximately one inch, grout to fill voids.
4. When boring is obstructed, relocate, jack, or tunnel as directed by Architect/Engineer.

B. Jacking

1. Construct adequate thrust wall normal to proposed line of thrust.
2. Impart thrust load to pipe through suitable thrust ring sufficiently rigid to ensure uniform distribution of thrust load on full pipe circumference.

C. Drilling and Jacking

1. Use oil field type rock roller bit or plate bit made up of individual roller cutter units solidly welded to pipe which is turned and pushed for its entire length by drilling machine to give bit necessary cutting action.
2. Inject high density slurry (oil field drilling mud) to head as cutter lubricant. Inject slurry at rear of cutter units to prevent jetting action ahead of pipe.

D. Mining and Jacking: Utilize manual hand-mining excavation from within casing pipe as casing is advanced with jacks, allowing minimum ground standup time ahead of casing pipe.

### 3.7 PRESSURE GROUTING

- A. Pressure grout annular space between casing pipe and surrounding earth.

### 3.8 CARRIER PIPE INSTALLATION

- A. Clean, inspect, and handle pipe in accordance with Section 33 11 13.
- B. Place carrier pipe in accordance with Section 33 11 13. Exercise care to prevent damage to pipe joints when carrier pipe is placed in casing.
- C. Support pipeline within casing so no external loads are transmitted to carrier pipe. Attach supports to barrel of carrier pipe; do not rest carrier pipe on bells.
- D. Grout ends of casing to seal.

### 3.9 TOLERANCES

- A. Do not over cut excavation by more than 1 inch greater than outside diameter of casing pipe.

- B. Install casing pipe to vertical and horizontal alignment on Drawings within plus or minus 3 inches prior to installation of carrier pipe.
- C. Install pipe bells with minimum 1/2 inch clearance to casing.

### 3.10 REMOVAL OF FACILITIES AND CONTROLS

- A. Remove temporary facilities for casing installation and jacking operations in accordance with Section 01 50 00 - Temporary Facilities and Controls.

END OF SECTION

## SECTION 33 11 13

### PUBLIC WATER UTILITY DISTRIBUTION PIPING

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
1. Water piping.
  2. Tapping sleeves and valves.
  3. Valves.
  4. Meters.
  5. Air release valves.
  6. Precast concrete vaults and meter boxes.
  7. Bedding and backfill materials.
- B. Related Sections:
1. Section 32 05 23 – Cement & Concrete for Exterior Improvements
  2. Section 33 05 23 – Trenchless Utility Installation.
  3. Section 33 12 16 – Water Utility Distribution Valves.

##### 1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.
- B. American Society of Mechanical Engineers:
1. ASME B16.1 - Cast Iron Pipe Flanges and Flanged Fittings.
- C. ASTM International:
1. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
  2. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
  3. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.
  4. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>)).
  5. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft<sup>3</sup> (2,700 kN-m/m<sup>3</sup>)).
  6. ASTM D1784 - Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
  7. ASTM D2241 - Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).
  8. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

9. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
10. ASTM D3139 - Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
11. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

D. American Water Works Association:

1. AWWA C104 - ANSI Standard for Cement Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
2. AWWA C105 - ANSI Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems.
3. AWWA C110 - ANSI Standard for Ductile-Iron and Gray-Iron Fittings, 3 In. Through 48 In. (76 mm Through 1,219 mm), for Water.
4. AWWA C111 - ANSI Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
5. AWWA C115 - ANSI Standard for Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges.
6. AWWA C150 - ANSI Standard for Thickness Design of Ductile-Iron Pipe.
7. AWWA C151 - ANSI Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water or Other Liquids.
8. AWWA C153 - ANSI Standard for Ductile-Iron Compact Fittings for Water Service.
9. AWWA C200 - Steel Water Pipe 6 In. (150 mm) and Larger.
10. AWWA C203 - Coal-Tar Protective Coatings and Linings for Steel Water Pipelines - Enamel and Tape - Hot Applied.
11. AWWA C205 - Cement-Mortar Protective Lining and Coating for Steel Water Pipe - 4 In. and Larger - Shop Applied.
12. AWWA C206 - Field Welding of Steel Water Pipe.
13. AWWA C207 - Steel Pipe Flanges for Waterworks Service - Sizes 4 In. Through 144 In. (100 mm Through 3,600 mm).
14. AWWA C208 - Dimensions for Fabricated Steel Water Pipe Fittings.
15. AWWA C213 - Fusion-Bonded Epoxy Coating for the Interior and Exterior of Steel Water Pipelines.
16. AWWA C300 - Reinforced Concrete Pressure Pipe, Steel-Cylinder Type.
17. AWWA C301 - Prestressed Concrete Pressure Pipe, Steel-Cylinder Type.
18. AWWA C500 - Gate Valves for Water and Sewage Systems.
19. AWWA C600 - Installation of Ductile-Iron Water Mains and Their Appurtenances.
20. AWWA C605 - Water Treatment - Underground Installation of Polyvinyl Chloride PVC Pressure Pipe and Fittings for Water.
21. AWWA C606 - Grooved and Shouldered Joints.
22. AWWA C700 - Cold-Water Meters - Displacement Type, Bronze Main Case.
23. AWWA C701 - Cold-Water Meters - Turbine Type, for Customer Service.
24. AWWA C702 - Cold-Water Meters - Compound Type.
25. AWWA C706 - Direct-Reading, Remote-Registration Systems for Cold-Water Meters.
26. AWWA C900 - Polyvinyl Chloride (PVC) Pressure Pipe, and Fabricated Fittings, 4 In. through 12 In. (100 mm Through 300 mm), for Water Distribution.

- 27. AWWA C905 - Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 In. Through 36 In. (350 mm Through 1,200 mm), for Water Transmission and Distribution.
  - 28. AWWA M6 - Water Meters - Selection, Installation, Testing, and Maintenance.
- E. Manufacturer's Standardization Society of the Valve and Fittings Industry:
    - 1. MSS SP-60 - Connecting Flange Joint between Tapping Sleeves and Tapping Valves.
  - F. National Fire Protection Agency:
    - 1. NFPA 24 - Standard for the Installation of Private Fire Service Mains and Their Appurtenances.
  - G. National Sanitation Foundation:
    - 1. NSF/ANSI – Standard 61 Drinking Water System Components – Health Effects.

### 1.3 SUBMITTALS

- A. Contractor is required to submit six (6) copies of product data for review and approval. The Engineer shall promptly review this data, and return two (2) copies to the Contractor as accepted, or with requested modifications. Contractor to submit data on pipe materials, pipe fittings, valves, meter assemblies, and all accessories.

### 1.4 RECORD DRAWINGS

- A. The Contractor shall furnish an As-Built drawing showing the actual locations of piping mains, valves, connections, fire hydrants, service assemblies, etc.

## PART 2 PRODUCTS

### 2.1 GENERAL

- A. All water main piping and fittings shall be of the types specified herein and shall be NSF 61 approved.
- B. All materials used to convey water for public consumption shall be “lead free” as defined in the Louisiana Department of Health and Hospitals’ Fact Sheet included at the end of this section.

### 2.2 WATER PIPING

- A. Ductile Iron Pipe
  - 1. Ductile Iron Pipe shall comply with AWWA C150/A21.50, AWWA C151/A21.51 AWWA C111/A21.11, latest revisions. Pipe shall be minimum Class 50 for an internal working pressure of 250 psi with 100 psi surge allowance plus a safety factor of 2.0.
  - 2. Thickness of ductile iron pipe shall be in accordance with laying condition “Type 2” with a minimum of 5 feet of cover, AWWA C150/A21.50. Thickness design

will also be based on a minimum working pressure of 250 psi. Surface loading shall be AASHTO H-20 Truck.

3. Buried piping shall be Push-on or Mechanical Joint, with factory installed rubber gasket conforming to AWWA C111/A21.11, latest revisions.
  4. Piping above ground shall be Flanged Joint. Flanged shall comply with AWWA C115/A21.15, latest revision. Pipe barrel shall be designed in accordance with AWWA C151/A21.51, latest revision and nominal thickness of pipe shall be at least Class 53. All flanges shall be ductile iron and rated for a working pressure of 250 psi. Flanged joints shall not be used for underground installations except within structures.
  5. All ductile iron pipe shall be asphaltic coated outside and cement-mortar lined inside with seal coat of bituminous material all in accordance with AWWA C151/A21.51 and AWWA C104/A21.4 respectively.
  6. Fittings shall be cast of gray iron or ductile iron conforming to AWWA C110/A21.10 or AWWA C153/A21.53. Cast iron fittings shall be asphaltic coated outside and cement-mortar lined inside with a seal coat of bituminous material conforming to AWWA C104/A21.4, latest revision. Joints for cast iron fittings shall be mechanical joint conforming to AWWA C153/A21.53 for 3” through 16” and AWWA C111/A21.11 for 18” through 24”. Fittings shall have “O” ring seals.
  7. Where indicated on the drawings or otherwise required by the Contract Documents, pipe joints may require additional thrust restraint by incorporating mechanical glands in accordance with pipe manufacturer’s installation recommendations. Restrained joints shall meet requirements of AWWA C151, AWWA C110 and AWWA C111 standards. Joint design shall utilize a high strength ductile iron or structural steel gland assembled on the pipe along with retainer lugs, conforming to ASTM A536 strength requirements, latest revision. Stainless steel or corrosive resistant high-strength low-alloy nuts, bolts and rods shall complete the restrained joint assembly, delivering a full circumferential contact and support of the pipe wall. The mechanical joint restraining gland shall have a pressure rating equal to that of the pipe on which it is used. All bends and tie-ins shall require mechanical restraints, including thrust blocking.
  8. Where indicated on the drawings or otherwise required by the Contract Documents, special external corrosion protection shall be provided for all ductile iron pipe and fittings. External corrosion protection shall be accomplished by complete encasement of the pipe with 8 mil thick polyethylene immediately before installing the pipe. Polyethylene encasement material shall be in accordance with requirements of AWWA C105/A21.5. The polyethylene encasement shall provide a “loose” wrap with no tears, rips or other perforations of the material.
- B. Polyvinyl Chloride (PVC) Pipe – C900
1. C900 PVC pipe shall be the gasket joint bell type, meeting the requirements of AWWA C900 for sizes 4” to 12” diameter or AWWA C905 for sizes 14” to 48” diameter. Unless otherwise specified on the Drawings, Pipe shall be Pressure Class 165 (DR 25) with cast iron pipe equivalent OD.
  2. Joints for PVC pipe shall be gasketed, push-on type conforming to the requirements of ASTM D3139 with joint gaskets complying with ASTM F477. Joints between pipe and metal fittings shall be compression type mechanical

joints conforming with the requirements of ASTM D3139 and AWWA C111/A21.11 with joint gaskets complying with AWWA C111/A21.11. Pipe and fittings shall be assembled with a non-toxic lubricant NSF tested, and certified suitable for potable water distribution products. Provisions shall be made for contraction and expansion at each joint. Integral bells or affixed couplings shall be tested with the pipe.

3. All fittings, tees, bends, crosses and specials used in connection with PVC pipe shall be of the same material and minimum thickness as specified for iron pipe. The fittings shall be made specifically for the pipe utilized, and only standard manufactured fittings will be acceptable. Special adaptors required to transition from PVC pipe to another type of pipe or to a valve or other appurtenance shall be of the type as recommended by the PVC pipe manufacturer. Only standard manufacturer adaptors will be acceptable.
4. Mechanical restraints for PVC pipe shall consist of the same physical properties as those described for ductile iron pipe with the exception of the circumferential contact support being designed for AWWA C900 pipe. Restraints shall be Uni-Flange 1300, Megalug 1100 PV or approved equal.
5. All PVC pipe shall have a 10 gauge insulated solid copper or copper-clad steel tracer wire installed in the trench with the pipe to facilitate locating the pipe with an electronic pipe locator. This wire is to be taped on top of the pipe at 10-foot intervals.

C. Polyvinyl Chloride (PVC) Pipe – Pressure-Rated

1. Pressure-Rated PVC pipe shall be the gasket joint bell type, meeting the requirements of ASTM D2241 and/or ASTM D3139. Unless otherwise specified on the Drawings, Pipe shall be Class 160 (SDR 26), except that PVC water mains located under roads or installed by jack & bore methods shall be Class 200 (SDR 21).
2. Joints for PVC pipe shall be factory installed rubber gasket seal joints conforming to ASTM F477 requirements. Solvent-cement type joints are not acceptable. Pipe and fittings shall be assembled with a non-toxic lubricant NSF tested, and certified suitable for potable water distribution products. Provisions shall be made for contraction and expansion at each joint. Integral bells or affixed couplings shall be tested with the pipe.
3. All fittings, tees, bends, crosses and specials used in connection with PVC pipe shall be of the same material and minimum thickness as specified for iron pipe. The fittings shall be made specifically for the pipe utilized, and only standard manufactured fittings will be acceptable. Special adaptors required to transition from PVC pipe to another type of pipe or to a valve or other appurtenance shall be of the type as recommended by the PVC pipe manufacturer. Only standard manufacturer adaptors will be acceptable.
4. Mechanical restraints for PVC pipe shall consist of the same physical properties as those described for ductile iron pipe with the exception of the circumferential contact support being designed for ASTM D2241 pipe. Restraints shall be Uni-Flange 1300, Megalug 1100 PV or approved equal.
5. All PVC pipe shall have a 10 gauge insulated solid copper tracer wire installed in the trench with the pipe to facilitate locating the pipe with an electronic pipe locator. This wire is to be taped on top of the pipe at 10-foot intervals.

- D. High Density Polyethylene Pipe (HDPE)
1. HDPE pipe shall be extra-high molecular weight high density polyethylene 4710 and shall conform in all respects to AWWA C901/C906 and ASTM F714 and shall meet the quality standard of the National Sanitation Foundation Standard 61 and bear its seal of approval as safe for potable water. HDPE pipe shall be Class 200 (SDR 11), Ductile Iron Pipe size. Piping shall be Design-Flow HDPE pipe, as manufactured by Independent Pipe Products, Inc., or approved equal. The minimum opening in the pipe shall be of equal or greater size as connecting pipe. No restriction of flow will be allowed.
  2. All HDPE water pipe shall be connected together using the heat fusion butt-weld method. All joints shall be leak-tight and fully restrained.
  3. All fittings for HDPE pipe shall be as specified for iron pipe and shall include stainless steel inserts. All fittings shall be compatible with the pipe on which they are installed and only standard manufactured fittings will be acceptable. Fittings shall be Tyler/Union or approved equal.
  4. All HDPE pipe shall have a 10 gauge insulated solid copper or copper-clad steel tracer wire installed in the trench with the pipe to facilitate locating the pipe with an electronic pipe locator. This wire is to be taped on top of the pipe at 10-foot intervals.

### 2.3 TAPPING SLEEVES AND VALVES

- A. Tapping Sleeves:
1. All tapping sleeves shall be cast iron or ductile iron sleeves meeting the requirements of AWWA C110/A21.10, in two sections, the halves to be bolted together along the centerline of the pipe.
  2. Mechanical joint ends shall conform to AWWA C111/A21.11.
  3. Flanged ends shall conform to AWWA C110/A21.10, Class 250 lb.
  4. Bolts and nuts will be of a high strength low alloy corrosion resistant steel conforming to ASTM A325 (Type 3). All mechanical joint glands shall be cast iron.
  5. Branch outlet or tapping sleeve shall be flanged, with a machined projection or recess to mate with tapping valve inlet to assure correct alignment.
- B. Tapping Valves:
1. Tapping valves shall conform to the requirements of AWWA C500 with the following exceptions:
    - a. Tapping valves shall have oversize seat rings to permit entry of standard tapping machine cutters.
    - b. In the open position, valve gates shall be clear of the ports, so that cutter will pass through without making contact with the gates.
    - c. Valves shall have an inlet flange conforming to ASA B 16.1, Class 125, with a machined recess to mate the tapping sleeve outlet flange to assure correct alignment.
    - d. Valves shall have a standard mechanical joint outlet end and shall fit any standard tapping machine.

## 2.4 VALVES

- A. Valves: Conform to Section 33 12 16.

## 2.5 BEDDING AND BACKFILL MATERIALS

- A. Bedding materials shall be installed as indicated on the Drawings using select material. Select material shall be defined as fine granular material, or native soil, consisting of sand, sandy loam or loam free of excessive clay (less than 5 percent). When wet, the material shall not form mud or muck.
- B. Haunching backfill is defined as backfill material placed from the bottom of pipe to the pipe springline. Haunching backfill shall consist of approved native soil or fine granular backfill, and shall be tamped to provide the lower part of the pipe with support as indicated on the Drawings.
- C. Initial backfill is defined as backfill material placed to a point 12" above the top of the pipe. Initial backfill may consist of finely divided native material stockpiled from the excavation, if approved by the engineer, or fine granular material. Initial backfill shall be compacted to 95% maximum density, as defined by the Standard Proctor test.
- D. Final backfill is defined as backfill material placed from a point 12" above the top of the pipe to existing grade, sub-grade, or base as required. Final backfill may consist of native material, if approved by the engineer, or select material. The degree of backfilling compaction density required shall be governed by the location of the water main.
  - 1. Whenever trenches fall under known structural pavements (streets, drives, or walkways), the trench shall be compacted to 95% maximum density, as defined by the Standard Proctor test.
  - 2. Otherwise, the trench shall be compacted to 90% maximum density, or to the insitu density of the surrounding soil.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Contractor shall carefully examine the project site and verify existing conditions before starting work.
- B. Contractor shall verify that existing utility water main size, location, and depth are as indicated on Drawings.
- C. All pipe, fittings, and accessories delivered to the job site shall be carefully examined by both the Contractor and the Engineer or his representative. This inspection does not exempt the Contractor from supplying the materials specified by the Contract. All materials found to have flaws, cracks, or other defects, whether before or after installation, shall be rejected by the Engineer and will be repaired or replaced by the Contractor as directed by the Engineer, at no additional cost.

### 3.2 PREPARATION

- A. Pre-Construction Site Photos:
  - 1. Take photographs along centerline of proposed pipe trench; minimum one photograph for each 200 feet of pipe trench.
  - 2. Show mail boxes, curbing, lawns, driveways, signs, culverts, and other existing site features.
  - 3. Include project description, date taken and sequential number on back of each photograph.
- B. Cut pipe ends square, ream pipe and tube ends to full pipe diameter, remove burrs. Use only equipment specifically designed for pipe cutting. The use of chisels or hand saws will not be permitted. Grind edges smooth with beveled end for push-on connections.
- C. Remove scale and dirt on inside and outside before assembly.
- D. Prepare pipe connections to equipment with flanges or unions.

### 3.3 SURFACE PREPARATION, PRIMING AND PAINTING

- A. All exposed metal piping, valves, fittings, etc. which have not received a suitable system of paints from the factory shall be cleaned, primed and painted as specified in this section.
- B. All metal surfaces to be painted shall be prepared by sandblasting or other methods to provide a surface suitable for paint adherence.
- C. All above ground metal piping and fittings, after cleaning, shall be primed and painted with a four- coat Alkyd paint system to a total dry film thickness of 5 mils. Immediately after surface preparation, each surface shall be primed with one coat of red lead iron oxide alkyd linseed oil paint conforming to Federal Specifications TT-P-86a to a minimum dry film thickness of 1 mil. Any primer surface damaged after priming operations and prior to application of the paint system shall be re-cleaned and re-primed as specified above. The initial three coats of paint shall be modified in color to contrast with successive coats. All painting shall be done in accordance with SSPC Paint Applications Specifications No. 1 – Latest Revision and in accordance with the manufacturer’s suggested application procedures.
- D. All below ground metal piping and fittings shall be painted with two coats of a coal tar epoxy paint. Each coat shall have a dry film thickness of 6 – 8 mils for a total dry film thickness of 12 – 16 mils. The limits of the coal tar epoxy application shall be all piping or fittings below, or in contact with, the ground surface to a point 12” above finish grade.

### 3.4 EXCAVATION AND BEDDING

- A. Excavate pipe trench in accordance with the Drawings. Excavated trench shall be of sufficient width to allow proper handling of the pipe and thorough compaction of backfill around the pipe.

- B. Dewater excavations to maintain dry conditions and preserve final grades at bottom of excavation.
- C. Stones found in the excavated trench shall be removed for a depth of at least six inches below the bottom of the pipe.
- D. Place bedding material as required.
- E. The subgrade and/or bedding material shall be accurately shaped and trimmed to support the pipe barrel. Each pipe section, when in place, shall have a uniform bearing on the supporting soil for the full length of the pipe barrel.

### 3.5 INSTALLATION - PIPE

- A. Install ductile iron pipe in accordance with AWWA C600.
- B. Install PVC pipe in accordance with AWWA C605.
- C. Unless otherwise indicated on the Drawings, water pipe shall be installed to clear all utility lines and shall have a minimum of 36 inches of cover.
- D. Proper equipment shall be used for lowering sections of pipe into trenches. Under no circumstances shall pipe be laid in water and no pipe shall be laid when trench conditions or weather are unsuitable for work. Full responsibility for the diversion of drainage and for dewatering of trenches during construction shall be borne by the Contractor.
- E. All dirt and foreign matter shall be removed from the inside of pipe and fittings before they are lowered into the trench. Pipe and fittings shall be kept clean during and after laying. Care shall be taken to keep dirt out of the jointing space.
- F. At the end of each day's work, and when pipe laying is discontinued for any appreciable period, open ends of pipe shall be closed with a cast plug or cap securely in place in all openings and at the end of the line.
- G. Pipe shall be supported to proper line and grade and secured against upheaval or floating during the placement of bedding.
- H. All bends and tie-in assemblies shall require restraint by thrust blocking. Additional restraining devices shall be required as indicated in the Drawings.
- I. All pipe and fittings shall be lowered carefully into the trench in such manner as to prevent damage to pipe, fittings, or linings. Neither pipe nor fittings shall be dropped or dumped into the trench.
- J. Cutting of pipe, when needed, shall be done in a neat and workmanlike manner without damage to pipe or pipe lining.
- K. Unless otherwise directed by the Engineer, pipe shall be laid with bell ends facing the direction of laying. For lines on a appreciable slope, bells shall, at the direction of the Engineer, face upgrade. Wherever necessary to deflect pipe from a straight line in either

the horizontal or vertical plan, to avoid any obstructions, or for other acceptable reasons, the degree of deflection at any joint shall not be greater than that recommended by the pipe manufacturer. Any necessary deflections greater than that recommended shall require fittings.

L. Separation of Water Mains and Sewer Lines

1. Water mains shall be generally laid at least ten (10) feet horizontally from any existing or proposed sewer line. The distance shall be measured from edge to edge. In cases where it is not practical to maintain a ten (10) foot separation, the Engineer, with approval of the Louisiana Department of Health and Human Resources, may allow water main to be installed closer to a sewer line provided that:
  - a. Water and sewer mains are laid in separate trenches not less than six (6) feet apart (face to face), or
  - b. The water main is laid on an undisturbed earth shelf located on one side of the sewer line at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer line.
2. Water mains crossing sewers shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. At crossings, one full length of water pipe shall be located so both joints will be as far from the sewer as possible. Special structural support for the water and sewer pipes, if required, shall be installed by the Contractor at no direct pay.

M. Install valves in accordance with Section 33 12 16.

3.6 THRUST RESTRAINT

- A. Class R concrete, as defined in Section 32 05 23, shall be placed at all valves, tees, bends, caps, dead-end, plugs, etc. as detailed in the Drawings. Concrete thrust block shall be placed against undisturbed earth, and shall be located so pipe fittings and joints will be accessible for repair.
- B. Additional thrust restraint devices shall be installed as indicated on the Drawings.

3.7 HYDROSTATIC TESTING

- A. All hydrostatic testing shall be done in accordance with the manufacturer's specifications, or in accordance with AWWA C600 or AWWA C605, and in accordance with this specification, whichever is more stringent. The contractor shall furnish gages, meters, water and all other material, tools, labor equipment and other necessary assistance of conducting the tests. The Engineer shall be notified at least 48 hours in advance of the hydrostatic test.
- B. The pipeline shall be tested with a pressure of 150 psi, maintained over a continuous four (4) hour period. After a successful four (4) hour pressure test has been achieved, a two (2) hour leak test shall be run at the same 150 pound pressure. If the test indicates a leakage in excess of ten (10) gallons per inch of internal pipe diameter per mile of pipeline per 24 hours, the Contractor will be required to find and fix the leak. All known leaks shall be

stopped, regardless of this test requirement. The cost of finding and repairing any leak shall be at the Contractor's expense.

- C. The Contractor may elect to pressure test against existing valves. However, the Owner does not guarantee the water tightness of existing valves. Should a new water main be tested against an existing valve and the test fails, the contractor must then install proper blocking and retest the system as provided herein, at his expense.
- D. The Contractor shall provide temporary tie-ins and flushing devices as required to perform the required hydrostatic testing at no direct pay.

### 3.8 DISINFECTION OF POTABLE WATER PIPING SYSTEM

- A. All new water lines including appurtenances shall be disinfected following the acceptance of the hydrostatic test in accordance with AWWA C651. Mains shall be thoroughly flushed before introduction of the disinfectant.
- B. All new mains and repaired portions of, or extensions to, existing mains shall be thoroughly disinfected by the use of chlorine or chlorine compounds before being placed in use. The rate of application of chlorine shall be in such proportion to the rate of water entering the pipe or other appurtenances that the chlorine dose applied to the water shall be 25 mg/L. Chlorinated water shall be retained long enough to destroy non-spore-forming bacteria. The retention period shall be a minimum of twenty-four (24) hours and preferably longer, as may be directed. After the chlorine treated water has been retained for the required time, the chlorine residual at pipe extremities and at other representative points shall be at least 10 mg/L. If the residual is less than 10 mg/L, the disinfection procedure shall be repeated until a 10 mg/L residual is obtained, as required above.
- C. While the disinfectant is being applied to any section of the system, the water will be allowed to escape at all extremities of this section until the presence of chlorine is evident by measuring with an orthotolidin test kit furnished by the contractor. If bacteriological tests indicate insufficient disinfection at the completion of the test and flushing of the system, the procedure shall be repeated on that part of the system at no additional compensation. The cost of disinfection shall be included in the bid price.
- D. The Contractor shall take whatever steps necessary to prevent the backflow of the strong chlorine solution into any existing water distribution system.
- E. Water from new systems, or from new parts of existing systems, shall not be furnished for consumer's use until tests performed by a laboratory which is certified by the state health officer have shown the new system or new part of the existing system to be free from contamination by Coliform bacteria (following EPA approved procedures prescribed in *Standard Methods for the Examination of Water and Wastewater*, Nineteenth Edition). Samples shall not be collected from the new facilities until such new facilities have been disinfected as prescribed in Paragraph B above, and the chlorinated water thoroughly flushed from the system.

END OF SECTION

## State of Louisiana Safe Drinking Water Program

### Low lead requirements in plumbing and potable water distribution systems:

Concentrations of lead found in drinking water do not typically derive from natural sources. Instead, the most common cause of lead concentrations in potable water is contamination from the gradual corrosion of water supply pipes and plumbing fixtures as well as the solder, or flux, used for installation and repair. Most current regulatory efforts to control lead in drinking water focus primarily on reducing the lead content of these system components.

On June 29, 2011, Gov. Bobby Jindal signed Louisiana House Bill 471 and enacted Act Number 362. This Act takes effect January 1, 2013, and prohibits the use, installation, repair, introduction into commerce, or sale of pipes, fittings, fixtures, solder, or flux that are not “lead free” when used for conveying water for human consumption.

The Department of Health and Hospitals (DHH) has prepared this fact sheet to help clarify how Act 362 redefines “lead-free” and how these new, lowered lead limits will affect various components used in the construction of new and existing plumbing and water distribution projects. In addition, this fact sheet will describe the key components of implementation including code development, applicable performance and material standards, enforcement and exceptions.

### Reduced Lead Requirements of Act 362 (effective January 1, 2013):

Under Act 362, the lead content of pipes, fittings and fixtures will be reduced from not more than 8.0 percent lead to not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings and fixtures.

All pipe, plumbing fittings and fixtures, solder or flux used in the installation or repair of any public water system or any plumbing in a facility providing water for human consumption must meet the new low lead requirements, except when necessary for the repair of leaded joints of cast iron pipes.

**EXCEPTIONS:** The following materials are not required to meet the reduced lead requirements of Act 362:

- ▶ Pipes, pipe fittings, plumbing fittings or fixtures, including backflow preventers, which are used exclusively for non-potable services such as manufacturing, fire sprinkler system, industrial processing, irrigation, outdoor watering or any other uses where the water is not anticipated to be used for human consumption; or
- ▶ Toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, showers, safety shower flushes, service saddles or water distribution main gate valves that are two inches in diameter or larger.
- ▶ Materials purchased or acquired by a public water system prior to January 1, 2013, can continue to be utilized until January 1, 2014.

In addition to the installation requirements, no person shall introduce into commerce any pipe, pipe or plumbing fitting or fixture intended to convey or dispense water for human consumption through drinking or cooking that is not lead-free, including kitchen faucets, bathroom faucets or any other end-use devices intended to convey or dispense water for human consumption through drinking or cooking.

### Louisiana Administrative Code (LAC) Updates:

These new low-lead requirements will be published in Parts XII (Water Supplies) and XIV (Plumbing)

**OVER**



## Louisiana Lead Reduction **FACTS** *(continued)*

of LAC Title 51 (Sanitary Code). Under Parts XII and XIV, all applicable potable water piping, fixtures, pipe related products and materials that join or seal pipes shall be evaluated and listed as conforming with NSF/ANSI 372-Drinking Water System Components, Lead Content or shall be certified to be lead-free by an independent American National Standards Institute (ANSI)-accredited third party testing laboratory, inspection agency or other organization concerned with product evaluation.

### **Enforcement:**

The enforcement of the lead reduction law will be handled during plan reviews, permit inspections, surveys, complaints, etc. For plumbing-related violations, the enforcement will typically be handled at the local level in accordance with their ordinances, laws or other regulations. When handled at the state level, the enforcement process will be in accordance with Part I of LAC Title 51.

### **Potential Health Effects of Lead Exposure:**

- ▶ Lead is a neuro-toxic metal that accumulates in both soft tissue and bones. Even low-level exposure can lead to a range of adverse health effects, including brain, nervous system and blood disorders.
- ▶ Children and Infants— Exposure can result in delays in physical or mental development, reduced intelligence, learning disabilities, attention deficit disorder, behavioral problems, stunted growth, impaired hearing and kidney damage.
- ▶ Adults— Exposure can result in kidney problems, high blood pressure, nerve disorders, fertility problems, muscle and joint pain, irritability, memory and concentration problems. Pregnant women can pass lead contained in their bodies to their fetuses.

### **Highlighted Facts:**

- ▶ Act 362 Becomes Effective January 1, 2013.
- ▶ Prohibits the use, installation or repair, introduction into commerce, or selling of pipes, fittings, fixtures, solder, or flux that is not “lead-free” when used for conveying water for human consumption.
- ▶ Pipes, fittings and fixtures that are used exclusively for non-potable services are not required to meet the reduced lead requirements of Act 362.
- ▶ Materials purchased or acquired by a public water system prior to January 1, 2013 can continue to be utilized until January 1, 2014.
- ▶ All applicable piping, fixtures, pipe-related products and materials that join or seal pipes shall be evaluated and listed as conforming with NSF/ANSI 372-Drinking Water System Components, Lead Content or shall be certified to be lead free by an independent ANSI-accredited third party testing laboratory.

## **State of Louisiana**

### **Safe Drinking Water Program**

### **Department of Health and Hospitals**

### **Office of Public Health**

628 N. 4th Street  
Baton Rouge, LA 70802

**Phone: 225-342-7499**

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[www.dhh.la.gov/SafeDrinkingWater](http://www.dhh.la.gov/SafeDrinkingWater)

## SECTION 33 12 13

### WATER SERVICE CONNECTIONS

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Pipe and fittings for domestic water service connections to buildings.
  - 2. Corporation stop assembly.
  - 3. Meter valve.
  - 4. Water meters.
  - 5. Backflow preventers.
  - 6. Meter boxes.
  
- B. Related Sections:
  - 1. Section 31 23 17 - Trenching Excavation and Backfill.
  - 2. Section 33 11 13 - Public Water Utility Distribution Piping.

##### 1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Water Service Pipe and Fittings:
  - 1. Basis of Measurement: By linear foot. Basis of Payment: Includes hand trimming excavation, pipe and fittings, locator wire, bedding, connection to service meter assembly and to municipal utility water source.
  
- B. Service Tap & Meter Connection:
  - 1. Basis of Measurement: By the unit.
  - 2. Basis of Payment: Includes tapping saddle, corporation stop, meter valve, fittings and accessories.

##### 1.3 REFERENCES

- A. American Association of State Highway and Transportation Officials:
  - 1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.
  
- B. American Society of Mechanical Engineers:
  - 1. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings.
  - 2. ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings.
  
- C. American Society of Sanitary Engineering:
  - 1. ASSE 1012 - Backflow Preventer with Intermediate Atmospheric Vent.
  - 2. ASSE 1013 - Reduced Pressure Principle Backflow Preventers.
  
- D. ASTM International:

1. ASTM A48/A48M - Standard Specification for Gray Iron Castings.
  2. ASTM B62 - Standard Specification for Composition Bronze or Ounce Metal Castings.
  3. ASTM B88 - Standard Specification for Seamless Copper Water Tube.
  4. ASTM C858 - Standard Specification for Underground Precast Concrete Utility Structures.
  5. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup> (600 kN-m/m<sup>3</sup>)).
  6. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft<sup>3</sup> (2,700 kN-m/m<sup>3</sup>)).
  7. ASTM D1785 - Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
  8. ASTM D2241 - Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).
  9. ASTM D2466 - Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.
  10. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.
  11. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
  12. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
- E. American Welding Society:
1. AWS A5.8 - Specification for Filler Metals for Brazing and Braze Welding.
- F. American Water Works Association:
1. AWWA C600 - Installation of Ductile-Iron Water Mains and Their Appurtenances.
  2. AWWA C700 - Cold-Water Meters - Displacement Type, Bronze Main Case.
  3. AWWA C701 - Cold-Water Meters - Turbine Type, for Customer Service.
  4. AWWA C702 - Cold-Water Meters - Compound Type.
  5. AWWA C706 - Direct-Reading, Remote-Registration Systems for Cold-Water Meters.
  6. AWWA C800 - Underground Service Line Valves and Fittings.
  7. AWWA C901 - Polyethylene (PE) Pressure Pipe and Tubing, 1/2 in. through 3 in., for Water Service.
  8. AWWA M6 - Water Meters - Selection, Installation, Testing, and Maintenance.

#### 1.4 SUBMITTALS

- A. Contractor is required to submit six (6) copies of product data for review and approval. The Engineer shall promptly review this data, and return two (2) copies to the Contractor as accepted, or with requested modifications. Contractor to submit data on pipe materials, pipe fittings, valves, meter assemblies, and all accessories.

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. During loading, transporting, and unloading of materials and products, exercise care to prevent any damage.
- C. Store products and materials off ground and under protective coverings and custody, away from walls and in manner to keep these clean and in good condition until used.
- D. Exercise care in handling precast concrete products to avoid chipping, cracking, and breakage.

## PART 2 PRODUCTS

### 2.1 WATER PIPING AND FITTINGS

- A. All water piping, fittings and appurtenances shall be NSF approved.
- B. Copper Tubing: ASTM B88, Type K, annealed:
  - 1. Fittings: ASME B16.18, cast copper, or ASME B16.22, wrought copper.
  - 2. Joints: Compression connection or AWS A5.8, BCuP silver braze.
- C. PVC Pipe: ASTM D2241, SDR-21 for 200 psig rating:
  - 1. Fittings: ASTM D2466, PVC.
  - 2. Joints: ASTM D2855, solvent weld.
- D. Polyethylene Pipe: AWWA C901:
  - 1. Fittings: AWWA C901, molded or fabricated.
  - 2. Joints: Compression or Butt fusion.

### 2.2 CORPORATION STOP ASSEMBLY

- A. Manufacturers:
  - 1. Ford Model F-1100-4.
  - 2. Substitutions: Section 01 60 00 - Product Requirements.
- B. Corporation Stops:
  - 1. Brass body conforming to ASTM B62.
  - 2. Inlet end threaded for tapping according to AWWA C800.
  - 3. Outlet end suitable for service pipe specified.
- C. Service Saddles:
  - 1. Manufacturers:
    - a. Ford Model S-71.
    - b. Substitutions: Section 01 60 00 - Product Requirements.

## 2.3 CURB STOP ASSEMBLY

- A. Manufacturers:
  - 1. Ford Model B43-342WR.
  - 2. Substitutions: Section 01 60 00 - Product Requirements.
- B. Meter Valves:
  - 1. Brass body conforming to ASTM B62.
  - 2. Plug type valve.
  - 3. Positive pressure sealing.

## 2.4 WATER METERS

- A. Manufacturers:
  - 1. Badger Model M25
  - 2. Substitutions: Section 01 60 00 - Product Requirements.
- B. Meter:
  - 1. Brass body meter of the magnetic drive, sealed register, disc type design with suitable strainer ahead of disc.
  - 2. Service: Cold water.
  - 3. Operating Range:
    - a. 5/8" x 3/4": ¼ - 20 gpm.
    - b. 3/4": ½ - 30 gpm.
    - c. 1": ¾ - 50 gpm.
    - d. 1 1/2": 1 ½ - 100 gpm.
    - e. 2": 2 - 160 gpm.
  - 4. Maximum Operating Pressure: 150 psi.
  - 5. Accuracy: 1-1/2 percent.
  - 6. Endpoint: Badger Orion LTE-M, twist-tight.
  - 7. Register: Badger HRE, 8 dial
  - 8. Maximum Counter Reading:
    - a. 10 million gallons for meter sizes up to 1".
    - b. 100 million gallons for meter sizes 1 ½" to 2".

## 2.5 BACKFLOW PREVENTERS

- A. Manufacturers:
  - 1. Ford Model HHS-31.
  - 2. Substitutions: Section 01 60 00 - Product Requirements.
- B. Dual Check Valve Assemblies:
  - 1. Comply with ASSE 1024.
  - 2. Brass body conforming to AWWA Standard C800, with stainless steel and acetal plastic working parts.
  - 3. In-line accessible such that backflow preventer is serviceable without removing the valve from the service line.

## 2.6 METER BOXES

- A. Manufacturers:
  - 1. NDS Model D1200 with cast iron reader.
  - 2. Brooks precast concrete meter boxes with cast iron reader.
  - 3. Substitutions: Section 01 60 00 - Product Requirements.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify building service connection and municipal utility water main size, location, and invert are as indicated on Drawings.

### 3.2 PREPARATION

- A. Cut pipe ends square, ream pipe and tube ends to full pipe diameter, remove burrs.
- B. Remove scale and dirt on inside and outside before assembly.
- C. Prepare pipe connections to equipment with flanges or unions.

### 3.3 INSTALLATION - WATER METER ASSEMBLY

- A. The contractor shall furnish and install service assemblies where shown on the plans or as directed by the Engineer. Service assemblies shall be installed according to the size and type designated on the Drawings. The completed assembly shall include all items as detailed on the Drawings, and shall be installed as per the manufacturer's instructions.

### 3.4 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

- A. Flush and disinfect system in accordance with Section 33 11 13.

END OF SECTION

## SECTION 33 12 16

### WATER UTILITY DISTRIBUTION VALVES

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Resilient wedge gate valves.
  - 2. Valve boxes.
- B. Related Sections:
  - 1. Section 31 23 17 - Trenching Excavation and Backfill.
  - 2. Section 32 05 23 - Cement & Concrete for Exterior Improvements.
  - 3. Section 33 11 13 - Public Water Utility Distribution Piping.

##### 1.2 REFERENCES

- A. American Water Works Association:
  - 1. AWWA C500 - Metal-Seated Gate Valves for Water Supply Service.
  - 2. AWWA C515 – Reduced Wall, Resilient-Seated Gate Valves for Water Supply Service.
  - 3. AWWA C550 - Protecting Epoxy Interior Coating for Valves and Hydrants.
  - 4. AWWA C600 - Installation of Ductile-Iron Water Mains and Their Appurtenances.
- B. National Sanitation Foundation:
  - 1. NSF 61 - Drinking Water System Components - Health Effects

##### 1.3 SUBMITTALS

- A. Contractor is required to submit six (6) copies of product data for review and approval. The Engineer shall promptly review this data, and return two (2) copies to the Contractor as accepted, or with requested modifications. Contractor to submit data on pipe materials, pipe fittings, valves, meter assemblies, and all accessories.

##### 1.4 DELIVERY, STORAGE AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing and protecting products.
- B. Prepare valves and accessories for shipment according to AWWA Standards and seal valve and ends to prevent entry of foreign matter into product body.
- C. Store products in areas protected from weather, moisture, or possible damage; do not store products directly on ground; handle products to prevent damage to interior or exterior surfaces.

## PART 2 PRODUCTS

### 2.1 RESILIENT WEDGE GATE VALVES – STANDARD TYPE

- A. Manufacturers:
  - 1. M & H 7000 Series
  - 2. Mueller A-2360 series.
  - 3. American Darling 2500 series.
  - 4. Clow F-6100 series.
  - 5. Substitutions: Section 01 60 00 - Product Requirements.
- B. All gate valves shall be resilient wedge type meeting the requirements of AWWA C-515 except as amended herein. All gate valves shall be provided with “O” ring seals. AWWA C-515 gate valves shall be provided with bronze stem nut and wedge lugs guided within the valve body with machined guides. Gate valves shall open counterclockwise and shall have a working pressure rating of 250 PSI. Gate valves shall have mechanical joint ends for below ground installations and flanged ends for above ground installations.
- C. Gate valves 3” or smaller shall be iron body with bronze trim. Valves shall be of the mechanical joint or threaded end type.

### 2.2 RESILIENT WEDGE GATE VALVES – INSERTION TYPE

- A. Manufacturer:
  - 1. Hydra-Stop Insta-Valve 250 Patriot Series.
- B. Insertion valve shall be an all stainless steel body resilient wedge gate valve designed for permanent use in potable water. Valve design shall allow the valve to be installed into an existing pressurized pipeline while maintaining constant pressure and service without system shutdown. No restraining devices, restraining fasteners or transition gaskets shall be required for installation or operation of the valve.
- C. Traditional line tapping methods shall be used for the installation of all insertion valves to allow removal of a single coupon for system evaluation. Reaming the pipe, complete removal of a section of pipe or milling a slot in the pipe shall be prohibited.
- D. All insertion valves shall be installed by companies trained and authorized by the approved valve manufacturer.
- E. Valve Body and Bonnet Construction:
  - 1. Insertion valves shall have a stainless steel body, carbon steel epoxy coated bonnet and a reinforced composite polymer valve cartridge to provide corrosion resistance, strength and a pressure rating that meets or exceeds the requirements of resilient seated gate valves.
  - 2. Insertion valves must be capable of working on Cast Iron or Ductile Iron Class A, B, C and D, IPS PVC, C900 and C909 PVC, Steel and AC pipe diameters without changing either top or bottom portion of split valve body or using a transition gasket.

3. Insertion valves must provide a solid support of the host pipe through the entire laying length of the valve body. No gaps or space between the valve body and host pipe shall be accepted.
  4. Insertion valves shall be rated for 250 psig maximum working pressure and the pressure rating must be permanently marked into the valve body.
  5. Insertion valves must be hydrostatically pressure tested to 1.25 times the system operating pressure (minimum) or 1.5 times the insertion valve's 250 psig maximum pressure rating. The test shall be sustained for a minimum of 15 minutes prior to tapping the host pipe. If the insertion valve body is moved, the pressure test must be completed again before the host pipe is tapped.
- F. Resilient Wedge Gate Assembly:
1. Insertion valves shall have an EPDM molded resilient wedge seal affixed into a reinforced composite polymer valve cartridge. The entire assembly shall be inert and impervious to corrosion.
  2. The valve cartridge shall be engineered to come into contact with the interior of the host pipe and an engineered sealing surface in the valve body to create a seal. The resilient wedge shall be reinforced where the wedge contacts the host pipe.
  3. Pressure equalization on the downstream or upstream side of the closed wedge shall not be necessary to open the valve.
  4. The wedge shall be symmetrical and seal equally well with flow in either direction.
  5. The resilient wedge must ride inside a minimum of four body channels to maintain wedge alignment throughout its travel and to achieve maximum fluid control.
  6. Insertion valves shall have a full size, full port flow way that is unobstructed and free of depressions.
- G. Insertion valves shall utilize four O-Rings to seal between valve body to valve bonnet and valve stem. O-Rings shall be located so as to ensure the 250 psig pressure worthiness and prevent ground water and/or foreign materials from entering the valve.
- H. Valve Stem:
1. Insertion valves shall be NRS (non-rising stem) and shall operate with standard turns 3 turns per diameter inch to open or close.
  2. Insertion valves shall be operated by a 2" square nut, opening left.
  3. The valve stem shall be made of stainless steel.
  4. The valve stem shall be able to withstand torque of 700 ft. lbs. without compromising operation.
  5. The NRS stem shall have an integral stem collar manufactured of no lead bronze. The stem shall be affixed into the valve cartridge to maintain stem alignment, low torque and continuous operation of the valve.

## 2.3 ECCENTRIC PLUG VALVES

- A. Eccentric plug valves shall be of the tightly closing, resilient faced, non-lubricating variety as manufactured by Clow, or approved equal. Valves shall be of eccentric design such that the valve's pressure member (plug) rises off the body seat contact area immediately upon shaft rotation during the opening movement. Valves shall be drop-

tight at the rated pressure (175 psi through 12", 150 psi 14" and above) and shall be satisfactory for applications involving throttling service as well as frequent or infrequent on-off service. The valve closing member should rotate approximately 90 degrees from the full-open to full-closed position and vice-versa.

- B. The valve body shall be constructed of cast iron (semi-steel) conforming to ASTM A126, Class B. Body ends shall be:
  - 1. Flanged with dimensions, facing and drilling in full conformance with ANSI B16.1, Class 125. This includes flange thickness.
  - 2. Mechanical Joint to meet the requirements of AWWA C111/ANSI A21.11.
  - 3. Grooved Ends to meet the requirements of AWWA C606.
- C. Eccentric plug valves shall have a rectangular shaped port. Port areas for 3" – 20" valves shall be a minimum 80% of full pipe area. Port area for 24" valve shall be a minimum 70% of full pipe area.
- D. Valve seat surface shall be welded-in overlay, cylindrically shaped of not less than 90% pure nickel. Seat area shall be raised, with raised area completely covered with weld to ensure proper seat contact. The machined seat area shall be a minimum of .125" thick and .500" wide.
- E. The valve plug shall be constructed of cast iron (semi-steel) conforming to ASTM A126, Class B. The plug shall have a cylindrical seating surface that is offset from the center of the plug shafts. The plug shafts shall be integral. The entire plug shall be 100% encapsulated with Buna-N rubber in all valve sizes. The rubber compound shall be approximately 70 (Shore A) durometer hardness. The rubber to metal bond must withstand 75 lbs. pull under test procedure ASTM D-429-73 Method B.
- F. Shaft bearings, upper and lower, shall be sleeve type metal bearings, sintered, oil impregnated and permanently lubricated Type 316 stainless steel. Thrust bearings shall be Nylatron.
- G. Plug valve shaft seals shall be of the multiple V-ring type (Chevron) and shall be adjustable. All packing shall be replaceable without removing the bonnet or actuator and while the valve is in service. Shaft seals shall be made of Buna-N.
- H. Each valve shall be given a test against the seat at the full rated working pressure and a hydrostatic shell test at twice the rated working pressure. Certified copies of individual tests shall be submitted when requested. Certified copies of proof-of-design tests shall be submitted upon request.
- I. Manual valves shall have lever or worm gear type actuators with handwheels. Lever actuators shall be furnished on valves 6" and smaller. Worm gear type actuators shall be furnished on valves 8" and larger.

## 2.4 BUTTERFLY VALVES

- A. All butterfly valves shall be of the rubber-seated, tight-closing type. They shall meet or exceed AWWA Standard C-504. All valves shall be Clow Valve Style 4500 butterfly valves, or approved equal.
- B. All valves must use full AWWA C-504 Class 150B valve shaft diameter, and full Class 150B underground-service-operator torque rating throughout entire travel, to provide capability for operation in emergency service. All valves shall be NSF approved.
- C. Valve body shall be high-strength cast iron ASTM A126 Class B with 18-8 type 304 stainless steel body seat. Valve vane shall be high-strength cast iron ASTM A48 Class 40, having rubber seat mechanically secured with an integral 18-8 stainless steel clamp ring and 18-8 stainless steel self-locked screws.
- D. For valves 4"-12" the valve shaft shall be one piece, extending full size through the entire valve. Valve shaft shall be 304 stainless steel. Packing shall be O-ring cartridge designed for permanent duty in underground service. For 14" and larger valve shaft shall be 18-8 stainless steel stub shaft design keyed to the vane with stainless steel torque plugs.
- E. Valve ends shall be one of the following type as indicated in the construction plans:
  - 1. Wafer Type Body: Suitable for installation between 125# or 150# ASA flanges.
  - 2. Flanged: Short body valves per Table 2 of AWWA C504. Flanges shall be 125# ANSI.
  - 3. Mechanical Joint: Both ends of valve shall be "MJ" per AWWA C111. "MJ" accessories (bolts, glands, gaskets) must be supplied by valve manufacturer.
- F. Valve operator shall be of the traveling-nut type, sealed, gasketed, and lubricated for underground service. It shall be capable of withstanding an overload input torque of 450 ft. pounds at full-open or full-closed position without damage to the valve or valve operator. It shall be designed for submergence in water to 25 ft head pressure for up to 72 hours.
- G. Valve shall be capable of easy closure by one man using standard valve key even under emergency line-break conditions. Operators shall come with easy external adjustment.
- H. All manual operators for service other than underground shall have position indicator and shall be totally enclosed and permanently lubricated. All valves shall open left (clockwise to close). In any event, a maximum pull of 80 pounds on the lever shall produce full output torque through entire travel. Operator shall accept 300 pounds pull on lever at full-open and full-closed positions without damage to the valve or operator. Operators shall be of the traveling nut type.
- I. Cylinder operator shall be of the base mounted configuration. Cylinder barrel shall be on molybdenum-disulfide lined glass fiber reinforced epoxy tubing, to provide a corrosion-free, self-lubricated high strength barrel. Rod seal shall be urethane, molybdenum-disulfide filled, to provide a self-lubricated, long life seal.

- J. Piston rod shall be of hard chromium plated 18-8 stainless steel, and shall be top and bottom guided in a heavy cast iron mechanism housing for positive alignment. Guiding shall be accomplished by bronze bearings at ends of housing straddling all side loads improved in operation. Entire operator including piston rod shall be fully enclosed.

## 2.5 CHECK VALVES

- A. All check valves shall be of the cushioned swing type as manufactured by Mueller, or approved equal. Valves shall be furnished with an external lever and weight unless otherwise specified. Swing check valves shall be constructed with heavy cast iron or cast steel body with a bronze or stainless steel seat ring, a non-corrosive shaft for attachment of the weight and lever, complete non-corrosive cushion chamber, and shall allow for removal of all internal parts without removing the valve body from the line.
- B. The cushion chamber shall be attached to the side of the valve body externally and so constructed with a piston operating in a chamber that will effectively permit the valve to be operated without any hammering action. The cushioning shall be by air, and the cushioning chamber shall be so arranged that the closing speed will be adjustable to meet the service requirements.
- C. The valve disc shall be of cast iron or cast steel and shall be suspended from a non-corrosive shaft which will pass through a stuffing box and be connected to the cushion chamber on the outside of the valve.

## 2.6 COMBINATION AIR AND VACUUM RELEASE VALVES

- A. All combination air and vacuum release valves shall be guaranteed not to blow shut under normal operating conditions with air flowing into the pipeline or being exhausted from the pipeline via the valve.
- B. Valves 2 inches and smaller shall be combination air and vacuum release valves and shall be Crispin Type R or approved equal.
- C. Valves 3 inches and larger shall be dual air and vacuum release valves and shall include a small orifice valve for exhausting small quantities of entrained air and a large orifice for inducting as well as exhausting large quantities of air. The combination air/vacuum and pressure release valve shall be Crispin US Series Universal valve or approved equal.

## 2.7 VALVE BOXES

- A. Valve boxes shall be made of cast iron and shall be of the heavy roadway type with an inside diameter of not less than 5 inches.
- B. The top section of the valve box shall be adjustable for elevation and shall be of the three-piece screw type.
- C. The base shall be sufficiently large so that it will not come in contact with the valve or pipe at any point.

- D. The valve box cover shall be cast iron with the designation “water” embossed on the top side and shall be of the bolt-down type.
- E. The top of the valve box shall be installed flush with the ground and shall be supported by a 2' x 2' x 6" poured in place concrete foundation reinforced with 6"x6"x10 ga. welded wire fabric as shown on the Drawings. Precast concrete pads will not be allowed unless prior approval is received from the owner.

## 2.8 ACCESSORIES

- A. Concrete for Thrust Restraints: Type R Concrete as specified in Section 03 30 00.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Determine exact location and size of valves from Drawings; obtain clarification and directions from Architect/Engineer prior to execution of work.
- C. Verify invert elevations prior to excavation and installation of valves.

### 3.2 PREPARATION

- A. Identify required lines, levels, contours and datum locations.
- B. Locate, identify, and protect utilities to remain from damage.
- C. Do not interrupt existing utilities without permission and without making arrangements to provide temporary utility services.
  - 1. Notify Engineer not less than three working days in advance of proposed utility interruption.
  - 2. Do not proceed without written permission from the Engineer.
- D. Perform trench excavation, backfilling and compaction in accordance with Section 31 23 17.

### 3.3 INSTALLATION

- A. Install valves in conjunction with pipe laying; set valves plumb.
- B. Provide buried valves with valve boxes installed flush with finished grade.

### 3.4 THRUST RESTRAINT

- A. Class R concrete, as defined in Section 03 30 00, shall be placed at all valves, tees, bends, caps, dead-end, plugs, etc. as detailed in the Drawings. Concrete thrust block shall be placed against undisturbed earth, and shall be located so pipe fittings and joints will be accessible for repair.
- B. Additional thrust restraint devices shall be installed as indicated on the Drawings.

### 3.5 DISINFECTION OF POTABLE WATER PIPING SYSTEM

- A. Flush and disinfect system in accordance with Section 33 11 13.

### 3.6 HYDROSTATIC TESTING

- A. Pressure test system to in accordance with Section 33 11 13.

END OF SECTION

## SECTION 33 12 19

### WATER UTILITY DISTRIBUTION FIRE HYDRANTS

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Fire hydrants.
- B. Related Sections:
  - 1. Section 32 05 23 - Cement & Concrete for Exterior Improvements.
  - 2. Section 33 11 13 - Public Water Utility Distribution Piping.
  - 3. Section 33 12 16 - Water Utility Distribution Valves.

##### 1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Fire Hydrants:
  - 1. Basis of Measurement: Each.
  - 2. Basis of Payment: Includes excavation, fire hydrant, accessories, test and backfill.

##### 1.3 REFERENCES

- A. American Water Works Association:
  - 1. AWWA C502 - Dry-Barrel Fire Hydrants.
  - 2. AWWA C503 - Wet-Barrel Fire Hydrants.
  - 3. AWWA C550 - Protecting Epoxy Interior Coating for Valves and Hydrants.
  - 4. AWWA C600 - Installation of Ductile-Iron Water Mains and Their Appurtenances.
- B. National Sanitation Foundation:
  - 1. NSF 61 - Drinking Water System Components - Health Effects
- C. National Fire Protection Association:
  - 1. NFPA 281 - Recommended Practice for Fire Flow Testing and Marking of Hydrants

##### 1.4 SUBMITTALS

- A. Contractor is required to submit six (6) copies of product data for review and approval. The Engineer shall promptly review this data, and return two (2) copies to the Contractor as accepted, or with requested modifications. Contractor to submit data on pipe materials, pipe fittings, valves, meter assemblies, and all accessories.

## 1.5 DELIVERY, STORAGE AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing and protecting products.
- B. Prepare hydrants and accessories for shipment according to AWWA Standards and seal hydrant and ends to prevent entry of foreign matter into product body.
- C. Store products in areas protected from weather, moisture, or possible damage; do not store products directly on ground; handle products to prevent damage to interior or exterior surfaces.

## PART 2 PRODUCTS

### 2.1 FIRE HYDRANTS

- A. Manufacturers:
  - 1. M & H Style 129S, AWWA C502 Hydrant.
  - 2. Substitutions: Section 01 60 00 - Product Requirements.
- B. Dry-barrel Break-away Type:
  - 1. AWWA C502; cast-iron body, compression type valve.
  - 2. Working Pressure: 250 psig.
  - 3. Bury Depth: As indicated on the Drawings.
  - 4. Inlet Connection: 6 inches.
  - 5. Valve Opening: 5-1/4 inches diameter.
  - 6. Inside Riser Barrel Diameter: 7 inches.
  - 7. Ends: Mechanical Joint.
  - 8. Bolts and Nuts: Corrosion resistant.
  - 9. Coating: AWWA C550; interior.
  - 10. Direction of Opening: Counterclockwise unless otherwise indicated.
- C. Nozzles:
  - 1. Two - 2 1/2" brass nozzles.
  - 2. One 4 1/2" nozzle.
  - 3. National Standard Threads.
  - 4. Attach nozzle caps by separate chains.
- D. Finish:
  - 1. Fire hydrant shall be provided with the standard factory coating in "Fire Hydrant Red".

### 2.2 ACCESSORIES

- A. Concrete for Thrust Restraints: Concrete type specified in Section 32 05 23.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Determine exact location and size of hydrants from Drawings; obtain clarification and directions from Engineer prior to execution of work.
- C. Verify invert elevations prior to excavation and installation of fire hydrants.

### 3.2 PREPARATION

- A. Identify required lines, levels, contours and datum locations.
- B. Locate, identify, and protect utilities to remain from damage.
- C. Do not interrupt existing utilities without permission and without making arrangements to provide temporary utility services.
  - 1. Notify Engineer not less than three working days in advance of proposed utility interruption.
  - 2. Do not proceed without written permission from the Engineer.
- D. Perform trench excavation, backfilling and compaction in accordance with Section 31 23 17.

### 3.3 INSTALLATION

- A. Install fire hydrants; provide support blocking and drainage gravel; do not block drain hole.
- B. Set hydrants plumb with pumper nozzle facing roadway; set hydrants with centerline of pumper nozzle 18 inches above finished grade and safety flange not more than 6 inches nor less than 2 inches above grade.
- C. After hydrostatic testing, flush hydrants and check for proper drainage.

### 3.4 THRUST RESTRAINT

- A. Class A concrete, as defined in Section 03 30 00, shall be placed at all valves, tees, bends, caps, dead-end, plugs, etc. as detailed in the Drawings. Concrete thrust block shall be placed against undisturbed earth, and shall be located so pipe fittings and joints will be accessible for repair.
- B. Additional thrust restraint devices shall be installed as indicated on the Drawings.

3.5 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

- A. Flush and disinfect system in accordance with Section 33 11 13.

3.6 HYDROSTATIC TESTING

- A. Pressure test system in accordance with Section 33 11 13.

END OF SECTION

**SPECIAL CONDITIONS**

## SPECIAL CONDITIONS

1. OWNER DEFINED: Ouachita Parish Police Jury, 100 Bry Street, Monroe, Louisiana 71201, acting through the President.
2. ENGINEERS DEFINED: Lazenby & Associates, Inc., 2000 North 7<sup>th</sup> Street, West Monroe, Louisiana 71291.
3. NOTICE TO PROCEED: No work shall begin on this project until the Owner has issued a "Notice to Proceed" directing the Contractor to proceed and stating that sufficient funds have been provided for payments according to the Contract.
4. PRE-CONSTRUCTION CONFERENCE: Prior to beginning construction a pre-work conference must be held between the Contractor(s), Ouachita Parish Police Jury, and Lazenby & Associates, Inc. to reach agreements relating to responsibilities and procedures of each interested party to see that the project is installed according to the approved plans and specifications and the conditions under which disbursements for construction cost are authorized and will be paid. This meeting will be pre-arranged by the President of the Ouachita Parish Police Jury.
5. AUTHORITY TO EXCEED QUANTITIES: The Contractor shall notify the Owner and the Engineer in writing at any time that Specifications, Contract, Plans, Instructions, or other job requirements cause an over-run of more than 5% in contract bid quantities for any bid item (EXCEEDING 105% OF LISTED QUANTITIES); such notice shall be given prior to the execution of work in excess of said 105%; said work will be done at contractor's risk without pay if done prior to issuance of a written change order approved by the Contractor, Owner and the Engineer.
6. RECORDATION OF CONTRACTS AND BOND: Where the project is located in a Parish of the State of Louisiana, the Contractor, at his own expense, shall record the Contract and Bond or Bonds required with the Clerk of Court or the Recorder of Mortgages of the Parish before the work commences. Contractor shall submit the certificate of recordation to the Engineer.
7. RECORDATION OF "CERTIFICATES OF SUBSTANTIAL COMPLETION" AND FURNISHING OF A "CLEAR LIEN CERTIFICATE": In Louisiana, and in those states having statutes relating to liens on private and public works similar to those in Louisiana; neither the final payment nor any part of the retained percentage shall become due until the Contractor shall deliver to the Owner a certificate by the Clerk of Court in the parish in which the project is located that the Owner's Substantial Completion Certificate has been recorded, more than thirty (30) days has elapsed since the recordation in the case of private works, and more than forty-five (45) days has elapsed since the recordation in the case if public works, and no liens have been recorded affecting this property and all

affidavits, consents, and releases specified in subparagraph below have been submitted to the Engineer.

- A. The Contractor shall record the Acceptance in the Parish in which the work has been performed and shall furnish a Clear Lien Certificate from the Clerk of Court after the appropriate lien period has elapsed after recordation of Acceptance”.