2009-00488

CMW inc.

ARCHITECTURE ENGINEERING INTERIOR DESIGN LANDSCAPE ARCHITECTURE

SANITARY SEWER EXTENSION, PHASE I

FOR

GRANT COUNTY SANITARY SEWER DISTRICT
GRANT COUNTY, KENTUCKY

12/3/09

MAY 2009

PROJECT MANUAL

Set No.

400 E. Vine St., Suite 400, Lexington, KY 40507 Tel 859.254.6623 Fax 859.259 1877

PROJECT MANUAL

FOR

SANITARY SEWER EXTENSION, PHASE I

OWNER:

GRANT COUNTY SANITARY SEWER DISTRICT

MAY, 2009

CMW, INC
400 E. VINE STREET
SUITE 400
LEXINGTON, KENTUCKY 40507

CMW PROJECT NO. 08089.02

KIA PROJECT NO. SX21081303

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END OF TABLE OF CONTENTS

ADVERTISEMENT FOR BIDS

Separate sealed BIDS for Sanitary Sewer Extension Phase I, will be received by the OWNER at the office of Grant County Sanitary Sewer District, 1 Farrell Drive, Crittenden, Kentucky, until 11:00 a.m., local time, on Thursday, November 19, 2009, and then at said office publicly opened and read aloud.

Construction of Base Bid shall consist of approximately 8,450 LF of 8" PVC gravity sewer, 485 LF of DI gravity sewer, 945 LF of 4" laterals, 20,452 LF of PVC force main, 43 manholes, 4 connections to existing sewer, 2 master meter manholes, 71 cleanouts, 495 LF of bores, 40 LF of roadway open cut, 460 LF of concrete cap, 13 sewage combination air valves, 2 each of gate valve, 4 each of check valve, 1 submersible pump station, 5 submersible grinder pump stations, and all necessary appurtenances.

Construction of Alternate #1 shall consist of approximately 3,796 LF of 2" HDPE force main, 3,775 LF of 1-1/4" HDPE force main, 22 individual grinder pumps, miscellaneous valves and all necessary appurtenances.

Construction of Alternate #2 shall consist of 10,035 LF of 6" PVC force main (in place of 3" PVC force main in Base Bid), upgrade of a submersible grinder pump station (in Base Bid) to submersible pump station and increase in size of submersible pump station (in Base Bid) and all necessary appurtenances.

The CONTRACT DOCUMENTS may be examined at the following locations:

CMW, Inc., 400 East Vine Street, Suite 400, Lexington, KY
Grant County Sanitary Sewer District, 1 Farrell Drive, Crittenden, Kentucky.
Associated General Contractors/McCraw Hill/Dodge Plan Room, 950 Contract Street, Suite 100A, Lexington, KY
Associated General Contractors/McCraw Hill Plan Room, 922 North Main Street, 2nd Floor, London, KY
Allied Construction Industries, 1010 Yale Avenue, Cincinnati, OH
Reed Construction Data/ABC Plan Room, 1812 Taylor Avenue, Louisville, KY
Reed Construction Data/ABC Plan Room, 2020 Liberty Road, Suite 110, Lexington, KY
F. W. Dodge Plan Room, Grant Baldwin Building, 655 Eden Park Road, Suite 515, Cincinnati, OH 45202

Copies of the CONTRACT DOCUMENTS may be obtained from Lynn Imaging, 328 Old East Vine Street, Lexington, KY 40507, phone 859\255-1021 upon payment of $75.00 (non-refundable) for each set. Make checks payable to CMW, Inc.

If bidding documents are requested to be sent by mail, include an additional $14.00 for each set to cover cost of handling and postage. This check should be made payable to Lynn Imaging.

The Owner reserves the right to waive any informalities or to reject any or all bids.

Each bidder must deposit with his bid, security in the amount, form and subject to the conditions provided in the Information for Bidders.

No bidder may withdraw his bid for within 90 days after the date of the opening thereof.

The award will be made to the lowest, responsive, responsible bidder.

This procurement will be subject to regulations contained in 40 CFR Part 31.36 or with Division of Water Procurement Guidance.

Bidders must comply with Title VI of the Civil Rights Act of 1964, the Anti-Kickback Act, and the Contract Work Hours Standard Act and 40 CFR 31.36 L (3,4 & 6).

Bidders must comply with the President's Executive Order No. 11246 as amended, which prohibits discrimination in employment regarding race, creed, color, sex or national origin.

This project is in compliance with Executive Order 11246 (Equal Employment Opportunity) as amended.

The Contractor / Subcontractor will comply with 41 CFR 60-4, in regard to affirmative action to insure equal opportunity to females and minorities and will apply the time tables and goal set forth in 41 CFR 60-4 if applicable to the area of the project.

Bidder will make positive efforts to use small, minority, women owned and disadvantaged businesses.

This project is being funded by appropriations from the 2005 and 2008 Kentucky General Assembly and from the American Recovery and Reinvestment Act of 2009.

November 2, 2009
Date

GRANT COUNTY SANITARY SEWER DISTRICT
BOBBY BURGESS, CHAIRMAN

CMW, INC.
400 EAST VINE STREET, SUITE 400
LEXINGTON, KENTUCKY

INFORMATION FOR BIDDERS

BIDS will be received by Grant County Sanitary Sewer District (herein called the "OWNER"), at the office of Grant County Sanitary Sewer District, 1 Farrell Drive, Crittenden, Kentucky, until 11:00 a.m., local time, on Thursday, November 19, 2009, and then at said office publicly opened and read aloud.

Each BID must be submitted in a sealed envelope, addressed to Grant County Sanitary Sewer District, P.O. Box 460, Crittenden, Kentucky 41311. Each sealed envelope containing a BID must be plainly marked on the outside as BID for Sanitary Sewer Extension, Phase I and the envelope should bear on the outside the BIDDER'S name, address, and license number if applicable, 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 to the OWNER at P. O. Box 460, Crittenden, Kentucky 41311.

All BIDS must be made on the required BID form. All blank spaces for BID prices must be filled in, in ink or typewritten, and the BID form must be fully completed and executed when submitted. Only one copy of the BID form is required.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID within 90 days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID Schedule by examination of the site and a review of the drawings and specifications including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The OWNER shall provide to BIDDERS prior to BIDDING, all information which is pertinent to, and delineates and describes, the land owned and rights-of-way acquired or to be acquired.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve the contractor from fulfilling any of the conditions of the contract.

Each BID must be accompanied by a BID bond payable to the OWNER for five percent of the total amount of the BID. As soon as the BID prices have been compared, the OWNER will return the BONDS of all except the three lowest responsible BIDDERS. When the Agreement is executed the bonds of the two remaining unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the payment BOND and performance BOND have been executed and approved, after which it will be returned. A certified check may be used in lieu of a BID BOND.

A performance BOND and a payment BOND each in the amount of 100 percent of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Attorneys-in-fact who sign BID BONDS or payment BONDS and performance BONDS must file with each BOND a certified and effective dated copy of their power of attorney.

The party to whom the contract is awarded will be required to execute the Agreement and obtain the performance BOND and payment BOND within ten (10) calendar days from the date when NOTICE OF AWARD is delivered to the BIDDER. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may consider the BIDDER in default, in which case the BID BOND accompanying the proposal shall become the Property of the OWNER.

The OWNER within ten (10) days of receipt of acceptable performance BOND, payment BOND and Agreement signed by the party to whom the Agreement was awarded shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may by WRITTEN NOTICE withdraw the signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The NOTICE TO PROCEED shall be issued within ten (10) days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER AND CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER may make such investigations as 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 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 properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated therein.

A conditional or qualified BID will not be accepted.

Award will be made to the lowest responsive responsible BIDDER unless all bids are rejected. The basis for determining responsiveness is based on bidder completing required forms in bid and submit bid prior to 11:00 a.m. on opening day. The basis for determination responsibility is based on previous work done by bidder and positive recommendation by the project OWNER or ENGINEER.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written in fully.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to its BID.

The low BIDDER shall supply the names and addresses of major material SUPPLIERS and SUBCONTRACTORS when required to do so by the OWNER.

CONTRACTOR is expected to include in his bid price an amount to cover Federal, State or Local taxes including but not limited to excise taxes, gross profit taxes, sales taxes, use taxes, occupational taxes, business privilege taxes and others which CONTRACTOR or his subcontractors may be required to bear whether directly or indirectly in connection with execution or performance of this Contract. CONTRACTOR will not otherwise be reimbursed or compensated for such tax payments. CONTRACTOR is urged to ascertain at his own risk his actual tax liability in connection with execution or performance of his Contract.

CONTRACTORS shall complete work within 210 consecutive calendar days. Liquidated damages will be charged at $500 for each consecutive calendar day.

CONTRACTORS shall be in compliance with Title VI of the Civil Rights Act of 1964, the Anti-Kickback Act and the Contract Work Hours Standards Act.

All BIDDERS are required to have a DUNS Number and a Central Contractor Registration Number (CCR).

The ENGINEER IS CMW, Inc. The ENGINEER'S address is 400 East Vine Street, Suite 400, Lexington, KY 40507.

END OF SECTION 00100

BID

SANITARY SEWER EXTENSION, PHASE I
GRANT COUNTY
GRANT COUNTY SANITARY SEWER DISTRICT

Proposal of _____ (hereinafter called "BIDDER"), a _____* organized and existing under the laws of the State of _____ doing business as _____*.

To the Grant County Sanitary Sewer District (hereinafter called "OWNER").

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all WORK for the construction of Sanitary Sewer Extension, Phase I – Grant County, in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

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

Bidder hereby agrees to commence work under this contract on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the base bid and Alternate #1 within 210 consecutive calendar days and Alternate #2 (if awarded) will add an additional 45 days. BIDDER further agrees to pay as liquidated damages, the sum of $500 for each consecutive calendar day thereafter as hereinafter provided in Section 15 of the General Conditions.

BIDDER acknowledges receipt of the following ADDENDUM:

_____

_____

_____

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

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

(1) BIDS shall include sales tax and all other applicable taxes and fees.

* Insert "a corporation", "a partnership", or "an individual" as applicable.

(2) Breakdown of work is for general information. Any work shown on Drawings and/or specified but not listed below shall be included in total base bid. Cost of items of work not specifically described below may be added to related bid item(s) at bidder's discretion.

BID SCHEDULE

Part I: Base Bid

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Amount
1.	8" PVC Sanitary Sewer	8450	LF	$	$
2.	8" DI Sanitary Sewer	485			
3.	4" PVC Sanitary Sewer Laterals	945	LF	$	$
4.	6" PVC Force Main	5785	LF	$	$
5.	3" PVC Force Main	11,559	LF	$	$
6.	2" PVC Force Main	3108	LF	$	$
7.	Connection to Existing Sewer Line @ Package Treatment Plant	2	EA	$	$
8.	Connection to Existing Manhole	2	EA	$	$
9.	Shallow Manhole	22	EA	$	$
10.	Standard Manhole (5.01' to 8.0')	15	EA	$	$
11.	Standard Manhole (8.01' to 10.00')	1	EA	$	$
12.	Standard Manhole (10.01' to 12.00')	2	EA	$	$
13.	Standard Manhole (12.01' to 14.00')	1	EA	$	$
14.	Standard Manhole (14.01' to 16.00')	1	EA	$	$
15.	Standard Manhole (16.01' to 18.00')	1	EA	$	$
16.	Standard Manhole with Master Meter	2	EA	$	$
17.	Manhole Drop	3	EA	$	$
18.	Bored and Jacked 14" Steel Encasement (Railroad Bore)	210	LF	$	$
19.	Bored and Jacked 12" Steel Encasement (I-75 Bore)	250	LF	$	$
20.	Bored and Jacked 12" Steel Encasement	35	LF	$	$

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Amount
21.	Open Cut with 10" Steel Encasement	40	LF	$	$
22.	Concrete Cap over Sewer Pipe	460	LF	$	$
23.	Clean – Out	71	EA	$	$
24.	Sewage Combination Air Valve with Box and Cover	13	EA	$	$
25.	3" MJ Gate Valve w/Box and Cover	1	EA	$	$
26.	3" Check Valve w/Box	1	EA	$	$
27.	2" MJ Gate Valve with Box and Cover	1	EA	$	$
28.	2" Check Valve with Box and Cover	3	EA	$	$
29.	Submersible Sewage Pump Station #C including Wet Well, Valve Vault, Fencing and all Piping and Necessary Appurtenances	1	EA	$	$
30.	Submersible Sewage Grinder Pump Station #A including Wet Well, Valve Vault, Fencing and all Piping and Necessary Appurtenances	1	EA	$	$
31.	Submersible Sewage Grinder Pump Station #B including Wet Well, Valve Vault, Fencing and all Piping and Necessary Appurtenances	1	EA	$	$
32.	Submersible Sewage Grinder Pump Station #E Including Wet Well, Valve Vault, Fencing and all Piping and Necessary Appurtenances	1	EA	$	$
33.	Submersible Sewage Grinder Pump Station #F, including Wet Well, Valve Vault, Fencing and All Piping and Necessary Appurtenances	1	EA	$	$

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Amount
34.	Submersible Sewage Grinder Pump Station #G, including Wet Well, Valve Vault, Fencing and all Piping and Necessary Appurtenances.	1	EA	$	$
35.	Extra Crushed Stone Bedding (Undercut)	400	TONS	$	$

Total Part I (Base Bid) $_____
(Use Figures)

_____
(Use Words)

Part II: Alternate Bid #1

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Amount
1.	2" HDPE Force Main	3796	LF	$	$
2.	1- 1/4" HDPE Force Main	3775	LF	$	$
3.	Individual Grinder Pumps, Including Wet Well and All Piping, Gate Valve and Check Valve (Lateral Assembly) on Force Main and Necessary Appurtenances	22	EA	$	$

Total Part II: (Alternate Bid #1) $_____
(Use Figures)

Total (Base Bid & Alternate Bid #1) $_____
(Use Figures)

_____
(Use Words)

Part III: Alternate Bid #2 – Grinder Pump Station #G changed to Pump Station, 3" Force Main changed to 6" Force Main from Pump Station G to Pump Station C and Increase flow of Pump Station C to 480 gpm from 255 gpm.

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Amount
1.	6" PVC Force Main	10,035	LF	$	$
2.	Deduct 3" PVC Force Main, (Base Bid Item #5)	(-10,035)	LF	$	$
3.	Submersible Sewage Pump Station #G including Wet Well, Valve Vault, Fencing and All Piping and Necessary Appurtenances.	1	EA	$	$
4.	Deduct Submersible Sewage Grinder Pump Station #G including Wet Well, Valve Vault, Fencing and All Piping and Necessary Appurtenances. (Base Bid Item #34).	1	EA	$	$
5.	Upgrade Submersible Sewage Pump Station #C (Base Bid Item #24). to _____gpm pumps.				

Total Part III: (Alternate Bid #2) $_____
(Use Figures)

_____
(Use Words)

SUBTOTALS AND TOTAL AMOUNTS SHALL BE SHOWN IN BOTH WORDS AND FIGURES. IN CASE OF DISCREPANCIES, THE AMOUNT AS WRITTEN IN WORDS SHALL GOVERN.

The above price shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for. Changes shall be processed in accordance with the General Conditions.

Award of the Contract will be based on the lowest and best Total Base Bid and Alternate #1.

The Bidder agrees that the Owner reserves the right to delete the whole or any part of the project from the Contract.

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

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of ninety (90) calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal contract attached within ten (10) days and deliver a surety bond or bonds as required by the bid security attached in the sum of _____ $_____ is to become the property of the Owner in the Event the contract and bond are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Respectfully submitted:

_____
(Name of Contracting Firm)

BY:_____

TITLE:_____

ADDRESS:_____

_____

DATE:_____

_____
DUNS Number

_____
Central Contractor Registration Number (CCR)

Seal (If Bid by Corporation)

Attest:_____

Exhibit F-4
BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,_____
_____as Principal, and_____
_____
_____as Surety, are hereby held and firmly bound unto_____
as OWNER in the penal sum of_____
_____
for payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.
Signed, this _____day of _____ , 20 ___.
The Condition of the above obligation is such that whereas the Principal has submitted to _____a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the _____
_____
_____
_____

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

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

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

_____(L.S.)
Principal

_____
Surety

By:_____

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

AUTHENICATION OF BID AND AFFIDAVIT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST

I hereby swear (or affirm) under the penalty for false swearing as provided by KRS 432.170:

1. That I am the bidder (if the bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the bidder is a corporation);
2. That the attached bid has been arrived at by the bidder independently and has been submitted without collusion with, and without any agreement, understanding or planned common course of action with, any other contractor, vendor of materials, supplies, equipment, or services described in the Invitation to Bid, designed to limit independent bidding or competition;
3. That the contents of the bid has not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid and will not be communicated to any such person prior to the official opening of the bid;
4. That the bidder is legally entitled to enter into the contracts with the Grant County Sanitary Sewer District and is not in violation of any prohibited conflicts of interest;
5. (Applicable to corporations only) That as a foreign corporation we are registered with the Secretary of State, Commonwealth of Kentucky, and authorized to do business in the State of _____ or, that as a domestic corporation we are in good standing with the Secretary of State, Commonwealth of Kentucky _____. (Check the statement applicable.)
6. That this offer is for 90 calendar days from the date this bid is opened. In submitting the above, it is expressly agreed that, upon proper acceptance by Grant County Sanitary Sewer District of any or all items bid above, a contract shall thereby be created with respect to the items accepted.
7. That I have fully informed myself regarding the accuracy of the statements made in this Affidavit.

READ CAREFULLY - SIGN IN SPACE BELOW - FAILURE TO SIGN INVALIDATES BID

Signed by _____

Title_____

Firm_____Telephone No._____

Address_____Area Code_____

_____Date_____

City_____State___Zip_____

END OF SECTION 00400

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 2010, by and between Grant County Sanitary Sewer District hereinafter called "OWNER" and _____, doing business as a _____, hereinafter called "CONTRACTOR".

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

1. The CONTRACTOR will commence and complete the construction of Sanitary Sewer Extension, Phase I.

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

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

4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of $_____ or as shown in the BID schedule.

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

   A. Advertisement
   B. Information to Bidders
   C. Bid
   D. Bid Bond
   E. Authentication of Bid

F. Agreement

G. Performance Bond

H. Payment Bond

I. General Conditions

J. Notice of Award

K. Notice to Proceed

L. Change Order

M. Drawings prepared by CMW, Inc. numbered 1.0 through 2.29 dated November 2008.

N. SPECIFICATIONS prepared or issued by CMW, Inc., dated April 2009.

O. ADDENDA:

No. _____, dated_____, 20____.

_____, dated_____, 20____.

_____, dated_____, 20____.

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

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

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

OWNER:

GRANT COUNTY SANITARY SEWER DISTRICT

BY_____

NAME Bobby Burgess
(Please Type)

TITLE Chairman

(SEAL)

ATTEST:

_____

NAME Billy Frank Simpson
(Please Type)

TITLE Secretary

BY_____

NAME_____
(Please Type)

ADDRESS_____

_____

EMPLOYER IDENTIFICATION NUMBER:

_____

(SEAL)

ATTEST:

_____

NAME_____
(Please Type)

TITLE_____

END OF SECTION

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

a , _____ hereinafter called Principal, and
(Corporation, Partnership, or Individual)

_____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto_____

_____
(Name of Owner)

_____
(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 , 20__, a copy of which is hereto attached and made a part hereof for the construction of:

_____

_____

_____

_____

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 way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that 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 _____(number) counterparts, each one of which shall be deemed an original, this the _____day of, _____ 20___ .

ATTEST:

_____
Principal

_____
Principal Secretary

By(s)_____

(SEAL)

_____
(Witness as to Principal)

_____
(Address)

_____
(Address)

_____
(Address)

_____
(Address)

_____
Surety

ATTEST:

_____
Surety Secretary

_____

(SEAL)

_____
(Witness as to Surety)

By_____
Attorney-in-Fact

_____
(Address)

_____
(Address)

_____

_____

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

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

Exhibit F-7
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

a _____, hereinafter called Principal, and
(Corporation, Partnership, or Individual)

_____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto_____

_____
(Name of Owner)

_____
(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_____ , 20_____ , a copy of which is hereto attached and made a part hereof for the construction of:_____
_____
_____
_____

NOW THEREFORE, if the Principal shall promptly make payments 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 way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that 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_____ counterparts, each (Number) one of which shall be deemed an original, this the _____ day of _____ , 20 _____.

ATTEST:

_____
Principal

_____ By _____ (s)
Principal Secretary

(SEAL)

_____ _____
(Witness as to Principal) (Address)

_____ _____
(Address)

_____

ATTEST:

_____
Surety

_____ By _____(s)
Surety Secretary

(SEAL)

_____ By _____
(Witness as to Surety) Attorney-in-Fact

_____ _____
(Address) (Address)

_____ _____

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

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

STANDARD TERMS AND CONDITIONS FOR CONTRACTS AND GRANTS USING ARRA FUNDS

May 8, 2009

To the extent that this contract or grant involves the use of American Recovery and Reinvestment Act of 2009, Pub. L. 111-5 ("ARRA") funds, the following terms and conditions apply. As used in this Section, "Contractor/Grantee" means the contractor or grantee receiving ARRA funds from the Commonwealth of Kentucky ("Commonwealth") under this agreement.

1. *The Contractor/Grantee specifically agrees to comply with each of the terms and conditions contained herein.*

2. *Contractor/Grantee understands and acknowledges that the federal stimulus process is still evolving and that new requirements for ARRA compliance may still be forthcoming from federal government and the Commonwealth of Kentucky. Accordingly, Contractor/Grantee specifically agrees that both it and subcontractors/subgrantees will comply with all such requirements during the contract period.*

AVAILABILITY OF FUNDING

Contractor/Grantee agrees that programs supported with temporary federal funds made available by the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, will not be continued with state financed appropriations once the temporary federal funds are expended.

BUY AMERICAN REQUIREMENT

Contractor/Grantee agrees that in accordance with ARRA, Section 1605, neither Contractor/Grantee or its subcontractors/subgrantees will use ARRA funds for a project for the construction, alternation, maintenance, or repair of a public building or public work unless all of the iron, steel and manufactured goods used in the project are produced in the United States in a manner consistent with United States obligations under international agreements. The Contractor/Grantee understands that this requirement may only be waived by the applicable federal agency in limited situations as set out in ARRA, Section 1605.

CONFLICTING REQUIREMENTS

Contractor/Grantee agrees that, to the extent ARRA requirements conflict with Commonwealth of Kentucky requirements, the ARRA requirements shall control.

FALSE CLAIMS ACT

Contractor/Grantee agrees that it shall promptly refer to an appropriate federal inspector general any credible evidence that a principal, employee, agent, subgrantee, subcontractor or other person has committed a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving those funds.

ENFORCEABILITY

Contractor/Grantee agrees that if Contractor/Grantee of one of its subcontractors/subgrantees fails to comply with all applicable federal and state requirements governing the use of ARRA funds, the Commonwealth of Kentucky may withhold or suspend, in whole or in part, funds awarded under the program, or recover misspent funds following an audit. This provision is in addition to all other remedies available to the Commonwealth of Kentucky under all applicable state and federal laws.

INSPECTION OF RECORDS

Contractor/Grantee agrees that it shall permit the United States Comptroller General or his representative or the appropriate inspector general appointed under section 3 or 8G of the Inspector General Act of 1978 or his representative to: (1) examine any records that directly pertain to, and involve transactions relating to, this contract; and (2) interview any officer or employee of Contractor/Grantee or any of its subcontractors/subgrantees regarding the activities funded with funds appropriated or otherwise made available by the ARRA.

JOB POSTING REQUIREMENTS

Section 1512 of the ARRA requires states receiving stimulus funds to report on jobs created and retained as a result of the stimulus funds. Contractors/Grantees who receive ARRA funded contracts are required to post jobs created and retained as a result of stimulus funds on the Commonwealth of Kentucky Job Bank at: https://e3.ky.gov/

PROHIBITION ON USE OF ARRA FUNDS

Contractor/Grantee agrees that none of the funds made available under this contract may be used for any casino or other gambling establishment, aquarium, zoo, golf course, swimming pools, or similar projects.

REPORTING REQUIREMENTS

Pursuant to Section 1512 of the ARRA, state agencies receiving ARRA funds must submit a report to the federal government no later than ten (10) calendar days after the end of each calendar quarter. This report must contain the information outlined below.

Accordingly, Contractor/Grantee agrees to provide the Commonwealth with the following information in a timely manner:

a. The total amount of ARRA funds received by Contractor/Grantee during the Reporting Period;
b. The amount of ARRA funds that were expended or obligated during the Reporting Period;
c. A detailed list of all projects or activities for which ARRA funds were expending or obligated, including:
    i. the name of the project or activity;
    ii. a description of the project or activity;
    iii. an evaluation of the completion status of the project or activity; and

iv. an estimate of the number of jobs created and the number of jobs retained by the project or activity;

d. For any subcontracts or subgrants equal to or greater than $25,000:
   i. The name of the entity receiving the subaward;
   ii. The amount of the subaward;
   iii. The transaction type;
   iv. The North American Industry Classification System (NAICS) code or
   v. Catalog of Federal Domestic Assistance (CFDA) number;
   vi. Program source;
   vii. An award title descriptive of the purpose of each funding action;
   viii. The location of the entity receiving the subaward;
   ix. The primary location of the subaward, including the city, state, congressional district and country; and
   x. A unique identifier of the entity receiving the sub-award and the parent entity of Contractor/Grantee, should the entity be owned by another.
   xi. The names and total compensation of the five most highly compensated officers of the company if it received: 1) 80% or more of its annual gross revenues in Federal awards; and 2) $25M or more in annual gross revenue from Federal awards.

e. For any subcontracts or subgrants of less than $25,000 or to individuals, the information required in 4 may be reported in the aggregate and requires the certification of an authorized officer of Contractor/Grantee that the information contained in the report is accurate.
f. Any other information reasonably requested by the Commonwealth or required by state or federal law or regulation.

Standard data elements and federal instructions for use in complying with reporting requirements under Section 1512 of the ARRA, are pending review by the federal government, and were published in the Federal Register on April 1, 2009 [74 FR 14824], and are to be provided online at www.FederalReporting.gov.

SEGREGATION OF FUNDS

Contractor/Grantee agrees that it shall segregate obligations and expenditures of Recovery Act funds from other funding. No part of funds made available under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, may be comingled with any other funds or used for a purpose other than that of making payments for costs allowable under the ARRA.

SUBRECEIPIENT REQUIREMENTS

Contractor/Grantee agrees that it shall include these standard terms and conditions, including this requirement, in any of its subcontracts or subgrants in connection with projects funded in whole or in part with funds available under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5.

WAGE REQUIREMENTS

Contractor/Grantee agrees that, in accordance with Section 1606 of the ARRA, both it and its subcontractors shall fully comply with this section in that, notwithstanding any other provision of

law, and in a manner consistent with the other provisions of the ARRA, all laborers and mechanics employed by contractors and subcontractors on projects funded in whole or in part with funds available under the ARRA shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality, as determined by the United States Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40 of the United States Code. The Secretary of Labor's determination regarding the prevailing wages applicable in the Commonwealth of Kentucky are located at: http://www.gpo.gov/davisbacon/ky.html

WHISTLEBLOWER PROTECTION

Contractor/Grantee agrees that both it and its subcontractors/subgrantees shall comply with Section 1553 of the ARRA, which prohibits all non-federal Contractor/Grantees of ARRA funds, including the Commonwealth of Kentucky, and all contractors and grantees of the Commonwealth of Kentucky, from discharging, demoting or otherwise discriminating against an employee for disclosures by the employee that the employee reasonably believes are evidence of (1) gross mismanagement of a contract or grant relating to ARRA funds; (2) a gross waste of ARRA funds; (3) a substantial and specific danger to public health or safety related to the implementation or use of ARRA funds; (4) an abuse of authority related to implementation or use of ARRA funds; or (5) a violation of law, rule, or regulation related to an agency contract (including the competition for or negotiation of a contract) or grant, awarded or issued relating to ARRA funds. Contractor/Grantee agrees that it and its subcontractors/subgrantees shall post notice of the rights and remedies available to employees under Section 1553 of Title XV of Division A of the ARRA.

END OF SECTION

GENERAL CONDITIONS

1. DEFINITIONS

1.1 Wherever used in the CONTRACT DOCU- MENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

1.2 ADDENDA -- Written or graphic instruments is-sued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications or corrections.

1.3 BID -- The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.

1.4 BIDDER -- Any person, firm or corporation submitting a BID for the WORK.

1.5 BONDS -- Bid, Performance, and Payment Bonds and other instruments of security, furnished by the CONTRACTOR and his surety in accordance with the CONTRACT DOCUMENTS.

1.6 CHANGE ORDER -- A written order to the CONTRACTOR authorizing an addition, deletion or revision in the WORK within the general scope of the CONTRACT DOCUMENTS, or authorizing an adjustment in the CONTRACT PRICE or CONTRACT TIME.

1.7 CONTRACT DOCUMENTS -- The contract, including Advertisement For Bids, Information for Bidders, BID, Bid Bond, Agreement, Payment Bond, Performance Bond, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS, and ADDENDA.

1.8 CONTRACT PRICE -- The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.

1.9 CONTRACT TIME -- The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.

1.10 CONTRACTOR -- The person, firm or corporation with whom the OWNER has executed the Agreement.

1.11 DRAWINGS -- The part of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.

1.12 ENGINEER -- The person, firm or corporation named as such in the CONTRACT DOCUMENTS.

1.13 FIELD ORDER -- A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.

1.14 NOTICE OF AWARD -- The written notice of the acceptance of the BID from the OWNER to the successful BIDDER.

1.15 NOTICE TO PROCEED -- Written communication issued by the OWNER to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date of commencement of the WORK.

1.16 OWNER -- A public or quasi-public body or authority, corporation, association, partnership, or individual for whom the WORK is to be performed.

1.17 PROJECT -- The undertaking to be performed as provided in the CONTRACT DOCUMENTS.

1.18 RESIDENT PROJECT REPRESENTATIVE – The authorized representative of the OWNER who is assigned to the PROJECT site or any part thereof.

1.19 SHOP DRAWINGS -- All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.

1.20 SPECIFICATIONS -- A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

1.21 SUBCONTRACTOR -- An individual, firm or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the work at the site.

1.22 SUBSTANTIAL COMPLETION -- That date as certified by the ENGINEER when the construction of the PROJECT or a specified part thereof is sufficiently completed, in accordance with the CONTRACT DOCUMENTS, so that the

PROJECT or specified part can be utilized for the purposes for which it is intended.

1.23 SUPPLEMENTAL GENERAL CONDITIONS -- Modifications to General Conditions required by a Federal agency for participation in the PROJECT and approved by the agency in writing prior to inclusion in the CONTRACT DOCUMENTS, or such requirements that may be imposed by applicable state laws.

1.24 SUPPLIER -- Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.

1.25 WORK -- All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.

1.26 WRITTEN NOTICE--Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the WORK.

2. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

2.1 The CONTRACTOR may be furnished additional instructions and detail drawings, by the ENGINEER, as necessary to carry out the WORK required by the CONTRACT DOCUMENTS.

2.2 The additional drawings and instruction thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instructions.

3. SCHEDULES, REPORTS AND RECORDS

3.1 The CONTRACTOR shall submit to the OWNER such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required by the CONTRACT DOCUMENTS for the WORK to be performed.

3.2 Prior to the first partial payment estimate the CONTRACTOR shall submit construction progress schedules showing the order in which he proposes to carry on the WORK, including dates at which he will start the various parts of the WORK, estimated date of completion of each part and, as applicable:

3.2.1 The dates at which special detail drawings will be required; and

3.2.2 Respective dates for submission of SHOP DRAWINGS, the beginning of manufacture, the testing and the installation of materials, supplies and equipment.

3.3 The CONTRACTOR shall also submit a schedule of payments that he anticipates he will earn during the course of the WORK.

4. DRAWINGS AND SPECIFICATIONS

4.1 The intent of the DRAWINGS and SPECIFICATIONS is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy or operation by the OWNER.

4.2 In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over scale dimensions, and detailed DRAWINGS shall govern over general DRAWINGS.

4.3 Any discrepancies found between the DRAW-INGS and SPECIFICATIONS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the CONTRACTOR'S risk.

5. SHOP DRAWINGS

5.1 The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCU-MENTS. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER'S approval of any SHOP DRAWING shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS. The approval of any SHOP DRAWING which substantially deviates from the requirement of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.

5.2 When submitted for the ENGINEER'S review, SHOP DRAWINGS shall bear the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.

5.3 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission has been approved by the ENGINEER. A copy of each approved SHOP DRAWING and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

6. MATERIALS, SERVICES AND FACILITIES

6.1 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, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.

6.2 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the WORK.

Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.

6.3 Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

6.4 Materials, supplies and equipment shall be in accordance with samples submitted by the CON-TRACTOR and approved by the ENGINEER.

6.5 Materials, supplies or equipment to be incorporated into the WORK shall not be purchased by the CONTRACTOR or the SUBCONTRACTOR subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

7. INSPECTION AND TESTING

7.1 All materials and equipment used in the const-ruction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the CONTRACT DOCUMENTS.

7.2 The OWNER shall provide all inspection and testing services not required by the CONTRACT DOCU-MENTS.

7.3 The CONTRACTOR shall provide at his expense the testing and inspection services required by the CONTRACT DOCUMENTS.

7.4 If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any WORK to specifically be inspected, tested, or approved by someone other than the CONTRACTOR, the CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.

7.5 Inspections, tests or approvals by the engineer or others shall not relieve the CONTRACTOR from his obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.

7.6 The ENGINEER and his representatives will at all times have access to the WORK. In addition, authorized representatives and agents of any participating Federal or state agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The CONTRACTOR will provide proper facilities for such access and observation of the WORK and also for any inspection, or testing thereof.

7.7 If any WORK is covered contrary to the written instructions of the \ENGINEER it must, if requested by the ENGINEER, be uncovered for his observation and re-placed at the CONTRACTOR'S expense.

7.8 If the ENGINEER considers it necessary or advisable that covered WORK be inspected or tested by others, the CONTRACTOR, at the ENGINEER'S request, will uncover,

expose or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools. And equipment. If it is found that such WORK is defective, the CONTRACTOR will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such WORK is not found to be defective, the CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate CHANGE ORDER shall be issued.

8. SUBSTITUTIONS

8.1 Whenever a material, article or piece of equipment is identified on the DRAWINGS or SPECI-FICATIONS by reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and the CONTRACT DOCUMENTS shall be appropriately modified by CHANGE ORDER. The CONTRACTOR warrants that if substitutes are approved, no major changes in the function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the CONTRACT PRICE or CONTRACT TIME.

9. PATENTS

9.1 The CONTRACTOR shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the OWNER harmless from loss on account thereof, except that the OWNER shall be responsible for any such loss when a particular process, design. or the product of a particular manufacturer or manufacturers is specified, however if the CONTRACTOR has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the ENGINEER.

10. SURVEYS, PERMITS, REGULATIONS

10.1 The OWNER shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the WORK together with a suitable number of bench marks adjacent to the WORK as shown in the CONTRACT DOCUMENTS. From the information provided by the OWNER, unless otherwise specified in the CONTRACT DOCUMENTS, the CON-

TRACTOR shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pile locations and other working point s, lines, elevations and cut sheets.

10.2 The CONTRACTOR shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

10.3 Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR unless otherwise stated in the SUPPLEMENTAL GENERAL CONDITIONS. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the OWNER, unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the WORK as drawn and specified. If the CONTRACTOR observes that the CONTRACT DOCUMENTS are at variance therewith, he shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted as provided in Section 13, CHANGES IN THE WORK.

11. PROTECTION OF WORK, PROPERTY AND PERSONS

11.1 The CONTRACTOR will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the WORK and other persons who may be affected thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

11.2 The CONTRACTOR will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the
WORK may affect them. The CONTRACTOR will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the OWNER or the ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.

11.3 In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, shall act to prevent threatened damage, injury or loss. He will give the ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be issued covering the changes and deviations involved.

12. SUPERVISION BY CONTRACTOR

12.1 The CONTRACTOR will supervise and direct the WORK. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR will employ and maintain on the WORK a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the WORK.

13. CHANGES IN THE WORK

13.1 The OWNER may at any time, as the need arises, order changes within the scope of the WORK without invalidating the Agreement. If such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or in the time required for performance of the WORK, an equitable adjustment shall be authorized by CHANGE ORDER.

13.2 The ENGINEER, also, may at any time, by issuing a FIELD ORDER, make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the CONTRACTOR believes that such FIELD ORDER entitles him to a change in CONTRACT PRICE or TIME, or both, in which event he shall give the ENGINEER WRITTEN NOTICE thereof within seven (7) days after the receipt of the ordered change. Thereafter the CONTRACTOR shall document the basis for the change in CONTRACT PRICE or TIME within thirty (30) days. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instruction from the OWNER.

14. CHANGES IN CONTRACT PRICE

14.1 The CONTRACT PRICE may be changed only by a CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:
(a) Unit prices previously approved.
(b) An agreed lump sum.
(c) The actual cost for labor, direct overhead, materials, supplies, equipment, and other services necessary t o complete the work. In addition there shall be added an amount to be agreed upon but not to exceed fifteen (15)

percent of the actual cost of the WORK to cover the cost of general overhead and profit.

15. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

15.1 The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.

15.2 The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the CONTRACT TIME. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.

15.3 If the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, or extension of time granted by the OWNER, then the CONTRACTOR will pay to the OWNER the amount for liquidated damages as specified in the BID for each calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS.

15.4 The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following, and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the OWNER or ENGINEER.

15.4.1 To any preference, priority or allocation order duly issued by the OWNER.

15.4.2 To unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to, act s 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 abnormal and unforeseeable weather: and

15.4.3 To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs 15.4.1 and 15.4.2 of this article.

16. CORRECTION OF WORK

16.1 The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and reexecute the WORK in accordance with the CONTRACT DOCU-MENTS and without expense to the OWNER and shall bear the expense of making good all WORK of other CONTRACTORS destroyed or damaged by such removal or replacement.

16.2 All removal and replacement WORK shall be done at the CONTRACTOR'S expense. If the CON-TRACTOR. does not take action to remove such rejected WORK within ten

(10) days after receipt of WRITTEN NOTICE, the OWNER may remove such WORK and store the materials at the expense of the CONTRACTOR.

17. SUBSURFACE CONDITIONS

17.1 The CONTRACTOR shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the OWNER by WRITTEN NOTICE of:

17.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the CONTRACT DOCUMENTS: or

17.1.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in WORK of the character provided for in the CONTRACT DOCUMENTS.

17.2 The OWNER shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the WORK, an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER. Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless he has given the required WRITTEN NOTICE; provided that the OWNER may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

18. SUSPENSI ON OF WORK, TERMINATION AND DELAY

18.1 The OWNER may suspend the WORK or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the CONTRACTOR by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER which notice shall fix the date on which WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any suspension.

18.2 If the CONTRACTOR is adjudged as bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK or if he disregards the authority of the ENGINEER, or if he otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate the services of the CONTRACTOR and take

possession of the PROJECT and of all materials, equipment, tools, construction equipment and machinery, thereon owned by the CONTRACTOR, and finish the WORK by whatever method he may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the WORK is finished. If the unpaid balance of the CONTRACT PRICE exceeds the direct and indirect costs of completing the PROJECT, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a CHANGE ORDER.

18.3 Where the CONTRACTOR'S services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.

18.4 After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the Contract. In such case, the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.

18.5 If, through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted or the OWNER fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded by arbitrators within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER, terminate the CONTRACT and recover from the OWNER payment for all WORK executed and all expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may upon ten (10) days written notice to the OWNER and the ENGINEER stop the WORK until he has been paid all amounts then due, in which event and upon resumption of the WORK, CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME or both to compensate for the costs and delays attributable to the stoppage of the WORK.

18.6 If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of a failure of the OWNER or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if no time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the

CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the CONTRACTOR for the costs and delays necessarily caused by the failure of the OWNER or ENGINEER.

19. PAYMENTS TO CONTRACTOR

19.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER's title to the material and equipment and protect his interest therein, including applicable insurance. The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing his reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within ten (10) days of presentation to him of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate. The OWNER shall retain ten (10) percent of the amount of each payment until final completion and acceptance of all work covered by the CONTRACT DOCUMENTS. The OWNER at any time, however, after fifty (50) percent of the WORK has been completed, if he finds that satisfactory progress is being made, shall reduce retainage to five (5%) percent on the current and remaining estimates. When the WORK is substantially complete (operational or beneficial occupancy), the retained amount may be further reduced below five (5) percent to only that amount necessary to assure completion. On completion and acceptance of a part of the WORK on which the price is stated separately in the CONTRACT DOCUMENTS, payment may be made in full, including retained percentages, less authorized deductions.

19.2 The request for payment may also include an allowance for the cost of such major materials and equipment which are suitably, stored either at or near the site.

19.3 Prior to SUBSTANTIAL COMPLETION, the OWNER, with the approval of the ENGINEER and with the concurrence of the CONTRACTOR, may use any completed or substantially completed portions of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.

19.4 The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole

responsibility for the care and protection of the WORK, or the restoration of any damaged WORK except such as may be caused by agents or employees of the OWNER.

19.5 Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate attached to the final payment request that the WORK has been accepted by him under the conditions of the CONTRACT DOCUMENTS. The entire balance found to be due the CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK.

19.6 The CONTRACTOR will indemnify and save the OWNER or the OWNER'S agent s harmless from all claims growing out of the lawful demands of SUBCONTRACTORS, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the WORK. The CONTRACTOR shall, at the OWNER'S request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills 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 the CONTRACT DOCUMENTS, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, his Surety, or any third party. In paying any unpaid bills of the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment made under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

19.7 If the OWNER fails to make payment thirty (30) days after approval by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such payment interest at the maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the CONTRACTOR.

20. ACCEPTANCE OF FINAL PAYMENT AS RELEASE

20.1 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by 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. Any payment, however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the CONTRACT

DOCUMENTS or the Performance BOND and Payment BONDS.

21. INSURANCE

21.1 The CONTRACTOR shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the CONTRACTOR'S execution of the WORK, whether such execution be by himself or by any SUBCONTRACTOR or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

21.1.1 Claims under workmen's compensation disability benefit and other similar employee benefit acts;

21.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;

21.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;

21.1.4 Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (2) by any other person; and

21.1.5 Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

21.2 Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. These Certificates shall contain a provision that coverages afforded under the policies will not be canceled unless at least fifteen (15) days prior WRITTEN NOTICE has been given to the OWNER.

21.3 The CONTRACTOR shall procure and maintain, at his own expense, during the CONTRACT TIME, liability insurance as hereinafter specified;

21.3.1 CONTRACTOR'S General Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting him from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by himself or by any SUBCONTRACTOR under him, or anyone directly or indirectly employed by the CONTRACTOR or by a SUBCONTRACTOR under him. Insurance shall be written with a limit of liability of not less than, $500,000 for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident; and a limit of liability of not less than $500,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than $200,000 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than $200,000 aggregate for any such damage sustained by two or more persons in any one accident.

21.3.2 The CONTRACTOR shall acquire and maintain, if applicable, Fire and Extended Coverage insurance upon the PROJECT to the full insurable value thereof for the benefit of the OWNER, the CONTRACTOR, and SUBCONTRACTORS as their interest may appear. This provision shall in no way release the CONTRACTOR or CONTRACTOR'S surety from obligations under the CONTRACT DOCUMENTS to fully complete the PROJECT.

21.4 The CONTRACTOR shall procure and maintain at his own expense, during the CONTRACT TIME, in accordance with the provisions of the laws of the state in which the work is performed, Workmen's Compensation Insurance, including occupational disease provisions, for all of his employees at the site of the PROJECT and in case any work is sublet, the CONTRACTOR shall require such SUBCONTRACTOR similarly to provide Workmen's Compensation Insurance, including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the CONTRACTOR. In case any class of employees engaged in hazardous work under this contract at the site of the PROJECT is not protected under Workmen's Compensation statute, the CONTRACTOR shall provide, and shall cause each SUBCONTRACTOR to provide, adequate and suitable insurance for the protection of his employees not otherwise protected.

21.5 The CONTRACTOR shall secure, if applicable, "All Risk" type Builder's Risk Insurance for WORK to be performed. Unless specifically authorized by the OWNER, the amount of such insurance shall not be less than the CONTRACT PRICE totaled in the BID. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke during the CONTRACT TIME, and until the WORK is accepted by the OWNER. The policy shall name as the insured the CONTRACTOR, the ENGINEER, and the OWNER.

22. CONTRACT SECURITY

22.1 The CONTRACTOR shall within ten (10) days after the receipt of the NOTICE OF AWARD furnish the OWNER with a Performance Bond and a Payment Bond in penal sums equal to the amount of the CONTRACT PRICE, conditioned upon the performance by the CONTRACTOR of all undertakings, covenants, terms, conditions and agreements of the CONTRACT DOCUMENTS and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS. Such BONDS shall be executed by the CONTRACTOR and a corporate bonding company licensed to transact such business in the state in which the WORK is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these BONDS shall be borne by the CONTRACTOR. If at any time a surety on any such BOND is declared a bankrupt or loses its right to do business in the state in which the WORK is to be performed or is removed from the list of Surety Companies accepted on Federal BONDS, CONTRACTOR shall within

ten (10) days after notice from the OWNER to do so, 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 an acceptable BOND to the OWNER.

23. ASSIGNMENTS

23.1 Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign or otherwise dispose of the Contract or any portion thereof or of his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

24. INDEMNIFICATION

24.1 The CONTRACTOR will indemnify and hold harmless the OWNER and the ENGINEER and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the WORK, provided t hat any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR, and SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

24.2 In any and all claims against the OWNER or the ENGINEER, or any of their agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under workmen's compensation acts, disability benefit acts or other employee benefits acts.

24.3 The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, his agents or employees arising out of the preparation or approval of maps, DRAWINGS, opinions, reports, surveys, CHANGE ORDERS, designs or SPECIFICATIONS.

25. SEPARATE CONTRACTS

25.1 The OWNER reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other CONTRACTORS reasonable opportunity for the introduction and storage of their materials and the execution of their WORK, and shall properly connect and coordinate his WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends upon the WORK of any other CONTRACTOR, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such WORK that renders it unsuitable for such proper execution and results.

25.2 The OWNER may perform additional WORK related to the PROJECT by himself, or he may let other contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are parties to such Contracts (or the OWNER, if he is performing the additional WORK himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK, and shall properly connect and coordinate his WORK with theirs.

25.3 If the performance of additional WORK by other CONTRACTORS or the OWNER is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional WORK. If the CONTRACTOR believes that the performance of such additional WORK by the OWNER or others involves him in additional expense or entitles him to an extension of the CONTRACT TIME, he may make a claim therefor as provided in Sections 14 and 15.

26. SUBCONTRACTING

26.1 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.

26.2 The CONTRACTOR shall not award WORK to SUBCONTRACTOR(s), in excess of fifty (50%) percent of the CONTRACT PRICE, without prior written approval of the OWNER.

26.3 The CONTRACTOR shall be 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.

26.4 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 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.

26.5 Nothing contained in this CONTRACT shall create any contractual relation between any SUBCONTRACTOR and the OWNER.

27. ENGINEER'S AUTHORITY

27.1 The ENGINEER shall act as the OWNER'S representative during the construction period. He shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed. He shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. The ENGINEER will make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS.

27.2 The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship and

execution of the WORK. Inspections may be made at the factory or fabrication plant of the source of material supply.
27.3 The ENGINEER will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

27.4 The ENGINEER shall promptly make decisions relative to interpretation of the CONTRACT DOCUMENTS.

28. LAND AND RIGHTS-OF-WAY

28.1 Prior to issuance of NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS unless otherwise mutually agreed.

28.2 The OWNER shall provide to the CONTRACTOR information which delineates and describes the lands owned and rights-of-way acquired.

28.3 The CONTRACTOR shall provide at his own expense and without liability to the OWNER any additional land and access thereto that the CONTRACTOR may desire for temporary construction facilities, or for storage of materials.

29. GUARANTY

29.1 The CONTRACTOR shall guarantee all materials and equipment furnished and WORK performed for a period of one (1) year from the date of SUBSTANTIAL COMPLETI ON. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the system that the completed system is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The OWNER will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs, adjustments, or other WORK that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred. The Performance BOND shall remain in full force and effect through the guarantee period.

30. ARBITRATION

30.1 All claims, disputes and other matters in question arising out of, or relating to, the CONTRACT DOCUMENTS or the breach thereof, except for claims which have been waived by the making and acceptance of final payment as provided by Section 20, shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association. This agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof.

30.2 Notice of the demand for arbitration shall be filed in writing with the other party to the CONTRACT DOCUMENTS and with the American Arbitration Association, and a copy shall be filed with the ENGINEER. Demand for arbitration shall in no event be made

and any claim, dispute or other matter in question which would be barred by the applicable statute of limitations.

30.3 The CONTRACTOR will carry on the WORK and maintain the progress schedule during any arbitration proceedings, unless otherwise mutually agreed in writing.

31. TAXES

31.1 The CONTRACTOR will pay all sales, consumer, use and other similar taxes required by the law of the place where the WORK is performed.

SUPPLEMENTAL GENERAL CONDITIONS

FOR

AMERICAN RECOVERY & REINVESTMENT ACT

(Drinking Water and Wastewater, State Revolving Funds)

Project Name: Grant County Sanitary Sewer Extension Phase 1

Project Number: ERF-187

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

	Attachment No.
SRF Special Provisions	1
KRS Chapter 45A-Kentucky Model Procurement Code-loans only	2
Equal Employment Opportunity (EEO) Documents:	
Notice of Requirement for Affirmative Action	3
Contract Specifications (Executive Order 11246)	4
EEO Goals for Region 4 Economic Areas	5
Special Notice #1 - Check List of EEO Documentation	6
Employer Information Report EEO-1 (SF 100)	7
Labor Standards Provisions for Federally Assisted Construction, EPA Form 5720-4	8
Certifications	9
Debarment, Suspension and Other Responsibility Matters	10
Region 4 Disadvantaged Business Enterprise (DBE)	11
Negotiated Rates as of October 1, 2006	12
Bonds and Insurance	13
Outlay Management Schedule	14
Storm Water General Permit	15
Wage Rates	16
Buy American	17

SRF SPECIAL PROVISIONS

(a) Line crossings of all roads and streets shall be done in accordance with the Kentucky Transportation Cabinet requirements as may be set forth in the Special Conditions.

(b) Construction is to be carried out so as to prevent by-passing of flows during construction unless a schedule has been approved by the State or EPA, whichever is applicable.

(c) Siltation and soil erosion must be minimized during construction. All construction projects with surface disturbance of more than 1 acre during the period of construction must have a KPDES Storm Water General Permit. To apply, the contractor must submit the "Notice of Intent" form at least 48 hours prior to start of construction. See Attachment 16 for the "Notice of Intent" form.

(d) Restore disturbed areas to original or better condition.

(e) Use of Chemicals: All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, must show approval of either DOW or EPA. Use of all such chemicals and disposal of residues shall be in conformance with instructions on the manufacturer's label.

(f) The construction of the project, including the letting of contracts in connection therewith, shall conform to the applicable requirements of state, territorial, and local laws and ordinances to the extent that such requirements do not conflict with Federal laws and this subchapter.

(g) The owner shall provide and maintain competent and adequate supervision and inspection.

(h) The Kentucky Infrastructure Authority and Kentucky Division of Water shall have access to the site and the project work at all times.

(i) In the event Archaeological materials (arrowheads, stone tools, stone axes, prehistoric and historic pottery, bottles, foundations, Civil War artifacts, and other types of artifacts) are uncovered during the construction of this project, work is to immediately cease at the location and the Kentucky Heritage Council shall be contacted. The telephone number is (502) 564-7005. Construction shall commence at this location until a written release is received from the Kentucky Heritage Council. Failure to report a find could result in legal action.

KRS Chapter 45A
Kentucky Model Procurement Code

45A.075 Methods of awarding state contracts.
Except as otherwise authorized by law, all state contracts shall be awarded by:
(1) Competitive sealed bidding, pursuant to KRS 45A.080; or
(2) Competitive negotiation, pursuant to KRS 45A.085 and 45A.090 or 45A.180; or
(3) Noncompetitive negotiation, pursuant to KRS 45A.095; or
(4) Small purchase procedures, pursuant to KRS 45A.100.
Effective: June 24, 2003
History: Amended 2003 Ky. Acts ch. 98, sec. 4, effective June 24, 2003. -- Created 1978 Ky. Acts ch. 110, sec. 16, effective January 1, 1979.

45A.080 Competitive sealed bidding.
(1) Contracts exceeding the amount provided by KRS 45A.100 shall be awarded by competitive sealed bidding unless it is determined in writing that this method is not practicable. Factors to be considered in determining whether competitive sealed bidding is not practicable shall include:
(a) Whether specifications can be prepared that permit award on the basis of best value; and
(b) The available sources, the time and place of performance, and other relevant circumstances as are appropriate for the use of competitive sealed bidding.
(2) The invitation for bids shall state that awards shall be made on the basis of best value. In any contract which is awarded under an invitation to bid which requires delivery by a specified date and imposes a penalty for late delivery, if the delivery is late, the contractor shall be given the opportunity to present evidence that the cause of the delay was beyond his control. If it is the opinion of the purchasing officer that there is sufficient justification for delayed delivery, the purchasing officer may adjust or waive any penalty that is provided for in the contract.
(3) Adequate public notice of the invitation for bids shall be given a sufficient time prior to the date set forth for the opening of bids. The notice may include posting on the Internet or publication in a newspaper or newspapers of general circulation in the state as determined by the secretary of the Finance and Administration Cabinet not less than seven (7) days before the date set for the opening of the bids. The provisions of this subsection shall also apply to price contracts and purchase contracts of state institutions of higher education.
(4) Bids shall be opened publicly at the time and place designated in the invitation for bids. At the time the bids are opened, the purchasing agency shall announce the agency's engineer's estimate, if applicable, and make it a part of the agency records pertaining to the letting of any contract for which bids were received. Each bid, together with the name of the bidder and the agency's engineer's estimate, shall be recorded and be open to public inspection. Electronic bid opening and posting of the required information for public viewing shall satisfy the requirements of this subsection.
(5) The contract shall be awarded by written notice to the responsive and responsible bidder whose bid offers the best value.
(6) Correction or withdrawal of bids shall be allowed only to the extent permitted by regulations issued by the secretary.
Effective: July 14, 2000
History: Amended 2000 Ky. Acts ch. 509, sec. 1, effective July 14, 2000. -- Amended 1998 Ky. Acts ch. 120, sec. 10, effective July 15, 1998. -- Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 4, sec. 27, effective May 30, 1997. -- Amended 1996 Ky.Acts ch. 60, sec. 2, effective July 15, 1996. -- Amended 1994 Ky. Acts ch. 278, sec. 1, effective July 15, 1994. -- Amended 1982 Ky. Acts ch. 282, sec. 1, effective July 15, 1982. -- Amended 1979 (1st Extra. Sess.) Ky. Acts ch. 9, sec. 1, effective February 10, 1979. -- Created 1978 Ky. Acts ch. 110, sec. 17, effective January 1, 1979.

45A.085 Competitive negotiation.
(1) When, under administrative regulations promulgated by the secretary or under KRS 45A.180, the purchasing officer determines in writing that the use of competitive sealed bidding is not practicable, and except as provided in KRS 45A.095 and 45A.100, a contract may be awarded by competitive negotiation.
(2) Adequate public notice of the request for proposals shall be given in the same manner and circumstances as provided in KRS 45A.080(3).
(3) Contracts other than contracts for projects utilizing an alternative project delivery method under KRS 45A.180 may be competitively negotiated when it is determined in writing by the purchasing officer that the bids received by competitive sealed bidding either are unreasonable as to all or part of the requirements, or were not independently reached in open competition, and for which each competitive bidder has been notified of the intention to negotiate and is given reasonable opportunity to negotiate.
(4) Contracts for projects utilizing an alternative project delivery method shall be processed in accordance with KRS 45A.180.
(5) The request for proposals shall indicate the relative importance of price and other evaluation factors.
(6) Award shall be made to the responsible offerer whose proposal is determined in writing to be the most advantageous to the Commonwealth, taking into consideration price and the evaluation factors set forth in the request for proposals.
(7) Written or oral discussions shall be conducted with all responsible offerers who submit proposals determined in writing to be reasonably susceptible of being selected for award. Discussions shall not disclose any information derived from proposals submitted by competing offerers. Discussions need not be conducted:
(a) With respect to prices, where the prices are fixed by law or administrative regulation, except that consideration shall be given to competitive terms and conditions;
(b) Where time of delivery or performance will not permit discussions; or
(c) Where it can be clearly demonstrated and documented from the existence of adequate competition or prior experience with the particular supply, service, or construction item, that acceptance of an initial offer without discussion would result in fair and reasonable best value procurement, and the request for proposals notifies all offerers of the possibility that award may be made on the basis of the initial offers.
Effective: June 24, 2003
History: Amended 2003 Ky. Acts ch. 98, sec. 5, effective June 24, 2003. -- Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 4, sec. 28, effective May 30, 1997. – Amended 1979 (1st Extra. Sess.) Ky. Acts ch. 9, sec. 2, effective February 10, 1979. -- Created 1978 Ky. Acts ch. 110, sec. 18, effective January 1, 1979.

45A.090 Negotiation after competitive sealed bidding when all bids exceed available funds.
(1) In the event that all bids submitted pursuant to competitive sealed bidding under KRS 45A.080 result in bid prices in excess of the funds available for the purchase, and the chief purchasing officer determines in writing:
(a) That there are no additional funds available from any source so as to permit an award to the responsive and responsible bidder whose bid offers the best value; and
(b) The best interest of the state will not permit the delay attendant to a resolicitation under revised specifications, or for revised quantities, under competitive sealed bidding as provided in KRS 45A.080, then a negotiated award may be made as set forth in subsections (2) or (3) of this section.
(2) Where there is more than one (1) bidder, competitive negotiations pursuant to KRS 45A.085(3) shall be conducted with the three (3) (two (2) if there are only two (2)) bidders determined in writing to be the most responsive and responsible bidders, based on criteria contained in the bid invitation. Such competitive negotiations shall be conducted under the following restrictions:

(a) If discussions pertaining to the revision of the specifications or quantities are held with any potential offerer, all other potential offerers shall be afforded an opportunity to take part in such discussions; and
(b) A request for proposals, based upon revised specifications or quantities, shall be issued as promptly as possible, shall provide for an expeditious response to the revised requirements, and shall be awarded upon the basis of best value.
(3) Where, after competitive sealed bidding, it is determined in writing that there is only one (1) responsive and responsible bidder, a noncompetitive negotiated award may be made with such bidder in accordance with KRS 45A.095.
Effective: June 24, 2003
History: Amended 2003 Ky. Acts ch. 98, sec. 6, effective June 24, 2003. -- Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 4, sec. 29, effective May 30, 1997. – Created 1978 Ky. Acts ch. 110, sec. 19, effective January 1, 1979.

45A.095 Noncompetitive negotiation.
(1) A contract may be made by noncompetitive negotiation only for sole source purchases, or when competition is not feasible, as determined by the purchasing officer in writing prior to award, under administrative regulations promulgated by the secretary of the Finance and Administration Cabinet or the governing boards of universities operating under KRS Chapter 164A, or when emergency conditions exist. Sole source is a situation in which there is only one (1) known capable supplier of a commodity or service, occasioned by the unique nature of the requirement, the supplier, or market conditions. Insofar as it is practical, no less than three (3) suppliers shall be solicited to submit written or oral quotations whenever it is determined that competitive sealed bidding is not feasible. Award shall be made to the supplier offering the best value. The names of the suppliers submitting quotations and the date and amount of each quotation shall be placed in the procurement file and maintained as a public record. Competitive bids may not be required:
(a) For contractual services where no competition exists, such as telephone service, electrical energy, and other public utility services;
(b) Where rates are fixed by law or ordinance;
(c) For library books;
(d) For commercial items that are purchased for resale;
(e) For interests in real property;
(f) For visiting speakers, professors, expert witnesses, and performing artists;
(g) For personal service contracts executed pursuant to KRS 45A.690 to 45A.725; and
(h) For agricultural products in accordance with KRS 45A.645.
(2) The chief procurement officer, the head of a using agency, or a person authorized in writing as the designee of either officer may make or authorize others to make emergency procurements when an emergency condition exists.
(3) An emergency condition is a situation which creates a threat or impending threat to public health, welfare, or safety such as may arise by reason of fires, floods, tornadoes, other natural or man-caused disasters, epidemics, riots, enemy attack, sabotage, explosion, power failure, energy shortages, transportation emergencies, equipment failures, state or federal legislative mandates, or similar events. The existence of the emergency condition creates an immediate and serious need for services, construction, or items of tangible personal property that cannot be met through normal procurement methods and the lack of which would seriously threaten the functioning of government, the preservation or protection of property, or the health or safety of any person.
(4) The Finance and Administration Cabinet may negotiate directly for the purchase of contractual services, supplies, materials, or equipment in bona fide emergencies regardless of estimated costs. The existence of the emergency shall be fully explained, in writing, by the head of the agency for which the purchase is to be made. The explanation shall be approved by the

secretary of the Finance and Administration Cabinet and shall include the name of the vendor receiving the contract along with any other price quotations and a written determination for selection of the vendor receiving the contract. This information shall be filed with the record of all such purchases and made available to the public. Where practical, standard specifications shall be followed in making emergency purchases. In any event, every effort should be made to effect a competitively established price for purchases made by the state.

Effective: July 15, 2002

History: Amended 2002 Ky. Acts ch. 344, sec. 9, effective July 15, 2002. – Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 4, sec. 30, effective May 30, 1997. – Amended 1990 Ky. Acts ch. 496, sec. 4, effective July 13, 1990. -- Created 1978 Ky. Acts ch. 110, sec. 20, effective January 1, 1979.

45A.100 Small purchases.

(1) Procurements may be made in accordance with small purchase administrative regulations promulgated by the secretary of the Finance and Administration Cabinet, pursuant to KRS Chapter 13A, as follows:

(a) Up to ten thousand dollars ($10,000) per project for construction and one thousand dollars ($1,000) for purchases by any state governmental body, except for those state administrative bodies specified in paragraph (b) of this subsection; and

(b) Up to forty thousand dollars ($40,000) per project for construction or purchases by the Finance and Administration Cabinet, state institutions of higher education, and the legislative branch of government.

(2) Procurement requirements shall not be artificially divided so as to constitute a small purchase under this section. At least every two (2) years, the secretary shall review the prevailing costs of labor and materials and may make recommendations to the next regular session of the General Assembly for the revision of the then current maximum small purchase amount as justified by intervening changes in the cost of labor and materials.

(3) The secretary of the Finance and Administration Cabinet may grant to any state agency with a justifiable need a delegation of small purchasing authority, which exceeds the agency's small purchase limit, provided in subsection (1) of this section.

Delegations of small purchasing authority shall be granted or revoked by the secretary of the Finance and Administration Cabinet, in accordance with administrative regulations promulgated by the cabinet pursuant to KRS Chapter 13A. These administrative regulations shall establish, at a minimum, the criteria for granting and revoking delegations of small purchasing authority, including the requesting agency's past compliance with purchasing regulations, the level of training of the agency's purchasing staff, and the extent to which the agency utilizes the Kentucky Automated Purchasing System. The administrative regulations may permit the secretary of the Finance and Administration Cabinet to delegate small purchase procurements up to the maximum amount specified in subsection (1)(b) of this section.

Effective: July 15, 2002

History: Amended 2002 Ky. Acts ch. 320, sec. 2, effective July 15, 2002. – Amended 2000 Ky. Acts ch. 225, sec. 1, effective July 14, 2000. -- Amended 1996 Ky. Acts ch. 60, sec. 1, effective July 15, 1996. -- Amended 1994 Ky. Acts ch. 323, sec. 1, effective July 15, 1994. -- Amended 1990 Ky. Acts ch. 496, sec. 5, effective July 13, 1990. -- Amended 1986 Ky. Acts ch. 384, sec. 1, effective July 15, 1986. -- Amended 1984 Ky. Acts ch. 384, sec. 1, effective July 13, 1984. – Amended 1982 Ky. Acts ch. 282, sec. 2, effective July 15, 1982. -- Amended 1980 Ky. Acts ch. 242, sec. 1, effective July 15, 1980; and ch. 250, sec. 19, effective April 9, 1980.-- Created 1978 Ky. Acts ch. 110, sec. 21, effective January 1, 1979.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

The following excerpts are from 45 FR 65984 (October 3, 1980):

The minority and female goals apply to Federal and federally assisted construction contractors and subcontractors which have covered contracts. The goals are expressed as a percentage of the total hours worked by such a covered or subcontractor's entire onsite construction workforce, which is working on any construction site within a relevant area. The goal applies to each construction craft and trade in the contractor's entire workforce in the relevant area including those employees working on private non-federally involved projects.

Until further notice, the following goals for minority utilization in each construction craft and trade shall be included in all Federal or federally assisted construction contracts and subcontracts in excess of $10,000 to be performed in the respective geographic area. The goals are applicable to each nonexempt contractor's total onsite construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, federally assisted or non-federally related project, contract or subcontract.

Construction contractors which are participating in an approved Hometown Plan (see 41 CFR 60-4.5) are required to comply with the goals of the Hometown Plan with regard to construction work they perform in the area covered by the Hometown Plan. With regard to all their other covered construction work, such contractors are required to comply as follows:

Goals for female participation in each trade.....6.9%
Goals for minority participation in each trade.....Insert goals for each year
(see Attachment Number 6)

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area.

The following excerpts are from 45 FR 65977 (October 3, 1980):

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

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

4. As used in this Notice, and in the contract resulting from this solicitation, the covered area is (insert description of the geographical areas where the contract is to be performed giving the state, country, and city, if any).

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

EEO Specifications

Following is the standard language, which must be incorporated into all solicitations for offers and bids on all Federal and Federally assisted construction contracts or subcontracts in excess of $10,000 to be performed in designated geographical areas:

1. As used in these specifications:
   (a) Covered Area means the geographical area described in the solicitation from which this contract resulted.

   (b) Director means Director, Office of Federal Contract Compliance Program, United States Department of Labor, or any person to whom the Director delegates authority;

   (c) Employer identification number means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

   (d) Minority includes:

   (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

   (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

   (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

   (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take a good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7-a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female

utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative actions steps at least as extensively as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligation.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7-b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, lay-off, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are 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 solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative actions obligations (7 a through p). The efforts of a contractor association, joint contractor-union, contractor-community, of other similar group of which the contractor is a member and participant may be asserted as fulfilling any one or more of its obligations under 7 a through p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example: even though the Contractor has achieved its goal for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables for affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation, if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

Attachment Number 5

EEO Goals for Economic Areas in Region 4

Source: Appendix B-80 in 45 FR 65984 (October 3, 1980)

Kentucky:

056 Paducah, KY:	
Non-SMSA Counties	5.2
IL Hardin; IL Massac; IL Pope; KY Ballard; KY Caldwell; KY Calloway. KY Carlisle; KY Crittenden; KY Fulton; KY Graves; KY Hickman; KY Livingston; KY Lyon. KY McCracken; KY Marshall.	
057 Louisville, KY:	
SMSA Counties:	
4520 Louisville, KY-IN	11.2
IN Clark; IN Floyd; KY Bullift; KY Jefferson; KY Oldham.	
Non-SMSA Counties	9.6
IN Crawford; IN Harrison; IN Jefferson; IN Orange; IN Scott; IN Washington; KY Breckinridge; KY Grayson; KY Hardin; KY Hart; KY Henry; KY Larue; KY Marion; KY Meade; KY Nelson; KY Shelby; KY Spencer; KY Trimble; KY Washington058 Lexington, KY	
SMSA Counties	
4280 Lexington-Fayette, KY	10.8
KY Bourbon; KY Clark; KY Fayette; KY Jessamine; KY Scott; KY Woodford.	
Non-SMSA Counties	7.0
KY Adair KY Anderson; KY Bath; KY Boyle; KY Breathitt; KY Casey; KY Clay; KY Estill; KY Franklin- KY Garrard; KY Green; KY Harrison- KY Jackson; KY Knott; KY Lee; KY Leslie; KY Letcher; KY Lincoln; KY Madison; KY Magoffin; KY Menifee; KY Mercer; KY Montgomery; KY Morgan. KY Nicholas; KY Owsley; KY Perry; KY Powell; KY Pulaski; KY Rockcastle; KY Russell; KY Taylor; KY Wolfe.	

Attachment Number 6

CHECK LIST OF EEO DOCUMENTATION FOR BIDDERS ON LOAN CONSTRUCTION (Required by Executive Order 11246 as amended)

The low, responsive responsible bidder must forward the following items, in duplicate, to the owner no later than ten (10) days after bid opening. The owner shall have one (1) copy available for inspection by the Office of Federal Contracts Compliance within 14 days after the bid opening. The web site for the OFCC is http://www.dol.gov/esa/ofcp_org.htm.

1. Project Number. Project Location. Type of Construction.

2. Proof of registration with the Joint Reporting Commission. (See Attachment Number 8.)

3. Copy of Affirmative Action Plan of contractor. Indicate company official responsible for EEO.

4. List of current construction contracts, with dollar amount. List contracting Federal Agency, if applicable.

5. Statistics concerning company percent workforce, permanent and temporary, by sex, race, trade, handicapped, and age. 40 CFR Part 7.

6. List of employment sources for project in question. If union sources are utilized, indicate percentage of minority membership within the union crafts.

7. Anticipated employment needs for this project, by sex, race and trade, with estimate of minority participation in specific trades.

8. List of subcontractors (name, address and telephone) with dollar amount and duration of subcontract. Subcontractor contracts over $10,000 must submit items 1- 8. The following information must be provided for all supplier contracts regardless of contract size: name of company, contact person, address, telephone number, dollar value of the contract, and a list of the materials to be supplied to the prime contractor.

9. List of any subcontract work yet to be committed with estimate of dollar amount and duration of contract.

10. Contract Price. Duration of prime contract.

11. DBE Documents - See special instructions regarding use of Minority, and Women Owned, and Small Businesses.

Attachment Number 7

Employer Information Report EEO-1

Under the direction of the US Equal Employment Opportunity Commission, the Joint Reporting Committee is responsible for the full-length, multi-phase processing of employment statistics collected on the Employer Information Report EEO-1. This report, also termed Standard Form 100, details the sex and race/ ethnic composition of an employer's work force by job category.

The Employer Information EEO-1 survey is conducted annually under the authority of Public Law 88-352, Title VII of the Civil Rights Act of 1964, as amended by the Equal Employment Opportunity Act of 1972. All employers with 15 or more employees are covered by Public Law 88-352 and are required to keep employment records as specified by Commission regulations. Based on the number of employees and federal contract activities, certain large employers are required to file an EEO-1 Report on an annual basis.

The EEO-1 Report must be filed by:

(A) All private employers who are: (1) subject to Title VII of the Civil Rights Act of 1964 (as amended by the Equal Employment Opportunity Act of 1972) with 100 or more employees EXCLUDING State and local governments, primary and secondary school systems, institutions of higher education, Indian tribes and tax-exempt private memberships clubs other than labor organizations; OR (2)subject to Title VII who have fewer than 100 employees if the company is owned or affiliated with another company, or there is centralized ownership, control or management (such as central control of personnel policies and labor relations) so that the group legally constitutes a single enterprise and the entire enterprise employs a total of 100 or more employees.

(B) All federal contractors (private employers), who:(1) are not exempt as provided for by 41 CFR 60-1.5, (2) have 50 or more employees, and (a) are prime contractors or first-tier subcontractors, and have a contract, subcontract, or purchase order amounting to $50,000 or more; or (b) serve as depository of Government funds in any amount, or (c) is a financial institution which is an issuing an paying agent for U.S. Savings Bonds and Notes.

Only those establishments located in the District of Columbia and the 50 states are required to submit the EEO-1 Report. No Reports should be filed for establishments in Puerto Rico, the Virgin Islands or other American Protectorates.

When filing for the EEO-1 Rep ort for the first time, go to the web site at: http://www.mimdms.com/jrc.html and select "Filing for the first time" from the box labeled INFORMATION. File out the electronic questionnaire to enter your company into Joint Reporting Committee (JRC) system. One you have completed the registration process, you will be contacted on how to proceed with the EEO-1 Report. If you have previously registered with the JRC, follow their instructions to update your information.

EPA Form 5720-4 **Attachment Number 8**

Labor Standards Provisions for Federally Assisted Construction

Labor standards provisions applicable to contracts covering federally financed and assisted construction (29 CFR 5.5, Contract Provisions and Related Matters) that apply to EPA Special Appropriations Projects grants are:

(a)(4)(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

(a)(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

(a)(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5 (a) (1) through (10) and such other clauses as the U.S. Environmental Protection Agency may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

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

(b) Contractor Work Hours and Safety Standards Act. The Administrator, EPA shall cause or require the contracting officer to insert the following clauses set forth in paragraph (b)(1),(2),(3), and (4) of this section in full in any contract subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by *Section 5.5(a) of this title. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

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

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b) (1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for unliquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The U.S. Environmental Protection Agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally- assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such liabilities of such contractor or

subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b) (2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in section 5.1, the Administrator of EPA shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly worked, deductions made, and actual wages paid. Further, the Administrator of EPA shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the U.S. Environmental Protection Agency and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job. (Approved by the Office of Management and Budget under OMB control numbers 1215-0140 and 1215-0017.)

Debarred Firms

All prime Construction Contractors shall certify that Subcontractors have not and will not be awarded to any firm that is currently on the EPA Master List of Debarred, Suspended and Voluntarily Excluded Persons in accordance with the provisions of 40 CFR 32.500(c). Debarment action is taken against a firm for noncompliance with Federal Law.

All bidders shall complete the attached certification (Attachment Number 10) and submit to the owner with the bid proposal.

CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(A) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining. attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement. theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal. State, or Local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

_____

Typed Name & Title of Authorized Representative

_____

Signature of Authorized Representative Date

____ I am unable to certify to the above statements. My explanation is attached.

Attachment Number 11

EPA DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

EPA's Disadvantaged Business Enterprise Program rule applies to contract procurement actions funded in part by EPA assistance agreements awarded after May 27, 2008. The rule is found at Federal regulation Title 40, Part 33. Specific responsibilities are highlighted below.

Grant recipient responsibilities:

- Conduct an Availability Analysis and negotiate fair share objectives with EPA (§ 33.411), or adopt the fair share objectives of the oversight state agency revolving loan fund for comparable infrastructure. (§ 33.405(b)(3)).

- Include the Appendix A term and condition in each contract with a primary contractor (§ 3.106). The term and condition is included in the EPA Region 4 contract specifications insert *FEDERAL REQUIREMENTS AND CONTRACT PROVISIONS FOR SPECIAL APPROPRIATION ACT PROJECTS US ENVIRONMENTAL PROTECTION AGENCY, Region III, June 2008.*

- Employ the six Good Faith Efforts during prime contractor procurement (§ 33.301).

- Require prime contractor to comply with the following prime contractor requirements of Title 40 Part 33:

  - To employ the six Good Faith Efforts steps in paragraphs (a) through (e) of § 33.301 if the prime contractor awards subcontracts (§ 33.301(f)).

  - To provide EPA form 6100-2 – *DBE Subcontractor Participation Form* to all DBE subcontractors (§ 33.302(e)).

  - To submit EPA forms 6100-3 – *DBE Program Subcontractor Performance Form* and 6100-4 – *DBE Program Subcontractor Utilization Form* with bid package or proposal. (§ 33.302 (f) and (g)).

  - To pay its subcontractor for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the recipient (§ 33.302(a)).

  - To notify recipient in writing by its prime contractor prior to any termination of a DBE subcontractor for convenience by the prime contractor (§ 33.302(b)).

  - To employ the six good faith efforts described in § 33.301 if soliciting a replacement subcontractor after a DBE subcontractor fails to complete work under the subcontract for any reason. (§ 33.302(c)).

  - To employ the six good faith efforts described in § 33.301 even if the prime contractor has achieved its fair share objectives under subpart D of Part 33. (§33.302(d)).

- Semiannually complete and submit to Charles Hayes, EPA Region 4 DBE Coordinator EPA form 5700-52A summarizing DBE participation achieved during the previous six months (§ 33.502).

- Maintain records documenting its compliance with the requirements of Title 40 Part 33, including documentation of its, and its prime contractors', good faith efforts (§ 33.501(a)).

Prime Contractor Responsibilities:

- Employ the six Good Faith Efforts steps in paragraphs (a) through (e) of § 33.301 if the prime contractor awards subcontracts (§ 33.301(f)).

- Provide EPA form number 6100-2 – *DBE Program Subcontractor Participation Form* and form number 6100-3 – *DBE Program Subcontractor Performance Form* to each DBE subcontractor prior to opening of the contractor's bid or proposal (§ 33.302(e) and (f)).

- Complete EPA form number 6100-4 – *DBE Program Subcontractor Utilization Form* (§ 33.302(g).

- Submit to recipient with it bid package or proposal the completed EPA form number 6100-4, plus an EPA form number 6100-3 for each DBE subcontractor used in the contractor's bid or proposal (§ 33.302(f) and (g)).

- Pay subcontractors for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the recipient (§ 33.302(a)).

- Notify the recipient in writing prior to prime contractor termination of a DBE subcontractor for convenience (§ 33.302(b)).

- Employ the six good faith efforts described in § 33.301 if soliciting a replacement subcontractor after a DBE subcontractor fails to complete work under the subcontract for any reason. (§ 33.302(c)).

- Employ the six good faith efforts described in § 33.301 even if the prime contractor has achieved its fair share objectives under subpart D of Part 33. (§33.302(d)).

- Semiannually inform recipient of DBE participation achieved (§ 33.502).

- Maintain records documenting its compliance with the requirements of Title 40 Part 33, including documentation of its, and its prime contractors', good faith efforts (§ 33.501(a)).

Subcontractor Responsibilities:

- May submit EPA form 6100-2 – *DBE Subcontractor Participation Form* to Charles Hayes, EPA Region 4 DBE Coordinator (§ 33.302(e)).
- Must complete EPA form 6100-3 – *DBE Program Subcontractor Performance Form*, and submit it to the prime contractor soliciting services from the subcontractor prior to the opening of bids for the prime contract.

Form	Requirement	Provided By:	Completed By:	Submitted To:
EPA Form 6100-2	Grant Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	EPA Region 4 DBE Coordinator Charles Hayes
EPA Form 6100-3	Grant Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	Grant Recipients as part of a bid or proposal package
EPA Form 6100-4	Grant Recipients required to have prime contractors complete the form	Grant Recipients	Prime Contractors	Grant Recipients as part of a bid or proposal package

DISADVANTAGED ENTERPRISE PARTICIPATION POLICY

PROJECT NAME: _____ **BID DATE:** _____

1. Name, address and telephone number of contact person on all DBE matters:

   Prime Contractor's Name: _____
   Contact Person: _____
   Address: _____
   Phone: _____
   Cell Phone: _____
   Email: _____
   Total Contract Amount:
   _____

5. Total dollar amount/percent of contract of MBE participation:
   _____

6. Total dollar amount/percent of contract of WBE participation:
   _____

7. Certifications* for each subcontractor enclosed: ☐ Yes ☐ No

8. Subcontracts or letters of intent signed by both parties enclosed: ☐ Yes ☐ No

9. **List of MBE Subcontractors:**
   Name: _____
   Contact Person: _____
   Address: _____
   Phone: _____
   Cell Phone: _____
   Email: _____
   Type of Contract: _____
   Work to be Done: _____
   Amount: _____

10. **List of WBE Subcontractors:**
    Name: _____
    Contact Person: _____
    Address: _____

Phone: _____
Cell Phone: _____
Email: _____
Type of Contract: _____
Work to be Done: _____
Amount: _____

Attach Additional Sheets, If Necessary
*Self-certification: Self certification of MBE/WBE/DBE firms will NOT be accepted as a valid form of certification of MBE/WBE/DBE status.

Information concerning the efforts for obtaining subcontractor(s)

11. Information to be submitted by the bidder concerning good faith efforts taken

a. Advertisements, etc.: List each publication in which an announcement or notification was placed and attach the tear sheet of each announcement from each publication

Name of publication: _____

Address: _____

Dates of advertisement: _____

Specific subcontract areas announced: _____

b. List each DBE construction firm or supplier to which a letter of solicitation was sent or with whom negotiations were held.

Company name and phone number: _____

Area of Work Expertise: _____

Date of any follow-up call and person spoke to: _____

c. Copies of returned envelopes.

d. Copies of faxes sent.

e. Copies of certified mail return receipts.

f. Copies of letters or e-mails from solicited firms declining offer.

g. Copy of bidders list (see sheet below):

BIDDER'S LIST FORM

OWNER _____ LOAN NO:_____

PROJECT TITLE_____ BID DATE:_____

Instructions:

1. This list must include all firms that bid or quote on prime or subcontracts under EPA assisted projects (i.e. SRF Projects), included both MBE/WBE's and non MBE/WBE's
2. SRF loan participants must keep the Bidder's List until the project period for the identified loan has ended and no funds are remaining.
3. This list must be submitted to DOW in the ATA Package. Contract Award Approval cannot be given until this form has been received by SRF.
4. The following information must be obtained from all prime and sub-contractor's. Please complete the form below:

ENTITY'S NAME	MAILING ADDRESS	CONTACT PERSON	PHONE#	E-MAIL ADDRESS	M/WBE?

REGION 4 DISADVANTAGED BUSINESS ENTERPRISE (DBE) NEGOTIATED RATES

(Subject to change - refer to grant award for specific fair share objectives)

KENTUCKY

SRF Construction:	0.70% MBE and 7.60% WBE
Equipment:	1.20% MBE and 1.10% WBE
Services:	1.20% MBE and 16.30% WBE
Supplies:*	3.70% MBE and 4.60% WBE

BONDS AND INSURANCE

The minimum requirements shall be as follows:

Bonding requirements for contracts of $100,000 or less are contained in 40 CFR 31.36(h).

Bond requirements for contracts in excess of $100,000 are:

- Bid guarantee equivalent to five percent of the bid price. The bid guarantee shall consist of a firm commitment such as a certified check or bid bond submitted with the bid;
- Performance bond equal to 100 percent of the contract price, and
- Payment bond equal to 100 percent of the contract price. Bonds must be obtained from companies holding Certificates of Authority as acceptable sureties, issued by the U.S. Treasury.

Insurance requirements are contained in the General Conditions of the contract. In addition to the other required insurance, the owner or the contractor, as appropriate, must acquire any flood insurance made available by the Federal Emergency Management Agency as required by 44 CFR Parts 59-79, if construction will take place in a flood hazard area identified by the Federal Emergency Management Agency. The owner's requirements on Flood Insurance are contained in the Special Conditions Section of the Contracts Documents.

Attachment No. 14

OUTLAY MANAGEMENT

The contractor must provide a contract progress schedule of percentage of work in place and costs against time; and a schedule of projected payments (cumulative) for construction and for the architectural/ engineering contract when the contract is awarded. The payment schedule must be submitted, in a format similar to the attached sample, to the owner for forwarding to the State when the contract is awarded, and whenever actual payments on a project vary beyond -5 percent and +10 percent from the schedule, as determined by the grantee.

Contractor will be required to review each of these contract schedules during the month of June and to submit revised schedules, as necessary, no later that July 1st of each year.

THIS FORMAT IS A SAMPLE ONLY.

CONSTRUCTION AND OUTLAY SCHEDULE

Project No.: _____

Applicant: _____

Contract Identification: _____

Description of Contract: _____

_____

(INSTRUCTIONS FOR USE ON REVERSE SIDE)

SCHEDULE I - CONSTRUCTION SCHEDULE

Date for Advertisement: _____
Date for Opening Bids: _____
Pre-Construction Conference Date: _____
Date of Contract Award: _____
Contract Period: _____ days Projected Contract Completion Date: _____
Total Eligible Contract Amount: _____
Work Order Date: _____
Start Construction Date: _____
Contract Completed: _____

SCHEDULE II - CUMULATIVE OUTLAY SCHEDULE (55% EPA Share) - Projection only for quarters that remain in the fiscal year (FY) plus cumulative annual amount for the next FY.

Cum EPA Amount thru 1st Qtr. Oct./Dec.: $ _____
Cum EPA Amount thru 2nd Qtr. Jan./Mar.: $ _____
Cum EPA Amount thru 3rd Qtr. Apr./June: $ _____
Cum EPA Amount thru 4th Qtr. July/Sept.: $ _____
Cum EPA Amount for Next Fiscal Year: $ _____

INSTRUCTIONS (Construction and Outlay Schedules)

To insure timely achievement of the loan objectives the owner must provide EEC/DEP/DOW with a loan activities schedule, contract construction schedules and corresponding payment outlay schedules for the loan and each contract under the loan. One copy of information similar to that showing the Construction and Outlay Schedule Form will be submitted for the loan schedule with the loan acceptance. A separate form will accompany each contract at time of contract award.

A. The loan activities schedule shall depict the period from loan award through loan closeout and cover all major milestone date. The loan activities schedule shall include Schedule I information items as well as other appropriate items necessary to monitor the loan. Schedule II shall be filled out to estimate the cumulative (all construction and architectural/engineering contracts) payment schedule to be requested by the borrower from KIA during the loan period, and whenever actual outlays vary beyond -5% and +10% from the schedule.

B. Individual contractor's construction schedules for each contract will be submitted to support the loan activities schedule. The Schedule I shall be submitted prior to date of advertisement of each contract and Schedule II along with the contractor's construction schedule shall be submitted seven (7) calendar days prior to the dates of the pre-construction conference. The contractor's construction schedule shall depict the contractor's plan for completing all contract requirements and show work placement in dollars versus contract time. Schedule II shall depict the contract payment outlay by month or quarter. The contract schedule will be coordinated with all parties at the pre-construction conference.

The loan activities schedule, contractor construction schedules, will be the basis for monitoring progress towards completion of the project. The schedules shall be maintained at the available for inspection and updated at least monthly. The schedules shall be revised to incorporate approved change orders as they occur.

All of the schedules will be submitted to the State Division of Water.

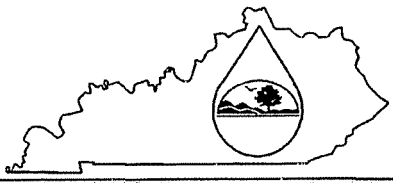
Attachment No. 15

NOTICE OF INTENT

All construction projects with surface disturbance of more than 1 acre during the period of construction must have a KPDES Storm Water General Permit. The contractor must complete and submit the attached form at least 48 hours prior to start of construction to the address below:

Section Supervisor
Permits Support Section
Surface Water Permits Branch
Kentucky Division of Water
200 Fair Oaks
Frankfort, Kentucky 40601

KPDES FORM NOI-SW



Kentucky Pollutant Discharge Elimination System (KPDES)
Notice of Intent (NOI)
for Storm Water Discharges
Associated with Industrial Activity Under the
KPDES General Permit

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form intends to be authorized by a KPDES permit issued for storm water discharges associated with industrial activity. Becoming a permittee obligates such discharger to comply with the terms and conditions of the permit.
ALL NECESSARY INFORMATION MUST BE PROVIDED ON THIS FORM (See Instructions on back)

I. Facility Operator Information

Name:		Phone:	
Address:		Status of Owner/Operator:	
City, State, Zip Code:			

II. Facility/Site Location Information

Name:			
Address:			
City, State, Zip Code:			
County:			
Site Latitude: (degrees/minutes/seconds)		Site Longitude: (degrees/minutes/seconds)	

III. Site Activity Information

MS4 Operator Name:							
Receiving Water Body:							
Are there existing quantitative data?	Yes ☐ If Yes, submit with this form. No ☐						
SIC or Designated Activity Code Primary		2nd		3rd		4th	
If this facility is a member of a Group Application, enter Group Application Number:							
If you have other existing KPDES Permits, enter Permit Numbers:							

IV. Additional Information Required FOR CONSTRUCTION ACTIVITIES ONLY

Project Start Date:		Completion Date:	
Estimated Area to be disturbed (in acres):			
Is the Storm Water Pollution Prevention Plan in Compliance with State and/or Local Sediment and Erosion Plans?		Yes ☐ No ☐	

Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed or Typed Name:			
Signature:		Date:	

To Be Covered Under The KPDES General Permit

WHO MUST FILE A NOTICE OF INTENT (NOI) FORM

Federal law at 40 CFR Part 122 prohibits point source discharges of stormwater associated with industrial activity to a water body of the Commonwealth of Kentucky without a Kentucky Pollutant Discharge Elimination System (KPDES) permit. The operator of an industrial activity that has such a storm water discharge must submit a NOI to obtain coverage under the KPDES Storm Water General Permit. If you have questions about whether you need a permit under the KPDES Storm Water program, or if you need information as to whether a particular program is administered by the state agency, call the Storm Water Contact, Industrial Section, Kentucky Division of Water at (502) 564-3410.

NOIs must be sent to the following address:

Section Supervisor
Permits Support Section
Surface Water Permits Branch, Division of Water
200 Fair Oaks
Frankfort, KY 40601

COMPLETING THE FORM

Type or print legibly in the appropriate areas only. If you have any questions regarding the completion of this form call the Storm Water Contact, Industrial Section, at (502) 564-3410.

SECTION I - FACILITY OPERATOR INFORMATION

Give the legal name of the person, firm, public organization, or any other entity that operates the facility or site described in this application. The name of the operator may or may not be the same as the name of the facility. The responsible party is the legal entity that controls the facility's operation, rather than the plant or site manager. Do not use a colloquial name. Enter the complete address and telephone number of the operator.

Enter the appropriate letter to indicate the legal status of the operator of the facility.

F = Federal	M = Public (other than federal or state)
S = State	P = Private

SECTION II - FACILITY/SITE LOCATION INFORMATION

Enter the facility's or site's official or legal name and complete street address, including city, state, and ZIP code.

SECTION III - SITE ACTIVITY INFORMATION

If the storm water discharges to a municipal separate storm sewer system (MS4), enter the name of the operator of the MS4 (e.g., municipality name, county name) and the receiving water of the discharge from the MS4. (A MS4 is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by a state, city, town, borough, county, parish, district, association, or other public body which is designed or used for collecting or conveying storm water.)

If the facility discharges storm water directly to receiving water(s), enter the name of the receiving water.

Indicate whether or not the owner or operator of the facility has existing quantitative data that represent the characteristics and concentration of pollutants in storm water
discharges.

If data is available submit with this form.

List, in descending order of significance, up to four 4-digit standard industrial classification (SIC) codes that best describe the principal products or services provided at the facility or site identified in Section II of this application.

If the facility listed in Section II has participated in Part 1 of an approved storm water group application and a group number has been assigned, enter the group application number in the space provided.

If there are other KPDES permits presently issued for the facility or site listed in Section II, list the permit numbers.

SECTION IV - ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION ACTIVITIES ONLY

Construction activities must complete Section IV in addition of Sections I through III. Only construction activities need to complete Section IV.

Enter the project start date and the estimated completion date for the entire development plan.

Provide an estimate of the total number of acres of the site on which soil will be disturbed (round to the nearest acre).

Indicate whether the storm water pollution prevention plan for the site is in compliance with approved state and/or local sediment and erosion plans, permits, or storm water management plans.

SECTION V - CERTIFICATION

Federal statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor; or

For a municipality, state, Federal, or other public facility: by either a principal executive officer or ranking elected official.

WAGE RATES

Federal Davis-Bacon rates **are** applicable to these funds. This determination applies to the entire project. Please contact the other funding sources, if applicable, for their requirements pertaining to federal wage rates. You must contact the Kentucky Labor Cabinet for determination of applicable state wages.

BUY AMERICAN

P.L. 111-5, the "American Recovery and Reinvestment Act of 2009" (ARRA) requires Clean Water State Revolving Fund and Drinking Water State Revolving Fund assistance recipients of these ARRA funds to use domestic iron, steel and manufactured goods that are produced in the United States.

Section 1605 of the ARRA requires assistance recipients to use American iron, Steel and manufactured goods throughout their ARRA funded projects. Section 1605 also, however, sets forth certain circumstances under which a federal agency may determine to waive Buy American requirements.

The approach described in the attached US EPA memorandum ARRA 09-1 dated April 28, 2009 describes how EPA will implement these provisions.

The memorandum includes sample Buy American contract language that must be completed and be part of your contract. It also includes a sample certification that you may require from your contractor or bidder to certify compliance with this requirement of the ARRA.

U.S. EPA, Office of Grants and Debarment

Tip Sheet for Registering with the Central Contractor Registration (CCR)

What is CCR?

- The CCR is a government-wide registry for organizations that seek to do business with the federal government. The CCR collects, validates, stores and disseminates data to support a variety of federal initiatives.
- **Already registered?** An organization may check if it is already registered by logging onto www.ccr.gov, clicking on "Search CCR," and providing the organization's DUNS number.
- **Need to register?** If an organization is not registered, it may register online at www.ccr.gov.
  CCR has developed a user guide at http://www.ccr.gov/doc/CCRUsersGuide.pdf and a handbook at http://www.ccr.gov/Handbook.aspx to assist with the process. These publications include details on the information that will need to be gathered to complete the CCR registration process.

How long should CCR Registration take?

- If an organization already has an Employer Identification Number (EIN) or Taxpayer Identification Number (TIN), it should allow a minimum of 48 hours to complete the entire CCR registration.
- If an organization does not have an EIN or TIN, it should allow two weeks for obtaining information from IRS when requesting the EIN or TIN via phone or Internet. The delay is due to security information that is mailed to the organization.

When an organization registers with the CCR, it must provide:

- **DUNS number.** The Data Universal Numbering System (DUNS) Number is a unique nine-character identification number provided by D&B. Organizations may call D&B at 1-866-705-5711 or access the website http://fedgov.dnb.com/webform if they do not have a DUNS Number. The process to request a DUNS Number via phone takes about 10 minutes and is free of charge. Internet requests are fulfilled within 24 hours. Once a DUNS Number has been issued, it will be available for use in CCR within 24 hours.
- **U.S. Federal TIN.** The Tax Identification Number (TIN) is the nine-digit number which is either an Employer Identification Number (EIN) assigned by the Internal Revenue Service (IRS) or Social Security Number (SSN) assigned by the Social Security Administration (SSA). If an organization does not have a TIN/EIN, contact the IRS at 1-866-255-0654.
- **CCR Point of Contact (CCR POC).** This individual is responsible for maintaining the accuracy and timeliness of the information in the CCR registry for the organization.
- **Electronic Business Point of Contact (EB POC).** This individual will have sole authority to designate the staff member(s) who may represent the organization to federal business systems. The same individual may serve as both the CCR POC and as the EB POC.
- **Marketing Partner ID (MPIN).** During registration, organizations will be asked to designate a special password called an MPIN. Record and protect passwords.

U.S. EPA, Office of Grants and Debarment

Tip Sheet for Registering with the Central Contractor Registration (CCR)

Important Notes:

- **CCR registration must be updated or renewed at least once a year or it will expire.** CCR will alert the CCR POC when it is time for renewal.

- **Organizations must ensure that all information contained in each database, the D&B DUNS, IRS and CCR databases, matches exactly.** For example: if an organization's address is 123 First Street in one database – entering 123 1st St. in another database will significantly delay the CCR registration process.

- **CCR uses data from the D&B DUNS number record for each CCR registrant's name and address.** If, upon review, an organization finds that any name or address information in their CCR registration needs to be updated, it will have to go back to D&B, which in turn will send the modified data to CCR where the CCR POC will have to accept it. An update will add a minimum of 2 days to the CCR registration process.

- **CCR also verifies with the IRS the Tax Identification Number (also known as the TIN or EIN) that each organization provides during the registration process.** Because of this, it may take CCR 2 or 3 days after receipt of an organization's information, with a D&B-validated name and address, to finalize a CCR registration.

- After the CCR registration is complete, CCR will e-mail a confirmation to the CCR POC.

Getting a DUNS number

Guidance for reporting under ARRA calls for subwardees (in our case, our borrowers, and now subgrantees) to have DUNS numbers for reporting. Below, please find the link for getting a DUNS number. Please go to http://fedgov.dnb.com/webform/

or call

U.S. and U.S Virgin Islands: 1-866-705-5711
Alaska and Puerto Rico: 1-800-234-3867 (Select Option 2, then Option 1)
Monday - Friday 7 AM to 8 PM C.S.T.
The process to request a D-U-N-S® Number by telephone takes between 5 and 10 minutes.
You will need to provide the following information:

- Legal Name
- Tradestyle, Doing Business As (DBA), or other name by which your organization is commonly recognized
- Physical Address, City, State and Zip Code
- Mailing Address (if separate)
- Telephone Number
- Contact Name
- SIC Code (Line of Business)
- Number of Employees at your location
- Headquarters name and address (if there is a reporting relationship to a parent corporate entity)
- Is this a home-based business?

Davis Bacon Quarterly Compliance – Contractor

Please fill out one form for each contract awarded and submit to the ARRA recipient. This information is required for compliance of the Davis Bacon provisions of the ARRA funded projects. This form should be submitted to the ARRA Recipient no later than October 3rd, January 3rd, April 3rd, and July 3rd.

Borrower Name:	
WX / SX Number:	
KIA Loan Number:	
Project Name:	
Federal Wage decision # and modification # used in contract:	
Effective Date of Wage Decision used in contract:	
Contract Amount:	
Contractor Name:	
Contractor Address:	

Questions regarding Davis Bacon determination:

	Yes or No
Was the appropriate wage rate paid to all workers from the first day on which work was performed?	
Have all weekly payroll information reports with a Statement of Compliance been submitted to the Borrower (WH-347 Form)?	
Is the appropriate signage and notification of federal wage rates posted at the construction site?	
Are all sub-contracts in compliance?	

I certify the correct wage decision is being applied to the above noted project.

_____ _____

Signature of Authorized Official of Contractor Date

_____

Title of Authorized Official

- ***The prime contractor must keep a complete set of all of the payrolls for every contractor (including subcontractors) for at least 3 years after completion of the project.***
- ***Every contractor (including every subcontractor) must keep a complete set of their own payrolls and other basic records such as time cards, tax records, and evidence of fringe benefit payments, for a Davis Bacon project for at least 3 years after the project is complete.***

PLEASE NOTE: KIA will use a combination of funding (ARRA funds and non-ARRA funds) to finance projects. Both federal Davis Bacon prevailing wages and the Commonwealth of Kentucky prevailing wages apply to this project. Payment of the wage and fringe benefits that are most beneficial to the employees are required.

Davis Bacon Quarterly Compliance – Sub-Contractor

Please fill out one form for each contract awarded and should be submitted to the Prime Contractor. This information is required for compliance of the Davis Bacon provisions of the ARRA funded projects. This form should be submitted to the Prime Contractor no later than October 3rd, January 3rd, April 3rd, and July 3rd.

Borrower Name:	
WX / SX Number:	
KIA Loan Number:	
Project Name:	
Federal Wage decision # and modification # used in contract:	
Effective Date of Wage Decision used in contract:	
Contract Amount:	
Prime Contractor Name:	
Contractor Address:	
Sub-Contractor Name:	
Sub-Contractor Address:	

Questions regarding Davis Bacon determination:

	Yes or No
Was the appropriate wage rate paid to all workers from the first day on which work was performed?	
Have all weekly payroll information reports with a Statement of Compliance been submitted to the Borrower (WH-347 Form)?	
Is the appropriate signage and notification of federal wage rates posted at the construction site?	

I certify the correct wage decision is being applied to the above noted project.

_____ _____

Signature of Authorized Official of Sub-Contractor Date

_____

Title of Authorized Official

- ***Every contractor (including every subcontractor) must keep a complete set of their own payrolls and other basic records such as time cards, tax records, and evidence of fringe benefit payments, for a Davis Bacon project for at least 3 years after the project is complete.***

PLEASE NOTE: KIA will use a combination of funding (ARRA funds and non-ARRA funds) to finance projects. Both federal Davis Bacon prevailing wages and the Commonwealth of Kentucky prevailing wages apply to this project. Payment of the wage and fringe benefits that are most beneficial to the employees are required.

Project Wage Rate Sheet

U.S. Department of Housing and Urban Development
Office of Labor Relations

PROJECT NAME:	WAGE DECISION NUMBER/MODIFICATION NUMBER:
PROJECT NUMBER:	PROJECT COUNTY:

WORK CLASSIFICATION	BASIC HOURLY RATE (BHR)	FRINGE BENEFITS	TOTAL HOURLY WAGE RATE	LABORERS FRINGE BENEFITS:		$
				GROUP #	BHR	TOTAL WAGE
Bricklayers			$			
Carpenters			$			$
Cement Masons			$			$
Drywall Hangers			$			$
Electricians			$			$
Iron Workers			$			$
Painters			$	OPERATORS FRINGE BENEFITS:		$
Plumbers			$	GROUP #	BHR	TOTAL WAGE
Roofers			$			$
Sheet Metal Workers			$			$
Soft Floor Layers			$			$
Tapers			$			$
Tile Setters			$	TRUCK DRIVERS FRINGE BENEFITS:		$
OTHER CLASSIFICATIONS				GROUP #	BHR	TOTAL WAGE
			$			$
			$			$
			$			$

ADDITIONAL CLASSIFICATIONS (HUD Form 4230-A)

WORK CLASSIFICATION	BASIC HOURLY RATE	FRINGE BENEFITS	TOTAL HOURLY WAGE RATE	DATE OF HUD SUBMISSION TO DOL	DATE OF DOL APPROVAL
			$		
			$		
			$		
			$		

BUY AMERICAN CONTRACTOR CERTIFICATION

Section 1605 of the American Recovery and Reinvestment Act (ARRA) states that:

> *"None of the funds appropriated or otherwise made available by this Act may be used for a project for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods used in the project are produced in the United States."*

I, _____ (representative of contractor), on behalf of _____ (contractor name) "Contractor", hereby certify to _____ (name of ARRA recipient) "ARRA Recipient", the below:

1. Consistent with the bid solicitation and the provisions of ARRA Section 1605, the Contractor certificates that this bid reflects the Contractor's best, good faith effort to identify domestic sources of iron, steel, and manufactured goods for every component of the project where American-made components are available on the schedule and consistent with the deadlines prescribed in or required by the bid solicitation.
2. All components contained in the bid solicitation that are American-made have been so identified, and Contractor agrees that it will provide reasonable, sufficient and timely verification to the ARRA recipient of the U.S. production of each component so identified.
3. For any component or components that are not American-made and are so identified in this project, the Contract has included in or attached one or both of the following as applicable:
   a. Identification of a citation to a categorical waiver published by the U.S. Environmental Protection Agency in the Federal Register that is applicable to such component or components, and an analysis that supports its applicability to the component or components;
   b. Verifiable documentation sufficient to the ARRA recipient, as required in the bid solicitation or otherwise, that the Bidder has sought to secure American-made components but has determined that such components are not available on the schedule and consistent with the deadlines prescribed in the bid solicitation, with assurance adequate for the Contractor under the application conditions stated in the bid solicitation or otherwise.
4. For any component or components that are not available, the Contractor has also provided in or attached to this certification documentation, including but not limited to the verifiable documentation and a full description of the Contractor's efforts to secure any such American-made component or components, that the Contractor believes is sufficient to provide and as far as possible constitute the detailed justification required for a waiver under Section 1605 with respect to such component or components. The Contractor further aggress that it will assist the ARRA recipient in amending, supplementing, or further supporting such information as required by the ARRA recipient to request, and, as applicable, implement the terms of a wavier with respect to such component or components.

_____

Project Name

_____ _____

Name of Contractor Date

_____

Signature of Authorized Official

_____

Title

EXHIBIT B-1
BUY-AMERICAN CERTIFICATION ACCOMPANYING PAY REQUESTS

BUY AMERICAN AFFIRMATION

Section 1605 of the American Recovery and Reinvestment Act (ARRA) states that:

"None of the funds appropriated or otherwise made available by this Act may be used for a project for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods used in the project are produced in the United States."

To meet this requirement, the undersigned hereby certifies that all of the material, equipment and accessories which are to represented by expenditures of this pay request and any other expenditures of the [Project Name] to be partially or fully funded by monies from the American Recovery and Reinvestment Act, has been manufactured from domestic construction material as defined by 40 CFR 35.936-13(D).

If any expenditures reflected in this Pay Request or expenditures made from other funding sources during the period covered by this Pay Request are not in compliance with Section 1605, documentation is attached hereto reflecting the waiver obtained or applicable hereto that allows the incorporation of a non-American component(s).

_____	_____
Name of Borrower	Name of Contractor
_____	_____
Signature of Authorized Official	Signature of Authorized Official
_____	_____
Title	Title
_____	_____
Date	Date

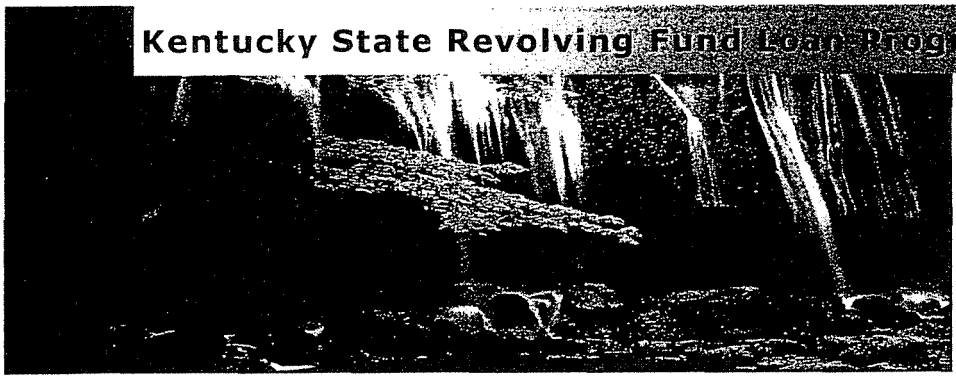
BUY AMERICAN – PROJECT CLOSE-OUT CERTIFICATION

Section 1605 of the American Recovery and Reinvestment Act (ARRA) states that:

"None of the funds appropriated or otherwise made available by this Act may be used for a project for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods used in the project are produced in the United States."

The undersigned parties hereby certify that all of the material, equipment and accessories used for [Name of Construction Contract] funded in part or in whole by monies from the American Recovery and Reinvestment Act, has been manufactured from domestic construction material as defined by 40 CFR 35.936-13(D) or documentation confirming any waivers obtained for non-compliant material, equipment and accessories have been provided to the Kentucky Infrastructure Authority.

_____	_____
Name of Borrower	Name of Contractor
_____	_____
Signature of Authorized Official	Signature of Authorized Official
_____	_____
Title	Title
_____	_____
Date	Date



Kentucky Infrastructure Authority
1024 Capital Center Drive - Suite 340
Frankfort, KY 40601
www.kia.ky.gov

Kentucky Division of Water
200 Fair Oaks Lane - 4th Floor
Frankfort, KY 40601
www.water.ky.gov

A SUMMARY OF THE NEW EPA DBE RULE AND ITS IMPACT ON SRF LOAN PARTICIPANTS

The Environmental Protection Agency's (EPA) new Disadvantaged Business Enterprise (DBE) rule became effective on May 27, 2008. This rule sets forth an EPA program that serves the compelling government interest of remedying past and current racial discrimination through agency-wide procurement objectives. It revises and replaces EPA's Minority and Women Business Enterprise (MBE/WBE) Program. Because the State Revolving Fund (SRF) Loan Program funding is provided by EPA, the new DBE rule requirements apply to all SRF funded projects. It is designed to increase the participation of DBE's in procurements funded by EPA assistance agreements. The key substantive changes that the new EPA DBE rule makes to the MBE/WBE program involve the following: certification of minority & women owned businesses, the six good faith efforts, contract administration requirements, negotiation of fair share goals, recordkeeping & reporting requirements and new requirements for Tribal and insular area fair share negotiations.

*** Certification of MBE/WBE:** In order to be counted as a MBE/WBE under the new EPA DBE rule MBE/WBEs must be certified by a federal agency (e.g., EPA, Small Business Administration, Department of Transportation) or by a State, locality, Indian Tribe, or independent private organization that meets the certification requirements of the new EPA DBE rule. In addition, individuals claiming economic disadvantaged status must have an initial and continued personal net worth of less than $750,000.

Q: Where can MBE/WBEs get certified in the State of Kentucky?

A: MBE/WBEs can get certified with the Kentucky Transportation Cabinet (KTC). KTC's certification process meets the requirements of the new EPA DBE rule. The website is http://transportation.ky.gov/OBOD/. Please identify on the application that you are seeking certification under the new EPA DBE rule. If you have any questions regarding the KTC website or certification process contact the KTC Certification Coordinator Melvin Bynes at 1-800-928-3079.

Q: If my firm is currently on the Kentucky Transportation Cabinet's list of certified DBEs do I need to get recertified?

A: No, you do not need to get re-certified. KTC's certification process meets the requirements of the new EPA DBE rule.

Q: Are there entities that KTC cannot certify? If so, where can those entities go for certification under the new EPA DBE rule?

A: There are entities that KTC will only certify on a case-by-case basis. Those entities are: a) Disabled American-owned firms, b) non - profit organizations (private and voluntary organizations controlled by individuals who are socially and economically disadvantaged), c) veteran's, and d) those entities who exceed the size standards that are specific to DOT certification process under 49 CFR Part 26. These entities should seek certification through EPA's DBE certification program. The entity may apply to EPA's Office of Small Business Programs (EPA OSBP) for certification as an MBE/WBE. The website is http://www.epa.gov/osbp/grants.htm. For questions regarding certification by EPA, please contact Kimberly Patrick, EPA Office of Small Business Programs, at 202-566-2605 or email Patrick.kimberly@epa.gov. Direct general questions regarding the new EPA DBE rule to Charles Hayes, Region 4 MBE/WBE Coordinator, phone number is (404) 562-8377 and email hayes.charles@epa.gov.

Q: Can I self-certify as an MBE/WBE through my attorney?

A: No. Therefore, if you want to bid on SRF projects then you will need to get certified through KTC or the EPA in order to be counted as a MBE/WBE under the new EPA DBE rule. Noncertified MBE/WBEs may be used by loan recipients for their procurement needs but those firms cannot be counted toward their MBE/WBE accomplishments. Under the new EPA DBE rule entities can no longer self-certify.

Q: How do I obtain certification as an MBE/WBE?

A: Under the new DBE program, in order to be counted as an MBE or WBE under an EPA financial assistance agreement, an entity will have to be certified as such. The EPA will require an MBE/WBE to first seek certification by a federal agency (such as the U.S. Small Business Administration, the U.S. Department of Transportation) or by a State, local, or independent private organization provided their criteria match those of the Small Business Act and SBA's applicable Business Development Program regulations. The EPA will only consider certifying firms that cannot get certified by one of these entities. An EPA DBE certification would only be accepted by the EPA.

Q: Where can I find a list of MBE/WBEs who have been certified and meet the requirements under the new EPA DBE rule?

A: The KTC DBE directory can be accessed at: http://transportation.ky.gov/OBOD/ which is located under the heading Disadvantaged Business Enterprise Directories. Those entities that were certified through EPA are posted on the EPA Office of Small Business Program's (OSBP) website. The website is: http://www.epa.gov/osbp/grants.htm.

Q: Can individuals having a personal net worth of $750,000 or more get certified as a DBE under the new EPA rule?

A: No. An individual claiming economic disadvantaged status must have an initial and continued personal net worth of less than $750,000.

Q: How can I find out more information about certification and the new EPA DBE rule in general?

A: You are encouraged to read the fact sheets located at http://www.epa.gov/osbp/grants.htm.

To view the Federal Register showing the DBE rule from the EPA, see Vol. 73, No. 59, pages 15904 - 15922 at http://www.epa.gov/osdbu/pdfs/dbe/final%20dbe%20rule.pdf

*** Contract Administration:** The new EPA DBE rule adds additional contract administration requirements that are intended to protect DBE subcontractors. Some of the requirements include provisions intended to ensure that subcontractors receive prompt payment from prime contractors (30 day payment provision). Loan recipients must be notified of DBE subcontractor terminations and prime contractors are required to make good faith efforts if the prime contractor chooses to hire another subcontractor. The rule requires that 3 new forms be filled out by the prime contractor and subcontractor if there are DBE subcontractors involved in a procurement.

The loan recipient must ensure that each contract awarded contains the term and condition set forth below:

"Term and Condition: The contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 40 CFR Part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or other legally available remedies."

Another new requirement is that loan recipients are now required to create and maintain a bidders list. The list must include all firms that bid or quote on prime contracts or subcontracts, including MBE/WBEs and non MBE/WBEs. The bidders list must be kept until the project period for the identified loan has ended. The project period is defined as the timeframe that the loan recipient receives SRF funding. The following information must be obtained from all prime and subcontractors: 1) entity's name with point of contact; 2) entity's mailing address, telephone number, and e-mail address; 3) the procurement on which the entity bid or quoted, and when; and 4) entity's status as an MBE/WBE or non-MBE/WBE.

Q: What is the purpose of the bidders list? And, as a loan recipient must I maintain it? Do I need to also provide a copy to SRF?

A: The purpose of the bidders list is to provide the loan recipient and SRF with a more accurate database of the universe of MBE/WBE and non MBE/WBE prime and subcontractors. The bidders list is intended to be a list of all firms that are participating, or attempting to participate, on EPA assisted contracts. The list must include all firms that bid on prime contracts, or bid or quote on subcontracts under EPA assisted projects, including both MBE/WBEs and non MBE/WBEs. As a loan recipient you must maintain the list. You will also provide SRF a copy of the bidders list when you submit your post-bid documentation to the Kentucky Division of Water's SRF & SPAP Section.

* **Reporting Requirements:** Loan participants, who close loans after the signing of the 2008 EPA Capitalization Grant, will be required to submit applicable DBE participation reports to the **Kentucky Division of Water's SRF & SPAP Section and the Kentucky Infrastructure Authority**. Only certified DBE's will be counted towards MBE/WBE participation.

Q: What are the Six Good Faith Efforts?

A: The good faith efforts are activities by an SRF loan recipient and its prime contractor to increase DBE awareness of procurement opportunities through race/gender neutral efforts. EPA combined the "Six Positive Efforts" (found at 40 CFR Part 31) with the "Six Affirmative Steps" (found at 40 CFR Part 30) and renamed them the six "good faith efforts" (found at 40 CFR Part 33). The substance of the efforts has not changed.

The Six Good Faith Efforts as defined by the EPA are as follows:

- Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
- Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.
- If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

Q: What are the four new forms and where can I go to get a copy of the new forms?

A: The forms can be obtained at http://www.epa.gov/osbp.grants.htm under "Forms" and from DOW & KIA.

The four new forms are:

* EPA Form 6100-2 - DBE Program Subcontractor Participation Form. This form gives a DBE subcontractor the opportunity to describe the work the DBE subcontractor received from the prime contractor, how much the DBE subcontractor was paid and any other concerns the DBE subcontractor might have.

* EPA Form 6100-3 - DBE Program Subcontractor Performance Form. This form captures an intended subcontractor's description of work to be performed for the prime contractor and the price of the work submitted to the prime.

* EPA Form 6100-4 – DBE Program Subcontractor Utilization Form. This form captures the prime's intended use of an identified DBE subcontractor, and the estimated dollar amount of the subcontract.

* Pay Request DBE Form - This form captures the amount of DBE work performed per pay request and amounts to be paid out.

Form	Requirement	Provided By:	Completed By:	Submitted To:
EPA Form 6100-2	Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	DOW Project Administrator
EPA Form 6100-3	Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	DOW Project Administrator with the ATA Package
EPA Form 6100-4	Recipients required to have prime contractors complete the form	Recipients	Prime Contractors	DOW Project Administrator with the ATA Package
Pay Request DBE Form	Recipients required to have prime contractors complete the form	Recipients	Prime Contractors	DOW Project Administrator **with EACH PAYMENT**

Disadvantaged Business Enterprise Program
DBE Subcontractor Participation Form

NAME OF SUBCONTRACTOR[1]	PROJECT NAME
ADDRESS	CONTRACT NO.
TELEPHONE NO.	E-MAIL ADDRESS
PRIME CONTRACTOR NAME	

Please use the space below to report any concerns regarding the above EPA-funded project (e.g., reason for termination by prime contractor, late payment, etc.).

CONTRACT ITEM NO.	ITEM OF WORK OR DESCRIPTION OF SERVICES RECEIVED FROM THE PRIME CONTRACTOR	AMOUNT SUBCONTRACTOR WAS PAID BY PRIME CONTRACTOR

Subcontractor *Signature* Title/Date

[1]Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

Disadvantaged Business Enterprise Program
DBE Subcontractor Participation Form

The public reporting and recordkeeping burden for this collection of information is estimated to average fifteen (15) minutes. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA DBE Subcontractor Participation Form to this address.

Disadvantaged Business Enterprise Program
DBE Subcontractor Performance Form

NAME OF SUBCONTRACTOR[1]	PROJECT NAME
ADDRESS	BID/PROPOSAL NO.
TELEPHONE NO.	E-MAIL ADDRESS
PRIME CONTRACTOR NAME	

CONTRACT ITEM NO.	ITEM OF WORK OR DESCRIPTION OF SERVICES BID TO PRIME	PRICE OF WORK SUBMITTED TO PRIME CONTRACTOR

Currently certified as an MBE or WBE under EPA's DBE Program? _____ Yes _____ No

_____ _____
Signature of Prime Contractor Date

_____ _____
Print Name Title

_____ _____
Signature of Subcontractor Date

_____ _____
Print Name Title

[1]Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

Disadvantaged Business Enterprise Program
DBE Subcontractor Performance Form

The public reporting and recordkeeping burden for this collection of information is estimated to average fifteen (15) minutes. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA DBE Subcontractor Performance Form to this address.

Disadvantaged Business Enterprise Program
DBE Subcontractor Utilization Form

BID/PROPOSAL NO.	PROJECT NAME
NAME OF PRIME BIDDER/PROPOSER	E-MAIL ADDRESS
ADDRESS	
TELEPHONE NO.	FAX NO.

The following subcontractors[1] will be used on this project:

COMPANY NAME, ADDRESS, PHONE NUMBER, AND E-MAIL ADDRESS	TYPE OF WORK TO BE PERFORMED	ESTIMATED DOLLAR AMOUNT	CURRENTLY CERTIFIED AS AN MBE OR WBE?

I certify under penalty of perjury that the forgoing statements are true and correct. In the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302(c).

Signature Of Prime Contractor _____ Date _____

Print Name _____ Title _____

[1]Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

Disadvantaged Business Enterprise Program
DBE Subcontractor Utilization Form

The public reporting and recordkeeping burden for this collection of information is estimated to average fifteen (15) minutes. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed EPA DBE Subcontractor Utilization Form to this address.

Project Completion and Job Reporting Requirements

This job reporting is required for projects funded in whole or in part form the American Recovery and Reinvestment Act of 2009. **Submit one form to KIA by the 3rd calendar day of October, January, April and July for the previous quarter's activity:**

Recipient Information:

Name:	
DUNS No. / CCR No.:	
KIA Loan Number:	

Professional Services and Construction Activity for the quarter ending: ____

JOB REPORTING

Engineering and Professional Services

Standard full time number of hours worked in a full-time schedule for quarter reported above:	

	Company Name	Hours Worked	Total Payroll
1			
2			
3			
4			
5			

Construction Activity

PRIME CONTRACTOR JOB INFORMATION

Standard full time number of hours worked in a full-time schedule for quarter reported above:	

	Company Name	Hours Worked	Total Payroll
1			
2			
3			
4			
5			

SUBCONTRACTOR JOB INFORMATION

Standard full time number of hours worked in a full-time schedule for quarter reported above:	

	Company Name	Hours Worked	Total Payroll
1			
2			
3			
4			
5			

QUARTERLY TOTALS (All categories)		
Quarterly FTE (All categories)		

Workforce Information

Broad Labor Category(ies) to describe work performed (i.e. Wastewater Utility Construction):	

Workforce Composition for ARRA funded project:

Employee Type	**Number of Employees Used for Project During Reporting Period**
Permanent Full-time	
Permanent Part-time	
Temporary Full-time	
Temporary Part-time	
Other (please describe)	

PROJECT COMPLETION UPDATES:

Percentage (%) of Work Completed to Date:	

* Based on portion of project work completed and not dollars expended.

This form was completed by:

Name:	
Phone:	
Email:	

Project Completion and Job Reporting Requirements – Instructions

All forms submitted should be mailed, emailed or faxed to the contact information below by the 3rd calendar day of October, January, April and July:

Kentucky Infrastructure Authority
ATTN: CWSRF/DWSRF Loan Team
1024 Capital Center Drive, Suite 340
Frankfort, Kentucky 40601
Fax: 502-573-0260
Email: kasi.white@ky.gov

Standard Full Time (SFT) Number of Hours Worked In a Full-time Schedule:
This information should be based on the standard FT number of hours an employee's contracted hours for the quarter.

Example: A FT construction worker typically works 38 hours per week. In the specific quarter, there are 12.5 weeks. Therefore, the standard FT schedule for 3 construction workers for the quarter would result in a FT number of hours for the quarter of 1,425 hours. (38 * 12.5 * 3 = 1,425)

Other examples:

- If 1 employee worked a FT schedule of 500 hours quarterly and 1 employee worked a part-time (PT) schedule of 250 hours a quarter, then SFT hours = 750
- IF 2 employees worked a FT schedule of 500 hours and 2 employees worked a PT schedule of 250 hours in a quarter, then SFT = 1,500 ((500*2)+(250*2))

Company Name:
Any engineering firm, contractor or subcontractor on the project should be listed. If there are more than five for any category, the form can be expanded to include or you may attach a separate document with the required information.

Hours Worked:
The amount of hours reported should include the labor hours billed during the quarter.

Total Payroll:
Total amount of payroll dollars of labor for the Hours Worked reported above.

Quarterly Totals (All Categories)
The sum of Hours Worked and Total Payroll for all detailed engineering and professional services, prime contractor and subcontractor information.

Quarterly FTE (All Categories)
This calculation should take the sum of all Hours Worked/sum of all Standard Full-time Schedule Hours as reported for the quarter. This will give you the Quarterly FTE amount to be reported.

Example: Total Standard Full-time Schedule Hours for all categories = 2,500
Total Hours Worked for all categories = 3,000
Quarterly Full-time Equivalent = 1.2 (3,000/2,500)

GENERAL DECISION: KY20080027 10/16/2009 KY27

Date: October 16, 2009
General Decision Number: KY20080027 10/16/2009

Superseded General Decision Number: KY20070027

State: Kentucky

Construction Types: Heavy and Highway

Counties: Anderson, Bath, Bourbon, Boyd, Boyle, Bracken, Breckinridge, Bullitt, Carroll, Carter, Clark, Elliott, Fayette, Fleming, Franklin, Gallatin, Grant, Grayson, Greenup, Hardin, Harrison, Henry, Jefferson, Jessamine, Larue, Lewis, Madison, Marion, Mason, Meade, Mercer, Montgomery, Nelson, Nicholas, Oldham, Owen, Robertson, Rowan, Scott, Shelby, Spencer, Trimble, Washington and Woodford Counties in Kentucky.

Heavy and Highway Construction Projects

Modification Number	Publication Date
0	02/08/2008
1	03/07/2008
2	04/04/2008
3	05/02/2008
4	06/06/2008
5	07/04/2008
6	08/01/2008
7	08/15/2008
8	09/05/2008
9	10/03/2008
10	12/05/2008
11	01/02/2009
12	02/06/2009
13	03/06/2009
14	04/03/2009
15	06/05/2009
16	07/03/2009
17	07/24/2009
18	08/07/2009
19	09/04/2009
20	09/11/2009
21	10/16/2009

BRIN0004-003 06/01/2009

BRECKENRIDGE COUNTY:

	Rates	Fringes
BRICKLAYER	$ 26.47	12.28

BRKY0001-005 06/01/2009

BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, & TRIMBLE COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 24.11	9.97

BRKY0002-006 06/01/2009

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 26.12	9.73

* BRKY0007-004 06/01/2009

BOYD, CARTER, ELLIOT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 26.82	15.30

BRKY0017-004 06/01/2009

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:

	Rates	Fringes
BRICKLAYER ((Layout Men))	$ 24.36	9.97
BRICKLAYER	$ 24.11	9.97
Refractory (Refractory/Acid Brick/Glass)	$ 24.61	9.97

CARP0064-001 07/01/2008

	Rates	Fringes
CARPENTER	$ 24.84	10.23
Diver	$ 37.64	10.23
PILEDRIVERMAN	$ 25.09	10.23

CARP1031-008 06/01/2009

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, OWEN, SCOTT & WOODWARD COUNTIES:

	Rates	Fringes
MILLWRIGHT	$ 22.95	13.50

CARP1031-009 06/01/2009

BOYD, CARTER, ELLIOTT, FLEMING, GREENUP, LEWIS, MASON, ROBERTSON & ROWAN COUNTIES:

	Rates	Fringes
MILLWRIGHT	$ 30.60	13.78

CARP1031-010 06/01/2009

BRECKINRIDGE, BULLITT, CARROLL, GALLATIN, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES:

	Rates	Fringes
MILLWRIGHT	$ 24.18	15.64

CARP1066-004 09/01/2009

BRACKEN & GRANT COUNTIES:

	Rates	Fringes
MILLWRIGHT	$ 27.55	15.39

ELEC0212-008 06/01/2009

BRACKEN, GALLATIN & GRANT COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 26.11	13.32

ELEC0212-014 01/01/2006

BRACKEN, GALLATIN & GRANT COUNTIES:

	Rates	Fringes
Sound & Communication Technician	$ 20.45	6.95

ELEC0317-012 06/01/2009

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

	Rates	Fringes
Electricians:		
Cable Splicer	$ 32.68	18.13
Electrician	$ 31.12	18.08

ELEC0369-007 05/27/2009

ANDERSON, BATH, BOURBON, BOYLE, BRECKINRIDGE, BULLITT, CARROLL, CLARK, FAYETTE, FRAONKLIN, GRAYSON, HARDIN, HARRISON, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, MONTGOMERY, NELSON, NICHOLAS, OLDHAM, OWEN, ROBERTSON, SCOTT, SHELBY, SPENCER, TRIMBLE, WASHINGTON, & WOODFORD COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 28.30	12.55

ELEC0575-002 06/01/2009

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 30.55	11.87

ENGI0181-018 07/01/2009

	Rates	Fringes

Operating Engineer:		
GROUP 1	$ 24.60	12.65
GROUP 2	$ 22.18	12.65
GROUP 3	$ 22.56	12.65
GROUP 4	$ 21.92	12.65

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller; Batcher Plant; Bituminous Paver; Bituminous Transfer Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All Scoop; Carry Deck Crane; Central Compressor Plant; Cherry Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over); Concrete Paver; Truck-Mounted Concrete Pump; Core Drill; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching & Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loaders; Grade-All; Gurries; Heavy Equipment Robotics Operator/Mechanic; High Lift; Hoe-Type Machine; Hoist (Two or More Drums); Hoisting Engine (Two or More Drums); Horizontal Directional Drill Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau; Locomotive; Mechanic; Mechanically Operated Laser Screed; Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete; Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor; Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Conrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler

GROUP 3 - All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling leads equals or exceeds 150 ft. - $1.00 over Group 1 rate

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10%
ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

IRON0044-009 06/01/2009

BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);

CARROLL (Eastern third, including the Township of Ghent);

FLEMING (Western part, excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);

MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);

NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);

OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);

SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall) &

BRACKEN, GALLATIN, GRANT, HARRISON & ROBERTSON COUNTIES:

	Rates	Fringes
IRONWORKER		
Fence Erector	$ 23.55	16.72
Structural	$ 26.17	16.72

IRON0070-006 06/01/2009

BOURBON (Southern two-thirds, including Townships of Austerlity, Centerville, Clintonville, Elizabeth, Hutchison, Littlerock, North Middletown & Paris);

CARROLL (Western two-thirds, including Townships of Carrollton, Easterday, English, Locust, Louis, Prestonville & Worthville);

CLARK (Western two-thirds, including Townships of Becknerville, Flanagan, Ford, Pine Grove, Winchester & Wyandotte);

OWEN (Eastern eighth, including Townships of Glenmary, Gratz, Monterey, Perry Park & Tacketts Mill);

SCOTT (Southern third, including Townships of Georgetown, Great Crossing, Newtown, Stampling Ground & Woodlake);

ANDERSON, BOYLE, BRECKINRIDGE, BULLITT, FAYETTE, FRANKLIN, GRAYSON, HARDIN, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE, WASHINGTON & WOODFORD COUNTIES:

	Rates	Fringes
IRONWORKER	$ 24.78	17.04

IRON0372-006 06/01/2009

BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);

CARROLL (Eastern third, including the Township of Ghent);

FLEMING (Western part, Excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);

MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);

NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);

OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);

SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall);

BRACKEN, GALLATIN, GRANT, HARRISON & ROBERTSON COUNTIES:

	Rates	Fringes
IRONWORKER		
Beyond 30-mile radius of Hamilton County, Ohio Courthouse	$ 26.45	16.70
Up to & including 30-mile radius of Hamilton County, Ohio Courthouse	$ 26.20	16.70

IRON0769-007 06/01/2009

CLARK (Eastern third, including townships of Bloomingdale, Hunt, Indian Fields, Kiddville, Loglick, Rightangele & Thomson); FLEMING (Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton,

Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
MASON (Eastern third, including Townships of Helena, Marshall, Orangeburg, Plumville & Springdale);
NICHOLAS (Eastern eighth, including the Township of Moorefield Sprout);
BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN COUNTIES:

	Rates	Fringes
IRONWORKER		
ZONE 1	$ 28.38	17.37
ZONE 2	$ 28.78	17.37
ZONE 3	$ 30.38	17.37

ZONE 1 - Up to 10 mi. radius of union hall, Ashland, Ky., 1643 Greenup Avenue
ZONE 2 - 10 to 50 mi. radius of union hall;
ZONE 3 - 50 mi. radius and beyond

LABO0189-003 07/01/2009

BATH, BOURBON, BOYD, BOYLE, BRACKEN, CARTER, CLARK, ELLIOTT, FAYETTE, FLEMING, FRANKLIN, GALLATIN, GRANT, GREENUP, HARRISON, JESSAMINE, LEWIS, MADISON, MASON, MERCER, MONTGOMERY, NICHOLAS, OWEN, ROBERTSON, ROWAN, SCOTT, & WOOLFORD COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 20.36	9.90
GROUP 2	$ 20.61	9.90
GROUP 3	$ 20.66	9.90
GROUP 4	$ 21.26	9.90

LABORERS CLASSIFICATIONS

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

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

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

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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LABO0189-008 07/01/2009

ANDERSON, BULLITT, CARROLL, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 20.51	9.75
GROUP 2	$ 20.76	9.75
GROUP 3	$ 20.81	9.75
GROUP 4	$ 21.41	9.75

LABORERS CLASSIFICATIONS

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

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

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

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster;

& Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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LABO0189-009 07/01/2009

BRECKINRIDGE & GRAYSON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 20.76	9.50
GROUP 2	$ 21.01	9.50
GROUP 3	$ 21.06	9.50
GROUP 4	$ 21.66	9.50

LABORERS CLASSIFICATIONS

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

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

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

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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PAIN0012-005 06/11/2005

BATH, BOURBON, BOYLE, CLARK, FAYETTE, FLEMING, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, ROBERTSON, SCOTT & WOODFORD COUNTIES:

	Rates	Fringes

PAINTER		
Bridge/Equipment Tender and/or Containment Builder	$ 18.90	5.90
Brush & Roller	$ 21.30	5.90
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 22.30	5.90
Sandblasting & Waterblasting	$ 22.05	5.90
Spray	$ 21.80	5.90

PAIN0012-017 06/14/2008

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

	Rates	Fringes
PAINTER (Heavy & Highway Bridges - Guardrails - Lightpoles - Striping)		
Bridge Equipment Tender and Containment Builder	$ 20.49	6.83
Brush & Roller	$ 23.10	6.83
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 24.10	6.83
Sandblasting & Water Blasting	$ 23.85	6.83
Spray	$ 23.60	6.83

PAIN0118-004 05/01/2009

ANDERSON, BRECKINRIDGE, BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES:

	Rates	Fringes
PAINTER		
Brush & Roller	$ 18.50	9.84
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning	$ 19.50	9.84

PAIN1072-003 12/01/2008

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
Painters:		
Bridges	$ 27.83	10.00
All other work	$ 24.83	10.00

PLUM0248-003 06/01/2009

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
Plumber and Steamfitter	$ 30.45	14.57

PLUM0392-007 06/01/2008

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN & ROBERTSON COUNTIES:

	Rates	Fringes
Plumbers and Pipefitters	$ 28.39	14.30

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* PLUM0502-003 08/01/2009

BRECKINRIDGE, BULLITT, CARROLL (Western Half), FRANKLIN (Western three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
PLUMBER	$ 30.00	14.17

SUKY2001-002 10/08/2001

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 16.57	7.34
GROUP 2	$ 16.68	7.34
GROUP 3	$ 16.86	7.34
GROUP 4	$ 16.96	7.34

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Mobile Batch Truck Tender

GROUP 2 - Greaser; Tire Changer; & Mechanic Tender

GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Distributor; Mixer; & Truck Mechanic

GROUP 4 - Euclid & Other Heavy Earthmoving Equipment & Lowboy; Articulator Cat; 5-Axle Vehicle; Winch & A-Frame when used in transporting materials; Ross Carrier; Forklift when used to transport building materials; & Pavement Breaker

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

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

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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

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

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

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

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END OF GENERAL DECISION

Steven L. Beshear
Governor

Daniel Mongiardo
Lieutenant Governor

KENTUCKY LABOR CABINET
DEPARTMENT OF WORKPLACE STANDARDS
DIVISION OF EMPLOYMENT STANDARDS, APPRENTICESHIP & MEDIATION
1047 US Hwy 127 S - Suite 4
Frankfort, Kentucky 40601
Phone: (502) 564-3534
Fax (502) 564-2248
www.labor.ky.gov

J. R. Gray
Secretary

Mark S. Brown
Deputy Secretary

Michael L. Dixon
Commissioner

October 30, 2009

Kerry Odle
CMW, Inc.
400 E. Vine St. Ste. 400
Lexington KY 40507

Re: Grant County Sanitary Sewer District, Sanitary Sewer Extension Phase 1

Advertising Date as Shown on Notification: November 2, 2009

Dear Kerry Odle:

This office is in receipt of your written notification on the above project as required by KRS 337.510 (1).

I am enclosing a copy of the current prevailing wage determination number CR 4-19, dated January 5, 2009 for GRANT County. This schedule of wages shall be attached to and made a part of the specifications for the work, printed on the bidding blanks, and made a part of the contract for the construction of the public works between the public authority and the successful bidder or bidders.

The determination number assigned to this project is based upon the advertising date contained in your notification. There may be modifications to this wage determination prior to the advertising date indicated. In addition, if the contract is not awarded within 90 days of this advertising date or if the advertising date is modified, a different set of prevailing rates of wages may be applicable. It will be the responsibility of the public authority to contact this office and verify the correct schedule of the prevailing rates of wages for use on the project. Your project number is as follows: 041-H-00065-09-4, Heavy/Highway

Sincerely,

Michael L. Dixon
Commissioner

KENTUCKY LABOR CABINET
PREVAILING WAGE DETERMINATION
CURRENT REVISION
LOCALITY NO. 019

Determination No. CR-4-019

Project No. 041-H-00065-09-4
Type: _____ Bldg xx____H/H

Date of Determination: January 5, 2009

This schedule of the prevailing rate of wages for Locality No. 019, which includes Grant, Owen & Scott Counties, has been determined in accordance with the provisions of KRS 337.505 to 337.550. This determination shall be referred to as Prevailing Wage Determination No. CR-4-019.

Apprentices shall be permitted to work as such subject to Administrative Regulations adopted by the Executive Director of the Office of Workplace Standards. Copies of these regulations will be furnished upon request to any interested person.

Overtime is to be computed at not less than one and one-half (1 1/2) times the indicated BASE RATE for all hours worked in excess of eight (8) per day, and/or in excess of forty (40) per week. However, KRS 337.540 permits an employee and employer to agree, in writing, that the employee will be compensated at a straight time base rate for hours worked in excess of eight (8) hours in any one workday, but not more than ten (10) hours worked in any one workday, if such written agreement is prior to the over eight (8) hours in a workday actually being worked, or where provided for in a collective bargaining agreement. The fringe benefit rate is to be paid for each hour worked at a straight time rate for all hours worked. Fringe benefit amounts are applicable for all hours worked except when otherwise noted. Welders will receive rate for craft in which welding is incidental.

No laborer, workman or mechanic shall be paid at a rate less than that of the General Laborer except those classified as bona fide apprentices registered with the Kentucky State Apprenticeship Supervisor unless otherwise specified in this schedule of wage rates.

NOTE: The type of construction shall be determined by applying the following definitions.

BUILDING CONSTRUCTION

Building construction is the construction of sheltered enclosures with walk-in access for the purpose of housing persons, machinery, equipment, or supplies. It includes all construction of such structures, the installation of utilities and the installation of equipment, both above and below grade level, as well as incidental grading, utilities and paving.

HIGHWAY CONSTRUCTION

Highway construction includes the construction, alteration or repair of roads, streets, highways, runways, taxiways, alleys, trails, paths, parking areas, and other similar projects not incidental to building or heavy construction. It includes all incidental construction in conjunction with the highway construction project.

HEAVY CONSTRUCTION

Heavy projects are those projects that are not properly classified as either "building" or "highway". For example, dredging projects, water and sewer line projects, dams, flood control projects, sewage treatment plants and facilities, and water treatment plants and facilities are considered heavy.

Michael L. Dixon
COMMISSIONER
KENTUCKY LABOR CABINET

CLASSIFICATIONS		RATE AND FRINGE BENEFITS	
ASBESTOS/INSULATION WORKERS/ HEAT & FROST INSULATORS		BASE RATE FRINGE BENEFITS	$25.98 13.14
BOILERMAKERS:		BASE RATE FRINGE BENEFITS	$24.65 12.94
BRICKLAYERS:			
Bricklayers:		BASE RATE FRINGE BENEFITS	$26.11 9.84
Refractory:		BASE RATE FRINGE BENEFITS	$26.61 9.84
CARPENTERS:			
Carpenters:	BUILDING	BASE RATE FRINGE BENEFITS	$19.65 9.62
Piledrivermen	BUILDING	BASE RATE FRINGE BENEFITS	$20.15 9.62
Carpenters:	HEAVY & HIGHWAY	BASE RATE FRINGE BENEFITS	$20.70 5.68
Pildrivermen:	HEAVY & HIGHWAY	BASE RATE FRINGE BENEFITS	$20.95 5.68
Divers:	HEAVY & HIGHWAY	BASE RATE FRINGE BENEFITS	$31.43 5.68
CEMENT MASONS:		BASE RATE FRINGE BENEFITS	$ 17.50 4.95

CLASSIFICATIONS	RATE AND FRINGE BENEFITS	
ELECTRICIANS:	BASE RATE	$27.33
	FRINGE BENEFITS	12.02
ELEVATOR CONSTRUCTORS:	BASE RATE	$27.38
	FRINGE BENEFITS	9.05
OWEN COUNTY:		
GLAZIERS:	BASE RATE	$18.01
	FRINGE BENEFITS	3.88
GRANT & SCOTT COUNTIES:		
GLAZIERS:	BASE RATE	$15.45
IRONWORKERS:	BASE RATE	$23.93
	FRINGE BENEFITS	16.74

LABORERS:

BUILDING GROUP 1:
General laborers, asbestos abatement laborer, toxic waste removal laborer, water boys, tool room checker, carpenter tenders, (civil engineer helper, rodman, grade checkers excluding all field work performed by engineering firms), concrete pouring and curing, concrete form stripping and wrecking, hand digging and backfilling of ditches, clearing of right of ways and building sites, wood sheeting and shoring, signalman for concrete bucket and general cleaning, and environmental laborer - nuclear, radiation, toxic and hazardous waste - Level D:

BUILDING	*BASE RATE	$17.91
	FRINGE BENEFITS	8.19

BUILDING GROUP 2:
All air tool operators, air track drills, asphalt rakers, tampers, batchers plant and scale man, chain saw, concrete saw, electric hand grinder, all electric bush and chipping hammers, flagmen, forklift operators, form setter (street or highway), metal form setters, heaters, mesh handlers on walkways, streets and roadways outside building, gunnite laborers, hand spiker, introflax burning rod, joint makers, mason tenders, multi-trade tender, pipe layers, plaster tenders, powderman helpers, power driven Georgia buggies, power posthole diggers, railroad laborers, sandblaster laborers, scow man and deck hand, signal man, sweeper and cleaner machines, vibrator operators, walk behind trenching machines, mortar mixer machines, water pumpmen, and environmental laborers-nuclear, radiation, toxic and hazardous waste - Level C:

BUILDING	*BASE RATE	$18.31
	FRINGE BENEFITS	8.19

CLASSIFICATIONS RATE AND FRINGE BENEFITS

LABORERS: BUILDING (Continued)

BUILDING GROUP 3:
Gunnite nozzleman and gunnite nozzle machine operator, sand blaster nozzleman, concrete or grout pumpman, plaster pumpman:

BUILDING	*BASE RATE	$18.51
	FRINGE BENEFITS	8.19

BUILDING GROUP 4:
Powderman and blaster, and environmental laborer - nuclear, radiation, toxic and hazardous waste - Level B:

BUILDING	*BASE RATE	$18.61
	FRINGE BENEFITS	8.19

BUILDING GROUP 5:
Caisson holes (6 ft. and over) pressure and free air including tools, construction specialist, and environmental laborer-nuclear, radiation, toxic and hazardous waste - Level A:

BUILDING	*BASE RATE	$19.11
	FRINGE BENEFITS	8.19

BUILDING GROUP 6:
Tunnel man and tunnel sand miner, cofferdam (pressure and free air), sand hog or mucker (pressure or free air):

BUILDING	*BASE RATE	$19.41
	FRINGE BENEFITS	8.19

LABORERS ON BUILDING: *Employees handling chemically treated materials which are harmful to the skin shall receive an additional $.25 above base rate. Any employee working on high work such as towers or smoke stacks or any type of work putting the employee 50 feet above the ground or a solid floor shall receive an additional $.50 per hour above the base rate. Any employee working on boilers, kilns, melting tanks, furnaces, or when refractory is done using live fire, drying fires, heatups or any hot work shall receive an additional 25% premium above the base rate.

HEAVY HIGHWAY GROUP 1:
Asphalt Laborer; Carpenter Tender; Concrete Curing applicator; Dump Man (Batch Truck); Guardrail and Fence Installer; Joint Setter; Laborer (Construction); Landscape Laborer; Mesh Handlers & Placer; Right-of way Laborer; Riprap Laborer & Grouter; Scaffold Erector; Seal Coating; Surface Treatment or Road Mix Laborer; Sign Installer; Slurry Seal; Utility Man; Bridge Man; Handyman; Waterproofing Laborer; Flagperson; Hazardous Waste (Level D); Diver Tender; Zone Person & Traffic Control:

HEAVY & HIGHWAY	*BASE RATE	$19.86
	FRINGE BENEFITS	9.55

CLASSIFICATIONS — RATE AND FRINGE BENEFITS

LABORERS: (Continued)

HEAVY HIGHWAY GROUP 2:
Skid Steer; Asphalt Raker; Concrete Puddler; Kettle Man (Pipeline); Machine Driven Tools (Gas, Electric, Air); Mason Tender; Brick Paver; Mortar Mixer; Power Buggy or Power Wheelbarrow; Sheeting & Shoring Man; Surface Grinder Man; Plastic Fusing Machine Operator; Pug Mill Operator; & Vacuum Devices (wet or dry); Rodding Machine Operator; Diver; Screwman or Paver; Screed Person; Water Blast, Hand Held Wand; Pumps 4" & Under (Gas, Air or Electric) & Hazardous Waste (Level C); Air Track and Wagon Drill; Bottom Person; Cofferdam (below 25 ft. deep); Hand Held or Walk Behind Concrete Saw Person; Cutting with Burning Torch; Form Setter; Hand Spiker (Railroad); Pipelayer; Tunnel Laborer (without air) & Caisson; Underground Person (working in Sewer & Waterline, Cleaning, Repairing & Reconditioning); Sandblaster Nozzle Person; & Hazardous Waste (Level B):

HEAVY & HIGHWAY	*BASE RATE	$20.11
	FRINGE BENEFITS	9.55

HEAVY HIGHWAY GROUP 3:
Blaster; Mucker; Powder Person; Top Lander; Wrencher (Mechanical Joints & Utility Pipeline); Yarner; Hazardous Waste (Level A); Concrete Crew in Tunnels (With air-pressurized - $1.00 premium); Curb Setter & Cutter; Grade Checker; Utility Pipeline Tapper; Waterline; and Caulker:

HEAVY & HIGHWAY	*BASE RATE	$20.16
	FRINGE BENEFITS	9.55

HEAVY HIGHWAY GROUP 4:
Miner (With Air-pressurized - $1.00 premium); & Gunnite Nozzle Person:

HEAVY & HIGHWAY	*BASE RATE	$20.76
	FRINGE BENEFITS	9.55

***Signal Person will receive the rate equal to the rate paid the laborer classification for which he or she is signaling.**

MARBLE, TILE & TERRAZZO:

Finishers:	BASE RATE	$15.39
	FRINGE BENEFITS	4.90
Setters:	BASE RATE	$22.39
	FRINGE BENEFITS	5.60

MILLWRIGHTS:	BASE RATE	$22.77
	FRINGE BENEFITS	12.77

CLASSIFICATIONS RATE AND FRINGE BENEFITS

OPERATING ENGINEERS:

BUILDING CLASS A:
Auto Patrol, Batcher Plant, Bituminous Paver, Cableway, Central Compressor Plant, Clamshell, Concrete Mixer (21 cu. ft. or over), Concrete Pump, Crane, Crusher Plant, Derrick, Derrick Boat, Ditching and Trenching Machine, Dragline, Dredge Operator, Dredge Engineer, Elevating Grader and all types of Loaders, Forklift (regardless of lift height), Hoe-Type Machine, Hoist (1 drum when used for stack or chimney construction or repair), Hoisting Engine (2 or more drums), Locomotive, Motor Scraper, Carry-all Scoop, Bulldozer, Heavy Duty Welder, Mechanic, Orangepeel Bucket, Piledriver, Power Blade, Motor Grader, Roller (bituminous), Scarifier, Shovel, Tractor Shovel, Truck Crane, Winch Truck, Push Dozer, Highlift, All types of Boom Cats, Core Drill, Hopto, Tow or Push Boat, A-Frame Winch Truck, Concrete Paver, Gradeall, Hoist, Hyster, Pumpcrete, Ross Carrier, Boom, Tail Boom, Rotary Drill, Hydro Hammer, Mucking Machine, Rock Spreader attached to equipment, Scoopmobile, KeCal Loader, Tower Cranes (French, German and other types), Hydrocrane, Backfiller, Gurries, Sub-Grader, Tunnel Mining Machines including Moles, Shields, or similar types of Tunnel Mining Equipment:

BUILDING	*BASE RATE	$19.95
	FRINGE BENEFITS	8.40

***Operators on cranes with boom one-hundred fifty feet (150') and over including jib, shall receive seventy-five cents ($.75) above base rate. All cranes with piling leads will receive $.50 above base rate regardless of boom length**

All Air Compressors (over 900 cfm), Bituminous Mixer, Joint Sealing Machine, Concrete Mixer (under 21 cu. ft), Form Grader, Roller (rock), tractor (50 HP and over), Bull Float, Finish Machine, Outboard Motor Boat, Flexplane, Fireman, Boom Type Tamping Machine, Greaser on Grease Facilities servicing Heavy Equipment, Switchman or brakeman, Mechanic Helper, Whirley Oiler, Self-Propelled Compactor, Tractair and Road Widening Trencher and Farm Tractor with Attachments (except backhoe, highlift and endloader), Elevator (regardless of ownership when used for hoisting any building materials), Hoisting Engineer (1 drum or buck hoist), Forklift (when used for masonry construction, Firebrick Masonry Excluded), Well Points, Grout Pump, Throttle-Valve Man, Tugger, Electric Vibrator Compactor and Caisson Drill Helper:

BUILDING	BASE RATE	$17.21
	FRINGE BENEFITS	8.40

BUILDING CLASS C:
Bituminous Distributor, Cement Gun, Conveyor, Mud Jack, Paving Joint Machine, Roller (earth), Tamping Machine, Tractors (under 50 HP), Vibrator, Oiler, Concrete Saw, Burlap and Curing Machine, Truck Crane Oiler, Hydro-Seeder, Power Form handling Equipment, Deckhand Steersman, Hydraulic Post Driver and Drill Helper:

BUILDING	BASE RATE	$16.44
	FRINGE BENEFITS	8.40

CLASSIFICATIONS — RATE AND FRINGE BENEFITS

OPERATING ENGINEERS:

HEAVY & HIGHWAY CLASS A:
A-frame Winch Truck, Auto Patrol, Backfiller, Batcher Plant, Bituminous Paver, Bituminous Transfer Machine, all types of Boom Cats, Bulldozer, Cableway, Carry-All Scoop, Carry Deck Crane, Central Compressor Plant Operator, Clamshell, Concrete Mixer (21 cu. Ft. or over), Concert Paver, Truck-mounted Concrete Pump, Core Drills, Crane, Crusher Plant, Derrick, Derrick Boat, Ditching and Trenching Machine, Dragline, Dredge Operator, Dredge Engineer, Earth Movers, Elevating Grader and all types of Loaders, Grade-all, Gurries, Heavy Equipment Robotics Operator/Mechanic, High Lift, Hoe-type machine, Hoist (two or more drums), Hoisting Engine, (two or more drums), Horizontal directional Drill Operator, Hydraulic Boom Truck, Hydrocrane, Hyster, KeCal Loader, Letourneau, Locomotive, Mechanic, Mechanically Operated Laser Screed, Mechanic Welder, Mucking Machine, Motor Scraper, Orangepeel Bucket, Piledriver, Power Blade, Pumpcrete, Push Dozer, Rock Spreader attached to equipment, All rotary Drills, Roller (Bituminous), Scarifier, Scoopmobile, Shovel, Side Boom, Subgrader, Tailboom, Telescoping Type Forklift, Tow or Push Boat, Tower Cranes (French, German, and other types), Tractor Shovel and Truck Crane, Tunnel Mining Machines including Moles, Shields, or similar types of Tunnel Mining Equipment:

HEAVY & HIGHWAY	BASE RATE	$22.95
	FRINGE BENEFITS	11.90

Operators on cranes with booms one hundred fifty feet (150) and over (including job) shall receive one dollar ($1.00) above Class A rate. Combination Rate: All crane operators operating cranes, where the length of the boom in combination with the length of the piling leads equal or exceeds one hundred fifty (150) feet, shall receive one dollar ($1.00) above the Class A rate. Where remote, laser, or CPS controlled equipment is utilized to operate the equipment listed in the wage classifications of this agreement, such work for operating purposes shall be the jurisdiction of the Operating Engineers.

HEAVY & HIGHWAY CLASS B:
All Air Compressors (over 900 cu. Ft. per min), Bituminous Mixer, Boom Type Tamping Machine, Bull Float, Concrete Mixer (under 21 cu. Ft.), Dredge Engineer, Electric Vibrator Compactor/Self-propelled Compactor, Elevator (on drum or back hoist), Elevator (regardless of lift height), Form Grader, Hoist (one drum), Joint Sealing Machine, Mechanic Helper, Outboard Motor Boat, Power Sweeper (riding type), Roller (rock), Ross Carrier, Skid Mounted or Trailer mounted Concrete Pumps, Skid Steer Machine with all attachments, Switchman or Brakeman, Throttle Valve Man, Tract air and Road Widening Trencher, Tractor (50 H.P. or over), Truck Crane Oiler, Tugger, Welding Machine, Well Points, and Whirley Oiler:

HEAVY & HIGHWAY	BASE RATE	$20.53
	FRINGE BENEFITS	11.90

HEAVY & HIGHWAY CLASS B2:
Greaser on Grease Facilities servicing Heavy Equipment, all off road material handling equipment, including articulating dump trucks:

HEAVY & HIGHWAY	BASE RATE	$20.91
	FRINGE BENEFITS	11.90

CLASSIFICATIONS		RATE AND FRINGE BENEFITS	
OPERATING ENGINEERS (continued)			
HEAVY & HIGHWAY CLASS C: Bituminous Distributor, Burlap and Curing Machine, Caison Drill and Core Drill Helper (track or skid mounted), Cement Gun, Concrete Saw, Conveyor, deckhand Oiler, Grout Pump, Hydraulic Post Driver, Hydro Seeder, Mud Jack, Oiler, Paving Joint Machine, Power form handling equipment, Pump, roller (earth), Steerman, Tamping machine, Tractors (under 50 H.P.) and Vibrator:	HEAVY & HIGHWAY	BASE RATE FRINGE BENEFITS	$20.27 11.90
PAINTERS:			
Painters:	BUILDING	BASE RATE FRINGE BENEFITS	$14.70 3.06
Brush & Roller:	HEAVY & HIGHWAY	BASE RATE FRINGE BENEFITS	$18.20 5.08
Drywall Finishers & Plasterers:	HEAVY & HIGHWAY	BASE RATE FRINGE BENEFITS	$18.45 5.08
Spray, Sandblast, Power Tools, Waterblast, Steam Cleaning; Brush & Roller of Mastics, Creosotes, Kwinch Koate and Coal Tar Epoxy:	HEAVY & HIGHWAY	BASE RATE FRINGE BENEFITS	$19.20 5.08
Spray of Mastics, Creosotes, Kwinch Koate and Coal Tar Epoxy:	HEAVY & HIGHWAY	BASE RATE FRINGE BENEFITS	$20.20 5.08
SCOTT COUNTY PLUMBERS & PIPEFITTERS:		BASE RATE FRINGE BENEFITS	$26.00 12.25
OWEN & GRANT COUNTIES: PLUMBER & PIPEFITTERS		BASE RATE FRINGE BENEFITS	$28.00 12.25
ROOFERS: (Excluding Metal Roofs)		BASE RATE FRINGE BENEFITS	$18.90 6.79
SHEETMETAL WORKERS: (Including Metal Roofs)		BASE RATE FRINGE BENEFITS	$26.35 11.07

CLASSIFICATIONS	RATE AND FRINGE BENEFITS	
SPRINKLER FITTERS:	BASE RATE	$28.65
	FRINGE BENEFITS	13.80
BUILDING TRUCK DRIVERS:	BASE RATE	$17.95
	FRINGE BENEFITS	*8.96

Truck Drivers performing work on or hauling from a hazardous or toxic waste site, add $4.00 to base.

*TRUCK DRIVER Fringe benefits - Apply to each employee (whose name appears on the payroll that week) who has been employed a minimum of twenty (20) work days within any ninety (90) consecutive day period for that employer.

HEAVY HIGHWAY TRUCK DRIVERS:

Four-wheel service trucks, four-wheel dump trucks, Batch Trucks, Oil Distributors, Asphalt Distributors:

HEAVY & HIGHWAY	BASE RATE	$19.34
	FRINGE BENEFITS	7.02

Tandems:

HEAVY & HIGHWAY	BASE RATE	$19.39
	FRINGE BENEFITS	7.02

Tractor-Trailer; including semi-tractors, pole-trailers, ready-mix trucks; fuel trucks, asphalt-oil spraybar men (see also next line):

HEAVY & HIGHWAY	BASE RATE	$19.44
	FRINGE BENEFITS	7.02

Asphalt-Oil spraybar men when operated from cab, Five-Axle trucks & over:

HEAVY & HIGHWAY	BASE RATE	$19.54
	FRINGE BENEFITS	7.02

Belly Dumps, End Dumps, Articulated Dumps, Low-boys & Heavy Duty Equipment, Truck Mechanics:

HEAVY & HIGHWAY	BASE RATE	$19.81
	FRINGE BENEFITS	7.02

END OF DOCUMENT CR-4-019
January 5, 2009
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SANITARY SEWER EXTENSION - PHASE I

DIVISION I – GENERAL REQUIREMENTS

SECTION 01010 - SPECIAL CONDITIONS

1. RELATED DOCUMENTS

General Provisions of Contract, General and Supplementary Conditions apply to this section.

2. DESCRIPTION OF WORK

Provide labor, materials, equipment and services necessary for proper and complete construction of this contract for the sanitary sewers in Grant County, Kentucky.

3. CONTRACTOR'S QUALIFICATIONS

A. Contractor shall have completed a minimum of five similar sanitary sewer projects.

B. Each bidder shall submit, in writing, the following information:

(1) Name and address of principal owner of contracting company.

(2) A list of projects with the name and address of Engineer on each project which shows contractor meets requirements on Part A.

(3) A list of all other similar work performed within the past five (5) years with name and address of Engineer on each project.

4. CONTRACTOR'S SUPERINTENDENT

Contractor shall keep on his work, at all times during its progress, a competent superintendent satisfactory to Engineer. The Superintendent shall not be changed, except with consent of Engineer, unless he proves to be unsatisfactory to Contractor and ceases to be in his employ. Superintendent shall represent Contractor in his absence and all directives given to him shall be binding as if given to Contractor.

5. INTENT

The intent of these Specifications is to require a high level of quality in materials and workmanship resulting in timely completion of all Work in an orderly sequence and manner without inconvenience to the Owner, adjacent property owners or the public.

6. WORK REASONABLY INFERRED BUT NOT PARTICULARLY DELINEATED OR SPECIFIED

A. Contractor shall make a thorough examination of site and study all drawings and specifications and all conditions relating to work, and if any materials or labor are evidently necessary for proper and complete execution of work which are not specifically mentioned and included in drawings and specifications, although reasonably inferred therefrom, unless eliminated by special mention, or if any error or inconsistency appears therein, or in the event of any doubts arising as to the true intent and meaning of drawings or specifications, he shall report it to Engineer at least five (5) days in advance of date set for receiving bids. If appropriate, Engineer will then issue an addendum containing the proper information to all Contractors not later than three (3) days prior to the date set for opening of bids.

B. If Contractor fails to make such report and Engineer is not otherwise advised of such doubtful matters, Contractor is hereby made responsible for furnishing all necessary labor and material reasonably inferred for any additional work involved in correction of apparent errors or inconsistencies and in executing the true intent and meaning of drawings and specifications as interrupted by Engineer, and all such labor and material shall be provided at Contractor's expense and under no circumstances will any such labor and material be allowed as extra cost.

7. QUALITY OF MATERIALS, EQUIPMENT AND WORKMANSHIP

A. Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of good quality. Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

B. Approval of manufacturer's shop drawings of materials and equipment shall not mean final acceptance, but they shall be subject to inspection and test on delivery and installation. Contractor shall repair, replace, or adjust any materials or equipment found defective or not operating properly due to improper materials, workmanship, and adjustment for a period of one year after completion and acceptance of work.

C. Contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ anyone not skilled in the work assigned to him.

8. TRADE NAMES

Whenever manufactured products, devices or materials are specified under a particular trade name or name of manufacturer, it shall be understood that the specifications are open to other manufacturers whether or not the clause "or approved equal" is included. Other products comparable in type, quality, utility and price are acceptable if approved by Engineer and Owner. The burden of proof of equality shall rest with Contractor. Owner shall be the sole judge of equality and reserves the right to require the product or material specified by name and furnished at no increase in contract amount.

9. MANUFACTURER'S EQUIPMENT - SHOP DRAWINGS

A. Various items of equipment indicated on Drawings have been indicated schematically only; actual details of each item of equipment shall be verified in shop drawings submitted to Engineer for approval. Data shown on shop drawings shall be complete with respect to dimensions, design criteria, materials of construction, wiring diagrams and component parts, and all details to enable Engineer to review the information as required. At the time of submission, the manufacturer shall in writing, call Engineer's attention to any deviations that shop drawings may have from requirements of Engineer's specifications, or deviation in dimension or equipment weight which might affect structural design or stability. Engineer's approval of shop drawings shall not relieve Contractor from responsibility for compliance with requirements of specifications. Engineer shall not be held responsible for omission or deletion of any components of manufacturer's equipment. Equipment manufacturer shall be responsible for all components of equipment and shall guarantee that equipment will perform and operate satisfactorily in accordance with requirements set forth in these specifications.

B. Contractor shall furnish six (6) copies of all shop drawings to Engineer for review. No equipment or materials shall be ordered prior to Engineer's written approval of shop drawings.

10. EXISTING UTILITIES

A. Before proceeding with work, Contractor shall verify location of, and possible interference with, existing utilities, arrange for necessary suspension of service, and make arrangements to locate and avoid interference with all utilities.

B. Contractor shall protect all utility lines which are to remain in service.

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

D. With particular respect to existing underground utilities, the available information concerning their location has been indicated on Drawings. While it is believed that the locations shown are reasonably correct, neither Engineer nor Owner can guarantee accuracy of adequacy of this information.

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

F. Contractor shall be diligent in his efforts and use every possible means to locate existing utilities. Any claims for unavoidable damage, based on improper or unknown locations, will be thoroughly examined in light of Contractor's efforts to locate said utilities or obstructions prior to beginning construction.

G. A partial list of contacts for underground utility information follows:

Bullock Pen Water District

Duke Energy-

Cincinnati Bell-

Owen County Rural Electric

Insight Cable

For General Utility Information call:

B.U.D. (Before you Dig)
811

Note: The above list is furnished with the intention of assisting the contractor in obtaining information concerning existing utilities. It is not intended to be a comprehensive list of all utility owners. Contractor shall be responsible for contacting all utility owners on a schedule far enough in advance of trench work to allow utility owners to respond.

11. DAMAGE TO EXISTING UTILITIES

A. Contractor shall be responsible for any and all damage done to existing utilities.

B. Damage done to existing utilities shall be repaired promptly, to satisfaction of utility company, at no cost to Owner.

12. PUBLIC AND PRIVATE HIGHWAYS AND STREETS

A. Contractor shall ascertain and obey all State and County road load limits in order to prevent damage to pavements resulting from his operation.

B. Public Convenience and Safety

(1) Contractor shall, at all times, conduct work in such manner as to insure minimum obstruction to public travel. Convenience of general public and of residents along and adjacent to area of work shall be provided for in a satisfactory manner, consistent with operation and local conditions and as directed by the Engineer.

(2) Flagmen shall be used at any time that work of any kind is being performed on any portion of roadway pavement, shoulder, ditch or road right-of-way.

(3) "Construction" signs shall be placed immediately adjacent to work, in conspicuous positions at such locations as traffic demands. Signs shall conform to requirements of Manual on Uniform Traffic Control Devices (MUTCD) published by U. S. Department of Transportation, Federal Highway Administration, latest edition. The manual is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402. At any time that streets are required to be closed, Contractor shall notify law enforcement agencies, fire departments, and parties operating emergency vehicles before streets are closed and again as soon as it is reopened. Access to fire hydrants and other fire extinguishing equipment shall be provided and maintained at all times.

(4) Trenches shall be backfilled at end of each day's work as directed by Engineer. Trenches left open shall be adequately protected with suitable flashing barricades, in compliance with MUTCD and as approved by Engineer. All trenches are required to be backfilled at end of work week. No trenches shall remain open over a weekend. Contractor shall place and maintain DGA on streets and in trenches in construction area when directed by Engineer to maintain roads in safe and traversable condition. Placement of DGA and maintenance of traffic in construction area is considered incidental to construction and will not be paid for separately.

(5) At anytime when excavated material is placed on a paved road the road shall be cleaned at the end of the day with a power broom as directed by the Engineer. Contractor shall power broom at any time as determined by the Engineer or his Representative that a hazard exists.

(6) When excavated material is placed or stockpiled on gravel roads, the contractor shall place crushed stone in these areas to the thickness as approved by the Engineer. The road shall have as much or more gravel or crushed stone as prior to construction as determined by Engineer.

13. WORK ON PRIVATE PROPERTY

A. In connection with work performed on "private property" (property other than public rights-of-way), Contractor shall confine equipment, storage of materials, and operation of his workmen to limits indicated on plans, or to lands and rights-of-way provided for the project by Owner, and shall take every precaution to avoid damage to private property owners' buildings, grounds and facilities.

B. Fences, hedges, shrubs, etc. within construction limits, shall be carefully removed, preserved, and replaced after construction on the private property is completed. Private property owners' facilities, and grounds, shall be restored to as good or better condition than found, as quickly as possible, at Contractor's expense.

C. Large trees or other facilities within construction limits that cannot be preserved and replaced shall be removed by Contractor upon approval by Engineers, but Owner will assume responsibility for settling with property owner for loss of said trees or facilities. Such trees and facilities, however, may be indicated on Drawings. Contractor shall be solely and entirely responsible for any damage to trees or facilities whether indicated on Drawings or not.

D. Foundations, adjacent to excavations made below bottoms of the foundations, shall be supported by shoring, bracing, and underpinning as required as long as excavations remain open, and Contractor shall be responsible for any damage to foundations.

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

14. BLASTING

A. All blasting operations shall be conducted in strict accordance with Kentucky Revised Statutes 351.320 to 351.340 and 351.340, effective October 6, 1972, and subsequent revisions, which shall be deemed to be included in these specifications the same as though herein written out in full. Contractor shall also comply with applicable municipal ordinances, Federal safety regulations and Section 9 of the Manual of Accident Prevention in Construction published by the Associated General Contractors of America, Inc. All explosives shall be stored in conformity with said ordinances, laws and safety regulations. No blasting shall be done within any other

underground utility lines, except with light charges of explosives. Any damage done by blasting is the responsibility of the Contractor and shall be promptly and satisfactorily repaired by him.

B. If directed by Engineer, all shots shall be covered with heavy timber or steel blasting mats to prevent flying material. Unless otherwise specified or directed, delay caps shall be used to reduce earth vibrations and noise.

C. All blasting shall be supervised and performed by qualified personnel.

15. CLEAN-UP

A. Clean-up shall be performed on a daily basis. All debris shall be removed from site regularly. The site shall be kept in a neat condition, ready for subsequent operations.

B. Excess dirt and rock stockpiles shall be placed at locations approved by Engineers. Stockpiles shall not be placed in the immediate front yards of houses or businesses.

C. If Contractor fails to perform proper or adequate cleanup behind pipe laying operations, Engineer may recommend to Owner that an additional amount of retainage, not to exceed ten (10) percent, be withheld from payment(s) due Contractor or may recommend that the construction be suspended until clean-up is acceptable. When construction is suspended due to inadequate clean-up, construction time will continue during the suspension.

16. PRECONSTRUCTION CONFERENCE

A. Following signing of Contract Documents and prior to actual beginning of construction, a Pre-Construction Conference will be held. Contractor, Contractor's Superintendent, and major subcontractors, shall be present to discuss the Construction Schedule, Contractor's Plan of Operation, Engineer's authority, Resident Inspector's authority, procedures for monthly progress reviews and payments, and other relevant questions. Preconstruction conference will be scheduled by Engineer within ten (10) calendar days following date of signing of Agreement.

B. Unless otherwise instructed by Engineer, Contractor shall prepare and submit five (5) copies of his proposed Construction Schedule for review at Preconstruction Conference.

(1) Construction Schedule shall be in a line-item/bar chart format showing anticipated starts, durations and completion of all major items, operations or disciplines or work.

17. TEMPORARY TOILETS, UTILITIES, STORAGE, ETC.

A. Contractor shall be responsible for providing suitable temporary toilets for use by all workmen.

B. Contractor shall be responsible for providing suitable sources of potable water for all operations required for completion of work.

C. Contractor shall make arrangements for on-site areas for storage of materials and equipment, etc.

D. Costs for any and all items covered under this paragraph shall be at Contractor's expense.

18. SECURITY

A. Contractor shall be responsible for protection of his materials, equipment and work during period of Contract. Damage done to construction stakes or to material, equipment, or to completed work shall be replaced or repaired to Engineer's satisfaction and at no additional cost to Owner.

B. Contractor shall be responsible for protection of adjacent public and private property affected by work performed under this Contract, and shall make all necessary and appropriate arrangements with adjacent property owners and with Engineer for such protection prior to commencing work. Damage done to adjacent property resulting from Contractor's operations, or loss suffered by owners of adjacent property, shall be repaired or otherwise compensated by Contractor to satisfaction of Engineer and the affected owner of adjacent property at no additional cost to Owner.

19. LAYOUT OUT WORK

A. Sanitary manhole - All manholes and pump stations will be staked with cut stakes one time.

B. Contractor will be responsible for replacement stakes and off-set stakes and shall furnish all materials required for staking. Contractor's personnel engaged in staking work shall be capable of performing duties set out herein.

20. MEASUREMENTS

A. Contractor and each subcontractor shall be responsible for verification of all measurements at site before ordering materials or doing work. No extra charge or compensation shall be allowed due to differences between actual dimensions found in the field and dimensions indicated on Bid Form or on Drawings.

B. Contractor shall be prepared to guarantee to each of his subcontractors dimensions which he may require for layout and fitting of his work to surrounding work.

21. RECORD DOCUMENTS

Contractor shall maintain in good condition at project site one (1) set of prints of all Contract Drawings, upon which Contractor's Representative will record periodically as required the actual location and conditions of construction, if different than shown or indicated on Drawings. Approval of final payment is contingent in part, upon receipt of record drawings by Engineer.

22. USE OF PREMISES AND REMOVAL OF DEBRIS

Contractor shall, at his own expense:

A. Take every precaution against injuries to persons or damage to property;

B. Store his apparatus, materials, supplies and equipment in such orderly fashion at site of work as will not unduly interfere with progress of his work or work of any other contractors or subcontractors.

C. Preserve all trees outside the construction limits.

D. Place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work;

E. Clean up daily all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of work shall present a neat, orderly and workmanlike appearance.

F. Before final inspection, remove all surplus materials, falsework, temporary structures, including foundations thereof, all debris resulting from his operation, and put the site in a neat, orderly condition;

G. Effect all cutting, fitting or patching of his work required to make same conform to intent of Plans and Specifications and, except with consent of Engineer, no cut or otherwise alter the work of any other Contractor.

23. FIELD CHANGES

Engineer may issue written "Changes" which interpret Contract Documents without change in contract price or contract time, and Contractor shall carry out such field orders promptly.

24. GENERAL GUARANTY

The Contractor shall guarantee all materials and equipment furnished and work performed for a period of one (1) year from date of substantial completion. Contractor warrants and guarantees for a period of one (1) year from date of substantial completion of system that completed system is free from all defects due to faulty materials or workmanship and Contractor shall promptly make such corrections as may be necessary by reason of such defects including repairs or damage of other parts of system resulting from such defects. Owner will give notice of observed defects with reasonable promptness. In the event that Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, the Owner may do so and charge Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

25. PARTIAL PAYMENT SCHEDULE

A. Partial Payment Estimate forms will be furnished by Engineer at Preconstruction Conference. Contractor shall prepare monthly Request Forms, as described in General Conditions.

B. Contractor shall submit partial pay estimates to Engineer by 20th day of each month. Pay Request will be submitted to KIA and DOW by the 5th of the next month. Payment shall be sent to Contractor by the 25th of the month.

C. Contractor shall attend monthly Progress Meetings, scheduled by Engineer, for purpose of reviewing Contractor's Request for Payment and other matters pertaining to performance of work. If directed by Engineer, Contractor shall arrange for his subcontractors to be present at Progress Meetings.

D. Payments Withhold

(1) Engineer may withhold or, on account or subsequently discovered evidence, nullify the whole or part of any certificate to such extent as may be necessary to protect Owner from loss on account of:

a. Defective work not remedied.

b. Claims filed or reasonable evidence indicating probable filing of claims.

c. Failure of the contractor to make payments properly to subcontractors or for material or labor.

d. A reasonable doubt that the contract can be completed for the balance then unpaid.

e. Damage to another Contractor.

f. Performance of work in violation of the terms of the contract.

D. Where work on unit price items is substantially complete but lacks clean-up and/or corrections order by Engineer, amounts shall be deducted from unit prices in payment certificates to amply cover such clean-up and corrections. When the above clean-up and/or corrections are made, payment shall be made for amounts withheld.

26. APPROVALS AND PERMITS

A. Contractor shall obtain permit from Kentucky Transportation Cabinet for construction within State right-of-way. The "Encroachment Permit" has been submitted pending receipt of bond from Contractor. Contact Permit Engineer in D.O.T. District No. 6 Office in Covington, Kentucky concerning this permit. Contractor shall not begin work in State right-of-way until he has furnished copy of approved encroachment permit to Engineer.

B. Use of rights-of-way shall be subject to written conditions on permits. Contractor shall comply with all requirements of access documents, for storage of materials, traffic control, restoration, etc.

27. SPECIFICATIONS BY REFERENCE

A. Whenever the term "Standard Specifications" is used, it shall mean "Standard Specifications for Road and Bridge Construction" of the Kentucky Transportation

Cabinet, Department of Highways latest Edition. Items described by reference to "Standard Specifications" shall comply with "Standard Specifications" as if they were printed herein.

B. Copies of "Standard Specifications" may be obtained from: Transportation Cabinet, Department of Administration, Division of Management Services, State Office Building, Frankfort, KY 40622.

28. INSPECTION

A. One inspector will be working on this project. If more than one crew is working, trenches must remain open until the inspector approves the work.

B. In inspector is not contacted by contractor concerning no work due to rain or wet weather conditions and comes to job site, no rain day will be allowed for the contract time.

C. If more than one crew is working on project, the starting time for all crews shall be the same.

29. SAFETY STANDARDS

Contractor shall be in compliance with OSHA (P.L. 91-596) and the Contract Work Hours and Safety Standards Act (P.L. 91-54).

30. CHANGE ORDERS

A. Change Orders shall be negotiated between the Engineer and Contractor. No work on Change Order shall proceed until change or has been approved by all parties.

B. Change Orders to construction contract (if required) must be negotiated with DOW/KIA Procurement Guidance for Construction and Engineer Contracts.

C. Change Orders must be negotiated pursuant to 40 CFR31.36 (f) (1).

31. SILTATION AND SOIL EROSION

Contractor shall use BMP to minimize siltation and soil erosion during construction.

32. WASTEWATER BYPASSING

No wastewater bypassing will be allowed during construction unless a schedule has been approved by the State and/or by EPA/NEPA permit if required.

END OF SECTION 01010

SANITARY SEWER EXTENSION - PHASE I

DIVISION 2 – TECHNICAL SPECIFICATIONS

SECTION 02280 - SILTATION CONTROL

1. RELATED DOCUMENTS

General provisions of Contract, General and Supplementary General Conditions, and General Requirements apply to this Section.

2. DESCRIPTION OF WORK

A. Provide labor, material, equipment and services necessary for proper and complete siltation control.

B. This work shall consist of temporary control measures as ordered by Owner during life of contract to control siltation through use of erosion control methods; and coordinating these measures with permanent erosion control features specified elsewhere in contract to extent practicable to assure effective and continuous erosion control throughout construction and postconstruction period.

C. Intent of this specification is to protect quality of water through prevention, control, and abatement of siltation resulting from construction project.

D. Contractor shall exercise every reasonable precaution at all times to prevent siltation of all streams. He shall conduct and schedule his operations so as to avoid or minimize muddying or siltation of all streams. No partially completed item of work shall be left in a manner that will contribute to erosion during period in which work on item is suspended.

3. QUALITY ASSURANCE

A. Progress Requirements:

(1) Both permanent and temporary erosion control measures shall be progressively coordinated with construction operations throughout duration of project.

(2) As areas of erodible earth material are exposed to elements of erosion, every effort should be made to stabilize and protect areas as quickly as possible, and as directed. Upon failure of Contractor to coordinate erosion control measures with construction operations in a manner to effectively control erosion and to prevent water pollution, Engineer may suspend Contractor's operations and withhold monies due Contractor on current estimates until such time that all aspects of work are coordinated in an acceptable manner.

B. Payment:

(1) Temporary erosion and pollution control measures which are required which are ordered by Engineer, shall be performed by Contractor at his own expense.

4. CONSTRUCTION

A. Prevention of Pollution:

(1) Construction operations shall not be performed in stream channels except in those areas where creek crossings are indicated on Drawings or where necessary for temporary or permanent structure.

(2) Material removed from excavation shall not be deposited in streams, stream channels, other areas subject to flooding, or other locations where it may be washed away by high stream flows or fast runoff.

(3) Fuels, oils, bitumens, calcium chloride, or other harmful materials shall not be placed where they may be carried into a stream or underground waters at any time.

(4) Duration of exposure of uncompleted construction shall be as short as practicable. All backfilled trenches shall be permanently vegetated progressively with construction.

(5) Contractor shall exercise every reasonable effort to prevent grass or brush fires that will expose areas of soil to erosion. Areas exposed to erosion by fire resulting from Contractor's operations shall be seeded and protected at no cost to Owner.

(6) Lands and waters outside limits of construction, shall not be disturbed, except as may be found necessary and as permitted. Before final acceptance of work, all such disturbed areas, including abandoned haul roads, storage areas and plant sites, shall be reshaped to conform to adjacent ground and shall be revegetated by Contractor at his expense.

B. Temporary Control Measures:

(1) Owner may limit surface area of erodible earth material exposed by trenching and backfilling operations, and may direct Contractor to provide immediate permanent or temporary pollution control measures to prevent contamination of adjacent streams.

(2) Temporary pollution control measures shall be coordinated with permanent erosion control features to extent deemed practicable by Owner to assure effective and continuous erosion control throughout construction and post-construction periods.

(3) Temporary erosion control measures shall be used at any time during life of project when directed to prevent soil erosion and pollution of streams.

(4) Erosion control features installed by Contractor shall be acceptably maintained by him.

(5) Temporary or finish seeding shall be done on all areas within 30 days of disturbance of the ground. No additional payment will be made for temporary seeding.

5. CLEAN-UP

At completion of project, and when approved by Owner, all materials (straw bales, silt fences, etc.) shall be removed from the site and properly disposed of.

END OF SECTION 02280

SECTION 02530 - SANITARY SEWERS

1. RELATED DOCUMENTS

General provisions of the Contract, General, Supplemental and Special Conditions and General Requirements apply to this Section.

2. DESCRIPTION OF WORK

Provide labor, materials, equipment and services necessary for proper and complete installation of gravity sanitary sewer mains, manholes, and miscellaneous appurtenances.

3. QUALITY ASSURANCE

A. Method of Measurement and Payment:

Payment shall include all excavation; bedding; furnishing, joining and laying pipe; air tests; backfill according to these specifications; handling ground water flow in trenches, ditches and drains as required; protecting trees and shrubs; culverts, ground surfaces and grassed areas; disposal of surplus materials; cleaning up; and all other work incidental to laying pipe and pipe fittings for items listed below:

(1) 8 inch sanitary sewer pipe will be measured horizontally from edge of manhole to edge of manhole.

(2) 4 inch gravity sewer laterals will be measured horizontally from outside edge of sewer main to end of pipe.

(3) Manholes will be paid for each standard 4 foot diameter manhole as described in specifications and indicated on Drawing.

(4) Manholes Drops will be paid for each manhole drop at a manhole.

(5) Extra crushed stone bedding will be paid for in tons to fill spaces under pipe or manholes that are made by removing unsuitable material directed by Engineer.

B. The following items will be considered incidental, and no extra payment will be made:

Excavation of earth and rock, line and grade control, roadway and driveway surface replacement, dewatering, stone bedding and cover, earth or crushed stone backfill, preliminary and final cleanup, regrading, spreading topsoil and seeding. List is not intended to be complete but to indicate common items of work that are NOT pay items.

C. All excavation for trenching is considered to be unclassified excavation. No additional payment will be made for rock excavation.

4. MATERIALS

A. Polyvinyl Chloride Pipe and Fittings (PVC):

(1) PVC pipe shall be extruded from Type I, Grade 1, polyvinyl chloride material designated as PVC 1120, meeting ASTM Specifications D3034, Type PSM, and have a standard dimension ratio or SDR 35.

(2) Pipe shall be homogeneous throughout and free from cracks, holes, foreign inclusions or other defects. Pipe shall be as uniform as commercially practical in color.

(3) Workmanship, pipe dimensions and tolerances, outside diameters, wall thickness, eccentricity, sustained pressures, burst pressures, flattening, extrusion quality, marking and all other requirements of Commercial Standards CS 256-63 shall be complied with in all respects.

(4) Pipe shall have a bell on one end. Male ends of pipe must be beveled on the outside. Pipe shall have a ring painted around male end or ends in such a manner as to allow field checking of setting depth of pipe in the socket. This requirement is made to assist construction superintendents and inspectors in visual inspection of pipe installation.

(5) Pipe must be delivered to job site by means which will adequately support it and not subject it to undue stresses. In particular, the load shall be so supported that the bottom rows of pipe are not damaged by crushing. Pipe shall be unloaded carefully and strung or stored as close to final point of placement as is practical. Pipe must not be exposed to direct rays of sun for an extended period of time. If pipe is not to be installed shortly after delivery to job site, it must be stored in shaded location and strung as needed.

(6) All pipe and fittings shall be clearly marked on the outside indicating name of manufacturer, nominal diameter, and specification classification.

B. Ductile Iron Pipe - Mechanical and Rubber Slip Joint Type

(1) Pipe

a. Ductile iron pipe shall be furnished for all piping 3 inches and over in size designated "D.I." on Drawings and shall be designed in accordance with ASTM A746 specifications and supplements thereto.

b. Ductile iron pipe shall be designed for a minimum 200 psi operating pressure plus 100 psi water hammer allowance.

c. The net weight, class or nominal thickness, and casting period shall be shown on each pipe. The manufacturer's mark, the year in which the pipe was produced and the letters "DI" or "DUCTILE" SHALL BE CAST OR STAMPED ON THE PIPE.

d. The spigot end of the pipe shall be free of blemishes and defects which might be responsible for a poor fit with the rubber ring gasket and result in leakage.

e. All ductile iron pipe for sewer service shall have manufacturer's standard outside bituminous or asphaltic base coating and a cement lining and bituminous seal coat on the inside. Cement mortar lining and bituminous seal coat inside shall conform to ANSI/AWWA C104/A21.4-90.

(2) Fittings

a. Ductile iron compact fittings, meeting the requirements of ANSI/AWWA C153/A21.53-88, will be accepted through 16 inch diameter.

b. Fittings shall be 350 psi pressure rating for all sizes through 30 inch.

c. All fittings shall be lined and coated the same as adjacent pipe.

(3) Joints

a. Pipe joints shall be mechanical joint or rubber ring slip joint.

b. All items used for jointing pipe shall be furnished with the pipe. The joints shall be made with tools and lubricant in strict conformity with the manufacturer's instructions. Copies of the instructions shall be delivered to the ENGINEER at start of construction in sufficient numbers that will permit the ENGINEER to retain 3 copies.

c. Mechanical joints are to be furnished according to ANSI/AWWA C111/A21.11-90. All pipe joints must be furnished complete with all accessories. Mechanical joint bolts and nuts shall be of alloy cast iron or alloy steel (Corten type such as U.S. Alloy) or equal. Rubber gaskets shall be made of plain first grade rubber, free of imperfections and porosity. Hardness shall be 75±5 durometer.

d. Rubber ring slip joint shall be equal to ANSI/AWWA C1111/A21.11-90.

C. Encasement Pipe:

(1) Where indicated on Drawings as Jack and Bore, Contractor shall install encasement pipe by boring method. Encasement pipe shall be installed using equipment that mechanically bores the hole with a cutting head and continuous auger inside the encasement pipe. Encasement pipe shall be installed simultaneously with boring the hole.

(2) Encasement pipe shall be steel, plain end, uncoated and unwrapped, have a minimum yield point strength of 35,000 psi and conform to ASTM A252 Grade 2 or ASTM A139 Grade B without hydrostatic tests. Steel pipe shall have welded joints and be in at least 18-foot lengths. Used pipe can be used if the minimum wall thickness is met.

(3) Wall thickness of pipe shall be a minimum of 0.250 inches. Diameter of pipe shall conform to requirements of Kentucky Transportation Cabinet, Bureau of Highways for highway crossings.

D. Manholes:

(1) Precast Concrete Rings:

Precast concrete rings for manholes shall conform to ASTM C 76, Table II,

Wall B, with minimum concrete strength of 4,000 psi, except that rings for manholes over 12 feet deep shall be in accordance with Table III. O-ring gaskets shall be installed between connected ring sections.

(2) Precast Concrete Eccentric Cones:

Precast concrete eccentric cones shall be of size and shape indicated on Drawings and shall conform to ASTM C 76 for reinforced concrete sewer pipe.

(3) Manhole Bases:

Manhole bases shall be formed as indicated on Drawings. Manholes shall be as manufactured by Cloud Concrete Products, Inc. or approved equal. Watertight seals, such as "Dura-Seal" shall be factory installed in the bases.

(4) Manhole Steps:

Manhole steps shall be made of steel reinforced polypropylene plastic as the PS1 manhole step manufactured by M.A. Ind., Inc., Peachtree City, Georgia, or any steel reinforced plastic step which produces equal or better performance.

(5) Manhole Frames and Covers:

Manhole castings shall consist of cast iron frames and 22-3/4 inch diameter covers, dimensioned as indicated on Drawings. Manhole covers shall set neatly in rings, with contact edges machined for even bearing and tops flush with ring edge. They shall have sufficient corrugations to prevent slipperiness and be marked in large letters, "SANITARY SEWER". Covers shall have two pick holes about 1-1/4" inches wide and sanitary sewer manholes shall not be perforated. Standard manhole frames (for medium traffic) shall be 7 inches thick and weigh 350 pounds, heavy duty manhole frames shall be 9 inches thick and weigh 450 pounds. Four (4) inch frames are not permitted.

(6) Drops into Standard Manholes:

Drops into standard manholes shall be built as a part of standard manhole of Class "B" concrete. Stack pipe shall be laid in manhole as indicated on Drawings and encased with concrete. Pipe which is laid on drop portion of manhole shall be supported with Class "B" concrete extending from drop stack to reinforced base of manhole.

E. Flowmeter

(1) General

The flowmeter shall consist of two components; a Sensor and permanent Flo-Station. The sensor shall combine advanced Electromagnetic velocity sensing technology with Pressure level sensing to remotely measure open channel flow. Flow shall be calculated based on the Continuity Equation ($Q = V \times A$), where Q= Flow, V= Average Velocity and A= Area. The flowmeter shall be of assured quality and provided by an ISO 9002

certified manufacturer. The flowmeter shall be equivalent to the Flo-Tote 3™ Model 3000 as manufactured by the Hach Company, Loveland Colorado,, USA or approved equal. The flowmeter has field replaceable/interchangeable sensor.

(2) Sensor Flo Tote 3 Model 3000

The sensor shall consist of two transducers molded into a single polyurethane watertight enclosure. The two transducers shall be Electromagnetic for fluid velocity measurement and Pressure for fluid level measurement. The Electromagnetic transducer sends a single point signal through an electronic algorithm that determines average velocity. The Pressure transducer is of the Piezo-resistive type measuring the pressure of flow and interpreting this to depth of flow. The sensor shall be mounted in the flow. The sensor shall accurately measure flows in circular and rectangular channels down to flow depths of $1^1/_4$-inch.

(3) The Data Logger shall be mounted in the control panel for adjacent pump station.

(4) The data logger shall be wired into the pump station control panel.

(5) Software

a. The software is the user on-site set-up, data management and report generation software for the Flowmeter System. It is compatible with computers (Desktop&Portable/Pocket PC) utilizing Windows 95/98/2000/Me/NT/XP/Pocket PC 2002.

b. Software is a full data management system, which includes Chart Reports, Text Reports, Data Editing, Text Report Designer, and Language Designer. The Text Report Designer and Language Designer shall be separate programs that can run as independent programs. The Text Report Designer shall allow the user to create or modify custom text reports. The Language Designer shall allow for creation or modification of the spelling of words used within the programs. The reports section of the program shall use the raw data from the instrument to create "projects" that can be viewed, adjusted, and printed. Reports shall consist of chart and text formats.

(6) Laptop Computer

a. Laptop computer will be furnished with a Minimum Pentium II or higher processor running at least 200 MHz with 64 MB RAM or more. Graphics card and monitor must be capable of 800x600 pixels running in 16 bit (65,000) colors.

(7) Software Operating System

Desktops and Portables (Laptops): Software Operational system shall be PC with Windows 95, 98, 2000, Me, XP, or NT

(8) The sensor shall be mounted directly in the flow by using a mounting band. The sensor mounts shall be designed for easy insertion and retraction of the sensor. All mounts shall be of 304 stainless steel material suitable for manhole applications.

5. SHOP DRAWINGS

Contractor shall furnish to Engineer for approval, six (6) sets of shop drawings, catalog cuts and certificates for all materials used in construction of sanitary sewers. Contractor shall not order material or equipment until approval of shop drawings is given by Engineer.

6. TRENCH EXCAVATION

A. Trenching:

(1) Unless specifically approved or directed otherwise by Engineer, not more than 400 feet of trench shall be opened ahead of pipe laying work of one crew, and not more than 400 feet of open ditch shall be left behind pipe laying work of any one crew.

(2) Trenches in which pipes are to be laid shall be excavated in open cut to depths indicated on Drawings, cut sheets or as specified by Engineer. Minimum allowable trench width shall not be less than outside diameter of pipe plus twelve inches. Where rock is encountered, it shall be removed to a minimum depth of six inches below the pipe.

(3) Unless specifically authorized by Engineer, trenches shall in no case be excavated or permitted to become wider than 2 feet 6 inches plus nominal diameter of pipe at level or below top of pipe. If trench does become wider than 2 feet 6 inches at level of or below top of pipe, special precautions may be necessary, such as providing compacted granular fill up to top of pipe or providing pipe with additional crushing strength determined by Engineer after taking into account actual trench loads that may result and strength of pipe being used. Contractor shall bear cost of such special precautions as necessary.

(4) All excavated materials shall be placed a minimum of 2 feet from edge of trench.

(5) Where conditions exist that may be conducive to slides or cave-ins, proper and adequate sheeting, shoring and bracing shall be installed to provide safe working conditions and to prevent damage to work.

(6) Trenches shall be kept free of water during laying of pipe and until pipeline has been backfilled. Removal of water shall be at Contractor's expense.

(7) Backfilling shall be as set out hereinafter.

(8) All trenching operations shall be in compliance with OSHA regulations and state requirements.

(9) When excavated material is placed on paved roads, the contractor shall clean road with power broom at the end of each days work or as directed by the Engineer.

(10) When excavated material is placed on gravel or dirt roads, the contractor shall place crushed stone to the same thickness of the road prior to construction as determined by the Engineer.

B. Shoring, Sheeting and Bracing:

(1) Where unstable material is encountered or where depth of excavation in earth exceeds six feet, sides of trench or excavation shall be supported by substantial sheeting, bracing and shoring, or side sloped to angle of repose. Sloping sides of ditch to angle of repose will not be permitted in streets, roads, narrow rights-of-way or other constricted areas unless otherwise specified. Design and installation of all sheeting, sheet piling, bracing and shoring shall be based on computations of pressure exerted by materials to be retained under construction conditions. Adequate and proper shoring of all excavations shall be the entire responsibility of Contractor.

(2) Foundations, adjacent to where excavation is to be made below depth of existing foundation, shall be supported by shoring, bracing, or underpinning as long as excavation shall remain open, or thereafter if required to insure stability of structure supported by the foundation, and Contractor shall be held strictly responsible for any damage to said foundation.

(3) Solid sheeting will be required for wet or unstable material. It shall consist of continuous vertical sheet piling of timber or steel with suitable whales and braces.

(4) Care shall be taken to avoid excessive backfill loads on the completed pipelines and the requirements that width of trench at level of crown of pipe be not more than two feet six inches plus nominal diameter of pipe shall, as set out hereinbefore, shall be strictly observed.

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

(6) All sheeting, shoring, planking, timbering, bracing and bridging shall be placed, renewed and maintained as long as necessary.

(7) Nothing in this section shall override any requirements of OSHA or of the State of Kentucky.

C. Blasting:

(1) Shall be conducted in accordance with municipal ordinances, state laws, and Section 9 of the Manual of Accident Prevention in Construction published by the Associated General Contractors of America, Inc. All explosives shall be stored in conformity with said ordinances, laws and safety regulations. No blasting shall be done within five feet of any water mains, except with light charges of explosives. Any damage done by blasting is the responsibility of the Contractor and shall be promptly and satisfactorily repaired by him.

(2) All shots shall be covered with heavy timber or steel blasting mats to prevent flying material. Unless otherwise specified or directed, delay caps shall be used to reduce earth vibrations and noise.

(3) All blasting operations shall be covered by public liability insurance, or if said public liability insurance does not cover blasting, then the Contractor shall have separate public liability insurance to cover his blasting operations.

(4) All blasting operations shall be supervised and performed by qualified licensed personnel.

7. PIPE BEDDING

A. General:

(1) In all cases foundation for pipes shall be prepared so that entire load of backfill on top of pipe will be carried on barrel of pipe and where bell and spigot pipe are involved, none of load will be carried on bells.

(2) For bell and spigot pipe, bell holes shall be cut in granular bedding to prevent bells from being supported on undisturbed earth or granular material.

(3) Supporting of pipe shall be as set out hereinafter, and in no case shall the supporting of pipe on blocks be permitted.

B. Earth Foundations:

Foundations for pipes laid in trenches shall be prepared so that entire load of backfill on top of pipe will be carried uniformly on barrel of pipe. Pipe bells shall not carry any load of backfill. Excavation shall be undercut to a minimum depth of six inches below bottom of pipe. Pipe shall be laid on a bed of granular material to provide continuous support for the lower section of pipe. Granular bedding shall be Dense Graded Aggregate (DGA) or #9 stone.

C. Rock Foundation:

If trench bottom is in rock, excavation shall be undercut to a minimum depth of six inches below bottom of pipe. Pipe shall be laid on a bed of granular material to provide continuous support for the lower section of pipe. Granular bedding shall be Dense Graded Aggregate (DGA) or #9 stone.

D. Special Bedding:

(1) In wet, yielding mucky locations where pipe is in danger of sinking below grade or floating out of line or grade, or where backfill materials are of such a fluid nature that such movements of pipe might take place during placing of backfill, pipe must be weighted or secured permanently in place by such means as will prove effective. When directed by Engineer, yielding and mucky material in subgrades shall be removed below ordinary trench depth in order to prepare a proper bed for pipe. Crushed stone or other such granular material, if necessary, as determined by Engineer to replace poor subgrade material, shall be classified as "Special Pipe Bedding".

(2) Granular material for "Special Pipe Bedding" shall be K.D.H.S. #9, as described in "Standard Specifications" unless other gradiation of granular material is approved by the Engineer.

8. PIPE LAYING

A. Laying of sewer pipe in finished trenches shall commence at lowest point so that spigot or tongue ends point in the direction of flow.

B. Contractor shall use a laser instrument to set grades on sewer lines. In using such an instrument, Contractor shall be responsible for maintaining grades and elevations as called for on drawing profiles, and any variances found shall be corrected by Contractor at no additional cost to Owner.

C. All pipe lengths shall be laid with ends abutting and true to line and grade as given by Engineer. They shall be fitted and matched so that when laid they will form a sewer with a smooth and uniform invert. Foundation of pipe shall be as set out hereinbefore under "Pipe Bedding" and in no case shall supporting of pipe on blocks be permitted.

D. Branches, fittings and specials for sewer lines shall be provided and laid as and where directed by Engineer or indicated on Drawings.

E. Before each piece of pipe is lowered into trench, it shall be thoroughly cleaned and inspected. Each piece of pipe shall be lowered separately. No piece of pipe or fitting which is known to be defective shall be laid or placed in trenches. If defective pipe or fitting shall be discovered after pipe is laid, it shall be removed and replaced with a satisfactory pipe or fitting. In case a length of pipe is cut to fit in a line, it shall be so cut to leave a smooth end at right angles to longitudinal axis of pipe.

F. When laying of pipe is stopped for any reason, the exposed end of such pipe shall be closed with a suitable plug, fitted into pipe bell, so as to exclude earth or other material, and precautions taken to prevent floatation of pipe by runoff into trench.

G. Pipe Joints:

All joints and connections shall be as established hereinbefore. Assembly of pipe and fitting joints shall be in accordance with manufacturer's recommendations.

9. BACKFILLING

A. General:

(1) All backfilling shall be accomplished in accordance with detail drawings and the requirements of this section. Any variances must be approved in writing by Engineer.

(2) When directed by Engineer, Contractor shall add water to backfill material or dry out material when needed to attain a condition near optimum moisture content for a maximum density of material when it is tamped. Contractor shall obtain a compaction of the backfill of at least 95 percent of a standard (ASTM D698) Proctor density where mechanical tamping of backfill is required.

(3) Before final acceptance, Contractor will be required to level off all trenches or to bring trench up to level of surrounding terrain. Contractor shall also remove from roadways, rights-of-way and/or private property all excess earth

or other materials resulting from construction.

(4) In the event that pavement is not placed immediately following trench backfilling in streets and highways, Contractor shall be responsible for maintaining trench surface in a level condition at proper pavement grade at all times. Pavement shall be replaced within 30 calendar days unless asphalt plant is closed.

(5) In all cases walking or working on completed pipelines except as may be necessary in tamping or backfilling will not be permitted until trench has been backfilled to a point one foot above top of pipe. Filling of the trench and tamping of backfill shall be carried on simultaneously on both sides of the pipe in such a manner that completed pipeline will not be disturbed and injurious side pressures do not occur.

B. Method "A" Backfilling in Open Terrain (AREAS NOT SUBJECT TO VEHICULAR TRAFFIC)

(1) Backfilling of pipeline trenches in open terrain shall be accomplished in the following manner:

Lower portion of trench, from pipe bedding to a level plane 12 inches above top of pipe shall be backfilled with DGA or #9 stone.

(2) Upper portion of trench above crushed stone portion shall be backfilled with material which is free from large rock. Incorporation of rock having a volume exceeding one-half cubic foot is prohibited. Backfilling this portion of trench may be accomplished by any means approved by Engineer. The trench backfill shall be leveled.

C. Method "B" Backfilling Under Paved Streets and Roads: (Open Cut Method)

(1) Backfilling of pipeline trenches under sidewalks, streets, proposed streets, and parking lots shall be backfilled with DGA or #9 stone. Backfill shall be placed full depth in trench.

(2) No extra payment will be made for crushed stone backfilling or pavement replacement.

D. Settlement of Trenches:

The Contractor shall be responsible for any trench settlement which occurs within one year from time of final acceptance of all work in the project. If paving shall require replacement because of trench settlement, within this time, it shall be replaced by Contractor. Repair of settlement damage shall meet approval of appropriate governing body.

E. Concrete Cradle, Anchors or Encasement:

Concrete cradle, anchors or encasement of sewer lines and/or fittings shall be placed where indicated on Drawings or directed by Engineer. Concrete shall be Class "B" and shall be mixed sufficiently wet to permit it to flow under pipe to form a continuous bed. In tamping concrete, care shall be taken not to disturb grade or line of pipe or injure joints.

10. STREAM CROSSINGS

A. All construction related to stream crossings shall be in accordance with Section 02280 – "Siltation Control" of these Specifications.

B. On stream crossings care shall be taken to limit the disturbed areas during construction. No excavating of unnecessary areas, disturbing or uprooting of trees and vegetation, dumping of soil or debris or pumping of silt-laden water into stream will be allowed.

C. On stream crossings, clean-up, grading, seeding and restoration shall begin immediately. All unexposed areas shall not remain unprotected for more than seven days.

11. MANHOLES

A. General:

Manholes shall be installed where and as indicated on Drawings.

B. Standard Manholes: Standard manholes shall be over five feet in depth, measured from base of cover frame to top of concrete footing and shall be of cone-type top construction as indicated on Drawings.

C. Shallow Manholes: Shallow manholes shall be five feet or less in depth, measured from base of cover frame to top of concrete footing and shall be of flat top construction as indicated on drawings.

D. Manhole excavation shall be kept free of water while manhole is being constructed and the manhole shall not be backfilled until inspected by the Engineer.

E. Prior to installation, manhole shall be inspected for damage.

12. TESTING GRAVITY SEWERS

A. General:

(1) After collection and/or outfall lines have been brought to completion, and prior to final inspection, Contractor shall rod out entire system by pushing through each individual line in system, from manhole to manhole, appropriate tools for removal from the lines of any and all dirt, debris and trash.

(2) All lines or sections of lines that are found to be laid improperly with respect to line or grade, that are found to contain broken or leaking sections of pipe, or are obstructed in such a manner that they cannot be satisfactorily corrected otherwise, shall be removed and replaced.

B. Low Pressure Air Test:

(1) All sanitary sewers will receive a low-pressure air test for leakage. Air test will be made after all laterals have been installed to property lines and backfilling has been completed and compacted.

(2) All ties and end of sewer services shall be plugged with flexible joints plugs or end caps securely fastened to withstand internal test pressures. Such plugs or caps shall be readily removable, and their removal shall provide a socket suitable for making a flexible jointed lateral connection or extension.

(3) Prior to testing, pipe shall be checked to see that it is clean. If not, it shall be cleaned by passing a full gauge squeegee through the pipe. It shall be Contractor's responsibility to clean the pipe.

(4) Immediately following this check or cleaning, pipe installation shall be tested with low-pressure air. Air shall be slowly supplied to plugged pipe installation until internal air pressure reaches 4.0 pounds per square inch greater than average back pressure of any ground water that may be in the pipe. At least two minutes shall be allowed for temperature stabilization.

(5) Requirements of air test shall be considered satisfied provided that the time required, in seconds for pressure to decrease from 3.5 to 3.0 pounds per square inch greater than the average back pressure of any ground water that may submerge the pipe is not less than that shown in the "Allowable Time Table" listed below, which is for 400 foot sections of pipe. For testing of shorter sections of pipe the Engineer shall determine duration of test.

ALLOWABLE TIME TABLE

PIPE SIZE	TIME MIN.	SEC.	PIPE SIZE	TIME MIN.	SEC.
6"	2	55	18"	8	30
8"	3	57	21"	9	50
10"	4	43	24"	11	20
12"	5	40	27"	12	45
15"	7	05	30"	14	10

(6) Contractor shall furnish all labor and equipment necessary to conduct low pressure air test. Records of test results shall be kept for each section of sewer tested.

(7) Engineer must witness each satisfactory air test before it will be accepted as fulfilling requirements of these specifications.

C. Infiltration Test:

(1) Contractor shall lay sewer lines, including house connections, so that ground water infiltration shall not average more than 1500 gallons per 24 hours per mile of sewer without regard to diameter of sewer. Only length of main sewers shall be used in making the foregoing computation even though house connections (from the main sewer to property line) should be in place and included as a part of system when infiltration is measured. This requirement may be applied to a portion of contract work, such as sewers in a separate drainage area or to a single section of line between two manholes.

(2) In order to test for infiltration, the Engineer may also require exfiltration tests on each section of pipe between manholes after it has been laid but prior to backfilling of joints. Exfiltration tests shall be conducted by plugging lower end of section of sewer to be tested and filling sewer with water to a point approximately five feet above invert at lower end observing for leakage at all joints and measuring the amount of leakage for a given interval of time. Exfiltration shall not exceed 110 percent of infiltration limits set out hereinbefore. All observed leaks shall be corrected even if exfiltration is within allowable limits. Exfiltration tests will normally be required for flat sections of sewer that are expected to be below wet season ground water table.

(3) To test for infiltration, Engineer may also require that Contractor plug open ends of all lines at manhole so that measurements may be made in each section of sewer line. This infiltration test will not be made until sewer line is completed, and Contractor will be required to correct all conditions that are conducive to excessive infiltration and may be required to relay such sections of line that may not be corrected otherwise. All observed leaks shall be corrected even if infiltration is within allowable limits.

D. Deflection Test:

(1) Deflection tests shall be performed on all sewers after they have been constructed a minimum of 30 days. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95 percent of the inside diameter of the pipe. The test shall be performed without mechanical pulling devices. Pipe deflection shall be measured and recorded by the CONTRACTOR in the presence of the Engineer using appropriate methods approved by the pipe manufacturer and acceptable to the Engineer. Equipment required for the test shall be provided by the Contractor.

(2) Any sewer line exceeding 5% of deflection shall be replaced.

E. Each manhole shall be tested for water tightness.

13. CONNECTIONS (LATERALS)

A. Sanitary eyes will be set on all sanitary sewer mains to serve the lots as shown on plans. The 4 inch laterals will be constructed to the property line or road right-of-way line as shown on plans. Normal lateral lengths shall be 13 feet unless shown larger on plans. Contractor shall coordinate lateral location with the Engineer.

B. All house connections, unless otherwise specified or directed, shall be 4-inch standard PVC pipe as specified hereinbefore and as indicated on Drawings. Trenching, pipe laying, joints and backfilling shall conform to requirements set out herein. All open ends shall be sealed with standard plugs to satisfaction of Engineer. Clean-outs shall be installed at end of all laterals.

C. For shallow sewers (10 feet or less in depth) in rock or earth trenches, tees shall be encased entirely with crushed stone (Kentucky Highway Department Size No. 78) and fully compacted.

D. House connection pipe shall be of same type as used in collector lines. Pipe shall be laid on a uniform grade from tee branch to meet building sewer grade to building so that no bends will be needed for final connection. Contractor shall coordinate lateral location with the Engineer.

E. House connection pipe shall contain a 45° fitting which will put end of pipe to ground level. The end of pipe shall be at the property line, right-of-way line or easement line.

F. For deep sewers (greater than 10 feet in depth) in rock, the tees shall be encased entirely with Class "B" Concrete. House connections in this case shall be a combination of cast iron pipe, cast iron bends, and standard adapter and sewer pipe of same material used for collector lines, extended from tee to property line. Cast iron pipe shall be laid vertically from main to a point to meet the probable building sewer grade. From this point appropriate pipe (same type as used in collector lines) shall be laid on a uniform slope to match probable grade of building sewer.

G. The laterals shall be installed so the grade will be able to tie into the house connection.

H. Under normal conditions, where elevations are not critical, house connection pipe shall be laid on a slope of not less than one foot per 100 feet (approximately 1/8 inch per foot).

I. Tapping house connections into manholes on newly constructed sewers will not be permitted, except where approved by Engineer. Where it is necessary to do so, invert of house connection shall not be higher than a point three inches below top of bench to prevent accumulation of solids on bench. If necessary, a standard drop connection shall be provided for a house connection that is tapped into a manhole.

J. Installation of house connections shall follow immediately or be concurrent with construction of main sewer. This method of construction will permit more advantageous handling of backfilling and will also avoid possible damage to main sewer by subsequent exposure for connection of service lines.

14. CLEAN-UP

Upon completion of installation of section of sewer lines, remove all debris and surplus construction materials. Grade ground surface along each side of pipe trench in a uniform and neat manner leaving construction area in a shape as near as possible to original ground line and ready for seeding to be as specified elsewhere.

END OF SECTION 02530

SECTION 02531 - SEWAGE FORCE MAIN

1. RELATED DOCUMENTS

General Provisions of the Contract, General, Supplemental and Special Conditions, and General Requirements apply to this section.

2. DESCRIPTION OF WORK

Provide labor, material, equipment and services necessary for proper and complete installation of sanitary sewage force main.

3. MATERIALS

A. Polyvinyl Chloride Pipe (PVC):

(1) PVC pressure pipe shall conform as a minimum, to ASTM Specifications D-2241, and shall be pressure Class 200. Pipe furnished under ASTM A-2241 shall have a standard dimension ratio not to exceed SDR 21, and shall be rated to a working pressure of at least 200 psi at 73.4°F.

(2) Fittings shall be cast iron Mechanical Joint Class 250 conforming to AWWA Specifications C110 for short body cast iron fittings. Fittings shall be tar-coated outside, and shall receive standard cement lining with bituminous seal coat on inside.

(3) Joints shall be of push-on type conforming to ASTM D3139 and F477 requirements for elastometric-gasket joints. All jointing material and lubricants shall be non-toxic.

B. Sewage Combinations Air Valve:

(1) The Sewage Combination Air Valve shall consist of a single body with double orifice to allow large volumes of air to escape and enter thru the larger diameter air and vacuum orifice when filling or draining a pipe line.

(2) The Float shall be heavily constructed stainless steel hermetically sealed; and having a Concave bottom impact area to provide immediate resistance to flow and instant upwards movement to shut off the larger orifice "WITHOUT SPILLING".

(3) The Buna-N seat must be fastened to the valve cover, without distortion for drop tight shut-off.

The Sewage Combination Air Valve shall be fitted with (1) inlet 2" Bronze Gate Valve from the force main, (1) Blow-off Valve and (1) Flush Valve and minimum 5' Rubber Hose with quick disconnect couplings for back flushing.

(4) Valve to be APCO Series 440WA Sewage Combination Air Valve with attachments, as manufactured by Valve & Primer Corporation or approved equal. All valves shall meet all requirements of the Buy American Clause.

(5) An acceptable alternate for the valve will be A.R.I. D-020 Combination Air Valve for Sewage.

C. Check Valve:

(1) Check valve shall be a lever a spring type and conform to the latest revision of AWWA Specification C-500. Valves shall have a rated working pressure of 175 psi with standard mechanical joint.

(2) Check valve shall be installed in a 36" diameter PVC box.

(3) Metal lid for boxes shall be VWM-24-2 by Vestal Manufacturing or approved equal and marked "Sewer".

D. Gate Valves:

(1) All gate valves shall be double disc, parallel seat type or resilient seated type, iron body, non-rising stem, fully bronze mounted with O-ring seals. Valves shall be of standard manufacture and of highest quality both as to materials and workmanship and shall conform to latest revisions of AWWA Specification C-500. Valves shall have a rated working pressure of 200 psi, with standard mechanical joint, A-2380-23 as manufactured by Mueller Co., Darling, Smith, Kennedy, or approved equal.

(2) Gate valves for buried service shall be furnished with mechanical joint end connections, unless otherwise indicated on Drawings. End connections shall be suitable to receive PVC.

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

(4) Gate valves set with valve boxes shall be provided with a 2 inch square operating nut and shall be opened by turning to left (counterclockwise); gate valves set in vaults or pits shall be furnished with hand wheels.

(5) Gate valves shall be installed in a vertical position with cast iron valve box. Valve boxes shall be cast iron, screw type with drop over marked "SEWER". They shall be set vertically and properly adjusted so that cover will be in the same plane as finished surface of ground, street, or sidewalk.

(6) Gate valves shall be accurately centered over valve operating nut, and backfill thoroughly tamped about them. Valve box bases shall not rest on valves but shall be supported on crushed stone fill. They shall be set vertically and properly cut and/or adjusted so that tops of boxes will be at grade in any paving, walk or road surface, and two to three inches above ground in grass plots, fields, woods or other open terrain. Valve boxes shall be as manufactured by Mueller, M & H Valve Company, Darling, Russell Pipe and Foundry, or approved equal.

(7) A two feet diameter by four inch thick concrete pad shall be furnished around valve boxes.

E. High Density Polyethylene Pipe (HDPE):

(1) Pipe shall be high-performance, high-molecular-weight, high-density polyethylene pipe. The pipe material shall be a Type III, Class C, Category 5, P34 material as described in ASTM D 1248. Minimum cell classification values of the pipe material shall be 3 4 5 4 3 4 C as referenced in ASTM D 3350 – 84. The density shall be 0.941 – 0.957 gms/cm^3 when tested in accordance with ASTM D 1505.

(2) Melt Flow shall be no greater than 0.15 gms/10 min. when tested in accordance with ASTM D 1238 - Condition E. (Melt Flow shall be no greater than 4.0 gms/10 min. when tested in accordance with ASTM D 1238 - Condition F.) 1 Flexural Modulus shall be 110,000 psi to less than 160,000 psi when tested in accordance with ASTM D 790. Tensile strength at yield shall be 3,200 psi to less than 3,500 psi when tested in accordance with ASTM D 638. Environmental Stress Crack Resistance shall be in excess of 5,000 hours with zero failures when tested in accordance with ASTM D 1693 - Condition C.

(3) Hydrostatic Design Basis shall be 1,600 psi at 23°C when tested in accordance with ASTM D 2837.

F. Engineered Thermoplastic Valves and Fittings (For Individual Pumps):

(1) All plastic valve and fitting components are to be tested for compliance with ASTM D 1599 (Categories 7.1.1, 7.2.2, and 7.2.3). Components shall be tested against the requirements of ASTM D2513 (Categories 6.10.1 and 6.10.2).

(2) All pipe connections shall be made using compression fitting connections including a Buna-N O-ring for sealing to the outside diameter of the pipe. A split-collect locking device shall be integrated into all pipe connection fittings to securely restrain the pipe from hydraulic pressure and external loading caused by shifting and settling.

(3) Polypropylene curb stop valves shall be pressure-tight in both directions. The tee-head shall include a ratcheting feature to prevent breaking from over-torquing the valve handle. EPDM or Buna-N O-rings shall be used to provide a redundant, watertight seal on the stem. A spherical, PVC ball shall be supported in molded, polyethylene seats to provide watertight seals in either direction, as well as maximum flow capacity and ease of operation. Valves shall be designed to withstand a working pressure of 150 psi minimum.

G. Check Valves (For Individual Pumps):

(1) Check valves shall be injection-molded from noncorroding, glass fiber reinforced PVC for durability. The check valve flapper shall include a non-fouling, integral hinge made from fabric-reinforced synthetic elastomer to ensure corrosion resistance, dimensional stability, fatigue strength and trouble-free operation. The check valve will provide a full-ported passageway and shall introduce a friction loss of less than 6

inches of water at maximum rated flow. A nonmetallic hinge shall be an integral part of the flapper assembly, providing a maximum degree of freedom to ensure seating at low back pressure.

H. Curb Boxes (For Individual Pumps):

(1) Curb boxes shall be constructed of ABS, conforming to ASTM-D 1788. Lid top casting shall be cast iron, conforming to ASTM A-48 Class 25, providing magnetic delectability, and be painted black. All components shall be inherently corrosion-resistant to ensure durability in the ground. Curb boxes shall provide height adjustment downward (shorter) from their nominal height.

4. SHOP DRAWINGS

Contractor shall furnish to Engineer for approval, six (6) sets of catalog cuts and certifications for all materials used in construction of sewage force main. Contractor shall not order material or equipment until approval is given by Engineer.

5. TRENCHING, BEDDING, PIPE LAYING, BACKFILLING AND HIGHWAY CROSSING

Trenching, bedding, pipe laying, backfilling and highway crossing for force main shall be as indicated on the drawings.

6. TESTING OF SEWAGE FORCE MAINS

A. Finished work shall comply with provisions listed below:

(1) Leakage in pipelines, when tested under pressure of 50# in excess of normal operating pressure, shall not exceed 5 psi differential during duration of test.

(2) Where practicable, pipelines shall be tested between line valves or plugs in lengths of not more than 1500 feet.

(3) Pipelines shall be tested before backfilling at joints except where otherwise required by necessity, local ordinance, or public convenience.

(4) Duration of test shall be not less than two hours.

(5) Where leaks are visible at exposed joints and/or evident on surface where joints are covered, joints shall be repaired or relaid, and leakage minimized, regardless of total leakage as shown by test.

(6) All pipe, fittings and other materials found to be defective under test shall be removed and replaced at Contractor's expense.

(7) Lines which fail to meet tests shall be repaired and retested as necessary until requirements are complied with.

(8) All tools, equipment, labor, materials, and water necessary for pressure testing of force main shall be provided by Contractor at no additional cost to Owner.

7. CLEAN-UP

Upon completion of installation of sewage force main, remove all debris and surplus construction materials. Grade ground along each side of pipe trench in a uniform and neat manner leaving construction area as shown on the typical section and ready for seeding to be as specified elsewhere.

8. CONNECTION TO EXISTING MANHOLE

When the connection of the sewer to an existing manhole is shown, the manhole shall be core drilled and a flexible pre-molded neoprene boot with stainless steel expanding shap-ring inserted in the cored hole of manhole barrel and exterior stainless steel ring (minimum 2) to clamp boot around pipe.

END OF SECTION 02531

SECTION 02920 - SEEDING, FERTILIZING AND MULCHING

1. RELATED DOCUMENTS

General provisions of Contract, and General, Supplemental, and Special Conditions apply to this Section.

2. DESCRIPTION OF WORK

Provide labor, material, equipment and services necessary for proper and complete seeding and mulching.

3. QUALITY ASSURANCE

The intent of these Specifications is to require the Contractor to provide, in all areas to be seeded, fertilized and mulched, a smooth uniform turf of the grasses specified free from bare spots, eroded areas, weeds or other deficiencies. Acceptance by the Engineer is conditional upon compliance with this intent after the initial growing season.

4. MATERIALS

A. Mulch shall be a high quality small-grain straw or a hydraulically applied wood-cellulose fiber mulch approved by Engineer.

B. Commercial fertilizer shall be a complete fertilizer, uniform in composition, dry and free flowing. Fertilizer which becomes caked or otherwise damaged making it unsuitable for use will not be accepted.

C. Lime shall be agricultural limestone containing not less than 85% of total carbonates and shall be grounds to a fineness that 50% will pass through a 100-mesh sieve and 80% will pass through a 20-mesh sieve. Coarser material will be acceptable provided that specified rates of application are increased proportionally on basis of quantities passing 100-mesh sieve.

D. Seed Mixture:

(1) Lawn Seed shall be guaranteed by dealer and distributed as follows:

a. Farm or pasture

80% Kentucky 31 Tall Fescue
20% Annual Ryegrass

b. Residential Yards

40% Kentucky Bluegrass
40% Fine Leaf Fescue
20% Annual Ryegrass

(2) Seed mixture shall be sown at rate of 5 pounds per 1000 square feet.

5. SOIL IMPROVEMENTS

Fertilizer shall be applied to all seeded areas as follows:

A. Agricultural limestone - 75 pounds per 1000 square feet.

B. Fertilizer - 20 pounds, 10-10-10 fertilizer per 1,000 square feet.

C. Application:

(1) Limestone shall be thoroughly mixed into topsoil as far ahead of seeding as will not interfere with other grading operations.

(2) Fertilizer shall be applied to areas being prepared for seeding and shall be mixed lightly in top few inches of topsoil.

6. SEEDING AND MULCHING

A. Seeding:

(1) Immediately before seed is sown, loosen soil to a depth of 3 inches by rotary tools, discs, harrows, or other approved methods. Engineer may reduce depth to which soil is loosened on steep slopes or places inaccessible to mechanical equipment.

(2) Remove all large or unsightly clods or stones, and other foreign material brought to surface and repair all gullies, washes, or disturbed areas before seed is applied.

(3) Seed shall be broadcast either by hand or by approved sowing equipment at rate specified.

(4) Do not perform seeding during high winds that would prevent uniform distribution of seed.

B. Mulching:

All seeded areas shall be mulched with straw to depth of approximately 1-1/2 inches. Mulching shall follow seeding operation not later than 48 hours.

7. PLANTING SEASON

Spring seeding season shall be between February 15 and April 15. Fall seeding season shall be between August 1 and October 20. Seeding seasons may be extended only at direction of Engineer.

8. CLEAN-UP

Soil, peat or similar material which has been brought onto paved areas within or outside construction limit by hauling operations or otherwise shall be removed promptly, keeping these areas clean at all times. Upon completion of seeding, all excess soil, stones and debris which have not previously been cleaned up shall be removed from site or disposed of as directed by Engineer. All lawn areas shall be prepared for final inspection.

9. MAINTENANCE

Maintenance shall begin immediately following last operation of seeding and shall continue until lawn is formally accepted. Maintenance shall include sufficient watering, weeding, cultivating, mulching, regular mowing of seeded areas, and removal of dead materials.

10. INSPECTION FOR ACCEPTANCE

Inspection of work of this section to determine completion, exclusive of possible replacement of seed, will be made by Engineer upon written notice requesting such inspection submitted at least ten (10) days prior to anticipated date of inspection and provided that an 80% minimum coverage per square foot for all seeded lawn areas has been established. Contractor shall guarantee, at the time of this inspection, that the seeded areas will be in compliance with the intent of this Specification described herein. This guarantee shall apply to all permanent seeding performed in conjunction with project, regardless of type protection used or season in which seeding is performed.

11. GUARANTEE

A. When seeding does not meet guarantee requirements at time of inspection, Contractor will be advised of amount and location of corrective work deemed necessary. Additional work required may include preparation of a new seedbed, refertilizing, reseeding, remulching, or any erosion control items that are required. Contractor shall perform all corrective work as soon as favorable working conditions occur after being advised of corrective work required. Corrective work and materials required to fulfill guarantee requirements will not be paid for, except as hereinafter provided for unavoidable damage.

B. When unavoidable damage occurs after date project is declared complete and before inspection previously described, then payment will be made at original contract unit prices for additional seeding and protection work ordered by Engineer. Unavoidable damage may result from slides, vehicular traffic, fires, and deluges. Failure of seed to sprout and grow will not be considered unavoidable damage.

C. From time seeding and protection work begins until date project is declared complete, keep all seeded areas in good condition at all times. Damage to seeded areas or to mulch materials shall be promptly repaired as directed. All work and materials necessary to protect, maintain, and restore seeded areas during life of contract shall be performed at no additional cost to Owner, except additional work caused by changes in project authorized by Engineer.

D. When it becomes necessary to disturb previously seeded areas at direction of Engineer, payment for a reasonable amount of additional work, as determined by Engineer, will be made at original contract unit price. No payment will be made for additional work due to changes made for benefit of Contractor, nor will payment be made for corrective work required because Contractor has failed to properly coordinate his entire erosion control schedule thus causing previously seeded areas to be disturbed by operations that could have been performed prior to seeding.

END OF SECTION 02920

SECTION 03300 - CONCRETE

1. RELATED DOCUMENTS

General Provisions of Contract, General, Supplemental and Special Conditions, and General Requirements apply to this Section.

2. DESCRIPTION OF WORK

Provide labor, transportation, materials, tools, equipment and appliances necessary for proper and complete installation of all concrete work related to sanitary sewer and other related components of the project.

3. MATERIALS

A. General

All materials used in the work shall be stored and handled in such a manner as will prevent deterioration or intrusion of foreign matter. Material which has deteriorated or has been damaged shall be immediately and completely removed for premises. All material shall comply with requirements of standards of American Society for Testing and Materials.

B. Manufactured Materials

Manufactured materials such as cement, shall be delivered and stored in original packages, plainly marked with brand and maker's name. Material in broken containers or in packages showing water marks or other evidence of damage will be rejected. Unless otherwise noted, all materials used in concrete work shall be as specified below:

(1) Portland Cement---Type I or Type III - ASTM C-150.

(2) Aggregates----------ASTM C-33.

a. Fine aggregates shall consist of natural sand having clean, hard, uncoated particles and free form injurious amounts of soft friable, thin, elongated or laminated pieces. Aggregates shall not absorb more than 3% moisture by weight. Maximum size of pieces shall be 3/4".

b. Coarse aggregates shall be crushed stone having clean, hard, uncoated particles and free from injurious amounts of soft friable, thin, elongated or laminated pieces. Aggregate shall not absorb move than 3% by weight.

(3) Air Entraining Agent----------ASTM 226.

(4) Water shall be clean and free from deleterious amounts of acids, alkalis or organic materials.

C. Metal Reinforcement

All reinforcing shall be ASTM A-615, with a minimum yield of 60,000 psi.

D. Concrete Curing and Hardening Compound shall be Sonneborne "Kure-N-Seal" or equal.

E. Anti-spalling compound shall be Sonneborne "Pitt-Loc" or equal.

F. Expansion joint material shall be premoulded filler as manufactured by Homasote Co. (Homex 300); Dayton SUre-Grip (G-30) or equal.

4. CONCRETE - QUALITY

A. Ready-mixed concrete complying with these Specifications and conforming to ASTM designation C-94, Strength Method shall be used.

B. Class "A" Concrete

(1) Class "A" concrete shall be used for all manholes and miscellaneous structures.

(2) Min. Compressive Strength at 28 days----------3,500 psi
Slump----------3-5 inches
Air Content----------4%

C. Class "B" Concrete

(1) Class "B" Concrete shall be used for encasement or cradle for pipelines and other underground work.

(2) Min. Compressive Strength at 28 days----------2,500 psi
Slump----------3 - 5 inches
Air Content----------3 - 6%

D. Use of admixtures is prohibited except where written consent is given by Engineer.

E. Ready mix design shall be submitted to Engineer for approval prior to ordering concrete for project.

5. REINFORCING

Detailing, fabrication and placing shall conform to American Concrete Institute "Manual of Standard Practice for Detailing Reinforced Structures" (ACI-315).

6. CONSISTENCE OF CONCRETE

Consistency of concrete shall be such as to produce a mixture which will work readily into corners and angles of forms and around reinforcement, but without permitting materials to segregate or excess water to collect on surface. When specified slump is three inches or less, the tolerance shall be plus or minus 1/2 inch. When the specified slump is greater than three inches, the tolerance shall be plus or minus one inch.

7. TRANSPORTING AND/OR CONVEYING

A. Concrete shall be conveyed from mixer to place of final deposit immediately after mixing by methods which will prevent separation or loss of materials.

B. Equipment for chuting, pumping and pneumatically conveying concrete shall be of such size and design as to insure a practically continuos flow of concrete at delivery and without segregation of materials.

C. Non-agitating type trucks shall not be used to haul ready mixed concrete under any circumstances. With respect to the trucks used to deliver ready mixed concrete, the number of revolutions of the drum at agitation speed and other such details shall conform to ASTM C94. In all such cases, however, concrete shall be delivered to job site and discharged within 1-1/2 hours or before drum has been revolved 300 times, whichever comes first, after mixing water has been added to other ingredients. In hot weather or under other conditions contributing to quick stiffening of concrete, a time less than 1-1/2 hours may be specified by Engineer.

8. PLACING CONCRETE

A. Concrete shall be delivered to its position of placement, within the required time for delivery after mixing and within the required time interval between delivery of batches, as specified hereinbefore or as directed by Engineer for the method of mixing and handling employed.

B. Water shall be removed from all foundation excavation or formwork before concrete is deposited. The method and manner of placing shall be such as to avoid the possibility of segregation or separation of aggregates or displacement of reinforcement. Placing of concrete shall be such as to entirely fill forms, but not to bulge or distort forms or their alignment. Special care shall be taken to fill each part of forms by depositing concrete as near to its final position as possible, to work coarser aggregate back from face and to force concrete under and around reinforcing bars without displacing them.

C. Concrete shall not be allowed to drop freely more than three or four feet. In thin sections, drop chutes of rubber, canvas or metal shall be used. Drop chutes shall be provided in several lengths or shall be in sections which can be hooked together so that length can be adjusted as concreting progresses.

D. When vibrating is required, it shall be done by methods and with equipment approved by Engineer.

9. CURING

A. All concrete shall be cured for a period of not less than 7 days after pouring. The method used to provide curing shall be approved by Engineer. Membrane curing, plastic sheet curing, and wetted burlap curing will be considered satisfactory.

B. If at any time during seven day curing period, air temperature is 40 degrees F. or less, concrete shall be insulated and/or heated as directed by Engineer to aid curing and to prevent freezing. Protective covering which will protect surface off freshly

placed concrete from rain shall be readily available at site of work. Concrete damaged as a result of failure on the part of Contractor to adequately protect concrete from rain or freezing shall be removed and replaced at the expense of Contractor as directed by Engineer.

10. TESTING CONCRETE

A. Slump Test

At least one slump test shall be made before first concrete pour, at start of pouring any concrete at each 5 cubic yards deposited during one operation. These shall be made for the same samples as those taken for cylinder tests, and records of same kept therewith. Test shall be made according to ASTM Designation (C-143), and as required under ASTM Designation C-94 for ready-mixed concrete. Mix designed for a slump test of 2" and not more than 4", except in cases where thin sections would indicate in the opinion of the Engineer that a wetter mix is more desirable. The Contractor shall furnish necessary equipment for the slump test.

B. Cylinder Test

(1) At the start of concreting, the Contractor shall make from a single batch a set of four (4) cylinders per ASTM Designation C-31. Two shall be tested at 7 days and two at 28 days, per ASTM Designation C-39.

(2) At each time when twenty or more cubic yards of concrete are placed during one operation, and when the sum of smaller deposits of concrete equal thirty cubic yards since previous tests, and at any change in mix, four (4) cylinder tests will be required, two tested at 7 days and two at 28 days, per ASTM Designation C-39. In case of C-94 and C-172 shall be added. Class "A" concrete samples shall show a compressive strength of not less than 3500 lbs. per square inch in 28 days.

(3) The Contractor shall furnish all equipment for sampling and curing on the job, and shall bear the cost of laboratory curing and testing.

(4) If cylinders do not meet strength requirements, Engineer may order shutdown on all concreting and redesign of concrete mix by laboratory selected by Owner. Cost of mix redesign shall be paid for by Contractor. Engineer may also order additional tests, such as load tests, Swiss Hammer Tests and/or core tests in areas of work represented by unacceptable cylinders. If areas of work are found to be under strength requirements, Engineer may order the Contractor to strengthen or replace those areas at expense of Contractor.

12. FINISHING AND RUBBING

A. Rubbing is not required below ground. Inside vaults and basins shall not be rubbed, but all fins shall be removed and holes patched.

B. Slabs

(1) Under no circumstances shall dry cement or a mixture of dry cement and sand be sprinkled directly on surface to absorb moisture or to stiffen mix.

(2) Finish slabs shall be as follows:

Surface of slab shall be struck off true to elevations called for, and all surface water, laitance and dirt removed. After allowing concrete to dry out from 20 - 30 minutes, depending on weather conditions, surfaces shall be brought to final grade with a wood float. Surfaces shall be tested with a straight edge to detect high and low spots which shall be eliminated. After concrete has hardened sufficiently to prevent excess fine material from working to surface, surface shall be steel troweled to a smooth hard finish, impervious and free from imperfections, pits and other irregularities, and true to a maximum tolerance of 1/8" in six (6) feet.

13. INSPECTION

A. Concrete shall not be placed over pipes and conduits until such work has been tested, inspected and approved.

B. All concrete placed in violation of these provisions shall be subject to rejection. If rejected by Engineer, Contractor shall remove and replace concrete work at no additional cost to Owner.

14. COLD WEATHER REQUIREMENTS

A. No concrete shall be poured when air temperature is 35 degree F or less unless approved by Engineer.

B. The contractor shall furnish the Engineer with a detailed plan of equipment and material to be used for protection of the concrete during the curing period.

END OF SECTION 03300

SECTION 15445 - SUBMERSIBLE SEWAGE PUMP STATION

1. RELATED DOCUMENTS

General Provisions of the Contract, General, Supplemental and Special Conditions, and General Requirements apply to this Section.

2. DESCRIPTION OF WORK

Provide labor, material, equipment and services necessary for proper installation of factory built underground submersible sewage pumping station complete and in operating condition. Work shall include excavation, concrete base slab, pump well, valve pit, including hatches and covers, connecting influent sewers, all interior piping, connection of force main and all other necessary piping, valves, fittings, and appurtenances required, backfilling, grading, access road electrical work including service pole and connections, meter, and acceptance tests.

3. GENERAL

Underground submersible sewage pumping station shall be furnished with all necessary equipment installed in precast concrete manhole as indicated on Drawings. Principal items of equipment in station shall include two vertical, motor-driven valves, non-clog submersible sewage pumps, necessary gate valves and check valves, required piping, electrical power source, central control panel with circuit breakers, motor starters, access hatch, and automatic pumping level controllers, vent piping, guide rails, and other required appurtenances and wiring.

4. PUMPS

A. Scope:

(1) At each station, furnish two (2) heavy-duty non-clog submersible sewage pumps, upper guide bar jacket, 40 feet of stainless steel lifting chain and 40 feet of pypalon-jacketed type SPC cable P-MSHA approved and sized according to N.E.C. and ICEA standards.

(2) Each pump in the sewage pump station shall meet the following design conditions as listed below.

PUMP STATION	PUMPING RATE GPM	TOTAL HEAD (FEET)	MINIMUM H.P.	EFFICIENCY
C	255	78'	15	40%
G (Alt. #2)	310	139'	25	50%
C (Alt. #2)	480	149'	30	58%

B. AFPK 1047 with ME3 motor:

The pump and integrated, close-coupled motor shall be a water tight, fully submersible unit, capable of handling raw unscreened sewage without clogging. The pump with its appurtenances and cable shall be capable of continuous submergence in the pumped liquid to a depth of 65 feet.

C. Pump Construction: Major pump components shall be of gray cast iron, ASTM A-48, Class 40, with smooth surfaces devoid of porosity or other irregularities. All exposed nuts and bolts shall be AISI type 316 stainless steel construction. All metal surfaces coming into contact with the pumped media (other than the stainless steel components) shall be protected by a factory applied spray coating of acrylic dispersion zinc phosphate primer with a high solids two part epoxy paint finish on the exterior of the pump.

D. Sealing design for the pump/motor assembly shall incorporate metal to metal contact between machined surfaces. Critical mating surfaces where a watertight seal is required shall be machined and fitted with Nitrile or Viton rubber O-rings. Sealing will be the result of controlled compression of rubber O-rings in two planes and O-ring contact of four sides without requiring a specific torque limit. Rectangular cross sectioned gaskets requiring specific torque limits to achieve compression shall not be considered adequate or equal. Secondary sealing compounds shall neither be required nor used.

E. Impeller: The impeller shall be of gray cast iron, ASTM A-48, Class 40 and shall be of the semi-open, two vane, non-clogging dynamically balanced design capable of passing spherical solids with a diameter of 3.1 inches. The impeller shall have a slip fit into the motor shaft and drive key, and shall be fastened to the shaft by a stainless steel bolt, which is mechanically prevented from loosening by a positively engaging ratcheting washer assembly. The backside of the impeller shall incorporate an active cutter system designed to protect the motor shaft and mechanical seal from stringy or fibrous solids in the process liquid. Solids that attempt to enter the area around the mechanical seal are chopped by the cutting system, and ejected by back vanes on the impeller. Designs that do not incorporate an active cutter system to protect the mechanical shaft seal shall not be considered acceptable.

F. Self Cleaning Wear Plate: (CB System) The pump shall be equipped with a self cleaning wear plate constructed from gray cast iron, ASTM A-48, Class 40. The wear plate shall be mounted to the volute with stainless steel/brass adjusting screws to permit close tolerance adjustment between the wear plate and impeller for maximum pump efficiency. The wear plate shall be easily adjustable, without requiring any disassembly of the pump. The wear plate shall incorporate an outward spiraling V-shaped groove on the side facing the impeller, to shred and force stringy solids outward from the impeller and through the pump discharge. The use of non-adjustable wear rings, or adjustment systems requiring shimming of the impeller or wear plate, or those requiring any disassembly of the pump to accomplish clearance adjustment shall not be considered acceptable.

G. Pump Volute: The pump volute shall be single piece gray cast iron, ASTM A48, Class 40, non-concentric design with centerline discharge. Passages shall be smooth, and large enough to pass any solids that may exit the impeller. The discharge flange design shall permit attachment to either standard ANSI or standard DIN flanges/appurtenances. The motor shall be attached to the volute by stainless steel bolts. The motor unit, with impeller attached, shall be removable from the volute without requiring removal of the impeller, and without disturbing the watertight integrity of the motor unit.

H. Rotating Assembly: The rotating assembly (impeller, shaft and rotor) shall be dynamically balanced such that undue vibration or other unsatisfactory characteristics will not result when the pump is in operation.

I. Shaft: The pump shaft and motor shaft shall be an integral unit. Each shaft shall be a one-piece design manufactured from 420 stainless steel material, and adequately designed to meet the maximum torque required at any normal start-up condition or operating point in the system. Maximum deflection shall not exceed .002" at the primary shaft seal. The shaft shall have a polished finish and have accurately machined shoulders to accommodate bearings, seals and impeller. Shafts of multiple piece design such as friction welded shafts, those requiring shaft sleeves, or shafts made from carbon steel or chrome plated steel shall not be considered adequate or equal.

J. Mechanical Seals:

(1) Each pump shall be equipped with a tandem mechanical shaft seal system consisting of two totally independent mechanical seals. The seals shall operate in a lubricant reservoir that hydro-dynamically lubricates the lapped seal faces at a constant rate. The lower, primary seal unit, located between the pump and the lubricant chamber, shall contain one stationary industrial duty **silicon-carbide** seal ring and one rotating industrial duty **silicon-carbide** seal ring. The upper, secondary seal unit, located between the lubricant chamber and motor housing, shall contain one stationary **aluminum oxide** seal ring and one rotating **carbon** seal ring. Each seal interface shall be held in contact by its own spring system. The seals shall not require routine maintenance, or adjustment, and shall not be dependent on the direction of rotation for proper sealing. Each pump shall be provided with a lubricant chamber for the shaft sealing system which shall provide superior heat transfer and maximum seal cooling. The lubricant chamber shall be designed to prevent overfilling, and to provide lubricant expansion capacity. The drain and inspection plug shall have a positive anti-leak seal, and shall be easily accessible from the outside of the pump. The seal system shall not rely upon the pumped media for lubrication and shall not be damaged when the pump is run dry.

(2) As an option, and in all cases with the optional internal cooling system, a cartridge mechanical seal system shall be available. The cartridge shaft sealing system shall consist of tandem mounted mechanical seals, as described above, built into a replaceable, cast iron cartridge or seal housing. The cartridge shall incorporate an integrated 400 Series stainless steel shaft sleeve to assure shaft protection. The primary seal face materials shall be **silicon carbide** as described above. The secondary seal face materials shall be **silicon carbide** for the stationary face, and **carbon** for the rotating face. Original and/or spare cartridge assemblies shall be pre-tested by the manufacturer, to assure proper assembly and water-tight sealing. The cartridge seal system shall facilitate on site replacement by maintenance personnel without the need for special tools, measurement devices, shims, etc.

(3) *The following seal types shall not be considered acceptable or equal:* Seals of proprietary design or seals manufactured by other than major independent seal manufacturing companies. Seals requiring set screws, pins, or other mechanical locking devices to hold the seal in place, conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces, any system requiring a pressure differential to seat the seal and ensure sealing.

K. Bearings: Each pump shaft shall rotate on permanently lubricated, greased bearings. The upper bearing shall be a deep groove ball bearing. The lower bearings shall be a heavy-duty double row angular contact ball bearing. Bearings shall be of sufficient size and properly spaced to transfer all radial and axial loads to the pump housing and minimize shaft deflection. L-10 bearing life shall be a minimum of 100,000 hours at flows ranging from ½ of BEP flow to 1½ times BEP flow (BEP is best efficiency point).

5. PUMP MOTOR

A. The motor housing shall be gray cast iron, ASTM A48 Class 40. The motor shall be of the squirrel-cage induction shell type (NEMA design B), housed in an air filled, water tight housing, and shall be capable of continuous submerged operation underwater to a depth of 65 feet. The stator windings and stator leads shall be insulated with moisture resistant Class H insulation rated for 180°C (356 °F). The stator shall be heat-shrink fitted into the stator housing. The use of bolts, pins or other fastening devices requiring penetration of the stator housing shall not be required. The rotor bars and short circuit rings shall be made of cast aluminum. The motor shall be designed for continuous duty operation, handling pumped media with a temperature of up to 40°C (104 °F), and capable of handling up to 12 evenly spaced starts per hour. The service factor (as defined by NEMA) shall be a minimum of 1.10. The motor shall be capable of handling an input voltage variation of +/- 10% from nominal.

B. The motor shall be designed for continuous duty, completely submerged or unsubmerged. For unsubmerged (dry pit) applications, a cooling jacket shall be fitted to the motor to allow the pumped fluid to be circulated around the motor for cooling with the provisions under the "Cooling System" section of this specification. The explosion proof variant shall be FM approved for use in NEC Class I, Division I, Groups C & D hazardous locations, and shall carry a T3C surface temperature class rating.

C. Cooling System: The optional factory installed closed loop cooling system shall provide adequate heat transfer to allow the motor to run continuously under full load while in an unsubmerged condition. A cooling jacket shall surround the stator housing, and a non-toxic propylene glycol solution shall be circulated through the jacket by a circulating impeller driven by the main motor shaft. The coolant shall be pumped through an integrated heat exchanger in the base of the motor, where excess heat is transferred to the process liquid. Cooling systems that cool by circulating oil within the motor chamber, or those that use a toxic cooling liquid shall not be acceptable. Cooling systems that use the product or pumpage liquid as the coolant shall not be considered equal or acceptable. The

use of external heat exchangers, fans, or the supply of supplemental cooling liquid shall not be required.

D. Thermal Protection: Each phase of the motor shall contain a bi-metallic temperature monitor switch in the upper portion of the stator windings. These thermal switches shall have normally closed contacts and shall be connected in series. The thermal switches shall be set to open at 140°C +/- 5°C. They shall be connected to the control panel, and used in conjunction with, and supplemental to, external motor overload protection so that over temperature in any phase signals the control panel to shut down the motor.

E. Seal Failure Early Warning System: An electrical probe shall be provided in a moisture sensing chamber for detecting the presence of water. A solid-state device mounted in the pump control panel or in a separate enclosure shall send a low voltage, low amperage signal to the probe. If, due to a mechanical seal failure, water enters the sensing chamber, the probe shall signal a solid state relay in the control panel. The relay shall then energize a warning device in the control panel, or cause the pump to be shut down (optional). Systems utilizing float switches, dual probes, or any other monitoring devices located solely in the stator housing are not considered to be early warning systems, and shall not be considered equal. The moisture sensing chamber shall have a drain / inspection plug with a positive anti-leak seal which is easily accessible from the outside of the pump.

F. Power Cables: The power cables shall be sized and selected according to applicable NEC, CSA, and FM standards and shall be of sufficient length to reach the junction box without requiring splices. The outer jacket of the cable shall be an oil resistant and UV stable material, and shall be capable of continuous submergence in water to a depth of 65 feet.

G. Cable Entry/Junction Chamber: The cable entry design shall not require specific torque requirements to insure a watertight seal. The cable entry shall consist of a cylindrical elastomer grommet, flanked by stainless steel washers. A cable cap incorporating a strain relief shall mount to the cable entry boss compressing the grommet ID to the cable while the grommet OD seals against the bore of the cable entry. The entry as part of the motor shall be FM approved for use in NEC Class I, Division I, Groups C & D hazardous locations. As an option, a removable explosion proof junction chamber shall be available. The junction chamber with terminal board shall be factory installed on the cable entry boss. The junction chamber shall be equipped with a removable cover allowing for cable removal or voltage change without opening the motor. Wires to from the terminal board pass through a sealing gland and connect to the motor winding. The sealing gland isolates the connection chamber form the motor chamber.

H. Lifting Bail: The pump shall be fitted with a rigid lifting bail of suitable strength to lift up to four times the weight of the pump. The lifting bail shall provide a large open loop so that the bale can be hooked from the surface, precluding the need for personnel to enter the wet well. The bail shall be designed so that standard, commercially available shackles and fittings can be used to attach lifting chains or wire rope lifting assemblies. The material of the bail shall be 316 stainless steel.

6. QUICK CONNECT GUIDE RAIL SYSTEM:

The discharge base elbow shall be permanently installed in the wet well and connected to the discharge piping. In order to prevent binding or separation of the pump from the guide rail system, the pump(s) shall connect to the guide rail base automatically and firmly, guided by one guide bar (two bars optional) extending from the top of the station to the discharge base elbow. Systems using guide cable in lieu of rigid guide bars or pipes shall not be considered acceptable. The sliding guide bracket shall be a separate part of the pumping unit, capable of being attached to either standard ANSI or standard DIN pump flanges, so that the bracket is interchangeable with other pumps, and not limited to a specific pump. Non standard flange dimensions or proprietary flange designs shall not be considered acceptable. There shall be no need for personnel to enter the wet well to remove or reinstall the pump(s). A field replaceable Nitrile rubber profile gasket or o-ring shall accomplish positive sealing of the pump flange/guide rail bracket to the discharge elbow. Metal to metal contact between the pump and discharge base elbow as a means of sealing shall not be considered acceptable. No portion of the pump shall bear directly on the floor of the sump. The guide rail system shall be a non-sparking version, approved by Factory Mutual for use in NEC Class 1, Division 1, Group C&D hazardous locations.

7. LEVEL CONTROLS

Liquid level controls shall include mercury switch level sensors in corrosion and shock resistant plastic casing with flexible cord and weight. Level control system shall include support brackets for suspending a minimum of five sensors at proper levels in wet well, and NEMA 4 watertight junction box as indicated on Drawings: one for pump turn-on; one for pump turn-off; one for both pumps ON; one for alarm and one for flooding of pump. Controls for automatically alternating the pumps shall also be installed.

8. MOTOR CONTROLS

A. Motor controls shall consist of a duplex control panel in a NEMA 4 lockable waterproof enclosure, and shall have a dead front with separate removable inside panel to protect electrical equipment. Panel will contain circuit breakers, magnetic starter and Hand-Off-Auto switch for each motor. Duplex panels will include an automatic electric alternator and a pump runtime meter.

B. A high water alarm flashing light shall be applied in separate NEMA 4 enclosure and mounted at control box. All motor controls shall include all equipment required by manufacturer and Engineer to insure proper operation of pumping station.

C. The control panel shall have room to install the date logger for the flow meter. Flow meter shall be wired into control panel.

9. ELECTRICAL WIRING

A. Pumping stations shall be completely wired at factory, in accordance with National Electric Code and wiring shall be color coded. Pump cables shall be one continuous cable, without splices or junction boxes of any type, from pump to control panel. All wiring outside the control cabinet shall be in rigid conduit or "Sealtite". All accessory equipment shall be permanently wired with suitable

disconnecting means and overload protection. Each flexible cable shall be provided with a watertight seal and separate strain relief. Cord, plug and receptacle type connections will not be acceptable.

B. Control panel shall include NICAD battery for operation of alarm system during power outage. Battery shall be maintained to full capacity by DC trickle charger in control panel. Operation of alarm shall be automatic on failure of electric power to station.

C. Electrical systems and components in raw wastewater wet well shall comply with NEC Class 1, Group D, Division 1 requirements and shall be suitable for use under corrosive conditions.

10. OUTSIDE ELECTRICAL SERVICE

A. Connection of electrical service to pumping station shall be as indicated on Drawings and further specified herein.

(1) Service pole shall be fully treated, southern yellow pine roofed 15 degrees one way and gained before treatment.

(2) Weatherproof switch and meter socket shall be fastened to rustproof channels that are banded to pole with rustproof bands.

(3) A weatherproof fused disconnect switch located above ground on service pole shall be main powerfeed to pump station.

(4) Service entrance fitting at pole shall be cast aluminum with stainless steel screws.

(5) Conduit and conduit fittings shall be heavy, threaded, galvanized steel. Fittings shall have neoprene gaskets for covers. Conduit shall be fastened to service pole with two-hole, heavy, galvanized straps with rustproof lag screws - minimum spacing on 5 foot centers.

(6) Control wire extensions shall be made as indicated on Drawings. Components shall be Nema 4.

(7) Insulating bushings of heavy fiber reinforced type shall be employed on all conduit terminations.

(8) All screws and fasteners are to be rustproof, double hot dipped galvanized, Monel metal or stainless steel.

(9) Fuses shall be Bussman "Low-Peak", or approved equal.

(10) All electrical work shall be inspected and approved by an electrical inspector. Three (3) copies of certificates of approval by Electrical Inspector shall be furnished to Engineer and a label of acceptance must be glued inside door of disconnect before final acceptance.

B. Furnish and install circuit breaking 110 volt ground fault interruption receptacle on outside of pump station.

11. PUMP AND VALVE PITS

Pump and valve pits shall be constructed of prefabricated reinforced concrete pipe conforming to requirements of AASHO M-207. Concrete slab cover for pump pit shall be adequately reinforced to support a live load of 100 pounds per square foot. A prefabricated steel pump and valve pit will be considered as an approved equal.

12. SEWAGE PIPE, FITTINGS AND VALVES

A. All inside piping shall be Class 52 Ductile Iron Pipe, flanged ANSI Class 125 inside and terminating in mechanical joints bells outside. Outside piping shall conform to requirements listed elsewhere in these Specifications.

B. Gate valves shall be solid wedge, bronze fitted. Check valves shall be weight loaded, external lever type, bronze fitted. Gate valves shall be provided on discharge lines and a check valve on discharged line between pump and gate valve as indicated on Drawings.

C. A pressure gauge shall be installed downstream of the check valve. Coupling adapters shall be Type 912 cast iron as manufactured by Smith-Blair, or approved equal.

D. The 4" overflow pipe shall be as specified in 02530 Sanitary Sewer.

13. CONCRETE BASE, PUMP WELL AND VALVE PIT

Class "A" reinforced concrete shall be provided for pumping station base slab as indicated on Drawings. Pump well shall be of precast reinforced concrete pipe of dimensions indicated on Drawings, or approved equal. All applicable provisions of concrete specifications shall govern construction of the pump well and valve pit. Valve pit shall have 1/4 inch hot dipped galvanized steel checkered plat covering.

14. FACTORY TESTING

A. Pump manufacturer shall perform the following inspections and tests on each pump before shipment to insure proper operation of pump and compliance to customer's purchase order.

(1) Impeller, motor rating and electrical connections shall first be checked for compliance to the customer's purchase order.

(2) A motor and cable insulation test for moisture content or insulation defects shall be made.

(3) Prior to submergence, the pump shall be run dry to establish correct rotation and mechanical integrity.

(4) The pump shall be run submerged in water to a minimum of six (6) feet.

(5) After operational test No. 4, the insulation test (No. 2) is to be performed again.

B. A written report stating the foregoing steps have been done shall be supplied with each pump at the time of shipment.

15. ACCEPTANCE TEST

A. After installation, pumping station shall be given a running test of all equipment. During test all piping and seals shall be checked to insure no leaks occur and controls shall be carefully checked and balanced for proper operation.

B. Contractor shall furnish all necessary tools, materials, equipment and supervision of tests. Owner will furnish electrical energy.

C. Any defects in equipment or failure to meet guaranteed requirements of these specifications shall be promptly corrected by Contractor by replacement.

16. TOOLS, SPARE PARTS AND MANUALS

A. One complete set of tools required for routine maintenance, together with any special tools required for such purpose, shall be furnished. Tools shall be supplied in a substantial steel tool box.

B. A complete replacement pump shaft seal assembly for each pump provided, complete with installation instructions and spare volute gasket shall be furnished.

17. WARRANTY

Complete pump station shall have an unconditional one (1) year warranty on all parts and labor. Sewage pumps shall have a five (5) year prorated manufacturer's warranty.

18. CHAIN LINK FENCING

A. Fencing

(1) Fabric shall be galvanized steel chain link 72" high, No. 9 gauge wire woven in a 2" mesh. Selvages shall be barbed. Fabric shall conform to ASTM 491-63T in its entirety. Minimum coating weight shall be 0.40 oz. per sq. ft.

(2) Barb wire shall consist of three lines of galvanized steel barbed wire which is to be of the 4-point pattern composed of two strands of 12-1/2 gauge line wires with 14 gauge aluminum barbs spaced on approximately 5" centers. Minimum weights of coating shall be 0.30 oz. per sq. ft. of wire surface.

(3) Barb wire arms: Intermediate post tops shall be of pressed steel or malleable iron base. Base shall include pressed steel extension farms to accommodate 3-barb style. Three-barb style shall extend at a 45 degree angle. Barb wire arms shall support a minimum of 400 lbs. vertical dead load from top of arm.

(4) Chain link fabric shall be securely fastened to all terminal posts using 3/16" x ¾" tension bars and heavy 12 gauge tension bands. There shall be one band for each foot in the height of the fence. The fabric shall be fastened to all intermediate posts with 9 gauge tie wires, spacing not to

exceed 14" apart. Fabric shall be tied to top rail with 9 gauge tie wires, spacing not to exceed 24".

B. Framework

(1) All posts and other appurtenances used in the construction of this fence shall be hot dipped galvanized with a minimum of 1.8 oz. per sq. ft. of surface.

(2) Intermediate posts shall be 2-1/2" O.D. nominal weight 3.65 per lineal foot.

(3) All end, corner, and pull posts shall be 3" O.D. nominal weight pipe, nominal weight 5.79 lbs. per lineal foot..

(4) Posts for swing gates shall be standard weight pipe of 4" O.D. St. 5.79 lbs. PLS.

(5) Evenly spaced posts in the line of fence no further apart than 10'-0" on center.

(6) Top rails shall be 1-5/8" O. D. standard weight pipe wt 2.27 per lineal foot, provided with couplings approximately every 20-'0". Couplings are to be outside sleeve type.

(7) Brace pipe shall be same as top rail and extend from terminal post to first adjacent line post. Braces shall be furnished to fasten to posts by heavy sand cast aluminum or malleable fittings, then securely trussed from line post to base of terminal post with a 3/8" truss rod and tightener. Brace pipe is required only in heights of 6'-0" and higher.

C. Gates: Gate frames shall be 1-5/8" O.D. standard weight pipe, wt. 2.72 per lineal foot. Gates shall be fabricated using welded construction. Gates must be properly braced to eliminate any possible sagging condition.

(1) Gate Fillers: Frames shall be filled with same specification of fabric as is used in line of fence.

(2) Hinges: Hinges shall be a ball and socket offset type allowing gates to swing parallel with line of fence; shall be of malleable iron or forging, and shall have hot dipped galvanized finish.

(3) Double Latch: Double latch shall be drop bar type securely bolted to gate frame and shall engage in a heavy malleable iron gate stop.

D. Installation

(1) Installation shall be made in a workmanlike manner by skilled mechanics experienced in erection of this type of fence. Erect fence on line and to grade designated. Set all posts in concrete foundations in ground to a minimum depth of 48". Diameter of foundation shall be a minimum of 9", except for gate posts on which minimum diameter shall be three times the outside diameter of gate post. Foundation shall be 1-2-4 mixture of concrete. All foundations shall extend approximately 2" above grade and shall slope away from post to provide for proper drainage.

(2) Fabric and barb wire shall be stretched to proper tension between terminal posts and securely fastened to the framework members as covered in previous sections. Bottom of fabric shall be held as uniformly as is practicable to finished grade.

END OF SECTION 15445

SECTION 15446 - SUBMERSIBLE SEWAGE GRINDER PUMP STATION

1. RELATED DOCUMENTS

General Provisions of the Contract, General, Supplemental and Special Conditions, and General Requirements apply to this Section.

2. DESCRIPTION OF WORK

Provide labor, material, equipment and services necessary for proper installation of underground submersible sewage grinder pumping station complete and in operating condition. Work shall include excavation, concrete base slab, pump well, including hatches and covers, connecting influent sewers, all interior piping, connection of force main and all other necessary piping, valves, fittings, and appurtenances required, backfilling, grading, access road electrical work including service pole and connections, meter, and acceptance tests. Payment will be based on unit price for Submersible Sewage Grinder Pump Station.

3. GENERAL

Underground submersible sewage grinder pumping station shall be furnished with all necessary equipment installed in precast concrete manhole as indicated on Drawings. Principal items of equipment in station shall include two vertical, motor-driven valves, non-clog submersible sewage grinder pumps, necessary ball valves and check valves, required piping, electrical power source, central control panel with circuit breakers, motor starters, access hatch, and automatic pumping level controllers, vent piping, guide rails, and other required appurtenances and wiring.

4. PUMPS

A. Scope:

(1) At each station, furnish two (2) heavy-duty non-clog submersible sewage grinder pumps, upper guide bar jacket, 40 feet of stainless steel lifting chain and 40 feet of hypalon-jacketed type SPC cable P-MSHA approved and sized according to NFPA 820, N.E.C. and ICEA standards.

(2) Pumps in the sewage pump station shall meet the following design conditions as listed below.

PUMP STATION	PUMPING RATE GPM	TOTAL HEAD (FEET)	MINIMUM H.P.
A	30	75	2
B	39	60	2
E	57	153	7.5
F	72	77	5
G	52	119	5

B. Pumps shall be capable of handling unscreened sewage at pumping rate adequate for total dynamic head and flow rate required for proper operation in the system which it exists. Design shall be such that pump unit will be automatically and firmly connected to discharge piping when lowered into place on its mating discharge connection, permanently installed in wet well. Pump shall be easily removable for inspections or service, requiring no bolts, nuts or other fastenings to be disconnected. For this purpose, there shall be no need for personnel to enter wet well. Each pump shall be fitted with a stainless steel chain of adequate length and strength to permit raising and lowering pump for inspection and removal.

C. Pump shall be of the centrifugal type Myers model WGX50H or approved equal with an integrally built in grinder unit and submersible type motor. The grinder unit shall be capable of macerating all material in normal domestic and commercial sewage including reasonable amounts of foreign objects such as small wood, sticks, plastic, thin rubber, sanitary napkins, disposable diapers and the like to a fine slurry that will pass freely through the pump and 2" discharge pipe. Discharge shall be 2-1/2" Flange. Pump and motor assembly shall be UL listed for Class 1, Group D explosion proof service.

D. Pumps shall be capable of dry pumping in a totally dry condition without damage to motor or seals.

E. Motor shall be protected by two mechanical seals mounted in tandem with a seal chamber between the seals. Seal chamber shall be oil filled to lubricate seal face and to transmit heat from shaft to outer shell. Seal face shall be carbon and ceramic and lapped to a flatness of one light band. An electrode shall be mounted in the seal chamber to detect any water entering the chamber through the lower seal. Water in the chamber shall cause a red light to turn on at the control box. This signal shall not stop the motor but shall act as a warning only, indicating service is required.

F. The pump impeller shall be of the recessed type to provide an open unobstructed passage through the volute for the ground solids. Impeller shall be bronze and shall be threaded onto stainless steel shaft.

G. Grinder assembly shall consist of grinder impeller and shredding ring and shall be mounted directly below the volute passage. Grinder impeller to be threaded onto stainless shaft and shall be locked with screw and washer. The shredding ring shall be pressed into iron holding flange for easy removal. Flange shall be provided with tapped back-off holes so that screws can be used to push the shredding ring from housing. All grinding of solids shall be from action of the impeller against the shredding ring. Both grinder impellers and shredding ring shall be of 440C stainless steel hardened to 58-60 Rockwell.

H. All iron castings shall be pre-treated with phosphate and chromic rinse and to be painted before machining and all machined surfaces exposed to the sewage water to be re-painted. All fasteners to be 302 stainless steel.

5. PUMP MOTORS

A. Submersible electric motor shall be rated at H.P. shaft output as shown in Paragraph 4.A.(2) above at 3450 RPM, have a service factor of 1.10, and be connected for A 230 volt, 60 Hz, 1 phase, 3 wire commercial quality service meeting NEMA standards for electric motors.

B. Motor shall be designed for continuous duty, capable of sustaining ten (10) starts per hour.

C. Stator winding shall be of the open type with Class F insulation good for 155°C (311°F) maximum operating temperature. Winding housing shall be filled with a clean high dielectric oil that lubricates bearings and seals and transfers heat from windings and rotor to outer shell. Air-filled motors which do not have the superior heat dissipating capabilities of oil-filled motors shall not be considered equal.

D. Motor shall have two heavy-duty ball bearings to support pump shaft and take radial and thrust loads. Ball bearings shall be designed for 50,000 hours B-10 life. Stator shall be heat shrunk into motor housing.

E. Single-phase motors shall have a heat sensor thermostat and overload attached to the top end of the motor windings to stop the motor if the motor winding temperature reaches 200°F. The high temperature shut-off will cause the pump to cease operation, should a control failure cause the pump to run in a dry wet well. The thermostat shall reset automatically when the motor cools to a safe operating temperature.

F. The common motor pump and grinder shaft shall be type 416 stainless steel threaded to take pump impeller and grinder impeller.

G. The motor power cord shall be 14-5 SOW/SOW-A and shall be fastened by means of a cord grip in the top of the pump. The top of the pump shall contain a waterproof junction box which will provide space to connect the power cord to the motor leads. The motor leads shall seal between the motor housing and junction box by means of a rubber compression fitting around each wire. Power cord shall have a green carrier ground conductor that attaches to motor frame.

6. LEVEL CONTROLS

Liquid level controls shall include mercury switch level sensors in corrosion and shock resistant plastic casing with flexible cord and weight. Level control system shall include support brackets for suspending a minimum of five sensors at proper levels in wet well, and NEMA 4 watertight junction box as indicated on Drawings: one for pump turn-on; one for pump turn-off; one for both pumps ON, one for alarm and one for flooding of pump station. Controls for automatically alternating the pumps shall also be installed.

7. MOTOR CONTROLS

A. Motor controls shall consist of a duplex control panel in a NEMA 4 lockable waterproof enclosure, and shall have a dead front with separate removable inside panel to protect electrical equipment. Panel will contain circuit breakers,

magnetic starter and Hand-Off-Auto switch for each motor. Duplex panels will include an automatic electric alternator and a pump runtime meter.

B. A high water alarm flashing light shall be applied in separate NEMA 4 enclosure and mounted at control box. All motor controls shall include all equipment required by manufacturer and Engineer to insure proper operation of pumping station.

C. All relays shall be intrinsically safe relays.

8. ELECTRICAL WIRING

A. Pumping stations shall be completely wired at factory, in accordance with National Electric Code and wiring shall be color coded. Pump cables shall be one continuous cable, without splices or junction boxes of any type, from pump to control panel. All wiring outside the control cabinet shall be in rigid conduit or "Sealtite". All accessory equipment shall be permanently wired with suitable disconnecting means and overload protection. Each flexible cable shall be provided with a watertight seal and separate strain relief. Cord, plug and receptacle type connections will not be acceptable.

B. Control panel shall include NICAD battery for operation of alarm system during power outage. Battery shall be maintained to full capacity by DC trickle charger in control panel. Operation of alarm shall be automatic on failure of electric power to station.

C. Electrical systems and components in raw water wet well shall comply with NEC Class I Grade D Division 2 requirements, and shall be suitable for use under corrosive conditions.

9. OUTSIDE ELECTRICAL SERVICE

A. Connection of electrical service to pumping station shall be as indicated on Drawings and further specified herein.

(1) Service pole shall be fully treated, southern yellow pine roofed 15 degrees one way and gained before treatment.

(2) Weatherproof switch and meter socket shall be fastened to rustproof channels that are banded to pole with rustproof bands.

(3) A weather-proof fused disconnect switch located above ground on service pole shall be main power feed to pump station. Disconnect switch shall be NEMA Type 3R.

(4) Service entrance fitting at pole shall be cast aluminum with stainless steel screws.

(5) Conduit and conduit fittings shall be heavy, threaded, galvanized steel. Fittings shall have neoprene gaskets for covers. Conduit shall be fastened to service pole with two-hole, heavy, galvanized straps with rustproof lag screws - minimum spacing on 5 foot centers.

(6) Control wire extensions shall be made as indicated on Drawings. Components shall be Nema 4.

(7) Insulating bushings of heavy fiber reinforced type shall be employed on all conduit terminations.

(8) All screws and fasteners are to be rustproof, double hot dipped galvanized, Monel metal or stainless steel.

(9) Fuses shall be Bussman "Low-Peak", or approved equal.

(10) All electrical work shall be inspected and approved by an electrical inspector. Three (3) copies of certificates of approval by Electrical Inspector shall be furnished to Engineer and a label of acceptance must be glued inside door of disconnect before final acceptance.

B. Furnish and install circuit breaking 110 volt ground fault interruption receptacle on outside of pump station.

10. RAIL ASSEMBLY

A. The lift-out rail system assembly shall permit easy removal and installation of the pump and lower check valve without the necessity of personnel entering the wet well. Two rail pipes shall be used to guide the pump from the surface to the discharge base connection. The guide rails shall be 1-1/2 inch schedule 40 stainless steel pipe. The weight of the pump shall bear solely on the discharge base and not on the guide rails. Rail systems which require the pump to be supported by legs which might interfere with the flow of solids into the pump suction will not be considered equal. The guide rail shall be firmly attached to the access hatch frame. Systems deeper than 21 feet shall use an intermediate guide for each 21 feet of wetwell depth. The lift out rail system shall be a non-sparking design and shall be U. L. listed for Class 1 Group D explosion proof service.

B. The discharge case shall be securely bolted to the floor of the wet well so that slight deflection caused by the discharge pipe will not cause the quick-connect pump flange to leak. The discharge case shall be made of cast iron pipe.

C. All guides, brackets and hold-downs shall be of non-sparking, corrosion resistant structural plastic.

11. LIFTING CHAIN

An adequate length of 40 feet stainless steel lifting chain shall be supplied for removing the pump. The chain shall be minimum ¼" welded link type, or of adequate strength, required to effectively support the weight of the pump assembly during removal or installation.

12. PUMP AND VALVE VAULTS

Pump and valve vaults shall be constructed of prefabricated reinforced concrete pipe conforming to requirements of AASHO M-207. Concrete slab cover for pump pit shall be adequately reinforced to support a live load of 100 pounds per square foot.

13. SEWAGE PIPE, FITTINGS AND VALVES

A. All inside piping shall be Class 52 Ductile Iron Pipe, flanged ANSI Class 125 inside and terminating in mechanical joints bells outside. Outside piping shall conform to requirements listed elsewhere in these Specifications.

B. Gate valves shall be solid wedge, bronze fitted. Check valves shall be weight loaded, external lever type bronze fitted. Gate valves shall be provided on discharge lines and a check valve on discharged line between pump and gate valve as indicated on Drawings.

C. A pressure gauge shall be installed downstream of the check valve. Coupling adapters shall be Type 912 cast iron as manufactured by Smith-Blair, or approved equal.

D. The 4" overflow pipe shall be as specified in 02530 Sanitary Sewer.

E. A flap-type gate shall be installed at end of overflow pipe in wet well.

14. CONCRETE BASE AND PUMP WELL AND VALVE VAULT

Class "A" reinforced concrete shall be provided for pumping station base slab as indicated on Drawings. Pump well shall be of pre-cast reinforced concrete pipe of dimensions indicated on Drawings, or approved equal. All applicable provisions of concrete specifications shall govern construction of the pump well and valve vault. Valve vault shall have 1/4 inch hot dipped galvanized steel checkered plat covering with a locking device.

15. FACTORY TESTING

A. Pump manufacturer shall perform the following inspections and tests on each pump before shipment to insure proper operation of pump and compliance to customer's purchase order.

(1) Impeller, motor rating and electrical connections shall first be checked for compliance to the customer's purchase order.

(2) A motor and cable insulation test for moisture content or insulation defects shall be made.

(3) Prior to submergence, the pump shall be run dry to establish correct rotation and mechanical integrity.

(4) The pump shall be run submerged in water to a minimum of six (6) feet.

(5) After operational test No. 4, the insulation test (No. 2) is to be performed again.

(6) The owner reserves the right to observe all testing. Notification that testing is to be done should be received prior to testing.

B. A written report stating the foregoing steps have been done shall be supplied with each pump at the time of shipment.

C. Contractor shall bear the cost of any corrective step necessary for test failures.

16. ACCEPTANCE TEST

A. After installation, pumping station shall be given a running test of all equipment. During test all piping and seals shall be checked to insure no leaks occur and controls shall be carefully checked and balanced for proper operation.

B. Contractor shall furnish all necessary tools, materials, equipment and supervision of tests. Owner will furnish electrical energy.

C. Any defects in equipment or failure to meet guaranteed requirements of these specifications shall be promptly corrected by Contractor by replacement. Contractor shall bear the cost of any corrective step necessary for test failures.

17. TOOLS, SPARE PARTS AND MANUALS

A. One complete set of tools required for routine maintenance, together with any special tools required for such purpose, shall be furnished. Tools shall be supplied in a substantial steel tool box.

B. Four copies of Operation and Maintenance Manuals shall be provided upon installation of pump station.

18. MANUFACTURER

Pumps shall be as manufactured by Meyer, or approved equal.

19. WARRANTY

Complete pump station shall have an unconditional one (1) year warranty on all parts and labor. Sewage pumps shall have a five (5) year prorated manufacturer's warranty.

20. CHAIN LINK FENCING

A. Fencing

(1) Fabric shall be galvanized steel chain link 72" high, No. 9 gauge wire woven in a 2" mesh. Selvages shall be barbed. Fabric shall conform to ASTM 491-63T in its entirety. Minimum coating weight shall be 0.40 oz. per sq. ft.

(2) Barb wire shall consist of three lines of galvanized steel barbed wire which is to be of the 4-point pattern composed of two strands of 12-1/2 gauge line wires with 14 gauge aluminum barbs spaced on approximately 5" centers. Minimum weights of coating shall be 0.30 oz. per sq. ft. of wire surface.

(3) Barb wire arms: Intermediate post tops shall be of pressed steel or malleable iron base. Base shall include pressed steel extension farms to accommodate 3-barb style. Three-barb style shall extend at a 45 degree angle. Barb wire arms shall support a minimum of 400 lbs. vertical dead load from top of arm.

(4) Chain link fabric shall be securely fastened to all terminal posts using 3/16" x ¾" tension bars and heavy 12 gauge tension bands. There shall be one band for each foot in the height of the fence. The fabric shall be fastened to all intermediate posts with 9 gauge tie wires, spacing not to exceed 14" apart. Fabric shall be tied to top rail with 9 gauge tie wires, spacing not to exceed 24".

B. Framework

(1) All posts and other appurtenances used in the construction of this fence shall be hot dipped galvanized with a minimum of 1.8 oz. per sq. ft. of surface.

(2) Intermediate posts shall be 2-1/2" O.D. nominal weight 3.65 per lineal foot.

(3) All end, corner, and pull posts shall be 3" O.D. nominal weight pipe, nominal weight 5.79 lbs. per lineal foot..

(4) Posts for swing gates shall be standard weight pipe of 4" O.D. St. 5.79 lbs. PLS.

(5) Evenly spaced posts in the line of fence no further apart than 10'-0" on center.

(6) Top rails shall be 1-5/8" O. D. standard weight pipe wt 2.27 per lineal foot, provided with couplings approximately every 20-'0". Couplings are to be outside sleeve type.

(7) Brace pipe shall be same as top rail and extend from terminal post to first adjacent line post. Braces shall be furnished to fasten to posts by heavy sand cast aluminum or malleable fittings, then securely trussed from line post to base of terminal post with a 3/8" truss rod and tightener. Brace pipe is required only in heights of 6'-0" and higher.

C. Gates: Gate frames shall be 1-5/8" O.D. standard weight pipe, wt. 2.72 per lineal foot. Gates shall be fabricated using welded construction. Gates must be properly braced to eliminate any possible sagging condition.

(1) Gate Fillers: Frames shall be filled with same specification of fabric as is used in line of fence.

(2) Hinges: Hinges shall be a ball and socket offset type allowing gates to swing parallel with line of fence; shall be of malleable iron or forging, and shall have hot dipped galvanized finish.

(3) Double Latch: Double latch shall be drop bar type securely bolted to gate frame and shall engage in a heavy malleable iron gate stop.

D. Installation

(1) Installation shall be made in a workmanlike manner by skilled mechanics experienced in erection of this type of fence. Erect fence on line and to grade designated. Set all posts in concrete foundations in ground to a minimum depth of 48". Diameter of foundation shall be a minimum of 9", except for gate posts on which minimum diameter shall be three times the outside diameter of gate post. Foundation shall be 1-2-4 mixture of

concrete. All foundations shall extend approximately 2" above grade and shall slope away from post to provide for proper drainage.

(2) Fabric and barb wire shall be stretched to proper tension between terminal posts and securely fastened to the framework members as covered in previous sections. Bottom of fabric shall be held as uniformly as is practicable to finished grade.

END OF SECTION 15446

SECTION 15447 – INDIVIDUAL SUBMERSIBLE GRINDER PUMP STATION

1. RELATED DOCUMENTS

General Provisions of the Contract, General, Supplemental and Special Conditions, and General Requirements apply to this Section.

2. DESCRIPTION OF WORK

Provide labor, material, equipment and services necessary for installation of factory-built and tested grinder pump unit(s), each consisting of a grinder pump core suitably mounted on an integral stand of stainless steel, tank, electrical quick disconnect (NEMA 6P), pump removal harness, discharge assembly/shut-off valve, anti-siphon valve/check valve assembly, electrical alarm assembly and all necessary internal wiring and controls. For ease of serviceability, all pump motor/grinder units shall be of like type and horsepower throughout the system.

3. SHOP DRAWINGS

Six sets of shop drawings detailing the equipment to be furnished including dimensional data and materials of construction shall be furnished to the Engineer. The Engineer shall promptly review this data, and return two copies as accepted, or with requested modifications. Upon receipt of accepted shop drawings, the Manufacturer shall proceed immediately with fabrication of the equipment.

4. GENERAL

A. Grinder pump stations, complete with all appurtenances, form an integral system, and as such, shall be supplied by one grinder pump station manufacturer. The Contractor shall be responsible for the satisfactory operation of the entire system. The equipment specified shall be a product of a company experienced in the design and manufacture of grinder pumps for specific use in low pressure sewage systems. The company shall submit detailed installation and user instructions for its product, submit evidence of an established service program including complete parts and service manuals, and be responsible for maintaining a continuing inventory of grinder pump replacement parts. The Manufacturer shall provide, upon request, a reference and contact list from ten of its largest contiguous grinder pump installations of the type of grinder pumps described within this specification.

B. The equipment furnished hereunder shall be the product of a company experienced in the design and manufacture of grinder pumps specifically designed for use in low pressure systems. All manufacturers proposing equipment for this project shall have at least 10 years of experience in the design and manufacture of units of identical size(s) and performance to the specified units. All manufacturers proposing equipment for this project must also have not less than 50 successful installations of low pressure sewer systems utilizing grinder pumps of like type to the grinder pumps specified herein. An installation is defined as a minimum of 25 pumps discharging into a common force main which forms a low pressure sewer system.

5. OPERATING CONDITIONS

The pumps shall be capable of delivering 15 GPM against a rated total dynamic head of 0 feet (0 PSIG), 11 GPM against a rated total dynamic head of 92 feet (40 PSIG), and 7.8 GPM against a rated total dynamic head of 185 feet (80 PSIG). The pump(s) must also be capable of operating at negative total dynamic head without overloading the motor(s). Under no conditions shall in-line piping or valving be allowed to create a false apparent head.

6. WARRANTY

The grinder pump Manufacturer shall provide a part(s) and labor warranty on the complete station and accessories, including, but not limited to, the panel for a period of 24 months after notice of Owner's acceptance, but no greater than 27 months after receipt of shipment. Any manufacturing defects found during the warranty period will be reported to the Manufacturer by the Owner and will be corrected by the Manufacturer at no cost to the Owner.

7. PUMPS

A. PUMPS

(1) The pump shall be a custom designed, integral, vertical rotor, motor driven, solids handling pump of the progressing cavity type with a single mechanical seal. Double radial O-ring seals are required at all casting joints to minimize corrosion and create a protective barrier. All pump castings shall be cast iron, fully epoxy coated to 8-10 mil Nominal dry thickness, wet applied. The rotor shall be through-hardened, highly polished, precipitation hardened stainless steel. The stator shall be of a specifically compounded ethylene propylene synthetic elastomer. This material shall be suitable for domestic wastewater service. Its physical properties shall include high tear and abrasion resistance, grease resistance, water and detergent resistance, temperature stability, excellent aging properties, and outstanding wear resistance. Buna-N is not acceptable as a stator material because it does not exhibit the properties as outlined above and required for wastewater service.

B. GRINDER

(1) The grinder shall be placed immediately below the pumping elements and shall be direct-driven by a single, one-piece motor shaft. The grinder impeller assembly shall be securely fastened to the pump motor shaft by means of a threaded connection attaching the grinder impeller to the motor shaft. Attachment by means of pins or keys will not be acceptable. The grinder will be a one-piece, forged 4140 cutter wheel of the rotating type with inductively hardened cutter teeth (Rockwell 55-58c) for abrasion resistance. A stationary quench hardened and ground shredding ring shall be provided. The shredding ring will have a staggered tooth pattern with only one edge engaged at a time, maximizing the cutting torque.

(2) This assembly shall be dynamically balanced and operate without objectionable noise or vibration over the entire range of recommended operating pressures. The grinder shall be constructed so as to minimize clogging and jamming under all normal operating conditions including starting. Sufficient vortex action shall be created to scour the tank free of deposits or sludge banks which would impair the

operation of the pump. These requirements shall be accomplished by the following, in conjunction with the pump:

a. The grinder shall be positioned in such a way that solids are fed in an upward flow direction.

b. The maximum flow rate through the cutting mechanism must not exceed 4 feet per second.

c. The inlet shroud shall have a diameter of no less than 5 inches. Inlet shrouds that are less than 5 inches in diameter will not be accepted due to their inability to maintain the specified 4 feet per second maximum inlet velocity which by design prevents unnecessary jamming of the cutter mechanism and minimizes blinding of the pump by large objects that block the inlet shroud.

d. The impeller mechanism must rotate at a nominal speed of no greater than 1800 rpm.

(3) The grinder shall be capable of reducing all components in normal domestic sewage, including a reasonable amount of "foreign objects," such as paper, wood, plastic, glass, wipes, rubber and the like, to finely-divided particles which will pass freely through the passages of the pump and the 1-1/4" diameter stainless steel discharge piping.

C. ELECTRIC MOTOR: As a maximum, the motor shall be a 1 HP, 1725 RPM, 240 Volt 60 Hertz, 1 Phase, capacitor start, ball bearing, air-cooled induction type with Class F installation, low starting current not to exceed 30 amperes and high starting torque of 8.4 foot pounds. The motor shall be press-fit into the casting for better heat transfer and longer winding life. Inherent protection against running overloads or locked rotor conditions for the pump motor shall be provided by the use of an automatic-reset, integral thermal overload protector incorporated into the motor. This motor protector combination shall have been specifically investigated and listed by Underwriters Laboratories, Inc., for the application. Non-capacitor start motors or permanent split capacitor motors will not be accepted because of their reduced starting torque and consequent diminished grinding capability. The wet portion of the motor armature must be 300 Series stainless. To reduce the potential of environmental concerns, the expense of handling and disposing of oil, and the associated maintenance costs, oil-filled motors will not be accepted.

D. MECHANICAL SEAL: The pump/core shall be provided with a mechanical shaft seal to prevent leakage between the motor and pump. The seal shall have a stationary ceramic seat and carbon rotating surface with faces precision lapped and held in position by a stainless steel spring.

8. WETWELL

A. The tank shall be a wetwell design made of high density polyethylene of a grade selected for environmental stress cracking resistance. Corrugated sections are to be made of a double wall construction with the internal wall being generally smooth to promote scouring. Corrugations of the outside wall are to be of a minimum amplitude of 1-1/2" to provide necessary transverse stiffness. Any incidental sections of a single wall construction are to be a minimum .250 inch thick. All seams created during tank construction are to be thermally welded

and factory tested for leak tightness. Tank wall and bottom must withstand the pressure exerted by saturated soil loading at maximum burial depth. All station components must function normally when exposed to maximum external soil and hydrostatic pressure.

B. The tank shall be furnished with a factory installed PVC inlet flange to accept a 4.50" OD (4" DWV or SCH 40) inlet pipe.

C. The tank shall include a lockable cover assembly providing low profile mounting and watertight capability. The cover assembly shall also include an integral 2-inch vent to prevent sewage gases from accumulating in the tank. The accessway design and construction shall facilitate field adjustment of station height in increments of 4" or less without the use of any adhesives or sealants requiring cure time before installation can be completed.

D. The power and control cable shall connect to the pump by means of the provided NEMA 6P Electrical Quick Disconnect (EQD) and shall enter the tank through a factory installed watertight strain relief connector. An electrical junction box shall not be permitted in the tank.

E. The station shall have all necessary penetrations factory sealed and tested. No field penetrations shall be acceptable.

9. DISCHARGE HOSE AND DISCONNECT/VALVE: All discharge fittings and piping shall be constructed of polypropylene, EPDM or PVC. The discharge hose assembly shall include a shut-off valve rated for 200 psi WOG and a quick disconnect feature to simplify installation and pump removal. The bulkhead penetration shall be factory installed and warranted by the manufacturer to be watertight.

10. ELECTRICAL QUICK DISCONNECT: The grinder pump core shall include a factory-installed NEMA 6P electrical quick disconnect (EQD) for all power and control functions. The EQD will be supplied with 32', 25' of useable, electrical supply cable (ESC) to connect to the alarm panel. The EQD shall require no tools for assembly, seal against water before the electrical connection is made, and include radial seals to assure a watertight seal regardless of tightening torque. Plug-type connections of the power cable onto the pump housing will not be acceptable due to the potential for leaks and electrical shorts. Junction boxes are not acceptable due to the large number of potential leak points. The EQD shall be so designed to be conducive to field wiring as required.

11. CHECK VALVE: The pump discharge shall be equipped with a factory installed, gravity operated, flapper-type integral check valve built into the discharge piping. The check valve will provide a full-ported passageway when open, and shall introduce a friction loss of less than 6 inches of water at maximum rated flow. Moving parts will be made of a 300 Series stainless steel and fabric reinforced synthetic elastomer to ensure corrosion resistance, dimensional stability, and fatigue strength. A nonmetallic hinge shall be an integral part of the flapper assembly providing a maximum degree of freedom to assure seating even at a very low back-pressure. The valve body shall be an injection molded part made of an engineered thermoplastic resin. The working pressure of the valve shall be at least 235 psi. Ball-type check valves are unacceptable due to their limited sealing capacity in slurry applications.

12. ANTI-SIPHON VALVE: The pump discharge shall be equipped with a factory-installed, gravity-operated, flapper-type integral anti-siphon valve built into the discharge piping. Moving parts will be made of 300 Series stainless steel and fabric-reinforced synthetic elastomer to

ensure corrosion resistance, dimensional stability, and fatigue strength. A nonmetallic hinge shall be an integral part of the flapper assembly, providing a maximum degree of freedom to ensure proper operation even at a very low pressure. The valve body shall be injection-molded from an engineered thermoplastic resin. Holes or ports in the discharge piping are not acceptable anti-siphon devices due to their tendency to clog from the solids in the slurry being pumped. The anti-siphon port diameter shall be no less than 60% of the inside diameter of the pump discharge piping.

13. CORE UNIT: The grinder pump station shall have an easily removable core assembly containing pump, motor, grinder, all motor controls, check valve, anti-siphon valve, electrical quick disconnect and wiring. The watertight integrity of the core unit shall be established by a 100% factory test at a minimum of 5 PSIG.

14. CONTROLS

A. All necessary motor starting controls shall be located in the cast iron enclosure of the core unit secured by stainless steel fasteners. Locating motor starting controls in a plastic enclosure is not acceptable. Wastewater level sensing controls shall be housed in a separate enclosure from motor starting controls. Level sensor housing must be sealed via a radial type seal; solvents or glues are not acceptable. Level sensing control housing must be integrally attached to pump assembly so that it may be removed from the station with the pump and in such a way as to minimize the potential for the accumulation of grease and debris accumulation, etc. Level sensing housing must be a high-impact thermoplastic copolymer over-molded with a thermo plastic elastomer. The use of PVC for the level sensing housing is not acceptable.

B. Non-fouling wastewater level controls for controlling pump operation shall be accomplished by monitoring the pressure changes in an integral air column connected to a pressure switch. The air column shall be integrally molded from a thermoplastic elastomer suitable for use in wastewater and with excellent impact resistance. The air column shall have only a single connection between the water level being monitored and the pressure switch. Any connections are to be sealed radially with redundant O-rings. The level detection device shall have no moving parts in direct contact with the wastewater and shall be integral to the pump core assembly in a single, readily-exchanged unit. Depressing the push to run button must operate the pump even with the level sensor housing removed from the pump.

C. All fasteners throughout the assembly shall be 300 Series stainless steel. High-level sensing will be accomplished in the manner detailed above by a separate air column sensor and pressure switch of the same type. Closure of the high-level sensing device will energize an alarm circuit as well as a redundant pump-on circuit. For increased reliability, pump ON/OFF and high-level alarm functions shall not be controlled by the same switch. Float switches of any kind, including float trees, will not be accepted due to the periodic need to maintain (rinsing, cleaning) such devices and their tendency to malfunction because of incorrect wiring, tangling, grease buildup, and mechanical cord fatigue. To assure reliable operation of the pressure switches, each core shall be equipped with a factory installed equalizer diaphragm that compensates for any atmospheric pressure or temperature changes. Tube or piping runs outside of the station tank or into tank-mounted junction boxes providing pressure switch equalization will not be permitted due to their susceptibility to condensation, kinking, pinching, and insect infestation. The grinder pump will be furnished with a 6 conductor 14 gauge, type SJOW cable, pre-wired and watertight to meet UL requirements with a factory installed NEMA 6P EQD half attached to it.

15. ALARM PANEL

A. Each grinder pump station shall include a NEMA 4X, UL-listed alarm panel suitable for wall or pole mounting. The NEMA 4X enclosure shall be manufactured of thermoplastic polyester to ensure corrosion resistance. The enclosure shall include a hinged, lockable cover with padlock, preventing access to electrical components, and creating a secured safety front to allow access only to authorized personnel. The enclosure shall not exceed 10.5" W x 14" H x 7" D, or 12.5" W x 16" H x 7.5" D if certain options are included.

B. The alarm panel shall contain one 15-amp, double-pole circuit breaker for the pump core's power circuit and one 15-amp single-pole circuit breaker for the alarm circuit. The panel shall contain a push-to-run feature, an internal run indicator, and a complete alarm circuit. All circuit boards in the alarm panel are to be protected with a conformal coating on both sides and the AC power circuit shall include an auto resetting fuse.

C. The alarm panel shall include the following features: external audible and visual alarm; push-to-run switch; push-to-silence switch; redundant pump start; and high level alarm capability. The alarm sequence is to be as follows when the pump and alarm breakers are on:

(1) When liquid level in the sewage wet-well rises above the alarm level, audible and visual alarms are activated, the contacts on the alarm pressure switch activate, and the redundant pump starting system is energized.

(2) The audible alarm may be silenced by means of the externally mounted, push-to-silence button.

(3) Visual alarm remains illuminated until the sewage level in the wet-well drops below the "off" setting of the alarm pressure switch.

D. The visual alarm lamp shall be inside a red, oblong lens at least 3.75" L x 2.38" W x 1.5" H. Visual alarm shall be mounted to the top of the enclosure in such a manner as to maintain the NEMA 4X rating. The audible alarm shall be externally mounted on the bottom of the enclosure, capable of 93 dB @ 2 feet. The audible alarm shall be capable of being deactivated by depressing a push-type switch that is encapsulated in a weatherproof silicone boot and mounted on the bottom of the enclosure (push-to-silence button).

E. The entire alarm panel, as manufactured and including any of the following options, shall be listed by Underwriters Laboratories, Inc.

16. SERVICEABILITY: The grinder pump core, including level sensor assembly, shall have two lifting hooks complete with lift-out harness connected to its top housing to facilitate easy core removal when necessary. The level sensor assembly must be easily removed from the pump assembly for service or replacement. All mechanical and electrical connections must provide easy disconnect capability for core unit removal and installation. Each EQD half must include a water-tight cover to protect the internal electrical pins while the EQD is unplugged. A pump push-to-run feature will be provided for field trouble shooting. The push-to-run feature must operate the pump even if the level sensor assembly has been removed from the pump assembly. All motor control components shall be mounted on a readily replaceable bracket for ease of field service.

17. OSHA CONFINED SPACE: All maintenance tasks for the grinder pump station must be possible without entry into the grinder pump station (as per OSHA 1910.146 Permit-required confined spaces). *"Entry means the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space."*

18. SAFETY

A. The grinder pump shall be free from electrical and fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled and wired grinder pump station shall be listed by Underwriters Laboratories, Inc., to be safe and appropriate for the intended use. UL listing of components of the station, or third-party testing to UL standard are not acceptable.

B. The grinder pump shall meet accepted standards for plumbing equipment for use in or near residences, shall be free from noise, odor, or health hazards, and shall have been tested by an independent laboratory to certify its capability to perform as specified in either individual or low pressure sewer system applications. As evidence of compliance with this requirement, the grinder pump shall bear the seal of NSF International. Third-party testing to NSF standard is not acceptable.

19. FACTORY TEST

A. Each grinder pump shall be submerged and operated for 5 minutes (minimum). Included in this procedure will be the testing of all ancillary components such as, the anti-siphon valve, check valve, discharge assembly and each unit's dedicated level controls and motor controls. All factory tests shall incorporate each of the above listed items. Actual appurtenances and controls which will be installed in the field, shall be particular to the tested pump only. A common set of appurtenances and controls for testing all pumps is not acceptable. Certified test results shall be available upon request showing the operation of each grinder pump at two different points on its curve, with a maximum pressure of no less than 80 psi and a factory bearing vibration test. The Engineer reserves the right to inspect such testing procedures with representatives of the Owner, at the Grinder Pumps Manufacturer's facility.

B. All HDPE basins shall be factory leak tested to assure the integrity of all joints, seams and penetrations. All necessary penetrations such as inlets, discharge fittings and cable connectors shall be included in this test along with their respective sealing means (grommets, gaskets etc.). Fiberglass basins with stainless steel discharge bulkhead shall be factory tested to be watertight.

20. DELIVERY: All grinder pump core units, including level controls, will be delivered to the job site 100 percent completely assembled, including testing, ready for installation. Grinder pump cores will be shipped separately from the tanks. Installing the cores and discharge piping/hose into the tanks is the only assembly step required and allowed due to the workmanship issues associated with other on-site assembly. Grinder pump cores must be boxed for ease of handling.

21. INSTALLATION

A. The Contractor shall be responsible for handling ground water to provide a firm, dry subgrade for the structure, and shall guard against flotation or other damage resulting from general water or flooding.

B. The grinder pump stations shall not be set into the excavation until the installation procedures and excavation have been approved by the Engineer.

C. Remove packing material. Users instructions MUST be given to the Owner. Hardware supplied with the unit, if required, will be used at installation. The basin will be supplied with a standard 4" inlet grommet (4.50" OD) for connecting the incoming sewer line. Appropriate inlet piping must be used. The basin may not be dropped, rolled or laid on its side for any reason.

D. Installation shall be accomplished so that 1" to 4" of accessway, below the bottom of the lid, extends above the finished grade line. The finished grade shall slope away from the unit. The diameter of the excavated hole must be large enough to allow for the concrete anchor.

E. A 6" inch (minimum) layer of naturally rounded aggregate, clean and free flowing, with particle size of not less than 1/8" or more than 3/4" shall be used as bedding material under each unit.

F. A concrete anti-flotation collar, as detailed on the drawings, and sized according to the manufacturer's instructions, shall be required and shall be pre-cast to the grinder pump or poured in place. Each grinder pump station with its pre-cast anti-flotation collar shall have a minimum of three lifting eyes for loading and unloading purposes.

G. If the concrete is poured in place, the unit shall be leveled, and filled with water, to the bottom of the inlet, to help prevent the unit from shifting while the concrete is being poured. The concrete must be manually vibrated to ensure there are no voids. If it is necessary to pour the concrete to a level higher than the inlet piping, an 8" sleeve is required over the inlet prior to the concrete being poured.

H. The Contractor will provide and install a 4-foot piece of 4-inch SCH 40 PVC pipe with water tight cap, to stub-out the inlet for the property owners' installation contractor, as depicted on the contract drawings.

I. The electrical enclosure shall be furnished, installed and wired to the grinder pump station by the Contractor. An alarm device is required on every installation, there shall be NO EXCEPTIONS. It will be the responsibility of the Contractor and the Engineer to coordinate with the individual property owner(s) to determine the optimum location for the alarm panel.

J. The Contractor shall mount the alarm device in a conspicuous location, as per national and local codes. The alarm panel will be connected to the grinder pump station by a length of 6 conductor 12 gauge type TC cable as shown on the contract drawings. The power and alarm circuits must be on separate power circuits. The grinder pump stations will be provided with 32', 25' of useable, electrical supply cable to connect the station to the alarm panel. This cable shall be supplied with a factory installed EQD half to connect to the mating EQD half on the core.

22. BACKFILL REQUIREMENTS

A. Proper backfill is essential to the long-term reliability of any underground structure. The method of backfilling is to surround the unit to grade using Class I or Class II backfill material as defined in ASTM 2321.

B. Improper backfilling may result in damaged accessways. The grinder pump station shall be installed at a minimum depth from grade to the top of the 1 1/4" discharge line, to assure maximum frost protection. The finish grade line shall be 1" to 4" below the bottom of the lid, and final grade shall slope away from the grinder pump station.

C. All restoration will be the responsibility of the Contractor. Per unit costs for this item shall be included in the Contractor's bid price for the individual grinder pump station. The properties shall be restored to their original condition in all respects, including, but not limited to, curb and sidewalk replacement, landscaping, loaming and seeding, and restoration of the traveled ways, as directed by the Engineer

22. START-UP AND FIELD TESTING

A. The Manufacturer shall provide the services of qualified factory trained technician(s) who shall inspect the placement and wiring of each station, perform field tests as specified herein, and instruct the Owner's personnel in the operation and maintenance of the equipment before the stations are accepted by the Owner.

B. All equipment and materials necessary to perform testing shall be the responsibility of the INSTALLING CONTRACTOR. This includes, as a minimum, a portable generator and power cable (if temporary power is required), water in each basin (filled to a depth sufficient to verify the high level alarm is operating), and opening of all valves in the system. These steps shall be completed prior to the qualified factory trained technician(s) arrival on site.

C. The services of a trained, factory-authorized technician shall be provided at a rate of 40 hours for every 100 grinder pump stations supplied.

D. Upon completion of the installation, the authorized factory technician(s) will perform the following test on each station:

(1) Make certain the discharge shut-off valve in the station is fully open.

(2) Turn ON the alarm power circuit and verify the alarm is functioning properly.

(3) Turn ON the pump power circuit. Initiate the pump operation to verify automatic " on/off" controls are operative. The pump should immediately turn ON.

(4) Consult the Manufacturer's Service Manual for detailed start-up procedures.

E. Upon completion of the start-up and testing, the Manufacturer shall submit to the Engineer the start-up authorization form describing the results of the tests performed for each grinder pump station. Final acceptance of the system will not occur until authorization forms have been received for each pump station installed and any installation deficiencies corrected.

END OF SECTION 15447