CALL NO. 107

CONTRACT ID. 111324

DAVIESS COUNTY

FED/STATE PROJECT NUMBER STP 0604 (011)

DESCRIPTION OWENSBORO BYPASS (US 60)

WORK TYPE GRADE & DRAIN AND PAVEMENT ALTERNATES

PRIMARY COMPLETION DATE 6/1/2015

LETTING DATE: July 15, 2011

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME July 15, 2011. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

ROAD AND BRIDGE PLANS

DBE CERTIFICATION REQUIRED - 7%

REQUIRED BID PROPOSAL GUARANTY: Not less than 5% of the total bid.

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PART I

SCOPE OF WORK

CONTRACT ID - 111324 ADMINISTRATIVE DISTRICT - 02

PROJECT(S) IDENTIFICATION AND DESCRIPTION:

COUNTY - DAVIESS PCN - DE03000601124
STP 0604 (011)
OWENSBORO BYPASS (US 60) RELOCATE US 60 BYPASS FROM THE US 60B/KY 54 INTERCHANGE EXTENDING TO KY 144 INTERCHANGE, A DISTANCE OF 3.74 MILES. GRADE & DRAIN AND PAVEMENT ALTERNATES. SYP NO. 02-00287.10.
GEOGRAPHIC COORDINATES LATITUDE 37^46'33" LONGITUDE 87^03'20"

COMPLETION DATE(S):
COMPLETION DATE - June 01, 2015
APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

All addenda to this proposal must be applied when calculating bid and certified in the bid packet submitted to the Kentucky Department of Highways. Failure to use the correct and most recent addenda may result in the bid being rejected.

BID SUBMITTAL

Bidder must use the Department's Expedite Bidding Program available on the Internet web site of the Department of Highways, Division of Construction Procurement. (www.transportation.ky.gov/contract)

The Bidder must download the bid file located on the Bid Express website (www.bidx.com) to prepare a bid packet for submission to the Department. The bidder must submit electronically using Bid Express.

JOINT VENTURE BIDDING

Joint venture bidding is permissible. All companies in the joint venture must be prequalified in one of the work types in the Qualifications for Bidders for the project. The bidders must get a vendor ID for the joint venture from the Division of Construction Procurement and register the joint venture as a bidder on the project. Also, the joint venture must obtain a digital ID from Bid Express to submit a bid. A joint bid bond of 5% may be submitted for both companies or each company may submit a separate bond of 5%.

UNDERGROUND FACILITY DAMAGE PROTECTION

The contractor is advised that the Underground Facility Damage Protection Act of 1994, became law January 1, 1995. It is the contractor's responsibility to determine the impact of the act regarding this project, and take all steps necessary to be in compliance with the provision of the act.

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

Questions about projects during the advertisement should be submitted in writing to the Division of Construction Procurement. This may be done by fax (502) 564-7299 or email to kytc.projectquestions@ky.gov. The Department will attempt to answer all submitted questions. The Department reserves the right not to answer if the question is not pertinent or does not aid in clarifying the project intent.

The deadline for posting answers will be 3:00 pm Eastern Daylight Time, the day preceding the Letting. Questions may be submitted until this deadline with the understanding that the later a question is submitted, the less likely an answer will be able to be provided.

The questions and answers will be posted for each Letting under the heading "Questions & Answers" on the Construction Procurement website (www.transportation.ky.gov/contract). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

04/28/2011

FEDERAL CONTRACT NOTES

The Kentucky Department of Highways, in accordance with the Regulations of the United States Department of Transportation 23 CFR 635.112 (h), hereby notifies all bidders that failure by a bidder to comply with all applicable sections of the current Kentucky Standard Specifications, including, but not limited to the following, may result in a bid not being considered responsive and thus not eligible to be considered for award:

102.02 Current Capacity Rating 102.10 Delivery of Proposals
102.08 Irregular Proposals 102.14 Disqualification of Bidders
102.09 Proposal Guaranty

CIVIL RIGHTS ACT OF 1964

The Kentucky Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Federal Department of Transportation (49 C.F.R., Part 21), issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin.

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071.

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

FHWA 1273

Contrary to Paragraph VI of FHWA 1273, contractors on National Highway System (NHS) Projects of $1 million or more are no longer required to submit Form FHWA-47.

Contrary to Form FHWA-1273, Section V, paragraph 2.b personal addresses and full social security numbers (SSN) shall not be included on weekly payroll submissions by contractors and subcontractors. Contractors and subcontractors shall include the last four digits of the employee's SSN as an individually identifying number for each employee on the weekly payroll submittal. This in no way changes the requirement that contractors and subcontractors maintain complete SSN and home addresses for employees and provide this information upon request of KYTC, FHWA, and the U.S. Department of Labor.

SECOND TIER SUBCONTRACTS

Second Tier subcontracts on federally assisted projects shall be permitted. However, in the case of DBE's, second tier subcontracts will only be permitted where the other subcontractor is also a DBE. All second tier subcontracts shall have the consent of both the Contractor and the Engineer.

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

It is the policy of the Kentucky Transportation Cabinet ("the Cabinet") that Disadvantaged Business Enterprises ("DBE") shall have the opportunity to participate in the performance of highway construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. To that end, the Cabinet will comply with the regulations found in 49 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.

The Cabinet, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to Cabinet contracts. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted highway construction projects. The contractor will include this provision in all its subcontracts and supply agreements pertaining to contracts with the Cabinet.

Failure by the contractor to carry out these requirements is a material breach of its contract with the Cabinet, which may result in the termination of the contract or such other remedy as the Cabinet deems necessary.

DBE GOAL

The Disadvantaged Business Enterprise (DBE) goal established for this contract, as listed on the front page of the proposal, is the percentage of the total value of the contract.

The contractor shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in a least the percent of the contract as set forth above as goals for this contract.

OBLIGATION OF CONTRACTORS

Each contractor prequalified to perform work on Cabinet projects shall designate and make known to the Cabinet a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

If a formal goal has not been designated for the contract, all contractors are encouraged to consider DBEs for subcontract work as well as for the supply of material and services needed to perform this work.

Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

CERTIFICATION OF CONTRACT GOAL

Contractors shall include the following certification in bids for projects for which a DBE goal has been established. BIDS SUBMITTED WHICH DO NOT INCLUDE CERTIFICATION OF DBE PARTICIPATION WILL NOT BE READ PUBLICLY. These bids will not be considered for award by the Cabinet and they will be returned to the bidder.

"The bidder certifies that it has secured participation by Disadvantaged Business Enterprises ("DBE") in the amount of ____ percent of the total value of this contract and that the DBE participation is in compliance with the requirements of 49 CFR 26 and the policies of the Kentucky Transportation Cabinet pertaining to the DBE Program."

The certification statement is located in the printed bid packet. All contractors must certify their DBE participation on that page. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted.

DBE PARTICIPATION PLAN

All bidders are encouraged to submit their General DBE Participation Plan with their bid on the official form. Lowest responsive bidders whose bid packages include DBE Participation Plans may be awarded the contract at the next Awards Committee meeting provided that the DBE goal is met. The DBE Participation Plan shall include the following:

1. Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
2. Description of the work each is to perform including the work item , unit, quantity, unit price and total amount of the work to be performed by the individual DBE;
3. The dollar value of each proposed DBE subcontract and the percentage of total project contract value this represents. DBE participation may be counted as follows;
    a) If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:
        - The entire expenditure paid to a DBE manufacturer;
        - 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment; and
        - the amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel,

facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.

b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;
c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;

4. Written and signed documentation of the bidder's commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and
5. Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.

The apparent low bidder who does not submit a General DBE Participation Plan with the bid shall submit it within 10 calendar days after receipt of notification that they are the apparent low bidder. The project will not be considered for award prior to submission and approval of the apparent low bidder's DBE Participation Plan.

Detailed DBE Participation Plan forms will be included in the Contractor Package presented to successful bidders following the awarding of the project. The Detailed DBE Participation Plan must be completed and returned to Contract Procurement in accordance with Cabinet policy. A copy of the blank estimate will be included with the Detailed DBE Participation Plan to list sequence items by PCN (Project Control Number).

Changes to DBE Participation Plans must be approved by the Cabinet. The Cabinet may consider extenuating circumstances including, but not limited to, changes in the nature or scope of the project, the inability or unwillingness of a DBE to perform the work in accordance with the bid, and/or other circumstances beyond the control of the prime contractor.

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set and nine (9) copies of this information must be received in the office of the Division of Contract Procurement no later than 12:00 noon of the tenth calendar day after receipt of notification that they are the apparent low bidder.

Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Cabinet considers in judging good faith efforts. This documentation may include written subcontractors' quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The Good Faith Effort Package shall include, but may not be limited to information showing evidence of the following:

1. Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
2. Whether the bidder provided solicitations through all reasonable and available means;
3. Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
4. Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainly whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the DBE Liaison in the Office of Minority Affairs to give notification of the bidder's inability to get DBE quotes;
5. Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
6. Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
7. Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
8. Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;

9. Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
10. Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal; and
11. Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

Where the apparent lowest responsive bidder fails to submit sufficient participation by DBE firms to meet the contract goal and upon a determination by the Good Faith Committee based upon the information submitted that the apparent lowest responsive bidder failed to make sufficient reasonable efforts to meet the contract goal, the bidder will be offered the opportunity to meet in person for administrative reconsideration. The bidder will be notified of the Committee's decision within 24 hours of its decision. The bidder will have 24 hours to request reconsideration of the Committee's decision. The reconsideration meeting will be held within two days of the receipt of a request by the bidder for reconsideration.

The request for reconsideration will be heard by the Office of the Secretary. The bidder will have the opportunity to present written documentation or argument concerning the issue of whether it met the goal or made an adequate good faith effort. The bidder will receive a written decision on the reconsideration explaining the basis for the finding that the bidder did or did not meet the goal or made adequate Good Faith efforts to do so.

The result of the reconsideration process is not administratively appealable to the Cabinet or to the United States Department of Transportation.

The Cabinet reserves the right to award the contract to the next lowest responsive bidder or to rebid the contract in the event that the contract is not awarded to the low bidder as the result of a failure to meet the good faith requirement.

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the Cabinet will hold the prime contractor accountable, as would be the case with all other contract provisions. Therefore, the contractor's failure to carry our the DBE contract requirements shall constitute a breach of contract and as such the Cabinet reserves the right to exercise all administrative remedies at its disposal including, but not limited to the following:

- Disallow credit toward the DBE goal;
- Withholding progress payments;

- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

PROMPT PAYMENT

The prime contractor will be required to pay the DBE within seven (7) working days after he or she has received payment from the Kentucky Transportation Cabinet for work performed or materials furnished.

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to submit certified reports on monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal.

Payment information that needs to be reported includes date the payment is sent to the DBE, check number, Contract ID, amount of payment and the check date. Before Final Payment is made on this contract, the Prime Contractor will certify that all payments were made to the DBE subcontractor and/or DBE suppliers.

The Prime Contractor should supply the payment information at the time the DBE is compensated for their work. Form to use is located at:
http://transportation.ky.gov/construction/forms/DBEcheck.xls

Photocopied payments and completed form to be submitted to:
Office of Civil Rights and Small Business Development
6th Floor West
200 Mero Street
Frankfort, KY 40622

DEFAULT OR DECERTIFICATION OF THE DBE

If the DBE subcontractor or supplier is decertified or defaults in the performance of its work, and the overall goal cannot be credited for the uncompleted work, the prime contractor may utilize a substitute DBE or elect to fulfill the DBE goal with another DBE on a different work item. If after exerting good faith effort in accordance with the Cabinet's Good Faith Effort policies and procedures, the prime contractor is unable to replace the DBE, then the unmet portion of the goal may be waived at the discretion of the Cabinet.

Page 1 of 3

Kentucky Transportation Cabinet
General DBE Participation Plan*

06/13/2005

Letting Date: _____ Contract ID Number _____ Project Number: _____

Designated DBE Goal % _____

Prime Contractor _____ DBE Company Name _____

Address _____

City, State, Zip _____

Federal Tax ID _____

Type of DBE Work: (all applicable)

_____ Supplier _____ Subcontractor _____ Manufacturer _____ Engineering _____ Other _____

Itemized worked to be performed by DBE Company:

Supplier 60% Y/N	Item Number	Description of Participation Item	Unit of Measure	Quantity to be Performed by DBE	DBE Unit Price **	Dollar Amount (based on DBE
					Total other Page	
					Total This DBE	
					Total Bid	
					% Credited toward Goal, this DBE	

**Note: 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment

Prime Contractor's Signature: _____ Title: _____ Date: _____

DBE Participant Signature: _____ Title: _____ Date: _____

***This form must be completed for each DBE participant**

KYTC
DBE Payments

updated 2/28/08

Prime Contractor	Cont-ID

DBE Contractor	CHECK #

PAYMENT DATE	Amount of Payment

Use the section below to show multiple payments using the same check

Cont-ID	Amount	Cont-ID	Amount

Comments:

attach copy of check here

Mail to:
Office of Civil Rights and Small Business Development
200 Mero Street
6th Floor West TCOB
Frankfort, KY 40622

to be Submitted within 7 days of receipt of payment from KYTC

TRAINEES

In Compliance with the "TRAINING SPECIAL PROVISION" included in Part III of the Proposal, the Contractor will be required to employ 2 trainee(s) (1 ARTICULATING TRUCK DRIVER TRAINEE AND 1 CARPENTER TRAINEE) for this contract.

OPTION A

The Contractor is advised that the compaction of asphalt mixtures furnished for driving lanes and ramps, at 25mm (1 inch) or greater, on this project will be accepted according to OPTION A in accordance with Section 402 and Section 403 of the current Standard Specification. Joint cores as described in subsection 402.03.02 are required for surface mixtures only. The compaction of all other asphalt mixtures will be accepted by OPTION B.

6/21/11

US 60, Daviess Co.
Item Number: 2-287.1

SPECIAL NOTE
ALTERNATE PAVEMENT BID ADJUSTMENT

This project includes alternate bidding for asphalt or concrete pavement. There are specific items listed for each pavement type to be bid with the alternate selected by the Contractor. There is also a line item in the alternate categories for each alternate to adjust for the projected out-year life-cycle costs to the Cabinet. These line item adjustments are as follows:

Asphalt Pavement Adjustment = $992,850

Concrete Pavement Adjustment = $397,415

The amount reflective of the pavement type selected by each contractor will be added to their respective bid for comparison of the low bid. The adjustment ***shall be used only for determination of the lowest bidder*** *and* ***shall not be used to determine the final payment*** to the contractor when the project is completed.

Please note that these adjustments should not be used for the calculation of the maximum Mobilization amount and are not required to be included in the minimum Demobilization amount.

Proposal Guaranty

As a supplement to Section 102 of the 2008 Standard Specifications, it will not be necessary for the Proposal Guaranty to include an amount necessary to cover the amount of the bid adjustment.

SPECIAL NOTE FOR DYNAMIC PILE TESTING

Daviess County (2-287.1)
US 60 Bypass

1.0 GENERAL

1.1 Scope of Work The scope of work includes furnishing all labor, equipment and analyses associated with dynamic testing of driven piles as specified in this Special Note and in general accordance with ASTM D 4945, ***High-Strain Dynamic Testing of Piles***. Dynamic testing involves attaching at least two strain transducers and two accelerometers to the pile near the pile head during initial driving or at a convenient location during restrike testing. A cable or wireless transmission connects the sensors near the pile head with the Pile Driving Monitoring Hardware located a safe distance from the pile, but not more than 330 ft from the pile. The piles that are to be tested must be of sufficient extra length to ensure that sensors are not driven into the ground.

1.2 Personnel Qualifications Perform dynamic pile testing utilizing the services of an independent Dynamic Pile Testing Consultant with qualified personnel as described below.

- Pile Driving Monitoring - An engineer with a minimum of 3 years dynamic pile testing and analysis experience or who has achieved Basic or better certification under the High-Strain Dynamic Pile Testing Examination and Certification process of the Pile Driving Contractors Association and Foundation QA.
- Wave Equation and Pile Driving Analyses - A licensed professional engineer with a minimum of 5 years dynamic pile testing and analysis experience or who has achieved Advanced or better certification under the High-Strain Dynamic Pile Testing Examination and Certification process of the Pile Driving Contractors Association and Foundation QA.

1.3 Equipment Supply equipment such as sensors, cables or wireless transmitters, etc. conforming to ASTM D 4945, ***High-Strain Dynamic Testing of Piles*** and furnished by the dynamic testing consultant. Prior to beginning work, submit the product name and manufacturer of the hardware and software components below for approval by the Engineer. If requested by the Engineer submit additional information including technical specifications, etc.

- Pile Driving Modeling - Wave Equation Software
- Pile Driving Monitoring - Hardware & Software
- Pile Driving Analysis - Signal Matching Software

To prepare the pile for sensor attachment, provide a drill (and bit) of sufficient power, operated by either a DC battery (preferred) or a generator. A hammer drill is required for preparation of concrete piles.

1.4 Submittals and General Testing & Analysis Requirements See Tables 1 and 2 on the following page. The Engineer will respond to the Contractor regarding acceptability of submittals as soon as practical.

Table 1 - Schedule of Dynamic Pile Testing Submittals

Submittal Number	Submittal Item	Calendar Days	Event
1	Proposed independent dynamic pile testing consultant, and a listing of assigned personnel and their experience and qualifications.	45 Before	Start of Pile Driving Monitoring
2	Details of the hardware and software components, method of testing, and materials to be used.	45 Before	Start of Pile Driving Monitoring
3	Completed *Pile and Driving Equipment Data Form* (Figure 1 of this Special Note) and the results of wave equations analyses.	21 Before	Start of Pile Driving Monitoring
4	Preliminary Reports as defined in Section 3.1 of this Special Note.	1 After	Completion of Each Field Test
5	Summary Report(s) as defined in Section 3.2 of this Special Note.	10 After	Completion of All Field Tests

Provide all submittals and reports in .pdf format.

Table 2 - General Testing and Analysis Requirements

Item	Requirement	
Wave Equation Analysis	Minimum of 1 and sufficient additional analyses as needed to define performance for all combinations of piles, driving systems and subsurface conditions anticipated.	
Dynamic Testing Pile Resistance (i.e. Capacity)	Required Nominal Pile Resistance (i.e. Ultimate Pile Capacity) as shown in the plans and/or as directed by the Engineer.	
End of Initial Driving Test Frequency	Minimum of 1 production pile for each substructure or as directed by the Engineer during the final 25 feet of initial driving	
Beginning of Restrike Test Frequency	Minimum of 1 production pile for each substructure or as directed by the Engineer.	
Time Interval between End of Initial Driving and Restrike	Minimum of 3 days unless directed otherwise by the Engineer based on the criteria below.	
	Soil Type	**Time Delay Until Restrike**
	Clean Sands	1 Day
	Silty Sands	2 Days
	Sandy Silts	3 - 5 Days
	Silts and Clays	7 - 14 Days
	Shales	7 Days
Pile Driving Analyses using Signal Matching Techniques	For each End of Initial Driving Test and each Beginning of Restrike Test	

Perform testing and analyses in accordance with this table and ASTM D 4945, *High-Strain Dynamic Testing of Piles*.

2.0 TESTING AND ANALYSES

2.1 Preconstruction Wave Equation Analyses At least 21 calendar days before beginning pile driving monitoring submit to the Engineer the completed Pile and Driving Equipment Data Form (Figure 1 of this Special Note) and preconstruction wave equation analyses performed by the Dynamic Pile Testing Consultant in accordance with Table 2 in this Special Note and a summary report of the results. The required nominal resistance (i.e. ultimate capacity) is provided in the plans and/or elsewhere in the contract documents. Upon request, the Geotechnical Report for the structure can be provided.

The purpose of the wave equation analyses is to assess the ability of all proposed pile driving systems to install piles to the required nominal resistance (i.e. ultimate capacity) and the desired penetration depth within allowable driving stresses. Acceptability of the wave equation report and the adequacy of analyses will be determined by the Engineer. In the Wave Equation Summary Report, include:

a. drivability graph relating pile resistance (i.e. capacity), blow count and driving stresses to depth;
b. bearing graph relating the pile resistance (i.e. capacity) to the pile driving resistance which indicates blow count versus resistance (i.e. capacity) and stroke; and
c. constant resistance (i.e. capacity) analysis or inspectors chart to assist the Engineer in determining the required driving resistance at other field-observed strokes.

2.1.1 Approval by the Engineer of the proposed pile driving system will be based upon the wave equation analyses indicating that the proposed system can develop the specified pile resistance (i.e. capacity) at a pile driving rate of 2 to 10 blows per inch at the end of driving, and within allowable driving compressive stress of 90% of the yield stress of the piles. Provide preliminary pile driving criteria based on wave equation analyses and any anticipated resistance (i.e. capacity) changes after driving, set-up or relaxation, subject to revision based upon dynamic pile testing field measurements.

2.1.2 If any changes or modifications are made to the approved pile driving system, additional wave equation analyses in accordance with Section 2.1 of this Special Note will be required.

2.2 High-Strain Dynamic Pile Testing

2.2.1 Perform dynamic pile testing at the locations and frequency required in accordance with Table 2 in this Special Note.

2.2.2 Dynamic pile testing involves monitoring the response of a pile subjected to heavy impact applied by the pile hammer at the pile head. The testing will provide information on the driving stresses, pile resistance (i.e. capacity), structural integrity, and hammer efficiency.

2.2.3 Engage an independent dynamic pile testing consultant and qualified personnel in accordance with Section 1.2 of this Special Note. Prior to testing, the Engineer will review and approve the proposed independent dynamic pile testing consultant, the experience and qualifications of assigned personnel, details of the method of testing, a list of equipment, and the method of analysis of test results.

2.2.4 Perform all field testing and measurements in the presence of the Engineer or authorized representative.

2.3 Field Testing

2.3.1 Equipment Perform dynamic pile testing field measurements using equipment, software and recording equipment approved in accordance with Section 1.4 of this Special Note. Analyze the data collected at the end of initial driving and the beginning of restrike using approved signal matching techniques and software.

2.3.2 Monitoring During Driving During pile driving, instrument the piles and monitor them with testing equipment satisfying the requirements of Section 1.3 of this Special Note. Prior to lifting the pile to be dynamically tested, provide a minimum of 3 ft of clear access to 180 degree opposite faces of the pile for pile preparation then drill and prepare holes for sensor attachment. Sensors are usually attached near the pile top.

2.3.2.1 Install two sets of strain transducers and accelerometers near the top of each pile to be tested, and use a compatible measuring and recording system to record the data during driving.

2.3.2.2 Appropriately position and fix the equipment required to be attached to the pile to the satisfaction of the Engineer.

2.3.2.3 Use a pile driving hammer and other equipment capable of delivering an impact force sufficient to mobilize the specified pile resistance (i.e. capacity) indicated in the structure plans without damaging the pile.

2.3.2.4 Use the testing equipment to monitor pile stresses during driving to prevent pile damage and ensure pile integrity and resistance (i.e. capacity). If the testing equipment indicates overstressing or damage to the pile, immediately discontinue driving and notify the Engineer and propose a new pile driving system, modifications to existing system, or new pile installation procedures. Approval by the Engineer of any proposed changes to the pile driving system or pile installation procedures will be based upon the results of additional wave equation analyses in accordance with Section 2.1.2 of this Special Note.

2.3.3 Preparation of the Pile Head The preparation of the pile head for the application of dynamic test load may involve, where appropriate, trimming the head, cleaning, and building up the pile using materials that, at the time of testing, safely withstand the impact stresses. Provide an impact surface that is flat and at right angles to the pile axis.

2.3.4 Dynamic Measurement and Analysis Begin monitoring of pile driving when pile driving begins. Record and process the data immediately in the field by the pile driving monitoring equipment and software. Unless monitoring indicates that additional driving will damage the pile, continue pile driving and monitoring until both the specified pile tip elevation and the specified pile resistance (i.e. capacity) are reached. When the level of the sensors is within 1 foot of any obstruction endangering the survival of sensors or cables, halt driving to remove the sensors from the pile. If additional driving is required, remove the obstruction or splice the pile and reattach the sensors to the head of the next pile segment prior to resuming driving. For each pile tested, perform pile driving analysis using signal matching techniques for a selected blow at the end of driving (EOD) to determine the relative capacities from end bearing and skin friction along the pile.

2.3.4.1 Perform beginning of restrike (BOR) tests at the frequency indicated in Table 2 of this Special Note with the time interval between end of initial driving and beginning of restrike in accordance with Table 2 of this Special Note. During restrike, instrument and monitor the pile in a manner similar to that used during initial driving. For each restrike test, perform pile driving analysis using signal matching techniques for a selected blow from the beginning of restrike to determine the relative capacities from end bearing and skin friction along the pile.

2.3.4.2 Perform the restrike test with a warmed-up hammer by striking the pile a minimum of 10 blows unless testing equipment indicates overstressing or damage to the pile. If such overstressing or damage to the pile is indicated, immediately discontinue driving and notify the Engineer. In the event initial restrike testing indicates a pile resistance below the specified resistance, additional driving may be required as directed by the Engineer.

2.3.4.3 The Engineer may request use of pile driving monitoring equipment and software on additional piles if inconclusive results are obtained or unusual driving conditions are encountered.

2.3.4.4 Evaluate pile resistance and integrity based on the standard procedure used in practice.

2.3.4.5 Immediately provide tabular records of the dynamic pile testing field measurements obtained at the end of initial driving and at the beginning of restrike to the Engineer.

3.0 DYNAMIC PILE TEST REPORTS

3.1 Preliminary Dynamic Pile Test Reports Submit a preliminary test report for each pile tested for review by the Engineer. In the reports, include tabular as well as graphical presentation of the dynamic test results versus depth and proposed pile driving criteria for the additional piles to be installed at the substructure unit of the pile tested. Also include the following:

a. The maximum force applied to the pile head.
b. The maximum pile head velocity.
c. The maximum energy imparted to the pile.
d. The assumed soil damping factor and wave speed.
e. Static resistance (i.e. capacity) estimate.
f. The maximum compressive and tensile forces in the pile .
g. Pile integrity.
h. Blows per inch.
i. Stroke.
j. Summary results of pile driving analysis from selected blow analyzed using signal matching techniques and software.

The Engineer will use the results of the preliminary reports to provide pile driving criteria for production piles to the Contractor.

3.2 Dynamic Pile Test Summary Report Submit a summary report of all piles tested on each structure for review by the Engineer. (Where phased construction is used it may be desirable to provide different reports for each phase. In such cases, the contractor should seek the approval of the Engineer.) In the report, include the results of hammer performance, pile driving stresses, and pile resistance during initial driving and restrike for all piles tested. Also include the following:

a. Identification of the structure, including: County, Route, Crossing, and Drawing Number.
b. Date of testing and date of pile installation.
c. Pile identification number and location.
d. All information given in preliminary reports as follows:
    1. Length of pile below the surface.
    2. Total length of pile, including projection above the surface at time of test.
    3. Length of pile from instrumentation position to tip.
e. Hammer type, drop, and other relevant details.
f. Blow selected for signal matching analysis.
g. Maximum compressive and tensile stresses, stroke, and resistance (i.e. capacity) versus penetration depth.
h. Temporary compression.
i. Pile integrity and location of damage, if any.
j. Force/velocity versus time trace.
k. Force/velocity match curve.
l. Resistance distribution along the pile.
m. Detailed graphical and tabular results from blow analyzed using signal matching techniques and software.

4.0 INCIDENTAL EQUIPMENT

Not Applicable

5.0 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Dynamic pile testing will be measured per each. Payment for each restrike test performed will be in addition to payment for each test performed at the end of initial driving. Payment for each test will include pile driving monitoring and pile driving analysis performed. Payment for the above described work, including all material, equipment, tools, labor and any other incidental work necessary to complete this item.

Payment will be made under:

Pay Item	**Pay Unit**
Dynamic Pile Testing	Each

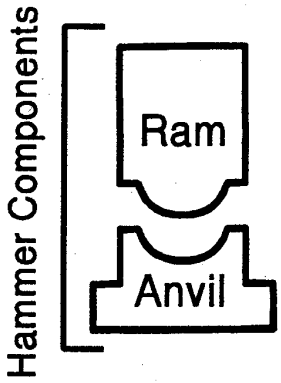
Contract No.: _____ Structure Name and/or No.: _____

Project: _____ _____

_____ Pile Driving Contractor or Subcontractor: _____

County: _____ _____

(Piles driven by)



Hammer

Manufacturer: _____ Model No.: _____

Hammer Type: _____ Serial No.: _____

Manufacturers Maximum Rated Energy: _____ (ft. - lb.)

Stroke at Maximum Rated Energy: _____ (ft.)

Range in Operating Energy: _____ to _____ (ft. - lb.)

Range in Operating Stroke: _____ to _____ (ft.)

Ram Weight: _____ (lb.)

Modifications: _____

_____

_____

Striker Plate

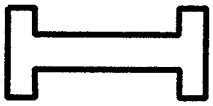
Weight: _____ (lb.) Diameter: _____ (in.)

Thickness: _____ (in.)

Hammer Cushion

	Material #1	Material #2 (for Composite Cushion)
Name:	_____	_____
Area:	_____ ($in.^2$)	_____ ($in.^2$)
Thickness/Plate:	_____ (in.)	_____ (in.)
No. of Plates:	_____	_____

Total Thickness of Hammer Cushion: _____



Helmet (Drive Head)

Weight: _____ (lb.)

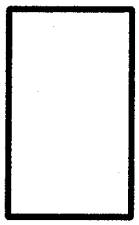
Pile Cushion

Material: _____

Area: _____ ($in.^2$) Thickness/Sheet: _____ (in.)

No. of Sheets: _____

Total Thickness of Pile Cushion: _____ (in.)



Pile

Pile Type: _____

Wall Thickness: _____ (in.) Taper: _____

Cross Sectional Area: _____ ($in.^2$) Weight/Foot _____

Ordered Length: _____ (ft.)

Design Load: _____ (kips)

Ultimate Pile Capacity: _____ (kips)

Description of Splice: _____

_____

Driving Shoe/Closure Plate Description: _____

_____

Submitted By: _____ Date: _____

Telephone No.: _____ Fax No.: _____

Figure 1
Pile and Driving Equipment Data Form (From FHWA-HI-097-014)

SPECIAL PROVISION FOR WASTE AND BORROW SITES

The contractor is advised that it is their responsibility to gain U.S. Army Corp of Engineer's approval before utilizing a waste or borrow site that involves "Waters of the United States". "Waters of the United States" are defined as perennial or intermittent streams, ponds or wetlands. Ephemeral streams are also considered jurisdictional waters, and are typically dry except during rainfall, but have a defined drainage channel. Questions concerning any potential impacts to "Waters…" should be brought to the attention of the appropriate District Office for the Corps of Engineers for a determination, prior to disturbance. Any fees associated with obtaining approval from the U.S. Army Corp of Engineer or other appropriate regulatory agencies for waste and borrow sites is the responsibility of the contractor.

01/01/2009

UTILITY NOTES TO BE INCLUDED IN THE PROPOSAL
SPECIAL NOTES FOR UTILITY CLEARANCE
IMPACT ON CONSTRUCTION

Daviess County
2-287.10
FD 52 030 659741 01U
Owensboro Bypass (East Corridor)

The following is a list of utility companies involved on this project, the contractor is advised to use caution and call **BUD** prior to beginning work.

Atmos Energy- Will have their facilities relocated by the letting.

Kenergy Electric Will have their facilities relocated by the letting.

Kentucky Utilities – Will have their facilities relocated by July 30th 2011.

OMU Electric – Has finished their relocation work.

AT& T – Has Finished their relocation work.

Marathon Oil - Will have their facilities relocated by June 30th 2011.

Time Warner – Will have their facilities relocated by the letting.

Owensboro Regional Water Resource Agency- Has included their relocation work into the roadway contract.

OMU Water - Has included their relocation work into the roadway contract.

PROTECTION OF UTILITIES

The location of utilities provided in the contract documents has been furnished by the facility owners and/or by reviewing record drawings and may not be accurate. It will be the roadway contractor's responsibility to locate utilities before excavating by calling the various utility owners and by examining any supplemental information supplied by the Cabinet. If necessary, the roadway contractor shall determine the exact location and elevation of utilities by hand digging to expose utilities before excavating in the area of a utility. The cost of repair and any other associated costs for any damage to utilities caused by the roadway contractor's operations shall be borne by the roadway contractor.

The contractor is advised to contact the **BUD one-call system at 1-800-752-6007** at least two working days prior to excavating. Contractor should be aware that owners of underground facilities are not required to be members of the BUD one-call system. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the project area.

REGIONAL WATER RESOURCE AGENCY

U.S. 60 BYPASS EXTENSION PLAN, PHASE II

DAVIESS COUNTY, KENTUCKY

SPECIAL CONDITIONS

&

PROJECT SPECIFICATIONS

FOR WORK SHOWN ON PLAN SHEETS
U1-RWRA THRU U17-RWRA

SPECIAL CONDITIONS
FOR SANITARY SEWER FACILITIES

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PAR. NO.

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24. CONSTRUCTION NOTIFICATION

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26. REGIONAL WATER RESOURCE AGENCY STANDARD MATERIALS

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28. BEDDING

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31. COVERING TRENCHES

32. EXISTING FORCE MAIN CLOSURES

33. FLOWABLE FILL

SPECIAL CONDITIONS

1. ***COORDINATION OF WORK AND MAINTENANCE OF EXISTING FACILITIES***. The Contractor will be required to coordinate all his work with the Regional Water Resource Agency (RWRA). Since all of the work involves the relocation of existing facilities, some disruption of normal operations will be required to take abandoned sections of piping off line and place relocated or reconstructed facilities in service. The Contractor will be responsible for contacting RWRA and scheduling, with RWRA approval, the time for all work that will require taking pump stations off line. RWRA will let the Contractor know at the time the work is scheduled the length of time the Contractor has to accomplish the work. It will be the Contractor's responsibility to do all necessary preparatory work that can be done prior to the tie-in work. The Contractor will be required to have on site at the scheduled time for the tie-in work the necessary labor force, equipment, tools, materials and supervisory staff to accomplish the work in the time frame established by RWRA. Work shall proceed on each end of a section of force main simultaneously to minimize the amount of time a pump station is off line. The Contractor will only be allowed to take one 20" force main off line at a time to make the connection to the new main. The reconnected main must be back on line and operating satisfactorily before the other 20" force main can be taken out of service and the new section connected. One 20" force main must be in service at all times.

2. ***FIELD CONDITIONS AND LOCATION OF EXISTING UTILITIES.*** The Contractor should be aware that the location of existing utilities and underground structures was determined from the best available plans and field locations by utility company representatives. It will be the Contractors responsibility to contact all utility companies either through the "Before U Dig" (BUD) service or individually to locate their facilities in the construction area (both horizontally and vertically) prior to construction work beginning. The actual locations may vary from those shown on the plans. The Contractor shall unearth the force mains at all tie-in locations prior to beginning any line work and determine the exact elevation of each in order that any necessary adjustments can be made to pipe grades, tie-in lengths, locations, etc. Should the Contractor find that the conditions differ significantly from those shown on the plans, the KTC Resident Engineer and the Engineer shall be notified of the altered conditions so that adjustments can be made to the plans, if necessary.

3. ***DAMAGE TO UTILITIES***. Any damage to existing utilities incurred during construction shall be the sole responsibility of the Contractor. In the event that any utility is damaged, repairs must be carried out on an around-the-clock basis until the utility is restored. All repairs shall be made at the direction of the utility company, and in accordance with their specifications.

4. ***WORK AREA AND PROPERTY DAMAGE***. The Contractor shall limit his work to the road right-of-way and construction and utility easements. The Contractor will not be allowed to work, park, store materials or travel on private property without written permission from the property owner. Any damage to private property caused by the Contractor's work force, equipment or construction operations shall be the sole responsibility of the Contractor and any associated costs shall be borne by the Contractor only.

The Contractor will be completely responsible for damages to shrubs, plants, trees, etc. and will replace or pay for any damaged plants or property that is located on private property at his expense. Any damage to roadways, sidewalks, fences, etc. will be repaired immediately by the contractor. Any fence damaged by the Contractor's equipment or personnel shall be repaired or replaced at the Contractor's expense and repairs shall be equal to or better than the original condition.

5. ***MAINTENANCE OF TRAFFIC***. The Contractor shall be responsible for maintaining traffic flow while work is in progress. When it becomes necessary to have equipment on or near enough to roadway surfaces to interfere with traffic flow, the Contractor shall have adequate signing and flagging personnel as prescribed by the Kentucky Transportation Cabinet, Division of Highways, to adequately protect the public and to keep traffic flowing. Should it become necessary to close an entrance road, or driveway for a period of time, it will be the Contractor's responsibility to keep steel plates of sufficient strength on hand so that they may be placed over the trench to allow passage of traffic in case of an emergency. Further, it will be the Contractor's responsibility to keep roads open at night and on weekends and holidays during the course of the project unless otherwise approved by the Kentucky Transportation Cabinet.

6. ***OPEN-CUT INSTALLATION OF 30" STEEL CASING PIPE***. When the Contractor is ready to begin the installation of the two 30" steel casing pipes across the U.S. 60 Bypass , RWRA shall be notified in order that the existing 18" HDPE force main (the main closest to the new installation) can be taken out of service. This will prevent any problems if the existing 18" force main should be damaged or fall into the excavated trench. Upon completion of the casing pipe installation, the 18" HDPE force main will be repaired so that it can be placed back into service if required. When the new (relocated) force mains are completed, tested and placed in service, the existing 18" force main along with the two existing 20" force mains will be taken out of service and either excavated and removed or abandoned in place as called for on the plans.

7. ***SURFACE RESTORATION***. The utility contractor will be required to restore ground surfaces by tilling, liming, fertilizing, seeding and mulching at the following locations:

1. The utility easement outside the proposed right-of-way from Station 549+70 ± to Station 557+50 ± (mainline stationing) a length of approximately 780 feet. This easement will contain the two 20" relocated force mains.

2. The utility trench along Access Road #1 from Station 29+00 ± to Station 43+50 ± a length of approximately 1,525 feet. Two 20" relocated force mains will be installed in this location.

3. The utility easements outside the proposed right-of-way at the force main crossing at Station 671+11.30 (mainline stationing) on both the east and west side of the right-of-way. The total length will be approximately 710 feet. The easement will contain either a 12" force main or a 6" force main. Additionally, all areas disturbed by manhole installations (4 at this location) will also be restored.

The restoration will consist of tilling the surfaces to be restored after the trenches have been compacted or allowed to settle, adding and incorporating agricultural lime and fertilizer of the type and in the amounts called for in the specifications, spreading and incorporating the specified seed mixture in the specified amounts and mulching the restored area.

All surface restoration within roadway right-of-ways will be performed by the highway contractor. The utility contractor shall verify this with the highway contractor.

The cost of all surface restoration performed by the utility contractor shall be merged and incorporated into the per linear foot price for various size force mains.

8. ***WATER POLLUTION CONTROL***. The utility contractor shall coordinate water pollution control measures with the highway contractor. The highway contractor shall provide all water pollution control measures (silt fences, sediment basins, silt traps, temporary ditches, etc.) for work within the existing and proposed right-of-ways. Work in utility easements will also require water pollution to be controlled. If measures are not shown on the highway erosion control plans for these areas, it will be the utility contractor's responsibility to devise a plan and submit it to the resident engineer for his review and approval. The plan should employ the same methods and procedures as used in the highway erosion control plans. The utility contractor shall incorporate the cost for any water pollution (erosion) control work into his per foot price for the installation of the various size force mains.

9. ***STANDARD SPECIFICATIONS***. All references to standard specifications such as the Kentucky Transportation Cabinet's "Standard Specifications for Road and Bridge Construction" are hereby referenced to the latest edition. The Contractor shall meet the requirements of the Public Improvement Specifications for Sanitary Sewers found on the internet at www.iompc.org/documents/P_PDFS/p05.pdf unless otherwise specified by these plans and specifications.

10. ***PERMITS***. It will be the responsibility of the Contractor to obtain any permits which may be required by the City, County or State on this project. The Engineer will secure permits for work in road right-of-way from the state and approval from the Division of Water for sanitary sewer system construction.

11. ***SAFETY***. The Contractor shall conduct all of his operations and maintain the work area in a safe manner to protect the public from injury. It will be his responsibility to provide all necessary signing, flagmen, barricades warning lights, etc., as required by KYTC to warn the public of the construction operations and protect them from injury.

12. ***SALES TAX***. The Bidder will be responsible to pay any applicable sales taxes on any materials purchased.

13. ***SHOP DRAWINGS***. The Contractor shall furnish seven (7) copies of shop drawings to the Engineer for review prior to having materials and equipment shipped. Shop drawings for this project shall include but are not limited to the following:

1. Polyvinyl Chloride Pipe
2. Ductile Iron Pipe Fittings

3. Steel Casing Pipe
4. Casing Pipe End Seals
5. Casing Pipe Spacers
6. Tracer Wire and Warning Tape
7. Air Release Valves
8. Manhole Castings
9. Precast Manholes
10. Restraints

14. ***REMOVAL OF EXISTING FORCE MAINS***. It will be the Contractor's responsibility to remove the three (3) existing force mains from Station 549+70 to Station 565+00 as indicated on the plans. All PVC and HDPE force main removed will become the property of the Contractor and be removed from the project site. Trenches created when the existing force mains are removed shall be backfilled with excavated material and mechanically compacted to insure against settlement from Station 549+70 to Station 557+50. Trenches created from Station 557+50 to Station 563+00 will be refilled with excavated material and rolled in. No special compaction effort will be required in this section. Trenches created from Station 563+00 to Station 565+00 will be backfilled with excavated material and mechanically compacted to insure against settlement. The station numbers indicated are from the mainline stations. The different areas (to be backfilled and compacted or backfilled and rolled in) are indicated on the plan sheets.

The force mains shown on the utility sheets at Sta. 665+00 to Sta. 680+00 and Frontage Road #2 Sta. 40+00 to Sta. 50+00 can either be removed or abandoned in place. If the Contractor chooses to abandon either or both of them in place, he will be required to safeload them with flowable fill. If he chooses to remove them, he will be required to unearth them, remove the pipe, refill the trenches and compact the trenches in 12" lifts when located within the construction limits or roll the fill in if located outside the construction limits.

15. ***TRACER WIRE AND WARNING TAPE***. Tracer wire shall be stubbed up into all manholes and air release pits to within three (3) inches of the ground surface. Tracer wire shall be properly spliced at all locations where it is joined together. The splice shall be made as per the detail on the plans. Force main warning tape shall be installed at 12" to 24" below finished grade along the entire length of the main.

16. ***CLEANUP***. Sewer and force main relocation work may precede reconstruction of the roadway, cleanup work will be kept at a minimum. The Contractor will be responsible for collecting and disposing of all unused materials and the removal of all tools and equipment from the job site. All trenches shall be leveled (either filled or excess removed) prior to final completion and acceptance so that they may be traversed by equipment (particularly mowing equipment). Trenches shall be refilled as necessary if settlement occurs. The cost of cleanup shall be merged into the Contractor's bid price for pipe installation.

17. ***KENTUCKY TRANSPORTATION CABINET'S RESIDENT ENGINEER***. The ultimate authority on the project shall be the Kentucky Transportation Cabinet's Resident Engineer. All questions shall be directed to the Resident Engineer who will in turn check with the Utility Design Engineer for resolution of the question. The Design Engineer will submit the answer or proposed solution to the Resident Engineer who will pass it on to the Contractor.

18. ***WORK INTERPRETATION***. All work shown on the plans or called for in the specifications shall be considered part of this contract even if a specific bid item is not included in the bidding schedule. The cost of any work for which there is no specific bid item shall be merged into other bid items.

19. ***ROAD CLOSING***. If it should become necessary to close any road or to close a lane on any road, the Contractor shall coordinate the closing with the Resident Engineer, the Daviess County Sheriff's Department and the Kentucky State Police.

20. ***AIR RELEASES***. The Air Release Manholes will have an air release/vacuum valve inside which will be braced to the interior wall of the manhole. The air release/vacuum valves will be included as part of the bid items for the manholes.

21 ***REGULATIONS.*** It is the Contractor's responsibility to comply with all local, state and federal regulations pertaining to the installation of all facilitates. All materials, workmanship and requirements shall be in accordance with the governing utility agency.

22. ***WORK ITEM DESCRIPTIONS***. All work including installation an furnishing materials associated with the installation of the force mains as shown on the plans and called for in the specifications shall be included in the Contractor's price for the following described items of work whether specifically called for or not. A general descriptive summary of each item of work follows:

- Furnish and install various size force mains, including all labor, materials, tools and equipment necessary for excavation (unclassified), bedding, backfilling, laying and jointing pipe, necessary fittings and couplings, maintaining trenches in a safe condition, handling groundwater, maintaining roadways in a safe, passable condition when construction operations are not in progress, necessary flagging and signing, joint restraints where called for, pressure testing, removal of abandoned pipes and filling and compacting trenches, safeloading abandoned force mains when left in place, surface restoration (where required), water pollution control measures, etc., complete in place and ready for use.
- Concrete caps on force mains including furnishing and finishing concrete, any required forming, protecting, etc., complete in place and ready for use.
- Furnish and install Steel Casing Pipe (minimum wall thickness as per specs) by open cut including all labor, materials, tools and equipment necessary for excavation (unclassified), jointing casing pipe, handling ground water encountered, furnishing and installing casing pipe spacers and end seals, backfilling, bedding, maintaining roadways in a safe and passable conditions when construction operations are not in progress, necessary signing and flagging, etc., complete in place and ready for use.
- Connection to existing force mains, including all labor, materials, tools and equipment necessary for excavation, handling sewage flow, cutting pipe, necessary fittings and restraints, etc., complete in place and ready for use.
- Removal of Existing Manholes shall include all labor, tools and equipment necessary to remove the manholes from the construction site.

- Cut and plugging of Existing Force Mains including all labor, materials, tools complete in place.
- Air Release and Check Valve Manholes, including excavation (unclassified), air release/vacuum valves, check valve, bracing, stone, precast base and barrel sections, precast cone sections, collars, rims, lids, steps, etc., all labor, tools and equipment necessary to construct the manhole, etc., as per detail, complete in place and ready for use.
- Adjustment to existing Manholes include all labor, materials, tools and equipment necessary to raise the manhole frames to the proper elevation to match the proposed grade.

23. ***FINAL MANHOLE CASTING GRADE***. The Contractor shall adjust existing manhole tops that are in the construction area to the proper grade by using barrel sections, collars or whatever is necessary to achieve the final grade.

24. ***CONSTRUCTION NOTIFICATION.*** The Contractor shall coordinate each force main tie-in with the following person at least 1 week prior to making any tie-ins to existing facilities:

Mr. Dean Behnke (Regional Water Resource Agency) 687-8452

A specific date and time will be agreed to by both parties at that time. RWRA personnel shall be responsible for shutting down any facility that would affect service to the public, such as pump stations.

25. ***PRESSURE AND LEAKAGE TEST.*** The Regional Water Resource Agency (RWRA) and/or their designated representative must be present during the testing of the force mains.

26. ***REGIONAL WATER RESOURCE AGENCY STANDARD MATERIALS***. The Regional Water Resource Agency (who will take this system over for operation and maintenance after construction) has standardized on several items in their system and only use the products of certain manufacturers. These items and the required manufacturer are listed below:

Air Release/Vacuum Valves - ARI
No. 1140 Traffic Manhole Frame and Type "A" Cover - John Bouchard & Sons

27. ***REMOVED MATERIALS.*** Any materials or items of equipment called to be removed by the Contractor as a part of the contract work shall become the property of the Contractor. It shall be removed from the project by the Contractor and be properly disposed of.

28. ***BEDDING.*** Force mains to be installed on this project (and their casing pipes installed by open cut) will be bedded and backfilled as per the detail in the plans and Section 0050 of the project specifications (except that the initial backfill will be Class I material also as shown in the detail). The force main and casing pipe will be laid on a 4" bed of Class I material making sure that bell holes are formed so that the entire length of the pipe barrel is resting on the bedding material. Class I material will then be placed on each side of the pipe up to the springline and densified by passing a plate vibrator over the bedding a minimum of three times to ensure adequate support for the pipe haunches. For pipes 15" in diameter and larger, the bedding shall be placed in two lifts of equal depth and each lift will be densified in the manner aforestated. Initial backfill will then be installed by placing Class I material around

and over the force main (or casing pipe) to a point 6" above the top of the pipe. The initial backfill will not require densification. The remainder of the backfill above the initial backfill shall be excavated earth in areas not under pavement (Case I) and shall be Class II material compacted to 95% Modified Proctor Density (in 6" loose measure lifts) to the subgrade elevation under pavement (Case II).

29. ***RESTRAINTS.*** The Contractor shall use bell restraints on the first two joints past a bend on the proposed side of the force main and meg-a-lug restraints on each side of the bend. In addition, a 4"x 4" x 3/8" by 5' long steel angle iron will be driven down behind each fitting. No concrete thrust blocking will be required. The Contractor shall use bell restraints on all joints on each side of fittings for the distance indicated on the plans. The bell restraints shall be placed on the existing force main side of fittings also where tie-ins are made. The existing force main shall be adequately exposed to its top to determine where joints are located for the specified distance. Disturbance to the existing force main shall be kept to a minimum.

30. ***FITTINGS.*** All fittings for force mains shall be mechanical joint (unless flanged fittings are specifically called for) ductile iron and coated internally with Protecto 401 ceramic epoxy coating.

31. ***COVERING TRENCHES***. Should it become necessary to leave a trench excavation in or near a roadway surface open over night, the Contractor shall provide steel trench plates of adequate size and strength to support traffic common to the roadway. The plates shall be secured over the trench to insure that they remain in position.

32. ***EXISTING FORCE MAIN CLOSURES.*** The Contractor shall submit a plan indicating how he intends to close the existing force mains on this project to the Regional Water Resource Agency prior to any installation of proposed force mains.

33. ***FLOWABLE FILL.*** Sanitary sewer force mains which are to be abandoned and not removed on this project shall be safe loaded with flowable fill per the latest edition of the Kentucky Transportation Cabinet's Supplemental Specifications to the Standard Specifications for Road and Bridge Construction. The exception to this will be the two 20" and one 18" force mains along the existing Bypass right-of-way (Access Road #1 from Station 28+00 ± to Station 43+50 ±). These force mains will be left in place with their ends plugged but will not require safe loading.

Flowable fill **will not** be a pay item. It will be paid for as a part of the per linear foot unit price for force main piping. It will be the Contractor's responsibility to determine for himself exactly how much safe loading will be required.

SECTION 0052

POLYVINYL CHLORIDE (PVC) PIPE

SEWAGE FORCE MAIN

PART 1 - GENERAL

1.01 WORK INCLUDED

The Contractor shall furnish all labor, material, and equipment necessary to install force main piping together with all appurtenances as shown and detailed on the Drawings and specified herein.

1.02 SUBMITTALS

A. GENERAL

1. The Contractor shall furnish manufacturer's product data information which gives sufficient information to insure that the material and equipment furnished meets the requirements of these specifications.
2. The Contractor shall furnish manufacturer's detailed drawings which indicate sizes and dimensions of materials and equipment furnished.
3. The Contractor will furnish any special or detailed drawings which are necessary to describe the method that the materials or equipment are to be installed.

B. SHOP DRAWINGS

1. PVC pipe and joints including gaskets
2. Ductile iron fittings, both flanged and mechanical joints, including interior and exterior coatings/linings.
3. Joint restraint systems.

C. TEST REPORTS

1. Submit certificates of compliance for pipe, fittings, gaskets, coatings for manufacturer run tests.
2. Furnish reports of the field hydrostatic tests conducted by the Contractor.

PART 2 – PRODUCTS

2.01 PIPE AND FITTINGS

A. POLYVINYL CHLORIDE (PVC) PIPE

1. PVC force main pipe with diameters 4 inches through 12 inches shall conform to the requirements of AWWA C900 Standard Specifications for PVC Pressure Pipe. The minimum pressure class allowance shall be 150 p.s.i. (DR 18). The pipe shall have a minimum cell classification of 12454 A or B as defined in ASTM D-1784 providing a hydrostatic design basis (HDB) of 4,000 p.s.i. All material used in the manufacture of the pipe shall be virgin material
2. PVC force main pipe with diameters of 14 inches through 36 inches shall conform to the requirements of AWWA C905 Standard Specifications for PVC Pressure Pipe. The minimum pressure class allowance shall be 150 p.s.i. (DR 25). The pipe shall have a minimum cell classification of 12454 A or B as defined in ASTM D-1784 providing a hydrostatic design basis (HDB) of 4,000 p.s.i. All material used in the manufacture of the pipe shall be virgin material.
3. Joints shall be push on bell and spigot type using elastomeric ring gaskets conforming to ASTM D-3139 and F-477. The gaskets shall be securely fixed into place in the bells so that they cannot be dislodged during joint assembly. The gaskets shall be of a composition and texture which is resistant to common ingredients of sewage and industrial wastes, including oils and ground water, and which will endure permanently under the conditions of the proposed use.
4. Pipe shall be furnished in lengths of not more that 20 feet. The centerline of each pipe section shall not deviate from a straight line drawn between the centers of the openings at the ends by more that 1/16-inch per foot of length.
5. PVC pipe shall not have a filler content greater than 10% by weight relative to PVC resin in the compound.
6. PVC pipe shall be clearly marked at intervals of 5 feet or less with the manufacturer's name or trademark, nominal pipe size, PVC cell classification, DR pressure class rating, AWWA C-900 or C-905 and other markings as required by the applicable ASTM or AWWA specification.
7. Five (5) copies of directions for handling and installing the pipe shall be furnished to the Contractor by the manufacturer at the first delivery of pipe to the job. PVC pipe installation shall conform to these specifications and the manufacturer's recommendations.
8. All pipe shall be provided with home marks to insure proper gasket seating.
9. Do not install any pipe contaminated with a petroleum product, either inside or outside.
10. Do not install any pipe that shows evidence of exposure to sunlight, age, surface deterioration, or other physical damage. The decision of RWRA or its representative shall be final as to the acceptability of the pipe to be installed.

11. Pipe shall be stored, if possible, at the job site in unit packages provided by the manufacturer. Caution should be exercised to avoid compression damage or deformation to bell-ends of the pipe. Pipe shall be supported uniformly while being stored and not stacked with the weight on the bells. All pipe shall be stored in such a way to protect it from exposure to direct sunlight. The pipe shall be covered with an opaque material while permitting adequate air circulation above and around the pipe. Gaskets shall be stored in a cool, dark place out of the direct rays of the sun, preferable in the original containers. If pipe furnished is older that 24 months, the Owner will require information on the location and method of storage since its manufacture. The Owner reserves the right to reject pipe older that 24 months or to require retesting and re-certification by the pipe manufacturer.

B. FITTINGS

1. Ductile iron fittings (underground) shall be mechanical joint and shall have a minimum rated working pressure of 250 p.s.i. The fittings shall have bell ends with gaskets specifically designed for cast iron equivalent outside diameter PVC pipe. All fittings will be mechanically restrained.
2. Ductile iron fittings in vaults, pits, structures, etc., shall be flanged and have a minimum rated working pressure of 250 p.s.i. Flanges shall be in accordance with ANSI B16.1 with respect to dimensions and drilling.
3. Restraining devices will be utilized at all bends, tees, plugs, reducers and other fittings to provide lateral or vertical support (depending on the orientation of the change in direction). Concrete thrust blocks shall only be used if approved by the Owner. Joint restraint devices for ductile iron mechanical joint fittings to PVC pipe shall be EBAA Iron, Inc., Series 2000 PV, Uniflange, Romac Industries or approved equal. Bell joint restraint devices for PVC push on joint pipe shall be EBAA Iron, Inc., Series 1600 for C900 pipe and Series 2800 for C905 pipe or approved equal.
4. All ductile iron fittings shall have the manufacturer's outside asphaltic coating and an interior lining of ceramic epoxy. The ceramic epoxy lining shall be a high build multi-component amine cured Novalac epoxy polymeric coating/lining equal to Protecto 401 as manufactured by Vulcan Painters, Inc. of Birmingham, AL. The coating/lining shall have a permeability rating in accordance with Method A of ASTM E-9666. The surface preparation shall remove all loose laitance, form oils and other loose materials and include a "brush blast" per SSPC SP-7. The coating and lining shall be applied in accordance with the manufacturer's requirements and have a minimum dry film thickness of 40 mils.

PART 3 – EXECUTION

3.01 GENERAL

A. The Contractor shall install all the pipe closure sections, fittings, valves and appurtenances shown on the approved plans, including bolts, nuts, gaskets and joining materials. All hardware is to be stainless steel.

B. The Contractor shall excavate sufficiently in advance of pipe laying operations to enable the alignment and profile to be revised to clear existing utilities and to align with existing connection points.

C. PVC pipe which has been gouged shall not be used. PVC pipe which has received minor scratches during handling may be used solely at the discretion of the Owner.

D. Before being placed in position, the pipe fittings and accessories shall be cleaned and shall be maintained in a clean condition.

E. The Contractor shall maintain the interior of the pipe clean and free from foreign materials. At all times when the work of installing pipe is not in progress, all openings into the pipe and the ends of the pipe in the trench shall be kept tightly closed to prevent the entrance of animals and foreign materials. To prevent unwanted water intrusion, open ends of the pipe shall be closed temporarily with a watertight bulkhead.

3.02 INSTALLATION

A. Proper care shall be used to prevent damage in handling, moving and placing the pipe. Tools and equipment satisfactory to the Owner will be provided and used by the Contractor.

B. The pipe shall not be handled in a manner that will cause bruises, cracks, or other damage. Any material damaged in the course of the installation shall be identified and removed from the job site.

C. All pipe, fittings, valves, and other pipeline materials shall be lowered into the trench in a manner that prevents damage. Under no circumstances shall pipe, fittings or any other materials be dropped or dumped into the trench.

D. The pipe shall be hoisted with mechanical equipment using a cloth belt sling or a continuous fiber rope which avoids scratching the pipe. A chain is not permitted.

E. The full length of each section of pipe and fittings shall rest solidly on the pipe bed with recessed excavation to accommodate bells, joints and couplings. Anchors and supports shall be provided where necessary and where indicated on the drawings for fastening work into place.

F. Wood support blocking will not be permitted.

G. Bell and spigot pipe shall be laid with the bell-ends pointing in the direction of laying. Pipe shall be graded in straight lines taking care to avoid the formation of any dips or low points. Joints shall be installed in accordance with the manufacturer’s recommendations.

H. The maximum deflection of any joint shall be in accordance with the manufacturer's recommendations. The pipe layout for curved alignments using 20-foot pipe lengths with bell-end or coupling shall also be as recommended by the manufacturer.

I. Pipe installation for straight and horizontal or vertical curve alignments shall be as described below. In no case shall the pipe be bent between couplings, nor shall deflection be made at a point without the use of a deflection coupling.

J. Installation tolerances for the pipe shall not vary more than 0.15 foot horizontally or 0.1 foot vertically from the alignment and elevations shown on the approved plans.

K. Install PVC pipe such that the indelible identification strip markings on each pipe section are continuously aligned for the total length of the pipeline being installed. Orient the strip marking upward to the 12 o'clock position (top) of the trench opening.

L. Assemble the pipe joint using the lubricant supplied by the manufacturer. Insert the spigot end into the bell or coupling to the proper insertion mark. Check that the elastomeric ring has not left the groove during assembly by passing a feeler gauge around the completed joint.

M. Pipe shall be cut by means of saws, power driven abrasive wheels or pipe cutters which will produce a square cut. After cutting and before insertion into a PVC bell-end, the end of the pipe shall be beveled using a beveling tool, portable type sander or abrasive disk. When a PVC pipe is to be inserted into a mechanical joint fitting, the end shall be left square or made square by cutting off the beveled end.

N. The pipe shall have a minimum cover of 36 inches from finished grade unless specifically required to have less on the approved plans or unless approved by the Owner or his representative on the project.

O. The type of backfill and method used to install backfill including preparation of bedding, initial backfill and final backfill shall be in conformance with section of these specifications entitled "Excavation, Backfilling, and Compacting for Utilities".

3.03 TESTING

A. A hydrostatic test of the entire length of the pipeline will be performed by the Contractor to insure the integrity of the pipe, joints and the construction process. All labor, tools, materials and equipment necessary to perform the test will be furnished by the Contractor. The cost of testing shall be a part of the unit price bid for furnishing and installing the force main.

B. Prior to performance of the test, the pipeline shall be filled with water and all air expelled through the air release valves installed at the high points in the main.

C. The cost of water required for the hydrostatic test will be the Contractor's responsibility and will be a part of the per foot cost for the force main.

D. When in the opinion of the Owner's representative, all air has been expelled from the line, the Contractor shall pressurize the line to a test pressure 50% above the systems maximum anticipated operating pressure or at a minimum 100 p.s.i., whichever is greater. After the specified pressure has been reached, the pump shall be stopped and valved off from the pipeline. The entire length of line shall be checked for any visible leaks and if any are found they shall be promptly repaired. The installation will be considered acceptable when the specified test pressure has been maintained without loss for a period of not less than two hours or until the Engineer has inspected and approved the test section, whichever is longer. Should the test fail, the Contractor shall make all necessary repairs and rerun the test as many times as is necessary until the system meets the above requirements.

END OF SECTION

SECTION H

GENERAL SPECIFICATIONS

CHECK VALVES

TABLE OF CONTENTS

1. **GENERAL**: This specification shall cover iron-body, bronze-mounted, swing check valves in sizes 2 inches through 24 inches in diameter. The valves shall be suitable for use in approximate level settings on buried water distribution pipelines. The valves shall meet the requirements of AWWA Standard C508-76, "Swing Check Valves for Ordinary Waterworks Service".

2. **VALVE PRESSURE RATING**: For valves 12 inches and smaller in diameter, the design working pressure shall be 175 psi and the test pressure shall be 350 psi. For valves 14 inches and larger, the design working pressure shall be 150 psi and the test pressure shall be 300 psi.

3. **INFORMATION FURNISHED BY THE MANUFACTURER**: The manufacturer shall submit for review by the Engineer seven sets of valve drawings indicating principle dimensions, construction details and materials used for all parts of the valve. There shall also be included a parts list in sufficient detail to serve as a guide in the assembly and disassembly of the valve as well as in ordering repair parts. All valves furnished on the project shall be in accordance with the reviewed shop drawings.

4. **MATERIALS**: All materials used in the manufacture and construction of valves called for in these specifications shall conform to the standards designated for each material listed.

(a) Iron Castings - Cast iron shall equal or exceed the requirements of ASTM A126, Class B. Malleable-iron castings shall conform to ASTM A47, grade 32510 or ASTM A197. Ductile iron castings shall conform to ASTM A395 or ASTM A536.

(b) Brass or Bronze - Brass or Bronze shall equal or exceed the requirements of the following:

i. Components of brass or bronze shall be made only to recognized ASTM or Copper Development Association alloys.

ii. The chemical and physical components shown below shall apply.

Grade of Bronze	Minimum Yield Strength (psi)	Minimum Elongation in 2 inches (percent)	Copper Minimum (percent)	Zinc Maximum (percent)
A	14000	15	79	16
B	20000	15	57	-
C	32000	10	57	-
D	20000	15	79	16
E	32000	10	79	16

iii. Any bronze alloy used in the cold worked condition shall be capable of passing the mercurous nitrate test to indicate minimum susceptibility to stress corrosion in accordance with ASTM B 154.

iv. Grades B and C should not be used in waters that promote galvanic corrosion as zinc may be removed from the bronze. Such waters are those with a pH higher than 9.0 or with a specific conductance higher than 350 micro-mho/cm. In these cases, bronze alloys shall contain no more than 16 percent zinc. Aluminum bronze used in such waters shall be inhibited against de-aluminization by a tempering anneal at 1200° $\pm$ 50 F (650° $\pm$ 30 C) for 1 hour per inch of section thickness followed by cooling in moving air or water quenching.

(c) Steel - Body bolt and nut material shall conform to ASTM A307, Grade B. Carbon-steel castings shall conform to ASTM A27, Grade U60-30. Stainless steel parts shall conform to ASTM A 276.

Bolts and nuts shall be either cadmium plated (ASTM A 165, Type NS), zinc coated (ASTM A 123 or ASTM A 164), or rust proofed by some other process disclosed to and accepted by the Engineer.

5. GENERAL DESIGN: (a) General - All check valves shall be designed to provide against any permanent distortion of body, cover, or seats and also to avoid any strain upon the seats that would be sufficient to force them out of alignment when under test pressure.

(b) Closure Assembly - The closure assembly shall be designed to assume the closed position by gravity under no-flow conditions in a horizontal pipeline.

(c) Accessibility of Internal Parts - Internal working parts, whose removal may become necessary for repairs, shall be readily accessible, removable, and replaceable without use of special tools or removal of the valve from the pipeline.

(d) Clapper Stop - When the check valve is wide open, the clapper assembly shall bear against a definite stop, the point of contact being so located that any impact or loading applied by water flow will tend not to twist or bend clapper parts. If this stop is located on the cover, it should be designed to prohibit improper assembly in the event of repairs.

(e) Net Flow Area - Awing-check valves, when fully open, shall have a net flow area not less than the area of a circle with a diameter equal to the nominal pipe size.

(f) End Connections - End connections shall conform to one of the following specifications.

i. Flanged Ends - Ends of flanged pipe shall conform to the dimensions and drilling of ANSI B16.1 for cast-iron flanges and flanged fittings, Class 125, unless otherwise specified. Slots the same width as bolthole diameters may be used in places where any cover interference might occur in joint assembly. Smooth facing shall have a finish of 250 micro-inches AARA (arithmetic average roughness height) maximum.

ii. Mechanical Joint-Ends - Mechanical joint-end dimensions shall conform to Table 11.1 of AWWA C111 (ANSI A21.11). Slots the same width as the diameter of the boltholes

may be provided instead of holes in the bell flange at those places where the valve body or bonnet interferes with the joint assembly.

(g) Seating Surfaces - Metal-to-metal type check-valve disc-seating surfaces shall be bronze and may be integral or a separate ring fastened securely to the disc.

i. Separate Disc Rings - If a separate metal disc ring is used, it may be rolled, peened, or pressed into machined grooves in the disc or by some other method disclosed to and accepted by the Engineer.

ii. Body Seat Rings - Body seat rings shall be faced and mechanically attached to machined surfaces in the body and shall be made of bronze.

iii. Seat Width-Metal - The seating surface width of a metal-seated check-valve disc shall be equal to or wider than the body seat ring.

iv. Seat Width-Rubber - The seating surface width of a rubber or resilient seated check-valve disc shall be wider than the body seat ring.

(h) Hinge - The hinge pin shall be made of bronze or stainless steel. Free relative rotation shall be accomplished by use of corrosion-resistant materials surrounding the pin either where it passes through the hinge or at the end bearings of the pin.

(i) Bolting - Bolts and nuts shall develop the physical strength requirements of ASTM A 307, Grade B, and may be of any dimension listed in ANSI B18.21 or ANSI B18.22.

(j) Painting - Valves shall be supplied with a coat of manufacturer's standard shop primer.

i. Special Coatings - Any other type of coating or lining specified by the Engineer shall be applied as a special.

6. <u>WORKMANSHIP</u>: All workmanship employed in the fabrication and assembly of check valves shall be first class in every respect. Valve parts shall be designed, and manufacturing tolerances set, to provide interchangeability in the products of any one manufacturer between units of the same size and type. When assembled, valves shall be well fitting and smooth operating.

All castings shall be clean and sound, without defects that will impair their service. No plugging, welding or repairing of such defects will be allowed.

7. <u>MARKING</u>: Markings shall be cast on the cover or body of each valve, and shall show the manufacturer's name or mark, flow direction arrow, size of the valve and designation of the working water pressure. Special markings will be supplied if required by these specifications.

8. <u>TESTING</u>: After manufacture, each valve shall be submitted to the following tests at the manufacturer's plant.

(a) Shell Test - The shell of the assembled check valves in sizes through 12 inches shall be given a hydrostatic pressure test at 350 psig. Valves in sizes 16-24 inches shall be given a 300 psig test.

There shall be no leakage through the castings or joints of the assembled check valves for a period of 1 minute on sizes up to and including 12 inches and 2 minutes on larger sizes.

(b) Seat Test - Assembled check valves shall be given a hydrostatic pressure test with the disc or clapper closed and pressure applied to the downstream or outlet end; the opposite or inlet end shall be open to atmosphere. Test pressure shall be 175 psig for check-valve sizes through 12 inches and 150 psig for check-valve sizes 16-24 inches. Maximum permissible leakage shall be 1 fluid oz/hr/in. of nominal valve size or inside seat ring diameter.

9. <u>PROJECT SPECIFICATIONS</u>: Check valves furnished on this project shall be as follows:

Operator	-	Outside Lever and Spring
End Type	-	Flanged
Trim	-	All hardware, brackets, etc., to be 304 Stainless Steel

SECTION J

GENERAL SPECIFICATIONS

WARNING TAPE

TABLE OF CONTENTS

1. **GENERAL**: The location of all PVC force mains to be installed under these specifications shall be marked by the use of a continuous "Detectable" identifying tape buried in the trench above the line at an approximate depth of 18 inches.

MATERIALS: The identifying tape, Terra Tape, manufactured by Reef Industries, Inc. (www.reefindustries.com) of Houston, Texas or approved equal, shall be an inert, bonded layer plastic material with a metallized foil core and shall be highly resistant to alkalize, acid or other chemical components likely to be encountered in soils. The tape shall be brightly colored to contrast with the soil and shall bear an imprint identifying the type of line located below.

2. **INSTALLATION**: The identifying tape shall be buried in the force main trench above the PVC force main. The tape shall be placed in the trench with the printed side up and shall be essentially parallel with the finished surface. The Contractor shall take necessary precautions to insure that the tape is not pulled, distorted, or otherwise misplaced in completing the trench backfill.

3. PROJECT SPECIFICATIONS:

Size	-	3" Wide x 1,000 Ft. Roll
Color	-	Orange
Marking	-	"Caution Force Main Buried Below"
Wording	-	Black
Materials	-	Tri-Layer Laminate
		Solid Foil Core
		Printed Film
		Clear Encapsulating Film
Connections	-	Terra Clips

SECTION K

GENERAL SPECIFICATIONS

TRACER WIRE

TABLE OF CONTENTS

1. **SCOPE**: This specification shall cover furnishing and installing insulated copper wire used to trace polyvinyl chloride force main. The tracer wire shall be manufactured and supplied by a manufacturer regularly engaged in the production of such wire.

2. **MATERIAL**: The tracer wire shall be #12 AWG, 600 volt, solid conductor copper wire with THHN insulation.

3. **SPLICING**: Splices in the tracer wire shall be a minimum of three inches, lap length. Ends of wire shall be stripped of insulation for a minimum of three inches and each have copper wire wound against the other so that continuous contact is made to insure against an open circuit.

4. **INSTALLATION**: The tracer wire will be installed along the top of the force main for the entire length of the project. with no gaps that would cause an open circuit. The wire shall be installed along the top of the pipe and shall be attached to the pipe at three equally spaced locations along each joint by tape fully wrapped around the circumference of the pipe. The wire shall be attached to each valve box along the main for electronic signal tracing after installation.

SECTION N

GENERAL SPECIFICATIONS

COMBINATION AIR RELEASE VACUUM VALVE

(SEWAGE FORCE MAINS)

TABLE OF CONTENTS

1. **GENERAL**: The automatic combination sewage air release/vacuum valve shall be specifically designed to operate with liquids carrying solid particles such as sewage and effluent. The valve shall provide separation of the liquid from the sealing mechanism. The air gap separation will be sustained under pressure up to 150 psi by a conical body shape and under vibrations by a spring-loaded joint.

2. **OPERATION**: The valve must discharge air at high velocity during filling of the system and admit air during drainage. The valve must be designed to prevent premature closing. The valve shall release accumulated air from the system while the system is under pressure and operating. The valve shall be capable of operating and discharging air when the systems pressure ranges between 3 and 150 psi.

3. **SPECIFICATIONS**: Valves furnished on this project shall conform to the following specifications:

Body	316 Stainless Steel
Float (Main)	316 Stainless Steel
Float Stem	316 Stainless Steel
Bolts	316 Stainless Steel
Flush Connection	Polypropylene
Size and Connection Type	2” Threaded
Test Pressure	250 psi
Manufacturer	A.R.I. or approved equal
Model	D-025

SECTION 0047
SHORING AND BRACING

PART 1 GENERAL

1.01 SUMMARY

A. Shore and brace sidewalls in excavations with trench boxes, steel sheet, soldier piles or timber lagging as required to protect existing buildings, utilities, roadways, and improvements and to prevent cave-ins, loss of ground, or damage to people and property.

B. Maintain shoring and bracing during construction activities and remove shoring and bracing if practical when construction and filling is complete.

1.02 SUBMITTALS

Submit for approval shop drawings and information on methods proposed for use.

1.03 QUALITY ASSURANCE

Comply with governing codes and regulations. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 MATERIALS

A. Trench Box: OSHA approved.

B. Sheet Steel: Heavy-gauge steel sheet suitable for service.

C. Soldier Piles: Steel H-beams in serviceable condition.

D. Timber Lagging: Heavy timber pressure treated with wood preservative.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install in proper relation with adjacent construction. Coordinate with work of other sections.

B. Locate shoring and bracing to avoid permanent construction. Anchor and brace to prevent collapse.

END OF SECTION

SECTION 0050
EXCAVATING, BACKFILLING, AND COMPACTING FOR UTILITIES

PART 1 GENERAL

1.01 WORK INCLUDED

The Contractor shall make excavations in such widths and depths as will give suitable room for below grade vaults, pump stations, etc., laying pipe to the lines, grades and elevations, furnish, place and compact all backfill materials specified herein or denoted on the Drawings. The materials, equipment, labor, etc., required herein are to be considered as part of the requirements and costs for installing the various pipes, structures and other items they are incidental to.

PART 2 PRODUCTS

2.01 MATERIALS

A. Crushed stone material shall conform to the requirements of the applicable sections of the Kentucky Department of Highways Standard Specifications and shall consist of clean, hard, and durable particles or fragments, free from dirt, vegetation or objectionable materials.

B. Two classes of backfill material are used in this Section. The type of material in each class is as follows:

1. Class I -Angular crushed stone or gravel i.e., No. 57 (No. 8, 9, 11 may be allowed as a substitute by the Engineer) as defined in the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, latest edition.

2. Class II -Dense Graded Aggregate (DGA).

PART 3 EXECUTION

3.01 EXCAVATION OF TRENCHES

A. Unless otherwise directed by the Engineer, trenches are to be excavated in open cuts. Pipe is to be laid in gravel bedding or concrete cradle, the trench may be excavated by machinery to, or just below, the designated subgrade, provided that the material remaining at the bottom of the trench is no more than slightly disturbed.

B. Trenches shall be sufficient width to provide working space on each side of the pipe and to permit proper backfilling around the pipe.

1. The Contractor shall remove only as much of any existing pavement as is necessary for the prosecution of the Work. The pavement shall be cut with pneumatic tools,

without extra compensation to the Contractor, to prevent damage to the remaining road surface. Where pavement is removed in large pieces, it shall be disposed of before proceeding with the excavation.

C. All excavated materials shall be placed a safe distance back form the edge of the trench.

D. Unless specifically directed otherwise by the Engineer, not more than 300 feet of trench shall be opened ahead of the pipe laying work of any one crew, and not more than 300 feet of open ditch shall be left behind the pipe laying work of anyone crew. Watchmen or barricades, lanterns and other such signs and signals as may be necessary to warn the public of the dangers in connection with open trenches, excavations and other obstructions, shall be provided by and at the expense of the Contractor.

E. When so required, or when directed by the Engineer, only one-half of street crossings and road crossings shall be excavated before placing temporary bridges over the side excavated, for the convenience of the traveling public. All backfilled ditches shall be maintained in such manner that they will offer no hazard to the passage of traffic. The convenience of the traveling public and the property owners abutting the improvements shall be taken into consideration. All public or private drives shall be promptly backfilled or bridged at the direction of the Engineer.

F. Trench excavation shall include the removal of earth, rock, or other materials encountered in the excavating to the depth and extent shown or indicated on the Drawings.

3.02 GRAVITY SEWER AND FORCE MAIN PIPE BEDDING

A. Piping for gravity sewers and force mains shall be supported as follows:

a. All sewer piping shall be laid on a bed of granular material except when a concrete encasement situation occurs. All pipe bedding material shall be Class I and shall be placed to a depth of 4 inches in an earth trench and 6 inches in a rock trench. Aggregate bedding shall be graded to provide for a uniform and continuous support beneath the pipe at all points. Bedding shall extend the full width of the trench.

i. After each pipe has been brought to grade, aligned, and placed in final position, Class I material shall be deposited and densified under the pipe haunches and on each side of the pipe up to the spring line of the pipe to prevent lateral displacement and hold the pipe in proper position during subsequent pipe jointing, bedding, and backfilling operations.

ii. In wet, yielding and mucky locations where pipe is in danger of sinking below grade or floating out of grade or line, or where backfill materials are of such a fluid nature that such movements of pipe might take place during the placing of

the backfill, the pipe must be weighted or secured permanently in place by such means as will prove effective. With the concurrence of the Engineer, the Contractor may place a flowable fill in lieu of eliminating unsuitable materials.

iii. Where an unstable (i.e., water, mud, etc.) trench bottom is encountered, stabilization of the trench bottom is required. This is to be accomplished by undercutting the trench depth and replacing to grade with a foundation of crushed stone aggregate.

iv. The depth of the foundation is dependent upon the severity of the trench bottom. The size of stone aggregate used in the foundation will be determined by the condition of the unstable material. Once the trench bottom has been stabilized, the required Class I bedding material can be placed.

v. It should be noted that no pipe shall be laid on solid or blasted rock.

vi. Pipe bedding as required in Paragraphs A, B, and D of this Section is not considered a separate pay item.

3.03 GRAVITY SEWER AND FORCE MAIN BACKFILL

A. Initial Backfill:

A. This backfill is defined as that material which is placed over the pipe from the spring line to a point 6 inches above the top of the pipe. For gravity sewer piping the material shall be Class I and may be machine placed without compaction. Uneven places in the backfill shall be leveled by hand. For force main piping, initial backfill material shall be earth material free of rocks, acceptable to the Engineer or with Class I material when a condition exists mentioned in Paragraph A.3 below.

B. Material used, whether earth or Class I, in the initial backfilling is not a separate pay item. Payment for the material is included in the unit price per linear foot of gravity sewer or force main.

C. In areas where large quantities of rock are excavated and the available excavated earth in the immediate vicinity is insufficient for placing the required amount of backfill over the top of the pipe as set forth in, Paragraph A.1, the Contractor shall either haul in earth or order Class I material for backfilling over the pipe. Neither the hauling and placement of earth nor the ordering and placement of Class I material to fulfill the backfill requirements set forth herein is considered a separate pay item.

B. Final Backfill:

1. There are two cases where the method of final backfilling varies. The various cases and their trench situations are as follows:

a. Case I -Areas not subject to vehicular traffic.

b. Case II -Paved areas including streets, drives, parking areas, and walks.

2. In all cases, walking or working on the completed pipelines, except as may be necessary in backfilling, will not be permitted until the trench has been backfilled to a point 6 inches above the top of the pipe. The method of final backfilling for each of the above cases is as follows:

   a. Case I -The trench shall be backfilled from a point 6 inches above the top of the pipe to a point 8 inches below the surface of the ground with earth material free from large rock (over one-half cubic foot in volume), acceptable to the Engineer. The remainder of the trench shall be backfilled with earth material reasonably free of any rocks.

   b. Case II -The trench shall be backfilled from a point 6 inches above the top of the pipe to grade with Class II material, excess material to be removed for pavement replacement. The backfill shall be mechanically tamped in approximately 6-inch layers to obtain a compaction of 95 percent density as measured by the modified Procter Test. The trench may be left with a slight mound if permitted by the Engineer. Where required by state or local regulations, a bituminous binder coarse detailed on the Drawings and specified herein shall be incorporated in the final backfill.

3. Earth and Class I material used in final backfill is not a separate pay item. Payment shall be included in the price of gravity sewer and force main.

4. Class II material used in final backfill shall be included in the unit price for gravity sewer and force main.

C. A sufficient amount of Class II material shall be stockpiled to insure immediate replacement by the Contractor of any settled areas. No extra payment will be made for the filling in of settled or washed areas by the Contractor.

D. Excavated materials from trenches, in excess of quantity required for trench backfill**,** shall be disposed of by the Contractor. It shall be the responsibility of the Contractor to obtain location or permits for its disposal, unless specific waste areas have been designated on the Drawings or noted in these Specifications. The cost of disposal of excess excavated materials, as set forth herein, no additional compensation being allowed for hauling or overhaul.

END OF SECTION

SECTION 0054
ENCASEMENT PIPE

PART 1 GENERAL

1.01 WORK INCLUDED

The Contractor shall furnish all labor, material, and equipment necessary to install encasement pipe together with all appurtenances as shown and detailed on the Drawings and specified herein.

PART 2 PRODUCTS

2.01 STEEL PIPE

1.01 Steel seamless pipe shall be new material, with a minimum yield of 35,000 psi and a wall thickness as shown below. All joints in the encasement pipe shall be welded.

Table of Minimum Wall Thickness for Steel Encasement Pipe

	Minimum Thickness Inches	
Nominal Diameter Inches	Highway Crossing	Railroad Crossing
14 & Under	0.250	0.281
16	0.375	0.281
18	0.375	0.312
20 & 22	0.375	0.344
24	0.500	0.406
26	0.500	0.406
28	0.500	0.406
30	0.500	0.469
32	0.500	0.469
34 & 36	0.500	0.532
42 & 48	0.625	0.563
54	0.719	0.625
60	0.75	0.625

1.02 Weldings of the steel casing pipe shall be solidly butt-welded with a smooth non-obstructing joint inside and conform to all specifications as required by American Welding Society (AWS). The casing pipe shall be installed without bends. All welders and welding operators shall be qualified as prescribed by AWS requirements.

1.03 The material shall conform to the chemical and mechanical requirements of the latest revision of ASTM A-l39 "Electric-Fusion (ARC) -Welded Steel Pipe (NPS 4 and Over)," unless otherwise stated herein.

1.04 Grade B steel shall be used. The steel shall be new and previously unused.

1.05

1.06 Hydrostatic testing shall not be necessary.

1.07 The wall thickness at any point shall be within 0.025 inches of the nominal metal thickness specified.

1.08 A protective coating shall be applied to each length of pipe. Following an SSPC SP-7 "Brush-Off Blast Cleaning" surface preparation, 3 (dry) mils of Tnemec Primer 10-99 (red), of Porter International Primer 260 FD (red), or of an approved equal shall be applied in the manner recommended by the respective paint manufacturer.

1.09 Each length of pipe shall be legibly marked, stating: manufacturer, diameter wall thickness and primer.

1.10 Precaution shall be taken to avoid deforming the pipe and damaging the primer during shipping.

1.11 Pipe shall be within the following tolerances:

Straightness	1/4 - 3/8
Roundness	1 Percent
Thickness	12 ½ Percent.

PART 3 EXECUTION

3.01 INSTALLATION

1.10 Where shown on the Drawings, the Contractor shall install encasement pipe. Two methods of installation are designated, the open-cut method and the boring method.

a. The open-cut method shall consist of placing the encasement pipe in the excavated trench, then installing the carrier pipe inside the encasement pipe. Excavation, bedding and backfilling shall be in accordance with Section 0050.

b. The boring method consists of pushing or jacking the encasement pipe into the hole as an auger cuts out the material or after the auger has completed the bore. The encasement pipe shall be installed in a manner that will not disrupt traffic.

1.11 The carrier pipe shall be ductile iron, polyvinyl chloride, or polyethylene pipe as designated on the Drawings. The carrier pipe will not be permitted to rest on bells or couplings.

SECTION 0054

1.12 Pipeline Spacers:

1.01 Carrier pipes installed inside encasement pipes shall be centered throughout the length of encasement pipe. Centering shall be accomplished by the installation of polyethylene pipeline spacers attached to the carrier pipe in such manner as to prevent the dislodgement of the spacers as the carrier pipe is pulled or pushed through the encasement pipe. Spacers shall be of such dimensions to provide: full supportive load capacity of the pipe and contents; of such thickness to allow installation and/or removal of the pipe; and to allow no greater than 1/2 inch movement of the carrier pipe within the cover pipe after carrier pipe is installed.

1.02 Spacers shall be located immediately behind each bell and at a maximum spacing distance as follows:

Carrier Pipe Diameter (inches)	Maximum Spacing (feet)
2 – 2-1/2	4
3 – 8	7
10 – 26	10
28	9
30	8
32	7
34	6
36 – 38	5.5
40 – 44	5
46 – 48	4

The materials and spacing to be used shall be accepted by the Engineer prior to installation. The pipeline spacers shall be manufactured by Pipeline Seal and Insulator, Inc. (PSI), Raci Spacers, Inc., or equal. Material, design, spacing and installation shall all be in accordance with manufacture's recommendations.

3.02 SEALING

After installation of the carrier pipe within the encasement pipe, the ends of the casing shall be sealed in the following manner. The space between the casing and the carrier pipe shall be filled with a waterproofing bitumastic compound until a tight seal is obtained. An Ethylene Propylene Diene Monomer (EPDM) elastomeric membrane shall be wrapped around the end of the encasement pipe in three layers and securely bound to the casing and the carrier pipe barrel with stainless steel bands. The EPDM membrane shall be 0.045 inches thick and have a tear resistance of 125-pounds/inches. The membrane shall be manufactured by Carlisle Tire & Rubber Company, Firestone Industrial Products Company, or approved equal.

3.03 DAMAGE

The cost of repairing damage which is caused by the boring operation to the highway or railroad shall be borne by the Contractor.

END OF SECTION

SECTION 0056
MANHOLES

PART 1 GENERAL

1.01 WORK INCLUDED

The Contractor shall furnish all labor, material, and equipment necessary to construct manholes for sanitary sewers, including steps, frames and covers, together with all appurtenances as shown and detailed on the Drawings and specified herein. Manhole materials shall be precast concrete.

1.02 DEFINITIONS

A. Standard Manhole: A standard manhole is defined as any manhole that is greater than 4 feet in depth, as measured from the invert of the manhole base at its center to the bottom of the manhole frame.

B. Shallow Manhole: A shallow manhole is defined as any manhole that is 4 feet or less in depth, as measured in the preceding sentence.

PART 2 PRODUCTS

2.01 CONCRETE MANHOLES - GENERAL

A. Manholes shall conform in shape, size, dimensions, materials, and other respects to the details indicated on the Drawings or bound in the Specifications.

B. All concrete manholes shall have precast reinforced concrete developed bases. No other type of base will be allowed. Invert channels shall be factory constructed when the base is made. Sloping invert channels shall be constructed whenever the difference between the inlet and outlet elevation is 2 feet or less.

C. The concrete manhole walls (barrels and cones) shall be precast concrete sections. The top of the cone shall be built of reinforced concrete adjustment rings to permit adjustment of the frame to meet the finished surface.

D. Minimum strength of the concrete for the precast sections shall be 4,000 psi at the time of shipment.

E. For concrete manholes, the inverts of the developed bases shall conform accurately to the size of the adjoining pipes. Side inverts shall be curved and main inverts (where direction changes) shall be laid out in smooth curves of the longest possible radius which is tangent, within the manhole, to the centerlines of adjoining pipelines.

F. For concrete manholes, the cast-iron frames and covers shall be the standard frame and cover as indicated on the Drawings and specified hereinafter in this Section.

2.02 PRECAST CONCRETE SECTIONS

A. Precast concrete sections and appurtenances shall conform to the ASTM Standard Specifications for Precast Reinforced Concrete Manhole Sections, Designation C-478, latest revision, with the following exceptions and additional requirements. All precast concrete shall be inspected prior to installation.

B. The base section shall be monolithic for 4-foot diameter manholes. Manholes with diameter of 5 feet or larger shall have base slab.

C. The wall sections shall be not less than 5 inches thick.

D. Type II cement shall be used except as otherwise permitted.

E. All Precast Reinforced Concrete Manhole Sections are to be treated with **Xypex** ADMIX C-1000 (dye) or approved equal to lessen erosion caused by hydrogen sulfide and diluted sulfuric acid.

F. Joints between sections shall be made watertight through the use of rubber 0-ring gaskets or rubber profile gaskets such as Forsheda 138 or rope mastic or butyl mastic sealant. Gaskets shall conform to the ASTM Standard C-443, latest revision.

G. Butyl mastic sealant shall be installed between the cone section, any adjusting sections or rings, and casting.

2.03 CONCRETE MANHOLE - FRAMES AND COVERS

A. The Contractor shall furnish all cast-iron manhole frames and covers conforming to the details shown on the Drawings, or as hereinbefore specified.

B. The castings shall be of good quality, strong, tough, even grained cast iron, smooth, free from scale, lumps, blisters, sandholes, and defects of every nature which would render them unfit for the service for which they are intended. Contact surfaces of covers and frame seats shall be machined to prevent rocking of covers.

C. All casting shall be thoroughly cleaned and subject to a careful hammer inspection.

D. Castings shall be at least Class 25 conforming to the ASTM Standard Specifications for Gray Iron Casting, Designation A-48, latest revision.

E. Unless otherwise specified, manhole covers shall be 22-3/4 inches in diameter, weighing not less than 350 pounds per frame and cover. Manhole covers shall set neatly in the

rings, with contact edges machined for even bearings and tops flush with ring edge. They shall have sufficient corrugations to prevent slipperiness. The covers shall have two (2) pick holes about 1-1/4 inches wide and 1/2 inches deep with 3/8-inch undercut all around. Covers shall not be perforated. Frames and covers shall be John Bouchard & Sons Co., catalog number 1140, or approved equal.

F. All covers shall be marked in large letters "SANITARY SEWER" in the center.

2.04 MANHOLE STEPS (CONCRETE MANHOLES)

Manholes steps shall be the polypropylene plastic type reinforced with a deformed steel rod. The steps shall be of the size and configuration as shown on the Drawings. Steps shall line up over the downstream invert of the manhole. The steps shall be embedded into the manhole wall a minimum of 3-3/8 inches. Steps shall be uniformly spaced at 12-inch to 16-inch intervals.

2.05 PREMOLDED ELASTOMERIC-SEALED JOINTS

All holes for pipe connections in concrete barrels and bases shall have a factory-installed flexible rubber gasket or boot to prevent infiltration. The manhole boots shall conform to the latest revision of ASTM C-973. The boots shall be Contour Seal or Kor-N-Seal made by National Pollution Control Systems, Inc., Nashua, NH; A-Lok Manhole Pipe Seal made by A-Lok Corporation, Trenton, NJ; or an approved equal.

2.06 POLYETHYLENE DIAPHRAGM

A. Polyethylene diaphragm manhole inserts shall be manufactured from corrosion-proof material suitable for atmospheres containing hydrogen sulfide and diluted sulfuric acid. Diaphragm shall be installed in manholes susceptible to inflow as indicated on the Drawings. Manhole diaphragms are to be **No flow Inflow** available at **1-800-537-5800** or approved equal.

B. The body of the manhole insert shall be made of high density polyethylene copolymer material meeting ASTM Specification D-1248, Class A, Category 5, Type III (the insert shall have a minimum impact brittleness temperature of -180 degrees Fahrenheit). The thickness shall be uniform 1/8 inches or greater. The manhole insert shall be manufactured to dimensions to allow easy installation within the manhole frame JBS #1140.

C. Lift strap shall be attached to the rising edge of the bowl insert. The lift strap shall be made of 1 inch wide woven polypropylene web and shall be seared on all cut ends to prevent unraveling. The lift strap shall be attached to the manhole insert by means of a wide head stainless steel rivet and a stainless steel ¾” backup washer (aluminum rivet or washer will not be accepted). Location of the lift strap shall provide easy visual location, preferably as close to the outside edge as possible.

D. Standard ventilation shall be by means of vent hole located on the side of the bowl. The hole will allow a maximum release of 5 gallons per 24 hours when the insert is full.

E. The manhole insert shall be manufactured to fit the manhole frame rim upon which the manhole cover rests (JBS #1140 for new installations). The Contractor is responsible for obtaining specific measurements of each manhole cover to insure a proper fit. The manhole frame shall be cleaned of all dirt, scale and debris before placing the manhole insert on the rim.

2.07 CLEANOUTS

Cleanouts shall be extended to finish grade and capped with a clean-out plug in accordance with details and at locations shown on the Drawings. Pipe material shall be the same as the gravity sewer line in which the cleanout is located.

2.08 DROP CONNECTIONS

Drop connections shall be installed in the manhole as shown on the Drawings.

PART 3 EXECUTION

3.01 FABRICATION - PRECAST SECTIONS

A. Manhole sections shall contain manhole steps accurately positioned and embedded in the concrete when the section is cast.

B. Sections shall be cured in an enclosed curing area and shall attain a strength of 4,000 psi prior to shipment.

C. No more than two (2) lift holes or inserts may be cast or drilled in each section.

D. Flat slab tops shall have a minimum thickness of 6 inches and reinforcement in accordance with ASTM C-478.

E. The date of manufacture and the name or trademark of the manufacturer shall be clearly marked on the precast sections.

F. Acceptance of the sections will be on the basis of material tests and inspection of the completed product and test cylinders if requested by the Engineer.

G. Cones shall be precast sections of similar construction.

H. CORROSION RESISTANT ADDITIVE

Manholes shall be constructed of Dynastone® Concrete or Xypex ADMIX.

Xypex ADMIX C-1000 (dye) or approved equal concrete waterproofing admix shall be added to the concrete during the batching operation to provide corrosion resistance. 3% of the required weight of Portland Cement shall be added as Xypex. The amount of cement shall remain the same and not be reduced. The colorant shall be added to verify the Xypex ADMIX was added to the concrete. Colorant shall be added at the ADMIX manufacturing facility, not at the concrete batch plant. Xypex ADMIX must be added to the concrete at the time of batching. It is recommended that the ADMIX powder be added first to the rock and sand and blended thoroughly for 2-3 minutes before adding cement and water.

Blend total concrete mix using normal practices to ensure formation of homogeneous mixture.

PRECAT BATCH PLANT – PAN TYPE MIXER: Add Xypex ADMIX to the rock and sand, then mix thoroughly for 2-3 minutes before adding the cement and water. The total concrete mass should be blended using standard practices.

FOR READY-MIX PLANTS – DRY BATCH OPERATION: Add XYPEX ADMIX to the drum of the ready-mix truck in powder form. Then drive the truck under the batch plant and add 60%-70% of the required water along with 300-500 lb. (136-227 kg) of aggregate. Mix the materials for 2-3 minutes to ensure that the ADMIX is distributed evenly throughout the mix water. Then add the balance of materials to the ready-mix truck in accordance with standard batch practices.

FOR READY-MIX PLANTS – CENTRAL MIX OPERATION: Mix Xypex ADMIX with water to form a very thin slurry (e.g. 15-20 lb. of powder with 3 gallons of water), then pour the required amount of material into the drum of the ready-mix truck. The aggregate, cement and water should be batched and mixed in the plant in accordance with standard practices (taking into account the quantity of water that has been placed in the ready-mix truck). Pour the concrete into the truck and mix for at least 15 minutes to ensure even distribution of the ADMIX throughout the concrete.

3.02 SETTING PRECAST MANHOLE SECTIONS

A. Precast reinforced concrete manhole sections shall be set so as to be vertical and with sections and steps in true alignment.

B. Rubber gaskets shall be installed in all manhole joints in accordance with the manufacturer's recommendations.

C. All holes in sections used for their handling shall be thoroughly plugged with rubber plugs made specifically for this purpose.

3.03 ADJUSTING MANHOLE FRAMES AND COVERS TO GRADE

A. Except where shown on the Drawings, the top of the precast concrete eccentric cone of a standard manhole or the top of the flat slab of a shallow manhole shall terminate 4 inches below existing grade in an unpaved non-traffic area except in a residential yard and 13 inches below existing grade in a paved or unpaved traffic area and in a residential yard. The remainder of the manhole shall be adjusted to the required grade as described hereinafter in paragraphs B and C of this article.

B. When a manhole is located in an unpaved non-traffic area other than in a residential yard, the frame and cover shall be adjusted to an elevation 3 inches to 5 inches above the existing grade at the center of the cover. If field changes have resulted in the installed manhole invert elevation to be lower than the invert elevation shown on the Drawings, the adjustment to an elevation of 3 inches to 5 inches above existing grade shall be accomplished by the use of precast concrete rings. If field changes have resulted in the completed manhole invert to be greater than the invert shown on the Drawings and the cover higher than 5 inches above existing grade, then the top of the eccentric cone, when used, or the top of the barrel section, when used, shall be trimmed down so that the manhole cover, after installation, is no greater than 5 inches above existing grade at the center of the cover. The area around the adjusted frame and cover shall be filled with the required material, sloping it away from the cover at a grade of 1 inch per foot.

C. When a manhole is located in a bituminous, concrete, or crushed stone traffic area, or in a residential yard, the frame and cover shall be adjusted to the grade of the surrounding area by the use of precast concrete rings. The adjusted cover shall conform to the elevation and slope of the surrounding area. If field changes have resulted in the installed manhole invert elevation to be so much higher than the invert elevation shown on the Drawings that the top of the eccentric cone, when used, or the top of the flat slab, when used, is less than the thickness of the frame and cover 7 inches from the grade of the surrounding area, then the top of the cone or barrel section shall be trimmed down enough to permit the cover, after installation, to conform to the elevation and slope of the surrounding area. After installation, the inside and outside surfaces of the brick shall receive a waterproofing bitumastic coating.

1. The Contractor shall coordinate elevations of manhole covers in paved streets with the Owner. If resurfacing of the street in which sewers are laid is expected within twelve (12) months, covers shall be set 1-1/2 inches above the existing pavement surface in anticipation of the resurfacing operations.

3.04 ADJUSTING SECTIONS

Only clean adjusting sections shall be used. Each adjusting section shall be laid in a bead of butyl mastic sealant and shall be thoroughly bonded.

3.05 SETTING MANHOLE FRAMES AND COVERS

A. Manhole frames shall be set with the tops conforming to the required elevations set forth hereinbefore. Frames shall be set concentric with the top of the concrete and in a full bead of butyl mastic sealant so that the space between the top of the masonry and the bottom flange of the frame shall be completely watertight.

A. Manhole covers shall be left in place in the frames on completion of other work at the manholes.

END OF SECTION

Southeast Daviess County Water District
U.S. 60 Bypass Relocation
FD52 030 65971 01U
Item No. 2-287.01

SPECIAL CONDITIONS

1. **OMPC Public Improvements Specifications**

   All conditions and requirements of construction and implementation contained in the "Public Improvement Specifications" as issued in August 2002 by the Owensboro Metropolitan Planning Commission (OMPC) must be complied with on this project and are hereby incorporated by reference. Copies may be obtained from the OMPC office located at 200 E. Third Street (second floor of Chase Bank building) or by downloading from the OMPC web page (www.iompc.org).

2. **Standard Specifications Conflicts**

   In the event of conflict between the Kentucky Transportation Cabinet Standard Specifications and the OMPC Public Improvements Specifications the more stringent, as determined by the Project Engineer for the Water Utility, shall apply.

3. **Pavement Cuts**

   Pavement cuts (backfill and repair) at new waterline installations shall be performed in accord with "Heavy Duty Bituminous" method and Method 'C' for County streets and roadways and in accord with the Kentucky Transportation Cabinet/Department of Highways permit and standard drawings.

4. **General**

   Work under this Contract shall include providing labor, equipment, materials, hand tools and incidentals required to place new water mains, miscellaneous fittings, fire hydrants, valve assemblies, and appurtenances of the project. The completed work will be turned over to the Southeast Daviess County Water District when completed to the satisfaction of the District. The Contractor shall fully coordinate the construction activities with the Southeast Daviess County Water District.

5. **Gravel Drive Crossing**

   The Contractor shall cross gravel roadways/drives by the open trench method and shall backfill with natural soil to a point six (6) inches above top of pipe. Remainder of trench(es) shall be backfilled with compacted dense grade aggregate (DGA). Compensation for this work shall be included in the bid unit prices for the waterline and DGA materials.

6. **Paved Drive Crossings**

   The Contractor shall cross asphalt or concrete drives by the uncased bore method as indicated on the plans. Compensation for this work shall be included in the bid unit price for the waterline. Steel casing pipe will not be required at uncased bore crossings.

7. **Roadway Ditches**
The Contractor shall exercise extreme care to protect the roadway ditch, drainage facilities and roadway pavement along the project. The Contractor shall backfill, shape and regrade the waterline trench as many times as necessary in order to restore the work area to original ground contour free of any ponding areas or excessive trench settlement. Maintain 42-inch minimum cover at all roadway ditch crossings.

8. **Existing Underground Structures**
It is the responsibility of the Contractor to accurately verify, locate, and avoid damage to all buried structures. The Contractor shall notify all utility companies involved, prior to excavation, so that they may identify or mark the location of their particular facility. All existing underground structures and/or underground utilities damaged by the Contractor shall be replaced at his expense.

9. **Underground Storage Tanks**
Water mains within 200 feet of underground fuel/oil storage tanks or gasoline pumps shall be constructed of ductile iron pipe. Pipe joints shall be protected from chemical attach by one of the following two methods:
   1.) Encase entire joint with concrete (4,000 psi at 28 day strength).
   2.) Provide Fluorocarbon resistant pipe gaskets (VITON Tyton Joint Gasket as manufactured by Specification Rubber Products, Inc. or approved equal).

10. **Incidental Materials**
The Contractor shall furnish all miscellaneous fittings, crushed limestone, cement concrete, bituminous asphalt, necessary restraining rods and clamps and other incidentals.

11. **Thrust Blocks**
The Contractor shall furnish all transit mix concrete for thrust blocks and to encase ductile iron pipe joints. Compensation for this work shall be included in the bid unit prices for the respective type and size of waterline.

12. **Pressure Tests**
Attention is called to the pressure test requirements as indicated in “Water Mains, Service Lines and Appurtenances”.

13. **Traffic Lane Availability**
The Contractor shall maintain at least one lane of traffic at all times in order to serve local traffic, emergency equipment and the school bus requirements. The Contractor shall furnish, utilize and maintain all barricades, signs, safety devices, traffic cones, flagmen, temporary pavement markings, radio equipment and other safety equipment necessary to maintain local traffic use and school bus traffic use. Traffic control must be performed in accordance with M.U.T.C.D. requirements and requirements of the Kentucky Transportation Cabinet.

14. **Corporation Stops**
Corporation stops shall be compression type fittings. Flared type will not be accepted.

15. **Pavement Removal/Replacement**
Pavement removal/replacement shall be incidental to the waterline construction. No additional compensation will be paid for pavement removal/replacement unless a specific bid item is provided.

16. **Relocation of Existing Hydrants**
Relocation of an existing hydrant shall include removal of the existing hydrant, installation of the hydrant, new hydrant tee and new hydrant valve, new hydrant drain pit and thrust block and incidentals.

17. **P.V.C. Fittings Prohibited**
No P.V.C. fittings shall be installed on the project unless specified in the Contract Documents or unless authorized in writing by the Water Utility Engineer.

18. **Polyethylene Wrapped Fittings**
Use polyethylene wrap around all ductile iron fittings.

19. **Existing A-C Pipe Taps**
During the process of tapping asbestos concrete main, the Contractor shall conform to OSHA regulations governing the handling of hazardous waste. Pieces of the asbestos concrete resulting from the tap shall be double bagged, placed in a rigid container and disposed of in an approved landfill.

20. **2" Hand Valves**
All 2" hand valves shall be 300 lb. bronze fittings manufactured by American Valve, Hammond Valve or equal. Include a meter box and cover at all hand valve installations.

21. **Grading & Dressing**
Excavation and fill placement shall be performed in a manner to provide positive drainage and in order to maintain a well-drained site. Daily work areas shall be graded to drain and when directed shall include temporary drains, swales or diversions installed at the Contractor's expense for protection of the site and/or adjacent areas.

Final grading, shaping and finishing shall be to a uniform line and grade to a tolerance on 0.20 foot. The final graded site shall be free of ponding or settlement area. The site shall be filled, leveled and final graded as many times as necessary to provide a uniform, well drained area at no additional compensation to the Contractor.

22. **Certificate of Acceptance**

The Water Utility's Resident Project Observer will witness the utility construction. Any failures or inconsistencies shall be reported to the Resident Engineer. It will be the responsibility of the Resident Engineer that all plans and specifications are complied with fully. The Southeast Daviess County Water District will not accept construction that is not performed in compliance with the plans and specification.

The Southeast Daviess County Water District will issue a Certificate of Acceptance to the KTC/DOT upon satisfactory installation of the utilities upon receipt of recommendation of approval by the District's Consultant.

The operation and maintenance of the constructed waterline and appurtenances shall remain the responsibility of the KTC/DOT until the District issues said certificate.

23. **Existing Underground Structures**

Every effort has been made to show the location of existing sewers, drains, pipes, conduits and other underground objects, which might be encountered. All locations and elevations are given only for the Contractor's information and are to be considered approximate. It is the responsibility of the Contractor to accurately locate and avoid damage to all buried structures. The Contractor shall notify all utility companies involved, prior to excavation, so that they may identify or mark the location of their particular facility.

All existing underground structures and/or underground utilities damaged by the Contractor shall be replaced at his expense.

24. **Normal Work Times**

Project work shall routinely be performed during normal daytime work hours. Unless specifically approved by the Water Utility Project Engineer on individual case-by-case incidents, the project work shall occur only during normal working hours and on regular workdays in order to minimize inconvenience to area neighborhoods, schools and conditions. Specifically prohibited is work performance at night times and on Sundays.

25. **Existing Water Meter Tie-In**

New water meter installations shall include tie-in to the existing water service line. Service line tie-in; including furnishing and installing additional Type 'K' copper service line; shall be incidental to the new meter setting. No additional compensation will be paid to the Contractor for incidental service line tie-in work/materials. The contractor shall furnish and install all miscellaneous fittings, copper tubing from the new meter location to the existing service line location and/or associated items. New meters shall be furnished and installed by the Contractor.

26. **Pipe Crossing Elevations**
Refer to the respective utility plan cross-section sheets for water main (top of pipe) elevations and to the respective utility plan profile sheets for proposed water/sewer crossing at existing sewer/culvert locations.

27. **Conditions of Work**
Bidders shall inform themselves of all conditions under which the proposed project work is to be performed relative to but not limited to the site location, obstacles which may be encountered and other pertinent factors; by a visit to the site for personal examination, by a complete study of the Contract Plan, Project Specifications and Contract Documents, by personal interview and applicable with the Water Utility Engineer and/or Water Utility Owner.

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

The Bidder is expected to examine carefully the site of the proposed work, the proposal, plans, specifications, contract forms and related documents, before submitting a proposal. The submission of a bid shall be considered prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the contract. Profession of ignorance or misunderstanding regarding requirements of the work will in no way serve to modify the provisions of the contract.

28. **Addenda and Interpretations**
No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally. Every request for such interpretation should be in writing addressed to **James R. Riney at P.O. Box 535, Owensboro, Kentucky, 42302** and to be given consideration must be received at least five (5) days prior to the date established for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be mailed by certified mail with return receipt requested to all prospective bidders (at the respective addresses furnished for such purposes), not later than three (3) days prior to the date established for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from the obligation under his/her bid as submitted. All addenda so issued shall become part of the contract documents.

29. **One-Year Warranty**

The Contractor must guarantee all waterline work for a period of one (1) year after the date of final project payment and shall promptly make corrections or adjustments which may be necessary to correct defects including repairs of any damages to other parts of the system resulting from such defects. Payment by the Owner does not constitute a waiver of the Owner's claims against the Contractor.

The Contractor's One-Year Warranty period shall commence on the date of the final payment check issued by the Owner.

30. **Indemnification**

The Contractor shall indemnify and hold harmless the Water Utility Owner, agents, or 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 that any such claim, damage, losses, or expenses (a) is attributable to bodily injury, sickness, disease or death, or attributable to injury to, or destruction of, tangible property (other than the work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of the Contractor, anyone directly or indirectly employed by the Contractor, or anyone for whose acts the Contractor may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

In any and all claims against the Water Utility Owner and its affiliated companies or any of its agents or employees by any employee of the Contractor, or anyone directly or indirectly employed by the Contractor or anyone for whose acts the Contractor may be liable, the indemnification obligation under the above paragraph shall not be limited in any way by the limitation payable by or for the Contractor under Workman's Compensation Acts, disability benefit acts, or other employee benefit acts.

Any provisions of this Contract in respect to indemnification which are prohibited or unenforceable by law shall be ineffective to the extent of such prohibition or unenforceability, and shall not invalidate the remaining provisions of this Agreement.

31. **Water Main Crossings**

Water mains crossing sewers shall be laid to provide a vertical distance of 18 inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main.

Water mains shall be laid at least 10 feet horizontally from any existing or proposed sewer. A sewer is defined as any conduit conveying fluids other than potable water. The distance shall be measured outside edge to outside edge of pipes.

In cases where it is not practical to maintain a 10-foot separation, specific approval must be granted by the Water Utility Engineer and by the Kentucky Division of Water. The water main shall be laid in a separate trench or on an undisturbed shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer. This alignment is not allowed for sewer force mains.

32. **Daviess County Sheriff's Department**
The Contractor shall be responsible for coordination with and shall assist the Daviess County Sheriff's Department traffic control efforts during school activities, peak traffic hours and special events occurring in the vicinity of the project site.

33. **Coordination with the Water District**
All waterline relocation work shall be coordinated with the Southeast Daviess County Water District Manager, Mr. Bill Higdon, at 270-685-5594 prior to beginning work.

34. **Special Conditions**
In the event a new service line, new meter, meter box, etc., will be required at a previously non-existent service location, the Contractor shall install such items along the project at the respective Unit Bid Prices. The Water Utility Engineer shall approve new service installations and location in writing prior to installation by the Contractor.

The Contractor shall be responsible for any damages to existing meters, meter boxes, etc., and should these be damaged due to his negligence, he shall be required to replace the damaged material with new equipment at no cost to the Owner.

The Contractor's attention is called to the sections of the General Specifications requiring disinfection and testing of the lines as well as the minimum intervals for test-point spacing. Test-point sampling, blow-offs, line flushing, etc., may be performed using newly installed fire hydrants, 3/4" corporation stops, or other points approved by the Water Utility Engineer.

Incidental corporation stops installed by the Contractor for water testing, blow-off, etc., shall be provided by the Contractor at no additional cost to the Owner. Cost for such corporation stops shall be incidental to the Unit Price Bid per linear foot of water line. Ends of corporation stops shall be protected by use of a plastic cap or heavy-duty tape upon final use for point testing or other construction related use.

Upon final testing, disinfection and blow-off, the tested water line shall be flushed and purged of air. Air shall be released at all hydrants, corporation stops or by other methods approved by the Water Utility Engineer.

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35. **Asbestos Cement Pipe**

This special note covers requirements that apply when the contract requires removal and disposal of existing asbestos cement pipe by the Contractor.

All handling, transportation, and disposal of asbestos cement pipe shall be in strict accordance with the Kentucky Occupational Safety and Health Standards for General Industry, 29 CFR part 1910 as adopted by 803 KAR 2.020 with amendments as of July 31, 1986 and all addenda and revisions to date and the Kentucky Occupational and Health Standards for the Construction Industry, 29 CFR part 1926 as adopted by 793 KAR 2.030 with amendments as of August 31, 1986 and all addenda and revisions to date.

All work shall be accomplished in accordance with the requirements of all applicable federal laws and regulations covering asbestos abatement, and as specified in 401 KAR 63:042.

The Contractor shall also comply with the applicable standards and regulations of any local government agency that may be applicable.

Removal shall be supervised by an asbestos abatement entity certified by the Kentucky Natural Resources and Environmental Protection Cabinet. Disposal shall be accomplished by a KNREPC registered transporter.

Any asbestos cement pipe outside the construction limits that is designated to remain in place shall not be disturbed.

Upon completion of removal and disposal of the asbestos cement pipe, the Contractor shall furnish to the Water Utility Engineer a written report, prepared by the asbestos abatement entity, covering the following information:

(a) Name and address of supervisor responsible;
(b) The location and description of the project and the estimated amount of asbestos removed;
(c) Starting and completion date. If the completion date differs form that originally scheduled, included reasons for delay;
(d) Summary of the procedures used to comply with all applicable requirements, including copies of all notifications, if applicable;
(e) Name and address of waste disposal site and disposal receipts, including the amount of asbestos-containing materials disposed; and
(f) Results of all air sampling conducted during he asbestos abatement project, if applicable, including personal, area, and clearance samples.

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36. **Shop Drawings**

Submit six (6) sets of shop drawings for the major material items including but not limited to:

Waterline:

1. Pipe (main, service, casing, etc.)
2. Fire hydrant
3. Valves
4. Meter assembly (setter, meter, box, corporation stop, etc.)

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SECTION 1

EROSION CONTROL

1.1. EROSION CONTROL

Erosion control and sediment containment shall be performed in general conformance with the "Kentucky Best Management Practices for Construction Activities"; prepared by the Division of Conservation and the Division of Water, Natural Resources and Environmental Protection Cabinet; dated August 1994 or most recent revision.

1.2. EROSION CONTROL PROCEDURES

Construction Areas

Site excavation and grading shall proceed in an orderly and practical manner as necessary to implement the site grading work and in order to avoid trapping water on the project site. Daily work areas shall be graded to drain. Work will be performed in a manner to minimize soil erosion and downstream siltation as described herein. The final site grading shall result in a uniformly graded surface and free of ponding areas.

Control Procedures

(a) Erosion control techniques shall include silt checks (straw bales, rock checks, timber dams, earthen dams, etc.) diversion ditches, silt traps or similar methods. Silt checks and silt fences shall be maintained and remain in-place until ground cover/re-vegetation has been established.

(b) Upon completion of construction/earthwork within a drainage basin area, the site shall be final shaped to drain and temporary seeding/fertilizer applied. Temporary seeding and/or final seeding shall be placed within seven (7) days after completion within a work area.

(c) Seed areas shall receive a straw or organic cover (approximately 2" loose depth) after seeding of disturbed areas.

(d) Storm run-off routes and sediment traps shall be monitored and sediment periodically removed for continued collection of upstream sediment.

Silt Basins

Any necessary silt basins shall be built prior to any site clearing or grading work; except for construction of diversions, silt basins, or necessary access roads.

Maintenance

The Contractor shall be required to clean out (remove sediment from) silt checks, silt traps and retention basins whenever they become one-half full, and properly dispose of the materials at site as often as required by the Water Utility Engineer.

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SECTION 2

EARTH WORK

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2.1. CLEARING AND GRUBBING

This work shall consist of clearing, grubbing, removing, and disposing of all vegetation, topsoil (min. 6") and debris, which are within the limits of construction of the proposed facilities as shown on the Plans. This work shall include the loosening, loading, removing, transportation, disposing of all vegetation, natural material, man-made materials (wet or dry materials) necessary to be removed to construct all work included in this project to the lines, grades, and locations shown on the Plans. The Contractor must assume the risk of meeting and the contract price shall include the cost of removal of unstable soils, rock, boulders, rubbish, unforeseen obstacles, underground conduits, gas pipe, drain tile, trees, logs, stumps, roots, timber or masonry structures, fences, pavements, and sidewalks, and the delayer damage occasioned by the same whether these obstacles are shown on the plans or not. Clearing and grubbing work shall be incidental to the Contract Bid Items unless specifically identified as a separate item in the Bid Schedule.

This work shall also include, where applicable, the preservation from injury or defacement of all vegetation and objects designated to remain. The Engineer will designate all trees, shrubs, plants, and other items to be removed.

All materials resulting from clearing and grubbing shall be completely disposed of by the Contractor off the project site. In no case shall the Contractor place on adjacent property any material obtained from clearing and grubbing without written permission from the property owner, a copy of which shall be provided to the Engineer. Burning of material on or near the project site is prohibited unless specifically approved on a case-by-case basis by the Engineer and unless performed in compliance with all Federal, State and Local regulations or restrictions.

2.2. EXCAVATION

Excavation shall be performed in a neat workmanlike manner, to the line and grade shown on the plans and typical sections or as directed by the Engineer. Care shall be exercised to avoid under-cutting or excessive cuts. All cuts shall be uniform; along a straight line; without sags, bulges, or heaped areas. No frozen material, stumps, logs, roots or other perishable material shall be placed in any embankment. Stone or masonry fragments greater than four (4) inches in any dimension shall be removed from the top foot of embankment material or subgrade material. Embankments shall not be constructed on frozen material.

Earth embankment shall be formed by uniformly distributing in successive horizontal layers not exceeding twelve (12) inches in thickness; loose depth; to the full width of the cross-section.

Each layer of the fill shall be thoroughly compacted as specified in the Contract Documents.

Excavation and fill placement shall be performed in a manner to provide positive drainage and in order to maintain a well-drained site. Daily work areas shall be graded to drain and when directed shall include temporary drains, swales or diversions installed at the Contractor's expense for protection of the site and/or adjacent areas.

Final grading, shaping and finishing shall be to a uniform line and grade to a tolerance on 0.20 foot. The final graded site shall be free of ponding or settlement area. The site shall be filled, leveled and final graded as many times as necessary to provide a uniform, well drained area at no additional compensation to the Contractor.

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SECTION 3

SEEDING AND PROTECTION

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3.1. SCOPE OF WORK

This work shall consist of the preparation, seeding and mulching of all disturbed areas within the limits of construction, as directed by the Water Utility Engineer.

3.2. MATERIALS

Materials shall conform to the following requirements:

Seed Mixture

70 percent Kentucky 31 Fescue
15 percent Creeping Red Fescue
10 percent Red Top
5 percent White Dutch Clover (per Mixture No. 1, Kentucky Standard Specifications)

Application Rate: 4 pounds per 1,000 square feet (175 pounds per acre)

Fertilizer

Fertilizer shall conform to the requirements of Section 827.04 of the Kentucky Standard Specifications. Unless otherwise specified the fertilizer shall be 10-10-10.

Application Rate: 23 pounds per 1,000 square feet (1,000 pounds per acre)

Straw Mulch

Straw mulch shall conform to the requirements of Section 827.06 of the Kentucky Standard Specifications.

Application Rate: 2 tons per acre (approximately 2-inches loose depth)

3.3. CONSTRUCTION REQUIREMENTS

Areas of established lawns and other non-agricultural areas disturbed during construction work shall be backfilled and graded to existing/adjacent ground lines in a smooth and uniform manner. All backfill shall be free of large roots, asphalt, concrete or other debris.

Fertilizer shall be thoroughly incorporated into the soil, either prior to or at the time of seeding.

Normally seeding and ground cover restoration will occur from March through June and from September through November, inclusive.

The Contractor is required to exercise extreme care when backfilling and shaping the disturbed areas to insure that flooding and water ponding will not occur. Areas of excessive settlement, ponding, etc., shall be reshaped, filled or regraded as many times as necessary to provide a uniformly contoured restoration area, at no additional cost to the Owner.

The Contractor shall grade, disc, shape, seed, fertilize, mulch and water the ground cover restoration areas as many times as necessary in order to provide a uniform ground cover of specified grasses and clovers in all restoration areas. The Contractor shall provide a guaranteed ground cover at all restoration areas for a period of one year after project completion.

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SECTION 4

MATERIALS SPECIFICATIONS

4.1. MATERIALS SPECIFICATIONS

All construction materials shall conform to the requirements as specified by the Kentucky Department of Highways or as otherwise defined in the Project Specifications and Contract Documents.

The cost of any materials testing or sampling shall be the responsibility of the Contractor unless otherwise noted. Any stockpiled or placed materials which the Water Utility Engineer deems inferior or inadequate shall be removed and replaced at the Contractor's expense.

All construction materials shall be the type and size shown on the Construction Plans.

The Contractor shall furnish upon request the manufacturer's/vendor's certification of materials standards for review and approval relative to the requirements of the Contract Documents.

4.2. FLOWABLE FILL AS PIPE BACKFILL (NIC)

Unless otherwise specified on the project plans, flowable fill shall be used at roadway crossings as backfill material. Compensation for furnishing and placing the flowable fill shall be paid per cubic yard as verified by and as approved by the Water Utility Engineer.

Description

Flowable fill is a low strength mixture consisting of portland cement, sand, class F fly ash, water and other materials as approved by the Water Utility Engineer. Flowable fill has a density between 115 lb./c.f. and 130 lb./c.f. and is of a consistency that will flow under and around pipe. Flowable fill does not require compaction, finishing, or curing and will not settle after hardening occurs. It is ideal for use in restricted areas where placing and compacting fill material is difficult and where traffic cannot be delayed for a long period. When used to backfill aluminum pipe, an approved means of separation shall be provided, such as bituminous coating.

Materials

Unless otherwise approved by the Water Utility Engineer flowable fill shall be proportioned as follows, per cubic yard:

Cement	30 lbs.
Fly Ash, Class F	300 lbs.
Sand (S.S.D.)	3000 lbs.
Water (Maximum)	550 lbs.

To expedite settlement and hardening of the flowable fill, bleed water should appear on the surface within 5 to 10 minutes after placement. The release of water by bleeding caused the solid particles to realign into intimate contact and the mixture becomes firm. A delay in bleeding indicates there are too many fines in the mixture or insufficient water. If the maximum water was added, the fly ash quantity shall be reduced in increments of 50 lbs. until the mixture is bleeding freely. Approximately 60 lbs. of sand shall be added to replace each 50 lbs. increment of fly ash to maintain the original yield. If two increment reductions, 100 lbs., do not promote free bleeding of the mixture, other possible remedies shall be evaluated. The flowable fill is too dry when cracks develop as it flows into place.

A set of test cylinders shall be cast for each 300 cubic yards of flowable fill. Cylinders shall not be rodded, but the sides of the mold shall be tapped lightly. The test cylinders shall be allowed to bleed for about 30 minutes, refilled, and then covered with a sheet of tough durable impervious plastic or cylinder lid. Plastic shall be secured in place around the mold, within one inch of the top, with a rubber band or string prior to covering the lid with wet burlap. The burlap shall be removed after 24 hours and the cylinder cured at 60 degrees Fahrenheit to 90 degrees Fahrenheit, in the shade, until 28 days old. The plastic covering and mold shall then be removed and the compressive strength test shall be performed. The average of the 28 days compressive strength tests shall be 50 Psi to 100 Psi. This strength range will provide the optimum balance of adequate cohesion while allowing ease of subsequent removal, if necessary.

Construction

Unless otherwise approved by the Water Utility Engineer, flowable fill shall be delivered in revolving drum truck mixers to insure that the mixture is in suspension when placed. Agitation will be required during transportation and waiting time. Subsidence may occur if the mixer is not agitated. Flowable fill may be placed by discharging directly from truck chutes into the trench or it may be placed by means of conveyors, buckets or pumps. If pumping is utilized the voids shall be adequately filled with solid particles to provide adequate cohesiveness for transport through the pump line under pressure without segregation. Inadequate void filling results in mixtures that may segregate in the pump and may cause line blockage. Continuous flow through the pump line shall be maintained. Interrupted flow may cause segregation which restricts flow and may result in line blockage.

The flowable fill shall extend from the top of the compacted bedding to the bottom of the pavement structure. Flowable fill shall be in place a minimum of 2 hours prior to the addition and compaction of any material above it unless otherwise directed by the Water Utility Engineer.

When flowable fill is used, the Contractor may reduce the trench width to a minimum of 6 inches clearance on each side of the pipe. Standing water in the trench does not have to be pumped out before backfilling with flowable fill.

Because certain types of pipe may float, it may be necessary to backfill in lifts or anchor the pipe. Backfilling in lifts is generally more applicable to long lines of pipe, allowing time for a substantial amount of the water to dissipate prior to applying the next lift. Anchors may be made of small lumber or metal straps, and shall be adequately spaced. For larger diameter pipe, it may be possible to maintain a surge of flowable fill on top of the pipe to prevent floating. Floating will usually not occur after the level of the backfill is above the springline of the pipe. The Contractor shall be responsible to insure that the pipe remains in the correct horizontal position and at the specified elevation.

4.3. PORTLAND CEMENT ROADBED MODIFICATION (NIC)

The roadbed modification process is achieved by uniformly mixing portland cement with roadbed materials and compacting to the lines, grades, thickness, and cross sections as specified in the contract plans. Modification shall also comply with Kentucky's Standard Specifications for Road and Bridge Construction, Section 304. Mixing depth and cement ratio shall be as defined in the Contract Documents or as directed by the Water Utility Engineer.

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SECTION 5

PERMITS

5.1. PERMITS SECURED BY CONTRACTOR

Refer to Section 1.6., "Legal Considerations and Insurance", for information regarding permits to be secured by the Contractor.

5.2. PERMITS SECURED BY OWNER

Division of Water

Permits have been obtained by the Owner, for system construction, from the Kentucky Division of Water. All permit conditions and criteria must be complied with and are incorporated into the Contract Documents by reference in **Appendix 'A'.**

Other Permits and Fees

The Contractor is responsible for securing all other applicable permits and payment of all other applicable fees.

OMU Requirements and Scope of Work for Wendell Ford Bypass Project - Phase 2

Scope of work:

OMU is requesting that the State to grant a 20' wide Public Utility Easement from the north/west side to the south/east side of the new Bypass and that in the center of this easement, the State's Electrical Contractor will install two (2) 6" schedule 80 PVC conduits side-by-side and extending at least 5' beyond the Right-Of-Way fence on both the north/west and south/east sides of the new Bypass. The length of this double run of conduit is approximately 450' so it will require approximately 900' of 6" Schedule 80 conduit.

On the north/west side the 20' easement should extend to and adjoin the existing Bypass right-of-way which will allow OMU to extent these conduits to an existing pole north of the new Bypass (this pole is not shown on the Plan drawing)

OMU requires that these conduits have no less than 42" of cover over the entire length (particularly under the bottoms of the drainage ditches) but should have no more than 54" of cover at both the north/west and south/east ends to allow OMU to intercept these conduits for extension at a later date.

The PDF Plan drawing was created from Sheet R7 and shows the required Public Utility Easement and conduits crossing the Bypass between Stations 566 and 568.

The Contractor is to install OMU facilities as indicated on the associated map or drawing(s).

The Roadway Contractor will assume all liability for work being performed on the installation of all OMU facilities and the Contractor will abide by all rules and laws such as but not limited to: OSHA, National Electric Safety Code, and Kentucky Transportation Cabinet.

Insurance:

The Contractor will carry or cause to be carried and maintained in force throughout the entire term of this project, insurance coverage as described below with reliable insurance companies:

> The Contractor must provide evidence upon request.
>
> Workers Compensation Insurance complying with the laws of the State or States having jurisdiction over each employee.

General Liability - The insurance shall be written in comprehensive form and shall protect the Contractor against all claims arising from injuries to members of the public or damage to property of OMU or others arising out of any act of omission of the contractor or his agents, employees, or subcontractors:

Each Occurrence-	$1,000,000
Person & Adv. Injury-	$1,000,000
General Aggregate-	$2,000,000
Products-Comp./ Ap. Aqq	$2,000,000

Automobile Liability insurance with a combined single limit of $1,000,000 each occurrence for bodily injury and property damage to include coverage for allowed, non-owned, and hired vehicles.

The Contractor will furnish all organization, supervision, qualified linemen, insurance, equipment, tolls, apparatus and conveyances to perform the work described in the Scope of Work listed above.

All material for this job will be supplied by the Contractor.

OMU will provide an on-site inspector for this job. The OMU inspector must approve all facility installations before the Contractor is allowed to finalize this project .

The Contractor will determine the location(s) for the easement and conduits based on the State's Bypass drawing Sheet R7 with 'points' added by OMU.

OMU Contact information for any questions related to this project is listed below:

Austin McLimore
T&D Manager of Engineering
Owensboro Municipal Utilities
2070 Tamarack Road
Owensboro, KY 42303
Phone: 270-926-3200 ext 464
e-mail: mclimoreca@omu.org

Dale Harris
Engineering Technician
Owensboro Municipal Utilities
2070 Tamarack Road
Owensboro, KY 42303
Ph one: 270-926-3200 ext 234
e-mail: harrisbd@omu.org

Kentucky Transportation Cabinet

Highway District 2

And

_____(2), Construction

Kentucky Pollutant Discharge Elimination System Permit KYR10 Best Management Practices (BMP) plan

Groundwater protection plan

For Highway Construction Activities

For

US 60 Bypass Relocation from KY 54 Interchange to KY 144 Interchange

Project: PCN ## -

Project information

Note – (1) = Design (2) = Construction (3) = Contractor

1. Owner – Kentucky Transportation Cabinet, District 2

2. Resident Engineer: Kevin Collignon, Section Supervisor (Acting)

3. Contractor name: (2)
   Address: (2)

   Phone number: (2)
   Contact: (2)
   Contractors agent responsible for compliance with the KPDES permit requirements (3):

4. Project Control Number (2)

5. Route (Address) : US 60 Bypass

6. Latitude/Longitude (project mid-point) dd/mm/ss, dd/mm/ss:

   Lat: 37/46/33, Long: 87/03/20(1)

7. County (project mid-point): Daviess

8. Project start date (date work will begin): (2)

9. Projected completion date: (2)

A. Site description:

1. Nature of Construction Activity (from letting project description): **Road widening of Southtown Boulevard from 2 lanes to 5 lane.** (1)

2. Order of major soil disturbing activities (2) and (3)

3. Projected volume of material to be moved : 1,603,728 cu yd(1)

4. Estimate of total project area (acres) : 183 acres(1)

5. Estimate of area to be disturbed (acres) : 175 acres(1)

6. Post construction runoff coefficient will be included in the project drainage folder. Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information. Kevin Collignon, Section Supervisor, Owensboro Construction Office(1)

7. Data describing existing soil condition: See Geotech report (1) & (2)

8. Data describing existing discharge water quality (if any): N/A (1) & (2)

9. Receiving water name: Yellow Creek (1)

10. TMDLs and Pollutants of Concern in Receiving Waters: N/A (1 DEA)

11. Site map – Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the storm water discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.

12. Potential sources of pollutants:

    The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes and trash/debris. (3)

B. Sediment and Erosion Control Measures:

1. Plans for highway construction projects will include erosion control sheets that depict Disturbed Drainage Areas (DDAs) and related information. These plan sheets will show the existing project conditions with areas delineated by DDA within the right of way limits, the discharge points and the areas that drain to each discharge point. Project managers and designers will analyze the DDAs and identify Best Management Practices (BMPs) that are site specific. The balance of the BMPs for the project will be listed in the bid documents for selection and use by the contractor on the project with approval by the resident engineer.

   Projects that do not have DDAs annotated on the erosion control sheets will employ the same concepts for development and managing BMP plans.

2. Following award of the contract, the contractor and resident engineer will annotate the erosion control sheets showing location and type of BMPs for each of the DDAs that will be disturbed at the outset of the project. This annotation will be accompanied by an order of work that reflects the order or sequence of major soil moving activities. The remaining DDAs are to be designated as “Do Not Disturb” until the contractor and resident engineer prepare the plan for BMPs to be employed. The initial BMP’s shall be for the first phase (generally Clearing and Grubbing) and shall be modified as needed as the project changes phases. The BMP Plan will be modified to reflect disturbance in additional DDA’s as the work progresses. <u>All DDA’s will have adequate BMP’s in place before being disturbed.</u>

3. As DDAs are prepared for construction, the following will be addressed for the project as a whole or for each DDA as appropriate:

   - Construction Access – This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with gravel and temporary mulch and/or vegetation.

- At the beginning of the project, all DDAs for the project will be inspected for areas that are a source of storm water pollutants. Areas that are a source of pollutants will receive appropriate cover or BMPs to arrest the introduction of pollutants into storm water. Areas that have not been opened by the contractor will be inspected periodically (once per month) to determine if there is a need to employ BMPs to keep pollutants from entering storm water.
- Clearing and Grubbing – The following BMP's will be considered and used where appropriate.
    - Leaving areas undisturbed when possible.
    - Silt basins to provide silt volume for large areas.
    - Silt Traps Type A for small areas.
    - Silt Traps Type C in front of existing and drop inlets which are to be saved
    - Diversion ditches to catch sheet runoff and carry it to basins or traps or to divert it around areas to be disturbed.
    - Brush and/or other barriers to slow and/or divert runoff.
    - Silt fences to catch sheet runoff on short slopes. For longer slopes, multiple rows of silt fence may be considered.
    - Temporary Mulch for areas which are not feasible for the fore mentioned types of protections.
    - Non-standard or innovative methods.
- Cut & Fill and placement of drainage structures - The BMP Plan will be modified to show additional BMP's such as:
    - Silt Traps Type B in ditches and/or drainways as they are completed
    - Silt Traps Type C in front of pipes after they are placed
    - Channel Lining
    - Erosion Control Blanket
    - Temporary mulch and/or seeding for areas where construction activities will be ceased for 21 days or more.
    - Non-standard or innovative methods
- Profile and X-Section in place – The BMP Plan will be modified to show elimination of BMP's which had to be removed and the addition of new BMP's as the roadway was shaped. Probably changes include:
    - Silt Trap Type A, Brush and/or other barriers, Temporary Mulch, and any other BMP which had to be removed for final grading to take place.
    - Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
    - Additional Channel Lining and/or Erosion Control Blanket.
    - Temporary Mulch for areas where Permanent Seeding and Protection cannot be done within 21 days.
    - Special BMP's such as Karst Policy

- Finish Work (Paving, Seeding, Protect, etc.) – A final BMP Plan will result from modifications during this phase of construction. Probably changes include:
  - Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMP's which are sufficient to control erosion, i.e. Erosion Control Blanket or Permanent Seeding and Protection on moderate grades.
  - Permanent Seeding and Protection
  - Placing Sod
  - Planting trees and/or shrubs where they are included in the project
- BMP's including Storm Water Management Devices such as velocity dissipation devices and Karst policy BMP's to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are : Seeding and Protection, Silt Traps using rock checks, silt fence, temporary mulch (1)

C. Other Control Measures

1. No solid materials, including building materials, shall be discharged to waters of the commonwealth, except as authorized by a Section 404 permit.

2. Waste Materials

All waste materials that may leach pollutants (paint and paint containers, caulk tubes, oil/grease containers, liquids of any kind, soluble materials, etc.) will be collected and stored in appropriate covered waste containers. Waste containers shall be removed from the project site on a sufficiently frequent basis as to not allow wastes to become a source of pollution. All personnel will be instructed regarding the correct procedure for waste disposal. Wastes will be disposed in accordance with appropriate regulations. Notices stating these practices will be posted in the office.

3. Hazardous Waste

All hazardous waste materials will be managed and disposed of in the manner specified by local or state regulation. The contractor shall notify the Resident Engineer if there any hazardous wastes being generated at the project site and how these wastes are being managed. Site personnel will be instructed with regard to proper storage and handling of hazardous wastes when required. The Transportation Cabinet will file for generator, registration when appropriate, with the Division of Waste Management and advise the contractor regarding waste management requirements.

4. Spill Prevention

The following material management practices will be used to reduce the risk of spills or other exposure of materials and substances to the weather and/or runoff.

- **Good Housekeeping:**

The following good housekeeping practices will be followed onsite during the construction project.

- An effort will be made to store only enough product required to do the job
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure
- Products will be kept in their original containers with the original manufacturer's label
- Substances will not be mixed with one another unless recommended by the manufacturer
- Whenever possible, all of the product will be used up before disposing of the container
- Manufacturers' recommendations for proper use and disposal will be followed
- The site contractor will inspect daily to ensure proper use and disposal of materials onsite

- **Hazardous Products:**

These practices will be used to reduce the risks associated with any and all hazardous materials.

- Products will be kept in original containers unless they are not resealable
- Original labels and material safety data sheets (MSDS) will be reviewed and retained
- Contractor will follow procedures recommended by the manufacturer when handling hazardous materials
- If surplus product must be disposed of, manufacturers' or state/local recommended methods for proper disposal will be followed

The following product-specific practices will be followed onsite:

- **Petroleum Products:**

Vehicles and equipment that are fueled and maintained on site will be monitored for leaks, and receive regular preventative maintenance to reduce the chance of

leakage. Petroleum products onsite will be stored in tightly sealed containers, which are clearly labeled and will be protected from exposure to weather.

The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.

This project (will / will not) (3) have over 1,320 gallons of petroleum products with a total capacity, sum of all containers 55 gallon capacity and larger.

- **Fertilizers:**

Fertilizers will be applied at rates prescribed by the contract, standard specifications or as directed by the resident engineer. Once applied, fertilizer will be covered with mulch or blankets or worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

- **Paints:**

All containers will be tightly sealed and stored indoors or under roof when not being used. Excess paint or paint wash water will not be discharged to the drainage or storm sewer system but will be properly disposed of according to manufacturers' instructions or state and local regulations.

- **Concrete Truck Washout:**

Concrete truck mixers and chutes will not be washed on pavement, near storm drain inlets, or within 75 feet of any ditch, stream, wetland, lake, or sinkhole. Where possible, excess concrete and wash water will be discharged to areas prepared for pouring new concrete, flat areas to be paved that are away from ditches or drainage system features, or other locations that will not drain off site. Where this approach is not possible, a shallow earthen wash basin will be excavated away from ditches to receive the wash water

- **Spill Control Practices**

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup**:**

- Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.

- Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contract with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.
- The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
- Spills of products will be cleaned up promptly. Wastes from spill clean up will be disposed in accordance with appropriate regulations.

D. Other State and Local Plans

This BMP plan shall include any requirements specified in sediment and erosion control plans, storm water management plans or permits that have been approved by other state or local officials. Upon submittal of the NOI, other requirements for surface water protection are incorporated by reference into and are enforceable under this permit (even if they are not specifically included in this BMP plan). This provision does not apply to master or comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit issued for the construction site by state or local officials. – This project has an Individual 401 permit and 404 Water Quality Certification.(1)Maintenance

1. The BMP plan shall include a clear description of the maintenance procedures necessary to keep the control measures in good and effective operating condition.

- Maintenance of BMPs during construction shall be a result of weekly and post rain event inspections with action being taken by the contractor to correct deficiencies.

- Post Construction maintenance will be a function of normal highway maintenance operations. Following final project acceptance by the cabinet, district highway crews will be responsible for identification and correction of deficiencies regarding ground cover and cleaning of storm water BMPs. The project manager shall identify any BMPs that will be for the purpose of post construction storm water management with specific guidance for any non-routine maintenance. (1)

E. Inspections

Inspection and maintenance practices that will be used to maintain erosion and sediment controls:

- All erosion prevention and sediment control measures will be inspected at least once each week and following any rain of one-half inch or more.
- Inspections will be conducted by individuals that have received KyTC Grade Level II training or other qualification as prescribed by the cabinet that includes instruction concerning sediment and erosion control.
- Inspection reports will be written, signed, dated, and kept on file.
- Areas at final grade will be seeded and mulched within 14 days.
- Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
- Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
- Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 70 percent of the design capacity and at the end of the job.
- Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and re-seeded / mulched as needed.
- Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
- All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

F. Non – Storm Water discharges

It is expected that non-storm water discharges may occur from the site during the construction period. Examples of non-storm water discharges include:

- Water from water line flushings.
- Water form cleaning concrete trucks and equipment.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater and rain water (from dewatering during excavation).

All non-storm water discharges will be directed to the sediment basin or to a filter fence enclosure in a flat vegetated infiltration area or be filtered via another approved commercial product.

G. Groundwater Protection Plan (3)

This plan serves as the groundwater protection plan as required by 401 KAR 5:037.

- Contractors statement: (3)

The following activities, as enumerated by 401 KAR 5:037 Section 2 that require the preparation and implementation of a groundwater protection plan, will or may be may be conducted as part of this construction project:

_____ 2. (e) land treatment or land disposal of a pollutant;

_____ 2. (f) Storing, …, or related handling of hazardous waste, solid waste or special waste, …, in tanks, drums, or other containers, or in piles, (This does not include wastes managed in a container placed for collection and removal of municipal solid waste for disposal off site);

_____ 2. (g) …. Handling of materials in bulk quantities (equal or greater than 55 gallons or 100 pounds net dry weight transported held in an individual container) that, if released to the environment, would be a pollutant;

_____ 2. (j) Storing or related handling of road oils, dust suppressants, …., at a central location;

_____ 2. (k) Application or related handling of road oils, dust suppressants or deicing materials, (does not include use of chloride-based deicing materials applied to roads or parking lots);

_____ 2. (m) Installation, construction, operation, or abandonment of wells, bore holes, or core holes, (this does not include bore holes for the purpose of explosive demolition);

Or, check the following only if there are no qualifying activities

_____ There are no activities for this project as listed in 401 KAR 5:037 Section 2 that require the preparation and implementation of a groundwater protection plan.

The contractor is responsible for the preparation of a plan that addresses the

401 KAR 5:037 Section 3. (3) Elements of site specific groundwater protection plan:

(a) General information about this project is covered in the Project information;
(b) Activities that require a groundwater protection plan have been identified above;
(c) Practices that will protect groundwater from pollution are addressed in section C. Other control measures.
(d) Implementation schedule – all practices required to prevent pollution of groundwater are to be in place prior to conducting the activity;
(e) Training is required as a part of the ground water protection plan. All employees of the contractor, sub-contractor and resident engineer personnel will be trained to understand the nature and requirements of this plan as they pertain to their job function(s). Training will be accomplished within one week of employment and annually thereafter. A record of training will be maintained by the contractor with a copy provide to the resident engineer.
(f) Areas of the project and groundwater plan activities will be inspected as part of the weekly sediment and erosion control inspections
(g) Certification (see signature page.)

KyTC BMP Plan for Project PCN ## -

Contractor and Resident Engineer Plan certification

The contractor that is responsible for implementing this BMP plan is identified in the Project Information section of this plan.

The following certification applies to all parties that are signatory to this BMP plan:

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 gathered and evaluated 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. Further, this plan complies with the requirements of 401 KAR 5:037. By this certification, the undersigned state that the individuals signing the plan have reviewed the terms of the plan and will implement its provisions as they pertain to ground water protection.

Resident Engineer and Contractor Certification:

(2) Resident Engineer signature

Signed _____title_____, _____
Typed or printed name[2] signature

(3) Signed _____title_____, _____
Typed or printed name[1] signature

1. Contractors Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.

2. KyTC note: to be signed by the Chief District Engineer or a person designated to have the authority to sign reports by such a person (usually the resident engineer) in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601 Reference the Project Control Number (PCN) and KPDES number when one has been issued.

Sub-Contractor Certification

The following sub-contractor shall be made aware of the BMP plan and responsible for implementation of BMPs identified in this plan as follows:

Subcontractor

Name:
Address:
Address:

Phone:

The part of BMP plan this subcontractor is responsible to implement is:

I certify under penalty of law that I understand the terms and conditions of the general Kentucky Pollutant Discharge Elimination System permit that authorizes the storm water discharges, the BMP plan that has been developed to manage the quality of water to be discharged as a result of storm events associated with the construction site activity and management of non-storm water pollutant sources identified as part of this certification.

Signed _____title_____, _____
Typed or printed name[1] signature

1. Sub Contractor Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.

SPECIAL NOTE

KPDES Stormwater Permit
eNOI Process

Daviess County
Item No. 2-287.10

Effective August 1, 2009, the Kentucky Division of Water implemented a new process for obtaining coverage under the Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Stormwater Discharges Associated with Construction Activities (KYR10). Notices of Intent should be submitted electronically using their form (eNOI) which is located at the following link:
https://dep.gateway.ky.gov/eForms/default.aspx?FormID=7**.**

The eNOI for this project has been initiated by the District 2 KYTC Project Development Branch and can be retrieved for completion using the following transaction ID number:

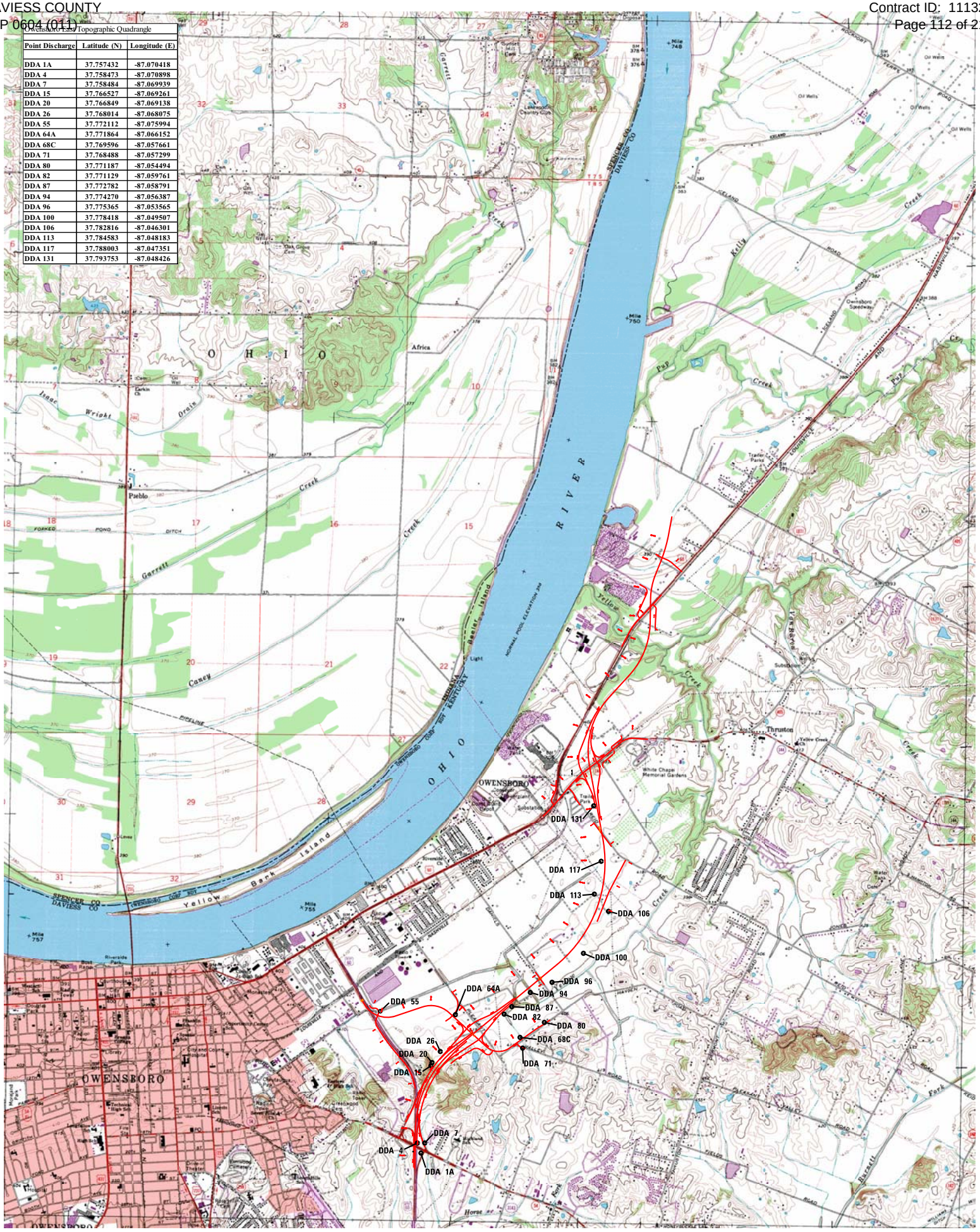
ccccca63a-798e-4df4-94b4-ba6d890aec3b

Please be advised that the eNOI will be completed and submitted by District 2 personnel at some time after the project is let to construction and that no earth-disturbing activities can occur on the project until an official approval is obtained from the Kentucky Division of Water.

If there are any questions regarding this note, please contact David Waldner, Director, Division of Environmental Analysis, TCOB, 200 Mero Street, Frankfort, KY 40622, Phone: (502) 564-7250.

Owensboro East Topographic Quadrangle

Point Discharge	Latitude (N)	Longitude (E)
DDA 1A	37.757432	-87.070418
DDA 4	37.758473	-87.070898
DDA 7	37.758484	-87.069939
DDA 15	37.766527	-87.069261
DDA 20	37.766849	-87.069138
DDA 26	37.768014	-87.068075
DDA 55	37.772112	-87.075994
DDA 64A	37.771864	-87.066152
DDA 68C	37.769596	-87.057661
DDA 71	37.768488	-87.057299
DDA 80	37.771187	-87.054494
DDA 82	37.771129	-87.059761
DDA 87	37.772782	-87.058791
DDA 94	37.774270	-87.056387
DDA 96	37.775365	-87.053565
DDA 100	37.778418	-87.049507
DDA 106	37.782816	-87.046301
DDA 113	37.784583	-87.048183
DDA 117	37.788003	-87.047351
DDA 131	37.793753	-87.048426



KENTUCKY TRANSPORTATION CABINET
COMMUNICATING ALL PROMISES (CAP)
ACTIVE

Item No. 2 - 287.1 **Project Mgr.** E. GREEN

County DAVIESS **Route** US-60

CAP #	Date of Promise	Promise made to:	Location of Promise
1	01-APR-11	Everett Green	Parcel #033

CAP Description

THE TRANSPORTATION CABINET HAS AGREED TO THE OWNERS REQUEST OF CONSTRUCTING THE ENTRANCE AT STATION 67+00 RT TO A STUB ENTRANCE OF 10FT OF TBB (TRAFFIC-BOUND BASE) ONTO THIS PARCEL. THE ORIGINAL PLANS CALL FOR A 40FT TBB ENTRANCE.

2	01-APR-11	Everett Green	Parcel #065

CAP Description

THAT THE STATE IS AWARE OF THE DRAINAGE TILE FROM THE HOMEPLACE TO THE PROPOSED RIGHT OF WAY. FLOODING OF THEIR BASEMENT IS THE CONCERN IF THE TILE IS DISTURBED. IN ADDITION, THE STATE IS AWARE OF THE TILE FROM THE EQUALIZATION POND. THE CONCERN IS THE DRAINING OR FLOODING OF THE POND WHEN THE TILE IS DISTURBED.

3	01-APR-11	Everett Green	Parcel #154

CAP Description

1) THE TRANSPORTATION CABINET AGREES THAT SUBJECT PROPERTY WILL BE LEFT IN THE SAME OR BETTER CONDITION AFTER HIGHWAY CONSTRUCTION. 2) THE PROPOSED BACK SLOPES AND THE (MATCH EXISTING WIDTH) FOOT WIDE RESIDENTIAL ENTRANCE LOCATED ON SUBJECT PROPERTY AT STATION 77+35 RT WILL BE CONSTRUCTED ON A 12.9% GRADE OR 7.75 TO 1 RATIO. THE PROPOSED SLOPES WILL MATCH THE EXISTING CONTOUR AND THE ENTRANCE WILL BE ASPHALT FROM THE EDGE OF PAVEMENT TO THE EXISTING RIGHT OF WAY LINE. 3) THE PURPOSE OF THE TEMPORARY EASEMENT IS FOR CONNECTING THE EXISTING RESIDENTIAL ENTRANCE TO THE PROPOSED HIGHWAY IMPROVEMENTS ON HAYDEN ROAD. THE EASEMENT WILL REVERT TO THE PROPERTY OWNER UPON COMPLETION OF THE HIGHWAY PROJECT. THE TRANSPORTATION CABINET HAS NO PLANS TO ELIMINATE SUBJECT'S RESIDENTIAL ENTRANCE ONTO HAYDEN ROAD AND THE OWNERS WILL CONTINUE TO HAVE INGRESS AND EGRESS AFTER HIGHWAY CONSTRUCTION. 4) A SPECIAL "V" DITCH IS PROPOSED ALONG THE HAYDEN ROAD HIGHWAY FRONTAGE AND WITHIN THE EXISTING RIGHT OF WAY BOUNDARIES. THE PROPOSED DITCH WILL BE AN IMPROVEMENT OF THE EXISTING DITCH LINE.

N O T I C E

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
(NATIONWIDE PERMIT AUTHORIZATION)

PROJECT: Daviess County
Item No. 2-287.1
Owensboro Bypass

The Section 404 activities for this project have been previously permitted under the authority of the Department of the Army Nationwide Permit No. 14 "Linear Transportation Projects". All impacts to water bodies are under notification thresholds and do not require mitigation. In order for this authorization to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Permit in a conspicuous location at the project site for the duration of construction and comply with the general conditions as required.

To more readily expedite construction, the contractor may elect to alter the design or perform the work in a manner different from what was originally proposed and specified. Prior to commencing such alternative work, the contractor shall obtain **written** permission from the Division of Construction and the Corps of Engineers. A copy of any request to the Corps of Engineers to alter this proposal and subsequent responses shall be forwarded to the Division of Environmental Analysis, DA Permit Coordinator, for office records and for informational purposes.

US Army Corps of Engineers ®

Nationwide Permit Conditions

The following General Conditions must be followed in order for any authorization by an NWP to be valid:

1. Navigation. No activity may cause more than a minimal adverse effect on navigation.

2. Proper Maintenance. Any structure or fill authorized shall be properly maintained, including maintenance to ensure public safety.

3. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

4. Aquatic Life Movements. No activity may substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

5. Equipment. Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.

6. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state or tribe in its Section 401 Water Quality Certification and Coastal Zone Management Act consistency determination.

7. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System; or in a river officially designated by Congress as a "study river" for possible inclusion in the system, while the river is in an official study status; unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation, or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

8. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

9. Water Quality. (a) In certain states and tribal lands an individual 401 Water Quality Certification must be obtained or waived (See 33 CFR 330.4(c)). (b) For NWPs 12, 14, 17, 18, 32, 39, 40, 42, 43, and 44, where the state or tribal 401 certification (either generically or individually) does not require or approve water quality management measures, the permittee must provide water quality management measures that will ensure that the authorized work does not result in more than minimal degradation of water quality (or the Corps determines that compliance with state or local standards, where applicable, will ensure no more than minimal adverse effect on water quality). An important component of water quality management includes stormwater management that minimizes degradation of the downstream aquatic system, including water quality (refer to General Condition 21 for stormwater management requirements). Another important component of water quality management is the establishment and maintenance of vegetated buffers next to open waters, including streams (refer to General Condition 19 for vegetated buffer requirements for the NWPs). This condition is only applicable to projects that have the potential to affect water quality. While appropriate measures must be taken, in most cases it is not necessary to conduct detailed studies to identify such measures or to require monitoring.

11. Endangered Species. (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. Non-federal permittees shall notify the District Engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or is located in the designated critical habitat and shall not begin work on the activity until notified by the District Engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that may affect Federally-listed endangered or threatened species or designated critical habitat, the notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. As a result of formal or informal consultation with the FWS or NMFS the District Engineer may add species-specific regional endangered species conditions to the NWPs.

(b) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the USFWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS and NMFS or their World Wide Web pages at http://www.fws.gov/r9endapp/endapp.html and http://www.nfms.noaa.gov/prot_res/overview/es.html respectively.

12. Historic Properties. No activity which may affect historic properties listed, or eligible for listing, in the National Register of Historic Places is authorized, until the District Engineer has complied with the provisions of 33 CFR part 325, Appendix C. The prospective permittee must notify the District Engineer if the authorized activity may affect any historic properties listed, determined to be eligible, or which the prospective permittee has reason to believe may be eligible for listing on the National Register of Historic Places, and shall not begin the activity until notified by the District Engineer that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places (see 33 CFR 330.4(g)). For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the notification must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property.

14. Compliance Certification. Every permittee who has received NWP verification from the Corps will submit a signed certification regarding the completed work and any required mitigation. The certification will be forwarded by the Corps with the authorization letter and will include:

(a) A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions;

(b) A statement that any required mitigation was completed in accordance with the permit conditions; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

15. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the US authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit (e.g. if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the US for the total project cannot exceed \1/3\-acre).

16. Water Supply Intakes. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may occur in the proximity of a public water supply intake except where the activity is for repair of the public water supply intake structures or adjacent bank stabilization.

17. Shellfish Beds. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4.

18. Suitable Material. No activity, including structures and work in navigable waters of the US or discharges of dredged or fill material, may consist of unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.) and material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the CWA).

20. Spawning Areas. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., excavate, fill, or smother downstream by substantial turbidity) of an important spawning area are not authorized.

21. Management of Water Flows. To the maximum extent practicable, the activity must be designed to maintain preconstruction downstream flow conditions (e.g., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters) and the structure or discharge of dredged or fill material must withstand expected high flows. The activity must, to the maximum extent practicable, provide for retaining excess flows from the site, provide for maintaining surface flow rates from the site similar to preconstruction conditions, and provide for not increasing water flows from the project site, relocating water, or redirecting water flow beyond preconstruction conditions. Stream channelizing will be reduced to the minimal amount necessary, and the activity must, to the maximum extent practicable, reduce adverse effects such as flooding or erosion downstream and upstream of the project site, unless the activity is part of a larger system designed to manage water flows. In most cases, it will not be a requirement to conduct detailed studies and monitoring of water flow. This condition is only applicable to projects that have the potential to affect water flows. While appropriate measures must be taken, it is not necessary to conduct detailed studies to identify such measures or require monitoring to ensure their effectiveness. Normally, the Corps will defer to state and local authorities regarding management of water flow.

22. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to the acceleration of the passage of water, and/or the restricting its flow shall be minimized to the maximum extent practicable. This includes structures and work in navigable waters of the US, or discharges of dredged or fill material.

23. Waterfowl Breeding Areas. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, into breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

24. Removal of Temporary Fills. Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.

25. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, National Wild and Scenic Rivers, critical habitat for Federally listed threatened and endangered species, coral reefs, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the District Engineer after notice and opportunity for public comment. The District Engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Except as noted below, discharges of dredged or fill material into waters of the US are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, and 44 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters. Discharges of dredged or fill materials into waters of the US may be authorized by the above NWPs in National Wild and Scenic Rivers if the activity complies with General Condition 7. Further, such discharges may be authorized in designated critical habitat for Federally listed threatened or endangered species if the activity complies with General Condition 11 and the USFWS or the NMFS has concurred in a determination of compliance with this condition.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with General Condition 13, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The District Engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

26. Fills Within 100-Year Floodplains. For purposes of this General Condition, 100-year floodplains will be identified through the existing Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps or FEMA-approved local floodplain maps.

(a) Discharges in Floodplain; Below Headwaters. Discharges of dredged or fill material into waters of the US within the mapped 100-year floodplain, below headwaters (i.e. five cfs), resulting in permanent above-grade fills, are not authorized by NWPs 39, 40, 42, 43, and 44.

(b) Discharges in Floodway; Above Headwaters. Discharges of dredged or fill material into waters of the US within the FEMA or locally mapped floodway, resulting in permanent above-grade fills, are not authorized by NWPs 39, 40, 42, and 44.

(c) The permittee must comply with any applicable FEMA-approved state or local floodplain management requirements.

27. Construction Period. For activities that have not been verified by the Corps and the project was commenced or under contract to commence by the expiration date of the NWP (or modification or revocation date), the work must be completed within 12-months after such date (including any modification that affects the project).

For activities that have been verified and the project was commenced or under contract to commence within the verification period, the work must be completed by the date determined by the Corps. For projects that have been verified by the Corps, an extension of a Corps approved completion date maybe requested. This request must be submitted at least one month before the previously approved completion date.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other Federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

*** Some NWP conditions that are not applicable for this verification were omitted from above list. If you are interested in a complete list, you should contact the Corps of Engineers office that handled your request.**

US Army Corps of Engineers ®

Nationwide Permit

No. 14, Linear Transportation Projects

Activities required for the construction, expansion, modification, or improvement of linear transportation crossings (e.g., highways, railways, trails, airport runways, and taxiways) in waters of the US, including wetlands, if the activity meets the following criteria:

a. The discharge does not cause the loss of greater than 1/2-acre of waters of the US;

b. The width of the fill is limited to the minimum necessary for the crossing;

c. This permit does not authorize stream channelization, and the authorized activities must not cause more than minimal changes to the hydraulic flow characteristics of the stream, increase flooding, or cause more than minimal degradation of water quality of any stream (see General Conditions 9 and 21);

d. This permit cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars; and

e. The crossing is a single and complete project for crossing waters of the US. Where a road segment (i.e., the shortest segment of a road with independent utility that is part of a larger project) has multiple crossings of streams (several single and complete projects) the Corps will consider whether it should use its discretionary authority to require an individual Permit. (Sections 10 and 404)

N O T I C E

DIVISION OF WATER
(GENERAL WATER QUALITY CERTIFICATION)

PROJECT: Daviess County
Item No. 2-287.1
Owensboro Bypass

The Division of Water has approved the Section 401 activities for this project by issuance of a General Water Quality Certification for Nationwide Permit #14, "Linear Transportation Projects". All impacts to water bodies are under notification thresholds and do not require mitigation. In order for this authorization to be valid, the attached conditions must be followed. The contractor shall post a copy of this Water Quality Certification in a conspicuous location at the project site for the duration of construction and comply with the general conditions as required.

To more readily expedite construction, the contractor may elect to alter the design or perform the work in a manner different from what was originally proposed and specified. Prior to commencing such alternative work, the contractor shall obtain **written** permission from the Division of Construction and the appropriate permit agency. A copy of any request to alter this proposal and subsequent responses shall be forwarded to the Division of Environmental Analysis, DA Permit Coordinator, for office records and for informational purposes.

TERMS FOR NATIONWIDE PERMIT NO. 14
Linear Transportation Projects

Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10 acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 27.) (Sections 10 and 404)

Note: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

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General Certification--Nationwide Permit # 14
Linear Transportation Projects

This General Certification is effective March 19, 2007, in conformity with the requirements of Section 401 of the Clean Water Act of 1977, as amended (33 U.S.C. §1341), as well as Kentucky Statute KRS 224.16-050.

Agricultural operations, as defined by KRS 224.71-100(1) conducting activities pursuant to KRS 224.71-100 (3), (4), (5), (6), or (10) are deemed to have certification if they are implementing an Agriculture Water Quality Plan pursuant to KRS 224.71-145.

For all other operations, the Commonwealth of Kentucky hereby certifies under Section 401 of the Clean Water Act (CWA) that it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 5, established pursuant to Sections 301, 302, 304, 306 and 307 of the CWA, will not be violated for the activity covered under NATIONWIDE PERMIT 14, namely Linear Transportation Projects, provided that the following conditions are met:

1. This general certification shall not apply to nationwide permits issued for individual crossings that are part of a larger road segment project where the cumulative, unmitigated wetland impacts within a 14-HUC total one (1) acre or more.

2. The individual stream crossing will impact less than 300 linear feet of intermittent or perennial streams, unless excluded by condition # 3. Impacts to ephemeral streams are not limited under this general certification.

3. This general certification shall not apply to nationwide permits issued for individual crossings which meet condition # 2 but that are part of a larger road segment project where the cumulative, unmitigated intermittent and perennial stream impacts within a 14-HUC exceed 500 linear feet.

4. The activity will not occur within waters of the Commonwealth identified by the Kentucky Division of Water as Outstanding State or National Resource Waters, Cold Water Aquatic Habitat, or Exceptional Waters.

5. Stream impacts covered under this nationwide permit and undertaken by those persons defined as an agricultural operation under the Agricultural Water Quality Act must be completed in compliance with the Kentucky Agricultural Water Quality Plan.

6. Projects that do not meet the conditions of this general certification require an individual Section 401 water quality certification.

7. Activities qualifying for coverage under this general water quality certification are subject to the following conditions:

   - Stream crossings shall be constructed in such a manner that does not impede the movement of aquatic organisms.

   - Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse.

   - In areas not riprapped or otherwise stabilized, revegetation of stream banks and riparian zones shall occur concurrently with project progression. At a minimum, revegetation will approximate pre-disturbance conditions.

   - To the maximum extent practicable, all in stream work under this certification shall be performed during low flow.

   - Heavy equipment, e.g. bulldozers, backhoes, draglines, etc., if required for this project, should not be used or operated within the stream channel. In those instances where such in stream work is unavoidable, then it shall be performed in such a manner and duration as to minimize turbidity and disturbance to substrates and bank or riparian vegetation.

   - Any fill shall be of such composition that it will not adversely affect the biological, chemical, or physical properties of the receiving waters and/or cause violations of water quality standards. If riprap is utilized, it is to be of such weight and size that bank stress or slump conditions will not be created because of its placement.

   - If there are water supply intakes located downstream that may be affected by increased turbidity and suspended solids, the permittee shall notify the operator when work will be done.

- Removal of existing riparian vegetation should be restricted to the minimum necessary for project construction.

- Should evidence of stream pollution or jurisdictional wetland impairment and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the Kentucky Division of Water shall be notified immediately by calling 800/928-2380.

Non-compliance with the conditions of this general certification or violation of Kentucky state water quality standards may result in civil penalties.

This general certification will expire on March 19, 2012, or sooner if the USACE makes significant changes to this nationwide permit.

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to the *Standard Specifications for Road and Bridge Construction, Edition of 2004,* and *Standard Drawings, Edition of 2000* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2008* and *Standard Drawings, Edition of 2003 with the 2008 Revision.*

Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

SUBSECTION: **REVISION:**	101.02 Abbreviations. Insert the following abbreviation and text into the section: KEPSC Kentucky Erosion Prevention and Sediment Control
SUBSECTION: **REVISION:**	101.03 Definitions. Replace the definition for Specifications – *Special Provisions* with the following: Additions and revisions to the Standard and Supplemental Specifications covering conditions peculiar to an individual project.
SUBSECTION: **REVISION:**	102.03 Contents of the Bid Proposal Form. Replace the first sentence of the first paragraph with the following: The Bid Proposal form will be available on the Department internet website (http://transportation.ky.gov/contract/). Delete the second paragraph. Delete the last paragraph.
SUBSECTION: **REVISION:**	102.04 Issuance of Bid Proposal Form. Replace Heading with the following: 102.04 Bidder Registration. Replace the first sentence of the first paragraph with the following: The Department reserves the right to disqualify or refuse to place a bidder on the eligible bidder's list for a project for any of the following reasons: Replace the last sentence of the subsection with the following: The Department will resume placing the bidder on the eligible bidder's list for projects after the bidder improves his operations to the satisfaction of the State Highway Engineer.
SUBSECTION: **REVISION:**	102.06 Examination of Plans, Specifications, Special Provisions, Special Notes, and Site of Work. Replace the first paragraph with the following: Examine the site of the proposed work, the Bid Proposal, Plans, specifications, contract forms, and bulletins and addendums posted to the Department's website and the Bid Express Bidding Service Website before submitting the Bid Proposal. The Department considers the submission of a Bid Proposal prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the Contract.
SUBSECTION: **REVISION:**	102.07.01 General. Replace the first sentence with the following: Submit the Bid Proposal on forms furnished on the Bid Express Bidding Service website (www.bidx.com). Replace the first sentence of the third paragraph with the following: Bid proposals submitted shall use an eligible Digital ID issued by Bid Express.

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SUBSECTION: **REVISION:**	102.07.02 Computer Bidding. Replace the first paragraph with the following: Subsequent to registering for a specific project, use the Department's Expedite Bidding Program on the internet website of the Department of Highways, Division of Construction Procurement (http://transportation.ky.gov/contract/). Download the bid file from the Bid Express Bidding Service Website to prepare a Bid Proposal for submission to the Department. Submit Bid Proposal electronically through Bid Express Bidding Service. Delete the second and third paragraph.
SUBSECTION: **REVISION:**	102.08 Irregular Bid Proposals. Delete the following from the first paragraph: 4) fails to submit a disk created from the Highway Bid Program. Replace the second paragraph with the following: The Department will consider Bid Proposals irregular and may reject them for the following reasons: 1) when there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the Bid Proposal incomplete, indefinite, or ambiguous as to its meaning; or 2) when the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a Contract pursuant to an award; or 3) any failure to comply with the provisions of Subsection 102.07; or 4) Bid Proposals in which the Department determines that the prices are unbalanced; or when the sum of the total amount of the Bid Proposal under consideration exceeds the bidder's Current Capacity Rating.
SUBSECTION: **REVISION:**	102.09 Bid Proposal Guaranty. Insert the following after the first sentence: Bid Proposals must have a bid proposal guaranty in the amount indicated in the bid proposal form accompany the submittal. A guaranty in the form of a paper bid bond, cashier's check, or certified check in an amount no less than the amount indicated on the submitted electronic bid is required when the electronic bid bond was not utilized with the Bid Express Bidding Service. Paper bid bonds must be delivered to the Division of Construction Procurement prior to the time of the letting.
SUBSECTION: **REVISION:**	102.10 Delivery of Bid Proposals. Replace paragraph with the following: Submit all Bid Proposals prior to the time specified in the Notice to Contractors. All bids shall be submitted electronically using Bid Express Bidding Services. Electronically submitted bids must be done in accordance with the requirements of the Bid Express Bidding Service.
SUBSECTION: **REVISION:**	102.11 Withdrawal or Revision of Bid Proposals. Replace the paragraph with the following: Bid Proposals can be withdrawn in accordance the requirements of the Bid Express Bidding Service prior to the time of the Letting.

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SUBSECTION: **REVISION:**	102.13 Public Opening of Bid Proposals. Replace Heading with the following: 102.13 Public Announcement of Bid Proposals. Replace the paragraph with the following: The Department will publicly announce all Bid Proposals at the time indicated in the Notice to Contractors.
SUBSECTION: **REVISION:**	103.02 Award of Contract. Replace the first sentence of the third paragraph with the following: The Department will normally award the Contract within 10 working days after the date of receiving Bid Proposals unless the Department deems it best to hold the Bid Proposals of any or all bidders for a period not to exceed 60 calendar days for final disposition of award.
SUBSECTION: **REVISION:**	105.02 Plans and Working Drawings. Insert the following after the fourth paragraph: Submit electrical shop drawings, design data, and descriptive literature for materials in electronic format to the Division of Traffic Operations for approval. Drawings and literature shall be submitted for lighting and signal components. Notify the Engineer when submitting information to the Division of Traffic Operations. Do not begin work until shop drawings are approved. Submit shop drawings for traffic counting equipment and materials in electronic format to the Engineer or the Division of Planning. Notify the Engineer when submitting information directly to the Division of Planning. Do not begin work until shop drawings are reviewed and approved.
SUBSECTION: **REVISION:**	105.03 Record Plans. Replace the section with the following: Record Plans are those reproductions of the original Plans on which the accepted Bid Proposal was based and, and signed by a duly authorized representative of the Department. The Department will make these plans available for inspection in the Central Office at least 24 hours prior to the time of opening bids and up to the time of letting of a project or projects. The quantities appearing on the Record Plans are the same as those on which Bid Proposals are received. The Department will use these Record Plans as the controlling plans in the prosecution of the Contract. The Department will not make any changes on Record Plans subsequent to their issue unless done so by an approved contract modification. The Department will make 2 sets of Record Plans for each project, and will maintain one on file in the Central Office and one of file in the District Office. The Department will furnish the Contractor with the following: 1 full size, 2 half size and an electronic file copy of the Record Plans at the Pre-Construction conference.

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SUBSECTION:	105.12 Final Inspection and Acceptance of Work.
REVISION:	Insert the following paragraphs after the first paragraph: Notify the Engineer when all electrical items are complete. A notice of the electrical work completion shall be made in writing to the Contractor. Electrical items will be inspected when the electrical work is complete and are not subject to waiting until the project as a whole has been completed. The Engineer will notify the Division of Traffic Operations within 3 days that all electrical items are complete and ready for a final inspection. A final inspection will be completed within 90 days after the Engineer notifies the Division of Traffic Operations of the electrical work completion. Energize all electrical items prior to notifying the Engineer that all electrical items are complete. Electrical items must remain operational until the Division of Traffic Operations has inspected and accepted the electrical portion of the project. Payment for the electrical service is the responsibility of the Contractor from the time the electrical items are energized until the Division of Traffic Operations has accepted the work. Complete all corrective work within 90 calendar days of receiving the original electrical inspection report. Notify the Engineer when all corrective work is complete. The Engineer will notify the Division of Traffic Operations that the corrective work has been completed and the project is ready for a follow-up inspection. Upon re-inspection, if additional corrective work is required, complete within the same 90 calendar day allowance. The Department will not include time between completion of the corrective work and the follow up electrical inspection(s). The 90 calendar day allowance is cumulative regardless of the number of follow-up electrical inspections required. The Department will assume responsibility for the electrical service on a project once the Division of Traffic Operations gives final acceptance of the electrical items on the project. The Department will also assume routine maintenance of those items. Any damage done to accepted electrical work items by other Contractors shall be the responsibility of the Prime Contractor. The Department will not be responsible for repairing damage done by other contractors during the construction of the remaining project. Failure to complete the electrical corrective work within the 90 calendar day allowance will result in penalties assessed to the project. Penalties will be assessed at ½ the rate of liquidated damages established for the contract. Replace the following in the second sentence of the second paragraph: Replace Section 213 with Section 212. Delete the fifth paragraph from the section.
SUBSECTION:	105.13 Claim Resolution Process.
REVISION:	Replace the last sentence of the 3. Bullet with the following: If the Contractor did not submit an as-bid schedule at the Pre-Construction Meeting or a written narrative in accordance with Subsection 108.02, the Cabinet will not consider the claim for delay. Delete the last paragraph from the section.

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SUBSECTION: **REVISION:**	106.04 Buy America Requirement. Replace the section with the following: **106.04 Buy America Requirement.** Follow the "Buy America" provisions as required by Title 23 Code of Federal Regulations § 635.410. Except as expressly provided herein all manufacturing processes of steel or iron materials including but not limited to structural steel, guardrail materials, corrugated steel, culvert pipe, structural plate, prestressing strands, and steel reinforcing bars shall occur in the United States of America, including the application of: • Coating, • Galvanizing, • Painting, and • Other coating that protects or enhances the value of steel or iron products. The following are exempt, unless processed or refined to include substantial amounts of steel or iron material, and may be used regardless of source in the domestic manufacturing process for steel or iron material: • Pig iron, • Processed, pelletized, and reduced iron ore material, or • Processed alloys. The Contractor shall submit a certification stating that all manufacturing processes involved with the production of steel or iron materials occurred in the United States. Produce, mill, fabricate, and manufacture in the United States of America all aluminum components of bridges, tunnels, and large sign support systems, for which either shop fabrication, shop inspection, or certified mill test reports are required as the basis of acceptance by the Department. Use foreign materials only under the following conditions: 1) When the materials are not permanently incorporated into the project; or 2) When the delivered cost of such materials used does not exceed 0.1 percent of the total Contract amount or $2,500.00, whichever is greater. The Contractor shall submit to the Engineer the origin and value of any foreign material used.
SUBSECTION: **REVISION:**	106.10 Field Welder Certification Requirements. Insert the following sentence before the first sentence of the first paragraph: All field welding must be performed by a certified welder unless otherwise noted.
SUBSECTION: **REVISION:**	108.02 Progress Schedule. Insert the following prior to the first paragraph: Specification 108.02 applies to all Cabinet projects except the following project types: • Right of Way Mowing and/or Litter Removal • Waterborne Paint Striping • Projects that contain Special Provision 82 • Projects that contain the Special Note for CPM Scheduling Insert the following paragraph after paragraph two: Working without the submittal of a Written Narrative is violation of this specification and additionally voids the Contractor's right to delay claims. Insert the following paragraph after paragraph six: The submittal of bar chart or Critical Path Method schedule does not relieve the Contractor's requirement to submit a Written Narrative schedule.

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	Insert the following at the beginning of the first paragraph of A) Written Narrative.: Submit the Written Narrative Schedule using form TC 63-50 available at the Division of Construction's website (http://www.transportation.ky.gov/construction/ResCenter/ResCenter.htm). Replace Part A) Written Narrative 1. And 2. with the following: 1. Provide a description that includes how the Contractor will sequence and stage the work, how the Contractor plans to maintain and control traffic being specific and detailed, and what equipment and crew sizes are planned to execute the work. 2. Provide a list of project milestones including, if applicable, winter shut-downs, holidays, or special events. The Contractor shall describe how these milestones and other dates effect the prosecution of the work. Also, include start date and completion date milestones for the contract, each project if the contract entails multiple projects, each phase of work, site of work, or segment of work as divided in the project plans, proposal, or as subdivided by the Contractor.
SUBSECTION: **REVISION:**	109.07.01 Liquid Asphalt. Add the following to the Adjustable Contract Items: • Stone Matrix Asphalt for Base • Stone Matrix Asphalt for Surface
SUBSECTION: **REVISION:**	110.01 Mobilization. Replace paragraph three with the following: Do not bid an amount for Mobilization that exceeds 5 percent of the sum of the total amounts bid for all items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives. The Department will automatically adjust any Bid Proposals that are in excess of this amount down to 5 percent to compare Bid Proposals and award the Contract. The Department will award a Contract for the actual amount bid when the amount bid for Mobilization is less than 5 percent, or the Department will award the Contract for the adjusted bid amount of 5 percent when the amount bid for Mobilization is greater than 5 percent. If any errors in unit bid prices for other Contract items in a Contractor's Bid Proposal are discovered after bid opening and such errors reduce the total amount bid for all other items, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives, so that the percent bid for Mobilization is larger than 5 percent, the Department will adjust the amount bid for Mobilization to 5 percent of the sum of the corrected total bid amounts.
SUBSECTION: **REVISION:**	110.02 Demobilization. Replace the third paragraph with the following: Bid an amount for Demobilization that is a minimum of $1,000 or 1.5 percent of the sum of the total amounts bid for all other items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives. The Department will automatically adjust any Bid Proposal that is less than this amount up to $1,000 or 1.5 percent to compare Bid Proposals and award the Contract. The Department will award a Contract for the actual amount bid when the amount bid for demobilization exceeds 1.5 percent, or the Department will award the Contract for the adjusted bid amount when the amount bid for demobilization is less than the minimum of $1,000 or less than 1.5 percent of the sum of the total amounts bid for all other items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives.
SUBSECTION: **REVISION:**	110.04 Payment. Insert the following paragraph following the demobilization payment schedule (4th paragraph): The Department will withhold an amount equal to $1,000 for demobilization, regardless of the schedule listed above. The $1,000 withheld for demobilization will be paid when the final estimate is paid.

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SUBSECTION: **REVISION:**	112.03.01 General Traffic Control. Replace paragraph three with the following: All flaggers shall be trained in current MUTCD flagging procedures. Proof of training must be available for review at the Department's request. Flagging credentials must be current within the last 5 years.
SUBSECTION: **PART:** **REVISION:**	112.03.11 Temporary Pavement Markings. B) Placement and Removal of Temporary Striping. Replace the 2nd sentence of the first paragraph with the following: On interstates and parkways, and other roadways approved by the State Highway Engineer, install pavement striping that is 6 inches in width.
SUBSECTION: **REVISION:**	112.03.12 Project Traffic Coordinator (PTC). Add the following at the end of the subsection: After October 1, 2008 the Department will require the PTC to have successfully completed the applicable qualification courses. Personnel that have not successfully completed the applicable courses by that date will not be considered qualified. Prior to October 1, 2008, conform to Subsection 108.06 A) and ensure the designated PTC has sufficient skill and experience to properly perform the task.
SUBSECTION: **REVISION:**	112.03.15 Non-Compliance of Maintain and Control of Traffic. Add the following section: **112.03.15 Non-Compliance of Maintain and Control of Traffic.** It is the Contractor's responsibility to conform to the traffic control requirements in the TCP, Proposal, plan sheets, specifications, and the Manual on Uniform Traffic Control Devices. Unless specified elsewhere in the contract, a penalty will be assessed in the event of non-compliance with Maintain and Control of Traffic requirements. These penalties will be assessed when the Contractor fails to correct a situation or condition of non-compliance with the contract traffic control requirements after being notified by the Engineer. The calculation of accrued penalties for non-compliance will be based upon the date/time of notification by the Engineer. The amount of the penalty assessed for non-compliance will be determined based upon the work zone duration, as defined by the MUTCD, and will be the greatest of the different calculation methods indicated below: A) Long-term stationary work that occupies a location more than 3 days. Correct the non-compliant issue within 24 hours from initial notification by the Engineer. If the issue is not corrected within 24 hours from the initial notification, a penalty for non-compliance will be assessed on a daily basis beginning from the initial notification of non-compliance. The Contractor will be assessed a $1,000 daily penalty or the amount equal to the contract liquidated damages in Section 108.09, whichever of the 2 is greater. The penalty for non-compliance will escalate as follows for continued non-compliance after the initial notification. 3 Days after Notification $1,500 daily penalty or 1.5 times the contract liquidated damages daily charge rate in Section 108.09, whichever is greater. 7 Days after Notification $2,000 daily penalty or double the contract liquidated damages daily charge rate in Section 108.09, whichever is greater.

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	B) Intermediate-term stationary work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour. Correct the non-compliant issue within 4 hours from initial notification by the Engineer. If the issue is not corrected within 4 hours from notification, a penalty for non-compliance will be assessed on an hourly basis beginning from the initial notification of non-compliance. The penalty for non-compliance will be assessed at $200 per hour. C) Short-term stationary is work that occupies a location for more than 1 hour within a single 24-hour period. Correct the non-compliant issue within 1 hour from initial notification by the Engineer. If the issue is not corrected within 1 hour from notification, a penalty for non-compliance will be assessed on an hourly basis beginning from the initial notification of non-compliance. The penalty for non-compliance will be assessed at $200 per hour. If the Contractor remains in violation of the Maintain and Control of Traffic requirements, or if the Department determines it to be in the public's interest, work will be suspended in accordance with Section 108.08 until the deficiencies are corrected. The Department reserves the right to correct deficiencies by any means available and charge the Contractor for labor, equipment, and material costs incurred in emergency situations.
SUBSECTION: **REVISION:**	206.03.02 Embankment Replace the last paragraph with the following: When rock roadbed is specified, construct the upper 2 feet of the embankment according to Subsection 204.03.09 A).
SUBSECTION: **REVISION:**	213.03.03 Inspection and Maintenance. Replace the last sentence of the second paragraph with the following: Initiate corrective action within 24 hours of any noted deficiency and complete the work within 7 calendar days of receipt of the report. The Contractor shall make a concentrated effort to complete any corrective action required prior to the next predicted rainfall event. Insert the following paragraph after the second paragraph: When the Contractor is required to obtain the KPDES permit, it is their responsibility to ensure compliance with the inspection and maintenance requirements of the permit. The Engineer will perform verification inspections a minimum of once per month and within 7 days of a ½ inch or greater rainfall event. The Engineer will document these inspections using Form TC 63-61 A. The Engineer will provide copies of the inspection only when improvements to the BMP's are required. Verification inspections performed by the Engineer do not relieve the Contractor of any responsibility for compliance with the KPDES permit. Initiate corrective action within 24 hours of any noted deficiency and complete the work within 7calendar days of receipt of the report. The Contractor shall make a concentrated effort to complete any corrective action required prior to the next predicted rainfall event.

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SUBSECTION: **PART:** **REVISION:**	213.03.05 Temporary Control Measures. E) Temporary Seeding and Protection. Replace the first paragraph with the following: Apply an Annual Rye seed mix at a rate of 100 pounds per acre during the months of March through August. In addition to the Annual Rye, add 10 pounds of German Foxtail-Millet (Setaria italica), when performing temporary seeding during the months of June through August. During the months of September through February, apply Winter Wheat or Rye Grain at a rate of 100 pounds per acre. Obtain the Engineer's approval prior to the application of the seed mixture.
SUBSECTION: **PART:** **REVISION:**	213.03.05 Temporary Control Measures. F) Temporary Mulch. Replace the last sentence with the following: Place temporary mulch to an approximate 2-inch loose depth (2 tons per acre) and anchor it into the soil by mechanically crimping it into the soil surface or applying tackifier to provide a protective cover. Regardless of the anchoring method used, ensure the protective cover holds until disturbance is required or permanent controls are in installed.
SUBSECTION: **REVISION:**	303.05 Payment. Replace the second paragraph of the section with the following: The Department will make payment for Drainage Blanket-Type II (ATDB) according to the Lot Pay Adjustment Schedule for Specialty Mixtures in Section 402.
SUBSECTION: **PART:** **REVISION:**	401.02.04 Special Requirements for Dryer Drum Plants. F) Production Quality Control. Replace the first sentence with the following: Stop mixing operations immediately if, at any time, a failure of the automatic electronic weighing system of the aggregate feed, asphalt binder feed, or water injection system control occurs.
SUBSECTION: **REVISION:**	401.02.04 Special Requirements for Dryer Drum Plants. Add the following: Part G) **Water Injection System.** Provided each system has prior approval as specified in Subsection 402.01.01, the Department will allow the use of water injection systems for purposes of foaming the asphalt binder and lowering the mixture temperature for production of Warm Mix Asphalt (WMA). Ensure the equipment for water injection meets the following requirements: 1) Injection equipment computer controls are automatically coupled to the plants controls (manual operation is not permitted); 2) Injection equipment has variable controls that introduce water ratios based on production rates of mixtures; 3) Injects water into the flow of asphalt binder prior to contacting the aggregate; 4) Provides alarms on the water injection system that operate when the flow of water is interrupted or deviates from the prescribed water rate.
SUBSECTION: **REVISION:**	401.03.01 Preparation of Mixtures. Replace the last sentence of the second paragraph with the following: Do not use asphalt binder while it is foaming in a storage tank.

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SUBSECTION: 401.03.01 Preparation of Mixtures.
REVISION: Replace the third paragraph and Mixing and Laying Temperature table with the following:

Maintain the temperature of the component materials and asphalt mixture within the ranges listed in the following table:

MIXING AND LAYING TEMPERATURES (°F)

Material		Minimum	Maximum
Aggregates		240	330
Aggregates used with Recycled Asphalt Pavement (RAP)		240	—
Asphalt Binders	PG 64-22	230	330
	PG 76-22	285	350
Asphalt Mixtures at Plant (Measured in Truck)	PG 64-22 HMA	250	330
	PG 76-22 HMA	310	350
	PG 64-22 WMA	230	275
	PG 76-22 WMA	250	300
Asphalt Mixtures at Project (Measured in Truck When Discharging)	PG 64-22 HMA	230	330
	PG 76-22 HMA	300	350
	PG 64-22 WMA	210	275
	PG 76-22 WMA	240	300

SUBSECTION: 402.01 Description.
REVISION: Replace the paragraph with the following:

Provide the process control and acceptance testing of all classes and types of asphalt mixtures which may be furnished either as hot mix asphalt (HMA) or warm mix asphalt (WMA) produced with water injection systems.

SUBSECTION 402.01.01 Warm Mix Asphalt (WMA) Evaluation and Approval.
REVISION: Add the following subsection:

402.01.01 Warm Mix Asphalt (WMA) Evaluation and Approval.
The Department will evaluate trial production of WMA by use of a water injection system provided the system is installed according to the manufacturer's requirements and satisfies the requirements of Section 401. Evaluation will include production and placement of WMA to demonstrate adequate mixture quality including volumetric properties and density by Option A as specified in Subsection 402.03.02 D). Do not place WMA for evaluation on Department projects. Provided production and placement operations satisfy the applicable quality levels, the Department will approve WMA production on Department projects using the water injection system as installed on the specific asphalt mixing plant evaluated.

SUBSECTION: 402.05.02 Asphalt Mixtures and Mixtures With RAP.
REVISION: Replace Subsection Title as below:

402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.

SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
REVISION: Replace the paragraph with the following:

The Department will pay for the mixture at the Contract unit bid price and apply a Lot Pay Adjustment for each lot placed based on the degree of compliance with the specified tolerances. Using the appropriate Lot Pay Adjustment Schedule, the Department will assign a pay value for the applicable properties within each sublot and average the sublot pay values to determine the pay value for a given property for each lot. The Department will apply the Lot Pay Adjustment for each lot to a defined unit price of $50.00 per ton. The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.

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SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
PART: C) Conventional and RAP Mixtures Placed on Shoulders.
REVISION: Replace Title and Text with the following:

C) HMA, WMA and RAP Mixtures Placed on Shoulders or Placed as Asphalt Pavement Wedge.

1) Placed monolithically with the Mainline – Width of 4 feet or less. The Department will pay as mainline mixture.
2) Placed monolithically with the Mainline – Width of greater than 4 feet. The Department will pay as mainline mixture but use 1.00 for the Lane and Joint Density Pay Value for shoulder or Asphalt Pavement Wedge quantities.
3) Placed Separately. The Department will use 1.00 for the Lane and Joint Density Pay Value.

SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
PART: D) Conventional and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge.
REVISION: Replace the title with the following:
D) HMA, WMA, and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge.

Delete the following:
D) HMA, WMA, and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge. The Department will pay as mainline mixture but use a 1.00 pay value for all properties.

SUBSECTION: 402.05.02 Asphalt Mixtures for Temporary Pavement.
PART: E) Asphalt Mixtures for Temporary Pavement.
REVISION: Replace E) Asphalt Mixtures for Temporary Pavement with the following:

D) Asphalt Mixtures for Temporary Pavement.

SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
PART: Lot Pay Adjustment Schedule, Compaction Option A, Base and Binder Mixtures
TABLES: VMA
REVISION: Replace the VMA table with the following:

VMA	
Pay Value	Deviation From Minimum
1.00	≥ min. VMA
0.95	0.1-0.5 below min.
0.90	0.6-1 0 below min.
(1)	> 1.0 below min.

SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
PART: Lot Pay Adjustment Schedule, Compaction Option A, Surface Mixtures
TABLES: VMA
REVISION: Replace the VMA table with the following:

VMA	
Pay Value	Deviation From Minimum
1.00	≥ min. VMA
0.95	0.1-0.5 below min.
0.90	0.6-1.0 below min.
(1)	> 1.0 below min.

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SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
PART: Lot Pay Adjustment Schedule, Compaction Option B Mixtures
TABLE: VMA
REVISION: Replace the VMA table with the following:

VMA	
Pay Value	Deviation From Minimum
1.00	≥min. VMA
0.95	0 1-0.5 bel w min.
0.9	0.6-1.0 below min.
(2)	> 1.0 below min.

SUBSECTION: 403.03.03 Preparation of Mixture.
PART: C) Mix Design Criteria.
NUMBER: 1) Preliminary Mix Design.
REVISION: Replace the last two sentences of the paragraph and table with the following:

Complete the volumetric mix design at the appropriate number of gyrations as given in the table below for the number of 20-year ESAL's. The Department will define the relationship between ESAL classes, as given in the bid items for Superpave mixtures, and 20-year ESAL ranges as follows:

		Number of Gyrations		
Class	**ESAL's (millions)**	$N_{initial}$	N_{design}	N_{max}
2	< 3.0	6	50	75
3	3.0 to < 30.0	7	75	115
4	≥ 30.0	8	100	160

SUBSECTION: 403.03.09 Leveling and Wedging, and Scratch Course.
PART: A) Leveling and Wedging.
REVISION: Replace the first sentence of the first paragraph with the following:

Conform to the gradation requirements (control points) of AASHTO M 323 for base, binder, or surface as the Engineer directs.

SUBSECTION: 403.03.09 Leveling and Wedging, and Scratch Course.
PART: B) Scratch Course.
REVISION: Replace the second sentence of the first paragraph with the following:

Conform to the gradation requirements (control points) of AASHTO M 323 for base, binder, or surface as the Engineer directs.

SUBSECTION: 407.01 DESCRIPTION.
REVISION: Replace the first sentence of the paragraph with the following:

Construct a pavement wedge composed of a hot-mixed or warm-mixed asphalt mixture.

SUBSECTION: 409.01 DESCRIPTION.
REVISION: Replace the first sentence of the paragraph with the following:

Use reclaimed asphalt pavement (RAP) from Department projects or other approved sources in hot mix asphalt (HMA) or warm mix asphalt (WMA) provided mixture requirements are satisfied.

SUBSECTION: 410.01 DESCRIPTION.
REVISION: Delete the second sentence of the paragraph.

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SUBSECTION: 410.03.01 Corrective Work.
REVISION: Replace the last sentence of the paragraph with the following:

Provide a final surface comparable to the adjacent pavement that does not require corrective work in respect to texture, appearance, and skid resistance.

SUBSECTION: 410.03.02 Ride Quality.
PART: B) Requirements.
NUMBER: 1) Category A.
REVISION: Replace the last sentence of the first paragraph with the following:

At the Department's discretion, a pay deduction of $1200 per 0.1-lane-mile section may be applied in lieu of corrective work.

SUBSECTION: 410.03.02 Ride Quality.
PART: B) Requirements.
NUMBER: 2) Category B.
REVISION: Replace the second and third sentence of the first paragraph with the following:

When the IRI is greater than 90 for a 0.1-mile section, perform corrective work, or remove and replace the pavement to achieve the specified IRI. At the Department's discretion, a pay deduction of $750 per 0.1-lane-mile section may be applied in lieu of corrective work.

SUBSECTION: 410.05 PAYMENT.
REVISION: Add the following sentence to the end of the first paragraph:

The sum of the pay value adjustments for ride quality shall not exceed $0 for the project as a whole.

SUBSECTION: 413.05.02 CL3 SMA BASE 1.00D PG76-22.
REVISION: Insert the following sentence between the first and second sentence of the first paragraph:

The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.

SUBSECTION: 413.05.02 CL3 SMA BASE 1.00D PG 76-22.
TABLE: JOINT DENSITY TABLE
REVISION: Replace the joint density table with the following:

LANE DENSITY	
Pay Value	Test Result (%)
1.05	95.0-96.5
1.00	93.0-94.9
0.95	92.0-92.9 or 96.6-97.0
0.90	91.0-91.9 or 97.1-97.5
(1)	< 91.0 or > 97.5

SUBSECTION: 413.05.03 CL3 SMA SURF 0.50A PG76-22 and CL3 SMA SURF 0.38A PG76-22.
REVISION: Insert the following sentence between the first and second sentence of the first paragraph:

The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.

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SUBSECTION: 413.05.03 CL3 SMA SURF 0.50A PG76-22 and CL3 SMA SURF 0.38A PG76-22.
TABLE: JOINT DENSITY TABLE
REVISION: Replace the joint density table with the following:

DENSITY		
Pay Value	Lane Density Test Result (%)	Joint Density Test Result (%)
1.05	95.0-96.5	92.0-96.0
1.00	93.0-94.9	90.0-91.9
0.95	92.0-92.9 or 96.6-97.0	89.0-89.9 or 96.1-96.5
0.90	91.0-91.9 or 97.1-97.5	88.0-88.9 or 96.6-97.0
0.75	----	< 88.0 or > 97.0
(1)	< 91.0 or > 97.5	----

SUBSECTION: 501.05.02 Ride Quality.
REVISION: Add the following sentence to the end of the first paragraph:

The sum of the pay value adjustments for the ride quality shall not exceed $0 for the project as a whole.

SUBSECTION: 505.03.04 Detectable Warnings.
REVISION: Replace the first sentence with the following:

Install detectable warning pavers at all sidewalk ramps and on all commercial entrances according to the Standard Drawings.

SUBSECTION: 505.04.04 Detectable Warnings.
REVISION: Replace the paragraph with the following:

The Department will measure the quantity in square feet. All retrofit applications for maintenance projects will require the removal of existing sidewalks to meet the requirements of the standard drawings applicable to the project. The cost associated with the removal of the existing sidewalk will be incidental to the detectable warnings bid item or incidental to the bid item for the construction of the concrete sidewalk unless otherwise noted.

SUBSECTION: 505.05 PAYMENT.
REVISION: Add the following to the bid item table:

Code	Pay Item	Pay Unit
23158ES505	Detectable Warnings	Square Foot

SUBSECTION: 509.01 DESCRIPTION.
REVISION: Replace the second paragraph with the following:

The Department may allow the use of similar units that conform to the National Cooperative Highway Research Program (NCHRP) 350 Test Level 3 (TL-3) requirements and the typical features depicted by the Standard Drawings. Obtain the Engineers approval prior to use. Ensure the barrier wall shape, length, material, drain slot dimensions and locations typical features are met and the reported maximum deflection is 3 feet or less from the NCHRP 350 TL-3 for Test 3 – 11 (pickup truck impacting at 60 mph at a 25-degree angle.)

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SUBSECTION: **REVISION:**	601.03.02 Concrete Producer Responsibilities. Replace the first sentence with the following: Obtain the concrete from producers that are in compliance with KM 64-323 and on the Department's List of Approved Materials. Add the following to the first paragraph: If a concrete plant becomes unqualified during a project and there are no other qualified plants in the region, the Department will provide qualified personnel to witness and ensure the producer follows the required specifications. The Department will assess the Contractor a $100 per hour charge for this service.
SUBSECTION: **PART:** **REVISION:**	601.03.02 Concrete Producer Responsibilities. B) Certified Personnel. Replace the second sentence with the following: Ensure that the concrete technicians are certified as ACI Level I (Level I) and KRMCA Level II (Level II).
SUBSECTION: **PART:** **REVISION:**	601.03.02 Concrete Producer Responsibilities. C) Quality Control. Replace the second sentence with the following: Ensure that the Level II concrete technician is present when work is in progress and is responsible for inspecting trucks, batch weight calculations, monitoring batching, making mixture adjustments, reviewing the slump, air content, unit weight, temperature, and aggregate tests, all to provide conforming concrete to the project.
SUBSECTION: **PART:** **REVISION:**	601.03.02 Concrete Producer Responsibilities. D) Producer Testing. Replace with the following: When producing for state work, have a Qualified Concrete Aggregate Technician or KYTC Qualified Aggregate Technician perform, at a minimum, weekly gradations and minus 200 wash tests and daily moisture contents of coarse and fine aggregate (Fine aggregates will not require a minus 200 wash test). Using the daily moisture contents, adjust the approved mix design accordingly prior to production. Ensure that the Level II concrete technician is present when work is in progress and is responsible for inspecting trucks, batch weight calculations, monitoring batching, making mixture adjustments, reviewing the slump, air content, unit weight, temperature, and aggregate tests, all to provide conforming concrete to the project.
SUBSECTION: **PART:** **REVISION:**	601.03.02 Concrete Producer Responsibilities. E) Trip Tickets. Replace the second sentence with the following: Include on the trip ticket the Sample ID for the approved mix design and a statement certifying that the data on the ticket is correct and that the mixture conforms to the mix design.
SUBSECTION: **PART:** **NUMBER:** **REVISION:**	601.03.03 Proportioning and Requirements. C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures 2) Mineral Admixtures. Replace the second sentence with the following: Reduction of the total cement content by a combination of mineral admixtures will be allowed, up to a maximum of 40 percent.

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SUBSECTION:	601.03.03 Proportioning and Requirements.
PART:	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures
NUMBER:	2) Mineral Admixtures.
LETTER:	a) Fly Ash.
REVISION:	Delete the last sentence of the third paragraph.
SUBSECTION:	601.03.03 Proportioning and Requirements.
PART:	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures
NUMBER:	2) Mineral Admixtures.
LETTER:	b) Ground Granulated Blast Furnace Slag (GGBF Slag).
REVISION:	Delete the second sentence of the third paragraph.
SUBSECTION:	601.03.03 Proportioning and Requirements.
PART:	E) Measuring.
REVISION:	Add the following sentence: Conform to the individual ingredient material batching tolerances in Appendix A.
SUBSECTION:	601.03.09 Placing Concrete.
PART:	A) General.
REVISION:	Replace the last sentence of the fourth paragraph with the following: Do not use aluminum or aluminum alloy troughs, pipes, or chutes that have surface damage or for lengths greater than 20 feet. Replace the second sentence of the fifth paragraph with the following: When pumping, equip the delivery pipe with a nozzle, having a minimum of 2 right angles, at the discharge end. Alternate nozzles or restriction devices may be allowed with prior approval by the Engineer.
SUBSECTION:	605.02.05 Forms.
REVISION:	Delete the last sentence.
SUBSECTION:	605.03.04 Tack Welding.
REVISION:	Replace with the following: The Department does not allow tack welding.
SUBSECTION:	606.02.11 Coarse Aggregate.
REVISION:	Replace with the following: Conform to Section 805, size No. 8 or 9-M.
SUBSECTION:	609.03.04 Expansion and Fixed Joints.
PART:	D) Preformed Neoprene Joint Seals.
REVISION:	Replace the last sentence of paragraph seven with the following: Field splices will not be allowed during partial width construction. It is Contractor's responsibility to determine and install the length of seal required for the joint to barrier wall as per the standard drawing.
SUBSECTION:	609.03.09 Finish with Burlap Drag.
REVISION:	Delete the entire section.
SUBSECTION:	609.04.06 Joint Sealing.
REVISION:	Replace Subsection 601.04 with the following: Subsection 606.04.08.

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SUBSECTION: **REVISION:**	609.05 Payment. Replace the Pay Unit for Joint Sealing with the following: See Subsection 606.05.
SUBSECTION: **REVISION:**	701.03.06 Initial Backfill. Replace the first sentence of the last paragraph with the following: When the Contract specifies, perform quality control testing to verify compaction according to KM 64-512.
SUBSECTION: **REVISION:**	701.03.08 Testing of Pipe. Replace and rename the subsection with the following: **701.03.08 Inspection of Pipe.** The engineer will visually inspect all pipe. The Department will require camera/video inspection on a minimum of 50 percent of the linear feet of all installed pipe structures. Conduct camera/video inspection according to KM 64-114. The pipe to be installed under pavement will be selected first. If the total linear feet of pipe under pavement is less than 50 percent of the linear feet of all pipe installed, the Engineer will randomly select installations from the remaining pipe structures on the project to provide for the minimum inspection requirement. The pipe will be selected in complete runs (junction-junction or headwall-headwall) until the total linear feet of pipe to be inspected is at least 50 percent of the total linear feet of all installed pipe on the project. Unless the Engineer directs otherwise, schedule the inspections no sooner than 30 days after completing the installation and completion of earthwork to within 1 foot of the finished subgrade. When final surfacing conflicts with the 30-day minimum, conduct the inspections prior to placement of the final surface. The contractor must ensure that all pipe are free and clear of any debris so that a complete inspection is possible. Notify the Engineer immediately if distresses or locations of improper installation are discovered. When camera testing shows distresses or improper installation in the installed pipe, the Engineer may require additional sections to be tested. Provide the video and report to the Engineer when testing is complete in accordance with KM 64-114. Pipes that exhibit distress or signs of improper installation may necessitate repair or removal as the Engineer directs. These signs include, but are not limited to: deflection, cracking, joint separation, sagging or other interior damage. If corrugated metal or thermoplastic pipes exceed the deflection and installation thresholds indicated in the table below, provide the Department with an evaluation of each location conducted by a Professional Engineer addressing the severity of the deflection, structural integrity, environmental conditions, design service life, and an evaluation of the factor of safety using Section 12, “Buried Structures and Tunnel Liners,” of the AASHTO LRFD Bridge Design Specifications. Based on the evaluation, the Department may allow the pipe to remain in place at a reduced unit price as shown in the table below. Provide 5 business days for the Department to review the evaluation. When the pipe shows deflection of 10 percent or greater, remove and replace the pipe. When the camera/video or laser inspection results are called into question, the Department may require direct measurements or mandrel testing. The Cabinet may elect to conduct Quality Assurance verifications of any pipe inspections.
SUBSECTION: **REVISION:**	701.04.07 Testing. Replace and rename the subsection with the following: **701.04.07 Pipeline Video Inspection.** The Department will measure the quantity in linear feet along the pipe invert of the structure inspected. When inspection above the specified 50 percent is performed due to a disagreement or suspicion of additional distresses and the Department is found in error, the Department will measure the quantity as Extra Work according to Subsection 104.03. However, if additional distresses or non-conformance is found, the Department will not measure the additional inspection for payment.

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SUBSECTION:
REVISION:

701.05 PAYMENT.
Add the following pay item to the list of pay items:

Code	Pay Item	Pay Unit
23131ER701	Pipeline Video Inspection	Linear Foot

SUBSECTION:
TABLE:
REVISION:

701.05 PAYMENT
PIPE DEFLECTION DETERMINED BY CAMERA TESTING
Replace this table with the following table and note:

PIPE DEFLECTION	
Amount of Deflection (%)	Payment
0.0 to 5.0	100% of the Unit Bid Price
5.1 to 9.9	50% of the Unit Bid Price (1)
10 or greater	Remove and Replace

(1) Provide Structural Analysis as indicated above. Based on the structural analysis, pipe may be allowed to remain in place at the reduced unit price.

SUBSECTION:
TABLE:
REVISION:

701.05 PAYMENT
PIPE DEFLECTION DETERMINED BY MANDREL TESTING
Delete this table.

SUBSECTION:
REVISION:

713.02.01 Paint.
Replace with the following:

Conform to Section 842 and Section 846.

SUBSECTION:
REVISION:

713.03 CONSTRUCTION.
Replace the first sentence of the second paragraph with the following:

On interstates and parkways, and other routes approved by the State Highway Engineer, install pavement striping that is 6 inches in width.

SUBSECTION:
REVISION:

713.03.03 Paint Application.
Replace the second paragraph with the following table:

Material	**Paint Application Rate**	**Glass Beads Application Rate**
4 inch waterborne paint	Min. of 16.5 gallons/mile	Min. of 6 pounds/gallon
6 inch waterborne paint	Min. of 24.8 gallons/mile	Min. of 6 pounds/gallon
6 inch durable waterborne paint	Min. of 36 gallons/mile	Min. of 6 pounds/gallon

SUBSECTION:
REVISION:

713.03.04 Marking Removal.
Replace the last sentence of the paragraph with the following:

Vacuum all marking material and removal debris concurrently with the marking removal operation.

SUBSECTION:
REVISION:

713.05 PAYMENT.
Insert the following codes and pay items below the Pavement Striping – Permanent Paint:

Code	Pay Item	Pay Unit
24189ER	Durable Waterborne Marking – 6 IN W	Linear Foot
24190ER	Durable Waterborne Marking – 6 IN Y	Linear Foot
24191ER	Durable Waterborne Marking – 12 IN W	Linear Foot

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SUBSECTION: **REVISION:**	714.03 CONSTRUCTION. Insert the following paragraph at the end of the third paragraph: Use Type I Tape for markings on bridge decks, JPC pavement and JPC intersections. Thermoplastic should only be used for markings on asphalt pavement.
SUBSECTION: **REVISION:**	714.03.07 Marking Removal. Replace the third sentence of the paragraph with the following: Vacuum all marking material and removal debris concurrently with the marking removal operation.
SUBSECTION: **REVISION:**	716.01 DESCRIPTION. Insert the following after the first sentence: Energize lighting as soon as it is fully functional and ready for inspection. Ensure that lighting remains operational until the Division of Traffic Operations has provided written acceptance of the electrical work.
SUBSECTION: **REVISION:**	716.02.01 Roadway Lighting Materials. Replace the last two sentences of the paragraph with the following: Submit for material approval an electronic file of descriptive literature, drawings, and any requested design data to the Division of Traffic Operations. Do not begin work until shop drawings are approved. Notify the Engineer when submitting any information to the Division of Traffic Operations. Do not make substitutions for approved materials without written permission as described above.
SECTION: **REVISION:**	717 – THERMOPLASTIC INTERSECTION MARKINGS. Replace the section name with the following: INTERSECTION MARKINGS.
SUBSECTION: **REVISION:**	717.01 DESCRIPTION: Replace the paragraph with the following: Furnish and install thermoplastic or Type I tape intersection markings (Stop Bars, Crosswalks, Turn Arrows, etc.) Thermoplastic markings may be installed by either a machine applied, screed extrusion process or by applying preformed thermoplastic intersection marking material.
SUBSECTION: **REVISION:**	717.02 MATERIALS AND EQUIPMENT. Insert the following subsection: 717.02.06 Type I Tape. Conform to Section 836.
SUBSECTION: **REVISION:**	717.03.03 Application. Insert the following part to the subsection: B) Type I Tape Intersection Markings. Apply according to the manufacturer's recommendations. Cut all tape at pavement joints when applied to concrete surfaces.

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SUBSECTION: 717.03.05 Proving Period.
PART: A) Requirements.
REVISION: Insert the following to this section:

2) Type I Tape. During the proving period, ensure that the pavement marking material shows no signs of failure due to blistering, excessive cracking, bleeding, staining, discoloration, oil content of the pavement materials, drippings, chipping, spalling, poor adhesion to the pavement, loss of retroreflectivity, vehicular damage, and normal wear. Type I Tape is manufactured off site and warranted by the manufacturer to meet certain retroreflective requirements. As long as the material is adequately bonded to the surface and shows no signs of failure due to the other items listed in Subsection 714.03.06 A) 1), retroreflectivity readings will not be required. In the absence of readings, the Department will accept tape based on a nighttime visual observation.

SUBSECTION: 717.03.06 Marking Removal.
REVISION: Replace the third sentence of the paragraph with the following:

Vacuum all marking material and removal debris concurrently with the marking removal operation.

SUBSECTION: 717.05 PAYMENT.
REVISION: Insert the following bid item codes:

Code	Pay Unit	Pay Item
06563	Pave Marking – R/R X Bucks 16 IN	Linear Foot
20782NS714	Pave Marking Thermo – Bike	Each
23251ES717, 23264ES717	Pave Mark TY I Tape X-Walk, Size	Linear Foot
23252ES717, 23265ES717	Pave Mark TY I Tape Stop Bar, Size	Linear Foot
23253ES717	Pave Mark TY I Tape Cross Hatch	Square Foot
23254ES717	Pave Mark TY I Tape Dotted Lane Extension	Linear Foot
23255ES717	Pave Mark TY I Tape Arrow, Type	Each
23268ES717-23270ES717		
23256ES717	Pave Mark TY I Tape- ONLY	Each
23257ES717	Pave Mark TY I Tape- SCHOOL	Each
23266ES717	Pave Mark TY 1 Tape R/R X Bucks-16 IN	Linear Foot
23267ES717	Pave Mark TY 1 Tape-Bike	Each

SUBSECTION: 725.02.02 Type VI Class C & CT.
REVISION: Replace bullet 2) with the following:

2) The SCI100GM System as developed by SCI Products, Inc. of St. Charles, Illinois. For all miscellaneous metal work conform to ASTM A 36 and galvanize according to ASTM A 123. For the SCI100GM fender panels conform to AASHTO 180. Galvanize the SCI100GM fender panels and SCI100GM -beam connectors after fabrication according to ASTM A 123.

SUBSECTION: 725.02.04 Type VII Class C.
REVISION: Replace bullet 2) with the following:

2) The SCI100GM System as developed by SCI Products, Inc. of St. Charles, Illinois. For all miscellaneous metal work conform to ASTM A 36 and galvanize according to ASTM A 123. For the SCI100GM fender panels conform to AASHTO 180. Galvanize the SCI100GM fender panels and SCI100GM-beam connectors after fabrication according to ASTM A 123.

SUBSECTION: 801.01 REQUIREMENTS.
REVISION: Delete the fourth sentence of the first paragraph and add the following to the second paragraph.

When supplying cement with a SO_3 content above the value in table I of ASTM C 150, include supportive ASTM C 1038 14-day expansion test data for the supplied SO_3 content on the certification.

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SUBSECTION:	805.01 GENERAL.
REVISION:	Replace the second paragraph with the following: The Department's List of Approved Materials includes the Aggregate Source List, the list of Class A and Class B Polish-Resistant Aggregate Sources, and the Concrete Restriction List.
SUBSECTION:	805.04 CONCRETE.
REVISION:	Delete footnote (1) The permissible lightweight particle content of gravel coarse aggregate for reinforced concrete box culvert sections, concrete pipe, pipe arches, or for use only in concrete that will be permanently protected from freezing by 2 feet or more of cover is 10.0 percent.
SUBSECTION:	805.04 CONCRETE.
REVISION:	Replace the "AASHTO T 160" reference in first sentence of the third paragraph with "KM 64-629"
SUBSECTION:	805.15 GRADATION ACCEPTANCE OF NON-SPECIFICATION COARSE AGGREGATE.
TABLE:	AGGREGATE SIZE USE
PART:	Cement Concrete Structures and Incidental Construction
REVISION:	Replace "9-M for Waterproofing Overlays" with "8 or 9-M for Waterproofing Overlays"

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SUBSECTION: 805.15 GRADATION ACCEPTANCE OF NON-SPECIFICATION COARSE AGGREGATE.
REVISION: Replace the "SIZES OF COARSE AGGREGATES" table in with the following:

SIZES OF COARSE AGGREGATES

	Sieve	AMOUNTS FINER THAN EACH LABORATORY SIEVE (SQUARE OPENINGS) PERCENTAGE BY WEIGHT															
Aggregate Size	Nominal [3] Maximum Aggregate Size	4 inch	3 1/2 inch	3 inch	2 1/2 inch	2 inch	1 1/2 inch	1 inch	3/4 inch	1/2 inch	3/8 inch	No. 4	No. 8	No. 16	No. 30	No. 100	No. 200
1	3 ½ inch	100	90-100		25-60		0-15		0-5								
2	2 ½ inch			100	90-100	35-70	0-15		0-5								
23	2 inch			100		40-90		0-15		0-5							
3	2 inch				100	90-100	35-70	0-15		0-5							
357	2 inch				100	95-100		35-70		10-30		0-5					
4	1 ½ inch					100	90-100	20-55	0-15		0-5						
467	1 ½ inch					100	95-100		35-70		10-30	0-5					
5	1 inch						100	90-100	20-55	0-10	0-5						
57	1 inch						100	95-100		25-60		0-10	0-5				
610	1 inch						100	85-100		40-75		15-40					
67	3/4 inch							100	90-100		20-55	0-10	0-5				
68	3/4 inch							100	90-100		30-65	5-25	0-10	0-5			
710	3/4 inch							100	80-100		30-75	0-30					
78	1/2 inch								100	90-100	40-75	5-25	0-10	0-5			
8	3/8 inch									100	85-100	10-30	0-10	0-5			
9-M	3/8 inch									100	75-100	0-25	0-5				
10[2]	No. 4										100	85-100				10-30	
11[2]	No. 4										100	40-90	10-40			0-5	
DENSE GRADED AGGREGATE [1]	3/4 inch							100	70-100		50-80	30-65			10-40		4-13
CRUSHED STONE BASE [1]	1 ½ inch				100		90-100		60-95		30-70	15-55			5-20		0-8

(1) *Gradation performed by wet sieve KM 64-620 or AASHTO T 11/T 27.*
(2) *Sizes shown for convenience and are not to be considered as coarse aggregates.*
(3) *Nominal Maximum Size is the largest sieve on the gradation table for an aggregate size on which any material may be retained.*

Note: The Department will allow blending of same source/same type aggregate when precise procedures are used such as cold feed, belt, or equivalent and combining of sizes or types of aggregate using the weigh hopper at concrete plants or controlled feed belts at the pugmill to obtain designated sizes.

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SUBSECTION: **REVISION:**	805.16 SAMPLING AND TESTING. Replace the "AASHTO T 160" method with the "KM 64-629" method for the Concrete Beam Expansion Test. Replace the "ASTM D 3042" method with the "KM 64-625" method for Insoluble Residue.
SUBSECTION: **REVISION:**	810.04.01 Coating Requirements. Replace the "Subsection 806.07" references with "Subsection 806.06"
SUBSECTION: **PART:** **REVISION:**	810.06.01 Polyvinyl Chloride (PVC) Pipe. B) Culvert and Entrance Pipe. Replace the title with the following: B) Culvert Pipe, Storm Sewer, and Entrance Pipe.
SUBSECTION: **REVISION:**	823.02 LIQUID MEMBRANE FORMING COMPOUNDS. Add the following: Effective July 1, 2011, to remain on or be added to the Department's approved list, products must have completed testing or been submitted for testing through the National Transportation Product Evaluation Program (NTPEP) for Concrete Curing Compounds.
SUBSECTION: **REVISION:**	837.03 APPROVAL. Replace the last sentence with the following: The Department will sample and evaluate for approval each lot of thermoplastic material delivered for use per contract prior to installation of the thermoplastic material. Do not allow the installation of thermoplastic material until it has been approved by the Division of Materials. Allow the Department a minimum of 10 working days to evaluate and approve thermoplastic material.
SUBSECTION: **REVISION:**	837.03.01 Composition. COMPOSITION Table: Replace Lead Chromate | 0.0 max. | 4.0 min. with Heavy Metals Content | Comply with 40 CFR 261
SUBSECTION: **TABLE:** **REVISION:**	842.02 APPROVAL. PAINT COMPOSITION Revise the following in the table: Replace the 2.0ΔE* values in the table with 4.0ΔE* for both Yellow and White Paint on both the Daytime and Nighttime Color Spectrophotometer.
SECTION: **REVISION:**	DIVISION 800 MATERIAL DETAILS Add the following section in Division 800 **SECTION 846 – DURABLE WATERBORNE PAINT** **846.01 DESCRIPTION.** This section covers quick-drying durable waterborne pavement striping paint for permanent applications. The paint shall be ready-mixed, one-component, 100% acrylic waterborne striping paint suitable for application on such traffic-bearing surfaces as Portland cement concrete, bituminous cement concrete, asphalt, tar, and previously painted areas of these surfaces. **846.02 Approval.** Select materials that conform to the composition requirements below. Provide independent analysis data and certification for each formulation stating the total concentration of each heavy metal present, the test method used for each determination, and compliance to 40 CFR 261 for leachable heavy metals content. Submit initial samples for approval before beginning striping

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operations. The initial sample may be sent from the manufacture of the paint. The Department will randomly sample and evaluate the paint each week that the striping operations are in progress.

The non-volatile portion of the vehicle shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis. The acrylic resin used shall be a 100% cross-linking acrylic as evidenced by infrared peaks at wavelengths 1568, 1624, and 1672 cm-1 with intensities equal to those produced by an acrylic resin known to be 100% cross-linking.

PAINT COMPOSITION		
Property and Test Method	Yellow	White
Daytime Color (CIELAB) Spectrophotometer using illuminant D65 at 45º illumination and 0º viewing with a 2º observer	L* 81.76 a* 19.79 b* 89.89 Maximum allowa le variation 4.0ΔE*	L* 93.51 a* -1.01 b* 0.70 Maximum allowable variation 4.0ΔE*
Nighttime Color (CIELAB) Spectrophotometer using illuminant A at 45º illumination and 0º viewing with a 2º observer	L* 86.90 a* 24.80 b* 95.45 Maximum allowable variation 4.0ΔE*	L* 93.45 a* -0.79 b* 0.43 Maximum allowable variation 4.0ΔE*
Heavy Metals Content	Comply with 40 CFR 261	Comply with 40 CFR 261
Titanium Dioxide ASTM D 4764	NA	10% by weight of pigment min.
VOC ASTM D 2369 and D 4017	1.25 lb/gal max.	1.25 l /gal ma .
Contrast Ratio (at 15 mils wft)	0.97	0.99

846.02.01 Manufacturers Certification. Provide a certification of analysis for each lot of traffic paint produced stating conformance to the requirements of this section. Report the formulation identification, traffic paint trade name, color, date of manufacturer, total quantity of lot produced, actual quantity of traffic paint represented, sampling method utilized to obtain the samples, and data for each sample tested to represent each lot produced.

846.03 ACCEPTANCE PROCEDURES FOR NON-SPECIFICATION DURABLE WATERBORNE PAVEMENT STRIPING PAINT. When non-specification paint is inadvertently incorporated into the work the Department will accept the material with a reduction in pay. The percentage deduction is cumulative based on its compositional properties, but will not exceed 60 percent. The Department will calculate the payment reduction on the unit bid price for the routes where the non-specification paint was used.

DURABLE WATERBORNE PAVEMENT STRIPING PAINT REDUCTION SCHEDULE						
Non-conforming Property	Resin	Color	Contrast	TiO_2	VOC	Heavy Metals Content
Reduction Rate	60%	10%	10%	10%	60%	60%

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APPENDIX A:	TABLUATION OF CONSTRUCTION TOLERANCES.
PART:	601.03.03
REVISION:	Replace with the following: Concrete accuracy of individual ingredient material for each batch. ± 2.0% for aggregates ± 1.0% for water ± 1.0% for cement in batches of 4 cubic yards or greater ± 1.0% for total cementitious materials in batches of 4 cubic yards or greater 0.0% to + 4.0% for cement in batches less than 4 cubic yards 0.0% to + 4.0% for total cementitious materials in batches less than 4 cubic yards ± 3.0% for admixtures
APPENDIX A:	TABLUATION OF CONSTRUCTION TOLERANCES.
PART:	601.03.03 C) 2)
REVISION:	Delete

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SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

This Special Note will apply when indicated on the plans or in the proposal.

1.0 DESCRIPTION. Furnish, install, operate, and maintain variable message signs at the locations shown on the plans or designated by the Engineer. Remove and retain possession of variable message signs when they are no longer needed on the project.

2.0 MATERIALS.

2.1 General. Use LED or flip disk/LED Variable Message Signs Class I, II, or III, as appropriate, from the Department's List of Approved Materials.

Unclassified signs may be submitted for approval by the Engineer. The Engineer may require a daytime and nighttime demonstration. The Engineer will make a final decision within 30 days after all required information is received.

2.2 Sign and Controls. All signs must:

1) Provide 3-line messages with each line being 8 characters long and at least 18 inches tall. Each character comprises 35 pixels.
2) Provide at least 40 preprogrammed messages available for use at any time. Provide for quick and easy change of the displayed message; editing of the message; and additions of new messages.
3) Provide a controller consisting of:
   a) Keyboard or keypad.
   b) Readout that mimics the actual sign display. (When LCD or LCD type readout is used, include backlighting and heating or otherwise arrange for viewing in cold temperatures.)
   c) Non-volatile memory or suitable memory with battery backup for storing pre-programmed messages.
   d) Logic circuitry to control the sequence of messages and flash rate.
4) Provide a serial interface that is capable of supporting complete remote control ability through land line and cellular telephone operation. Include communication software capable of immediately updating the message, providing complete sign status, and allowing message library queries and updates.
5) Allow a single person easily to raise the sign to a satisfactory height above the pavement during use, and lower the sign during travel.
6) Allow direct wiring for operation of the sign or arrow board from an external power source when desired.
7) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
8) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
9) Provide the driver board as part of a module. All modules are interchangeable, and have plug and socket arrangements for disconnection and reconnection. Printed circuit boards associated with driver boards have a conformable coating to protect against moisture.
10) Provide a sign case sealed against rain, snow, dust, insects, etc. The lens is UV stabilized clear plastic (polycarbonate, acrylic, or other approved material) angled to prevent glare.

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11) Provide a flat black UV protected coating on the sign hardware, character PCB, and appropriate lens areas.
12) Provide a photocell control to provide automatic dimming.
13) Allow an on-off flashing sequence at an adjustable rate.
14) Provide a sight to aim the message.
15) Provide a LED display color of approximately 590 nm amber.
16) Provide a controller that is password protected.
17) Provide a security device that prevents unauthorized individuals from accessing the controller.
18) Provide the following 3-line messages preprogrammed and available for use when the sign unit begins operation:

/KEEP/RIGHT/⇒⇒⇒/
/KEEP/LEFT/⇐⇐⇐/
/LOOSE/GRAVEL/AHEAD/
/RD WORK/NEXT/**MILES/
/TWO WAY/TRAFFIC/AHEAD/
/PAINT/CREW/AHEAD/
/REDUCE/SPEED/**MPH/
/BRIDGE/WORK/***0 FT/
/MAX/SPEED/**MPH/
/SURVEY/PARTY/AHEAD/
/MIN/SPEED/**MPH/
/ICY/BRIDGE/AHEAD/ /ONE LANE/BRIDGE/AHEAD/
/ROUGH/ROAD/AHEAD/
/MERGING/TRAFFIC/AHEAD/
/NEXT/***/MILES/
/HEAVY/TRAFFIC/AHEAD/
/SPEED/LIMIT/**MPH/
/BUMP/AHEAD/
/TWO/WAY/TRAFFIC/

*Insert numerals as directed by the Engineer.
Add other messages during the project when required by the Engineer.

2.3 Requirements for Flip-Disc Type Signs. Flip-disc type signs will have the following additional requirements:

1) Disc faces are fluorescent yellow on one side, and flat black on the reverse.
2) Discs are at least 3.5 square inches with a minimum character size of 5 discs horizontally by 7 discs vertically.
3) Discs are designed to operate without lubrication for at least 200 million operations.
4) Line change speed of 600 milliseconds or less.
5) When power is lost, the sign automatically becomes blank or displays a preprogrammed default message.

2.4 Power.

1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide energy backup for 21 days without sunlight and an on-board system charger with the ability to recharge completely discharged batteries in 24 hours.
2) Diesel Power Source. Ensure the following is provided for:

    a) At least 24 spare bulbs available on the project for quick replacement of burned out bulbs.
    b) Black light at both top and bottom of each line to illuminate discs for visibility at night or under adverse weather conditions, for flip disk signs.

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c) Diesel generator and electric start assembly, including batteries and a fuel capacity adequate to provide at least 72 hours continuous operation without refueling.
d) Fuel gage.
e) Provide all other specific features, such as bulb size, protection from sun glare, and shock protection for electronics and bulbs, to the satisfaction of the Engineer.

3.0 CONSTRUCTION. Furnish and operate the variable message signs as designated on the plans or by the Engineer. Ensure the bottom of the message panel is a minimum of 7 feet above the roadway in urban areas and 5 feet above in rural areas when operating. Use Class I, II, or III signs on roads with a speed limit less than 55 mph. Use Class I or II signs on roads with speed limits 55 mph or greater. Unless the Contract specifies flip-disk signs, use Class I signs on interstates and parkways.

Maintain the sign in proper working order, including repair of any damage done by others, until completion of the project. When the sign becomes inoperative, immediately repair or replace the sign. Repetitive problems with the same unit will be cause for rejection and replacement.

Use only project related messages and messages directed by the Engineer, unnecessary messages lessen the impact of the sign. Ensure the message is displayed in either one or 2 phases with each phase having no more than 3 lines of text. When no message is needed, but it is necessary to know if the sign is operable, flash only a pixel or disk.

When the sign is not needed, move it outside the clear zone or where the Engineer directs. Variable Message Signs are the property of the Contractor and shall be removed from the project when no longer needed. The Department will not assume ownership of these signs.

4.0 MEASUREMENT. The final quantity of Variable Message Sign will be the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

5.0 PAYMENT. The Department will pay for the Variable Message Signs at the unit price each. The Department will not pay for signs replaced due to damage or rejection. Payment is full compensation for furnishing all materials, labor, equipment, and service necessary to, operate, move, repair, and maintain or replace the variable message signs. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
02671	Portable Changeable Message Sign	Each

January 5, 2010

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SPECIAL NOTE FOR MATERIAL TRANSFER VEHICLE

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Provide and use a Material Transfer Vehicle (MTV) to place asphalt mixtures.

2.0 MATERIALS AND EQUIPMENT. In addition to the equipment specified in Subsection 403.02, provide a MTV with the following minimum characteristics:

1) A system to independently deliver asphalt mixtures from the hauling equipment to the paving equipment;
2) A high capacity truck unloading system, capable of 600 tons per hour, that will receive asphalt mixtures from the hauling equipment;
3) A minimum combined capacity, including the MTV storage bin and paver hopper, of 25 tons of asphalt mixture;
4) An auger system in the storage bin to continuously blend the asphalt mixture prior to discharge to the conveyor system; and
5) A discharge conveyor, with the ability to swivel, to deliver the mixture to the paving spreader while allowing the MTV to operate from an adjacent lane.

3.0 CONSTRUCTION. When constructing driving lanes, use a MTV to place asphalt mixtures. When the Engineer determines the use of the MTV is not practical for a portion of the project he may waive its requirement for that portion.

4.0 MEASUREMENT.

4.1 Asphalt Placement with MTV. The Department will not measure the MTV for payment and will consider its use incidental to the asphalt mixture.

4.2 Asphalt Mixture. The Department will measure the quantity according to Section 402.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
-----	Asphalt Mixture, Type	Ton

March 12, 2008

10T

SPECIAL NOTE FOR ACCEPTANCE OF JPC PAVEMENT THICKNESS

This Special Note will apply where indicated on the plans or in the proposal. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. This Special Note covers the requirements for thickness of JPC pavement. Contrary to Subsection 501.03.21 and 501.05.01, the Department will accept JPC pavement thickness from cores based on a percent within limits (PWL) per lot. The PWL will not apply for projects involving less than 2,500 square yards of pavement per bid item. For quantities less than 2,500 square yards of pavement per bid item, acceptance will be in accordance with 3.1.2 of this note.

2.0 MATERIALS. Reserved

3.0 CONSTRUCTION.

3.1 Pavement Thickness. The Engineer will determine random sampling locations according to KM 64-113. Obtain 8 cores per lot at the randomly selected locations under the observance of the Engineer. Cut cores with a nominal diameter of not less than 4 inches. Take all cores after any corrective grinding. Provide the cores to the Engineer immediately. The Department will measure cores according to KM 64-308, taking 5 measurements for all cores. Furnish all tools, labor, and materials for cutting samples and filling the cored hole. Fill core holes with a non-shrink grout approved by the Engineer within one day after sampling.

When a core thickness is deficient by one inch or more, the Department will not accept the pavement. Remove and replace the deficient pavement. Take another random core from the sublot as the Engineer directs to determine the PWL.

3.1.1 Lot Size. The Department will divide each pavement bid item into lots of 6,000 linear feet of paved width. The lot will be divided into 8 sublots of equal length (750 feet). Take a core from each sublot for determination of pavement thickness.

For bid items with over 2,500 square yards and less than 6,000 linear feet of paved width, project area will be divided into 4 equal sublots for determination of PWL.

For a remainder lot of less than 3,000 feet, the Department will add the quantity of pavement to the previous lot and the 8 sublots will be equally divided over the increased length. For a remainder lot of 3,000 feet or greater, the Department will divide the remainder lot into 8 equal sublots for acceptance.

3.1.2 Small Quantities and Miscellaneous Areas. For quantities less than 2,500 square yards per bid item and for miscellaneous areas, the acceptance may be based on either of the following:

1) Engineer's inspection of the base grade elevation in relation to the forms, or
2) Engineer's monitoring of the yield rate and visual inspection of the placement,

Miscellaneous areas are entrances and tapers less than 10 feet wide. Furnish cores for areas where there are indications of deficient thickness as the Engineer directs. Replace areas found deficient by one inch or more at no cost. The Engineer will evaluate areas found deficient by 0.50 to 0.99 inches according to Subsection 105.04 for acceptance.

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3.1.3 Statistical Evaluation. The Department will use the Variability-Unknown/Standard Deviation Method to determine the estimate percentage of the lot that is within the specification limits (PWL). The Engineer will calculate the lower quality index (QL)

$$QL = \frac{\text{Average} - LSL}{s}$$

Where: Average = the arithmetic mean of the test values. The average will be determined to the nearest tenth of an inch.
LSL = the specified thickness minus 0.20 inch.
s = Standard Deviation = [Sum (Individual Measurement - Average)^2 / (n-1)]$^{1/2}$, determined to 2 decimal places.
N = Number of measurements.

QL will be determined to 2 decimal places.

For calculation of PWL, core thickness greater than 0.75 inches more than the specified thickness will be rounded down to the specified thickness plus 0.75 inch.

Percent Within Limits (PWL) will be determined by the attached tables with QL, for n = the number of tests for the Lot. PWL will be determined to 2 decimal places.

For all calculations round down when the last significant digit is followed by a number less than 5 and round up when the last significant digit is followed by a number equal to or greater than 5.

4.0 MEASUREMENT. The Department will not measure for payment any work or materials required to supply the cores or grout the holes and will consider it incidental to JPC Pavement.

5.0 PAYMENT. The Department will base acceptance of each lot of material on the percentage of material within specification limits (PWL). The following equation will determine the pay factor for thickness: PF % = 52.5 + 0.5 PWL. The Department will round the Pay Factor to 2 decimal places as noted above.

January 1, 2008

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PERCENT WITHIN LIMITS ESTIMATION TABLE
Variability - Unknown Procedure
Standard Deviation Method
Sample Size 4

Q	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	50.00	50.33	50.67	51.00	51.33	51.67	52.00	52.33	52.67	53.00
0.1	53.33	53.67	54.00	54.33	54.67	55.00	55.33	55.67	56.00	56.33
0.2	56.67	57.00	57.33	57.67	58.00	58.33	58.67	59.00	59.33	59.67
0.3	60.00	60.33	60.67	61.00	61.33	61.67	62.00	62.33	62.67	63.00
0.4	63.33	63.67	64.00	64.33	64.67	65.00	65.33	65.67	66.00	66.33
0.5	66.67	67.00	67.33	67.67	68.00	68.33	68.67	69.00	69.33	69.67
0.6	70.00	70.33	70.67	71.00	71.33	71.67	72.00	72.33	72.67	73.00
0.7	73.33	73.67	74.00	74.33	74.67	75.00	75.33	75.67	76.00	76.33
0.8	76.67	77.00	77.33	77.67	78.00	78.33	78.67	79.00	79.33	79.67
0.9	80.00	80.33	80.67	81.00	81.33	81.67	82.00	82.33	82.67	83.00
1.0	83.33	83.67	84.00	84.33	84.67	85.00	85.33	85.67	86.00	86.33
1.1	86.67	87.00	87.33	87.67	88.00	88.33	88.67	89.00	89.33	89.67
1.2	90.00	90.33	91.67	91.00	91.33	91.67	92.00	92.33	92.67	93.00
1.3	93.33	93.67	94.00	94.33	94.67	95.00	95.33	95.67	96.00	96.33
1.4	96.67	97.00	97.33	97.67	98.00	98.33	98.67	99.00	99.33	99.67
1.5	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

10T

PERCENT WITHIN LIMITS ESTIMATION TABLE
Variability - Unknown Procedure
Standard Deviation Method
Sample Size 8

Q	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	50.00	50.38	50.76	51.14	51.51	51.89	52.27	52.65	53.03	53.41
0.1	53.78	54.16	54.54	54.92	55.29	55.67	56.04	56.42	56.79	57.17
0.2	57.54	57.92	58.29	58.66	59.03	59.41	59.78	60.15	60.52	60.89
0.3	61.25	61.62	61.99	62.35	62.72	63.08	63.45	63.81	64.17	64.53
0.4	64.89	65.25	65.61	65.96	66.32	66.67	67.03	67.38	67.73	68.08
0.5	68.43	68.78	69.13	69.47	69.82	70.16	70.50	70.84	71.18	71.52
0.6	71.85	72.19	72.52	72.85	73.18	73.51	73.84	74.17	74.49	74.81
0.7	75.14	75.46	75.77	76.09	76.41	76.72	77.03	77.34	77.65	77.96
0.8	78.26	78.56	78.86	79.16	79.46	79.76	80.05	80.34	80.63	80.92
0.9	81.21	81.49	81.77	82.05	82.33	82.61	82.88	83.15	83.43	83.69
1.0	83.96	84.22	84.49	84.75	85.00	85.26	85.51	85.76	86.01	86.26
1.1	86.51	86.75	86.99	87.23	87.46	87.70	87.93	88.16	88.39	88.61
1.2	88.83	89.06	89.27	89.49	89.70	89.91	90.12	90.33	90.53	90.74
1.3	90.94	91.13	91.33	91.52	91.71	91.9	92.09	82.27	92.45	92.63
1.4	92.81	92.98	93.15	93.32	93.49	93.65	93.81	93.97	94.13	94.29
1.5	94.44	94.59	94.74	94.88	95.03	95.17	95.31	95.44	95.58	95.71
1.6	95.84	95.97	96.09	96.21	96.33	96.45	96.57	96.68	96.79	96.90
1.7	97.01	97.11	97.21	97.31	97.41	97.51	97.60	97.69	97.78	97.87
1.8	97.96	98.04	98.12	98.20	98.28	98.35	98.42	98.49	98.56	98.63
1.9	98.69	98.76	98.82	98.88	98.93	98.99	99.04	99.09	99.14	99.19
2.0	99.24	99.28	99.33	99.37	99.41	99.45	99.48	99.52	99.55	99.58
2.1	99.61	99.64	99.67	99.7	99.72	99.74	99.77	99.79	99.81	99.83
2.2	99.84	99.86	99.87	99.89	99.90	99.91	99.92	99.93	99.94	99.95
2.3	99.96	99.96	99.97	99.98	99.98	99.98	99.99	99.99	99.99	100.00

11D

SPECIAL NOTE FOR ROCK BLASTING

1.0 DESCRIPTION. This work consists of fracturing rock and constructing stable final rock cut faces using presplit blasting and production blasting techniques.

2.0 MATERIALS. Deliver, store, and use explosives according to the manufacturer's recommendations and applicable laws. Do not use explosives outside their recommended use date. Verify date of manufacture and provide copies of the technical data sheets (TDS) and material safety data sheets (MSDS) to the Engineer. Explosives and initiating devices include, but are not necessarily limited to, dynamite and other high explosives, slurries, water gels, emulsions, blasting agents, initiating explosives, detonators, blasting caps, and detonating cord.

3.0 CONSTRUCTION. Furnish copies or other proof of all-applicable permits and licenses. Comply with Federal, State, and local regulations on the purchase, transportation, storage, and use of explosive material. Regulations include but are not limited to the following:

1) KRS 351.310 through 351.9901.
2) 805 KAR 4:005 through 4:165
3) Applicable rules and regulations issued by the Office of Mine Safety and Licensing.
4) Safety and health. OSHA, 29 CFR Part 1926, Subpart U.
5) Storage, security, and accountability. Bureau of Alcohol, Tobacco, and Firearms (BATF), 27 CFR Part 181.
6) Shipment. DOT, 49 CFR Parts 171-179, 390-397.

3.1 Blaster-in-Charge. Designate in writing a blaster-in-charge and any proposed alternates for the position. Submit documentation showing the blaster-in-charge, and alternates, have a valid Kentucky blaster's license. Ensure the blaster-in-charge or approved alternate is present at all times during blasting operations.

3.2 Blasting Plans. Blasting plans and reports are for quality control and record keeping purposes. Blasting reports are to be signed by the blaster-in-charge or the alternate blaster-in-charge. The general review and acceptance of blasting plans does not relieve the Contractor of the responsibility whatsoever for conformance to regulations or for obtaining the required results.

A) General Blasting Plan. Submit a general blasting plan for acceptance at least 15 working days before drilling operations begin. Include, as a minimum, the following safety and procedural details:

1) Working procedures and safety precautions for storing, transporting, handling, detonating explosives. Include direction on pre and post blast audible procedures, methods of addressing misfires, and methods of addressing inclement weather, including lightning.
2) Proposed product selection for both dry and wet holes. Furnish Manufacturer's TDS and MSDS for all explosives, primers, initiators, and other blasting devices.
3) Proposed initiation and delay methods.

4) Proposed format for providing all the required information for the site specific blasting shot reports.

B) Preblast Meeting. Prior to drilling operations, conduct a preblast meeting to discuss safety and traffic control issues and any site specific conditions that will need to be addressed. Ensure, at a minimum, that the Engineer or lead inspector, Superintendent, blaster-in-charge, and all personnel involved in the blasting operation are present. Site specific conditions include blast techniques; communication procedures; contingency plans and equipment for dealing with errant blast material. The conditions of the General Blasting plan will be discussed at this meeting. Record all revisions and additions made to the blasting plan and obtain written concurrence by the blaster-in-charge. Provide a copy of the signed blast plan to the Engineer along with the sign in sheet from the preblast meeting.

3.3 Preblast Condition Survey and Vibration Monitoring and Control. Before blasting, arrange for a preblast condition survey of nearby buildings, structures, or utilities, within 500 feet of the blast or that could be at risk from blasting damage. Provide the Engineer a listing of all properties surveyed and any owners denying entry or failing to respond. Notify the Engineer and occupants of buildings at risk at least 24 hours before blasting.

Limit ground vibrations and airblast to levels that will not exceed limits of 805 KAR 4:005 through 4:165. More restrictive levels may be specified in the Contract.

Size all blast designs based on vibration, distance to nearest building or utility, blast site geometry, atmospheric conditions and other factors. Ground vibrations are to be controlled according to the blasting standards and scaled distance formulas in 805 KAR 4:020 or by the use of seismographs as allowed in 805 KAR 4:030. The Department will require seismographs at the nearest allowable location to the protected site when blasting occurs within 500 feet of buildings, structures, or utilities.

3.4 Blasting. Drill and blast at the designated slope lines according to the blasting plan. Perform presplitting to obtain smooth faces in the rock and shale formations. Perform the presplitting before blasting and excavating the interior portion of the specified cross section at any location. The Department may allow blasting for fall benches and haul roads prior to presplitting when blasting is a sufficient distance from the final slope and results are satisfactory to the Engineer. Use the types of explosives and blasting accessories necessary to obtain the required results.

Free blast holes of obstructions for their entire depth. Place charges without caving the blast hole walls. Stem the upper portion of all blast holes with dry sand or other granular material passing the 3/8-inch sieve. Dry drill cuttings are acceptable for stemming when blasts are more than 800 feet from the nearest dwelling.

Stop traffic during blasting operations when blasting near any road and ensure traffic does not pass through the Danger Zone. The blaster-in-charge will define the Danger Zone prior to each blast. Ensure traffic is stopped outside the Danger Zone, and in no case within 800 feet of the blast location.

Following a blast, stop work in the entire blast area, and check for misfires before allowing worker to return to excavate the rock.

Remove or stabilize all cut face rock that is loose, hanging, or potentially dangerous. Leave minor irregularities or surface variations in place if they do not create a hazard. Drill the next lift only after the cleanup work and stabilization work is complete.

When blasting operations cause fracturing of the final rock face, repair or stabilize it in an approved manner at no cost to the Department.

Halt blasting operations in areas where any of the following occur:

1) Slopes are unstable;
2) Slopes exceed tolerances or overhangs are created;
3) Backslope damage occurs;
4) Safety of the public is jeopardized;
5) Property or natural features are endangered;
6) Fly rock is generated; or
7) Excessive ground or airblast vibrations occur in an area where damage to buildings, structures, or utilities is possible.
8) The Engineer determines that materials have become unsuitable for blasting

Blasting operations may continue at a reasonable distance from the problem area or in areas where the problems do not exist. Make the necessary modifications to the blasting operations and perform a test blast to demonstrate resolution of the problem.

A) Drill Logs. Maintain a layout drawing designating hole numbers with corresponding drill logs and provide a copy of this information to the blaster prior to loading the hole. Ensure the individual hole logs completed by the driller(s) show their name; date drilled; total depth drilled; and depths and descriptions of significant conditions encountered during drilling that may affect loading such as water, voids, changes in rock type.

B) Presplitting. Conduct presplitting operations in conformance with Subsection 204.03.04 of the Standard Specifications for Road and Bridge Construction.

3.5 Shot Report. Maintain all shot reports on site for review by the Department. Within one day after a blast, complete a shot report according to the record keeping requirements of 805 KAR 4:050. Include all results from airblast and seismograph monitoring.

3.6 Unacceptable Blasting. When unacceptable blasting occurs, the Department will halt all blasting operations. Blasting will not resume until the Department completes its investigation and all concerns are addressed. A blast is unacceptable when it results in fragmentation beyond the final rock face, fly rock, excessive vibration or airblast, overbreak, damage to the final rock face or overhang. Assume the cost for all resulting damages to private and public property and hold the Department harmless.

When an errant blast or fly rock causes damage to or blocks a road or conveyance adjacent to the roadway, remove all debris from the roadway as quickly as practicable and perform any necessary repairs. Additionally, when specified in the Contract, the Department will apply a penalty.

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4.0 MEASUREMENT AND PAYMENT. The Department will not measure this work for payment and will consider all items contained in this note to be incidental to either Roadway Excavation or Embankment-in-Place, as applicable. However, if the Engineer directs in writing slope changes, then the Department will pay for the second presplitting operation as Extra Work.

The Department will measure for payment material lying outside the typical section due to seams, broken formations, or earth pockets, including any earth overburden removed with this material, only when the work is performed under authorized adjustments.

The Department will not measure for payment any extra material excavated because of the drill holes being offset outside the designated slope lines.

The Department will not measure for payment any material necessary to be removed due to the inefficient or faulty blasting practices.

May 6, 2008

SPECIAL PROVISION FOR EMBANKMENT AT BRIDGE END BENT STRUCTURES

This Special Provision will apply when indicated on the plans or in the proposal. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Construct a soil, granular, or rock embankment with granular or cohesive pile core and place structure granular backfill, as the Plans require. Construct the embankment according to the requirements of this Special Provision, the Plans, Standard Drawing RGX 100 and 105, and the 2008 Standard Specifications.

2.0 MATERIALS.

2.1 Granular Embankment. Conform to Subsection 805.10. When Granular Embankment materials are erodible or unstable according to Subsection 805.03.04, use the Special Construction Methods found in 3.2 of the Special Provision.

2.2 Rock Embankment. Provide durable rock from roadway excavation that consists principally of Unweathered Limestone, Durable Shale (SDI equal to or greater than 95 according to KM 64-513), or Durable Sandstone.

2.3 Granular Pile Core. Select a gradation of durable rock to facilitate pile driving that conforms to Subsection 805.11. If granular pile core material hinders pile driving operations, take appropriate means necessary to reach the required pile tip elevation, at no expense to the Department.

2.4 Cohesive Pile Core. Conform to Section 206 of the Standard Specifications and use soil with at least 50 percent passing a No. 4 sieve having a minimum Plasticity Index (PI) of 10. In addition, keep the cohesive pile core free of boulders, larger than 6 inches in any dimension, or any other obstructions, which would interfere with drilling operations. If cohesive pile core material interferes with drilling operations, take appropriate means necessary to maintain excavation stability, at no expense to the Department.

2.5 Structure Granular Backfill. Conform to Subsection 805.11

2.6 Geotextile Fabric. Conform to Type I or Type IV in Section 214 and 843 as required in the plans.

3.0 CONSTRUCTION.

3.1 General. Construct roadway embankments at end bents according to Section 206 and in accordance with the Special Provision, the Plans, and Standard Drawings for the full embankment section. In some instances, granular or rock embankment will be required for embankment construction for stability purposes, but this special provision does not prevent the use of soil when appropriate. Refer to the plans for specific details regarding material requirements for embankment construction.

Place and compact granular or cohesive pile core, soil, granular or rock embankment, and structure granular backfill according to the applicable density requirements for the project. When constructing granular or rock embankments, use granular pile core for driven pile foundations and use cohesive pile core for pre-drilled pile or drilled shaft foundations. Place geotextile fabric, Type IV between cohesive pile core and structure granular backfill and granular or rock embankment.

When granular or rock embankment is required for embankment construction, conform to the general requirements of Subsection 206.03.02 B). In addition, place the material in no greater than 2-foot lifts and compact with a vibrating smooth wheel roller capable of producing a minimum centrifugal force of 15 tons. Apply these requirements to the full width of the embankment for a distance of half the embankment height or 50 feet, whichever is greater, as shown on Standard Drawing RGX-105.

When using granular pile core, install 8-inch perforated underdrain pipe at or near the elevation of the original ground in the approximate locations depicted on the standard drawing, and as the Engineer directs, to ensure positive drainage of the embankment. Wrap the perforated pipe with a fabric of a type recommended by the pipe manufacturer.

After constructing the embankment, excavate for the end bent cap, drive piling or install shafts, place the mortar bed, construct the end bent, and complete the embankment to finish grade according to the construction sequence shown on the Plans or Standard Drawings and as specified hereinafter.

After piles are driven or shafts installed (see design drawings), slope the bottom of the excavation towards the ends of the trench as noted on the plans for drainage. Using a separate pour, place concrete mortar, or any class concrete, to provide a base for forming and placing the cap. Place side forms for the end bent after the mortar has set sufficiently to support workmen and forms without being disturbed.

Install 4-inch perforated pipe in accordance with the plans and Standard Drawings. In the event slope protection extends above the elevation of the perforated pipe, extend the pipe through the slope protection.

After placing the end bent cap and removing adjacent forms, fill the excavation with structure granular backfill material to the level of the berm prior to placing beams for the bridge. For soil embankments, place Type IV geotextile fabric between embankment material and structure granular backfill. After completing the end bent backwall, or after completing the span end wall, place the structure granular backfill to subgrade elevation. If the original excavation is enlarged, fill the entire volume with compacted structure granular backfill at no expense to the Department. Do not place backfill before removing adjacent form work. Place structure granular backfill material in trench ditches at the ends of the excavation. Place Geotextile Fabric, Type IV over the surface of structure granular backfill prior to placing aggregate base course.

Tamp the backfill with hand tampers, pneumatic tampers, or other means the Engineer approves. Thoroughly compact the backfill under the overhanging portions of the structure to ensure that the backfill is in intimate contact with the sides of the structure.

Do not apply seeding, sodding, or other vegetation to the exposed granular embankment.

3.2 Special Construction Methods. Erodible or unstable materials may erode even when protected by riprap or channel lining; use the special construction method described below when using these materials.

Use fine aggregates or friable sandstone granular embankment at “dry land” structures only. Do not use them at stream crossings or locations subject to flood waters.

For erodible or unstable materials having 50 percent or more passing the No. 4 sieve, protect with geotextile fabric. Extend the fabric from the original ground to the top of slope over the entire area of the embankment slopes on each side of, and in front of, the end bent. Cover the fabric with at least 12 inches of non-erodible material.

For erodible or unstable materials having less than 50 percent passing a No. 4 sieve, cover with at least 12 inches of non-erodible material.

Where erodible or unstable granular embankment will be protected by riprap or channel lining, place geotextile fabric between the embankment and the specified slope protection.

4.0 MEASUREMENT.

4.1 Granular Embankment. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure for payment any Granular Embankment that is not called for in the plans.

The Department will not measure for payment any special construction caused by using erodible or unstable materials and will consider it incidental to the Granular Embankment regardless of whether the erodible or unstable material was specified or permitted.

4.2 Rock Embankment. The Department will not measure for payment any rock embankment and will consider it incidental to roadway excavation or embankment in place, as applicable. (embankments requiring rock with none present within project excavation limits will be constructed using granular embankment)

4.3 Granular Pile Core. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure for payment furnishing and placing 8-inch perforated underdrain pipe and will consider it incidental to the Granular pile core. The Department will not measure for payment any granular pile core that is necessary because the contractor elects to use granular or rock embankment when it is not specified in the plans.

4.4 Cohesive Pile Core. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204.

4.5 Structure Granular Backfill. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure any additional material required for backfill outside the limits shown on the Plans and Standard Drawings for payment and will consider it incidental to the work.

When following construction sequence “A”, as shown on the Standard Drawings, the Department will not measure structure excavation at the end bent for payment and will consider it incidental to Structure Granular Backfill.

The Department will not measure for payment the 4-inch perforated underdrain pipe and will consider it incidental to the Structure Granular Backfill.

4.6 Geotextile Fabric. The Department will measure the quantities as specified in Section 214. The Department will not measure the quantity of fabric used for separating granular or rock embankment and cohesive pile core and will consider it incidental to cohesive pile core.

4.7 End Bent. The Department will measure the quantities according to the Contract. The Department will not measure furnishing and placing the 2-inch mortar or concrete bed for payment and will consider it incidental to the end bent construction.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
02223	Granular Embankment	Cubic Yards
20209EP69	Granular Pile Core	Cubic Yards
20210EP69	Cohesive Pile Core	Cubic Yards

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02231	Structure Granular Backfill	Cubic Yards
02596, 02599	Geotextile Fabric, Type	See Section 214

The Department will consider payment as full compensation for all work required in this provision.

April 24, 2008

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4, and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly takecorrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. **Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within thetime limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin,

age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. **Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. **Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of $10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. **General:**

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics

shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. **Classification:**

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

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

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. **Payment of Fringe Benefits:**

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

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

4. **Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:**

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level ofprogress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable

classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wagedetermination for the classification of work actually performed.

5. **Apprentices and Trainees (Programs of the U.S. DOT):**

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. **Withholding:**

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. **Overtime Requirements:**

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. **Violation:**

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. **Withholding for Unpaid Wages and Liquidated Damages:**

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any

liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. **Compliance with Copeland Regulations (29 CFR 3):**

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. **Payrolls and Payroll Records:**

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than $1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provideall safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended andsupplemented;

Shall be fined not more that $10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. **Instructions for Certification - Primary Covered Transactions:**

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowinglyrendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary 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 3-year period preceding this proposal been convicted of or had a civil judgement 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 governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. **Instructions for Certification - Lower Tier Covered Transactions:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions of $25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

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

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

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

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

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

EMPLOYMENT REQUIREMENTS
RELATING TO
NONDISCRIMINATION OF EMPLOYEES
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)

AN ACT OF THE KENTUCKY GENERAL ASSEMBLY TO PREVENT DISCRIMINATION IN EMPLOYMENT

KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (between forty and seventy); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age (between forty and seventy). The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, disability or age (between forty and seventy), except that such notice or advertisement may indicate a preference, limitation, or specification based on religion, or national origin when religion, or national origin is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age (between forty and seventy), in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administrating agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

REVISED: 12-3-92

EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (6) provides:

No present or former public servant shall, within six (6) months of following termination of his office or employment, accept employment, compensation or other economic benefit from any person or business that contracts or does business with the state in matters in which he was directly involved during his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved in state government. This subsection shall not prohibit the performance of ministerial functions, including, but not limited to, filing tax returns, filing applications for permits or licenses, or filing incorporation papers.

KRS 11A.040 (8) states:

A former public servant shall not represent a person in a matter before a state agency in which the former public servant was directly involved, for a period of one (1) year after the latter of:

a) The date of leaving office or termination of employment; or
b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, Room 136, Capitol Building, 700 Capitol Avenue, Frankfort, Kentucky 40601; telephone (502) 564-7954.

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

TRAINING SPECIAL PROVISIONS

This Training Special Provision supersedes subparagraph 7b of the Special Provision entitled ``Specific Equal Employment Opportunity Responsibilities," (Attachment 1), and is in implementation of 23 U.S.C. 140(a).

As part of the contractor's equal employment opportunity affirmative action program training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeymen in the type of trade or job classification involved.

The number of trainees to be trained under these special provisions and in this contract is shown in “Special Notes Applicable to Project” in the bid proposal.

In the event that a contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing construction the contractor shall submit to the Kentucky Transportation Cabinet, Department of Highways for its approval, an acceptable training program on forms provided by the Cabinet indicating the number of trainees to be trained in each selected classification. Failure to provide the Cabinet with the proper documentation evidencing an acceptable training program prior to commencing construction shall cause the Cabinet to suspend the operations of the contractor with (if applicable) working days being charged as usual against the contract time or (if applicable), no additional contract time being granted for the suspension period. The Cabinet will not be liable for the payment of any work performed during the suspension period due to the failure of the contractor to provide an acceptable training program. Said suspension period shall be terminated when an acceptable training program is received by the Cabinet. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeymen status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case. The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Kentucky Transportation Cabinet, Department of Highways and the Federal Highway Administration shall approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the division office. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed for each hour of training given an employee on this contract in accordance with an approved training program. As approved by the engineer, reimbursement will be made for training persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirements of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program. It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

1-1-93

General Decision Number: KY100214 06/03/2011 KY214

State: Kentucky

Construction Type: Highway

Counties: Allen, Ballard, Butler, Caldwell, Calloway, Carlisle, Christian, Crittenden, Daviess, Edmonson, Fulton, Graves, Hancock, Henderson, Hickman, Hopkins, Livingston, Logan, Lyon, Marshall, McCracken, McLean, Muhlenberg, Ohio, Simpson, Todd, Trigg, Union, Warren and Webster Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Modification Number	Publication Date
0	10/22/2010
1	01/28/2011
2	03/25/2011
3	04/01/2011
4	05/27/2011
5	06/03/2011

BRIN0004-002 04/01/2010

BALLARD, BUTLER, CALDWELL, CARLISLE, CRITTENDEN, DAVIESS, EDMONSON, FULTON, GRAVES, HANCOCK, HENDERSON, HICKMAN, HOPKINS, LIVINGSTON, LYON, MARSHALL, MCCRACKEN, MCLEAN, MUHLENBERG, OHIO, UNION, and WEBSTER COUNTIES

	Rates	Fringes
BRICKLAYER	$ 27.47	12.53

BRTN0004-005 05/01/2009

ALLEN, CALLOWAY, CHRISTIAN, LOGAN, SIMPSON, TODD, TRIGG, and WARREN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 24.52	1.83

CARP0357-002 07/01/2010

	Rates	Fringes
CARPENTER	$ 25.45	12.21
Diver	$ 37.64	10.23
PILEDRIVERMAN	$ 25.09	10.23

ELEC0369-006 05/26/2010

BUTLER, EDMONSON, LOGAN, TODD & WARREN COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 29.27	13.08

ELEC0429-001 02/01/2010

ALLEN & SIMPSON COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 21.85	10.35

ELEC0816-002 01/01/2010

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON (Except a 5 mile radius of City Hall in Fulton), GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN & TRIGG COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 28.27	25.5%+5.25

Cable spicers receive $.25 per hour additional.

ELEC1701-003 06/01/2010

DAVIESS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, MUHLENBERG, OHIO, UNION & WEBSTER COUNTIES:

	Rates	Fringes
ELECTRICIAN		
Electrician	$ 29.01	27.85%+5.34
Heilarc Welding; Cable Splicing	$ 29.26	27.85%+5.34

ELEC1925-002 06/01/2009

FULTON COUNTY (Up to a 5 mile radius of City Hall in Fulton):

	Rates	Fringes
CABLE SPLICER	$ 25.00	10.27
ELECTRICIAN	$ 24.50	10.26

ENGI0181-017 07/01/2010

	Rates	Fringes
Operating Engineer:		
GROUP 1	$ 25.35	13.00
GROUP 2	$ 22.93	13.00
GROUP 3	$ 23.31	13.00
GROUP 4	$ 22.67	13.00

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 equals or exceeds 150 ft. - $1.00 above 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.

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* IRON0070-005 06/01/2011

BUTLER COUNTY (Eastern eighth, including the Townships of Decker, Lee & Tilford);
EDMONSON COUNTY (Northern three-fourths, including the Townships of Asphalt, Bee Spring, Brownsville, Grassland, Huff, Kyrock, Lindseyville, Mammoth Cave, Ollie, Prosperity, Rhoda, Sunfish & Sweden)

	Rates	Fringes
Ironworkers: Structural; Ornamental; Reinforcing; Precast Concrete Erectors	$ 25.77	18.28

IRON0103-004 04/01/2011

DAVIESS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, OHIO, UNION & WEBSTER COUNTIES
BUTLER COUNTY (Townships of Aberdeen, Bancock, Casey, Dexterville, Dunbar, Elfie, Gilstrap, Huntsville, Logansport, Monford, Morgantown, Provo, Rochester, South Hill & Welchs Creek);
CALDWELL COUNTY (Northeastern third, including the Township of Creswell);
CHRISTIAN COUNTY (Northern third, including the Townships of Apex, Crofton, Kelly, Mannington & Wynns);
CRITTENDEN COUNTY (Northeastern half, including the Townships of Grove, Mattoon, Repton, Shady Grove & Tribune);
MUHLENBERG COUNTY (Townships of Bavier, Beech Creek Junction, Benton, Brennen, Browder, Central City, Cleaton, Depoy, Drakesboro, Eunis, Graham, Hillside, Luzerne, Lynn City, Martwick, McNary, Millport, Moorman, Nelson, Paradise, Powderly, South Carrollton, Tarina & Weir)

	Rates	Fringes
Ironworkers:	$ 28.25	14.475

IRON0492-003 05/01/2009

ALLEN, LOGAN, SIMPSON, TODD & WARREN COUNTIES
BUTLER COUNTY (Southern third, including the Townships of Boston, Berrys Lick, Dimple, Jetson, Quality, Sharer, Sugar Grove & Woodbury);
CHRISTIAN COUNTY (Eastern two-thirds, including the Townships of Bennettstown, Casky, Herndon, Hopkinsville, Howell, Masonville, Pembroke & Thompsonville);
EDMONSON COUNTY (Southern fourth, including the Townships of Chalybeate & Rocky Hill);
MUHLENBERG COUNTY (Southern eighth, including the Townships of Dunnior, Penrod & Rosewood)

	Rates	Fringes
Ironworkers:	$ 22.50	9.60

* IRON0782-006 05/01/2011

BALLARD, CALLOWAY, CARLISLE, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN & TRIGG COUNTIES
CALDWELL COUNTY (Southwestern two-thirds, including the Townships of Cedar Bluff, Cider, Claxton, Cobb, Crowtown, Dulaney, Farmersville, Fredonia, McGowan, Otter Pond & Princeton);
CHRISTIAN COUNTY (Western third, Excluding the Townships of Apex, Crofton, Kelly, Mannington, Wynns, Bennettstown, Casky,

Herndon, Hopkinsville, Howell, Masonville, Pembroke & Thompsonville);
CRITTENDEN COUNTY (Southwestern half, including the Townships of Crayne, Dycusburg, Frances, Marion, Mexico, Midway, Sheridan & Told)

	Rates	Fringes
Ironworkers:		
Projects with a total contract cost of $20,000,000.00 or above	$ 26.00	17.42
All Other Work	$ 24.66	16.29

LABO0189-005 07/01/2010

BALLARD, CALLOWAY, CARLISLE, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL & MCCRACKEN COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 20.13	10.83
GROUP 2	$ 20.30	10.83
GROUP 3	$ 20.43	10.83
GROUP 4	$ 21.03	10.83

LABORER 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; Blaster; 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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LABO0189-006 07/01/2010

ALLEN, BUTLER, CALDWELL, CHRISTIAN, DAVIESS, EDMONSON, HANCOCK, HOPKINS, LOGAN, MCLEAN, MUHLENBERG, OHIO, SIMPSON, TODD, TRIGG & WARREN COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 21.16	9.80
GROUP 2	$ 21.41	9.80
GROUP 3	$ 21.46	9.80
GROUP 4	$ 22.06	9.80

LABORER 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; Blaster; 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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LABO0189-007 07/01/2010

CRITTENDEN, HENDERSON, UNION & WEBSTER COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 20.31	10.65
GROUP 2	$ 20.56	10.65
GROUP 3	$ 20.61	10.65
GROUP 4	$ 21.21	10.65

LABORER 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; Blaster; 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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PAIN0032-002 05/01/2010

BALLARD COUNTY

	Rates	Fringes
Painters:		
Bridges	$ 30.56	13.95
All Other Work	$ 28.26	13.95

Spray, Blast, Steam, High & Hazardous (Including Lead Abatement) and All Epoxy - $1.00 Premium

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PAIN0118-003 05/01/2010

EDMONSON COUNTY:

	Rates	Fringes
Painters:		
Brush & Roller	$ 18.50	10.30
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning	$ 19.50	10.30

PAIN0156-006 04/01/2010

DAVIESS, HANCOCK, HENDERSON, MCLEAN, OHIO, UNION & WEBSTER COUNTIES

	Rates	Fringes
Painters:		
BRIDGES		
GROUP 1	$ 25.60	10.05
GROUP 2	$ 25.85	10.05
GROUP 3	$ 26.60	10.05
GROUP 4	$ 27.60	10.05
ALL OTHER WORK:		
GROUP 1	$ 25.60	11.30
GROUP 2	$ 25.85	11.30
GROUP 3	$ 26.60	11.30
GROUP 4	$ 27.60	11.30

PAINTER CLASSIFICATIONS

GROUP 1 - Brush & Roller

GROUP 2 - Plasterers

GROUP 3 - Spray; Sandblast; Power Tools; Waterblast; Steamcleaning; Brush & Roller of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy

GROUP 4 - Spray of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy

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PAIN0456-003 07/01/2009

ALLEN, BUTLER, LOGAN, MUHLENBERG, SIMPSON, TODD & WARREN COUNTIES:

	Rates	Fringes
Painters:		
BRIDGES		
Brush & Roller	$ 22.05	8.65
Spray; Sandblast; Power Tools; Waterblast & Steam Cleaning	$ 23.05	8.65
ALL OTHER WORK		
Brush & Roller	$ 17.05	8.65
Spray; Sandblast; Power Tools; Waterblast & Steam		

Cleaning.....$ 18.05 8.65

ALL OTHER WORK - HIGH TIME PAY
Over 35 feet (up to 100 feet) - $1.00 above base wage
100 feet and over - $2.00 above base wage

DURING SPRAY PAINTING AND SANDBLASTING OPERATIONS, POT TENDERS SHALL RECEIVE THE SAME WAGE RATES AS THE SPRAY PAINTER OR NOZZLE OPERATOR

PAIN0500-002 07/01/2010

CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON, GRAVES, HICKMAN, HOPKINS, LIVINGSTON, LYON, MARSHALL, MCCRACKEN & TRIGG COUNTIES:

	Rates	Fringes
Painters:		
Bridges	$ 24.75	11.30
All Other Work	$ 18.50	11.30

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

PLUM0184-002 01/01/2011

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN and TRIGG COUNTIES

	Rates	Fringes
Plumber; Steamfitter	$ 30.54	13.74

PLUM0502-004 08/01/2010

ALLEN, BUTLER, EDMONSON, SIMPSON & WARREN

	Rates	Fringes
Plumber; Steamfitter	$ 30.50	15.13

PLUM0633-002 07/01/2010

DAVIESS, HANCOCK, HENDERSON, HOPKINS, LOGAN, MCLEAN, MUHLENBERG, OHIO, TODD, UNION & WEBSTER COUNTIES:

	Rates	Fringes
PLUMBER/PIPEFITTER	$ 27.37	12.75

TEAM0089-003 03/31/2008

	Rates	Fringes
Truck drivers:		
ALLEN, BUTLER, EDMONSON, LOGAN, SIMPSON & WARREN		

COUNTIES:
Group 1.....$ 19.04 12.02
Group 2.....$ 19.37 12.02
Group 3.....$ 19.44 12.02
Group 4.....$ 19.45 12.02
Group 5.....$ 19.50 12.02

BALLARD, CALLOWAY,
CALDWELL, CARLISLE,
CHRISTIAN, CRITTENDEN,
FULTON, GRAVES, HICKMAN,
LIVINGSTON, LYON,
MARSHALL, MCCRACKEN, TODD
& TRIGG COUNTIES:
Group 1.....$ 23.89 4.15
Group 2.....$ 24.12 4.15
Group 3.....$ 24.19 4.15
Group 4.....$ 24.20 4.15

DAVIESS, HANCOCK,
HENDERSON, HOPKINS,
MCLEAN, MUHLENBERG, OHIO,
UNION & WEBSTER COUNTIES:
Group 1.....$ 19.23 9.20
Group 2.....$ 19.46 9.20
Group 3.....$ 19.53 9.20
Group 4.....$ 19.54 9.20

TRUCK DRIVER CLASSIFICATIONS FOR ALLEN, BUTLER, EDMONSON, LOGAN, SIMPSON & WARREN COUNTIES

GROUP 1 - Greaser, Tire Changer

GROUP 2 - Truck Mechanic

GROUP 3 - Single Axle Dump; Flat Bed; all Terrain vehicles when used to haul materials; Semi Trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Driver of Distributors; Mixer All Types

GROUP 4 - Winch and A-Frame when used in transporting materials; Ross Carrier; Fork Lift when used to transport building materials; Driver on Pavement Breaker

GROUP 5 - Euclid and Other Heavy Earth Moving Equipment; Low Boy; Articulator Cat; Five Axle Vehicle

TRUCK DRIVER CLASSIFICATIONS FOR BALLARD, CALLOWAY, CALDWELL, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN, TODD & TRIGG COUNTIES

GROUP 1 - Greaser; Tire Changer

GROUP 2 - Truck Mechanic

GROUP 3 - Single Axle Dump; Flat Bed; all Terrain Vehicles when used to haul materials; Semi Trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Driver of Distributors; Mixer All Types

GROUP 4 - Euclid and Other Heavy Earth Moving Equipment; Low Boy; Articulator Cat; Five Axle Vehicle; Winch and A-Frame when used in transporting materials; Ross Carrier

TRUCK DRIVER CLASSIFICATIONS FOR DAVIESS, HANCOCK, HENDERSON,

HOPKINS, MCLEAN, MUHLENBERG, OHIO, UNION & WEBSTER COUNTIES

GROUP 1 - Greaser, Tire Changer

GROUP 2 - Truck Mechanic

GROUP 3 - Single Axle Dump; Flat Bed; all Terrain Vehicle when used to haul materials; Semi Trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Driver of Distributors; Mixer All Types

GROUP 4 - Euclid and Other Heavy Earth moving Equipment; Lowboy; Articulator Cat; 5 Axle Vehicle; Winch and A-Frame when used in transporting materials; Ross Carrier; Fork Lift when used to transport building materials; Driver on 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 (29 CFR 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.

END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

These rates are listed pursuant to the Kentucky Determination No. CR-10-I-HWY dated July 12, 2010.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

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

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid after an employee works eight (8) hours a day or forty (40) hours a week, whichever gives the employee the greater wages. At least time and one-half the base rate is required for all overtime. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Ryan Griffith, Director
Division of Construction Procurement
Frankfort, Kentucky 40622

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (Executive Order 11246)

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

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

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
4.7%	6.9%

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

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609

4. As used in this Notice, and in the contract resulting from this solicitation, the **"covered area"** is Daviess County.

PART IV

INSURANCE

INSURANCE

The Contractor shall procure and maintain the following insurance in addition to the insurance required by law:

1) Commercial General Liability-Occurrence form – not less than $2,000,000 General aggregate, $2,000,000 Products & Completed Aggregate, $1,000,000 Personal & Advertising, $1,000,000 each occurrence.

2) Automobile Liability- $1,000,000 per accident

3) Employers Liability:

   a) $100,000 Each Accident Bodily Injury
   b) $500,000 Policy limit Bodily Injury by Disease
   c) $100,000 Each Employee Bodily Injury by Disease

4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
   a) "policy contains no deductible clauses."
   b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."

5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

The cost of insurance is incidental to all contract items. All subcontractors must meet the same minimum insurance requirements.

PART V

BID ITEMS

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 111324 PAGE: 1
COUNTY: DAVIESS LETTING: 07/15/11
PROPOSAL: STP 0604 (011) CALL NO: 107

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
	SECTION 0001	PAVING			
ALT GROUP AA1		ALTERNATE A - ASPHALT			
0010	00001	DGA BASE	139,602.000 TON		
0020	00008	CEMENT STABILIZED ROADBED	236,843.000 SQYD		
0030	00018	DRAINAGE BLANKET-TYPE II-ASPH	63,329.000 TON		
0040	00020	TRAFFIC BOUND BASE	134.000 TON		
0050	00100	ASPHALT SEAL AGGREGATE	964.000 TON		
0060	00190	LEVELING & WEDGING PG64-22	63.000 TON		
0070	00212	CL2 ASPH BASE 1.00D PG64-22	3,895.000 TON		
0080	00214	CL3 ASPH BASE 1.00D PG64-22	52,127.000 TON		
0090	00217	CL4 ASPH BASE 1.00D PG64-22	70,184.000 TON		
0100	00219	CL4 ASPH BASE 1.00D PG76-22	27,613.000 TON		
0110	00221	CL2 ASPH BASE 0.75D PG64-22	5,187.000 TON		
0120	00291	EMULSIFIED ASPHALT RS-2	114.000 TON		
0130	00301	CL2 ASPH SURF 0.38D PG64-22	1,462.000 TON		
0140	00309	CL2 ASPH SURF 0.50D PG64-22	806.000 TON		
0150	00312	CL3 ASPH SURF 0.50D PG64-22	6,518.000 TON		
0160	00324	CL3 ASPH SURF 0.50B PG64-22	2,723.000 TON		
0170	00329	CL4 ASPH SURF 0.50B PG76-22	12,774.000 TON		
0180	00358	ASPHALT CURING SEAL	422.000 TON		
0190	02101	CEM CONC ENT PAVEMENT-8 IN	1,083.000 SQYD		
0200	02230	EMBANKMENT IN PLACE	886,363.000 CUYD		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 111324 PAGE: 2
COUNTY: DAVIESS LETTING: 07/15/11
PROPOSAL: STP 0604 (011) CALL NO: 107

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
0210	02542	CEMENT	4,642.000 TON		
0220	02677	ASPHALT PAVE MILLING & TEXTURING	78.000 TON		
0230	02702	SAND FOR BLOTTER	592.000 TON		
0240	10203ND	PAVEMENT ADJUSTMENT (ASPHALT)	(1.00) LS	992,850.00	992,850.00
	SECTION 0002	PAVING			
ALT GROUP AA2		ALTERNATE B - CONCRETE			
0250	00001	DGA BASE	136,029.000 TON		
0260	00008	CEMENT STABILIZED ROADBED	222,214.000 SQYD		
0270	00018	DRAINAGE BLANKET-TYPE II-ASPH	509.000 TON		
0280	00020	TRAFFIC BOUND BASE	134.000 TON		
0290	00022	JPC PAVEMENT DRAINAGE BLANKET	46,044.000 TON		
0300	00100	ASPHALT SEAL AGGREGATE	952.000 TON		
0310	00190	LEVELING & WEDGING PG64-22	63.000 TON		
0320	00212	CL2 ASPH BASE 1.00D PG64-22	3,895.000 TON		
0330	00214	CL3 ASPH BASE 1.00D PG64-22	20,951.000 TON		
0340	00217	CL4 ASPH BASE 1.00D PG64-22	677.000 TON		
0350	00219	CL4 ASPH BASE 1.00D PG76-22	283.000 TON		
0360	00221	CL2 ASPH BASE 0.75D PG64-22	5,187.000 TON		
0370	00291	EMULSIFIED ASPHALT RS-2	114.000 TON		
0380	00301	CL2 ASPH SURF 0.38D PG64-22	1,462.000 TON		
0390	00309	CL2 ASPH SURF 0.50D PG64-22	806.000 TON		
0400	00312	CL3 ASPH SURF 0.50D PG64-22	82.000 TON		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 111324 PAGE: 3
COUNTY: DAVIESS LETTING: 07/15/11
PROPOSAL: STP 0604 (011) CALL NO: 107

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
0410	00324	CL3 ASPH SURF 0.50B PG64-22	2,723.000 TON		
0420	00329	CL4 ASPH SURF 0.50B PG76-22	278.000 TON		
0430	00358	ASPHALT CURING SEAL	401.000 TON		
0440	02071	JPC PAVEMENT-11 IN	151,435.000 SQYD		
0450	02072	JPC PAVEMENT-11 IN SHLD	77,996.000 SQYD		
0460	02101	CEM CONC ENT PAVEMENT-8 IN	1,083.000 SQYD		
0470	02230	EMBANKMENT IN PLACE	897,377.000 CUYD		
0480	02542	CEMENT	4,355.000 TON		
0490	02677	ASPHALT PAVE MILLING & TEXTURING	78.000 TON		
0500	02702	SAND FOR BLOTTER	556.000 TON		
0510	10203ND	PAVEMENT ADJUSTMENT (CONCRETE)	(1.00) LS	397,415.00	397,415.00
	SECTION 0003	ROADWAY			
0520	01015	INSPECT & CERTIFY EDGE DRAIN SYSTEM	(1.00) LS		
0530	01825	ISLAND CURB AND GUTTER	462.000 LF		
0540	01897	ASPHALT WEDGE CURB	3,045.000 LF		
0550	02014	BARRICADE-TYPE III	6.000 EACH		
0560	02091	REMOVE PAVEMENT	25,912.000 SQYD		
0570	02159	TEMP DITCH	52,150.000 LF		
0580	02160	CLEAN TEMP DITCH	52,150.000 LF		
0590	02223	GRANULAR EMBANKMENT	37,000.000 CUYD		
0600	02242	WATER	2,000.000 MGAL		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 111324 PAGE: 4
COUNTY: DAVIESS LETTING: 07/15/11
PROPOSAL: STP 0604 (011) CALL NO: 107

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
0610	02262	FENCE-WOVEN WIRE TYPE 1	36,025.000 LF		
0620	02351	GUARDRAIL-STEEL W BEAM-S FACE	22,525.000 LF		
0630	02352	GUARDRAIL-STEEL W BEAM-D FACE	550.000 LF		
0640	02360	GUARDRAIL TERMINAL SECTION NO 1	6.000 EACH		
0650	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	17.000 EACH		
0660	02365	CRASH CUSHION TYPE IX-A	4.000 EACH		
0670	02367	GUARDRAIL END TREATMENT TYPE 1	26.000 EACH		
0680	02369	GUARDRAIL END TREATMENT TYPE 2A	28.000 EACH		
0690	02381	REMOVE GUARDRAIL	3,146.000 LF		
0700	02387	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	9.000 EACH		
0710	02429	RIGHT-OF-WAY MONUMENT TYPE 1	154.000 EACH		
0720	02432	WITNESS POST	154.000 EACH		
0730	02483	CHANNEL LINING CLASS II	1,499.000 TON		
0740	02484	CHANNEL LINING CLASS III	1,550.000 TON		
0750	02545	CLEARING AND GRUBBING (183 ACRES)	(1.00) LS		
0760	02562	SIGNS	540.000 SQFT		
0770	02585	EDGE KEY	230.000 LF		
0780	02599	FABRIC-GEOTEXTILE TYPE IV	196,300.000 SQYD		
0790	02650	MAINTAIN & CONTROL TRAFFIC	(1.00) LS		
0800	02651	DIVERSIONS (BY-PASS DETOURS)	(1.00) LS		
0810	02671	PORTABLE CHANGEABLE MESSAGE SIGN	6.000 EACH		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 111324 PAGE: 5
COUNTY: DAVIESS LETTING: 07/15/11
PROPOSAL: STP 0604 (011) CALL NO: 107

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
0820	02676	MOBILIZATION FOR MILL & TEXT	(1.00) LS		
0830	02692	SETTLEMENT PLATFORM	4.000 EACH		
0840	02701	TEMP SILT FENCE	52,150.000 LF		
0850	02703	SILT TRAP TYPE A	420.000 EACH		
0860	02704	SILT TRAP TYPE B	420.000 EACH		
0870	02705	SILT TRAP TYPE C	210.000 EACH		
0880	02706	CLEAN SILT TRAP TYPE A	840.000 EACH		
0890	02707	CLEAN SILT TRAP TYPE B	840.000 EACH		
0900	02708	CLEAN SILT TRAP TYPE C	420.000 EACH		
0910	02709	CLEAN TEMP SILT FENCE	104,300.000 LF		
0920	02726	STAKING	(1.00) LS		
0930	02775	ARROW PANEL	4.000 EACH		
0940	02929	CRASH CUSHION TYPE IX	4.000 EACH		
0950	03225	TUBULAR MARKERS	100.000 EACH		
0960	03340	STEEL PIPE-2 1/2 IN	32.000 LF		
0970	03343	STEEL PIPE-4 IN	141.000 LF		
0980	05950	EROSION CONTROL BLANKET	86,661.000 SQYD		
0990	05952	TEMP MULCH	1,016,400.000 SQYD		
1000	05985	SEEDING AND PROTECTION	498,520.000 SQYD		
1010	05989	SPECIAL SEEDING CROWN VETCH	58,955.000 SQYD		
1020	05990	SODDING	8,432.000 SQYD		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 111324 PAGE: 6
COUNTY: DAVIESS LETTING: 07/15/11
PROPOSAL: STP 0604 (011) CALL NO: 107

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
1030	06510	PAVE STRIPING-TEMP PAINT-4 IN	34,830.000 LF		
1040	06514	PAVE STRIPING-PERM PAINT-4 IN	192,700.000 LF		
1050	06517	PAVE STRIPING-PERM PAINT-12 IN	8,098.000 LF		
1060	06568	PAVE MARKING-THERMO STOP BAR-24IN	320.000 LF		
1070	06569	PAVE MARKING-THERMO CROSS-HATCH	3,814.000 SQFT		
1080	06570	PAVE MARKING-PAINT CROSS-HATCH	20,120.000 SQFT		
1090	06574	PAVE MARKING-THERMO CURV ARROW	57.000 EACH		
1100	06589	PAVEMENT MARKER TYPE V-MW	130.000 EACH		
1110	06591	PAVEMENT MARKER TYPE V-BY	314.000 EACH		
1120	06592	PAVEMENT MARKER TYPE V-B W/R	948.000 EACH		
1130	06593	PAVEMENT MARKER TYPE V-B Y/R	527.000 EACH		
1140	08100	CONCRETE-CLASS A	99.400 CUYD		
1150	08150	STEEL REINFORCEMENT	4,622.000 LB		
1160	20210EN	COHESIVE PILE CORE	6,600.000 CUYD		
1170	20550ND	SAWCUT PAVEMENT	735.000 LF		
1180	21289ED	LONGITUDINAL EDGE KEY	735.000 LF		
1190	23131ER701	PIPELINE VIDEO INSPECTION	3,543.000 LF		
	SECTION 0004	DRAINAGE			
1200	00440	ENTRANCE PIPE-15 IN	433.000 LF		
1210	00441	ENTRANCE PIPE-18 IN	247.000 LF		
1220	00443	ENTRANCE PIPE-24 IN	276.000 LF		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 111324 PAGE: 7
COUNTY: DAVIESS LETTING: 07/15/11
PROPOSAL: STP 0604 (011) CALL NO: 107

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
1230	00445	ENTRANCE PIPE-30 IN	48.000 LF		
1240	00452	ENTRANCE PIPE-24 IN EQUIV	156.000 LF		
1250	00461	CULVERT PIPE-15 IN	394.000 LF		
1260	00462	CULVERT PIPE-18 IN	1,206.000 LF		
1270	00464	CULVERT PIPE-24 IN	458.000 LF		
1280	00466	CULVERT PIPE-30 IN	442.000 LF		
1290	00468	CULVERT PIPE-36 IN	335.000 LF		
1300	00470	CULVERT PIPE-48 IN	205.000 LF		
1310	00503	CULVERT PIPE-72 IN EQUIV	106.000 LF		
1320	00522	STORM SEWER PIPE-18 IN	1,759.000 LF		
1330	00524	STORM SEWER PIPE-24 IN	1,504.000 LF		
1340	00526	STORM SEWER PIPE-30 IN	676.000 LF		
1350	01000	PERFORATED PIPE-4 IN	54,929.000 LF		
1360	01001	PERFORATED PIPE-6 IN	10,885.000 LF		
1370	01010	NON-PERFORATED PIPE-4 IN	5,043.000 LF		
1380	01011	NON-PERFORATED PIPE-6 IN	2,899.000 LF		
1390	01020	PERF PIPE HEADWALL TY 1-4 IN	16.000 EACH		
1400	01024	PERF PIPE HEADWALL TY 2-4 IN	4.000 EACH		
1410	01025	PERF PIPE HEADWALL TY 2-6 IN	1.000 EACH		
1420	01028	PERF PIPE HEADWALL TY 3-4 IN	63.000 EACH		
1430	01029	PERF PIPE HEADWALL TY 3-6 IN	21.000 EACH		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 111324 PAGE: 8
COUNTY: DAVIESS LETTING: 07/15/11
PROPOSAL: STP 0604 (011) CALL NO: 107

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
1440	01032	PERF PIPE HEADWALL TY 4-4 IN	25.000 EACH		
1450	01033	PERF PIPE HEADWALL TY 4-6 IN	1.000 EACH		
1460	01433	SLOPED BOX OUTLET TYPE 1-18 IN	11.000 EACH		
1470	01434	SLOPED BOX OUTLET TYPE 1-24 IN	4.000 EACH		
1480	01450	S & F BOX INLET-OUTLET-18 IN	7.000 EACH		
1490	01451	S & F BOX INLET-OUTLET-24 IN	5.000 EACH		
1500	01452	S & F BOX INLET-OUTLET-30 IN	12.000 EACH		
1510	01453	S & F BOX INLET-OUTLET-36 IN	2.000 EACH		
1520	01480	CURB BOX INLET TYPE B	22.000 EACH		
1530	01505	DROP BOX INLET TYPE 5B	18.000 EACH		
1540	01511	DROP BOX INLET TYPE 5D	1.000 EACH		
1550	01517	DROP BOX INLET TYPE 5F	8.000 EACH		
1560	01559	DROP BOX INLET TYPE 13G	2.000 EACH		
1570	01756	MANHOLE TYPE A	2.000 EACH		
1580	02600	FABRIC GEOTEXTILE TY IV FOR PIPE	12,606.000 SQYD		
	SECTION 0005	BRIDGE			
1590	01643	JUNCTION BOX-24 IN	24.000 EACH		
1600	02231	STRUCTURE GRANULAR BACKFILL	2,361.600 CUYD		
1610	02403	REMOVE CONCRETE MASONRY	27.800 CUYD		
1620	02599	FABRIC-GEOTEXTILE TYPE IV	600.000 SQYD		
1630	02998	MASONRY COATING	8,357.000 SQYD		

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
1640	03299	ARMORED EDGE FOR CONCRETE	908.200 LF		
1650	04797	CONDUIT-3 IN	2,237.000 LF		
1660	08001	STRUCTURE EXCAVATION-COMMON	2,665.000 CUYD		
1670	08003	FOUNDATION PREPARATION (25909)	(1.00) LS		
1680	08003	FOUNDATION PREPARATION (26107)	(1.00) LS		
1690	08003	FOUNDATION PREPARATION (26108)	(1.00) LS		
1700	08020	CRUSHED AGGREGATE SLOPE PROT	2,012.000 TON		
1710	08033	TEST PILES	2,539.000 LF		
1720	08100	CONCRETE-CLASS A	2,673.700 CUYD		
1730	08104	CONCRETE-CLASS AA	3,247.000 CUYD		
1740	08133	MECHANICAL REINF COUPLER #8	68.000 EACH		
1750	08134	MECHANICAL REINF COUPLER #9	283.000 EACH		
1760	08135	MECHANICAL REINF COUPLER #10	113.000 EACH		
1770	08150	STEEL REINFORCEMENT	340,049.000 LB		
1780	08151	STEEL REINFORCEMENT-EPOXY COATED	886,205.000 LB		
1790	08500	APPROACH SLAB	1,913.800 SQYD		
1800	08634	PRECAST PC I BEAM TYPE 4	4,648.400 LF		
1810	08635	PRECAST PC I BEAM TYPE 6	1,155.000 LF		
1820	08637	PRECAST PC I BEAM TYPE 7	3,283.600 LF		
1830	20391NS835	JUNCTION BOX TYPE A	16.000 EACH		
1840	21532ED	RAIL SYSTEM TYPE III	3,138.000 LF		

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
1850	23233EC	DYNAMIC PILE TESTING	54.000 EACH		
1860	23546EC	PIPE PILE-18 IN	30,094.000 LF		
1870	24042EC	INSIDE FIT SNUB NOSE CONICAL POINT-18 IN	379.000 EACH		
	SECTION 0006	UTILITY			
1880	24198EC	PVC CONDUIT-6 IN-SCHEDULE 80	900.000 LF		
	SECTION 0007	SIGNING			
1890	02351	GUARDRAIL-STEEL W BEAM-S FACE	600.000 LF		
1900	02369	GUARDRAIL END TREATMENT TYPE 2A	4.000 EACH		
1910	02391	GUARDRAIL END TREATMENT TYPE 4A	4.000 EACH		
1920	02775	ARROW PANEL	1.000 EACH		
1930	06400	GMSS GALV STEEL TYPE A	77,921.000 LB		
1940	06405	SBM ALUMINUM PANEL SIGNS	23,123.000 SQFT		
1950	06406	SBM ALUM SHEET SIGNS .080 IN	336.000 SQFT		
1960	06407	SBM ALUM SHEET SIGNS .125 IN	2,307.000 SQFT		
1970	06410	STEEL POST TYPE 1	5,655.000 LF		
1980	06411	STEEL POST TYPE 2	768.000 LF		
1990	06417	FLEXIBLE DELINEATOR POST-W	488.000 EACH		
2000	06418	FLEXIBLE DELINEATOR POST-Y	443.000 EACH		
2010	06422	OSS ALUMINUM 60 FT TRUSS	2.000 EACH		
2020	06424	OSS ALUMINUM 65 FT TRUSS	4.000 EACH		
2030	06436	OSS ALUMINUM 75 FT TRUSS	1.000 EACH		

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
2040	06441	GMSS GALV STEEL TYPE C	28,870.000	LB		
2050	06443	OSS ALUMINUM 85 FT TRUSS	1.000	EACH		
2060	06448	SIGN BRIDGE ATTACHMENT BRACKET	5.000	EACH		
2070	06451	REMOVE SIGN SUPPORT BEAM	122.000	EACH		
2080	06465	OSS ALUMINUM 125 FT TRUSS	1.000	EACH		
2090	06490	CLASS A CONCRETE FOR SIGNS	617.000	CUYD		
2100	06491	STEEL REINFORCEMENT FOR SIGNS	27,049.000	LB		
2110	20419ND	ROADWAY CROSS SECTION	108.000	EACH		
2120	21373ND	REMOVE SIGN	85.000	EACH		
2130	21596ND	GMSS TYPE D	390.000	EACH		
2140	23639ED	REM SIGN BRIDGE MOUNT ATTACHMENT	4.000	EACH		
	SECTION 0008	SIGNALIZATION				
2150	04793	CONDUIT-1 1/4 IN	150.000	LF		
2160	04811	JUNCTION BOX TYPE B	3.000	EACH		
2170	04820	TRENCHING AND BACKFILLING	150.000	LF		
2180	04830	LOOP WIRE	1,600.000	LF		
2190	04844	CABLE-NO. 14/5C	1,100.000	LF		
2200	04845	CABLE-NO. 14/7C	245.000	LF		
2210	04850	CABLE-NO. 14/1 PAIR	790.000	LF		
2220	04885	MESSENGER-10800 LB	515.000	LF		
2230	04895	LOOP SAW SLOT AND FILL	595.000	LF		

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
2240	04931	INSTALL CONTROLLER TYPE 170	1.000 EACH		
2250	04932	INSTALL STEEL STRAIN POLE	4.000 EACH		
2260	04950	REMOVE SIGNAL EQUIPMENT	3.000 EACH		
2270	20094ES835	TEMP RELOCATION OF SIGNAL HEAD	12.000 EACH		
2280	20188NS835	INSTALL LED SIGNAL-3 SECTION	8.000 EACH		
2290	20189NS835	INSTALL LED SIGNAL-5 SECTION	1.000 EACH		
2300	23157EN	TRAFFIC SIGNAL POLE BASE	19.890 CUYD		
2310	23982EC	INSTALL ANTENNA	1.000 EACH		
	SECTION 0009	LIGHTING			
2320	04714	POLE 120 FT MTG HT HIGH MAST	15.000 EACH		
2330	04761	LIGHTING CONTROL EQUIPMENT	1.000 EACH		
2340	04773	HPS LUMINAIRE HIGH MAST	72.000 EACH		
2350	04797	CONDUIT-3 IN	2,925.000 LF		
2360	04800	MARKER	38.000 EACH		
2370	04820	TRENCHING AND BACKFILLING	12,100.000 LF		
2380	04860	CABLE-NO. 8/3C DUCTED	4,250.000 LF		
2390	04862	CABLE-NO. 4/3C DUCTED	13,800.000 LF		
2400	04863	CABLE-NO. 2/3C DUCTED	5,300.000 LF		
2410	04940	REMOVE LIGHTING	(1.00) LS		
2420	20391NS835	JUNCTION BOX TYPE A	10.000 EACH		
2430	20392NS835	JUNCTION BOX TYPE C	6.000 EACH		

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
2440	21543EN	BORE AND JACK CONDUIT	2,925.000	LF		
2450	23161EN	POLE BASE-HIGH MAST	137.000	CUYD		
	SECTION 0010	WATERLINE				
2460	01065	STEEL ENCASEMENT PIPE-8 IN	110.000	LF		
2470	01067	STEEL ENCASEMENT PIPE-10 IN	500.000	LF		
2480	01075	STEEL ENCASEMENT PIPE-18 IN	415.000	LF		
2490	01076	STEEL ENCASEMENT PIPE-20 IN	175.000	LF		
2500	01315	BLOW-OFF ASSEMBLY	1.000	EACH		
2510	01787	REMOVE MANHOLE	2.000	EACH		
2520	01791	ADJUST MANHOLE FRAME TO GRADE	2.000	EACH		
2530	03360	COPPER PIPE-3/4 IN	700.000	LF		
2540	03383	PVC PIPE-4 IN	350.000	LF		
2550	03385	PVC PIPE-6 IN	2,925.000	LF		
2560	03387	PVC PIPE-8 IN	1,200.000	LF		
2570	03391	PVC PIPE-12 IN	460.000	LF		
2580	03432	REMOVE AND RELOCATE METER	10.000	EACH		
2590	03524	GATE VALVE-4 IN	1.000	EACH		
2600	03526	GATE VALVE-6 IN	1.000	EACH		
2610	03538	BEND 11.25 DEG 6 IN	1.000	EACH		
2620	03545	BEND 22.50 DEG 6 IN	2.000	EACH		
2630	03546	BEND 22.50 DEG 8 IN	1.000	EACH		

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
2640	03548	BEND 22.50 DEG 12 IN	2.000 EACH		
2650	03553	BEND 45 DEG 4 IN	2.000 EACH		
2660	03554	BEND 45 DEG 6 IN	4.000 EACH		
2670	03556	BEND 45 DEG 12 IN	2.000 EACH		
2680	03563	BEND 45 DEG 8 IN	2.000 EACH		
2690	20097ES601	CONCRETE CAP	60.000 LF		
2700	20551NC	TEE AND BLOCK 8 IN X 8 IN X 6 IN	1.000 EACH		
2710	20708ND	CUT AND PLUG 12 IN	5.000 EACH		
2720	20790ND	CONNECT TO 12 IN	4.000 EACH		
2730	20794ND	REDUCER 8 IN X 6 IN	1.000 EACH		
2740	20864ND	FIRE HYDRANT ASSEMBLY	3.000 EACH		
2750	21045ND	TAPPING SLEEVE AND VALVE 4 IN X 4 IN	1.000 EACH		
2760	21179ND	TAPPING SLEEVE & VALVE 12 X 12	1.000 EACH		
2770	21382ND	CUT AND PLUG-8 IN	1.000 EACH		
2780	22103NN	HYDRO-STOP INSERTION VALVE-12 IN	1.000 EACH		
2790	22131NN	CONNECT TO FORCE MAIN-4 IN	1.000 EACH		
2800	22984EN	PVC FORCE MAIN-6 IN	310.000 LF		
2810	23356EC	PVC FORCE MAIN-12 IN	1,509.000 LF		
2820	23455EC	CONNECT TO 20 IN	3.000 EACH		
2830	23699EC	STEEL ENCASEMENT PIPE-30 IN	1,242.000 LF		
2840	23996EC	TAPPING SLEEVE AND VALVE-8X8X8 IN	1.000 EACH		

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
2850	24199EC	PVC FORCE MAIN-20 IN	6,300.000 LF		
2860	24200EC	CONNECT TO FORCE MAIN-18 IN	1.000 EACH		
2870	24201EC	CUT AND PLUG-20 IN	4.000 EACH		
2880	24202EC	CUT AND PLUG-18 IN	2.000 EACH		
2890	24203EC	CUT AND PLUG-4 IN	4.000 EACH		
2900	24204EC	MANHOLE TY 1	6.000 EACH		
2910	24205EC	MANHOLE TY 2	1.000 EACH		
2920	24206EC	TEE AND BLOCK-6 X 6 X 4 IN	1.000 EACH		
2930	24207EC	SPECIAL DITCH CROSSING PROTECTION	32.000 LF		
	SECTION 0011	TRAINEES			
2940	02742	TRAINEE PAYMENT REIMBURSEMENT 1 ARTICULATING TRUCK DRIVER TRAINEE	1,600.000 HOUR		
2950	02742	TRAINEE PAYMENT REIMBURSEMENT 1 CARPENTER TRAINEE	1,400.000 HOUR		
	SECTION 0012	MOBILIZATION / DEMOBILIZATION			
2960	02568	MOBILIZATION	LUMP		
2970	02569	DEMOBILIZATION	LUMP		
		TOTAL BID			