



CALL NO. 201

CONTRACT ID. 191046

PERRY COUNTY

FED/STATE PROJECT NUMBER 097GR19D046-STP BRZ

DESCRIPTION BARK CAMP BRANCH ROAD(CR-1150) AND MACES CREEK ROAD(KY-1166)

WORK TYPE BRIDGE REPLACEMENT

PRIMARY COMPLETION DATE 11/15/2020

LETTING DATE: August 23,2019

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME August 23,2019. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

PLANS AVAILABLE FOR THIS PROJECT.

DBE CERTIFICATION REQUIRED - 0%

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

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PART I
SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 10

CONTRACT ID - 191046

097GR19D046-STP BRZ

COUNTY - PERRY

PCN - DE09711501910

STP BRZ 1003 (270)

BARK CAMP BRANCH ROAD(CR-1150) (MP 0.000) ADDRESS DEFICIENCIES OR BRIDGE OVER LEATHERWOOD CREEK (MP 0.050), A DISTANCE OF 0.04 MILES.BRIDGE REPLACEMENT SYP NO. 10-08915.00.

GEOGRAPHIC COORDINATES LATITUDE 37:01:45.00 LONGITUDE 83:05:15.00

PCN - DE09711661946

STP BRZ 1003(274)

LEFT FORK MACES CREEK ROAD(KY-1166) (MP 4.283) ADDRESS DEFICIENCIES OF BRIDGE ON KY-1166 OVER MACES CREEK (MP 4.291), A DISTANCE OF 0.10 MILES.BRIDGE REPLACEMENT SYP NO. 10-08913.00.

GEOGRAPHIC COORDINATES LATITUDE 37:10:51.00 LONGITUDE 83:08:57.00

COMPLETION DATE(S):

COMPLETED BY 11/15/2020

APPLIES TO ENTIRE CONTRACT

60 CALENDAR Days

INTERMEDIATE MILESTONE FOR
10-8915.00. SEE SPECIAL NOTE.

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 electronic bidding software. 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 shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. When prescribed in said directives, the contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom shall be contacted through their individual Protection Notification Center. Non-compliance with these directives can result in the enforcement of penalties.

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

Pursuant to KRS 176.085(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by [KRS 14A.9-010](#) to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under [KRS 14A.9-030](#) unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. If the foreign entity is not required to obtain a certificate as provided in [KRS 14A.9-010](#), the foreign entity should identify the applicable exception. Foreign entity is defined within [KRS 14A.1-070](#).

For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.

Businesses can register with the Secretary of State at <https://secure.kentucky.gov/sos/ftbr/welcome.aspx>.

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.

HARDWOOD REMOVAL RESTRICTIONS

The US Department of Agriculture has imposed a quarantine in Kentucky and several surrounding states, to prevent the spread of an invasive insect, the emerald ash borer. Hardwood cut in conjunction with the project may not be removed from the state. Chipping or burning on site is the preferred method of disposal.

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

Identification of excess material sites and borrow sites shall be the responsibility of the Contractor. The Contractor shall be responsible for compliance with all applicable state and federal laws and may wish to consult with the US Fish and Wildlife Service to seek protection under Section 10 of the Endangered Species Act for these activities.

ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially

disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004.

April 30, 2018

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 Rating | 102.08 Preparation and Delivery of Proposals |
| 102.13 Irregular Bid 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.

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 ACCEPTED. 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 electronic bid file. 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

Lowest responsive bidders must submit the *DBE Plan/ Subcontractor Request*, form TC 14-35 DBE, within **5** days of the letting. This is necessary before the Awards Committee will review and make a recommendation. **The project will not be considered for award prior to submission and approval of the apparent low bidder’s DBE Plan/Subcontractor Request.**

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. The Proposal Line Number, Category Number, and the Project Line Number can be found in the “material listing” on the Construction Procurement website under the specific letting;
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.

UPON AWARD AND BEFORE A WORK ORDER WILL BE ISSUED

Contractors must submit the signed subcontract between the contractor and the DBE contractor, along with the DBE's certificate of insurance. If the DBE is a supplier of materials for the project, a signed purchase order must be submitted to the Division of Construction Procurement.

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 (hard copy along with an electronic copy) of this information must be received in 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 certainty 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 Disadvantaged Enterprise Business Liaison Officer (DEBLO) in the Office of Civil Rights and Small Business Development 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 out 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 complete and submit a **signed and notarized** Affidavit of Subcontractor Payment (TC 18-7) and copies of checks for any monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal. These documents must be completed and signed within 7 days of being paid by the Cabinet.

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.

******* IMPORTANT *******

Please mail the original, signed and completed TC (18-7) Affidavit of Subcontractor Payment form and all copies of checks for payments listed above to the following address:

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

The prime contractor should notify the KYTC Office of Civil Rights and Small Business Development seven (7) days prior to DBE contractors commencing work on the project. The contact in this office is Mr. Melvin Bynes. Mr. Bynes' current contact information is email address – melvin.bynes2@ky.gov and the telephone number is (502) 564-3601.

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.

7/19/2019

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – CARGO PREFERENCE ACT (CPA).

(REV 12-17-15) (1-16)

SECTION 7 is expanded by the following new Article:

102.10 **Cargo Preference Act – Use of United States-flag vessels.**

Pursuant to Title 46CFR Part 381, the Contractor agrees

- To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

- To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph 1 of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

- To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

ASPHALT MIXTURE

Unless otherwise noted, the Department estimates the rate of application for all asphalt mixtures to be 110 lbs/sy per inch of depth.

DGA BASE

Unless otherwise noted, the Department estimates the rate of application for DGA Base to be 115 lbs/sy per inch of depth.

DGA BASE FOR SHOULDERS

Unless otherwise noted, the Department estimates the rate of application for DGA Base for Shoulders to be 115 lbs/sy per inch of depth. The Department will not measure necessary grading and/or shaping of existing shoulders prior to placing of DGA Base, but shall be incidental to the Contract unit price per ton for DGA Base.

Accept payment at the Contract unit price per ton as full compensation for all labor, materials, equipment, and incidentals for grading and/or shaping of existing shoulders and furnishing, placing, and compacting the DGA Base.

INCIDENTAL SURFACING

The Department has included in the quantities of asphalt mixtures established in the proposal estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, curve widening, ramp gores and tapers, and road and street approaches, as applicable. Pave these areas to the limits as shown on Standard Drawing RPM-110-06 or as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, pave the crossroads to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. Surface or resurface these areas as directed by the Engineer. The Department will not measure placing and compacting for separate payment but shall be incidental to the Contract unit price for the asphalt mixtures.

ASPHALT PAVEMENT RIDE QUALITY CATEGORY B

The Department will apply Pavement Rideability Requirements on this project in accordance with Section 410, Category B.

OPTION B

Be advised that the Department will control and accept compaction of asphalt mixtures furnished on this project under OPTION B in accordance with Sections 402 and 403.

Special Note Concerning Environmental Training Specified by Permit:

Training is required as a part of the ground water protection plan. All employees of the contractor and all sub-contractor 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 provided to the resident engineer within 10 days of employment and annually thereafter for as long as the contractor is under contract.

SPECIAL NOTE FOR SEALING BRIDGE DECKS

These Notes or designated portions thereof, apply where so indicated on the plans, proposals or bidding instruction.

I. DESCRIPTION. Perform all work in accordance with the Department's 2012 Standard Specifications, and applicable Supplemental Specifications, the attached sketches, and these Notes. Section references are to the Standard Specifications.

This work consists of: (1) Furnish all labor, materials, tools, and equipment; (2) Clean the bridge deck; (3) Seal the bridge deck; (4) Maintain & control traffic; and, (5) Any other work specified as part of this contract.

II. MATERIALS.

A. Sealer. Use one of the following:

Product	Supplier
Protectosil BHN	Evonik Industries
Protectosil 300	Evonik Industries
TK-590-40 Tri-Silane 40%	TK Products
Certivex Penseal 244 O/W 80	Vexcon
Master Protect H 440 VT <i>(formerly Hydrozo Clear 40 VOC)</i>	BASF
SW-244-100 DOT	Chemical Products Industries, Inc.
TK-590-1 MS Tri-Silane	TK Products

III. CONSTRUCTION.

A. Cleaning the Deck. Dry clean the deck to remove all loose debris. Remove all visible hydrocarbons from the surface with detergent approved by the manufacturer of the deck sealant. Pressure wash all surfaces to be sealed at 2000 to 3000 psi. Install pressure gauges at each wand to verify pressure. Use 30° fan tip or as recommended by the manufacturer of the deck sealant. Hold pressure washing wand a minimum of 45° from the deck with a maximum stand-off distance of 12 inches.

B. Sealing the Deck. Allow new concrete to cure a minimum 28 days prior to application of sealer. Monitor weather conditions prior to sealer application. Refer to manufacturer's recommendations for proper ambient conditions. Do not apply sealer if precipitation is anticipated within the time stated by the manufacturer. Allow the deck to dry 24 hours (after washing or rain event) before sealer application. The deck can be reopened to traffic while drying. Sealer must be applied within 48 hours of washing or the deck must be rewashed. Divide the deck into predefined areas of specific square footage to aid in determining usage. Comply with manufacturer's usage recommendation. Using a low

pressure pump, apply sealer and spread evenly with broom or squeegee; do not allow pooling to remain. When each predefined area is complete, measure the amount of sealer used to verify proper usage. After sealing, follow manufacturer's recommended cure time before opening to traffic.

C. Inspection: Monitor all aspects of the project to assure compliance to this specification. Observe and document general conditions during the entirety of the project. Verify that each phase of work has been satisfactorily completed prior to beginning the next phase. Phases are described as follows:

1. Dry cleaning to remove loose debris, verify and document:
 - a. All debris has been removed and disposed of properly.
2. Removal of hydrocarbons, verify and document:
 - a. The manufacturer's recommended detergent is used for removal.
 - b. Hydrocarbons have been satisfactorily removed.
3. Pressure washing, verify and document:
 - a. Washing pressure at the wand.
 - b. Tip size used.
 - c. Wash angle and stand-off distance.
 - d. The deck is satisfactorily cleaned.
4. Sealer application, verify and document:
 - a. Proper cure time for new concrete.
 - b. Deck surface is dry.
 1. Document time since washed.
 2. Was deck opened to traffic after washing?
 - c. Ambient conditions.
 1. Document ambient temperature, surface temperature, relative humidity, and dew point.
 - d. Application and distribution method.
 - e. Coverage to be complete and even.
 - f. Material is not allowed to remain pooled.
 - g. Monitor material usage.
 - h. No traffic until proper cure time is allowed.

IV. MEASUREMENT

- A. Concrete Sealing.** The Department will measure the quantity per square feet of each area sealed.

V. PAYMENT

- A. Concrete Sealing.** Payment at the contract unit price per square feet is full compensation for the following: (1) Furnish all labor, materials, tools, and equipment; (2) Clean the bridge deck; (3) Seal the existing bridge deck; (4) Maintain & control traffic; and, (5) Any other work specified as part of this contract.

Special Note for Fixed Completion Date and Liquidated Damages

Perry County Item No. 10-8913.00 & 10-8915.00

These projects have an Ultimate Fixed Completion Date of November 15, 2020. Liquidated damages will be assessed for each day work remains uncompleted beyond the Specified Completion Date. See Section 108.09 of the Standard Specifications for liquidated damages.

10-8915.00 - The temporary diversion may be in place for 60 consecutive working days. Starting from the date at which the traffic is moved to the diversion, the contractor has 60 consecutive working days to reopen the roadway/bridge to traffic. Failure to have the roadway reopened to traffic after 60 consecutive working days of closure will result in the contractor being assessed liquidated damages in amount of \$5,000/day.

All liquidated damages will be applied cumulatively.

All other applicable portions of Section 108 apply.

SPECIAL NOTE

For Tree Removal

**Perry County
KY-1166 near Viperville Road
Bridge Replacement
Item No. 10-8913.00**

**NO CLEARING OF TREES 5 INCHES OR GREATER
(DIAMETER BREST HEIGHT) FROM APRIL 1 TO OCTOBER 14.**

**If there are any questions regarding this note, please contact
Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601,
Phone: (502) 564-7250.**

SPECIAL NOTE

For Tree Removal

**Perry County
CR-1150 Bark Camp Branch Road
Bridge Replacement
Item No. 10-8915.00**

NO CLEARING OF TREES 5 INCHES OR GREATER
(DIAMETER BREAST HEIGHT) FROM JUNE 1 - JULY 31.

**If there are any questions regarding this note, please contact
Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601,
Phone: (502) 564-7250.**

Special Note for Bridge Demolition, Renovation and Asbestos Abatement

If the project includes any bridge demolition or renovation, the successful bidder is required to notify Kentucky Division for Air Quality (KDAQ) via filing of form (DEP 7036) a minimum of 10 days prior to commencement of any bridge demolition or renovation work.

Any available information regarding possible asbestos containing materials (ACM) on or within bridges to be affected by the project has been included in the bid documents. These are to be included with the Contractor's notification filed with the KDAQ. If not included in the bid documents, the Department will provide that information to the successful bidder for inclusion in the KDAQ notice as soon as possible. If there are no documents stating otherwise, the bidders should assume there are no asbestos containing materials that will in any way affect the work.



Matthew G. Bevin
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Greg Thomas
Secretary

Asbestos Inspection Report

To: Brandon Baker

District: 10

Date: October 30, 2017

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Perry 10-8913.00

Structure ID: 097B00072N

Structure Location: Right Fork Maces Creek Road over Left Fork of Maces Creek

Sample Description: There were no suspect materials present on this structure.

Inspection Date: October 26, 2017

Results and Recommendations

The results of the samples collected were negative for the presence of asbestos above 1%.
No abatement is required at this time.

It is recommended that this report accompany the 10-Day Notice of Intent for Demolition (DEP7036 Form) which is to be submitted to the Kentucky Division of Air Quality prior to abatement, demolition, or renovation of any building or structure in the Commonwealth.



ENVIRONMENTAL TRAINING CONCEPTS, INC
P.O. Box 99603 Louisville, KY 40269
(502)640-2951

Certification Number: ETC-AIR-061317-00518

O'Dail Lawson

has on 06-13-2017, attended and successfully completed the requirements and passed the examination with a score of 70% of better on the entitled course.

ASBESTOS INSPECTOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the Commonwealth of Kentucky, the Indiana Department of Environmental Management and Tennessee Department of Environment & Conservation The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 1220 Kentucky Mills Drive, Louisville, KY

Expiration Date: 06-13-2018


Name - Training Manager


Name - Instructor



Matthew G. Bevin
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Greg Thomas
Secretary

Asbestos Inspection Report

To: Brandon Baker

District: 10

Date: October 30, 2017

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Perry 10-8915.00

Structure ID: 097C00021N

Structure Location: Bark Camp Branch Road over Leatherback Creek

Sample Description: There were no suspect materials present on this structure.

Inspection Date: October 26, 2017

Results and Recommendations

The results of the samples collected were negative for the presence of asbestos above 1%.
No abatement is required at this time.

It is recommended that this report accompany the 10-Day Notice of Intent for Demolition (DEP7036 Form) which is to be submitted to the Kentucky Division of Air Quality prior to abatement, demolition, or renovation of any building or structure in the Commonwealth.



ENVIRONMENTAL TRAINING CONCEPTS, INC
P.O Box 99608 Louisville, KY 40269
(502)640-2951

Certification Number: ETC-AIR-061317-00518

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Conducted at: 1220 Kentucky Mills Drive, Louisville, KY


Name - Training Manager

Expiration Date: 06-13-2018


Name - Instructor

	KENTUCKY TRANSPORTATION CABINET Department of Highways DIVISION OF RIGHT OF WAY & UTILITIES	TC 62-226 Rev. 01/2016 Page 1 of 1
RIGHT OF WAY CERTIFICATION		

<input checked="" type="checkbox"/> Original	<input type="checkbox"/> Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
10-8913.00	Perry	12F0 FD52 097 9264101R	STPBRZ 1003 (273)

PROJECT DESCRIPTION

Right Fork of Maces Creek Road

No Additional Right of Way Required

Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.

Condition # 1 (Additional Right of Way Required and Cleared)

All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.

Condition # 2 (Additional Right of Way Required with Exception)


The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract

Condition # 3 (Additional Right of Way Required with Exception)

The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.

Total Number of Parcels on Project	6	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed	4		
Condemnation	2		
Signed ROE	2		

Notes/ Comments (Use Additional Sheet if necessary)

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Edgar Raleigh II
Signature		Signature	 2019.06.20 15:26:19 -04'00'
Date		Date	June 18, 2019
Right of Way Director		FHWA	
Printed Name		Printed Name	
Signature	Digitally signed by DM Loy Date: 2019.06.21 07:16:31 -04'00'	Signature	No Signature Required as per FHWA-KYTC Current Stewardship Agreement
Date		Date	



KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF RIGHT OF WAY & UTILITIES

TC 62-226
Rev. 01/2016
Page 1 of 1

RIGHT OF WAY CERTIFICATION

<input checked="" type="checkbox"/>	Original	<input type="checkbox"/>	Re-Certification	RIGHT OF WAY CERTIFICATION			
ITEM #		COUNTY		PROJECT # (STATE)		PROJECT # (FEDERAL)	
10-8915.00		Perry		FD52 097 1150 000-001		STP BRZ 1003 (275)	
PROJECT DESCRIPTION							
Bridge Replacement over Leatherwood Creek on CR 1150.							
<input type="checkbox"/> No Additional Right of Way Required							
Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.							
<input checked="" type="checkbox"/> Condition # 1 (Additional Right of Way Required and Cleared)							
All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.							
<input type="checkbox"/> Condition # 2 (Additional Right of Way Required with Exception)							
The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract							
<input type="checkbox"/> Condition # 3 (Additional Right of Way Required with Exception)							
The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.							
Total Number of Parcels on Project		5	EXCEPTION (S) Parcel #		ANTICIPATED DATE OF POSSESSION WITH EXPLANATION		
Number of Parcels That Have Been Acquired							
Signed Deed		4					
Condemnation		1					
Signed ROE		1					
Notes/ Comments (Use Additional Sheet if necessary)							
LPA RW Project Manager				Right of Way Supervisor			
Printed Name				Printed Name		Aric Skaggs	
Signature				Signature			
Date				Date		February 22, 2019	
Right of Way Director				FHWA			
Printed Name		Digitally signed by DM Loy		Printed Name		No Signature Required	
Signature				Signature		as per FHWA-KYTC	
Date		Date: 2019.02.22 15:51:58 -05'00'		Date		Current Stewardship Agreement	

UTILITIES AND RAIL CERTIFICATION NOTE

**Perry County
STP BRZ 1003(274)
FD52 097 9264101U
Mile point: 4.283 TO 4.291
ADDRESS DEFICIENCIES OF BRIDGE ON KY 1166 OVER MACES CREEK. (16CCN) 097B00072N (SD)
ITEM NUMBER: 10-8913.00**

PROJECT NOTES ON UTILITIES

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs. The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

UTILITIES AND RAIL CERTIFICATION NOTE

Perry County
STP BRZ 1003(274)
FD52 097 9264101U
Mile point: 4.283 TO 4.291
ADDRESS DEFICIENCIES OF BRIDGE ON KY 1166 OVER MACES CREEK. (16CCN) 097B00072N (SD)
ITEM NUMBER: 10-8913.00

NOTE: DO NOT DISTURB THE FOLLOWING FACILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

Windstream - Telephone

American Electric Power - Electric

City of Hazard – Water & Natural Gas

TVS - CATV

The Contractor is fully responsible for protection of all utilities listed above

THE FOLLOWING FACILITY OWNERS ARE RELOCATING/ADJUSTING THEIR FACILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

Not Applicable

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE OWNER OR THEIR SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

Not Applicable

UTILITIES AND RAIL CERTIFICATION NOTE

<p>Perry County STP BRZ 1003(274) FD52 097 9264101U Mile point: 4.283 TO 4.291 ADDRESS DEFICIENCIES OF BRIDGE ON KY 1166 OVER MACES CREEK. (16CCN) 097B00072N (SD) ITEM NUMBER: 10-8913.00</p>
--

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT

City of Hazard - Water

City of Hazard - Natural Gas

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

No Rail Involvement Rail Involved Rail Adjacent

UTILITIES AND RAIL CERTIFICATION NOTE

Perry County
STP BRZ 1003(274)
FD52 097 9264101U
Mile point: 4.283 TO 4.291
ADDRESS DEFICIENCIES OF BRIDGE ON KY 1166 OVER MACES CREEK. (16CCN) 097B00072N (SD)
ITEM NUMBER: 10-8913.00

AREA FACILITY OWNER CONTACT LIST

Facility Owner	Address	Contact Name	Phone	Email
American Electric Power - Electric	12333 Kevin Avenue Ashland KY 41102	Doug Christian	6064361329	wdchristian@aep.com
City of Hazard - Natural Gas	700 Main Street Hazard Ky 41702	Carlos Combs	6064363171	linda.stele@cityofhazard.com
City of Hazard - Water	700 Main Street Hazard Ky 41702	Carlos Combs	6064363171	linda.stele@cityofhazard.com
TVS - CATV	PO Box 698 Hindman KY 41811	Jamie Thomas	6067853450	jamie@tvscable.com
Windstream - Telephone	719 North Main Street London KY 40741	Bryan Reed	6063098438	Bryan.reed@windstream.com

UTILITIES AND RAIL CERTIFICATION NOTE

Perry County
STP BRO 1003(270)
FD52 097 92560 01U
Mile point: 0.000 TO 0.050
ADDRESS DEFICIENCIES OF BRIDGE OVER LEATHERWOOD CREEK. (16CCN) 097C00021N
ITEM NUMBER: 10-8915.00

PROJECT NOTES ON UTILITIES

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs. The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

UTILITIES AND RAIL CERTIFICATION NOTE

<p>Perry County STP BRO 1003(270) FD52 097 92560 01U Mile point: 0.000 TO 0.050 ADDRESS DEFICIENCIES OF BRIDGE OVER LEATHERWOOD CREEK. (16CCN) 097C00021N ITEM NUMBER: 10-8915.00</p>

NOTE: DO NOT DISTURB THE FOLLOWING FACILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

American Electric Power - Electric

TVS - CATV

The Contractor is fully responsible for protection of all utilities listed above

THE FOLLOWING FACILITY OWNERS ARE RELOCATING/ADJUSTING THEIR FACILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

Windstream – Telephone

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE OWNER OR THEIR SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

Not Applicable

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT

City of Hazard - Water

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

No Rail Involvement Rail Involved Rail Adjacent

UTILITIES AND RAIL CERTIFICATION NOTE

Perry County
STP BRO 1003(270)
FD52 097 92560 01U
Mile point: 0.000 TO 0.050
ADDRESS DEFICIENCIES OF BRIDGE OVER LEATHERWOOD CREEK. (16CCN) 097C00021N
ITEM NUMBER: 10-8915.00

AREA FACILITY OWNER CONTACT LIST

Facility Owner	Address	Contact Name	Phone	Email
American Electric Power - Electric	12333 Kevin Avenue Ashland KY 41102	Doug Christian	6064361329	wdchristian@aep.com
City of Hazard - Water	700 Main Street Hazard Ky 41702	Carlos Combs	6064363171	linda.stele@cityofhazard.com
TVS - CATV	PO Box 698 Hindman KY 41811	Jamie Thomas	6067853450	jamie@tvscable.com
Windstream - Telephone	719 North Main Street London KY 40741	Bryan Reed	6063098438	Bryan.reed@windstream.com

GENERAL UTILITY NOTES AND INSTRUCTIONS APPLICABLE TO ALL UTILITY WORK MADE A PART OF THE ROAD CONSTRUCTION CONTRACT

The contractor should be aware the following utility notes and KYTC Utility Bid Item Descriptions shall supersede, replace and take precedence over any and all conflicting information that may be contained in utility owner supplied specifications contained in the contract, on plans supplied by the utility owner, or any utility owner specifications or information externally referenced in this contract.

Where information may have been omitted from these notes, bid item descriptions, utility owner supplied specifications or plans; the KYTC Standard Specifications for Road and Bridge Construction shall be referenced.

PROTECTION OF EXISTING UTILITIES

The existing utilities shown on the plans are shown as best known at the time the plans were developed and are to be used as a guide only by the Contractor. The Contractor shall use all means at his disposal to accurately locate all existing utilities, whether shown on the plans or not, prior to excavation. The contractor shall protect these utilities during construction. Any damage to existing utilities during construction that are shown or not shown on the plans shall be repaired at the Contractor's expense.

PREQUALIFIED UTILITY CONTRACTORS

Some utility owners may require contractors that perform relocation work on their respective facilities as a part of the road contract be prequalified or preapproved by the utility owner. Those utility owners with a prequalification or preapproval requirement are as follows:

No contractors are required to be prequalified or preapproved by the utility owner(s) to perform utility relocation work under this contract.

The bidding contractor needs to review the above list and look for a list of preapproved or prequalified contractors at the end of these general notes as identified above before bidding. Only contractors shown to be prequalified or preapproved by the utility owner on the following list(s) will be allowed to work on that utility as a part of this contract.

Any utility contractor that is not listed as prequalified or preapproved when the project is advertised for bid and wishes to be added must make request through the KYTC Contract Procurement website. The request should be made at least one week prior to the bidding deadline to allow for review and posting on the KYTC Contract Procurement website. A contractor is only considered prequalified or preapproved when

published on the KYTC Contract Procurement website. Contractors that contact the utility owner directly for preapproval or prequalification without contacting KYTC will not be considered for preapproval or prequalification for this contract. Contractors that are not prequalified or preapproved through KYTC before the bidding deadline will not be considered for prequalification or preapproval after bidding.

CONTRACT ADMINISTRATION RELATIVE TO UTILITY WORK

All utility work is being performed as a part of a contract administered by KYTC; there is not a direct contract between the utility contractor and utility owner. The KYTC Section Engineer is ultimately responsible for the administration of the road contract and any utility work included in the contract.

SUBMITTALS AND CORRESPONDENCE

All submittals and correspondence of any kind relative to utility work included in the road contract shall be directed to the KYTC Section Engineer, a copy of which may also be supplied to the utility owner by the contractor to expedite handling of items like material approvals and shop drawings. All approvals and correspondence generated by the utility owner shall be directed to the KYTC Section Engineer. The KYTC Section Engineer will relay any approvals or correspondence to the utility contractor as appropriate. At no time shall any direct communication between the utility owner and utility contractor without the communication flowing through the KYTC Section Engineer be considered official and binding under the contract.

ENGINEER

Where the word "Engineer" appears in any utility owner specifications included in this proposal, utility owner specifications included as a part of this contract by reference or on the utility relocation plans, it shall be understood the "Engineer" is the Kentucky Transportation Cabinet (KYTC) Section Engineer or designated representative and the utility owner engineer or designated representative jointly. Both engineers must mutually agree upon all decisions made with regard to the utility construction. The Transportation Cabinet, Section Engineer shall make all final decisions in all disputes.

INSPECTOR OR RESIDENT PROJECT REPRESENTATIVE

Where the word “Inspector” or “Resident Project Representative” appears in the utility specifications included in this proposal, utility owner specifications included as a part of this contract by reference or on the utility relocation plans, it shall be understood the “Inspector” or “Resident Project Representative” is the utility owner inspector and KYTC inspector jointly. The Transportation Cabinet, Section Engineer shall make all final decisions in all disputes.

NOTICE TO UTILITY OWNERS OF THE START OF WORK

One month before construction is to start on a utility, the utility contractor shall make notice to the KYTC Section Engineer and the utility owner of when work on a utility is anticipated to start. The utility contractor shall again make confirmation notice to the KYTC Section Engineer and the utility owner one week before utility work is to actually start.

UTILITY SHUTDOWNS

The Contractor shall not shut down any active and in-service mains, utility lines or services for any reason unless specifically given permission to do so by the utility owner. The opening and closing of valves and operating of other active utility facilities for main, utility line or utility service shut downs are to be performed by the utility owner unless specific permission is given to the contractor by the owner to make shutdowns. If and when the utility owner gives the contractor permission to shutdown mains, utility lines or utility services, the contractor shall do so following the rules, procedures and regulations of the utility owner. Any permission given by the utility owner to the contractor to shutdown active and in-service mains, utility lines or services shall be communicated to the KYTC Section Engineer by the utility owner that such permission has been given.

Notice to customers of utility shut downs is sometimes required to be performed by the utility contractor. The contractor may be required; but, is not limited to, making notice to utility customers in a certain minimum amount of time in advance of the shut down and by whatever means of communication specified by the utility owner. The means of communication to the customer may be; but is not limited to, a door hanger, notice by newspaper ad, telephone contact or any combination of communication methods deemed necessary, customary and appropriate by the utility owner. The contractor should refer to the utility owner specifications for requirements on customer notice.

Any procedure the utility owner may require the contractor to perform by specification or plan note and any expense the contractor may incur to comply with the utility owner’s shut down procedure and notice to customers shall be considered an incidental expense to the utility construction.

STATIONS AND DISTANCES

All stations and distances, when indicated for utility placement in utility relocation plans or specifications, are approximate; therefore, some minor adjustment may have to be made during construction to fit actual field conditions. Any changes in excess of 6 inches of plan location shall be reviewed and approved jointly by the KYTC Section Engineer or designated representative and utility owner engineer or designated

representative. Changes in location without prior approval shall be remedied by the contractor at his own expense if the unauthorized change creates an unacceptable conflict or condition.

RESTORATION

Temporary and permanent restoration of paved or stone areas due to utility construction shall be considered incidental to the utility work. No separate payment will be made for this work. Temporary restoration shall be as directed by the KYTC Section Engineer. Permanent restoration shall be “in-kind” as existing.

Restoration of seed and sod areas will be measured and paid under the appropriate seeding and sodding bid items established in the contract for roadway work.

BELOW ARE NOTES FOR WHEN “INST” ITEMS ARE IN THE CONTRACT MEANING THE UTILITY COMPANY IS PROVIDING CERTAIN MATERIALS FOR UTILITY RELOCATION

MATERIAL

Contrary to Utility Bid Item Descriptions, those bid items that have the text “**Inst**” at the end of the bid item will have the major components of the bid item provided by the utility owner. No direct payment will be made for the major material component(s) supplied by the utility company. All remaining materials required to construct the bid item as detailed in utility bid item descriptions, in utility specifications and utility plans that are made a part of this contract will be supplied by the contractor. The contractor’s bid price should reflect the difference in cost due to the provided materials.

The following utility owners have elected to provide the following materials for work under this contract:

No materials are being supplied by the utility owner(s). All materials are to be supplied by the contractor per bid item descriptions, utility specifications and utility plans.

SECURITY OF SUPPLIED MATERIALS

If any utility materials are to be supplied by the utility owner, it will be the responsibility of the utility contractor to secure all utility owner supplied materials after delivery to the project site. The utility contractor shall coordinate directly with the utility owner and their suppliers for delivery and security of the supplied materials. Any materials supplied by the utility owner and delivered to the construction site that are subsequently stolen, damaged or vandalized and deemed unusable shall be replaced with like materials at the contractor’s expense.

Standard Gas Bid Item Descriptions

BOLLARDS This item is for payment for furnishing and installing protective guard posts at above ground utility installations. A bollard may consist of, but not limited to, a steel post set in concrete or any other substantial post material. This item shall include all labor, equipment, and materials needed for complete installation of the bollard as specified by the utility owner specifications and plans. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

NOTE: A bid code for this item has been established in standard roadway bid items and shall be used for payment of this item. The bid code is 21341ND.

G DIRECTIONAL BORE Payment under this item is made whenever the plans or specifications specifically show directional boring is to be utilized in order to minimize the impact of open cut for the installation of gas main under streets, creeks, etc. Payment under this item shall include the specified bore pipe, labor, and equipment. No separate payment shall be made for bore pipe installed in the bore whether used as a carrier pipe or an encasement of a separate carrier pipe. Carrier pipe installed within a bore pipe shall be paid separately under pipe items. Payment under this item shall be for all sizes and not be size specific. No separate bid items will be established for size variations. The bore pipe sizes to be included under this item shall be as shown on the plans and/or in the specifications. This bid item shall also include the cost of pre and/or post directional bore gas installation video inspection of adjacent sanitary and storm sewer mains, manholes, and laterals when the utility specifications associated with the contract require such video inspection. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

G ELECTRONIC ID MARKER This bid item is to pay for labor, equipment, computer programming, and installation of an electronic ID marker at the locations shown on the plans or as directed by the engineer. The marker may be in the form of a ball, disk, cylinder, post, or other shape as required by specification and may be buried, at grade, or above grade as specified. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Paid EACH (EA) when complete.

NOTE: This bid item is not for payment of standard non-electronic markers or monuments. A separate "Line Marker" bid item is established for this purpose.

G ENCASUREMENT STEEL BORED This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, vents, labor, and equipment to bore and install the encasement in accordance with the plans and specifications, complete and ready for use. The size shall be the measured internal diameter of the encasement pipe. The sizes of encasement to be paid under the size ranges specified in the bid items shall be as follows:

- Range 1 = All encasement sizes greater than 2 inches to and including 6 inches
- Range 2 = All encasement sizes greater than 6 inches to and including 10 inches
- Range 3 = All encasement sizes greater than 10 inches to and including 14 inches
- Range 4 = All encasement sizes greater than 14 inches to and including 18 inches
- Range 5 = All encasement sizes greater than 18 inches to and including 24 inches
- Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately; but, shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

G ENCASEMENT STEEL OPEN CUT This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, vents, labor, and equipment to open cut and install the encasement in accordance with the plans and specifications, complete and ready for use. The size shall be the measured internal diameter of the encasement pipe. The size encasement to be paid under the size ranges specified in the bid items shall be as follows:

- Range 1 = All encasement sizes greater than 2 inches to and including 6 inches
- Range 2 = All encasement sizes greater than 6 inches to and including 10 inches
- Range 3 = All encasement sizes greater than 10 inches to and including 14 inches
- Range 4 = All encasement sizes greater than 14 inches to and including 18 inches
- Range 5 = All encasement sizes greater than 18 inches to and including 24 inches
- Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately; but, shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

G FARM TAP AND REGULATOR This item is for the installation of gas service tap and regulator assembly on a gas transmission main. This item shall include excavation, labor, equipment, and all tapping, piping, fittings, and regulator materials to install the farm tap and regulator assembly in accordance with the plans, specifications, and standard drawings complete and ready for use. Only one pay item has been established for Farm Tap and Regulator installations. Payment shall be made under this item regardless of farm tap service and regulator size. No separate pay items will be established for size variation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

G LINE MARKER This item is for payment for furnishing and installing a gas utility line marker as specified by the utility owner specifications and plans. A line marker may consist of a post or monument of whatever materials specified and shall include markings and/or signage on same as specified by plans or specifications. This item shall include all labor, equipment, and materials needed for complete installation of the marker. This item shall be paid EACH (EA) when complete.

NOTE: This bid item is not for payment of "Electronic ID Markers". Electronic ID Markers are paid under a separate bid item.

G MAIN ABANDON This bid item is in full payment for all efforts in abandonment of all gas mains and facilities shown to be abandoned on the plans, for removal of any sections of abandoned main that is in conflict with road construction, and for nitrogen purge and plug of any sections of main that are to remain. All work shall be done in accordance with the plans and specifications, and in accordance with

all pipeline safety regulations. This bid item is for all work to abandon and purge gas main in the total project regardless of size or length. No adjustment in the unit bid price will be allowed if the scope of work described in this item should increase in this contract for any reason. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item is to be paid LUMP SUM (LS) when complete.

G MAIN POINT RELOCATE This item is intended for payment for horizontal and/or vertical relocation of a short length of an existing main at the locations shown on the plans. This bid item is to be used to relocate an existing gas main at point locations such as to clear a conflict at a proposed drainage structure, pipe or any other similar short relocation situation. All new materials are to be used. The materials provided shall be of the same type and specification as those that exist. Substitution of alternative materials shall be approved by the engineer in advance on a case by case basis. Payment under this item shall be for each location requiring an existing main to be relocated horizontally or vertically regardless of pipe size or relocation length. No separate pay items will be established for pipe size variations or relocation segment length variations. Main Point Relocate shall not be paid on a linear feet basis; but shall be paid EACH (EA) at each location when complete and placed in service. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

G METER AND REGULATOR This bid item description shall be used for all meter and regulator bid items of every size except those defined as "Special". These pay items are for all labor, equipment, and materials needed for the installation of a service meter and regulator assembly at the locations shown on the plans or as directed by the engineer in accordance with specifications and standard drawings complete and ready for use. Materials to be provided under this bid item shall include, but are not limited to, meter, regulator, piping, fittings, building anchoring brackets, and hardware needed to create and install the assembly. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

G PIPE This description shall apply to all polyethylene/plastic and steel pipe bid items of every size and type to be used as gas main, except those bid items defined as "Special". This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test boxes (if required by specification), corrosion protective coatings of steel pipe and fittings, labor, equipment, excavation, bedding, restoration, pressure testing, backfill, etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. For steel pipe, this bid item shall include all cathodic protection anodes, lead wire, test boxes or stations, and any accessories. No additional payment will be made for rock excavation. This bid item shall include material and placement of flowable fill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. This bid item shall also include the cost of pre and/or post directional bore gas installation video inspection of adjacent sanitary and storm sewer mains, manholes, and laterals when the utility specifications associated with the contract require such video inspection. Measurement of quantities under this item shall be through valves (including horizontal measurements through above grade valves), fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Please refer to the Utility

Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

G REGULATOR STATION Includes all labor, equipment, materials and restoration, to install a new gas regulator station as indicated on plans and on standard drawings complete and ready for use. Only one pay item has been established for regulator station installations. Payment shall be made under this item regardless of regulator station size. No separate pay items will be established for size variation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

NOTE: This item is to be used to pay for regulator stations to reduce the pressure of gas from a higher pressure main to feed a lower pressure main. This item is not to be used to pay for regulators used on individual customer service lines.

G SERVICE LONG SIDE This bid item description shall apply to all service line installations of every size bid up to and including 2 inch inside diameter, except those service bid items defined as "Special". This item includes the specified piping material, main tap, coupling for connecting the new piping to the surviving existing piping, encasement of 2 inches or less internal diameter (if required by plan or specification), labor, equipment, excavation, backfill, testing, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. This bid item is to pay for service installations where the ends of the service connection are on opposite sides of the public roadway and the service line crosses the centerline of the public roadway as shown on the plans. The length of the service line is not to be specified. Payment under this item shall not be restricted by a minimum or maximum length. The contractor shall draw his own conclusions as to the length of piping that may be needed. Payment under this item shall include boring, jacking, or excavating across the public roadway for placement. Placement of a service across a private residential or commercial entrance alone shall not be reason to make payment under this item. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. This pay item does not include installation or relocation of meters. Meters will be paid separately. This bid item shall also include the cost of pre and/or post directional bore gas installation video inspection of adjacent sanitary and storm sewer mains, manholes, and laterals when the utility specifications associated with the contract require such video inspection. No additional payment will be made for rock excavation or for special bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

G SERVICE SHORT SIDE This bid item description shall apply to all service line installations of every size up to and including 2 inch internal diameter, except those service bid items defined as "Special". This item includes installation of the specified piping material of the size specified on plans, encasement of 2 inches or less internal diameter (if required by plan or specification), main tap, coupling for connecting the new piping to the surviving existing piping, labor, equipment, excavation, backfill, testing, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. This bid item is to pay for service installations where both ends of the service connection are on the same side of the public roadway, or when an existing service crossing a public roadway will remain and is being extended, reconnected, or relocated with all work on one side of the public roadway centerline as shown on the plans. The length of the service line is not to be specified and shall not be restricted to any minimum or maximum length. Payment shall be made under this item even if the service crosses a private residential or commercial entrance; but, not a public roadway. Private or commercial entrances shall not be considered a public

roadway in defining payment under this item. The contractor shall draw his own conclusions as to the length of piping that may be needed. This pay item does not include installation or relocation of meters. Meters will be paid separately. This bid item shall also include the cost of pre and/or post directional bore gas installation video inspection of adjacent sanitary and storm sewer mains, manholes, and laterals when the utility specifications associated with the contract require such video inspection. No additional payment will be made for rock excavation or for bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

G SERVICE RELOCATE This item is for the relocation of an existing gas service line where a meter is not involved, and where an existing service line can easily be adjusted by excavating alongside and moving the line horizontally and/or vertically a short distance without cutting the service line to avoid conflicts with road construction. This item shall include excavation, labor, equipment, bedding, and backfill to relocate the line in accordance with the plans and specifications complete and ready for use. Payment under this item shall be for each location requiring relocation. Payment shall be made under this item regardless of service size or relocation length. No separate pay items will be established for size or length variation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

G TIE-IN This bid description shall be used for all polyethylene/plastic or steel gas main tie-in bid items of every size except those that include a temporary bypass or are defined as "Special". This item includes all labor, equipment, excavation, fittings, sleeves, reducers, couplings, restoration, testing and backfill required to make the gas main tie-in as shown on the plans, and in accordance with the specifications complete and ready for use. Pipe for tie-ins shall be paid under separate bid items. No additional payment will be made for rock excavation. This bid item shall also include material and placement of flowable fill backfill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

G TIE-IN W/BYPASS This bid description shall be used for all polyethylene/plastic or steel gas main tie-in bid items that include temporary bypass of every size except those defined as "Special". This item includes all labor, equipment (including tapping, stopple and/or squeeze equipment), excavation, permanent and temporary fittings (including, but not limited to, tees, split tees, bends, reducers, plugs, caps, and couplings), temporary bypass piping, restoration, testing and backfill required to make the gas main tie-in with temporary bypass as shown on the plans, and in accordance with the specifications complete and ready for use. Mainline pipe for tie-ins shall be paid under separate bid items. No additional payment will be made for rock excavation. This bid item shall also include material and placement of flowable fill backfill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

NOTE: The tie-in size reflected in the bid item reflects the nominal internal diameter size of the main gas line being tied-in, not the bypass pipe size.

G VALVE This description shall apply to all buried valves of every size and type required in the plans and specifications except those bid items defined as "Special". Payment under this description is to be

for gas valves being installed with new main. This item includes the valve as specified in the plans and specifications, protective coating and corrosion protection, labor, equipment, excavation, valve box and valve stem extensions, backfill, restoration, testing, and etc., required to install the specified valve at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

G VALVE ABOVE GRADE This description shall apply to all above grade valve assemblies of every size and type required in the plans and specifications except those bid items defined as "Special". Payment under this description is to be for above grade gas valves being installed with new main. This item includes the above grade valve, pipe, and fittings as specified in the plans, specifications and standard drawings. This bid items shall also include protective coating and corrosion protection, labor, equipment, excavation, backfill, restoration, testing, etc., required to install the specified above grade valve at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

G VALVE BOX ADJUST Includes all labor, equipment, valve box and valve stem extensions (if required), excavation, backfill, concrete pad around valve box (when specified in specifications or plans), restoration, etc. to adjust the top of the box to finished grade complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

G WELD X-RAY INSPECTION This description shall apply to all radiographic x-ray inspections of steel pipe joints of every size within the pipe size ranges given in the bid item text. This bid includes all labor, equipment, materials, to assess the acceptability of the weld to comply with specifications and to industry and regulatory standards. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) for each pipe joint inspected.

Standard Water Bid Item Descriptions

W AIR RELEASE VALVE This bid item description shall apply to all air release valve installations of every size except those defined as “Special”. This item shall include the air release valve, main to valve connecting line or piping, manhole, vault, structure, access casting or doors, tapping the main, labor, equipment, excavation, proper backfill and restoration required to install the air release valve at the location shown on the plans or as directed in accordance with the specifications and standard drawings complete and ready for use. All air release/vacuum valves on a project shall be paid under one bid item regardless of size. No separate pay items will be established for size variations. Only in the case of the uniqueness of a particular air release valve would a separate bid item be established. Please refer to the Utility Company’s Specifications. If the Company does not have specifications, KYTC’s Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

BOLLARDS This item is for payment for furnishing and installing protective guard posts at above ground utility installations. A bollard may consist of, but not limited to, a steel post set in concrete or any other substantial post material. This item shall include all labor, equipment, and materials needed for complete installation of the bollard as specified by the utility owner specifications and plans. If the Company does not have specifications, KYTC’s Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

NOTE: A bid code for this item has been established in standard roadway bid items and shall be used for payment of this item. The bid code is 21341ND

W CAP EXISTING MAIN This item shall include the specified cap, concrete blocking and/or mechanical anchoring, labor, equipment, excavation, backfill, and restoration required to install the cap at the location shown on the plans or as directed in accordance with the specifications. This item is not to be paid on new main installations. This pay item is only to be paid to cap existing mains. Caps on new mains are incidental to the new main. Any and all caps on existing mains shall be paid under one bid item included in the contract regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company’s Specifications. If the Company does not have specifications, KYTC’s Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W DIRECTIONAL BORE Payment under this item is made whenever the plans or specifications specifically show directional boring is to be utilized in order to minimize the impact of open cut for the installation of water main under streets, creeks, and etc. Payment under this item shall include the specified bore pipe, labor, and equipment. No separate payment shall be made for bore pipe installed in the bore whether used as a carrier pipe or an encasement of a separate carrier pipe. This item shall also include pipe anchors at each end of the bore when specified to prevent the creep or contraction of the bore pipe. Carrier pipe installed within a bore pipe shall be paid separately under pipe items. Payment under this item shall not be size specific and no separate bid items will be established for size variations. The bore pipe sizes to be included under this item shall be as shown on the plans and/or in the specifications. Any and all directional bores in each contract shall be paid under one directional bore bid item included in the contract regardless of size. Please refer to the Utility Company’s Specifications. If the Company does not have specifications, KYTC’s Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W ENCASUREMENT CONCRETE Includes all labor, equipment, excavation, concrete, reinforcing steel, backfill, restoration, and etc., to construct the concrete encasement of the water main as shown on the plans, and in accordance with the specifications and standard drawings. Payment under this item shall be in addition to the carrier pipe as paid under separate bid items. Carrier pipe is not included in this bid item. Any and all concrete encasement shall be paid under one bid item included in the contract regardless of the size of the carrier pipe or the volume of concrete or steel reinforcement as specified in the plans and specifications. No separate bid items will be established for size variations. Measurement of pay quantity shall be from end of concrete to end of concrete. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W ENCASUREMENT STEEL BORED This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, labor, and equipment to bore and install the encasement in accordance with the plans and specifications, complete and ready for use. The size shall be the measured internal diameter of the encasement pipe. The sizes of encasement to be paid under the size ranges specified in the bid items shall be as follows:

- Range 1 = All encasement sizes greater than 2 inches to and including 6 inches
- Range 2 = All encasement sizes greater than 6 inches to and including 10 inches
- Range 3 = All encasement sizes greater than 10 inches to and including 14 inches
- Range 4 = All encasement sizes greater than 14 inches to and including 18 inches
- Range 5 = All encasement sizes greater than 18 inches to and including 24 inches
- Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately; but, shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W ENCASUREMENT STEEL OPEN CUT This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, labor, and equipment to open cut and install the encasement in accordance with the plans and specifications, complete and ready for use. The size shall be the measured internal diameter of the encasement pipe. The size encasement to be paid under the size ranges specified in the bid items shall be as follows:

- Range 1 = All encasement sizes greater than 2 inches to and including 6 inches
- Range 2 = All encasement sizes greater than 6 inches to and including 10 inches
- Range 3 = All encasement sizes greater than 10 inches to and including 14 inches
- Range 4 = All encasement sizes greater than 14 inches to and including 18 inches
- Range 5 = All encasement sizes greater than 18 inches to and including 24 inches
- Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately; but, shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W FIRE HYDRANT ADJUST Includes all labor, equipment, excavation, materials, and backfill to adjust the existing fire hydrant using the fire hydrant manufacturer's extension kit for adjustments of 18" or less. Adjustments greater than 18" require anchoring couplings and vertical bends to adjust to grade. The Contractor will supply and install all anchor couplings, bends, fire hydrant extension, concrete blocking, restoration, granular drainage material, etc, needed to adjust the fire hydrant complete and ready for use as shown on the plans, and in accordance with the specifications and standard drawings. This also includes allowing for the utility owner inspector to inspect the existing fire hydrant prior to adjusting, contractor returning unusable fire hydrants to the utility owner warehouse and picking up a replacement hydrant. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete and ready for use.

W FIRE HYDRANT ASSEMBLY Includes all labor, equipment, new fire hydrant, isolating valve and valve box, concrete pad around valve box (when specified in specifications or plans), piping, anchoring tee, anchoring couplings, fire hydrant extension, excavation, concrete blocking, granular drainage material, backfill, and restoration, to install a new fire hydrant assembly as indicated on plans and on standard drawings complete and ready for use. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W FIRE HYDRANT RELOCATE This item includes all labor and equipment to remove the existing fire hydrant from its existing location and reinstalling at a new location. This item shall include a new isolating valve and valve box, concrete pad around valve box (when required in specifications or plans), new piping, new anchoring tee, anchoring couplings, fire hydrant extensions, concrete blocking, restoration, granular drainage material, excavation, and backfill as indicated on plans, specifications, and on standard drawings complete and ready for use. This item shall also include allowing for utility owner inspector to inspect the existing fire hydrant prior to reuse, contractor returning unusable fire hydrants to the utility owner warehouse and picking up a replacement hydrant for use, if the existing fire hydrant is determined unfit for reuse. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W FIRE HYDRANT REMOVE This bid item includes removal of an abandoned fire hydrant, isolating valve, and valve box to the satisfaction of the engineer. The removed fire hydrant, isolating valve and valve box shall become the property of the contractor for his disposal as salvage or scrap. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W FLUSH HYDRANT ASSEMBLY This item shall include the flushing hydrant assembly, service line, tapping the main, labor, equipment, excavation, backfill, and restoration required to install the flush hydrant at the location shown on the plans and in accordance with the specifications and standard drawings, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W FLUSHING ASSEMBLY This item shall include the flushing device assembly, service line, meter box and lid, tapping the main, labor, equipment, excavation, backfill, and restoration required to install the

flushing device at the location shown on the plans and in accordance with the specifications and standard drawings, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W LEAK DETECTION METER This item is for payment for installation of a water meter at main valve locations where shown on the plans for detection of water main leaks. The meter shall be of the size and type specified in the plans or specifications. This item shall include all labor, equipment, meter, meter box or vault, connecting pipes between main and meter, main taps, tapping saddles, casting, yoke, and any other associated material needed for installation of a functioning water meter in accordance with the plans and specifications, complete and ready for use. No separate payment will be made under any other contract item for connecting pipe or main taps. Any and all leak detection meters shall be paid under one bid item included in the contract regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete and ready for use.

W LINE MARKER This item is for payment for furnishing and installing a water utility line marker as specified by the utility owner specifications and plans. A line marker may consist of a post or monument of whatever materials specified and shall include markings and/or signage on same as specified by plans or specifications. This item shall include all labor, equipment, and materials needed for complete installation of the marker. This item shall be paid EACH (EA) when complete.

W MAIN POINT RELOCATE This item is intended for payment for horizontal and/or vertical relocation of a short length of an existing main at the locations shown on the plans. This bid item is to be used to relocate an existing water main at point locations such as to clear a conflict at a proposed drainage structure, pipe or any other similar short relocation situation, and where the existing pipe material is to be reused. The contractor shall provide any additional pipe or fitting material needed to complete the work as shown on the plans and specifications. The materials provided shall be of the same type and specification as those that exist. Substitution of alternative materials shall be approved by the engineer in advance on a case by case basis. New polyethylene wrap is to be provided (if wrap exists or is specified in the specifications to be used). If it is necessary that the pipe be disassembled for relay, payment under this item shall also include replacement of joint gaskets as needed. Bedding and backfill shall be provided and performed the same as with any other pipe installation as detailed in the plans and specifications. Payment under this item shall be for each location requiring an existing main to be relocated horizontally or vertically regardless of pipe size or relocation length. No separate pay items will be established for pipe size variations or relocation segment length variations. Water Main Relocate shall not be paid on a linear feet basis; but, shall be Paid EACH (EA) at each location when complete and placed in service. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

W METER This item is for payment for installation of all standard water meters of all sizes 2 inches ID or less as specified on the plans. This item shall include all labor, equipment, meter, meter box, casting, yoke, and any other associated material needed for installation of a functioning water meter in accordance with the plans and specifications, complete and ready for use. This item shall include connections to the new or existing water service line. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W METER ADJUST This item includes all labor, equipment, excavation, materials, backfill, restoration, and etc., to adjust the meter casting to finished grade (whatever size exists) at the location shown on the plans or as directed in accordance with the specifications and standard drawings complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W METER RELOCATE This item includes all labor, equipment, excavation, additional fittings, disinfection, testing, restoration, and etc., to relocate the existing water meter (whatever size exists), meter yoke, meter box, casting, and etc., from its old location to the location shown on the plans or as directed, in accordance with the specifications and standard drawings complete and ready for use. The new service pipe (if required) will be paid under short side or long side service bid items. Any and all meter relocations of 2 inches or less shall be paid under one bid item included in the contract regardless of size. Each individual relocation shall be paid individually under this item; however, no separate bid items will be established for meter size variations of 2 inches ID or less. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W METER VAULT SIZE RANGE 1 OR 2 This item is for payment for installation of an underground structure for housing of a larger water meter, fittings, and valves as required by the plans and specifications. This item shall include all labor, equipment, excavation, concrete, manhole castings or access doors, the specified meter(s) valve(s), all piping, and fitting materials associated with installing a functioning meter and vault in accordance with the plans, standard drawings, and specifications, complete and ready for use. The size shall be the measured internal diameter of the meter and piping to be installed. The size meter vault to be paid under size 1 or 2 shall be as follows:

- Size Range 1 = All meter and piping sizes greater than 2 inches up to and including 6 inches
- Size Range 2 = All meter and piping sizes greater than 6 inches

This item shall be paid EACH (EA) when complete. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

W METER/FIRE SERVICE COMBO VAULT This item is for payment for installation of an underground structure for housing of a water meter and fire service piping, fittings, and valves as required by the plans and specifications. This item shall include all labor, equipment, excavation, concrete, manhole castings or access doors, the specified meter(s), valve(s), all piping, and fitting materials associated with installing a functioning meter and fire service vault in accordance with the plans and specifications, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W METER WITH PRESSURE REDUCING VALVE (PRV) This item is for payment for installation of all standard water meters with pressure reducing valves (PRV) of all sizes 2 inches ID or less as specified on the plans. This item shall include all labor, equipment, meter, PRV, meter box, casting, yoke, and any other associated material needed for installation of a functioning water meter with PRV in accordance with the plans and specifications, complete and ready for use. This item shall include connections to the new or existing water service line. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

This item shall be paid EACH (EA) when complete.

W PIPE This description shall apply to all PVC, ductile iron, and polyethylene/plastic pipe bid items of every size and type to be used as water main, except those bid items defined as “Special”. This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test boxes (if required by specification), polyethylene wrap (when specified), labor, equipment, excavation, bedding, restoration, testing, sanitizing, backfill, and etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. No additional payment will be made for rock excavation. This bid item includes material and placement of flowable fill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. **This item shall include all temporary and permanent materials and equipment required to pressure test and sanitize mains including, but not limited to, pressurization pumps, hoses, tubing, gauges, main taps, saddles, temporary main end caps or plugs and blocking, main end taps for flushing, chlorine liquids or tablets for sanitizing, water for testing/sanitizing and flushing (when not supplied by the utility), chlorine neutralization equipment and materials, and any other items needed to accomplish pressure testing and sanitizing the main installation.** This item shall also include pipe anchors, at each end of polyethylene pipe runs when specified to prevent the creep or contraction of the pipe. Measurement of quantities under this item shall be through fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Please refer to the Utility Company’s Specifications. If the Company does not have specifications, KYTC’s Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W PLUG EXISTING MAIN This item shall include the specified plug, concrete blocking and/or anchoring, labor, equipment, excavation, backfill, and restoration required to install the plug in an existing in-service main that is to remain at the location shown on the plans or as directed in accordance with the specifications. Any and all plugs on all existing in-service mains shall be paid under one bid item included in the contract regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company’s Specifications. If the Company does not have specifications, KYTC’s Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

NOTE: This utility bid item is not to be paid on new main installations or abandoned mains. This pay item is to plug existing in-service mains only. Plugs on new mains are incidental to the new main just like all other fittings.

NOTE: Plugging of existing abandon mains shall be performed and paid in accordance with Section 708.03.05 of KYTC Standard Specifications For Road And Bridge Construction and paid using Bid Code 01314 Plug Pipe.

W PRESSURE REDUCING VALVE This description shall apply to all pressure reducing valves (PRV) of every size required in the plans and specifications except those bid items defined as “Special”. Payment under this description is to be for PRVs being installed with new main. This item includes the PRV as specified in the plans and specifications, polyethylene wrap (if required by specification), labor, equipment, excavation, anchoring (if any), pit or vault, backfill, restoration, testing, disinfection, and etc., required to install the specified PRV at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. If required on plans and/or proposed adjoining DIP is restrained, PRVs shall be restrained. PRV restraint shall be considered incidental to the

PRV and adjoining pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W PUMP STATION This item is for payment for installation of pumps and an above or below ground structure for housing of the pumps. This item shall include all pumps, piping, fittings, valves, electrical components, building materials, concrete, any other appurtenances, labor, equipment, excavation, and backfill, to complete the pump station installation as required by the plans, standard drawings, and specifications, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LUMP SUM (LS) when complete.

W REMOVE TRANSITE (AC) PIPE This item shall include all labor, equipment, and materials needed for removal and disposal of the pipe as hazardous material. All work shall be performed by trained and certified personnel in accordance with all environmental laws and regulations. Any and all transite AC pipe removed shall be paid under one bid item included in the contract regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W SERVICE LONG SIDE This bid item description shall apply to all service line installations of every size bid up to and including 2 inch inside diameter, except those service bid items defined as "Special". This item includes the specified piping material, main tap, tapping saddle (if required), and corporation stop materials, coupling for connecting the new piping to the surviving existing piping, encasement of 2 inches or less internal diameter (if required by plan or specification), labor, equipment, excavation, backfill, testing, disinfection, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. This bid item is to pay for service installations where the ends of the service connection are on opposite sides of the public roadway and the service line crosses the centerline of the public roadway as shown on the plans. The length of the service line is not to be specified. Payment under this item shall not be restricted by a minimum or maximum length. The contractor shall draw his own conclusions as to the length of piping that may be needed. Payment under this item shall include boring, jacking, or excavating across the public roadway for placement. Placement of a service across a private residential or commercial entrance alone shall not be reason to make payment under this item. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. This pay item does not include installation or relocation of meters. Meters will be paid separately. No additional payment will be made for rock excavation or for special bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W SERVICE SHORT SIDE This bid item description shall apply to all service line installations of every size up to and including 2 inch internal diameter, except those service bid items defined as "Special". This item includes installation of the specified piping material of the size specified on plans, encasement of 2 inches or less internal diameter (if required by plan or specification), main tap, tapping saddle (if required), corporation stop, coupling for connecting the new piping to the surviving existing piping, labor, equipment, excavation, backfill, testing, disinfection, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and

ready for use. This bid item is to pay for service installations where both ends of the service connection are on the same side of the public roadway, or when an existing service crossing a public roadway will remain and is being extended, reconnected, or relocated with all work on one side of the public roadway centerline as shown on the plans. The length of the service line is not to be specified and shall not be restricted to any minimum or maximum length. Payment shall be made under this item even if the service crosses a private residential or commercial entrance; but, not a public roadway. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. The contractor shall draw his own conclusions as to the length of piping that may be needed. This pay item does not include installation or relocation of meters. Meters will be paid separately. No additional payment will be made for rock excavation or for bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W SERVICE RELOCATE This item is for the relocation of an existing water service line where a meter is not involved, and where an existing service line can easily be adjusted by excavating alongside and moving the line horizontally and/or vertically a short distance without cutting the service line to avoid conflicts with road construction. This item shall include excavation, labor, equipment, bedding, and backfill to relocate the line in accordance with the plans and specifications complete and ready for use. Payment under this item shall be for each location requiring relocation. Payment shall be made under this item regardless of service size or relocation length. No separate pay items will be established for size or length variation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W STRUCTURE ABANDONMENT This item is to be used to pay for abandonment of larger above or below ground water structures such as meter vaults, fire pits, pump stations, tanks, and etc. Payment under this item shall not be limited to size or scope; however structures with connecting pipes of 2 inches or less shall not be paid under this item; but, shall be considered incidental to water construction, (i.e., abandonment of standard water meters up to and including 2 inches would not be paid under this item). Payment under this item shall include all labor, equipment, and compacted fill or flowable fill for abandonment of the structure in place and restoration complete. No separate bid items will be established for size or structure variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W STRUCTURE REMOVAL This item is to be used to pay for removal of larger above or below ground water structures such as meter vaults, fire pits, pump stations, tanks, and etc. Payment under this item shall not be limited to size or scope; however structures with connecting pipes of 2 inches or less shall not be paid under this item; but, shall be considered incidental to water construction, (i.e., removal of standard water meters up to and including 2 inches would not be paid under this item). Payment under this item shall include all labor, equipment, and compacted backfill for removal of the structure and restoration complete. No separate bid items will be established for size or structure variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W TAPPING SLEVE AND VALVE SIZE 1 OR 2 This item shall include the specified tapping sleeve, valve, valve box, concrete pad around valve box (when required in specifications or plans), labor, and equipment to install the specified tapping sleeve and valve, complete and ready for use in accordance with

the plans and specifications. The size shall be the measured internal diameter of the live pipe to be tapped. The size tapping sleeve and valve to be paid under sizes 1 or 2 shall be as follows:

Size 1 = All live tapped main sizes up to and including 8 inches

Size 2 = All live tapped main sizes greater than 8 inches

Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W TIE-IN This bid description shall be used for all main tie-in bid items of every size except those defined as "Special". This item includes all labor, equipment, excavation, fittings, sleeves, reducers, couplings, blocking, anchoring, restoration, disinfection, testing and backfill required to make the water main tie-in as shown on the plans, and in accordance with the specifications complete and ready for use. Pipe for tie-ins shall be paid under separate bid items. This item shall be paid EACH (EA) when complete.

W VALVE This description shall apply to all valves of every size required in the plans and specifications except those bid items defined as "Special". Payment under this description is to be for gate or butterfly valves being installed with new main. This item includes the valve as specified in the plans and specifications, polyethylene wrap (if required by specification), labor, equipment, excavation, anchoring (if any), valve box and valve stem extensions, backfill, concrete pad around valve box (if required by specification), restoration, testing, disinfection, and etc., required to install the specified valve at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. If required on plans and/or proposed adjoining DIP is restrained, valves shall be restrained. Valve restraint shall be considered incidental to the valve and adjoining pipe. This description does not apply to cut-in valves. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE ANCHOR EXISTING This bid item is intended to pay for installation of restraint hardware on an existing valve where no restraint exists to hold the valve in place to facilitate tie-ins and other procedures where restraint is prudent. This work shall be performed in accordance with water specifications and plans. This bid item shall include all labor equipment, excavation, materials and backfill to complete restraint of the designated valve, regardless of size, at the location shown on the plans, complete and ready for use. Materials to be provided may include, but is not limited to, retainer glands, lugs, threaded rod, concrete, reinforcing steel or any other material needed to complete the restraint. Should the associated valve box require removal to complete the restraint, the contractor shall reinstall the existing valve box, the cost of which shall be considered incidental to this bid item. No separate bid items are being provided for size variations. All sizes shall be paid under one bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE BOX ADJUST Includes all labor, equipment, valve box and valve stem extensions (if required), excavation, backfill, concrete pad around valve box (when specified in specifications or plans), restoration, and etc., to adjust the top of the box to finished grade complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE CUT-IN This bid description is for new cut-in valve installations of all sizes where installation is accomplished by cutting out a section of existing main. This item shall include cutting the existing pipe, supplying the specified valve, couplings or sleeves, valve box, concrete pad around valve box (when required in specifications or plans), labor, equipment, and materials to install the valve at the locations shown on the plans, or as directed by the engineer, complete and ready for use. Any pipe required for installation shall be cut from that pipe removed or supplied new by the contractor. No separate payment will be made for pipe required for cut-in valve installation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE VAULT This item is for payment for installation of an underground structure for housing of specific valve(s) as required by the plans and specifications. This item shall include all labor, equipment, excavation, concrete, manhole castings or doors, the specified valve(s), all piping, and fitting materials associated with installing a functioning valve vault in accordance with the plans, standard drawing, and specifications, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

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WATER & GAS UTILITY RELOCATIONS
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1. SPECIAL NOTES:

- A. Crushed stone for backfilling and bedding of pipe is **not a Pay Item**. This additional cost should be reflected in your Unit Price for water piping. Additionally, unless specifically noted otherwise, only crushed stone specially listed on the plans will be paid at your Bid Unit Price. The Plans detail the crushed stone refill requirements for all pipe types.
- B. General Concrete used for pipe kickers on water pipe is **not a pay item** unless it is specifically noted otherwise as a pay item on the plans. This addition in cost should be reflected in your Unit Price for water piping. General concrete can include unformed concrete w/ reinforcement up to a maximum of #5's @ 8" each way, maximum of two mats. Other general concrete which **is a pay item** includes items such as cover caps over pipe where specifically noted on the plans. No Reinforced Formed Concrete is anticipated on this project (for the Utility portion) and may be listed or shown as "Detailed" concrete, and is a separate and distinct pay item.
- C. Special attention should be afforded all areas that are marked with 'Pay Limits'. Notes as they appear on the drawings will be strictly adhered to concerning pay items.
- D. Contractors should note the placement of No. 12 copper wire in the location of all non-metallic water and gas pipe. Substitutes (for tracing) such as line marking tape will not be accepted. Smaller diameter wire will not be accepted. Also note the requirement in all water and gas piping areas for marking tape labeled and colored appropriately that shall be used.
- E. Use extreme caution in areas where other utilities are shown. All utility locations as shown on the drawings shall be considered approximate. All known utility crossings (after this determination by the utility) shall be flagged by the appropriate agency. These crossings may require hand digging for discovery and/or clearance.
- F. Contractor shall contact all utilities and arrange for flagging of all existing lines. Contractor shall be responsible for contact and initiation of work with Kentucky 811.
- G. Valve collars shall be required at all valves and cost shall be included in the unit price for the valve and box.
- H. All "TIES" which are bid items shall include all necessary materials required to make the same; see breakdown of "Ties" in these specifications.
- I. The plans serve as the guide to the final line location. The Contractor, because of his extensive knowledge obtained from line installation and roadway work, shall immediately contact the Engineer should construction appear unreasonable,

dangerous, or liable to generate property damage in any location, or to provide an unreasonable conflict with roadway work. This notification shall include likely areas of slip, slide, or other ground movement. The Contractor is responsible for all construction activities and any detrimental result of his construction. The Contractor, in accepting any portion of this Contract, assumes all associated responsibility for any and all construction activity. Additionally, the Contractor shall contact the Engineer if any construction is not practical without producing extended service outage or unreasonable conflict with roadway construction.

- J. Cooperation is critical for this utility relocation to be completed effectively. The drawings note contacts with the City of Hazard Water and Gas Departments and these people should be contacted as directed or as needed and shall be contacted as specifically noted on the plans.
- K. The Contractor shall work both plans sheets and profile sheets as a unit. What is shown on one shall be considered to be shown on both. Contractor shall report any conflict between the two to the Utility Relo. Engineer.
- L. **Contractor is responsible for all Surveying on the Project.** In all areas Contractor shall be required to survey or resurvey both horizontal and vertical locations for pipes, etc., determine any possible profile related conflicts, and compare planned horizontal and vertical locations with surveyed. Should a conflict or discrepancy exist, the Contractor shall immediately report this to the Utility Relo. Engineer. Contractor shall do no work in any line segment before this is complete.
- M. **A digital camera shall be used to photograph all valves, or valve groupings** (if valves lay within 5' radius of each other). Each valve or valve grouping photograph shall be named with a descriptive title. For example, if a valve grouping is at the intersection of KY 80 and KY 15, it shall be named "KY 80 KY 15.JPG". Each photograph shall be descriptive in and of itself with background information sufficient for subsequent location of the valve grouping by Water and Sanitary Sewer Department personnel. Two (2) compact disks (CD's) shall be provided to the Engineer after project completion showing all valve or valve groupings. Final payment will not be made until these CD's are submitted. The Contractor shall work with the Relo. Engineer to ensure that correct titles are transferred to "AS-BUILT" drawings. Additionally, Contractor shall assist Utility Relocation Engineer's personnel in location of installed valves and valve groupings so a geographical location (KY State Plan Coordinate) can be obtained for each valve, valve grouping, or other important item as determined.
- N. **Sequence of construction is absolutely critical to this project.** The Contractor shall complete work in the sequences noted on the drawings or as determined in the field so to limit or eliminate service outage. The Utility Relocation Engineer has made his best effort to show work which can be reasonably completed as the

roadway portion is constructed without significant service outage, but certainly does not warrant that this is the case. Changes to sequence, type, layout, etc. may be required to achieve this goal and the Contractor is encouraged to contact the Relo. Engineer for any discussion which eases his roadway construction burden or shortens utility downtime.

- O. Unless noted, all waterline fittings are Mechanical Joint. All mechanical joint fittings shall use Grip Rings on every branch, inlets and outlets. Unless noted otherwise, all waterline service tubing on the job is Compression Joint. Additional joint restraint for service tubing will be provided as directed by the Utility Relocation Engineer.

- P. Shop Drawing submission to the Utility Relocation Engineer is required of the Contractor for review and approval. Items which require Shop Drawing approval include:
 - All Pipe, all types, Water & Gas
 - All Fittings, Water & Gas
 - Liner Pipes, Casing Spacers, & End Seals, Water & Gas
 - Valves, Water & Gas
 - River test Stations
 - ARV's, Water
 - Mag Meters, Boxes, Vaults, Etc.
 - All Blowoffs
 - All Water Meters including radio Read Equip.

- Q. "Liner Pipe" and "Encasement Pipe" are used interchangeably in this specification.

- R. All plans and details show **42" minimum cover** required for all pipes. **KYTC may have deeper requirements.** Contractor is responsible for installing all lines at the depth required by KYTC. Contractor should confirm cover requirements before Bid.

- S. These specifications may list singular manufactures for a specific item. This listing is only for defining required quality and/or features that are required for the project. In almost all cases, this singular listing will be followed by "or Engineer approved equal". Any item, unless it is an item brand/type that has been standardized by the City of Hazard for operational reasons as a requirement, can be replaced with an item of comparable quality and/or features.

The Utility Relocation Engineer's address is:

H. A. Spalding Engineers, Inc.
651 Skyline Drive
Hazard, KY 41701-1664
(606) 436-2151
Project Engineer, Hank A. Spalding
hank.spalding@haspaldingengineers.com

Engineer prefers the PDF process for Shop Drawing Submission which will speed approval. Submission shall be complete and shall be in an adequate number (if paper is used) to allow the Engineer to keep two (2) complete sets while allowing the Contractor any required sets for his use.

2. SPECIAL SURFACE RESTORATION NOTE:

The Contractor should understand that returning all surface work areas to their original condition is one of the most important phases of this project. The Contractor will be working in many cases in yard or other sensitive areas. The Contractor shall make every effort to avoid cutting of any trees, shrubs, and other items which are not absolutely required for the construction process (other than the Clear & Grub area). The Engineer will allow for, and in fact will encourage, the Contractor to adjust alignments to miss sensitive structures such as large trees, etc. However, all changes in alignment must be approved before any work is done to insure compliance with project requirements such as allowable grade, angles, etc. Contractor shall utilize mobile drop hammers, or other suitable equipment (other than walk behind tampers), which will compact the trench in all yard, road, and other areas which are considered sensitive. The Contractor shall also use similar compaction equipment and effort around all manholes. The Contractor shall satisfy the Engineer and KYTC with their yard restoration work. KYTC satisfaction with compaction and re-vegetation efforts shall be considered under your one year warranty.

3. INSTALLATION:

Trenching - Trenching shall be done in a true straight line at all times and fittings shall be used only at the direction of the RESIDENT ENGINEER.

Trenching shall include all clearing and grubbing (Clear and Grub is a Unit Price Bid Item for the waterline or gas line areas shown on the plans), including all weeds, briars, trees, and stumps encountered in the trenching. The CONTRACTOR shall dispose of any such material by burning, burial, or hauling away, at no extra cost to the KYTC. All material shall be disposed of by methods which meet all KYTC requirements, local fire officials, and all local, state, and federal requirements. Outside of the clear & grub area, Shrubs, hedges, and small trees (3" in dia.) shall be removed and replanted, at no extra cost to the KYTC. Trenching also includes such items as street, road, sidewalk, pipe and small creek

crossings; cutting, moving, or repairing damage to fences, poles, or gates and other surface structures, regardless of whether shown on the Plans.

All material encountered in excavation shall be Unclassified. In areas where rock is encountered, a min. of 2" of crushed stone shall be placed in the bottom of the trench before installation of the pipe. Extra payment will be made for the installation of the crushed stone at your submitted unit price for crushed stone. The price for the pipe in place shall also include hauling off of all excavated material.

The CONTRACTOR shall determine, as far as possible in advance, the location of all existing sewer, culvert, drain, water, electric, and gas pipes and other subsurface structures and avoid disturbing same in opening his trenches. In case of sewer, water, and gas services, and other facilities easily damaged by machine trenching, same shall be uncovered without damage ahead of trenching, and restored immediately after trenching machine has passed, without extra cost to the KYTC except as noted in the bid item Utility Conflicts. The CONTRACTOR shall protect such existing facilities, including power and telephone poles and guy wires, against danger or damage due to settlement of his backfill. It shall be the responsibility of the CONTRACTOR to inform customers of utilities of disruption of service as soon as it is known that it has or will be cut off.

The CONTRACTOR shall at all times during trenching operations on the streets or other areas, carry a stock of pipe and fittings likely to be needed for replacement of water, gas, sewage, or drain pipes to facilitate immediate repair.

Construction equipment will not be approved for use where treads are injurious to paving encountered. Curbs, sidewalks, and other structures shall be protected by the CONTRACTOR from damage by his construction equipment.

In case of damage to any existing structures, repair and restoration shall be made at once and backfill shall not be replaced until this is done. In all cases, restoration and repair shall be such that the damaged structure will be in as good condition and serve its purpose as completely as before and such restoration and repair shall be done without extra charge, except as set forth under the provisions of the General Conditions. Where there is the possibility of damage to existing utility lines by trenching machine, the ENGINEER may order hand search excavation ahead of machine trenching to uncover same, at no extra cost to the KYTC.

All trenches must be dug neatly to lines. Hand trenching may be required by the ENGINEER, at no extra payment, where undue damage would be caused by existing structures and facilities by machine trenching. Trenches in earth shall be dug to just above grade by machine and shall be finished down to grade by hand, unless otherwise specified.

Where trenching is cut through paving, which does not crumble on edges, trench edge shall be cut to at least two (2") inches deep to straight and neat edges before excavation is

started, and care taken to preserve edge to facilitate neat repaving as shown on the Drawings.

All excavation shall be open trenches, except where otherwise called for on the Plans or by special permission of the ENGINEER, for boring or jacking under railroads, sidewalks, and the highway.

When working along the highway the CONTRACTOR shall furnish, install and maintain necessary signs, lights or other warning devices as prescribed by the Kentucky Department of Transportation and shall furnish and employ sufficient flagmen to direct traffic in the construction area all as directed by the Department of Transportation. All signs, devices, flagmen, etc. shall be as prescribed in the "Manual on Uniform Traffic Control Devices, Part VI," latest revision.

The CONTRACTOR shall so coordinate his work as to produce a minimum of interference with normal traffic on highways and streets. He may, with the approval of the ENGINEER and governing agency, close a street to traffic for such length of time considered necessary by the ENGINEER, provided persons occupying property abutting the streets have an alternate route of access to the property which is suitable for their needs during the time closure. It shall be the responsibility of the CONTRACTOR to give 24 hours advance notice to Fire and Police Departments and to occupants of a street which will be closed in a manner approved by the ENGINEER.

The opening of more than 500 feet of trench ahead of the pipe laying and more than 500 feet of open ditch left behind pipe laying before backfilling, will not be permitted except upon written consent of the KYTC or verbal consent from KYTC directly to the Engineer. No trench shall be left open or work stopped on same for a considerable length of time. If such is necessary, trench shall be refilled according to backfill specifications. In crossing a road or street a temporary bridge must be placed over the excavation if traffic conditions require its use before backfilling. Where required or when directed by the ENGINEER, road or street crossings will be limited to one-half of travel width before placing temporary bridge over the excavated side. Whenever trenching is performed on public ways, the CONTRACTOR shall furnish and maintain barricades, lanterns, warning sign and signals as far as one block ahead or at locations directed by the governing agency as required for public safety. All such necessary bridges, barricades, lanterns, signs and signals shall be provided by and at the expense of the CONTRACTOR. The CONTRACTOR shall maintain road crossings in a passable condition for traffic until the final acceptance of the work at no cost to the KYTC.

Where pipelines run through wooded terrain, cutting of trees within limits of maximum permissible trench width, plus 4' on each side of this trench centerline, will be permitted. However, cutting of additional trees on each side of this 8' total width to accommodate operation of trenching machine will not be permitted. The CONTRACTOR shall obtain specific permission of the OWNER before cutting any tree larger than six (6") inches in

diameter.

Sheeting and shoring of trench will be required of this CONTRACTOR where necessary to protect life, property, or any structure from damage or to maintain maximum permissible trench widths at top of pipe. Sheeting, sheet piling, trench jacks, braces, shores, and stringers shall be used to hold trench walls. These shall be withdrawn as the trenches are being backfilled, after backfill has been placed over pipe at least 18". If their removal, before backfill is completed to surface, endangers adjacent structures such as pipelines, street paving, sidewalk and buildings, then they shall be left in place until such danger has passed and then pulled if possible. Voids caused by sheeting withdrawal shall be backfilled and tamped with thin rammers designed for the purpose so as not to form an obstruction at the ground level. Dewatering of the trenches shall be considered a part of trenching at no extra cost to the OWNER. Dewatering of trenches shall include ground water and storm or sanitary sewage. Suitable pumping and other dewatering equipment is to be provided by the CONTRACTOR to insure the installation of the pipeline structure in a dewatered trench and under the proper conditions. Dewatering shall include all practical means available for prevention of surface runoff into trenches and scouring against newly laid pipe.

Piles of excavated material shall be trenched or temporarily piped to prevent, as far as practical, blockage of drainage ditches and gutters and resultant water carriage of excavated materials over street surfaces.

Where subgrade of trench has insufficient stability to support the pipeline and hold it to its original grade, the ENGINEER may order stabilization by various means. Exclusive of dewatering normally required for construction and instability caused by neglect of the CONTRACTOR, it shall be paid for at unit prices set up in the Contract such as extra excavation, crushed rock for pipe bedding, concrete cradle, or piling.

The location of pipe and their appurtenances, as shown, are those intended for the final construction. However, conditions may present themselves before construction of any line is started, that would indicate desirable changes in location. Also, development of property traversed may require location changes. In such cases, the KYTC reserves that right to make reasonable changes in line and structure location without extra cost except as may be determined by the application of the unit prices bid to the quantities actually involved. The OWNER or KYTC is under no obligation to locate pipelines, so they may be excavated by machine.

The work of uncovering and backfilling required for locating existing sewers, waterlines and other existing facilities for connection of improvements, or avoidance in location of proposed pipeline, where such uncovering and backfilling is not within trench for improvements, shall be at the CONTRACTOR's expense.

The CONTRACTOR will be required to test all pipelines (as described in other areas of these Specifications) before backfilling. Backfilling before testing will be allowed at the

discretion of the ENGINEER at points where danger to the public, or other hazards, demand that such be done immediately after pipe is laid. All leakage apparent or other problems after testing must be repaired before backfilling.

Backfilling Trenches:

Backfilling must be started as soon as practicable after pipe has been laid. Packing of earth across and around pipe at six (6') foot intervals and between joints shall be the usual procedure as the laying proceeds. This is in order to avoid danger of misalignment from slide, flooding or other causes. The ENGINEER shall be given a maximum of 24 hours for inspection before backfilling. Only earth, or rock less than 2-1/2" size, shall be used as backfill materials up to six (6") inches above top of pipe. No stones or other hard or heavy substances may be thrown directly upon the pipes or into the trench until the above named cover of earth is obtained. Above the 6 or 12 inches above pipe, rock may be used in the backfill to an extent not greater than one-half of the total backfill materials used. If additional earth is required, it must be obtained and placed by the CONTRACTOR. Filling with rock and earth shall proceed simultaneously in order that all voids in the rock may be filled with earth. Where noted on the Plans and within the shoulder of the Kentucky Highways, the CONTRACTOR shall backfill to finish highway grade with DGA. The DGA shall be tamped in six (6") inch layers in accordance with Department of Transportation Specifications. In these areas (if any) DGA will be a pay item. All material hauled away shall be placed at no cost and at a location specified by the KYTC or if not specified by KYTC at a location obtained by Contractor.

No extra charge shall be made for supplying outside materials for backfill or removing excess excavation material from the site of the work.

Extra cost of compaction of backfill on street and driveway crossings and tunnels shall be included in price bid for pipe.

Where highway slopes, thin grass, or cover crops are destroyed by trenching, laying, or backfilling operations, and access to them, surface shall be prepared by disking, fertilizing 5 lbs. of 5-10-5 or 6-8-6 per 1,000 square feet and seeding 21 lbs. of Italian Rye Grass per 1,000 square feet, light harrowing, then reseeding with crop destroyed or one part Red Top, three parts certified Kentucky Bluegrass seed mixed together at the rate of 2 lbs. per 1,000 square feet of surface. This shall be included in the price for trenching and backfilling. Requirement of the KYTC, for reseeding shall take precedence over these specifications.

4. CLEANING UP AND REPAIRING DAMAGE:

The Contract will not be considered complete until all construction structures and equipment and rubbish from construction are cleaned from the site of the work.

All damage to existing grounds and structures caused by construction operations must be

repaired or the KYTC compensated for such damage before contract will be considered complete. This does not include replacement of sod, but does include required shaping of ground for sodding or planting of grass and the removal and disposition of all rock from blasting three (3") inches or over in size.

5. HAULING AND STORAGE:

The CONTRACTOR will be required to deliver all pipe, fittings, valves and valve boxes and other materials and place same as and where required for laying.

Care must be exercised in the handling of all materials and equipment and the CONTRACTOR will be held responsible for all breakage or damage to same caused by his workmen, agents of appliances for handling or moving. Pipes and other castings shall in no case be thrown or dropped from cars, trucks, or wagons to the ground but same shall be lowered gently and not allowed to roll against or strike other castings and unyielding objects violently. Pipe and special castings may be distributed at places that will not interfere with other building operations as unloaded or yard and distributed as required, as the CONTRACTOR may elect.

Valves, valve boxes, jointing materials, meter box covers, castings, fabricated metal, reinforced steel, etc. shall be yarded or housed in some convenient location by the CONTRACTOR and delivered on the ground, as required.

The cost of all hauling, handling, and storage shall be included in the price bid for equipment and materials in place.

The KYTC takes no risk or responsibility for fire, theft, flood, or damage until after the final acceptance of the work.

6. GENERAL SPECIFICATIONS ON MATERIALS:

All materials specified or planned shall be furnished by the Contractor. Approval of manufacturer's plans of materials and equipment shall not mean final acceptance but they shall be subject to inspection and test on delivery and installation.

The Contractor shall repair, replace or adjust any material or equipment found defective or not operating properly due to improper materials, workmanship and adjustment on his part, for a period of one (1) year after completion and acceptance of his work.

Inclusion of a certain make or type of material or equipment in the Contractor's bid or estimate shall not obligate the KYTC to accept such materials or equipment if it does not meet with requirements of these Plans and Specifications.

The burden of proof of equal quality or service shall be on the Contractor. Proof of

inequality is not implied by these specifications and is not a burden of the Engineer. His duty shall be to properly weigh the proven facts of equality in fairness to all parties involved.

7. TESTING OF WATERLINES:

On all projects involving the installation of water pipeline, the finished work shall comply with the provisions listed below, or similar requirements which will insure equal or better results.

.a. All water mains shall be given a hydrostatic test to 150 psi (or 1.5 times the service pressure, contact the Relocation Engineer), under which leakage shall not exceed the limits established in Section 4 of AWWA Standard Specifications C600.

.b. Where practicable, pipelines shall be tested between line valves or plugs in lengths of not more than 3,000 feet.

.c. Duration of test shall be not less than two hours.

.d. Where leaks are evident on the surface where joints are covered, the joints shall be re-caulked, re-poured, bolts retightened or re-laid, and leakage minimized regardless of total leakage as shown by test.

.e. All appurtenances shall be connected and made ready for ultimate service before the pressure test. Specifically, all meter boxes, yokes, and appurtenances (with sole exception of meter unit) shall be installed prior to the pressure test. Additionally, all meter yokes shall be "flowed" to insure that the corp stop has been connected and is in the open position. This flow shall be witnessed by the ENGINEER'S Representative and documented on the project mapping with a date when the flow was observed. All pipe, fittings and other materials found to be defective under test shall be removed and replaced.

.f. Lines which fail to meet tests shall be repaired or replaced and retested as necessary until test requirements are complied with.

.g. The CONTRACTOR shall furnish a recording gauge and clock used during leakage test and recording pressure charts during duration of test. Recording pressure charts shall remain the property of the ENGINEER at conclusion of test. The new potable waterlines shall not be placed in service, either temporarily or permanently, until they have been thoroughly disinfected in accordance with the following requirements and to the satisfaction of the ENGINEER.

.h. The CONTRACTOR, in consultation with the KYTC Resident Engineer and the part-time Relocation Observer or Engineer, shall keep, maintain, and update, a color coded project map which shows what lines have been pressure tested, date of test, and result. See below for additional requirements.

After successful pressure testing, a solution of hypochlorite using HTH, or equal, shall be introduced into the section of the line being disinfected sufficient to insure a chlorine dosage of at least 50 ppm in the main. While the solution is being applied the water should be allowed to escape at the ends of the line until tests indicate that a dosage of at least 50 ppm has been obtained throughout the pipe. Open and close all valves and cocks while chlorinating agent is in the piping system. The Chlorinated water shall be allowed to remain in the pipe for 24 hours, after which a residual of at least 25 ppm shall be obtained. The disinfection shall be repeated until 25 ppm is obtained, after which time the main shall be thoroughly flushed until the residual chlorine content is not greater than 1.0 ppm.

Following disinfection of the line, bacteriological samples shall be collected and analyzed in accordance with the requirements of Kentucky Department of Natural Resources and Environmental Protection. When the samples have been approved, the new line then may be connected to the system. On the map noted above, the Contractor, in consultant with the Resident Engineer, shall keep, maintain, and update the color coded map showing dates samples were collected, and dates where samples were approved.

8. TESTING OF GAS LINES:

On all projects involving the installation of gas pipelines the finished work shall comply with the provisions listed below, or similar requirements which will insure equal or better results.

..a. All Polyethylene (PE) gas mains shall be given a pressure test to 100 psi or 150% the design pressure, whichever is greater. All Steel gas mains shall be tested at a pressure that produces a hoop stress of 20% of Specified Minimum Yield Strength (SMYS).

..b. Where practicable, gas pipelines shall be tested between line valves or plugs in lengths of not more than 1500 feet. All line shall be walked during the test to fully discover any potential leaks or hazardous conditions.

..c. Duration of test shall be determined by volumetric content of test section and instrumentation in order to ensure discovery of all potentially hazardous leaks per TITLE 49, CFR 192.507 for steel pipe and 192.513 for plastic pipe.

..d. Where leaks are evident they shall be repaired immediately.

..e. All pipe, fittings and other materials found to be defective under test shall be removed and replaced.

..f. Lines which fail to meet tests shall be repaired and retested as necessary until test requirements are complied with.

..g. The CONTRACTOR shall furnish all necessary equipment, including recording gauge

and clock used during leakage test and recording pressure charts during duration of test. Recording pressure charts shall remain the property of the ENGINEER at conclusion of all tests.

..h. All gas lines shall be pressure tested in strict accordance with U.S.D.O.T. 49 CFR 192.507 for steel lines and 192.513-C for plastic lines. The Contractor may test the steel line prior to installation and connection with the existing steel line, but after connection the entire system shall be tested. For PE piping segments the entire system (after connection) shall be pressure tested to 100 psi (or three (3) times design pressure) as per 192.513-C. A recording pressure gauge shall be used and pressure charts shall be furnished to the Owner at the completion of the testing and shall be retained for permanent record.

9. WELD TESTING OF STEEL GAS LINES:

100% of all welds for steel gas pipe shall be non-destructively tested in accordance with U.S.D.O.T. 49 CFR 192.243 including the tie-ins. A copy of all test reports shall be provided to the Relocation Engineer or to the appropriate City of Hazard personnel. All welding shall meet all requirements outlined in U.S.D.O.T. 49 CFR 192, Subpart E including qualification of welders.

10. OPERATOR QUALIFICATION PLAN (OQP):

Before any work is completed on the Gas portion of this utility relocation the Contractor shall submit and obtain approval of his/her OQP from the appropriate City of Hazard personnel in accordance w/ U.S.D.O.T. 49 CFR 192, Subpart N.

11. LAYING PIPE IN COMMON DITCH:

A. General

1. Water & Gas Pipelines laid in same trench shall, in all cases, be laid on original earth, regardless of divergence in their elevations. Pipe shall never be laid in backfill or one above the other unless specifically shown otherwise on the drawings.

12. PRESSURE PIPE INSTALLATION (Water):

A. General

1. Pipe shall be handled with such care as necessary to prevent damage during installation. The interior of the pipe shall be kept clean and the pipe shall be installed to the lines and grades shown on the Drawings. Whenever pipe laying is stopped, the end of the pipe shall be securely plugged or capped.

2. Fittings shall be firmly blocked to original earth or rock to prevent water pressure from springing pipe sideward or upward. Concrete or other blocking material shall be placed such that it does not cover the pipe joints, nuts, and bolts. The means to do this shall be thoroughly wrapping the fitting with suitable plastic to the Engineer's satisfaction.
3. Pipes shall be free of all structures other than those planned. Openings and joints to concrete walls shall be constructed as shown on the Drawings.
4. Pressure pipe, 4 inch diameter or larger, entering a structure below original earth level, unsupported by original earth for a distance of more than 3 feet shall be supported by Class "3000" concrete, where depth of such support does not exceed 3 feet, and by Class "4000" concrete piers each 6 feet, where depth exceeds 3 feet. Class "3000" concrete required will be included in the payment for furnishing and laying the particular pipe, in order to discourage excessive excavation outside the limits of structures. Pipes entering structures shall have flexible joint within 18 inches of exterior of structure, and also from point of leaving concrete support to original earth or crushed stone bedding.

B. Pressure Pipe Laying

1. Pressure pipe shall first be thoroughly cleaned at joints, then joined according to instructions and with tools recommended by the manufacturer. A copy of such instructions shall be available at all times at the site of the work.
2. All pipes must be forced and held together, or "homed" at the joints, before sealing or bolting. Pipe must be aligned as each joint is placed, so as to obtain straight lines and grades. Curves and changes in grades shall be laid in such a manner that maximum allowable joint deflection is not exceeded.
3. Trench excavation for pipe laying must be of sufficient width to allow the proper jointing and alignment of the pipe. Trenches in earth or rock shall be dug deep enough to insure 36" minimum cover over top of the pipe, unless otherwise indicated on the Drawings.
4. Trench line stations shall be set ahead of the trenching at least each 100 feet of pipeline. Trenches shall be dug true to alignment of stakes. Alignment of trenches or pipes in trench must not be changed to pass around obstacles such as poles, fences and other evident obstructions without the approval of the Engineer. Lines will be laid out to avoid obstacles as far as possible, consistent with maintenance of alignment necessary to finding the pipeline in the future and avoiding obstruction of future utilities and structures.

5. Cut pieces of pressure pipe 18" or more in length may be used in fitting to the specials and valves and fitting changes in grade and alignment. Cut ends shall be even enough to make first class joints.

C. Testing Pressure Pipe

1. The Contractor shall furnish all necessary equipment for pressure testing.
2. Inspection of pipe laying shall in no way relieve the Contractor of the responsibility for passing tests, stopping leakage, or correcting poor workmanship.
3. The Contractor shall furnish meter or suction tank, pipe test plugs and bypassing piping, and make all connections for conducting the above tests. The pumping equipment used shall be compressed air, centrifugal pump, or other pumping equipment which will not place shock pressures on the pipeline. Power plunger pumps will not be permitted for use on closed pipe system for any purpose.
4. The pipe shall be tested with water to the pressure class of the pipe for 24 hours with pressure recorder. The drop in pressure shall not exceed 5% of the test pressure.

MATERIAL & BID ITEMS:

13. CL250 PVC PIPE AND FITTINGS:

All pipe designated as PVC shall be PVC type pressure pipe designed ASTM Class 250 of the Integral Bell Joint type. The pipe shall conform to ASTM 2241 for Standard Dimension Ratios, SDR 17 for pressure characteristics. The pipe shall be extruded from clean, virgin, approved class 12454-A PVC compound conforming to ASTM resin Specification D1784. Rubber rings shall conform to ASTM D 1869. This pipe shall be National Pipe Company, North American Pipe Company, JM Pipe, or Diamond Plastics pipe PVC Pressure pipe or approved equal. Laying radius of pipe shall in all cases be equal to, or greater than, that listed by the manufacturer of the pipe. All tees, elbows, and bends shall be Mechanical Joint unless noted on the Plans. All mechanical joint fittings shall be equipped with grip rings. All pipe and fittings shall be inspected at the factory and on the job site. Testing of PVC pipe and fittings shall be accomplished in conformance with the latest revision of ASTM D3034, ASTM F679 T-1, ASTM D2444, ASTM 2412, and ASTM D2152. The manufacturer shall submit five (5) copies of certification of test for each lot of material represented by shipment to the job site. The pipe shall be homogeneous throughout and free from cracks, holes, foreign inclusions or other defects. The pipe shall be as uniform in color as commercially practical. PVC pipe shall have a ring painted around spigot ends in such a manner as to allow field checking of setting depth of pipe in the socket. Pipe must be delivered to job site by means which will adequately support it, and not subject it to undue stresses. In particular, the load shall be so supported that the bottom rows of pipe are not damaged by crushing. Pipe shall be unloaded carefully and strung or stored as close to the final point of placement as is practical. Pipe shall not be stored outside where subject to sunlight. Jointing of PVC pipe shall be by a natural rubber ring inserted into the belled end of the pipe or double hub joints. Solvent weld joints are not acceptable. The PVC pipe manufacturer shall provide special fittings, acceptable to the Engineer to make watertight connections to manholes and for all service connections. The pipe shall be equal in all respects to that manufactured by CertainTeed Corporation, National Pipe Company, North American Pipe Company, JM Pipe, or Diamond Plastics pipe. All PVC shall be marked w/ tape as shown on the drawings.

14. DUCTILE IRON PIPE FOR WATER:

All pipe designated as ductile iron shall be of Grade 60-42-10 material meeting AWWA C151 Minimum physical properties. Thickness of the pipe shall be determined in accordance with ANSI/AWWA C150/A21.50 and shall be Type 4 Bedding Condition except in high traffic areas where Type 5 Bedding shall be used; all pipe 16" and smaller shall be Pressure Class 350 with the exception of 4" and 3" which shall be thickness Class 51. All piping used for spool pieces or for use in vaults shall be Thickness Class 53 minimum. Joints shall meet the requirements of AWWA C111 for Fastite Joint Pipe ANSI/AWWA

C151.51 and Mechanical Joint ANSI/AWWA C111/A21.11. Pipe shall be equal to that manufactured by the U. S. Pipe Company or approved equal. All tees, elbows, and bends shall be Mechanical Joint. All mechanical joint fittings shall be equipped with grip rings, or in the case of 16" pipe retainer glands. The exterior of the pipe shall be furnished with an asphaltic coating. Installation shall be as recommended by the manufacturer in their printed manual. Pulling devices and tie-in devices shall be that normally furnished by the manufacturer for this type of installation. Where ductile iron pipe is being used to cross areas which may be contaminated with gasoline or gasoline type substances (these areas clearly shown on the plan), the Contractor shall use gasket material recommended by the pipe manufacturer as being impervious or highly resistive to degradation from gasoline type chemicals. Nitrile Rubber Gaskets are satisfactory. Pipe which is noted as D.I.M.J. shall be ductile iron, mechanical joint. Where the Plans designate 3" ductile iron pipe, except where 3" ductile iron pipe is designated within the Pay Limits of a special vault or Booster or Pressure Stations, may substitute, at his convenience, 4" ductile iron pipe. The Unit Price shall be the same regardless. Should the Contractor elect to use 4" D.I. vs 3" D.I., any associated valve or fitting shall be paid at the 3" Unit Price

15. HORIZONTAL DIRECTIONAL DRILLING (HDD):

All areas designated on the Plans as Horizontal Directional Drilling (HDD) shall be completed using equipment designed for the size and type of pipe noted. All HDD shall be completed using PE 4710 high density polyethylene, DR 9, having a minimum pressure rating of 252 psi, except where noted otherwise for the steel gas line liner pipe which shall use steel, ¼" wall pipe., **The Unit Price of HDD includes the cost of the pipe itself**, and all else required for a complete and finished installation. The Contractor shall have experience in this type of work (HDD) suitable to the Utility Relo. Engineer.

16. LINER PIPE:

Liner Pipe (also known as encasement pipe) of the size and location, as shown on the Plans, shall be installed. Liner Pipe is the term longtime used by the Utility Relocation Engineer, and shall in all cases be used synonymously with "Encasement Pipe". The pipe shall be a high quality Wrought Steel Schedule and weights as listed below, with the same properties as determined by the American National Standard for welded and seamless wrought steel pipe. Used pipe will not be accepted unless it is delivered to the job site in as-new condition as determined by the Engineer. The unit price for liner pipe includes the cost of purchasing and installing the casing spacers as detailed on the drawings using Phillips Engineering Model PE-MS 500 plastic casing insulators (or approved equal) for single carrier pipe installations for water. For Water, all casing spacers shall be spaced at a maximum of 8' on center and at each end approximately 1'-0" from the end (also see requirements under "gas" portion of this specification). Unit price for liner pipe shall also include the placement of casing end seals. End seals may be pre-manufactured models correctly sized or "End Seal Tape" may be used. The spacing of the casing spacers shall be equal to the casing spacer spacing as shown within the manufacturer's submittals or as

directed by the Engineer, but in no case shall the spacing exceed 8'-0" on center for water (also see gas portion). The schedule below is adequate for both Water and Gas installations.

Liner Pipe Table

<u>Pipe Size</u>	<u>Sch. #</u>	<u>Wall (In.)</u>	<u>#/Foot</u>
4"	40 (Std.)	.237	10.8
6"	40 (Std.)	.250	19.0
8"	40 (Std.)	.250	28.6
10"	40 (Std.)	.250	40.5
12"	(Std.)	.250	49.6
14"	30 (Std.)	.250	54.6
16"	30 (Std.)	.383	62.6
18"	(Std.)	.383	70.6
20"	20 (Std.)	.383	78.6
24"	20 (Std.)	.383	94.6
30"	20 (Std.)	.383	

The Liner Pipe shall be either bored & jacked, installed by HDD methods with appropriate equipment, or Open Cut as designated on the Plans. The casing pipe sizes shown on the plans are believed to be adequately sized to allow the placement of the carrier pipe/s and associated spacers, but this must be confirmed by the Contractor. Use larger casing (liner) pipe if required by your combination of carrier pipe/casing spacers than shown at no extra cost to the KYTC.

17. MARKING TAPES:

Marking tapes shall be used for all water lines larger than 1" diameter. All tapes shall be of the "warning" type and detectability is not a requirement. Detectability shall be provided with the installation of #12 AWG copper wire (minimum) as detailed on the drawings. All tapes shall be suitable for underground installation. All tapes shall be a minimum of 6" wide, have a minimum thickness of 5 mils, shall be polyethylene, and shall be marked as follows:

WATER- Blue color with "Buried Waterline Below" imprinted;

GAS - Yellow color with "Buried Gas Line Below" imprinted;

18. CRUSHED STONE MATERIALS:

All Crushed Stone materials shall conform to the applicable sections of Standard Specifications for Road & Bridge Construction, KYTC. The Crushed Stone Bid Item shall include all required materials ranging from DGA to #2 stone as indicated in the above

specifications. The Engineer will only pay for crushed stone where original delivery tickets are provided for his records. If used, Class II & Class III Stone is Channel Lining, Class II & Class III, as designated in the above specifications. **Contractor should specifically note that crushed stone for backfilling and creating a pipe base is included in his unit price for that piping.**

19. CONCRETE WORK:

(a) Proportioning Mix:

Concrete is to be proportioned in three classes according to use as follows:

Class "A" for reinforced concrete structures, surface courses of highway, and street paving. This concrete type is noted as "**Detail Concrete**" on the plans.

Class "B" for reinforced concrete structures, and special anchors or supports. This concrete type is for use where significant forming and/or reinforcement is required. Batching and strength shall match Class A concrete.

Class "C" for interceptor structures, curbs, gutters, driveways, sidewalks, base courses for highway and street paving, thrust blocks, creek crossings, and valve pads. This concrete type is noted as "**General Concrete**" on the plans and on the Bid Form.

Class "A" concrete is to be proportioned one 94 lb. sack of Portland Cement, 195 lbs. of sand, 270 lbs. of coarse aggregate, and no admixture. These proportions may be varied by the Engineer after the materials supplied have been tested and proportions for the greatest density and workability determined, provided that no more than 7.25 nor less than 6.50 bags of cement per cubic yard of concrete will be required. Class "A" concrete shall have a minimum compressive strength of 4,000 lbs. per square inch in 28 days. Where instructed by the Engineer, the Contractor shall place reinforcement as outlined in special notes of these specifications or as detailed on the drawings.

Class "C" concrete shall have a minimum compressive strength of 3,000 lbs. per square inch and shall contain not less than 5.5 sacks of cement per cubic yard of concrete. The relative amounts of fine and admixture will not be required.

The water used in mixing must be a minimum required for a plastic mix. No water will be permitted to be used for purpose of hastening mixing and reducing of tamping and vibration.

The water content allowed will be at all times subject to regulations by the Engineer. In the case of Class "A" concrete, not more than five and one-half gallons of water to the bag of cement will be allowed in mixing concrete (or proportionately less when slump is

about 4" and/or mix is wet), except in cases where, in the judgement of the Engineer, additional water is necessary to obtain proper results.

Batching equipment shall include scales for weighing contents of wheelbarrows and a device for accurately measuring water by the gallon, to be used for proportioning each batch.

In case of ready-mixed concrete, specifications for proportioning of mixes shall be the same, except that from the manufacturer's experience with his own aggregates, he shall vary proportions of sand and coarse aggregate for the greatest density and workability of mix. Prior to actual delivery of concrete, and at any change of proportioning, the manufacturer shall furnish a statement to the Engineer giving the proportion by weight (dry) of cement and of fine and coarse aggregates that will be used in the manufacture of each mix ordered. Proportions must be approved by the Engineer. Otherwise, proportioning of mix and batching plant shall be according to ASTM Designation C-94, latest revision, specifications for ready-mixed concrete.

(b) Forms:

Forms for concrete with exposed surfaces shall consist of dressed and sized lumber or metal and must match on edges sufficiently to prevent leakage of mortar. Forms shall be built to such accuracy and braced to such an extent that they shall not vary from true lines and surfaces where exposed more than 1/4" before pouring concrete, nor more than 3/8" after pouring. Angle strips (3/4" size) shall be placed in all exposed corners of forms.

(c) Steel Reinforcement Placing:

All such steel shall be delivered in new condition either clean or with only a slight coating of rust. If stored on the site it must be kept under shelter or supporting at least 12" above ground to prevent its becoming coated with dirt and when placed in forms it must be free from scale or dirt.

When placing in forms, steel must be tied together to form a rigid frame before pouring concrete and must be secured in the walls or slabs in such a manner as to insure its holding and position designed for it in the finished work by use of form stands, steel or concrete chairs or spacers. As a rule, steel bars must have a minimum covering of 2" when exposed to air and a minimum of 3" when exposed to earth" of concrete, unless otherwise noted on the plans. All splices shall be 24 diameters long and 1" between spliced bars.

(d) Mixing and Placing:

Concrete shall be thoroughly mixed at least two minutes after all materials, including water, are in the mixer drum having a capacity of at least one sack batch.

Concrete must be poured into forms slowly enough to permit thorough tamping and vibrating to eliminate any honeycombed surfaces.

Concrete pouring will not be permitted under conditions where there is danger of freezing or when materials are frozen. After pouring, concrete must be protected from freezing weather for at least 72 hours.

Ready-mixed concrete delivery facilities pledged to the concrete pour shall be approved by the Engineer before permission will be given to start the pour. The period between termination of placing by one truck and starting by the next shall not be longer than 10 minutes at temperatures above 70° F., nor longer than 20 minutes below 70° F. The concrete in a truck mixer or agitator must be totally discharged within 1-1/2 hours after the introduction of mixing water to the cement and aggregates. The mixing operation shall begin within 30 minutes after the cement has been intermingled with the aggregates. Otherwise, mixing, mixers, agitators, and inspection shall be according to ASTM Designation C-94, latest revision, specifications for ready-mixed concrete. Non-agitating trucks for hauling concrete from central mixing plant will not be accepted.

(e) Tempering:

All concrete must be kept wet or moist for a period of at least 48 hours after pouring in order to prevent too rapid drying out. In dry weather, wooden forms must be thoroughly wet before concrete is placed in them and must also be kept in this condition during the period above mentioned. Concrete must be covered and kept damp to protect it from the sun as soon as the surfaces are firm enough to allow the placing of such covering or protection.

TESTING CONCRETE

(a) Slump Test:

At least one slump test shall be made before first concrete pour, at the start of pouring any concrete and at each 5 cubic yards deposited during one operation. These shall be made from samples as those taken from cylinder tests and records of same kept therewith. Tests shall be made according to ASTM Designation C-143 and as required under ASTM Designation C-94, for ready-mixed concrete. Mix is designed for a slump test of 2" and not more than 4", except in cases where thin sections would indicate, in the opinion of the Engineer, that a wetter mix is more desirable. The **Contractor** shall furnish necessary equipment for the slump tests.

(b) Cylinder Test:

Cylinder tests will be taken on all important structures such as the storage tank or Booster Station. However, on line work for sewer and waterline requiring only small amounts of concrete per pour, the cylinder tests will be waived. However, should the Engineer have reason to doubt that the concrete being furnished meets the strength

requirements, he shall have the right to order cylinder tests according to the following specifications:

At the start of concreting or before, if practical, the **Contractor** shall make from a single batch a set of four (4) cylinders per ASTM Designation C-31. Two (2) shall be tested at 7 days and two (2) at 28 days per ASTM Designation C-39.

At each time when five or more cubic yards of concrete are placed during one operation and when the sum of smaller deposits of concrete equal 10 cubic yards since previous test and at any change in the mix four (4) cylinder tests will be required, two tested 7 days and the other two at 28 days per ASTM Designation C-39. In case of ready-mixed concrete, requirement for testing of ASTM Designation C-94 and C-172 shall be added. Class "A" concrete sampled shall show a compressive strength of not less than 3,000 lbs. per square inch in 7 days and 4,000 lbs. per square inch in 28 days. Class "C" concrete shall have a compressive strength of 3,000 lbs. per square inch in 28 days. Seven (7) day tests on Class "C" concrete shall have the same relation to 28 days requirements.

The **Contractor** shall furnish all equipment for sampling and curing on the job and shall bear the cost of laboratory curing and testing.

20. PAVEMENT REPLACEMENT:

All replacement pavement shall conform to the applicable section of Specifications for Road and Bridge Construction, Kentucky Transportation Cabinet. All areas which are to be repaved shall first be sawn to full depth. Pavement edges shall not be broken or ripped by backhoe or other equipment. Paving quantities as shown on the Bid Form are calculated for crossings and/or areas which are designed as constructing under pavement and are not anticipated to be part of the Roadway Construction. Bid quantities (if any Bid quantities are given) do not include pavement repair on the edge of roads damaged by your construction activities. Certain areas of the project may require that unavoidable damage occurs along roadway edges. If this is the case, at the discretion of the KYTC Engineer, payment may be made for pavement replacement at your bid unit price (or a price to be agreed on if a Bid Price does not exist). However, should pavement damage be caused by your willful disregard of reasonable construction technique and room existed for pipeline (or other items) placement without damage to the pavement, this **pavement shall be repaired to original or better condition at your sole expense**. The decision of the KYTC Engineer is final.

21. DRAIN CROSSINGS (if used):

- 1) The following Specification will be followed, with no exceptions, to protect the aquatic life within the waters of the Commonwealth.

- 2) When making a drain crossing it shall be completely dry, with no visible flow. The drain shall be excavated to grade, pipe installed, backfill installed, backfill compacted by tread or other methods, to density satisfactory to the Engineer, and cap installed if appropriate. The drain shall, in all cases, whether caused by your work in, nearby, parallel, or upstream, remain clear of sediment.
- 3) The required structures for silt control, as determined by the Engineer, shall be put in place to satisfy Paragraph 2 of this Section.

After this, if required by drain bottom conditions (see Paragraph 4 below) apply drain crossing concrete. After Application of concrete, apply re-vegetation measures to the drain crossing (see other sections of these specifications). If you do not have the ability to complete these operations within a twenty-four (24) hour period, **DO NOT BID THIS PROJECT.**

- 4) All drain crossings as noted on plans shall have a minimum cover of 36" as measured from the original channel floor. Bedding shall be the same as that for "open areas" shown on the "Standard" sheet with the following exceptions:
 - A. Begin at 6" above pipe and refill with removed material.
 - B. 6" from orig. channel floor use Class "C" concrete flush to top of rock.

If channel floor is not of a rocky nature, then this requirement may be waived at the discretion of the Engineer.

22. SURVEY REQUIREMENTS:

The Contractor is responsible for having the proper equipment and personnel adequately skilled and trained to perform all survey requirements. The Contractor is responsible for re-establishing, and establishing, all noted elevations. The Contractor is also responsible for establishing all horizontal locations throughout the project. The Contractor is responsible for comparison of horizontal and vertical location with that planned by running from established bench marks. The Contractor shall report any difference found between that planned and his established horizontal and vertical location to the Utility Reloc. Engineer. The Contractor is responsible for determining any gross grade conflicts before he begins any line segment.

23. VALVES < 14" WATER:

All valves must be of ductile iron with bronze mountings, unless otherwise specified. Only makers of well-known and approved standings who have been making similar devices for a period of at least ten (10) years, prior to the bid date, will be considered. Also, maker shall be prepared to furnish through the bidder, within one (1) week after award is made,

complete catalogues or other descriptive matter giving complete details and dimensions of valves they proposed to furnish.

All valves shall be provided with suitable operating devices and adapted for operation in the position in which they are shown on the plans. All screw operated valves shall open by turning to the left.

All valves shall have mechanical joints both ends (unless noted on the Plans) and shall conform to A.W.W.A Specifications D-150, N.R.S. complying to A.W.W.A. C222 and ANSI A21.11.

All 4" through 12" Gate valves shall be resilient seat Gate valves, 250 psi max working pressure, 400 psi test pressure, Mueller A-2370-20, or approved equal. 3" and smaller Gate valves shall be double disc, parallel seat, bronze faces and disc rings with wedging mechanism simple and direct, Mueller A-2380-20, or approved equal. 1", 1-1/4", and 1-1/2" Gate valves shall be Mueller H-10914, bronze Gate valve with solid wedge and F.I.P. thread with appropriate fittings and hand wheel. All valves shall conform to the latest revision of "Specifications for Gate Valves for Ordinary Water Works Service," adopted by A.W.W.A.

24. VALVE BOXES:

Valve Boxes for 1" through eight (8") inch valves shall be telescope type with screw top, of extension length suitable for the cover/s noted on the plans. Ten (10") inch and twelve (12") inch valve boxes shall have an extension length ranging from eighteen (18") inches to twenty-four (24") inches. These minimum valve box lengths redefine depth of cover over pipe at valve locations. These requirements shall be maintained. Pieces of scrap PVC or ductile iron pipe with lid installed **shall not** be acceptable. Valve boxes shall be Tyler 461-S for ten (10") inch and twelve (12") inch valves, Tyler 562-S for one (1") inch through eight (8") inch valves and for 16" valves, the Sigma equivalent, or approved equal. All valve boxes shall have a minimum inside diameter of 4-1/4" for intersection with an arc base. **In high traffic areas only** all valve box lids shall be cast iron and manufactured by the same firm as the box and marked WATER. **In all other areas**, use plastic lid manufactured by Bingham & Taylor, NCUL5LWRDLT with locking tab, H20 load rated, or approved equal. All valve boxes shall have installed a valve box collar similar in all respects to the Cloud Company U-235 Valve Retainer Ring, alternate as shown on the detail sheet, or approved equal.

25. TYPE I, 3" BLOW-OFF:

Type I, 3" Blow-off's shall be self-draining, non-freeze, compression type with 2-1/4" main

valve opening. Inlet connection shall be 3" Mechanical Joint. Outlet size shall be 2-1/2" NST. Blow-offs shall have cast iron box, locking lid, and 3" Ductile Iron Riser Pipe. Principal operating parts shall be Brass and be removable from the blow-off for servicing without excavation. Blow-offs shall be set in four cubic feet min. of crushed stone to allow for proper drainage. The blow-off shall be M&H Style 333 Flush Type, or approved equal.

26. TYPE II, 3" BLOW-OFF:

Type II, 3" Blow-off's shall be self-draining, non-freeze, compression type with 2-1/4" main valve opening. Inlet connection shall be 3" Mechanical Joint. Outlet size shall be 2-1/2" NST. Blow-offs shall have 3" Ductile Iron Riser Pipe. Principal operating parts shall be Brass and be removable from the blow-off for servicing without excavation. Blow-offs shall be set in four cubic feet min. of crushed stone to allow for proper drainage. The blow-off shall be M&H Style 33 Post Type, the Kupferle equivalent, or approved equal. No pay difference for the blow-off will be made where incoming line is smaller than 3". Any valve used will be paid as a separate unit price item.

27. SMALL RIVER TEST STATION:

Small river test stations shall be installed where shown on the Drawings. Where undesignated test stations are shown, they shall be "small" river test stations. Detail for the small test station is shown on Sheet U3 of the Drawings. This river test station consists only of the materials herein specified. The mainline valve, 3/4" service line, and other items necessary are paid at your bid unit price for those items. The river test station consists of a standard meter box and cover, Mid-States Meter style provided by Oldcastle, MS183010, with a 30" depth and 18" inside diameter. Meter yoke to be Mueller 1404-2 with non-approved Dual Check Valve feature replaced with an extra angle valve, 7" to 9" riser height with valve for 5/8" x 3/4" meter unit. Unit shall be copper. Service saddle shall be bronze, Mueller Single Strap H-13000 Series. Corp Stop to be Muller 15008. All the above materials shall be as specified or approved equal. The meter shall be Badger RecordAll, Model No. M25, or approved equal, with bronze case, suitable for operation with remote meter reading system. Meter shall be designed to permit the use of both a straight reading, environmentally sealed local register and remote reading electronic register. The registration reading shall be US Gallons. The register shall not be in contact with the water being measured. The transmitter/register devices shall be designed to permit removal and exchange without the removal of the meter from the service installation or interruption of service water supply. The transmitter shall use the most current and up-to-date battery/s available from the manufacturer as a power source and said battery/s shall be guaranteed for a minimum of ten (10) years from initiation of operation. **The meter date of manufacture shall be no older than 6 (six) months prior to installation.** The transmitter shall be guaranteed for a minimum of twenty (20) years.

This unit shall be capable of providing optional leak detection when no two hour window of no usage within a 24 hour period is detected. It shall also be capable of tamper detection

such as a cut wire. The meters shall be equipped with optional data profiling capability. The meters and meter reading software shall be fully compatible with the existing City of Hazard meter reading software and hardware and shall be compatible with existing City of Hazard billing software. The Radio Read equipment shall be Badger Orion, or Engineer approved equal, equipped w/ radio read as previously specified, suitable for a maximum continuous flow rate of 25 gpm.

28. ALL WATER TIES COMPLETE:

The drawings indicate where tie-ins to existing waterlines are to be made, and should give an indication of the work and materials involved to make the same. These ties are listed below. Additionally listed is the plan sheet where these tie-ins occur.

WATER TIE #	DESCRIPTION	SHOWN ON
WA0+00,	10x8 Tapping Sleeve, 8" Tapping Vlv.	U2
WA 1+33,	8" Tie, Fittings as Req.	U2
WB0+00,	8" Tie, Fittings as Req., Provide Vlv. Restraint	U2
WB3+36	8" Tie, Fittings as Req.	U2
WC0+97	3" Tie, Fittings as Req.	

29. ALL GAS TIES COMPLETE:

The drawings indicate where tie-ins to existing gas lines are to be made, and should give an indication of the work and materials involved to make the same. These ties are listed below. Additionally listed is the plan sheet where these tie-ins occur.

GAS TIE #	DESCRIPTION	SHOWN ON
GA0+00,	6", Fittings as Req.	U2
GA3+27,	6" Tie, Fittings as Req.	U2
GB0+00,	2" Tie, Fittings as Req.,	U2
GB2+24	2" Tie, Fittings as Req.	U2

30. WATER TAPPING SLEEVES & TAPPING VALVES:

PVC pipe wet taps shall use "wrap around" sleeves which shall be stainless steel equipped with 304 L stainless steel outlet flange and shall be Mueller H-304SS, Cascade Extra Heavy, or Engineer's approval equal. All "wrap around" sleeves shall be rated for 250 psi working pressure. All "wrap around" sleeves shall be the longest laying length of any model and size offered by a particular manufacturer in their standard production line.

Regardless of pipe and sleeve type, Contractor shall carefully clean the entire pipe area where the sleeve will cover and an additional 6" on each side of the sleeve so to ensure a good seal for the sleeve.

All tapping valves 12" and smaller shall be Mueller T-2360, flanged x M.J., equipped with grip ring on the M.J. end, or Engineer's approval equal. All tapping valves 14" and larger shall be Mueller T-2361, flanged by M.J., equipped with grip ring on the M.J. end. All tapping valves shall have a rated working pressure of 250 psi minimum.

31. GEOTEXTILE

SCOPE

This work shall consist of furnishing and placing geotextile beneath ditches, around subsurface drains, and/or other applications as directed by the ENGINEER.

MATERIALS

Geotextile used on the project shall be a non-woven, polyester or polypropylene fabric meeting the following minimum physical properties.

Minimum Physical Properties Geotextile	
Property	Value
Burst Strength	300 psi
Grab Strength	160 lbs.
Permeability	3×10^{-1} cm/sec
Apparent Opening Size	0.21 - 0.15

The CONTRACTOR shall submit, for each roll of geotextile material delivered, a certification that the delivered products meet or exceed the values specified in this section, and all supporting data.

INSTALLATION

The surface to receive geotextile and aggregate shall be prepared to a relatively smooth condition free of obstructions, debris, or sharp objects that may puncture the fabric. The fabric shall be placed with long dimension parallel to the flow line and shall be laid smooth and free of tension, stress, folds, wrinkles, or creases. If more than one strip is necessary, the strips shall overlap (longitudinally) a minimum of 24 inches. Transverse overlaps

shall be a minimum of 18 inches and shall be placed so the upstream strip overlaps the downstream strip. Fastener pins shall be installed through the midpoint of the lap and at any other locations as necessary to prevent slippage of the geotextile.

The geotextile shall not be exposed to sunlight for a period greater than two weeks. If the fabric is damaged during construction, the torn or punctured section shall be repaired by placing a piece of fabric that is large enough to cover the damaged area and meet the overlap requirement.

The geotextile shall be protected from damage due to the placement of the channel lining by limiting the height of drop of the material to no greater than three (3) feet, or by placing a cushioning layer of sand on top of the fabric before dumping the material, at the CONTRACTOR'S option. Fabric shall not be placed until it can be covered with stone promptly to avoid damage from water, wind, and deterioration from undue exposure. The CONTRACTOR shall demonstrate that the placement technique will not damage the fabric.

MEASUREMENT AND PAYMENT

No payment will be made for the geotextile as it considered incidental to all other items of work.

32. LINE & VALVE MARKERS:

At the locations noted on the drawings, line and valve markers shall be placed for water and gas facilities. The markers shall be Carsonite Composites CRM3-066-08 (blue) with white graphics for water, CRM3-066-02 (yellow) with black graphics for gas, or Engineer approved equal. All markers shall be equipped with optional anchor barb.

33. SERVICE OR METER RETIES (3/4" & 1" SERVICE CONNECTION):

At the locations indicated on the Plans, and other locations as may become apparent, provide 3/4" and 1" re-connection of existing 3/4" or 1" water meters. Replacement of the meter, meter box, or reading equipment is not included in this bid item. KYTC uses a Bid Item entitled " W Service Short Side (3/4" or 1")" for this same work. As indicated on the detail given in the plans, when using ductile iron pipe it shall be directly tapped for the appropriate size using AWWA taper. Following this use a Mueller B-25008 ball valve in the tap. This ball valve is equipped with a compression fitting on the discharge side. As indicated on the drawing, thoroughly compact the DGA (if used vs flowable fill) under the tap so no undue stress is placed upon the tap. Service tubing, concrete, pavement and other items necessary to complete this tie will be paid at your bid unit price.

34. REMOVE/RELOCATE WATER METERS:

Sheets U2 of the plans shows one (1) water meter which may have to be removed and then relocated in a nearby location. If this is required, this Bid Item pays for the work associated with this effort.

35. MAG METERS:

Electromagnetic meters shall be installed where indicated on the Plans. Mag Meters are shown on the Bid Form as, for example, 3 in 4. What this means is the use of a 3" mag meter placed within 4" piping. The mag meter sizes used are 6" with pipe size of 8", and 4" with pipe size of 8". The Bid Unit Cost shall include the concentric reducers, spool pieces, and other required devices, as indicated on the Drawings. The Bid Unit Price for the mag meters shall also include the exterior enclosure and mounting as detailed on the Plans, and all attendant conduit. Also included in the mag meter placement is the 30" dia. plastic vault for the 6" meter, 24" dia. plastic vault for the 4" meter, 36"/24" extension ring (Ford or equal), and standard meter cover with frame for 20" tile size or the traffic capable vault as detailed. The meter cover for the plastic box shall be the same as that previously specified for ARV covers. The 36"/24" plastic vault shall have the same material properties as the Mid-States Meter Box, Oldcastle.

The mag meter shall be a Badger M-5000 with battery power, or Engineer approved equal. Where the Drawings show a circled "P" this indicates that an exterior enclosure mounting will be provided with attendant battery power and use of the Badger M-5000. As indicated on the Drawings the meter shall be equipped with a junction box for remote amplifier. All mag meters shall be submersible NEMA 6P rated. All mag meters shall be equipped with stainless steel grounding rings. The meter shall be capable of plus or minus 0.50% accuracy independent of fluid viscosity, density, and temperature. The mag meter shall be fully capable of communication with Badger Orion Radio Read Equipment. The remote amplifier shall be installed in a fiberglass 4X lockable enclosure for exterior mountings. This box shall be Pentair Polypro, Type 4X with optional Stainless Steel latches (pad-lockable).

36. PE GAS PIPE AND FITTINGS:

PE Gas pipe and fittings shall be polyethylene PE 2406 (Yellow) SDR 11. The pipe shall conform to ASTM D 1248, and ASTM D 3350 for a PE 2406 material. All pipe and fittings shall meet requirements outlined in currently approved ASTM D 2513 specifications, ASTM D 3261 specification, and Department of Transportation Title 49, Part 192. 90 degree elbows to be socket type. All pipe and fittings to be Drisco Pipe 6500 (PE 2406), or approved equal. All PE pipe shall be fused in strict accordance with manufacturers instructions. Contractor is responsible for having personnel adequately trained for this installation.

37. PE GAS SERVICE TUBING:

All gas service tubing to meet ASTM D2513 and SDR 11, be of Yellow P.E. 2406 material. All service line to be Drisco Pipe 6500, or approved equal.

38. 6" STEEL GAS PIPING, FITTINGS, VENTS, LINER PIPE, CP:

Furnish all labor, materials, equipment and incidentals necessary to install and test pipe and fittings as shown on the Drawings and required by the Specifications. Piping shall be located substantially as shown. The ENGINEER reserves the right to make such modifications in locations as may be found desirable to avoid interference between pipes or for other reasons. Pipe fitting notation is for the CONTRACTOR's convenience and does not relieve him from laying and jointing different or additional items where required without additional compensation. Wherever the word pipe or piping is used it shall mean pipe and fittings unless otherwise noted.

Piping shall be installed substantially as shown on the drawings so as to form a complete smooth flow path and workable system. The piping and materials specified herein are intended to be standard types of pipe for use in transporting the fluids as indicated on the Drawings. The pipe and fittings shall be designed, constructed, and installed in accordance with the best practices and methods and the manufacturer's recommendations.

All pipe, valves, and fittings under this section shall be furnished by manufacturers who are fully experienced, qualified, and regularly engaged in the manufacture of the materials to be furnished. Installation of natural gas system components shall be performed by skilled workers experienced in the installation of gas systems employed by and under direct supervision of a licensed utility contractor. Foremen shall meet requirements as prescribed by OSHA requirements as a competent person. Each welder shall be qualified in accordance with API Standard 1104 or 49 CFR 192.227 and provide certification to the Engineer of currency for the size and pressure rating of the pipe to be welded. The Contractor shall certify compliance with drug testing requirements of 49 CFR, Section 199. All jointers shall be competent and experienced and shall have a complete working knowledge of joining equipment and the preliminaries necessary for making ready to joint. They shall also be familiar with the precautions necessary to insure good results with a maximum of safety. Jointers shall be qualified by the manufacturer and a copy of this certification shall be furnished to the Engineer before the work on the project begins. Pre-qualification tests shall be required if there is some specific reason to question a jointers ability or if the jointer is not engaged in a given process of joining for a period of six months or more.

The manufacturer shall inspect all pipe joints for out-of-roundness and pipe ends for squareness. The manufacturer shall furnish to the ENGINEER a notarized affidavit stating all pipe meets the requirements of applicable ASTM Specifications, these Specifications, and the joint design with respect to square ends and out-of-round joint surfaces.

STEEL GAS PIPE- Pipe shall be black, plain end, seamless or electric welded 6" steel pipe, furnished in double random mill length. Pipe shall be nominal 6" pipe with outside diameter of 6.625", API 5L X-42 Grade steel and shall have a 0.188 wall thickness. Pipe shall be coated with 3M Scotchkote 6233 Fusion Bonded Epoxy, or engineered approved equal. The coating shall be one part, heat curable, thermo setting epoxy coating powder designed for corrosion protection of pipe. The coating shall be factory installed or installed by competent personnel in strict compliance with all manufacturer requirements and specifications. Pipe shall be marked in conformance with API Specification 5L, including the manufacturer's name, grade, and other required marking. Each length of pipe shall be hydro statically tested at the mill per API Specification 5L. The CONTRACTOR shall provide the ENGINEER with all mill test results. Pipe shall be provided with 2" cutback of coating for field welding.

STEEL GAS FITTINGS- All welded fittings shall be Schedule 40, Standard Strength, unless specifically noted otherwise on the Drawings. All fittings shall conform to ANSI B-16.9, and shall be manufactured in the United States of America. All fittings shall be coated using the same system as that specified for pipe. Cutback shall be 2".

JOINT PROTECTION- At all welded joints and cut back locations, and any other areas which is to be installed underground and is uncoated, the following protection system shall be used: Protac 7000, two part coating mixture shall be used. All steps and procedures as recommended by the manufacturer shall be followed. At a minimum, the CONTRACTOR shall follow the following steps:

- a. X-Ray
- b. Sandblast to near white or extra heavy brush to near white
- c. Clean with Xylene solution
- d. Blend 2 parts
- e. Brush on per manufacturer's instructions.

GAS LINE VENTS- Vent pipes for all liner pipes whether bored or open cut shall be installed as shown on the Drawings. Pipe for vents shall conform to the requirements of "Steel Gas Pipe" as previously specified. All underground vent piping shall be coated as previously specified. All above ground vent pipe shall be painted as hereinafter specified. All vent pipes shall be 2" nominal diameter Schedule 40 pipe. The vent shall be equipped with a 180 degree return welded 4' above finished grade as detailed on the Drawings. This return shall be equipped with a stainless steel inset screen inside the outlet end of the return.

GAS LINE LINER PIPE- All liner pipe used for gas installations shall be new welded wrought steel, of wall thickness and schedule as noted on the Drawings. All liner pipe shall be equipped with casing insulators spaced at a maximum of 5' and at each end. These casing insulators shall be manufactured by CCI Pipeline Systems, Model CSP, or models

offered by PSI Products, Inc., CRC, or engineer approved equal. All liner pipes shall be equipped with end seals on both ends. These end seals shall be manufactured by CCI Model ESW, models offered by Rachem, CRC, T.D. Williamson, Linkseal, or engineered approved equal.

MAGNESIUM ANODES- Each anode shall be installed as detailed on the Drawings. Each magnesium anode shall be a pre packaged 17 lb. Dow "Galvomag" Magnesium Anode, or engineered approved equal. Each anode shall be provided with a 10' minimum length copper lead which shall be cadwelded to appurtenances as detailed on the Plans. As shown on the Plans, each anode shall be installed a minimum of 36" vertically below the bottom of the new proposed gas line and a minimum of 12" away from the outside edge of the new gas line horizontally. Additionally, the lead shall be looped around the pipe as indicated on the Drawings for additional stress relief. The cost for anodes is included in the unit cost of steel gas line.

CATHODIC PROTECTION TEST STATION- The Drawings detail the locations where cathodic protection test stations shall be installed. The Drawings also detail the means and methods of connecting the cathodic protection test station to various appurtenances. The test station shall be a Cott Big Fink Cathodic Protection Test Station, with five (5) terminals. The test station shall come complete with a 6' length, 2" diameter yellow Cottpipe. All leads shall be color coded, with wires of the same color being from/to a common point. The Cottpipe (or equal) shall be equipped with anti-pullout device.

39. G MAIN ABANDON:

The gas lines shown on the plan shall be formally abandoned by thoroughly purging the existing lines with nitrogen and then capping or plugging the lines.

40. POLYETHYLENE GAS VALVE:

Gas valve to be constructed of Marlex TR 418 material. Valve to be Rockwell Polyvalve Ball Valve, #82211, or approved equal. Valve Boxes for 1-1/4" to ten (10") inch valves shall be telescope type with screw top, of length for thirty-three (33") inch to forty-two (42") inch pipe cover over the top of the pipe. They shall have a minimum inside diameter of 4-1/4" for intersection with an arc base. Valve boxes shall be Mueller No. H-10366 as manufactured by the Mueller Co., Decatur, Ill., or approved equal. Valve box lids shall be Mueller H-10369 or approved equal and marked "**GAS**". All valve boxes not installed in pavement (bituminous or concrete) shall have installed a valve box collar similar in all respects to the Cloud Company U-235 Valve Retainer Ring, alternate as shown on the detail sheet, or approved equal. All gas valve boxes shall rest wholly on a bed of crushed stone as detailed on the drawings and shall not rest on the valve bonnet.

41. ONE YEAR GUARANTEE:

The Contractor, and through him each subcontractor, in accepting the Contract for this construction, or respective portions of the construction covered by these Plans and Specifications, does hereby agree to replace and make good, without expense to the KYTC and/or to the City of Hazard, any work or material which may be found to be defective within one year from the date of the final certificate of payment to said Contractor. The deterioration due to ordinary use and wear and failure of materials furnished by the Owner (or KYTC) are excepted from this guarantee.

This guarantee shall include leaks or breaks in any form of piping and damage done by settlement of backfills and filling regrade elevations, such damage and sinking of fills being considered as defective workmanship. This shall also include paint failure.

The Contractor shall reimburse the Owner for cost of damage, if any, as well as cost of replacing defective materials or workmanship. If replacements are not made within ten (10) days in case of materials, then Owner may make replacements and charge cost of same to the Contractor or his bondsman.

CR 1150, KYTC ITEM NO. 10-8915.00
WATER UTILITY RELOCATION
INDEX FOR TECHNICAL SPECIFICATIONS

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1. SPECIAL NOTES:

- A. Crushed stone for backfilling and bedding of pipe is **not a Pay Item**. This additional cost should be reflected in your Unit Price for water piping. Additionally, unless specifically noted otherwise, only crushed stone specially listed on the plans will be paid at your Bid Unit Price. The Plans detail the crushed stone refill requirements for all pipe types.
- B. General Concrete used for pipe kickers is **not a pay item** unless it is specifically noted otherwise as a pay item on the plans. This addition in cost should be reflected in your Unit Price for water piping. General concrete can include un-formed concrete w/ reinforcement up to a maximum of #5's @ 8" each way, maximum of two mats. Other general concrete which **is a pay item** includes items such as cover caps over pipe where specifically noted on the plans. No Reinforced Formed Concrete is anticipated on this project (for the Utility portion) and may be listed or shown as "Detailed" concrete, and is a separate and distinct pay item.
- C. Special attention should be afforded all areas that are marked with 'Pay Limits'. Notes as they appear on the drawings will be strictly adhered to concerning pay items.
- D. Contractors should note the placement of No. 12 copper wire in the location of all non-metallic water pipe. Substitutes (for tracing) such as line marking tape will not be accepted. Smaller diameter wire will not be accepted. Also note the requirement in all water piping areas for marking tape labeled and colored appropriately that shall be used.
- E. Use extreme caution in areas where other utilities are shown. All utility locations as shown on the drawings shall be considered approximate. All known utility crossings (after this determination by the utility) shall be flagged by the appropriate agency. These crossings may require hand digging for discovery and/or clearance.
- F. Contractor shall contact all utilities and arrange for flagging of all existing lines. Contractor shall be responsible for contact and initiation of work with Kentucky 811.
- G. Valve collars shall be required at all valves and cost shall be included in the unit price for the valve and box.
- H. All "TIES" which are bid items shall include all necessary materials required to make the same; see breakdown of "Ties" in these specifications.
- I. The plans serve as the guide to the final line location. The Contractor, because of his extensive knowledge obtained from line installation and roadway work, shall immediately contact the Engineer should construction appear unreasonable,

dangerous, or liable to generate property damage in any location, or to provide an unreasonable conflict with roadway work. This notification shall include likely areas of slip, slide, or other ground movement. The Contractor is responsible for all construction activities and any detrimental result of his construction. The Contractor, in accepting any portion of this Contract, assumes all associated responsibility for any and all construction activity. Additionally, the Contractor shall contact the Engineer if any construction is not practical without producing extended service outage or unreasonable conflict with roadway construction.

- J. Cooperation is critical for this utility relocation to be completed effectively. The drawings note contacts with the City of Hazard Water Department and these people should be contacted as directed or as needed.
- K. The Contractor shall work both plans sheets and profile sheets as a unit. What is shown on one shall be considered to be shown on both. Contractor shall report any conflict between the two to the Utility Relo. Engineer.
- L. **Contractor is responsible for all Surveying on the Project.** In all areas Contractor shall be required to survey or resurvey both horizontal and vertical locations for pipes, etc., determine any possible profile related conflicts, and compare planned horizontal and vertical locations with surveyed. Should a conflict or discrepancy exist, the Contractor shall immediately report this to the Utility Relo. Engineer. Contractor shall do no work in any line segment before this is complete.
- M. **A digital camera shall be used to photograph all valves, or valve groupings** (if valves lay within 5' radius of each other). Each valve or valve grouping photograph shall be named with a descriptive title. For example, if a valve grouping is at the intersection of KY 80 and KY 15, it shall be named "KY 80 KY 15.JPG". Each photograph shall be descriptive in and of itself with background information sufficient for subsequent location of the valve grouping by Water and Sanitary Sewer Department personnel. Two (2) compact disks (CD's) shall be provided to the Engineer after project completion showing all valve or valve groupings. Final payment will not be made until these CD's are submitted. The Contractor shall work with the Relo. Engineer to ensure that correct titles are transferred to "AS-BUILT" drawings. Additionally, Contractor shall assist Utility Relocation Engineer's personnel in location of installed valves and valve groupings so a geographical location (KY State Plan Coordinate) can be obtained for each valve, valve grouping, or other important item as determined.
- N. **Sequence of construction is absolutely critical to this project.** The Contractor shall complete work in the sequences noted on the drawings or as determined in the field so to limit or eliminate service outage. The Utility Relocation Engineer has made his best effort to show work which can be reasonably completed as the roadway portion is constructed without significant service outage, but certainly does

- not warrant that this is the case. Changes to sequence, type, layout, etc. may be required to achieve this goal and the Contractor is encouraged to contact the Relo. Engineer for any discussion which eases his roadway construction burden or shortens utility downtime.
- O. Unless noted, all waterline fittings are Mechanical Joint. All mechanical joint fittings shall use Grip Rings on every branch, inlets and outlets. Unless noted otherwise, all waterline service tubing on the job is Compression Joint. Additional joint restraint for service tubing will be provided as directed by the Utility Relocation Engineer.
- P. Shop Drawing submission to the Utility Relocation Engineer is required of the Contractor for review and approval. Items which require Shop Drawing approval include:
- All Pipe, all types, Water
 - All Fittings, Water
 - Valves, Water
 - River test Stations
 - All Blowoffs
 - All Water Meters including radio Read Equip.
- Q. "Liner Pipe" and "Encasement Pipe" are used interchangeably in this specification.
- R. All plans and details show **42" minimum cover** required for all pipes. **KYTC may have deeper requirements.** Contractor is responsible for installing all lines at the depth required by KYTC. Contractor should confirm cover requirements before Bid.
- S. These specifications may list singular manufactures for a specific item. This listing is only for defining required quality and/or features that are required for the project. In almost all cases, this singular listing will be followed by "or Engineer approved equal". Any item, unless it is an item brand/type that has been standardized by the City of Hazard for operational reasons as a requirement, can be replaced with an item of comparable quality and/or features.

The Utility Relocation Engineer's address is:

H. A. Spalding Engineers, Inc.
651 Skyline Drive
Hazard, KY 41701-1664
(606) 436-2151
Project Engineer, Hank A. Spalding
hank.spalding@haspaldingengineers.com

Engineer prefers the PDF process for Shop Drawing Submission which will speed approval. Submission shall be complete and shall be in an adequate number (if paper is used) to allow the Engineer to keep two (2) complete sets while allowing the Contractor any required sets for his use.

2. SPECIAL SURFACE RESTORATION NOTE:

The Contractor should understand that returning all surface work areas to their original condition is one of the most important phases of this project. The Contractor will be working in many cases in yard or other sensitive areas. The Contractor shall make every effort to avoid cutting of any trees, shrubs, and other items which are not absolutely required for the construction process (other than the Clear & Grub area). The Engineer will allow for, and in fact will encourage, the Contractor to adjust alignments to miss sensitive structures such as large trees, etc. However, all changes in alignment must be approved before any work is done to insure compliance with project requirements such as allowable grade, angles, etc. Contractor shall utilize mobile drop hammers, or other suitable equipment (other than walk behind tampers), which will compact the trench in all yard, road, and other areas which are considered sensitive. The Contractor shall also use similar compaction equipment and effort around all manholes. The Contractor shall satisfy the Engineer and KYTC with their yard restoration work. KYTC satisfaction with compaction and re-vegetation efforts shall be considered under your one year warranty.

3. INSTALLATION:

Trenching - Trenching shall be done in a true straight line at all times and fittings shall be used only at the direction of the RESIDENT ENGINEER.

Trenching shall include all clearing and grubbing (Clear and Grub is a Unit Price Bid Item for the waterline or gas line areas shown on the plans), including all weeds, briars, trees, and stumps encountered in the trenching. The CONTRACTOR shall dispose of any such material by burning, burial, or hauling away, at no extra cost to the KYTC. All material shall be disposed of by methods which meet all KYTC requirements, local fire officials, and all local, state, and federal requirements. Outside of the clear & grub area, Shrubs, hedges, and small trees (3" in dia.) shall be removed and replanted, at no extra cost to the KYTC. Trenching also includes such items as street, road, sidewalk, pipe and small creek

crossings; cutting, moving, or repairing damage to fences, poles, or gates and other surface structures, regardless of whether shown on the Plans.

All material encountered in excavation shall be Unclassified. In areas where rock is encountered, a min. of 2" of crushed stone shall be placed in the bottom of the trench before installation of the pipe. Extra payment will be made for the installation of the crushed stone at your submitted unit price for crushed stone. The price for the pipe in place shall also include hauling off of all excavated material.

The CONTRACTOR shall determine, as far as possible in advance, the location of all existing sewer, culvert, drain, water, electric, and gas pipes and other subsurface structures and avoid disturbing same in opening his trenches. In case of sewer, water, and gas services, and other facilities easily damaged by machine trenching, same shall be uncovered without damage ahead of trenching, and restored immediately after trenching machine has passed, without extra cost to the KYTC except as noted in the bid item Utility Conflicts. The CONTRACTOR shall protect such existing facilities, including power and telephone poles and guy wires, against danger or damage due to settlement of his backfill. It shall be the responsibility of the CONTRACTOR to inform customers of utilities of disruption of service as soon as it is known that it has or will be cut off.

The CONTRACTOR shall at all times during trenching operations on the streets or other areas, carry a stock of pipe and fittings likely to be needed for replacement of water, gas, sewage, or drain pipes to facilitate immediate repair.

Construction equipment will not be approved for use where treads are injurious to paving encountered. Curbs, sidewalks, and other structures shall be protected by the CONTRACTOR from damage by his construction equipment.

In case of damage to any existing structures, repair and restoration shall be made at once and backfill shall not be replaced until this is done. In all cases, restoration and repair shall be such that the damaged structure will be in as good condition and serve its purpose as completely as before and such restoration and repair shall be done without extra charge, except as set forth under the provisions of the General Conditions. Where there is the possibility of damage to existing utility lines by trenching machine, the ENGINEER may order hand search excavation ahead of machine trenching to uncover same, at no extra cost to the KYTC.

All trenches must be dug neatly to lines. Hand trenching may be required by the ENGINEER, at no extra payment, where undue damage would be caused by existing structures and facilities by machine trenching. Trenches in earth shall be dug to just above grade by machine and shall be finished down to grade by hand, unless otherwise specified.

Where trenching is cut through paving, which does not crumble on edges, trench edge shall be cut to at least two (2") inches deep to straight and neat edges before excavation is

started, and care taken to preserve edge to facilitate neat repaving as shown on the Drawings.

All excavation shall be open trenches, except where otherwise called for on the Plans or by special permission of the ENGINEER, for boring or jacking under railroads, sidewalks, and the highway.

When working along the highway the CONTRACTOR shall furnish, install and maintain necessary signs, lights or other warning devices as prescribed by the Kentucky Department of Transportation and shall furnish and employ sufficient flagmen to direct traffic in the construction area all as directed by the Department of Transportation. All signs, devices, flagmen, etc. shall be as prescribed in the "Manual on Uniform Traffic Control Devices, Part VI," latest revision.

The CONTRACTOR shall so coordinate his work as to produce a minimum of interference with normal traffic on highways and streets. He may, with the approval of the ENGINEER and governing agency, close a street to traffic for such length of time considered necessary by the ENGINEER, provided persons occupying property abutting the streets have an alternate route of access to the property which is suitable for their needs during the time closure. It shall be the responsibility of the CONTRACTOR to give 24 hours advance notice to Fire and Police Departments and to occupants of a street which will be closed in a manner approved by the ENGINEER.

The opening of more than 500 feet of trench ahead of the pipe laying and more than 500 feet of open ditch left behind pipe laying before backfilling, will not be permitted except upon written consent of the KYTC or verbal consent from KYTC directly to the Engineer. No trench shall be left open or work stopped on same for a considerable length of time. If such is necessary, trench shall be refilled according to backfill specifications. In crossing a road or street a temporary bridge must be placed over the excavation if traffic conditions require its use before backfilling. Where required or when directed by the ENGINEER, road or street crossings will be limited to one-half of travel width before placing temporary bridge over the excavated side. Whenever trenching is performed on public ways, the CONTRACTOR shall furnish and maintain barricades, lanterns, warning sign and signals as far as one block ahead or at locations directed by the governing agency as required for public safety. All such necessary bridges, barricades, lanterns, signs and signals shall be provided by and at the expense of the CONTRACTOR. The CONTRACTOR shall maintain road crossings in a passable condition for traffic until the final acceptance of the work at no cost to the KYTC.

Where pipelines run through wooded terrain, cutting of trees within limits of maximum permissible trench width, plus 4' on each side of this trench centerline, will be permitted. However, cutting of additional trees on each side of this 8' total width to accommodate operation of trenching machine will not be permitted. The CONTRACTOR shall obtain specific permission of the OWNER before cutting any tree larger than six (6") inches in

diameter.

Sheeting and shoring of trench will be required of this CONTRACTOR where necessary to protect life, property, or any structure from damage or to maintain maximum permissible trench widths at top of pipe. Sheeting, sheet piling, trench jacks, braces, shores, and stringers shall be used to hold trench walls. These shall be withdrawn as the trenches are being backfilled, after backfill has been placed over pipe at least 18". If their removal, before backfill is completed to surface, endangers adjacent structures such as pipelines, street paving, sidewalk and buildings, then they shall be left in place until such danger has passed and then pulled if possible. Voids caused by sheeting withdrawal shall be backfilled and tamped with thin rammers designed for the purpose so as not to form an obstruction at the ground level. Dewatering of the trenches shall be considered a part of trenching at no extra cost to the OWNER. Dewatering of trenches shall include ground water and storm or sanitary sewage. Suitable pumping and other dewatering equipment is to be provided by the CONTRACTOR to insure the installation of the pipeline structure in a dewatered trench and under the proper conditions. Dewatering shall include all practical means available for prevention of surface runoff into trenches and scouring against newly laid pipe.

Piles of excavated material shall be trenched or temporarily piped to prevent, as far as practical, blockage of drainage ditches and gutters and resultant water carriage of excavated materials over street surfaces.

Where subgrade of trench has insufficient stability to support the pipeline and hold it to its original grade, the ENGINEER may order stabilization by various means. Exclusive of dewatering normally required for construction and instability caused by neglect of the CONTRACTOR, it shall be paid for at unit prices set up in the Contract such as extra excavation, crushed rock for pipe bedding, concrete cradle, or piling.

The location of pipe and their appurtenances, as shown, are those intended for the final construction. However, conditions may present themselves before construction of any line is started, that would indicate desirable changes in location. Also, development of property traversed may require location changes. In such cases, the KYTC reserves that right to make reasonable changes in line and structure location without extra cost except as may be determined by the application of the unit prices bid to the quantities actually involved. The OWNER or KYTC is under no obligation to locate pipelines, so they may be excavated by machine.

The work of uncovering and backfilling required for locating existing sewers, waterlines and other existing facilities for connection of improvements, or avoidance in location of proposed pipeline, where such uncovering and backfilling is not within trench for improvements, shall be at the CONTRACTOR's expense.

The CONTRACTOR will be required to test all pipelines (as described in other areas of these Specifications) before backfilling. Backfilling before testing will be allowed at the

discretion of the ENGINEER at points where danger to the public, or other hazards, demand that such be done immediately after pipe is laid. All leakage apparent or other problems after testing must be repaired before backfilling.

Backfilling Trenches:

Backfilling must be started as soon as practicable after pipe has been laid. Packing of earth across and around pipe at six (6') foot intervals and between joints shall be the usual procedure as the laying proceeds. This is in order to avoid danger of misalignment from slide, flooding or other causes. The ENGINEER shall be given a maximum of 24 hours for inspection before backfilling. Only earth, or rock less than 2-1/2" size, shall be used as backfill materials up to six (6") inches above top of pipe. No stones or other hard or heavy substances may be thrown directly upon the pipes or into the trench until the above named cover of earth is obtained. Above the 6 or 12 inches above pipe, rock may be used in the backfill to an extent not greater than one-half of the total backfill materials used. If additional earth is required, it must be obtained and placed by the CONTRACTOR. Filling with rock and earth shall proceed simultaneously in order that all voids in the rock may be filled with earth. Where noted on the Plans and within the shoulder of the Kentucky Highways, the CONTRACTOR shall backfill to finish highway grade with DGA. The DGA shall be tamped in six (6") inch layers in accordance with Department of Transportation Specifications. In these areas (if any) DGA will be a pay item. All material hauled away shall be placed at no cost and at a location specified by the KYTC or if not specified by KYTC at a location obtained by Contractor.

No extra charge shall be made for supplying outside materials for backfill or removing excess excavation material from the site of the work.

Extra cost of compaction of backfill on street and driveway crossings and tunnels shall be included in price bid for pipe.

Where highway slopes, thin grass, or cover crops are destroyed by trenching, laying, or backfilling operations, and access to them, surface shall be prepared by disking, fertilizing 5 lbs. of 5-10-5 or 6-8-6 per 1,000 square feet and seeding 21 lbs. of Italian Rye Grass per 1,000 square feet, light harrowing, then reseeding with crop destroyed or one part Red Top, three parts certified Kentucky Bluegrass seed mixed together at the rate of 2 lbs. per 1,000 square feet of surface. This shall be included in the price for trenching and backfilling. Requirement of the KYTC, for reseeding shall take precedence over these specifications.

4. CLEANING UP AND REPAIRING DAMAGE:

The Contract will not be considered complete until all construction structures and equipment and rubbish from construction are cleaned from the site of the work.

All damage to existing grounds and structures caused by construction operations must be

repaired or the KYTC compensated for such damage before contract will be considered complete. This does not include replacement of sod, but does include required shaping of ground for sodding or planting of grass and the removal and disposition of all rock from blasting three (3") inches or over in size.

5. HAULING AND STORAGE:

The CONTRACTOR will be required to deliver all pipe, fittings, valves and valve boxes and other materials and place same as and where required for laying.

Care must be exercised in the handling of all materials and equipment and the CONTRACTOR will be held responsible for all breakage or damage to same caused by his workmen, agents of appliances for handling or moving. Pipes and other castings shall in no case be thrown or dropped from cars, trucks, or wagons to the ground but same shall be lowered gently and not allowed to roll against or strike other castings and unyielding objects violently. Pipe and special castings may be distributed at places that will not interfere with other building operations as unloaded or yard and distributed as required, as the CONTRACTOR may elect.

Valves, valve boxes, jointing materials, meter box covers, castings, fabricated metal, reinforced steel, etc. shall be yarded or housed in some convenient location by the CONTRACTOR and delivered on the ground, as required.

The cost of all hauling, handling, and storage shall be included in the price bid for equipment and materials in place.

The KYTC takes no risk or responsibility for fire, theft, flood, or damage until after the final acceptance of the work.

6. GENERAL SPECIFICATIONS ON MATERIALS:

All materials specified or planned shall be furnished by the Contractor. Approval of manufacturer's plans of materials and equipment shall not mean final acceptance but they shall be subject to inspection and test on delivery and installation.

The Contractor shall repair, replace or adjust any material or equipment found defective or not operating properly due to improper materials, workmanship and adjustment on his part, for a period of one (1) year after completion and acceptance of his work.

Inclusion of a certain make or type of material or equipment in the Contractor's bid or estimate shall not obligate the KYTC to accept such materials or equipment if it does not meet with requirements of these Plans and Specifications.

The burden of proof of equal quality or service shall be on the Contractor. Proof of

inequality is not implied by these specifications and is not a burden of the Engineer. His duty shall be to properly weigh the proven facts of equality in fairness to all parties involved.

7. TESTING OF WATERLINES:

On all projects involving the installation of water pipeline, the finished work shall comply with the provisions listed below, or similar requirements which will insure equal or better results.

.a. All water mains shall be given a hydrostatic test to 150 psi (or 1.5 times the service pressure, contact the Relocation Engineer), under which leakage shall not exceed the limits established in Section 4 of AWWA Standard Specifications C600.

.b. Where practicable, pipelines shall be tested between line valves or plugs in lengths of not more than 3,000 feet.

.c. Duration of test shall be not less than two hours.

.d. Where leaks are evident on the surface where joints are covered, the joints shall be re-caulked, re-poured, bolts retightened or re-laid, and leakage minimized regardless of total leakage as shown by test.

.e. All appurtenances shall be connected and made ready for ultimate service before the pressure test. Specifically, all meter boxes, yokes, and appurtenances (with sole exception of meter unit) shall be installed prior to the pressure test. Additionally, all meter yokes shall be "flowed" to insure that the corp stop has been connected and is in the open position. This flow shall be witnessed by the ENGINEER'S Representative and documented on the project mapping with a date when the flow was observed. All pipe, fittings and other materials found to be defective under test shall be removed and replaced.

.f. Lines which fail to meet tests shall be repaired or replaced and retested as necessary until test requirements are complied with.

.g. The CONTRACTOR shall furnish a recording gauge and clock used during leakage test and recording pressure charts during duration of test. Recording pressure charts shall remain the property of the ENGINEER at conclusion of test.

The new potable waterlines shall not be placed in service, either temporarily or permanently, until they have been thoroughly disinfected in accordance with the following requirements and to the satisfaction of the ENGINEER.

.h. The CONTRACTOR, in consultation with the KYTC Resident Engineer and the part-time Relocation Observer or Engineer, shall keep, maintain, and update, a color coded project map which shows what lines have been pressure tested, date of test, and result. See below for additional requirements.

After successful pressure testing, a solution of hypochlorite using HTH, or equal, shall be introduced into the section of the line being disinfected sufficient to insure a chlorine dosage of at least 50 ppm in the main. While the solution is being applied the water should be allowed to escape at the ends of the line until tests indicate that a dosage of at least 50 ppm has been obtained throughout the pipe. Open and close all valves and cocks while chlorinating agent is in the piping system. The Chlorinated water shall be allowed to remain in the pipe for 24 hours, after which a residual of at least 25 ppm shall be obtained. The disinfection shall be repeated until 25 ppm is obtained, after which time the main shall be thoroughly flushed until the residual chlorine content is not greater than 1.0 ppm.

Following disinfection of the line, bacteriological samples shall be collected and analyzed in accordance with the requirements of Kentucky Department of Natural Resources and Environmental Protection. When the samples have been approved, the new line then may be connected to the system. On the map noted above, the Contractor, in consultant with the Resident Engineer, shall keep, maintain, and update the color coded map showing dates samples were collected, and dates where samples were approved.

8. LAYING PIPE IN COMMON DITCH:

A. General

1. Pipelines, force mains and sewers laid in same trench shall, in all cases, be laid on original earth, regardless of divergence in their elevations. Pipe shall never be laid in backfill or one above the other unless specifically shown otherwise on the drawings.

9. PRESSURE PIPE INSTALLATION:

A. General

1. Pipe shall be handled with such care as necessary to prevent damage during installation. The interior of the pipe shall be kept clean and the pipe shall be installed to the lines and grades shown on the Drawings. Whenever pipe laying is stopped, the end of the pipe shall be securely plugged or capped.
2. Fittings shall be firmly blocked to original earth or rock to prevent water pressure from springing pipe sideward or upward. Concrete or other blocking material shall be placed such that it does not cover the pipe joints, nuts, and bolts. The means to do this shall be thoroughly wrapping the fitting with suitable plastic to the Engineer's satisfaction.
3. Pipes shall be free of all structures other than those planned. Openings and joints to concrete walls shall be constructed as shown on the Drawings.

4. Pressure pipe, 4 inch diameter or larger, entering a structure below original earth level, unsupported by original earth for a distance of more than 3 feet shall be supported by Class "3000" concrete, where depth of such support does not exceed 3 feet, and by Class "4000" concrete piers each 6 feet, where depth exceeds 3 feet. Class "3000" concrete required will be included in the payment for furnishing and laying the particular pipe, in order to discourage excessive excavation outside the limits of structures. Pipes entering structures shall have flexible joint within 18 inches of exterior of structure, and also from point of leaving concrete support to original earth or crushed stone bedding.

B. Pressure Pipe Laying

1. Pressure pipe shall first be thoroughly cleaned at joints, then joined according to instructions and with tools recommended by the manufacturer. A copy of such instructions shall be available at all times at the site of the work.
2. All pipes must be forced and held together, or "homed" at the joints, before sealing or bolting. Pipe must be aligned as each joint is placed, so as to obtain straight lines and grades. Curves and changes in grades shall be laid in such a manner that maximum allowable joint deflection is not exceeded.
3. Trench excavation for pipe laying must be of sufficient width to allow the proper jointing and alignment of the pipe. Trenches in earth or rock shall be dug deep enough to insure 36" minimum cover over top of the pipe, unless otherwise indicated on the Drawings.
4. Trench line stations shall be set ahead of the trenching at least each 100 feet of pipeline. Trenches shall be dug true to alignment of stakes. Alignment of trenches or pipes in trench must not be changed to pass around obstacles such as poles, fences and other evident obstructions without the approval of the Engineer. Lines will be laid out to avoid obstacles as far as possible, consistent with maintenance of alignment necessary to finding the pipeline in the future and avoiding obstruction of future utilities and structures.
5. Cut pieces of pressure pipe 18" or more in length may be used in fitting to the specials and valves and fitting changes in grade and alignment. Cut ends shall be even enough to make first class joints.

C. Testing Pressure Pipe

1. The Contractor shall furnish all necessary equipment for pressure testing.
2. Inspection of pipe laying shall in no way relieve the Contractor of the

responsibility for passing tests, stopping leakage, or correcting poor workmanship.

3. The Contractor shall furnish meter or suction tank, pipe test plugs and bypassing piping, and make all connections for conducting the above tests. The pumping equipment used shall be compressed air, centrifugal pump, or other pumping equipment which will not place shock pressures on the pipeline. Power plunger pumps will not be permitted for use on closed pipe system for any purpose.
4. The pipe shall be tested with water to the pressure class of the pipe for 24 hours with pressure recorder. The drop in pressure shall not exceed 5% of the test pressure.

MATERIAL & BID ITEMS:

10. CL250 PVC PIPE AND FITTINGS:

All pipe designated as PVC shall be PVC type pressure pipe designed ASTM Class 250 of the Integral Bell Joint type. The pipe shall conform to ASTM 2241 for Standard Dimension Ratios, SDR 17 for pressure characteristics. The pipe shall be extruded from clean, virgin, approved class 12454-A PVC compound conforming to ASTM resin Specification D1784. Rubber rings shall conform to ASTM D 1869. This pipe shall be National Pipe Company, North American Pipe Company, JM Pipe, or Diamond Plastics pipe PVC Pressure pipe or approved equal. Laying radius of pipe shall in all cases be equal to, or greater than, that listed by the manufacturer of the pipe. All tees, elbows, and bends shall be Mechanical Joint unless noted on the Plans. All mechanical joint fittings shall be equipped with grip rings. All pipe and fittings shall be inspected at the factory and on the job site. Testing of PVC pipe and fittings shall be accomplished in conformance with the latest revision of ASTM D3034, ASTM F679 T-1, ASTM D2444, ASTM 2412, and ASTM D2152. The manufacturer shall submit five (5) copies of certification of test for each lot of material represented by shipment to the job site. The pipe shall be homogeneous throughout and free from cracks, holes, foreign inclusions or other defects. The pipe shall be as uniform in color as commercially practical. PVC pipe shall have a ring painted around spigot ends in such a manner as to allow field checking of setting depth of pipe in the socket. Pipe must be delivered to job site by means which will adequately support it, and not subject it to undue stresses. In particular, the load shall be so supported that the bottom rows of pipe are not damaged by crushing. Pipe shall be unloaded carefully and strung or stored as close to the final point of placement as is practical. Pipe shall not be stored outside where subject to sunlight. Jointing of PVC pipe shall be by a natural rubber ring inserted into the belled end of the pipe or double hub joints. Solvent weld joints are not acceptable. The PVC pipe manufacturer shall provide special fittings, acceptable to the Engineer to make water-tight connections to manholes and for all service connections. The pipe shall be equal in all respects to that manufactured by CertainTeed Corporation, National Pipe Company, North American Pipe Company, JM Pipe, or Diamond Plastics pipe. All PVC shall be marked w/ tape as shown on the drawings.

11. HORIZONTAL DIRECTIONAL DRILLING (HDD):

All areas designated on the Plans as Horizontal Directional Drilling (HDD) shall be completed using equipment designed for the size and type of pipe noted. All HDD shall be completed using PE 4710 high density polyethylene, DR 9, having a minimum pressure rating of 252 psi, except where noted otherwise on the plans, and in these locations the pipe shall be DR 7 (or DR 7.3), having a minimum pressure rating of 335 psi. **The Unit Price of HDD includes the cost of the pipe itself**, and all else required for a complete and finished installation. The Contractor shall have experience in this type of work (HDD) suitable to the Utility Relo. Engineer.

12. POLYETHYLENE (PE) PIPE:

Polyethylene Pipe shall be manufactured in accordance with AWWA CD01 for sizes 1/2" through 3" and in accordance with AWWA C906 for sizes 4" through 54". All Copper Tubing Size (C.T.S.) PE pipe shall be high density polyethylene (PE 4710) intended for the transportation of potable water. All PE pipe smaller than two inch shall have a minimum pressure rating of 252 psi and have a dimension ratio (DR) of 9 and be copper tubing size (CTS) unless noted otherwise (UNO) on the plans for high pressure areas. All PE pipe 2" and larger shall be Iron Pipe Size (I.P.S.) and shall be high density polyethylene PE 4710, have a minimum pressure rating of 252 psi, and shall have a dimension ratio of 9, except where noted otherwise on the plans, and in these locations the pipe shall be DR 7 (or DR 7.3) in high pressure water areas, having a minimum pressure rating of 335 psi. All PE pipe fittings shall be butt fusion welded per the manufacturer's requirements of the same DR as the pipe it connects. All joints between plain ends of polyethylene pipe shall be made by butt fusion. The Contractor shall follow all requirements in the pipe manufacturer's printed literature for butt fusion welds including test weld requirements and shall use personnel adequately trained and experienced in this work. All PE pipe intended for the transportation of water shall be equipped with a **BLUE stripe**. Installation of incorrect color coding for this water utility shall not occur. All transitions from PE pipe to other pipe types shall use the appropriate adapter as detailed on the plans and the concrete restraint/s shall be installed as indicated. Where PE pipe enters or leaves concrete structures it shall be equipped with the special restraints as detailed on the plans to prevent pullout. All PE pipe shall be Plexco, Driscopipe, or approved equal.

13. MARKING TAPES:

Marking tapes shall be used for all water lines larger than 1" diameter. All tapes shall be of the "warning" type and detectability is not a requirement. Detectability shall be provided with the installation of #12 AWG copper wire (minimum) as detailed on the drawings. All tapes shall be suitable for underground installation. All tapes shall be a minimum of 6" wide, have a minimum thickness of 5 mils, shall be polyethylene, and shall be marked as follows:

WATER- Blue color with "Buried Waterline Below" imprinted;

GAS (if used)- Yellow color with "Buried Gas Line Below" imprinted;

SEWER (if used)- Green Color with "Buried Sanitary Sewer Below" imprinted.

14. CRUSHED STONE MATERIALS:

All Crushed Stone materials shall conform to the applicable sections of Standard Specifications for Road & Bridge Construction, KYTC. The Crushed Stone Bid Item shall include all required materials ranging from DGA to #2 stone as indicated in the above specifications. The Engineer will only pay for crushed stone where original delivery tickets are provided for his records. If used, Class II & Class III Stone is Channel Lining, Class II &

Class III, as designated in the above specifications. **Contractor should specifically note that crushed stone for backfilling and creating a pipe base is included in his unit price for that piping.**

15. CONCRETE WORK:

(a) Proportioning Mix:

Concrete is to be proportioned in three classes according to use as follows:

Class "A" for reinforced concrete structures, surface courses of highway, and street paving. This concrete type is noted as "**Detail Concrete**" on the plans.

Class "B" for reinforced concrete structures, and special anchors or supports. This concrete type is for use where significant forming and/or reinforcement is required. Batching and strength shall match Class A concrete.

Class "C" for interceptor structures, curbs, gutters, driveways, sidewalks, base courses for highway and street paving, thrust blocks, creek crossings, and valve pads. This concrete type is noted as "**General Concrete**" on the plans and on the Bid Form.

Class "A" concrete is to be proportioned one 94 lb. sack of Portland Cement, 195 lbs. of sand, 270 lbs. of coarse aggregate, and no admixture. These proportions may be varied by the Engineer after the materials supplied have been tested and proportions for the greatest density and workability determined, provided that no more than 7.25 nor less than 6.50 bags of cement per cubic yard of concrete will be required. Class "A" concrete shall have a minimum compressive strength of 4,000 lbs. per square inch in 28 days. Where instructed by the Engineer, the Contractor shall place reinforcement as outlined in special notes of these specifications or as detailed on the drawings.

Class "C" concrete shall have a minimum compressive strength of 3,000 lbs. per square inch and shall contain not less than 5.5 sacks of cement per cubic yard of concrete. The relative amounts of fine and admixture will not be required.

The water used in mixing must be a minimum required for a plastic mix. No water will be permitted to be used for purpose of hastening mixing and reducing of tamping and vibration.

The water content allowed will be at all times subject to regulations by the Engineer. In the case of Class "A" concrete, not more than five and one-half gallons of water to the bag of cement will be allowed in mixing concrete (or proportionately less when slump is about 4" and/or mix is wet), except in cases where, in the judgement of the Engineer, additional water is necessary to obtain proper results.

Batching equipment shall include scales for weighing contents of wheelbarrows and a device for accurately measuring water by the gallon, to be used for proportioning each batch.

In case of ready-mixed concrete, specifications for proportioning of mixes shall be the same, except that from the manufacturer's experience with his own aggregates, he shall vary proportions of sand and coarse aggregate for the greatest density and workability of mix. Prior to actual delivery of concrete, and at any change of proportioning, the manufacturer shall furnish a statement to the Engineer giving the proportion by weight (dry) of cement and of fine and coarse aggregates that will be used in the manufacture of each mix ordered. Proportions must be approved by the Engineer. Otherwise, proportioning of mix and batching plant shall be according to ASTM Designation C-94, latest revision, specifications for ready-mixed concrete.

(b) Forms:

Forms for concrete with exposed surfaces shall consist of dressed and sized lumber or metal and must match on edges sufficiently to prevent leakage of mortar. Forms shall be built to such accuracy and braced to such an extent that they shall not vary from true lines and surfaces where exposed more than 1/4" before pouring concrete, nor more than 3/8" after pouring. Angle strips (3/4" size) shall be placed in all exposed corners of forms.

(c) Steel Reinforcement Placing:

All such steel shall be delivered in new condition either clean or with only a slight coating of rust. If stored on the site it must be kept under shelter or supporting at least 12" above ground to prevent its becoming coated with dirt and when placed in forms it must be free from scale or dirt.

When placing in forms, steel must be tied together to form a rigid frame before pouring concrete and must be secured in the walls or slabs in such a manner as to insure its holding and position designed for it in the finished work by use of form stands, steel or concrete chairs or spacers. As a rule, steel bars must have a minimum covering of 2" when exposed to air and a minimum of 3" when exposed to earth" of concrete, unless otherwise noted on the plans. All splices shall be 24 diameters long and 1" between spliced bars.

(d) Mixing and Placing:

Concrete shall be thoroughly mixed at least two minutes after all materials, including water, are in the mixer drum having a capacity of at least one sack batch.

Concrete must be poured into forms slowly enough to permit thorough tamping and vibrating to eliminate any honeycombed surfaces.

Concrete pouring will not be permitted under conditions where there is danger of

freezing or when materials are frozen. After pouring, concrete must be protected from freezing weather for at least 72 hours.

Ready-mixed concrete delivery facilities pledged to the concrete pour shall be approved by the Engineer before permission will be given to start the pour. The period between termination of placing by one truck and starting by the next shall not be longer than 10 minutes at temperatures above 70° F., nor longer than 20 minutes below 70° F. The concrete in a truck mixer or agitator must be totally discharged within 1-1/2 hours after the introduction of mixing water to the cement and aggregates. The mixing operation shall begin within 30 minutes after the cement has been intermingled with the aggregates. Otherwise, mixing, mixers, agitators, and inspection shall be according to ASTM Designation C-94, latest revision, specifications for ready-mixed concrete. Non-agitating trucks for hauling concrete from central mixing plant will not be accepted.

(e) Tempering:

All concrete must be kept wet or moist for a period of at least 48 hours after pouring in order to prevent too rapid drying out. In dry weather, wooden forms must be thoroughly wet before concrete is placed in them and must also be kept in this condition during the period above mentioned. Concrete must be covered and kept damp to protect it from the sun as soon as the surfaces are firm enough to allow the placing of such covering or protection.

TESTING CONCRETE

(a) Slump Test:

At least one slump test shall be made before first concrete pour, at the start of pouring any concrete and at each 5 cubic yards deposited during one operation. These shall be made from samples as those taken from cylinder tests and records of same kept therewith. Tests shall be made according to ASTM Designation C-143 and as required under ASTM Designation C-94, for ready-mixed concrete. Mix is designed for a slump test of 2" and not more than 4", except in cases where thin sections would indicate, in the opinion of the Engineer, that a wetter mix is more desirable. The **Contractor** shall furnish necessary equipment for the slump tests.

(b) Cylinder Test:

Cylinder tests will be taken on all important structures such as the storage tank or Booster Station. However, on line work for sewer and waterline requiring only small amounts of concrete per pour, the cylinder tests will be waived. However, should the Engineer have reason to doubt that the concrete being furnished meets the strength requirements, he shall have the right to order cylinder tests according to the following specifications:

At the start of concreting or before, if practical, the **Contractor** shall make from a single batch a set of four (4) cylinders per ASTM Designation C-31. Two (2) shall be tested at 7 days and two (2) at 28 days per ASTM Designation C-39.

At each time when five or more cubic yards of concrete are placed during one operation and when the sum of smaller deposits of concrete equal 10 cubic yards since previous test and at any change in the mix four (4) cylinder tests will be required, two tested 7 days and the other two at 28 days per ASTM Designation C-39. In case of ready-mixed concrete, requirement for testing of ASTM Designation C-94 and C-172 shall be added. Class "A" concrete sampled shall show a compressive strength of not less than 3,000 lbs. per square inch in 7 days and 4,000 lbs. per square inch in 28 days. Class "C" concrete shall have a compressive strength of 3,000 lbs. per square inch in 28 days. Seven (7) day tests on Class "C" concrete shall have the same relation to 28 days requirements.

The **Contractor** shall furnish all equipment for sampling and curing on the job and shall bear the cost of laboratory curing and testing.

16. PAVEMENT REPLACEMENT (if used):

All replacement pavement shall conform to the applicable section of Specifications for Road and Bridge Construction, Kentucky Transportation Cabinet. All areas which are to be repaved shall first be sawn to full depth. Pavement edges shall not be broken or ripped by backhoe or other equipment. Paving quantities as shown on the Bid Form are calculated for crossings and/or areas which are designed as constructing under pavement and are not anticipated to be part of the Roadway Construction. Bid quantities (if any Bid quantities are given) do not include pavement repair on the edge of roads damaged by your construction activities. Certain areas of the project may require that unavoidable damage occurs along roadway edges. If this is the case, at the discretion of the KYTC Engineer, payment may be made for pavement replacement at your bid unit price (or a price to be agreed on if a Bid Price does not exist). However, should pavement damage be caused by your willful disregard of reasonable construction technique and room existed for pipeline (or other items) placement without damage to the pavement, this **pavement shall be repaired to original or better condition at your sole expense**. The decision of the KYTC Engineer is final.

17. DRAIN CROSSINGS:

- 1) The following Specification will be followed, with no exceptions, to protect the aquatic life within the waters of the Commonwealth.
- 2) When making a drain crossing it shall be completely dry, with no visible flow. The drain shall be excavated to grade, pipe installed, backfill installed, backfill compacted by tread or other methods, to density satisfactory to the Engineer, and

cap installed if appropriate. The drain shall, in all cases, whether caused by your work in, nearby, parallel, or upstream, remain clear or sediment.

- 3) The required structures for silt control, as determined by the Engineer, shall be put in place to satisfy Paragraph 2 of this Section.

After this, if required by drain bottom conditions (see Paragraph 4 below) apply drain crossing concrete. After Application of concrete, apply re-vegetation measures to the drain crossing (see other sections of these specifications). If you do not have the ability to complete these operations within a twenty-four (24) hour period, **DO NOT BID THIS PROJECT.**

- 4) All drain crossings as noted on plans shall have a minimum cover of 36" as measured from the original channel floor. Bedding shall be the same as that for "open areas" shown on the "Standard" sheet with the following exceptions:
 - A. Begin at 6" above pipe and refill with removed material.
 - B. 6" from orig. channel floor use Class "C" concrete flush to top of rock.

If channel floor is not of a rocky nature, then this requirement may be waived at the discretion of the Engineer.

18. SURVEY REQUIREMENTS:

The Contractor is responsible for having the proper equipment and personnel adequately skilled and trained to perform all survey requirements. The Contractor is responsible for re-establishing, and establishing, all noted elevations. The Contractor is also responsible for establishing all horizontal locations throughout the project. The Contractor is responsible for comparison of horizontal and vertical location with that planned by running from established bench marks. The Contractor shall report any difference found between that planned and his established horizontal and vertical location to the Utility Relo. Engineer. The Contractor is responsible for determining any gross grade conflicts before he begins any line segment.

19. VALVES < 14" WATER:

All valves must be of ductile iron with bronze mountings, unless otherwise specified. Only makers of well-known and approved standings who have been making similar devices for a period of at least ten (10) years, prior to the bid date, will be considered. Also, maker shall be prepared to furnish through the bidder, within one (1) week after award is made, complete catalogues or other descriptive matter giving complete details and dimensions of valves they proposed to furnish.

All valves shall be provided with suitable operating devices and adapted for operation in the

position in which they are shown on the plans. All screw operated valves shall open by turning to the left.

All valves shall have mechanical joints both ends (unless noted on the Plans) and shall conform to A.W.W.A Specifications D-150, N.R.S. complying to A.W.W.A. C222 and ANSI A21.11.

All 4" through 12" Gate valves shall be resilient seat Gate valves, 250 psi max working pressure, 400 psi test pressure, Mueller A-2370-20, or approved equal. 3" and smaller Gate valves shall be double disc, parallel seat, bronze faces and disc rings with wedging mechanism simple and direct, Mueller A-2380-20, or approved equal. 1", 1-1/4", and 1-1/2" Gate valves shall be Mueller H-10914, bronze Gate valve with solid wedge and F.I.P. thread with appropriate fittings and hand wheel. All valves shall conform to the latest revision of "Specifications for Gate Valves for Ordinary Water Works Service," adopted by A.W.W.A.

20. VALVE BOXES:

Valve Boxes for 1" through eight (8") inch valves shall be telescope type with screw top, of extension length suitable for the cover/s noted on the plans. Ten (10") inch and twelve (12") inch valve boxes shall have an extension length ranging from eighteen (18") inches to twenty-four (24") inches. These minimum valve box lengths redefine depth of cover over pipe at valve locations. These requirements shall be maintained. Pieces of scrap PVC or ductile iron pipe with lid installed **shall not** be acceptable. Valve boxes shall be Tyler 461-S for ten (10") inch and twelve (12") inch valves, Tyler 562-S for one (1") inch through eight (8") inch valves and for 16" valves, the Sigma equivalent, or approved equal. All valve boxes shall have a minimum inside diameter of 4-1/4" for intersection with an arc base. **In high traffic areas only** all valve box lids shall be cast iron and manufactured by the same firm as the box and marked WATER. **In all other areas**, use plastic lid manufactured by Bingham & Taylor, NCUL5LWRDLT with locking tab, H20 load rated, or approved equal. All valve boxes shall have installed a valve box collar similar in all respects to the Cloud Company U-235 Valve Retainer Ring, alternate as shown on the detail sheet, or approved equal.

21. TYPE II, 3" BLOW-OFF:

Type II, 3" Blow-off's shall be self-draining, non-freeze, compression type with 2-1/4" main valve opening. Inlet connection shall be 3" Mechanical Joint. Outlet size shall be 2-1/2" NST. Blow-offs shall have 3" Ductile Iron Riser Pipe. Principal operating parts shall be Brass and be removable from the blow-off for servicing without excavation. Blow-offs shall be set in four cubic feet min. of crushed stone to allow for proper drainage. The blow-off shall be M&H Style 33 Post Type, or approved equal.

22. SMALL RIVER TEST STATION:

Small river test stations shall be installed where shown on the Drawings. Where undesignated test stations are shown, they shall be "small" river test stations. Detail for the small test station is shown on Sheet U4 of the Drawings. This river test station consists only of the materials herein specified. The mainline valve, ¾" service line, and other items necessary are paid at your bid unit price for those items. The river test station consists of a standard meter box and cover, Mid-States Meter style provided by Oldcastle, MS183010, with a 30" depth and 18" inside diameter. Meter yoke to be Mueller 1404-2 with non-approved Dual Check Valve feature replaced with an extra angle valve, 7" to 9" riser height with valve for 5/8" x 3/4" meter unit. Unit shall be copper. Service saddle shall be bronze, Mueller Single Strap H-13000 Series. Corp Stop to be Muller 15008. All the above materials shall be as specified or approved equal. The meter shall be Badger RecordAll, Model No. M25, or approved equal, with bronze case, suitable for operation with remote meter reading system. Meter shall be designed to permit the use of both a straight reading, environmentally sealed local register and remote reading electronic register. The registration reading shall be US Gallons. The register shall not be in contact with the water being measured. The transmitter/register devices shall be designed to permit removal and exchange without the removal of the meter from the service installation or interruption of service water supply. The transmitter shall use the most current and up-to-date battery/s available from the manufacturer as a power source and said battery/s shall be guaranteed for a minimum of ten (10) years from initiation of operation. **The meter date of manufacture shall be no older than 6 (six) months prior to installation.** The transmitter shall be guaranteed for a minimum of twenty (20) years.

This unit shall be capable of providing optional leak detection when no two hour window of no usage within a 24 hour period is detected. It shall also be capable of tamper detection such as a cut wire. The meters shall be equipped with optional data profiling capability. The meters and meter reading software shall be fully compatible with the existing City of Hazard meter reading software and hardware and shall be compatible with existing City of Hazard billing software. The Radio Read equipment shall be Badger Orion, or Engineer approved equal, equipped w/ radio read as previously specified, suitable for a maximum continuous flow rate of 25 gpm.

23. ALL WATER TIES COMPLETE:

The drawings indicate where tie-ins to existing waterlines are to be made, and should give an indication of the work and materials involved to make the same. These ties are listed below. Additionally listed is the plan sheet where these tie-ins occur.

WATER TIE #	DESCRIPTION	SHOWN ON
W0+00,	Tie to 6", Fittings as Req.	U2
W2+04,	Tie to 6", Fittings as Req.	U2

24. GEOTEXTILE

SCOPE

This work shall consist of furnishing and placing geotextile beneath ditches, around subsurface drains, and/or other applications as directed by the ENGINEER.

MATERIALS

Geotextile used on the project shall be a non-woven, polyester or polypropylene fabric meeting the following minimum physical properties.

Minimum Physical Properties
Geotextile

Property	Value
Burst Strength	300 psi
Grab Strength	160 lbs.
Permeability	3×10^{-1} cm/sec
Apparent Opening Size	0.21 - 0.15

The CONTRACTOR shall submit, for each roll of geotextile material delivered, a certification that the delivered products meet or exceed the values specified in this section, and all supporting data.

INSTALLATION

The surface to receive geotextile and aggregate shall be prepared to a relatively smooth condition free of obstructions, debris, or sharp objects that may puncture the fabric. The fabric shall be placed with long dimension parallel to the flow line and shall be laid smooth and free of tension, stress, folds, wrinkles, or creases. If more than one strip is necessary, the strips

shall overlap (longitudinally) a minimum of 24 inches. Transverse overlaps shall be a minimum of 18 inches and shall be placed so the upstream strip overlaps the downstream strip. Fastener pins shall be installed through the midpoint of the lap and at any other locations as necessary to prevent slippage of the geotextile.

The geotextile shall not be exposed to sunlight for a period greater than two weeks. If the fabric is damaged during construction, the torn or punctured section shall be repaired by placing a piece of fabric that is large enough to cover the damaged area and meet the overlap requirement.

The geotextile shall be protected from damage due to the placement of the channel lining by limiting the height of drop of the material to no greater than three (3) feet, or by placing a cushioning layer of sand on top of the fabric before dumping the material, at the CONTRACTOR'S option. Fabric shall not be placed until it can be covered with stone promptly to avoid damage from water, wind, and deterioration from undue exposure. The CONTRACTOR shall demonstrate that the placement technique will not damage the fabric.

MEASUREMENT AND PAYMENT

No payment will be made for the geotextile as it considered incidental to all other items of work.

25. LINE & VALVE MARKERS:

At the locations noted on the drawings, line and valve markers shall be placed for water facilities. The markers shall be Carsonite Composites CRM3-066-08 (blue) with white graphics for water, or Engineer approved equal. All markers shall be equipped with optional anchor barb.

26. ONE YEAR GUARANTEE:

The Contractor, and through him each subcontractor, in accepting the Contract for this construction, or respective portions of the construction covered by these Plans and Specifications, does hereby agree to replace and make good, without expense to the KYTC or to the City of Hazard, any work or material which may be found to be defective within one year from the date of the final certificate of payment to said Contractor. The deterioration due to ordinary use and wear and failure of materials furnished by the Owner (or KYTC) are excepted from this guarantee.

This guarantee shall include damage done by settlement of backfills and filling regrade elevations, such damage and sinking of fills being considered as defective workmanship. This shall also include paint failure.

The Contractor shall reimburse the Owner for cost of damage, if any, as well as cost of replacing defective materials or workmanship. If replacements are not made within ten (10) days in case of materials, then Owner may make replacements and charge cost of same to the Contractor or his bondsman.

CR 1150, KYTC ITEM NO. 10-8915.00
WATER UTILITY RELOCATION

N O T I C E

**DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NATIONWIDE PERMIT AUTHORIZATION
KENTUCKY DIVISION OF WATER 401 WQC**

PROJECT: Perry County, Item No. 10-8913
KY 1166 Bridge replacement over Maces Creek

The Section 404 & 401 activities for this project have been previously permitted under the authority of the Department of the Army Nationwide Permit No. 14 “Linear Transportation Projects” & Division of Water General Water Quality Certification. In order for these authorizations to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Permit & General WQC in a conspicuous location at the project site for the duration of construction and comply with the general conditions as required.

Station 204+10 to
Station 204+50
Sheet: R5

Chanel change to an **ephemeral** stream a U.T. to Maces Creek will have impacts below the normal high water mark due to realignment of KY 1166 and Viperville Road. The estimated area of impact is **50 linear feet** and **0.001 acres**.
Lat 37.180752, Long -83.149285

Station 205+25
Sheet: R5

Bridge Replacement on KY 1166 over Right Fork Maces Creek. The **perennial** stream will have impacts below the normal high water mark. The estimated area of impact is **70 linear feet** and **0.05 acres**.
Lat 37.180752, Long -83.149285

This project involves work near and/or within Jurisdictional Waters of the United States as defined by the United States Army Corps of Engineers and therefore requires a Nationwide 14 General 404 Permit. The Division of Water certified this General Permit with several conditions (See attached). One that should be brought to your attention is regarding the use of heavy equipment in the stream channel. If there is need to cross the stream channel with heavy equipment or conduct work from within the stream channel a working platform or temporary crossing is authorized. This should be constructed with clean rock and sufficient pipe to allow stream flow to continue unimpeded (see attached typical drawing).

In order for this authorization to be valid, the attached conditions must be followed. The

contractor shall post a copy of this Nationwide Approval 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 Division of Environmental Analysis. If such changes necessitate further permitting then the contractor will be responsible for applying to the Army Corps of Engineers and the Kentucky Division of Water (KDOW). A copy of any request to the Corps of Engineers or the KDOW 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.



MATTHEW G. BEVIN
GOVERNOR

CHARLES G. SNAVELY
SECRETARY

**ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION**

R. BRUCE SCOTT
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

**General Certification--Nationwide Permit # 14
Linear Transportation Projects**

This General Certification is issued March 19, 2017, 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.

For this and all nationwide permits, the definition of surface water is as per 401 KAR 10:001 Chapter 10, Section 1(80): Surface Waters means those waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered to be surface waters of the commonwealth.

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 10, 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. The activity will not occur within surface waters of the Commonwealth identified by the Kentucky Division of Water as Outstanding State or National Resource Water, Cold Water Aquatic Habitat, or Exceptional Waters.
2. The activity will not occur within surface waters of the Commonwealth identified as perpetually-protected (e.g. deed restriction, conservation easement) mitigation sites.
3. The activity will impact less than 1/2 acre of wetland/marsh.

General Certification--Nationwide Permit # 14
Linear Transportation Projects
Page 2

4. The activity will impact less than 300 linear feet of surface waters of the Commonwealth. Stream realignment greater than 100 feet and in-stream stormwater detention/retention basins are not covered under this general water quality certification.
5. For complete linear transportation projects, all impacts shall not exceed a cumulative length of 500 linear feet within each Hydrologic Unit Code (HUC) 14.
6. Any crossings must be constructed in a manner that does not impede natural water flow.
7. Stream impacts covered under this General Water Quality Certification 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 (KWQP).
8. The Kentucky Division of Water may require submission of a formal application for an individual certification for any project if the project has been determined to likely have a significant adverse effect upon water quality or degrade the waters of the Commonwealth so that existing uses of the water body or downstream waters are precluded.
9. Activities that do not meet the conditions of this General Water Quality Certification require an Individual Section 401 Water Quality Certification.
10. Activities qualifying for coverage under this General Water Quality Certification are subject to the following conditions:
 - Projects requiring in-stream stormwater detention/retention basins shall require individual water quality certifications.
 - Erosion and sedimentation pollution control plans and Best Management Practices must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur (401 KAR 10:031 Section 2 and KRS 224.70-100).
 - Sediment and erosion control measures, such as check-dams constructed of any material, silt fencing, hay bales, etc., shall not be placed within surface waters of the Commonwealth, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in such a manner that may result in instability of streams that are adjacent to,

General Certification--Nationwide Permit # 14
Linear Transportation Projects
Page 3

upstream, or downstream of the structures. All sediment and erosion control devices shall be removed and the natural grade restored within the completion timeline of the activities.

- Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse.
- Removal of riparian vegetation in the utility line right-of-way shall be limited to that necessary for equipment access.
- To the maximum extent practicable, all in-stream work under this certification shall be performed under low-flow conditions.
- 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 in which 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 rip-rap is utilized, it should 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 such work will be done.
- 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 KDOW 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.

2017 Nationwide Permits Regional and Permit-Specific Conditions COMMONWEALTH OF KENTUCKY

These regional conditions are in addition to, but do not supersede, the requirements in the Federal Register (Volume 82, No. 4 of January 6, 2017, pp 1860).

Notifications for all Nationwide Permits (NWP) shall be in accordance with General Condition No. 32.

1. For activities that would impact Outstanding State or National Resource Waters (OSNRWs), Exceptional Waters (EWs), Coldwater Aquatic Habitat Waters (CAHs) under the Endangered Species Act for the NWP listed below, a Pre-Construction Notification (PCN) will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWP (Section 404 activities), for impacts to these waters.

NWP 3 (Maintenance)

NWP 4 (Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities)

NWP 5 (Scientific Measurement Devices)

NWP 6 (Survey Activities)

NWP 7 (Outfall Structures and Associated Intake Structures)

NWP 12 (Utility Line Activities)

NWP 13 (Bank Stabilization)

NWP 14 (Linear Transportation Projects)

NWP 15 (U.S. Coast Guard Approved Bridges)

NWP 16 (Return Water from Upland Contained Disposal Areas)

NWP 17 (Hydropower Projects)

NWP 18 (Minor Discharges)

NWP 19 (Minor Dredging)

NWP 20 (Response Operations for Oil or Hazardous Substances)

NWP 21 (Surface Coal Mining Activities)

NWP 22 (Removal of Vessels)

NWP 23 (Approved Categorical Exclusions)

NWP 25 (Structural Discharges)

NWP 27 (Aquatic Habitat Restoration, Establishment, and Enhancement Activities)

NWP 29 (Residential Developments)

NWP 30 (Moist Soil Management for Wildlife)

NWP 31 (Maintenance of Existing Flood Control Facilities)

NWP 32 (Completed Enforcement Actions)

NWP 33 (Temporary Construction, Access, and Dewatering)

NWP 34 (Cranberry Production Activities)

NWP 36 (Boat Ramps)

NWP 37 (Emergency Watershed Protection and Rehabilitation)

NWP 38 (Cleanup of Hazardous and Toxic Waste)

NWP 39 (Commercial and Institutional Developments)

NWP 40 (Agricultural Activities)

- NWP 41 (Reshaping Existing Drainage Ditches)
- NWP 42 (Recreational Facilities)
- NWP 43 (Stormwater Management Facilities)
- NWP 44 (Mining Activities)
- NWP 45 (Repair of Uplands Damaged by Discrete Events)
- NWP 46 (Discharges in Ditches)
- NWP 48 (Commercial Shellfish Aquaculture Activities)
- NWP 49 (Coal Remining Activities)
- NWP 50 (Underground Coal Mining Activities)
- NWP 51 (Land-Based Renewable Energy Generation Facilities)
- NWP 52 (Water-Based Renewable Energy Generation Pilot Projects)
- NWP 53 (Removal of Low-Head Dams)
- NWP 54 (Living Shorelines)

2. In addition to the notification and agency coordination requirements in the NWPs, for impacts greater than 0.25 acres in all “waters of the U.S.” for the NWPs listed below, a PCN will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs:

- NWP 3 (Maintenance)
- NWP 7 (Outfall Structures and Associated Intake Structures)
- NWP 12 (Utility Line Activities)
- NWP 14 (Linear Transportation Projects)
- NWP 29 (Residential Developments)
- NWP 39 (Commercial and Institutional Developments)
- NWP 40 (Agricultural Activities)
- NWP 41 (Reshaping Existing Drainage Ditches)
- NWP 42 (Recreational Facilities)
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- NWP 44 (Mining Activities)
- NWP 51 (Land-Based Renewable Energy Generation Facilities)
- NWP 52 (Water-Based Renewable Energy Generation Pilot Projects)
- NWP 53 (Removal of Low-Head Dams)

3. For activities in all “waters of the U.S.” for the NWPs listed below, a PCN will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs:

- NWP 21 (Surface Coal Mining Activities)
- NWP 27 (Aquatic Habitat Restoration, Establishment & Enhancement Activities)
- NWP 49 (Coal Remining Activities)
- NWP 50 (Underground Coal Mining Activities)

4. Nationwide Permit No. 14 – Linear Transportation Projects.

- (a) New road alignments or realignments are limited to a permanent loss of 500 linear feet of intermittent or perennial stream length at each crossing. Road crossings with permanent losses greater than 500 linear feet of intermittent or perennial stream associated with new

alignments or realignments will be evaluated as an individual permit (i.e., a Letter of Permission or as a Standard Individual Permit).

- (b) In addition to the notification requirements contained in NWP 14, the permittee must submit a PCN to the district engineer prior to commencing the activity for the permanent loss of greater than 300 feet of ephemeral, intermittent and perennial stream of all "waters of the U.S." (See General Condition 32 and the definition of "loss of waters of the United States" in the Nationwide Permits for further information.)
5. Notification in accordance with General Condition 32 is required to the Corps for all activities which are subject to jurisdiction under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
6. All applications are required as both a paper copy and in an electronic media format, including electronic mail or compact disc.
7. For all activities, the applicant shall review the U.S. Fish and Wildlife Service's IPaC website: <http://ecos.fws.gov/ipac> to determine if the activity might affect threatened and/or endangered species or designated critical habitat. If federally-listed species or designated critical habitat are identified, a PCN in accordance with General Condition 18 and 32 would be triggered and the official species list generated from the IPaC website must be submitted with the PCN.

Further information:

Outstanding State or National Resource Water (OSNRWs), Exceptional Waters (EWs), and Coldwater Aquatic Habitat Waters (CAHs) are waters designated by the Commonwealth of Kentucky, Natural Resources and Environmental Protection Cabinet. The list can be found at the following link: <http://eppcapp.ky.gov/spwaters/>

Information on Pre-Construction Notification (PCN) can be found at NWP General Condition No. 32 in the Federal Register (Volume 81, No. 105 of June 1, 2017, pp 35211).

COORDINATING RESOURCE AGENCIES

Chief, Wetlands Regulatory Section
U.S. Environmental Protection Agency
Region IV
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303

Supervisor
U.S. Fish & Wildlife Service
JC Watts Federal Building, Room 265
330 West Broadway
Frankfort, Kentucky 40601

Supervisor
401 Water Quality Certification
Kentucky Division of Water
300 Sower Boulevard, 3rd Floor
Frankfort, KY 40601

Commissioner
Department of Fish and Wildlife Resources
#1 Game Farm Road
Frankfort, Kentucky 40601

Executive Director and State Historic Preservation Officer
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

**ADDITIONAL COORDINATING RESOURCE AGENCY
FOR NWPS 21, 49, AND 50**

Kentucky Department for Natural Resources
Division of Mine Permits
300 Sower Boulevard
Frankfort, KY 40601

Terms for Nationwide Permit No. 14
Linear Transportation Projects

Activities required for crossings of waters of the United States associated with 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, including the use of temporary mats, 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.

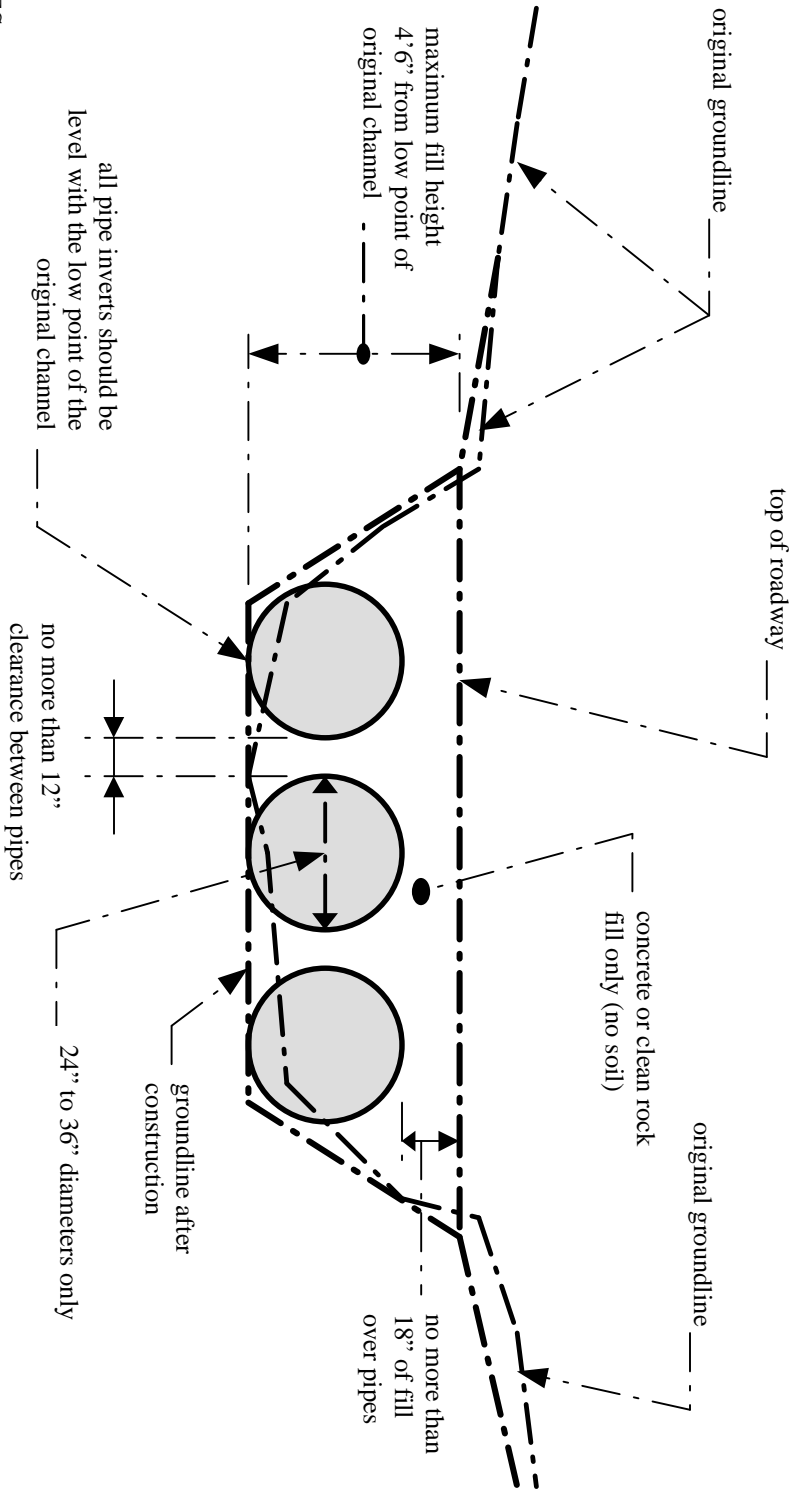
Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: For linear transportation projects crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Linear transportation projects must comply with 33 CFR 330.6(d).

Note 2: 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).

Note 3: For NWP 14 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

ATTACHMENT 1



NOTES:

1. This is a conceptual drawing. The number and size of pipes and other details will vary depending on specific site conditions.
2. The pipes and backfill must be contained within the stream channel as shown above. During the construction of the approaches and access roadway across the floodplain, unstable and unconsolidated materials unsuitable for roadways may be excavated and replaced with riprap, crushed stone, or other stable road construction materials. This may only be done, however, with the following provisions: (1) the disposal of excess, unconsolidated materials thus excavated must be outside of the floodplain and (2) the finished surface of the completed road may be no more than three inches (3") above the pre-construction surface of the floodplain at any point beyond the top of banks.

LOW-WATER CROSSING

STANDARD DRAWING
Not to Scale

N O T I C E

**DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NATIONWIDE PERMIT AUTHORIZATION
KENTUCKY DIVISION OF WATER 401 WQC**

PROJECT: Perry County, Item No. 10-8915
Bark Camp Branch Road Bridge replacement over Blair
Fork

The Section 404 & 401 activities for this project have been previously permitted under the authority of the Department of the Army Nationwide Permit No. 14 “Linear Transportation Projects” & Division of Water General Water Quality Certification. In order for these authorizations to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Permit & General WQC in a conspicuous location at the project site for the duration of construction and comply with the general conditions as required.

Station 50+89
Sheet: R3

Bridge Replacement on KY Bark Camp Branch over Blair Fork. The **perennial** stream will have impacts below the normal high water mark. The estimated area of impact is **23 linear feet** and **0.02** acres.
Lat 37.029044, Long -83.087556

Temporary Impacts:

Station 50+40 to
Station 51+45
Sheet: R3

Construction of a temporary diversion will result in temporary crossing and impacts to two **perennials**. The estimated area of impact is **70 linear feet** and **0.02** acres to Ax Handle Branch and **40 linear feet** and **0.01** acres to Blair Fork.
Lat 37.028931, Long -83.087419

This project involves work near and/or within Jurisdictional Waters of the United States as defined by the United States Army Corps of Engineers and therefore requires a Nationwide 14 General 404 Permit. The Division of Water certified this General Permit with several conditions (See attached). One that should be brought to your attention is regarding the use of heavy equipment in the stream channel. If there is need to cross the stream channel with heavy equipment or conduct work from within the stream channel a working platform or temporary crossing is authorized. This should be constructed with clean rock and sufficient pipe to allow stream flow to continue unimpeded (see attached typical drawing).

In order for this authorization to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Approval 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 Division of Environmental Analysis. If such changes necessitate further permitting then the contractor will be responsible for applying to the Army Corps of Engineers and the Kentucky Division of Water (KDOW). A copy of any request to the Corps of Engineers or the KDOW 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.



MATTHEW G. BEVIN
GOVERNOR

CHARLES G. SNAVELY
SECRETARY

**ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION**

R. BRUCE SCOTT
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

General Certification--Nationwide Permit # 14 Linear Transportation Projects

This General Certification is issued March 19, 2017, 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.

For this and all nationwide permits, the definition of surface water is as per 401 KAR 10:001 Chapter 10, Section 1(80): Surface Waters means those waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered to be surface waters of the commonwealth.

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 10, 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. The activity will not occur within surface waters of the Commonwealth identified by the Kentucky Division of Water as Outstanding State or National Resource Water, Cold Water Aquatic Habitat, or Exceptional Waters.
2. The activity will not occur within surface waters of the Commonwealth identified as perpetually-protected (e.g. deed restriction, conservation easement) mitigation sites.
3. The activity will impact less than 1/2 acre of wetland/marsh.

General Certification--Nationwide Permit # 14
Linear Transportation Projects
Page 2

4. The activity will impact less than 300 linear feet of surface waters of the Commonwealth. Stream realignment greater than 100 feet and in-stream stormwater detention/retention basins are not covered under this general water quality certification.
5. For complete linear transportation projects, all impacts shall not exceed a cumulative length of 500 linear feet within each Hydrologic Unit Code (HUC) 14.
6. Any crossings must be constructed in a manner that does not impede natural water flow.
7. Stream impacts covered under this General Water Quality Certification 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 (KWQP).
8. The Kentucky Division of Water may require submission of a formal application for an individual certification for any project if the project has been determined to likely have a significant adverse effect upon water quality or degrade the waters of the Commonwealth so that existing uses of the water body or downstream waters are precluded.
9. Activities that do not meet the conditions of this General Water Quality Certification require an Individual Section 401 Water Quality Certification.
10. Activities qualifying for coverage under this General Water Quality Certification are subject to the following conditions:
 - Projects requiring in-stream stormwater detention/retention basins shall require individual water quality certifications.
 - Erosion and sedimentation pollution control plans and Best Management Practices must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur (401 KAR 10:031 Section 2 and KRS 224.70-100).
 - Sediment and erosion control measures, such as check-dams constructed of any material, silt fencing, hay bales, etc., shall not be placed within surface waters of the Commonwealth, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in such a manner that may result in instability of streams that are adjacent to,

General Certification--Nationwide Permit # 14
Linear Transportation Projects
Page 3

upstream, or downstream of the structures. All sediment and erosion control devices shall be removed and the natural grade restored within the completion timeline of the activities.

- Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse.
- Removal of riparian vegetation in the utility line right-of-way shall be limited to that necessary for equipment access.
- To the maximum extent practicable, all in-stream work under this certification shall be performed under low-flow conditions.
- 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 in which 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 rip-rap is utilized, it should 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 such work will be done.
- 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 KDOW 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.

2017 Nationwide Permits Regional and Permit-Specific Conditions COMMONWEALTH OF KENTUCKY

These regional conditions are in addition to, but do not supersede, the requirements in the Federal Register (Volume 82, No. 4 of January 6, 2017, pp 1860).

Notifications for all Nationwide Permits (NWP) shall be in accordance with General Condition No. 32.

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NWP 3 (Maintenance)

NWP 4 (Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities)

NWP 5 (Scientific Measurement Devices)

NWP 6 (Survey Activities)

NWP 7 (Outfall Structures and Associated Intake Structures)

NWP 12 (Utility Line Activities)

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- NWP 52 (Water-Based Renewable Energy Generation Pilot Projects)
- NWP 53 (Removal of Low-Head Dams)
- NWP 54 (Living Shorelines)

2. In addition to the notification and agency coordination requirements in the NWPs, for impacts greater than 0.25 acres in all “waters of the U.S.” for the NWPs listed below, a PCN will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs:

- NWP 3 (Maintenance)
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3. For activities in all “waters of the U.S.” for the NWPs listed below, a PCN will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs:

- NWP 21 (Surface Coal Mining Activities)
- NWP 27 (Aquatic Habitat Restoration, Establishment & Enhancement Activities)
- NWP 49 (Coal Remining Activities)
- NWP 50 (Underground Coal Mining Activities)

4. Nationwide Permit No. 14 – Linear Transportation Projects.

- (a) New road alignments or realignments are limited to a permanent loss of 500 linear feet of intermittent or perennial stream length at each crossing. Road crossings with permanent losses greater than 500 linear feet of intermittent or perennial stream associated with new

alignments or realignments will be evaluated as an individual permit (i.e., a Letter of Permission or as a Standard Individual Permit).

- (b) In addition to the notification requirements contained in NWP 14, the permittee must submit a PCN to the district engineer prior to commencing the activity for the permanent loss of greater than 300 feet of ephemeral, intermittent and perennial stream of all "waters of the U.S." (See General Condition 32 and the definition of "loss of waters of the United States" in the Nationwide Permits for further information.)
5. Notification in accordance with General Condition 32 is required to the Corps for all activities which are subject to jurisdiction under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
6. All applications are required as both a paper copy and in an electronic media format, including electronic mail or compact disc.
7. For all activities, the applicant shall review the U.S. Fish and Wildlife Service's IPaC website: <http://ecos.fws.gov/ipac> to determine if the activity might affect threatened and/or endangered species or designated critical habitat. If federally-listed species or designated critical habitat are identified, a PCN in accordance with General Condition 18 and 32 would be triggered and the official species list generated from the IPaC website must be submitted with the PCN.

Further information:

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COORDINATING RESOURCE AGENCIES

Chief, Wetlands Regulatory Section
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Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303

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U.S. Fish & Wildlife Service
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Executive Director and State Historic Preservation Officer
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

**ADDITIONAL COORDINATING RESOURCE AGENCY
FOR NWPS 21, 49, AND 50**

Kentucky Department for Natural Resources
Division of Mine Permits
300 Sower Boulevard
Frankfort, KY 40601

Terms for Nationwide Permit No. 14
Linear Transportation Projects

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This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, 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.

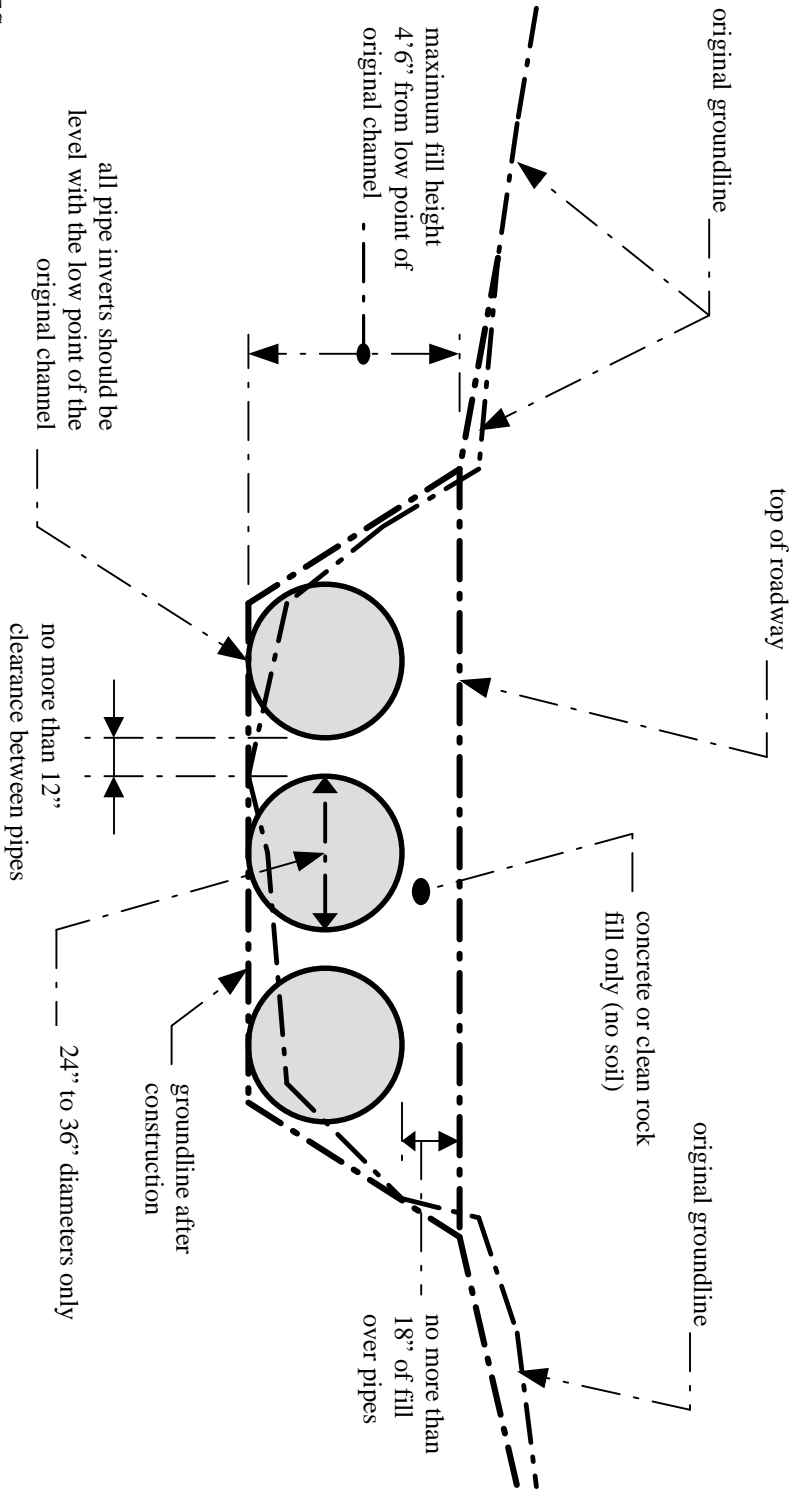
Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: For linear transportation projects crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Linear transportation projects must comply with 33 CFR 330.6(d).

Note 2: 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).

Note 3: For NWP 14 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

ATTACHMENT 1



NOTES:

1. This is a conceptual drawing. The number and size of pipes and other details will vary depending on specific site conditions.
2. The pipes and backfill must be contained within the stream channel as shown above. During the construction of the approaches and access roadway across the floodplain, unstable and unconsolidated materials unsuitable for roadways may be excavated and replaced with riprap, crushed stone, or other stable road construction materials. This may only be done, however, with the following provisions: (1) the disposal of excess, unconsolidated materials thus excavated must be outside of the floodplain and (2) the finished surface of the completed road may be no more than three inches (3") above the pre-construction surface of the floodplain at any point beyond the top of banks.

LOW-WATER CROSSING

STANDARD DRAWING
Not to Scale

KyTC BMP Plan for Project PCN ## - #####



Kentucky Transportation Cabinet

Highway District 10

And

_____ (2), Construction

Kentucky Pollutant Discharge Elimination System

Permit KYR10

Best Management Practices (BMP) plan

Groundwater protection plan

For Highway Construction Activities

For

Replace Bridge on KY 1166 over Maces Creek

Project: PCN ## - #####

KyTC BMP Plan for Project PCN ## -

Project information

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

1. Owner – Kentucky Transportation Cabinet, District _10_
2. Resident Engineer: (2)
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) KY 1166 over Maces Creek
6. Latitude/Longitude (project mid-point) 37°10'51", -83°08'57" (1)
7. County (project mid-point) Perry County. (1)
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)
Replacing bridge on KY 1166 over Maces Creek.
2. Order of major soil disturbing activities (2) and (3)
3. Projected volume of material to be moved
5,770 cubic yards to be excavated and 1,019 cubic yard to be filled.

KyTC BMP Plan for Project PCN ## -

4. Estimate of total project area (acres) 1.6 acre
5. Estimate of area to be disturbed (acres) 1.6 acre
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.
7. Data describing existing soil condition (2)
8. Data describing existing discharge water quality (if any) (1) & (2)
9. Receiving water name **Maces Creek and Right Fork of Maces Creek**
10. TMDLs and Pollutants of Concern in Receiving Waters: (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

KyTC BMP Plan for Project PCN ## -

(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. All DDA’s will have adequate BMP’s in place before being disturbed.

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.

KyTC BMP Plan for Project PCN ## -

- 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 : (1)

KyTC BMP Plan for Project PCN ## -

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.

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.

2. 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.

3. 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

KyTC BMP Plan for Project PCN ## -

- 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.

KyTC BMP Plan for Project PCN ## -

➤ **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 contact 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

KyTC BMP Plan for Project PCN ## -

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. (1)

E. 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)

F. 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 successfully completed the KEPSC-RI course as required by Section 213.02.02 of the Standard Specifications for Road and Bridge Construction, current edition.
- 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

KyTC BMP Plan for Project PCN ## -

- 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.

G. 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 from 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.

H. Groundwater Protection Plan (3)

KyTC BMP Plan for Project PCN ## - #####

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;

KyTC BMP Plan for Project PCN ## - #####

- (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.)

SPECIAL NOTE

Filing of eNOI for KPDES Construction Stormwater Permit

County: Perry
Item No.: 10-8913.00

Route: KY 1166
KDOW Submittal ID: 160791

Project Description: Construct bridge on KY 1166 over Right Fork Maces Creek.

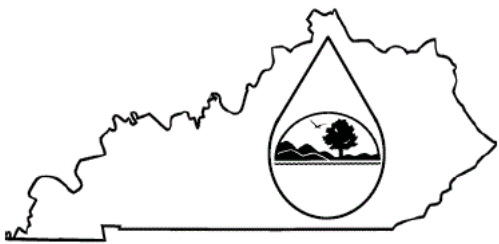
A Notice of Intent for obtaining coverage under the Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Stormwater Discharges Associated with Construction Activities (KYR10) has been drafted, copy of which is attached. Upon award, the Contractor will be identified in Section III of the form as the “Building Contractor” and it will be submitted for approval to the Kentucky Division of Water. The Contractor shall be responsible for advancing the work in a manner that is compliant with all applicable and appropriate KYTC specifications for sediment and erosion control as well as meeting the requirements of the KYR10 permit and the KDOW.

Upon award of the project, the appropriate District Project Delivery & Preservation Branch is Responsible for providing the eNOI preparer (Darren Back) with the Contractor’s name, address and CID #. The project eNOI preparer is responsible for completing and submitting the eNOI document.

The eNOI preparer will notify the appropriate Project Delivery & Preservation Branch when the NOI is approved. The approved NOI will be placed in Site Manager. This will need to be accomplished prior to any on-site work.

This note conforms with the Joint Design (05-2017)/Construction (02-2017) Memorandum issued on March 28, 2017.

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

	<h2 style="margin:0;">KENTUCKY POLLUTION DISCHARGE</h2> <h3 style="margin:0;">ELIMINATION SYSTEM (KPDES)</h3> <p style="margin:0;">Notice of Intent (NOI) for coverage of Storm Water Discharge Associated with Construction Activities Under the KPDES Storm Water General Permit KYR100000</p> <p style="margin:0;">Click here for Instructions (Controls/KPDES_FormKYR10_Instructions.htm)</p> <p style="margin:0;">Click here to obtain information and a copy of the KPDES General Permit. (http://dep.ky.gov/formslibrary/Documents/KYR10PermitPage.pdf)</p> <p style="margin:0;">(*) indicates a required field; (✓) indicates a field may be required based on user input or is an optionally required field</p>
---	---

Reason for Submittal:(*) <input type="text" value="Application for New Permit Coverage"/>	Agency Interest ID: <input type="text" value="Agency Interest ID"/>	Permit Number:(✓) <input type="text" value="KPDES Permit Number"/>
--	--	---

If change to existing permit coverage is requested, describe the changes for which modification of coverage is being sought:(✓)

ELIGIBILITY:
Stormwater discharges associated with construction activities disturbing individually one (1) acre or more, including, in the case of a common plan of development, contiguous construction activities that cumulatively equal one (1) acre or more of disturbance.

EXCLUSIONS:
The following are excluded from coverage under this general permit:
 1) Are conducted at or on properties that have obtained an individual KPDES permit for the discharge of other wastewaters which requires the development and implementation of a Best Management Practices (BMP) plan;
 2) Any operation that the DOW determines an individual permit would better address the discharges from that operation;
 3) Any project that discharges to an Impaired Water listed in the most recent Integrated Report, §305(b) as impaired for sediment and for which an approved TMDL has been developed.

SECTION I -- FACILITY OPERATOR INFORMATION (PERMITTEE)

Company Name:(✓) <input type="text" value="KYTC District 10"/>	First Name:(✓) <input type="text" value="Corbett"/>	M.I.: <input type="text" value="R"/>	Last Name:(✓) <input type="text" value="Caudill"/>
Mailing Address:(*) <input type="text" value="PO Box 621"/>	City:(*) <input type="text" value="Jackson"/>	State:(*) <input type="text" value="Kentucky"/>	Zip:(*) <input type="text" value="41339"/>
eMail Address:(*) <input type="text" value="corbett.caudill@ky.gov"/>	Business Phone:(*) <input type="text" value="6066668841"/>	Alternate Phone: <input type="text" value="Phone"/>	

SECTION II -- GENERAL SITE LOCATION INFORMATION

Project Name:(*) <input type="text" value="Replace bridge on KY 1166 over Maces Creek"/>	Status of Owner/Operator(*) <input type="text" value="State Government"/>	SIC Code(*) <input type="text" value="1611 Highway and Street Const"/>
Company Name:(✓) <input type="text" value="KYTC District 10"/>	First Name:(✓) <input type="text" value="Corbett"/>	M.I.: <input type="text" value="R"/>
Last Name:(✓) <input type="text" value="Caudill"/>		
Site Physical Address:(*) <input type="text" value="KY 1166 over Maces Creek"/>		
City:(*) <input type="text" value="Viper"/>	State:(*) <input type="text" value="Kentucky"/>	Zip:(*) <input type="text" value="41774"/>
County:(*) <input type="text" value="Perry"/>	Latitude(decimal degrees)(*)DMS to DD Converter (https://www.fcc.gov/media/radio/dms-decimal) <input type="text" value="37.180833"/>	Longitude(decimal degrees)(*) <input type="text" value="-83.149167"/>

SECTION III -- SPECIFIC SITE ACTIVITY INFORMATION

Project Description:(*)

a. For single projects provide the following information

Is a Clean Water Act 401 Water Quality Certification required?:(*)	Yes
--	-----

SECTION VII -- NOI PREPARER INFORMATION

First Name:(*) Darren	M.I.: MI	Last Name:(*) Back	Company Name:(*) KYTC District 10	
Mailing Address:(*) P.O. Box 621	City:(*) Jackson	State:(*) Kentucky	Zip:(*) 41339	
eMail Address:(*) darren.back@ky.gov	Business Phone:(*) 6066668841	Alternate Phone: Phone		

SECTION VIII -- ATTACHMENTS

Facility Location Map:(*)	<input type="button" value="Upload file"/>
Supplemental Information:	<input type="button" value="Upload file"/>

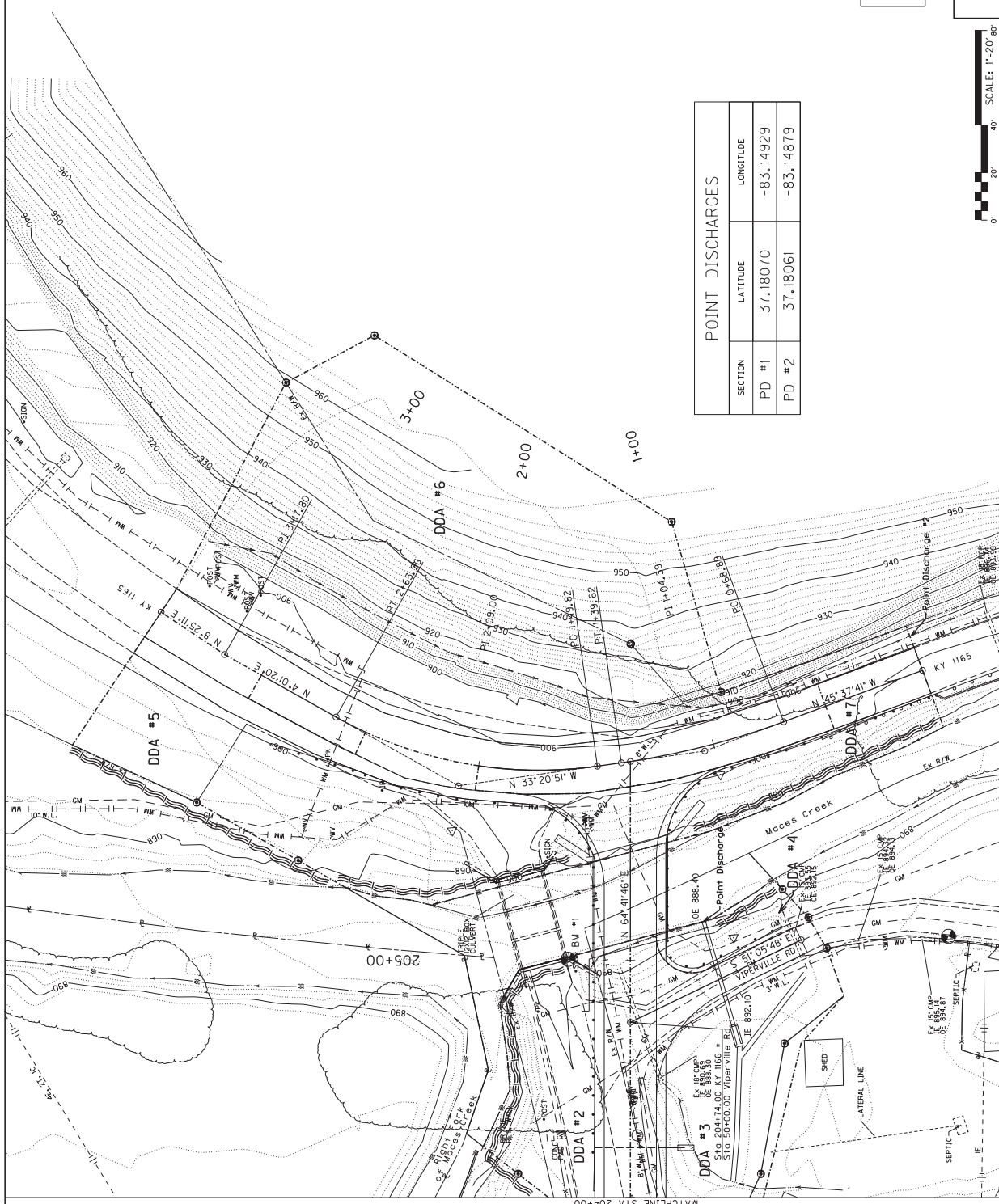
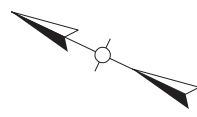
SECTION IX -- CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information 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.

Signature:(*) Corbett R Caudill	Title:(*) Executive Director		
First Name:(*) Corbett	M.I.: R	Last Name:(*) Caudill	
eMail Address:(*) corbett.caudill@ky.gov	Business Phone:(*) 6066668841	Alternate Phone: Phone	Signature Date:(*) 7/11/2019

<input type="button" value="Click to Save Values for Future Retrieval"/>	<input type="button" value="Click to Submit to EEC"/>
--	---

COUNTY OF	ITEM NO.	SHEET
PERRY	10-893.00	8/11



POINT DISCHARGES		
SECTION	LATITUDE	LONGITUDE
PD #1	37.18070	-83.14929
PD #2	37.18061	-83.14879

HAZARDOUS OR FLAMMABLE
CAUTION MATERIALS - GAS LINES



KY 1166
ENVI EXHIBIT
STA 204+00 TO STA 205+73.38

MATCHLINE STA 204+00

DDA #3
 Ex. 15' Cup
 15' x 15' x 3' 6"
 Sta. 204+74.00 KY 1166 =
 Sta. 50+00.00 Viperville Rd

DDA #4
 Ex. 15' Cup
 15' x 15' x 3' 6"
 Sta. 204+74.00 KY 1166 =
 Sta. 50+00.00 Viperville Rd

DDA #5
 Ex. 15' Cup
 15' x 15' x 3' 6"
 Sta. 204+74.00 KY 1166 =
 Sta. 50+00.00 Viperville Rd

DDA #6
 Ex. 15' Cup
 15' x 15' x 3' 6"
 Sta. 204+74.00 KY 1166 =
 Sta. 50+00.00 Viperville Rd

DDA #2
 Ex. 15' Cup
 15' x 15' x 3' 6"
 Sta. 204+74.00 KY 1166 =
 Sta. 50+00.00 Viperville Rd

FILE NAME: C:\PWORK\DRREN\BARK\020939\01300C.DGN
 DATE PLOTTED: July 10, 2019
 USER: Derr, Beck

KyTC BMP Plan for Project PCN ## - #####



Kentucky Transportation Cabinet

Highway District 10

And

_____ **(2), Construction**

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

Groundwater protection plan

For Highway Construction Activities

For

**[Replace Bridge on CR 1150 over Leatherwood
Creek, Perry County]**

Project: PCN ## - #####

KyTC BMP Plan for Project PCN ## -

Project information

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

1. Owner – Kentucky Transportation Cabinet, District _10_
2. Resident Engineer: (2)
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) CR 1150 over Leatherwood Creek, near Delphia, Perry County.
6. Latitude/Longitude (project mid-point) 37°01'45", -83°05'15" (1)
7. County (project mid-point) Perry
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)
Replace existing superstructure, extend abutment and wingwall.
Temporary Diversion.
2. Order of major soil disturbing activities (2) and (3)
3. Projected volume of material to be moved
172 cubic yards to be excavated and 18 cubic yard to be filled.

KyTC BMP Plan for Project PCN ## -

4. Estimate of total project area (acres) 1 acre
5. Estimate of area to be disturbed (acres) 1 acre
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.
7. Data describing existing soil condition (2)
8. Data describing existing discharge water quality (if any) (1) & (2)
Muddy due to failing roadway embankment slope.
9. Receiving water name **Barkcamp Branch & Leatherwood Creek.**
10. TMDLs and Pollutants of Concern in Receiving Waters: (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

KyTC BMP Plan for Project PCN ## -

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. All DDA's will have adequate BMP's in place before being disturbed.

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

KyTC BMP Plan for Project PCN ## -

- 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

KyTC BMP Plan for Project PCN ## -

discharges that will occur after construction has been completed are : (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.

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.

2. 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.

3. 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

KyTC BMP Plan for Project PCN ## -

- 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

KyTC BMP Plan for Project PCN ## -

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 contact 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.

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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. (1)

E. 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)

F. 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 successfully completed the KEPSC-RI course as required by Section 213.02.02 of the Standard Specifications for Road and Bridge Construction, current edition.

KyTC BMP Plan for Project PCN ## -

- 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.

G. 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 from 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.

KyTC BMP Plan for Project PCN ## - #####

H. 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;

KyTC BMP Plan for Project PCN ## - #####

- (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.)

SPECIAL NOTE

Filing of eNOI for KPDES Construction Stormwater Permit

County: Perry

Route: CR 1150

Item No.: 10-8915.00

KDOW Submittal ID:

149936

Project Description: Replace Bridge on CR 1150 over Leatherwood Creek.

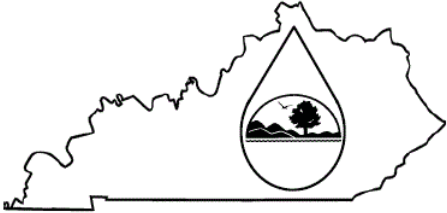
A Notice of Intent for obtaining coverage under the Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Stormwater Discharges Associated with Construction Activities (KYR10) has been drafted, copy of which is attached. Upon award, the Contractor will be identified in Section III of the form as the “Building Contractor” and it will be submitted for approval to the Kentucky Division of Water. The Contractor shall be responsible for advancing the work in a manner that is compliant with all applicable and appropriate KYTC specifications for sediment and erosion control as well as meeting the requirements of the KYR10 permit and the KDOW.

Upon award of the project, the appropriate District Project Delivery & Preservation Branch is Responsible for providing the eNOI preparer (Min Jiang) with the Contractor’s name, address and CID #. The project eNOI preparer is responsible for completing and submitting the eNOI document.

The eNOI preparer will notify the appropriate Project Delivery & Preservation Branch when the NOI is approved. The approved NOI will be placed in Site Manager. This will need to be accomplished prior to any on-site work.

This note confirms with the Joint Design (05-2017)/Construction (02-2017) Memorandum issued on March 28, 2017.

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.

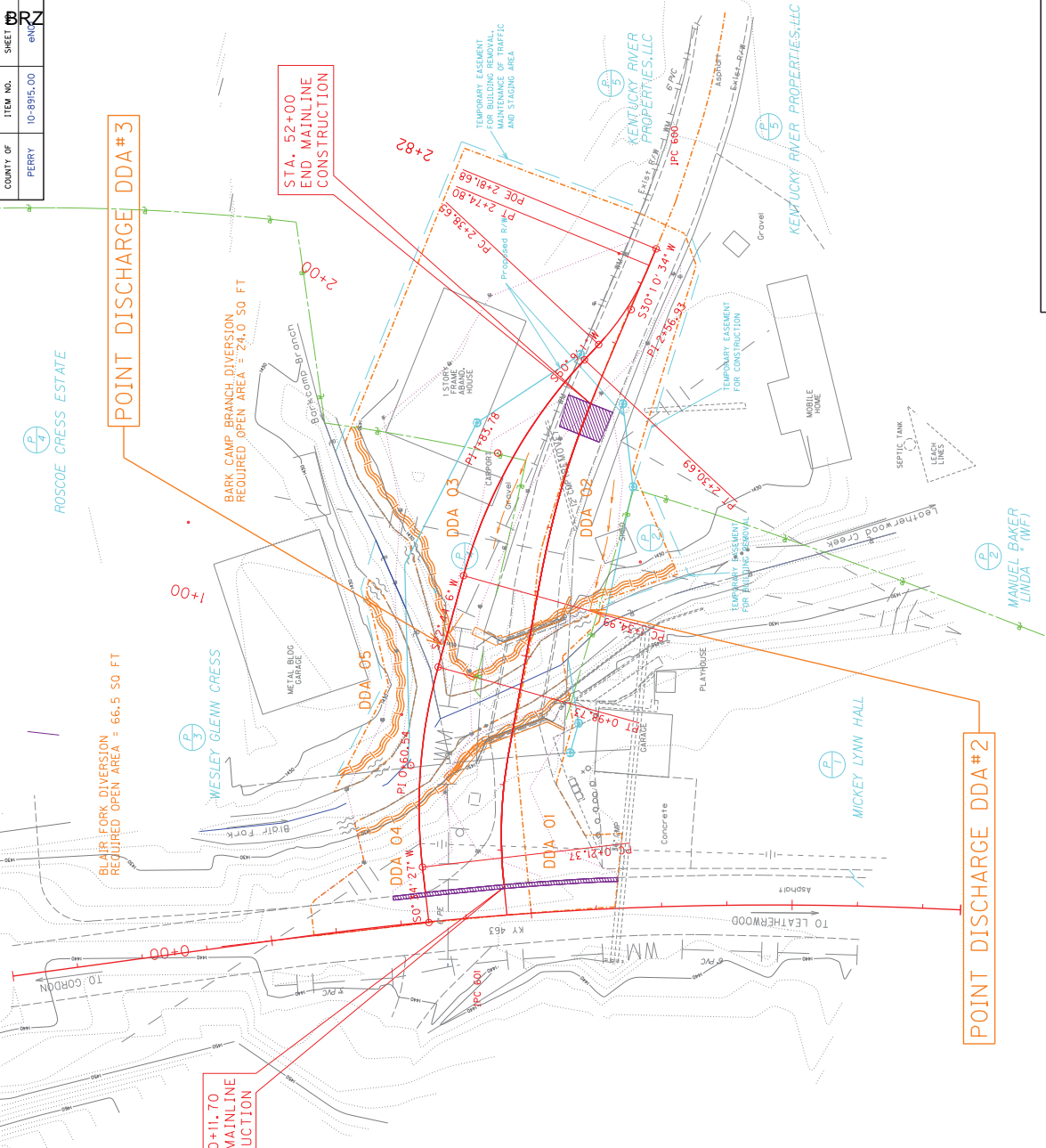
	<h2 style="text-align: center;">KENTUCKY POLLUTION DISCHARGE ELIMINATION SYSTEM (KPDES)</h2> <p style="text-align: center;">Notice of Intent (NOI) for coverage of Storm Water Discharge Associated with Construction Activities Under the KPDES Storm Water General Permit KYR100000</p> <p style="text-align: center;"> Click here for Instructions (Controls/KPDES_FormKYR10_Instructions.htm) Click here to obtain information and a copy of the KPDES General Permit. (http://dep.ky.gov/formslibrary/Documents/KYR10PermitPage.pdf) </p> <p style="text-align: center; font-size: small;">(*) indicates a required field; (✓) indicates a field may be required based on user input or is an optionally required field</p>
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Reason for Submittal:(*) Application for New Permit Coverage ▼	Agency Interest ID: Agency Interest ID	Permit Number:(✓) KPDES Permit Number
If change to existing permit coverage is requested, describe the changes for which modification of coverage is being sought:(✓)		
ELIGIBILITY: Stormwater discharges associated with construction activities disturbing individually one (1) acre or more, including, in the case of a common plan of development, contiguous construction activities that cumulatively equal one (1) acre or more of disturbance.		
EXCLUSIONS: The following are excluded from coverage under this general permit: 1) Are conducted at or on properties that have obtained an individual KPDES permit for the discharge of other wastewaters which requires the development and implementation of a Best Management Practices (BMP) plan; 2) Any operation that the DOW determines an individual permit would better address the discharges from that operation; 3) Any project that discharges to an Impaired Water listed in the most recent Integrated Report, §305(b) as impaired for sediment and for which an approved TMDL has been developed.		
SECTION I -- FACILITY OPERATOR INFORMATION (PERMITTEE)		
Company Name:(✓) Kentucky Transportation Cabinet	First Name:(✓) Corbett	M.I.: MI
		Last Name:(✓) Caudill
Mailing Address:(*) 473 Highway 15 South	City:(*) Jackson	State:(*) Kentucky ▼
		Zip:(*) 41339
eMail Address:(*) Corbett.Caudill@ky.gov	Business Phone:(*) 606-666-8841	Alternate Phone: Phone
SECTION II -- GENERAL SITE LOCATION INFORMATION		
Project Name:(*) Replace bridge on CR1150 over Leatherwood Creek	Status of Owner/Operator(*) State Government ▼	SIC Code(*) 1611 Highway and Street (▼)
Company Name:(✓) Kentucky Transportation Cabinet	First Name:(✓) Corbett	M.I.: MI
		Last Name:(✓) Caudill
Site Physical Address:(*) CR 1150 over Leatherwood Creek, near Delphia, Perry County.		
City:(*) Delphia	State:(*) Kentucky ▼	Zip:(*) 41735
County:(*) Perry ▼	Latitude(decimal degrees)(*)DMS to DD Converter (https://www.fcc.gov/media/radio/dms-decimal) 37.029167	Longitude(decimal degrees)(*) -83.087500
SECTION III -- SPECIFIC SITE ACTIVITY INFORMATION ?		
Project Description:(*) Construct bridge CR 1150 over Leatherwood Creek		
a. For single projects provide the following information		
Total Number of Acres in Project:(✓)	Total Number of Acres Disturbed:(✓)	

1	1																														
Anticipated Start Date:(✓) 4/15/2019	Anticipated Completion Date:(✓) 9/1/2019																														
b. For common plans of development provide the following information																															
Total Number of Acres in Project:(✓) # Acre(s)	Total Number of Acres Disturbed:(✓) # Acre(s)																														
Number of individual lots in development, if applicable:(✓) # lot(s)	Number of lots in development:(✓) # lot(s)																														
Total acreage of lots intended to be developed:(✓) Project Acres	Number of acres intended to be disturbed at any one time:(✓) Disturbed Acres																														
Anticipated Start Date:(✓)	Anticipated Completion Date:(✓)																														
List Building Contractor(s) at the time of Application:(*)																															
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:5%;">+</th> <th style="width:65%;">Company Name</th> <th style="width:5%;"></th> <th style="width:5%;"></th> <th style="width:5%;"></th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		+	Company Name																												
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SECTION IV -- IF THE PERMITTED SITE DISCHARGES TO A WATER BODY THE FOLLOWING INFORMATION IS REQUIRED ?																															
Discharge Point(s):																															
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:5%;"> </th> <th style="width:20%;">Unnamed Tributary?</th> <th style="width:15%;">Latitude</th> <th style="width:15%;">Longitude</th> <th style="width:35%;">Receiving Water Name</th> <th style="width:10%;"> </th> </tr> </thead> <tbody> <tr> <td>1</td> <td>No</td> <td>37.028995</td> <td>-83.087459</td> <td>Barkcamp Branch</td> <td>Delete</td> </tr> <tr> <td>2</td> <td>No</td> <td>37.028982</td> <td>-83.087658</td> <td>Leatherwood Creek</td> <td>Delete</td> </tr> <tr> <td>3</td> <td> </td> <td>0</td> <td> </td> <td> </td> <td>Delete</td> </tr> <tr> <td>+</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			Unnamed Tributary?	Latitude	Longitude	Receiving Water Name		1	No	37.028995	-83.087459	Barkcamp Branch	Delete	2	No	37.028982	-83.087658	Leatherwood Creek	Delete	3		0			Delete	+					
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2	No	37.028982	-83.087658	Leatherwood Creek	Delete																										
3		0			Delete																										
+																															
SECTION V -- IF THE PERMITTED SITE DISCHARGES TO A MS4 THE FOLLOWING INFORMATION IS REQUIRED ?																															
Name of MS4: <input style="width:100%;" type="text"/>																															
Date of application/notification to the MS4 for construction site permit coverage: Date	Discharge Point(s):(*) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:5%;">+</th> <th style="width:20%;">Latitude</th> <th style="width:20%;">Longitude</th> <th style="width:15%;"></th> <th style="width:15%;"></th> <th style="width:15%;"></th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	+	Latitude	Longitude																											
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SECTION VI -- WILL THE PROJECT REQUIRE CONSTRUCTION ACTIVITIES IN A WATER BODY OR THE RIPARIAN ZONE?																															
Will the project require construction activities in a water body or the riparian zone?:(*)	Yes																														
If Yes, describe scope of activity: (✓)	Constructing Bridge Wingwall and Diversion.																														
Is a Clean Water Act 404 permit required?:(*)	Yes																														
Is a Clean Water Act 401 Water Quality Certification required?:(*)	Yes																														
SECTION VII -- NOI PREPARER INFORMATION																															

First Name: (*) Min	M.I.: MI	Last Name: (*) Jiang	Company Name: (*) Kentucky Transportation Cabinet	
Mailing Address: (*) 473 Highway 15 South		City: (*) Jackson	State: (*) Kentucky	Zip: (*) 41339
eMail Address: (*) min.jiang@ky.gov		Business Phone: (*) 606-666-8841	Alternate Phone: Phone	
SECTION VIII -- ATTACHMENTS				
Facility Location Map: (*)		Upload file		
Supplemental Information:		Upload file		
SECTION IX -- CERTIFICATION				
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information 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.				
Signature: (*) Min Jiang		Title: (*) P.E.		
First Name: (*) Min	M.I.: MI	Last Name: (*) Jiang		
eMail Address: (*) min.jiang@ky.gov	Business Phone: (*) Phone	Alternate Phone: Phone	Signature Date: (*) 2/1/2019	
<div style="display: flex; justify-content: space-around;"> Click to Save Values for Future Retrieval Click to Submit to EEC </div>				

SHEET	ITEM NO.	COUNTY OF
eN01	10-8915.00	PERRY



POINT DISCHARGE DDA #2
LAT = 37.028995, LONG = -83.087459

POINT DISCHARGE DDA #3
LAT = 37.028982, LONG = -83.087658

eN01 SHEET
SCALE: 1" = 20'

MATERIAL SUMMARY

CONTRACT ID: 191046

097GR19D046-STP BRZ

DE09711501910

BARK CAMP BRANCH ROAD(CR-1150) ADDRESS DEFICIENCIES OR BRIDGE OVER LEATHERWOOD CREEK BRIDGE REPLACEMENT, A DISTANCE OF .04 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	00001	DGA BASE	358.00	TON
0010	00020	TRAFFIC BOUND BASE	50.00	TON
0015	00078	CRUSHED AGGREGATE SIZE NO 2	50.00	TON
0020	00100	ASPHALT SEAL AGGREGATE	3.00	TON
0025	00103	ASPHALT SEAL COAT	1.00	TON
0030	00221	CL2 ASPH BASE 0.75D PG64-22	279.00	TON
0035	00301	CL2 ASPH SURF 0.38D PG64-22	41.00	TON
0040	00356	ASPHALT MATERIAL FOR TACK	.40	TON
0045	01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	7.00	EACH
0050	02014	BARRICADE-TYPE III	2.00	EACH
0055	02200	ROADWAY EXCAVATION	172.00	CUYD
0060	02242	WATER	2.00	MGAL
0065	02351	GUARDRAIL-STEEL W BEAM-S FACE	187.50	LF
0070	02360	GUARDRAIL TERMINAL SECTION NO 1	2.00	EACH
0075	02371	GUARDRAIL END TREATMENT TYPE 7	2.00	EACH
0080	02399	EXTRA LENGTH GUARDRAIL POST	31.00	EACH
0085	02432	WITNESS POST	9.00	EACH
0090	02484	CHANNEL LINING CLASS III	26.00	TON
0095	02545	CLEARING AND GRUBBING - 0.64 ACRES	1.00	LS
0100	02562	TEMPORARY SIGNS	129.00	SQFT
0105	02585	EDGE KEY	18.20	LF
0110	02599	FABRIC-GEOTEXTILE TYPE IV	400.00	SQYD
0115	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
0120	02651	DIVERSIONS (BY-PASS DETOURS)	1.00	LS
0125	02726	STAKING	1.00	LS
0130	06406	SBM ALUM SHEET SIGNS .080 IN	9.00	SQFT
0135	06411	STEEL POST TYPE 2	11.00	LF
0140	06568	PAVE MARKING-THERMO STOP BAR-24IN	26.00	LF
0145	21289ED	LONGITUDINAL EDGE KEY	86.50	LF
0150	24540	R/W MONUMENT TYPE 3	6.00	EACH
0155	24631EC	BARCODE SIGN INVENTORY	1.00	EACH
0160	24663ED	WITNESS R/W MONUMENT TYPE 4	3.00	EACH
0165	02159	TEMP DITCH	95.00	LF
0170	02160	CLEAN TEMP DITCH	47.00	LF
0175	02701	TEMP SILT FENCE	95.00	LF
0180	02703	SILT TRAP TYPE A	1.00	EACH
0185	02704	SILT TRAP TYPE B	1.00	EACH
0190	02705	SILT TRAP TYPE C	1.00	EACH
0195	02706	CLEAN SILT TRAP TYPE A	1.00	EACH
0200	02707	CLEAN SILT TRAP TYPE B	1.00	EACH
0205	02708	CLEAN SILT TRAP TYPE C	1.00	EACH
0210	05952	TEMP MULCH	2,049.00	SQYD

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0215	05953	TEMP SEEDING AND PROTECTION	1,537.00	SQYD
0220	05963	INITIAL FERTILIZER	.10	TON
0225	05964	MAINTENANCE FERTILIZER	.20	TON
0230	05985	SEEDING AND PROTECTION	2,101.00	SQYD
0235	05992	AGRICULTURAL LIMESTONE	1.90	TON
0240	02231	STRUCTURE GRANULAR BACKFILL	29.00	CUYD
0245	02998	MASONRY COATING	100.00	SQYD
0250	03299	ARMORED EDGE FOR CONCRETE	47.70	LF
0255	08001	STRUCTURE EXCAVATION-COMMON	111.00	CUYD
0260	08019	CYCLOPEAN STONE RIP RAP	212.00	TON
0265	08033	TEST PILES	67.00	LF
0270	08039	PRE-DRILLING FOR PILES	190.00	LF
0275	08052	PILES-STEEL HP14X117	165.00	LF
0280	08100	CONCRETE-CLASS A	30.60	CUYD
0285	08104	CONCRETE-CLASS AA	35.90	CUYD
0290	08151	STEEL REINFORCEMENT-EPOXY COATED	12,092.00	LB
0295	08160	STRUCTURAL STEEL - 16,540 LB	1.00	LS
0300	08170	SHEAR CONNECTORS - APPROX. 840 EACH	1.00	LS
0305	08301	REMOVE SUPERSTRUCTURE	1.00	LS
0310	23378EC	CONCRETE SEALING	923.00	SQFT
0315	24896ED	RAIL SYSTEM TYPE T631	75.00	LF
0320	14004	W DIRECTIONAL BORE	165.00	LF
0325	14023	W FLUSHING ASSEMBLY	1.00	EACH
0330	14057	W PIPE PVC 03 INCH	20.00	LF
0335	14059	W PIPE PVC 06 INCH	40.00	LF
0340	14085	W SERV PE/PLST SHORT SIDE 3/4 IN	1.00	EACH
0345	14094	W TIE-IN 06 INCH	2.00	EACH
0350	14103	W VALVE 03 INCH	1.00	EACH
0355	14105	W VALVE 06 INCH	2.00	EACH
0360	14144	W LINE MARKER	5.00	EACH
0365	14153	W LEAK DETECTION METER	1.00	EACH
0370	02569	DEMOBILIZATION	1.00	LS

CONTRACT ID: 191046

097GR19D046-STP BRZ

DE09711661946

LEFT FORK MACES CREEK ROAD(KY-1166) ADDRESS DEFICIENCIES OF BRIDGE ON KY-1166 OVER MACES CREEK BRIDGE REPLACEMENT, A DISTANCE OF .1 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0375	00003	CRUSHED STONE BASE	1,485.00	TON
0380	00020	TRAFFIC BOUND BASE	20.00	TON
0385	00100	ASPHALT SEAL AGGREGATE	7.00	TON
0390	00103	ASPHALT SEAL COAT	1.00	TON
0395	00212	CL2 ASPH BASE 1.00D PG64-22	302.00	TON
0400	00301	CL2 ASPH SURF 0.38D PG64-22	166.00	TON
0405	00078	CRUSHED AGGREGATE SIZE NO 2	461.00	TON
0410	00356	ASPHALT MATERIAL FOR TACK	1.20	TON

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0415	01000	PERFORATED PIPE-4 IN	100.00	LF
0420	01010	NON-PERFORATED PIPE-4 IN	100.00	LF
0425	01028	PERF PIPE HEADWALL TY 3-4 IN	2.00	EACH
0430	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	7.00	EACH
0435	02014	BARRICADE-TYPE III	2.00	EACH
0440	02159	TEMP DITCH	342.00	LF
0445	02160	CLEAN TEMP DITCH	171.00	LF
0450	02200	ROADWAY EXCAVATION	5,777.00	CUYD
0455	02242	WATER	6.50	MGAL
0460	02351	GUARDRAIL-STEEL W BEAM-S FACE	362.50	LF
0465	02360	GUARDRAIL TERMINAL SECTION NO 1	1.00	EACH
0470	02371	GUARDRAIL END TREATMENT TYPE 7	1.00	EACH
0475	02381	REMOVE GUARDRAIL	50.00	LF
0480	02391	GUARDRAIL END TREATMENT TYPE 4A	1.00	EACH
0485	02429	RIGHT-OF-WAY MONUMENT TYPE 1	13.00	EACH
0490	02431	WITNESS R/W MONUMENT TYPE 2	3.00	EACH
0495	02432	WITNESS POST	6.00	EACH
0500	02488	CHANNEL LINING CLASS IV	117.00	CUYD
0505	02545	CLEARING AND GRUBBING - 1.6 ACRES	1.00	LS
0510	02562	TEMPORARY SIGNS	292.00	SQFT
0515	02267	REMOVE & RESET FENCE	40.00	LF
0520	02585	EDGE KEY	35.00	LF
0525	02599	FABRIC-GEOTEXTILE TYPE IV	73.00	SQYD
0530	02600	FABRIC GEOTEXTILE TY IV FOR PIPE	128.00	SQYD
0535	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
0540	02676	MOBILIZATION FOR MILL & TEXT	1.00	LS
0545	02677	ASPHALT PAVE MILLING & TEXTURING	139.00	TON
0550	02690	SAFELOADING	4.10	CUYD
0555	02701	TEMP SILT FENCE	342.00	LF
0560	02703	SILT TRAP TYPE A	2.00	EACH
0565	02704	SILT TRAP TYPE B	2.00	EACH
0570	02705	SILT TRAP TYPE C	2.00	EACH
0575	02706	CLEAN SILT TRAP TYPE A	2.00	EACH
0580	02707	CLEAN SILT TRAP TYPE B	2.00	EACH
0585	02708	CLEAN SILT TRAP TYPE C	2.00	EACH
0590	02726	STAKING	1.00	LS
0595	02731	REMOVE STRUCTURE	1.00	LS
0600	05950	EROSION CONTROL BLANKET	80.00	SQYD
0605	05952	TEMP MULCH	5,156.00	SQYD
0610	05953	TEMP SEEDING AND PROTECTION	3,867.00	SQYD
0615	05963	INITIAL FERTILIZER	.20	TON
0620	05964	MAINTENANCE FERTILIZER	.30	TON
0625	05985	SEEDING AND PROTECTION	5,621.00	SQYD
0630	22664EN	WATER BLASTING EXISTING STRIPE	200.00	LF
0635	05992	AGRICULTURAL LIMESTONE	3.60	TON
0640	06406	SBM ALUM SHEET SIGNS .080 IN	55.00	SQFT
0645	06410	STEEL POST TYPE 1	64.00	LF
0650	06510	PAVE STRIPING-TEMP PAINT-4 IN	2,468.00	LF
0655	06514	PAVE STRIPING-PERM PAINT-4 IN	2,468.00	LF
0660	06568	PAVE MARKING-THERMO STOP BAR-24IN	16.00	LF

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0665	24631EC	BARCODE SIGN INVENTORY	8.00	EACH
0670	00462	CULVERT PIPE-18 IN	46.00	LF
0675	01444	SLOPED AND PARALLEL HEADWALL-18 IN	1.00	EACH
0680	02231	STRUCTURE GRANULAR BACKFILL	340.00	CUYD
0685	02998	MASONRY COATING	319.00	SQYD
0690	03299	ARMORED EDGE FOR CONCRETE	66.20	LF
0695	08001	STRUCTURE EXCAVATION-COMMON	311.00	CUYD
0700	08002	STRUCTURE EXCAV-SOLID ROCK	104.00	CUYD
0705	08019	CYCLOPEAN STONE RIP RAP	522.00	TON
0710	08039	PRE-DRILLING FOR PILES	323.00	LF
0715	08100	CONCRETE-CLASS A	256.40	CUYD
0720	08104	CONCRETE-CLASS AA	123.40	CUYD
0725	08151	STEEL REINFORCEMENT-EPOXY COATED	49,853.00	LB
0730	08160	STRUCTURAL STEEL - 102,505 LBS	1.00	LS
0735	23378EC	CONCRETE SEALING	1,551.00	SQFT
0740	24896ED	RAIL SYSTEM TYPE T631	75.00	LF
0745	14004	W DIRECTIONAL BORE	185.00	LF
0750	14014	W ENCASEMENT STEEL OPEN CUT RANGE 3	30.00	LF
0755	14023	W FLUSHING ASSEMBLY	3.00	EACH
0760	14030	W METER RELOCATE	1.00	EACH
0765	14031	W METER VAULT	2.00	EACH
0770	14037	W PIPE DUCTILE IRON 08 INCH	60.00	LF
0775	14057	W PIPE PVC 03 INCH	130.00	LF
0780	14060	W PIPE PVC 08 INCH	270.00	LF
0785	14085	W SERV PE/PLST SHORT SIDE 3/4 IN	2.00	EACH
0790	14090	W TAPPING SLEEVE AND VALVE SIZE 2	1.00	EACH
0795	14092	W TIE-IN 03 INCH	1.00	EACH
0800	14095	W TIE-IN 08 INCH	2.00	EACH
0805	14096	W TIE-IN 10 INCH	2.00	EACH
0810	14103	W VALVE 03 INCH	5.00	EACH
0815	14106	W VALVE 08 INCH	8.00	EACH
0820	14144	W LINE MARKER	7.00	EACH
0825	14112	W VALVE ANCHOR EXISTING	1.00	EACH
0830	14153	W LEAK DETECTION METER	1.00	EACH
0835	16000	G DIRECTIONAL BORE	185.00	LF
0840	16009	G ENCASEMENT STEEL OPEN CUT RANGE 2	50.00	LF
0845	16015	G PIPE POLYETHYLENE/PLASTIC 02 INCH	230.00	LF
0850	16026	G PIPE STEEL 06 INCH	330.00	LF
0855	16039	G SERVICE SHORT SIDE 3/4 INCH	1.00	EACH
0860	16041	G TIE-IN POLYETHYLENE/PLASTIC 02 INCH	2.00	EACH
0865	16049	G VALVE POLYETHYLENE/PLASTIC 02 INCH	2.00	EACH
0870	16065	G LINE MARKER	9.00	EACH
0875	16068	G MAIN ABANDON - ABANDON	1.00	LS
0880	16080	G TIE-IN STEEL 06 INCH	2.00	EACH
0885	16108	G WELD X-RAY INSPECTION 6 TO 12 INCH	17.00	EACH
0890	02569	DEMOBILIZATION	1.00	LS

PART II
SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2019* and *Standard Drawings, Edition of 2016*.

SUPPLEMENTAL SPECIFICATIONS

The contractor shall use the Supplemental Specifications that are effective at the time of letting.
The Supplemental Specifications can be found at the following link:

<http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx>

SPECIAL NOTE FOR ROCK BLASTING

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

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. All blasting plans shall be submitted to the Engineer. The Engineer will be responsible for submitting the plan to the Central Office Division of Construction and the Division of Mine Reclamation and Enforcement, Explosives and Blasting Branch at the following address: 2 Hudson Hollow, Frankfort, Kentucky, 40601.

- 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.

11D

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.

11D

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.

Report all blasting accidents to the Division of Mine Reclamation and Enforcement, Explosives and Blasting Branch at 502-564-2340.

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.

June 15, 2012

SPECIAL NOTE FOR BARCODE LABEL ON PERMANENT SIGNS

1.0 DESCRIPTION. Install barcode label on sheeting signs. Section references herein are to the Department’s Standard Specifications for Road and Bridge Construction, current edition.

2.0 MATERIALS. The Department will provide the Contractor with a 2 inch x 1 inch foil barcode label for each permanent sheeting sign. A unique number will be assigned to each barcode label.

The Contractor shall contact the Operations and Pavement Management Branch in the Division of Maintenance at (502) 564-4556 to obtain the barcode labels.

3.0 CONSTRUCTION. Apply foil barcode label in the lower right quadrant of the sign back. Signs where the bottom edge is not parallel to the ground, the lowest corner of the sign shall serve as the location to place the barcode label. The barcode label shall be placed no less than one-inch and no more than three inches from any edge of the sign. The barcode must be placed so that the sign post does not cover the barcode label.

Barcodes shall be applied in an indoor setting with a minimum air temperature of 50°F or higher. Prior to application of the barcode label, the back of the sign must be clean and free of dust, oil, etc. If the sign is not clean, an alcohol swab shall be used to clean the area. The area must be allowed to dry prior to placement of the barcode label.

Data for each sign shall include the barcode number, MUTCD reference number, sheeting manufacturer, sheeting type, manufacture date, color of primary reflective surface, installation date, latitude and longitude using the North American Datum of 1983 (NAD83) or the State Plane Coordinates using an x and y ordinate of the installed location.

Data should be provided electronically on the TC 71-229 Sign Details Information and TC 71-230 Sign Assembly Information forms. The Contractor may choose to present the data in a different format provided that the information submitted to the Department is equivalent to the information required on the Department TC forms. The forms must be submitted in electronic format regardless of which type of form is used. The Department will not accept PDF or handwritten forms. These completed forms must be submitted to the Department prior to final inspection of the signs. The Department will not issue formal acceptance for the project until the TC 71-229 and TC-230 electronic forms are completed for all signs and sign assemblies on the project.

4.0 MEASUREMENT. The Department will measure all work required for the installation of the barcode label and all work associated with completion and submission of the sign inventory data (TC 71-229 and TC 71-230).

The installation of the permanent sign will be measured in accordance to Section 715.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

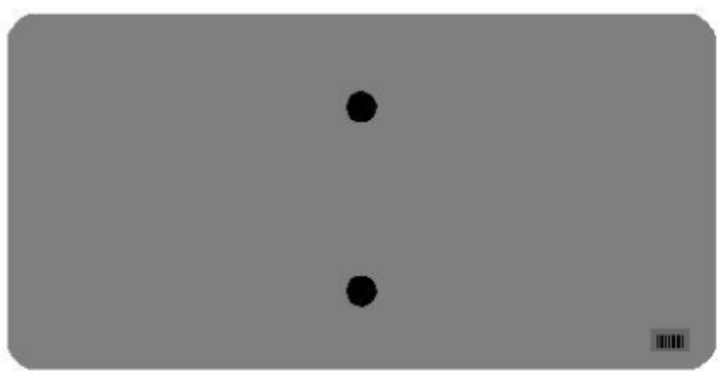
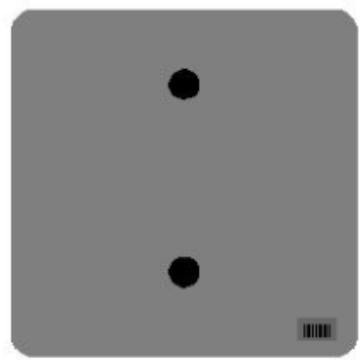
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24631EC	Barcode Sign Inventory	Each

The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment as full compensation for all work required under this special note.

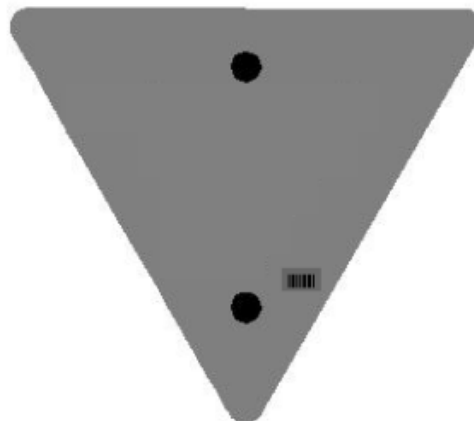
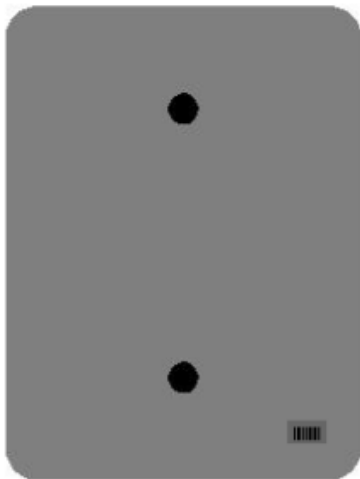
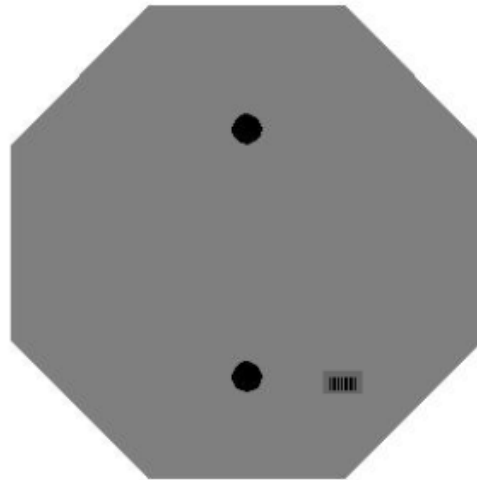
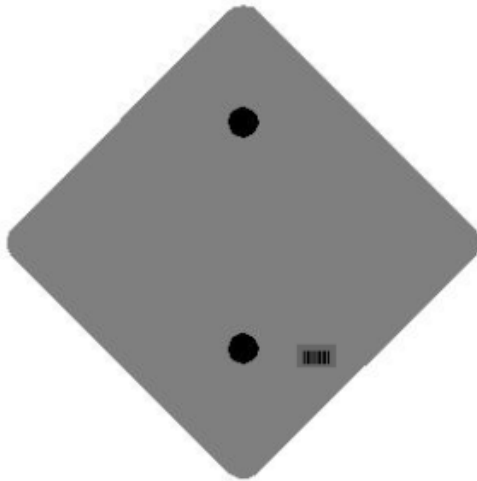
One Sign Post



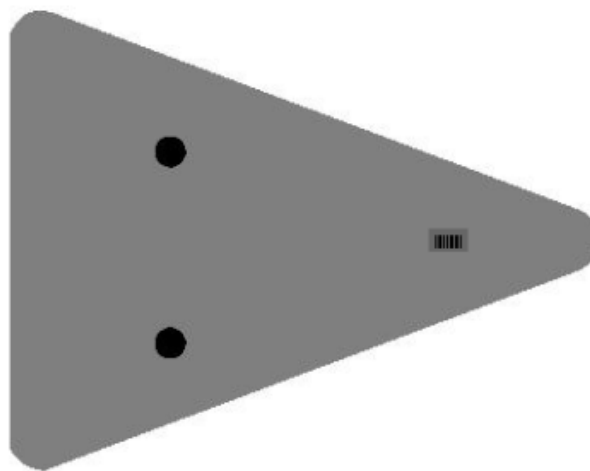
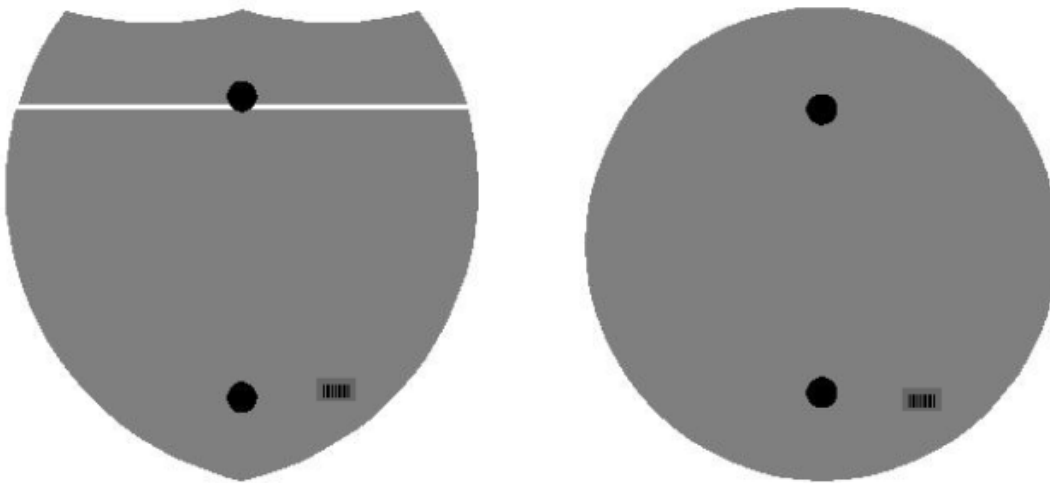
↑
2" Wide Post



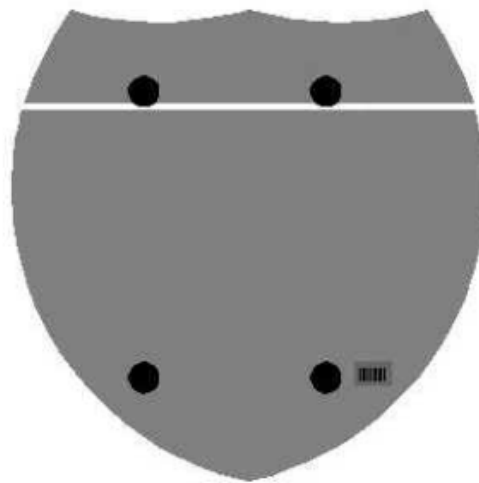
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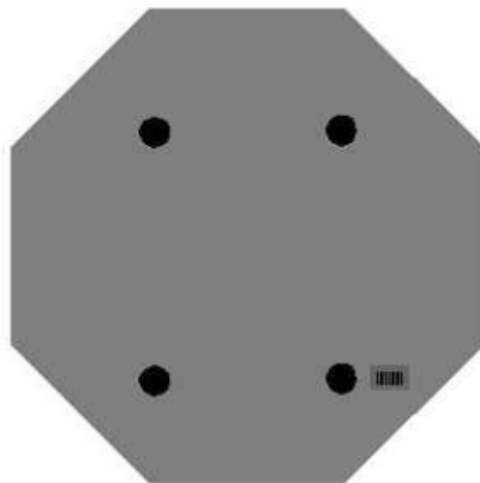
One Sign Post



Double Sign Post



Interstate
Shield

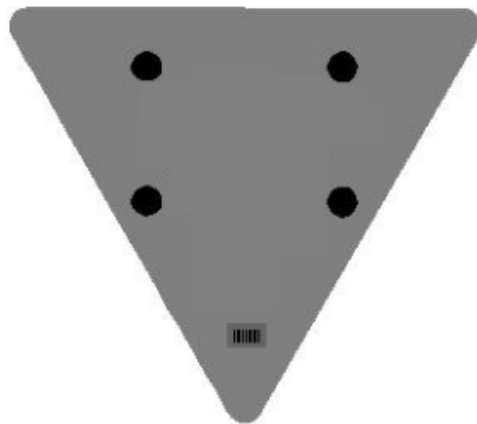


48" Stop

2 Post Signs



↑
2" Wide Post



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 Standard Specifications for Road and Bridge Construction, Current Edition.

1.0 DESCRIPTION. Construct a soil, granular, or rock embankment with soil, 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 Standard Specifications, Current Edition.

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 Pile Core. Provide a pile core in the area of the embankments where deep foundations are to be installed unless otherwise specified. The Pile Core is the zone indicated on Standard Drawings RGX 100 and 105 designated as Pile Core. Material control of the pile core area during embankment construction is always required. Proper Pile Core construction is required for installation of foundation elements such as drilled or driven piles or drilled shafts. The type of material used to construct the pile core is as directed in the plans or below. Typically, the pile core area will be constructed from the same material used to construct the surrounding embankment. Pile Core can be classified as one of three types:

A) Pile Core - Conform to Section 206 of the Standard Specifications. Provide pile core material consisting of the same material as the adjacent embankment except the material in the pile core area shall be free of boulders or particle sizes larger than 4 inches in any dimension or any other obstructions that may hinder pile driving operations. If the pile core material hinders pile driving operations, take the appropriate means necessary to reach the required pile tip elevation, at no expense to the Department.

B) Granular Pile Core. Granular pile core is required only when specified in the plans. 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.

C) Cohesive Pile Core. Cohesive Pile Core is required only when specified in the plans. 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 4 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.

2.4 Structure Granular Backfill. Conform to Subsection 805.11

2.5 Geotextile Fabric. Conform to Type I or Type IV in Section 214 and 843.

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 the pile core and structure granular backfill according to the applicable density requirements for the project. If the embankment and pile core are dissimilar materials (i.e., a granular pile core is used with a soil embankment or a cohesive pile core is used with a granular embankment), a Geotextile Fabric, Type IV, will be required between the pile core and embankment in accordance with Sections 214 and 843 of the Standard Specifications.

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 loose 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, install shafts or other foundation elements, 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.

Certain projects may require widening of existing embankments and the removal of substructures. Construct embankment according to the plans. Substructure removal shall be completed according to the plans and Section 203. Excavation may be required at the existing embankment in order to place the structure granular backfill as shown in the Standard Drawings.

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 achieving required concrete cylinder strengths, remove adjacent forms and fill the excavation with compacted structure granular backfill material (maximum 1' loose lifts) to the level of the berm prior to placing beams for the bridge. 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 compacted structure granular backfill (maximum 1' loose lifts) to subgrade elevation. If the original excavation is enlarged, fill the entire volume with compacted structure granular backfill (maximum 1' loose lifts) 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 the compacted structure granular backfill prior to placing aggregate base course.

Tamp the backfill with hand tampers, pneumatic tampers, or other means approved by the Engineer. 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 Type IV 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. Rock embankments will be constructed using granular embankment on projects where there is no available rock present within the excavation limits of the project.

4.3 Pile Core. Pile core will be measured and paid under roadway excavation or embankment in place, as applicable. The Department will not measure the pile core for separate payment. The Department will not measure for payment the 8-inch perforated underdrain pipe and will consider it incidental to the Pile Core.

4.4 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.

The Department will not measure for payment the 4-inch perforated underdrain pipe and will consider it incidental to the Structure Granular Backfill.

4.5 Geotextile Fabric. The Department will not measure the quantity of fabric used for separating dissimilar materials when constructing the embankment and pile core and will consider it incidental to embankment construction.

The Department will not measure for payment the Geotextile Fabric used to separate the Structure Granular Backfill from the embankment and aggregate base course and will consider it incidental to Structure Granular Backfill.

The Department will not measure for payment the Geotextile Fabric required for construction with erodible or unstable materials and will consider it incidental to embankment construction.

4.6 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.

4.7 Structure Excavation. The Department will not measure structure excavation on new embankments for payment and will consider it incidental to the Structure Granular Backfill or Concrete as applicable.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02223	Granular Embankment	Cubic Yards
02231	Structure Granular Backfill	Cubic Yards

The Department will consider payment as full compensation for all work required in this provision.

September 16, 2016

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised May 1, 2012

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

2. Subject to the applicability criteria noted in the following sections, 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.

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, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) 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 provisions of the Americans with 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 contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its 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, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program 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 minorities and women.

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 minorities and women 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 minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women 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, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such 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 take corrective 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 its 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 their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

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. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

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 employees who are minorities and women 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 good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 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 good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith 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 contracting agency 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 referrals within the time 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 minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. 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 contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. 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. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. 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 the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours 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; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency 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](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (ii) The classification is utilized in the area by the construction industry; and
- (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour 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.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

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

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

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency 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.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) 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 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

d. 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.

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

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

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

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

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

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

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

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

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such 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 (2.) of this section.

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

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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 contracting agency. 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 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased 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 or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

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 or propose 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 VI 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 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 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 contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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 provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the 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. 3704).

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.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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, Form FHWA-1022 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:

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 and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier 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 first tier 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 first tier 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 contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier 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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first 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 entering into this transaction.

g. The prospective first tier 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 Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective 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.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;
- (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (3) 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 (a)(2) of this certification; and
- (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective 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 Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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 exceeding the \$25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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 Participants:

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 participating in covered transactions 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.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is 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 its bid or proposal that the participant 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.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

**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 (forty and above); 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 forty (40) and over. 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, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, 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 forty (40) and over, 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 administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017

Standard Title VI/Non-Discrimination Assurances

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the **Federal Highway Administration** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the **Federal Highway Administration**, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **Federal Highway Administration** may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **Federal Highway Administration** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Standard Title VI/Non-Discrimination Statutes and Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*)

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 (7) provides:

No present or former public servant shall, within six (6) months 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, or is regulated by, the state in matters in which he was directly involved during the last thirty-six (36) months of 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, or for which he received, prior to his state employment, a professional degree or license, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his tenure 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, nor shall it prohibit the former officer or public servant from receiving public funds disbursed through entitlement programs.

KRS 11A.040 (9) states:

A former public servant shall not represent a person or business before a state agency in a matter in which the former public servant was directly involved during the last thirty-six (36) months of his tenure, 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, 3 Fountain Place, Frankfort, Kentucky 40601; telephone (502) 564-7954.

General Decision Number: KY190107 01/04/2019 KY107

Superseded General Decision Number: KY20180187

State: Kentucky

Construction Type: Highway

Counties: Adair, Barren, Bell, Breathitt, Casey, Clay, Clinton, Cumberland, Estill, Floyd, Garrard, Green, Harlan, Hart, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lincoln, Magoffin, Martin, McCreary, Menifee, Metcalfe, Monroe, Morgan, Owsley, Perry, Pike, Powell, Pulaski, Rockcastle, Russell, Taylor, Wayne, Whitley and Wolfe Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019

SUKY2015-047 10/20/2015

	Rates	Fringes
BOILERMAKER.....	\$ 24.65	12.94
BRICKLAYER		
Bricklayer.....	\$ 22.90	8.50

Stone Mason.....	\$ 21.50	8.50
CARPENTER		
Carpenter.....	\$ 24.90	14.50
Piledriver.....	\$ 24.55	14.50

CEMENT MASON.....	\$ 21.25	8.50
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ELECTRICIAN		
Electrician.....	\$ 29.36	10.55
Equipment Operator.....	\$ 26.90	10.31
Groundsman.....	\$ 17.79	8.51
Lineman.....	\$ 30.09	10.94

When workmen are required to work from bosum chairs, trusses, stacks, tanks, scaffolds, catwalks, radio and T.V. towers, structural steel (open, unprotected, unfloored raw steel), and bridges or similar hazardous locations where workmen are subject to fall, except where using JLG's and bucket trucks up to 75 feet: Add 25% to workman's base rate for 50 to 75 feet, and add 50% to workman's base rate for over 75 feet.

IRONWORKER.....	\$ 27.56	20.57
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LABORER		
Group 1.....	\$ 21.80	12.36
Group 2.....	\$ 22.05	12.36
Group 3.....	\$ 22.10	12.36
Group 4.....	\$ 22.70	12.36

GROUP 1: Aging and Curing of Concrete (Any Mode or Method), Asbestos Abatement Worker, Asphalt Plant Laborers, Asphalt Laborers, Batch Truck Dumpers, Carpenter Tenders, Cement Mason Tenders, Cleaning of Machines, Concrete Laborers, Demolition Laborers, Dredging Laborers, Drill Tender, Environmental Laborer - Nuclear, Radiation, Toxic and Hazardous Waste - Level D, Flagmen, Grade Checkers, All Hand Digging and Hand Back Filling, Highway Marker Placers, Landscaping Laborers, Mesh Handlers and Placers, Puddler, Railroad Laborers, Rip-rap and Grouters, Right of Way Laborers, Sign, Guard Rail and Fence Installers (All Types), Signalmen, Sound Barrier Installer, Storm and Sanitary Sewer Laborers, Swampers, Truck Spotters and Dumpers, Wrecking of Concrete Forms, General Cleanup

GROUP 2: Batter Board Men (Sanitary and Storm Sewer), Brickmason Tenders, Mortar Mixer Operator, Scaffold Builders, Burner and Welder, Bushammers, Chain Saw Operator, Concrete Saw Operators, Deckhand Scow Man, Dry Cement Handlers, Environmental Laborers - Nuclear, Radiation, Toxic and Hazardous Waste - Level C, Forklift Operators for Masonry, Form Setters, Green Concrete Cutting, Hand Operated Grouter and Grinder Machine Operator, Jack Hammers, Lead Paint Abatement, Pavement Breakers, Paving Joint Machine, Pipe Layers - Laser Operators (Non-metallic), Plastic Pipe Fusion, Power Driven Georgia Buggy and Wheel Barrow, Power Post Hole Diggers, Precast Manhole Setters, Walk-behind Tampers, Walk-behind Trenchers, Sand Blasters, Concrete Chippers, Surface Grinders, Vibrator Operators, Wagon Drillers

GROUP 3: Air Track Driller (All Types), Asphalt Luteman and Rakers, Gunnite Nozzleman, Gunnite Operators and Mixers, Grout

Pump Operator, Powderman and Blaster, Side Rail Setters, Rail Paved Ditches, Screw Operators, Tunnel Laborers (Free Air), Water Blasters

GROUP 4: Caisson Workers (Free Air), Cement Finishers, Environmental Laborer - Nuclear, Radiation, Toxic and Hazardous Waste - Level A and B, miners and Drillers (Free Air), Tunnel Blasters, and Tunnel Mockers (Free Air), Directional and Horizontal Boring, Air Track Drillers (All Types), Powder Man and Blasters, Troxler and Concrete Tester if Laborer is Utilized

PAINTER

All Excluding Bridges.....	\$ 19.92	9.57
Bridges.....	\$ 23.92	10.07

PLUMBER.....\$ 22.52 7.80

POWER EQUIPMENT OPERATOR:

Group 1.....	\$ 29.95	14.40
Group 2.....	\$ 29.95	14.40
Group 3.....	\$ 27.26	14.40
Group 4.....	\$ 26.96	14.40

GROUP 1: Auto Patrol, Batcher Plant, Bituminous Paver, Cable-Way, Clamshell, Concrete Mixer (21 cu ft or over), Concrete Pump, Crane, Crusher Plant, Derrick, Derrick Boat, Ditching and Trenching Machine, Dragline, Dredge Engineer, Elevator (regardless of ownership when used for hoisting any building material), Elevating Grader and all types of Loaders, Hoe-type Machine, Hoisting Engine, Locomotive, LeTourneau or Carry-all Scoop, Bulldozer, Mechanic, Orangepeel Bucket, Piledriver, Power Blade, Roller (Bituminous), Roller (Earth), Roller (Rock), Scarifier, Shovel, Tractor Shovel, Truck Crane, Well Point, Winch Truck, Push Dozer, Grout Pump, High Lift, Fork Lift (regardless of lift height), all types of Boom Cats, Multiple Operator, Core Drill, Tow or Push Boat, A-Frame Winch Truck, Concrete Paver, Grade-All, Hoist, Hyster, Material Pump, Pumpcrete, Ross Carrier, Sheepfoot, Sideboom, Throttle-Valve Man, Rotary Drill, Power Generator, Mucking Machine, Rock Spreader attached to Equipment, Scoopmobile, KeCal Loader, Tower Cranes, (French, German and other types), Hydrocrane, Tugger, Backfiller Gurries, Self-propelled Compactor, Self-Contained Hydraulic Percussion Drill

GROUP 2: All Air Compressors (200 cu ft/min or greater), Bituminous Mixer, Concrete Mixer (21 cu. ft. or over), Welding Machine, Form Grader, Tractor (50 hp and over), Bull Float, Finish Machine, Outboard Motor Boat, Brakeman, Mechanic Tender, Whirly Oiler, Tract-air, Road Widening Trencher, Articulating Trucks

GROUP 3: Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4: Bituminous Distributor, Cement Gun, Conveyor, Mud Jack, Paving Joint Machine, Pump, Tamping Machine, Tractor (under 50 hp), Vibrator, Oiler, Air Compressor (under 200 cu ft per minute), Concrete Saw, Burlap and Curing Machine, Hydro Seeder, Power Form Handling Equipment, Deckhand Oiler, Hydraulic Post Driver

SHEET METAL WORKER.....	\$ 20.40	7.80
TRUCK DRIVER		
Driver (3 Tons and Over), Driver (Truck Mounted Rotary Drill).....	\$ 23.74	14.50
Driver (3 Tons and Under), Tire Changer and Truck Mechanic Tender.....	\$ 23.53	14.50
Driver (Semi-Trailer or Pole Trailer), Driver (Dump Truck, Tandem Axle), Driver of Distributor.....	\$ 23.40	14.50
Driver on Mixer Trucks (All Types).....	\$ 23.45	14.50
Driver on Pavement Breakers.	\$ 23.55	14.50
Driver, Euclid and Other Heavy Earth Moving Equipment and Low Boy.....	\$ 24.31	14.50
Driver, Winch Truck and A- Frame when used in Transporting Materials.....	\$ 23.30	14.50
Greaser on Greasing Facilities.....	\$ 24.40	14.50
Truck Mechanic.....	\$ 23.50	14.50
Truck Tender and Warehouseman.....	\$ 23.20	14.50

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

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

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

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage

determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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

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

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

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

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END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

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 to an employee at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Director
Division of Construction Procurement
Frankfort, Kentucky 40622
502-564-3500

**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
7.0%	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 Perry County.

PART IV
INSURANCE

Refer to
Kentucky Standard Specifications for Road and Bridge Construction,
current edition

PART V
BID ITEMS

PROPOSAL BID ITEMS

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Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	358.00	TON		\$	
0020	00003		CRUSHED STONE BASE	1,485.00	TON		\$	
0030	00020		TRAFFIC BOUND BASE	70.00	TON		\$	
0040	00078		CRUSHED AGGREGATE SIZE NO 2	50.00	TON		\$	
0050	00100		ASPHALT SEAL AGGREGATE	10.00	TON		\$	
0060	00103		ASPHALT SEAL COAT	2.00	TON		\$	
0070	00212		CL2 ASPH BASE 1.00D PG64-22	302.00	TON		\$	
0080	00221		CL2 ASPH BASE 0.75D PG64-22	279.00	TON		\$	
0090	00301		CL2 ASPH SURF 0.38D PG64-22	207.00	TON		\$	
0100	00356		ASPHALT MATERIAL FOR TACK	.40	TON		\$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0110	00078		CRUSHED AGGREGATE SIZE NO 2	461.00	TON		\$	
0120	00356		ASPHALT MATERIAL FOR TACK	1.20	TON		\$	
0130	01000		PERFORATED PIPE-4 IN	100.00	LF		\$	
0140	01010		NON-PERFORATED PIPE-4 IN	100.00	LF		\$	
0150	01028		PERF PIPE HEADWALL TY 3-4 IN	2.00	EACH		\$	
0160	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	7.00	EACH		\$	
0170	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	7.00	EACH		\$	
0180	02014		BARRICADE-TYPE III	4.00	EACH		\$	
0190	02159		TEMP DITCH	342.00	LF		\$	
0200	02160		CLEAN TEMP DITCH	171.00	LF		\$	
0210	02200		ROADWAY EXCAVATION	5,949.00	CUYD		\$	
0220	02242		WATER	8.50	MGAL		\$	
0230	02267		REMOVE & RESET FENCE	40.00	LF		\$	
0240	02351		GUARDRAIL-STEEL W BEAM-S FACE	550.00	LF		\$	
0250	02360		GUARDRAIL TERMINAL SECTION NO 1	3.00	EACH		\$	
0260	02371		GUARDRAIL END TREATMENT TYPE 7	3.00	EACH		\$	
0270	02381		REMOVE GUARDRAIL	50.00	LF		\$	
0280	02391		GUARDRAIL END TREATMENT TYPE 4A	1.00	EACH		\$	
0290	02399		EXTRA LENGTH GUARDRAIL POST	31.00	EACH		\$	
0300	02429		RIGHT-OF-WAY MONUMENT TYPE 1	13.00	EACH		\$	
0310	02431		WITNESS R/W MONUMENT TYPE 2	3.00	EACH		\$	
0320	02432		WITNESS POST	15.00	EACH		\$	
0330	02484		CHANNEL LINING CLASS III	26.00	TON		\$	
0340	02488		CHANNEL LINING CLASS IV	117.00	CUYD		\$	
0350	02545		CLEARING AND GRUBBING 0.64 ACRES	1.00	LS		\$	
0360	02545		CLEARING AND GRUBBING 1.6 ACRES	1.00	LS		\$	
0370	02562		TEMPORARY SIGNS	421.00	SQFT		\$	
0380	02585		EDGE KEY	53.20	LF		\$	
0390	02599		FABRIC-GEOTEXTILE TYPE IV	473.00	SQYD		\$	

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0400	02600		FABRIC GEOTEXTILE TY IV FOR PIPE	128.00	SQYD	\$2.00	\$	\$256.00
0410	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0420	02651		DIVERSIONS (BY-PASS DETOURS)	1.00	LS		\$	
0430	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		\$	
0440	02677		ASPHALT PAVE MILLING & TEXTURING	139.00	TON		\$	
0450	02690		SAFELOADING	4.10	CUYD		\$	
0460	02701		TEMP SILT FENCE	342.00	LF		\$	
0470	02703		SILT TRAP TYPE A	2.00	EACH		\$	
0480	02704		SILT TRAP TYPE B	2.00	EACH		\$	
0490	02705		SILT TRAP TYPE C	2.00	EACH		\$	
0500	02706		CLEAN SILT TRAP TYPE A	2.00	EACH		\$	
0510	02707		CLEAN SILT TRAP TYPE B	2.00	EACH		\$	
0520	02708		CLEAN SILT TRAP TYPE C	2.00	EACH		\$	
0530	02726		STAKING	1.00	LS		\$	
0540	02731		REMOVE STRUCTURE	1.00	LS		\$	
0550	05950		EROSION CONTROL BLANKET	80.00	SQYD		\$	
0560	05952		TEMP MULCH	5,156.00	SQYD		\$	
0570	05953		TEMP SEEDING AND PROTECTION	3,867.00	SQYD		\$	
0580	05963		INITIAL FERTILIZER	.20	TON		\$	
0590	05964		MAINTENANCE FERTILIZER	.30	TON		\$	
0600	05985		SEEDING AND PROTECTION	5,621.00	SQYD		\$	
0610	05992		AGRICULTURAL LIMESTONE	3.60	TON		\$	
0620	06406		SBM ALUM SHEET SIGNS .080 IN	64.00	SQFT		\$	
0630	06410		STEEL POST TYPE 1	64.00	LF		\$	
0640	06411		STEEL POST TYPE 2	11.00	LF		\$	
0650	06510		PAVE STRIPING-TEMP PAINT-4 IN	2,468.00	LF		\$	
0660	06514		PAVE STRIPING-PERM PAINT-4 IN	2,468.00	LF		\$	
0670	06568		PAVE MARKING-THERMO STOP BAR-24IN	42.00	LF		\$	
0680	21289ED		LONGITUDINAL EDGE KEY	86.50	LF		\$	
0690	22664EN		WATER BLASTING EXISTING STRIPE	200.00	LF		\$	
0700	24540		R/W MONUMENT TYPE 3	6.00	EACH		\$	
0710	24631EC		BARCODE SIGN INVENTORY	9.00	EACH		\$	
0720	24663ED		WITNESS R/W MONUMENT TYPE 4	3.00	EACH		\$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0730	00462		CULVERT PIPE-18 IN	46.00	LF		\$	
0740	01444		SLOPED AND PARALLEL HEADWALL-18 IN	1.00	EACH		\$	
0750	02159		TEMP DITCH	95.00	LF		\$	
0760	02160		CLEAN TEMP DITCH	47.00	LF		\$	
0770	02701		TEMP SILT FENCE	95.00	LF		\$	
0780	02703		SILT TRAP TYPE A	1.00	EACH		\$	
0790	02704		SILT TRAP TYPE B	1.00	EACH		\$	
0800	02705		SILT TRAP TYPE C	1.00	EACH		\$	
0810	02706		CLEAN SILT TRAP TYPE A	1.00	EACH		\$	
0820	02707		CLEAN SILT TRAP TYPE B	1.00	EACH		\$	
0830	02708		CLEAN SILT TRAP TYPE C	1.00	EACH		\$	

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0840	05952		TEMP MULCH	2,049.00	SQYD		\$	
0850	05953		TEMP SEEDING AND PROTECTION	1,537.00	SQYD		\$	
0860	05963		INITIAL FERTILIZER	.10	TON		\$	
0870	05964		MAINTENANCE FERTILIZER	.20	TON		\$	
0880	05985		SEEDING AND PROTECTION	2,101.00	SQYD		\$	
0890	05992		AGRICULTURAL LIMESTONE	1.90	TON		\$	

Section: 0004 - BRIDGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0900	02231		STRUCTURE GRANULAR BACKFILL	29.00	CUYD		\$	
0910	02998		MASONRY COATING	100.00	SQYD		\$	
0920	03299		ARMORED EDGE FOR CONCRETE	47.70	LF		\$	
0930	08001		STRUCTURE EXCAVATION-COMMON	111.00	CUYD		\$	
0940	08019		CYCLOPEAN STONE RIP RAP	212.00	TON		\$	
0950	08033		TEST PILES	67.00	LF		\$	
0960	08039		PRE-DRILLING FOR PILES	190.00	LF		\$	
0970	08052		PILES-STEEL HP14X117	165.00	LF		\$	
0980	08100		CONCRETE-CLASS A	30.60	CUYD		\$	
0990	08104		CONCRETE-CLASS AA	35.90	CUYD		\$	
1000	08151		STEEL REINFORCEMENT-EPOXY COATED	12,092.00	LB		\$	
1010	08160		STRUCTURAL STEEL 16,540 LB	1.00	LS		\$	
1020	08170		SHEAR CONNECTORS APPROX. 840 EACH	1.00	LS		\$	
1030	08301		REMOVE SUPERSTRUCTURE	1.00	LS		\$	
1040	23378EC		CONCRETE SEALING	923.00	SQFT		\$	
1050	24896ED		RAIL SYSTEM TYPE T631	75.00	LF		\$	

Section: 0005 - BRIDGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1060	02231		STRUCTURE GRANULAR BACKFILL	340.00	CUYD		\$	
1070	02998		MASONRY COATING	319.00	SQYD		\$	
1080	03299		ARMORED EDGE FOR CONCRETE	66.20	LF		\$	
1090	08001		STRUCTURE EXCAVATION-COMMON	311.00	CUYD		\$	
1100	08002		STRUCTURE EXCAV-SOLID ROCK	104.00	CUYD		\$	
1110	08019		CYCLOPEAN STONE RIP RAP	522.00	TON		\$	
1120	08039		PRE-DRILLING FOR PILES	323.00	LF		\$	
1130	08100		CONCRETE-CLASS A	256.40	CUYD		\$	
1140	08104		CONCRETE-CLASS AA	123.40	CUYD		\$	
1150	08151		STEEL REINFORCEMENT-EPOXY COATED	49,853.00	LB		\$	
1160	08160		STRUCTURAL STEEL 102,505 LBS	1.00	LS		\$	
1170	23378EC		CONCRETE SEALING	1,551.00	SQFT		\$	
1180	24896ED		RAIL SYSTEM TYPE T631	75.00	LF		\$	

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Section: 0006 - UTILITY-GAS

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1190	16000		G DIRECTIONAL BORE	185.00	LF		\$	
1200	16009		G ENCASMENT STEEL OPEN CUT RANGE 2	50.00	LF		\$	
1210	16015		G PIPE POLYETHYLENE/PLASTIC 02 INCH	230.00	LF		\$	
1220	16026		G PIPE STEEL 06 INCH	330.00	LF		\$	
1230	16039		G SERVICE SHORT SIDE 3/4 INCH	1.00	EACH		\$	
1240	16041		G TIE-IN POLYETHYLENE/PLASTIC 02 INCH	2.00	EACH		\$	
1250	16049		G VALVE POLYETHYLENE/PLASTIC 02 INCH	2.00	EACH		\$	
1260	16065		G LINE MARKER	9.00	EACH		\$	
1270	16068		G MAIN ABANDON ABANDON	1.00	LS		\$	
1280	16080		G TIE-IN STEEL 06 INCH	2.00	EACH		\$	
1290	16108		G WELD X-RAY INSPECTION 6 TO 12 INCH	17.00	EACH		\$	

Section: 0007 - WATERLINE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1300	14004		W DIRECTIONAL BORE	350.00	LF		\$	
1310	14014		W ENCASMENT STEEL OPEN CUT RANGE 3	30.00	LF		\$	
1320	14023		W FLUSHING ASSEMBLY	4.00	EACH		\$	
1330	14030		W METER RELOCATE	1.00	EACH		\$	
1340	14031		W METER VAULT	2.00	EACH		\$	
1350	14037		W PIPE DUCTILE IRON 08 INCH	60.00	LF		\$	
1360	14057		W PIPE PVC 03 INCH	150.00	LF		\$	
1370	14059		W PIPE PVC 06 INCH	40.00	LF		\$	
1380	14060		W PIPE PVC 08 INCH	270.00	LF		\$	
1390	14085		W SERV PE/PLST SHORT SIDE 3/4 IN	3.00	EACH		\$	
1400	14090		W TAPPING SLEEVE AND VALVE SIZE 2	1.00	EACH		\$	
1410	14092		W TIE-IN 03 INCH	1.00	EACH		\$	
1420	14094		W TIE-IN 06 INCH	2.00	EACH		\$	
1430	14095		W TIE-IN 08 INCH	2.00	EACH		\$	
1440	14096		W TIE-IN 10 INCH	2.00	EACH		\$	
1450	14103		W VALVE 03 INCH	6.00	EACH		\$	
1460	14105		W VALVE 06 INCH	2.00	EACH		\$	
1470	14106		W VALVE 08 INCH	8.00	EACH		\$	
1480	14112		W VALVE ANCHOR EXISTING	1.00	EACH		\$	
1490	14144		W LINE MARKER	12.00	EACH		\$	
1500	14153		W LEAK DETECTION METER	2.00	EACH		\$	

Section: 0008 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1510	02569		DEMOBILIZATION	1.00	LS		\$	