



CALL NO. 114

CONTRACT ID. 191009

MADISON COUNTY

FED/STATE PROJECT NUMBER STP 6271(016)

DESCRIPTION I-75 / KY-627

WORK TYPE GRADE, DRAIN & SURFACE WITH BRIDGE

PRIMARY COMPLETION DATE 8/31/2020

LETTING DATE: February 22,2019

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME February 22,2019. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

PLANS AVAILABLE FOR THIS PROJECT.

DBE CERTIFICATION REQUIRED - 11%

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

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PART I
SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 07

CONTRACT ID - 191009

STP 6271(016)

COUNTY - MADISON

PCN - DE07606271909

STP 6271(016)

I-75 / KY-627 IMPROVE SAFETY AND REDUCE CONGESTION AT THE KY-627 BRIDGE OVER I-75, A DISTANCE OF 0.60 MILES.GRADE, DRAIN & SURFACE WITH BRIDGE SYP NO. 07-08403.00.

GEOGRAPHIC COORDINATES LATITUDE 37:50:43.00 LONGITUDE 84:19:40.00

COMPLETION DATE(S):

COMPLETED BY 08/31/2020

APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

Bidder must use the Department's 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 Capacity Rating 102.10 Delivery of Proposals
102.8 Irregular Proposals 102.14 Disqualification of Bidders
102.9 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 Project Code Number (PCN), 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, the DBE's certificate of insurance, and an affidavit for bidders, offerors, and contractors from the DBE to the Division of Construction Procurement. The affidavit can be found on the Construction Procurement website. If the DBE is a supplier of materials for the project, a signed purchase order and an affidavit for bidders, offerors, and contractors 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 and nine (9) copies of this information must be received in the office of the Division of Contract Procurement no later than 12:00 noon of the tenth calendar day after receipt of notification that they are the apparent low bidder.

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

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

- 1 Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
- 2 Whether the bidder provided solicitations through all reasonable and available means;
- 3 Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
- 4 Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with 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 DBE Liaison in the Office of Minority Affairs to give notification of the bidder's inability to get DBE quotes;
- 5 Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
- 6 Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
- 7 Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
- 8 Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;
- 9 Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
- 10 Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal; and
- 11 Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

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

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

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

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

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the Cabinet will hold the prime contractor accountable, as would be the case with all other contract provisions. Therefore, the contractor's failure to carry 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 (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 submitted within 10 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.

The Prime Contractor should supply the payment information at the time the DBE is compensated for their work. Form to use is located at:

<http://transportation.ky.gov/Construction/Pages/Subcontracts.aspx>

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 is Melvin Bynes and the telephone number is (502) 564-3601.

Photocopied payments and completed, signed and notarized affidavit must be submitted by the Prime Contractor to: Office of Civil Rights and Small Business Development
6th Floor West 200 Mero Street
Frankfort, KY 40622

DEFAULT OR DECERTIFICATION OF THE DBE

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

1/27/2017

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.

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 A

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

OPTION A

Be advised that the Department will accept compaction of asphalt mixtures furnished for driving lanes and ramps, at 1 inch (25mm) or greater, on this project according to OPTION A in accordance with Section 402 and Section 403 of the current Standard Specifications. The Department will require joint cores as described in Section 402.03.02 for surface mixtures only. The Department will accept compaction of all other asphalt mixtures according to OPTION B.

SPECIAL NOTE FOR INLAID PAVEMENT MARKERS

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard and Supplemental Specifications and applicable Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. This work shall consist of:

- (1) Maintain and Control Traffic; and (2) Furnish and install Inlaid Pavement Markers (IPMs) in recessed grooves; and (3) Any other work as specified by these notes and the Contract.

II. MATERIALS

The Department will sample all materials in accordance with the Department's Sampling Manual. Make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Markers. Provide reflective lenses with depth control breakaway positioning tabs. Before furnishing the markers, provide to the Engineer the manufacturer's current recommendations for adhesives and installation procedures. Use one brand and design throughout the project. Use markers meeting the specifications in the table below.

SPECIFICATIONS FOR HOUSING AND REFLECTOR	
Material:	Polycarbonate Plastic
Weight:	Housing 2.00 oz.
	Reflector 2.00oz.
Housing Size:	5.00" x 3.00" x 0.70" high
Specific Intensity of Reflectivity at 0.2° Observation Angle	
White:	3.0 at 0°entrance angle
	1.2 at 20°entrance angle
Yellow:	60% of white values
Red:	25% of white values

C. Adhesives. Use adhesives that conform to the manufacturer's recommendations.

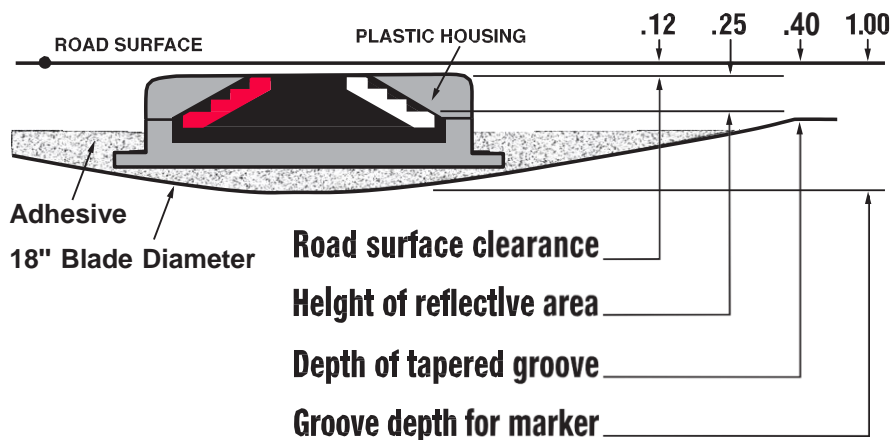
III. CONSTRUCTION

A. Experimental Evaluation. The University of Kentucky Transportation Center will be evaluating this installation of IPMs. Notify the Engineer a minimum of 14 calendar days prior to beginning work. The Engineer will coordinate the University's activities with the Contractor's work.

B. Maintain and Control Traffic. See Traffic Control Plan.

C. Installation. Install IPMs in recessed grooves cut into the final course of pavement according to the manufacturer's recommendations. Do not cut the grooves until the pavement has cured sufficiently to prevent damaging the pavement. Cut installation grooves using diamond blades on saws that accurately control groove dimensions. Remove all dirt, grease, oil, loose or unsound layers, and any other material from the marker area which would reduce the bond of the adhesive. Maintain pavement surfaces in a clean condition until placing markers.

Prepare the pavement surfaces, and install the markers in the recessed groove according to the drawing below. Use an approved snowplowable epoxy adhesive. Ensure that the adhesive bed area is equal to the bottom area of the marker, and apply adhesive in sufficient quantity to force excess out around the entire perimeter of the marker. Use materials, equipment, and construction procedures that ensure proper adhesion of the markers to the pavement surface according to the manufacturer's recommendations. Remove all excess adhesive from in front of the reflective faces. If any adhesive or foreign matter cannot be removed from the reflective faces, or if any marker fails to properly adhere to the pavement surface, remove and replace the marker at no additional cost to the Department.

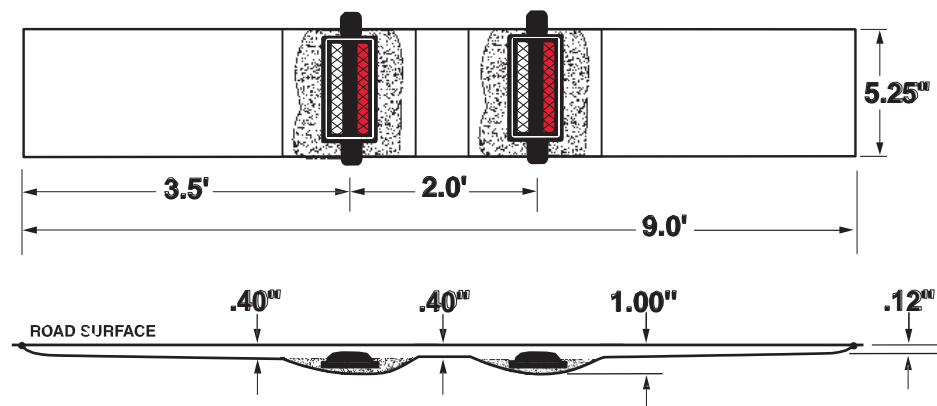


D. Location and Spacing. Install the markers in the pattern for high reflectivity with two (2) IPMs per groove. Locate and space markers as shown in the current standard drawings or sepias (note: use Inlaid Pavement Markers wherever Type V Pavement Markers are called for). Do not install markers on bridge decks. Do not install a marker

Inlaid Pavement Markers

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on top of a pavement joint or crack. Offset the recessed groove a minimum of 2 inches from any longitudinal pavement joint or crack and at least one inch from the painted stripe, ensuring that the finished line of markers is straight with minimal lateral deviation. Give preference to maintaining the 2-inch offset between recessed groove and joint as opposed to keeping the line of markers straight.



Place inlaid markers as much in line with existing pavement striping as possible. Place markers installed along an edge line or channelizing line so that the near edge of the plastic housing is no more than one inch from the near edge of the line. Place markers installed along a lane line between and in line with the dashes. Do not place markers over the lines except where the lines deviate visibly from their correct alignment, and then only after obtaining the Engineer's prior approval of the location.

If conflicts between recessed groove placement in relation to pavement joint and striping cannot be resolved, obtain the Engineer's approval to eliminate the marker or revise the alignment.

E. Disposal of Waste. Dispose of all removed pavement, debris, and other waste at sites off the right of way obtained by the Contractor at no additional cost to the Department. See Special Note for waste and Borrow.

F. Restoration. Be responsible for all damage to public and/or private property resulting from the work. Restore all damaged features in like kind materials and design at no additional cost to the Department.

G. On-Site Inspection. Make a thorough inspection of the site prior to submitting a bid and be thoroughly familiar with existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid as evidence of this inspection having been made and will not honor any claims for money or grant Contract time extensions resulting from site conditions.

H. Caution. Do not take information shown on the drawings and in this proposal and the types and quantities of work listed as an accurate or complete evaluation of the

Inlaid Pavement Markers
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material and conditions to be encountered during construction, but consider the types and quantities of work listed as approximate only. The bidder must draw his own conclusion as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation or extension of Contract time if the conditions encountered are not in accordance with the information shown.

IV. MEASUREMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. "INLAID PAVEMENT MARKER" shall be measured as each. One (1) installation of "INLAID PAVEMENT MARKER" will consist of grooving the pavement, removing cuttings and debris, preheating pavement to remove moisture, adhesives, and installation of two (2) markers with all lenses in accordance with this note.

Note: Each pay item of Inlaid Pavement Marker will require two markers.

V. PAYMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Inlaid Pavement Markers. The Department will make payment for the completed and accepted quantity of completely installed "INLAID PAVEMENT MARKERS" at the Contract unit price, each. Accept payment as full compensation for all labor, equipment, materials, and incidentals to accomplish this work to the satisfaction of the Engineer. A system of one (1) groove and two (2) markers shall be paid as one "INLAID PAVEMENT MARKER". The bid item "INLAID PAVEMENT MARKER" shall be used regardless of the color and type of lenses required.

**RECOMMENDATION FOR PICKUP OF ITEMS TO BE INSTALLED
 ON TRAFFIC SIGNALS/LIGHTING**

Item Number: 7-8403.00
 County: Madison
 Description: KY 627 @ I-75 and KY 627 @ KY 2878 Signals

Cabinets	Master code	
2	T-01-0020	Base Mounted 332 Cabinet
2	T-01-0100	170 Controller
1	T-01-0501	Conflict Monitor, Model 2018
10	T-01-0600	Loop Detector, Model 222
8	T-01-0700	Load Switches

Signals		
19	T-02-0009	Siemens 3 Section Signal
7	T-02-0300	LED Module 12" red arrow
9	T-02-0310	LED Module 12" yellow arrow
5	T-02-0320	LED Module 12" green arrow
12	T-02-0330	LED Module 12" red ball
12	T-02-0340	LED Module 12" yellow ball
12	T-02-0350	LED Module 12" green ball

Special Items		
2	T-02-0504	Router (this includes power supply/antenna/cabling)
1	T-02-0640	Mast arm mount signal bracket (3 section)

Poles		
2	T-04-0030	Steel Strain Pole 32 foot
4	T-04-0040	Steel Strain Pole 34 foot
2	T-04-0051	Steel Strain Pole 36 foot

Electrical Contractor Name _____
 Electrical Contractor Supervisor _____ Contact number for Supervisor _____
 Project Engineer _____ Contact number for Project Engineer _____
 Project Engineer attests that the mentioned contractor is the actual electrical contractor on this project
 Signature of Project Engineer or Designee _____

7-8403.0
SPECIAL NOTE
FOR
COMPLETION DATE

Project Fixed Completion Date

This project shall have a fixed completion date of **August 31, 2020** for the completion of **all** work associated with this project. Liquidated damages shall be assessed according to Section 108 of the 2012 Kentucky Standard Specifications for Road and Bridge Construction. Contrary to Section 108 of the 2012 Kentucky Standard Specifications for Road and Bridge Construction, contract extensions associated with this project may only be adjusted at the discretion of the Engineer.

SPECIAL NOTE

For Tree Removal

**Madison County
Reconstruct bridge and approaches on KY 627 over I75
Item No. 7-8403**

**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 PIPELINE INSPECTION

1.0 DESCRIPTION. The Department will perform visual inspections on all pipe on the project. A video inspection will be required on projects having more than 250 linear feet of storm sewer and/or culvert pipe and on routes with an ADT of greater than 1,000 vehicles. Conduct video inspections on all pipe located under the roadway and 50 percent of the remaining pipe not under the roadway. Storm sewer runs and outfall pipes not under the roadway take precedence over rural entrance pipes. Contractors performing this item of work must be prequalified with the Department in the work type J51 (Video Pipe Inspection and Cleaning). Deflection testing shall be completed using a mandrel in accordance with the procedure outlined below or by physical measurement for pipes greater than 36 inches in diameter. Mandrel testing for deflection must be completed prior to the video inspection testing. Unless otherwise noted, Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

2.0 VIDEO INSPECTION. Ensure pipe is clear of water, debris or obstructions. Complete the video inspection and any necessary measurement prior to placing the final surface over any pipe. When paving will not be delayed, take measurements 30 days or more after the completion of earthwork to within 1 foot of the finished subgrade. Notify the Engineer a minimum of 24 hours in advance of inspection and notify the Engineer immediately if distresses or locations of improper installation are logged.

2.1 INSPECTION FOR DEFECTS AND DISTRESSES

A) Begin at the outlet end and proceed through to the inlet at a speed less than or equal to 30 ft/minute. Remove blockages that will prohibit a continuous operation.

B) Document locations of all observed defects and distresses including but not limited to: cracking, spalling, slabbing, exposed reinforcing steel, sags, joint offsets, joint separations, deflections, improper joints/connections, blockages, leaks, rips, tears, buckling, deviation from line and grade, damaged coatings/paved inverts, and other anomalies not consistent with a properly installed pipe.

C) During the video inspection provide a continuous 360 degree pan of every pipe joint.

D) Identify and measure all cracks greater than 0.1" and joint separations greater than 0.5".

E) Video Inspections are conducted from junction to junction which defines a pipe run. A junction is defined as a headwall, drop box inlet, curb box inlet, manhole, buried junction, or other structure that disturbs the continuity of the pipe. Multiple pipe inspections may be conducted from a single set up location, but each pipe run must be on a separate video file and all locations are to be referenced from nearest junction relative to that pipe run.

F) Record and submit all data on the TC 64-765 and TC 64-766 forms.

3.0 MANDREL TESTING. Mandrel testing will be used for deflection testing. For use on Corrugated Metal Pipe, High Density Polyethylene Pipe, and Polyvinyl Chloride Pipe,

use a mandrel device with an odd number of legs (9 minimum) having a length not less than the outside diameter of the mandrel. The diameter of the mandrel at any point shall not be less than the diameter specified in Section 3.6. Mandrels can be a fixed size or a variable size.

3.1 Use a proving ring or other method recommended by the mandrel manufacturer to verify mandrel diameter prior to inspection. Provide verification documentation for each size mandrel to the Engineer.

3.2 All deflection measurements are to be based off of the AASHTO Nominal Diameters. Refer to the chart in section 3.6.

3.3 Begin by using a mandrel set to the 5.0% deflection limit. Place the mandrel in the inlet end of the pipe and pull through to the outlet end. If resistance is met prior to completing the entire run, record the maximum distance achieved from the inlet side, then remove the mandrel and continue the inspection from the outlet end of the pipe toward the inlet end. Record the maximum distance achieved from the outlet side.

3.4 If no resistance is met at 5.0% then the inspection is complete. If resistance occurred at 5.0% then repeat 3.1 and 3.2 with the mandrel set to the 10.0% deflection limit. If the deflection of entire pipe run cannot be verified with the mandrel then immediately notify the Engineer.

3.5 Care must be taken when using a mandrel in all pipe material types and lining/coating scenarios. Pipe damaged during the mandrel inspection will be video inspected to determine the extent of the damage. If the damaged pipe was video inspected prior to mandrel inspection then a new video inspection is warranted and supersedes the first video inspection. Immediately notify the Engineer of any damages incurred during the mandrel inspection and submit a revised video inspection report.

3.6 AASHTO Nominal Diameters and Maximum Deflection Limits.

Base Pipe Diameter (inches)	AASHTO Nominal Diameter (inches)	Max. Deflection Limit (inches)	
		5.0%	10.0%
15	14.76	14.02	13.28
18	17.72	16.83	15.95
24	23.62	22.44	21.26
30	29.53	28.05	26.58
36	35.43	33.66	31.89
42	41.34	39.27	37.21
48	47.24	44.88	42.52
54	53.15	50.49	47.84
60	59.06	56.11	53.15

4.0 PHYSICAL MEASUREMENT OF PIPE DEFLECTION. Alternate method for deflection testing when there is available access or the pipe is greater than 36 inches in diameter, as per 4.1. Use a contact or non-contact distance instrument. A leveling device is recommended for establishing or verifying vertical and horizontal control.

4.1 Physical measurements may be taken after installation and compared to the AASHTO Nominal Diameter of the pipe as per Section 3.6. When this method is used, determine the smallest interior diameter of the pipe as measured through the center point of the pipe (D2). All measurements are to be taken from the inside crest of the corrugation. Take the D2 measurements at the most deflected portion of the pipe run in question and at intervals no greater than ten (10) feet through the run. Calculate the deflection as follows:

$$\% \text{ Deflection} = [(AASHTO \text{ Nominal Diameter} - D2) / AASHTO \text{ Nominal Diameter}] \times 100\%$$

Note: The Engineer may require that preset monitoring points be established in the culvert prior to backfilling. For these points the pre-installation measured diameter (D1) is measured and recorded. Deflection may then be calculated from the following formula:

$$\% \text{ Deflection} = [(D1 - D2) / D1] (100\%)$$

4.2 Record and submit all data.

5.0 DEDUCTION SCHEDULE. All pipe deductions shall be handled in accordance with the tables shown below.

FLEXIBLE PIPE DEFLECTION	
Amount of Deflection (%)	Payment
0.0 to 5.0	100% of the Unit Bid Price
5.1 to 9.9	50% of the Unit Bid Price ⁽¹⁾
10 or greater	Remove and Replace ⁽²⁾

⁽¹⁾ Provide Structural Analysis for HDPE and metal pipe. Based on the structural analysis, pipe may be allowed to remain in place at the reduced unit price. ⁽²⁾ The Department may allow the pipe to remain in place with no pay to the Contractor in instances where it is in the best interest to the public and where the structural analysis demonstrates that the pipe should function adequately.

RIGID PIPE REMEDIATION TABLE PIPE	
Crack Width (inches)	Payment
• 0.1	100% of the Unit Bid Price
Greater than 0.1	Remediate or Replace ⁽¹⁾

⁽¹⁾ Provide the Department in writing a method for repairing the observed cracking. Do not begin work until the method has been approved.

6.0 PAYMENT. The Department will measure the quantity in linear feet of pipe to inspect. 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>
24814EC	Pipeline Inspection	Linear Foot
10065NS	Pipe Deflection Deduction	Dollars

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.



COMMONWEALTH OF KENTUCKY

Matthew G. Bevin
Governor

Memorandum

To: Becky Barrick
CC: Tim Foreman
From: O'Dail Lawson
Environmental Scientist IV
Division of Environmental Analysis
Date: 2/1/2016
Re: Asbestos Inspection Report for Madison 07-8403

This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.

Project and Structure Information

Project # Madison 07-8403

Bridge # 076B00040N

Location: KY-0627 (Boonesborough Road) over Interstate 75.

Description: The samples collected were point counted below 1%. No abatement necessary.

Inspection Date: January 7, 2016

Results

The results revealed that there is no ACM abatement required at this time.



MRS, INC. MRS, Inc. Analytical Laboratory Division

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	<u>KY Transportation Cabinet</u>	Project No:	<u>21127 B</u>
Address:	<u>200 Mero Street</u>	Sample ID:	<u># M 1</u>
	<u>Frankfort, KY</u>	Sampled:	<u>7-Jan-16</u>
	<u>40601</u>	Received:	<u>8-Jan-16</u>
	<u>Attention O'Dail Lawson</u>	Analyzed:	<u>12-Jan-16 - Point Count -</u>

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Madison County - Item # 07 - 8403 076 B00040N

Field Description: Guard Rail Mastic

Laboratory Description:

Thick Gray Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

<u>Cellulose</u>	<u>0.25 %</u>
<u>Binders</u>	<u>99.25 %</u>

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah **Reviewed By:** *Winterford Mensah*
Signature

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	<u>KY Transportation Cabinet</u>	Project No:	<u>21127 B</u>
Address:	<u>200 Mero Street</u>	Sample ID:	<u># M 2</u>
	<u>Frankfort, KY</u>	Sampled:	<u>7-Jan-16</u>
	<u>40601</u>	Received:	<u>8-Jan-16</u>
		Analyzed:	<u>12-Jan-16 - Point Count -</u>
	<u>Attention O'Dail Lawson</u>		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Madison County - Item # 07 - 8403 076 B00040N

Field Description: Masonry Sealant

Laboratory Description:

Dark Brown Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

<u>Cellulose</u>	<u>0.25 %</u>
<u>Binders</u>	<u>99.25 %</u>

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah **Reviewed By:** *Winterford Mensah*
Signature

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

Certification Number: ETC-AIR-071415-00276


O'Dail Lawson

has on 07-14-2015, 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


Name - Training Manager

Expiration Date: 07-14-2016


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 type="checkbox"/>	Original	<input checked="" type="checkbox"/>	Re-Certification	RIGHT OF WAY CERTIFICATION			
ITEM #		COUNTY		PROJECT # (STATE)		PROJECT # (FEDERAL)	
078403.00		Madison		12FO FD52 C076 8328301R		STP 6271 (016)	
PROJECT DESCRIPTION							
Boonesborough - White Hall Road							
<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		15	EXCEPTION (S) Parcel #		ANTICIPATED DATE OF POSSESSION WITH EXPLANATION		
Number of Parcels That Have Been Acquired							
Signed Deed		7					
Condemnation		8					
Signed ROE		8					
Notes/ Comments (Use Additional Sheet if necessary)							
LPA RW Project Manager				Right of Way Supervisor			
Printed Name				Printed Name		Cecil Smith	
Signature				Signature			
Date				Date		1/17/2019	
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: 2019.01.18 07:09:05 -05'00'		Date		Current Stewardship Agreement	

UTILITIES AND RAIL CERTIFICATION NOTE

**Madison County
ONHPP6271017
FD52 076 8328301U
Mile point: 0.073 TO 0.193
RECONSTRUCT AND WIDEN THE KY-627 BRIDGE OVER I-75 TO FIVE LANES TO IMPROVE TRAFFIC
CONGESTION AND IMPROVE SAFETY. (INCLUDES 7-8400) (B40)(08CCN)(10CCR)(14CCR)(16CCR)
ITEM NUMBER: 07-8403.00**

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

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ITEM NUMBER: 07-8403.00

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

Texas Eastern Transmission LP - Spectra Energy Transmission, LLC - Natural Gas

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**

AT&T – KY – Communications

This company has aerial facilities along the south right of way of White Hall Shrine Road (KY 3055) that will remain in place. They have aerial facilities along west right of way of US 25 with a crossing at approximately Station 19+15 to an aerial facilities south of KY 627 that is located outside of the east right of way line of US 25. They have aerial facilities that run along the east right of way of Colonel Road (KY 2878) and north right of way of Old Boonesboro Road with two aerial crossings over Old Boonesboro Road and one over Colonel Road near their intersection. They have aerial facilities on the east side of Simpson Lane that go around east side of the development of the BP Station/McDonalds.

Delta Natural Gas – Natural Gas

This company has buried facilities along the east right of way of US 25. They have facilities along the west right of way of Simpson Lane (KY 2878) that cross Simpson Lane near the McDonalds development

UTILITIES AND RAIL CERTIFICATION NOTE

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ITEM NUMBER: 07-8403.00

then runs south along the east right of way of Simpson Lane then crosses KY 627 at approximately Station 55+20 then turns to run along the south right of way of KY 627 to the east end of the project.

LG&E KU - Electric

This company has aerial facilities along the west right of way of US 25 with a crossing at approximately Station 19+55 to an aerial facility outside of the east right of way of US 25. They have aerial facilities along the east right of way of Colonel Rd (KY 2878) with a crossing at approximately 150' south of Old Boonesboro Rd. They have aerial facilities along the west right of way of Old Boonesboro Rd crossing the proposed South Approach at approximately Station 48+15 and proposed Colonel Rd at approximately Station 27+65. They have facilities on the east right of way of Simpson Lane crossing the proposed North Approach at approximately Station 43+45 and the proposed Simpson Lane at approximately Station 52+00.

Madison County Utilities – Water

The company has facilities just outside the existing west right of way of US 25. They have facilities along the east right of way of Colonel Road (KY 2878). They have facilities along the south right of way of KY 627 from Colonel Road to the east end of the project. They have facilities along the existing west right of way of Simpson Lane which goes around the east side of the BP/McDonalds development to the north right of way of KY 627. They have facilities along the north right of way of KY 627 from approximately Station 57+00 to approximately Station 60+80 with a crossing of KY 627 at approximately Station 60+80.

Northern Madison County Sanitation District – Sewer

This company has facilities along the west right of way of US 25. They have facilities along the east right of way of Colonel Road (KY 2878) from the south end of the project crossing Old Boonesboro Road and going along the north right of way of Old Boonesboro Road to east end of Loves Truck Stop then going to the south right of way of KY 627 at approximately Station 63+00. They have facilities along the north right of way of KY 627 from approximately Station 58+00 to approximately Station 60+40 with a crossing of KY 627 at approximately Station 60+40. They have facilities along the south right of way of KY 627 from approximately Station 58+25 to the east end of the project. They have facilities running parallel to KY 627 approximately 250' to 400' south of KY 627 in the project area.

UTILITIES AND RAIL CERTIFICATION NOTE

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ITEM NUMBER: 07-8403.00**

Spectrum Cable – Communication

The company has yet to provide a proposed relocation plan for their facilities; consequently, we are unable to identify the current or proposed location of the company’s facilities. The company has been given a clearance date of June 15, 2019.

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

AT&T – KY – Communications

The aerial facilities along the west right of way of US 25 will be relocated to the east right of way of US 25 with an aerial crossing at approximately Station 19+00. The aerial facilities along Colonel Road and Old Boonesboro Road will be relocated to run along east right of way of the new relocated Colonel Road with a new aerial crossing at approximately Station 24+95. The aerial facilities that runs on the east side of the BP Station/McDonalds development will be relocated adjacent to the existing facilities just to the northeast with a crossing of the North Approach at approximately Station 46+00. Completion date 4/15/2019.

Delta Natural Gas – Natural Gas

This company will relocated their facilities along US 25 approximately 25’ to the east of their existing facilities from approximately 125’ north of KY 627 to approximately 165’ south of KY 627 crossing KY 627 at approximately Station 43+60. They will relocated approximately 60’ of their facilities under the existing 36” pipe in the northeast corner of KY 627 and the existing Simpson Lane just to the west of the existing line. They will relocated their facilities along KY 627 from approximately Station 57+50 to the east of end of the project to just inside the proposed south right of way. Completion date 4/15/2019.

LG&E KU - Electric

The company will relocate their aerial facilities to the east right of way of US 25 crossing KY 627 at approximately Station 43+85. They will relocate their aerial facilities on Colonel Rd just to the east of the existing line crossing Colonel Rd in the area of the existing Old Boonesboro Rd intersection. They

UTILITIES AND RAIL CERTIFICATION NOTE

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ITEM NUMBER: 07-8403.00

will relocate their facilities on Old Boonesboro Rd just to the north of the existing facilities crossing the proposed Colonel Rd at approximately Station 27+75. They will relocate their facilities along Simpson Ln in generally the same corridor with a new crossing of the North Approach at approximately Station 44+35. A new aerial facility will be installed along the south right of way of KY 627 from approximately Station 63+35 to the east end of the project. Completion date May 1, 2019.

Madison County Utilities – Water

The company will relocated their facilities along US 25 to outside the east right of way from approximately Station 17+50 to approximately Station 22+75. There will be a new crossings at approximately US 25 Station 17+50 and KY 627 Station 43+60. There will be new service line crossings at approximately US 25 Stations 20+10 and 22+35. They will relocate their facilities along Colonel Road to outside the proposed east right of way with crossing at approximately Stations 16+80 and 33+40 with a service line crossing at approximately Station 21+30. They will relocated their facilities along Simpson Lane to the proposed east right of way with a crossing at approximately Station 35+10. They will install new facilities along the proposed north right of way of KY 627 from approximately Station 55+75 to approximately Station 63+25 with a crossing of KY 627 at approximately Station 63+25. They will relocate their facilities along the south right of way of KY 627 to the new proposed south right of way from approximately Station 59+00 to the east end of the project. Completion date June 15, 2019.

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

Northern Madison County Sanitation District – Sewer

UTILITIES AND RAIL CERTIFICATION NOTE

Madison County
ONHPP6271017
FD52 076 8328301U
Mile point: 0.073 TO 0.193
RECONSTRUCT AND WIDEN THE KY-627 BRIDGE OVER I-75 TO FIVE LANES TO IMPROVE TRAFFIC
CONGESTION AND IMPROVE SAFETY. (INCLUDES 7-8400) (B40)(08CCN)(10CCR)(14CCR)(16CCR)
ITEM NUMBER: 07-8403.00

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

- No Rail Involvement Rail Involved Rail Adjacent

UTILITIES AND RAIL CERTIFICATION NOTE

Madison County
ONHPP6271017
FD52 076 8328301U
Mile point: 0.073 TO 0.193
RECONSTRUCT AND WIDEN THE KY-627 BRIDGE OVER I-75 TO FIVE LANES TO IMPROVE TRAFFIC
CONGESTION AND IMPROVE SAFETY. (INCLUDES 7-8400) (B40)(08CCN)(10CCR)(14CCR)(16CCR)
ITEM NUMBER: 07-8403.00

AREA FACILITY OWNER CONTACT LIST

Facility Owner	Address	Contact Name	Phone	Email
AT&T - KY - Communication	894 East Main Street Ext Georgetown KY 40324	Frank Ambrose	(502) 867-8240	fa2207@att.com
Delta Natural Gas Company, Inc. - Natural Gas	3617 Lexington Road Winchester KY 40391	Steve Lewis	(859) 744-6171	slewis@DeltaGas.com
LG&E KU - Electric	820 West Broadway Louisville KY 40202	Caroline Justice	(502) 627-3708	Caroline.Justice@lge-ku.com
Madison County Utilities District - Water	PO Box 670 Richmond KY 40476	John Clark	(859) 624-1735	jyork@madisoncountyutilities.com
Northern Madison County Sanitation District - Sewer	201 Aqueduct Drive Richmond KY 40476	Elliott Turner	(859) 626-0431	nmcsdelliott@bellsouth.net
Texas Eastern Transmission LP - Spectra Energy Transmission, LLC - Natural Gas	P.O. Box 305001 Nashville TN 37230	Taylor Miller	(501) 400-4787	Taylor.Miller@Enbridge.com

UTILITIES AND RAIL CERTIFICATION NOTE

Madison County
ONHPP6271017
FD52 076 8328301U
Mile point: 0.073 TO 0.193
RECONSTRUCT AND WIDEN THE KY-627 BRIDGE OVER I-75 TO FIVE LANES TO IMPROVE TRAFFIC
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ITEM NUMBER: 07-8403.00

Time Warner Cable / Spectrum Cable - CATV	1617 Foxhaven Drive Richmond KY 40475	Elbert Lamb	(859) 624-6974	elbert.lamb@twcable.com
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GENERAL UTILITY NOTES AND INSTRUCTIONS APPLICABLE TO ALL UTILITY WORK MADE A PART OF THE ROAD CONSTRUCTION CONTRACT

Item 7-8403 Madison County

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:

None

The bidding contractor needs to review the above referenced list and choose from the list of approved subcontractors at the end of these general notes as identified above before bidding. When the list of approved subcontractors is provided, only subcontractors shown on the following list(s) will be allowed to work on that utility as a part of this contract.

When the list of approved subcontractors for the utility work is not provided in these general notes, the utility work can be completed by the prime contractor. If the prime contractor chooses to subcontract the work, the subcontractor shall be prequalified with the KYTC Division of Construction Procurement in the work type of "Utilities" (I33). Those who would like to become prequalified may contact the Division of Construction Procurement at (502) 564-3500. Please note: it could take up to 30 calendar days for prequalification to be approved. The prequalification does not have to be approved prior to the bid, but must be approved before the subcontract will be approved by KYTC and the work can be performed.

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.

CUSTOMER SERVICE AND LATERAL ABANDONMENTS When temporary or permanent abandonment of customer water, gas, or sewer services or laterals are necessary during relocation of utilities included in the contract, the utility contractor shall perform these abandonments as part of the contract as incidental work. No separate payment will be made for service line and lateral abandonments. The contractor shall provide all labor, equipment and materials to accomplish the temporary or permanent abandonment in accordance with the plans, specifications and/or as directed by the engineer. Abandonment may include, but is not limited to, digging down on a water or gas main at the tap to turn off the tap valve or corporation stop and/or capping or plugging the tap, digging down on a sewer tap at the main and plugging or capping the tap, digging down on a service line or lateral at a location shown on the plans or agreeable to the engineer and capping or plugging, or performing any other work necessary to abandon the service or lateral to satisfactorily accomplish the final utility relocation.

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.

No materials are being supplied by Northern Madison Sanitation.

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.

LISTING OF PREQUALIFIED CONTRACTORS:

No prequalified contractors are required by Northern Madison Sanitation District

Standard Sanitary Sewer Bid Item Descriptions

S BYPASS PUMPING This item shall include all labor, equipment, and materials needed to complete a bypass pumping and/or hauling operation for diversion of sewage during sanitary sewer construction. Examples of such operations when bypass pumping and/or hauling may be necessary is during force main tie-ins, manhole invert reconstruction, insertion of new manholes into existing mains, or other similar construction. There may be more than one bypass pumping/hauling operation on a project. This item shall be paid for each separate bypass pumping/hauling operation occurrence as called out on the plans or directed by the engineer and actually performed. There will be no separate bid items defined for length, duration, or volume of sewage pumped or hauled in each occurrence. If a bypass pumping/hauling operation is called out on the plans; but, conditions are such that the bypass pumping/hauling operation is not needed or utilized, no payment will be made under this item. The contractor shall draw his own conclusions as to what labor, equipment, and materials may be needed for each bypass pumping/hauling occurrence. The contractor should be prepared to handle the maximum volume of the sewer being bypassed, even during a storm event. This item shall not be paid separately, but shall be considered incidental, when bypass pumping and/or hauling is needed during cast-in-place-pipe (CIPP) and/or point repair operations. 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).

S CIPP LATERAL SERVICE INVESTIGATION This item shall include all equipment, materials, labor and incidentals necessary to enter the sewer in compliance with all safety/confined space requirements and perform the identification, assessment and pre-measurement of all existing and abandoned laterals for the placement of Cured-In-Place-Pipe lining. This item shall be in payment for all lateral service investigation for all sewer segments to be lined as a part of this contract. This bid item shall include bypass pumping when required. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Payment for this item shall be LUMP SUM (LS).

S CIPP LATERAL REINSTATEMENT This item is to pay for installing a Cured-In-Place-Pipe liner in service laterals and service/mainline connections to stabilize structural defects and construction inadequacies. This bid item shall include all labor, equipment, materials and incidentals necessary to perform the service lateral reinstatement in accordance with the plans and specifications. Work under this item shall include bypass pumping, sewer flow control, pre-installation cleaning, sealing connections to existing sewer main, pre- and post- construction CCTV inspection and final testing of the CIPP system. This item shall also include the "top hat" required by the specifications. All CIPP lateral reinstatements shall be paid under this item regardless of the size or length of reinstatement. No separate bid items of varying sizes or length of CIPP lateral reinstatement will be provided in the contract. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Payment for this item shall be EACH (EA) for each CIPP lateral reinstatement complete and ready for use.

S CIPP LINER This bid Item is to pay for rehabilitation of existing sanitary sewers using the Cured-In-Place-Pipe method. This bid item description applies to all CIPP sizes included in the contract.

All CIPP Liner items of all varying sizes shall include all labor, materials, customer notification, testing, necessary permits, ingress and egress procedures, bypass pumping, pre-construction video, sediment and root removal, dewatering, traffic control, erosion and sediment control, excavation pits, removal and replacement of manhole frames and covers as necessary to facilitate the lining work, sealing at manholes and service connections, clearing and grubbing, pipeline cleaning, re-cleaning and video inspection as many times as necessary, debris collection and disposal, root removal, pre- and post-construction video inspection, all digital inspection footage, final report preparation and approval, the cost of potable water from the Owner, required compliance tests, site restoration, site cleanup, sealing of liner at manholes, acceptance testing and all other rehabilitation work and incidentals not included under other pay items necessary to complete the rehabilitation per the plans and specifications. There will be no separate payment for acceptance testing of the lined pipe; but shall be considered incidental to this item. Pay under this item shall be by each size bid in the contract. Pay measurement shall be from center of manhole to center of manhole. 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).

S CIPP PROTRUDING LATERAL REMOVAL This item includes all equipment, materials, labor and incidentals necessary to enter the sewer in compliance with all safety/confined space requirements, remove a sufficient amount of the protruding tap to insure a proper and safe Cured-In-Place-Pipe lining insertion and perform pre-installation CCTV. This bid item shall include bypass pumping when required. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. Payment for this item shall be EACH (EA) for each protruding lateral removed.

S CONCRETE PIPE ANCHOR This item shall be constructed on the sewer pipe at the locations shown on the plans in accordance with sanitary sewer specifications and standard drawings. Payment for concrete anchors will be made at the contract unit price each in place complete and ready for use. Each concrete anchor of sewer pipe or force main shall be paid under one bid item per contract regardless of the sizes of carrier pipe being anchored in the contract. 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.

S 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 force main or gravity sewer 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).

S ENCASEMENT CONCRETE Includes all labor, equipment, excavation, concrete, reinforcing

steel, backfill, restoration, and etc., to construct the concrete encasement of the sewer or force 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.

S ENCASEMENT 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).

S 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, labor, and equipment to open cut 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).

S FORCE MAIN This description shall apply to all PVC and ductile iron and polyethylene/plastic pipe bid items of every size and type, 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, 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 also include pipe anchors on polyethylene pipe runs as shown on the plans or required by the specifications 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). No separate payment will be made under pipe items when the directional bore pipe is the carrier 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. 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).

S FORCE MAIN AIR RLS/VAC VLV This bid item description shall apply to all force main air release/vacuum valve installations of every size except those defined as “Special”. This item shall include the air release/vacuum 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/vacuum 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/vacuum 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.

S FORCE MAIN 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 sewer or force main under streets, buildings, 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).

S FORCE 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 force 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. Force 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.

S FORCE MAIN TAP SLEVE/VALVE RANGE 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:

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

Range 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.

S FORCE MAIN TIE-IN This bid description shall be used for all force 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, testing and backfill required to make the force main tie-in as shown on the plans and in accordance with the specifications complete and ready for use. This bid item shall include purge and sanitary disposal of any sewage from any abandoned segments of force main. Pipe for tie-ins shall be paid under separate bid items. 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.

S FORCE MAIN VALVE This description shall apply to all force main 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 force main valves being installed with new force 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, 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, force main valves shall be restrained. Force main valve restraint shall be considered incidental to the force main valve 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.

S FORCE MAIN 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 force main valve 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.

S LATERAL CLEANOUT This item shall be for payment for installation of a cleanout in a service lateral line. This item shall include furnishing and installation of a tee, vertical pipe of whatever length required, and threaded cap. The cleanout shall extend from the lateral to final grade elevation. The size of the cleanout shall be equivalent to the size of the lateral. The cleanout materials shall meet the same specification as those for the lateral. The cleanout shall be installed at the locations shown on the plans or as directed by the engineer. Only one pay item shall be established for cleanout installation. No separate pay items shall be established for size or height variances. 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.

S LATERAL LOCATE This bid item is to pay for all labor, equipment, and materials needed in locating an existing sanitary sewer service lateral for tie-in of the lateral to new mainline sewers and/or for the relocation of a lateral. This bid item shall be inclusive of any and all methods and efforts required to locate the lateral for tie-in or relocation of the lateral. Locating methods to be included under this items shall include, but are not limited to, those efforts employing the use of video cameras from within an existing sanitary sewer main or lateral, electronic locating beacons and/or tracers inserted into the sanitary sewer main or lateral, careful excavation as a separate operation from mainline sewer or lateral excavation, the use of dyes to trace the flow of a lateral, or any combination of methods required to accurately locate the lateral. 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).

S LATERAL LONG SIDE This bid item description shall apply to all service lateral installations of every size up to and including 6 inch internal diameter, except those lateral bid items defined as "Special". This item includes the specified piping material, main tap, bends, clean outs, 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 lateral installations where the ends of the lateral connection are on opposite sides of the public roadway. The new lateral must cross the centerline of the public roadway to qualify for payment as a long side lateral. The length of the service lateral 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 lateral 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. 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.

S LATERAL SHORT SIDE This bid item description shall apply to all service lateral installations of every size up to and including 6 inch, except those lateral bid items defined as “Special”. This item includes the specified piping material, main tap tee, bends, clean outs, 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 lateral installations where both ends of the lateral connection are on the same side of the public roadway, or when an existing lateral 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 lateral 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 lateral 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. 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.

S LINE MARKER This item is for payment for furnishing and installing a sewer 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.

S MANHOLE Payment under this item is for the installation of new 4 foot interior diameter sanitary sewer manhole. Payment for manholes will be made at the contract unit price each in place complete and ready for use at the locations shown on plans in accordance with specifications and standard drawings. Manholes shall include concrete base, barrel sections, cone section or slab top, steps, excavation, backfilling, air testing, restoration, and cleanup in accordance with the specifications and standard drawings. Payment shall be made under this item regardless of whether the base is to be precast or cast-in-place (doghouse). All materials, except casting, shall be new and unused. An existing casting from an existing abandoned or removed manhole is to be reused and shall be considered incidental to this item. When a new casting is specified, or an existing casting is unavailable, it shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. 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.

S MANHOLE ABANDON/REMOVE Payment under this item is for the partial removal and/or filling of any sanitary sewer manhole regardless of size or depth that no longer serves any purpose. Payment shall be made regardless of whether the manhole is or is not in conflict with other work. Any manhole requiring partial removal, but not total removal, in order to clear a conflict with other work shall be paid under this item. All manholes partially removed shall be removed to a point at least one foot below final grade, one foot below roadway subgrade, or one foot clear of any other underground infrastructure, whichever is lowest. If partial removal of an abandoned manhole is elected by the contractor, the remaining manhole structure shall be refilled with flowable fill. Payment for disposal of a sanitary sewer manhole will be made under this item only. 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.

S MANHOLE ADJUST TO GRADE Payment under this item is for the adjustment of sanitary sewer casting elevation on all sizes of existing sanitary manholes. This work shall be performed in accordance with the sanitary sewer specifications. Payment shall be made under this bid item regardless of the amount of adjustment necessary to a sanitary sewer manhole casting or diameter of the manhole. Work under this pay item may be as simple as placing a bed of mortar under a casting; but, shall also be inclusive of installation of adjusting rings, and /or addition, removal, or replacement of barrel sections. The existing casting is to be reused unless a new casting is specified on the plans. New casting, when specified, shall be paid as a separate bid item. Anchoring of the casting shall be incidental to this 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.

S MANHOLE CASTING STANDARD Payment under this bid items is for furnishing of a new standard traffic baring casting for sanitary manholes meeting the requirements of the sanitary sewer specifications and standard drawings. 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 installed.

S MANHOLE CASTING WATERTIGHT Payment under this bid item is for furnishing of a new watertight traffic baring casting for sanitary manholes meeting the requirements of the sanitary sewer specifications and standard drawings. 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 installed.

S MANHOLE RECONSTRUCT INVERT This bid item is to pay for all labor, equipment, and material for rework of the manhole bench to redirect or eliminate flow, such as when the flow of a pipe or pipes are being removed or redirected. This work will be as specified in the plans, specifications, or directed by the engineer. This work may consist of, but is not limited to, removal of concrete and/or placement of concrete in elimination or redirect of flow. This item shall also include providing and placement of a rubber seal or boot as required by utility specification, standard drawing or plan. The contractor shall draw his own conclusions as to the effort and scope of work needed to comply with the specifications, standard drawings, and plans. No payment shall be made under this bid when MANHOLE TAP EXISTING, or MANHOLE TAP EXISTING ADD DROP are being paid at the same location, as this type of work is included in those items. 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.

S MANHOLE TAP EXISTING This bid item is to pay for all labor, equipment, and material for coring one opening in an existing manhole base, addition of a rubber seal as specified, and rework of the manhole bench to direct the additional pipe flow. The bid item shall be paid for each core opening added to a single manhole. This bid item shall also include any rework of the existing manhole bench due to the elimination of other existing pipes and flow. This work will be as specified in the plans, specifications, or directed by the engineer. This work may consist of, but is not limited to, removal of concrete and/or placement of concrete in the addition, elimination, or redirect of flow. The contractor shall draw his own conclusions as to the effort and scope of work needed to comply with the

specifications, standard drawings, and plans. 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.

S MANHOLE TAP EXISTING ADD DROP This bid item is to pay for all labor, equipment, and material for coring one opening in an existing manhole base, addition of a rubber seal as specified, addition of a vertical drop pipe to the outside of the manhole, placement of reinforcing steel and concrete to encase vertical pipe, and rework of the manhole bench to direct the additional pipe flow. The bid item shall be paid for each drop added to a single manhole. This bid item shall also include any rework of the existing manhole bench due to the elimination of other existing pipes and flow. This work will be as specified in the plans, specifications, or directed by the engineer. This work may consist of, but is not limited to, removal of concrete and/or placement of concrete in the addition, elimination, or redirect of flow. The contractor shall draw his own conclusions as to the effort and scope of work needed to comply with the specifications, standard drawings, and plans. 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.

S MANHOLE WITH DROP Payment under this item is for the installation of new 4 foot interior diameter sanitary sewer manhole with drop. Payment for drop manholes will be made at the contract unit price each in place complete and ready for use at the locations shown on plans in accordance with specifications and standard drawings. Drop manholes shall include concrete base, barrel sections, drop materials, cone section or slab top, steps, excavation, backfilling, air testing, restoration, and cleanup. Payment shall be made under this item regardless of whether the base is to be precast or cast-in-place (doghouse). All materials, except casting, shall be new and unused. An existing casting from an existing abandoned or removed manhole is to be reused and shall be considered incidental to this item. When a new casting is specified, or an existing casting is unavailable, it shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. 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.

S MANHOLE WITH LINING Payment under this item is for the installation of new 4 foot interior diameter sanitary sewer manhole with corrosion resistant lining. Payment for manholes will be made at the contract unit price each in place complete and ready for use at the locations shown on plans in accordance with specifications and standard drawings. Manholes shall include concrete base, barrel sections, cone section or slab top, steps, lining, excavation, backfilling, air testing, restoration, and cleanup in accordance with the standard drawings. Payment shall be made under this item regardless of whether the base is to be precast or cast-in-place (doghouse). All materials, except casting, shall be new and unused. An existing casting from an existing abandoned or removed manhole is to be reused and shall be considered incidental to this item. When a new casting is specified, or an existing casting is unavailable, it shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. 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.

S MANHOLE WITH TRAP Payment under this item is for the installation of a new manhole with

trap. Payment for trap manholes will be made at the contract unit price each in place complete and ready for use at the locations shown on plans in accordance with specifications and standard drawings. Trap manholes shall include concrete base, manhole structure and trap materials, cone section or slab top, steps, excavation, backfilling, air testing, restoration, and cleanup. All materials, except casting, shall be new and unused. Payment shall be made under this item regardless of whether the base is to be precast or cast-in-place (doghouse). An existing casting from an existing abandoned or removed manhole is to be reused and shall be considered incidental to this item. When a new casting is specified, or an existing casting is unavailable, it shall be paid as a separate bid item. Anchoring of casting, new or used, shall be considered incidental to this bid item. No additional compensation will be paid for manhole height variations. 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.

S PIPE This description shall apply to all PVC and ductile iron gravity sewer pipe bid items of every size and type 8 inches internal diameter and larger, 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, tap tees and couplings for joining to existing similar or dissimilar pipes), polyethylene wrap (if required by specification), labor, equipment, excavation, bedding, restoration, pressure or vacuum testing, temporary testing materials, video inspection, 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. This bid item shall include material and placement of flowable fill under existing and proposed pavement, and wherever specified on the plans or in the specifications. No additional payment will be made for rock excavation. Measurement of quantities under this item shall be through fittings and encasements to a point at the outside face of manhole barrels, or to the point of main termination at dead ends or lamp holes. Carrier pipe placed within an encasement shall be paid under this item and shall include casing spacers and end seals. 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).

S PIPE POINT REPAIR This item is to be used to pay for repair of short lengths of existing sanitary sewer pipe that, through prior video inspection or other means, are known to have pre-existing failure. Pipe Point Repair may be needed in preparation for installation of cured-in-place-pipe (CIPP) lining or other instances where failure is known and repair is prudent. The size of pipe shall not be defined in separate bid items. All diameter sizes of point repair shall be paid under this one item. The materials to be used to make the repair shall be as defined on the plans or in the specifications. This bid item shall include all excavation, pipe materials, joining materials to connect old and new pipe, bedding, and backfill to complete the repair at the locations shown on the plans or as directed by the engineer, complete and ready for use. This bid item shall include bypass pumping when required. Measurement shall be from contact point to contact point of old and new 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).

S PUMP STATION This item is for payment for installation of sanitary pump stations including 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) for each when complete.

S STRUCTURE ABANDON This item is to be used to pay for abandonment of larger above or below ground sewer structures such as air release/vacuum valve vaults, pump stations, tanks, etc. Payment under this time 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 sewer construction, (i.e., abandonment of standard air release/vacuum valves 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.

S STRUCTURE REMOVAL This item is to be used to pay for removal of larger above or below ground sewer structures such as air release/vacuum valve vaults, pump stations, tanks, and etc. Payment under this time 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 sewer construction, (i.e., removal of standard air release/vacuum valves and their structure 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.

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SECTION 02326

STEEL CASING PIPE

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Steel casing pipe shall be furnished and installed as shown on the DRAWINGS and specified herein.

1.02 RELATED WORK.

- A. Piping is included in this Division, and 02700.
- B. Excavation, backfill and grading are addressed in the Specifications accompanying the roadway construction Plans
- C. Roadway construction and related matters are addressed in the Specifications accompanying the roadway construction Plans.

PART 2 PRODUCTS

2.01 STEEL CASING PIPE

- A. Steel casing or jack pipe shall be plain end steel pipe with a minimum yield strength of 35,000 psi and tensile strength of 60,000 psi per API-5L Grade B material. The steel pipe supplied shall be manufactured by the seamless, electric-weld, submerged arc weld or gas metal-arc weld process as specified in API-5L. Certifications of 35,000 psi minimum yield strength shall be furnished by the CONTRACTOR.
- B. The inside diameter shall be at least 2 inches greater than the largest outside diameter of the carrier pipe, joint or couplings for carrier pipe less than 6" in diameter and at least 4" greater for carrier pipe 6" and over in diameter unless otherwise noted on the plan sheets. In all cases, the casing pipe shall be great enough to allow the carrier pipe to be removed subsequently without disturbing the casing pipe or roadbed.
- C. Casing pipe shall have minimum wall thickness as shown in the following table:

Nominal Diameter (Inch)	Nominal Thickness (Inch)	Nominal Diameter (Inch)	Nominal Thickness (Inch)
Under 10	0.188	24	0.438
10 - 12	0.250	26	0.438

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14 - 16 0.281 28 - 30 0.500

PART 3 EXECUTION

3.01 TUNNELING, BORING OR JACKING

- A. Boring or jacking as specified herein shall be located as shown on DRAWINGS. All other casing pipe installations shall be open cut trench.
- B. Tunneling under paving, railroads, buildings and underground structures is included as an alternate to boring or repaving required by open cut trenching at no extra cost to the OWNER. Bore and casing pipe is also included as an alternate to tunneling. Backfilling of tunnels shall be mechanically tamped in not more than 3-inch layers and with material rendered suitable for tamping before being placed in tunnel unless otherwise shown on the DRAWINGS. No payment will be made for tunnels less than 3 feet long.
- C. In tunneling under buildings, the CONTRACTOR will held responsible for all damage by his operations and methods of excavation and backfilling.
- D. Should the CONTRACTOR elect and receive permission to tunnel and bore, other than locations designated on the DRAWINGS or required by the ENGINEER to be tunneled or bored, the entire compensation therefore shall be the same as the unit prices bid for installation in open trench, including paving replacement, but not including bore or unit prices.
- E. At locations where tunneling or boring or jacking is called for on the DRAWINGS, in addition to the unit prices for permanent tunnel, tunnel liner, temporary tunnel, boring or jacking and/or casing pipe, payment will be made for furnishing and laying carrier pipe inside the tunnel or casing pipe. No payment will be made for separate trench and backfill unit price items where permanent tunnel, tunnel liner, temporary tunnel, boring or jacking and/or casing pipe unit prices is paid.
- F. Boring or jacking under highways, railroads, sidewalks, pipelines, etc., shall be done at the locations shown on the DRAWINGS. It shall be performed by mechanical means and accurate vertical and horizontal alignment must be maintained. When shown on the DRAWINGS, casing pipe shall be used and shall be installed inside bored holes concurrently with boring, or jacking.

3.02 STEEL CASING PIPE INSTALLATION

- A. Steel casing pipe shall be of the size and wall thickness as shown on the DRAWINGS or specifications.
- B. When casing pipe is jacked, concurrent with boring, all joints shall be solidly welded. The weld shall be such that the joint shall be of such strength to withstand the forces exerted from the boring and jacking

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operation as well as the vertical loading imposed on the pipe after installation. The weld shall also be such that it provides a smooth, non-obstructing joint in the interior of the pipe, which will allow easy installation of the carrier pipe without hanging or abrasion to the carrier pipe upon installation.

- C. When casing pipe is installed in open trench or permanent tunnel, it shall be bedded and backfilled as specified in Division 2. When casing pipe is installed in temporary tunnel, it shall be laid accurately to alignment of proposed pipeline and at an elevation below proposed pipeline necessary to support it at the planned elevation. Bedding and backfill for casing pipe in temporary tunnel shall be as specified in Division 2.
- D. Casing pipe in open trench, permanent tunnel and temporary tunnel shall be joined by welding such that it will not be moved out of alignment or grade and will prevent backfill material from entering joint. Where casing pipes are shown on the DRAWINGS to be equipped with vent pipes, vents shall be installed as shown on the DRAWINGS with cost of the same included in the price bid for the casing pipe unless otherwise specified.

3.03 CARRIER PIPE IN CASING PIPE INSTALLATION

A. Pipeline Spacers

Carrier pipes shall be centered inside casing pipe throughout the length of the casing pipe. Centering shall be accomplished by the installation of polyethylene pipeline spacers attached to the casing pipe in such a manner as to prevent the dislodgment of the spacers as the carrier pipe is pulled or pushed through the casing pipe. Spacers shall be of such dimensions to provide (1) full supportive load capacity of the carrier pipe and contents; (2) of such thickness to allow installation and/or removal of the pipe; and (3) to allow no greater than 1/2 inch movement of the carrier pipe within the casing pipe after the carrier pipe is installed. Installation shall be in accordance with manufacturer's recommendations.

- B. Upon completion of installation of the carrier pipe, the annular space at the ends of the cover pipe shall be sealed to prevent the entrance of groundwater, silt, etc., into the casing pipe. The seal shall be a manufactured product specially made for this purpose. The seal shall be the best seal type constructed of synthetic rubber with stainless steel banding straps. Seals may be of the "pull-on" or "wrap around" type as manufactured by Advance Products and Systems, Inc. or equal.

3.04 BASIS FOR PAYMENT

Steel Casing Pipe shall be paid for at the unit price bid or lump sum bid and shall include all work incidental to making a complete installation such as excavation, carrier pipe, bedding, backfill, painting, testing, disinfection, cleanup, seeding, etc.

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END OF SECTION

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SECTION 02700

SEWAGE AND DRAINAGE PIPE

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. 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.
- B. 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.
- C. Wherever the word pipe or piping is used it shall mean pipe and fittings unless otherwise noted.

1.02 RELATED WORK

- A. Excavation, backfill and grading are addressed in the Specifications accompanying the roadway construction Plans
- B. Roadway construction and related matters are addressed in the Specifications accompanying the roadway construction Plans.
- C. Water line and related appurtenances are addressed in the Specifications accompanying the waterline relocation Plans.

1.03 DESCRIPTION OF SYSTEM

- A. Piping shall be installed substantially as shown on the DRAWINGS so as to form a complete smooth flow path and workable system.
- B. The piping and materials specified here in 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.

1.04 QUALIFICATIONS

- A. All pipe 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.

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1.05 SUBMITTALS

- A. The CONTRACTOR shall submit to the ENGINEER for review in accordance with Division 1, Section 01300, complete sets of SHOP DRAWINGS showing layout and details of materials, joints and methods of construction and installation of the pipe, specials and fittings required.
- B. Before fabrication and/or shipping of the pipe is begun, the CONTRACTOR shall submit for approval a schedule of pipe lengths for the entire job. All pipe furnished under the CONTRACT shall be fabricated in full accordance with the approved DRAWINGS.
- C. Submit to the ENGINEER within 30 days after execution of the CONTRACT a list of materials to be furnished, the names of the SUPPLIERS and the approximate date of delivery of materials to the site.

1.06 INSPECTION

- A. 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.

PART 2 PRODUCTS

2.01 DUCTILE IRON PIPE (FORCE MAIN AND GRAVITY SEWER APPLICATIONS)

- A. General
 - 1. Ductile iron pipe shall be centrifugally cast of ductile iron conforming to ASTM Specification A-746-82, or latest revision. Unless noted otherwise on the DRAWINGS, all ductile iron pipe shall have a wall thickness not less than 0.33 inch (Class 52).
 - 2. The manufacturing tolerances included in the nominal thickness shall not be less than specified by ANSI/AWWA C150/A21.50-latest revision.
 - 3. Pipe may be furnished in 18' or 20' nominal laying lengths; and the weight of any single pipe shall not be less than the tabulated weight by more than 5 percent for pipe 12 inches or smaller in diameter, not by more than 4 percent for pipe larger than 12 inches in diameter.

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4. The hydrostatic and acceptance tests for the physical characteristics of the pipe shall be as specified in ANSI/AWWA C151/A21.51-latest revision.
5. Any pipe not meeting the ANSI/AWWA SPECIFICATIONS quoted above shall be rejected in accordance with the procedure outlined in the particular specification.
6. The ENGINEER shall be provided with 3 copies of a certification by the manufacturer that the pipe supplied for this CONTRACT has been tested in accordance with the referenced SPECIFICATIONS and is in compliance therewith.
7. The net weight, class or nominal thickness and sampling period shall be marked on each pipe. The pipe shall also be marked to show that it is ductile iron.
8. Unless otherwise noted, joints for ductile iron pipe will be "push-on" type consisting of a rubber gasket installed in a recess in the bell.
9. Ductile iron pipe must be used within 200 feet of underground petroleum storage tanks and shall have gaskets designed for this purpose such as Nitrile Butadiene (NBR), approved equal or better.

B. Lining and Coating Ductile Iron Pipe

1. All ductile iron pipe and fittings shall have manufacturer's outside coal tar or asphaltic base coating. The inside lining shall be amine cured novalac epoxy (40 mil, DFT nominal), Protecto 401, manufactured by Induron Coatings Inc., or approved equal.

C. Fittings for Ductile Iron Pipe - 3" and Larger

Fittings shall be the same as specified in Section 02610, Paragraph 2.02 C of these SPECIFICATIONS.

D. Ductile Iron Pipe and Fittings - Smaller than 3"

Fittings shall be the same as specified in Section 02610, Paragraph 2.02 D of these SPECIFICATIONS.

E. Flanged Cast Iron Pipe and Flanged Coupling Adapters for Flexible Couplings

Fittings shall be the same as specified in Section 02610, Paragraph 2.02 E of these SPECIFICATIONS.

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- F. Mechanical Joint Restraints shall be the same as specified in Section 02610, Paragraph 2.02 F of these SPECIFICATIONS.

2.02 POLYVINYLCHLORIDE (PVC) PIPE AND FITTINGS (GRAVITY SEWER APPLICATIONS)

- A. PVC pipe used for gravity sewer applications shall meet all requirements of ASTM specification D3034-latest revision. Pipe and fittings shall meet the extra strength minimum of SDR-35 of that specification.
- B. 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 D2444, ASTM D2412 and ASTM D2152. The manufacturer shall submit 5 copies of certification of test for each lot of material represented by shipment to the job site.
- C. 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.
- D. 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.
- E. 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.
- F. The PVC pipe manufacturer shall provide special fittings, acceptable to the ENGINEER to make water-tight connections to manholes.

2.03 POLYVINYLCHLORIDE (PVC) PIPE AND FITTINGS (FORCE MAIN APPLICATIONS)

- A. General
 - 1. PVC pipe used for force main applications shall meet all the requirements of ASTM specification D2241-latest revision. The PVC cell classification shall be 1245B as defined under ASTM D1784.
 - 2. Elastomeric gaskets shall comply with the requirements specified in ASTM F477.

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3. Joints shall comply with the requirements specified in ASTM D3139.
4. PVC pipe shall be as manufactured by IPEX, J-M Manufacturing or approved equal.
5. The lubricant used for joint assembly shall be a water soluble lubricating and shall not be detrimental to the gasket or the pipe.
6. The manufacturer shall, upon written request by the purchaser, furnish an affidavit that all basic materials used in pipe production meet the requirements of this recommended standard.
7. Pipe shall be homogeneous throughout. It shall be free from voids, cracks, inclusions and other defects. It shall be uniform as commercially practical in color, density, and other physical properties. Pipe surfaces shall be free from nicks and scratches. Joining surfaces of spigots and joints shall be free from gouges and imperfections that could cause leakage.
8. Pipe shall be nominal sizes and dimension ratio as shown on the DRAWINGS or specified elsewhere. Pipe outside diameters shall be consistent with iron pipe sizes (IPS), to assure the pipe can be directly connected to ductile iron fittings without adapters or complicated procedures.
9. Pipe shall be a standard green color representative of sewer pipe.

B. Testing and Certification

1. The manufacturer shall be subject to random inspection and evaluation by an independent third party in order to assure the purchaser of full compliance with this specification. The third party shall report all findings to the purchaser upon request. The third party selection shall be subject to the approval of the OWNER and shall be provided at no additional cost to the OWNER.
2. The third party inspector shall have free access to those parts of the manufacturer's plant involved in WORK performed to meet requirements of this recommended standard. The manufacturer shall afford the third party inspector reasonable facilities needed to determine if the pipe meets the requirements of this recommended standard.
3. Certification: Upon request by the OWNER, the manufacturer shall furnish a certificate of conformance to specified standards. Upon request by the OWNER, the manufacturer shall furnish

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production standard dimensions and tolerances of the joint and gasket.

4. Test Preparation

- a. Testing shall be performed at $73.4^{\circ}\text{F} + 36^{\circ}\text{F}$ ($23^{\circ}\text{C} + 2^{\circ}\text{C}$) unless otherwise specified. Care shall be exercised to condition test specimens to the proper temperature before testing. In cases of disagreement, specimens shall be conditioned in accordance with Procedure A of ASTM D618.
- b. Selection of pipe specimens for testing, if not specified in this recommended standard, shall be as agreed upon by the purchaser and manufacturer.

5. Test Methods

- a. All measurements shall be made in accordance with ASTM D2122.
- b. Flatten three (3) specimens of pipe, 2 inches long, between parallel plates in a suitable press until the distance between the plates is 5% of the original outside diameter of the pipe, or the walls touch, whichever occurs first. The rate of flattening shall be uniform and such that the compression is completed within two (2) to five (5) minutes. Remove the applied load and examine the specimen for evidence of splitting, cracking or breaking.
- c. The extrusion quality test shall be performed in accordance with ASTM D2152. This procedure determines the extrusion quality as indicated by reaction to immersion in anhydrous acetone. The test distinguishes between fused and unfused PVC. After completion of test procedure, remove the specimen and examine for evidence of flaking or disintegration.
- d. The design of the gasket joint provided on the PVC pipes shall comply with ASTM D3139.
- e. Impact testing shall be performed in accordance with ASTM D2444.
- f. The manufacturer shall hydrostatically proof-test all pipe, including the joint, that is marked with the designation number of piece of pipe, whether ANSI/AWWA C905-latest revision at $73.4^{\circ}\text{F} + 3.6^{\circ}\text{F}$ ($23^{\circ}\text{C} + 2^{\circ}$). Each piece of pipe, whether standard or random length shall be proof-tested at

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twice the pressure rating of the pipe. The test shall be run for a minimum dwell of 5 seconds.

g. Impact Resistance Requirements

1. TUP Weight shall be 20 lb. or 30 lb.
2. TUP shall have a 1/2" radius nose piece.
3. Sample lengths shall be 12" O.A.L.
4. Ten samples shall be tested and all shall pass. Any failures shall result in rejection.
5. All samples shall pass a minimum impact of 220 ft. lbs.

6. Test Frequency

- a. The dimensions of pipe and joints shall be measured at the beginning of each extrusion run and hourly thereafter.
- b. The flattening test shall be performed at the beginning of each extrusion run and once every twenty-four hours thereafter.
- c. The extrusion quality test shall be performed at the beginning of each extrusion run of each specific material on size, and every two hours thereafter. The test shall also be run immediately following any change from established running conditions that could affect extrusion quality.
- d. The joint integrity test shall be performed by the manufacturer to evaluate gasket joint design whenever the design of the joint or the gasket is changed.
- e. The impact test shall be performed every two hours during the extrusion run.
- f. The hydrostatic proof test shall be performed every twenty-four hours during the extrusion run.

C. Quality Control Records.

1. The manufacturer shall maintain for a period of not less than two years a record of all quality control tests and shall, if requested, submit the pertinent record to the purchaser.

D. Markings

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1. Pipe and couplings shall bear identification markings that will remain legible during the normal handling, storage, and installation. Markings shall be applied in a manner that will not weaken or damage the pipe or coupling. Marking shall be applied at the intervals of not more than five (5) feet on the pipe.
2. Marking on the pipe and coupling shall include the following:
 - a. Nominal size and OD base (e.g. 24CI)
 - b. PVC
 - c. Dimension ratio and pressure rating (e.g. DR25 PR165)
 - d. UNI-B-11
 - e. Manufacturer's name or Trademark
 - f. Manufacturer's production code to include day, month, year, shift, plant and extruder of manufacture.
 - g. Certification seals pertaining to entire documents or specific sections, if desired or requested.
3. Special Marking: If plant inspection is made by a third party inspector, a special marking of no more than three (3) letters, as specified by the OWNER may be added to markings on the pipe and coupling.
4. Double Assembly Lines: Pipe shall be supplied with twin assembly lines on the spigot to guard against over-assembly.

2.07 DETECTABLE UNDERGROUND UTILITY WARNING TAPES

- A. Detectable underground utility warning tapes which can be located from the surface by a pipe detector shall be installed directly above non-metallic (PVC, polyethylene, concrete) pipe.
- B. The tape shall consist of a minimum thickness 0.35 mils solid aluminum foil encased in a protective inert plastic jacket that is impervious to all known alkalis, acids, chemical reagents and solvents found in the soil.
- C. The minimum overall thickness of the tape shall be 5.5 mils and the width shall not be less than 2" with a minimum unit weight of 2-1/2 pounds/1" x 1000'. The tape shall be color coded and imprinted with the message as follows:

Type of Utility	Color Code	Legends
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Water	Safety Precaution Blue	Caution Buried Water Line Below
Sewer	Safety Green	Caution Buried Sewer Line Below

- D. Detectable underground tape shall be "Detect Tape" as manufactured by Allen Systems, or approved equal.
- E. Installation of detectable tapes shall be per manufacturer's recommendations and shall be as close to the grade as is practical for optimum protection and detectability. Allow a minimum of 18" between the tape and the line.
- F. Payment for detectable tapes shall be included in the linear foot price BID of the piping BID item(s).
- G. Immediately below the tape, the Contractor shall install one unspliced No. 12 A.W.G. conductor. Each end of the conductor shall terminate at an accessible location such as an air release manhole or pump station valve box. A separate valve box shall be installed for accessing the terminal end of a conductor where a force main discharges to a manhole.
- H. Payment for detectable tapes shall be included in the linear foot price BID of the piping BID item(s).

PART 3 EXECUTION

3.01 NON-PRESSURE PIPE INSTALLATION - GENERAL

- A. General
 - 1. All pipe may be tested for uniform diameter, straightness and defects before laying. Rejected pipe shall be removed from the PROJECT.
 - 2. All pipe after being inspected and accepted shall be laid to the lines and grades shown on the DRAWINGS. The CONTRACTOR shall furnish all labor and materials for staking out lines and grades. All gravity pipelines shall be laid to constant grades between invert elevations shown on the DRAWINGS. Grades shown on DRAWINGS are invert of pipe, unless specifically noted otherwise. The pipe lengths shall be fitted together and matched to form a smooth and uniform invert.
 - 3. Sub-grade, undercut, bedding and backfilling under, around and over the pipe shall all be in accordance with the details shown on

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the DRAWINGS. No pipe shall be laid until the sub-grade is properly in place.

4. Unnecessary walking upon the completed pipelines shall be avoided until trench has been backfilled to over the top of the pipe.
5. The interior of the pipe shall be cleaned of all dirt, jointing materials and superfluous materials of every description. When laying of pipe is stopped, the end of the pipe shall be securely plugged or capped. Care should be taken to prevent flotation of the pipe in the event the trench should floor. The CONTRACTOR will be responsible for relaying and/or relocating pipe if the pipe is laid before trenching has progressed far enough to eliminate the possibility of grade conflicts or realignment on account of existing structures, pipelines, or conduits.
6. In trench conditions where pipe is in danger of sinking below grade or floated out of grade or line, or where backfill materials are such a fluid nature that such movements of pipe might take place during the placing of the backfill, the pipe shall be weighted or secured permanently in place.
7. Pipes shall be laid free from all structures other than those planned. Openings in and joints to contact walls shall be constructed as shown on the DRAWINGS.
8. Non-pressure pipes entering structures underground and unsupported by original earth for a distance of more than 3', shall be supported by Class "B" concrete, where depth of such support does not exceed 3'. All pipes entering buildings or basins, below original ground, which are higher than 3' depth above sub-grade, span more than 3' depth above sub-grade, span more than 3' between wall and original earth, and with more than 24" of cover or under a roadway, shall be supported by concrete beams with piers at 6' intervals between structural wall and edge of excavation for the structure, in order to prevent breakage from settlement of backfill about the structure. Concrete and reinforcing steel for these supports shall be in the lump sum portion of the CONTRACT; and no extra payment will be allowed. Pipe entering structures shall have flexible joint within 18" of exterior of structure or from point of leaving concrete support.
9. No backfilling except for securing pipe in place, shall be done until the ENGINEER has inspected the joints, alignment, and grade in the section laid. Such inspection, however, does not relieve the CONTRACTOR of liability in case of defective joints. Joints that show leakage will not be accepted. If after backfilling and inspection, any joints are found that are allowing groundwater to enter the sewer, such joints shall be sealed by the CONTRACTOR.

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10. Flexible thermoplastic sewer pipe installation shall conform to ASTM D-2321, latest revision.
11. Ductile iron pipe installation shall conform to AWWA C-600-82, or latest revision.

B. Pipe Bedding

1. Pipe bedding for gravity sewers shall be as shown on the DRAWINGS. Crushed stone used for bedding shall be size shown, and shall comply with State Highway Department Standards.

3.02 TESTING NON-PRESSURE PIPE

Note: Before entering any confined space, follow all local, state and federal safety precautions.

- A. A wetted interior pipe surface is desirable and will produce more consistent test results. Where practical, clean the line with cleaning balls, manufactured by Cherne Industries Incorporated or approved equal, prior to testing, to wet the pipe surface and eliminate debris.
- B. All new pipe shall be low-pressure air tested to insure the integrity of the pipe and joints.
- C. Air testing shall be performed by the CONTRACTOR using equipment manufactured by Cherne Industries Incorporated or approved equal. Equipment used shall meet the following minimum requirements:
 1. Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be inspected.
 2. Pneumatic plugs shall resist internal test pressures without requiring external bracing or blocking.
 3. All air used shall pass through a single control panel.
 4. Three (3) individual hoses shall be used for the following connections:
 - a. From control panel to pneumatic plugs for inflation.
 - b. From control panel to sealed line for introducing the low pressure air.
 - c. From sealed line to control panel for continually monitoring the air pressure rise in the sealed line.

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D. Air testing procedures shall follow guidelines outlined in ASTM SPECIFICIATIONS C828, C924 and Uni-Bell B6, (see ASTM C828, C924 and Uni-Bell B6). All pneumatic plugs shall be seal tested before being used in the actual test installation. One length of pipe shall be laid on the ground and sealed at both ends with the pneumatic plugs to be checked. Air shall be introduced into the plugs to the manufacturer's recommended inflation pressure. The sealed pipe shall be pressurized to 5 PSIG. The plugs shall hold against this pressure without bracing and without movement of the plugs out of the pipe.

After a manhole to manhole reach of pipe has been backfilled and cleaned, and the pneumatic plugs are checked by the above procedure, the plugs shall be placed in the line at each manhole and inflated to manufacturer's recommended inflation pressure. Low pressure air shall be introduced into this sealed line until the internal air pressure reaches 4 PSIG. At least two minutes shall be allowed for the air pressure to stabilize. After the stabilization period (3.5 PSIG minimum pressure in the pipe), the air hose from the control panel to the air supply shall be disconnected. The portion of line being tested shall be termed "Acceptable" if the allocated line pressure decreases less than one PSI in the time shown for the given diameters in the following table:

Nominal Pipe Size Inches	Time Minutes per 100 Feet
4.....	0.3
6.....	0.7
8.....	1.2
10.....	1.5
12.....	1.8
15.....	2.1
18.....	2.4
21.....	3.0
24.....	3.6

In areas where ground water is known to exist, the height in feet shall be divided by 2.35 to establish the pounds of pressure that will be added to all readings. (For example, if the height of water is 11-1/2 feet, then the added pressure will be 5 PSIG.)

If the installation fails to meet this requirement, the CONTRACTOR shall, at his own expense, determine the source of leakage. He shall perform a leak location test and then repair or replace all defective materials and/or workmanship.

E. Joints

Individual joint air tests shall be performed on pipe over 24" in diameter according to the following instructions: (see ASTM C1103-89)

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1. Determine test pressure. Test pressure for large diameter pipe should be 3.5 PSIG (.24 bar). In addition, .43 PSIG (0.3 bar) is added to the 3.5 PSIG (.24 bar) for every foot of water head above the top of the pipeline, to a maximum pressure of 15 PSIG (1.03 bar). (i.e. 10 ft. of water head above a 60" diameter pipe would require a test pressure of $10 \times .43 = 4.3 \text{ PSIG} + 3.5 \text{ PSIG} = 7.8 \text{ PSIG}$ required test pressure.)
2. Position the Joint Tester so the end elements (inflatable pneumatic rings) are located on both sides of the joint to be tested. Inflate the end elements to 50 PSIG 93.4 bar).
3. Pressurize center cavity with air or water to test pressure calculated in Step 1 above. Allow pressure to stabilize (approx. 10-15 seconds) and turn off pressure source.
4. If the pressure in the cavity holds or drops less than 1 PSIG (.68 bar) in 5 seconds, the pipe joint shall be found to be acceptable. If the pressure drops over 1 PSIG the joint is defective and should be repaired.
5. When the joint test is completed all pressure must be exhausted from center cavity to 0 PSIG and then from the end elements to 0 PSIG. The Joint Tester can then be transported and positioned on the next joint to be tested.

The equipment used must be manufactured by Cherne Industries Incorporated or approved equal.

F. Deflection Test

Mandrel test (deflection test) shall be performed by the CONTRACTOR in order to verify the roundness and proper installation of the pipeline.

1. Mandrels shall be approved by the ENGINEER with proving rings prior to use and shall meet the following requirements:
 - a. Mandrel Sizing: The outside diameter of the mandrel shall be fabricated to the following SPECIFICATION:

Base Pipeline Diameter – (Percent of deflection limit times base pipeline diameter) = Mandrel diameter. In accordance with ANSI/ASTM D-3034 and F-679.
 - b. Mandrel Construction: The mandrel shall be of open design to prevent debris build-up from occurring between the channels of adjacent fins which in-turn causes erratic test results. The fin sets shall number at least (9) and be removable from the mandrel core by unscrewing the wing-

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nut and loosening the end caps which secure the fins in position. The contact area of the fins shall be equal to the nominal inside diameter of the pipe. Gauges of various diameters shall be assembled by substituting fin sets of appropriate dimension.

Equipment used must be manufactured by Cherne Industries Incorporated or approved equal.

2. Deflection Test

The deflection test shall consist of testing pipe for proper installation by the method outlined: (Set ASTM D3034)

After the pipeline has been installed and backfill materials have been compacted to their required standard densities (called out in ASTM D 2321 or other applicable standard), the mandrel shall be pulled by hand through the pipeline with a suitable rope or cable that is connected to an eyebolt at one end of the gauge. A similar rope or cable shall be attached to the eyebolt at the opposite end of the mandrel and tension shall be applied to it. This will insure that the mandrel maintains its correct position during testing and also to remove the mandrel if it should be lodged in an excessively deflected pipeline. Winching or other means of forcing the mandrel through the pipeline are unacceptable. Pipeline deflection testing performed within thirty (30) days of installation shall have a deflection not exceeding 5% of the base inside pipe diameter as established by ASTM Standards D3034 and F679 listed in the following table:

Deflection Gauge Dimensions: SDR 35

Nominal Size	Average I.D.	Base I.D.	5% Deflection Gauge
6"	5.893	5.742	5.46
8"	7.891	7.665	7.28
10"	9.864	9.563	9.08
12"	11.737	11.361	10.79
15"	14.374	13.898	13.20
18"	17.564	16.976	16.13
21"	20.707	20.004	19.00
24"	23.296	22.480	21.36
27"	26.258	25.327	24.06

Pipeline deflection testing performed thirty days (30) beyond the date of installation shall have a deflection not exceeding 7.5% of the nominal inside diameter or as established otherwise by the applicable governing body.

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3. A permanent record of all testing with locations where excessive pipeline deflections occur shall be kept by the CONTRACTOR and forwarded to the ENGINEER after completion of testing on each line.
4. The CONTRACTOR shall immediately replace all sections of pipe which deflect more than 5% (or 7 1/2%).
5. All materials and labor required for testing and replacement of pipelines shall be furnished by the CONTRACTOR and the cost thereof included in the prices BID for furnishing and laying sewers.

3.03 PRESSURE PIPE INSTALLATION - GENERAL

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.
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. Ductile iron or steel pressure pipe, 4 inch diameter or larger, entering a structure below original earth level, unsupported by original earth for a distance of more than 6 feet shall be supported by Class "2500" 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. All other pressure pipe entering buildings or basins below original earth and having a cover of more than 24 inches of earth, or under roadway, shall be supported as shown in detail on the Drawings. All piers required will be paid for in accordance with the appropriate specification hereinbefore. Class "2500" 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

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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 ground level and unsupported by original earth for a distance of more than 6 feet shall be supported by concrete to original ground where depth of such support does not exceed 3 feet. When depth exceeds 3 feet, beams with piers shall be used for support.
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 ensure 30" 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. Pressure and leakage tests shall be conducted in accordance with ANSI/AWWA C600.
2. The CONTRACTOR shall furnish all necessary equipment for pressure testing.
3. Inspection of pipe laying shall in no way relieve the CONTRACTOR of the responsibility for passing tests, stopping leakage, or correcting poor workmanship.
4. Underground pipelines will not be finally accepted until leakage is less than allowable by ANSI/AWWA C600. In case leakage exceeds this amount, the CONTRACTOR shall locate and repair leaks until the entire pipeline will pass the required test. All

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leakage shall be stopped in exposed piping. The pumping equipment shall be disconnected during test.

5. 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 or us on closed pipe system for any purpose.
6. The test pressure shall not be less than 150 psi at the highest point. Along the test section, the test pressure shall not exceed pipe or thrust-restraint design pressure, shall be of at least 2 hour duration, and shall not vary by more than 5 psi for the duration of the test.
7. Before testing, all air shall be expelled and all caps, plugs and fittings shall be properly braced. Air is expelled by opening a fire hydrant or air release vents or corporation cocks at the high points of the line. Once all the air is released, the valves between the existing distribution system and the pipe to be tested are closed. Pressure is then applied to the portion of the pipeline being tested by means of a hand or motor driven pump.
8. The pipeline shall be pressurized to 150 psi and held at this test pressure for at least two (2) hours duration, with the leakage and pressure recordings being conducted simultaneously. Any make-up water shall be carefully measured by a meter or by pumping the water from a vessel of known volume. After every five (5) psi drop (in the event the psi drop should occur) the pressure shall be returned to 150 psi and leakage recorded.
9. Leakage
Allowable make up water formula: $L = \frac{S \cdot D^3 \cdot P}{148,000}$, where L = allowable leakage in gallons per hour; S = length of pipe tested, in feet; D = nominal diameter of the pipe, in inches; and P = average test pressure during the leakage test, in pounds per square inch gauge. (revised allowable make up water formula divisor is 148,000) Allowable Leakage Table per 1000 feet of pipeline in gph at a test pressure of 150 psi.

Pipe Size-in.	4	6	8	10	12	16	20	24	30	36	42
Leakage-gph	0.33	0.50	0.66	0.83	0.99	1.32	1.66	1.99	2.48	2.98	3.48

3.03 FINAL CLEAN-UP

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Before completion of the CONTRACT, all backfill shall be reshaped, holes filled and surplus material hauled away, and all permanent walks, street, driveway and highway paving, and sod, replaced and reseeding performed.

The CONTRACTOR shall be responsible for clean-up, grading, seeding, sodding or otherwise restoring all areas that he disturbs, even if these areas are within the WORK limits of other CONTRACTORS on this PROJECT.

The WORK shall not be accepted until the right-of-way of roads and all private property has been cleared of all rubbish and loose stone, and also all equipment, excess material and temporary structures. All property which has been damaged in the course of the WORK shall be restored in a manner fully acceptable to the property owner.

3.04 BASIS FOR PAYMENT

- A. Piping shall be paid for at the unit price bid and shall include all work incidental to making a complete installation such as, excavation, bedding, backfill, testing, cleanup, seeding, etc.

END OF SECTION

SECTION 02733

MANHOLES

PART 1 GENERAL

1.01 SCOPE OF WORK

The WORK to be performed includes the furnishing of all labor, materials, equipment and services necessary for the construction of all manholes, including reinforced concrete rings, bases, barrels, steps, frames and covers, invert construction, stubs and all other appurtenances.

1.02 RELATED WORK

- A. Excavation, backfill and grading are addressed in the Specifications accompanying the roadway construction Plans
- B. Roadway construction and related matters are addressed in the Specifications accompanying the roadway construction Plans.

PART 2 PRODUCTS

2.01 MANHOLES

Precast concrete manholes shall consist of precast reinforced concrete sections, a conical or flat slab top section and a base section conforming with the typical manhole details as shown on the DRAWINGS.

Precast manhole sections shall be manufactured, tested and marked in accordance with the latest provisions of ASTM SPECIFICATION C 478.

Manholes shall be constructed of specified materials to the sizes, shapes and dimensions and at the location shown on the DRAWINGS or as otherwise directed by the ENGINEER. The height or depth of the manhole will vary with the location, but unless shown otherwise on the DRAWINGS, shall be such that the top of the manhole frame will be at finish grade in pavement and 2 inches above ground surface elsewhere and the invert will be at the designated elevations. Wall thickness of precast concrete manholes shall be as shown on the DRAWINGS.

Manholes shall be constructed of precast reinforced concrete manhole rings, unless specified otherwise. Form and dimensions shall be as shown on DRAWINGS. Precast bases for manholes shall be bedded on at least 12 inches of # 9 crushed stone as shown on DRAWINGS.

The minimum compressive strength of the concrete for all sections shall be 4,000 psi.

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

The admixture manufacturer shall furnish a qualified concrete technician employed by the manufacturer, to assist in the proper field batching and use of the specified admixtures if requested by the Engineer. The technician shall visit the site at the beginning of concrete operations and as requested during construction. In addition, the manufacturer shall furnish the ready mix plant with accurate and dependable equipment for the proper dispensing of admixture.

The maximum allowable absorption of the concrete mix design aggregate shall not exceed 8 percent of the dry weight.

The ends of each reinforced concrete manhole riser section and the bottom end of the manhole top section shall be so formed that when the manhole risers and the top are assembled, they will make a continuous and uniform manhole.

Joints of manhole sections shall be of the tongue and groove type with performed plastic gasket meeting the requirements of Federal SPECIFICATION SS-S-00210, "Sealing Compound, Performed Plastic for Pipe Joints" Type 1, Rope Form. The sealing compound shall be produced from blends of refined hydrocarbon resins and plasticizing compounds reinforced with inert mineral filler and shall contain no solvents, irritating fumes, or obnoxious odors. The compound shall not depend on oxidizing, evaporating, or chemical action for its adhesive or cohesive strength. It shall be supplied in extruded rope-form of suitable cross-section and of such sizes as to seal the joint space when the manhole sections are set. The sealing compound shall be protected by a suitable removable two-piece wrapper.

Each section of the precast manhole shall have not more than two (2) holes for the purpose of handling and setting. These holes shall be tapered and shall be plugged with rubber stoppers or mortar after installation.

2.02 Manhole Castings

Manhole rims, toe pockets and covers shall be cast iron conforming to the minimum requirements of Federal SPECIFICATION WW-1-652 or to the latest ASTM SPECIFICATION A-48, for Class 30 gray iron castings. All castings shall be made accurately to the required dimensions, fully interchangeable, sound, smooth, clean and free from blisters and/or other defects. Defective castings

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which have been plugged or otherwise treated shall not be used. All castings shall be thoroughly cleaned and painted or coated with bituminous paint. Each casting shall have its actual weight in pounds stenciled or painted on it in white paint.

Manhole frames and covers shall be of the size and weights shown on the DRAWINGS and as manufactured by the J.R. Hoe & Sons, Neenah Foundry Co. No R1772-C, Clow No. F-3245-1 or equal. Sanitary sewer manhole covers shall have the words "Sanitary Sewer" cast on the top in letters 2 inches high.

Where frames and covers are shown on the drawings to be cast into the manhole top slab they shall have 24-inch clear openings and be designed for H-20 loading. Manhole covers for the air and vacuum release valve manholes shall have the words "Sanitary Sewer" cast on the top in letters 2 inches high.

Watertight manhole covers shall be equal to J.R. Hoe & Sons, Neenah Foundry Co., or equal. The size and weights shall be as shown on the DRAWINGS. Payment shall be as a cost difference between regular and watertight frames and covers.

2.03 Steps

Manhole steps shall be reinforced with three-eighths inch (3/8") rebar and shall have a polypropylene plastic coating identical to the dimensions of cast iron manhole steps. They shall be produced specifically for use as manhole steps. Spacing of steps shall be built into the walls of all manholes. Steps shall be as manufactured by M.A. Industries, PS-1, or approved equal.

Manhole steps shall be installed in each section of the manhole in accordance with the details on the DRAWINGS.

2.04 Line Connectors

All manholes shall have rubber and/or neoprene line connectors for the installation of the line such as Kor-N-seal or approved equal.

2.05 Drop Manholes

Drop Manholes shall have integrally cast external drops. Where called for on the drawings, or directed by the Engineer, and on all influent lines into pump stations, internal drop structures shall be installed.

Internal drop structures shall be as follows:

- A. The structure shall consist of a RELINER drop bowl manufactured by Duran Inc., or approved equal, a drop pipe and a turn-out at the base of the drop. All force main discharges shall include a force line hood.
- B. The appropriately sized drop pipe of SDR 35 PVC, or as noted on the drawing, shall be securely attached to the manhole wall using stainless

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steel RELINER adjustable clamping brackets and stainless steel fasteners.

- C. The connection of drop bowl to drop pipe shall be by flexible external pipe coupler.
- D. The turn-out at the base end of the drop pipe shall be accomplished with a cast-in RELINER drop end flume system or an appropriately angled PVC pipe elbow.
- E. The clamping pipe supports shall consist of 304 stainless steel with 18-8 stainless nuts and bolts.

PART 3 EXECUTION

3.01 INSTALLATION

Manhole inverts shall be constructed of 1:2 grout in accordance with details on the DRAWINGS and inverts shall have the same cross-section as the invert of the sewer to which they connect. The manhole invert shall be carefully formed to the required size and grade by gradual and even changes in sections. Changes in direction of flow through the sewer shall be made to a true curve with as large as radius as the size of the manhole will permit. Only inverts with a smooth trowel finish will be acceptable.

The cast iron frame for the manhole cover shall be set at the required elevation and properly anchored to the masonry. Where manholes are constructed in paved areas, the top surface of the frame and cover shall be tilted to conform to the exact slope, crown and grade of the existing adjacent pavement.

Masonry WORK shall be allowed to set for a period of not less than 24 hours. Outside forms, if any, then shall be removed and the manhole backfilled and compacted in the manner provided in these SPECIFICATIONS. All loose or waste material shall be removed from the interior of the manhole. The manhole cover then shall be placed and the surface in the vicinity of the WORK cleaned off and left in a neat and orderly condition.

After backfilling has been completed, the excavated area, if located in a street, alley or sidewalk, shall be provided with a temporary surface.

A bench shall be provided in each side of any manhole channel when the pipe diameter(s) are less than the manhole diameter. The bench should be sloped no less than ½ inch per foot (4%). No lateral sewer, service connection, or drop manhole pipe shall discharge onto the surface of the bench. (From *Recommended Standards for Wastewater Facilities*, often known as the "10-States Standards").

3.02 TESTING

- A. Vacuum tests shall be conducted on newly constructed manholes.

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Preliminary manhole testing shall take place following construction after all connections are made, and before backfilling. Test results derived from this test will allow time for necessary repairs to be completed before further construction proceeds and hinders such repairs. Final tests must be performed after the manhole has been backfilled.

B. Equipment:

1. Manhole vacuum tester assembly and vacuum pumps shall be manufactured by Cherne Industries Incorporated or approved equal.
2. Pneumatic plugs shall be manufactured by Cherne Industries Incorporated or approved equal. These plugs shall have a sealing length equal to or greater than the diameter of the connecting pipe to be sealed.

C. Procedures:

1. Plug all manhole entrances and exits other than the manhole top access using suitably sized pneumatic or mechanical pipeline plugs and follow all manufacturer's recommendations and warnings for proper and safe installation of such plugs. Plugs should be inserted a minimum of 6" beyond manhole wall. Make sure such plugs are properly rated for the pressures required for the test. The standard test of 10" Hg (mercury) is equivalent to approximately 5 PSIG (.3 bar) backpressure. Unless such plugs are mechanically restrained, it is recommended that the plugs are used with a minimum two times (2x) safety factor or a minimum of 10 PSIG (0.7 bar) backpressure usage rating.

CAUTION: BRACE INVERTS IF LINES ENTERING THE MANHOLE HAVE NOT BEEN BACKFILLED TO PREVENT PIPE FROM BEING DISLODGED AND PULLED INTO THE MANHOLE.

2. Install the vacuum tester head assemble at the top access of manhole. Adjust the cross brace to insure that the inflatable sealing element inflates and seals against the straight top section of the manhole or the ring assembly, if possible. (If using a "plate" style manhole tester, position the plate on the manhole ring assembly.)
3. Attach the vacuum pump assembly to the proper connection on the test head assemble. Make sure the vacuum inlet/outlet valve is in the closed position.
4. Following safety precautions and manufacturer's instructions, inflate sealing element to the recommend maximum inflation pressure.

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CAUTION: DO NOT OVER INFLATE!

5. Start the vacuum pump and allow pre-set RPM to stabilize.
6. Open the inlet/outlet ball valve and evacuate the manhole to 10" Hg (approximately negative 5 PSIG, 0.3 bar).

CAUTION: DO NOT PRESSURIZE MANHOLE! THIS MAY RESULT IN MANHOLE DAMAGE AND/OR RESULT IN MANHOLE TEST HEAD DISLODGING FROM MANHOLE INLET!

7. Close vacuum inlet/outlet ball valve and monitor vacuum for specified test period (see Minimum Test Times for Various Manhole Diameters table on the following page). If vacuum does not drop in excess of 1" Hg, manhole is considered acceptable and the manhole passes the test. If manhole fails the test, complete necessary repairs and repeat test procedure until satisfactory results are obtained.

Minimum Test Times for Various Manhole Diameters									
Depth, Feet	Diameter, Inches								
	30	33	36	42	48	54	60	66	72
	Time, Seconds								
0 to 8	11	12	14	17	20	23	26	29	33
10	14	15	18	21	25	29	33	36	41
12	17	18	21	25	30	35	39	43	49
14	20	21	25	30	35	41	46	51	57
16	22	24	29	34	40	46	52	58	67
18	25	27	32	38	45	52	59	65	73
20	28	30	35	42	50	53	65	72	81
22	31	33	39	46	55	64	72	79	89
24	33	36	42	51	59	64	78	87	97
26	36	39	46	55	64	75	85	94	105
28	39	42	49	59	69	81	91	101	113
30	42	45	53	63	74	87	98	108	121

(The valves listed above are taken from ASTM SPECIFICATION C1244-93 "Standard Test Method for Concrete Manholes by the Negative Air Pressure (Vacuum) Test.")

- D. Repeat the above test procedure after backfilling manhole for final acceptance test.

All plugs and equipment used must be manufactured by Cherne Industries Incorporated or approved equal.

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3.05 BASIS FOR PAYMENT

- A. Manholes shall be paid for at the unit price bid and shall include all work incidental to making a complete installation such as excavation, bedding, backfill, testing, cleanup, seeding, etc.

END OF SECTION

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SECTION 15100

VALVES AND PLUMBING SPECIALTIES – SANITARY SEWER

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Furnish all labor, materials, equipment, and incidentals required, and install complete and ready for operation, all valves and appurtenances as show on the Drawings and as specified herein.

1.02 RELATED WORK

- A. Excavation, backfill and grading are addressed in the Specifications accompanying the roadway construction Plans
- B. Roadway construction and related matters are addressed in the Specifications accompanying the roadway construction Plans.
- C. Potable water valves, plumbing specialties and related appurtenances are addressed in the Specifications accompanying the waterline relocation Plans.

1.03 SYSTEM DESCRIPTION

- A. All of the equipment and materials specified herein is intended to be standard for use in controlling the flow of potable water or drainage as shown on the drawings.

1.04 QUALITY ASSURANCE

- A. All of the types of valves and appurtenances shall be products of well established firms who are fully experienced, reputable and qualified in the manufacture of the particular equipment to be furnished. All materials of construction shall be of an acceptable type and shall be designated for the pressure and temperature at which they are to be operated, for the materials they are to handle and for the use for which they are intended. The materials shall meet established technical standards of quality and strength necessary to assure safe installations and conform to applicable standards. The equipment shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with these Specifications as applicable.

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1.05 REFERENCES

- A. Kentucky Basic Building Code.
- B. Kentucky State Plumbing Law, Regulations and Code

1.06 SUBMITTALS

- A. Copies of all materials required to establish compliance with these Specifications shall be submitted in accordance with the provisions of Division 1, Section 01300. Submittals shall include at least the following:
 - 1. Certified drawings showing all important details of construction and dimensions.
 - 2. Descriptive literature, bulletins, and/or catalogs of the equipment.
 - 3. The total weight of each item.
 - 4. A complete total bill of materials.
 - 5. A list of the manufacturer's recommended spare parts.

1.07 OPERATING INSTRUCTIONS

- A. Operating and maintenance instructions shall be furnished to the ENGINEER as provided in Division 1. The instructions shall be prepared specifically for this installation and shall include all required cuts, drawings, equipment lists, descriptions, etc., that are required to instruct operating and maintenance personnel unfamiliar with such equipment.

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. General
 - 1. All valves and appurtenances shall be of the size shown on the Drawings and as far as possible all equipment of the same type shall be from one manufacturer.
 - 2. All valves and appurtenances shall have the name of the maker, flow directional arrows, and the working pressure for which they are designed cast in raised letters on some appropriate part of the body.

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3. All buried valves shall open left (counterclockwise). Insofar as possible, all valves shall open counterclockwise.

2.02 VALVES

A. Ball Valves

Ball valves shall normally be used in quick shut-off and frequent use applications. Specified valves shall be as indicated on the drawings.

1. Ball Valves - bronze
 - a. Ball valves shall be for 125-pound water working pressure, 2 inches and smaller, standard bronze construction, with precision machined bronze ball, twin Buna-N seats, and handle operator with integral stop where exposed. Buried ball valves shall be as above with key or nut operators. Valves shall be Lunkenheimer No. 700-SB, Ford, or approved equal.

B. Sewage Air/Vacuum Valves

1. Sewage Air/Vacuum Valves shall be furnished and installed at the locations shown on the PLANS. The valves shall be ARI sewage air/vacuum valves as manufactured by A.R.I. Flow Control Accessories, Kfar Charuv, 12932 Israel, or approved equal.
2. The valves shall be the size shown on the PLANS and be A.R.I. Model D-025 or approved equal.
3. The valves shall be designed to allow entrapped air to escape from the pipeline when pumps are started and close water tight when liquid enters the valves. When the sewage line is filled, the valves shall allow air to reenter when draining, to prevent vacuum or water column separation. The valves shall allow unrestricted venting or re-entry of air through it, during filling or draining of the force main. The complete valve shall withstand 500 psi test pressure.
4. Inlet and outlet blow off valves, and five (5) feet of hose for flushing shall be provided with each valve. Fittings shall be $\frac{3}{4}$ " hose connections.
5. The body, cover and baffle of each valve assembly shall be constructed of cast iron, conforming to ASTM A126 GR.B. The upper float shall be constructed of stainless steel conforming to ASTM A240. The lower float shall have a concave underside, and shall be constructed of stainless steel and conform to ASTM S240, Series T304. The stem and guide bushing shall be constructed of stainless steel, Series T300. The seat shall be

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constructed of Buna-N rubber. The valve shall be delivered coated with red oxide primer.

C. Dielectric Pipe Couplings

1. Dielectric pipe couplings shall be used wherever copper pipe connects to steel or cast iron pipe and appurtenances. Couplings shall have steel bodies with non-conducting bushings on both ends. Ends shall have standard pipe threads. Couplings shall be rated for at least 200 psi at 225°F. Couplings shall be as manufactured by Thermodynamics Corporation, Needham, MA; Water Vallett Company, Detroit, MI; or approved equal.

PART 3 EXECUTION

3.01 INSTALLATION

- A. All valves and appurtenances shall be installed in the locations shown, true to alignment and rigidly supported. Any damage to the above items shall be repaired to the satisfaction of the ENGINEER before they are installed.
- B. Control valves in all locations shall be so grouped and located that they may be easily operated, through access panels, doors, or adjacent to equipment.
- C. After installation, all valves and appurtenances shall be tested at least one hour at the working pressure corresponding to the class of pipe, unless a different test pressure is specified. If any joint proves to be defective, it shall be repaired to the satisfaction of the ENGINEER.
- D. Install all brackets, extension rods, guides, the various types of operators and appurtenances as shown on the DRAWINGS in masonry floors or walls, and install concrete inserts for hangers and supports as soon as forms are erected and before concrete is poured. Before setting these items, the CONTRACTOR shall check all DRAWINGS and figures which have a direct bearing on their location and he shall be responsible for the proper location of these valves and appurtenances during the construction of the structures.
- E. All materials shall be carefully inspected for defects in workmanship and materials; all debris and foreign material cleaned out of valve openings, etc.; all operating mechanisms operated to check their proper functioning, and all nuts and bolts checked for tightness. Valves and other equipment which do not operate easily, or are otherwise defective, shall be repaired or replaced at no additional cost to the OWNER.

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- F. Fire hydrants and yard hydrants shall be set at the locations as shown on the DRAWINGS and bedded on a firm foundation. A drainage pit as detailed on the DRAWINGS shall be filled with screened gravel and satisfactorily compacted.
- G. During backfilling, additional screened gravel shall be brought up around, and 6-inches over, the drain port. Each hydrant shall be set in true vertical alignment and properly braced. Concrete thrust blocks shall be placed between the back of the hydrant inlet and undisturbed soil at the end of the trench. Minimum bearing area shall be as shown on the DRAWINGS. Felt roofing paper shall be placed around hydrant elbow before placing concrete. CARE SHALL BE TAKEN TO INSURE THAT CONCRETE DOES NOT PLUG THE DRAIN PORTS.
- H. If directed, the hydrant shall be tied to the pipe with suitable rods or clamps, galvanized, painted, or otherwise rustproof treated. Concrete used for backing shall be no leaner than 1 part cement, 2-1/2 parts sand, and 5-1/2 parts stone. Hydrant paint shall be touched up as required after installation.
- I. Buried flanged or mechanical joints shall be made with cadmium-plated bolts. All exposed bolts and nuts shall be cadmium-plated. All exposed bolts and nuts shall be heavily coated with two coats of bituminous paint.
- J. Yard hydrants shall be installed in accordance with manufacturer's recommendation and applicable requirements of the fire hydrants above.
- K. Buried valves and valve boxes shall be set with the valve stem vertically aligned in the center of the box. Valves shall be set on firm foundation and supported by tamping selected excavated material under the sides of the valve. The valve box shall be supported during backfilling and maintained in vertical alignment with the top flush with finish grade.

3.02 SHOP PAINTING

- A. Interior surfaces of all valves, the exterior surfaces of buried valves, and miscellaneous piping appurtenances shall be given a shop finish of an asphalt varnish conforming to Federal Specification TT-V51e for Varnish Asphalt.
- B. The exterior surface of various parts of the valves, operators, floor stands and miscellaneous piping shall be thoroughly cleaned of all scale, dirt, grease or other foreign matter and thereafter one shop coat of an approved rust-inhibitive primer, such as Inertol Primer No. 621, shall be applied in accordance with the instructions of the paint manufacturer.
- C. Ferrous surfaces obviously not to be painted shall be given a shop coat of grease or other suitable rust-resistant coating.
- D. Field painting is specified under Division 9, Section 09900.

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3.03 INSPECTION AND TESTING

- A. The various pipelines in which the valves and appurtenances are to be installed are specified to be field-tested. During these tests any defective valve or appurtenance shall be adjusted, removed and replaced, or otherwise made acceptable to the ENGINEER.
- B. Various regulating valves, strainer, or other appurtenances shall be tested to demonstrate their conformance with the specified operational capabilities and any deficiencies shall be corrected or the device replaced or otherwise made acceptable to the ENGINEER.

END OF SECTION

N O T I C E

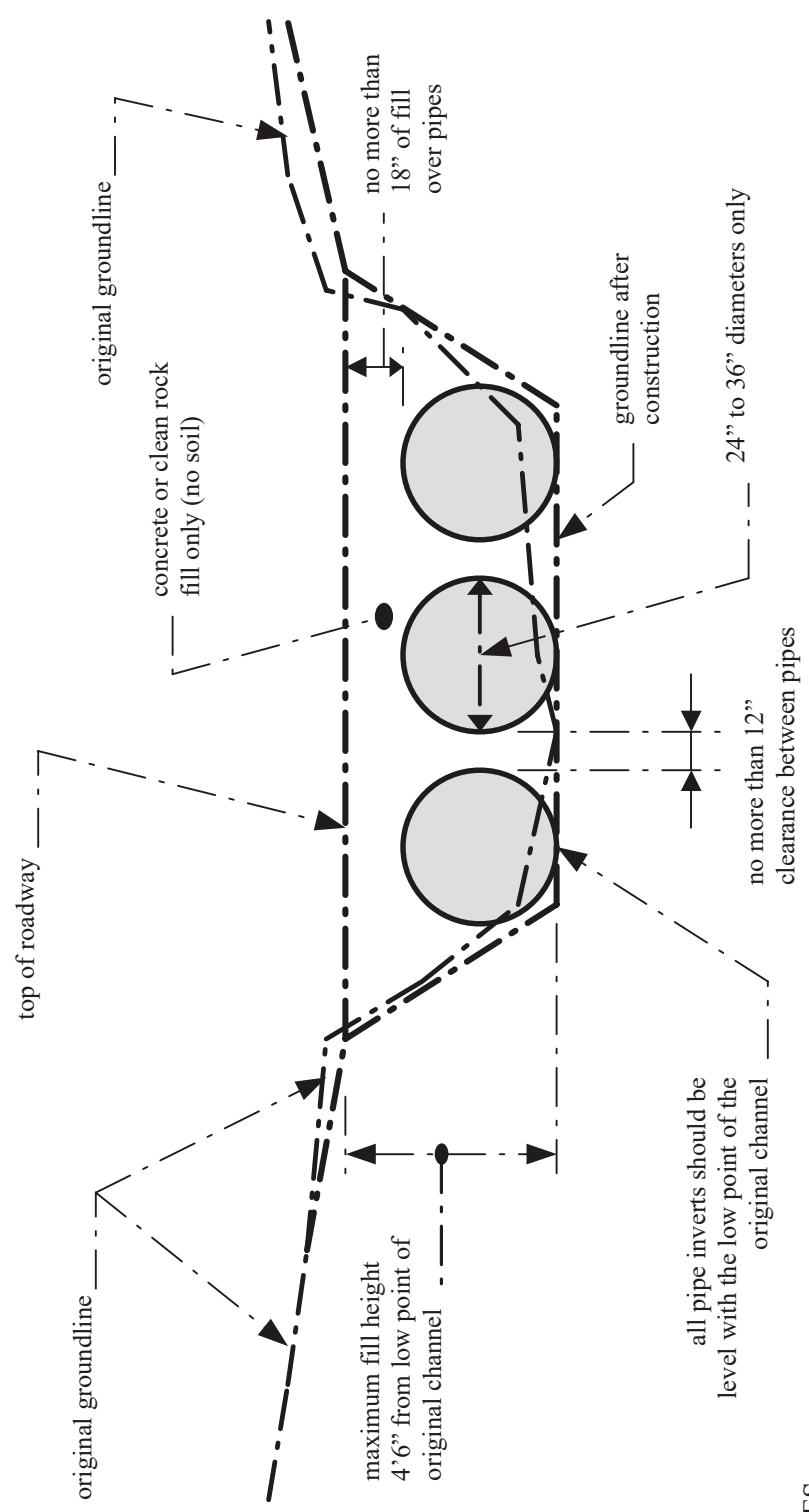
**DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
(NATIONWIDE PERMIT & GENERAL WQC AUTHORIZATION)**

PROJECT: Madison County, Item No. 7-8403.00
Major Widening

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. . 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 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.

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

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



STEVEN L. BESHEAR
GOVERNOR

LEONARD K. PETERS
SECRETARY

ENERGY AND ENVIRONMENTAL PROTECTION CABINET

DEPARTMENT FOR ENVIRONMENTAL PROTECTION

DIVISION OF WATER

200 FAIR OAKS LANE

FRANKFORT, KENTUCKY 40601

www.kentucky.gov

General Certification--Nationwide Permit # 14 Linear Transportation Projects

This General Certification is issued March 19, 2012, 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.
4. The activity will impact less than 300 linear feet of surface waters of the Commonwealth. Stream realignment greater than 100 feet is not covered under this general water quality certification.

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5. For a single and complete linear transportation project, the cumulative length of impacts less than 300 linear feet of surface waters within each Hydrologic Unit Code (HUC) 14 watershed will not exceed 500 linear feet.
6. 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).
7. 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.
8. Activities that do not meet the conditions of this General Water Quality Certification require an Individual Section 401 Water Quality Certification.
9. Activities qualifying for coverage under this General Water Quality Certification are subject to the following conditions:
 - 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, 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.

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- 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.



US Army Corps of Engineers

Nationwide Permit No. 14, Linear Transportation Projects

Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States.

- a. 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.
- b. 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.
- c. This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.
- d. 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 31.) (Sections 10 and 404)

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

Valid from March 19, 2012 through March 18, 2017

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR §§ 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

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

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car

bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

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

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

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River

designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

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

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.noaa.gov/fisheries.html> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any “take” permits required under the U.S. Fish and Wildlife Service’s regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such “take” permits are required for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must

still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.

(2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist

of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with

any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

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

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

- (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
- (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
- (c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; 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. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative

description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWP's and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments.

The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWP, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

D. District Engineer's Decision


1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (a) that the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

E. Further Information

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

	<p>Kentucky Transportation Cabinet</p> <p>NO EFFECT FINDING</p>		
KYTC Item No:	07 - 8403	Route:	KY 627 and I-75 ramps
Quadrangle(s):		County(ies):	Madison
Project Description: (Type of improvement, areas to be impacted, crossroad improvements, easements, etc.)			
The proposed project is to provide new I-75 ramps at exit 95 and reconstruct the frontage roads along I-75 and improve KY 627. Mostly occurs within existing interstate ROW			
Listed Species: (Attach copy of USFWS county list, KSNPC web site and KDFWR web site)			
Indiana bat, gray bat, running buffalo clover			
Methodologies: (Methods of assessment, who, what, when, resources, etc.)			
Office assessment consisted of reviewing maps (aerial, topo, soil, geology) and historical records of T&E spp in Madison County. Field assessment conducted by qualified biologist on May 11, 2012.			
Results: (Compare habitat used by listed species with available habitat)			
Gray bat: No caves or karst features will be directly or indirectly impacted by this project. The streams are ephemeral with a short length of riparian buffer. No canopy cover along ditch-like streams This is not adequate habitat for GB foraging.			
Indiana bat: No winter habitat is present. There are some potential roost trees that may be impacted by the project. These trees could provide some marginal summer habitat. This loss will be addressed by adhering to seasonal tree clearing or by entering into a CMOA with USFWS.			
Running Buffalo Clover: The soil survey indicates that the soil has low organic matter, is slow to drain and subject to high water table during wet periods. Additionally, no historic homes or trees were within the assessment area. Areas on map that could appear to be potential habitat are dominated by weedy growth (pokeweed, ragweed, crown vetch, etc) Thus, no habitat is present for RBC.			

Determinations:

The project has been assessed in accordance with the provisions of Section 7 of the Endangered Species Act, and KYTC concludes that the project will have No Effect on any listed species or their critical habitat and that further consultation with the Service is not required.


KYTC Signature

5/14/12
Date

Andrew Logsdon
Print Name

EATS Updated

AWL
Name

5/15/12
Date



U.S. Fish & Wildlife Service
Kentucky Ecological Services Field Office

U.S. Fish & Wildlife Service
330 West Broadway, Rm 265
Frankfort, KY 40601
Phone: 502-695-0468
Fax: 502-695-1024

Endangered, Threatened, & Candidate
Species in MADISON County, KY

Group	Species	Common name	Legal Status	Known Potential	Special Comments
Mammals	<i>Myotis sodalis</i>	Indiana bat	E	P	
	<i>Myotis grisescens</i>	gray bat	E	P	
Plants	<i>Trifolium stoloniferum</i>	running buffalo clover	E	K	
	<i>Lesquerella globosa</i>	globe bladderpod	C	K	

NOTES:

* Key to notations: E = Endangered, T = Threatened, C = Candidate, CH = Critical Habitat

**Key to notations: K = Known occurrence record within the county, P = Potential for the species to occur within the county based upon historic range, proximity to known occurrence records, biological, and physiographic characteristics.

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- Species Information
- KDFWR
- Maps
- Public
- Hunting
- Area Maps
- Game Maps
- Download GIS Data
- Links

Species Information

Federal Threatened, Endangered, and Candidate Species observations for selected counties

Linked life history provided courtesy of [NatureServe Explorer](#).
Records may include both recent and historical observations.
[US Status Definitions](#) [Kentucky Status Definitions](#)

List Federal Threatened, Endangered, and Candidate Species observations in 1 selected county.
 Selected county is: **Madison.**

Scientific Name and Life History	Common Name and Pictures	Class	County	US Status	KY Status	WAP	Reference
Myotis grisescens	Gray Myotis	Mammalia	Madison	LE	T	Yes	Reference

1 species are listed

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**Report of
Endangered, Threatened, and Special Concern
Plants, Animals, and Natural Communities
for Madison County, Kentucky**

**Kentucky State Nature Preserves
Commission
801 Schenkel Lane
Frankfort, KY 40601
(502) 573-2886 (phone)
(502) 573-2355 (fax)**

www.naturepreserves.ky.gov

Kentucky State Nature Preserves Commission Key for County List Report

Within a county, elements are arranged first by taxonomic complexity (plants first, natural communities last), and second by scientific name. A key to status, ranks, and count data fields follows.

STATUS

KSNPC: Kentucky State Nature Preserves Commission status:

N or blank = none E = endangered T = threatened S = special concern H = historic X = extirpated

USESA: U.S. Fish and Wildlife Service status:

blank = none C = candidate LT = listed as threatened LE = listed as endangered
SOMC = Species of Management Concern

RANKS

GRANK: Estimate of element abundance on a global scale:

G1 = Critically imperiled GU = Unrankable
G2 = Imperiled G#? = Inexact rank (e.g. G2?)
G3 = Vulnerable G#Q = Questionable taxonomy
G4 = Apparently secure G#T# = Intraspecific taxa (Subspecies and variety abundances are coded with a 'T' suffix; the 'G' portion of the rank then refers to the entire species)
G5 = Secure GNR = Unranked
GH = Historic, possibly extinct GNA = Not applicable
GX = Presumed extinct

SRANK: Estimate of element abundance in Kentucky:

S1 = Critically imperiled SU = Unrankable
S2 = Imperiled S#? = Inexact rank (e.g. G2?)
S3 = Vulnerable S#Q = Questionable taxonomy
S4 = Apparently secure S#T# = Intraspecific taxa
S5 = Secure SNR = Unranked
SH = Historic, possibly extirpated SNA = Not applicable
SX = Presumed extirpated

Migratory species may have separate ranks for different population segments (e.g. S1B, S2N, S4M):
S#B = Rank of breeding population
S#N = Rank of non-breeding population
S#M = Rank of transient population

COUNT DATA FIELDS

OF OCCURRENCES: Number of occurrences of a particular element from a county. Column headings are as follows:

E - currently reported from the county
H - reported from the county but not seen for at least 20 years
F - reported from county & cannot be relocated but for which further inventory is needed
X - known to have extirpated from the county
U - reported from a county but cannot be mapped to a quadrangle or exact location.

The data from which the county report is generated is continually updated. The date on which the report was created is in the report footer. Contact KSNPC for a current copy of the report.

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new species of plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

KSNPC appreciates the submission of any endangered species data for Kentucky from field observations. For information on data reporting or other data services provided by KSNPC, please contact the Data Manager at:

Kentucky State Nature Preserves Commission
801 Schenkel Lane
Frankfort, KY 40601
(502) 573-2886 (phone)
(502) 573-2355 (fax)
email: naturepreserves@ky.gov
internet: www.naturepreserves.ky.gov

County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky
Kentucky State Nature Preserves Commission

County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	# of Occurrences				
						E	H	F	X	U
Madison	Vascular Plants	<i>Bolboschoenus fluvialis</i>	River Bulrush	E/	G5 / S1S2	0	0	0	1	0
Madison	Vascular Plants	<i>Bouteloua curtipendula</i>	Side-oats Grama	S/	G5 / S3?	1	0	0	0	0
Madison	Vascular Plants	<i>Castanea pumila</i>	Allegheny Chinkapin	T/	G5 / S2	1	0	0	0	0
Madison	Vascular Plants	<i>Dodecatheon frenchii</i>	French's Shooting Star	S/	G3 / S3	0	0	1	0	0
Madison	Vascular Plants	<i>Dryopteris carthusiana</i>	Spinulose Wood Fern	S/	G5 / S3	0	0	1	0	0
Madison	Vascular Plants	<i>Elodea nuttallii</i>	Western Waterweed	T/	G5 / S2?	1	0	0	0	0
Madison	Vascular Plants	<i>Gentiana flavida</i>	Yellow Gentian	E/	G4 / S1S2	1	0	0	0	0
Madison	Vascular Plants	<i>Heteranthera limosa</i>	Blue Mud-plantain	S/	G5 / S2S3	0	0	0	1	0
Madison	Vascular Plants	<i>Lesquerella globosa</i>	Globe Bladderpod	E/C	G2 / S1	0	1	1	0	0
Madison	Vascular Plants	<i>Matvastrum hispidum</i>	Hispid Falsemallow	T/	G3G5 / S2?	1	0	0	0	0
Madison	Vascular Plants	<i>Oenothera triloba</i>	Stemless Evening-primrose	T/	G4 / S1S2	0	1	0	0	0
Madison	Vascular Plants	<i>Paxistima canbyi</i>	Canby's Mountain-lover	T / SOMC	G2 / S2	1	0	0	0	0
Madison	Vascular Plants	<i>Ranunculus ambigens</i>	Waterplantain Spearwort	S/	G4 / S3	0	0	0	1	0
Madison	Vascular Plants	<i>Ribes americanum</i>	Eastern Black Currant	T/	G5 / S2?	1	0	0	0	0
Madison	Vascular Plants	<i>Salix amygdaloides</i>	Peach-leaved Willow	H/	G5 / SH	0	1	0	0	0
Madison	Vascular Plants	<i>Spiranthes magnicamporum</i>	Great Plains Ladies'-tresses	T/	G4 / S2	1	0	0	0	0
Madison	Vascular Plants	<i>Spiranthes ochroleuca</i>	Yellow Nodding Ladies'-tresses	T/	G4 / S2?	0	1	0	0	0
Madison	Vascular Plants	<i>Symphoricarpos albus</i>	Snowberry	E/	G5 / S1	1	0	0	0	0
Madison	Vascular Plants	<i>Trifolium stoloniferum</i>	Running Buffalo Clover	T / LE	G3 / S2S3	19	0	1	15	0
Madison	Vascular Plants	<i>Viburnum molle</i>	Softleaf Arrowwood	S/	G5 / S3?	1	0	0	0	0
Madison	Vascular Plants	<i>Viburnum rafinesquianum</i> var. <i>rafinesquianum</i>	Downy Arrowwood	T/	G5T4T5 / S2	1	1	0	0	0
Madison	Insects	<i>Pseudanophthalmus catorcyctos</i>	Lesser Adams Cave Beetle	E/	G1 / S1	1	0	0	0	0
Madison	Insects	<i>Pseudanophthalmus pholeter</i>	Greater Adams Cave Beetle	E/	G1 / S1	1	0	0	0	0
Madison	Amphibians	<i>Cryptobranchus alleganiensis alleganiensis</i>	Eastern Hellbender	E / SOMC	G3G4T3T4 / S1	0	1	0	0	0
Madison	Amphibians	<i>Rana pipiens</i>	Northern Leopard Frog	S/	G5 / S3	4	1	0	0	0
Madison	Reptiles	<i>Eumeces anthracinus</i>	Coal Skink	T/	G5 / S2	1	0	0	0	0
Madison	Breeding Birds	<i>Atmophila aestivalis</i>	Bachman's Sparrow	E / SOMC	G3 / S1B	0	0	0	2	0

County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky
Kentucky State Nature Preserves Commission

County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	# of Occurrences				
						E	H	F	X	U
Madison	Breeding Birds	<i>Ammodramus henslowii</i>	Henslow's Sparrow	S / SOMC	G4 / S3B	1	0	0	0	0
Madison	Breeding Birds	<i>Chondestes grammacus</i>	Lark Sparrow	T /	G5 / S2S3B	0	1	0	0	0
Madison	Breeding Birds	<i>Thryomanes bewickii</i>	Bewick's Wren	S / SOMC	G5 / S3B	1	0	0	0	0
Madison	Breeding Birds	<i>Tyto alba</i>	Barn Owl	S /	G5 / S3	3	0	0	0	0
Madison	Mammals	<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	S / SOMC	G3G4 / S3	1	0	0	0	0
Madison	Mammals	<i>Mustela nivalis</i>	Least Weasel	S /	G5 / S2S3	3	0	0	0	0
Madison	Mammals	<i>Myotis grisescens</i>	Gray Myotis	T / LE	G3 / S2	3	0	0	1	0
Madison	Mammals	<i>Nycticeius humeralis</i>	Evening Bat	S /	G5 / S3	1	0	0	0	0
Madison	Mammals	<i>Ursus americanus</i>	American Black Bear	S /	G5 / S2	1	0	0	0	0
Madison	Communities	<i>Appalachian mesophytic forest</i>		N /	GNR / S4S5	2	0	0	0	0
Madison	Communities	<i>Bluegrass mesophytic cane forest</i>		E /	GNR / S1	1	0	0	0	0
Madison	Communities	<i>Calcareous mesophytic forest</i>		N /	GNR / S5	1	0	0	0	0
Madison	Communities	<i>Limestone/dolomite prairie</i>		E /	GNR / S1	1	0	0	0	0
Madison County Total:						56	8	4	21	0



31 Oct '12 AM 9:38

STEVEN L. BESHEAR
GOVERNOR

**TOURISM, ARTS AND HERITAGE CABINET
KENTUCKY HERITAGE COUNCIL**

MARCHETA SPARROW
SECRETARY

THE STATE HISTORIC PRESERVATION OFFICE
300 WASHINGTON STREET
FRANKFORT, KENTUCKY 40601
PHONE (502) 564-7005
FAX (502) 564-5820
www.heritage.ky.gov

FILE COPY
LINDY CASEBIER
ACTING EXECUTIVE DIRECTOR AND
STATE HISTORIC PRESERVATION OFFICER

October 26, 2012

David M. Waldner, P.E.
Division of Environmental Analysis
Kentucky Transportation Cabinet
200 Mero Street
Frankfort, KY 40601

Re: A Cultural Historic Survey of the Reconstruction of the I-75 / KY 627 Interchange and the Colonel Road / Simpson Lane Relocation at KY 627 in Madison County, Kentucky (Item No. 7-8400.00/8403.00)

Dear Mr. Waldner:

The Kentucky Heritage Council has received for review and comment the above referenced Cultural Historic Survey completed by Division of Environmental Analysis staff. The survey identified three (3) properties that are 50 years of age or older, one of which had been previously surveyed. Only one site, MA-924, is recommended as eligible for listing in the National Register of Historic Places (NRHP). We agree with the recommended eligibility under Criterion C and agree with the recommended National Register boundary. In addition, we agree that Site MA-580 (previously surveyed) and Site MA-923 are not eligible for listing in the NRHP.

Site MA-924 lies in the southwest part of the APE, west of I-75, and the preferred alternative (Alternative D) is largely focused on the east side of I-75. We therefore agree that the undertaking as proposed will have No Effect on Site MA-924. Thank you for coordinating with this office. If you have any questions please contact Craig Potts of my staff at (502) 564-7005, ext. 123.

Sincerely,

Lindy Casebier
Acting Executive Director and
State Historic Preservation Officer

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



Kentucky Transportation Cabinet

Highway District Seven

And

_____ **(2), Construction**

Kentucky Pollutant Discharge Elimination System

Permit KYR10

Best Management Practices (BMP) plan

Groundwater protection plan

For Highway Construction Activities

For

Madison County

I-75/KY 627 Interchange

Project: PCN ## - #####

KyTC BMP Plan for Project PCN ## -

Project information

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

1. Owner – Kentucky Transportation Cabinet, District Seven
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: I75 at KY 627 Interchange – Exit 95 (1)
6. Latitude/Longitude 37/50/43 North, 84/19/40 West (1)
7. County: Madison (1)
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

KyTC BMP Plan for Project PCN ## -

A. Site description:

1. Nature of Construction Activity: Construct Georgetown Northwest Bypass from US 460 east to KY 32
2. Order of major soil disturbing activities (2) and (3)
3. Projected volume of material to be moved: 46,196 cubic yards of excavation and 105,886 cubic yards embankment and (1)
4. Estimate of total project area: 58 acres
5. Estimate of area to be disturbed: 58 acres
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. (1)
7. Data describing existing soil condition. The Project is located in the Richmond North Geologic Quadrangle (#583). Soil depths range from 4.5 to 13 feet. High and low plastic clays are found over the course of the project. The Bedrock encountered is part of the Ashlock Foundation. (1) & (2)
8. Data describing existing discharge water quality (if any) (1) & (2)
9. Receiving water name: Shallow Ford 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.

KyTC BMP Plan for Project PCN ## -

12. Potential sources of pollutants:

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

B. Sediment and Erosion Control Measures:

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

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

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

KyTC BMP Plan for Project PCN ## -

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

KyTC BMP Plan for Project PCN ## -

- 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)

C. Other Control Measures

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

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

3. Hazardous Waste

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

KyTC BMP Plan for Project PCN ## -

4. Spill Prevention

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

➤ **Good Housekeeping:**

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

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

➤ **Hazardous Products:**

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

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

The following product-specific practices will be followed onsite:

➤ **Petroleum Products:**

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

KyTC BMP Plan for Project PCN ## -

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

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

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

➤ **Fertilizers:**

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

➤ **Paints:**

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

➤ **Concrete Truck Washout:**

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

➤ **Spill Control Practices**

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

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

KyTC BMP Plan for Project PCN ## -

- 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 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)

KyTC BMP Plan for Project PCN ## -

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 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.

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

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

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

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);

KyTC BMP Plan for Project PCN ## -

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

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

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

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

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

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

Special Note`

Filing of eNOI for KPDES Construction Stormwater Permit

County: Madison

Route: I75/KY 627

Item No.: 7-8403

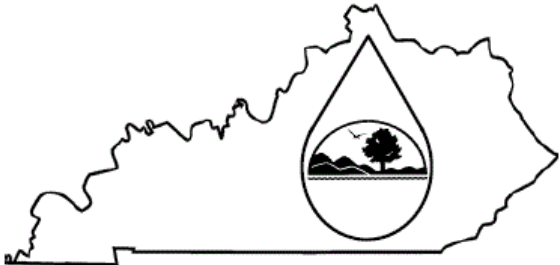
KDOW Submittal ID: 147108

Project Description:

IMPROVE SAFETY AND REDUCE CONGESTION AT THE KY-627 BRIDGE OVER I-75

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, a copy of which is attached. Upon award, the Contractor will be identified in Section III of the form as “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.


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: 10px 0 0 0;">ELIMINATION SYSTEM (KPDES)</h3> <p style="margin: 10px 0 0 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: 10px 0 0 0;">Click here for Instructions (Controls/KPDES_FormKYR10_Instructions.)</p> <p style="margin: 10px 0 0 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: 10px 0 0 0;">(*) 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:(*) <input style="width: 90%; border: 1px solid #ccc;" type="text" value="Application for New Permit (∨)"/>	Agency Interest ID: <input style="width: 90%; border: 1px solid #ccc;" type="text" value="Agency Interest ID"/>	Permit Number:(∨) <input style="width: 90%; border: 1px solid #ccc;" 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:(∨) <input style="width: 100%; height: 30px; border: 1px solid #ccc;" type="text"/>			
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, Å§305(b) as impaired for sediment and for which an approved TMDL has been developed.			
SECTION I -- FACILITY OPERATOR INFORMATION (PERMITTEE)			
Company Name:(∨) <input style="width: 90%; border: 1px solid #ccc;" type="text" value="KENTUCKY TRANSPORTATION CABIN"/>	First Name:(∨) <input style="width: 90%; border: 1px solid #ccc;" type="text" value="Kelly"/>	M.I.: <input style="width: 90%; border: 1px solid #ccc;" type="text" value="A"/>	Last Name:(∨) <input style="width: 90%; border: 1px solid #ccc;" type="text" value="Baker"/>
Mailing Address:(*) <input style="width: 90%; border: 1px solid #ccc;" type="text" value="800 NEWTOWN CT"/>	City:(*) <input style="width: 90%; border: 1px solid #ccc;" type="text" value="LEXINGTON,"/>	State:(*) <input style="width: 90%; border: 1px solid #ccc;" type="text" value="Kentucky ∨"/>	Zip:(*) <input style="width: 90%; border: 1px solid #ccc;" type="text" value="40512"/>

eMail Address:(*) kellya.baker@ky.gov	Business Phone:(*) 859-246-2355	Alternate Phone: 859-246-2354
--	------------------------------------	----------------------------------

SECTION II -- GENERAL SITE LOCATION INFORMATION			
Project Name:(*) I-75/KY 627 Interchange		Status of Owner/Operator(*) State Governmen ▾	SIC Code(*) 1622 Bridge, Tun ▾
Company Name:(✓) KENTUCKY TRANSPORTATION CABINE	First Name:(✓) First Name	M.I.: M	Last Name:(✓) Last Name
Site Physical Address:(*) I75 EXIT 95			
City:(*) RICHMOND		State:(*) Kentucky ▾	Zip:(*) 40475
County:(*) Madison ▾	Latitude(decimal degrees)(*)DMS to DD Converter (https://www.fcc.gov/media/radio/dms-decimal) 37.84528	Longitude(decimal degrees)(*) -84.32778	

SECTION III -- SPECIFIC SITE ACTIVITY INFORMATION 

Section III requires part A or part B to be completed.

Project Description:(*) improve safety and reduce congestion at the KY 627 Bridge over I-75.	
a. For single projects provide the following information	
Total Number of Acres in Project:(✓) 58	Total Number of Acres Disturbed:(✓) 58
Anticipated Start Date:(✓) 4/1/2019	Anticipated Completion Date:(✓) 8/31/2020
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:(✓) <input style="width:90%; height: 20px;" type="text" value="Project Acres"/>	Number of acres intended to be disturbed at any one time:(✓) <input style="width:90%; height: 20px;" type="text" value="Disturbed Acres"/>
Anticipated Start Date:(✓) <input style="width:90%; height: 20px;" type="text"/>	Anticipated Completion Date:(✓) <input style="width:90%; height: 20px;" type="text"/>
List Building Contractor(s) at the time of Application:(*) <input style="width:90%; height: 20px;" type="text" value="Company Name"/>	


SECTION IV -- IF THE PERMITTED SITE DISCHARGES TO A WATER BODY THE FOLLOWING INFORMATION IS REQUIRED

Complete the following table if the permitted site discharges to a water body. Please note that if you enter a row in hte below table, all columns are required to be filled out.

Unnamed Tributary?: Does discharge enter an unnamed tributary prior to entering a named receiving water?
Latitude in decimal degrees: Format must be between 36.490000 and 39.150000, with a minimum of 5 decimal points of accuracy.
Longitude in decimal degrees: Format must be between -89.580000 and -81.960000, with a minimum of 5 decimal points of accuracy.
Receiving Water Name: Recieving water name must be from the following list of possible receiving waters.(click here for a list (Controls/ReceivingStream.htm)). If the discharge flows into an unnamed tributary, please enter the first â€œnamedâ€ receiving water for which the unnamed tributary(ies) eventually flows into.

Discharge Point(s):			
<u>Unnamed Tributary?</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Receiving Water Name</u>
Yes	37.838314	-84.324844	Shallow Ford Creek
Yes	37.839664	-84.325604	Shallow Ford Creek
Yes	37.839768	-84.325605	Shallow Ford Creek
Yes	37.840200	-84.324849	Shallow Ford Creek
Yes	37.840358	-84.324559	Shallow Ford Creek
No	37.842288	-84.327662	Shallow Ford Creek
No	37.842313	-84.327745	Shallow Ford Creek
Yes	37.842368	-84.329145	Shallow Ford Creek
Yes	37.842524	-84.329378	Shallow Ford Creek
Yes	37.842569	-84.331263	Shallow Ford Creek
Yes	37.842671	-84.327273	Shallow Ford Creek
No	37.842945	-84.327564	Shallow Ford Creek
No	37.843066	-84.327506	Shallow Ford Creek
Yes	37.843070	-84.326516	Shallow Ford Creek
No	37.843094	-84.327384	Shallow Ford Creek
Yes	37.843546	-84.322141	Shallow Ford Creek
Yes	37.843886	-84.32978	Shallow Ford Creek
Yes	37.844098	-84.326924	Shallow Ford Creek
No	37.844441	-84.327156	Shallow Ford Creek
No	37.844889	-84.327096	Shallow Ford Creek

Yes	37.847874	-84.328853	Shallow Ford Creek
Yes	37.848607	-84.330353	Shallow Ford Creek
Yes	37.849333	-84.33006	Shallow Ford Creek

SECTION V -- IF THE PERMITTED SITE DISCHARGES TO A MS4 THE FOLLOWING INFORMATION IS REQUIRED 

List all MS4 Discharge Points

Latitude in decimal degrees. Format must be between 36.490000 and 39.150000, with a minimum of 5 decimal points of accuracy.

Longitude in decimal degrees. Format must be between -89.580000 and -81.960000, with a minimum of 5 decimal points of accuracy.

Name of MS4: <input type="text"/>	
Date of application/notification to the MS4 for construction site permit coverage: <input type="text" value="Date"/>	Discharge Point(s):(*) <input type="text" value="Latitude"/> <input type="text" value="Longitude"/>

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?:(*)	<input type="text" value="Yes"/>
If Yes, describe scope of activity: (✓)	<input type="text" value="Extension of Box Culvert"/>
Is a Clean Water Act 404 permit required?:(*)	<input type="text" value="Yes"/>
Is a Clean Water Act 401 Water Quality Certification required?:(*)	<input type="text" value="Yes"/>

SECTION VII -- NOI PREPARER INFORMATION

First Name:(*) <input type="text" value="Stuart"/>	M.I.: <input type="text" value="C"/>	Last Name:(*) <input type="text" value="Goodpaster"/>	Company Name:(*) <input type="text" value="KYTC - District 7"/>	
Mailing Address:(*) <input type="text" value="800 Newtown Ct"/>		City:(*) <input type="text" value="Lexington"/>	State:(*) <input type="text" value="Kentucky"/>	Zip:(*) <input type="text" value="40512"/>
eMail Address:(*)		Business Phone:(*)	Alternate Phone:	

stuart.goodpaster@ky.gov

859-246-2355

859-246-2354

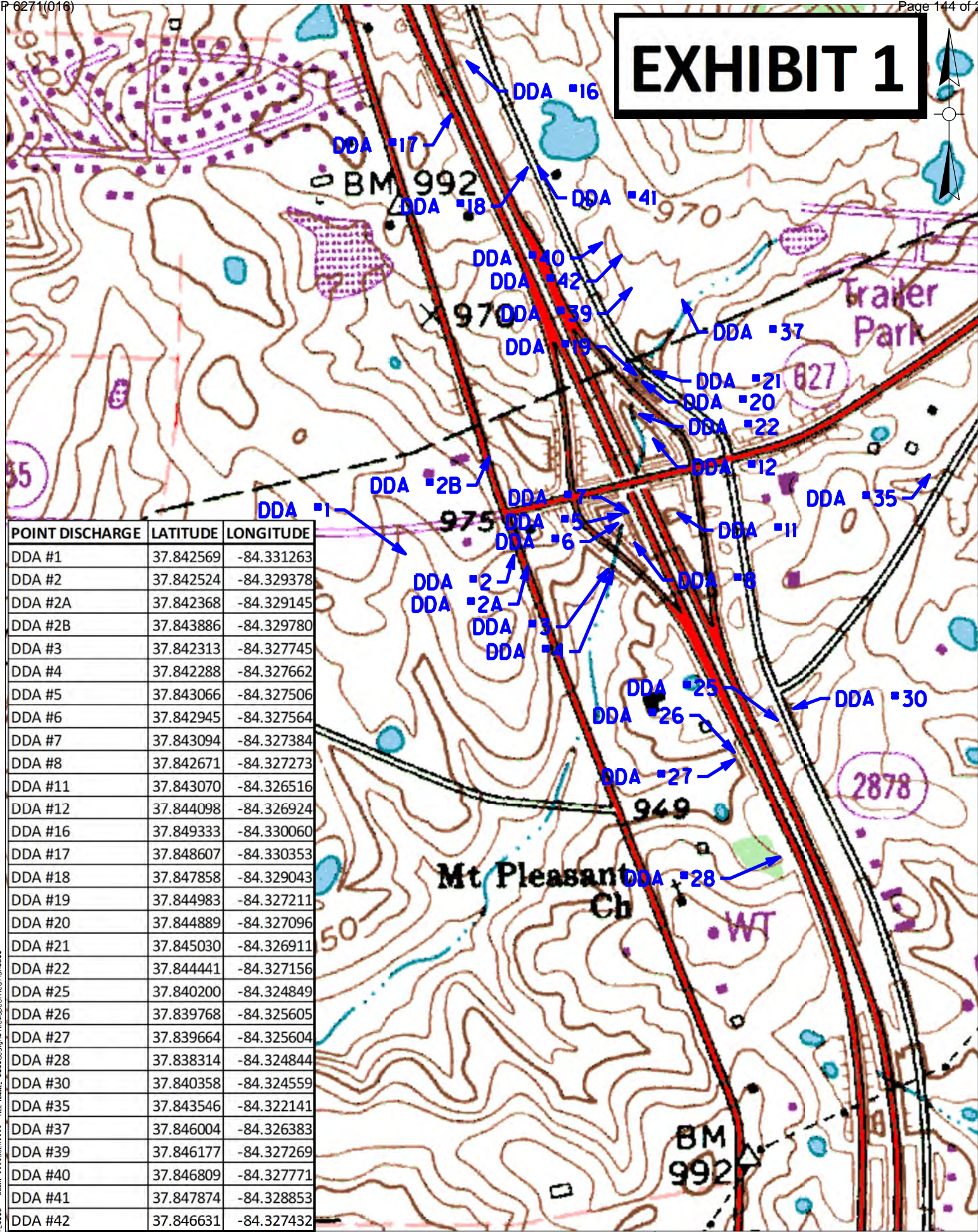
SECTION VIII -- ATTACHMENTS	
Facility Location Map:(*)	<input type="button" value="Upload file"/>
Supplemental Information:	<input type="button" value="Upload file"/>

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:(*) <input type="text" value="Stuart C Goodpaster"/>		Title:(*) <input type="text" value="Transportation Engineer I"/>	
First Name:(*) <input type="text" value="Stuart"/>	M.I.: <input type="text" value="C"/>	Last Name:(*) <input type="text" value="Goodpaster"/>	
eMail Address:(*) <input type="text" value="stuart.goodpaster@ky.gov"/>	Business Phone:(*) <input type="text" value="859-246-2355"/>	Alternate Phone: <input type="text" value="859-246-2355"/>	Signature Date:(*) <input type="text" value="1/9/2019"/>

EXHIBIT 1



POINT DISCHARGE	LATITUDE	LONGITUDE
DDA #1	37.842569	-84.331263
DDA #2	37.842524	-84.329378
DDA #2A	37.842368	-84.329145
DDA #2B	37.843886	-84.329780
DDA #3	37.842313	-84.327745
DDA #4	37.842288	-84.327662
DDA #5	37.843066	-84.327506
DDA #6	37.842945	-84.327564
DDA #7	37.843094	-84.327384
DDA #8	37.842671	-84.327273
DDA #11	37.843070	-84.326516
DDA #12	37.844098	-84.326924
DDA #16	37.849333	-84.330060
DDA #17	37.848607	-84.330353
DDA #18	37.847858	-84.329043
DDA #19	37.844983	-84.327211
DDA #20	37.844889	-84.327096
DDA #21	37.845030	-84.326911
DDA #22	37.844441	-84.327156
DDA #25	37.840200	-84.324849
DDA #26	37.839768	-84.325605
DDA #27	37.839664	-84.325604
DDA #28	37.838314	-84.324844
DDA #30	37.840358	-84.324559
DDA #35	37.843546	-84.322141
DDA #37	37.846004	-84.326383
DDA #39	37.846177	-84.327269
DDA #40	37.846809	-84.327771
DDA #41	37.847874	-84.328853
DDA #42	37.846631	-84.327432

Kentucky Transportation
 SITE: _____
 STREAM: _____
 COUNTY: _____
 STATE: _____
 NEAR: _____
 ITEM: _____
 SHEET: _____

DATE: 8/28/2018 10:58:58 AM
 USER: *****
 FILE NAME: s:\ssdesign\files\specifications\ss

SYP8162
08 JAN 2019

KENTUCKY TRANSPORTATION CABINET
COMMUNICATING ALL PROMISES (CAP)
ACTIVE

<u>Item No.</u>	7 - 8403			<u>Project Mgr.</u>	KYTC\STUART.GOOD PASTER
				<u>County</u>	MADISON
				<u>Route</u>	KY-627
<u>CAP #</u>	<u>Date of Promise</u>	<u>Promise made to:</u>	<u>Location of Promise</u>		
1	08-JAN-19	STUART GOODPASTER	PARCEL 7		
<u>CAP Description</u>					
Before starting work on the Project, the Contractor shall reach out to Jennifer Welch Moser, who is the General Partner of the Parwell Limited Partnership, at jwmoser@yahoo.com regarding the potential purchase, sale, transfer and/or use of fill dirt on the Project.					

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 2012* 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 PORTABLE CHANGEABLE MESSAGE SIGNS

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

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

2.0 MATERIALS.

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

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

2.2 Sign and Controls. All signs must:

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

- 12) Allow an on-off flashing sequence at an adjustable rate.
- 13) Provide a sight to aim the message.
- 14) Provide a LED display color of approximately 590 nm amber.
- 15) Provide a controller that is password protected.
- 16) Provide a security device that prevents unauthorized individuals from accessing the controller.
- 17) Provide the following 3-line messages preprogrammed and available for use when the sign unit begins operation:

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

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

2.3 Power.

- 1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide direct wiring for operation of the sign or arrow board from an external power source to provide energy backup for 21 days without sunlight and an on-board system charger with the ability to recharge completely discharged batteries in 24 hours.

3.0 CONSTRUCTION. Furnish and operate the variable message signs as designated on the plans or by the Engineer. Ensure the bottom of the message panel is a minimum of 7 feet above the roadway in urban areas and 5 feet above in rural areas when operating. Use Class I, II, or III signs on roads with a speed limit less than 55 mph. Use Class I or II signs on roads with speed limits 55 mph or greater.

Maintain the sign in proper working order, including repair of any damage done by others, until completion of the project. When the sign becomes inoperative, immediately repair or replace the sign. Repetitive problems with the same unit will be cause for rejection and replacement.

Use only project related messages and messages directed by the Engineer, unnecessary messages lessen the impact of the sign. Ensure the message is displayed in either one or 2 phases with each phase having no more than 3 lines of text. When no message is needed, but it is necessary to know if the sign is operable, flash only a pixel.

When the sign is not needed, move it outside the clear zone or where the Engineer directs. Variable Message Signs are the property of the Contractor and shall be removed from the project when no longer needed. The Department will not assume ownership of these signs.

4.0 MEASUREMENT. The final quantity of Variable Message Sign will be

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the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

5.0 PAYMENT. The Department will pay for the Variable Message Signs at the unit price each. The Department will not pay for signs replaced due to damage or rejection. Payment is full compensation for furnishing all materials, labor, equipment, and service necessary to, operate, move, repair, and maintain or replace the variable message signs. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

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.

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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 TURF REINFORCING MAT

1.0 DESCRIPTION. Install turf reinforcement mat at locations specified in the Contract or as the Engineer directs. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

2.0 MATERIALS.

2.1 Turf Reinforcement Mat (TRM). Use a Turf Reinforcement Mat defined as permanent rolled erosion control product composed of non-degradable synthetic fibers, filaments, nets, wire mesh and/or other elements, processed into a three-dimensional matrix of sufficient thickness and from the Department's List of Approved Materials. Mats must be 100% UV stabilized materials. For TRMs containing degradable components, all physical property values must be obtained on the non-degradable portion of the matting exclusively. Ensure product labels clearly show the manufacturer or supplier name, style name, and roll number. Ensure labeling, shipment and storage follows ASTM D-4873. The Department will require manufacturer to provide TRMs that are machine constructed web of mechanically or melt bonded nondegradable fibers entangled to form a three dimensional matrix. The Department will require all long term performance property values in table below to be based on non degradable portion of the matting alone. Approved methods include polymer welding, thermal or polymer fusion, or placement of fibers between two high strength biaxially oriented nets mechanically bound by parallel stitching with polyolefin thread. Ensure that mats designated in the plans as Type 4 mats, are not to be manufactured from discontinuous or loosely held together by stitching or glued netting or composites. Type 4 mats shall be composed of geosynthetic matrix that exhibits a very high interlock and reinforcement capacities with both soil and root systems and with high tensile modulus. The Department will require manufacturer to use materials chemically and biologically inert to the natural soil environments conditions. Ensure the blanket is smolder resistant without the use of chemical additives. When stored, maintain the protective wrapping and elevate the mats off the ground to protect them from damage. The Department will not specify these materials for use in heavily acidic coal seam areas or other areas with soil problems that would severally limit vegetation growth.

- A) Dimensions. Ensure TRMs are furnished in strips with a minimum width of 4 feet and length of 50 feet.
- B) Weight. Ensure that all mat types have a minimum mass per unit area of 7 ounces per square yard according to ASTM D 6566.
- C) Performance Testing: The Department will require AASHTO's NTPEP index testing. The Department will also require the manufacturer to perform internal MARV testing at a Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP) accredited laboratory for tensile strength, tensile elongation, mass per unit area, and thickness once every 24,000 yds of production or whatever rate is required to ensure 97.7% confidence under ASTM D4439& 4354. The Department will require Full scale testing for slope and channel applications shear stress shall be done under ASTM D 6459, ASTM D 6460-07 procedures.

2.2 Classifications

The basis for selection of the type of mat required will be based on the long term shear stress level of the mat of the channel in question or the degree of slope to protect and will be designated in the contract. The Type 4 mats are to be used at structural backfills protecting critical

structures, utility cuts, areas where vehicles may be expected to traverse the mat, channels with large heavy drift, and where higher factors of safety, very steep slopes and/or durability concerns are needed as determined by project team and designer and will be specified in the plans by designer.

Turf Reinforcement Matting					
Properties ¹	Type 1	Type 2	Type 3	Type 4	Test Method
Minimum tensile Strength lbs/ft	125	150	175	3000 by 1500	ASTM D6818 ²
UV stability (minimum % tensile retention)	80	80	80	90	ASTM D4355 ³ (1000-hr exposure)
Minimum thickness (inches)	0.25	0.25	0.25	0.40	ASTM D6525
Slopes applications	2H:1V or flatter	1.5H:1V or flatter	1H:1V or flatter	1 H: 1V or greater	
Shear stress lbs/ft ² Channel applications	6.0 ⁴	8.0 ⁴	10.0 ⁴	12.0 ⁴	ASTM D6459 ASTM D6460-07

¹ For TRMs containing degradable components, all physical property values must be obtained on the non-degradable portion of the matting alone.

²Minimum Average Roll Values for tensile strength of sample material machine direction.

³Tensile Strength percentage retained after stated 1000 hr duration of exposure under ASTM D4355 testing. Based on nondegradable components exclusively.

⁴Maximum permissible shear design values based on short-term (0.5 hr) vegetated data obtained by full scale flume testing ASTM D6459, D6460-07. Based on nondegradable components exclusively. Testing will be done at Independent Hydraulics Facility such as Colorado State University hydraulics laboratory, Utah State University hydraulics laboratory, Texas Transportation Institute (TTI) hydraulics and erosion control laboratory.

2.3 Quality Assurance Sampling, Testing, and Acceptance

- A) Provide TRM listed on the Department’s List of Approved Materials. Prior to inclusion on the LAM, the manufacturer of TRM must meet the physical and performance criteria as outlined in the specification and submit a Letter Certifying compliance of the product under the above ASTM testing procedures and including a copy of report from Full Scale Independent Hydraulics Facility that Fully Vegetated Shear Stress meets shear stress requirements tested under D6459 and D6460-07.
- B) Contractors will provide a Letter of Certification from Manufacturer stating the product name, manufacturer, and that the product MARV product unit testing results meets Department criteria. Provide Letters once per project and for each product.
- C) Acceptance shall be in accordance with ASTM D-4759 based on testing performed by a Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP) accredited laboratory using Procedure A of ASTM D-4354.

Current mats meeting the above criteria are shown on the Department's List of Approved Materials.

2.4 Fasteners. When the mat manufacturer does not specify a specific fastener, use steel wire U-shaped staples with a minimum diameter of 0.09 inches (11 gauge), a minimum width of one inch and a minimum length of 12 inches. Use a heavier gauge when working in rocky or clay soils and longer lengths in sandy soils as directed by Engineer or Manufacturer's Representative. Provide staples with colored tops when requested by the Engineer.

3.0 CONSTRUCTION. When requested by the Engineer, provide a Manufacturer's Representative on-site to oversee and approve the initial installation of the mat. When requested by the Engineer, provide a letter from the Manufacturer approving the installation. When there is a conflict between the Department's criteria and the Manufacturer's criteria, construct using the more restrictive. The Engineer and Manufacturer's Representative must approve all alternate installation methods prior to execution. Construct according to the Manufacturer's recommendations and the following as minimum installation technique:

3.1 Site Preparation. Grade areas to be treated with matting and compact. Remove large rocks, soil clods, vegetation, roots, and other sharp objects that could keep the mat from intimate contact with subgrade. Prepare seedbed by loosening the top 2 to 3 inch of soil.

3.2 Installation. Install mats according to Standard Drawing Sepias "Turf Mat Channel Installation" and "Turf Mat Slope Installation." Install mats at the specified elevation and alignment. Anchor the mats with staples with a minimum length of 12 inches. Use longer anchors for installations in sandy, loose, or wet soils as directed by the Engineer or Manufacturer's Representative. The mat should be in direct contact with the soil surface.

4.0 MEASUREMENT. The Department will measure the quantity of Turf Reinforcement Mat by the square yard of surface covered. The Department will not measure preparation of the bed, providing a Manufacturer's Representative, topsoil, or seeding for payment and will consider them incidental to the Turf Reinforcement Mat. The Department will not measure any reworking of slopes or channels for payment as it is considered corrective work and incidental to the Turf Reinforcement Mat. Seeding and protection will be an incidental item.

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>
23274EN11F	Turf Reinforcement Mat 1	Square Yard
23275EN11F	Turf Reinforcement Mat 2	Square Yard
23276EN11F	Turf Reinforcement Mat 3	Square Yard
23277EN11F	Turf Reinforcement Mat 4	Square Yard

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 2012 Standard Specifications for Road and Bridge Construction.

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:

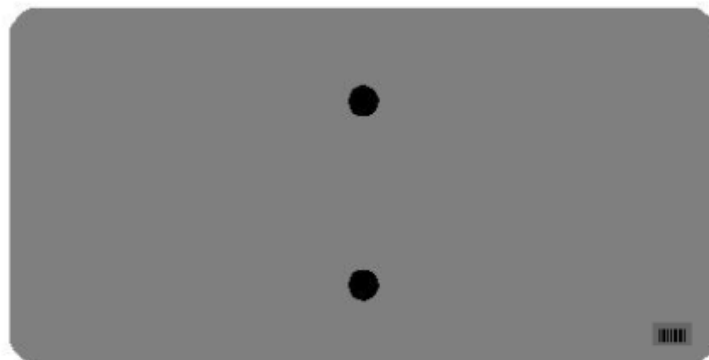
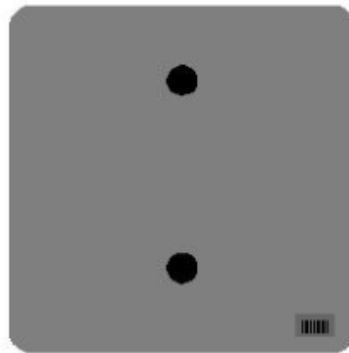
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24631EC	Barcode Sign Inventory	Each

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.

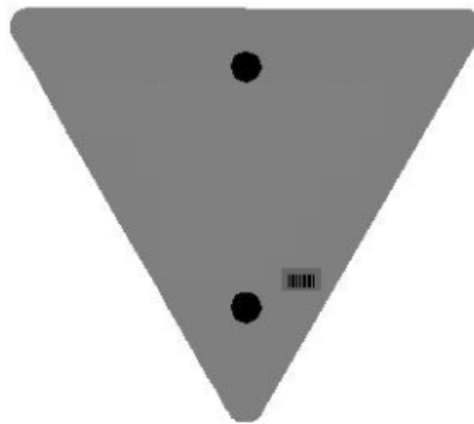
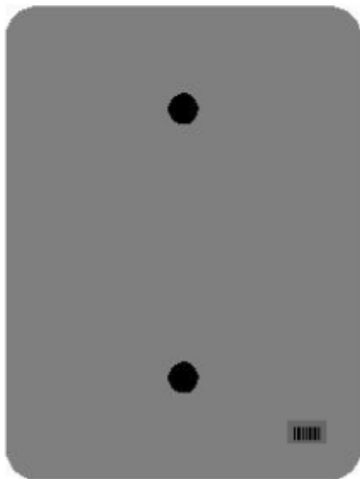
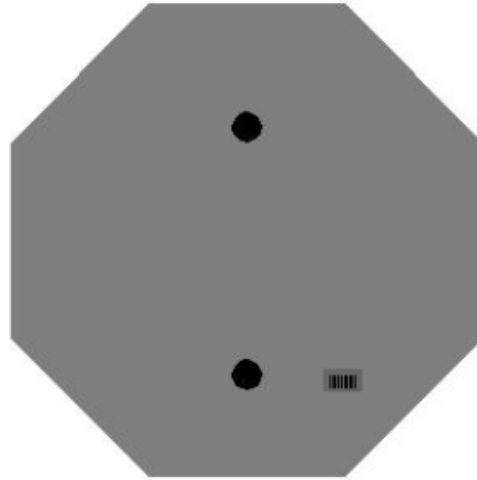
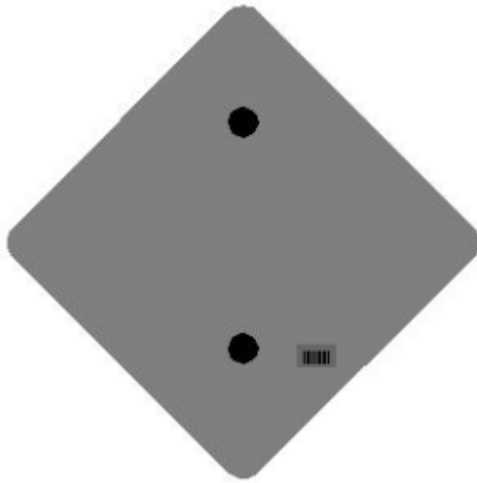
One Sign Post



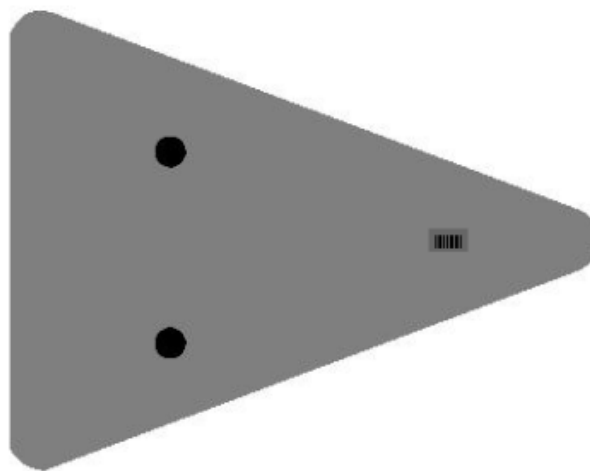
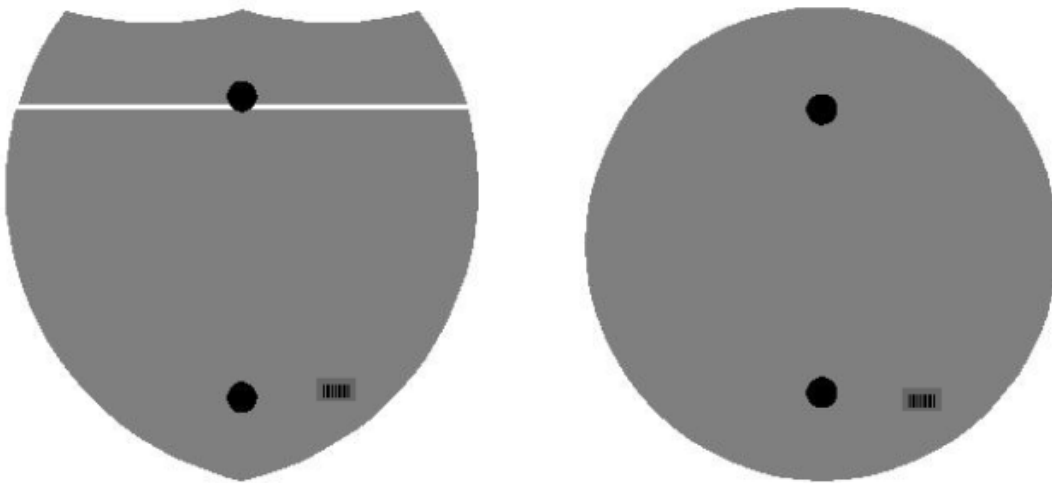
↑
2" Wide Post



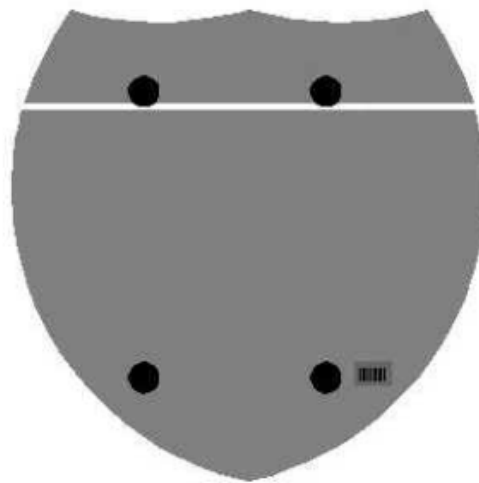
One Sign Post



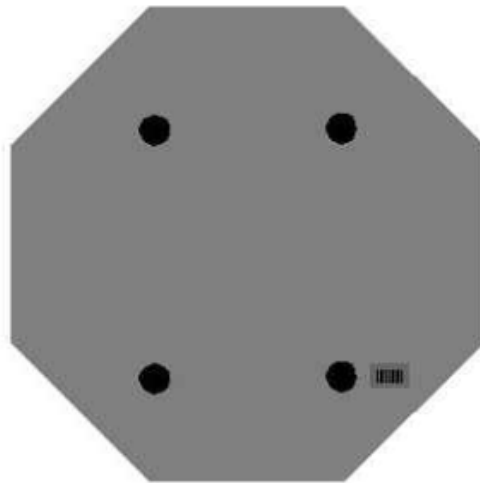
One Sign Post



Double Sign Post



Interstate
Shield

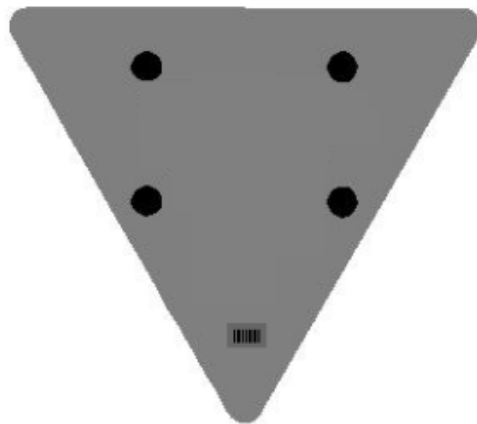


48" Stop

2 Post Signs



↑
2" Wide Post



SPECIAL NOTE FOR LONGITUDINAL PAVEMENT JOINT ADHESIVE

1. DESCRIPTION. This specification covers the requirements and practices for applying an asphalt adhesive material to the longitudinal joint of the surface course of an asphalt pavement. Apply the adhesive to the face of longitudinal joint between driving lanes for the first lane paved. Then, place and compact the adjacent lane against the treated face to produce a strong, durable, waterproof longitudinal joint.
2. MATERIALS, EQUIPMENT, AND PERSONNEL.

2.1 Joint Adhesive. Provide material conforming to Subsection 2.1.1.

2.1.1 Provide an adhesive conforming to the following requirements:

Property	Specification	Test Procedure
Viscosity, 400 ° F (Pa·s)	4.0 – 10.0	ASTM D 4402
Cone Penetration, 77 ° F	60 – 100	ASTM D 5329
Flow, 140 ° F (mm)	5.0 max.	ASTM D 5329
Resilience, 77 ° F (%)	30 min.	ASTM D 5329
Ductility, 77 ° F (cm)	30.0 min.	ASTM D 113
Ductility, 39 ° F (cm)	30.0 min.	ASTM D 113
Tensile Adhesion, 77 ° F (%)	500 min.	ASTM D 5329, Type II
Softening Point, ° F	171 min.	AASHTO T 53
Asphalt Compatibility	Pass	ASTM D 5329

Ensure the temperature of the pavement joint adhesive is between 380 and 410 °F when the material is extruded in a 0.125-inch-thick band over the entire face of the longitudinal joint.

2.2. Equipment.

2.2.1 Melter Kettle. Provide an oil-jacketed, double-boiler, melter kettle equipped with any needed agitation and recirculating systems.

2.2.2 Applicator System. Provide a pressure-feed-wand applicator system with an applicator shoe attached.

2.3 Personnel. Ensure a technical representative from the manufacturer of the pavement joint adhesive is present during the initial construction activities and available upon the request of the Engineer.

3. CONSTRUCTION.

3.1 Surface Preparation. Prior to the application of the pavement joint adhesive, ensure the face of the longitudinal joint is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the joint face by the use of compressed air.

Ensure this preparation process occurs shortly before application to prevent the return of debris on the joint face.

3.2 Pavement Joint Adhesive Application. Ensure the ambient temperature is a minimum of 40 ° F during the application of the pavement joint adhesive. Prior to applying the adhesive, demonstrate competence in applying the adhesive according to this note to the satisfaction of the Engineer. Heat the adhesive in the melter kettle to the specified temperature range. Pump the adhesive from the melter kettle through the wand onto the vertical face of the cold joint. Apply the adhesive in a continuous band over the entire face of the longitudinal joint. Do not use excessive material in either thickness or location. Ensure the edge of the extruded adhesive material is flush with the surface of the pavement. Then, place and compact the adjacent lane against the joint face. Remove any excessive material extruded from the joint after compaction (a small line of material may remain).

3.3 Pavement Joint Adhesive Certification. Furnish the joint adhesive's certification to the Engineer stating the material conforms to all requirements herein prior to use.

3.4 Sampling and Testing. The Department will require a random sample of pavement joint adhesive from each manufacturer's lot of material. Extrude two 5 lb. samples of the heated material and forward the sample to the Division of Materials for testing. Reynolds oven bags, turkey size, placed inside small cardboard boxes or cement cylinder molds have been found suitable. Ensure the product temperature is 400°F or below at the time of sampling.

4. MEASUREMENT. The Department will measure the quantity of Pavement Joint Adhesive in linear feet. The Department will not measure for payment any extra materials, labor, methods, equipment, or construction techniques used to satisfy the requirements of this note. The Department will not measure for payment any trial applications of Pavement Joint Adhesive, the cleaning of the joint face, or furnishing and placing the adhesive. The Department will consider all such items incidental to the Pavement Joint Adhesive.
5. PAYMENT. The Department will pay for the Pavement Joint Adhesive at the Contract unit bid price and apply an adjustment for each manufacturer's lot of material based on the degree of compliance as defined in the following schedule. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

Pavement Joint Adhesive Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Joint Adhesive Referenced in Subsection 2.1.1						
Viscosity, 400 ° F (Pa•s) ASTM D 3236	4.0-10.0	3.5-10.5	3.0-3.4 10.6-11.0	2.5-2.9 11.1-11.5	2.0-2.4 11.6-12.0	≤1.9 ≥ 12.1
Cone Penetration, 77 ° F ASTM D 5329	60-100	57-103	54-56 104-106	51-53 107-109	48-50 110-112	≤ 47 ≥ 113
Flow, 140 ° F (mm) ASTM D 5329	≤ 5.0	≤ 5.5	5.6-6.0	6.1-6.5	6.6-7.0	≥ 7.1
Resilience, 77 ° F (%) ASTM D 5329	≥ 30	≥ 28	26-27	24-25	22-23	≤ 21
Tensile Adhesion, 77 ° F (%) ASTM D 5329	≥ 500	≥ 490	480-489	470-479	460-469	≤ 459
Softening Point, ° F AASHTO T 53	≥ 171	≥ 169	166-168	163-165	160-162	≤ 159
Ductility, 77 ° F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9
Ductility, 39 ° F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9

Code
20071EC

Pay Item
Joint Adhesive

Pay Unit
Linear Foot

May 7, 2014

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

ATTACHMENTS

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

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).

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.

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.

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).

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.

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.

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.

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 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.

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.

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.

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.

Revised: January 27, 2017

General Decision Number: KY190038 01/04/2019 KY38

Superseded General Decision Number: KY20180100

State: Kentucky

Construction Type: Highway

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

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

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

BRIN0004-003 06/01/2017

BRECKENRIDGE COUNTY

Rates	Fringes
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BRICKLAYER.....\$ 26.80 12.38

BRKY0001-005 06/01/2017

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

Rates Fringes

BRICKLAYER.....\$ 26.80 12.38

BRKY0002-006 06/01/2017

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

Rates Fringes

BRICKLAYER.....\$ 27.81 13.01

BRKY0007-004 06/01/2017

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

Rates Fringes

BRICKLAYER.....\$ 32.98 19.02

BRKY0017-004 06/01/2017

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

Rates Fringes

BRICKLAYER.....\$ 26.47 12.76

CARP0064-001 05/01/2015

Rates Fringes

CARPENTER.....\$ 27.50 16.06
Diver.....\$ 41.63 16.06
PILEDRIVERMAN.....\$ 27.75 16.06

ELEC0212-008 06/04/2018

BRACKEN, GALLATIN and GRANT COUNTIES

Rates Fringes

ELECTRICIAN.....\$ 28.39 18.98

ELEC0212-014 11/27/2017

BRACKEN, GALLATIN & GRANT COUNTIES:

	Rates	Fringes
Sound & Communication Technician.....	\$ 23.55	11.26

 ELEC0317-012 06/01/2018

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

	Rates	Fringes
ELECTRICIAN (Wiremen) Cable Splicer.....	\$ 32.68	18.13
Electrician.....	\$ 33.75	20.03

 ELEC0369-007 05/30/2018

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

	Rates	Fringes
ELECTRICIAN.....	\$ 31.66	17.01

 ELEC0575-002 05/28/2018

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 32.45	16.43

 ENGI0181-018 07/01/2017

	Rates	Fringes
POWER EQUIPMENT OPERATOR GROUP 1.....	\$ 31.95	15.15
GROUP 2.....	\$ 29.09	15.15
GROUP 3.....	\$ 29.54	15.15
GROUP 4.....	\$ 28.77	15.15

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller;
 Batcher Plant; Bituminous Paver; Bituminous Transfer
 Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All
 Scoop; Carry Deck Crane; Central Compressor Plant; Cherry
 Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over);
 Concrete Paver; Truck-Mounted Concrete Pump; Core Drill;
 Crane; Crusher Plant; Derrick; Derrick Boat; Ditching &
 Trenching Machine; Dragline; Dredge Operator; Dredge
 Engineer; Elevating Grader & Loaders; Grade-All; Gurries;
 Heavy Equipment Robotics Operator/Mechanic; High Lift;
 Hoe-Type Machine; Hoist (Two or More Drums); Hoisting

Engine (Two or More Drums); Horizontal Directional Drill Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau; Locomotive; Mechanic; Mechanically Operated Laser Screed; Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete; Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment

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

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

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

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

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

IRON0044-009 06/01/2018

BRACKEN, GALLATIN, GRANT, HARRISON, ROBERTSON,
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);

MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);
 NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);
 OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);
 SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall)

	Rates	Fringes
IRONWORKER		
Fence Erector.....	\$ 26.76	21.20
Structural.....	\$ 28.17	21.20

 IRON0070-006 06/01/2018

ANDERSON, BOYLE, BRECKINRIDGE, BULLITT, FAYETTE, FRANKLIN, GRAYSON, HARDIN, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE, WASHINGTON & WOODFORD
 BOURBON (Southern two-thirds, including Townships of Austerlity, Centerville, Clintonville, Elizabeth, Hutchison, Littlerock, North Middletown & Paris);
 CARROLL (Western two-thirds, including Townships of Carrollton, Easterday, English, Locust, Louis, Prestonville & Worthville);
 CLARK (Western two-thirds, including Townships of Becknerville, Flanagan, Ford, Pine Grove, Winchester & Wyandotte);
 OWEN (Eastern eighth, including Townships of Glenmary, Gratz, Monterey, Perry Park & Tacketts Mill);
 SCOTT (Southern third, including Townships of Georgetown, Great Crossing, Newtown, Stampling Ground & Woodlake);

	Rates	Fringes
IRONWORKER.....	\$ 28.79	22.50

 IRON0769-007 06/01/2018

BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN
 CLARK (Eastern third, including townships of Bloomingdale, Hunt, Indian Fields, Kiddville, Loglick, Rightangele & Thomson);
 FLEMING (Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksville, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
 MASON (Eastern third, including Townships of Helena, Marshall, Orangeburg, Plumville & Springdale);
 NICHOLAS (Eastern eighth, including the Township of Moorefield Sprout)

Rates Fringes

IRONWORKER

ZONE 1.....	\$ 31.67	25.27
ZONE 2.....	\$ 31.67	25.27
ZONE 3.....	\$ 31.67	25.27

ZONE 1 - (no base rate increase) Up to 10 mile radius of Union Hall, 1643 Greenup Ave, Ashland, KY.

ZONE 2 - (add \$0.40 per hour to base rate) 10 to 50 mile radius of Union Hall, 1643 Greenup Ave, Ashland, KY.

ZONE 3 - (add \$2.00 per hour to base rate) 50 mile radius & over of Union Hall, 1643 Greenup Ave, Ashland, KY.

LABO0189-003 07/01/2018

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

Rates Fringes

Laborers:

GROUP 1.....	\$ 23.07	14.21
GROUP 2.....	\$ 23.32	14.21
GROUP 3.....	\$ 23.37	14.21
GROUP 4.....	\$ 23.97	14.21

LABORERS CLASSIFICATIONS

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

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

Vibrator Operator; Wagon Driller

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

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

LAB00189-008 07/01/2018

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

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 23.07	14.21
GROUP 2.....	\$ 23.32	14.21
GROUP 3.....	\$ 23.37	14.21
GROUP 4.....	\$ 23.97	14.21

LABORERS CLASSIFICATIONS

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

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

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman;
Gunnite Operator & Mixer; Grout Pump Operator; Side Rail

Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

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

LABO0189-009 07/01/2018

BRECKINRIDGE & GRAYSON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 23.07	14.21
GROUP 2.....	\$ 23.32	14.21
GROUP 3.....	\$ 23.37	14.21
GROUP 4.....	\$ 23.97	14.21

LABORERS CLASSIFICATIONS

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

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

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

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

Boring; Air Track Drillers (All Types); Powdermen &
 Blasters; Troxler & Concrete Tester if Laborer is Utilized

 PAIN0012-005 06/11/2005

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

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

 PAIN0012-017 05/01/2015

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

	Rates	Fringes
PAINTER (Heavy & Highway Bridges - Guardrails - Lightpoles - Striping)		
Bridge Equipment Tender and Containment Builder.....	\$ 20.73	9.06
Brush & Roller.....	\$ 23.39	9.06
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement.....	\$ 24.39	9.06
Sandblasting & Water Blasting.....	\$ 24.14	9.06
Spray.....	\$ 23.89	9.06

 PAIN0118-004 06/01/2018

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

	Rates	Fringes
PAINTER		
Brush & Roller.....	\$ 22.00	12.52
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning.....	\$ 23.00	12.52

 * PAIN1072-003 12/01/2018

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS and ROWAN COUNTIES

	Rates	Fringes
Painters:		
Bridges; Locks; Dams; Tension Towers & Energized Substations.....	\$ 33.33	18.50
Power Generating Facilities.	\$ 30.09	18.50

 PLUM0248-003 06/01/2018

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

	Rates	Fringes
Plumber and Steamfitter.....	\$ 36.00	20.23

 PLUM0392-007 06/01/2018

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

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 32.01	19.67

 PLUM0502-003 08/01/2018

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

	Rates	Fringes
PLUMBER.....	\$ 34.62	20.78

 SUKY2010-160 10/08/2001

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

TRUCK DRIVER CLASSIFICATIONS

- GROUP 1 - Mobile Batch Truck Tender
- GROUP 2 - Greaser; Tire Changer; & Mechanic Tender
- GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Distributor; Mixer; & Truck Mechanic

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

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 after an employee works eight (8) hours a day or forty (40) hours a week, whichever gives the employee the greater wages. At least time and one-half the base rate is required for all overtime. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. Wage violations or questions should be directed to the designated Engineer or the undersigned.

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 Madison County.

PROPOSAL BID ITEMS

191009

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Report Date 1/28/19

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00003		CRUSHED STONE BASE	29,366.00	TON		\$	
0020	00008		CEMENT STABILIZED ROADBED	41,475.00	SQYD		\$	
0030	00020		TRAFFIC BOUND BASE	29.00	TON		\$	
0040	00071		CRUSHED AGGREGATE SIZE NO 57	500.00	TON		\$	
0050	00100		ASPHALT SEAL AGGREGATE	188.00	TON		\$	
0060	00103		ASPHALT SEAL COAT	23.00	TON		\$	
0070	00190		LEVELING & WEDGING PG64-22	248.00	TON		\$	
0080	00212		CL2 ASPH BASE 1.00D PG64-22	3,160.00	TON		\$	
0090	00214		CL3 ASPH BASE 1.00D PG64-22	7,897.00	TON		\$	
0100	00301		CL2 ASPH SURF 0.38D PG64-22	897.00	TON		\$	
0110	00358		ASPHALT CURING SEAL	33.00	TON		\$	
0120	00388		CL3 ASPH SURF 0.38B PG64-22	2,512.00	TON		\$	
0130	02071		JPC PAVEMENT-11 IN	33,189.00	SQYD		\$	
0140	02542		CEMENT	807.00	TON		\$	
0150	02677		ASPHALT PAVE MILLING & TEXTURING	668.00	TON		\$	
0160	02702		SAND FOR BLOTTER	321.00	TON		\$	
0170	20071EC		JOINT ADHESIVE	26,880.00	LF		\$	
0180	21289ED		LONGITUDINAL EDGE KEY	14,420.00	LF		\$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0190	00078		CRUSHED AGGREGATE SIZE NO 2	5,011.00	TON		\$	
0200	01000		PERFORATED PIPE-4 IN	567.00	LF		\$	
0210	01010		NON-PERFORATED PIPE-4 IN	269.00	LF		\$	
0220	01020		PERF PIPE HEADWALL TY 1-4 IN	3.00	EACH		\$	
0230	01028		PERF PIPE HEADWALL TY 3-4 IN	8.00	EACH		\$	
0240	01811		STANDARD CURB AND GUTTER MOD	438.00	LF		\$	
0250	01830		STANDARD INTEGRAL CURB	1,454.00	LF		\$	
0260	01845		ISLAND INTEGRAL CURB	449.00	LF		\$	
0270	01875		STANDARD HEADER CURB	251.00	LF		\$	
0280	01915		STANDARD BARRIER MEDIAN TYPE 1	120.00	SQYD		\$	
0290	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	38.00	EACH		\$	
0300	01983		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	33.00	EACH		\$	
0310	01985		DELINEATOR FOR BARRIER - YELLOW	8.00	EACH		\$	
0320	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	75.00	EACH		\$	
0330	02014		BARRICADE-TYPE III	20.00	EACH		\$	
0340	02091		REMOVE PAVEMENT	2,061.00	SQYD		\$	
0350	02159		TEMP DITCH	8,895.00	LF		\$	
0360	02230		EMBANKMENT IN PLACE	133,723.00	CUYD		\$	
0370	02242		WATER	700.00	MGAL		\$	
0380	02261		FENCE-WOVEN WIRE	4,039.00	LF		\$	
0390	02351		GUARDRAIL-STEEL W BEAM-S FACE	9,050.00	LF		\$	
0400	02360		GUARDRAIL TERMINAL SECTION NO 1	11.00	EACH		\$	

PROPOSAL BID ITEMS

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0410	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	4.00	EACH		\$	
0420	02367		GUARDRAIL END TREATMENT TYPE 1	15.00	EACH		\$	
0430	02369		GUARDRAIL END TREATMENT TYPE 2A	9.00	EACH		\$	
0440	02381		REMOVE GUARDRAIL	6,464.00	LF		\$	
0450	02397		TEMP GUARDRAIL	1,437.50	LF		\$	
0460	02429		RIGHT-OF-WAY MONUMENT TYPE 1	71.00	EACH		\$	
0470	02432		WITNESS POST	3.00	EACH		\$	
0480	02545		CLEARING AND GRUBBING ACRES	1.00	LS		\$	
0490	02562		TEMPORARY SIGNS	910.00	SQFT		\$	
0500	02585		EDGE KEY	283.00	LF		\$	
0510	02596		FABRIC-GEOTEXTILE TYPE I	15,000.00	SQYD		\$	
0520	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0530	02654		TRUCK MOUNTED ATTENUATOR	1.00	EACH		\$	
0540	02671		PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH		\$	
0550	02690		SAFELOADING	10.00	CUYD		\$	
0560	02701		TEMP SILT FENCE	8,894.00	LF		\$	
0570	02703		SILT TRAP TYPE A	58.00	EACH		\$	
0580	02704		SILT TRAP TYPE B	58.00	EACH		\$	
0590	02705		SILT TRAP TYPE C	58.00	EACH		\$	
0600	02706		CLEAN SILT TRAP TYPE A	58.00	EACH		\$	
0610	02707		CLEAN SILT TRAP TYPE B	58.00	EACH		\$	
0620	02708		CLEAN SILT TRAP TYPE C	58.00	EACH		\$	
0630	02726		STAKING	1.00	LS		\$	
0640	02731		REMOVE STRUCTURE KY 627 OVER I-75	1.00	LS		\$	
0650	02775		ARROW PANEL	4.00	EACH		\$	
0660	03145		CONC MEDIAN BARRIER TYPE 9C2	372.00	LF		\$	
0670	03171		CONCRETE BARRIER WALL TYPE 9T	9,550.00	LF		\$	
0680	04953		TEMP RELOCATION OF SIGNAL HEAD	4.00	EACH		\$	
0690	05950		EROSION CONTROL BLANKET	9,935.00	SQYD		\$	
0700	05952		TEMP MULCH	222,842.00	SQYD		\$	
0710	05953		TEMP SEEDING AND PROTECTION	140,360.00	SQYD		\$	
0720	05963		INITIAL FERTILIZER	12.00	TON		\$	
0730	05964		MAINTENANCE FERTILIZER	12.00	TON		\$	
0740	05985		SEEDING AND PROTECTION	222,842.00	SQYD		\$	
0750	05990		SODDING	1,000.00	SQYD		\$	
0760	05992		AGRICULTURAL LIMESTONE	145.00	TON		\$	
0770	06401		FLEXIBLE DELINEATOR POST-M/W	141.00	EACH		\$	
0780	06403		FLEXIBLE DELINEATOR POST-B/W	78.00	EACH		\$	
0790	06404		FLEXIBLE DELINEATOR POST-M/Y	27.00	EACH		\$	
0800	06510		PAVE STRIPING-TEMP PAINT-4 IN	27,000.00	LF		\$	
0810	06511		PAVE STRIPING-TEMP PAINT-6 IN	46,000.00	LF		\$	
0820	06514		PAVE STRIPING-PERM PAINT-4 IN	37,887.00	LF		\$	
0830	06515		PAVE STRIPING-PERM PAINT-6 IN	38,924.00	LF		\$	
0840	06517		PAVE STRIPING-PERM PAINT-12 IN	3,387.00	LF		\$	
0850	06568		PAVE MARKING-THERMO STOP BAR-24IN	406.00	LF		\$	
0860	06570		PAVE MARKING-PAINT CROSS-HATCH	6,820.00	SQFT		\$	
0870	06572		PAVE MARKING-DOTTED LANE EXTEN	2,677.00	LF		\$	

PROPOSAL BID ITEMS

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0880	06574		PAVE MARKING-THERMO CURV ARROW	53.00	EACH		\$	
0890	06575		PAVE MARKING-THERMO COMB ARROW	9.00	EACH		\$	
0900	06576		PAVE MARKING-THERMO ONLY	5.00	EACH		\$	
0910	06578		PAVE MARKING-THERMO MERGE ARROW	4.00	EACH		\$	
0920	06588		PAVEMENT MARKER TY IVA-BY TEMP	320.00	EACH		\$	
0930	08100		CONCRETE-CLASS A	17.20	CUYD		\$	
0940	08150		STEEL REINFORCEMENT	214.00	LB		\$	
0950	08903		CRASH CUSHION TY VI CLASS BT TL3	10.00	EACH		\$	
0960	10020NS		FUEL ADJUSTMENT	28,700.00	DOLL	\$1.00	\$	\$28,700.00
0970	10030NS		ASPHALT ADJUSTMENT	26,000.00	DOLL	\$1.00	\$	\$26,000.00
0980	20362ES403		SHOULDER RUMBLE STRIPS-SAWED	20,896.00	LF		\$	
0990	20430ED		SAW CUT	680.00	LF		\$	
1000	23274EN11F		TURF REINFORCEMENT MAT 1	11,257.00	SQYD		\$	
1010	23877EC		CONC MEDIAN BARRIER WALL TY 14C	67.00	LF		\$	
1020	24489EC		INLAID PAVEMENT MARKER	1,330.00	EACH		\$	
1030	24668EC		STEEL ENCASEMENT PIPE 16 IN	213.00	LF		\$	
1040	24814EC		PIPELINE INSPECTION	1,000.00	LF		\$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1050	00440		ENTRANCE PIPE-15 IN	241.00	LF		\$	
1060	00441		ENTRANCE PIPE-18 IN	172.00	LF		\$	
1070	00443		ENTRANCE PIPE-24 IN	74.00	LF		\$	
1080	00462		CULVERT PIPE-18 IN	435.00	LF		\$	
1090	00464		CULVERT PIPE-24 IN	226.00	LF		\$	
1100	00466		CULVERT PIPE-30 IN	203.00	LF		\$	
1110	00469		CULVERT PIPE-42 IN	125.00	LF		\$	
1120	00521		STORM SEWER PIPE-15 IN	94.00	LF		\$	
1130	00522		STORM SEWER PIPE-18 IN	230.00	LF		\$	
1140	00524		STORM SEWER PIPE-24 IN	100.00	LF		\$	
1150	00526		STORM SEWER PIPE-30 IN	50.00	LF		\$	
1160	00528		STORM SEWER PIPE-36 IN	451.00	LF		\$	
1170	00529		STORM SEWER PIPE-42 IN	40.00	LF		\$	
1180	00530		STORM SEWER PIPE-48 IN	36.00	LF		\$	
1190	01204		PIPE CULVERT HEADWALL-18 IN	3.00	EACH		\$	
1200	01208		PIPE CULVERT HEADWALL-24 IN	3.00	EACH		\$	
1210	01210		PIPE CULVERT HEADWALL-30 IN	4.00	EACH		\$	
1220	01212		PIPE CULVERT HEADWALL-36 IN	2.00	EACH		\$	
1230	01214		PIPE CULVERT HEADWALL-42 IN	3.00	EACH		\$	
1240	01433		SLOPED BOX OUTLET TYPE 1-18 IN	4.00	EACH		\$	
1250	01434		SLOPED BOX OUTLET TYPE 1-24 IN	1.00	EACH		\$	
1260	01450		S & F BOX INLET-OUTLET-18 IN	6.00	EACH		\$	
1270	01451		S & F BOX INLET-OUTLET-24 IN	6.00	EACH		\$	
1280	01452		S & F BOX INLET-OUTLET-30 IN	1.00	EACH		\$	
1290	01456		CURB BOX INLET TYPE A	4.00	EACH		\$	
1300	01490		DROP BOX INLET TYPE 1	6.00	EACH		\$	
1310	01643		JUNCTION BOX-24 IN	4.00	EACH		\$	

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1320	01645		JUNCTION BOX-36 IN	2.00	EACH		\$	
1330	01646		JUNCTION BOX-42 IN	1.00	EACH		\$	
1340	01691		FLUME INLET TYPE 2	4.00	EACH		\$	
1350	01767		MANHOLE TYPE C	5.00	EACH		\$	
1360	02477		CAP CATCH BASIN	1.00	SQYD		\$	
1370	02483		CHANNEL LINING CLASS II	25.00	TON		\$	
1380	02484		CHANNEL LINING CLASS III	670.00	TON		\$	
1390	02600		FABRIC GEOTEXTILE TY IV FOR PIPE	4,022.00	SQYD	\$2.00	\$	\$8,044.00
1400	20211ES706		BORE & JACK PIPE	94.00	LF		\$	

Section: 0004 - BRIDGE- 26899

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1410	02231		STRUCTURE GRANULAR BACKFILL	460.00	CUYD		\$	
1420	02998		MASONRY COATING	1,435.00	SQYD		\$	
1430	03299		ARMORED EDGE FOR CONCRETE	179.60	LF		\$	
1440	08001		STRUCTURE EXCAVATION-COMMON	380.00	CUYD		\$	
1450	08016		REINF CONC SLOPE WALL-6 IN	1,050.00	SQYD		\$	
1460	08033		TEST PILES	218.00	LF		\$	
1470	08039		PRE-DRILLING FOR PILES	611.00	LF		\$	
1480	08046		PILES-STEEL HP12X53	2,980.00	LF		\$	
1490	08094		PILE POINTS-12 IN	106.00	EACH		\$	
1500	08100		CONCRETE-CLASS A	349.20	CUYD		\$	
1510	08104		CONCRETE-CLASS AA	764.80	CUYD		\$	
1520	08135		MECHANICAL REINF COUPLER #10	16.00	EACH		\$	
1530	08150		STEEL REINFORCEMENT	69,862.00	LB		\$	
1540	08151		STEEL REINFORCEMENT-EPOXY COATED	313,759.00	LB		\$	
1550	08635		PRECAST PC I BEAM TYPE 6	2,446.70	LF		\$	
1560	21532ED		RAIL SYSTEM TYPE III	494.10	LF		\$	

Section: 0005 - BRIDGE-26910

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1570	02403		REMOVE CONCRETE MASONRY	9.00	CUYD		\$	
1580	08003		FOUNDATION PREPARATION	1.00	LS		\$	
1590	08100		CONCRETE-CLASS A	21.60	CUYD		\$	
1600	08150		STEEL REINFORCEMENT	1,886.00	LB		\$	

Section: 0006 - BRIDGE-26911

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1610	02403		REMOVE CONCRETE MASONRY	14.00	CUYD		\$	
1620	08003		FOUNDATION PREPARATION	1.00	LS		\$	
1630	08100		CONCRETE-CLASS A	54.20	CUYD		\$	
1640	08150		STEEL REINFORCEMENT	4,833.00	LB		\$	

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Section: 0007 - SEWER

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1650	01787		REMOVE MANHOLE	8.00	EACH		\$	
1660	01810		STANDARD CURB AND GUTTER	18.00	LF		\$	
1670	01812		REMOVE CURB AND GUTTER	18.00	LF		\$	
1680	02091		REMOVE PAVEMENT ALL DEPTHS	93.00	SQYD		\$	
1690	02650		MAINTAIN & CONTROL TRAFFIC SANITARY SEWER	1.00	LS		\$	
1700	03387		PVC PIPE-8 IN	341.00	LF		\$	
1710	03389		PVC PIPE-10 IN	824.00	LF		\$	
1720	15000		S BYPASS PUMPING	1.00	EACH		\$	
1730	15020		S ENCASEMENT STEEL OPEN CUT RANGE 1	85.00	LF		\$	
1740	15022		S ENCASEMENT STEEL OPEN CUT RANGE 3 SCH 40 STEEL CASING PIPE	60.00	LF		\$	
1750	15022		S ENCASEMENT STEEL OPEN CUT RANGE 3 SEE PLANS	245.00	LF		\$	
1760	15023		S ENCASEMENT STEEL OPEN CUT RANGE 4 SEE PLANS	215.00	LF		\$	
1770	15029		S FORCE MAIN AIR RLS/VAC VLV SPCL	2.00	EACH		\$	
1780	15061		S FORCE MAIN PVC 08 INCH	2,090.00	LF		\$	
1790	15068		S FORCE MAIN SPECIAL 1.5" SDR21 PVC	130.00	LF		\$	
1800	15092		S MANHOLE	8.00	EACH		\$	
1810	15094		S MANHOLE ADJUST TO GRADE	5.00	EACH		\$	
1820	15099		S MANHOLE TAP EXISTING	5.00	EACH		\$	
1830	15101		S MANHOLE WITH DROP 4" DIAMETER	1.00	EACH		\$	
1840	15101		S MANHOLE WITH DROP INTERNAL DROP	1.00	EACH		\$	
1850	15104		S PIPE DUCTILE IRON 08 INCH	271.00	LF		\$	
1860	15114		S PIPE PVC 12 INCH	162.00	LF		\$	
1870	20757ED		PAVEMENT REPAIR	93.00	SQYD		\$	
1880	21415ND		EROSION CONTROL SANITARY SEWER	1.00	LS		\$	
1890	23300ED		CRUSHED STONE	662.00	TON		\$	
1900	24814EC		PIPELINE INSPECTION	3,859.00	LF		\$	
1910	40095		SEEDING AND MULCHING	3.00	ACRE		\$	

Section: 0008 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1920	06400		GMSS GALV STEEL TYPE A	312.50	LB		\$	
1930	06406		SBM ALUM SHEET SIGNS .080 IN	670.00	SQFT		\$	
1940	06407		SBM ALUM SHEET SIGNS .125 IN	102.00	SQFT		\$	
1950	06410		STEEL POST TYPE 1	1,926.00	LF		\$	
1960	06441		GMSS GALV STEEL TYPE C	256.50	LB		\$	
1970	06451		REMOVE SIGN SUPPORT BEAM	4.00	EACH		\$	
1980	06490		CLASS A CONCRETE FOR SIGNS	9.22	CUYD		\$	
1990	06491		STEEL REINFORCEMENT FOR SIGNS	228.00	LB		\$	

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2000	20418ED		REMOVE & RELOCATE SIGNS	2.00	EACH		\$	
2010	21596ND		GMSS TYPE D	15.00	EACH		\$	
2020	24631EC		BARCODE SIGN INVENTORY	371.00	EACH		\$	

Section: 0009 - SIGNALIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2030	04792		CONDUIT-1 IN	88.00	LF		\$	
2040	04795		CONDUIT-2 IN	45.00	LF		\$	
2050	04811		ELECTRICAL JUNCTION BOX TYPE B	9.00	EACH		\$	
2060	04820		TRENCHING AND BACKFILLING	820.00	LF		\$	
2070	04830		LOOP WIRE	3,144.00	LF		\$	
2080	04844		CABLE-NO. 14/5C	1,964.00	LF		\$	
2090	04850		CABLE-NO. 14/1 PAIR	4,695.00	LF		\$	
2100	04885		MESSENGER-10800 LB	970.00	LF		\$	
2110	04895		LOOP SAW SLOT AND FILL	1,288.00	LF		\$	
2120	04931		INSTALL CONTROLLER TYPE 170	2.00	EACH		\$	
2130	04932		INSTALL STEEL STRAIN POLE	8.00	EACH		\$	
2140	20094ES835		TEMP RELOCATION OF SIGNAL HEAD	36.00	EACH		\$	
2150	20188NS835		INSTALL LED SIGNAL-3 SECTION	19.00	EACH		\$	
2160	20390NS835		INSTALL COORDINATING UNIT	2.00	EACH		\$	
2170	23157EN		TRAFFIC SIGNAL POLE BASE	35.10	CUYD		\$	
2180	24900EC		PVC CONDUIT-1 1/4 IN-SCHEDULE 80	715.00	LF		\$	
2190	24901EC		PVC CONDUIT-2 IN-SCHEDULE 80	60.00	LF		\$	
2200	24955ED		REMOVE SIGNAL EQUIPMENT	2.00	EACH		\$	

Section: 0010 - LIGHTING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2210	04714		POLE 120 FT MTG HT HIGH MAST	9.00	EACH		\$	
2220	04761		LIGHTING CONTROL EQUIPMENT	2.00	EACH		\$	
2230	04797		CONDUIT-3 IN	9,962.00	LF		\$	
2240	04800		MARKER	15.00	EACH		\$	
2250	04820		TRENCHING AND BACKFILLING	9,962.00	LF		\$	
2260	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	4.00	EACH		\$	
2270	20392NS835		ELECTRICAL JUNCTION BOX TYPE C	4.00	EACH		\$	
2280	21543EN		BORE AND JACK CONDUIT	1,041.00	LF		\$	
2290	23161EN		POLE BASE-HIGH MAST	45.00	CUYD		\$	
2300	24749EC		HIGH MAST LED LUMINAIRE	44.00	EACH		\$	
2310	24851EC		CABLE-NO. 10/3C DUCTED	10,740.00	LF		\$	

Section: 0011 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2320	02568		MOBILIZATION	1.00	LS		\$	
2330	02569		DEMOBILIZATION	1.00	LS		\$	