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CALL NO. 202
CONTRACT ID. 172031
PENDLETON COUNTY
FED/STATE PROJECT NUMBER 096GR16P120 - HSIP & FD05
DESCRIPTION FALMOUTH TO COVINGTON ROAD (KY 17)
WORK TYPE ASPHALT PAVEMENT & ROADWAY REHAB
PRIMARY COMPLETION DATE 12/15/2017

LETTING DATE: February 24,2017

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME February 24,2017. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - 5%

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

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CONTRACT ID - 172031 096GR16P120 - HSIP & FD05 COUNTY - PENDLETON

PCN - MP09600171601 HSIP 5217 015

FALMOUTH TO COVINGTON ROAD (KY 17) (MP 7.4) BEGIN 67 FEET SOUTH OF BRIDGES DRIVE EXTENDING NORTH TO 1.41 MILES SOUTH OF KY 491 (MP 8.6), A DISTANCE OF 01.20 MILES.ASPHALT PAVEMENT & ROADWAY REHAB SYP NO. 06-09011.00.

GEOGRAPHIC COORDINATES LATITUDE 38:47:31.00 LONGITUDE 84:27:24.00

PCN - MP09600171602 FD05 096 0017 006-011

FALMOUTH TO COVINGTON ROAD (KY 17) (MP 6.934) BEGIN AT KY 476 EXTENDING NORTH TO THE KENTON COUNTY LINE (MP 10.339), A DISTANCE OF 03.40 MILES.ASPHALT PAVEMENT & ROADWAY REHAB GEOGRAPHIC COORDINATES LATITUDE 38:47:31.00 LONGITUDE 84:27:24.00

COMPLETION DATE(S):

COMPLETED BY 12/15/2017 APPLIES TO ENTIRE CONTRACT
COMPLETED BY 08/01/2017 APPLIES TO HSIP 5217 015

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

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.

SPECIAL NOTE FOR COMPOSITE OFFSET BLOCKS

Contrary to the Standard Drawings (2016 edition) the Cabinet will allow 6" composite offset blocks in lieu of wooden offset blocks, except as specified on proprietary end treatments and crash cushions. The composite blocks shall be selected from the Cabinet's List of Approved Materials.

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.

06/01/16

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:

- Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
- 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;
- 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
- 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:

- Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
- Whether the bidder provided solicitations through all reasonable and available means;
- 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;
- Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainly whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the DBE Liaison in the Office of Minority Affairs to give notification of the bidder's inability to get DBE quotes;
- 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;
- Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
- 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;
- 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;
- 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
- Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

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

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

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

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

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

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

- Disallow credit toward the DBE goal;
- Withholding progress payments;
- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

PROMPT PAYMENT

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

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to 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

<u>LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – CARGO PREFERENCE ACT (CPA).</u>

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

SECTION 7 is expanded by the following new Article:

102.10 <u>Cargo Preference Act – Use of United States-flag vessels.</u>

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.

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SURFACING AREAS

The Department estimates the mainline surfacing width to be 24 feet.

The Department estimates the total mainline area to be surfaced to be 50,388 square yards.

The Department estimates the shoulder width to be 0.5 feet on each side.

The Department estimates the total shoulder area to be surfaced to be 1,998 square yards.

ASPHALT MIXTURE

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

DGA BASE

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

DGA BASE FOR SHOULDERS

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

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

INCIDENTAL SURFACING

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

OPTION B

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

PROJECT DESCRIPTION

Pendleton County
Spot improvements on KY 17 from KY 467 (MP 7.4) to KY 491 (MP 8.6)

Item No. 06-9011.00

The purpose of this project is to perform various spot improvements on KY 17 between the intersections of KY 467 and KY 491. Work will include milling, leveling and wedging and asphalt surface, tree cutting and removal, replacement of the existing culvert at STA 34+28 and installing a DBI type 12A drain across the Bridges Drive approach and ditching the south side of KY 17 from Bridges Drive west to approximately STA 64+11.

GENERAL SUMMARY				
ITEM	DESCRIPTION	UNIT	PROJECT TOTALS	
00001	DGA BASE	TON	6	
00190	LEVEL & WEDGING	TON	245	
00221	CL2 AASP Base 0.75D PG64-22	TON	6	
00336	CL3 ASPH SURF 0.38A PG76-22	TON	559	
01550	DROP BOX INLET TYPE 12A	LF	95	
01726	SAFETY BOX INLET - 18 IN SDB-1	EACH	1	
02014	BARRICADE TYPE III	EACH	3	
02230	EMBANKMENT IN PLACE	CUYD	249	
02237	DITCHING	LF	105	
02351	GUARDRAIL-STEEL W BEAM-S FACE	LF	400	
02367	GUARDRAIL END TREATMENT TYPE 7	EACH	4	
02381	REMOVE GUARDRAIL	LF	100	
02460	REMOVE TREES OR STUMPS	EACH	34	
02562	TEMPORARY SIGNS	SQFT	120	
02625	REMOVE HEADWALL	EACH	3	
02671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	3	
02677	ASPHALT PAVE MILLING & TEXTURING	TON	404	
02731	REMOVE STRUCTURE	LS	1	
03269	TRIM AND REMOVE TREES & BRUSH	LF	2775	
06514	PAVE STRIPING - PERM PAINT - 4 IN	LF	7500	
23074NN	ADJUST DRAINAGE STRUCTURE (4)	EACH	3	
24649EN	ALUMINUM STRUCTURAL PLATE BOX CULVERT	LF	31	

NOTES:

- (1) Remove and replace Guardrail from STA. 33+44 to STA. 35+12. Refer to Guardrail Detail Sheet (Attached).
- (2) Refer to DBI Detail Sheet (Attached).
- (3) Remove and replace box culvert at STA. 34+28. Refer to Culvert Detail Sheet (Attached).
- (4) Extend 3 existing pipe culverts to accommodate for any added embankment.

Pendleton County Spot improvements on KY 17 from KY 467 (MP 7.4) to KY 491 (MP 8.6)

Item No. 06-9011.00

- The contractor is to be advised of the locations of overhead utility wires on the project. These and all other utilities should be avoided on this project. If any utility is impacted, it will be the contractor's responsibility to contact the affected utility and cover any costs associated with the impact.
- 2. The contractor is to remove and reset signs and take care not to damage any existing roadway signs. Any roadway signs that are damaged during construction are to be replaced at the contractor's expense in accordance with section 105.08 of the standard specifications.
- 3. The Contractor will utilize milling and leveling and wedging in order to obtain the desired cross slope. After the desired cross slope is achieved, the entire area will be paved with a surface course. At both ends of this area, milling and texturing will be performed to tie the surface course.

SPECIAL NOTE

For Tree Removal

Pendleton County
Correct superelevation in curves, remove trees in clear zone, ditching/shouldering, and extend culvert (MP 8.06) on KY 17 from KY 467 TO KY 491.

Item No. 6-9011

NO CLEARING OF TREES 5 INCHES OR GREATER (DIAMETER BREAST HEIGHT) FROM APRIL 1 THROUGH OCTOBER 14.

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

Special Note for Call Before You Dig

Pendleton County Spot improvements on KY 17 from KY 467 (MP 7.4) to KY 491 (MP 8.6)

Item No. 06-9011.00

Call 1-800-752-6007 toll free a minimum of two and no more than ten business days prior to excavation for information on the location of existing under-ground utilities which subscribe to the before-u-dig (BUD) service. Coordinate excavation with all utility owners, including those who do not subscribe to BUD.

Special Note for Erosion Prevention and Sediment Control Pendleton County / Item No 06-9011.00

The Contractor shall be responsible for filing the Kentucky Pollution Discharge Elimination System (KPDES) KYR10 permit Notice of Intent (NOI) with the Kentucky Division of Water (DOW) and any KPDES local Municipal Separate Storm Sewer System (MS4) program that has jurisdiction. The NOI shall name the contractor as the Facility Operator and include the KYTC Contract ID Number (CID) for reference.

The Contractor shall perform all temporary erosion/sediment control functions including: providing a Best Management Practice (BMP) Plan, conducting required inspections, modifying the BMP plan documents as construction progresses and documenting the installation and maintenance of BMPs in conformance with the KPDES KYR10 permit dated September 30, 2003 or a permit re-issued to replace the KYR10 permit. This work shall be conducted in conformance with the requirements of Section 213 of KYTC Standard Specifications for Road and Bridge Construction (current edition).

Contrary to Section 213.03.03, paragraph 2, the Engineer shall conduct inspections as needed to verify compliance with Section 213 of *KYTC Standard Specifications for Road and Bridge Construction (current edition)*. The Engineer's inspections shall be performed a minimum of once per month and within seven days after a storm of ½ inch or greater. Copies of the Engineer's inspections shall not be provided to the contractor unless improvements to the BMP's are required. The contractor shall initiate corrective action within 24 hours of any reported deficiency and complete the work within 5 days. The Engineer shall use Form TC 63-61 A for this report. Inspections performed by the Engineer do not relieve the Contractor of any responsibility for compliance with the KPDES permit.

Contrary to Section 213.05, bid items for temporary BMPs will not be listed and will be replaced with one lump sum item for the services. Payment will be pro-rated based on the Project Schedule as submitted by the Contractor and as agreed to by the Engineer.

The contractor shall be responsible for applying "good engineering practices" as required by the KPDES permit. The contractor may use any temporary BMPs with the approval of the KYTC Engineer.

The contractor shall provide the Engineer copies of all documents required by the KPDES permit at the time they are prepared.

The contractor shall be responsible for the examination of the soils to be encountered and make his own independent determination of the temporary BMPs that will be required to accomplish effective erosion prevention and sediment control.

The Contractor shall be responsible for filing the KPDES permit Notice of Termination (NOT) with the Kentucky DOW and any local MS4 program that has jurisdiction. The NOT shall be filed after the Engineer agrees that the project is stabilized or the project has been formally accepted.

SPECIAL NOTE FOR ALUMINUM AND STEEL STRUCTURAL PLATE BOX CULVERTS

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. Furnish and install either an aluminum or a steel structural plate box culvert as the Contract specifies.

2.0 MATERIALS.

2.1 Structure. These structures consist of prefabricated sections assembled and erected at the site. Prefabricated sections consist of corrugated aluminum or steel plates, as the Contract specifies, which have been factory shaped, punched, and coated when required. The Department will not permit field modification except for tapping saddles or other devices to permit passage of other conduits or utilities through the structure. Furnish and install all auxiliary items such as ribs, wales, stiffeners, footing pads, etc. that the design requires. Furnish and install endwalls and toewalls when the plans require them. When endwalls are required, construct full height wing sections. Do not field bevel cut wing sections.

Before beginning erection, furnish to the Engineer applicable shop drawings, erection layouts, and manufacturer's brochures for submittal to the Division of Construction. Indicate the location of the drawing number, design load (as applicable), contract award year, and contractor stencils on the shop drawings. If a drawing number has not been assigned for the structure, obtain one from the Division of Structural Design. The Department will accept plates and accessories by certificate of compliance from the manufacturer. Upon completion of construction, submit to the Division of Structural Design an as-built set of structure plans and reviewed shop drawings in 22 inch by 36 inch Portable Document Format (PDF) for archiving.

2.1.1 Aluminum Structure. Obtain the aluminum structural plate box culvert, aluminum endwalls, toewalls, from either Contech Construction Products or Lane Metal Products.

The Department will accept comparable aluminum structures produced by other companies when the Engineer approves. For such approval, submit sufficient data and design calculations to show that the proposed structures are equal in all respects to the Contech product and also include evidence of actual installations now in service that are performing satisfactorily. Design according to the current AASHTO LRFD Bridge Design Specifications, except design for KYHL-93 live load. The KYHL-93 live load is arrived at by increasing the standard AASHTO HL-93 truck and lane loads as specified in the AASHTO Specifications by 25%. Do not consider as a tunnel or tunnel liner plate for design. Before beginning erection, furnish the Engineer applicable shop drawings and structural design calculations performed, stamped, and signed by a qualified Professional Engineer licensed to practice in the State of Kentucky.

Use aluminum accessories and plates, of the plan specified thickness, that conforms to AASHTO M 219 or ASTM B 308 as applicable.

Where non-aluminum utilities are passed through, insulate with an alumilastic compound or approved equal, to prevent bi-metallic contact.

2.1.2 Steel Structure. Use either (1) Contech Construction Products' Multi-Plate Steel Box Culvert; or (2) Lane Metal Products Company's Low Profile Box

Culvert.

The Department will accept comparable steel structures produced by other companies when the Engineer approves. For such approval, submit sufficient data and design calculations to show that the proposed structures are equal in all respects to those specified above and also include evidence of actual installations now in service that are performing satisfactorily. Design according to the current AASHTO LRFD Bridge Design Specifications, except design for KYHL-93 live load. The KYHL-93 live load is arrived at by increasing the standard AASHTO HL-93 truck and lane loads as specified in the AASHTO Specifications by 25%. Do not consider as a tunnel or tunnel liner plate for design. Before beginning erection, furnish the Engineer applicable shop drawings and structural design calculations performed, stamped, and signed by a qualified Professional Engineer licensed to practice in the State of Kentucky.

Use steel accessories and plates, of the plan specified thickness, that conform to AASHTO M 167 for galvanized steel.

- **2.2 Asphalt Coating.** On all steel drainage structures, except those installed as railroad tunnels, cattle underpasses, bicycle or pedestrian underpasses, or similar dry conditions, apply an asphalt coating conforming to Subsection 806.06.
- **2.3 Bedding Material.** Use granular material with 100% passing 1 inch sieve that conforms to Subsection 804.08. Bedding shall be placed at a minimum thickness of twice the corrugation depth.
- **2.4 Backfill Material.** Select any of the following alternates and obtain the Engineers approval.
- 1) well graded or uniformly graded bank or creek gravel, crushed or uncrushed, up to 3 inches maximum size;
- 2) well graded or uniformly graded natural or crushed sand;
- 3) finely shot limestone or sandstone providing no individual fragment is larger than 3 inches and the material contains no more than 5 percent dirt and/or shale, as determined by visual inspection by the Engineer;
- 4) crushed stone or crushed slag up to 3 inches maximum size (except DGA or Size No. 610);
- 5) other locally available materials meeting the approval of the Engineer (local soils conforming to soil classifications A-2-4 or A-2-5 from AASHTO M 145 will be acceptable). Do not use plastic soils, or materials containing significant amounts of nondurable shale (SDI < 95 by KM 64-513); or
- 6) flowable fill conforming to Subsection 601.03.03, B), 5).
- **2.5 Foundation Material.** Use material capable of supporting the imposed loads due to backfill weight and footing pressures of 2 tons per square foot.

3.0 CONSTRUCTION.

3.1 Technical Representative. Provide a technical representative from the structure manufacturer to advise at the start of the project. Ensure the technical representative is available thereafter to assist in the event problems or special

circumstances arise. Technical assistance shall be provided at no additional cost to the Department.

3.2 Site Preparation. Perform structure excavation according to Section 603, except as modified herein.

On structures with footing pads, excavate trenches 3 inches below the elevation shown on the plans, and level the bottom of the trench with 3 inches of bedding material before placing the footing pads.

On structures with a full metal invert, excavate the entire area covered by the invert plates to accommodate bedding material placement to a minimum thickness of twice the corrugation depth before placing the invert plates.

Take soundings for foundation design at the inlet and outlet of each culvert and at intervals no greater than 20 feet along the grade line of the bottom of the culvert, to a depth of one foot. Make soundings on the centerline and at each edge of the culvert. Where ledge rock, gravel, hardpan, or other unyielding material is encountered or known to exist within the limits stated, perform excavation in the area under the invert plates or footing pads. Extend the additional excavation to a depth of 0.042 H below the bottom of the metal plates, where H is the height of fill above the top of the culvert. However, regardless of the height of fill, the Department will require the additional depth to be a minimum of one foot and will not require it to be more than 0.75 Hc, where Hc is the total height of the culvert.

Backfill the additional excavation with an earth cushion of firmly compacted fine soils in layers of 6 inches or less, prior to placing the sand bedding layer.

Excavate cross trenches as necessary to place metal toewalls when the plans require them.

Excavate a minimum width of the outside dimension of the box culvert including footing pads or invert plates plus 6 inches on each side.

Proper bedding preparation is critical for satisfactory performance of the box culvert. Place the bed for footing pads or invert plates to uniform lines and grade to avoid distortions and undesirable stresses in the structure.

Construct concrete footings or bottom slabs in accordance with the plans and standard specifications.

3.3 Installation. Erect the culvert, and endwalls when required, in strict accordance with the manufacturer's recommendations. The Department will allow offsite assembly of the structure, provided prior approval is obtained, and assembly is in accordance with the manufacturer's instructions. Structural plates shall be assembled with their inside circumferential sheet laps pointing downstream. Align plates circumferentially to avoid permanent distortion from the specified shape. Ensure the width and height of the completed structure is within 2 percent of the specified dimensions or 2 inches, whichever is greater.

Tighten bolts in the erected structure according to the manufacturer's recommendations, with good seam laps, while in proper shape, using nuts and bolts the manufacturer supplies. Construct concrete footings and headwalls in accordance with the plans.

Install the ribs, wales, and toewalls when required, according to the manufacturer's recommendations.

In side-by-side installations, install the box culverts with footing pads or invert plates of each culvert no closer than 2 feet to the footing pads or invert plates of the adjacent culvert, unless the plans show otherwise. Excavate the entire volume between the culverts and place backfill.

3.4 Backfill. Proper placement and compaction of backfill are essential to obtain maximum strength and stability of the finished structure. Use equipment and

construction procedures to prevent excessive structure distortion from occurring. The manufacturer of the structure will specify the magnitude of allowable shape changes during backfill. Monitor the shape of the structure to control distortion until all backfilling operations are completed.

On structures with concrete footing pads, backfill the trench for the pads to the flowline inside the culvert before outside backfilling begins.

Place granular backfill material in horizontal layers not exceeding 6 inches loose depth, and bring up uniformly on both sides of the structure. Compact each layer to the same level on all sides before proceeding to the next lift. Do not use compaction equipment or methods that produce earth pressures that cause distortion or damage. Place material on top of the structure at right angles to the centerline of the structure. Compact each layer of backfill to a density of at least 95 percent of the maximum density according to KM 64-511. The Department will determine the in-place density using nuclear gages. The Engineer may waive density testing when not feasible due to the nature of the material. When using flowable fill, place according to Subsection 601.03.09, C).

If the structure is not installed in a full depth trench, use backfill material for embankment adjacent to the structure for a distance equal to the span width on each side of the box culvert and to a height of 2 feet or subgrade elevation, whichever is lower, above the structure.

- **3.5 Construction Loads.** Do not allow construction loads in excess of HS-20 vehicles to cross the completed box culvert unless it is internally braced. Design the support for such bracing so as not to impair the structural integrity or severely interfere with the hydraulics of the box culvert or its invert. Have the culvert manufacturer review the details of the bracing and submit them to the Engineer for approval.
- **3.6 Headwalls.** Construct concrete headwalls, when required, according to the plans. Apply masonry coating to exposed surfaces of the headwalls when required by Subsection 601.03.18, B). When using an aluminum structure, coat aluminum surfaces that will be in contact with concrete with alumilastic compound or an approved equal prior to placing concrete.

4.0 MEASUREMENT.

4.1 Structure Excavation. The Department will measure Structure Excavation as Structure Excavation, Common or Structure Excavation, Solid Rock according to Subsection 206.04.03, except on the sides of the structure the volume will be bounded by vertical planes 6 inches outside the footing pads or invert plates and parallel thereto.

The Department will measure material necessary for backfill in excess of the material excavated as Borrow Excavation, Roadway Excavation, or Embankment-in-Place, as applicable.

The Department will measure granular material used to replace excavated material that is unsuitable for backfill as Borrow Excavation, Roadway Excavation, or Embankment-in-Place. The Department will not measure earthwork for payment when the bid item is Embankment-in-Place unless the unsuitable material is wasted.

The Department will not measure flowable fill for payment and will consider it incidental to the structure.

The Department will not measure bedding for payment and will consider it incidental to the structure.

4.2 Aluminum Structural Plate Box Culvert. The Department will measure the quantity in linear feet at each location. The Department will consider the number of linear feet in each installation to be the plan length, increased or decreased by

authorized adjustments. The Department will not measure ribs, wales, stiffeners, footing pads, toewalls, endwalls, internal braces, or asphalt coating for payment and will consider them incidental to the structure.

- 4.3 Steel Structural Plate Box Culvert. See 4.2.
- **4.4 Class A Concrete.** The Department will measure Class A Concrete in footings and headwalls according to Subsection 601.04.
- **4.5 Reinforcement.** The Department will measure Steel Reinforcement in the footings and headwalls according to Subsection 602.04.
- **5.0 PAYMENT.** The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	Pay Item	Pay Unit
20694EN	Aluminum Structural Plate Box Culvert	Linear Foot
20695EN	Steel Structural Plate Box Culvert	Linear Foot
	Structure Excavation, as classified	See Section 603.05
	Concrete, Class	See Section 601.05
	Steel Reinforcement	See Section 602.05

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

June 15, 2012

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

*Insert numerals as directed by the Engineer.

Add other messages during the project when required by the Engineer.

2.3 Power.

- 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 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:

CodePay ItemPay Unit02671Portable Changeable Message SignEach

Effective June 15, 2012

REFERENCES

- 1. Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2012.
- 2. FHWA Manual on Uniform Traffic Control Devices 2009 Edition.
- 3. Kentucky Department of Highways Standard Drawings, Edition 2016, as applicable:

RBR-050-06 GUARDRAIL END TREATMENT TYPE 7 RDB-012-09 DROP BOX INLET TYPE 12 OR 12A

RDI-021 PIPE BEDDING FOR CULVERTS ENTRANCE AND STORM

SEWER PIPE

TTC-100-03 TWO-LANE HIGHWAY LANE

CLOSURE TWO-LANE

4. Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2012, Appendix B - Supplemental Specifications, as applicable:

Special Note Call Before You Dig attached

Special Note Fixed Completion Date, Road Closures and Liquidated Damages

attached

Special Note Erosion Prevention and Sediment Control *attache*d Special Note Aluminum and Steel Structural Plate Box Culverts

Special Note Portable Message Signs

General Note Compaction of Asphalt Mixtures attached

EROSION CONTROL NOTES

ALL SILT CONTROL DEVICES SHALL BE SIZED TO RETAIN A VOLUME OF 3,600 CUBIC FEET PER DISTURBED CONTRIBUTING ACRE.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED GROUND DURING EACH PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL COMPUTE THE VOLUME NECESSARY TO CONTROL SEDIMENT DURING EACH PHASE OF CONSTRUCTION. AS WORK PROCEEDS, SILT TRAPS MAY BE ADDED OR REMOVED IN ORDER TO ACHIEVE THE BEST MANAGEMENT PLAN. THE REQUIRED VOLUME AT EACH ADDED SILT TRAP SHALL BE COMPUTED AS UP GRADIENT CONTRIBUTING AREAS ARE DISTURBED OR ARE STABILIZED TO THE SATISFACTION OF THE ENGINEER. THE REQUIRED VOLUME CALCULATION FOR EACH SILT TRAP SHALL BE DETERMINED BY THE CONTRACTOR AND VERIFIED BY THE ENGINEER. THE REQUIRED VOLUME AT EACH SILT TRAP MAY BE REDUCED BY THE FOLLOWING AMOUNTS:

UP GRADIENT AREAS NOT DISTURBED (ACRES).
UP GRADIENT AREAS THAT HAVE BEEN RECLAIMED AND PROTECTED BY EROSION CONTROL BLANKET OR OTHER GROUND PROTECTION MATERIAL SUCH AS TEMPORARY MULCH. (ACRES).

THE USE OF TEMPORARY MULCH IS ENCOURAGED.

UP GRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT FENCE (ACRES).

AREAS PROTECTED BY SILT FENCE SHALL BE COMPUTED AT A MAXIMUM RATE
OF 100 SQUARE FOOT PER LINEAR FOOT OF SILT FENCE.

UP GRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT TRAPS (ACRES).

THE EROSION CONTROL PLAN SHALL BE ANNOTATED AS THE WORK PROCEEDS BY THE CONTRACTOR TO DETAIL THE SELECTION OF EACH EROSION CONTROL DEVICE USED AND THE VOLUME PROVIDED BY EACH SILT TRAP IN ACCORDANCE WITH THE DOCUMENTATION PROCEDURES ESTABLISHED BY THE DIVISION OF CONSTRUCTION.

IF A SILT BASIN IS NOT USED THEN ONE SILT TRAP TYPE A, ALTERNATE NUMBER 2 OR SILT TRAP TYPE B SHALL ALWAYS BE PLACED AT THE MOST REMOTE DOWNSTREAM COLLECTION POINT PRIOR TO DISCHARGING INTO A BLUE LINE STREAM OR ONTO AN ADJACENT PROPERTY OWNER. WHERE OVERLAND FLOW EXIST, A SILT FENCE OR OTHER FILTER DEVICES MAY BE USED OR THE OVERLAND FLOW MAY BE DIVERTED TO ONE OF THE AFOREMENTED SILT BASIN OR TRAPS.

THE EROSION CONTROL PLANS DO NOT CONSTITUTE A BMP BY THEMSELVES. THEY PROVIDE A STARTING POINT FOR THE CONTRACTOR AND SECTION ENGINEER TO DEVELOP THE BMP ACCORDING TO SECTION 213.03.01 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE SUPPLEMENTAL SPECS EFFECTIVE WITH THE OCTOBER, 2004 LETTING.

EROSION CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONING PRIOR TO ANY EXCAVATION OR DISTURBANCE WITHIN A DRAINAGE AREA.

THE CONTRACTOR SHALL BE REQUIRED TO CLEAN OUT (REMOVE SEDIMENT FROM) SILT TRAPS AND SILT FENCES WHENEVER THEY BECOME ONE- HALF FULL AND PROPERLY DISPOSE OF THE MATERIAL AT SITES APPROVED BY THE SECTION ENGINEER.

EROSION CONTROL MEASURES EMPLOYED BY THE CONTRACTOR WILL BE UNIQUE TO THE PROJECT AND WORK CONDITIONS AND SHALL BE APPROVED BY THE SECTION ENGINEER. THE DEVELOPMENT AND UTILIZATION OF THESE MEASURES WILL BE RECORDED AS PART OF THE BMP, KEPT ON SITE, AND AVAILABLE FOR PUBLIC INSPECTION.

Special Note for Fixed Completion Date, Road Closures and Liquidated Damages

Pendleton County Spot improvements on KY 17 from KY 467 (MP 7.4) to KY 491 (MP 8.6)

HSIP 5217 015 Item No. 06-9011.00

Liquidated Damages will be assessed for each day that work remains uncompleted beyond the Specified Project Completion Date, at the rate specified in 108.09 of the standard specifications. This project has a Phase II Completion Date of April 1, 2017, for removal and trimming of trees with a Fixed Project Completion August 1, 2017.

7 day closures for both the main line and side road will be for those roads individually and cannot be combined to increase those road closures.

Also contrary to Section 108, liquidated damages will be charged during the months of August through March.

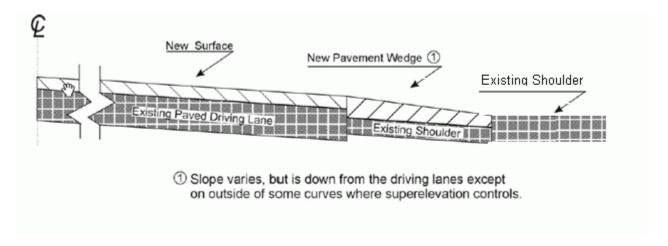
SPECIAL NOTE FOR PAVEMENT WEDGE AND SHOULDER MONOLITHIC OPERATION

- **1.0 MATERIALS.** Provide an Asphalt Surface Mixture conforming to Section 403 of the Standard Specifications, as applicable to the project, for the pavement wedge.
- **2.0 CONSTRUCTION.** Place the specified Asphalt Surface Mixture on shoulders monolithically with the driving lane. Prime the existing shoulder with tack material as the Engineer directs before placing the wedge. Construct according to Section 403.03 of the Standard Specifications.

Equip the paver with a modified screed that extends the full width of the wedge being placed and is tapered to produce a wedge. Obtain the Engineer's approval of the modified screed before placing shoulder wedge monolithically with the driving lane.

The wedge may vary in thickness at the edge of the milled area in the shoulder. If the area to receive the shoulder wedge is milled prior to placement, during rolling operations pinch the outside edge of the new inlay wedge to match the existing shoulder elevation not being resurfaced. Unless required otherwise by the Contract, construct rolled or sawed rumble strips according to Section 403.03.08, as applicable.

The following sketch is primarily for the computation of quantities; however, the wedge will result in a similar cross-section where sufficient width exists. Do not construct a shoulder for placing the wedge unless specified elsewhere in the Contract.



- **3.0 MEASUREMENT.** The Department will measure Asphalt Surface Mixture placed as the pavement wedge according to Section 403.
- **4.0 PAYMENT.** The Department will make payment for the completed and accepted quantities of Asphalt Surface Mixtures on pavement wedges according to Section 403.

SPECIAL NOTES FOR GUARDRAIL

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's Standard and Supplemental Specifications and Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications.

Furnish all equipment, labor, materials, and incidentals for the following work items:

(1) Site preparation; (2) Remove existing guardrail systems; (3) Construct Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections, as applicable; (4) Delineators for guardrail; (5) Maintain and control traffic; and (6) all other work specified as part of this contract.

II. MATERIALS

Except as specified herein, provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual and 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.

- A Maintain and Control Traffic. See Traffic Control Plan.
- **B. Guardrail.** Furnish guardrail system components according to section 814 and the Standard Drawings; except use steel posts only, no alternates.
- **C. Delineators for Guardrail. Delineators for Guardrail.** Furnish white and/or yellow Delineators for Guardrail according to Standard Drawing RBR-055.
- **D. Erosion Control.** See Special Notes for Erosion Control.

III. CONSTRUCTION METHODS

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B. Site Preparation.** Remove existing guardrail system including the guardrail end treatments, Bridge End connectors and all other elements of the existing guardrail system as per Section 719, except that the Contractor will take possession of all concrete posts and all concrete associated with existing bridge and/or guardrail end treatments. Locate all disposal areas off the Right of Way. Be responsible for all site preparation, including but not limited to, clearing and grubbing, excavation, embankment, and removal of all obstructions or any other items; regrading, reshaping, adding and compacting of suitable materials on the existing shoulders to provide proper template or foundation for the

Guardrail Page 2 of 3

guardrail; filling voids left as the result of removing existing guardrail and guard posts with dry sand; temporary pollution and erosion control; disposal, of excess and waste materials and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as approved or directed by the Engineer.

C. Guardrail. Except as specified herein, construct guardrail system according to Section 719 and the Standard Drawings. Locations listed on the summary and/or shown on the drawings are approximate only. The Engineer will determine the exact termini for individual guardrail installations at the time of construction. Unless directed otherwise by the Engineer, provide a minimum two (2) foot shoulder width. Construct radii at entrances and road intersections as directed by the Engineer.

Erect guardrail to the lines and grades shown on current Standard Drawings or as directed by the Engineer by any method approved by the Engineer which allows construction of the guardrail to the true grade without apparent sags.

When removing existing guardrail and installing new guardrail, do not leave the blunt end exposed where it would be hazardous to the public. When it is not practical to complete the construction of the guardrail and the permanent end treatments and terminal sections first, provide a temporary end by connecting at least 25 feet of rail to the last post, and by slightly flaring, and burying the end of the rail completely into the existing shoulder. If left overnight, place a drum with bridge panel in advance of the guardrail end and maintain during use.

- **D. Delineators for Guardrail.** Install delineators for guardrail according to Standard Drawing RBR-055 and RBR-060, as applicable.
- **E. Property Damage.** Be responsible for all damage to public and/or private property resulting from the work. Restore damaged roadway features and private property at no additional cost to the Department.
- **F. Coordination with Utility Companies.** Locate all underground, above ground and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of guardrail operations at no additional cost to the Department.
- **G. Right of Way Limits**. The Department has not established exact limits of the Right-of-Way. Limit work activities to obvious Right-of-Way, permanent or temporary easements, and work areas secured by the Department through consent and release of the adjacent property owners. Be responsible for all encroachments onto private lands.

Guardrail Page 3 of 3

- **H. Disposal of Waste.** Dispose of all removed concrete, debris, and other waste and debris off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department. See Special; Note for Waste and Borrow.
- **I. Final Dressing, Clean Up, and Seeding and Protection.** Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas according to the Special Notes for Erosion Control.
- **J. Erosion Control.** See Special Notes for Erosion Control.

IV. METHOD OF MEASUREMENT

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B. Site preparation.** Other than the bid items listed, the Department will not measure Site Preparation for separate payment but shall be incidental to Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections as applicable.
- C. Guardrail. See Section 719.04.
- **D. Delineators for Guardrail.** See Standard Drawing RBR-055.
- **E. Erosion Control.** See Special Notes for Erosion Control.

V. BASIS OF PAYMENT

- A. Maintain and Control Traffic. See Traffic Control Plan.
- B. Guardrail. See Section 719.05.
- **C. Delineators for Guardrail.** See Standard Drawing RBR-055.
- **D. Erosion Control.** See Special Notes for Erosion Control.

1-3414 Remove Replace Guardrail 8/22/2016

SPECIAL NOTE FOR ASPHALT MILLING AND TEXTURING

Begin paving operations within <u>48 hours</u> of commencement of the milling operation. Continue paving operations continuously until completed. If paving operations are not begun within this time period, the Department will assess liquidated damages at the rate prescribed by Section 108.09 until such time as paving operations are begun.

Take possession of the millings and recycle the millings or dispose of the millings off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department.

1-3520 48 hours Contractor keeps millings 01/2/2012

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

Consider the dimensions shown on the typical sections for pavement and shoulder widths and thickness' to be nominal or typical dimensions. The Engineer may direct or approve varying the actual dimensions to be constructed to fit existing conditions. Do not widen existing pavement or shoulders unless specified elsewhere in this proposal or directed by the engineer.

 $\begin{array}{c} 1\text{-}3725 \text{ Typical Section Dimensions} \\ 01/02/2012 \end{array}$

TRAFFIC CONTROL PLAN

TRAFFIC CONTROL GENERAL

Except as provided herein, maintain and control traffic in accordance with the Standard and Supplemental Specifications and the Standard and Sepia Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic".

Contrary to Section 106.01, furnish new, or used in like new condition, traffic control devices at the beginning of the work and maintain in like new condition until completion of the work.

PROJECT PHASING & CONSTRUCTION PROCEDURES

The Engineer may specify days and hours when lane closures will not be allowed.

Maintain alternating one way traffic during construction. Provide a minimum clear lane width of 11 feet; however, provide for passage of vehicles of up to 16 feet in width. If traffic should be stopped due to construction operations, and a school bus on an official run arrives on the scene, make provisions for the passage of the bus as quickly as possible.

LANE CLOSURES

Do not leave lane closures in place during non-working hours.

SIGNS

Sign posts and splices shall be compliant with NCHRP 350 or MASH. Manufacturer's documentation validating this compliance shall be provided to the Engineer prior to installation. Signs, including any splices, shall be installed according to manufacturer's specifications and installation recommendations. Contrary to section 112.04.02, only long-term signs (signs intended to be continuously in place for more than 3 days) will be measured for payment. Short-term signs (signs intended to be left in place for 3 days or less) will not be measured for payment but will be incidental to Maintain and Control Traffic.

CHANGEABLE MESSAGE SIGNS

If deemed necessary by the Engineer, the Department will furnish, operate, and maintain Changeable Message Signs.

Traffic Control Plan Page 2 of 3

BARRICADES

The Department will not measure barricades used in lieu of barrels and cones for channelization or delineation, but shall be incidental to Maintain and Control Traffic according to Section 112.04.01.

The Department will measure barricades used to protect pavement removal areas in individual units Each. The Department will measure for payment the maximum number of barricades in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual barricades only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged barricades the Engineer directs to be replaced due to poor condition or reflectivity. Retain possession of the Barricades upon completion of construction.

PAVEMENT MARKINGS

If there is to be a deviation from the existing striping plan, the Engineer will furnish the Contractor a striping plan prior to placement of the final surface course.

Install Temporary Striping according to Section 112 with the following exception:

If the Contractor's operations or phasing requires temporary markings that must subsequently be removed from the final surface course, use an approved removable lane tape; however, the Department will not measure removable lane tape for separate payment, but will measure and pay for removable lane tape as temporary striping.

PAVEMENT EDGE DROP-OFFS

Do not allow a pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation with an elevation difference greater than 1½". Place Warning signs (MUTCD W8-11 or W8-9A) in advance of and at 1500' intervals throughout the drop-off area. Dual post the signs on both sides of the traveled way. Wedge all transverse transitions between resurfaced and unresurfaced areas which traffic may cross with asphalt mixture for leveling and wedging. Remove the wedges prior to placement of the final surface course.

Protect pavement edges that traffic is not expected to cross, except accidentally, as follows:

Less than 2" - No protection required.

Traffic Control Plan Page 3 of 3

2" to 4" - Place plastic drums, vertical panels, or barricades every 50 feet. During daylight working hours only, the Engineer will allow the Contractor to use cones in lieu of plastic drums, panels, and barricades. Wedge the drop-off with DGA or asphalt mixture for leveling and wedging with a 1:1 or flatter slope in daylight hours, or 3:1 or flatter slope during nighttime hours, when work is not active in the drop-off area.

Greater than 4" - Protect drop-offs greater than 4 inches within 10 feet of traffic by placing drums, vertical panels, or barricades every 25 feet. The Engineer will not allow the use of cones in lieu of drums, vertical panels, or barricades for drop-offs greater than 4". Place Type III Barricades directly in front of the drop-off facing on coming traffic in both directions of travel. Provide warning signs as shown on the Standard Drawings or as directed by the Engineer

Pedestrians & Bicycles - Protect pedestrian and bicycle traffic as directed by the engineer.

1-3820 Traffic Control Plan 2 Lane 01/02/2012

Added: 2-23-17 Contract ID: 172031 Page 41a of 198

TRAFFIC CONTROL GENERAL

HSIP 5217 015 Item No 6-9011.00

Except as provided herein, "Maintain and Control Traffic" shall be in accordance with the 2012 Standard Specifications and the Standard Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic". All lane closures used on the Project will be in compliance with the appropriate Standard Drawings.

Contrary to Section 106.01, traffic control devices used on this project may be new, or used in like new condition at the beginning of the work and maintained in like new condition until completion of the work. Traffic control devices will conform to current MUTCD.

Reduce the speed limit in work areas by 10 miles per hour. The extent of these areas within the project limits will be restricted to the proximity of actual work areas as determined by the Engineer. Any relocation or covering of signs will be incidental to "Maintain and Control Traffic", lump sum.

Maintain access to all entrances. The Contractor will be responsible to notify adjacent property owners when work affecting the entrances will be performed.

PROJECT PHASING & CONSTRUCTION PROCEDURES

Type III Barricades shall be placed immediately in front of the road closures. Type III Barricades will be measured for payment only once. Moving and placing the barricades in subsequent locations will be considered incidental to "Maintain and Control Traffic", Lump Sum.

During the days and hours when a lane closures are in place, maintain traffic as specified in the phasing notes and typical sections.

PROJECT PHASING

PHASE I

Sign project in accordance with standard drawings. Place reduced speed signs every 2 miles through the project. Cover up any conflicting signs.

PHASE II

Remove and trim trees as specified in this proposal. Completion date shall be no later than April 1, 2017. Liquidated damages will be assessed according to section 108.09 in the KYTC Department of Highways Specifications book if the trees are not removed by the specified date.

PHASE III

Remove and replace box culvert and guard rail at STA. 34+37. Close the road for 7 days using Type III Barricades. Backfill through the final asphalt base

Added: 2-23-17 Contract ID: 172031 Page 41b of 198

course and open to traffic a minimum of 14 days before installing final surface. Provide the Engineer with two week notice prior to scheduling road closure to allow for proper public notification. Liquidated damages will be assessed according to section 108.09 in the KYTC Department of Highways Specifications book if the road is closed for more than 7 days.

PHASE IV

Install DBI Type 12A at STA. 65+44 across Bridges Drive (CR-1343) and improve adjacent ditch to drain to existing 72 inch CMP at STA. 64+11. Field locate 12" CL 350 Ductile Iron pipe located underground on the right side of the road prior to DBI installation and ditch improvement. If the water line or other utilities are damaged during construction, the contractor shall be responsible for all costs associated with repair or replacement of utility facilities. The road will be closed for 7 days using type III barricades. Provide the Engineer with two week notice prior to scheduling road closure to allow for proper public notification. Liquidated damages will be assessed according to section 108.09 in the KYTC Department of Highways Specifications book if the road is closed for more than 7 days.

PHASE V

Complete the extensions of existing cross drains at STA. 16+46, STA 18+10 and STA. 40+41. Perform all required ditching and minor embankment work.

Phase VI

In the described locations, improve the cross slopes with leveling and wedging, milling and asphalt surface and finish with pavement striping.

SIGNS

Additional signs needed will be furnished, relocated, and maintained by the Contractor. Contrary to section 112, individual signs will be measured only once for payment, regardless of how many times they are set, reset, removed and relocated during the duration of the project. Replacements for damaged signs or signs directed to be replaced by the Engineer due to poor legibility or reflectivity will not be measured for payment.

PORTABLE CHANGEABLE MESSAGE SIGNS

Provide portable changeable message signs (PCMS) in advance of and within the project at locations to be determined by the Engineer. The locations designated may vary as the work progresses. The messages required to be provided will be designated by the Engineer. The PCMS will be in operation at all times. In the event of damage or mechanical/electrical failure, the contractor will repair or replace the PCMS immediately. PCMS will be paid for once, no matter how many times they are moved or relocated. The Department **WILL NOT** take possession of the signs upon completion of the work.

PAVEMENT MARKINGS

Place temporary and permanent striping in accordance with Section 112.

PAVEMENT EDGE DROP-OFFS

Pavement edge drop-offs will be protected by a lane or shoulder closure. Lane closures will be protected with plastic drums, vertical panels, or barricades as shown on the Standard Drawings.

Added: 2-23-17 Contract ID: 172031 Page 41c of 198

Pavement edges that traffic is not expected to cross, except accidentally, shall be treated as follows:

Less than 2" - Protect with a lane closure.

2" to 4" – Protect with a lane closure. Place plastic drums, vertical panels, or barricades every 50 feet. Cones may not be used in place of plastic drums, panels, and barricades at any time. Construct a wedge with compacted cuttings from milling, trenching, or asphalt mixtures with a 3:1 or flatter slope, when work is not active in the drop-off area. Place Type III Barricades at the beginning of the lane closures, and place additional Type III Barricades spaced at 2,500 feet during the time the lane closure is in place.

Greater than 4" – Pavement removal areas – In areas where pavement is to be removed, work should proceed continuously so that traffic is exposed to a drop-off for the minimum amount of time necessary to bring the pavement back up to existing grade. Barrel spacing should be 20 feet and appropriate lighting should be utilized to illuminate the area during nighttime operations.

TRAFFIC COORDINATOR

Designate an employee to be traffic coordinator. The designated Traffic Coordinator must be certified by the American Traffic Safety Services Association (ATSSA). The Traffic Coordinator will inspect the project maintenance of traffic once every two hours during the Contractor's operations and at any time a lane closure is in place. The Traffic Coordinator will report all incidents throughout the work zone to the Engineer on the project. The Contractor will furnish the name and telephone number where the Traffic Coordinator can be contacted at all times.

The Traffic Coordinator will be responsible for giving their contact information to local law enforcement and emergency personnel.

EROSION CONTROL

In those areas where the soil is significantly disturbed, erosion control measures should be taken to prevent sediment from polluting the water shed.

SPECIAL NOTE FOR EDGELINE AND SHOULDER RUMBLE STRIPS

Construct edgeline rumble strips and/or shoulder rumble strips at the locations listed on the Pavement Markings Summary, Typical Sections, and/or according to the following drawings, as applicable:

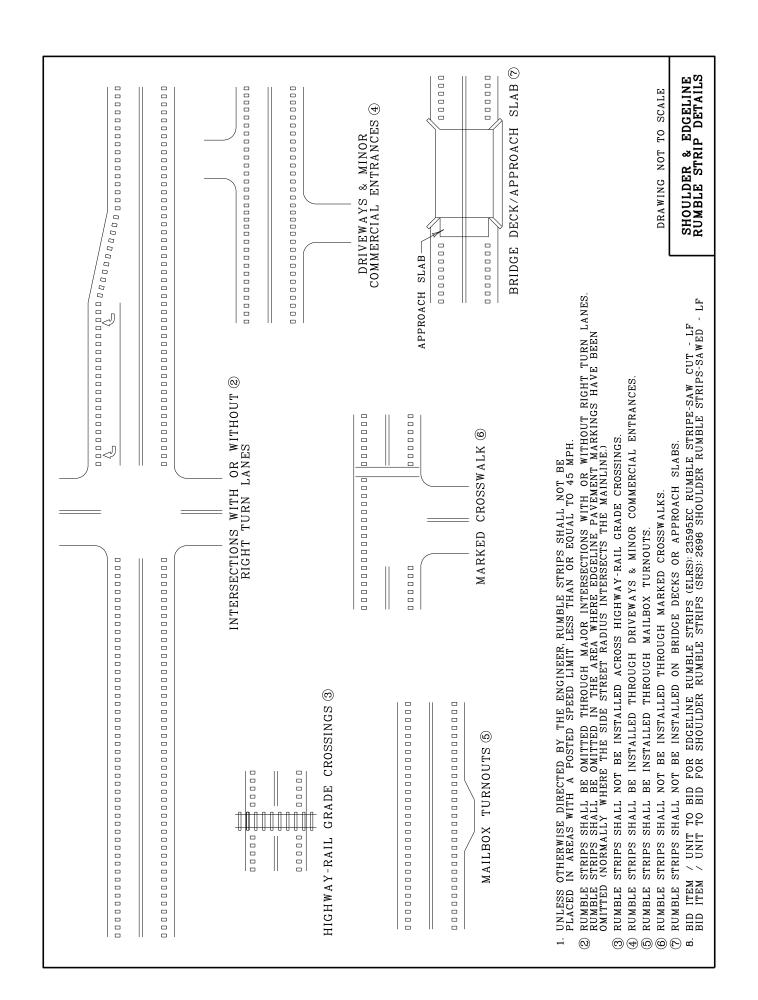
- Shoulder & Edgeline Rumble Strip Details
- Edgeline Rumble Strip Details Two Lane Roadways
- Shoulder Rumble Strip Details Two Lane Roadways
- Rumble Strip Details Multi-Lane Roadways

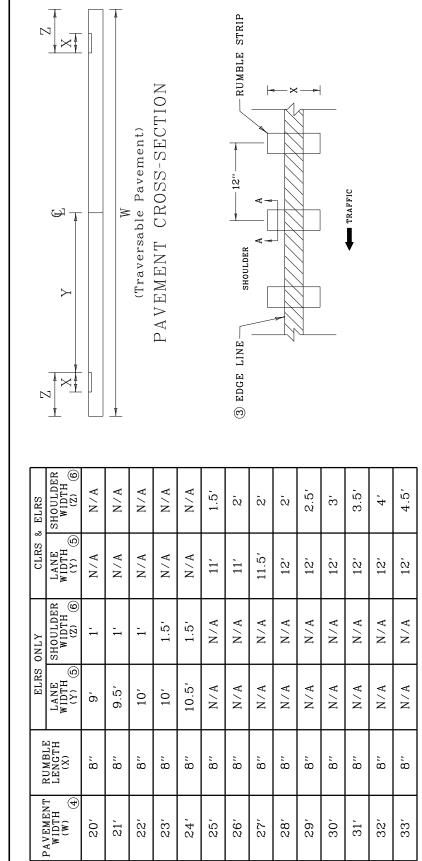
The locations listed for edgeline rumble strips and/or shoulder rumble strips, and the dimensions on the drawings are approximate only and may vary from the existing marking's locations. The Engineer shall determine the exact locations for edgeline rumble strips and/or shoulder rumble strips at the time of construction. If the Typical Section shows a Lane Width (Y) and/or Shoulder Width (Z) that differs from the widths listed on the drawings the Engineer shall determine the appropriate Lane Width (Y) and/or Shoulder Width (Z) at the time of construction.

(<u>Note to the Engineer</u>: In order to achieve consistent installations statewide, rumble strips should be installed according to the dimensions specified in the drawings, unless there is an Engineering basis that supports a change in dimension(s) – e.g. the existing shoulder width is wider than the drawing specifies and/or the existing lane width is narrower than the drawing specifies AND the existing shoulder pavement depth is not suitable to be used as a driving lane.)

Unless directed otherwise by the Engineer, DO NOT install edgeline rumble strips or shoulder rumble strips where the posted speed limit is 45 MPH or less. Before sawing edgeline rumble strips, pre-mark the pavement surface and obtain the Engineer's approval of the proposed location, alignment, and control guides. After sawing edgeline rumble strips, construct a rumble stripe by applying permanent edgeline striping according to Section 713 on the sawed edgeline rumble strips at the locations approved by the Engineer. Before sawing shoulder rumble strips, obtain the Engineer's approval of the proposed layout, location, and alignment. Notify the Engineer if questions arise regarding changes in striping and/or rumble patterns. If necessary, the Engineer will obtain guidance from the District Traffic Engineer and/or the Division of Traffic Operations.

The Department will measure edgeline rumble strips and shoulder rumble strips according to Section 403. Unless required by the Traffic Control Plan or directed by the Engineer, the Department will not measure for payment temporary edgeline striping used for pre-marking edgeline rumble strips. The Department will measure permanent edgeline striping according to Section 713. The Department will not measure the removal of existing markings, pre-marking and layout, surface preparation, corrective work, labor, equipment, and any incidentals necessary to construct edgeline rumble strips and/or shoulder rumble strips, and will consider these items incidental to the installation of the sawed rumble strips.





23, 24' 25' 26' 27

20, 21, 22, 28, 29, 31'

30,

33,

32,

EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS

DRAWING NOT TO SCALE

SECTION A-A

3/8" MIN, 1/2" MAX

PAVEMENT SURFACE

7" MIN 7.5" MAX

DISTANCES SHOWN ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE. IF THE TYPICAL SECTION SHOWS A LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) THAT DIFFERS FROM THE WIDTHS LISTED IN THIS DRAWING, THE ENGINEER SHALL DETERMINE THE LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) AT THE TIME OF CONSTRUCTION.

UNLESS OTHERWISE DIRECTED BY THE ENGINEER, RUMBLE STRIPS SHALL NOT BE PLACED IN AREAS WITH A POSTED SPEED LIMIT LESS THAN OR EQUAL TO 45 MPH. EDGE LINE MARKINGS SHALL BE PLACED IN THE CENTER OF THE RUMBLE STRIP.

WIDTH OF LANE FROM CENTER OF ROAD TO INSIDE EDGE OF RUMBLE STRIP OR JOINT. WIDTH OF PAVED SHOULDER IS FROM LANE SIDE EDGE OF RUMBLE STRIP TO OUTSIDE EDGE OF TRAVERSABLE PAVEMENT. WIDTH OF PAVEMENT BETWEEN EDGES OF TRAVERSABLE PAVEMENT.

RUMBLE LENGTH (X) MAY BE MODIFIED AS THE ENGINEER DIRECTS, IF SHOULDER WIDTH (Z) IS EQUAL TO OR LESS THAN SPECIFIED RUMBLE LENGTH (X).

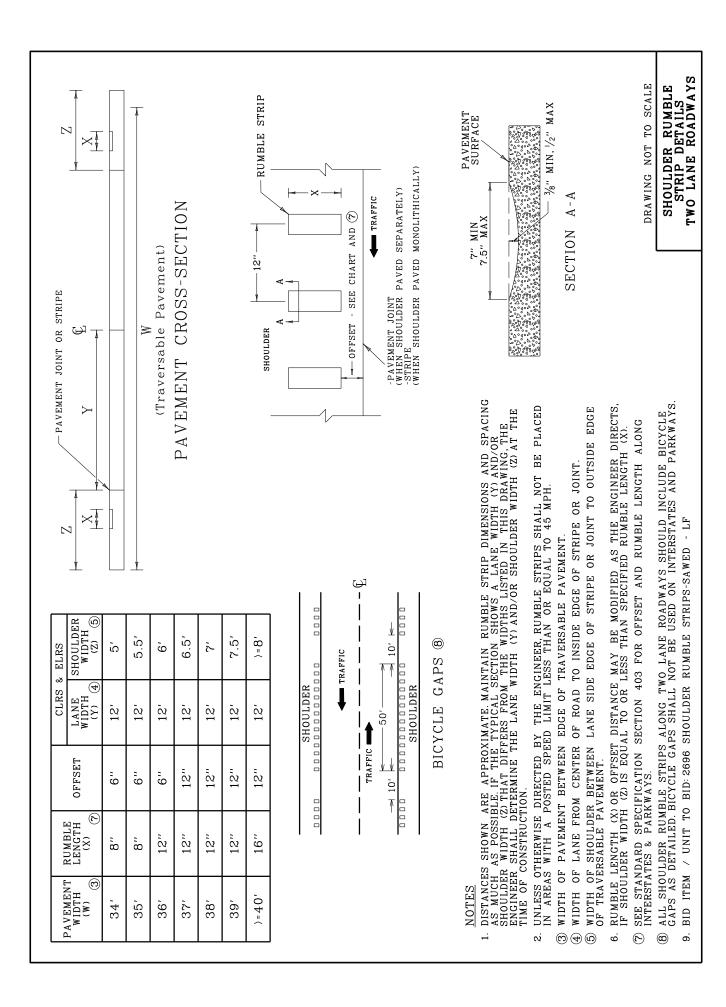
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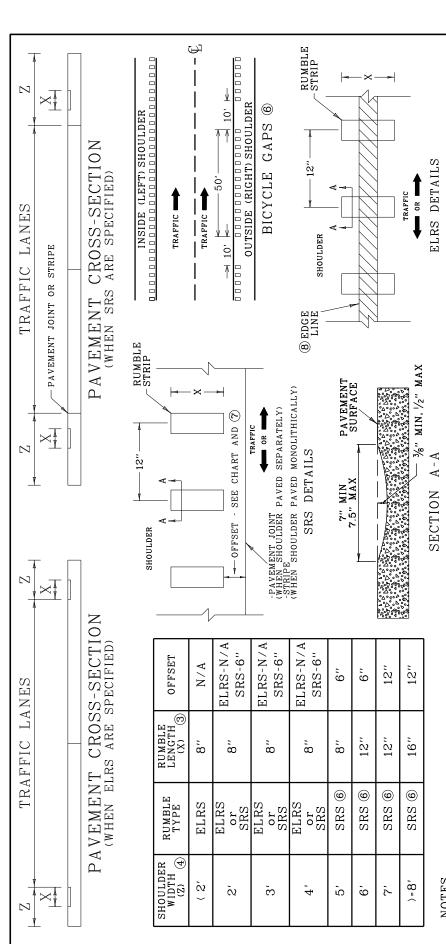
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CONTRARY TO SECTION 403.03.08 SUBSECTION A, PART 2 IN THE STANDARD SPECIFICATIONS: USE THE DIMENSIONS SPECIFIED ABOVE WHEN THIS DRAWING IS INCLUDED IN THE PROPOSAL œ.

- LF BID ITEM / UNIT TO BID: 23595EC RUMBLE STRIPE-SAW CUT g G





DISTANCES SHOWN ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE. IF THE TYPICAL SECTION SHOWS A SHOULDER WIDTH (Z) THAT DIFFERS FROM THE WIDTH LISTED IN THIS DRAWING, THE ENGINEER SHALL DETERMINE THE SHOULDER WIDTH (Z) AT THE TIME OF CONSTRUCTION.

BE PLACED IN AREAS WITH A POSTED SPEED LIMIT LESS THAN UNLESS OTHERWISE DIRECTED BY THE ENGINEER, RUMBLE STRIPS SHALL NOT OR EQUAL TO 45 MPH. જાં

FOR MULTI-LANE ROADWAYS, THE RUMBLE TYPE TO BE INSTALLED IS BASED ON SHOULER WIDTH (Z). FOR SHOULDER WIDTHS OF 2', 3', AND 4' THE RUMBLE TYPE MAY BE SPECIFIED AS EITHER EDGELINE RUMBLE STRIPS (SRS) IN THESE SITUATIONS, THE RUMBLE TYPE TO BE USED WILL BE SPECIFIED IN THE PLANS, PROPOSAL NOTES, AND/OR BID ITEMS, OR AS DIRECTED BY THE ENGINEER... (m)

WHEN ELRS ARE SPECIFIED: WIDTH OF SHOULDER IS FROM LANE SIDE EDGE OF RUMBLE STRIP TO OUTSIDE EDGE OF TRAVERSABLE PAVEMENT. WHEN SRS ARE SPECIFIED: WIDTH OF SHOULDER IS FROM LANE SIDE EDGE OF STRIPE OR JOINT TO OUTSIDE EDGE OF TRAVERSABLE PAVEMENT. RUMBLE LENGTH (X) MAY BE MODIFIED AS THE ENGINEER DIRECTS, IF SHOULDER WIDTH (Z) IS EQUAL TO OR LESS THAN SPECIFIED RUMBLE LENGTH (X). Ġ. 4

SHOULDER RUMBLE STRIPS (SRS) ALONG OUTSIDE (RIGHT) SHOULDERS THAT ARE 5' OR WIDER SHOULD INCLUDE BICYCLE GAPS AS DETAILED. BICYCLE GAPS ARE NOT REQUIRED ON THE INSIDE (LEFT) SHOULDER. BICYCLE GAPS SHALL NOT BE USED ON INTERSTATES AND PARKWAYS. 6

SEE STANDARD SPECIFICATION SECTION 403 FOR OFFSET AND RUMBLE LENGTH ALONG INTERSTATES & PARKWAYS. WHEN ELRS ARE SPECIFIED, THE EDGE LINE MARKINGS SHALL BE PLACED IN THE CENTER OF THE RUMBLE STRIP. (<u>></u>) (⊚) o

- LF BID ITEM / UNIT TO BID FOR ELRS: 23595EC RUMBLE STRIPE-SAW CUT - LF BID ITEM / UNIT TO BID FOR SRS: 2696 SHOULDER RUMBLE STRIPS-SAWED -

RUMBLE STRIP DETAILS MULTI-LANE ROADWAYS DRAWING NOT TO SCALE

Contract ID: 172031 Page 47 of 198



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

○ Original		Certification		RIGHT O	F WAY CERTIFICA	TION
ITEM	#		COUNTY	PROJE	CT # (STATE)	PROJECT # (FEDERAL)
06-9011.00		PENDLETON		12FO FD52 0	96 9031601	OHSIP5217013
PROJECT DESCRIPTION						
CORRECT SUPERELEVATION IN CURVES, REMOVE TREES IN CLEAR ZONE, DITCHING/SHOULDERING AND EXTEND CULVER						
No Additional Right of Way Required						
Femile				The right of way w	as acquired in accor	rdance to FHWA regulations
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 assista	relocation assistance were required for this project.					
Condition	#1 (Additi	onal Right of V	Way Required and (Cleared)		
			of access rights when a			
						ere may be some improvements
						as physical possession and the
-	_				•	een paid or deposited with the available to displaced persons
			e with the p rovisions			available to displaced persons
Married Co., Co., Co., Co., Co., Co., Co., Co.,			Way Required with		eri dii Golife.	
			The state of the s		-of-way required fo	r the proper execution of the
						ion has not been obtained, but
				*		has physical possession and right
		•	•	*	•	the court for most parcels. Just
The second secon			paid or deposited wit	AND DESCRIPTION OF THE PARTY OF	o AWARD of constr	uction contract
The second secon			Way Required with			OSPITE TO THE TOTAL THE TOTAL TO THE TOTAL TOTAL TO THE T
						parcels still have occupants. All
						24.204. KYTC is hereby
7			-			he necessary right of way will not e paid or deposited with the
						R 635.309(c)(3) and 49 CFR
			acquisitions, relocatio			
			account construction			-
Total Number of Pari			CEPTION (S) Parcel #	ANTICH	PATED DATE OF POSSES	SION WITH EXPLANATION
Number of Parcels T	hat Have Been	Acquired			37.33.	
Signed Deed						
Condemnation Signed ROE	-	+ +				
Notes/ Comments	(Use Addition	al Sheet if neces	sary)			2 100 1000 100
i X. u maranina =		22				289
LPA RW Project Manager			Right of Way Supervisor			
Printed Name		ANTE CONTRACTOR OF THE PROPERTY OF THE PROPERT		Printed Name		Rollert Yeager
Signature				Signature	Laker	
Date	100			Date	- Luniya	11/30/2016
Right of Way Director				L EHIAT	7	
Printed Name McClebe for Dean Con		Printed Name	as per	hature Required FHWA - KYTC		
Signature	77		- Cuy	Signature	the second secon	ardship Agreement
Date		0,1	10/-	Date		
			4/17	Date		
		/	1			

UTILITIES AND RAIL CERTIFICATION NOTE

PENDLETON COUNTY, HSIP 5217 013 FD52 096 0017 006-009, 9031601D

KY 17 Correct Superelevation in Curves, Remove Trees in Clear Zone, Ditching/Shouldering and extend Culvert (MP 8.06) on KY 17.

Item No. 6-9011.00

Utility coordination efforts determined that no significant utility relocation work is required to complete the project. Any work pertaining to these utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal.

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

Pendleton County Water District (PCWD) has a 12" Water Main along the South side of KY 17 throughout the entire project limits that is not to be disturbed during construction activities. As stated in the proposal, the contractor is to contact PCWD to have their main located and is to avoid the existing main.

Cincinnati Bell has overhead telephone facilities throughout the project that the contractor is to avoid.

	•	J	
THE FOLLOWING RAI	L COMPANIES HAVE FACILITIES	IN CONJU	NCTION WITH THIS PROJECT AS NOTED
☑ No Rail Involved	☐ Minimal Rail Involved (S	ee Below) □ Rail Involved (See Below)

UNDERGROUND FACILITY DAMAGE PROTECTION - BEFORE YOU DIG

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.

<u>SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES</u>

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

UTILITIES AND RAIL CERTIFICATION NOTE

PENDLETON COUNTY, HSIP 5217 013 FD52 096 0017 006-009, 9031601D

KY 17 Correct Superelevation in Curves, Remove Trees in Clear Zone, Ditching/Shouldering and extend Culvert (MP 8.06) on KY 17.

Item No. 6-9011.00

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.

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

AREA UTILITIES CONTACT LIST AS PROVIDED BY KY 811

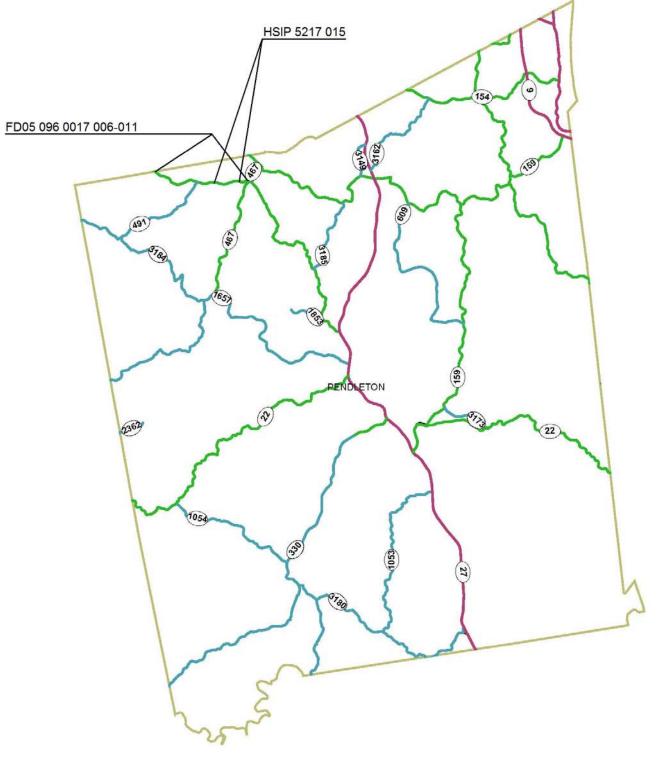
Utility Company/Agency

Contact Name

Contact Information

Will be provided at the preconstruction meeting.

PENDLETON





Revised: 2-23-17 Contract ID: 172031 Page 51 of 198

MATERIAL SUMMARY

CONTRACT ID: 172031	096GR16P120 - HSIP & FD05	MP09600171601
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FALMOUTH TO COVINGTON ROAD (KY 17) BEGIN 67 FEET SOUTH OF BRIDGES DRIVE EXTENDING NORTH TO 1.41 MILES SOUTH OF KY 491 ASPHALT PAVEMENT & ROADWAY REHAB, A DISTANCE OF 1.2 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	00001	DGA BASE	6.00	TON
0010	02230	EMBANKMENT IN PLACE	249.00	CUYD
0015	00190	LEVELING & WEDGING PG64-22	245.00	TON
0020	02677	ASPHALT PAVE MILLING & TEXTURING	404.00	TON
0025	00221	CL2 ASPH BASE 0.75D PG64-22	6.00	TON
0030	02014	BARRICADE-TYPE III	3.00	EACH
0035	02351	GUARDRAIL-STEEL W BEAM-S FACE	400.00	LF
0040	02371	GUARDRAIL END TREATMENT TYPE 7	4.00	EACH
0045	02381	REMOVE GUARDRAIL	100.00	LF
0050	02460	REMOVE TREES OR STUMPS	34.00	EACH
0055	02562	TEMPORARY SIGNS	120.00	SQFT
0060	02671	PORTABLE CHANGEABLE MESSAGE SIGN	3.00	EACH
0065	03269	TRIM & REMOVE TREES & BRUSH	2,775.00	LF
0075	01550	DROP BOX INLET TYPE 12A	95.00	LF
0080	01726	SAFETY BOX INLET-18 IN SDB-1	1.00	EACH
0085	02237	DITCHING	105.00	LF
0090	02625	REMOVE HEADWALL	3.00	EACH
0095	23074NN	ADJUST DRAINAGE STRUCTURE	3.00	EACH
0100	02731	REMOVE STRUCTURE - (HSIP)	1.00	LS
0105	24649EN	ALUMINUM STRUCTURAL PLATE BOX CULVERT - (HSIP)	1.00	LS
0110	02569	DEMOBILIZATION	1.00	LS
0115	02676	MOBILIZATION FOR MILL & TEXT - (HSIP)	1.00	LS
0120	02650	MAINTAIN & CONTROL TRAFFIC - (HSIP)	1.00	LS
0125	01984	DELINEATOR FOR BARRIER - WHITE	8.00	EACH
0130	20257NC	SITE PREPARATION	1.00	LS
0135	02726	STAKING	1.00	LS
0140	21415ND	EROSION CONTROL	1.00	LS

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MATERIAL SUMMARY

CONTRACT ID: 172031 096GR16P120 - HSIP & FD05 MP09600

FALMOUTH TO COVINGTON ROAD (KY 17) BEGIN AT KY 476 EXTENDING NORTH TO THE KENTON COUNTY LINE ASPHALT PAVEMENT & ROADWAY REHAB, A DISTANCE OF 3.4 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0145	02562	TEMPORARY SIGNS	270.00	SQFT
0150	02650	MAINTAIN & CONTROL TRAFFIC - (FD05)	1.00	LS
0155	00301	CL2 ASPH SURF 0.38D PG64-22	3,025.00	TON
0160	00190	LEVELING & WEDGING PG64-22	311.00	TON
0165	06514	PAVE STRIPING-PERM PAINT-4 IN	71,912.00	LF
0170	06510	PAVE STRIPING-TEMP PAINT-4 IN	20,000.00	LF
0175	02677	ASPHALT PAVE MILLING & TEXTURING	67.00	TON
0180	02676	MOBILIZATION FOR MILL & TEXT - (FD05)	1.00	LS
0185	00001	DGA BASE	350.00	TON
0190	10030NS	ASPHALT ADJUSTMENT	8,037.00	DOLL
0195	10020NS	FUEL ADJUSTMENT	4,672.00	DOLL
0200	02569	DEMOBILIZATION	1.00	LS

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TREE CUTTING AND TRIMMING

Trees have been identified for removal along the project corridor and are identified in the table below. Removal will be paid by the bid item "Remove Trees or Stumps" as EACH.

Station	Offset	Elev	Description
8+24	LT 16'	0	30" WALNUT
8+75	LT 15'	0	36" WALNUT
12+48	LT 16'	0	30" WALNUT
13+14	LT 18'	0	24" WALNUT
15+42	LT 16'	0	24" ELM
16+27	LT 17'	0	18" DEAD ASH
19+33	LT 17	0	18" DEAD ASH
23+51	LT 16'	0	18" DEAD ASH
39+36	LT 17'	0	20" WALNUT
39+37	LT 15'	0	16" LOCUST
47+69	LT 14'	0	24" BOX ELDER
50+62	LT 16'	0	24" SYCAMORE
50+85	LT 18'	0	12" DEAD ASH
50+97	LT 15'	0	16" TWIN DEAD ELM
51+28	LT 16'	0	8" MAPLE
51+45	LT 18'	0	14" SYCAMORE
51+76	LT 17'	0	12" MAPLE
51+79	LT 17'	0	10" DEAD ASH
52+06	LT 18'	0	16" SYCAMORE
52+49	LT 18'	0	18" SYCAMORE
53+22	LT 19'	0	14" SYCAMORE
57+62	LT 17'	0	36" SYCAMORE
58+75	LT 15'	0	42" SYCAMORE
59+50	LT 18'	0	18" WALNUT
60+58	LT 18'	0	18" SYCAMORE
60+94	LT 14'	0	42" SYCAMORE
62+12	LT 21'	0	36" SYCAMORE
63+04	LT 17'	0	14" WALNUT
63+28	LT 15'	0	16" OAK
63+41	LT 14'	0	36" OAK
64+32	RT 18'	0	18" WALNUT
69+60	LT 14'	0	36" OAK

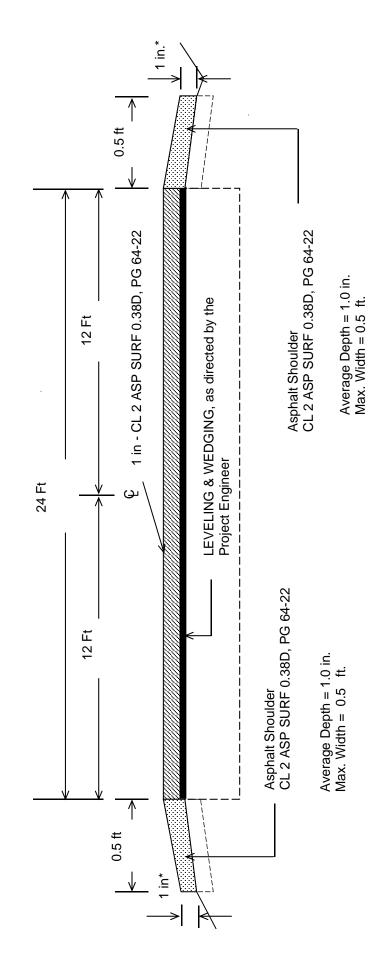
TREE CUTTING AND TRIMMING cont.

Trees trimming locations have been identified in the table below. Trimming will be paid by the bid item "Trim & Remove Trees & Brush" as LF. Trees shall be trimmed to alleviate the canopy effect over KY 17, as directed by the Engineer.

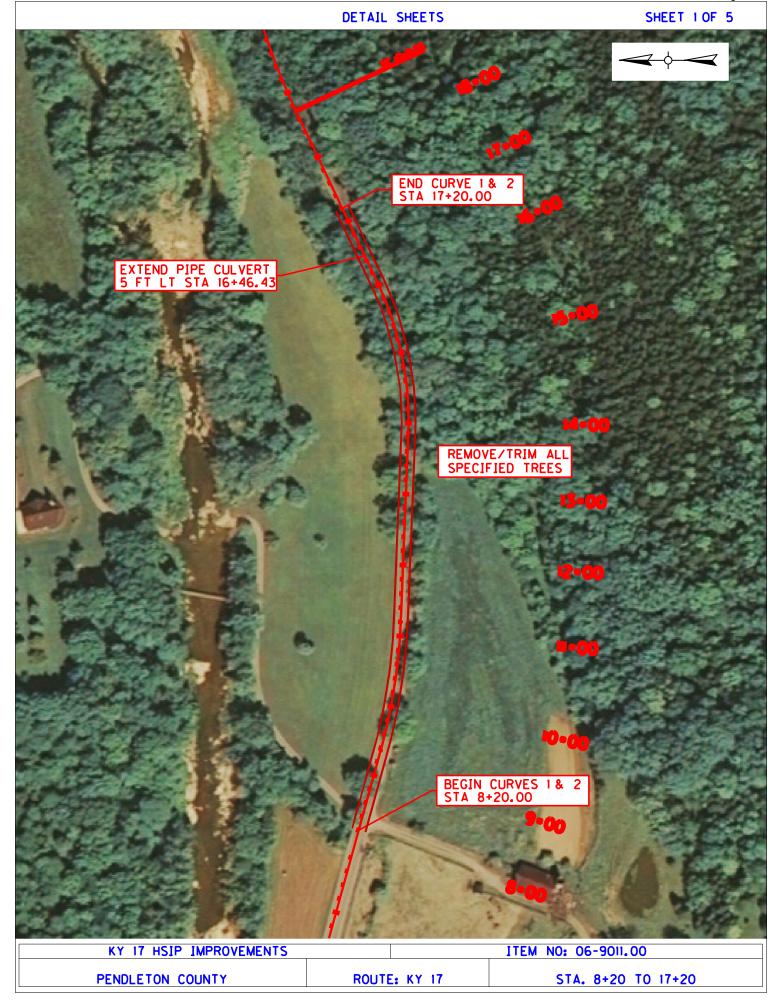
Begin STA	End STA	LF
12+40	17+00	460
17+75	20+80	305
22+50	24+25	175
41+25	48+00	675
50+75	54+85	410
57+50	65+00	750

PENDLETON COUNTY

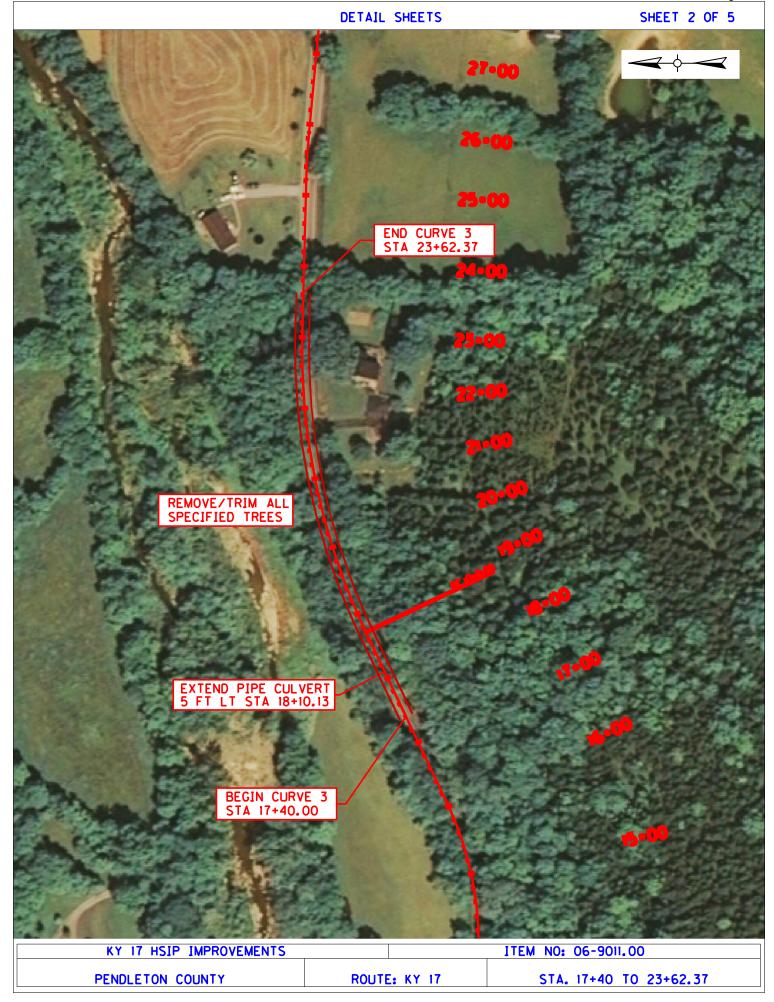
FD05 096 0017 006-011 TYPICAL SECTION MILEPOINTS 6.934 - 10.339

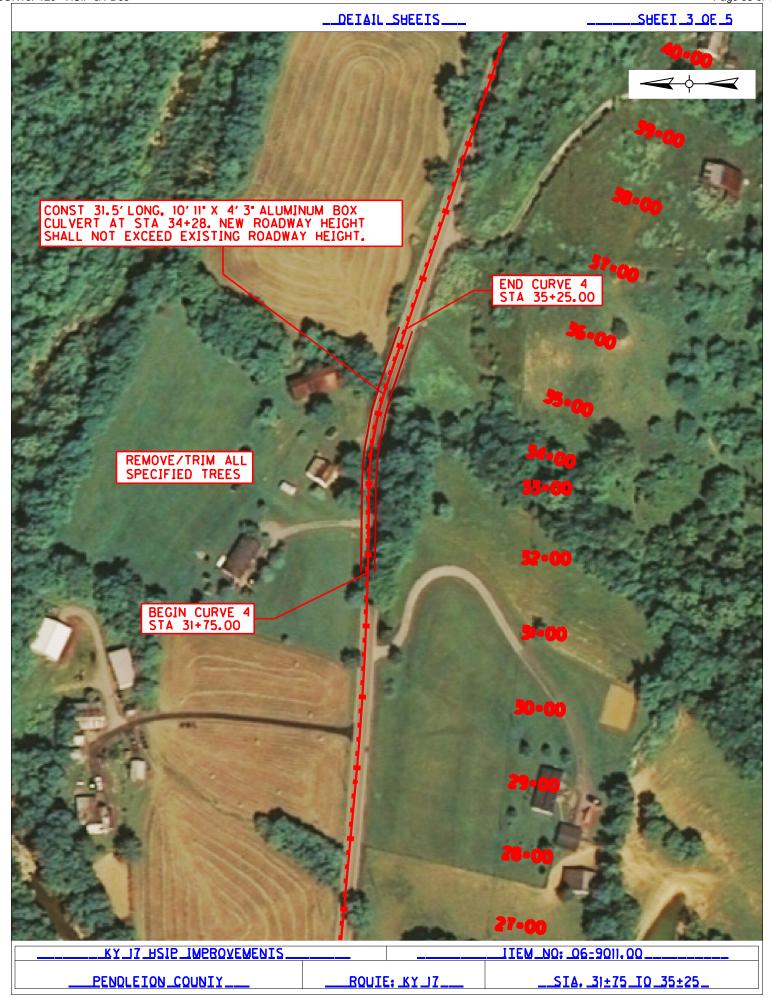


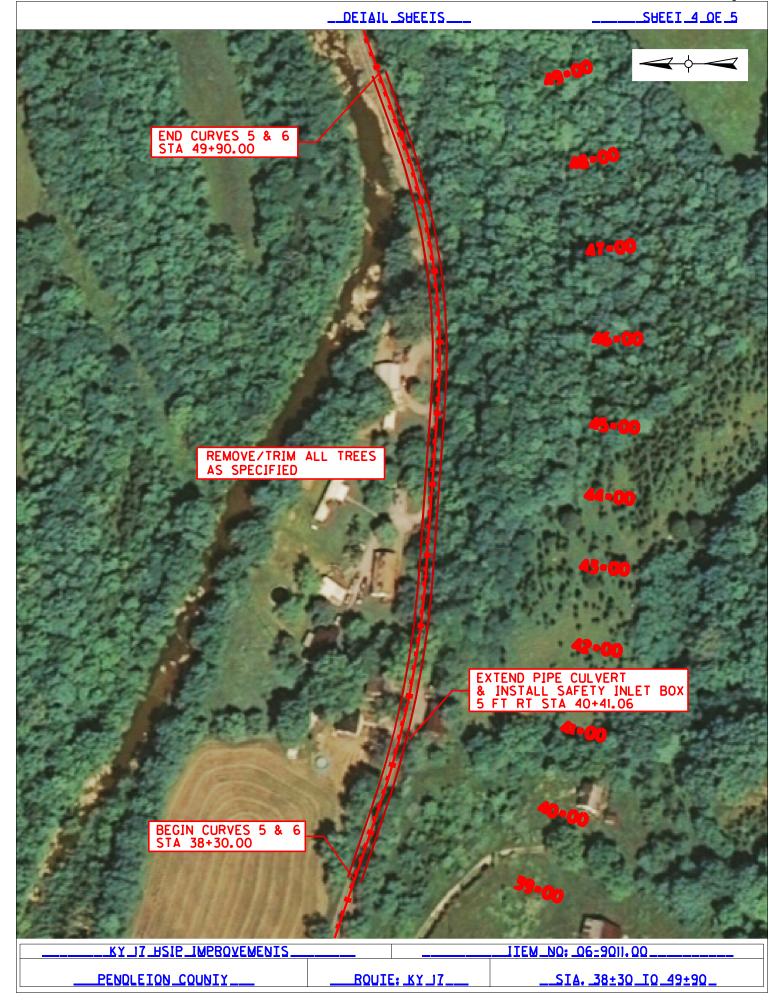
*Where Existing Site Conditions Permit



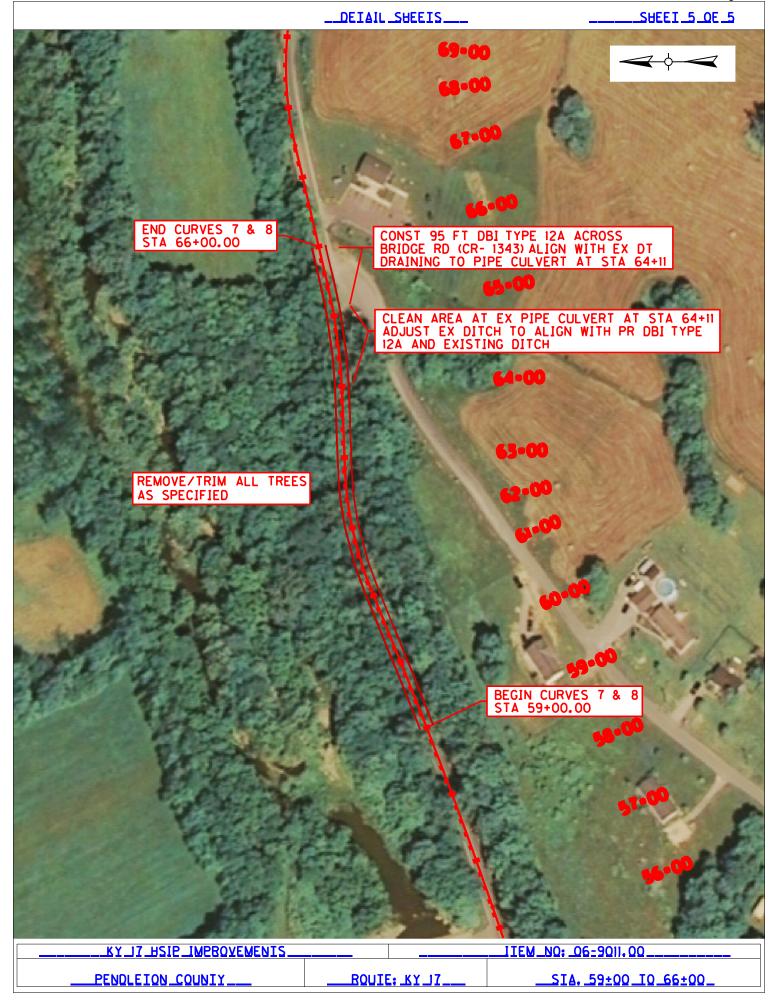
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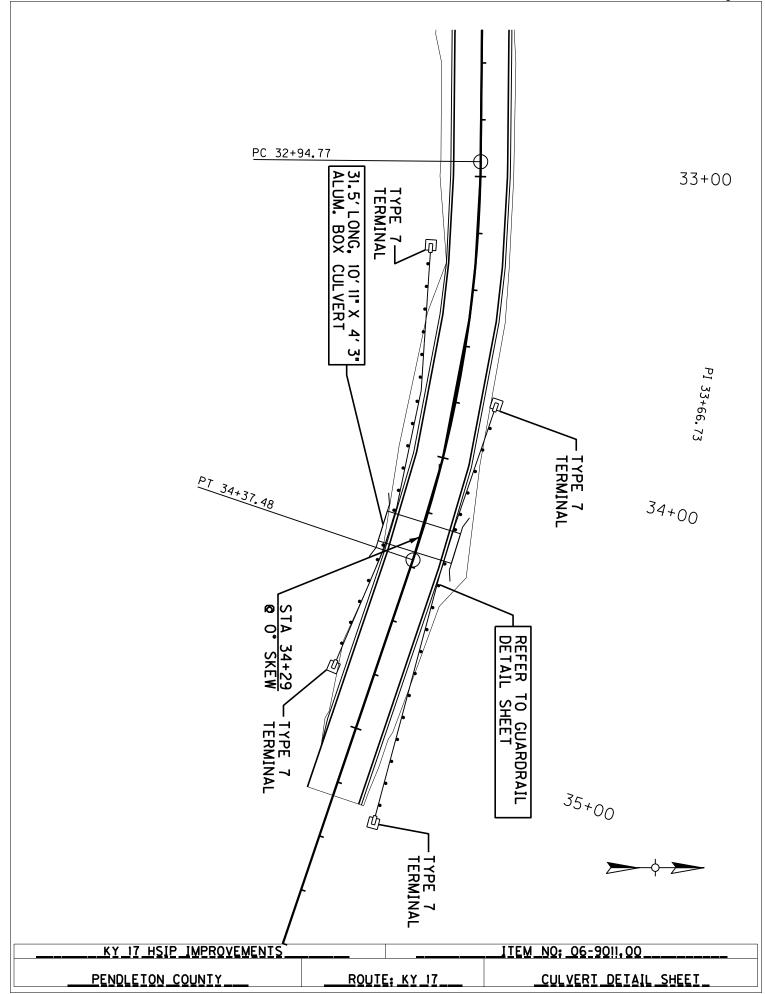


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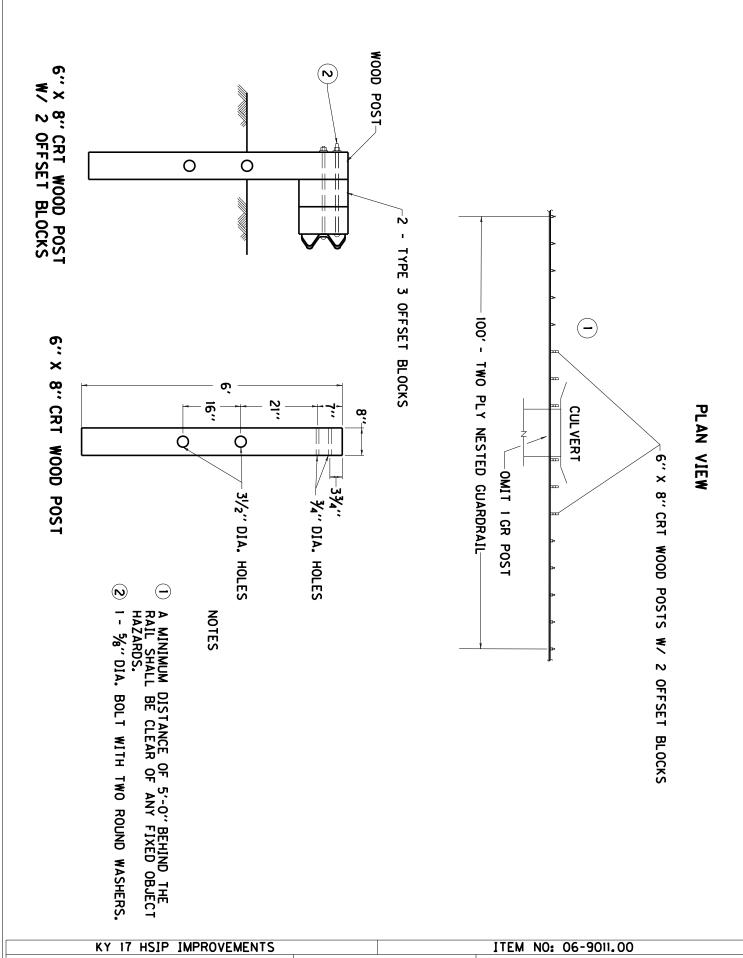


EXISTING GROUND LINE Stone Shoulder Wedge to be used as directed by the engineer on the project Stone Shoulder Wedge to be used when shoulder dropoff is over 1" To be used at the edge of the resurfaced shoulder 2' AVG STONE WEDGE APROX. 2" ASPHALT SHOULDER ASPHALT RESURFACING EX. SURFACE NOTE:

...\DGNfiles\Srone Wedge.dgn 12/2/2007 3:41:13 PM

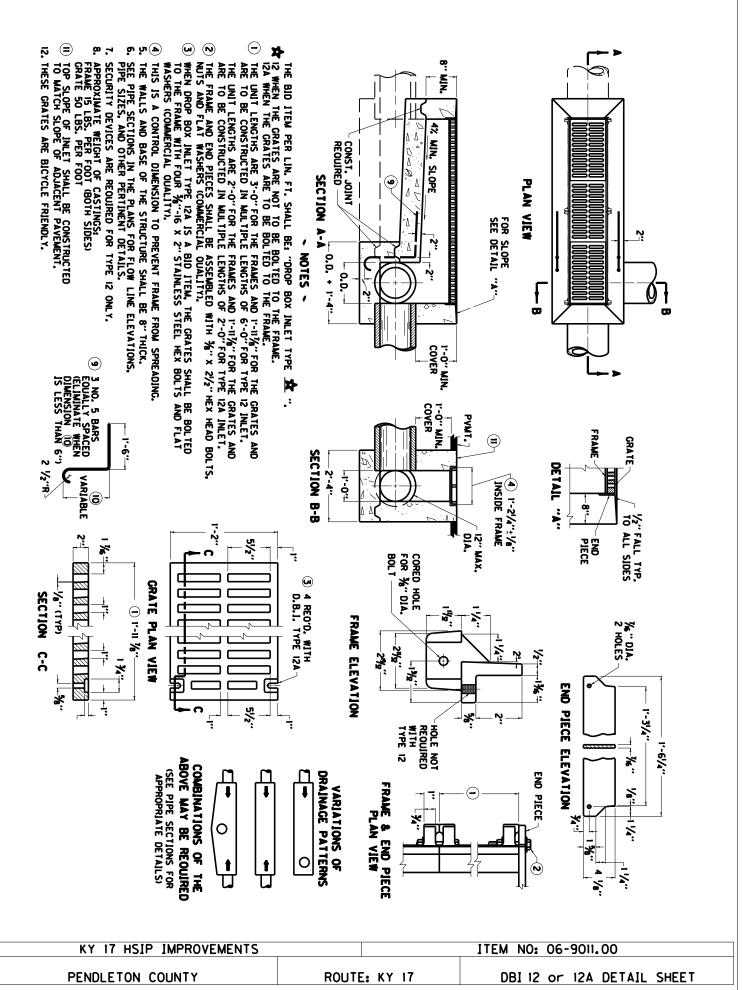


PENDLETON COUNTY



ROUTE: KY 17

GUARDRAIL DETAIL SHEET



PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 65 of 198 560 550 550 550 560 550 COM 2.65 CU YDS EMB 0.00 CU YDS 140 150 1.54 cu ybs 1.06 cu ybs 150 rps rps 150 cu ybs cu ybs TO STA,9+50 140 1 COM 3.21 CU YE EMB 0.56 CU YE 140 COM 0.00 EMB 0.00 COM COUNTY OF 130 130 130 130 STA.8+20 120 120 120 120 91 9 9 9 100 001 100 001 HORIZONTA VERTICAL 90 90 90 90 80 80 80 80 SCALE: " = 70 20 2 20 9 09 09 09 50 20 20 20 40 40 40 40 30 30 30 30 20 20 20 20 0 3.00% 1,887 262,00 0 + 0 + 05.538 0 8+20 2.00% 2.00% 2.00% 2.00% 9 9 -10 -10 -20 -20 -20 -20 -30 -30 -30 -30 -40 -40 -40 -40 -50 -50 -50 -50 -60 09--60 -60 -70 -70 -70 -70 -80 -80 -80 -80 -90 -90 -90 -90 -100 -100 -100 -100 -110 -110 -110 -110 -120 -120 -120 -120 -130 -130 -130 -130 -150 -140 COM 1.98 SO FT EMB 0.00 SO FT -150 -140 COM 0.99 SO FT EMB 0.54 SO FT -150 -140 COM 0.67 SO FT EMB 0.60 SO FT -140 S0 FT -150 M 2.80 S 260 260 570 260 260 550 550 550 550 570 COM USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN E-SHEET NAME: E++.Y.11.8v noitst2onalM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 66 of 198 560 550 560 550 560 550 560 550 140 150 COM 3.09 CU YDS EMB 1.72 CU YDS 140 150 COM 5.79 CU YDS EMB 1.11 CU YDS 140 150 COM 2.56 CU YDS EMB 1.10 CU YDS COM 5.04 CU YDS EMB 0.87 CU YDS STA,10+00 TO STA,11+50 130 COUNTY OF 130 130 130 120 120 120 120 91 9 9 9 100 001 100 001 HORIZONTA VERTICAL 90 90 90 90 80 80 80 80 SCALE: " = 70 20 2 20 9 09 09 09 50 20 20 20 40 40 40 40 30 30 30 30 20 20 20 20 0 81.0 9 0 9 92.0 0.88% 2.00% O + O + O 0 193 0 10+00 18*199 O + 150 O 08.193 = + 0 8.192 0 2.00% 2.00% 2.00% -10 -10 -10 -10 -20 -20 -20 -20 -30 -30 -30 -30 -40 -40 -40 -40 -50 -50 -50 -50 -60 09--60 -60 -70 -70 -70 -70 -80 -80 -80 -80 -90 -90 -90 -90 -100 -100 -100 -100 -110 -110 -110 -110 -120 -120 -120 -120 -130 -130 -130 -130 -150 -140 COM 1.78 SO FT EMB 0.65 SO FT -150 -140 COM 0.75 SO FT EMB 0.96 SO FT -150 -140 COM 2.59 SO FT EMB 0.90 SO FT -150 -140 COM 3.66 SO FT EMB 0.30 SO FT 260 260 260 560 550 550 550 570 570 USER: chile.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN E-SHEET NAME: E++.Y.11.8v noitst2onalM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 580 260 560 550 550 550 140 150 com 1.98 cu YDS EMB 2.05 cu YDS 150 res res 140 150 COM 2.18 CU YDS EMB 1.13 CU YDS STA,12+00 TO STA,13+00 140 1.44 CU Y 7.96 CU Y COM COUNTY OF 130 130 130 120 120 120 9 9 9 100 100 001 HORIZONTAL VERTICAL 90 90 90 80 80 80 SCALE: " = 20 20 20 09 09 09 20 20 20 40 40 40 30 30 30 20 20 20 0 0 0 0.25 0.55% 0 + E1 0 + S5.188 0 + 51 + 550 0 12+00 2.00% 2.00% -10 -10 -10 -20 -20 -20 -30 -30 -30 -40 -40 -40 -50 -50 -50 09--60 -60 -70 -70 -70 -80 -80 -80 -90 -90 -90 -100 -100 -100 -110 -110 -110 -120 -120 -120 -130 -130 -130 -150 -140 COM 1.02 SO FT EMB 6.64 SO FT -150 -140 COM 0.54 SO FT EMB 1.95 SO FT -150 -140 COM 1.60 SO FT EMB 0.26 SO FT 260 570 260 560 550 570 550 580 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN E-SHEET NAME: E##. T. 11.8v notist/2010/IM

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PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 68 of 198 009 580 560 550 COM 2.86 CU YDS EMB 7.56 CU YDS COM 3.05 CU YDS EMB 2.47 CU YDS STA.13+50 TO STA.14+00 COUNTY OF 130 120 120 9 10 100 001 HORIZONTAL VERTICAL 90 90 80 80 SCALE: " = 70 20 09 09 20 40 40 30 30 20 20 0 0 0.25 95.0 4, 79% 2.67% 0 14+00 0 13+50 4.56% 9 9 -20 -20 -30 -30 -40 -40 -50 -50 -60 -60 -70 -80 -80 -90 -90 -100 -100 -110 -110 -120 -120 -130 -150 -140 COM 1.22 SO FT EMB 1.15 SO FT -150 -140 COM 2.07 SO FT EMB 1.52 SO FT 260 560 550 590 580 580 009 590 USER: chrls.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN 644 7.11.8v nottst2orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 69 of 198 COM 2.39 CU YDS EMB 1.39 CU YDS 550 140 150 COM 2.89 CU YDS EMB 1.71 CU YDS 560 610 590 580 580 STA,14+50 TO STA,15+00 COUNTY OF 130 130 120 120 9 9 100 001 HORIZONTAL VERTICAL 90 90 80 80 SCALE: " = 20 20 09 09 20 20 40 40 30 30 20 20 0 9 0.24 0 15+00 0 14+50 55.888 5,75% 5.75% 9 -10 -20 -20 -30 -30 -40 -40 -50 -50 -60 -60 -70 -70 -80 -80 -90 -90 -100 -100 -110 -110 -120 -120 -130 -130 -150 -140 COM 1.90 SO FT EMB 0.70 SO FT -150 -140 COM 0.69 SO FT EMB 0.80 SO FT 260 550 560 550 009 590 580 009 580 910 620 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 70 of 198 250 140 150 COM 3.03 CU YDS EMB 1.18 CU YDS STA,15+50 TO STA,15+50 130 COUNTY OF 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0.28 5.75% 0 15+50 9.695 9 61.0 -20 -30 -40 -50 09--70 -80 -90 -100 -110 -120 -130 -150 -140 COM 2.59 SO FT EMB 0.48 SO FT 620 580 560 550 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 71 of 198 550 140 150 COM 4.67 CU YDS EMB 1.01 CU YDS STA,16+00 TO STA,16+00 130 COUNTY OF 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 4.60% 0 16+00 19.072 5. 75% 9 -20 -30 -40 -50 09--70 -80 -90 -100 -110 -120 -130 -150 -140 COM 2.45 SO FT EMB 0.62 SO FT 620 580 560 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 72 of 198 140 150 COM 3.71CU YDS EMB 7.81CU YDS STA,16+50 TO STA,16+50 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 2.82% 0 16+50 3,81% 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.56 SO FT EMB 7.82 SO FT 620 580 560 610 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 73 of 198 250 140 150 COM 2.36 CU YDS EMB 7.56 CU YDS STA.17+00 TO STA.17+00 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 60.0 1.03% 0 17+00 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 0.99 SO FT EMB 0.35 SO FT 620 580 560 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 74 of 198 COM 1.54 CU YDS EMB 0.36 CU YDS STA.17+30 TO STA.17+30 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 17+30 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.78 SO FT EMB 0.30 SO FT 620 580 560 610 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 75 of 198 0 140 150 COM 0.00 CU YDS EMB 0.00 CU YDS STA.17+30 TO STA.17+30 130 COUNTY OF 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 17+30 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.80 SO FT EMB 2.36 SO FT 620 580 560 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 76 of 198 140 150 COM 1.60 CU YDS EMB 0.87 CU YDS STA.17+50 TO STA.17+50 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 17+50 3.00% 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 2.53 SO FT EMB 0.00 SO FT 620 580 560 610 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 77 of 198 0 140 150 com 4.02 cu ybs EMB 20.58 cu ybs STA,18+00 TO STA,18+00 130 COUNTY OF 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 18+00 3,00% 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.81 SO FT EMB 22.23 SO FT 620 290 570 260 550 540 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 78 of 198 0 140 150 COM 3.51 CU YDS EMB 22.09 CU YDS STA,18+50 TO STA,18+50 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 1,72% 0 18+50 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.98 SO FT EMB 1.63 SO FT 620 290 570 260 550 540 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 79 of 198 540 140 150 COM 6.77 CU YDS EMB 3.59 CU YDS 610 STA,19+00 TO STA,19+00 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 19+00 1.50% 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 5.34 SO FT EMB 2.25 SO FT 290 570 260 550 540 620 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 80 of 198 D 140 150 COM 7.25 CU YDS EMB 2.74 CU YDS 620 580 STA,19+50 TO STA,19+50 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0.21 0 19+50 35.25 2.00% 9 -20 -30 -40 -50 09--70 -80 -90 -100 -110 -120 -130 -150 -140 COM 2.49 SO FT EMB 0.71 SO FT 570 260 550 540 590 620 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 81 of 198 540 140 150 COM 3.95 CU YDS EMB 1.21 CU YDS 620 STA,20+00 TO STA,20+00 130 COUNTY OF 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 20+00 2.00% 9 0,28 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.77 SO FT EMB 0.60 SO FT 290 570 260 550 540 620 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 82 of 198 140 150 COM 3.19 CU YDS EMB 1.96 CU YDS 620 STA.20+50 TO STA.20+50 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 20+50 89.978 9 -20 -30 -40 -50 09--70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.67 SO FT EMB 1.52 SO FT 290 570 260 550 540 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 0 140 150 com 4.00 cu ybs EMB 3.03 cu ybs 140 150 COM 3.57 CU YDS EMB 3.46 CU YDS 009 550 610 580 STA,21+00 TO STA,21+50 130 130 120 120 9 9 100 001 90 90 80 80 SCALE: " = 20 20 09 09 20 20 40 40 30 30 20 20 0 9 0.22 0 21+50 0 21+00 95.672 14.872 9 -10 65.0 PT.0 -20 -20 -30 -30 -40 -40 -50 -50 -60 -60 -70 -70 -80 -80 -90 -90 -100 -100 -110 -10 -120 -120 -130 -130 -150 -140 COM 2.13 SQ FT EMB 1.05 SQ FT -150 -140 COM 2.19 SO FT EMB 2.22 SO FT 009 580 550 540 570 550 540 590 570 590 260 610 560 610 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN

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PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 140 150 COM 3.74 CU YDS EMB 1.14 CU YDS 550 580 580 140 150 COM 2.07 CU YDS EMB 0.66 CU YDS STA.22+00 TO STA.22+50 COUNTY OF 130 130 120 120 9 9 100 100 HORIZONTAL VERTICAL 90 90 80 80 SCALE: " = 20 20 09 09 20 20 40 40 30 30 20 20 0 0 61.0 0 22+50 0 22+00 88.672 0.26 9 -10 0.21 -20 -20 -30 -30 -40 -40 -50 -50 09--60 -70 -70 -80 -80 -90 -90 -100 -100 -110 -110 -120 -120 -130 -150 -140 COM 0.33 SO FT EMB 0.54 SO FT -150 -140 COM 1.90 SO FT EMB 0.17 SO FT 260 550 540 570 550 540 590 580 009 590 580 260 USER: chrls.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN 644 7.11.8v nottst2orotM

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PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 540 140 150 COM 2.42 CU YDS EMB 1.25 CU YDS 009 550 580 560 140 150 COM 2.93 CU YDS EMB 0.77 CU YDS STA.23+00 TO STA.23+50 COUNTY OF 130 130 120 120 9 10 100 100 HORIZONTAL VERTICAL 90 90 80 80 SCALE: " = 20 20 09 09 20 20 40 40 30 30 20 20 0 0 0 23+50 0 23+00 08.972 61.878 0.65% 9 -10 -20 -20 -30 -30 -40 -40 -50 -50 09--60 -70 -70 -80 -80 -90 -90 -100 -100 -110 -110 -120 -120 -130 -150 -140 com 0.88 S0 FT EMB 0.02 S0 FT -150 -140 COM 2.28 SO FT EMB 0.81 SO FT 580 570 009 570 260 550 540 009 590 580 590 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN E-SHEET NAME: 644 7.11.8v nottst2orotM

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PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 0 140 150 COM 0.65 CU YDS EMB 0.00 CU YDS Page 86 of 198 009 STA.23+62 TO STA.23+62 ITEM NO. COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 23+62 52.978 9 -20 -30 -40 -50 09--70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.96 SO FT EMB 0.00 SO FT 580 560 590 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN E-SHEET NAME: £#4.7.11.8v notts/2010/M

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 560 550 560 550 540 570 550 COM 1.57 CU YDS EMB 6.43 CU YDS 150 res res COM 0.00 CU YDS EMB 0.00 CU YDS STA.31+75 TO STA.32+50 140 com 1.62 cu Yr EMB 0.96 cu Yr ITEM NO. COUNTY OF 130 130 130 120 120 120 9 9 9 100 100 001 HORIZONTAL VERTICAL 90 90 90 80 80 80 SCALE: " = 20 20 20 09 09 09 20 20 20 40 40 40 30 30 30 20 20 20 0 0 0 0.65% 0 32+50 0 32+00 0 31+75 ST .888 2.26% .16% -10 0--10 11.0 -20 -20 -20 -30 -30 -30 -40 -40 -40 -50 -50 -50 09--60 -60 -70 -70 -70 -80 -80 -80 -90 -90 -90 -100 -100 -100 -110 -110 -110 -120 -120 -120 -130 -130 -130 -150 -140 COM 0.46 SO FT EMB 6.40 SO FT -150 -140 COM 2.27 SO FT EMB 1.53 SO FT -150 -140 COM 1.24 SO FT EMB 0.54 SO FT 550 540 570 260 560 550 570 260 580 580 USER: chitle.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN E-SHEET NAME: 644 7.11.8v nottst2orotM

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PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 260 540 550 540 550 550 530 540 COM 2.65 CU YDS EMB 6.78 CU YDS 150 res res 150 res res 150 cu ybs cu ybs STA,33+00 TO STA,34+50 140 1 COM 2.27 CU YE EMB 2.80 CU YE 140 1.67 CU Y 6.28 CU Y 140 COM 2.26 EMB 7.96 COM COUNTY OF 130 130 130 130 120 120 120 120 9 9 9 9 100 001 001 HORIZONTA VERTICAL 90 90 90 90 80 80 80 80 <u>" "</u> 20 2 20 20 09 09 09 09 20 20 20 20 40 40 40 40 30 30 30 30 20 20 20 20 0 0 0 9 5.75% 4.11% 0 % 34+50 0 34 + 00 0 33+**%** 0 33+00 546.25 5.75% 9-9 9 -10 0.25 -20 -20 -20 -20 -30 -30 -30 -30 -40 -40 -40 -40 -50 -50 -50 -50 09--60 -60 -60 -70 -70 -70 -70 -80 -80 -80 -80 -90 -90 -90 -90 -100 -100 -100 -100 -110 -110 -110 -110 -120 -120 -120 -120 -130 -130 -130 -130 -150 -140 COM 0.92 SO FT EMB 1.65 SO FT -150 -140 COM 0.88 SO FT EMB 5.13 SO FT -150 -140 COM 1.98 SO FT EMB 2.19 SO FT -150 -140 COM 1.53 SO FT EMB 1.38 SO FT 550 530 560 550 540 550 540 540 260 560 550 USER: chile.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN E-SHEET NAME: E++.Y.11.8v noitst2onalM

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PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 89 of 198 550 530 560 530 COM 2.58 CU YDS EMB 1.88 CU YDS COM 1.54 CU YDS EMB 0.30 CU YDS STA.35+00 TO STA.35+25 ITEM NO. COUNTY OF 130 130 120 120 9 10 100 100 HORIZONTAL VERTICAL 90 90 80 80 SCALE: 1' = 70 20 09 09 20 20 40 40 30 30 20 20 0 0 2.00% 1.51% 0 35+25 0 35+00 p7.2p2 29.645 0.61% 0.54% 0--10 -20 -20 -30 -30 -40 -40 -50 -50 09--60 -70 -70 -80 -80 -90 -90 -100 -100 -110 -110 -120 -120 -130 -130 -150 -140 COM 1.25 SO FT EMB 0.65 SO FT -150 -140 COM 2.06 SO FT EMB 0.00 SO FT 540 560 540 530 260 550 550 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN E-SHEET NAME: 644 7.11.8v nottst2orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 530 0 140 150 com 0.00 cu ybs EMB 0.00 cu ybs 530 140 150 COM 1.52 CU YDS EMB 0.34 CU YDS STA.38+30 TO STA.38+50 COUNTY OF 130 130 120 120 9 10 001 100 90 90 80 80 SCALE: " = 70 10 09 09 20 20 40 40 30 30 20 20 0 9 0 38+50 0 38+30 545.34 2.53% 9--10 -20 -30 -30 -40 -40 -50 -50 09--60 -70 -70 -80 -80 -90 -90 -100 -100 -110 -110 -120 -130 -130 -150 -140 COM 1.69 SO FT EMB 0.59 SO FT -150 -140 COM 2.41 SO FT EMB 0.32 SO FT 260 550 540 530 260 550 540 530 580 580 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: E++.7.11.8v notist@orotM

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PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 530 530 140 150 COM 1.77 CU YDS EMB 4.26 CU YDS COM 1.97 CU YDS EMB 2.26 CU YDS STA,39+00 TO STA,39+50 COUNTY OF 130 130 120 120 9 110 100 100 HORIZONTAL VERTICAL 90 90 80 80 SCALE: 1' = 70 10 09 09 20 20 40 40 30 30 20 20 mi / 0 0 ٥.4ا <u>1ξ.0</u> 0.47% 0 39+50 0 39+00 20.64 44.44 2.53% 3,10% 9--10 -20 -30 -30 -40 -40 -50 -50 09--60 -70 -70 -80 -80 -90 -90 -100 -100 -110 -110 -120 -130 -130 -150 -140 COM 1.48 SO FT EMB 2.75 SO FT -150 -140 COM 0.43 SO FT EMB 1.85 SO FT 260 550 540 530 260 550 540 530 580 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: E++.7.11.8v notist@orotM

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PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 92 of 198 530 COM 2.44 CU YDS EMB 6.69 CU YDS COM 2.89 CU YDS EMB 5.12 CU YDS STA,40+00 TO STA,40+50 COUNTY OF 130 120 120 10 100 001 HORIZONTAL VERTICAL 90 90 80 80 SCALE: " = 70 20 09 09 20 20 40 40 30 30 20 20 0 0 94.0 0.26 3.64% 3.64% 0 40+50 0 40+00 542.93 S1.Σ#3 3.64% 3.64% 9 -10 -20 -20 -30 -30 -40 -40 -50 -50 -60 -60 -70 -80 -80 -90 -90 -100 -100 -110 -110 -120 -120 -130 -130 -150 -140 COM 0.99 SO FT EMB 4.45 SO FT -150 -140 COM 1.64 SO FT EMB 2.77 SO FT 260 540 530 260 550 540 530 550 USER: chrls.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN E-SHEET NAME: 644 7.11.8v nottst2orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 530 140 150 COM 1.85 CU YDS EMB 2.26 CU YDS 140 150 COM 1.48 CU YDS EMB 5.37 CU YDS STA,41+00 TO STA,41+50 COUNTY OF 130 130 120 120 9 9 100 100 HORIZONTAL VERTICAL 90 90 80 80 SCALE: " = 10 20 09 09 20 20 40 40 30 30 20 20 0 0 0.29 3.64% 0 41+50 0 41+00 3.64% 3.64% 9--10 -20 -30 -30 -40 -40 -50 -50 09--60 -70 -70 -80 -80 -90 -90 -100 -100 -110 -110 -120 -130 -130 -150 -140 COM 1.39 SO FT EMB 1.09 SO FT -150 -140 COM 0.61 SO FT EMB 1.35 SO FT 590 260 550 540 530 260 550 540 530 580 580 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: E++.7.11.8v notist@orotM

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PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 580 260 530 260 530 140 150 COM 2.13 CU YDS EMB 2.19 CU YDS 140 150 COM 2.64 CU YDS EMB 1.72 CU YDS STA,42+00 TO STA,42+50 COUNTY OF 130 130 120 120 9 9 100 100 HORIZONTAL VERTICAL 90 90 80 80 SCALE: " = 20 20 09 09 20 20 40 40 30 30 20 20 0 0 δ.0 0 42+50 0 42+00 538.27 62.653 0--10 -20 -20 -30 -30 -40 -40 -50 -50 09--60 -70 -70 -80 -80 -90 -90 -100 -100 -110 -110 -120 -120 -130 -150 -140 COM 0.83 SO FT EMB 1.59 SO FT -150 -140 COM 1.47 SO FT EMB 0.77 SO FT 580 550 540 260 550 540 530 570 260 590 580 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN E++.7.11.8v notist@orotM

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PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 95 of 198 COM 1.84 CU YDS EMB 3.29 CU YDS 290 260 530 560 COM 1.56 CU YDS EMB 2.62 CU YDS STA,43+00 TO STA,43+50 COUNTY OF 130 130 120 120 9 9 100 001 HORIZONTAL VERTICAL 90 90 80 80 SCALE: " = 20 20 09 09 20 20 40 40 30 30 20 20 0 9 11.0 7S.0 0 43+50 0 43+00 536.32 2.00% 9 -10 -20 -20 -30 -30 -40 -40 -50 -50 -60 -60 -70 -70 -80 -80 -90 -90 -100 -100 -110 -10 -120 -120 -130 -130 -150 -140 COM 0.85 SO FT EMB 1.24 SO FT -150 -140 COM 1.13 SO FT EMB 2.32 SO FT 530 🗠 009 290 570 540 530 590 550 540 580 260 550 009 580 260 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN 644 7.11.8v nottst2orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 96 of 198 140 150 COM 2.17 CU YDS EMB 3.01 CU YDS STA,44+00 TO STA,44+00 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 80.0 2.00% 0 44+00 19.25.61 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.21 SO FT EMB 0.93 SO FT 530 590 580 260 550 540 009 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETOMD1134815/6-9011_3D POST DORIAN.DGN E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 97 of 198 0 140 150 COM 2.00 CU YDS EMB 1.71 CU YDS STA,44+50 TO STA,44+50 130 COUNTY OF 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 44+50 £2.25 2.00% 9 60.0 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 0.95 SO FT EMB 0.92 SO FT 590 580 260 550 520 530 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 98 of 198 520 0 140 150 com 2.07 cu YDS EMB 2.68 cu YDS STA,45+00 TO STA,45+00 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 45+00 2.00% 9 0,32 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.28 SO FT EMB 1.97 SO FT 590 580 560 550 520 009 910 USER: chrls.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 99 of 198 520 0 140 150 com 2.09 cu ybs EMB 4.75 cu ybs STA,45+50 TO STA,45+50 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 45+50 76.556 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 0.98 SO FT EMB 3.16 SO FT 590 580 560 550 530 009 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 100 of 198 520 0 140 150 com 2.34 cu ybs EMB 3.65 cu ybs STA,46+00 TO STA,46+00 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 51.0 4,34% 0 46+00 4.34% 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.55 SO FT EMB 0.79 SO FT 590 580 560 550 530 009 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 101 of 198 520 0 140 150 com 2.23 cu YDS EMB 2.78 cu YDS STA.46+50 TO STA.46+50 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 ε.0 4.34% 0 46+50 53.552 4,34% 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 com 0.86 S0 FT EMB 2.22 S0 FT 590 580 560 550 009 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 102 of 198 COM 2.81 CLU YDS
EMB 3.82 CLU YDS STA,47+00 TO STA,47+00 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 47+00 97.952 4.34% 9 -20 -30 -40 -50 09--70 -80 -90 -100 -110 -120 -130 -150 -140 COM 2.17 SO FT EMB 1.90 SO FT 590 580 560 550 009 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 103 of 198 520 0 140 150 com 3.29 cu ybs EMB 3.34 cu ybs STA.47+50 TO STA.47+50 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 4.34% 0 47+50 92.552 4.34% 9 0.2 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.38 SO FT EMB 1.70 SO FT 590 580 560 550 520 009 910 USER: chrls.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 104 of 198 520 0 140 150 com 2.08 cu YDS EMB 2.95 cu YDS STA,48+00 TO STA,48+00 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 48+00 4,34% 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 0.86 SO FT EMB 1.49 SO FT 590 580 560 550 520 009 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 .30 | 140 | 150 | Com 2.06 U YOS | EMB 1.85 CU YOS | CT 7 Contract ID: 172031 Page 105 of 198 STA,48+50 TO STA,48+50 130 COUNTY OF 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0,12 0 48+50 4.34% 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 1.36 SO FT EMB 0.50 SO FT 590 580 260 550 530 520 009 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 106 of 198 140 150 COM 1.86 CU YDS EMB 2.57 CU YDS STA.49+00 TO STA.49+00 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 PO*0 0 49+00 3,75% 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 com 0.65 S0 FT EMB 2.27 S0 FT 590 580 560 550 530 520 009 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 107 of 198 520 0 140 150 com 2.56 cu yos EMB 2.89 cu yos STA.49+50 TO STA.49+50 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 49+50 630,90 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 2.11 SO FT EMB 0.86 SO FT 590 580 560 550 520 009 910 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 Page 108 of 198 520 0 140 150 com 3.27 cu yos EMB 1.35 cu yos STA.49+90 TO STA.49+90 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 49+90 99.058 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -150 -140 COM 2.30 S0 FT EMB 0.97 S0 FT 590 580 560 550 530 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E-SHEET NAME: 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 J 510 150 Page 109 of 198 520 STA.59+00 TO STA.59+00 140 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 1.00% 0 29+00 80.988 4.66% 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -140 -150 540 590 260 510 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETON/D1134815/6-9011_3D POST DORIAN.DGN MicroStation v8.11.7.443

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 J 510 150 Page 110 of 198 520 STA.59+50 TO STA.59+50 140 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 59+50 87.788 9 1.0 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -140 -150 540 590 260 510 USER: chrite.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETON/D1134815/6-9011_3D POST DORIAN.DGN MicroStation v8.11.7.443

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 J 510 150 Page 111 of 198 520 STA.60+00 TO STA.60+00 140 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 61.0 0 00+09 50.652 9 74.0 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -140 -150 260 540 590 510 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETON/D1134815/6-9011_3D POST DORIAN.DGN 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 J 510 150 Page 112 of 198 520 STA.60+50 TO STA.60+50 140 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 91.0 0 60+50 6.852 9 11.0 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -140 -150 580 540 260 590 510 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETON/D1134815/6-9011_3D POST DORIAN.DGN 644.7.11.8v nottst2onstM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 J 510 150 Page 113 of 198 520 STA.61+00 TO STA.61+00 140 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 61+00 78.042 3.00% 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -140 -150 260 540 590 510 USER: chrite.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETON/D1134815/6-9011_3D POST DORIAN.DGN MicroStation v8.11.7.443

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 J 510 150 Page 114 of 198 520 STA.61+50 TO STA.61+50 140 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 61+50 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -140 -150 580 260 540 590 510 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETON/D1134815/6-9011_3D POST DORIAN.DGN MicroStation v8.11.7.443

PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 J 510 150 Page 115 of 198 520 STA.62+00 TO STA.62+00 140 COUNTY OF 130 120 9 100 90 80 SCALE: 1' = 70 09 20 40 30 20 0 0 62+00 3.00% 9 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -140 -150 580 260 540 590 510 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETON/D1134815/6-9011_3D POST DORIAN.DGN 644.7.11.8v nottst2onstM

PENDLETON COUNTY Contract ID: 172031 096GR16P120 - HSIP & FD05 J 510 150 Page 116 of 198 J 510 520 550 STA.62+50 TO STA.63+00 140 140 130 130 120 120 9 9 001 001 90 90 80 80 SCALE: " = 70 20 09 09 20 20 40 40 30 30 20 20 0 9 0 63+00 0 62+50 540.34 9 -10 61.0 -20 -20 -30 -30 -40 -40 -50 -50 -60 -60 -70 -70 -80 -80 -90 -90 -100 -100 -110 -110 -120 -120 -140 -140 -150 -150 540 260 550 260 580 550 510 510 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORK/CHRIS.CONGLETON/D1134815/6-9011_3D POST DORIAN.DGN

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PENDLETON COUNTY 096GR16P120 - HSIP & FD05 Contract ID: 172031 J 510 150 Page 119 of 198 550 510 550 520 150 STA.65+50 TO STA.66+00 140 140 COUNTY OF 130 130 120 120 9 9 001 100 90 90 80 80 SCALE: " = 70 20 09 09 20 20 40 40 30 30 20 20 0 9 0 0 0 65+50 61.888 90.888 3.04% 9-9 -20 -30 -40 -40 -50 -50 09--60 -70 -70 -80 -80 -90 -90 -100 -100 -110 -110 -120 -130 -130 -140 -140 -150 -150 540 520 550 260 550 540 510 USER: chris.congleton DATE PLOTTED: May 12, 2016 FILE NAME: C:PWWORKICHRIS.CONGLETON.D113481516-9011_3D POST DORIAN.DGN E++.7.11.8v notist@orotM

PENDLETON COUNTY 096GR16P120 - HSIP & FD05

GUARDRAIL DELIVERY VERIFICATION SHEET

Contract ID: 172031 Page 120 of 198

Contract Id:		Contractor:				
Section Engineer:		District & County:				
<u>DESCRIPTION</u>	<u>UNIT</u>	QTY LEAVING PROJECT	QTY RECEIVED@BB YARD			
GUARDRAIL (Includes End treatments & crash cushions)	LF					
STEEL POSTS	EACH					
STEEL BLOCKS	EACH					
WOOD OFFSET BLOCKS	EACH					
BACK UP PLATES	EACH					
CRASH CUSHION	EACH					
NUTS, BOLTS, WASHERS	BAG/BCKT					
DAMAGED RAIL TO MAINT. FACILIT	ΓY LF					
DAMAGED POSTS TO MAINT. FACI	LITY EACH					
*Required Signatures before	Laguina Proia	ct Sita				
<u>kequirea Signatures bejore</u>	Leaving Proje	<u>ct site</u>				
Printed Section Engineer's Re	epresentative_		& Date			
Signature Section Engineer's	_& Date					
Printed Contractor's Represe	ntative		_& Date			
Signature Contractor's Repre	sentative		_& Date			
*Required Signatures after A	Arrival at Baile	y Bridge Yard (All material (on truck must be counted & the			
quantity received column co	mpleted befor	<u>e signatures)</u>				
Printed Bailey Bridge Yard Re	presentative_		& Date			
Signature Bailey Bridge Yard	Representative	9	_& Date			
Printed Contractor's Represe	ntative		_& Date			
Signature Contractor's Repre	sentative		_& Date			
	ent will not be	made for guardrail removal	uantities shown in the Bailey Bridge until the guardrail verification sheets e Yard Representative.			
Completed Form Submitted to	By:					

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.

Subsection:	101.03 DEFINITIONS
Revision:	Add the following Definitions to this section:
Ke vision.	Superpave Mix Design Technologist (SMDT) - An inspector qualified by the KYTC to submit,
	adjust, or approve asphalt mix designs.
	Superpave Plant Technologist (SPT) - An inspector qualified by the KYTC to perform routine
	inspection and process control, acceptance, or verification testing on asphalt mixtures.
Subsection:	102.15 Process Agent.
Revision:	Replace the 1st paragraph with the following:
ACVISION.	Every corporation doing business with the Department shall submit evidence of compliance with KRS Sections 14A.4-010, 271B.11-010, 271B.11-070, 271B.11-080, 271B.5-010 and 271B.16-
	220, and file with the Department the name and address of the process agent upon whom process may be served.
Subsection:	105.13 Claims Resolution Process.
Revision:	Delete all references to TC 63-34 and TC 63-44 from the subsection as these forms are no longer
ACVISION.	available through the forms library and are forms generated within the AASHTO SiteManager software.
Subsection:	108.01 Subcontracting of Contract.
Revision:	Replace the section with the following:
Revision.	Do not subcontract, sell, transfer, assign, or otherwise dispose of the Contract or any portion of
	the Contract or Contracts, or of the right, title, or interest therein, without the Engineer's written
	consent. If the Contractor chooses to subcontract any portion of the Contract, a written request to sublet work must be submitted on the Subcontract Request (TC 63-35) form for the Engineer's
	approval. When directed by the Engineer, submit a certified copy of the actual subcontract agreement executed between the parties.
	The Engineer will allow the Contractor to subcontract a portion, but the Contractor must perform with his own organization work amounting to no less than 30 percent of the total Contract cost. The Engineer will not allow any subcontractor to exceed the percentage to be performed by the Contractor and will require the Contractor to maintain a supervisory role over the entire project.
	Do not allow any subcontractor to further subcontract any portion of the work without obtaining written consent from the Engineer. When the Engineer gives such consent, the first tier subcontractor may further subcontract a portion of his work not to exceed 50 percent of the work originally subcontracted to him by the Contractor. Do not allow any second tier subcontractor to subcontract any portion of the work.
	Extra work performed by subcontractors in accordance with Section 109 will not be utilized in the computation of total dollar amount subcontracted. Subcontract percentages are based upon the original contract amount.
	Payment to subcontractors for satisfactory performance of their work or materials supplied must be made within 7 calendar days from receipt of payment from the Engineer. Upon request by the Engineer, provide proof that payment has been made to the subcontractor within the 7 calendar days. Progress payments may be withheld for failure to comply with this request.

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The Engineer's written consent to subcontract, assign, or otherwise dispose of any portion of the Contract does not, under any circumstances, relieve the Contractor or the surety of their respective liabilities and obligations under the Contract. The Engineer will make transactions only with the Contractor. The Engineer will recognize subcontractors only in the similar capacity of employees or workers of the Contractor who are subject to the same requirements as to character and competence as specified in Subsection 108.06.

Lease agreements are acceptable on Department projects. No additional paperwork is needed when equipment is rented from a commercial rental company unless the leased equipment comes with an operator. In these circumstances, payroll records for the operator of the leased equipment must be maintained and submitted by the contractor in accordance with Department policy.

Lease agreements between contractors that involve equipment only will require the submittal of a TC 63-71 Department Equipment Rental Form. If a Contractor is found to be in violation of these requirements, the Engineer reserves the right to withhold payment for the work which was performed in violation of these requirements. This provision does not include the lease or use of equipment from a corporation or company wholly owned by the Contractor. The Contractor shall not use equipment in the performance of the Contract to which title is not held by the Contractor or an approved subcontractor without a submitted lease agreement.

If a public official has provided a documented Declaration of Emergency, then the Engineer may verbally waive the requirement of submitting a TC 63-71 Department Equipment Rental Form until the situation has ended. After the emergency situation ends, immediately remove the equipment from the project or submit a completed TC 63-71 Department Equipment Rental Form to the Engineer.

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108.03 Preconstruction Conference.

Revision:

Replace 8) Staking with the following:

8) Staking (designated by a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.

Subsection:

109.07.02 Fuel.

Revision:

Revise item Crushed Aggregate Used for Embankment Stabilization to the following:

Crushed Aggregate

Used for Stabilization of Unsuitable Materials

Used for Embankment Stabilization

Delete the following item from the table.

Crushed Sandstone Base (Cement Treated)

Subsection:

110.02 Demobilization.

Revision:

Replace the first part of the first sentence of the second paragraph with the following:

Perform all work and operations necessary to accomplish final clean-up as specified in the first paragraph of Subsection 105.12;

Subsection:

112.03.12 Project Traffic Coordinator (PTC).

Revision:

Replace the last paragraph of this subsection with the following:

Ensure the designated PTC has sufficient skill and experience to properly perform the task assigned and has successfully completed the qualification courses.

Subsection:	112.04.18 Diversions (By-Pass Detours).
Revision:	Insert the following sentence after the 2nd sentence of this subsection.
	The Department will not measure temporary drainage structures for payment when the contract documents provide the required drainage opening that must be maintained with the diversion.
	The temporary drainage structures shall be incidental to the construction of the diversion. If the
	contract documents fail to provide the required drainage opening needed for the diversion, the
	cost of the temporary drainage structure will be handled as extra work in accordance with section
	109.04.
Subsection:	201.03.01 Contractor Staking.
Revision:	Replace the first paragraph with the following: Perform all necessary surveying under the
	general supervision of a Professional Engineer or Land Surveyor licensed in the Commonwealth
	of Kentucky.
Subsection:	201.04.01 Contractor Staking.
Revision:	Replace the last sentence of the paragraph with the following: Complete the general layout of
	the project under the supervision of a Professional Engineer or Land Surveyor licensed in the
	Commonwealth of Kentucky.
	206.04.01 Embankment-in-Place.
Revision:	Replace the fourth paragraph with the following: The Department will not measure suitable
	excavation included in the original plans that is disposed of for payment and will consider it
	incidental to Embankment-in-Place.
	208.02.01 Cement.
Revision:	Replace paragraph with the following:
	Select Type I or Type II cement conforming to Section 801. Use the same type cement
	throughout the work.
	208.03.06 Curing and Protection.
Revision:	Replace the fourth paragraph with the following:
	Do not allow traffic or equipment on the finished surface until the stabilized subgrade has cured for a total of 7-days with an ambient air temperature above 40 degrees Fahrenheit. A curing day
	consists of a continuous 24-hour period in which the ambient air temperature does not fall below
	40 degrees Fahrenheit. Curing days will not be calculated consecutively, but must total seven (7)
	, 24-hour days with the ambient air temperature remaining at or above 40 degrees Fahrenheit
	before traffic or equipment will be allowed to traverse the stabilized subgrade. The Department
	may allow a shortened curing period when the Contractor requests. The Contractor shall give the
	Department at least 3 day notice of the request for a shortened curing period. The Department
	will require a minimum of 3 curing days after final compaction. The Contractor shall furnish
	cores to the treated depth of the roadbed at 500 feet intervals for each lane when a shortened
	curing time is requested. The Department will test cores using an unconfined compression test.
	Roadbed cores must achieve a minimum strength requirement of 80 psi.
Subsection:	208.03.06 Curing and Protection.
Revision:	Replace paragraph eight with the following:
	At no expense to the Department, repair any damage to the subgrade caused by freezing.
	1

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Subsection:	212.03.03 Permanent Seeding and Protection.				
Part:	A) Seed Mixtures for Permanent Seeding.				
Revision:	Revise Seed Mix Type I to the mixture shown below:				
	50% Kentucky 31 Tall Fescue (Festuca arundinacea)				
	35% Hard Fescue (Festuca (Festuca longifolia)				
	10% Ryegrass, Perennial (Lolium perenne)				
	5% White Dutch Clover (Trifolium repens)				
Subsection:	212.03.03 Permanent Seeding and Protection.				
Part:	A) Seed Mixtures for Permanent Seeding.				
Number:	2)				
Revision:	Replace the paragraph with the following:				
	Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 4, 5, 6, and 7. Apply seed				
	mix Type II at a minimum application rate of 100 pounds per acre. If adjacent to a golf course				
	replace the crown vetch with Kentucky 31 Tall Fescue.				
Subsection:	212.03.03 Permanent Seeding and Protection.				
Part:	A) Seed Mixtures for Permanent Seeding.				
Number:	3)				
Revision:	Replace the paragraph with the following:				
	Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 1, 2, 3, 8, 9, 10, 11, and 12.				
	Apply seed mix Type III at a minimum application rate of 100 pounds per acre. If adjacent to				
	crop land or golf course, replace the Sericea Lespedeza with Kentucky 31 Fescue.				
Subsection:	212.03.03 Permanent Seeding and Protection.				
Part:	B) Procedures for Permanent Seeding.				
Revision:	Delete the first sentence of the section.				
Subsection:	212.03.03 Permanent Seeding and Protection.				
Part:	B) Procedures for Permanent Seeding.				
Revision:	Replace the second and third sentence of the section with the following:				
	Prepare a seedbed and apply an initial fertilizer that contains a minimum of 100 pounds of				
	nitrogen, 100 pounds of phosphate, and 100 pounds of potash per acre. Apply agricultural				
	limestone to the seedbed when the Engineer determines it is needed. When required, place				
	agricultural limestone at a rate of 3 tons per acre.				
	212.03.03 Permanent Seeding and Protection.				
Part:	D) Top Dressing.				
Revision:	Change the title of part to D) Fertilizer.				

Subsection:	212.03.03 Permanent Seeding and Protection.				
Part:	D) Fertilizer.				
Revision:	Replace the first paragraph with the following:				
	Apply fertilizer at the beginning of the seeding operation and after vegetation is established. Use				
	fertilizer delivered to the project in bags or bulk. Apply initial fertilizer to all areas prior to the				
	seeding or sodding operation at the application rate specified in 212.03.03 B). Apply 20-10-10				
	fertilizer to the areas after vegetation has been established at a rate of 11.5 pounds per 1,000				
	square feet. Obtain approval from the Engineer prior to the 2nd fertilizer application. Reapply				
	fertilizer to any area that has a streaked appearance. The reapplication shall be at no additional				
	cost to the Department. Re-establish any vegetation severely damaged or destroyed because of				
	an excessive application of fertilizer at no cost to the Department.				
Subsection:	212.03.03 Permanent Seeding and Protection.				
Part:	D) Fertilizer.				
Revision:	Delete the second paragraph.				
Subsection:	212.04.04 Agricultural Limestone.				
Revision:	Replace the entire section with the following:				
	The Department will measure the quantity of agricultural limestone in tons.				
Subsection:	212.04.05 Fertilizer.				
Revision:	Replace the entire section with the following:				
	The Department will measure fertilizer used in the seeding or sodding operations for payment.				
	The Department will measure the quantity by tons.				
Subsection:	212.05 PAYMENT.				
Revision:	Delete the following item code:				
	Code Pay Item Pay Unit				
	05966 Topdressing Fertilizer Ton				
	212.05 PAYMENT.				
Revision:	Add the following pay items:				
	Code Pay Item Pay Unit				
	05963 Initial Fertilizer Ton				
	05964 20-10-10 Fertilizer Ton				
	05992 Agricultural Limestone Ton				

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Subsection:	213.03.02 Progress Requirements.
Revision:	Replace the third paragraph with the following: After exposing areas of erodible material, make every effort to stabilize and protect the areas as
	quickly as possible. Permanently seed and mulch all areas at final grade within 14 days.
	Temporary stabilization practices on those portions of the project where construction activities
	have temporarily ceased shall be initiated within 14 days of the date of activity cessation. The
	Engineer will suspend grading operations for instances where the Contractor fails to sustain
	erosion control measures to effectively control erosion and to prevent water pollution in accordance with the KPDES Permit. In addition, the Engineer will withhold monies due on
	current estimates until corrective work has been initiated and is continuously progressing to
	remediate noted deficiencies. Additionally, should noted deficiencies not be adequately
	addressed to the satisfaction of the Engineer within 7 calendar days of receipt of written
	notification of deficiencies, the Department will apply a penalty equal to the daily liquidated
	damages rate until all aspects of the work have been completed.
	213.03.05 Temporary Control Measures.
Part:	E) Temporary Seeding and Protection.
Revision: Subsection:	Delete the second sentence of the first paragraph. 304.02.01 Physical Properties.
Table:	Required Geogrid Properties
Revision:	Replace all references to Test Method "GRI-GG2-87" with ASTM D 7737.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	B) Sampling.
Revision:	Replace the second sentence with the following:
	The Department will determine when to obtain the quality control samples using the random-
	number feature of the mix design submittal and approval spreadsheet. The Department will
	randomly determine when to obtain the verification samples required in Subsections 402.03.03
Subsection:	and 402.03.04 using the Asphalt Mixture Sample Random Tonnage Generator. 402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilities.
Number:	3) VMA.
Revision:	Add the following paragraph below Number 3) VMA:
	Retain the AV/VMA specimens and one additional corresponding G_{mm} sample for 5 working
	days for mixture verification testing by the Department. For Specialty Mixtures, retain a mixture
	sample for 5 working days for mixture verification testing by the Department. When the
	Department's test results do not verify that the Contractor's quality control test results are within
	the acceptable tolerances according to Subsection 402.03.03, retain the samples and specimens
	from the affected sublot(s) for the duration of the project.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilities.
Number: Revision:	4) Density. Panlage the second sentence of the Option A paragraph with the following:
Wealsinii:	Replace the second sentence of the Option A paragraph with the following: Perform coring by the end of the following work day.
	errorm coring by the end of the following work day.

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Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.			
Part:	D) Testing Responsibilities.			
Number:	5) Gradation.			
Revision:	Delete the second paragraph.			
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.			
Part:	H) Unsatisfactory Work.			
Number:	1) Based on Lab Data.			
Revision:	Replace the second paragraph with the following:			
	When the Engineer determines that safety concerns or other considerations prohibit an immediate			
	shutdown, continue work and the Department will make an evaluation of acceptability according			
	to Subsection 402.03.05.			
Subsection:	402.03.03 Verification.			
Revision:	Replace the first paragraph with the following:			
	402.03.03 Mixture Verification. For volumetric properties, the Department will perform a			
	minimum of one verification test for AC, AV, and VMA according to the corresponding			
	procedures as given in Subsection 402.03.02. The Department will randomly determine when to			
	obtain the verification sample using the Asphalt Mixture Sample Random Tonnage Generator.			
	For specialty mixtures, the Department will perform one AC and one gradation determination per			
	lot according to the corresponding procedures as given in Subsection 402.03.02. However,			
	Department personnel will not perform AC determinations according to KM 64-405. The			
	Contractor will obtain a quality control sample at the same time the Department obtains the			
	mixture verification sample and perform testing according to the procedures given in Subsection			
	402.03.02. If the Contractor's quality control sample is verified by the Department's test results			
	within the tolerances provided below, the Contractor's sample will serve as the quality control			
	sample for the affected sublot. The Department may perform the mixture verification test on the			
	Contractor's equipment or on the Department's equipment.			
Subsection:	402.03.03 Verification.			
Part:	A) Evaluation of Sublot(s) Verified by Department.			
Revision:	Replace the third sentence of the second paragraph with the following:			
	When the paired <i>t</i> -test indicates that the Contractor's data and Department's data are possibly not			
	from the same population, the Department will investigate the cause for the difference according			
	to Subsection 402.03.05 and implement corrective measures as the Engineer deems appropriate.			
Subsection:	402.03.03 Verification.			
Part:	B) Evaluation of Sublots Not Verified by Department.			
Revision:	Replace the third sentence of the first paragraph with the following:			

When differences between test results are not within the tolerances listed below, the Department

will resolve the discrepancy according to Subsection 402.03.05.

Subsection:	402.03.03 Verification.
Part:	B) Evaluation of Sublots Not Verified by Department.
Revision:	Replace the third sentence of the second paragraph with the following: When the <i>F</i> -test or <i>t</i> -test indicates that the Contractor's data and Department's data are possibly not from the same population, the Department will investigate the cause for the difference according to Subsection 402.03.05 and implement corrective measures as the Engineer deems appropriate.
Subsection:	402.03.03 Verification.
Part:	C) Test Data Patterns.
Revision:	Replace the second sentence with the following:
	When patterns indicate substantial differences between the verified and non-verified sublots, the
	Department will perform further comparative testing according to subsection 402.03.05.
Subsection:	402.03 CONSTRUCTION.
Revision:	Add the following subsection: 402.03.04 Testing Equipment and Technician Verification. For mixtures with a minimum quantity of 20,000 tons and for every 20,000 tons thereafter, the Department will obtain an additional verification sample at random using the Asphalt Mixture Sample Random Tonnage Generator in order to verify the integrity of the Contractor's and Department's laboratory testing equipment and technicians. The Department will obtain a mixture sample of at least 150 lb at the asphalt mixing plant according to KM 64-425 and split it according to AASHTO R 47. The Department will retain one split portion of the sample and provide the other portion to the Contractor. At a later time convenient to both parties, the Department and Contractor will simultaneously reheat the sample to the specified compaction temperature and test the mixture for AV and VMA using separate laboratory equipment according to the corresponding procedures given in Subsection 402.03.02. The Department will evaluate the differences in test results between the two laboratories. When the difference between the results for AV or VMA is not within ± 2.0 percent, the Department will investigate and resolve the discrepancy according to Subsection 402.03.05.
	402.03.04 Dispute Resolution.
Revision:	Change the subsection number to 402.03.05.
Subsection: Part:	402.05 PAYMENT. Let Pay Adjustment Schedule Compaction Ontion A Page and Rinder Mixtures
Table:	Lot Pay Adjustment Schedule Compaction Option A Base and Binder Mixtures AC
Revision:	Replace the Deviation from JMF(%) that corresponds to a Pay Value of 0.95 to ±0.6.
Subsection:	403.01 Description.
Revision:	Replace the sentence three and four of the first paragraph with the following: Provide a Superpave Plant Technologist (SPT) or Superpave Mix Design Technician (SMDT) qualified by the Laboratories' Quality Acceptance program. Be available to address all Quality Control concerns arising during work performed under section 403.

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403.02.07 Asphalt Pavers. **Subsection:** Revision: Add the following to the subsection: 7) Utilize a Durable Pavement Edge that produces material that is confined at the end gate and extrudes the asphalt material in such a way that results in a consolidated wedge-shape pavement edge of approximately 29 to 40 degrees as it leaves the paver (measured from a line parallel to the payement surface). The device shall maintain contact to the graded material adjacent to the pavement and must be adjustable to allow for transition to cross roads, driveways and obstructions without requiring the paver to be stopped routinely. The device shall constrain the asphalt head and increase the density of the extruded profile. To achieve desired results, rolling is not required on the wedge. The desired pavement edge angle is 30 degrees. A listing of approved commercially manufactured Durable Pavement Edge systems will be available on the Department internet website (http://transportation.ky.gov/Constructi on/Pages/Kentucky -Standard- Specifications.aspx). If electing to not use a commercially manufactured Durable Pavement Edge system, proof shall be demonstrated that the device has been used on previous projects with acceptable results or a test section shall be constructed prior to the beginning of work which demonstrates that the wedge is capable of producing consolidation to the satisfaction of the Engineer. The *finished* angle of the Durable Pavement Edge shall be between 29 to 40 degrees. A single-plate strike-off method shall not be allowed for bituminous paving. 403.02.10 Material Transfer Vehicle (MTV). **Subsection:** Replace the first sentence with the following: **Revision:** In addition to the equipment specified above, provide a MTV with the following minimum characteristics: 403.03.03 Preparation of Mixture **Subsection:**

Part:

C) Mix Design Criteria

Number:

2)

Revision:

Revise part 2) to read as follows: Selection of Optimum AC. Normally, the Department will approve the AC at an air-void content of 4.0 percent. The Engineer may assign an AC corresponding to other air-void levels as deemed appropriate. Ensure the optimum AC is a minimum of 5.2 percent by weight of the total mixture for all 0.5-inch nominal surface mixtures and 5.5 percent by weight of the total mixture for all 0.38-inch nominal surface mixtures.

Subsection:

403.03.08 Shoulder Rumble Strips and Pavement Texturing

Revision:

Replace the entire subsection with the following:

Construct centerline, edgeline, and/or shoulder rumble strips according to the notes and drawings in the proposal, plans, and/or Standard Drawings, or as directed by the Engineer.

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Unless directed otherwise by the Engineer, DO NOT install centerline, edgeline, and/or shoulder rumble strips where the posted speed limit is 45 MPH or less. Before sawing centerline and/or edgeline rumble strips, pre-mark the pavement surface and obtain the Engineer's approval of the proposed location, alignment, and control guides. After sawing the centerline and/or edgeline rumble strips, apply permanent centerline and/or edgeline striping, according to Section 713, on the sawed rumble strips at the locations approved by the Engineer. Before sawing shoulder rumble strips, obtain the Engineer's approval of the proposed layout, location, and alignment. Notify the Engineer if questions arise regarding changes in striping and/or rumble patterns. If necessary, the Engineer may obtain guidance from the District Traffic Engineer and/or the Division of Traffic Operations.

Section:

403.03 CONSTRUCTION.

Revision:

Add the following Section: 403.03.14 Durable Pavement Edge.

The contractor will have the option to pave roadway shoulders monolithically with mainline pavement or by separate operation. However, if the shoulder is placed monolithically, with the mainline material, the Durable Pavement Edge shoe shall be used for the placement of the asphalt. For divided highways, the Durable Pavement Edge must be added to both median and outside bituminous shoulders when the paved shoulder width is 6 feet or narrower.

Construct the edge to the depth, width, and slope the Contract specifies where existing conditions permit. Remove the sod or perform trench excavation only when necessary to obtain the specified depth and width. Do not remove solid rock. Provide enough area to construct the Durable Pavement Edge so that the Durable Pavement Edge will be placed on solid material, free of debris such as loose material, grass, weeds or mud. The edge should be compacted such that there is no loose material. Short sections of handwork will be allowed for pavement transitions and turnouts.

Durable Pavement Edge is not intended for the following:

- 1) Centerline pavement joint.
- 2) Joint between paved side road and mainline.
- 3) Bridge decks.
- 4) Adjacent to concrete barrier.
- 5) Adjacent to curb and gutter.
- 6) Edges between adjoining pavements.
- 7) Centerline pavement joint.
- 8) Mainline and taper joint.
- 9) Mainline and turning joints.

The Durable Pavement Edge shall be applied when all of the following criteria are met, unless otherwise directed by the Engineer:

1) New bituminous pavement/shoulder or bituminous overlay is being constructed with at least 1-(one) inch of paving depth; 2)

The posted speed is 40 mph and higher;

- 3) Pavements/shoulders that are not adjacent to curbing; and
- 4) Pavements/shoulders that are not adjacent to barrier wall.

	The Durable Pavement Edge may be omitted in the following situations with the approval of						
	the Engineer:						
	1) Areas where existing drop-offs at the edge of existing pavement exceed 5 inches.						
	2) Areas where the distance from pavement edge to Durable Pavement Edge catch point						
	exceeds 9 inches or where slopes are steeper than 3:1.						
Subsection:	403.04.07 Rumble Strips.						
Revision:	Rename the subsection to the following: Centerline, Edgeline, and Shoulder Rumble Strips and						
	replace the paragraph with the following:						
	The Department will measure the quantity of sawed rumble strips in linear feet. The Department						
	will measure permanent striping according to Section 713. The Department will measure						
	temporary striping when required by Section 112, the Traffic Control Plan, and/or when directed						
	by the Engineer. When bicycle gaps are required in the rumble pattern, the Department will						
	include the length of the bicycle gaps in the measurement of the rumble. The Department will						
	not measure the areas where rumble strips are omitted, such as at intersections, crosswalks,						
	bridges, railroad crossings, etc. The Department will not measure temporary striping that is only						
	used for pre-marking centerline and/or edgeline rumble strips. The Department will not measure						
	the removal of existing markings, pre-marking and layout, surface preparation, corrective work,						
	labor, equipment, and any incidentals necessary to construct rumble strips, and will consider						
	these items incidental to the installation of the rumble strips.						
Section:	403.04 MEASUREMENT.						
Revision:	Add the following subsection: 403.04.09 Durable Pavement Edge. The Department will						
	not consider the Durable Pavement Edge for payment and will consider its use incidental to the						
	asphalt mixture.						
Subsection:	403.05 Payment.						
Revision:	Replace the bid code table with the following:						
	<u>Code</u> <u>Pay Item</u> <u>Pay Unit</u>						
	06600 Remove Pavement Marker Type V Each						
	O1791 Adjust Manhole Frame to Grade Each						
	02697 Edgeline Rumble Strips Linear Foot						
	20458ES403 Centerline Rumble Strips Linear Foot						
	02696 Shoulder Rumble Strips Linear Foot						
Subsection:	412.02.09 Material Transfer Vehicle (MTV).						
Revision:	Replace the paragraph with the following:						
	Provide and utilize a MTV with the minimum characteristics outlined in section 403.02.10.						
Subsection:	412.03.07 Placement and Compaction.						
Revision:	Replace the first paragraph with the following:						
	Use a MTV when placing SMA mixture in the driving lanes. The MTV is not required on ramps						
	and/or shoulders unless specified in the contract. When the Engineer determines the use of the						
	MTV is not practical for a portion of the project, the Engineer may waive its requirement for that						
	portion of pavement by a letter documenting the waiver.						

		Liteotive			, -						
Subsection:	412.04 MEASUREMENT.										
Revision:	Add the following subsection:										
	412.04.03. Material Transfer Vehicle (MTV). The Department will not measure the MTV for										
	payment and w		*	*	-		C 1VII V 101				
G 1 4					spiiait iiiixt	ure.					
Subsection:	501.03.19 Surfa		and Testing	g Surface.							
Part:	B) Ride Quality										
Revision:	Add the following to the end of the first paragraph:										
	The Departmen	it will specify if	the ride qu	uality requ	irements are	e Category A or Cate	egory B when				
	ride quality is s	pecified in the	Contract. C	Category B	ride quality	requirements shall	apply when				
	the Department	fails to classify	which rid	e quality re	equirement	will apply to the Co	ntract.				
Subsection:	501.03.05 Wear	ther Limitations	s and Prote	ction.							
Revision:					ragranh 5	with Subsection 501	1 03 20				
Subsection:	601.02.02 Cem		CHOII JOI.	75.17 111 1 0	irugrupii 5,	with Subsection 50	1.05.20.				
			. 41. a fallav	vina. The	Domontos one		.CT.m.o				
Revision:	_			_	-	t will allow the use of	• •				
			ـ, Type II,	and Type	III when the	Engineer approves					
Subsection:	601.02.02 Cem										
Revision:	_			_	-	test results are obtain	_				
	Type IP(≤20), 7	Γype IS(≤30), T	ype IL, Ty	pe II, or T	ype III cem	ent complete the wo	rk using Type				
	I cement.										
Subsection:	601.03.02 Cond	crete Producer I	Responsibil	lities.							
Part:	E) Trip Tickets		-								
Revision:	Replace the sec	tion with the fo	ollowing:	Furni	ish a trip tic	ket containing the m	ninimum				
			_		-	he ticket is correct a					
				-		olant manager or a L					
				_	-	rspector will comple					
	necessary infor	-		-	t s joosite ii	ispector will comple	te an other				
	inccessary infor	ination on the o	ack of the	шр псксі.							
	Contract	Id: Proj. Number	: Date:	County:			_				
	Truck No				ger Sample Id:		_				
	Qty(Yds ³): Time Loaded	(Non Agitated								
		xing Time:	AM P	M REV_			_				
		der Used educer Used	Yes	Type	No		_				
		nderrun	Yes Gal/Yd ³	Type	No otal Gallons		_				
		V/C: Actual W/C:	Slump (in	nches)							
	Batch Weight Information:										
i						Material: Description: Design Qty: Required: Batched: %Var: %Moisture: Actual:					
			Design Qty: F	Required: Ba	tched: %Var:	%Moisture: Actual:					
			Design Qty: F	Required: Ba	tched: %Var:	%Moisture: Actual:					
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Subsection:	601.03.03 Proportioning and Requirements				
	A) Concrete				
Revision:	Revise Table for INGREDIENT PROPORTIONS AND REQUIREMENTS FOR VARIOUS				
	CLASSES OF CONCRETE as follows: Replace "M1 w/ Type 1 cement" with "M1 w/ Type 1 or				
	blended hydraulic cement"				
Subsection:	601.03.03 Proportioning and Requirements				
Part:	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures				
Revision:	Revise part C) header to read as follows: Mixtures Using Type IP(≤ 20), IS(≤ 30), and IL Cement				
	and Mineral Admixtures.				
	601.03.03 Proportioning and Requirements				
	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures				
Number:	1)				
	Revise first sentence to read as follows: Type IP(≤ 20), IS(≤ 30), IL Cement.				
	601.03.03 Proportioning and Requirements				
	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures				
	2)				
	Revise second sentence to read as follows: The use of fly ash, blast furnace slag cement, or				
	microsilica in concrete is the Contractor's option.				
	601.03.03 Proportioning and Requirements				
	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures				
	2)				
	Revise the first sentence in the second paragraph to read as follows: When the ability to use blast				
	furnace slag cement or microsilica has not been demonstrated have the concrete producer provide				
	trial batches in accordance with Subsection 601.03.02 G) 1).				
	601.03.03 Proportioning and Requirements				
	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures				
	2)				
	b)				
	Revise first sentence to read as follows: Blast Furnace Slag Cement				
	601.03.03 Proportioning and Requirements				
	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures				
	2)				
	b)				
	Revise second sentence to read as follows: When added as a separate ingredient, use Grade 120				
	or Grade 100 slag to reduce the quantity of cement, except do not use blast furnace slag cement				
	to reduce the quantity of Type IS(\leq 30) cement.				
	601.03.03 Proportioning and Requirements C) Mixtures Using Type IP, IS, and I(SM) Coment or Mineral Admixtures				
	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures				
	2)				
	b)				
Revision:	In part b), replace all references to "GGBF slag" with "blast furnace slag cement".				

P							
Subsection:	601.03.04 Classes and Primary Uses						
Part:	H) Class M1						
Revision:	Revise part H) to read as follows: High early strength for bridge joint repair and full or partial						
	depth bridge deck patching. (Type 1 cement or blended hydraulic cement)						
Subsection:	603.03.06 Cofferdams.						
Revision:	Replace the seventh sentence of paragraph one with the following:						
	Submit drawings that are stamped by a Professional Engineer licensed in the Commonwealth of						
	Kentucky.						
Subsection:	605.03.04 Tack Welding.						
Revision:	Insert the subsection and the following:						
	605.03.04 Tack Welding. The Department does not allow tack welding.						
Subsection:	606.03.17 Special Requirements for Latex Concrete Overlays.						
Part:	A) Existing Bridges and New Structures.						
Number:	1) Prewetting and Grout-Bond Coat.						
Revision:	Add the following sentence to the last paragraph: Do not apply a grout-bond coat on bridge						
	decks prepared by hydrodemolition.						
Subsection:	609.03 Construction.						
Revision:	Replace Subsection 609.03.01 with the following:						
	609.03.01 A) Swinging the Spans. Before placing concrete slabs on steel spans or precast						
	concrete release the temporary erection supports under the bridge and swing the span free on its						
	supports.						
	609.03.01 B) Lift Loops. Cut all lift loops flush with the top of the precast beam once the beam						
	is placed in the final location and prior to placing steel reinforcement. At locations where lift						
	loops are cut, paint the top of the beam with galvanized or epoxy paint.						
Subsection:	611.03.02 Precast Unit Construction.						
Revision:	Replace the first sentence of the subsection with the following:						
THE VISION.	Construct units according to ASTM C1577, replacing Table 1 (Design Requirements for						
	Precast Concrete Box Sections Under Earth, Dead and HL-93 Live Load Conditions) with						
	KY Table 1 (Precast Culvert KYHL-93 Design Table), and Section 605 with the following						
	exceptions and additions:						
Subsection:	613.03.01 Design.						
Number:	2)						
Revision:	Replace "AASHTO Standard Specifications for Highway Bridges" with "AASHTO LRFD						
	Bridge Design Specifications"						
Subsection:	615.06.02						
Revision:	Add the following sentence to the end of the subsection.						
	The ends of units shall be normal to walls and centerline except exposed edges shall be beveled						
	3/4 inch.						
Subsection:	615.06.03 Placement of Reinforcement in Precast 3-Sided Units.						
Revision:	Replace the reference of 6.6 in the section to 615.06.06.						
Subsection:	615.06.04 Placement of Reinforcement for Precast Endwalls.						
Revision:	Replace the reference of 6.7 in the section to 615.06.07.						
	*						

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615.06.06 Laps, Welds, and Spacing for Precast 3-Sided Units. **Subsection:**

Revision:

Replace the subsection with the following:

Tension splices in the circumferential reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. The overlap of welded wire fabric shall be measured between the outer most longitudinal wires of each fabric sheet. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. For splices other than tension splices, the overlap shall be a minimum of 12" for welded wire fabric or deformed billet-steel bars. The spacing center to center of the circumferential wires in a wire fabric sheet shall be no less than 2 inches and no more than 4 inches. The spacing center to center of the longitudinal wires shall not be more than 8 inches. The spacing center to center of the longitudinal distribution steel for either line of reinforcing in the top slab shall be not more than 16 inches.

Subsection:

615.06.07 Laps, Welds, and Spacing for Precast Endwalls.

Revision:

Replace the subsection with the following:

Splices in the reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. The spacing center-tocenter of the wire fabric sheet shall not be less than 2 inches or more than 8 inches.

Subsection:

615.08.01 Type of Test Specimen.

Revision:

Replace the subsection with the following:

Start-up slump, air content, unit weight, and temperature tests will be performed each day on the first batch of concrete. Acceptable start-up results are required for production of the first unit. After the first unit has been established, random acceptance testing is performed daily for each 50 yd³ (or fraction thereof). In addition to the slump, air content, unit weight, and temperature tests, a minimum of one set of cylinders shall be required each time plastic property testing is performed.

Subsection: 615.08.02 Compression Testing.

Delete the second sentence. **Revision:**

Subsection: 615.08.04 Acceptability of Core Tests.

Delete the entire subsection. **Revision:**

Subsection:

615.12 Inspection.

Revision:

Add the following sentences to the end of the subsection: Units will arrive at jobsite with the "Kentucky Oval" stamped on the unit which is an indication of acceptable inspection at the production facility. Units shall be inspected upon arrival for any evidence of damage resulting from transport to the jobsite.

Subsection:	701.04.16 Deduction for Pipe Deflection.						
Revision:	Insert the following at the end of the paragraph:						
	The section length is determined by the length of the pipe between joints where the failure						
	occurred.						
Subsection:							
Revision:	Replace sentence with the following: Conform to Section 821.						
	716.03 CONSTRUCTION.						
Revision:	Replace bullet 5) with the following: 5) AASHTO Standard Specifications for Structural						
	Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with curre						
	interims,						
Subsection:	716.03.02 Lighting Standard Installation.						
Revision:	Replace the paragraph with the following:						
	Locate poles to avoid trees, drainage, structures, etc. Regardless of the station & offset noted, locate all poles/bases behind guardrail a minimum of 4 feet behind the face of the guardrail. All poles shall be placed as close to stations and offsets as stated on Plans to provide proper illumination. If any pole needs to be relocated from stations indicated, the Division of Traffic Operations shall be contacted. When submitting brochures for suggested luminaires include iso lux curves, IES type distribution, lamp lumens, and typical ballast factor used for each type of luminaire. Submit the photometric data in a digital IES format to the Division of Traffic Operations. Include with the submittal a point of contact and phone number to answer technical questions about the luminaire.						
Subsection	716.03.02 Lighting Standard Installation.						
Part:	A) Conventional Installation.						
Revision:	Replace the third sentence with the following: Orient the transformer base so the door is						
ite vision.	positioned on the side away from on-coming traffic.						
Subsection:	716.03.02 Lighting Standard Installation.						
Part:	A) Conventional Installation.						
Number:	1) Breakaway Installation and Requirements.						
Revision:	Replace the first sentence with the following: For breakaway supports, conform to Section 12 of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.						
Subsection:	716.03.02 Lighting Standard Installation.						
Part:	B) High Mast Installation						
Revision:	Replace the first three sentences of the first paragraph with the following: Install each high mast						
	pole as noted on Plans. Install each high mast pole on a separate circuit and use luminaires with						
	light patterns as indicated. Orient luminaires as shown in Plans.						
Subsection:	716.03.02 Lighting Standard Installation.						
Part:	B) High Mast Installation						
Number:	2) Concrete Base Installation						
Revision:	Modification of Chart and succeeding paragraphs within this section:						

Drilled Shaft Depth Data								
		3:1 Ground		2:1 Ground		1.5:1 Ground		
Level Ground		Sl	Slope		Slope		Slope (2)	
Soil	Rock	Soil	Rock	Soil	Rock	Soil	Rock	
17 ft	7 f t	19 ft	7 f t	20 ft	7 ft	(1)	7 f t	
Steel R	Steel Requirements						•	

Vertical Bars Ties or Spiral Spacing or Size Total Size Pitch #10 16 #4 12 inch

Note 1: Shaft length is 22 feet for cohesive soil only. For cohesionless soil, contact Geotechnical Branch for design. Note 2: Do not construct high mast drilled shafts on ground slopes steeper than 1.5:1 without the approval of the Division of Traffic Operations.

If rock is encountered during drilling operations and confirmed by the Engineer to be of sound quality, the shaft is only required to be further advanced into the rock by the length of rock socket shown in the design table. The total length of the shaft need not be longer than that of soil alone. Both longitudinal rebar length and number of ties or spiral length shall be adjusted

If a shorter depth is desired for the drilled shaft, the Contractor shall provide, for the state's review and approval, a detailed column design with individual site specific soil and rock analysis performed and approved by a Professional Engineer licensed in the Commonwealth of Kentucky.

Spiral reinforcement may be substituted for ties. If spiral reinforcement is used, one and one-half closed coils shall be provided at the ends of each spiral unit. Subsurface conditions consisting of very soft clay or very loose saturated sand could result in soil parameters weaker than those assumed. Engineer shall consult with the Geotechnical Branch if such conditions are

The bottom of the drilled hole shall be firm and thoroughly cleaned so no loose or compressible materials are present at the time of the concrete placement. If the drilled hole contains standing water, the concrete shall be placed using a tremie to displace water. Continuous concrete flow will be required to insure full displacement of any water.

The reinforcement and anchor bolts shall be adequately supported in the proper positions so no movement occurs during concrete placement. Welding of anchor bolts to the reinforcing cage is unacceptable, templates shall be used. Exposed portions of the foundation shall be formed to create a smooth finished surface. All forming shall be removed upon completion of foundation construction.

Subsection: 716.03.03 Trenching.

Part:

A) Trenching of Conduit for Highmast Ducted Cables.

Revision:

Add the following after the first sentence: If depths greater than 24 inches are necessary, obtain the Engineer's approval and maintain the required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.

G 1 4	71 (02 02 T						
Part:	B) Trenching of Conduit for Non-Highmast Cables.						
Revision:	Add the following after the second sentence: If depths greater than 24 inches are necessary for						
	either situation listed previously, obtain the Engineer's approval and maintain the required						
	conduit depths coming into the junction boxes.						
Subsection:							
Revision:	Replace the first two sentences of the paragraph with the following: Provide rigid steel cond						
	encasement for all conductors except as specified in the Contract. Provide conduit that is listed						
	on the Department's List of Approved Materials.						
Subsection:	716.03.04 Conduit Installation.						
Part:	A) Conduit Requirements in Junction Boxes.						
Number:	1) Highmast Ducted Cable.						
Revision:	Replace the first two sentences with the following: Install conduit horizontally through the						
	junction box. Conduit shall be 4 inches from the bottom and 4 inches from the side of the						
	junction box.						
Subsection:	716.03.04 Conduit Installation.						
Revision:	Add the following to the Part to the Subsection: G) Bore and Jack. Construction						
	methods shall be in accordance with Subsections 706.03.02, paragraphs 1, 2 and 4.						
	716.03.08 Splicing.						
Revision:	Replace the last sentence of the paragraph with the following: Ensure the splices are of the						
	correct size for the wire being used.						
Subsection:	716.03.10 Junction Boxes.						
Revision:	Replace subsection title with the following: Electrical Junction Box and replace the last sentence						
	of the paragraph with the following: Any additional junction boxes shall be approved by the						
	Engineer.						
Subsection:	716.03.13 Temporary Lighting.						
Revision:	Change subsection heading to the following: 716.03.13 Temporary/Maintain Lighting.						
Subsection:	716.03.13 Temporary /Maintain Lighting.						
Revision:	Replace the entire section with the following:						
	The Contractor shall furnish and install all materials necessary to temporarily light the proposed						
	roadway to design standards in Subsection 716.03. The Contractor shall submit his proposed						
	design of temporary lighting to the Division of Traffic Operations for approval at least 30 days						
	before installation.						
	Maintain all lighting elements impacted within or outside the project limits until new lighting						
	elements are installed and a functional inspection has been performed on the new lighting						
	elements. The Contractor shall submit a proposed design for maintaining lighting to the Division						
	of Traffic Operations for approval at least 30 days before installation.						

Subsection:	716.03.14 Remove Lighting.					
Revision:	Replace the section with the following: Remove all lighting equipment that is identified by the Engineer as no longer necessary including, but not limited to, the following: pole bases, poles,					
	junction boxes, cabinets, and wood poles. Pole bases shall be removed a minimum of one below finished grade by chipping off or other method that is approved by the Engineer.					
	of all removed concrete off right-of-way. Wood poles shall be removed a minimum of one foot below finished grade. Backfill holes with material approved by the Engineer. Conduit may be					
	abandoned in the ground. All materials shall be removed from the project as directed by the					
	Engineer. Transformers not owned by a utility shall be tested for PCB's and disposed of in accordance with state regulations.					
Subsection:	716.03.15 Painting.					
Revision:	Replace the first sentence with the following: Clean non-galvanized or damaged surfaces of exposed junction boxes, pull boxes, control panels, poles, and similar equipment, and apply one coat of an inhibiting paint and two coats of aluminum paint.					
Subsection:	716.04.01. Poles.					
Revision:	Change the subsection heading to 716.04.01 Pole and replace the last sentence of the subsection					
	with the following: The Department will not measure anchor bolts, washers, nuts, anchor bolt					
	covers, ground lugs, and any associated hardware for payment and will consider them incidental to this item of work.					
Subsection:	716.04.02 High Mast Pole.					
Revision:	Replace the second sentence with the following: The Department will not measure the lowering					
110 (151011)	device, anchor bolts, head frame assembly, cables, winch unit, power cables, wiring, connectors,					
	circuit breakers, grounding lugs, ground wire, ground rods, conduits, test plugs,, adjustment and					
	calibration of the unit to provide the desired operation, and any associated hardware for payment					
	and will consider them incidental to this item of work.					
Subsection:						
Revision:	Replace the second sentence with the following: The Department will not measure any associated hardware needed for attaching the bracket to the pole for payment and will consider them incidental to this item of work.					
Subsection:	716.04.04 Pole Base.					
Revision:	Change the subsection heading to 716.04.04 Pole Bases and delete the paragraph.					
Subsection:	1 1 1					
Revision:	Insert the following:					
	A. Pole Base. The Department will measure the quantity as each individual unit furnished					
	and installed. The Department will not measure excavation, concrete, conduits, fittings, ground					
	rods, ground wires, ground lugs, reinforcing steel, restoring disturbed areas to the satisfaction of					
	the Engineer, and any associated hardware for payment and will consider them incidental to this					
	item of work.					
	B. Pole Base High Mast. The Department will measure the quantity in cubic yards furnished and installed. The Department will not measure everything generate conduits fittings ground					
	and installed. The Department will not measure excavation, concrete, conduits, fittings, ground rods, ground wires, ground lugs, reinforcing steel, restoring disturbed areas to the satisfaction of					
	the Engineer, and any associated hardware for payment and will consider them incidental to this item of work.					
	INGIL OF WOLK,					

Subsection	716.04.05 Pole Base in Median Wall.		
Revision:	Replace the last sentence with the following: The Department will not measure conduits, fittings, junction boxes, additional reinforcing steel, ground rods, ground wire, ground lugs, and aluminum cover plates (if specified) for payment, and will consider them incidental to this item of work.		
	716.04.06 Transformer Base.		
Revision:	Replace the last sentence with the following: The Department will not measure transformer door, ground lug, anchoring bolts, nuts, washers, and any associated hardware for payment and will consider them incidental to this item of work. The filling of any unused holes will also be considered incidental to this item of work.		
	716.04.07 Pole with Secondary Equipment.		
Revision:	Replace the heading with the following: 716.04.07 Pole with Secondary Control Equipment.		
Subsection:	716.04.07 Pole with Secondary Control Equipment.		
Revision:	Replace the second and third sentence with the following: The Department will not measure mounting the cabinet to the pole, backfilling, restoration, any necessary hardware to anchor pole, electrical inspection fees, and required building fees involving utility secondary, and primary service for payment and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, specified conduits, meter base, transformer, service panel, fused cutout, fuses, lighting arrestors, photoelectrical control, circuit breaker, contactor, manual switch, ground rods, ground lugs, and ground wires for payment and will consider them incidental to this item of work. The filling of unused holes will also be considered incidental to this item of work.		
Subsection:	716.04.08 Lighting Control Equipment.		
Revision:	Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure the concrete base, excavation, backfilling, restoration, any necessary anchors, electrical inspection fees, and required building fees involving utility secondary/primary service for payment and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, specified conduits, meter base, transformer, service panel, fused cutout, fuses, lighting arrestors, photoelectrical control, circuit breakers, contactor, manual switch, ground rods, ground lugs, and ground wires for payment and will consider them incidental to this item of work. The Department will not measure the filling of any unused holes with and will consider them incidental to this item of work.		
Subsection:	716.04.09 Luminaire.		
Revision:	Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure lamps, starters, ballasts, drivers, surge protection, dimming modules, photo-control receptacle, specified shielding (if		
	required), and any adjustments necessary to provide the desired lighting pattern for payment and will consider them incidental to this item of work.		
Subsection:			

	Effective with the rebruary 24, 2017 Letting			
Subsection:	716.04.10 Fuse Connector Kits.			
Revision:	Replace the paragraph with the following: The Department will measure the quantity as each			
	individual unit furnished and installed. The Department will not measure fuses/lugs for payment			
	and will consider them incidental to this item of work.			
Subsection:	716.04.11 Conduit.			
Revision:	Replace the second sentence with the following: The Department will not measure installation			
	in ground or on structures, conduit fittings, test plugs, expansion joints with bonding straps,			
	grounding lugs, drill anchors, clamps, and any additional hardware required for payment and will			
	consider them incidental to this item of work.			
Subsection:	716.04.12 Markers.			
Revision:	Replace the section with the following: The Department will measure the quantity as each			
	individual unit furnished and installed.			
Subsection:	716.04.13 Junction Box.			
Revision:	Replace the subsection title with the following: Electrical Junction Box Type Various.			
Subsection:	716.04.13 Electrical Junction Box Type Various.			
Revision:	Replace the section with the following: The Department will measure the quantity as each			
	individual unit furnished and installed. The Department will not measure additional junction			
	boxes for greater depths than those identified in Plans, #57 aggregate, backfilling, restoration of			
	disturbed areas to the satisfaction of the Engineer, geotextile filter fabric, concrete, hot dipped			
	galvanized cover, stainless steel screws, rubber gasket, and any associated hardware for paym, and will consider them incidental to this item of work.			
	716.04.13 Junction Box.			
Part:	A) Junction Electrical.			
Revision:	Delete Part A.			
	716.04.14 Trenching and Backfilling.			
Revision:	Replace the section with the following: The Department will measure the quantity in linear fe			
	The Department will not measure excavation, backfilling, underground utility warning tape (if			
	required), and the restoration of disturbed areas to original condition for payment and will			
	consider them incidental to this item of work.			
	716.04.15 Wire or Cable.			
Revision:	Replace the section with the following: The Department will measure the quantity in linear feet			
	furnished and installed. The Department will not measure installation within conduit, splice			
	boots, and any other hardware required for installing cable for payment and will consider them			
G 1	incidental to this item of work.			
	716.04.16 Ducted Cable.			
Revision:	Replace the second sentence of the paragraph with the following: The Department will not			
	measure installation within trench or conduit and any other necessary hardware for payment and			
Cubaction	will consider them incidental to this item of work.			
	716.04.17 Temporary Lighting Panema the subsection as follows: 716.04.17 Temporary Lighting/Maintain Lighting			
Revision:	Rename the subsection as follows: 716.04.17 Temporary Lighting/Maintain Lighting.			

Subsection:	716.04.17 Temporary Lighting/Maintain Lighting.				
	Delete the paragraph and add the following parts:				
	A) Temporary Lighting. The Department will measure the quantity by lump sum. The				
	Department will not measure poles, luminaires, wire, conduit, trenching and backfilling, control				
	equipment, all relocations and removal, design (if required), and any other necessary hardware to				
			onsider them incidental to this item of work.		
	B) Maintain Lig	hting The Department will measure	e the quantity by lump sum. The Department		
	will not measur	e maintenance of lighting elements a	nd design (if required) for payment and will		
		ncidental to this item of work.			
	716.04.18 Remo				
Revision:			partment will measure the quantity by lump		
	_	rtment will not measure backfilling a			
			ral or electrical component of the lighting		
ļ	_	-	s, junction boxes, cabinets, and wood poles		
		d will consider them incidental to this	s item of work.		
Subsection:	716.04.19 Rem	love Pole Base.			
Revision:	Delete Subsecti	on.			
Subsection:	716.04.20 Bore	and Jack Conduit.			
Revision:	Renumber Subs	ection to 716.04.19 Bore and Jack C	onduit.		
Subsection:	716.04.19 Bore	and Jack Conduit.			
Revision:			artment will measure the quantity in linear		
	feet. This item shall include all work necessary for boring and installing conduit under an				
	existing roadwa	y.			
	716.05 PAYME				
Revision:	Revise the follo	wing under <u>Code</u> , <u>Pay Item</u> , and <u>Pay</u>	Unit with the following:		
	<u>Code</u>	Pay Item	Pay Unit		
	04700-04701	Pole(Various)Mtg Ht	Each		
ļ	04710-04714	Pole(Various)Mtg Ht High Mast	Each		
ļ	04810-04811	Electrical Junction Box (Various)	Each		
	20391NS835	Electrical Junction Box Type A	Each		
ļ	20392NS835	Electrical Junction Box Type C	Each		
	04770-04773	Luminaire (Various)	Each		
ļ	04780	Fuse Connector Kit	Each		
ļ	20410ED	Maintain Lighting	Lump Sum		
	04941	Remove Pole Base	Each		
	723.02.02 Paint.				
Revision:	Replace sentence with the following: Conform to Section 821.				
Subsection:	723.03 CONSTRUCTION.				
Revision:	Replace bullet 5) with the following: 5) AASHTO Standard Specifications for Structural				
	Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current				
	interims,				

Subsection	723.03.02 Poles and Bases Installation.				
Revision:	Replace the title with the following: 723.03.02 Pole and Base Installation.				
	723.03.02 Pole and Base Installation.				
Revision:					
Kevision:	Replace the first paragraph with the following: Regardless of the station and offset noted, locate all poles/bases behind the guardrail a minimum of four feet from the front face of the				
	guardrail to the front face of the pole base. Orient the handhole door away from traffic travel				
	path. If pole base is installed within a sidewalk the top of the pole base shall be the same grade				
G 1 4	as the sidewalk.				
	723.03.02 Poles and Bases Installation.				
Part:	A) Steel Strain and Mastarm Poles Installation				
Revision:	Replace the title of Part A) Steel Strain and Mast Arm Pole Installation.				
	723.03.02 Pole and Base Installation.				
Part:	A) Steel Strain and Mast Arm Pole Installation.				
Revision:	Insert the following sentence at the beginning of the first paragraph: Install pole bases 4 to 6				
	inches above grade.				
Subsection:	723.03.02 Pole and Base Installation.				
Part:	A) Steel Strain and Mast Arm Pole Installation.				
Revision:	Replace the second paragraph with the following: For concrete base installation, see Subsection				
	716.03.02 B), 2), Paragraphs 2-6. Drilled shaft depth shall be based on the soil conditions				
	encountered during drilling and slope condition at the site. Refer to the design chart below:				
Subsections	723.03.02 Pole and Base Installation.				
Part:					
Revision:	B) Pedestal or Pedestal Post Installation. Replace the second sentence with the following: If over 12 feet high the base shall have the				
Kevision:	minimum depth and diameter as Subsection 716.03.02 (A), paragraph 2.				
Cubaatian	723.03.02 Poles and Bases Installation.				
Part:					
	B) Pedestal or Pedestal Post Installation.				
Revision:	Replace the fourth sentence of the paragraph with the following: For breakaway supports,				
	conform to Section 12 of the AASHTO Standard Specifications for Structural Supports for				
Cubaatian.	Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.				
Subsection: Revision:	723.03.03 Trenching.				
	Replace the first sentence with the following: See Subsection 716.03.03 (B).				
	723.03.03 Trenching.				
Part: Revision:	A) Under Roadway.				
	Delete Part A) Under Roadway. 723.03.05 Conduit Requirements in Junction Boxes.				
Revision:	Delete the Subsection and replace with the following:				
ACVISIUII:	723.03.05 Fuse Connector Kits. See Subsection 716.03.09.				
Subsection:					
Revision:	723.03.06 Coupling Installation.				
Kevisiuii:	Delete the Subsection and replace with the following:				
Cubaatian	723.03.06 Painting. See Subsection 716.03.15.				
	723.03.07 Bonding Requirements.				
Revision:	Delete the Subsection and replace with the following:				
	723.03.07 Electrical Junction Boxes. See Subsection 716.03.10.				

Revision: Replace with 723.03.06 Painting. See Subsection 716.03.15. Subsection: Revision: Renumber Subsection to 723.03.08 Underground Warning Tape. Subsection: 723.03.10 Backfilling and Disturbed Areas. Revision: 723.03.10 Backfilling and Disturbed Areas. Revision: Renumber Subsection to 723.03.09 Backfilling and Disturbed Areas. Subsection: 723.03.11 Wiring Installation. Revision: Renumber Subsection to 723.03.10 Wiring Installation. Revision: Add the following sentence between the fifth and sixth sentences: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes. Subsection: 723.03.12 Loop Installation. Revision: Renumber Subsection to 723.03.11 Loop Installation. Revision: Replace the fourth sentence of the 2nd paragraph with the following: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes. Subsection: Replace the fourth sentence of the 2nd paragraph with the following: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes. Subsection: Revision: Replace the fourth sentence of the 2nd paragraph with the following: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes. Subsection: 723.03.13 Grounding Installation. Revision: Replace the reference to "Standard Detail Sheets" in the first sentence with "Plans". Subsection: Revision: 723.03.14 Splicing. Revision: Delete the reference to (IMSA 19-2) from the 5th sentence of the paragraph. Subsection: 723.03.15 Painting. Delete the reference to (IMSA 19-2) from the 5th sentence of the paragraph. Subsection: 723.03.15 Painting. Revision: Revision: Replace with new Subsection 723.03.14 Remove Signal Equipment. Revision: Revision: Replace with new Subsection 723.03.14 Remove Signal Equipment that is identified by the Engineer as no longer necessary including, but not limited to, the following: pole bases, poles, j					
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Subsection:	723.03.15 Drawings.				
Revision:	Replace Subsection with the following: Before final inspection of the traffic control device,				
	provide a complete set of reproducible as-built drawings that show the arrangement and locations				
	of all equipment including: junction boxes, conduits, spare conduits, etc. Keep a daily record of				
	all conduits placed in trenches, showing the distance from the pavement edge, the depth, and the				
	length of runs, and indicate this information on the as-built drawings.				
	723.03.17 Acceptance and Inspection Requirements.				
Revision:	Renumber Subsection to 723.03.16 Acceptance and Inspection Requirements.				
	723.03.16 Acceptance and Inspection Requirements.				
Revision:	Replace the first paragraph of the section with the following: See Subsection 105.12. In				
	coordination with the District Traffic Engineer, energize traffic control device as soon as it is				
	fully functional and ready for inspection. After the work has been completed, conduct an				
	operational test demonstrating that the system operates in accordance with the Plans in the				
	presence of the Engineer. The Department will also conduct its own tests with its own				
	equipment before final acceptance. Ensure that the traffic control device remains operational until the Division of Traffic Operations has provided written acceptance of the electrical work.				
	723.04.01 Conduit.				
Revision:	Replace the second sentence of the subsection with the following: The Department will not				
	measure conduit fittings, ground lugs, test plugs, expansion joints, and clamps for payment and				
	will consider them incidental to this item of work.				
	723.04.02 Junction Box.				
	Replace subsection title with the following: Electrical Junction Box Type Various.				
	723.04.02 Electrical Junction Box Type Various.				
Revision:	Replace the subsection with the following: The Department will measure the quantity as each				
	individual unit furnished and installed. The Department will not measure additional junction boxes for greater depths than those identified in Plans, Aggregate (#57), backfilling, restoration				
	of disturbed areas to the satisfaction of the Engineer, geotextile fabric, concrete, hot dipped				
	galvanized cover, stainless steel screws, rubber gasket, and any associated hardware for payment				
	and will consider them incidental to this item of work.				
Subsection:	723.04.03 Trenching and Backfilling.				
Revision:	Replace the second sentence with the following: The Department will not measure excavation,				
	backfilling, underground utility warning tape, and the restoration of disturbed areas to original				
	condition for payment and will consider them incidental to this item of work.				
Subsection:	723.04.04 Open Cut Roadway.				
Revision:	Replace the second sentence of the subsection with the following: The Department will not				
	measure concrete, reinforcing steel, and asphalt for payment and will consider them incidental to				
	this item of work.				
Subsection:	723.04.05 Loop Wire.				
Revision:	Replace the second sentence of the subsection with the following: The Department will not				
	measure splice boots, cable rings, and any other necessary hardware for payment and will				
	consider them incidental to this item of work.				

Subsection:	723.04.06 Cable.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
ic vision.	measure splice boots, cable rings, and any other hardware for payment and will consider them			
	incidental to this item of work.			
Subsection:	723.04.07 Pole-Wooden.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
ic vision.	measure excavation, backfilling, and restoring disturbed areas for payment and will consider			
	them incidental to this item of work.			
Subsection:	723.04.08 Steel Strain Pole.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
Te vision.	measure excavation, backfilling, and restoring disturbed areas for payment and will consider			
	them incidental to this item of work.			
Subsection:	723.04.09 Mast Arm Pole.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
110 (151011)	measure anchor bolts, arms, mounting brackets, and any other necessary hardware for payment			
	and will consider them incidental to this item of work.			
Subsection:	723.04.10 Signal Pedestal.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
	measure excavation, concrete, reinforcing steel, conduits, fittings, ground rods, ground wire,			
	ground lugs, backfilling, restoring disturbed areas, and other necessary hardware for payment and			
	will consider them incidental to this item of work.			
Subsection:	723.04.11 Post.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
	measure excavation, backfilling, and restoring disturbed areas for payment and will consider			
	them incidental to this item of work.			
Subsection:	723.04.12 Anchor.			
Revision:	Replace the second sentence of the subsection with the following: . The Department will not			
	measure down-guy, messenger, clamps, guy guard, or insulators, and possible installation in			
	various soil conditions for payment and will consider them incidental to this item of work.			
Subsection:	723.04.13 Messenger.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
	measure strand vises, bolts, washers, and other necessary hardware for payment and will consider			
	them incidental to this item of work.			
Revision:	Revise subsection title to 723.04.14 Install Beacon Controller - 2 Circuit.			
Revision:	Replace the subsection with the following: The Department will measure the quantity as each			
	individual unit furnished and installed. The Department will not measure the controller housing,			
	mounting equipment, S5-1 school zone sign, time clock, nema flasher, ground rods, ground			
	wires, ground lugs, metering disconnect hardware, electrical inspection fees, and required			
	building fees involving utility secondary/primary service for payment and will consider them			
	incidental to this item of work.			

Subsection:	723.04.15 Loop Saw Slot and Fill.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
	measure sawing, cleaning, filling induction loop saw slot, loop sealant, backer rod, drilling hole			
	for conduit, and grout for payment and will consider them incidental to this item of work.			
Subsection:	723.04.16 Pedestrian Detector.			
Revision:	Replace the subsection with the following: The Department will measure the quantity as each			
	individual unit furnished, installed and connected to pole/pedestal. The Department will not			
	measure installing R10-3e signs, detector housing, and installing mounting hardware for sign for			
	payment and will consider them incidental to this item of work.			
Subsection:	723.04.17 Signal.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
	measure furnishing and installing LED modules, retroreflective tape, back plates, and any other			
	hardware for payment and will consider them incidental to this item of work.			
Subsection:	723.04.18 Signal Controller- Type 170.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
	measure the concrete base, mounting the cabinet, connecting the signal and detectors, excavation,			
	backfilling, restoration, any necessary pole mounting hardware, electric service, electrical			
	inspection fees, and building fees involving secondary/primary service for payment and will			
	consider them incidental to this item of work. The Department will also not measure furnishing			
	and connecting the induction of loop amplifiers, pedestrian isolators, load switches, model 400			
	modem card, electrical service conductors, conduits, anchors, meter base, fused cutout, fuses,			
	ground rods, ground wires, and ground lugs for payment and will consider them incidental to this			
	item of work.			
Subsection:	723.04.19 Beacon Controller - 2 Circuit.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
	measure the controller housing, mounting equipment, S5-1 school zone sign, time clock, nema			
	flasher, ground rods, ground wires, ground lugs, metering disconnect hardware, electrical			
	inspection fees, and required building fees involving utility secondary/primary service for			
~ -	payment and will consider them incidental to this item of work.			
	723.04.20 Install Signal Controller - Type 170.			
Revision:	Replace the paragraph with the following: The Department will measure the quantity as each			
	individual unit installed. The Department will not measure the concrete base, mounting the			
	cabinet, connecting the signal and detectors, excavation, backfilling, restoration, any necessary			
	pole mounting hardware, electric service, electrical inspection fees, and required building fees			
	involving utility secondary/primary service for payment and will consider them incidental to this item of work. The Department will also not measure connecting the induction loop amplifiers,			
	pedestrian isolators, load switches, model 400 modem card for payment and will consider them			
	incidental to this item of work. The Department will also not measure furnishing and installing			
	electrical service conductors, conduits, anchors, meter base, fused cutout, fuses, ground rods,			
	ground lugs, and ground wires for payment and will consider them incidental to this item of work.			
	WUIK.			

Subsection:	722 04 21 Install Steel Strain Pole			
Revision:	723.04.21 Install Steel Strain Pole. Replace the second sentence of the subsection with the following: The Department will not measure any necessary clamp assemblies for payment and will consider them incidental to this item of work.			
Subsection: Revision:	723.04.22 Remove Signal Equipment. Replace the paragraph with the following: The Department will measure the quantity by lump sum. The Department will not measure backfilling and the disposal or transportation of equipment and materials associated with any structural or electrical component of the signal system including, but not limited to pole bases, poles, junction boxes, cabinets, and wood poles for payment and will consider them incidental to this item of work.			
Subsection:	723.04.23 Install Span/Pole Mounted Sign.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure the hanger or any other hardware necessary to install the sign for payment and will consider them incidental to this item of work.			
Subsection:	723.04.24 Install Pedestrian Head LED.			
Revision:	Insert the following sentence at the end of the paragraph: The Department will not measure the installation of LED modules and any other necessary hardware for payment and will consider them incidental to this item of work.			
Subsection:	723.04.25 Install Signal LED.			
Revision:	Insert the following sentence at the end of the paragraph: The Department will not measure the installation of LED modules, retroreflective tape, back plates, and any other necessary hardware for payment and will consider them incidental to this item of work.			
Subsection:	723.04.26 Install Coordinating Unit.			
Revision:	Replace the subsection with the following: The Department will measure the quantity as each individual unit installed. The Department will not measure radio, modem, cable(s), antenna(s), router, repeater, and any other necessary hardware for payment and will consider them incidental to this item of work.			
Subsection:	723.04.27 Video Camera.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure video modules, mounting bracket, truss type arm, power cable, coaxial cable, and any other necessary hardware for payment and will consider them incidental to this item of work.			
Subsection:	723.04.28 Install Pedestrian Detector Audible.			
Revision:	Replace the second sentence with the following: The Department will not measure installing R10-3e sign, detector housing, and installing mounting hardware for payment and will consider them incidental to this item of work.			
Subsection:	723.04.29 Audible Pedestrian Detector.			
Revision:	Replace the second sentence with the following: The Department will not measure furnishing and installing the R10-3e sign, detector housing, and installing mounting hardware for payment and will consider them incidental to this item of work.			

Subsection:	723.04.30 Bore and Jack Conduit.			
Revision:	Replace the paragraph with the following: The Department will measure the quantity in linear			
	feet. This item shall include all work necessary for boring and installing conduit under an existing roadway.			
	723.04.31 Install Pedestrian Detector.			
	Replace the paragraph with the following: The Department will measure the quantity as each individual unit installed and connected to pole/pedestal. The Department will not measure			
	installing R 10-3e sign, detector housing, and installing mounting hardware for payment as			
	consider them incidental to this item of work.			
	723.04.32 Install Mast Arm Pole.			
	Replace the second sentence with the following: The Department will not measure installation of			
	arms, signal mounting brackets, anchor bolts, and any other necessary hardware for payment and			
	will consider them incidental to this item of work.			
	723.04.33 Pedestal Post.			
	Replace the second sentence with the following: The Department will not measure excavation,			
	backfilling, restoration, furnishing and installing concrete, reinforcing steel, anchor bolts,			
	conduit, fittings, ground rod, ground wire, ground lugs, or any other necessary hardware for			
	payment and will consider them incidental to this item of work.			
Subsection:	723.04.34 Span Mounted Sign.			
Revision:	Revise subsection title to 723.04.34 Span/Pole-Mounted Sign.			
Subsection:	723.04.34 Span/Pole-Mounted Sign.			
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
	measure the hanger, sign, and any other necessary hardware for payment and will consider then			
	incidental to this item of work.			
	723.04.35 Remove and Reinstall Coordinating Unit.			
	Add the following sentence to the end of the subsection: The Department will not measure			
	removing, storage, reinstalling, and connecting radio, modem, cable(s), antenna(s), router,			
	repeater, and any other necessary hardware for payment and will consider them incidental to			
	item of work.			
	723.04.36 Traffic Signal Pole Base.			
	Replace the second sentence of the subsection with the following: The Department will not			
	measure excavation, backfilling, restoration, furnishing and installing reinforcing steel, anchor bolts, conduits, ground rods, ground wires, and ground lugs for payment and will consider them			
	incidental to this item of work.			
+	723.04.37 Install Signal Pedestal.			
	Replace the second sentence of the subsection with the following: . The Department will not			
	measure excavation, backfilling, restoration, furnishing and installing concrete, reinforcing steel,			
	conduits, fittings, ground rod, ground wire, ground lugs, and any other necessary hardware for			
	payment and will consider them incidental to this item of work.			
Subsection:	723.04.38 Install Pedestal Post.			
	Replace the second sentence of the subsection with the following: The Department will not			
	measure excavation, backfilling, restoration, furnishing and installing concrete, reinforcing steel,			
	conduit, fittings, ground rod, ground wire, ground lugs, and any other necessary hardware for			
	payment and will consider them incidental to this item of work.			

		Effective with the February 24, 20		
Subsection:	723.04.39 Install	Antenna.		
Revision:	Replace the second sentence of the subsection with the following: The Department will not			
	measure any other materials necessary to complete the installation for payment and will consider			
	them incidental to this item of work.			
Subsection:	723.05 PAYMEN	VT.		
Revision:	Replace items 048	810-04811, 20391NS835, 20392NS835,2	3052NN and add item number	
	24526ED under <u>C</u>	Code, Pay Item, and Pay Unit with the following	owing:	
		Pay Item Pay U	<u>nit</u>	
	04810	Electrical Junction Box Eac	h	
	04811	Electrical Junction Box Type B Each	h	
	20391NS835	Electrical Junction Box Type A Eac	h	
	20392NS835	Electrical Junction Box Type C Eac	h	
	23052NN	Span/Pole-Mounted Sign Eac	h	
	24526ED 1	Install Beacon Controller 2 Cir Eac	h	
Subsection:	801.01 REQUIRE	EMENTS		
Revision:	_	ence in paragraph one with the following:		
	hydraulic cement from approved mills listed in the Department's List of Approved Materials.			
	801.01 REQUIRE	EMENTS		
Number:	1)			
Revision:	Replace first sentence with the following: Type I, II, III, and IV <i>Portland cement</i> conforms to			
	ASTM C 150.			
	801.01 REQUIREMENTS			
Number:	3)			
Revision:	Replace the first sentence with the following: Type IP (≤20), Portland-pozzolan cement,			
	conforms to ASTM C595, and the following additional requirements to Type IP (≤20).			
Subsection:	801.01 REQUIREMENTS			
Number:	3)			
Part:	b)			
Revision:	Delete part b)			
	801.01 REQUIREMENTS			
Number:	3)			
Part:	(c)			
Revision:	Rename Part c) to Part b) and replace the text with the following: The cement manufacturer shall			
	furnish to the Engineer reports showing the results of tests performed on the fly ash used in the			
	manufacture of the Type IP(≤20) cement shipped to the project.			
Subsection	801.01 REQUIRE	EMENTS		
Number:	3)			
Part:	d)			
Revision:	Rename Part d) to Part c)			

	Lifective with the rebidary 24, 2017 Letting	
Subsection:	801.01 REQUIREMENTS	
Number:	[3]	
Part:	e)	
Revision:	Rename Part e) to Part d) and replace the text with the following: Use only one brand of Type	
	IP(≤20) cement throughout the project, unless the Engineer approved a change in brand in	
	writing.	
Subsection:	801.01 REQUIREMENTS	
Number:	4)	
Revision:	Replace first sentence with the following: Type IS(≤30), Portland blast furnace slag cement,	
	conforms to ASTM C 595 and the following requirements:	
Subsection:	801.01 REQUIREMENTS	
Number:	4)	
Part:	a)	
Revision:	Replace part a) with the following: Use Grade 100 or 120 blast furnace slag cement conforming	
	to the requirements of ASTM C 989.	
	801.01 REQUIREMENTS	
Number:	4)	
Part:	(b)	
Revision:	Delete part b)	
	801.01 REQUIREMENTS	
Number:	4)	
Part:	(c)	
Revision:	Rename Part c) to Part b) and replace the text with the following: The cement manufacturer shall	
	furnish to the Engineer reports showing the results of the tests performed on the blast furnace	
	slag cement used in the manufacturing of the Type IS(≤30) shipped to the project.	
Subsection:	801.01 REQUIREMENTS	
Number:	4)	
Part:	(d)	
Revision:	Rename Part d) to Part c)	
	801.01 REQUIREMENTS	
Number:	4)	
Part:	e)	
Revision:	Rename Part e) to Part d) and replace the text with the following: Use only one brand of Type	
	IS(≤30) cement throughout the project, unless the Engineer approves otherwise.	
	801.01 REQUIREMENTS	
Number:	5)	
Revision:	Insert part 5) as the following: Type IL(5-15), Portland-limestone cement, conforms to ASTM C	
	595 and the following additional requirements:	
	801.01 REQUIREMENTS	
Number:	5)	
Part:	a)	
Revision:	Insert part a) as the following: The cement manufacturer shall furnish to the Engineer reports	
	showing the results of test performed on the limestone used in the manufacture of the Type IL	
	cement shipped to the project.	

	Effective with the repruary 24, 2017 Letting				
Subsection:	801.01 REQUIREMENTS				
Number:	5)				
Part:	b)				
Revision:	Insert part b) as the following: Use only one brand of Type IL cement throughout the project,				
	unless the Engineer approves a brand change in writing.				
Subsection:	801.01 REQUIREMENTS				
Number:	5)				
Part:	(c)				
Revision:	Insert part c) as the following: The Type IL blended cement shall be an intimate and uniform				
	blend produced by intergrinding of the Portland cement and limestone.				
Subsection:	804.01.02 Crushed Sand.				
Revision:	Delete last sentence of the section.				
	804.01.06 Slag.				
Revision:	Add subsection and following sentence.				
	Provide blast furnace slag sand where permitted. The Department will allow steel slag sand only				
	in asphalt surface applications.				
Subsection:	804.04 Asphalt Mixtures.				
Revision:	Replace the subsection with the following:				
	Provide natural, crushed, conglomerate, or blast furnace slag sand, with the addition of filler as				
	necessary, to meet gradation requirements. The Department will allow any combination of				
	natural, crushed, conglomerate or blast furnace slag sand when the combination is achieved using				
	cold feeds at the plant. The Engineer may allow other fine aggregates.				
Subsection:	806.03.01 General Requirements.				
Revision:	Replace the second sentence of the paragraph with the following:				
	Additionally, the material must have a minimum solubility of 99.0 percent when tested according				
	to AASHTO T 44 and PG 76-22 must exhibit a minimum recovery of 60 percent, with a J_{NR} (non-				
	recoverable creep compliance) between 0.1 and 0.5, when tested according to AASHTO TP 70.				
Subsection:	806.03.01 General Requirements.				
Table:	PG Binder Requirements and Price Adjustment Schedule				
Revision:	Replace the Elastic Recovery, % (3) (AASHTO T301) and all corresponding values in the table				
	with the following:				
	Test Specification 100% Pay 90% Pay 80% Pay 70% Pay 50% Pay 50% Pay 100% Pa				
	MSCR recovery, $\%^{(3)}$ 60 Min. ≥58 56 55 54 <53				
	(AASHTO TP 70)				
Subsection:	806.03.01 General Requirements.				
Table:	PG Binder Requirements and Price Adjustment Schedule				
Superscript:					
Revision:					
IXC VISIUII.	Replace (3) with the following:				
	Perform testing at 64°C.				

Subsection: 80	08.07 Polypropylene Waterproofing Membrane.	
Revision: R	Replace the paragraph and table with the following: Furnish a layered waterproofing membrane.	
T	The layers will consist of an internal puncture resistant woven polypropylene fabric sandwiched	
be	between two rubberized mastic layers. The mastic will have a heavy polyethylene membrane	
at	ttached on the top and the bottom mastic layer will be covered by a protective release film.	
Subsection: 80	08.09 Acceptance.	
Revision: R	Replace the reference to "KMIMS" in the second paragraph with SiteManager.	
Subsection: 8	11.10.04 Properties of the Coated Bar.	
Part: B	3) Flexibility of Coating.	
Revision: R	Replace the second sentence of the paragraph with the following: Ensure that the coated bars	
aı	are capable of being bent to 180 degrees (after rebound) over a mandrel, without any visible	
ev	vidence of cracking the coating.	
Subsection: 8	13.04 Gray Iron Castings.	
Revision: R	Replace the reference to "AASHTO M105" with "ASTM A48".	
Subsection: 8	13.09.02 High Strength Steel Bolts, Nuts, and Washers.	
Number: A	A) Bolts.	
Revision: D	Delete first paragraph and "Hardness Number" Table. Replace with the following:	
A	A) Bolts. Conform to ASTM A325 (AASHTO M164) or ASTM A490 (AASHTO 253) as	
aj	pplicable.	
Subsection: 8	14.04.02 Timber Guardrail Posts.	
Revision: T	Third paragraph, replace the reference to "AWPA C14" with "AWPA U1, Section B, Paragraph	
4.	.1".	
	14.04.02 Timber Guardrail Posts.	
	Replace the first sentence of the fourth paragraph with the following:	
	Use any of the species of wood for round or square posts covered under AWPA U1.	
	14.04.02 Timber Guardrail Posts.	
	Fourth paragraph, replace the reference to "AWPA C2" with "AWPA U1, Section B, Paragraph	
	.1".	
	14.04.02 Timber Guardrail Posts.	
	Delete the second sentence of the fourth paragraph.	
	14.05.02 Composite Plastic.	
1 ') Add the following to the beginning of the first paragraph: Select composite offset blocks	
	onforming to this section and assure blocks are from a manufacturer included on the	
	Department's List of Approved Materials.	
	Delete the last paragraph of the subsection.	
	16.07.02 Wood Posts and Braces.	
	First paragraph, replace the reference to "AWPA C5" with "AWPA U1, Section B, Paragraph	
	.1".	
	16.07.02 Wood Posts and Braces.	
	Delete the second sentence of the first paragraph.	
	18.07 Preservative Treatment.	
1880-miniones 11/2	First paragraph, replace all references to "AWPA C14" with "AWPA U1, Section A".	

Subsection	833.01.02 Sheeting Signs.
Revision:	Replace the second sentence with the following: Provide a thickness of 125 mils if any single
ic vision.	edge dimension of the sign exceeds 3 feet.
Subsection	834.14 Lighting Poles.
Revision:	Replace the first sentence with the following: Lighting pole design shall be in accordance with
ic vision.	loading and allowable stress requirements of the AASHTO Standard Specifications for Structural
	Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current
	interims, with the exception of the following: The Cabinet will waive the requirement stated in
	the first sentence of Section 5.14.6.2 – Reinforced Holes and Cutouts for high mast poles (only).
	The minimum diameter at the base of the pole shall be 22 inches for high mast poles (only).
Subsection	834.14.03 High Mast Poles.
Revision:	Remove the second and fourth sentence from the first paragraph.
Subsection	834.14.03 High Mast Poles.
Revision:	Replace the third paragraph with the following: Provide calculations and drawings that are
	stamped by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection:	834.14.03 High Mast Poles.
Revision:	Replace paragraph six with the following: Provide a pole section that conforms to ASTM A 595
	grade A with a minimum yield strength of 55 KSI or ASTM A 572 with a minimum yield
	strength of 55 KSI. Use tubes that are round or 16 sided with a four inch corner radius, have a
	constant linear taper of .144 in/ft and contain only one longitudinal seam weld. Circumferential
	welded tube butt splices and laminated tubes are not permitted. Provide pole sections that are
	telescopically slip fit assembled in the field to facilitate inspection of interior surface welds and
	the protective coating. The minimum length of the telescopic slip splices shall be 1.5 times the
	inside diameter of the exposed end of the female section. Use longitudinal seam welds as
	commended in Section 5.15 of the AASHTO 2013 Specifications. The thickness of the
	transverse base shall not be less than 2 inches. Plates shall be integrally welded to the tubes with
	a telescopic welded joint or a full penetration groove weld with backup bar.
	The handhole cover shall be removable from the handhole frame. One the frame side opposite
	the hinge, provide a mechanism on the handhole cover/frame to place the Department's standard
	padlock as specified in Section 834.25. The handhole frame shall have two stainless studs
	installed opposite the hinge to secure the handhole cover to the frame which includes providing
	stainless steel wing nuts and washers. The handhole cover shall be manufactured from 0.25 inch
	thick galvanized steel (ASTM A 153) and have a neoprene rubber gasket that is permanently
	secured to the handhole frame to insure weather-tight protection. The hinge shall be
	manufactured from 7-guage stainless steel to provide adjustability to insure weather-tight fit for
	=
	834.16 ANCHOR BOLTS.
Revision:	Insert the following sentence at the beginning of the paragraph: The anchor bolt design shall
	follow the NCHRP Report 494 Section 2.4 and NCHRP 469 Appendix A Specifications.
	the cover. The minimum clear distance between the transverse plate and the bottom opening of the handhole shall not be less than the diameter of the bottom tube of the pole but needs to be at least 15 inches. Provide products that are hot-dip galvanized to the requirements of either ASTM A123 (fabricated products) or ASTM A 153 (hardware items). 834.16 ANCHOR BOLTS. Insert the following sentence at the beginning of the paragraph: The anchor bolt design shall
	10110W the NCHRP Report 494 Section 2.4 and NCHRP 469 Appendix A Specifications. 34

Subsection:	834.17.01 Conventional.		
Revision:	Add the following sentence after the second sentence: Provide a waterproof sticker mounted on		
	the bottom of the housing that is legible from the ground and indicates the wattage of the fixture		
	by providing the first two numbers of the wattage.		
Subsection:	834.21.01 Waterproof Enclosures.		
Revision:	Replace the last five sentences in the second paragraph with the following sentences:		
TTO VISIOII.	Provide a cabinet door with a louvered air vent, filter-retaining brackets and an easy to clean		
	metal filter. Provide a cabinet door that is keyed with a factory installed standard no. 2 corbin		
	traffic control key. Provide a light fixture with switch and bulb. Use a 120-volt fixture and		
	utilize a L.E.D. bulb (equivalent to 60 watts minimum). Fixture shall be situated at or near the		
	top of the cabinet and illuminate the contents of the cabinet. Provide a 120 VAC GFI duplex		
	receptacle in the enclosure with a separate 20 amp breaker.		
Subsection:	835.07 Traffic Poles.		
Revision:	Replace the first sentence of the first paragraph with the following: Pole diameter and wall		
	thickness shall be calculated in accordance with the AASHTO Standard Specifications for		
	Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with		
	current interims.		
Subsection:	835.07 Traffic Poles.		
Revision:	*Replace the first sentence of the fourth paragraph with the following: Ensure transverse plates		
	have a thickness ≥ 2 inches.		
	*Add the following sentence to the end of the fourth paragraph: The bottom pole diameter shall		
	not be less than 16.25 inches.		
Subsection:	835.07 Traffic Poles.		
Revision:	Replace the third sentence of the fifth paragraph with the following: For anchor bolt design, pole		
	forces shall be positioned in such a manner to maximize the force on any individual anchor bolt		
	regardless of the actual anchor bolt orientation with the pole.		
Subsection:	835.07 Traffic Poles.		
Revision:	Replace the first and second sentence of the sixth paragraph with the following:		
	The pole handhole shall be 25 inches by 6.5 inches. The handhole cover shall be removable		
	from the handhole frame. On the frame side opposite the hinge, provide a mechanism on the		
	handhole cover/frame to place the Department's standard padlock as specified in Section 834.25.		
	The handhole frame shall have two stainless studs installed opposite the hinge to secure the		
	handhole cover to the frame which includes providing stainless steel wing nuts and washers. The		
	handhole cover shall be manufactured from 0.25 inch thick galvanized steel (ASTM 153) and		
	have a neoprene rubber gasket that is permanently secured to the handhole frame to insure		
	weather-tight protection. The hinge shall be manufactured from 7 gauge stainless steel to		
	provide adjustability to insure a weather-tight fit for the cover. The minimum clear distance		
	between the transverse plate and the bottom opening of the handhole shall not be less than the		
	diameter of the bottom tube but needs to be at least 12 inches.		

C	835.07 Traffic Poles.	
Revision:	*Replace the first sentence of the last paragraph with the following: Provide calculations and	
	drawings that are stamped by a Professional Engineer licensed in the Commonwealth of	
	Kentucky.	
	*Replace the third sentence of the last paragraph with the following: All tables referenced in	
	835.07 are found in the AASHTO Standard Specifications for Structural Supports for Highway	
G	Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.	
	835.07.01 Steel Strain Poles.	
Revision:	Replace the second sentence of the second paragraph with the following:	
	The detailed analysis shall be certified by a Professional Engineer licensed in the Commonwealth	
	of Kentucky.	
	835.07.01 Steel Strain Poles.	
Revision:	Replace number 7. after the second paragraph with the following: 7. Fatigue calculations should	
	be shown for all fatigue related connections. Provide the corresponding detail, stress category	
	and example from table 11.9.3.1-1.	
	835.07.02 Mast Arm Poles.	
Revision:	Replace the second sentence of the fourth paragraph with the following: The detailed analysis	
	shall be certified by a Professional Engineer licensed in the Commonwealth of Kentucky.	
	835.07.02 Mast Arm Poles.	
Revision:	Replace number 7) after the fourth paragraph with the following: 7) Fatigue calculations should be shown for all fatigue related connections. Provide the corresponding detail, stress category	
	and example from table 11.9.3.1-1.	
	835.07.03 Anchor Bolts.	
Revision:	Add the following to the end of the paragraph: There shall be two steel templates (one can be	
	used for the headed part of the anchor bolt when designed in this manner) provided per pole.	
	Templates shall be contained within a 26.5 inch diameter. All templates shall be fully galvanized	
	(ASTM A 153).	
	835.16.05 Optical Units.	
Revision:	Replace the 3rd paragraph with the following:	
	The list of certified products can be found on the following website: http://www.intertek.com.	
	835.19.01 Pedestrian Detector Body.	
Revision:	Replace the first sentence with the following: Provide a four holed pole mounted aluminum	
	rectangular housing that is compatible with the pedestrian detector.	
	843.01.01 Geotextile Fabric.	
Table:	TYPE I FABRIC GEOTEXTILES FOR SLOPE PROTECTION AND CHANNEL LINING	
Revision:	Add the following to the chart:	
	<u>Property</u> <u>Minimum Value⁽¹⁾</u> <u>Test Method</u>	
	CBR Puncture (lbs) 494 ASTM D6241	
	Permittivity (1/s) 0.7 ASTM D4491	

Subsection:	843.01.01 Geotextile Fabric	С.	
Table:	TYPE II FABRIC GEOTEXTILES FOR UNDERDRAINS		
Revision:	Add the following to the chart:		
	<u>Property</u>	Minimum Value ⁽¹⁾	Test Method
	CBR Puncture (lbs)	210	ASTM D6241
	Permittivity (1/s)	0.5	ASTM D4491
Subsection:	843.01.01 Geotextile Fabric	c.	
Table:	TYPE III FABRIC GEOTE	EXTILES FOR SUBGRADE OR EMBANK	MENT
	STABILIZATION		
Revision:	Add the following to the ch	art:	
	<u>Property</u>	Minimum Value ⁽¹⁾	Test Method
	CBR Puncture (lbs)	370	ASTM D6241
	Permittivity (1/s)	0.05	ASTM D4491
Subsection:	843.01.01 Geotextile Fabric	c.	
Table:	TYPE IV FABRIC GEOTI	EXTILES FOR EMBANKMENT DRAINAG	E BLANKETS AND
	PAVEMENT EDGE DRAINS		
Revision:	Add the following to the chart:		
	<u>Property</u>	Minimum Value ⁽¹⁾	Test Method
	CBR Puncture (lbs)	309	ASTM D6241
	Permittivity (1/s)	0.5	ASTM D4491
Subsection:	843.01.01 Geotextile Fabric	c.	
Table:	TYPE V HIGH STRENGT	H GEOTEXTILE FABRIC	
Revision:	Make the following change	es to the chart:	
	<u>Property</u>	Minimum Value ⁽¹⁾	Test Method
	CBR Puncture (lbs)	618	ASTM D6241
	Apparent Opening Size	U.S. #40 ⁽³⁾	ASTM D4751
	(3) Maximum average roll v		

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ROADWAY

~ BARRIERS ~	
GUARDRAIL AND BRIDGE END DRAINAGE	
GUARDRAIL AND BRIDGE END DRAINAGE FOR SINGLE STRUCTURES	RBB-001-08
GUARDRAIL AND BRIDGE END DRAINAGE FOR TWIN STRUCTURES	
LAYOUT OF GUARDRAIL AT TWIN STRUCTURES (DEPRESSED MEDIAN)	
GUARDRAIL TRANSITION FROM NORMAL SHOULDER TO NARROW BRIDGE	
CONDICILE TRANSPITON TROM NORMAL SHOULDER TO WIRKOW BRIDGE	KDD 010 03
GUARDRAIL CONNECTORS TO BRIDGE ENDS	
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A COMPONENTS	RBC-002-03
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A AND A-1 COMPONENTS	RBC-003-08
GUARDRAIL CONNECTOR TO BRIDGE END TYPE D	RBC-004-07
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A	
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A-1	
GUARDRAIL CONNECTOR TO CONCRETE MEDIAN BARRIER END	RBC-100-04
CONNECTION DETAILS OF CRASH CUSHION TYPE VI TO DOUBLE FACE GUARDRAIL	RBC-110-11
ENERGY ABSORPTION DEVICES	
CRASH CUSHION TYPE VII CLASS B AND C (ONE & TWO DIRECTION)	
CRASH CUSHION TYPE VI (ONE & TWO DIRECTION)	RBE-060-14
CONCRETE MEDIAN BARRIER END	RBE-065-07
CONCRETE MEDIAN BARRIER END FOR CRASH CUSHION TYPE IX	RBE-070-06
ENERGY ARGORPTION DEVICES (CONTINUED)	
ENERGY ABSORPTION DEVICES (CONTINUED)	
CRASH CUSHION TYPE VI-BT	
CRASH CUSHION TYPE IX	RBE-200-06
	RBE-200-06
CRASH CUSHION TYPE IX	RBE-200-06
CRASH CUSHION TYPE IXCRASH CUSHION TYPE IX-A	RBE-200-06 RBE-205-06
CRASH CUSHION TYPE IX CRASH CUSHION TYPE IX-A TYPICAL BARRIER INSTALLATIONS	RBE-200-06 RBE-205-06
CRASH CUSHION TYPE IX CRASH CUSHION TYPE IX-A TYPICAL BARRIER INSTALLATIONS TYPICAL GUARDRAIL INSTALLATIONS	RBE-200-06 RBE-205-06 RBI-001-11 RBI-002-07
CRASH CUSHION TYPE IX CRASH CUSHION TYPE IX-A TYPICAL BARRIER INSTALLATIONS TYPICAL GUARDRAIL INSTALLATIONS TYPICAL GUARDRAIL INSTALLATIONS	RBE-200-06 RBE-205-06 RBI-001-11 RBI-002-07 RBI-003-09
CRASH CUSHION TYPE IX CRASH CUSHION TYPE IX-A	RBE-200-06 RBE-205-06 RBI-001-11 RBI-002-07 RBI-003-09 RBI-004-05
CRASH CUSHION TYPE IX. CRASH CUSHION TYPE IX-A TYPICAL BARRIER INSTALLATIONS TYPICAL GUARDRAIL INSTALLATIONS TYPICAL GUARDRAIL INSTALLATIONS TYPICAL INSTALLATION FOR GUARDRAIL END TREATMENT TYPE 2A INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1	RBE-200-06 RBE-205-06 RBI-001-11 RBI-002-07 RBI-003-09 RBI-004-05 RBI-005-08
CRASH CUSHION TYPE IX. CRASH CUSHION TYPE IX-A. TYPICAL BARRIER INSTALLATIONS TYPICAL GUARDRAIL INSTALLATIONS. TYPICAL GUARDRAIL INSTALLATIONS. TYPICAL INSTALLATION FOR GUARDRAIL END TREATMENT TYPE 2A. INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1 GUARDRAIL INSTALLATION AT BRIDGE COLUMNS.	RBE-200-06RBE-205-06RBI-001-11RBI-002-07RBI-003-09RBI-004-05RBI-005-08RBI-006-07
CRASH CUSHION TYPE IX. CRASH CUSHION TYPE IX-A	RBE-200-06RBE-205-06RBI-001-11RBI-002-07RBI-003-09RBI-004-05RBI-005-08RBI-006-07
CRASH CUSHION TYPE IX. CRASH CUSHION TYPE IX-A. TYPICAL BARRIER INSTALLATIONS TYPICAL GUARDRAIL INSTALLATIONS. TYPICAL GUARDRAIL INSTALLATIONS. TYPICAL INSTALLATION FOR GUARDRAIL END TREATMENT TYPE 2A. INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1 GUARDRAIL INSTALLATION AT BRIDGE COLUMNS. GUARDRAIL INSTALLATION AT SIGN SUPPORTS. CRASH CUSHION TYPE IX INSTALLATION AT MEDIAN PIERS (DEPRESSED MEDIAN). CONCRETE MEDIAN BARRIERS	RBE-200-06RBI-001-11RBI-002-07RBI-003-09RBI-005-08RBI-006-07RBI-007-09
CRASH CUSHION TYPE IX. CRASH CUSHION TYPE IX-A	RBE-200-06RBI-001-11RBI-002-07RBI-003-09RBI-005-08RBI-006-07RBI-007-09
CRASH CUSHION TYPE IX. CRASH CUSHION TYPE IX-A. TYPICAL BARRIER INSTALLATIONS TYPICAL GUARDRAIL INSTALLATIONS	RBE-200-06RBI-001-11RBI-002-07RBI-003-09RBI-005-08RBI-006-07RBI-007-09RBM-001-10RBM-003-11
CRASH CUSHION TYPE IX CRASH CUSHION TYPE IX TYPICAL BARRIER INSTALLATIONS TYPICAL GUARDRAIL INSTALLATIONS TYPICAL GUARDRAIL INSTALLATIONS TYPICAL INSTALLATION FOR GUARDRAIL END TREATMENT TYPE 2A INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1 GUARDRAIL INSTALLATION AT BRIDGE COLUMNS GUARDRAIL INSTALLATION AT SIGN SUPPORTS CRASH CUSHION TYPE IX INSTALLATION AT MEDIAN PIERS (DEPRESSED MEDIAN) CONCRETE MEDIAN BARRIERS CONCRETE MEDIAN BARRIER FIXED-FORM OR SLIP-FORM (PERMANENT) CONCRETE MEDIAN BARRIER PRECAST (PERMANENT - NEW PAVEMENT) CONCRETE MEDIAN BARRIER PRECAST (PERMANENT - EXISTING PAVEMENT)	RBE-200-06RBE-205-06RBI-001-11RBI-002-07RBI-003-09RBI-005-08RBI-006-07RBI-007-09RBM-001-10RBM-003-11RBM-006-10
CRASH CUSHION TYPE IX. CRASH CUSHION TYPE IX-A. TYPICAL BARRIER INSTALLATIONS TYPICAL GUARDRAIL INSTALLATIONS. TYPICAL GUARDRAIL INSTALLATIONS. TYPICAL INSTALLATION FOR GUARDRAIL END TREATMENT TYPE 2A. INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1 GUARDRAIL INSTALLATION AT BRIDGE COLUMNS. GUARDRAIL INSTALLATION AT SIGN SUPPORTS. CRASH CUSHION TYPE IX INSTALLATION AT MEDIAN PIERS (DEPRESSED MEDIAN) CONCRETE MEDIAN BARRIERS CONCRETE MEDIAN BARRIERS CONCRETE MEDIAN BARRIER FIXED-FORM OR SLIP-FORM (PERMANENT). CONCRETE MEDIAN BARRIER PRECAST (PERMANENT - NEW PAVEMENT). CONCRETE MEDIAN BARRIER PRECAST (PERMANENT - EXISTING PAVEMENT). CONCRETE MEDIAN BARRIER SYMMETRICAL & ASYMMETRICAL SEPARATE AND TRA	RBE-200-06RBI-001-11RBI-002-07RBI-003-09RBI-005-08RBI-006-07RBI-007-09RBM-001-10RBM-003-11RBM-006-10 ANSITION
CRASH CUSHION TYPE IX	RBE-200-06RBE-205-06RBI-001-11RBI-002-07RBI-003-09RBI-004-05RBI-005-08RBI-007-09RBM-001-10RBM-003-11RBM-006-10 ANSITIONRBM-015-06
CRASH CUSHION TYPE IX	RBE-200-06RBE-205-06RBI-001-11RBI-002-07RBI-003-09RBI-005-08RBI-006-07RBI-007-09RBM-001-10RBM-006-10 ANSITIONRBM-015-06RBM-020-09
CRASH CUSHION TYPE IX	RBE-200-06RBI-001-11RBI-002-07RBI-003-09RBI-005-08RBI-006-07RBI-007-09RBM-001-10RBM-003-11RBM-006-10 ANSITIONRBM-015-06RBM-020-09
CRASH CUSHION TYPE IX	RBE-200-06RBI-001-11RBI-002-07RBI-003-09RBI-005-08RBI-006-07RBI-007-09RBM-001-10RBM-006-10 ANSITIONRBM-015-06RBM-020-09 (ALL)RBM-050-01

CONCRETE MEDIAN BARRIER SYMMETRICAL & ASYMMETRICAL SEPARATE A	ND TRANSITION
DETAILS (50" TALL WALL)	RBM-060-01
CONCRETE BARRIER WALL TYPE 9T (TEMPORARY)	RBM-115-10
BOX BEAM STIFFENING OF TEMPORARY CONCRETE BARRIER	RBM-120-01
CURB TO BARRIER WALL TRANSITION	RBM-130-05
<u>GUARDRAIL HARDWARE</u>	
STEEL BEAM GUARDRAIL ("W"-BEAM)	
GUARDRAIL COMPONENTS	
GUARDRAIL TERMINAL SECTIONS	
STEEL GUARDRAIL POSTS	
TIMBER GUARDRAIL POSTS	
GUARDRAIL END TREATMENT TYPE 1	
GUARDRAIL END TREATMENT TYPE 2A	
GUARDRAIL END TREATMENT TYPE 3	
GUARDRAIL END TREATMENT TYPE 3 PIPE DRAINAGE DETAIL	
GUARDRAIL END TREATMENT TYPE 3 ALTERNATE ANCHOR	
GUARDRAIL END TREATMENT TYPE 4A	
GUARDRAIL END TREATMENT TYPE 7	
GUARDRAIL END TREATMENT TYPE 7 ALTERNATE ANCHOR	RBR-051
DELINEATORS FOR GUARDRAIL	
DELINEATORS AT NARROW SHOULDER BRIDGES	
STEEL BEAM GUARDRAIL (THRIE BEAM)	RBR-100-07
~ DRAINAGE ~	
BOX INLETS AND OUTLETS	
DROP BOX INLET TYPE 1	DDD 001 12
DROP BOX INLET TYPE 2	
DROP BOX INLET TYPE 4	
DROP BOX INLET TYPE 4	
DROP BOX INLET TYPE 6A-6B-6C-6D-6E AND 6F	
DROP BOX INLET TYPE 7 (DIMENSION & STEEL PATTERN)	
DROP BOX INLET TYPE 10	
DROP BOX INLET TYPE 11	
DROP BOX INLET TYPE 11	
DROP BOX INLET TYPE 12 OR 12A	
DROP BOX INLET TYPE 13 (DETAIL SHEET)	
DROP BOX INLET TYPE 13 AND TYPE 16 (FRAME & GRATE DETAILS)	
DROP BOX INLET TYPE 13 (DETAIL & BAR CHART FOR LID)	
DROP BOX INLET TYPE 13 (PIPE CHAMBER - GRADE CONDITION)	
DROP BOX INLET TYPE 13 (PIPE CHAMBER - SAG CONDITION)	
DROP BOX INLET TYPE 13 (ADDITIONAL STEEL - RISER)	
DROP BOX INLET TYPE 13 (ADDITIONAL STEEL - CHAMBER)	
DROP BOX INLET TYPE 14 & 15	
DROP BOX INLET TYPE 16 (DETAIL SHEET)	
DROP BOX INLET TYPE 16 (STEEL SHEET)	
DROP BOX INLET TYPE 16 (DETAIL & BAR CHART FOR LID)	
DROP BOX INLET TYPE 16 (DIMENSIONS & ESTIMATE OF QUANTITIES)	
DROP BOX INLET TYPE 16 (ADDITIONAL STEEL - RISER)	
DROP BOX INLET TYPE 16 (ADDITIONAL STEEL - CHAMBER)	RDB-035-04

SLOPED BOXES

SLOPED BOX OUTLET TYPE 1	
GRATES FOR SLOPED BOX OUTLET TYPE 1	
SLOPED AND FLARED BOX INLET-OUTLET 18"-24"-30"-36" ALL SKEWS	
GRATES FOR SLOPED AND FLARED BOX INLET-OUTLET	RDB-106-05
SLOPED BOX INLET OR OUTLET TYPE 1	
SLOPED BOX INLET OR OUTLET TYPE 2	RDB-111-08
METAL END SECTION TYPE 1 & 2 (PARALLEL STRUCTURES)	RDB-150-02
METAL END SECTION TYPE 3 & 4 (CROSS STRUCTURES)	RDB-155-02
DIMENSIONS FOR METAL END SECTIONS	RDB-160-02
<u>CURB BOXES</u>	
CONCRETE MEDIAN BARRIER BOX INLET (CAST-IN-PLACE)	RDB-230-09
CONCRETE MEDIAN BARRIER BOX INLET (SLIP-FORM)	
CONCRETE MEDIAN BARRIER BOX INLET (50" TALL WALL CAST-IN-PLACE)	
CONCRETE MEDIAN BARRIER BOX INLET (50" TALL WALL SLIP-FORM)	
CURB BOX INLET TYPE A (DETAIL DRAWING)	
CURB BOX INLET TYPE A (STEEL DRAWING)	
CURB BOX INLET TYPE A (TOP PHASE TABLE)	
CURB BOX INLET TYPE A (DETAIL & BAR CHART FOR 8" LID)	
CURB BOX INLET TYPE B (DETAIL DRAWING)	
CURB BOX INLET TYPE B (STEEL DRAWING)	
CURB BOX INLET TYPE B (TOP PHASE TABLE)	
CURB BOX INLET TYPE B (DETAIL & BAR CHART FOR 8" LID)	
CURB BOX INLET TYPE F	
BOX INLET RISER	
BOX INLET PIPE CHAMBER	
BOX INLET PIPE CHAMBER (ADDITIONAL STEEL)	RDB-420-05
PAVED DITCHES, FLUME INLETS AND CHANNEL LININGS	
PAVED DITCH TYPE 1	
PAVED DITCH TYPE 1PAVED DITCH TYPE 2	RDD-002-07
PAVED DITCH TYPE 1	RDD-002-07 RDD-020-07
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2	RDD-002-07 RDD-020-07 RDD-021-07
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS)	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS)	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III PIPE AND BOX CULVERT AND HEADWALLS	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08 RDD-040-05
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08 RDD-040-05
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III PIPE AND BOX CULVERT AND HEADWALLS FOR ALL PIPE AND BOX CULVERT HEADWALLS (RDH SERIES) SEE HEADWALL SUPPLE	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08 RDD-040-05
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III PIPE AND BOX CULVERT AND HEADWALLS FOR ALL PIPE AND BOX CULVERT HEADWALLS (RDH SERIES) SEE HEADWALL SUPPLE TYPICAL DRAINAGE INSTALLATIONS	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08 RDD-040-05
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III PIPE AND BOX CULVERT AND HEADWALLS FOR ALL PIPE AND BOX CULVERT HEADWALLS (RDH SERIES) SEE HEADWALL SUPPLE TYPICAL DRAINAGE INSTALLATIONS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08 RDD-040-05 MENT
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2. CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III. PIPE AND BOX CULVERT AND HEADWALLS FOR ALL PIPE AND BOX CULVERT HEADWALLS (RDH SERIES) SEE HEADWALL SUPPLE TYPICAL DRAINAGE INSTALLATIONS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08 RDD-040-05 MENTRDI-001-10RDI-002-05
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III PIPE AND BOX CULVERT AND HEADWALLS FOR ALL PIPE AND BOX CULVERT HEADWALLS (RDH SERIES) SEE HEADWALL SUPPLE TYPICAL DRAINAGE INSTALLATIONS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS	RDD-002-07RDD-020-07RDD-021-07RDD-030-08RDD-040-05 MENTRDI-001-10RDI-002-05RDI-003-05
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III PIPE AND BOX CULVERT AND HEADWALLS FOR ALL PIPE AND BOX CULVERT HEADWALLS (RDH SERIES) SEE HEADWALL SUPPLE TYPICAL DRAINAGE INSTALLATIONS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08 RDD-040-05 MENT RDI-001-10 RDI-002-05 RDI-003-05 RDI-004-04
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III PIPE AND BOX CULVERT AND HEADWALLS FOR ALL PIPE AND BOX CULVERT HEADWALLS (RDH SERIES) SEE HEADWALL SUPPLE TYPICAL DRAINAGE INSTALLATIONS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS	RDD-002-07RDD-020-07RDD-021-07RDD-030-08RDD-040-05 MENTRDI-001-10RDI-002-05RDI-003-05RDI-004-04RDI-005-04
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III PIPE AND BOX CULVERT AND HEADWALLS FOR ALL PIPE AND BOX CULVERT HEADWALLS (RDH SERIES) SEE HEADWALL SUPPLE TYPICAL DRAINAGE INSTALLATIONS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08 RDD-040-05 MENT RDI-001-10 RDI-002-05 RDI-003-05 RDI-004-04 RDI-005-04 RDI-006-04
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III PIPE AND BOX CULVERT AND HEADWALLS FOR ALL PIPE AND BOX CULVERT HEADWALLS (RDH SERIES) SEE HEADWALL SUPPLE TYPICAL DRAINAGE INSTALLATIONS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS	RDD-002-07RDD-020-07RDD-021-07RDD-030-08RDD-040-05 MENTRDI-001-10RDI-002-05RDI-003-05RDI-004-04RDI-005-04RDI-006-04RDI-007-04
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III PIPE AND BOX CULVERT AND HEADWALLS FOR ALL PIPE AND BOX CULVERT HEADWALLS (RDH SERIES) SEE HEADWALL SUPPLE TYPICAL DRAINAGE INSTALLATIONS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS	RDD-002-07 RDD-020-07 RDD-021-07 RDD-030-08 RDD-040-05 MENT RDI-001-10 RDI-002-05 RDI-003-05 RDI-004-04 RDI-005-04 RDI-006-04 RDI-007-04 RDI-008-04
PAVED DITCH TYPE 1 PAVED DITCH TYPE 2 FLUME INLET TYPE 1 FLUME INLET TYPE 2 CHANNEL LINING CLASS IA (MATTRESS UNITS) CHANNEL LINING CLASS II AND III PIPE AND BOX CULVERT AND HEADWALLS FOR ALL PIPE AND BOX CULVERT HEADWALLS (RDH SERIES) SEE HEADWALL SUPPLE TYPICAL DRAINAGE INSTALLATIONS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS	RDD-002-07RDD-021-07RDD-030-08RDD-040-05 MENT RDI-001-10RDI-002-05RDI-003-05RDI-004-04RDI-005-04RDI-006-04RDI-007-04RDI-008-04RDI-008-04RDI-008-04
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PIPE BEDDING, TRENCH CONDITION REINFORCED CONC. PIPE	RDI-026-01
COATINGS, LININGS AND PAVINGS FOR NON-STRUCTURAL PLATE PIPE	
EROSION CONTROL BLANKET SLOPE INSTALLATION	
EROSION CONTROL BLANKET CHANNEL INSTALLATION	
TYPICAL MEDIAN DRAIN INSTALLATIONS	
FILL HEIGHTS FOR PRECAST REINFORCED CONCRETE BOX CULVERTS	
BEDDING FOR PRECAST BOX CULVERTS, SEWERS, STORM DRAINS AND THEIR CO.	
SLOTTED DRAIN PIPE (DETAIL SHEET)	RDI-200-05
<u>MANHOLES</u>	
MANHOLE TYPE A	
MANHOLE TYPE B	
MANHOLE TYPE C (CHAMBER LAYOUT)	RDM-010-06
MANHOLE TYPE C (TOWER APPLICATIONS)	RDM-011-05
MANHOLE TYPE C (STEEL PATTERN)	
MANHOLE TYPE C (TABLE OF QUANTITIES)	RDM-013-04
TRAPPED MANHOLE	RDM-050-07
MANHOLE STEPS	RDM-055
FRAME AND LID TYPE 1	RDM-100-03
FRAME AND LID TYPE 2	RDM-105-03
PERFORATED PIPE	
PERFORATED PIPE TYPES AND COVER HEIGHTS	
PERFORATED PIPE FOR SUBGRADE DRAINAGE ON TWO-LANE (CLASS 2) AND MUL	TI-LANE ROADS
PERFORATED PIPE UNDERDRAINS (LONGITUDINAL AND TRANSVERSE)	
PERFORATED PIPE DETAILS (SOLID ROCK)	
PERFORATED PIPE HEADWALLS	RDP-010-09
MICCELL ANDOLIC DRAINAGE	
MISCELLANEOUS DRAINAGE	DDW 001 06
JUNCTION BOX	
JUNCTION BOX (DIMENSIONS AND QUANTITIES)	
JUNCTION BOX TYPE B	
SPRING BOX INLET TYPE "A"	
SPRING BOX INLET TYPE "B"	
TRAP FOR BOX INLETSSUBGRADE DRAINAGE - CONCRETE PAVEMENT	
INTERMEDIATE AND END ANCHORS FOR CIRCULAR PIPE	
INTERMEDIATE AND END ANCHORS FOR NON-CIRCULAR PIPE	
SIDE TAPERED INLETS – 30" TO 60" DIA. ALL SLOPES - ALL SKEWS	
SECURITY DEVICES FOR FRAMES, GRATES AND LIDS	
TEMPORARY SILT FENCE	
TEMPORARY SILT FENCE WITH WOVEN WIRE FENCE FABRIC	
SILT TRAP - TYPE A	
SILT TRAP - TYPE B	
SILT TRAP - TYPE C	
CHANNEL HABITAT IMPROVEMENT STRUCTURES (DUMPED STONE)	
CHANNEL HABITAT IMPROVEMENT STRUCTURES (GABIONS)	
PRECAST BOX CULVERT EXTENSION	KDX-300-04
~ FENCES AND GATES ~	
CHAIN LINK FENCE	
CHAIN LINK FENCE CHAIN LINK FENCE 4' TO 6' HIGH	DEC 001 00
CHAIN LINK FENCE 4 TO 0 HIGH	KFC-001-08

CHAIN LINK FENCE 8' TO 12' HIGH	RFC-002-05
<u>GATES</u>	
WOVEN WIRE GATES	DEC 001 07
4' TO 12' HIGH CHAIN LINK GATE	
WATER GATE TYPE 1	
WATER GATE TITE I	
WATER GATE TITE 5	KI'O-011-00
WOVEN WIRE FENCE	
FENCING DETAILS	
WOVEN WIRE FENCE TYPE 1	
WOVEN WIRE FENCE TYPE 2	.RFW-006-07
~ GENERAL ~	
CURVE WIDENING AND SUPERELEVATION	
CURVE WIDENING AND SUPERELEVATION TRANSITIONS	RGS-001-07
SUPERELEVATION FOR MULTILANE PAVEMENT	RGS-002-06
MISCELLANEOUS STANDARDS	
MISCELLANEOUS STANDARDS	
RETAINING WALL GRAVITY TYPE NON-REINFORCED	
TEMPORARY BRIDGE OR PAVEMENT CROSSOVER	
RIGHT-OF-WAY MONUMENTS	
TYPICAL EMBANKMENT FOUNDATION BENCHES	
SETTLEMENT PLATFORM	
CONCRETE STEPS	
HANDRAIL TYPE A, A-1, A-2, A-3, A-4	
DETECTABLE WARNINGS	
GABION RETAINING WALLS	
BREAKAWAY SIGN SUPPORT SYSTEM FOR TYPE C BEAM	
FOOTING DETAILS FOR TYPE C BEAM	
TYPE D BREAKAWAY SIGN SUPPORT	
TREATMENT OF EMBANKMENTS AT END-BENTS	
TREATMENT OF EMBANKMENTS AT END-BENTS - DETAILS	
ONE POINT PROCTER FAMILY OF CURVES	. RGX-200-01
~ PAVEMENT ~	
MEDIANS, CURBS, APPROACHES, ENTRANCES, ETC.	
PERMANENT U-TURN MEDIAN OPENING	. RPM-001-04
STANDARD BARRIER MEDIAN	. RPM-010-06
MOUNTABLE MEDIAN	. RPM-011-06
MOUNTABLE MEDIAN TYPE 6A	. RPM-012-04
MOUNTABLE MEDIAN TYPE 7A	. RPM-015-04
CURB AND GUTTER, CURBS AND VALLEY GUTTER	. RPM-100-10
APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT	. RPM-110-07
CONCRETE TERMINAL SECTION TYPE 1	. RPM-115-05
CONCRETE ISLAND CURB CONSTRUCTION DETAILS (RIGID & FLEXIBLE PAVEMENT)	. RPM-120-07
PRECAST VEHICLE STOP	. RPM-130-04
RUMBLE STRIPS TYPE 3	. RPM-145-04
CONCRETE ENTRANCE PAVEMENT AND SIDEWALK	. RPM-150-08
CONCRETE ENTRANCE PAVEMENT AND SIDEWALK	
SIDEWALK RAMPS	
SIDEWALK RAMP WITH HANDRAIL	. RPM-172-07

NON-REINFORCED CONCRETE PAVEMENT	
JOINTED PLAIN CONCRETE PAVEMENT FOR SHOULDERS AND MEDIANS	
PAVEMENT TRANSITIONS AND JOINT DETAILS FOR JOINTED PLAIN CONCRETE PAVEM	
BRIDGE ENDS	
JOINTED PLAIN CONCRETE PAVEMENT	
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING	RPN-020-04
STANDARD REINFORCED CONCRETE PAVEMENT	
CONCRETE PAVEMENT JOINT DETAILS	RPS-010-11
EXPANSION AND CONTRACTION JOINT - LOAD TRANSFER ASSEMBLIES	
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING	
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING	
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING	
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING	
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CONCRETE PAVEMENT JOINTS - TYPES AND SPACING	
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING	
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING	RPS-039-06
MISCELLANEOUS PAVING	
STATION MARKINGS - CONCRETE PAVEMENT	PPY 001 04
PREFORMED COMPRESSION JOINT SEAL FOR CONCRETE PAVEMENT	
HOT - POURED ELASTIC JOINT SEALS FOR CONCRETE PAVEMENT	
SILICONE RUBBER SEALS FOR CONCRETE PAVEMENT	
ACCESSIBLE PARKING SPACE DETAILS	
TRAFFIC	
~ PERMANENT ~	
RAISED PAVEMENT MARKERS	
PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS	TPM-100-03
PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS	
PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS	
PAVEMENT MARKER ARRANGEMENTS TWO-LANE, TWO-WAY ROADWAYS	
PAVEMENT MARKER ARRANGEMENT TWO-LANE TO FOUR-LANE TRANSITIONS	
PAVEMENT MARKER ARRANGEMENT EXIT-GORE AND OFF-RAMP	
PAVEMENT MARKER ARRANGEMENT FOR PARALLEL DECELERATION LANE	
PAVEMENT MARKER ARRANGEMENT ON-RAMP WITH TAPERED ACCELERATION LAND PAVEMENT MARKER ARRANGEMENT ON-RAMP WITH PARALLEL ACCELERATION LAND	
PAVEMENT MARKER ARRANGEMENT ON-RAMP WITH PARALLEL ACCELERATION LAN PAVEMENT MARKER ARRANGEMENTS TWO-WAY LEFT, TURN LANE	
PAVEMENT MARKER ARRANGEMENTS TWO-WAT LEFT, TURN LANE PAVEMENT MARKER ARRANGEMENT CHANNELIZED INTERSECTION	
CENTERLINE RUMBLE STRIPS	
CENTERLINE RUMBLE STRIP 4 INCH STRIPING	TPM-150-02
CENTERLINE RUMBLE STRIP 4 INCH STRIPING	
SHOULDER AND EDGE LINE RUMBLE STRIP DETAILS	
FLEXIBLE DELINEATOR POST ARRANGEMENTS FOR HORIZONTAL CURVES	
FLEXIBLE DELINEATOR POST ARRANGEMENTS FOR INTERCHANGE RAMPS AND CROS	
TELAIDEL DELINEATOR TOST ARRANGEMENTS FOR INTERCHANGE RAINTS AND CROS	

TRAFFIC CONTROL

LANE CLOSURE TWO-LANE HIGHWAY	TTC-100-04
LANE CLOSURE USING TRAFFIC SIGNALS	TTC-110-03
LANE CLOSURE MULTI-LANE HIGHWAY CASE I	TTC-115-03
LANE CLOSURE MULTI-LANE HIGHWAY CASE II	TTC-120-03
DOUBLE LANE CLOSURE	
SHOULDER CLOSURE	
MEDIAN CROSSOVER CASE I	
MEDIAN CROSSOVER CASE I	
MEDIAN CROSSOVER CASE II	
MEDIAN CROSSOVER CASE II	
ROAD CLOSURE WITH DIVERSION	
TEMPORARY PAVEMENT MARKER ARRANGEMENTS FOR CONSTRUCTION ZONES	
TEMPORARY PAVEMENT MARKER ARRANGEMENTS FOR LANE CLOSURES	
	110 100 02
<u>DEVICES</u>	
DOUBLE FINES ZONES SIGNS	TTD_120_02
PAVEMENT CONDITION WARNING SIGNS	TTD-125-02
TAVENDATION WARRING SIGNS	11D-123-02
STRIPING OPERATIONS	
MOBILE OPERATION FOR PAINT STRIPING CASE I	TTS 100 02
MOBILE OPERATION FOR PAINT STRIPING CASE II	
MOBILE OPERATION FOR PAINT STRIPING CASE III	
MOBILE OPERATION FOR PAINT STRIPING CASE III	
MOBILE OPERATION FOR DURABLE STRIPING CASE I	
MOBILE OPERATION FOR DURABLE STRIPING CASE II	
MOBILE OPERATION FOR DURABLE STRIPING CASE III	
MOBILE OPERATION FOR DURABLE STRIPING CASE IV	118-135-02
BRIDGES	
BEARING DEVICES	
ELASTOMERIC BEARING PADS FOR PRESTRESSED BEAMS	
BEARING DETAILS	
ELASTOMERIC BEARING PADS FOR BOX BEAMS	BBP-003-02
BOX BEAMS	
BOX BEAM GENERAL NOTES & REFERENCES	
BOX BEAM BEARING DETAILS	
BOX BEAM MISCELLANEOUS DETAILS	
BOX BEAM TENSION ROD DETAILS	
RAILING SYSTEM TYPE II	
BOX BEAM B12 & CB12 DETAILS	
BOX BEAM B17 & CB17 DETAILS	
BOX BEAM B21 & CB21 DETAILS	BDP-008-04
BOX BEAM B27 & CB27 DETAILS	BDP-009-04
BOX BEAM B33 & CB33 DETAILS	BDP-010-04
BOX BEAM B42 DETAILS	BDP-011-04
BOX BEAM CB42 DETAILS	BDP-012-04
SLAB BRIDGE FOR 12" & 17" BEAMS	BDP-013-03
MISCELLANEOUS STANDARDS	
CONCRETE SLOPEWALLS FOR GRADE SEPARATION BRIDGES	BGX-004-09
CONCRETE SLOPEWALLS FOR GRADE SEPARATION BRIDGES	BGX-005-09

STENCILS FOR STRUCTURES	BGX-009-04 BGX-012-02 BGX-015-03 BGX-016-01
RAILING SYSTEMS	
RAILING SYSTEM, TYPE II, GUARDRAIL TREATMENT	BHS-007-07
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CONCRETE PILES	
14" REINFORCED CONCRETE PILE	
14" PRECAST PRESTRESSED CONCRETE PILE	BPC-011-07
STEEL PILES	
HP12 X 53 STEEL PILE	
HP14 X 73 STEEL PILE	
HP14 X 89 STEEL PILE	BPS-011-04

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

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

- (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 federallyassisted 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 contacting 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:
- 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

T h i s p r o v i s i o n i s 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:
- 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 administrating agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017

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: KY170101 02/03/2017 KY101

Superseded General Decision Number: KY20160101

State: Kentucky

Construction Type: Highway

Counties: Boone, Campbell, Kenton and Pendleton 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 \$10.20 for calendar year 2017 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 \$10.20 (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 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

 $\begin{array}{ccc} \text{Modification Number} & \text{Publication Date} \\ & 0 & 01/06/2017 \end{array}$

1 02/03/2017

BRKY0002-005 06/01/2014

Rates Fringes

BRICKLAYER.....\$ 26.50 11.17

BROH0001-005 06/01/2008

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...\$ 25.75 8.60

CARP0698-001 05/01/2014

BOONE, CAMPBELL, KENTON & PENDLETON COUNTIES:

Rates Fringes

Carpenter & Piledrivermen....\$ 27.27 14.59

Diver.....\$ 40.58 9.69

ELEC0212-007 06/06/2016

	Rates	Fringes
ELECTRICIAN	\$ 27.47	17.13
ELEC0212-013 12/01/2014		
	Rates	Fringes
Sound & Communication Technician		10.08
ENGI0018-013 05/01/2015		
	Rates	Fringes
POWER EQUIPMENT OPERATOR GROUP 1	\$ 33.22	14.25 14.25 14.25

14.25

14.25

14.25

OPERATING ENGINEER CLASSIFICATIONS

GROUP 4.....\$ 31.00 GROUP 5.....\$ 25.54

GROUP 6.....\$ 33.59

GROUP 7.....\$ 33.84

GROUP 1 - Air Compressor on Steel Erection; Barrier Moving Machine; Boiler Operator on Compressor or Generator when mounted on a Rig; Cableway; Combination Concrete Mixer & Tower; Concrete Plant (over 4 yd. Capacity); Concrete Pump; Crane (All Types, Including Boom Truck, Cherry Picker); Crane-Compact, Track or Rubber over 4,000 lbs. capacity; Cranes-Self Erecting, Stationary, Track or Truck (All Configurations); Derrick; Dragline; Dredge (Dipper, Clam or Suction); Elevating Grader or Euclid Loader; Floating Equipment (All Types); Gradall; Helicopter Crew (Operator-Hoist or Winch); Hoe (all types); Hoisting Engine on Shaft or Tunnel Work; Hydraulic Gantry (Lifting System); Industrial-Type Tractor; Jet Engine Dryer (D8 or D9) Diesel Tractor; Locomotive (Standard Gauge); Maintenance Operator Class A; Mixer, Paving (Single or Double Drum); Mucking Machine; Multiple Scraper; Piledriving Machine (All Types); Power Shovel; Prentice Loader; Quad 9 (Double Pusher); Rail Tamper (with auto lifting & aligning device); Refrigerating Machine (Freezer Operation); Rotary Drill, on Caisson work; Rough Terrain Fork Lift with Winch/Hoist; Side-Boom; Slip-Form Paver; Tower Derrick; Tree Shredder; Trench Machine (Over 24" wide); Truck Mounted Concrete Pump; Tug Boat; Tunnel Machine and/or Mining Machine; & Wheel Excavator

GROUP 2 - Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48"; Bulldozer; Endloader; Hydro Milling Machine; Horizontal Directional Drill (over 500,000 ft. lbs. thrust); Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications); Material Transfer Equipment (Shuttle Buggy) Asphalt;

Pettibone-Rail Equipment; Power Grader; Power Scraper; Push Cat; Rotomill (all), Grinders & Planers of All types; Trench Machine (24" wide & under); & Vermeer type Concrete Saw

GROUP 3 - A-Frame; Air Compressor on Tunnel Work (low pressure); Asphalt Plant Engineer; Bobcat-type and/or Skid Steer Loader with or without Attachments; Highway Drills (all types); Locomotive (narrow gauge); Material Hoist/Elevator; Mixer, Concrete (more than one bag capacity); Mixer, one bag capacity (Side Loader); Power Boiler (Over 15 lbs. Pressure) Pump Operator installing & operating Well Points; Pump (4" & over discharge); Roller, Asphalt; Rotovator (lime soil stabilizer); Switch & Tie Tampers (without lifting & aligning device); Utility Operator (Small equipment); & Welding Machines

GROUP 4 - Backfiller; Ballast Re-locator; Bars, Joint & Mesh Installing Machine; Batch Plant; Boring Machine Operator (48" or less); Bull Floats; Burlap & Curing Machine; Concrete Plant (capacity 4 yd. & under); Concrete Saw (Multiple); Conveyor (Highway); Crusher; Deckhand; Farm-type Tractor with attachments (highway) except Masonry); Finishing Machine; Fireperson, Floating Equipment (all types); Fork Lift (highway); Form Trencher; Hydro Hammer; Hydro Seeder; Pavement Breaker; Plant Mixer; Post Driver; Post Hole Digger (Power Auger); Power Brush Burner; Power Form Handling Equipment; Road Widening Trencher; Roller (Brick, Grade & Macadam); Self-Propelled Power Spreader; Self-Propelled Power Subgrader; Steam Fireperson; Tractor (Pulling Sheepfoot, Roller or Grader); & Vibratory Compactor with Integral Power

GROUP 5 - Compressor (Portable, Sewer, Heavy & Highway); Drum Fireperson (Asphalt); Generator; Masonry Fork Lift; Inboard-Outboard Motor Boat Launch; Masonry Fork Lift; Oil Heater (asphalt plant); Oiler; Power Driven Heater; Power Sweeper & Scrubber; Pump (under 4" discharge); Signalperson; Tire Repairperson; & VAC/ALLS

GROUP 6 - Master Mechanic & Boom from 150 to 180

GROUP 7 - Boom from 180 and over

IRON0044-008 06/01/2016

	Rates	Fringes	
Ironworkers: Fence Erector Structural	· ·	19.15 19.15	
* IRON0372-004 07/15/2016			_
	Rates	Fringes	
IRONWORKER, REINFORCING	\$ 27.15	20.33	

PENDLETON COUNTY:

		Rates	Fringes
LABORER			
GROUP	1\$	22.75	12.84
GROUP	2\$	23.00	12.84
GROUP	3\$	23.05	12.84
GROUP	4\$	23.65	12.84

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 Driller (All Types); Powderman & Blaster; Troxler & Concrete Tester if Laborer is Utilized

LABO0265-009 05/01/2016

BOONE, CAMPBELL & KENTON COUNTIES:

	I	Rates	Fringes
LABORER			
GROUP	1\$	29.22	10.35

GROUP	2\$	29.39	10.35
GROUP	3\$	29.72	10.35
GROUP	4\$	30.17	10.35

LABORER CLASSIFICATIONS

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

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

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

GROUP 4 - Miner; & Gunite Nozzle Person

TUNNEL LABORER WITH AIR-PRESSURIZED ADD \$1.00 TO BASE RATE

SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING.

PAIN0012-016 05/01/2015

	Rates	Fringes
PAINTER		
Bridge	24.39	9.06
Bridge Equipment Tender		
and Containment Builder	\$ 20.73	9.06
Brush & Roller	323.39	9.06
Sandblasting & Water		
Blasting	\$ 24.14	9.06

Spray		23.89	9.06
PLUM0392-008	06/01/2014		

Rates Fringes

Rates Fringes

PLUMBER.....\$ 29.80 17.79

SUKY2010-161 02/05/1996

	-
Truck drivers:	
GROUP 1\$ 15.85	4.60
GROUP 2\$ 16.29	4.60

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Driver

GROUP 2 - Euclid Wagon; End Dump; Lowboy; Heavy Duty Equipment; Tractor-Trailer Combination; & Drag

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

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.

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	GOALS FOR FEMALE
PARTICIPATION	PARTICIPATION IN
IN EACH TRADE	EACH TRADE
9.2%	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 Pendleton County.

PART IV

INSURANCE

INSURANCE

The Contractor shall procure and maintain the following insurance in addition to the insurance required by law:

- 1) Commercial General Liability-Occurrence form not less than \$2,000,000 General aggregate, \$2,000,000 Products & Completed Aggregate, \$1,000,000 Personal & Advertising, \$1,000,000 each occurrence.
- 2) Automobile Liability- \$1,000,000 per accident
- 3) Employers Liability:
 - a) \$100,000 Each Accident Bodily Injury
 - b) \$500,000 Policy limit Bodily Injury by Disease
 - c) \$100,000 Each Employee Bodily Injury by Disease
- 4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
 - a) "policy contains no deductible clauses."
 - b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."
- 5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

The cost of insurance is incidental to all contract items. All subcontractors must meet the same minimum insurance requirements.

PART V

BID ITEMS

PROPOSAL BID ITEMS

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Report Date 2/23/17

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	350.00	TON		\$	
0020	00190		LEVELING & WEDGING PG64-22	311.00	TON		\$	
0030	00301		CL2 ASPH SURF 0.38D PG64-22	3,025.00	TON		\$	
0040	02562		TEMPORARY SIGNS	270.00	SQFT		\$	
0050	02650		MAINTAIN & CONTROL TRAFFIC (FD05)	1.00	LS		\$	
0060	02676		MOBILIZATION FOR MILL & TEXT (FD05)	1.00	LS		\$	
0070	02677		ASPHALT PAVE MILLING & TEXTURING	67.00	TON		\$	
0800	06510		PAVE STRIPING-TEMP PAINT-4 IN	20,000.00	LF		\$	
0090	06514		PAVE STRIPING-PERM PAINT-4 IN	71,912.00	LF		\$	
0100	10020NS		FUEL ADJUSTMENT	4,672.00	DOLL	\$1.00	\$	\$4,672.00
0110	10030NS		ASPHALT ADJUSTMENT	8,037.00	DOLL	\$1.00	\$	\$8,037.00

Section: 0002 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0120	00001		DGA BASE	6.00	TON		\$	
0130	00190		LEVELING & WEDGING PG64-22	245.00	TON		\$	
0140	00221		CL2 ASPH BASE 0.75D PG64-22	6.00	TON		\$	
0150	02230		EMBANKMENT IN PLACE	249.00	CUYD		\$	
0160	02650		MAINTAIN & CONTROL TRAFFIC (HSIP)	1.00	LS		\$	
0170	02676		MOBILIZATION FOR MILL & TEXT (HSIP)	1.00	LS		\$	
0180	02677		ASPHALT PAVE MILLING & TEXTURING	404.00	TON		\$	

Section: 0003 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0190	01984		DELINEATOR FOR BARRIER - WHITE	8.00	EACH		\$	
0200	02014		BARRICADE-TYPE III	3.00	EACH		\$	
0210	02351		GUARDRAIL-STEEL W BEAM-S FACE	400.00	LF		\$	
0220	02371		GUARDRAIL END TREATMENT TYPE 7	4.00	EACH		\$	
0230	02381		REMOVE GUARDRAIL	100.00	LF		\$	
0240	02460		REMOVE TREES OR STUMPS	34.00	EACH		\$	
0250	02562		TEMPORARY SIGNS	120.00	SQFT		\$	
0260	02671		PORTABLE CHANGEABLE MESSAGE SIGN	3.00	EACH		\$	
0270	02726		STAKING	1.00	LS		\$	
0280	03269		TRIM & REMOVE TREES & BRUSH	2,775.00	LF		\$	

Section: 0004 - DRAINAGE

LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC F	P AMOUNT
0300	01550	DROP BOX INLET TYPE 12A	95.00	LF	\$	

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PROPOSAL BID ITEMS

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Report Date 2/23/17

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0310	01726		SAFETY BOX INLET-18 IN SDB-1	1.00	EACH		\$	
0320	02237		DITCHING	105.00	LF		\$	
0330	02625		REMOVE HEADWALL	3.00	EACH		\$	
0340	20257NC		SITE PREPARATION	1.00	LS		\$	
0350	21415ND		EROSION CONTROL	1.00	LS		\$	
0360	23074NN		ADJUST DRAINAGE STRUCTURE	3.00	EACH		\$	

Section: 0005 - BRIDGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0370	02731		REMOVE STRUCTURE (HSIP)	1.00	LS		\$	
0380	24649EN		ALUMINUM STRUCTURAL PLATE BOX CULVERT (HSIP)	1.00	LS		\$	

Section: 0006 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP AMOUNT
0390	02569		DEMOBILIZATION	1.00	LS	3	\$