

CALL NO. 306

CONTRACT ID. 232346

CARTER COUNTY

FED/STATE PROJECT NUMBER FD04 022 0002 000-005

DESCRIPTION OLIVE HILL TO SMOKY VALLEY (KY 2)

WORK TYPE ASPHALT RESURFACING

PRIMARY COMPLETION DATE 11/15/2023

LETTING DATE: June 22,2023

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME June 22,2023. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

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

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PART I SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 09

CONTRACT ID - 232346

FD04 022 0002 000-005

COUNTY - CARTER

PCN - MP02200022301 FD04 022 0002 000-005

OLIVE HILL TO SMOKY VALLEY (KY 2) (MP 0.000) BEGIN AT US 60 EXTENDING EAST TO KY 1704 (MP 4.218), A DISTANCE OF 04.21 MILES.ASPHALT RESURFACING GEOGRAPHIC COORDINATES LATITUDE 38:19:06.00 LONGITUDE 83:11:41.00 ADT 3,039

COMPLETION DATE(S):

COMPLETED BY 11/15/2023

APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

JOINT VENTURE BIDDING

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

UNDERGROUND FACILITY DAMAGE PROTECTION

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

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

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

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

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

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

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

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

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

HARDWOOD REMOVAL RESTRICTIONS

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

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

ACCESS TO RECORDS

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

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

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

BUILD AMERICA, BUY AMERICA ACT (BABA)

On November 15, 2021, President Biden signed into law the Infrastructure Investment and Jobs Act (IIJA), Pub. L. No. 117-58, includes the Build America, Buy America Act ("the Act"). Pub. L. No. 117-58, §§70901-52. The Act strengthens the Buy America preference to include "construction materials." The current temporary waiver for "construction materials" will expire on November 10, 2022.

The Act will apply to construction materials as outlined in the guidance issued in OMB M-22-11.

Construction Materials – Includes an article, material, or supply – other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives – that is or consists primarily of:

- Non-ferrous metals
- Plastic/polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- Glass (including optic glass);
- Lumber; or
- Drywall.

Construction Materials only applies to items, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project.

Construction Materials does not apply to tools, equipment or supplies brought to the jobsite and removed before completion.

BOYCOTT PROVISIONS

If applicable, the contractor represents that, pursuant to <u>KRS 45A.607</u>, they are not currently engaged in, and will not for the duration of the contract engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which Kentucky can enjoy open trade. **Note:** The term Boycott does not include actions taken for bona fide business or economic reasons, or actions specifically required by federal or state law.

If applicable, the contractor verifies that, pursuant to KRS 41.480, they do not engage in, and will not for the duration of the contract engage in, in energy company boycotts as defined by KRS 41.472.

LOBBYING PROHIBITIONS

The contractor represents that they, and any subcontractor performing work under the contract, have not violated the agency restrictions contained in <u>KRS 11A.236</u> during the previous ten (10) years, and pledges to abide by the restrictions set forth in such statute for the duration of the contract awarded.

The contractor further represents that, pursuant to <u>KRS 45A.328</u>, they have not procured an original, subsequent, or similar contract while employing an executive agency lobbyist who was convicted of a crime related to the original, subsequent, or similar contract within five (5) years of the conviction of the lobbyist.

February 1, 2023

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

RECIPROCAL PREFERENCE TO BE GIVEN BY PUBLIC AGENCIES TO RESIDENT BIDDERS

By reference, KRS 45A.490 to 45A.494 are incorporated herein and in compliance regarding the bidders residency. Bidders who want to claim resident bidder status should complete the Affidavit for Claiming Resident Bidder Status along with their bid in the electronic bidding software. Submittal of the Affidavit should be done along the bid in Bid Express.

April 30, 2018

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SURFACING AREAS

The Department estimates the mainline surfacing width to be varied 22 to 48 feet.

The Department estimates the total mainline area to be surfaced to be 95,803 square yards.

The Department estimates the asphalt shoulder width to be varied 2 to 8 feet on each side.

The Department estimates the total asphalt shoulder area to be surfaced to be 11,102 square yards.

The Department estimates the DGA shoulder width to be varied 1 to 6 feet on each side.

The Department estimates the total DGA shoulder area to be surfaced to be 24,749 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 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.

FUEL AND ASPHALT PAY ADJUSTMENT

The Department has included the Contract items Asphalt Adjustment and Fuel Adjustment for possible future payments at an established Contract unit price of \$1.00. The Department will calculate actual adjustment quantities after work is completed. If existing Contract amount is insufficient to pay all items on the contract with the adjustments, the Department will establish additional monies with a change order.

OPTION A

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

MATERIAL TRANSFER VEHICLE (MTV)

Provide and use a MTV in accordance with Sections 403.02.10 and 403.03.05.

GENERAL NOTES

CARTER COUNTY KY 2 MP 0.000-4.218

I. DESCRIPTION

Perform all work in accordance with the Department's Standard Specifications, Supplemental Specifications, Applicable Special Provisions, and Applicable Standard and Sepia Drawings, current editions, except as hereafter specified. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for the following work:

(1) Maintain and Control Traffic; (2) Pipe and Drainage structure work; (3) Removal and Placement of Guardrail and Guardrail End treatments; (4) Erosion Repairs; (5) Asphalt Pavement and Milling and Texturing; (6) Pavement Markings; and (7) All other work specified as part of this contract.

II. MATERIALS

Except as specified in these notes or on the drawings, all materials will be according to the Standard Specifications and applicable Special Provisions and Special Notes. The Department will sample and test all materials according to Department's Sampling Manual and the Contractor will have the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing, unless otherwise specified in these notes.

- A. Maintain and Control Traffic. See Traffic Control Plan.
- B. **Permanent Pavement Markings 6 inch.** Use 6" Durable Waterborne Markings for permanent paint on asphalt surfaces.
- C. **Asphalt Material for Tack Non-Tracking.** See Special Note for Non-Tracking Tack Coat.
- D. Channel Lining. Channel Lining Class II and Class III will be limestone.
- E. Guardrail. Use 7' posts for all guardrail installations.
- F. Asphalt Seal Aggregate. Use limestone #8 or #9m crushed aggregate.
- G. Seeding and Protection. Use erosion control blanket for all seeding applications.

III. CONSTRUCTION METHODS

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

- B. **Site Preparation.** Be responsible for all site preparation. Do not disturb existing signs. This item will include, but is not limited to, incidental excavation and backfilling; removal of all obstructions or any other items; disposal of materials; sweeping and removal of debris; shoulder preparation and restoration, temporary and permanent erosion, and pollution control; and all incidentals. Site preparation will be only as approved or directed by the Engineer.
- C. **Milling and Texturing.** See Traffic Control Plan and see Special Note for Asphalt Milling and Texturing.
- D. **Disposal of Waste.** Dispose of all cuttings, debris, and other waste off the right-of- way at approved sites obtained by the Contractor. The contractor will be responsible for obtaining any necessary permits for this work. No separate payment will be made for obtaining the necessary permits but will be incidental to the other items of the work. Disposal of existing cuttings and brush shall adhere to Section 202 of the current Standard Drawings.
- D. **Final Dressing, Clean Up, and Seeding and Protection.** After all work is completed, completely remove all debris from the job site. Perform Class A Final Dressing on all disturbed areas. Sow disturbed earthen areas with Seed Mixture No. I or Seed Mixture No. 3 for slopes greater than 3:1 as applicable and use erosion control blanket in lieu of "Seeding and Protection" in all seeding applications. Install erosion control blanket in all ditching areas not receiving aggregate channel lining.
- E. **Guardrail.** Remove guardrail where necessary to perform drainage structure work or other activities. Turn down and pin the blunt ends and protect the opening with drums on 20' spacing until new guardrail can be installed. All guardrail is scheduled for replacement on the project. Do not remove guardrail until immediately prior to beginning work that requires the guardrail to be removed. Continually pursue all items of work on the regularly scheduled basis until all paving is completed and guardrail is reinstalled. Once guardrail is removed or partially removed, the contractor shall not suspend operations for more than a normal weekend, or normal inclement weather days. Maintain drums on 20' spacing at all locations that guardrail has been removed.

Remove all existing guardrail components as directed by the engineer. Remove all existing guardrail concrete anchors. Refill all voids resulting from removal of guardrail including post holes and concrete anchors with DGA. Offset new guardrail post installation approximately 3' to avoid driving new posts in old post holes if possible. Payment for DGA used to refill voids will be allowed. Compact DGA in a method approved by the engineer.

Construct grading for end treatments in accordance with the Standard Drawings or as directed by the engineer. Use DGA for grading if required and if practical.

The contractor shall submit a plan for crossing each existing Reinforced Concrete Box Culvert. Guardrail may be attached to the top slab or parapet by an approved method or may be spanned by the elimination of no more than one post and double ply nesting of at least 2 sections of guardrail.

- F. **Pavement Markings.** Permanent striping will be in accordance with Section 713 for Waterborne Markings on asphalt pavement, and Section 112 for temporary striping, except that:
 - (1). Striping will be 6" in width.
 - (2). Permanent striping or temporary striping will be in place before a lane is opened to traffic.
 - (3). Temporary edgelines will not be required.
- G. **On-Site Inspection.** In accordance with section 102.06, each Contractor submitting a bid for this work will make a thorough inspection of the site prior to submitting a bid and will thoroughly familiarize himself with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department.
- H. Caution: Information shown on the drawings and in this proposal and the types and quantities of work listed are not to be taken as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw his own conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information above.
- I. Utility Clearance. It is not anticipated that 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.
- J. Asphalt Pavement Repairs. See Asphalt Pavement Repair Detail.
- K. Culvert Pipe. Saw cut the existing pavement at a depth to extend to the bottom of the existing pavement.
- L. **DGA Base.** Prepare shoulders for application of DGA Base at locations designated for overlay by the engineer. Conduct shoulder preparation operations at times that shoulders are dry with no standing water and when moisture content are conducive to grading and shaping. Prior to application of DGA Base on the shoulders, perform grading to remove potholes, ruts, ridges and sod if present. Flat roll the reshaped shoulder with a steel drum roller prior to application of DGA Base and compact the DGA Base prior to application of the Asphalt Seal Coat. Extend the DGA Base to the shoulder break and to a tie down point down the slope in preparation for guardrail installation. The engineer will determine locations of shoulders to receive the DGA Base overlay and reshaping for guardrail. Areas with little or no shoulder traffic and well graded with established sod will not receive DGA Base overlay. Shoulder preparation will be considered to be a "Site Preparation" item with no direct measurement or payment.

M. **Asphalt Seal Coat.** Apply Asphalt Seal Coat only to areas of shoulders receiving DGA Base.

IV. METHOD OF MEASUREMENT

- A. **Maintain and Control Traffic.** See Traffic Control Plan. Only the bid items listed will be measured for payment. No measurement or payment for striping removal will be made and will be considered incidental to "Maintain and Control Traffic".
- B. **Site Preparation.** Other than the bid items listed, site preparation will not be measured for payment, but will be incidental to the other items of work.
- C. Clearing and Grubbing. No direct measurement will be made for Clearing and Grubbing and any cleaning, clearing, or removal of brush or sod will be considered to be a Site Preparation activity.
- D. Erosion Control. Erosion control items will be measured and paid in accordance with the Standard Specifications for Road and Bridge Construction. No direct measurement for seeding in locations that erosion control blanket is used will be made as the seeding is incidental to the erosion control blanket in accordance with the specifications.
- E. Roadway Excavation, Embankment in Place, or Borrow Excavation. No direct measurement will be made for Roadway Excavation, Embankment in Place, or Borrow Excavation. All incidental excavation, embankment, or regrading of slopes required by small drainage structure work, or other items of work will be considered incidental to the individual item requiring the work.
- F. Asphalt Pavement Repairs. See Asphalt Pavement Repair Detail.
- G. **Ditching and Shouldering.** Plan quantity of Ditching and Shouldering will be measured for payment upon successful completion of all items of work required.

V. BASIS OF PAYMENT

No direct payment will be made other than for the bid items listed. All other items required to complete the construction will be incidental to the bid items listed. Existing signs damaged by the Contractor will be replaced by the Contractor at his expense. Payment will be made in accordance with the KYTC Standard Specifications, current edition in conjuncture with supplemental specifications and current Standard Drawings unless otherwise specified herein.

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

If the contractor chooses to obtain approval for changes to the Traffic Control Plan, any additional costs for materials, labor, or equipment necessary to implement the change will be at the contractor's expense. No payment will be

- considered for Temporary Concrete Barriers, Temporary Signals, or other items except the items set up in the original contract.
- B. **Site Preparation.** Other than the bid items listed, no direct payment will be allowed for site preparation, but will be incidental to the other items of work.
- C. Lane Closures. Contrary to Section 112, lane closures will not be measured for payment but will be incidental to the bid item "Maintain and Control Traffic". Portable message boards and signs shall be paid for one time regardless of how many times they are moved. No payment will be made for temporary signals if the contractor chooses to use temporary signals for lane closures.
- D. **Ditching and Shouldering.** In accordance with Section 209 of the Standard Specifications, the bid item "Ditching and shouldering" includes ditching on both sides of the roadway for the entire length of the project. Cleaning of all drainage structures, including perforated pipe headwalls and pipe structures 36 inches in diameter or less is also included in this bid item. Plan quantity of Ditching and Shouldering will be measured for payment upon successful completion of all items of work required. **ATTENTION:** Significant amounts of landslide debris exist in ditches at some locations on the project. Removal of the slide debris from the ditches will be considered incidental to Ditching and Shouldering.
- E. **Milling and Texturing.** Milling and texturing will be paid for per section 408.05 of the 2019 Standard Specifications.
- F. **Asphalt Material for Tack Non-Tracking.** See Special Note for Non-Tracking Tack Coat.
- G. **Barricade Type III** Contrary to the specifications, no direct measurement or payment will be made for Barricade Type III.
- H. **Fabric-Geotextile Class 2.** No direct measurement or payment will be made for Fabric-Geotextile Class 2 used in conjunction with the placement of channel lining in channel lined ditches, French Drain Backfill, or other incidental applications.
- I. **Guardrail.** No additional measurement or payment will be made for methods of crossing existing Reinforced Concrete Box Culverts.
- J. Saw Cut. Saw cut of existing pavement for pipe replacement will be considered incidental to pipe installation.

PROJECT SPECIFIC NOTES

CARTER COUNTY KY 2 MP 0.000-4.218

This project is intended to improve drainage, replace guardrail and provide a thin overlay to provide a new mainline riding surface through the length of the project.

- 1. The dimensions shown on the typical section for pavement and shoulder widths and thickness are nominal or typical dimensions. The actual dimensions to be constructed may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement or shoulders be widened unless otherwise specified in the Proposal.
- 2. The contractor is to be aware 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 owner and cover any costs associated with the impact.
- 3. The contractor is advised that the planned locations of work established by milepoints are referenced from the Kentucky Transportation Cabinet's Official Route Log. The existing reference markers may not correspond to the established work locations.
- 4. All guardrail is to be replaced on the project. Only remove the amount of guardrail necessary to access the work zone when performing work on drainage structures, slide repairs, etc. requiring guardrail removal for access. The contractor will place traffic drums on 20' spacing in the areas and pin down exposed blunt ends until such time that guardrail is re-established. Either a lane closure or shoulder closure shall be in place at any time that a section of guardrail is not in place. Do not remove the remainder of the guardrail until immediately prior to the commencement of the shoulder grading and DGA Base overlay operations. Maintain a shoulder closure with drums on a 20' spacing until the paving operations are completed and guardrail is reestablished.
- 5. The Contractor shall deliver existing, salvaged guardrail system materials to the Central Sign Shop and Recycle center at 1224 Wilkinson Blvd in Frankfort, KY. Contact Section Supervisor at (502) 564-8187 to schedule the delivery of material. Deliver the material between the hours of 8:00AM and 3:30PM, Monday through Friday. There is a Guardrail Delivery Verification Sheet which must be completed and signed by the Contractor, Engineer, and a representative of the Central Sign Shop and Recycle Center. A copy of this sheet is included elsewhere in the proposal.
- 6. The speed limit on the project will be reduced to 45 mph while lane closures are in place. Any time work is suspended the speed limit will revert to 55 mph.

- 7. The contractor is to 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. Signs that may conflict with proposed items of work are to be removed and stored in dry environment until they can be reinstalled. The contractor will reinstall each sign at the approximate location of removal or as directed by the engineer. Removal, storage and reinstallation of signs will be considered incidental to Maintain and Control Traffic.
- 8. The cleaning of existing pipe culvert inlets and outlets 36 inches or less in diameter are incidental to the bid item for "Ditching and Shouldering" in accordance with Section 209 of the 2019 Edition of the Standard Specifications for Road and Bridge Construction. This includes the cleaning of existing perforated pipe headwalls if present.
- 9. Roadway Excavation, Borrow Excavation, or Embankment in place required to regrade slopes or grade around new headwalls will not be measured for payment. Any embankment and backfill for the culvert pipe installation or small drainage structure installation is incidental to the respective bid item installed. Minor regrading of slopes to improve the clear zone will be considered incidental to Ditching and Shouldering.
- 10. Removal of sidewalk ramps will be incidental to "Sidewalk-4 in Concrete". Excavation and removal of material, form work, additional labor for construction of curb and gutter will be incidental to "Standard Curb and Gutter".
- 11. Coordinate activities of any adjacent contracts with this contract. Other projects may be in progress while this project is active. The engineer will determine the relative priority of activities on projects in case of conflict.
- 12. Culvert pipe trenches across existing approach roadways are to be backfilled with flowable fill and plated and traffic restored as soon as practical. After the flowable fill has achieved adequate set, cap the pipe trench with asphalt base. Payment for the asphalt base for trench cap will be made as "CL2 ASPH BASE 1.0D PG64-22". No direct payment will be made for flowable fill or other work required for pipe backfill and will be considered incidental to the individual item of pipe.
- 13. A quantity of channel lining has been established for lining of inlet and outlet ditches of proposed headwalls and at eroded areas. Quantities of channel lining may be increased, decreased or eliminated at each proposed location and additional locations of channel lining installation may be identified and required by the engineer. Place Geotextile Fabric Class 2 under all channel lining applications. Geotextile Fabric Class 2 used for channel lining underlayment will be considered incidental to Channel Lining Class 2 and Channel Lining Class 3.

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14. Asphalt overlay limits on all public road approaches are to be extended to the back of radius minimum and may be extended to a prior paving joint or other tie down point as directed by the engineer.

Most private entrances are to be overlayed to the edge of paved shoulder or to the pavement joint resulting from prior resurfacing projects. Some entrances were overlaid to approximately 2 feet behind the paved shoulder line. These entrances are to be overlayed to this existing joint behind the paved shoulder line. Entrance asphalt paving limits may be extended beyond these limits at the discretion of the engineer if site conditions warrant the extension to provide an improved tie down point. Select entrances are to be paved to the back of paved shoulder or as detailed in the typical sections. Overlay stone entrances with DGA as needed and as directed in accordance with the typical sections.

INSTALL RADAR PRESENCE DETECTOR TYPE A

Install Radar Presence Detector Type A shall consist of installation of a pole mounted radarpresence sensor, sensor mounting bracket, sensor cables, interface boxes, lead-in cable, connectors (furnished by contractor), and controller interface assembly. Radar Presence Detector Type A bid item shall include all labor required to provide a functional detection system. Radar Presence Detector Type A shall be installed and wired in accordance with the manufacturer's instructions. After the detector is installed and before the detector is powered on, the contractor shall coordinate with District Traffic Division's representatives to schedule a time to perform the detector setup. The contractor shall double check to verify that all wiring is correctly installed and connected before scheduling the setup work. Representatives from KYTC and/or the manufacturer or sales representative will assist with setup and calibration. The contractor shall provide a bucket truck and operators at this time for final aiming of the sensors. The contractor shall provide individuals capable of operating the setup software and learning the setup process so that future installations may be completed without assistance from others.

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SPECIAL NOTES SLIDE REPAIR PROJECT

I. DESCRIPTION

This work shall be performed in accordance with the Department's Current Standard Specifications and applicable Special Provisions except as hereafter specified. Article references are to the Standard Specifications.

This work shall consist of: (1) Do necessary excavation; (2) Furnish and install railroad rails; (3) **Install wall cribbing furnished by the Department of Highways**; (4) Excavate, place geotextile material, and backfill the area around the railroad rails and on the fill slope; (5) Reconstruct shoulder area; (6) Install guardrail, as stated in the guardrail special notes; (7) Maintain and control traffic; and (8) any other work as specified by this contract.

II. MATERIALS

All materials shall be sampled and tested in accordance with the Department's Sampling Manual and the materials shall be available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

- **A.** Railroad Rails. Use recycled (used) railroad rails classified with a nominal weight of 130 lb./yd (pounds per yard) size or greater. Use only visibly straight recycled railroad rails with no splices. The Engineer will verify rail nominal weights (Manufacturer's Stamp with lb./yd, date, etc.). Provide Certification for nominal weight if the Manufacturer's Stamp is unidentifiable.
- **B.** Wall Cribbing. Use wall cribbing: recycled (used) steel "W" beam guardrail.
- C. Backfill material for Drilled Sockets. Use the following for backfill material for Drilled sockets: concrete; free flowing sand; pea gravel, crushed limestone, or crushed sandstone. Use backfill material with one hundred percent (100%) passing a one-half (1/2) inch sieve. Do not use auger tailings. Engineer will use visual inspection and/or material testing, as applicable to determine acceptability.
- **D.** Fill Material for CRIBBING. Use one of the following backfill materials: Kentucky Aggregate Gradation No. 2's or larger. Backfill material shall meet requirements of Section 805. The Engineer will use visual inspection and/or material testing, as applicable to determine acceptability.
- **E. DGA.** Furnish Dense Graded Aggregate as per Section 805. Do not use Crushed Stone Base.
- F. Final Dressing, Seed and Protection. Use Seed Mixture No. 1.
- G. Silt Trap A, B or C. Furnish Silt traps as per Std Drawings and Section 213.
- **H. Silt Fence.** Furnish Temporary Silt Fence as per Section 213 and Section 827.
- I. Geotextile Fabric. Furnish Geotextile Fabric Type IV as per Section 843.

III. CONSTRUCTION METHODS

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

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- **B. Staking.** Establish proper slope elevations and ratios, shoulder widths, existing ditch profile and final ditch profile to insure positive drainage. Be responsible for field layout. Positive drainage is required upon completion of the project and is the responsibility of the Contractor.
- C. Site Preparation. Prepare flood repair sites. This includes clearing and grubbing, if necessary. Remove all obstructions. Sweep and remove debris, if necessary. The area to be cleared has not been measured by the Department and the bidder must draw his own conclusions. Construct silt checks and Temporary silt fence at locations directed by the engineer. The Engineer shall approve all site preparation. The Department will not make direct payment for site preparation.
- **D.** Installation of Railroad Rails. See attached summary for site locations and estimated quantities of materials required. Contrary to the attached tables and drawings for drilled railroad rails, Install only 1 Row of RR Rails on 3 foot centers unless otherwise shown on the summary or mentioned in these notes. The depth to rock shown on the location summary is approximate. The embankment failures at these sites are caused by erosion.

NOTE TO ENGINEER AND CONTRACTOR: ABSOLUTELY NO CHANGE IN SCOPE OF WORK OR INCREASE IN QUANTITIES WILL BE ALLOWED ON THIS PROJECT WITHOUT PRIOR WRITTEN APPROVAL FROM THE TEBM (Transportation Engineering Branch Manager) FOR OPERATIONS OR HIS REPRESENTATIVE IN THE DISTRICT OFFICE.

THE DEPARTMENT SHALL NOT BE LIABLE FOR PAYMENTS DUE TO ADDITIONAL WORK THAT HAS NOT BEEN AUTHORIZED BY THE AFOREMENTIONED PERSONS.

Install used railroad rail piling in drilled sockets in rock or stable material under the landslides (see figure 1) or the eroded areas (see figure 2) as project location dictates or as directed by the Engineer.

Drill the socket, furnish, and install the railroad rails into holes at slide locations. If the Engineer determines from the sounding obtained at a drilled socket that railroad rail piling cannot be used in that socket, the depth of the socket shall be measured and 50% of the depth shall be paid as "Railroad Rail-Drilled". Drill sockets into solid rock, if possible. The Department will monitor each hole, which will serve as a sounding for the rail to be installed in it. Embed the railroad rail into solid rock no less than one-half the free end length of the rail. (See figure 1 and figure 2). If solid rock cannot be obtained, the Engineer will determine the length of embedment required in other stable foundation. Allow adequate size of the drilled socket to allow free insertion of the railroad rail, but the maximum socket size is 1 foot in diameter.

After each hole is drilled, install railroad rail immediately with the flanges positioned perpendicular to the direction of the landslide or break (see figure 3). Determine the height of rail that is needed to reestablish pavement and shoulder typical section. Cut off excess rail flush with the proposed ground line that is not needed. Use cutoffs elsewhere in the project if possible; unusable cutoffs remain the property of the Contractor.

After railroad rail is installed, immediately backfill the drilled hole with the approved materials. Shovel the backfill material into the hole in small amounts. Avoid bridging between the rail and the sides of the hole. Do not use Auger tailings as backfill material.

When double or triple rows are required, stagger the rows to obtain the required spacing. Keep the spacing between the rows of rails as close as is practical; do not space between the rows of more than 2 feet, if possible. See figure 3 (Case II and Case III) for the diagrams showing two (2) or three (3) rows of rails. Select the spacing as per Table 1 for all 130 pound per yard rail or greater. The Department shall approve the selection prior to work being performed.

Crib any exposed portion of railroad rail before placing backfill.

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E. Excavation and Backfill for Embankment Repair. Excavate each embankment/flood repair area to provide a platform for drilling the used railroad rails, if necessary. Excavate for roadway ditches as necessary for slope, shoulder and pavement drainage. Place geotextile fabric, then construct embankment behind railroad rails, cribbing and on slope, as per Section 206. Construct embankment up to the approximate existing pavement elevation.

Reconstruct the shoulder area with DGA up to the approximate existing elevation and width of the surrounding typical section or to a minimum width of <u>2 Feet</u> at each slide location. Do not pond water on the shoulder area or at the shoulder edge. Reconstruct the shoulder before installing guardrail. Asphalt paving will not be part of the contract. If necessary, asphalt paving will be done by state forces at a later date.

<u>DO NOT USE EXCAVATED MATERIAL FROM THE SITE AS FILL MATERIAL</u>. Excess excavation may be wasted at sites on the right-of-way, ONLY if approved by the Engineer. Material may NOT be wasted in flood prone areas or in streams.

If the Engineer deems no suitable sites are available within the right-of-way, the Contractor will be required to waste excess material off the right-of-way at sites obtained by the Contractor at no cost to the Department.

- **F.** Installation of Wall Cribbing. Install Cribbing as shown on Figure 1 or Figure 2 as slide location dictates or as directed by the Engineer. Extend wall cribbing 2 feet below the existing ground line. If bedded rock is encountered, install the cribbing to the bedded rock only. If necessary, the Engineer will direct changes to this procedure. Furnish all labor and equipment to deliver and install wall cribbing on the recycled (used) railroad rail piling. Wall cribbing shall be lapped, bolted, and attached solid to the drilled railroad rails.
- **G. Final Dressing, Seeding and Protection**. Apply Final Dressing; Class A to all disturbed areas, both on and off the right-of-way. Sow with Seed Mixture No. 1. The Department will NOT make direct payment for final dressing, or seeding and protection.
- **H. On-Site Inspection.** Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his bid and shall thoroughly familiarize themselves with the existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made.
- I. Right-of-Way Limits. Right-of-Way and easement limits shown on the plans are approximate only. The Contractor shall make every effort to limit his activities to obvious right-of-way and permanent or temporary easements and shall be responsible for encroachments onto private lands.
- **J. Property Damage.** The Contractor will be responsible for all damage to public and/or private property resulting from his work.

IV. METHOD OF MEASUREMENT

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B.** Railroad Rail-Drilled. The Department will measure this item in Linear Feet finished in-place length: Laps, cutoffs, excess and waste will not be measured for payment. If the Engineer determines from the sounding obtained at a drilled socket that railroad rail piling cannot be used in that socket, the depth of the socket shall be measured and 50% of the depth shall be paid as "Railroad Rail-Drilled".
- **C. Wall Cribbing** The Department will measure this item in square feet finished in-place area. Laps, cutoffs, excess and waste will not be measured for payment.

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- **D.** Excavation and Backfill. The Department will measure this item in cubic yards. The Department will measure the quantity in the field as per Section 204 (Roadway Excavation) or other accepted methods of measurement as directed by the Engineer. The following items will not be measured directly by the Department: Site Preparation, Clearing and Grubbing, Seeding and Protection, Final Dressing, Temporary Erosion Control, Temporary Pollution Control, Waste removal, and Disposal, but will be incidental to "Excavation and Backfill" as applicable to each project.
- E. Site Preparation, Clearing and Grubbing, Seeding and Protection, Fertilizer, Temporary Erosion Control, Temporary Pollution Control, Waste Disposal. The Department will NOT MEASURE for payment these items. They include Site Preparation, Clearing and Grubbing, Seeding and Protection, Final Dressing, Temporary Erosion Control, Temporary Pollution Control, Waste Disposal, and other items not expressly bid as individual items. These items shall be incidental to the bid item "Excavation and Backfill" as applicable to each project.

V. BASIS OF PAYMENT

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B.** Railroad Rail-Drilled. The Department will pay for the completed and accepted quantities under the bid item of "Railroad Rail-Drilled". The Department will consider payment full compensation for all work required in these notes and elsewhere in the Contract.
- C. Excavation and Backfill. The Department will pay for the completed and accepted quantities under the bid item: Excavation and Backfill. Payment will be based on quantity measured in the field. The Department will consider payment full compensation for all work required on the project. The following items are incidental to "Excavation and Backfill" and will not be measured directly by the Department. These items include Site Preparation, Clearing and Grubbing, Seeding and Protection, Final Dressing, Temporary Erosion Control, Temporary Pollution Control, Waste removal and Disposal.
- **D. Wall Cribbing.** The Department will pay for the completed and accepted quantities under the bid item of "Wall Cribbing". Payment will be based on the quantity installed in the field. The Department will not make separate payment for the hauling of the wall cribbing to the slide site. The Department will consider payment full compensation for all work required on the project.
- E. Site Preparation, Clearing and Grubbing, Seeding and Protection, Fertilizer, Temporary Erosion Control, Temporary Pollution Control, Waste Disposal. The Department will NOT make direct payment for operations for which bid items do not exist. They include items listed here: Site Preparation, Clearing and Grubbing, Seeding and Protection, Final Dressing, Temporary Erosion Control, Temporary Pollution Control, Waste removal and Disposal. These activities shall be incidental to the bid item "Excavation and Backfill" as applicable to each project.

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SPECIAL PROVISION FOR WASTE AND BORROW SITES

Obtain U.S. Army Corps of Engineer's approval before utilizing a waste or borrow site that involves "Waters of the United States". The Corps of Engineers defines "Waters of the United States" as perennial or intermittent streams, ponds or wetlands. The Corps of Engineers also considers ephemeral streams, typically dry except during rainfall but having a defined drainage channel, to be jurisdictional waters. Direct questions concerning any potential impacts to "Waters of the United States" to the attention of the appropriate District Office for the Corps of Engineers for a determination prior to disturbance. Be responsible for any fees associated with obtaining approval for waste and borrow sites from the U.S. Army Corps of Engineer or other appropriate regulatory agencies.

1-296 Waste & Borrow Sites 01/02/2012

SPECIAL NOTE FOR NON-TRACKING TACK COAT

- 1. DESCRIPTION AND USEAGE. This specification covers the requirements and practices for applying a non-tracking tack asphalt coating. Place this material on the existing pavement course, prior to placement of a new asphalt pavement layer. Use when expedited paving is necessary or when asphalt tracking would negatively impact the surrounding area. This material is not suitable for other uses. Ensure material can "break" within 15 minutes under conditions listed in 3.2.
- 2. MATERIALS, EQUIPMENT, AND PERSONNEL.
 - 2.1 Non-Tracking Tack. Provide material conforming to Subsection 2.1.1.
 - 2.1.1 Provide a tack conforming to the following material requirements:

Property	Specification	Test Procedure		
Viscosity, SFS, 77 ° F	20 - 100	AASHTO T 72		
Sieve, %	0.3 max.	AASHTO T 59		
Asphalt Residue ¹ , %	50 min.	AASHTO T 59		
Oil Distillate, %	1.0 max.	AASHTO T 59		
Residue Penetration, 77 ° F	0 - 30	AASHTO T 49		
Original Dynamic Shear (G*/sin δ), 82 ° C	1.0 min.	AASHTO T 315		
Softening Point, ° F	149 min.	AASHTO T 53		
Solubility, %	97.5 min.	AASHTO T 44		

¹ Bring sample to 212 °F over a 10-15 minute period. Maintain 212 °F for 15-20 minutes or until 30-40 mL of water has distilled. Continue distillation as specified in T59.

- 2.2. Equipment. Provide a distributor truck capable of heating, circulating, and spraying the tack between 170 °F and 180 °F. Do not exceed 180 °F. Circulate the material while heating. Provide the correct nozzles that is recommend by the producer to ensure proper coverage of tack is obtained. Ensure the bar can be raised to between 14" and 18" from the roadway.
- 2.3. Personnel. Ensure the tack supplier has provided training to the contractor on the installation procedures for this product. Make a technical representative from the supplier available at the request of the Engineer.

3. CONSTRUCTION.

3.1 Surface Preparation. Prior to the application of the non-tracking tack, ensure the pavement surface is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the surface by scraping, sweeping, and the use of compressed air. Ensure this preparation process occurs shortly before application to prevent the return of debris on to the pavement. If rain is expected within one hour after application, do not apply material. Apply material only when the surface is dry, and no precipitation is expected.

- 3.2 Non-tracking Tack Application. Placement of non-tracking tack is not permitted from October 1st to May 15th. When applying material, ensure the roadway temperature is a minimum of 40°F and rising. Prior to application, demonstrate competence in applying the tack according to this note to the satisfaction of the Engineer. Heat the tack in the distributor to between 170 180 °F. After the initial heating, between 170 180 °F, the material may be sprayed between 165 °F and 180 °F. Do not apply outside this temperature range. Apply material at a minimum rate of 0.70 pounds (0.08 gallons) per square yard. Ensure full coverage of the material on the pavement surface. Full coverage of this material is critical. Increase material application rate if needed to achieve full coverage. Schedule the work so that, at the end of the day's production, all non-tracking tack is covered with the asphalt mixture. If for some reason the non-tracking tack cannot be covered by an asphalt mixture, ensure the non-tracking tack material is clean and reapply the non-tracking tack prior to placing the asphalt mixture. Do not heat material more than twice in one day.
- 3.3 Non-tracking Tack Certification. Furnish the tack certification to the Engineer stating the material conforms to all requirements herein prior to use.
- 3.4 Sampling and Testing. The Department will require a sample of non-tracking tack be taken from the distributor at a rate of one sample per 15,000 tons of mix. Take two 1 gallon samples of the heated material and forward the sample to the Division of Materials for testing within 7 days. Ensure the product temperature is between 170 and 180 °F at the time of sampling.
- 4. MEASUREMENT. The Department will measure the quantity of non-tracking tack in tons. The Department will not measure for payment any extra materials, labor, methods, equipment, or construction techniques used to satisfy the requirements of this note. The Department will not measure for payment any trial applications of non-tracking tack, the cleaning of the pavement surface, or furnishing and placing the non-tracking tack. The Department will consider all such items incidental to the non-tracking tack.
- 5. PAYMENT. The Department will pay for the non-tracking tack at the Contract unit bid price and apply an adjustment for each manufacturer's lot of material based on the degree of compliance as defined in the following schedule. Non-tracking tack will not be permitted for use from October 1st to May 15th. During this timeframe, the department will allow the use of an approved asphalt emulsion in lieu of a non-tracking tack product but will not adjust the unit bid price of the material. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

Non-Tracking Tack Price Adjustment Schedule								
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay		
Viscosity, SFS, 77 ° F	20 – 100	19 - 102	17 - 18	15 - 16	14	≤13		
			103 - 105	106 - 107	108 - 109	≥ 110		
Sieve, %	0.30 max.	≤ 0.40	0.41 - 0.50	0.51 - 0.60	0.61 - 0.70	≥ 0.71		
Asphalt Residue, %	50 min.	≥49.0	48.5 – 48.9	48.0 - 48.4	47.5-47.9	≤ 47.4		
Oil Distillate, %	1.0 max.	≤1.0	1.1-1.5	1.6 - 1.7	1.8-1.9	>2.0		
Residue Penetration, 77 ° F.	30 max.	≤ 31	32 - 33	34 - 35	36 - 37	≥ 38		
Original Dynamic Shear (G*/sin δ), 82 ° C	1.0 min.	≥0.95	0.92 - 0.94	0.90 - 0.91	0.85 - 0.89	≤ 0.84		
Softening Point, ° F	149 min.	≥145	142 - 144	140 - 141	138 - 139	≤ 137		
Solubility, %	97.5 min.	≥ 97.0	96.8 – 96.9	96.6 – 96.7	96.4 – 96.5	≤ 96.3		

Code
24970ECPay Item
Asphalt Material for Tack Non-TrackingPay Unit
Ton

Revised: May 23, 2022

SPECIAL NOTE FOR EXPERIMENTAL KYCT AND HAMBURG TESTING

1.0 General

1.1 Description. The KYCT (Kentucky Method for Cracking Test) and the Hamburg test results will help determine if the mixture is susceptible to cracking and rutting. During the experimental phase, data will be gathered and analyzed by the Department to determine the durability of the bituminous mixes. Additionally, the data will help the Department to create future performance-based specifications which will include the KYCT and Hamburg test methods.

2.0 Equipment

- **2.1 KYCT Testing Equipment.** The Department will require a Marshall Test Press with digital recordation capabilities. Other CT testing equipment may be used for testing with prior approval by the Department.
- **2.2 Water Baths.** One or more water baths will be required that can maintain a temperature of 77° +/- 1.8° F with a digital thermometer showing the water bath temperature. Also, one water bath shall have the ability to suspend gyratory specimen fully submerged in water in accordance with AASHTO T-166, current edition.
- **2.3** Hamburg Wheel Track Testing. The department encourages the use of the PTI APA/Hamburg Jr. test equipment to perform the loaded wheel testing. The Department will allow different equipment for the Hamburg testing, but the testing device must be approved by the Department prior to testing.
- **2.4 Gyratory Molds.** Gyratory molds will be required to assist in the production of gyratory specimens in accordance with AASHTO T-312, current edition.
- **2.5 Ovens.** Adequate (minimum of two ovens) will be required to accommodate the additional molds and asphalt mixture necessary to perform the acceptance testing as outlined in Section 402 of the Kentucky Standard Specifications for Road and Bridge Construction, current edition.
- **2.6 Department Equipment.** The Department will provide gyratory molds, PINE 850 Test Press with digital recordation, and CT testing equipment to assist during this experimental phase so data can be gathered. Hamburg test specimens will be submitted to the Division of Materials for testing on the PTI APA/Hamburg Jr if the asphalt contractor or district materials office does not have an approved Hamburg testing device.

3.0 Testing Requirements

- **3.1 Acceptance Testing.** Perform all acceptance testing and aggregate gradation as according with Section 402 and Section 403 of the Kentucky Standard Specifications for Road and Bridge Construction, current edition.
- **3.2 KYCT Testing.** Perform crack resistance analysis (KYCT) in accordance with the current Kentucky Method for KYCT Index Testing during the mix design phase and during the plant production of all surface mixtures. For mix design approvals, submit KYCT results on the Department MixPack. For Class 4 mixtures, submit ingredient materials to the Division of Materials for verification.

- **3.2.1 KYCT Frequency.** Obtain an adequate sample of hot mix asphalt to ensure the acceptance testing, gradation, and KYCT gyratory samples can be fabricated and is representative of the bituminous mixture. Acceptance specimens shall be fabricated first, then immediately after, fabricate the KYCT samples with the gyratory compactor in accordance with Section 2.4 of this Special Note. Analysis of the KYCT specimens and gradation will be required one per sublot produced from the same asphalt material and at the same time as the acceptance specimen is sampled and tested.
- **3.2.2 Number of Specimens and Conditioning.** Fabricate specimens in accordance with the Kentucky Method for KYCT Index Testing. Contrary to the method, for field specimens, fabricate a minimum of 3 and up to 6 test specimens. The specimens shall be compacted at the temperature in accordance with KM 64-411. KYCT mix design specimens shall be short-term conditioned uncovered for four hours at compaction temperature in accordance with KM 64-411. Contrary to the Kentucky Method, plant produced bituminous material shall be short-term conditioned immediately after sampling for two hours uncovered in the oven at compaction temperature in accordance with KM 64-411. Additionally, fabricated specimens shall be allowed to cool in air (fan is permissible) for 30 minutes +/- 5 minutes and conditioned in a 77 °F water bath for 30 minutes +/- 5 minutes. To ensure confidence and reliability of the test results provided by KYCT testing and Hamburg testing, reheating of the asphalt mixture is prohibited.
- **3.2.3 Record Times.** For each sublot, record the time required between drying aggregates in the plant to KYCT specimen fabrication. The production time may vary due to the time that the bituminous material is held in the silo. Record the preconditioning time when the time exceeds the one-hour specimen cool down time as required in accordance with The Kentucky Method for KYCT Index Testing. The preconditioning time may exceed an hour if the technician is unable to complete the test on the same day or within the specified times as outlined in The Kentucky Method for KYCT Index Testing. The production time and the preconditioning time shall be recorded on the AMAW.
- **3.2.4 File Name.** As according to section 7.12 of The Kentucky Method for KYCT Index Testing, save the filename with the following format: "CID_Approved Mix Number_Lot Number_Sublot Number_Date"
- **3.3 Hamburg Testing.** Perform the rut resistance analysis (Hamburg) in accordance with AASTHO T-324, not to exceed 20,000 passes for all bituminous mixtures during the mix design phase and production. For mix design approvals, submit Hamburg results on the Department MixPack. For Class 4 mixtures, submit ingredient materials to the Division of Materials for informational verification.
- **3.3.1 Hamburg Testing Frequency.** Perform testing and analysis per lot of material. The plant produced bituminous material sampled for the Hamburg test does not have to be obtained at the same time as the acceptance and KYCT sample. If the Hamburg test sample is not obtained at the same time as the KYCT sample, determine the Maximum Specific Gravity of the KYCT sample in accordance with AASHTO T-209 coinciding with the Hamburg specimens.
- **3.3.2 Record Times.** Record the production time as according to section 3.2.3 in this special note. Also record the time that the specimens were fabricated and the time the Hamburg testing was started. All times shall be recorded on the AMAW.

3.3.3 File Name. Save the Excel spreadsheet with the following file name; "Hamburg_CID_Approved Mix Number_Lot Number_Sublot Number_Date" and upload the file into the AMAW.

4.0 Data

Submit the AMAW and all test data that was obtained for acceptance, gradation, KYCT, and Hamburg testing within five working days once all testing has been completed for a lot to Central Materials Lab and the District Materials Engineer. Also, any data and or comments that the asphalt contractor or district personnel deem informational during this experimental phase, shall also be submitted to the Central Materials Lab and the District Materials Engineer. Any questions or comments regarding any item in this Special Note can be directed to the Central Office, Division of Materials, Asphalt Branch.

5.0 Payment

Any additional labor and testing equipment that is required to fabricate and test the KYCT and Hamburg specimens shall be considered incidental to the asphalt surface line item. The Department will perform the testing for the KYCT and Hamburg specimens if a producer does not possess the proper equipment.

June 15th, 2022

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SPECIAL NOTE FOR DOUBLE ASPHALT SEAL COAT

Use RS-2 or RS-2C asphalt material that is compatible with the seal aggregate. Apply the first course of asphalt seal coat at the rate of 3.2 lbs/sy of asphalt and 30 lbs/sy of size #78 seal coat aggregate. Apply the second course at 2.8 lbs/sy of asphalt and 20 lbs/sy of size #9M seal coat aggregate. The Engineer may adjust the rate of application as conditions warrant. Use caution in applying liquid asphalt material to avoid over spray getting on curbs, gutter, barrier walls, bridges, guardrail, and other roadway appurtenances.

The Department will not measure any surface preparation required prior to applying the asphalt seal coat, but shall be incidental to "Asphalt Material for Asphalt Seal Coat".

1-3215 Double Asphalt Seal Coat 01/02/2012

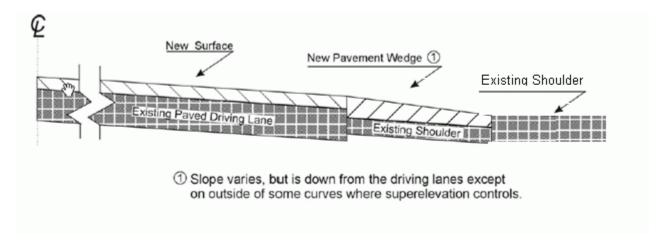
SPECIAL NOTE FOR PAVEMENT WEDGE AND SHOULDER MONOLITHIC OPERATION

- **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.

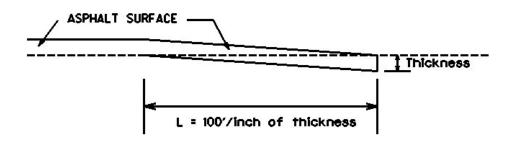


- **3.0 MEASUREMENT.** The Department will measure Asphalt Surface Mixture placed as the pavement wedge according to Section 403.
- **4.0 PAYMENT.** The Department will make payment for the completed and accepted quantities of Asphalt Surface Mixtures on pavement wedges according to Section 403.

SPECIAL NOTE FOR EDGE KEY

Construct Edge Keys at the beginning of project, end of project, at railroad crossings, and at ramps, as applicable. Unless specified in the Contract or directed by the Engineer, do not construct edge keys at intersecting streets, roads, alleys, or entrances. Cut out the existing asphalt surface to the required depth and width shown on the drawing and heel the new surface into the existing surface. The Department will make payment for this work at the Contract unit price per ton for Asphalt Pavement Milling and Texturing, which shall be full compensation for all labor, materials, equipment, and incidentals for removal and disposal of the existing asphalt surface required to construct the edge key.

EDGE KEY



Thickness = 1.25 Inches

L = 125 LF

L= Length of Edge Key

1-3309 Edge key by Ton 01/02//2012

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) Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections, as applicable; (3) Delineators for guardrail; (4) Maintain and control traffic; and (5) 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.** Furnish white and/or yellow Delineators for Guardrail according to the Delineators for Guardrail Standard Drawing.
- **D. Erosion Control.** See Special Notes for Erosion Control.

III. CONSTRUCTION METHODS

- A. Maintain and Control Traffic. See Traffic Control Plan.
- **B. Site Preparation.** 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; 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.

Guardrail Page 2 of 3

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 installing 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.** Construct Delineators for Guardrail according to the Delineators for Guardrail Sepia Drawing.
- **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.
- **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 thee Department. See Special; Note for Waste and Borrow.

Guardrail Page 3 of 3

- **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 Delineators for Guardrail Standard Drawing.
- **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 Delineators for Guardrail Standard Drawing.
- **D. Erosion Control.** See Special Notes for Erosion Control.

1-3415 New Guardrail 1/02/2012

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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 BASE FAILURE REPAIR

Repair locations listed on the summary are approximate only. The Engineer will determine actual repair locations and dimensions at the time of construction. Prior to overall milling and/or leveling and wedging, excavate the designated base failure areas by milling to a depth 6 inches below the existing asphalt pavement surface level. Dispose of the excavated materials at waste sites off the Right-of-Way obtained by the Contractor at no additional cost to the Department. See Special Note for Waste and Borrow.

Backfill the excavated areas with Class 2 Asphalt Base 1.00D PG64-22. Compact the asphalt base to the compaction required in Section 403.03.10. Seal the asphalt base with leveling and wedging. Perform all base failure repairs in such a manner that removal and replacement are completed on the same day. Do this work as one of the Contractor's first operations in order to allow further compaction by traffic. Do not mill or place new asphalt surface over repaired base failure areas until a minimum of 7 calendar days have elapsed after placement of the asphalt base. After a minimum of 7 calendar days and when the Engineer determines the base failure repair areas have sufficiently stabilized, begin milling and/or resurfacing operations. Prior to milling and/or constructing the new asphalt surface, level and wedge any settlement of the repair areas.

The bidder must draw conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and will not consider any claim for additional compensation if the materials encountered that are not in accord with the classification shown.

Accept payment at the Contract unit prices per ton for Asphalt Milling and Texturing, Asphalt Base, and Leveling and Wedging as full compensation for all labor, materials, equipment, and incidentals for removing pavement and disposing of the materials, furnishing and placing asphalt base, leveling and wedging, and all other items necessary to complete the work according to these notes to the satisfaction of the Engineer.

1-3605 basefailurerepairmillinlaypayton 01/02/2012

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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.

1-3725 Typical Section Dimensions 01/02/2012

SPECIAL NOTE FOR SIDEWALK RAMPS & DETECTABLE WARNINGS

GENERAL

Unless otherwise stated in the contract, or as directed by or with prior approval from the Engineer, construct Sidewalk Ramps and Detectable Warnings in accordance with Sections 505 and 720; Supplemental Specifications; Standard Drawings RGX-040-03, RPM-150-08, RPM-152-08, RPM-170-09, and RPM-172-07; current editions, as applicable. In lieu of the Detectable Warnings shown on Standard Drawing RGX-040-03, the Department will also allow the use of any Detectable Kentucky Product Warnings listed Phase XI on the Evaluation (http://www.ktc.uky.edu/kytc/kypel/allevaluations.php). For Detectable Warnings as shown on Standard Drawing RGX-040-03, saw cut existing sidewalks, curb and gutter, and pavement, if present, as shown on the detail and reconstruct sidewalk ramps with detectable warnings as directed or approved by the Engineer. For Detectable Warnings from the Kentucky Product Evaluation List, install according to the manufacturer's recommendations. Unless specified otherwise in the Contract, construct sidewalk with 4" nominal minimum required thickness; however, if the existing sidewalk thickness is found to be greater or less than the thickness specified, transition the thickness as directed by the Engineer.

Except as required by the work, do not disturb drainage pipe, catch basins, and other roadway features, appurtenances and installations. Restore any roadway features, appurtenances, and installations damaged by the work in like kind materials and design at no additional cost to the Department. Dispose of all waste 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).

MEASUREMENT & PAYMENT

SIDEWALK RAMPS – The Department will measure Sidewalk Ramps in accordance with Section 505.04.01 and Standard Drawing RPM-170-09, current editions; however, contrary to Sections 505.04.05 and 505.04.06, the Department will not measure Roadway Excavation or Embankment in Place, but shall be incidental to the Sidewalk. Accept payment at the Contract unit price per square yard as full compensation for all labor, materials, equipment, and incidentals required for removal and disposal of existing sidewalk and curb and gutter, excavation and embankment, construction of the sidewalk ramps, reconstruction of the adjacent curb and/or sidewalk as necessary to install the sidewalk ramps, and restoration of disturbed features in accordance with these notes or as directed by the Engineer.

DETECTABLE WARNINGS – The Department will measure Detectable Warnings in accordance with Section 505.04.04 and Standard Drawings RGX-040-03 and RPM-170-09, current editions. The Department will make payment according to Section 505.05.

HANDRAIL – The Department will measure and make payment for Handrail in accordance with Section 720.05 and Standard Drawing RPM-172-07, current editions.

TRAFFIC CONTROL PLAN CARTER COUNTY FD04 022 0002 000-005 MP 0.000-4.218

TRAFFIC CONTROL GENERAL

Except as provided herein, "Maintain and Control Traffic" shall be in accordance with the Standard Specifications and the Standard Drawings, and the Manual on Uniform Traffic Control Devices (MUTCD), current editions at the time of letting. 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.

Night work will be allowed on this project. Obtain approval from the Engineer for the method of lighting prior to use. No additional payment shall be made for night work operations.

TRAFFIC PHASING OVERVIEW

Access to all private and public entrances on the project shall be maintained at all times unless otherwise directed by the Engineer.

Use a lane closure adhering to the Standard Drawings when work is performed in the lane, on the shoulder, or side slopes adjacent to travel lanes. Perform any maintenance of the shoulder as deemed necessary by the Engineer in order to maintain traffic. Remove failed materials and perform additional patching as directed by the Engineer. All items of work required on the project will be performed by alternating lane closures except for the approach cross pipe replacement.

PROJECT PHASING & CONSTRUCTION PROCEDURES

No lane closures will be allowed on the project during the following days unless otherwise approved by the Engineer:

Good Friday/Easter Weekend Memorial Day Weekend Independence Day Weekend US 60 Yard Sale Weekend Labor Day Weekend Thanksgiving Weekend April 7th, 2023 – April 9th, 2023 May 27th, 2023 – May 29th, 2023 July 1st, 2023 – July 4th, 2023 August 4th, 2023 – August 6th, 2023 Sept 1st, 2022 – Sept 4th, 2022 Nov 23rd, 2022– Nov 26th, 2022 CARTER COUNTY FD04 022 0002 000-005

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CONSTRUCTION PHASING

PHASE I – Drainage Repairs, Ditching, and Roadside Improvements

Phase Ia - Cross Drain Removal & Replacement

For cross drains on approaches, during times of allowable closure, temporarily close the approach and perform pipe removal and installation and backfilling operations at approach locations indicated. Place message boards on the proposed closed route 7 days in advance of the closure to notify the public of the proposed closure. Backfill with flowable fill, plate the pipe trench, and reopen the approach to traffic within the times specified. Limit the duration of closure to the minimum required to install the new pipe, backfill, and plate the trench to restore traffic. Install 12" thickness asphalt base for trench cap as soon as practical and as soon as the flowable fill has gained enough stability. Complete ditching, headwall installation, and site grading around headwalls as a separate operation using lane closures to limit the time of road closure.

Phase Ib – Ditching and Shouldering, Slide Repair, and Erosion Repairs

Using alternating lane closures and flaggers, complete ditching, clean pipes and culverts, and remove and replace headwalls and small drainage structures indicated or as directed by the engineer. Complete channel lining and erosion repairs and regrade slopes to tie proposed headwalls into the existing slopes.

Maintain a minimum lane width of 12 feet during all phases of slide repair. Lane closure can be used for slide repair at MP 2.07, see Std Dwg TTC-115-03. An alternating lane closure with flaggers or temporary traffic signals will be required for the slide repair at MP 3.842. All equipment and labor required will be incidental to "Maintain and Control Traffic".

Phase Ic – Retrofit Bridge Barrier, Curb and Gutter, Flumes, and Sidewalk Ramps

Using alternating lane closures and flaggers, complete all work associated with Retrofit Bridge Barrier. Traffic on I-64 will be protected from the work required for Retrofit Bridge Barrier by working above a lane closure on I-64 or providing a containment device approved by the Engineer. Lane closures or additional material or equipment for a containment system will be incidental to "Maintain and Control Traffic".

Using alternating lane closures and flaggers, complete all work associated with Standard Curb and Gutter, Flumes, and Sidewalk Ramps. Ensure pedestrians are aware of changes to the sidewalk ramp and protect any hazards during construction.

PHASE II - Shoulder Preparation, Asphalt Milling, and Resurfacing

Phase IIa - Asphalt Pavement Repairs

Utilizing alternating lane closures and flaggers, complete milling for base failure repairs in accordance with the Base Failure Repair Note or as directed by the engineer. Place asphalt base in the repair area by the end of each day's production and restore 2 lanes of traffic at the end of each shift. Place a Type III Barricade in advance of pavement repair locations until the asphalt base is placed. Place temporary striping on the repair area prior to opening to traffic.

Phase IIb – Asphalt Milling and Paving

Using alternating lane closures, complete milling and texturing as noted in the milling summary. Clip back sod from shoulder and place leveling and wedging to correct any irregularities in profile or cross slope. Temporary striping is to be placed at the end of each day in areas where the existing striping was eliminated.

Using alternating lane closures, place asphalt surface on one lane and on one shoulder for approximately ½ day's production. After final rolling, alternate lane closures to place traffic on the newly paved lane and complete paving of the other lane and shoulder to approximately even with the first half day's production. Complete both lanes of paving daily to an approximate common point.

PHASE III – Shoulder Grading and Guardrail

Utilizing alternating lane closures, remove existing guardrail on the project, lining the shoulder with drums on 20' spacing in locations of guardrail removal.

Utilizing alternating lane closures and flaggers, prepare shoulders for placement of DGA Base overlay at locations directed by the engineer. Place DGA shoulder overlay, place compacted DGA in post holes resulting from guardrail removal and grade shoulders across the width of stone shoulder to prepare for placement of guardrail. Place asphalt seal coat on shoulders treated with the DGA overlay. Install new guardrail upon completion of shoulder grading and modification of shoulder and completion of the Asphalt Seal Coat.

Once guardrail is removed or partially removed, the contractor shall not suspend operations for more than a normal weekend, or normal inclement weather days until new guardrail is installed.

PHASE IV – Final Construction Items

Using alternating lane closures, complete construction of any remaining items of work including but not limited to final pavement markings, rumble strips, final cleanup incidental seeding and removal of signs.

LANE CLOSURES

Contrary to Section 112.04.17, lane closures, whether long term or short term, will not be measured for payment and will be incidental to the bid item "Maintain and Control Traffic". Maintain a minimum lane width of 9 feet. Use traffic drums or vertical panels only for areas that guardrail has been removed.

SHOULDER PREPARATION AND RESTORATION

Wide loads, errant vehicles, or traffic shying away from equipment or workers may inadvertently tend to travel for short distances on the shoulders. Clean any debris from the shoulders prior to beginning any work on the project and periodically when debris accumulates throughout the duration of the project. Monitor shoulder conditions and perform repairs as necessary if damage develops. Repairs to shoulders are to be paid by the ton of milling measured, asphalt material for tack, and the measured tons of the asphalt mixture used. Use asphalt base, asphalt surface or leveling and wedging for repairs as directed by the engineer. No direct payment for these repairs will be made other than measurement and payment of established contract work items necessary

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to make the repairs. No additional mobilization or traffic control will be considered for payment for these potential repairs.

ROAD CLOSURE

Allowable time for approach road closures for approach cross pipe replacements shall be from 9:00am to 2:00pm. The contractor shall give the engineer a two (2) week notice prior to all road closures for approach cross pipe replacements. Use PCMS message boards, one per direction of travel, for one week prior to the dates of closure to advise the traveling public of the dates and times of proposed closure. Limit the duration of the road closure to the minimum time required to remove the existing pipe, reinstall and backfill the new culvert pipe. Reopen the road to traffic as soon as possible. Headwall construction and grading of slopes must be performed as a separate operation with one lane closed. Road closures will only be allowed for replacement of approach cross drains. Backfill with flowable fill, plate the pipe trench, and reopen to traffic as soon as possible. After the flowable fill has achieved adequate set, cap the pipe trench with asphalt base.

SIGNS

Traffic control signs in addition to normal lane closure signing detailed on the Standard Drawings may be required by the Engineer. Additional signs may be needed for lane closures.

Signs shall be constructed on each end of the proposed project as directed by the Engineer. Additional quantities have been added for any additional signs required by the Engineer. One lane road and flagger signs will be required in accordance with the Standard Drawings and will be required to be moved periodically as the work progresses. Remove lane closure and flagger signage when workers are not present.

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.

Contrary to the section 112, only post mounted signs will be measured for payment and only signs intended to be continuously in place for more than 3 consecutive days will be measured for payment.

TYPE III BARRICADES

Utilize Type III Barricades at all locations required by the traffic control plan and as required by the Standard Drawings or MUTCD. Contrary to the specifications, no direct payment will be made for Type III Barricades and will be considered incidental to "Maintain and Control Traffic".

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. Place PCMS on both ends of the project corridor. 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. See notes elsewhere in the proposal for additional requirements.

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> Use PCMS to advise traffic of lane closures, milled surface, and other messages as provided by the engineer.

PAVEMENT MARKINGS

Maintain temporary or permanent pavement markings any time two lanes of traffic is open without flaggers. Temporary edgelines will not be required on this project.

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. 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" and less than 8' from edge of traveled way – 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. Complete work in the drop-off area to eliminate the drop-if possible. In the event that planned work cannot be completed to eliminate the drop-off due to conditions beyond the contractor's control, construct a wedge with compacted cuttings from milling, trenching, DGA Base, 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" and less than 8' from edge of traveled way – If ongoing work results in a greater than 4" drop-off, 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. Traffic Control Device spacing should be 40 feet and appropriate lighting should be utilized to illuminate the area during nighttime operations. Complete work in the drop-off area to eliminate the drop-if possible. In the event that planned work cannot be completed to eliminate the drop-off due to conditions beyond the contractor's control, construct a wedge with compacted cuttings from milling, trenching, DGA Base, 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.

TRAFFIC COORDINATOR

when

Designate an employee to be traffic coordinator. The designated Traffic Coordinator must meet the requirements of section 112.03.12 of the Standard Specifications. 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 which the Traffic Coordinator can be contacted at all times. During any period when a lane closure is in place, the Traffic Coordinator will arrange for personnel to be present on the project at all times to inspect the traffic control, maintain the signing and devices, and relocate portable changeable message boards as queue lengths change. The personnel will have access on the project to a radio or telephone to be used in case of emergencies or accidents. The Project Traffic Coordinator will be responsible for ensuring One Lane Road and Flagger signs are maintained at appropriate locations and distance from the work zone and removed

not

needed.

COORDINATION OF WORK

The Contractor is advised that other projects may be in progress within or in the near vicinity of this project. The traffic control of those projects may affect this project and the traffic control of this project may affect those projects. The Contractor will coordinate the work on this project with the work of the other contractors. In case of conflict, the Engineer will determine the relative priority to give to work phasing on the various projects.

CONTRACTOR'S AND CONTRACTOR'S EMPLOYEES' VEHICLES

Do not allow the contractor's equipment or employees to park on private property or block access to any private or public entrances at any time. Damage to private property including but not limited to mailboxes, entrance pavement, entrance pipe, sod, or other items must be repaired immediately by the contractor and at the contractor's expense.

SCHOOL BUS AND EMERGENCY VEHICLES

Provide for immediate passage of all school buses and emergency vehicles.

EMERGENCY I-64 BYPASS ROUTE

In case of an emergency closing of I-64, the contractor will immediately perform any necessary activities to restore KY 2 to two lanes and suspend operations on the project until such time that the use of KY 2 as a detour route for I-64 is no longer needed.

WIDE LOADS

Wide load detours will not be established on this project. Provide for passage of wide loads up to 16 feet. Wide loads may use a portion of the shoulder to allow for passage. Temporarily shift traffic drums to allow for passage of wide loads when necessary.

USE AND PLACEMENT OF CHANGEABLE MESSAGE SIGNS

The following policy is based upon current Changeable Message Signs (CMS) standards and practice from many sources, including the Federal Highway Administration (FHWA), other State Departments of Transportation, and Traffic Safety Associations. It is understood that each CMS installation or use requires individual consideration due to the specific location or purpose. However, there will be elements that are constant in nearly all applications. Accordingly these recommended guidelines bring a level of uniformity, while still being open to regional experience and engineering judgment.

Application

The primary purpose of CMS is to advise the driver of unexpected traffic and routing situations. Examples of applications where CMS can be effective include:

- Closures (road, lane, bridge, ramp, shoulder, interstate)
- Changes in alignment or surface conditions
- Significant delays, congestion
- Construction/maintenance activities (delays, future activities)
- Detours/alternative routes
- Special events with traffic and safety implications
- Crash/incidents
- Vehicle restrictions (width, height, weight, flammable)
- Advance notice of new traffic control devices
- Real-time traffic conditions (must be kept up to date)
- Weather /driving conditions, environmental conditions, Roadway Weather Information Systems
- Emergency Situations
- Referral to Highway Advisory Radio (if available)
- Messages as approved by the County Engineer's Office

CMS should not be used for:

- Replacement of static signs (e.g. road work ahead), regulatory signage (e.g. speed limits), pavement markings, standard traffic control devices, conventional warning or guide signs.
- Replacement of lighted arrow board
- Advertising (Don't advertise the event unless clarifying "action" to be taken by driver e.g. Speedway traffic next exit)
- Generic messages
- Test messages (portable signs only)
- Describe recurrent congestion (e.g. rush hour)
- Public service announcements (not traffic related

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Messages

Basic principles that are important to providing proper messages and insuring the proper operation of a CMS are:

- Visible for at least ½ mile under ideal daytime and nighttime conditions
- Legible from all lanes a minimum of 650 feet
- Entire message readable twice while traveling at the posted speed
- Nor more than two message panels should be used (three panels may be used on roadways where vehicles are traveling less than 45 mph). A panel is the message that fits on the face of the sign without flipping or scrolling.
- Each panel should convey a single thought; short and concise
- Do not use two unrelated panels on a sign
- Do not use the sign for two unrelated messages
- Should not scroll text horizontally or vertically
- Should not contain both the words left and right
- Use standardized abbreviations and messages
- Should be accurate and timely
- Avoid filler/unnecessary words and periods (hazardous, a, an, the)
- Avoid use of speed limits
- Use words (not numbers) for dates

Placement

Placement of the CMS is important to insure that the signs is visible to the driver and provides ample time to take any necessary action. Some of the following principles may only be applicable to controlled access roadways. The basic principles of placement for a CMS are:

- When 2 signs are needed, place on same side of roadway and at least 1,000 feet apart
- Place behind semi-rigid/rigid protection (guardrail, barrier) or outside of the clear zone
- Place 1,000 feet in advance of work zone; at least one mile ahead of decision point
- Normally place on right side of roadway; but should be placed closest to the affected lane so that either side is acceptable
- Signs should not be dual mounted (one on each side of roadway facing same direction)
- Point trailer hitch downstream
- Secure to immovable object to prevent thief (if necessary)
- Do not place in sags or just beyond crest
- Check for reflection of sun to prevent the blinding of motorist
- Should be turned ~3 degrees outward from perpendicular to the edge of pavement
- Bottom of sign should be 7 feet above the elevation of edge of roadway
- Should be removed when not in use

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Standard Abbreviations

The following is a list of standard abbreviations to be used on CMS.

Word	Abbrev.	Example
Access	ACCS	ACCIDENT AHEAD/USE ACCS RD
		NEXT RIGHT
Alternate	ALT	ACCIDENT AHEAD/USE ALT RTE
		NEXT RIGHT
Avenue	AVE	FIFTH AVE CLOSED/DETOUR
		NEXT LEFT
Blocked	BLKD	FIFTH AVE BLKD/MERGE LEFT
Boulevard	BLVD	MAIN BLVD CLOSED/USE ALT RTE
Bridge	BRDG	SMITH BRDG CLOSED/USE ALT RTE
Cardinal Directions	N, S, E, W	N I75 CLOSED/ DETOUR EXIT 30
Center	CNTR	CNTR LANE CLOSED/MERGE LEFT
Commercial	COMM	OVRSZ COMM VEH/USE I275
Condition	COND	ICY COND POSSIBLE
Congested	CONG	HVY CONG NEXT 3 MI
Construction	CONST	CONST WORK AHEAD/EXPECT
		DELAYS
Downtown	DWNTN	DWNTN TRAF USE EX 40
Eastbound	E-BND	E-BND I64 CLOSED/DETOUR
		EXIT 20
Emergency	EMER	EMER VEH AHEAD/PREPARE TO
		STOP
Entrance, Enter	EX, EXT	DWNTN TRAF USE EX 40
Expressway	EXPWY	WTRSN EXPWY CLOSED/DETOUR
		EXIT 10
Freeway	FRWY, FWY	GN SYNDR FWY CLOSED/DETOUR
		EXIT 15
Hazardous Materials	HAZMAT	HAZMAT IN ROADWAY/ALL TRAF
		EXIT 25
Highway	HWY	ACCIDENT ON AA HWY/EXPECT
		DELAYS
Hour	HR	ACCIDENT ON AA HWY/2 HR
		DELAY
Information	INFO	TRAF INFO TUNE TO 1240 AM
Interstate	I	E-BND I64 CLOSED/DETOUR
		EXIT 20
Lane	LN	LN CLOSED/MERGE LEFT
Left	LFT	LANE CLOSED/MERGE LFT
Local	LOC	LOC TRAF USE ALT RTE
Maintenance	MAINT	MAINT WRK ON BRDG/SLOW
Major	MAJ	MAJ DELWAYS 175/USE ALT RTE
Mile	MI	ACCIDENT 3 MI AHEAD/ USE
		ALT RTE
Minor	MNR	ACCIDENT 3 MI MNR DELAY

Minutes	MIN	ACCIDENT 3 MI/30 MIN DELAY
Northbound	N-BND	N-BND I75 CLOSED/ DETOUR
		EXIT 50
Oversized	OVRSZ	OVRSZ COMM VEH/USE I275
		NEXT RIGHT
Parking	PKING	EVENT PKING NEXT RGT
Parkway	PKWY	CUM PKWAY TRAF/DETOUR
•		EXIT 60
Prepare	PREP	ACCIDENT 3 MIL/PREP TO STOP
Right	RGT	EVENT PKING NEXT RGT
Road	RD	HAZMAT IN RD/ALL TRAF EXIT 25
Roadwork	RDWK	RDWK NEXT 4 MI/POSSIBLE
		DELAYS
Route	RTE	MAJ DELAYS 175/USE ALT RTE
Shoulder	SHLDR	SHLDR CLOSED NEXT 5 MI
Slippery	SLIP	SLIP COND POSSIBLE/ SLOW SPD
Southbound	S-BND	S-BND I75 CLOSED/DETOUR
		EXIT 50
Speed	SPD	SLIP COND POSSIBLE/ SLOW SPD
Street	ST	MAIN ST CLOSED/USE ALT RTE
Traffic	TRAF	CUM PKWAY TRAF/DETOUR
		EXIT 60
Vehicle	VEH	OVRSZ COMM VEH/USE I275
		NEXT RIGHT
Westbound	W-BND	W-BND I64 CLOSED/DETOUR
		EXIT 50
Work	WRK	CONST WRK 2MI/POSSIBLE
		DELAYS

Certain abbreviations are prone to inviting confusion because another word is abbreviated or could be abbreviated in the same way. DO NO USE THESE ABBREVIATIONS.

Abbrev.	Intended Word		Word Erroneously Given
ACC	Accident		Access (Road)
CLRS	Clears		Colors
DLY	Delay		Daily
FDR	Feeder		Federal
L	Left		Lane (merge)
LOC	Local		Location
LT	Light (traffic)	Left	
PARK	Parking		Park
POLL	Pollution (index)		Poll
RED	Reduce		Red
STAD	Stadium		Standard
TEMP	Temporary		Temperature
WRNG	Warning		Wrong

TYPICAL MESSAGES

The following is a list of typical messages used on CMS. The list consists of the reason or problem that you want the driver to be aware of and the action that you want the driver to take.

Reason/Problem Action

ACCIDENT ALL TRAFFIC EXIT RT
ACCIDENT/XX MILES AVOID DELAY USE XX
XX ROAD CLOSED CONSIDER ALT ROUTE

XX EXIT CLOSED DETOUR

BRIDGE CLOSED

BRIDGE/(SLIPPERY, ICE, ETC.)

CENTER/LANE/CLOSED

DETOUR XX MILES

DO NOT PASS

EXPECT DELAYS

DELAY(S), MAJOR/DELAYS

FOLLOW ALT ROUTE

DEBRIS AHEAD KEEP LEFT
DENSE FOG KEEP RIGHT

DISABLED/VEHICLE MERGE XX MILES
EMER/VEHICLES/ONLY MERGE LEFT
EVENT PARKING MERGE RIGHT
EXIT XX CLOSED ONE-WAY TRAFFIC

FLAGGER XX MILES PASS TO LEFT
FOG XX MILES PASS TO RIGHT
FREEWAY CLOSED PREPARE TO STOP

FRESH OIL REDUCE SPEED
HAZMAT SPILL SLOW

ICE SLOW DOWN

INCIDENT AHEAD STAY IN LANE LANES (NARROW, SHIFT, MERGE, ETC.) STOP AHEAD

LEFT LANE CLOSED

LEFT LANE NARROWS

STOP XX MILES

TUNE RADIO 1610 AM

LEFT 2 LANES CLOSED

USE NN ROAD

LEFT SHOULDER CLOSED

USE CENTER LANE

LOOSE GRAVEL USE DETOUR ROUTE MEDIAN WORK XX MILES USE LEFT TURN LANE

MOVING WORK ZONE, WORKERS IN ROADWAY

USE NEXT EXIT

NEXT EXIT CLOSED

USE RIGHT LANE

WATCH FOR FLAGGER

NO OVERSIZED LOADS WATCH FOR FLAGGER NO PASSING NO SHOULDER

ONE LANE BRIDGE
PEOPLE CROSSING
RAMP CLOSED

RAMP (SLIPPERY, ICE, ETC.) RIGHT LANE CLOSED

RIGHT LANE NARROWS

RIGHT SHOULDER CLOSED

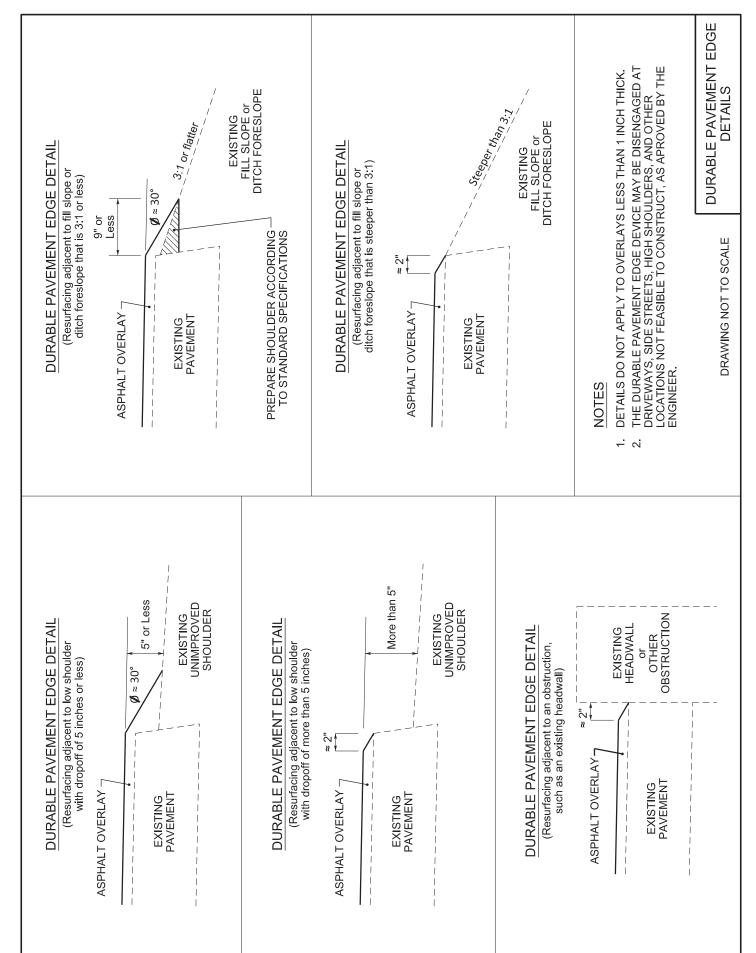
ROAD CLOSED

ROAD CLOSED XX MILES ROAD (SLIPPERY, ICE, ETC.)

ROAD WORK

ROAD WORK (OR CONSTRUCTION) (TONIGHT, TODAY, TOMORROW, DATE)

ROAD WORK XX MILES SHOULDER (SLIPPERY, ICE, SOFT, BLOCKED, ETC.) NEW SIGNAL XX MILES SLOW 1 (OR 2) - WAY TRAFFIC SOFT SHOULDER STALLED VEHICLES AHEAD TRAFFIC BACKUP TRAFFIC SLOWS TRUCK CROSSING TRUCKS ENTERING TOW TRUCK AHEAD **UNEVEN LANES** WATER ON ROAD WET PAINT WORK ZONE XX MILES **WORKERS AHEAD**



CARTER COUNTY FD04 022 0002 000-005

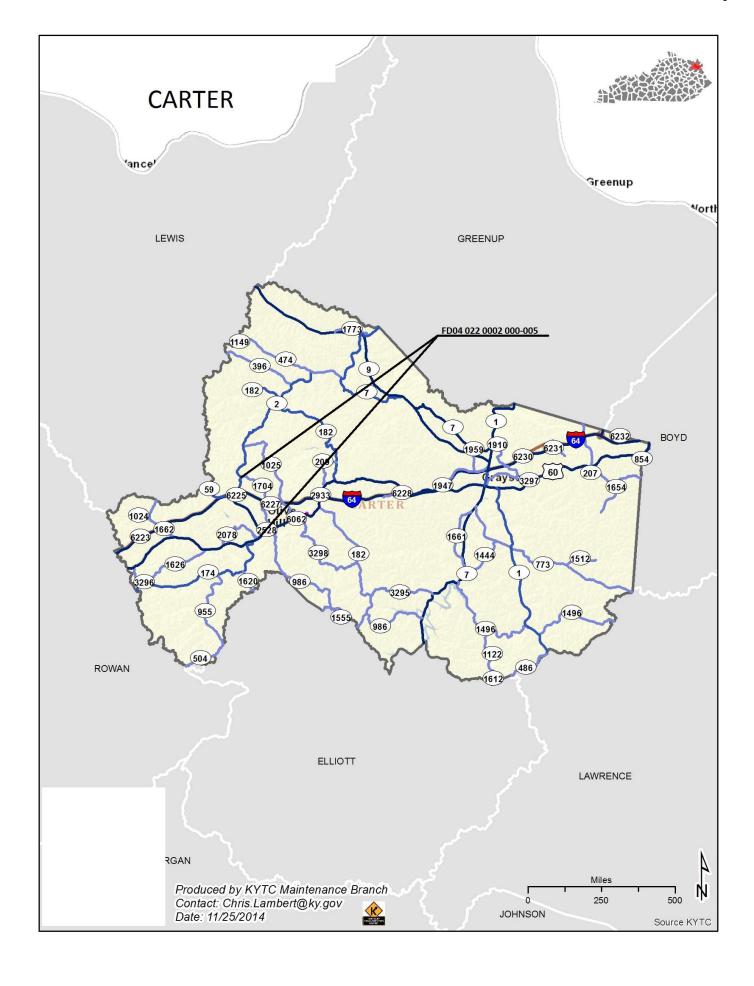
Contract ID: 232346 Page 53 of 92

SPECIAL NOTE FOR TRENCHING

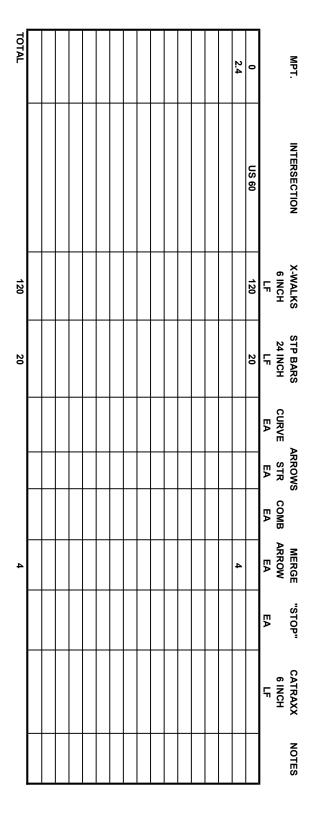
Trench shoulders as shown on the typical section. Reshape and compact excavated material from the trench on the outside edge of the paved shoulder as shown on the typical section. Retain possession of excess materials and materials the Engineer deems unsuitable for reuse. Waste the excess and/or unsuitable materials 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.

The Department will measure "Trenching" in linear feet at the pavement/shoulder edge. Accept payment at the contract unit price per linear feet shall as full compensation for all labor, materials, equipment and incidentals for excavating the shoulder trench and reuse and/or disposal of the material.

 $\begin{array}{c} \hbox{1--3910 Trenching Shoulder Contractor Reshape} \\ \hbox{01/01/2012} \end{array}$



Carter County THERMOPLASTIC INTERSECTION PAVEMENT MARKINGS SUMMARY FD04 022 0002 000-005

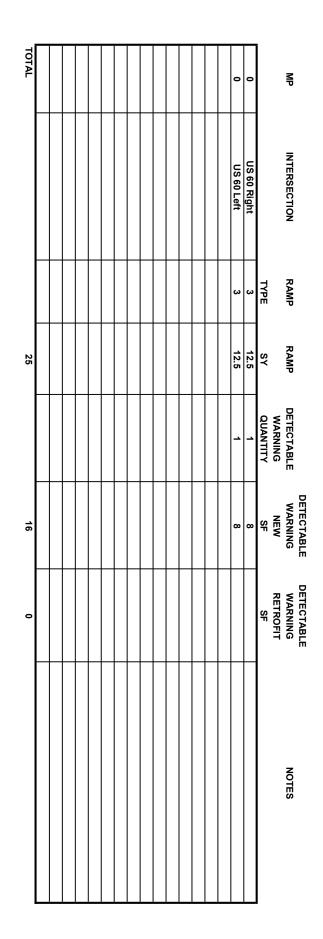


Slide Repair Summary

Milepoint	Length of Slide (FT)	RR Rail Length (LF)	Cribbing (SQ FT)	Crushed Aggregate No. 2 (TON)	Roadway Excavation (CU YD)	Fabric Geotextile Type IV (SQ YD)
2.070	325	4320	3900	900	600	1100
3.842	325	4320	3900	900	600	1100
					·	

Total 700 8640 7800 1800 1200 2200

Carter County SIDEWALK RAMP AND DETECTABLE WARNING SUMMARY FD04 022 0002 000-005



Type 4A	0.147 0.194 0.238 0.398 0.642 0.762 0.852 1.060 1.070 1.272 1.392 1.528 1.460 1.507 1.542 1.618 1.996 2.165 2.160 2.253 2.695 2.733 2.738 2.940 2.842 2.900 2.842 2.903 2.903 2.944 2.990 3.008 2.990 3.078 3.492 3.586 3.492 3.585 3.694 3.825 3.834 4.050 14.000 8.000	LANE SB	END TREAT.	BEGIN MILEPOINT	NEW GUARDRAIL END MILEPOINT Radius 0.170 Type 7	RDRAIL END TREAT. Radius & Type 7		LIN FEET	FEET REWARKS		REMARKS LANE MILEPOI	REMARKS LANE
Type 4A 0.238 0.398 Type 4A Type 4A 0.642 0.762 Type 4A Radius & TS 0.852 1.060 Radius & TS 1.070 1.272 Radius & TS 1.070 1.272 Radius & TS Type 4A 1.392 1.528 Type 4A 1.460 1.507 Type 4A Radius & TS 1.542 1.618 Type 4A Radius & TS 1.542 1.618 Type 4A Radius & TS 2.160 2.253 Radius & TS 1.542 1.542 Radius & TS 1.542 1.618 Type 4A Radius & TS 2.160 2.253 Radius & TS 1.542 1.542 Type 4A 1.596 2.735 Radius & TS 1.542 1.542 Type 7 Type 4A 2.695 2.735 Te to 1.542 1.542 Type 7 The to 1.542 1.542 1.542 Type 7 The beam 1.542 1.542 1.542 1.542 Type 7 The beam 1.542 1	0.238 0.398 0.642 0.762 0.6852 1.060 1.070 1.272 1.392 1.528 1.460 1.507 1.542 1.618 1.996 2.165 2.160 2.253 2.685 2.733 2.903 2.940 2.903 2.944 2.990 3.008 2.990 3.027 3.492 3.595 3.492 3.595 3.893 3.893 3.894 4.050 14.000 8.000 15.000 15.000	NB SB	Type 4A Radius & Type 7	0.105	0.170	Type 7 Radius & TS	350.0 250.0	0 0			NB SB	SB 0.109 NB 0.147
Type 4A	0.642 0.762 0.852 1.060 1.070 1.272 1.392 1.528 1.460 1.507 1.542 1.618 1.996 2.165 2.160 2.253 2.695 2.733 2.695 2.910 2.738 2.940 2.903 2.944 2.903 2.944 2.903 3.008 2.990 3.008 2.990 3.027 3.451 3.478 3.492 3.560 3.492 3.560 1.000 1.000 1.000 1.000 1.000 1.000		Type 4A	0.238	0.398	Type 4A		0	0		NB	NB 0.238
Radius & TS 1.070 1.272 Radius & TS Type 4A 1.392 1.528 Radius & TS Type 4A 1.460 1.507 Type 4A Radius & TS 1.542 1.618 Type 4A Radius & TS 1.542 1.618 Type 4A Radius & TS 2.160 2.253 Radius & TS Type 4A 2.695 2.733 Type 7 Radius & TS 2.910 Existing Type 4A 2.695 2.733 Type 7 Radius & TS 1.996 2.160 Radius & TS Type 4A 2.695 2.733 Type 7 Radius & TS 2.900 Existing Type 1 Type 2A 2.903 2.944 Transistion Type 2A 2.903 2.944 Transistion Tire Beam 1.990 3.027 Existing Type 4A 3.492 3.595 Radius & TS Type 7 3.492 3.595 Radius & TS Type 7 3.694	1.070 1.272 1.392 1.528 1.392 1.528 1.460 1.507 1.542 1.618 1.996 2.165 2.160 2.253 2.695 2.733 2.695 2.733 2.695 2.733 2.900 3.008 2.990 3.027 2.990 3.027 3.492 3.595 3.492 3.595 3.492 3.595 3.492 3.595 3.694 3.825 3.834 4.050 1.000 1.000 1.000 1.000	R R	Type 4A Radius & TS	0.642	1.060	Type 4A Radius & TS		50	.5	NB NB		NB NB
Type 4A 1.392 1.528 Radius & TS Type 4A 1.460 1.507 Type 4A Radius & TS 1.542 1.618 Type 4A Type 4A 1.966 2.165 Radius & TS Type 4A 1.996 2.165 Radius & TS Type 4A 2.695 2.733 Type 7 Radius & TS 2.160 2.253 Radius & TS Type 4A 2.695 2.733 Type 7 Radius & 2.735 2.910 Existing Type AA 2.738 2.940 Tie to Existing Type AA 2.903 2.944 Transistion Tie beam 2.903 2.944 Transistion Tie Beam 2.990 3.008 Type 1 Transistion 2.990 3.008 Type 7 Radius & TS 3.492 3.595 Radius & TS Type 7 Radius & TS 3.492 3.595 Radius & TS Type 7 Radius & TS Type 1 3.894 3.595 Type 7 Radius & TS Type 1 3.894 3.595 Type 7 Radius & TS Type 1 3.894 3.595 Type 7 Radius & TS Type 1 3.894 3.595 Type 7 Radius & TS Type 1 3.894 3.595 Type 7 Radius & TS Type 1 3.894 Type 7	1.392 1.528 1.460 1.507 1.542 1.618 1.996 2.165 2.160 2.253 2.695 2.733 2.738 2.940 2.903 2.944 2.990 3.008 2.990 3.027 3.492 3.560 3.894 3.893 3.893 3.893 3.894 3.825 3.893 3.825 3.800 3.800		Radius & TS 1	1.070	1.272	Radius & TS 1		.o	:.0		NB	NB 1.070
Type 4A 1.460 1.507 Type 4A Radius & ITS 1.542 1.618 Type 4A 1.996 2.165 Radius & ITS 1.996 2.165 Radius & ITS 1.996 2.733 Radius & ITS 1.996 2.733 Type 4A 2.695 2.733 Type 7 Radius & Type A 2.695 2.735 2.910 Existing Type 7 2.735 2.910 Existing Type A 2.903 2.840 Type 7 Te to Existing 2.842 2.900 Existing Type A 2.903 2.944 Transistion Time Beam 2.990 3.008 Type 1 Time Ito 1.716 1.7176 Beam 2.990 3.008 Type 1 Time Ito 1.7176 Beam 2.990 3.027 Existing Type 4A 3.451 3.492 3.595 Radius & ITS Radius & ITS Radius & ITS 3.492 3.595 Radius & ITS Radius & ITS 3.492 3.595 Radius & ITS Type 1 3.834 3.895 Radius & ITS Type 1 3.894 4.050 Type 4A 3.825 Radius & ITS Type 1 3.894 4.050 Type 4A 4.0	1.460 1.507 1.542 1.618 1.996 2.165 2.160 2.253 2.695 2.733 2.735 2.910 2.738 2.940 2.903 2.944 2.903 2.944 2.903 2.944 2.990 3.008 2.990 3.027 3.451 3.478 3.492 3.595 3.694 3.825 3.694 4.050 14.000 15.000	NB	Type 4A	1.392	1.528	Radius & TS	725.0	.0	.0		NB	NB
Radius & 15 1.542 1.618 Type 4A Type 4A 1.996 2.165 Radius & TS 1.618 Type 4A 1.996 2.253 Radius & TS 1.600 2.253 Radius & TS 1.600 2.253 Radius & TS 1.600 1.79e 7 Te to 1.79e 4A 2.695 2.735 2.910 Existing 1.79e 2A 2.903 2.944 Transistion 1.79e 2A 2.903 2.944 Transistion 1.79e 2A 2.903 2.944 Transistion 1.79e 14 1.79e 4A 3.451 3.492 3.595 Radius & TS 1.79e 7 Radius & TS 3.492 3.595 Radius & TS 1.79e 7 Radius & TS 3.492 3.595 Radius & TS 1.79e 7 Radius & TS 3.693 Radius & TS 1.79e 7 Radius & TS 1.79e 7 Radius & TS 1.79e 7 3.694 3.825 Radius & TS 1.79e 7 3.694 3.825 Radius & TS 1.79e 1 3.834 4.050 Type 4A 3.825 Radius & TS 1.000 3.000 3.000 Type 4A 3.825 Radius & TS 3.694 3.825 Radius & TS 3.693 Radius & TS 3.694 3.825	1.542 1.618 1.996 2.165 2.160 2.253 2.695 2.733 2.695 2.910 2.738 2.840 2.903 2.944 2.990 3.008 2.990 3.027 3.492 3.595 3.492 3.595 3.694 3.893 3.694 3.893 3.834 4.050 14.000 8.000 15.000 15.000	SB	Type 4A	1.460	1.507	Type 4A	250.0	.0	.0	.0 SB		SB
Type 4A 1.996 2.165 Fadius & 13 Radius & 15 Pype 4A 2.160 2.253 Radius & 15 Pype 4A 2.695 2.733 Pype 7 Radius & 2.940 Existing Type 4A 2.738 2.940 Existing Tie to Existing 2.903 2.944 Transistion Type 2A 2.993 2.944 Transistion Tire Beam 2.990 3.027 Existing Tire Beam 1.990 3.027 Existing Type 4A 3.451 3.492 3.595 Radius & 179e 7 Ra	1,996 2,165 2,160 2,253 2,695 2,733 2,738 2,940 2,903 2,944 2,990 3,008 2,990 3,027 3,492 3,560 3,894 3,893 3,894 3,893 3,894 3,895 3,894 3,895 3,894 3,895 3,895 3,893 3,894 4,050 14,000 8,000 15,000 15,000		Radius & TS	1.542	1.618	Type 4A	412.5	.cı	σ	.5		NB
Radius & 13 2,160 2,253 Radius & 13	2.160 2.253 2.695 2.733 2.695 2.910 2.735 2.910 2.738 2.840 2.903 2.944 2.990 3.008 2.990 3.027 3.492 3.560 3.492 3.585 3.694 3.825 3.834 4.050 14.000 8.000 15.000 15.000		Type 4A	1.996	2.165	Radius & TS		Ö	.0		NB	NB 1.996
Type 4A 2,695 2,733 Type 7 Radius & 2,735 2,910 Existing Type 7 Radius & 2,735 2,910 Existing Type 7 The to Type 4A 2,738 2,840 Type 7 The to Existing 2,903 2,944 Trensistion Tire Beam Type 8am 2,990 3,008 Type 1 Trensistion 2,990 3,008 Type 1 Trensistion 2,990 3,008 Type 1 Trensistion 3,492 3,595 Radius & TS Radius & TS Type 7 3,492 3,595 Radius & Type 7 Radius & TS Type 1 3,694 3,825 Radius & TS Type 1 3,694 4,050 Type 4A Type 1 3,834 4,050 Type 4A	2.695 2.733 2.735 2.910 2.738 2.840 2.903 2.944 2.990 3.008 2.990 3.027 3.492 3.585 3.492 3.583 3.894 3.825 3.834 4.050 14.000 14.000 15.000 15.000	_	Radius & TS	2.160	2.253	Radius & TS	500.0	.0	0.0	NB		NB
Text	2,735 2,910 2,738 2,840 2,842 2,900 2,903 2,944 2,990 3,008 2,990 3,027 3,451 3,478 3,492 3,595 3,492 3,595 3,693 3,693 3,595 3,693 3,894 4,050 11,000 11,000 15,000		Type 4A	2.695	2.733	Radius & Type 7	212.5	.5	.5	.5 NB	NB	NB 2.695
Type 4A 2.738 2.840 Radius & Type 7 Tile to Existing 2.842 2.900 Existing Type A 2.903 2.944 True to Existing Type A 2.903 2.944 Transistion Tire Beam Existing 2.990 3.008 Type 1 Tire Beam Existing 2.990 3.027 Existing Tire Beam Transistion 2.990 3.027 Existing Type 4A 3.451 3.478 Radius & TS Radius & TS 3.492 3.595 Radius & TS Radius & TS 3.492 3.595 Radius & TS Type 7 3.694 3.825 Radius & TS Type 1 3.834 4.050 Type 4A 3.834 4.050 Type 4A	2,738 2,840 2,942 2,900 2,842 2,900 2,944 2,903 2,944 2,990 3,008 2,990 3,027 3,451 3,478 3,492 3,595 3,492 3,595 3,694 3,893 3,694 3,825 3,834 4,050 1,000 1,000 14,000 15,000		Radius & Type 7	2.735	2.910	Tie to Exisiting	925.0	.0	.0		NB	NB 2.735
Tie to Existing 2.842 2.900 Existing 17.90	2.842 2.900 2.903 2.944 2.903 2.944 2.990 3.008 2.990 3.027 3.451 3.478 3.492 3.595 3.492 3.595 3.694 3.893 3.694 3.825 3.834 4.050 11.000 115.000		Type 4A	2.738	2.840	Radius & Type 7	550.0	.0	.0		NB	NB 2.738
Type 2A 2.903 2.944 Trie beam Transistion Existing Time Beam Transistion 2.903 2.944 Transistion Time Beam Transistion 2.990 3.008 Type 1 Time Beam Transistion 2.990 3.027 Existing Transistion Type 4A 3.451 3.478 Radius & TS Type 4A 3.492 3.595 Type 7 Radius & TS 3.492 3.595 Type 7 Radius & TS 3.492 3.595 Radius & TS Type 7 3.595 3.693 Radius & TS Type 1 3.694 3.825 Radius & TS Type 1 3.834 4.050 Type 4A 3.000 1.000 0.000	2.903 2.944 2.903 2.944 2.990 3.008 2.990 3.027 3.451 3.478 3.492 3.560 3.492 3.560 3.595 3.693 3.694 3.825 3.834 4.050 11,000 0.000 14,000 15,000		Tie to Existing	2.842	2.900	Tie to Exisiting	500.0	0	0		SB 2	SB 2.842
Tipe to Tipe to Tipe Tipe Tipe Transistion T	2.990 3.008 2.990 3.008 2.990 3.027 3.451 3.478 3.492 3.595 3.492 3.596 3.595 3.693 3.694 3.825 3.834 4.050 1.000 1.000 1.000 1.000	NB NB	Type 2A	2.903	2.944	Thrie Beam Transistion	225.0				NB	NB 2.903
Three Beam Transistion 2.990 3.008 Type 1 The to Transistion Type 4A 3.451 3.478 Radius & TS Radius & TS Radius & TS 3.492 3.595 Type 7 Radius & TS Radius & TS 3.492 3.560 Radius & Type 7 Radius & TS Radius & TS 3.693 Radius & TS Type 1 3.595 3.693 Radius & TS Type 1 3.834 4.050 Type 4A Type 1 3.834 4.050 Type 4A 3.000 1.000 1.000	2.990 3.008 2.990 3.027 3.451 3.478 3.492 3.595 3.492 3.560 3.595 3.693 3.694 3.825 3.834 4.050 1.000 1.000 1.000 1.000 1.000 1.000		Tie to Existing	2.903	2.944	Thrie Beam Transistion	225.0	0	0		SB	SB 2.903
Three Bearm 2.990 3.027 Existing Existing Existing Type 4A 3.451 3.478 Radius & TS Type 7 Radius & TS Type 7 Radius & TS Type 1 3.694 3.595 Radius & TS Type 1 3.834 4.050 Type 4A Type 4A 3.000 1.000	2.990 3.027 3.451 3478 3.492 3.595 3.492 3.590 3.595 3.693 3.694 3.825 3.834 4.050 1.000 1.000 14.000 15.000		Thrie Beam Transistion	2.990	3.008	Type 1	100.0	0	0	O NB		NB
Type 4A 3.451 3.478 Radius & 13 Radius & 1	3.451 3.478 3.492 3.595 3.492 3.560 3.492 3.693 3.694 3.825 3.834 4.050 1.000 1.000 1.000 15.000		Thrie Beam Transistion	2.990	3.027	Exisiting	200.0	0	.0	SB SB		SB
Radius & TS Type 7 Type 7 Type 1 Type 4A Type 1 Type 4A Type 1 Type 4A Type 1 Type 4A	3.492 3.595 3.492 3.560 3.595 3.693 3.694 3.825 3.834 4.050 1.000 1.000 14.000 8.000 15.000	NB T	Type 4A Radius & TS	3.451	3.478	1 Radius &	150.0	.0	.0	.0 NB	NB	NB
Type 7 3.595 3.693 Radius & TS	3.595 3.693 3.694 3.825 3.834 4.050 1.000 14.000 15.000	88	Radius & TS	3.492	3.560	Radius & Type 7	362.5	51	·50 10	SB 8		SB
Type 1 3.694 3.825 Radius & TS Type 1 3.834 4.050 Type 4A 3.000 1.000 1.000 14.000	3.694 3.825 3.834 4.050 1.000 14.000 15.000	NB NB	Radius & Type 7	3.595	3.693	Radius & TS	525.0	0	0		NB	NB 3.595
3.834 4.050 Type 4A 3.000 1.000 0.000 14.000	3.834 4.050 1.000 0.000 14.000 8.000	NB	Type 1	3.694	3.825	Radius & TS	700.0	.0	.0	.0	·o	i.o
3.000 1.000 0.000	3.000 1.000 0.000 14.000 8.000	NB	Type 1	3.834	4.050	Type 4A	1150.0	0.0	0.0	0.0	0.0	0.0
	3.000 1.000 0.000 14.000 8.000						132	13425.0	125.0	125.0	125.0	125.0
	1.000 0.000 14.000 8.000 15.000			3.000								
	0.000 14.000 8.000 15.000	Type 2A		1.000								
	14.000 8.000 15.000	Type 3		0.000								
	8.000 15.000	Type 4A		14.000								

Drainage Summary

	2	0	55	1	1	2	3	1	410	36	44	TOTALS
			5							36		3.97
Bridge End									44 *			2.98
Bridge End			10			2	2		44 *			2.94
Left Side			10				1	1	230			2.87
	1											2.332
				1	1							2.15
			5									2.1
			5									1.89
			10									1.368
			10									1.3
											20	0.808
											24	0.59
	1											0.44
									180			0
	EA	NOT	NOT	EA	EA	EA	EA	EA	LF	LF	LF	TINU
REMARKS	REPLACE GRATE	CHANNEL LINING - CLASS	CHANNEL LINING - CLASS	REMOVE DROP BOX INLET	DROP BOX INLET TYPE 3	REMOVE CURB AND GUTTER BOX INLET	FLUME INLET TYPE 2	FLUME INLET TYPE 1	STANDARD CURB AND GUTTER	CULVERT PIPE - 24 IN	ENTRANCE PIPE - 15 IN	MP

* - Standard header curb is incidental to Thrie-Beam Guardrail Transition TL-3 (Sta. Drw. BHS-014)

Carter County RADAR PRESENCE DETECTOR SUMMARY FD04 022 0002 000-005

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NOTES:	TOTAL									0.000	MPT.
										US 60	INTERSECTION
	2									2	RADAR PRESENCE DETECTOR RADAR PRESENCE DETECTOR TYPE A TYPE B EA EA
	0										RADAR PRESENCE DETECTOR TYPE B EA
											NOTES

Milling Summary FD04 022 0002 000-005

				Total	1180
Milepoint	Comment	Length	Width	Avg Depth	Tons
0.000	Edge Key	125	24	0.75	13.75
	Remove Patches				150
	Base Failures				1000
4.218	Edge Key	125	24	0.75	13.75
					0
					0
					0
					0
					0
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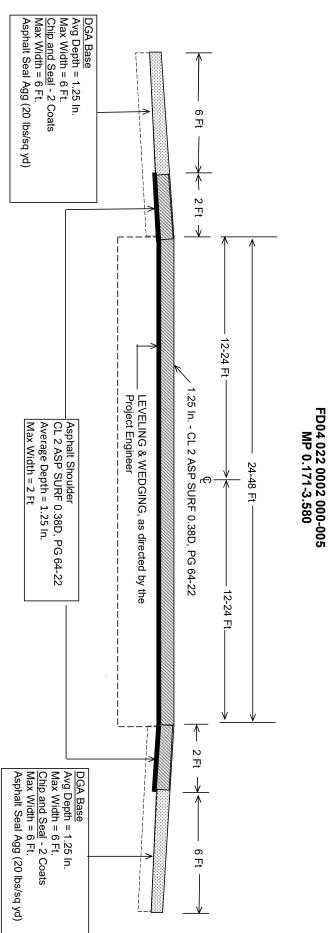
Base Failure Repair Summary FD04 022 0002 000-005

		Total	2940
Milepoint	Length	Width	SQYD
0.455 LT	50	7	38.89
0.467 RT	250	7	194.44
0.570 LT	50	7	38.89
0.595 RT	80	7	62.22
0.668 RT	50	7	38.89
0.78 RT	80	7	62.22
0.833 RT	170	7	132.22
1.049 RT	50	7	38.89
1.275 RT	250	7	194.44
1.676 LT	75	7	58.33
1.89 RT	175	7	136.11
2.075 RT	225	7	175.00
2.190 LT	125	7	97.22
2.258 RT	325	7	252.78
2.546 RT	750	7	583.33
2.632 LT	125	7	97.22
2.773 LT	300	7	233.33
2.845 LT	200	7	155.56
2.845 RT	150	7	116.67
3.10 RT	250	7	194.44
3.337 LT	50	7	38.89
			0
			0
			0
			0

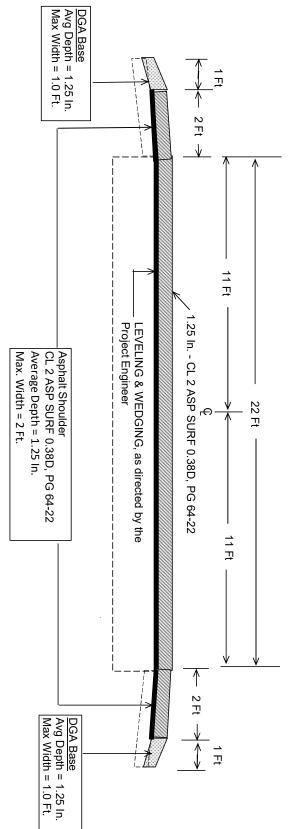
Average Depth = 8 in Max. Width = 6 ft TRENCHING AND ASPHALT BASE CL 2 ASPH BASE 1.00D PG 64-22 6 Ft ^ 2Ft → 12 Ft l.25 ln. - CL 2 ASP SURF 0.38D, PG 64-22 LEVELING & WEDGING, as directed by the Project Engineer Carter County TYPICAL SECTION FD04 022 0002 000-005 MP 0.000-0.171 Asphalt Shoulder CL 2 ASP SURF 0.38D, PG 64-22 Max Width = 8 Ft Average Depth = 1.25 In. 24 Ft 12 Ft 2 Ft TRENCHING AND ASPHALT BASE CL 2 ASPH BASE 1.00D PG 64-22 Average Depth = 8 in Max. Width = 6 ft 6 Ft

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Carter County TYPICAL SECTION FD04 022 0002 000-005 MP 0.171-3.580



Carter County TYPICAL SECTION FD04 022 0002 000-005 MP 3.580-4.218

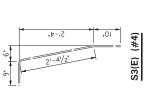


Page 1

COMMONWEALTH OF KENTUCKY (K)
DEPARTMENT OF HIGHWAYS Indignostring

BRIDGE BARRIER RETROFIT





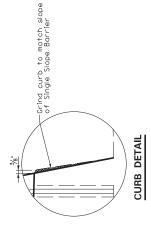
Vertical bars to be placed at 12" max. spacing

BARRIER RETROFIT SECTION

See Curb Detail—

All longitudinal steel we to be epoxy coated 4 rebar

S4(E) / IS

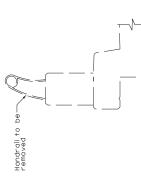


SHEET NO.

1TEM NO.

COUNTY OF







BRIDGE END CONNECTION

SHEET NO. 1TEM NO. 00-000.00

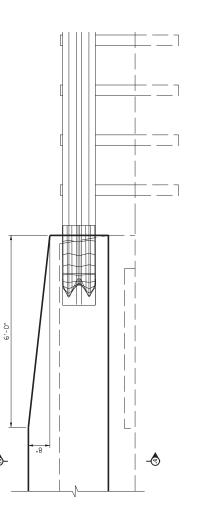
COUNTY OF

COMMONWEALTH OF KENTUCKY (K)
DEPARTMENT OF HIGHWAYS [Mainstering] CURB DETAIL

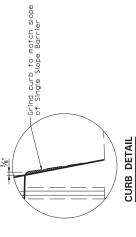
SECTION A-A

ELEVATION

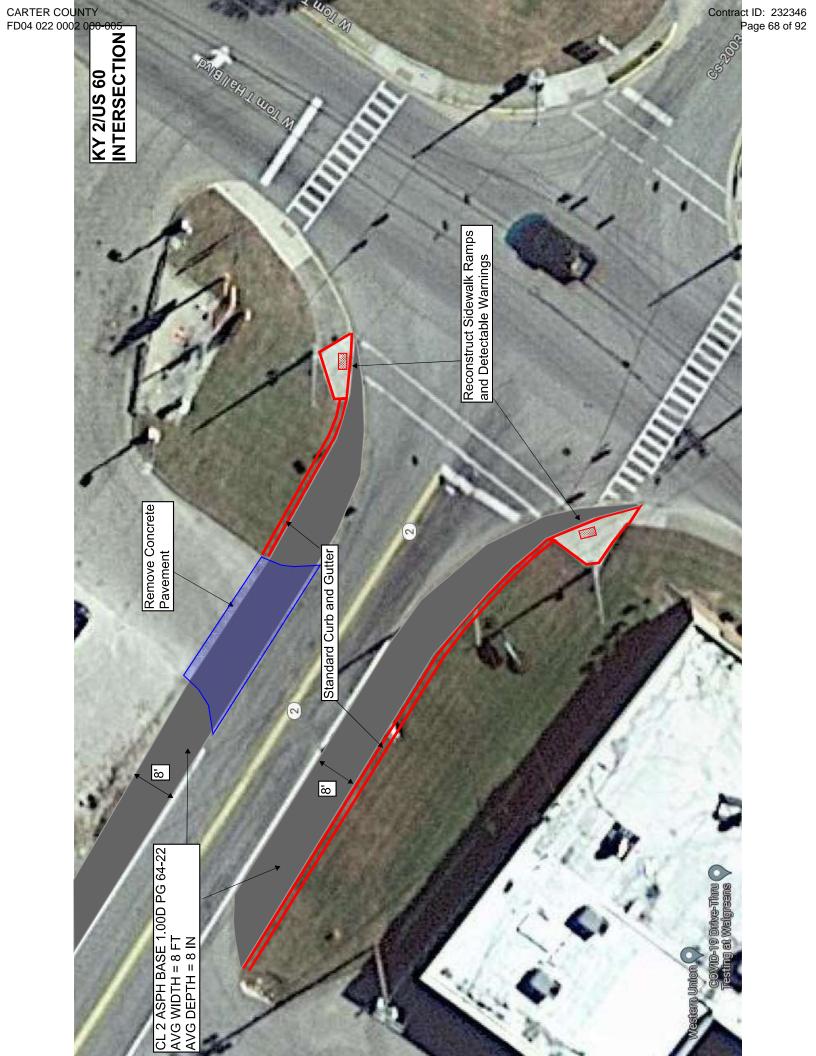
Vertical bars to be placed at 12" max. spacing



@-







SPECIAL NOTE

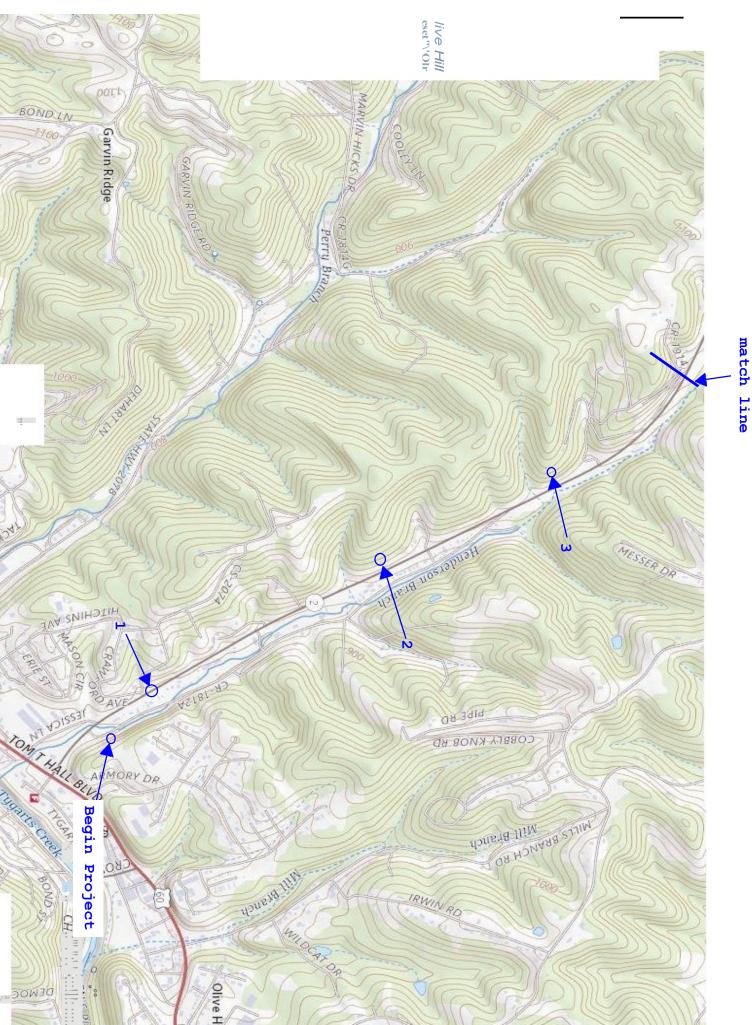
Filing of eNOI for KPDES Construction Stormwater Permit

County: Carter Route: KY 2 MP 0.000 – 4.218 Item No.: N/A KDOW Submittal ID: 355863

Project Description: Asphalt paving, ditching, shouldering, guardrail, slope repair and stabilization using drilled railroad rail and cribbing.

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

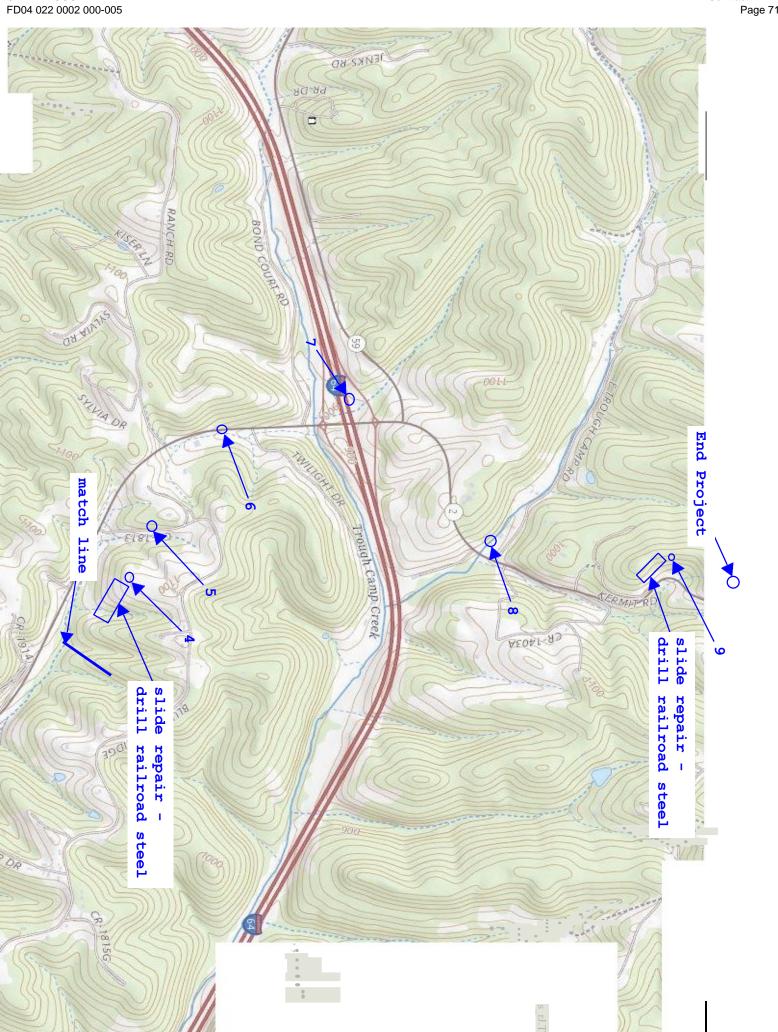
If there are any questions regarding this note, please contact Director, Division of Environmental Analysis, TCOB, 200 Mero Street, Frankfort, KY 40622, Phone: (502) 564-7250.



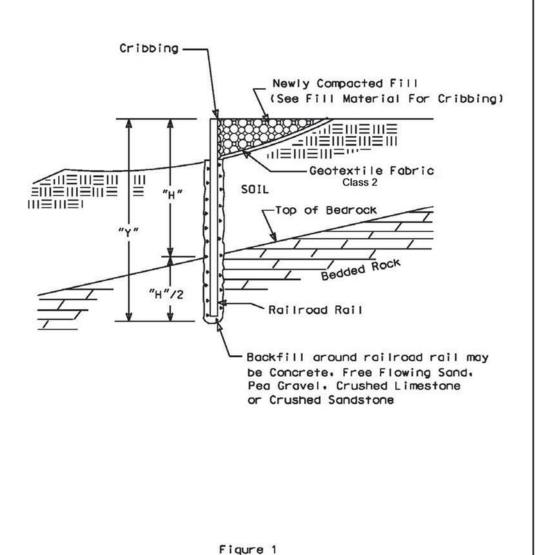
KY 2 Page

1 of

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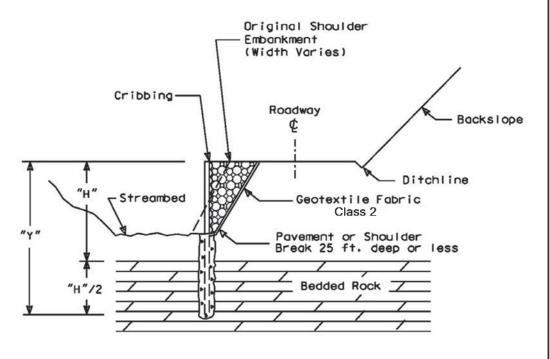


TYPICAL SECTION DEPICTING INSTALLATION OF RECYCLED RAILROAD RAIL PLACED IN DRILLED SOCKET FOR LANDSLIDE CORRECTION



TYPICAL CROSS SECTION OF ROADWAY REPAIRS UTILIZING RECYCLED RAILROAD RAILS IN DRILLED SOCKETS FOR EMBANKMENT EROSION CORRECTION

NOTE: Spacing from edge to edge of drilled socket: 3 ft. max.



NOTE:
"H"/2 Depth of Rail into bedded rock =
1/3 total length where rock is present.

Figure 2

ALTERNATE SCHEMES FOR INSTALLING RAILROAD RAILS IN DRILLED SOCKETS

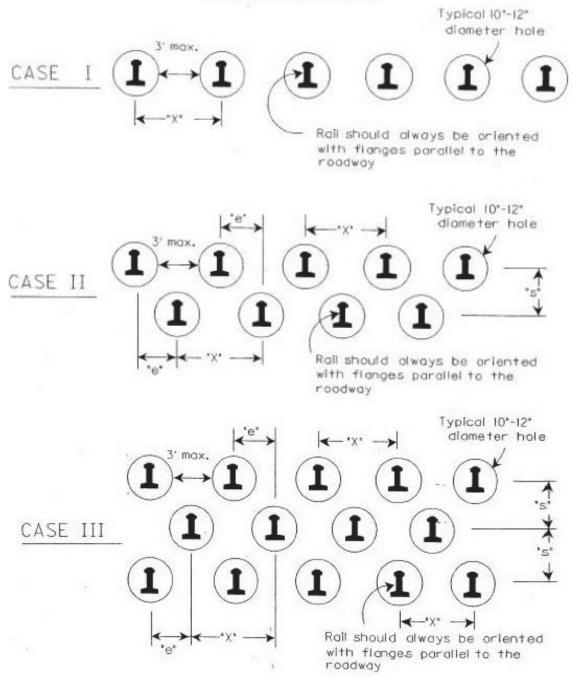


FIGURE 3

DESIGN CHART FOR 130LBS/YD TO 133 LBS/YD RECYCLED (USED) RAILROAD RAILS FACTOR OF SAFETY = 1

Effective Spacing Between Rows of Rails "e'" (Inches)	N/A	N/A	N/A	N/A	N/A	Y/A	N/A	24	22	18	14	12	11	5.6	N/A
Maximum Spacing Between Rails "X" (Max. 48") (Inches)	48	48	48	48	48	48	32	48	44	36	28	24	33	28.5	N/A
Required Number of Rows	1	1	1	1	_	1	1	2	2	2	2	2	3	3	N/A
Total Length of Installed Railroad Rail "Y" (Feet)	12	13.5	15	16.5	18	19.5	21	22.5	24	25.5	27	28.5	30	31.5	N/A
Minimum Embedment into Bedded Rock "H/2" (Feet)	4	4.5	5	5.5	9	6.5	7	7.5	8	8.5	6	9.5	10	10.5	N/A
Soil Depth to Bedded Rock "H" (Feet)	8	6	10	11	12	13	14	15	16	17	18	19	20	21	>21

2. FOR SOIL DEPTHS "H" GREATER THAN 21 FEET CONTACT THE ENGINEER. 1. REFER TO FIGURES 1, 2, & 3 FOR DIMENSIONS SHOWN NOTES:

TABLEI

RAILROAD RAIL SIZES

Typically classified in units of Ibs-per-yard.

Examples:

155 lbs/yd, 140 lbs/yd, 132 lbs/yd, 90 lbs/yd

Each rail has a classification stamped in web: a

Example:

1935 USA ILLINOIS HO R 112 25

Weight in Ibs/yd

CARTER COUNTY FD04 022 0002 000-005

GUARDRAIL DELIVERY VERIFICATION SHEET

Contract ID: 232346 Page 77 of 92

Contract Id:		Contractor:							
Section Engineer:		_ District & County: _							
DESCRIPTION	<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. FACILI	TY LF								
DAMAGED POSTS TO MAINT. FACI	LITY EACH								
* <u>Required Signatures before</u>	e Leaving Proje	ct Site							
Printed Section Engineer's Ro	epresentative_		_ & Date						
Signature Section Engineer's	Representativ	e	_& Date						
Printed Contractor's Represe	entative		_& Date						
Signature Contractor's Repre	esentative		_& 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	epresentative_		& Date						
Signature Bailey Bridge Yard	Representative	2	_& Date						
Printed Contractor's Represe	entative		& Date						
Signature Contractor's Repre	esentative		_& Date						
•	ent will not be	made for guardrail removal	uantities shown in the Bailey Bridge until the guardrail verification sheets se Yard Representative.						
Completed Form Submitted to	Section Enginee	r Date:	By:						

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

STANDARD SPECIFICATIONS

Any reference in the plans or proposal to previous editions of the Standard Specifications for Road and Bridge Construction and Standard Drawings are superseded by Standard Specifications for Road and Bridge Construction, Edition of 2019 and Standard Drawings, Edition of 2020.

SUPPLEMENTAL SPECIFICATIONS

The contractor shall use the Supplemental Specifications that are effective at the time of letting. The Supplemental Specifications can be found at the following link: http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx

SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

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

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

2.0 MATERIALS.

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

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

2.2 Sign and Controls. All signs must:

- Provide 3-line messages with each line being 8 characters long and at least 18 inches tall. Each character comprises 35 pixels.
- 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.
 - Readout that mimics the actual sign display. (When LCD or LCD type readout is used, include backlighting and heating or otherwise arrange for viewing in cold temperatures.)
 - c) Non-volatile memory or suitable memory with battery backup for storing pre-programmed messages.
 - d) Logic circuitry to control the sequence of messages and flash rate.
- 4) Provide a serial interface that is capable of supporting complete remote control ability through land line and cellular telephone operation. Include communication software capable of immediately updating the message, providing complete sign status, and allowing message library queries and updates.
- 5) Allow a single person easily to raise the sign to a satisfactory height above the pavement during use, and lower the sign during travel.
- 6) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
- 7) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
- 8) Provide the driver board as part of a module. All modules are interchangeable, and have plug and socket arrangements for disconnection and reconnection. Printed circuit boards associated with driver boards have a conformable coating to protect against moisture.
- 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.

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- 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:

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

*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

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

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

CodePay ItemPay Unit02671Portable Changeable Message SignEach

Effective June 15, 2012

2020 KENTUCKY STANDARD DRAWINGS

CURVE WIDENING AND SUPERELEVATION TRANSITIONS	RGS-001-07
SUPERELEVATION FOR MULTILANE PAVEMENT	RGS-002-06
MISCELLANEOUS STANDARDS	
APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT	RPM-110-07
LANE CLOSURE TWO-LANE HIGHWAY	
LANE CLOSURE MULTI-LANE HIGHWAY CASE I	TTC-115-04
LANE CLOSURE MULTI-LANE HIGHWAY CASE II	TTC-120-04
SHOULDER CLOSURE	TTC-135-02
PAVEMENT CONDITION WARNING SIGNS	TTD-125-02
MOBILE OPERATION FOR PAINT STRIPING CASE I	
MOBILE OPERATION FOR PAINT STRIPING CASE II	
MOBILE OPERATION FOR PAINT STRIPING CASE III	
MOBILE OPERATION FOR PAINT STRIPING CASE IV	
CENTERLINE RUMBLE STRIPS PLACEMENT DETAILS	TPR-100
CENTERLINE RUMBLE STRIPS 4 INCH STRIPING	
CENTERLINE RUMBLE STRIPS 6 INCH STRIPING	
SHOULDER & EDGELINE RUMBLE STRIPS PLACEMENT DETAILS	TPR-115
EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS	TPR-120
SHOULDER RUMBLE STRIP DETAILS TWO LANE ROADWAYS	
RUMBLE STRIP DETAILS MULTI LANE ROADWAYS & RAMPS	TPR-130
DETECTABLE WARNINGS	
CONCRETE ENTRANCE PAVEMENT AND SIDEWALK	RPM-150-08
CONCRETE ENTRANCE PAVEMENT AND SIDEWALK	
SIDEWALK RAMPS	RPM-170-09
STEEL BEAM GUARDRAIL ("W"-BEAM)	
GUARDRAIL COMPONENTS	
INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1	
GUARDRAIL TERMINAL SECTIONS	
GUARDRAIL END TREATMENT TYPE 1	
GUARDRAIL END TREATMENT TYPE 2A	
GUARDRAIL END TREATMENT TYPE 4A	
GUARDRAIL END TREATMENT TYPE 7	
DELINEATORS FOR GUARDRAIL	
DROP BOX INLET TYPE 3	RDB-003-08
EROSION CONTROL BLANKET SLOPE INSTALLATION	
EROSION CONTROL BLANKET CHANNEL INSTALLATION	
FLUME INLET TYPE 1	
FLUME INLET TYPE 2	
CHANNEL LINING CLASS II AND III	RDD-040-05

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

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TRANSPORTATION CABINET DEPARTMENT OF HIGHWAYS

LABOR AND WAGE REQUIREMENTS APPLICABLE TO OTHER THAN FEDERAL-AID SYSTEM PROJECTS

- I. Application
- II. Nondiscrimination of Employees (KRS 344)

I. APPLICATION

- 1. These contract provisions shall apply to all work performed on the contract by the contractor with his own organization and with the assistance of workmen under his immediate superintendence and to all work performed on the contract by piecework, station work or by subcontract. The contractor's organization shall be construed to include only workmen employed and paid directly by the contractor and equipment owned or rented by him, with or without operators.
- 2. The contractor shall insert in each of his subcontracts all of the stipulations contained in these Required Provisions and such other stipulations as may be required.
- 3. A breach of any of the stipulations contained in these Required Provisions may be grounds for termination of the contract.

II. NONDISCRIMINATION OF EMPLOYEES

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

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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, 1025 Capital Center Drive, Suite 104, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: May 23, 2022

Kentucky Equal Employment Opportunity Act of 1978

The requirements of the Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) shall apply to this Contract. The apparent low Bidder will be required to submit EEO forms to the Division of Construction Procurement, which will then forward to the Finance and Administration Cabinet for review and approval. No award will become effective until all forms are submitted and EEO/CC has certified compliance. The required EEO forms are as follows:

- EEO-1: Employer Information Report
- Affidavit of Intent to Comply
- Employee Data Sheet
- Subcontractor Report

These forms are available on the Finance and Administration's web page under *Vendor Information*, *Standard Attachments and General Terms* at the following address: https://www.eProcurement.ky.gov.

Bidders currently certified as being in compliance by the Finance and Administration Cabinet may submit a copy of their approval letter in lieu of the referenced EEO forms.

For questions or assistance please contact the Finance and Administration Cabinet by email at **finance.contractcompliance@ky.gov** or by phone at 502-564-2874.

EMPLOYEE RIGHTS UNDER THE FAIR LABOR STANDARDS ACT

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

FEDERAL MINIMUM WAGE

\$7.25

PEN HUUI

BEGINNING JULY 24, 2009

OVERTIME PAY

At least $1\frac{1}{2}$ times your regular rate of pay for all hours worked over 40 in a workweek.

CHILD LABOR

An employee must be at least **16** years old to work in most non-farm jobs and at least **18** to work in non-farm jobs declared hazardous by the Secretary of Labor.

Youths **14** and **15** years old may work outside school hours in various non-manufacturing, non-mining, non-hazardous jobs under the following conditions:

No more than

- 3 hours on a school day or 18 hours in a school week;
- 8 hours on a non-school day or 40 hours in a non-school week.

Also, work may not begin before **7 a.m.** or end after **7 p.m.**, except from June 1 through Labor Day, when evening hours are extended to **9 p.m.** Different rules apply in agricultural employment.

TIP CREDIT

Employers of "tipped employees" must pay a cash wage of at least \$2.13 per hour if they claim a tip credit against their minimum wage obligation. If an employee's tips combined with the employer's cash wage of at least \$2.13 per hour do not equal the minimum hourly wage, the employer must make up the difference. Certain other conditions must also be met.

ENFORCEMENT

The Department of Labor may recover back wages either administratively or through court action, for the employees that have been underpaid in violation of the law. Violations may result in civil or criminal action.

Employers may be assessed civil money penalties of up to \$1,100 for each willful or repeated violation of the minimum wage or overtime pay provisions of the law and up to \$11,000 for each employee who is the subject of a violation of the Act's child labor provisions. In addition, a civil money penalty of up to \$50,000 may be assessed for each child labor violation that causes the death or serious injury of any minor employee, and such assessments may be doubled, up to \$100,000, when the violations are determined to be willful or repeated. The law also prohibits discriminating against or discharging workers who file a complaint or participate in any proceeding under the Act.

ADDITIONAL INFORMATION

- Certain occupations and establishments are exempt from the minimum wage and/or overtime pay provisions.
- Special provisions apply to workers in American Samoa and the Commonwealth of the Northern Mariana Islands.
- \bullet Some state laws provide greater employee protections; employers must comply with both.
- \bullet The law requires employers to display this poster where employees can readily see it.
- Employees under 20 years of age may be paid \$4.25 per hour during their first 90 consecutive calendar days of employment with an employer.
- Certain full-time students, student learners, apprentices, and workers with disabilities may be paid less than the minimum wage under special certificates issued by the Department of Labor.



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PART IV

INSURANCE

Refer to *Kentucky Standard Specifications for Road and Bridge Construction*,

current edition

PART V

BID ITEMS

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232346

PROPOSAL BID ITEMS

Report Date 5/18/23

Section: 0001 - PAVING

LINE	BID CODE	ALT DESCRIPTION	QUANTITY	_	UNIT PRIC	FP	AMOUNT
0010	00001	DGA BASE	1,950.00	TON		\$	
020	00078	CRUSHED AGGREGATE SIZE NO 2	1,800.00	TON		\$	
030	00100	ASPHALT SEAL AGGREGATE	600.00	TON		\$	
040	00103	ASPHALT SEAL COAT	72.00	TON		\$	
050	00190	LEVELING & WEDGING PG64-22	864.00	TON		\$	
060	00212	CL2 ASPH BASE 1.00D PG64-22	1,550.00	TON		\$	
070	00301	CL2 ASPH SURF 0.38D PG64-22	7,400.00	TON		\$	
080	00440	ENTRANCE PIPE-15 IN	44.00	LF		\$	
090	00464	CULVERT PIPE-24 IN	36.00	LF		\$	
100	01496	DROP BOX INLET TYPE 3	1.00	EACH		\$	
)110	01585	REMOVE DROP BOX INLET	1.00	EACH		\$	
120	01690	FLUME INLET TYPE 1	1.00	EACH		\$	
130	01691	FLUME INLET TYPE 2	3.00	EACH		\$	
140	01705	REMOVE CURB & GUTTER BOX INLET	2.00	EACH		\$	
150	01810	STANDARD CURB AND GUTTER	410.00	LF		\$	
0160	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	132 00	EACH		\$	
170	02058	REMOVE PCC PAVEMENT		SQYD		\$	
)180	02030	ROADWAY EXCAVATION	1,200.00			\$	
190	02200	GUARDRAIL-STEEL W BEAM-S FACE	13,425.00	LF		\$	
200	02360	GUARDRAIL TERMINAL SECTION NO 1		EACH		\$	
210	02367	GUARDRAIL FERMINAL SECTION NO 1		EACH		\$	
	02369	GUARDRAIL END TREATMENT TYPE 1		EACH			
)220)230	02369	GUARDRAIL END TREATMENT TYPE 7		EACH		\$ \$	
240	02372	REMOVE GUARDRAIL CON TO BR END		EACH		\$	
250	02381	REMOVE GUARDRAIL	10,900.00	LF		\$	
260	02391	GUARDRAIL END TREATMENT TYPE 4A	14.00			\$	
270	02396	REMOVE GUARDRAIL END TREATMENT		EACH		\$	
280	02483	CHANNEL LINING CLASS II	55.00	TON		\$	
290	02562	TEMPORARY SIGNS	310.00			\$	
300	02568	MOBILIZATION	1.00	LS		\$	
0310	02575	DITCHING AND SHOULDERING	22,270.00	LF		\$	
320	02603	FABRIC-GEOTEXTILE CLASS 2	2,200.00			\$	
330	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
340	02671	PORTABLE CHANGEABLE MESSAGE SIGN		EACH		\$	
350	02676	MOBILIZATION FOR MILL & TEXT	1.00	LS		\$	
360	02677	ASPHALT PAVE MILLING & TEXTURING	1,215.00			\$	
370	02696	SHOULDER RUMBLE STRIPS	43,500.00			\$	
380	02720	SIDEWALK-4 IN CONCRETE		SQYD		\$	
390	02775	ARROW PANEL		EACH		\$	
400	03234	RAILROAD RAILS-DRILLED	8,640.00	LF		\$	
410	03236	CRIBBING	7,800.00	SQFT		\$	
)420	05950	EROSION CONTROL BLANKET	24,750.00	SQYD		\$	
0430	06427	TRENCHING	1,805.00	LF		\$	
)440	06511	PAVE STRIPING-TEMP PAINT-6 IN	67,500.00	LF		\$	
) 450	06565	PAVE MARKING-THERMO X-WALK-6 IN	120.00	LF		\$	
0460	06568	PAVE MARKING-THERMO STOP BAR-24IN	20.00	LF		\$	

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PROPOSAL BID ITEMS

232346

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0470	06578		PAVE MARKING-THERMO MERGE ARROW	4.00	EACH		\$	
0480	10020NS		FUEL ADJUSTMENT	13,304.00	DOLL	\$1.00	\$	\$13,304.00
0490	10030NS		ASPHALT ADJUSTMENT	33,415.00	DOLL	\$1.00	\$	\$33,415.00
0500	20366NN		REPLACE GRATE	2.00	EACH		\$	
0510	20458ES403		CENTERLINE RUMBLE STRIPS	21,750.00	LF		\$	
0520	23032EN		BRIDGE BARRIER RETROFIT	520.00	LF		\$	
0530	23140EN		DURABLE WATERBORNE MARKING-6 IN W	40,000.00	MILE		\$	
0540	23141EN		DURABLE WATERBORNE MARKING-6 IN Y	27,500.00	MILE		\$	
0550	23158ES505		DETECTABLE WARNINGS (NEW)	16.00	SQFT		\$	
0560	24970EC		ASPHALT MATERIAL FOR TACK NON- TRACKING	45.00	TON		\$	
0570	25078ED		THRIE BEAM GUARDRAIL TRANSITION TL-3	4.00	EACH		\$	
0580	26119EC		INSTALL RADAR PRESENCE DETECTOR TYPE A	2.00	EACH		\$	

Section: 0002 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0590	02569		DEMOBILIZATION	1.00	LS		\$	