



CALL NO. 321

CONTRACT ID. 211347

BOONE COUNTY

FED/STATE PROJECT NUMBER FD04 008 0275 013-014

DESCRIPTION I-275

WORK TYPE ASPHALT REHAB INTERSTATE/PARKWAY

PRIMARY COMPLETION DATE 6/30/2022

LETTING DATE: November 19,2021

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 am EASTERN STANDARD TIME November 19,2021. Bids will be publicly announced at 10:00 am EASTERN STANDARD TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

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

TABLE OF CONTENTS

PART I	SCOPE OF WORK
	<ul style="list-style-type: none">• PROJECT(S), COMPLETION DATE(S), & LIQUIDATED DAMAGES• CONTRACT NOTES• STATE CONTRACT NOTES• ASPHALT MIXTURE• INCIDENTAL SURFACING• SPECIAL NOTE(S) APPLICABLE TO PROJECT• SPECIAL NOTE FOR NON-TRACKING TACK COAT• RIGHT OF WAY CERTIFICATION• UTILITY IMPACT & RAIL CERTIFICATION NOTES
PART II	SPECIFICATIONS AND STANDARD DRAWINGS
	<ul style="list-style-type: none">• SPECIFICATIONS REFERENCE• SUPPLEMENTAL SPECIFICATION• [SN-1I] PORTABLE CHANGEABLE SIGNS• [SN-11N] LONGITUDINAL PAVEMENT JOINT ADHESIVE• INLAID PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS• INLAID PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS
PART III	EMPLOYMENT, WAGE AND RECORD REQUIREMENTS
	<ul style="list-style-type: none">• LABOR AND WAGE REQUIREMENTS• EXECUTIVE BRANCH CODE OF ETHICS• KENTUCKY EQUAL EMPLOYMENT OPPORTUNITY ACT OF 1978 LOCALITY / STATE• PROJECT WAGE RATES / STATE FUNDED
PART IV	INSURANCE
PART V	BID ITEMS

PART I
SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 06

CONTRACT ID - 211347

FD04 008 0275 013-014

COUNTY - BOONE

PCN - DE00802752139

FD04 008 0275 013-014

I-275 FROM MP 13.140 TO MP 13.481, A DISTANCE OF 0.34 MILES.ASPHALT REHAB INTERSTATE/PARKWAY SYP
NO. 06-20005.00.

GEOGRAPHIC COORDINATES LATITUDE 39:05:46.00 LONGITUDE -84:49:05.00

COMPLETION DATE(S):

COMPLETED BY 06/30/2022

APPLIES TO CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

JOINT VENTURE BIDDING

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

UNDERGROUND FACILITY DAMAGE PROTECTION

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

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

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

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

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

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

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

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

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

HARDWOOD REMOVAL RESTRICTIONS

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

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

ACCESS TO RECORDS

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

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

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

April 30, 2018

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.

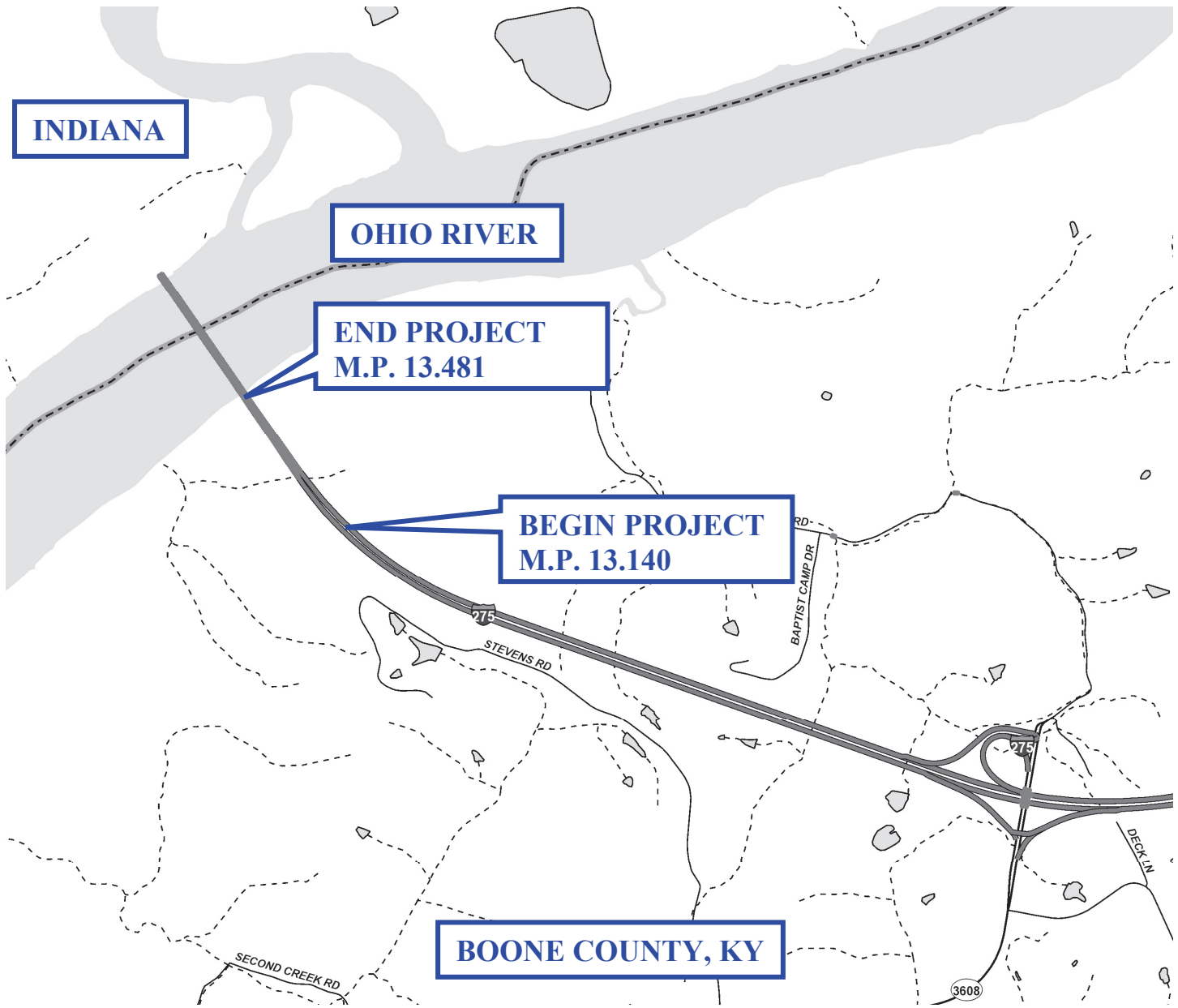
April 30, 2018

ASPHALT MIXTURE

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

INCIDENTAL SURFACING

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



COUNTY: BOONE

ITEM NUMBERS: 6-20005

PROJECT NUMBER: FD04 008 0275 013-014

LETTING DATE: September 24, 2021

RECOMMENDED BY: _____

Project Manager

DATE: _____

PLAN APPROVED BY: _____

State Highway Engineer

DATE: _____

FHWA APPROVED BY: _____

DATE: _____

COUNTY OF	ITEM NO.
BOONE	6-20005

MATCHLINE (SEE SHEET 2)

MP 13.3

95+00

MP 13.2

100+00

**BEGIN PROJECT
6-20005
MP 13.140**

MP 13.1

105+00

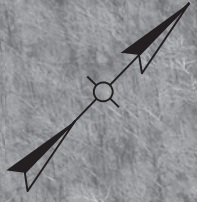
LOW WIRES
APPROX. LOCATION
USE CAUTION

110+00



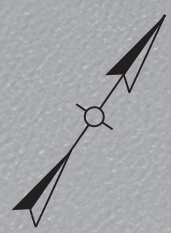
SCALE: 1"=200'

**I-275
STATIONING INFORMATION SHEETS
PLAN SHEET 1 OF 2**



COUNTY OF	ITEM NO.
BOONE	6-20005

OHIO RIVER



POB 80+00.00

END PROJECT
6-20005
MP 13.481

85+00

MP 13.4



SCALE: 1"=200'

90+00

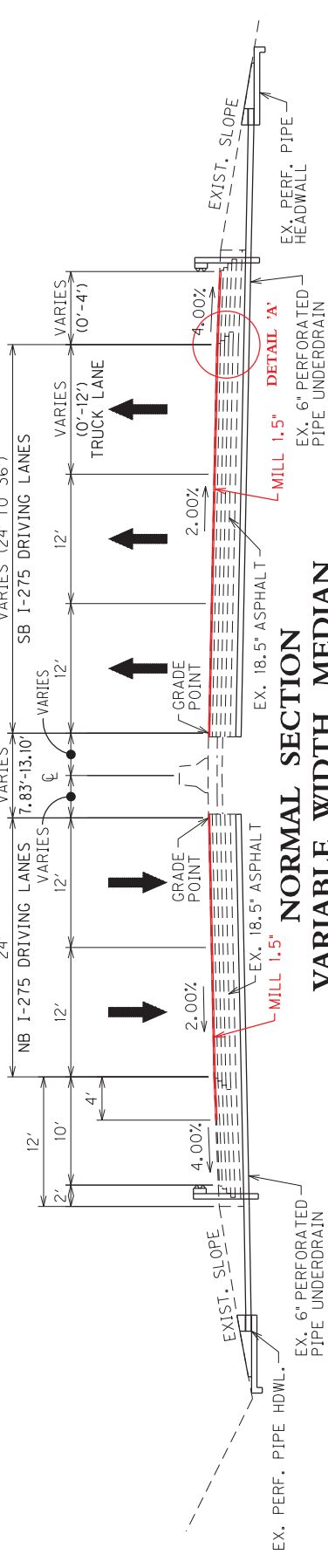
MATCHLINE (SEE SHEET 1)

I-275
STATIONING INFORMATION SHEETS
PLAN SHEET 2 OF 2

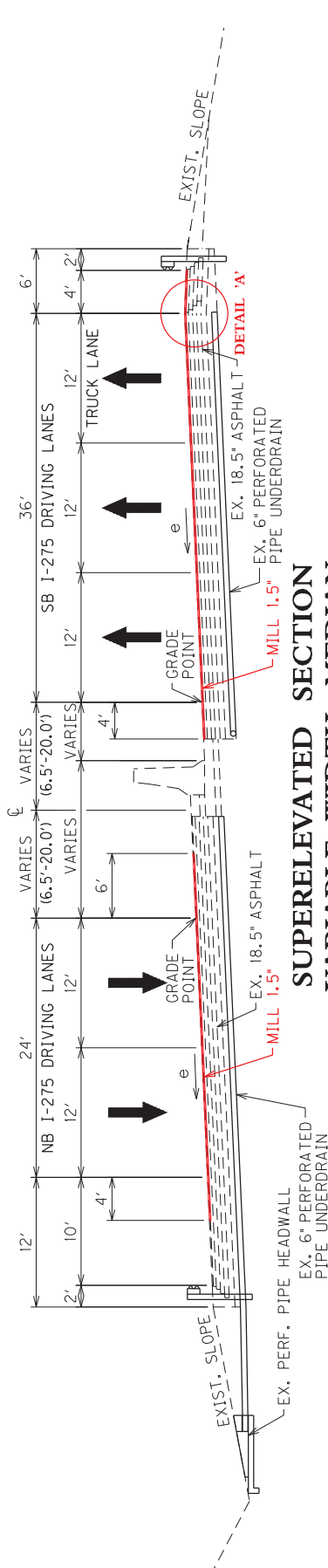
COUNTY OF	BOONE
ITEM NO.	6-20005

I-275

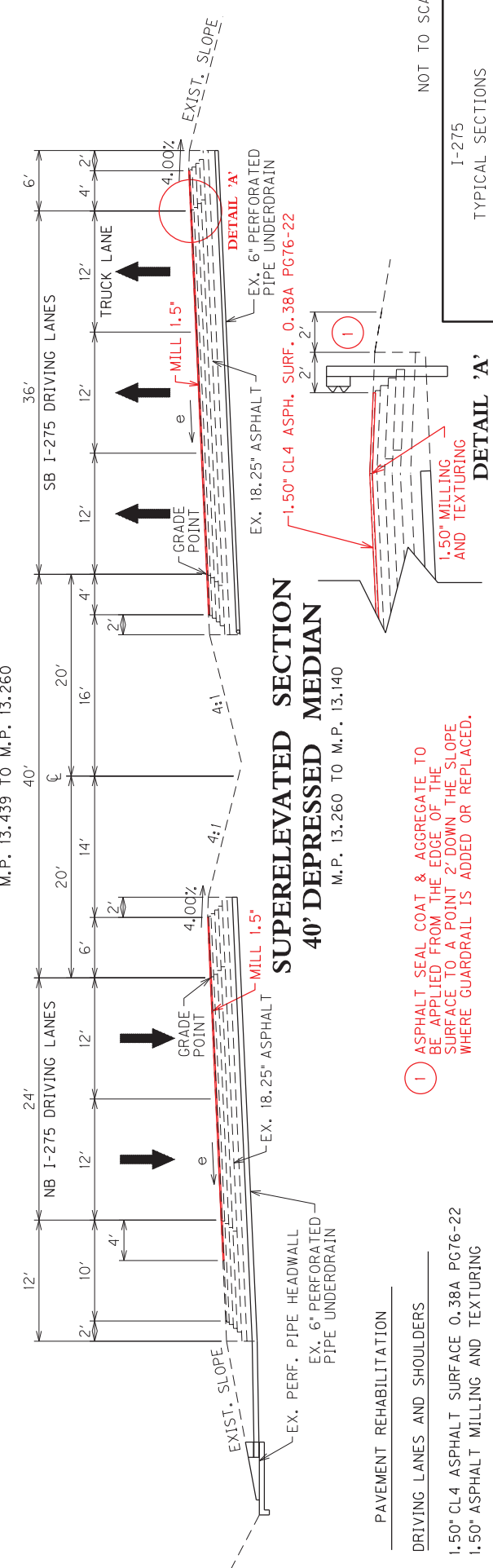
PROPOSED TYPICAL SECTIONS



NORMAL SECTION
VARIABLE WIDTH MEDIAN
M.P. 13.481 TO M.P. 13.439



SUPERELEVATED SECTION
VARIABLE WIDTH MEDIAN
M.P. 13.439 TO M.P. 13.260



SUPERELEVATED SECTION
40' DEPRESSED MEDIAN
M.P. 13.260 TO M.P. 13.140

PAVEMENT REHABILITATION
DRIVING LANES AND SHOULDERS
1.50" CL4 ASPHALT SURFACE 0.38A PG76-22
1.50" ASPHALT MILLING AND TEXTURING

① ASPHALT SEAL COAT & AGGREGATE TO BE APPLIED FROM THE EDGE OF THE SURFACE TO A POINT 2' DOWN THE SLOPE WHERE GUARDRAIL IS ADDED OR REPLACED.

NOT TO SCALE
I-275
TYPICAL SECTIONS

**PAVEMENT REHABILITATION SUMMARY
I-275 BOONE COUNTY MILEPOST 13.140 TO 13.481
ITEM NUMBER 6-20005.00**

ITEM NUMBER	ITEM	NOTE	TOTAL	UNIT
100	ASPHALT SEAL AGGREGATE	(4)(8)	2	TON
103	ASPHALT SEAL COAT	(4)(9)	1	TON
194	LEVELING AND WEDGING PG76-22	(1)	100	TON
342	CL4 ASPH SURF 0.38A PG76-22	(2)(3)	1,249	TON
2351	GUARDRAIL-STEEL W BEAM-S FACE	(4)	100	LF
2367	GUARDRAIL END TREATMENT TYPE 1	(4)	1	EACH
2381	REMOVE GUARDRAIL	(4)	50	LF
2484	CHANNEL LINING CLASS III	(5)(10)	125	TON
2562	TEMPORARY SIGNS		1,500	SQFT
2569	DEMOBILIZATION		1	LS
2575	DITCHING AND SHOULDERING		1,800	LF
2650	MAINTAIN AND CONTROL TRAFFIC		1	LS
2671	PORTABLE CHANGEABLE MESSAGE SIGN	(11)	2	EACH
2676	MOBILIZATION FOR MILLING & TEXTURING		1	LS
2677	ASPHALT PAVE MILLING & TEXTURING		1,349	TON
2696	SHOULDER RUMBLE STRIPS		7,200	LF
2775	ARROW PANEL		2	EACH
5950	EROSION CONTROL BLANKET	(1)	2,500	SQYD
6511	PAVEMENT STRIPING-TEMP PAINT -6 IN	(6)	500	LF
6542	PAVE STRIPING-THERMO-6 IN W		4,810	LF
6543	PAVE STRIPING-THERMO-6 IN Y		3,545	LF
6613	INLAID PAVEMENT MARKER-B-W/R		67	EACH
20071EC	JOINT ADHESIVE		7,737	LF
20411ED	LAW ENFORCEMENT OFFICER		80	HOUR
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	(7)	6	TON
25075EC	QUEUE PROTECTION VEHICLE		200	HOUR
25117EC	FURNISH QUEUE PROTECTION VEHICLES		3	MONTH
26136EC	PORTABLE QUEUE WARNING ALERT SYSTEM		3	MONTH
26137EC	QUEUE WARNING PCMS		18	MONTH
26138EC	QUEUE WARNING PORTABLE RADAR SENSORS		18	MONTH

- (1) To be used as directed by the Engineer.
- (2) Includes 551 tons for paving 1.5" in Northbound I-275 and 698 tons for paving 1.5" in Southbound I-275
- (3) All Asphalt mixtures estimated at 110 lbs. per sq. yd. per inch of depth.
- (4) For extension of guardrail on Northbound lanes that ends at MP 13.264, as directed by the Engineer.
- (5) Use as directed by the Engineer on the Northbound outside ditch.
- (6) Only for use on Leveling. Temporary striping for surface is included in Permanent per Section 714.
- (7) Asphalt Material for Tack Non-Tracking is estimated at 0.70 lbs per sq.yd.
- (8) Two applications of Asphalt Seal Aggregate estimated at 20 LB/SQ. YD.
- (9) Two applications of Asphalt Seal Coat estimated at 2.4 LB/SQ. YD.
- (10) Any excavation and Fabric-Geotextile Class 2 required to place the channel lining is incidental to the lining.
- (11) Portable Changeable Message Signs being bid independently of the Queue Warning System shall be used as directed by the Engineer.

NOTE: Quantities from all roadway summary sheets have been carried over and included in this General Summary

**I-275 BOONE COUNTY
MP 13.140 TO MP 13.481
NHPP IM 2759(138)
FD52 008 0275 013-014
Item No. 6-20005.00**

**THIS PROJECT IS A FULLY
CONTROLLED ACCESS HIGHWAY**

I. DESCRIPTION

Perform all work in accordance with the *Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2019, Supplemental Specifications*, any applicable Special Provisions, and applicable current Standard and Sepia Drawings, 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) Ditching and Channel Lining as directed by the Engineer; (3) Inlaid Pavement Markers; (4) Asphalt Pavement Milling and Texturing; (5) Asphalt Surface at locations listed and/or as directed by the Engineer; and (6) 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. **Pavement Markings – 6 inch Thermoplastic.** Use Pavement Striping Thermoplastic 6-inch for permanent striping.

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. Other than the bid items listed, no direct payment will be made for site preparation, but will be incidental to the other items of work.
- C. **Disposal of Waste.** Dispose of all cuttings, debris, and other waste off the right-of-way at approved sites obtained by the Contractor at no additional cost to the Department. The contractor will be responsible for obtaining any necessary permits for this work. Temporary openings in the right of way fence for direct access to waste sites off the right of way or for access to other public roads will not be allowed. No separate payment will be made for the disposal of waste and debris from the project or obtaining the necessary permits but will be incidental to the other items of the work.
- 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. These items are incidental to other items in the contract.
- E. **Guardrail and Cable Barrier.** Do not disturb existing guardrail or cable barrier except as noted. The chip seal between the driving lanes and the cable barrier shall not be disturbed. Slopes around guardrail posts and end treatments may need to be reshaped due to erosion. This work will be considered part of the ditching operations. Actual locations for new guardrail and end treatments will be determined by the Engineer at the time of construction. Grade and reshape shoulders to proper template for new End Treatment. Utilize DGA for embankment when required for new end treatments. DGA used for installation of an end treatment will be considered incidental to the end treatment. Remove any existing guardrail with a lane closure in place.

Do not leave the area unprotected. After the guardrail is removed, a shoulder closure shall remain in place until the guardrail is replaced in that area. To minimize safety hazards, guardrail removal is to be performed at the latest practical time prior to initiating the paving operation in an area and re-installation is to be completed prior to opening lanes the following morning. If guardrail installation is not completed by 5:00 a.m. that morning, Liquated Damages will be charged as outlined in Section 108 of the 2019 Standard Specifications.

The Contractor shall deliver existing salvaged guardrail system materials to the Central Sign Shop and Recycle Center in in Frankfort, KY (502-564-8187) between the hours

of 8:00AM and 3:00PM, Monday through Friday and shall be neatly stacked in accordance with section 719.03.07 of the standard specifications. There is a guardrail delivery verification sheet which must be completed. The Contractor, engineer, and Central Sign/Guardrail Center representative must all sign off on this sheet before payment may be made.

- F. **Pavement Striping and Pavement Markers.** Permanent striping will be in accordance with Section 714. Pavement Markers will be inlaid. Removal of existing Pavement Markers Type V will be incidental to Asphalt Milling and Texturing.
- G. **On-Site Inspection.** 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, if 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.

IV. METHOD OF MEASUREMENT

- A. **Maintain and Control Traffic.** See Traffic Control Plan.
- 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. **Inlaid Pavement Markers and Permanent Striping.** Permanent striping is measured per linear foot. See Traffic Control Plan. Inlaid Pavement Markers are measured as each.

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.

- A. **Maintain and Control Traffic.** See Traffic Control Plan.
- 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. **Permanent Striping.** See Traffic Control Plan.

**NOTES APPLICABLE TO PROJECT
PAVEMENT REHABILITATION
I-275 BOONE COUNTY
MP 13.140 TO MP 13.481
NHPP IM 2759(138)
FD52 008 0275 013-014
Item No. 6-20005.00**

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 specified in the Proposal.
2. The contractor is to be advised locations of low wires may exist. The following locations are approximate:
 - None observed within the project limits. Four transmission lines are located just South of the Begin Project.

CAUTION: Other Locations may exist. These and all other utilities should be avoided on this project. If any utility is impacted, it will be the contractor's responsibility to contact the affected utility and cover any costs associated with the impact.
3. All blue milepost signs on the project are not to be disturbed. The contractor will be responsible for the replacement of these signs if damaged during construction.
4. All "green" milepost signs should not be disturbed by this project. The contractor will be responsible for the replacement of these signs if damaged during construction.
5. Any roadway signs that are damaged during construction are to be replaced at the contractor's expense.
6. Any light poles that are damaged during construction are to be replaced at the contractor's expense.
7. Solar traffic detectors on the project are to not be disturbed. Any detectors that are damaged during construction are to be replaced at the contractor's expense.
8. The existing edge drain system is to be preserved. Care should be taken when the asphalt is removed and replaced, any edge drains damaged during these activities will be replaced at the contractor's expense. Edge drains damaged during ditching and channel lining will also be replaced at the contractor's expense.
9. Pavement Rideability Requirements, in accordance with Section 410 of the Standard Specifications, Current Edition, shall apply on this project. Category A shall apply.

10. The Engineer will accept the compaction of asphalt mixtures furnished for the driving lanes at one inch or greater on this project by Option A according to subsections 402 and 403 of the Standard Specifications, Current Edition. Use joint cores as described in subsection 402.03.02 for surface mixtures only. Will accept the compaction of all other mixtures by option B.
11. See Construction Memorandum No. 01-2020 for contactless electronic ticketing.
12. This project is considered a Significant Project.

**TRAFFIC CONTROL PLAN
I-275 BOONE COUNTY
MILEPOST 13.140 - 13.481
NHPP IM 2759(138)
FD52 008 0275 013-014
Item No. 6-20005**

**THIS PROJECT IS A FULLY
CONTROLLED ACCESS HIGHWAY**

TRAFFIC CONTROL GENERAL

Except as provided herein, maintain and control traffic in accordance with the 2019 Standard Specifications and the Standard Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic". All lane closures used on the Project will be in compliance with the appropriate Standard Drawings. Do NOT use Cones for lane closures or shoulder closures.

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

Reduce the speed limit in work areas to 55 miles per hour and establish double fines for work zone speeding violations. The extent of these areas within the project limits will be restricted to the proximity of actual work areas as determined by the Engineer. Notify the Engineer a minimum of 12 hours prior to using the double fine signs. At the beginning of the work zone, the "WARNING FINE DOUBLED IN WORK ZONE" signs will be dual mounted. At the end of the work zone, the "END DOUBLE FINE" signs will be dual mounted as well. Remove or cover the signs when the highway work zone does not have workers present for more than a two-hour period of time. Payment for the signs will be at the unit bid price for signs erected. Any relocation or covering of signs will be incidental to Maintain and Control Traffic.

Night work is required on this project. Obtain approval from the Engineer for the method of lighting prior to its use.

Traffic Control Plan
Boone County
I-275
Page 2 of 6

PROJECT PHASING & CONSTRUCTION PROCEDURES

The contractor **shall maintain a minimum of one lane** in each direction of I-275 mainline during the hours of 9 pm to 5 am nightly during the contract time period. All lanes must be striped and open at all other times and hours unless otherwise stated in this proposal or approved by the Engineer. No lane closures will be permitted the following days:

April 15, 2022 – April 17, 2022
May 27, 2022 – May 30, 2022

Good Friday and Easter Weekend
Memorial Day Weekend

The minimum clear lane width will be 11 feet. The Contractor will make accommodations for wide loads. Use a lane closure all times when work is performed in the lane or adjacent shoulder. All removal of existing striping shall be by water blasting, unless otherwise directed by the Engineer, and this work shall be considered incidental to “Maintain and Control Traffic.”

Joint adhesive is to be placed on any “cold joint” on the project as directed by the Engineer. Any deviation from this scheme shall be approved by the Engineer.

All pavement edge transitions must be smooth and level before opening both lanes up to traffic. A lane closure must be in place during all times that pavement edge drop-offs are present (see Pavement Edge Drop-off note).

The Engineer will determine exact locations of pavement repair, if any, at the time of construction. Once removal of pavement at a repair location has begun, work continuously within the parameters outlined above to complete the work and eliminate the “hole”. Place Type III Barricades immediately in front of pavement removal areas. Type III Barricades shall be considered incidental to “Maintain and Control Traffic”. Once pavement removal at a site has begun, full depth replacement must be completed within the time a lane closure is allowed. A quantity of “LEVELING AND WEDGING PG76-22” has been included to allow for any pavement repairs that may be needed.

During the days and hours when a lane closure is allowed, implement the following procedures: Maintain traffic as specified in the phasing notes. Any other work not requiring traffic lane widths to be restricted due to barrels or equipment encroaching into the interior lanes can be done during the remaining hours when two lanes of traffic must be maintained. Please refer to the “Special Note for Fixed Completion Date and Liquidated Damages” for damage rates per hour associated with failure to maintain the required number of lanes during the specified time. Once milling operations at a site has begun, the final surface course must be completed within the time a lane closure is allowed. Liquidated Damages, at the rate specified per hour in the “Special Note for Fixed Completion Date and Liquidated Damages”, will be assessed for each hour the existing number of lanes is not maintained.

The contractor must notify the Engineer at least fourteen (14) days prior to beginning construction in either direction.

Traffic Control Plan
Boone County
I-275
Page 3 of 6

SHOULDER PREPARATION AND RESTORATION

Prior to placing any lane closure that requires shifting traffic onto existing shoulders, patch and remove any foreign debris on the shoulders as directed by the Engineer. Remove failed materials and perform additional patching as directed by the Engineer during the time the shoulder is used as a travel lane. All work required for shoulder preparation and restoration is incidental to Maintenance of Traffic, except for the asphalt patching, which will be paid at the contract unit bid price for “LEVELING AND WEDGING PG76-22”.

CONSTRUCTION PHASING

PHASE I – Mill and Resurface Inside Lanes

Shift traffic to the outside lane, where necessary and approved by the Engineer, and close the inside lane(s) and shoulder to traffic. Mill existing pavement and resurface on the inside lane(s) and inside shoulder, where applicable, as directed by the Engineer. Inside shoulders will only be partially milled and resurfaced in the barrier wall section. Refer to typical sections for limits. Once the pavement has been removed, the Contractor must work continuously until the pavement has been replaced back to existing grade.

PHASE II – Mill and Resurface Outside Lanes

Shift traffic to the inside lane constructed in the previous phase, as directed by the Engineer, and close the outside lane and shoulder to traffic. Mill existing pavement and resurface on the remaining lanes and outside shoulders, where applicable, as directed by the Engineer. The northbound outside shoulder will only be partially milled and resurfaced. Refer to typical sections for limits. Once the pavement has been removed, the Contractor must work continuously until the pavement has been replaced back to existing grade.

PHASE III – Place Final Striping and Markers

Place permanent striping and markers throughout the project utilizing temporary lane closures as directed by the Engineer. Final striping may be placed during closures for milling and paving operations as directed or approved by the Engineer.

LANE CLOSURES

Limit the lengths of lane closures to only that needed for actual operations in accordance with the phasing specified herein, or as directed by the Engineer. Limit lane closures to allow one lane open per direction at any given time. No long-term lane closures will be allowed. Contrary to section 112, lane closures will **NOT** be measured for payment, but are considered incidental to Maintain and Control Traffic.

Traffic Control Plan
Boone County
I-275
Page 4 of 6

SIGNS

Additional traffic control signs in addition to normal lane closure signing detailed on the Standard Drawings may be required by the Engineer. Additional signs needed for lane closures may include, but are not limited to, dual mounted TRUCKS USE LEFT/RIGHT LANE, LEFT/RIGHT LANE CLOSED 1 MILE, LEFT/RIGHT LANE CLOSED 2 MILES, LEFT/RIGHT LANE CLOSED 3 MILES, SLOWED/STOPPED TRAFFIC AHEAD. Signage for reduced speed limits and double fine work zones will be furnished, relocated, and maintained by the Contractor.

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

FLASHING ARROWS

Flashing arrows will be paid for once, no matter how many times they are moved or relocated. The Department **WILL NOT** take possession of the flashing arrows upon completion of the work.

PORTABLE CHANGEABLE MESSAGE SIGNS

Portable Changeable Message Signs being bid independently of the Queue Warning System shall be used as directed by the Engineer. The messages required to be provided will be designated by the Engineer. In the event of damage or mechanical/electrical failure, the Contractor will repair or replace the Portable Changeable Message Sign immediately. Portable Changeable Message Signs 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.

BARRELS

Barrels are to be used for channelization or delineation and will be incidental to "MAINTAIN AND CONTROL TRAFFIC" according to Section 112.04.01. Replacements for damaged barrels as directed by the Engineer to be replaced due to poor condition or reflectivity will not be measured for payment.

TRUCK MOUNTED ATTENUATORS

Furnish and install MUTCD approved Truck Mounted Attenuators in advance of work areas when workers are present less than 12 feet from traffic. If there is less than 500 feet between work sites, only a single TMA will be required at a location directed by the Engineer. Locate the TMAs at the individual work sites and move them as the work zone moves within the project limits. All details of the TMA installations shall be approved by the Engineer. Truck Mounted Attenuators will not be measured for payment but are incidental to

Traffic Control Plan
Boone County
I-275
Page 5 of 6

Maintain and Control Traffic. The Department **WILL NOT** take possession of the TMAs upon completion of the work.

PAVEMENT MARKINGS

If lane closures are in place during nighttime hours, remove or cover the lenses of raised pavement markers that do not conform to the traffic control scheme in use, or as directed by the Engineer. Replace or uncover lenses before a closed lane is reopened to traffic. No direct payment will be made for removing and replacing or covering and uncovering the lenses but will be incidental to "Maintain and Control Traffic".

Place temporary and permanent striping in accordance with Section 112 and Section 714, except that:

1. Temporary and permanent striping will be 6" in width; and
2. If the contractor's operations or phasing requires temporary markings which must be subsequently removed from the ultimate pavement, an approved removable lane tape will be used; however removable tape will be measured and paid as Pavement Striping-Temporary Paint 6"; and
3. Edge lines will be required for temporary striping; and
4. Existing, temporary, or permanent striping will be in place before a lane is opened to Traffic.
5. Place permanent striping on pavement within the project limits.
6. Permanent striping will be Thermoplastic. According to Section 714, any temporary striping placed on fresh asphalt instead of permanent will be incidental to permanent striping.

PAVEMENT EDGE DROP-OFFS

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

A pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation shall not have an elevation difference greater than 1 ½". Place warning signs (MUTCD W8-11 or W8-9A) in advance of and at 1500' intervals throughout the drop-off area. Dual posting on both sides of the traveled way shall be required. Wedge all transverse transitions between resurfaced and unresurfaced areas which traffic may cross with asphalt mixture for leveling and wedging. Remove the wedges prior to placement of the final surface course. Pavement edges that traffic is not expected to cross, except accidentally, shall be treated as follows:

Less than 2" – Protect with a lane closure.

2" to 4" – Protect with a lane closure. barrels, vertical panels, or barricades every 50 feet. Traffic cones may not be used in place of barrels, panels, and barricades at any time. Construct a wedge with compacted cuttings from milling, trenching, or asphalt mixtures with a 3:1 or flatter slope, when work is not active in the drop-off area. Place Type III Barricades at the beginning of the lane closures, and place additional Type III Barricades spaced at 2,500 feet during the time the lane closure is in place. Type III Barricades will **NOT** be measured for payment, but are considered incidental to the bid item "Maintain and Control Traffic".

Traffic Control Plan
Boone County
I-275
Page 6 of 6

Guardrail Installation – Guardrail will be removed at the last practical moment and replaced as soon as the placement of asphalt in an area requiring guardrail is complete. All areas from which guardrail is removed shall be protected by a shoulder closure or other method approved by the Engineer until the new guardrail is installed.

TRAFFIC COORDINATOR

Designate an employee to be traffic coordinator. The designated Traffic Coordinator shall meet the requirements described in Section 112.03.12 of the Department's 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 a telephone number where 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, and maintain the signing and all other traffic control devices. The personnel will have access on the project to a radio or telephone to be used in case of emergencies or accidents.

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

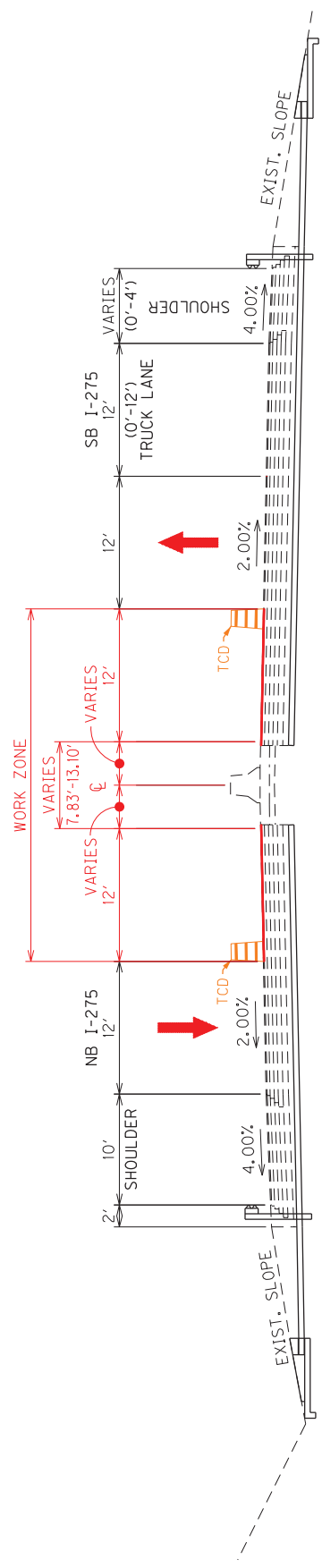
Do not use or allow employees to use median crossovers at any time except when inside lanes are closed for construction. In all other phases of construction, change vehicular direction of travel only at interchanges.

LAW ENFORCEMENT OFFICERS (LEO'S)

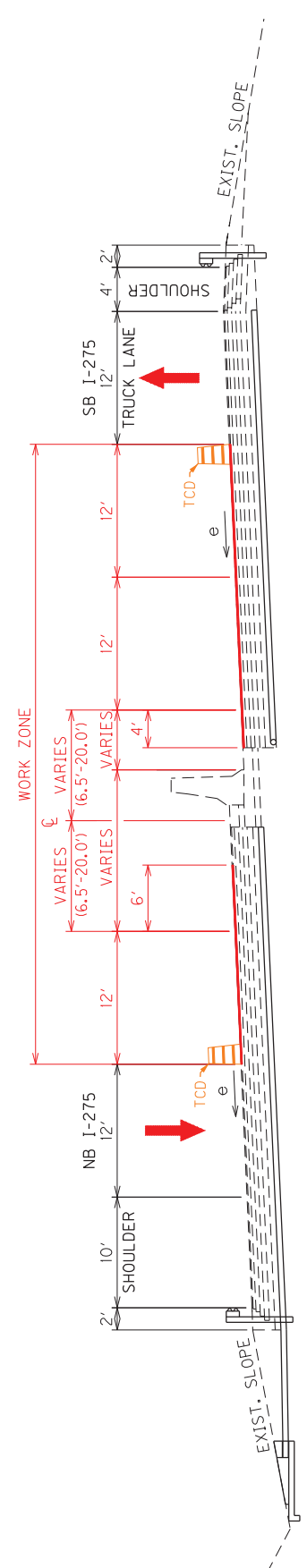
Police support shall be a unit consisting of an off-duty police officer from any police force agency having lawful jurisdiction and a police car equipped with externally mounted flashing blue lights. Officers may be asked to issue citations for traffic violations but will be considered incidental to the contract unit bid price for "Law Enforcement Officer". No additional compensation will be provided. The officers will be placed at the discretion of the Engineer. Police support will be measured and paid on a per hour basis for each officer and police vehicle.

COUNTY OF	BOONE
ITEM NO.	6-20005

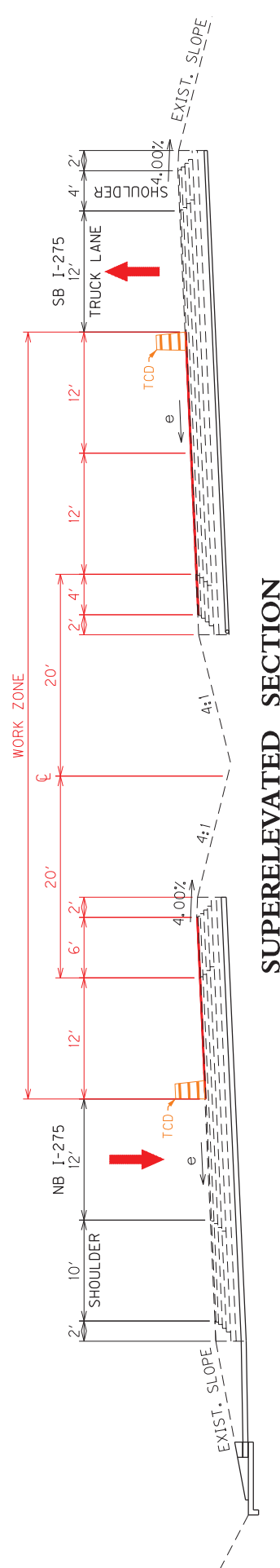
I-275 MAINTENANCE OF TRAFFIC TYPICAL SECTIONS



NORMAL SECTION VARIABLE WIDTH MEDIAN - PHASE I M.P. 13.481 TO M.P. 13.439



SUPERELEVATED SECTION VARIABLE WIDTH MEDIAN - PHASE I M.P. 13.439 TO M.P. 13.260

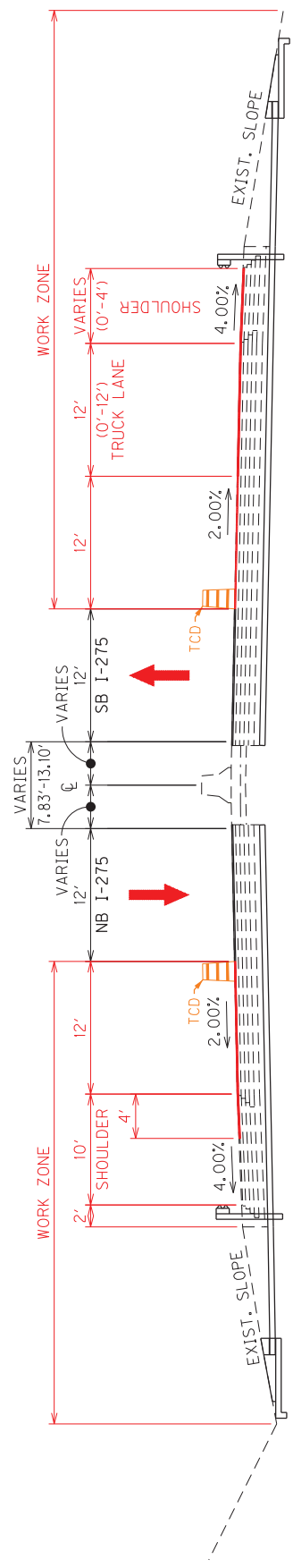


SUPERELEVATED SECTION 40' DEPRESSED MEDIAN - PHASE I M.P. 13.260 TO M.P. 13.140

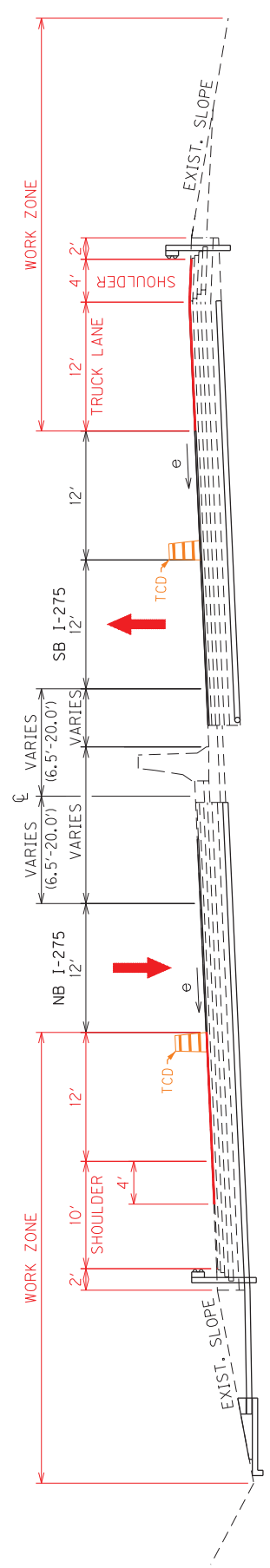
NOT TO SCALE
I-275
TYPICAL SECTIONS

COUNTY OF	BOONE
ITEM NO.	6-20005

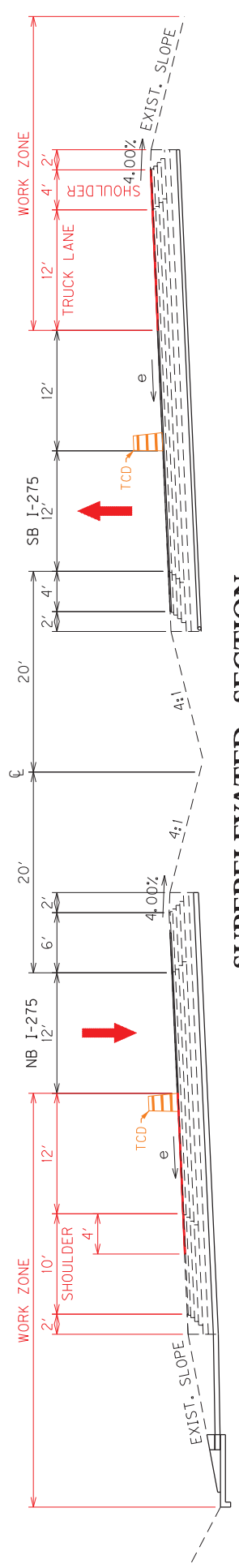
I-275 MAINTENANCE OF TRAFFIC TYPICAL SECTIONS



**NORMAL SECTION
VARIABLE WIDTH MEDIAN - PHASE II**
M.P. 13.481 TO M.P. 13.439



**SUPERELEVATED SECTION
VARIABLE WIDTH MEDIAN - PHASE II**
M.P. 13.439 TO M.P. 13.260



**SUPERELEVATED SECTION
40' DEPRESSED MEDIAN - PHASE II**
M.P. 13.260 TO M.P. 13.140

NOT TO SCALE

I-275
TYPICAL SECTIONS

REFERENCES

1. *Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2019.*
2. FHWA Manual on Uniform Traffic Control Devices.
3. Active Sepia List

<u>Drawing No.</u>	<u>Drawing Name</u>
Sepia 006	Inlaid Pavement Marker Arrangements Multi-Lane Roadways
Sepia 007	Inlaid Pavement Marker Arrangements Multi-Lane Roadways
4. Kentucky Department of Highways Standard Drawings, current editions, as applicable:

RBI-001	Typical Guardrail Installations
RBI-002	Typical Guardrail Installations
RBI-004	Installation of Guardrail End Treatment Type 1
RBR-001	Steel Beam Guardrail "W" Beam
RBR-005	Guardrail Components
RBR-015	Steel Guardrail Posts
RBR-020	Guardrail End Treatment Type 1
RBR-055	Delineators for Guardrail
RDD-040	Channel Lining Class II and III
RGS-002	Superelevation for Multilane Pavement
RGX-001	Miscellaneous Standards
TPR-115	Shoulder and Edge Line Rumble Strip Placement Details
TPR-130	Rumble Strip Details Multi-Lane Roadways and Ramps
TTC-115	Lane Closure Multi-Lane Highway Case I
TTC-135	Shoulder Closure
TTD-120	Double Fine Zone Signs
TTD-125	Pavement Condition Warning Signs
TTD-130	Speed Zone Signing for Work Zones
TTS-110	Mobile Operation for Paint Striping Case III
TTS-115	Mobile Operation for Paint Striping Case IV
TTS-120	Mobile Operation for Durable Striping Case I
TTS-125	Mobile Operation for Durable Striping Case II
5. *Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2019, Appendix B - Supplemental Specifications, as applicable:*

Special Note	11 Portable Changeable Message Signs (6/15/2012)
Special Note	Guardrail Delivery Verification Sheet
Special Note	Asphalt Milling and Texturing <i>attached</i>
Special Note	Typical Section Dimensions <i>attached</i>
Special Note	Before You Dig <i>attached</i>
Special Note	Fixed Completion Date and Liquidated Damages <i>attached</i>
Special Note	Non-Tracking Tack Coat <i>attached</i>
Special Note	Portable Queue Warning Alert System <i>attached</i>
Special Note	Traffic Queue Protection Vehicle <i>attached</i>

**SPECIAL NOTE FOR
ASPHALT MILLING AND TEXTURING
I-275 BOONE COUNTY
Item No. 6-20005.00**

Begin paving operations immediately after the commencement of the asphalt milling operation. Continue paving operations continuously until completed. Do not allow public traffic to drive on the milled surface. If paving operations are not begun within this time period, liquidated damages will be assessed at the rate prescribed by Section 108.09 of the current Standard Specifications until such time as paving operations are begun.

Removal of the existing pavement markers prior to the milling operation is considered incidental to the bid item "Asphalt Pavement Milling and Texturing".

**SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS
I-275**

The dimensions shown on the typical sections for pavement and shoulder widths 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 specified elsewhere in the Proposal.

SPECIAL NOTE FOR BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

Special Note for Fixed Completion Date and Liquidated Damages
I-275 BOONE COUNTY
Item No. 6-20005.00

Contrary to Section 108.09, Liquidated Damages of \$100,000 per calendar day will be assessed for each day work remains uncompleted beyond the Specified Project Completion Date. **No work will be permitted before April 01, 2022 without approval of the Engineer.** This project has a Fixed Project Completion Date of June 30, 2022.

In addition to the Liquidated Damages specified in Section 108.09, Liquidated Damages in the following amounts will be charged when a lane or ramp closure remains in place during the prohibited period outlined in the Traffic Control Plan, excluding delays caused by inclement weather:

Mainline: \$5,000 for the first hour or fraction thereof
 \$10,000 for any additional hour or fraction thereof

These hourly disincentives will still be in effect after the Fixed Completion Date and will be charged in addition to the \$100,000 per calendar day if warranted. The contractor is expected to make every effort to complete the work in order to open the mainline lane closure within a specified timeframe.

If work is delayed by inclement weather, the minimum work required to allow removal of the lane closure, as directed by the Engineer, shall be resumed immediately as soon as weather permits or the Department will begin to assess Liquidated Damages as specified herein.

Contrary to Section 108.09 of the Standard Specifications, **the disincentive fee will be charged during those periods when seasonal limitations of the Contract prohibit the Contractor from working on a controlling item or operation. This includes the months from December through March.**

All liquidated damages will be applied cumulatively.

All other applicable portions of Section 108 apply.

Special Note for Portable Queue Warning Alert System

1.0 Description

This item shall consist of furnishing, installing, relocating, operating, servicing, and removing various components of a portable, quickly deployable, real-time automated ITS queue warning alert system (PQWAS), in accordance with the standard specifications and this special provision. The Contractor shall also provide the maintenance of the complete system for the duration of the project or as directed by the Project Engineer. The Department is willing to look at different technologies (i.e. allow the use of crowd sourcing data to be used in lieu of the portable radar sensors). Any changes to the below requirements must be submitted and approved by the Engineer.

2.0 Materials

Materials shall be in accordance as follows:

All materials used shall meet the manufacturer's specifications and recommendations.

All PQWAS materials installed on the project shall be provided by the Contractor in excellent quality condition, shall be corrosion resistant and in strict accordance with all of the details shown within Contractor's Plans approved by KYTC. The Contractor shall maintain an adequate inventory of parts and replacement units to support maintenance and repair of the PQWAS. Pre-deployment is a condition of the system's acceptance and is based on the successful performance demonstration for a (5) day continuous period in accordance to this specification and as set forth in the plans. Ensure compliance to all FCC and Department specifications.

The Contractor shall maintain this system and shall be locally available to service and maintain system components, move portable devices as necessary and respond to emergency situations. The Contractor has oversight responsibility for directing placement of devices in the project area. The Contractor is to be accessible seven (7) days a week and twenty-four (24) hours a day while the system is deployed. The Contractor shall provide contact information for the system's coordinator and others responsible for maintenance of the system prior to installation of the system. Furnish a System Coordinator for monitoring the PQWAS throughout all periods of deployment.

A. General Capabilities and Performance Requirements

1. Overall PQWAS capabilities and performance requirements include the following:
 - a. Furnish a system capable of providing advance traffic information to motorists when there is a queueing of traffic due to congestion resulting from lane reductions, emergency events or other conditions. The condition-responsive notification to the motorist occurs with the use of Portable Changeable Message Signs (PCMS) in accordance to the below capabilities and performance requirements, activated through real-time traffic data collected downstream of the PCMS locations. This equipment must

be a packaged system, pre-programmed and operates as a stand-alone PQWAS meeting this specification. Conditions might exist that require relocation of the portable sensors at any given time, the sensors shall be portable and shall not require re-calibration in the field for fast deployments. Due to the potential need to replace damaged sensors or to change the position of one or more sensors at any given time, sensors must be interchangeable and relocatable by an unskilled laborer. The system must continue to function if as many as half the sensors fail to function.

- b. Provide a PQWAS that consists of the following field equipment: portable radar sensors and portable changeable message signs (PCMS). Provide a system capable of withstanding inclement weather conditions while continuing to provide adequate battery power. The portable radar sensor battery, in a stand-alone state and without a solar panel for recharging, shall be capable of keeping power and capable of sending data for (10) consecutive days or longer. The system shall notify drivers of real-time queue events via specifically placed PCMS units up stream of the work zone. All predetermined/preprogrammed messages are to be approved by KYTC. The number and location of portable radar sensors and PCMS units shall be as directed by the Project Engineer. The decision to deploy or relocate field equipment is made by the Project Engineer and instrumented through the System Coordinator. The decision for equipment removal is made by the Project Engineer after work is complete. The sensors and PCMS units shall be identifiable via global positioning system (GPS) and shall contain an accelerometer to detect and alert of unauthorized movement.
- c. The portable radar sensor shall be capable of collecting traffic speed data. The processed data is used to remotely control PCMS units to display user definable, Engineer approved and locally stored messages. The message trigger state thresholds for slow and stopped speeds shall be user configurable and revisable in less than {1} hour from the Project Engineer's request. Weekly Traffic Data Reports shall be presented to the Project Engineer and shall include speed data per sensor location, travel times, and queue lengths in graphical and numerical formats. In the event the Project Engineer requires a report, other than a weekly report, for any reason; then the Contractor shall provide report within (48) hours of request. Unlimited data reports shall be included within price of system. Sensors shall require no calibration adjustments in the field. Sensor should begin transmitting data within (30) seconds of being turned on. Satellite (SAT) communications will be required when cellular service does not provide continuous communications. Contractor shall identify the most trustworthy cellular provider within the project area.
- d. Data shall be accessible through a website and the Contractor shall provide a username and password for protection. The website shall be accessible seven (7) days a week and twenty - four (24) hours a day. The website shall provide historical & real-time data in graphical and numerical formats and shall have the capability of being integrated within the Department's Traffic Management Center (if requested). The website should be compatible to most hand held devices. Data shall be saved on the manufacturer's network for up to (5) years from the deployment date of system and shall be provided at the request

of the Department at any time within the (5) year window. The use of the website shall be included within the price of system.

- e. Warning Alerts: queue events, low battery voltage warnings, sensor movement alerts, high and low speed alerts shall be provided via cellular text messaging and/or via email messaging at the request of select Contractor personnel and KYTC officials.
- f. The PQWAS system shall have the capabilities to provide alternate route messaging on specifically placed portable changeable message units and/or fixed Variable Message Systems (VMS). The intent of this service is to provide alternate route messaging to motorists before entering the project limits from all directions and giving them appropriate time to adjust their routes. Alternative routes shall be predefined and approved by KYTC. Additional PCMS units may be required for alternate route messaging and will be as per Section 5.0 of this note. KYTC's Traffic Management Center will provide detour messages via fixed VMS units during the term of the project.

B. Portable Radar Sensor Capabilities and Performance Requirements

The PQWAS shall include portable radar sensors (PRD) to monitor and detect queue events.

1. The Radar Sensor shall be FHWA accepted to meet NCHRP 350 test requirements
2. The Radar Sensor shall be locatable at all times via an internal Global Positioning System (GPS) and shall be capable of Cellular or SAT Communications.
3. The Radar Sensor shall have a dry-cell battery capable of powering the system for (10) consecutive days or longer
4. The Radar sensor shall be K-Band technology and have a line of sight up to 200 linear feet without obstruction
5. The Radar sensor shall have the ability to be charged in the field through adaptable solar recharging technology in the case the sensor is utilized for more than 10 consecutive days

C. PCMS Capabilities and Performance Requirements

The PQWAS shall include portable changeable message signs (PCMS) designated to relay automated messaging of queue events, alternate route messages, and caution for the work area defined by the project limits. PCMS placements shall meet the requirements set forth by the Cabinet in each direction of the National Highway System (NHS).

1. The PCMS unit shall be a Full Matrix 24 rows x 50 columns and shall be capable of 1 line, 2line or 3 line messages
2. The PCMS unit shall be legible from a distance over twelve hundred feet(1200')
3. The height and size of characters shall be 18" to 58"
4. The PCMS shall be capable of storing up to 199 pre-programmed messages and up to 199 user-defined messages
5. The PCMS shall have a weather tight control cabinet with back lit LCD handheld controller.
6. The PCMS shall utilize a hydraulic lift to raise the unit to display height
7. The PCMS unit shall include solar recharging ports to allow for recharging of the portable radar sensors when they are not deployed.
8. The PCMS shall be NTCIP compliant and shall have an active Modem with active cellular service.

9. The user shall have the ability to communicate and override the PCMS remotely in the event of an emergency, Amber Alert, etc.
10. The PCMS unit shall have a docking station to include safety rails that allow a commercial safety strap to tie down the portable radar sensors while in transport. The docking station shall hold-up to (4) sensors safely and securely at all times

3.0 Construction Requirements

All communication costs include cellular telephone services, FCC licensing, wireless data networks, satellite and internet subscription charges, and battery charging and maintenance. Additional to these requirements, the Contractor shall assume all responsibility for any and all damaged equipment due to crashes, vandalism, and adverse weather that may occur during the contract period.

The PQWAS shall operate continuously (24 hours/ 7 Days) when deployed on the project. The system is in a constant "data collection" mode when deployed. The Contractor shall provide technical support for the PQWAS for all periods of operation.

In the event communication is lost with any component of the PQWAS, provide a means and staff to manually program a PCMS message. If communication is lost for more the 10 consecutive minutes, the system shall revert to a fail-safe ROADWORK/# MILES/AHEAD message displayed on the PCMS units until communication is restored.

System Operator, local control function and remote management operation must be password protected.

The PQWAS shall be capable of acquiring traffic information and selecting messages automatically without operator intervention after system utilization. The lag time between changes in threshold ranges and the posting of the appropriate PCMS message(s) shall be no greater than (60) seconds. The system operation and accuracy must not be appreciably degraded by inclement weather or degraded visibility conditions including precipitation, fog, darkness, excessive dust, and road debris.

The system shall be capable of storing ad-hoc messages created by the System Coordinator and logging this action when overriding any default or automatic advisory message.

The PQWAS communication system shall incorporate an error detection/correction mechanism to insure the integrity of all traffic conditions data and motorists information messages. Any required configuration of the PQWAS communication system shall be performed automatically during system initialization.

The system's acceptance is based on the successful performance demonstration of PQWAS for a (5) day continuous period in accordance to this specification and as set forth in the plans. Ensure compliance to all FCC and Department specifications.

4.0 Equipment Maintenance.

Maintain system components in good working condition at all times. Repair or replace damaged or malfunctioning components, at no cost to the Department, as soon as possible and within (12) hours of notification by the Engineer. Periodically clean PCMS units if necessary.

5.0 Measurement. The Department will measure each item below in Months. For partial months the Department will pay in 0.25 increments based on the number of calendar days in the below table.

Partial Month Payment Schedule

Days	Increment
0-7 days	0.25
8-14 days	0.50
15-21 days	0.75
22-31 days	1.00

5.1 Portable Queue Warning Alert System includes cellular (SAT communications will be required if cellular is not available), all supporting field equipment, website, and unlimited data reports accessible by the Engineer. It will be measured by the number of months authorized by the Engineer for use on the project.

5.2 Queue Warning PCMS will be measured by each individual unit multiplied by the number of months authorized by the Engineer for use on the project.

5.3 Queue Warning Portable Radar Sensors will be measured by each individual unit multiplied by the number of months authorized by the Engineer for use on the project. Queue Warning Portable Radar Sensors will not be measured for payment if the Contractor utilizes a system operating on crowd sourcing data. Crowd sourcing data systems will only be allowed as approved by the engineer and will be considered incidental to Portable Queue Warning Alert System.

6.0 Payment.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
26136EC	Portable Queue Warning Alert System	Month
26137EC	Queue Warning PCMS	Month
26138EC	Queue Warning Portable Radar Sensors	Month

Special Note for Traffic Queue Protection Vehicle

- 1.0 DESCRIPTION.** Furnish, Operate, and Maintain Traffic Queue Protection Vehicle at locations and times described herein. The Queue Protection Vehicle is expected to alert motorists (inside and outside of project limits) of all stopped traffic caused by construction activities or incidents within the project limits.
- 2.0 MATERIALS.** The contractor shall provide a minimum of one (1) queue protection vehicle for each traveling direction where traffic flow is reduced or modified in a manner where a queue could occur. One (1) additional queue protection vehicle shall be onsite in reserve. The Traffic Queue Protection Vehicle must fulfill the following minimum requirements:
1. A truck mounted attenuators that meets or exceeds NCHRP TL-3 requirements.
 2. Four (4) round yellow strobe lights (with auto-dimmers) positioned rear facing
 - Two (2) mounted under rear bumper
 - Two (2) mounted at cab level
 - Visibility of strobe lights can not be deterred by attenuator
 3. One (1) standard cab mounted light bar.
 4. A truck mounted message board with a minimum of 3 Lines and 8 Characters per line.
 5. Four Hour National Traffic Incident Management (TIM) Responder Training for Queue Truck Operators.
- 3.0. CONSTRUCTION.** A queue will be defined as anytime that traffic traveling through the project is reduced to a speed of twenty (20) miles per hour or less. The following procedures will be followed when a traffic queue occurs until free flow traffic conditions are present:
- The queue protection vehicle shall be positioned no further than ½ mile upstream from the back of the slow moving traffic.
 - The queue protection vehicle shall be positioned on the shoulder and clear of the traveled way so as not to impede traffic.
 - The queue protection vehicle shall relocate as needed to maintain approximately ½ mile distance from the back of the slow moving traffic.
 - The 2nd queue protection vehicle shall be held in reserve, on site, and support the primary vehicle if conditions prevent repositioning by reverse. This vehicle shall not be paid for idle time.
 - Queue Protection Vehicles shall be kept in project limits during planned lane closures and other project activities expected to cause a queue. One Queue Protection Vehicle shall remain on the project at all times available to respond to incidents within the project limits in a timely manner.
 - Queue length estimates and traffic conditions shall be reported to the KYTC project engineer or designee at the following periods:
 1. At 30 minute intervals
 2. At significant changes
 3. When free flow traffic is achieved
 - The KYTC project engineer or designee will document all daily queue reports and provide these logs to the Director of Maintenance and Director of Construction at the end of each month.

The Queue Protection Vehicle shall be mobilized by the Project Engineer or designee for planned construction activities. For unplanned incidents mobilization should be initiated by the first person (KYTC's or Contractor's project staff) receiving notification of the queue.

4. MEASUREMENT.

4.01 Queue Protection Vehicle. The Department will measure the time from when the vehicle is in position protecting the queue until either free flow traffic is achieved or the vehicle is no longer protecting the queue, whichever occurs first. Idle time will not be paid. The Department will not measure mobilization, removal, maintenance, labor, fuel, or any additional items but will consider them all incidental to this item of work.

4.02 Furnish Queue Protection Vehicles. The Department will measure the quantity by each month the Engineer requires to have the Contractor furnish vehicles as defined in '2.0 Materials' of this Special Note. The Department will not measure mobilization, removal, labor, fuel, or any additional items but will consider them all incidental to this item of work. Partial Months will be calculated as shown in the table below.

Partial Month Payment Schedule	
Days	Increment
0-7 days	0.25
8-14 days	0.50
15-21 days	0.75
22-31 days	1.00

5. PAYMENT.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
25075EC	Queue Protection Vehicle	Hour
25117EC	Furnish Queue Protection Vehicles	Month

October 2021

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	20 max.	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.


October 2021

- 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. From September 1st to June 1st, 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.

October 2021

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	20 max.	≤ 21	22 - 23	24 - 25	26 - 27	≥ 28
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

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24970EC	Asphalt Material for Tack Non-Tracking	Ton

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

<input checked="" type="checkbox"/> Original	<input type="checkbox"/> Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
6-20005	Boone	FD52 008 0275 013-014	NHPP IM 2759(138)
PROJECT DESCRIPTION		Address pavement condition of I-275 both direction(s) from MP 13.14-13.481	

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

Condition # 1 (Additional Right of Way Required and Cleared)
 All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.

Condition # 2 (Additional Right of Way Required with Exception)
 The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract

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

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

Notes/ Comments (Use Additional Sheet if necessary)

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Lynn Whalen
Signature		Signature	<i>Lynn Whalen</i>
Date		Date	Date: 2021.08.05 11:12:37 -04'00'
Right of Way Director		FHWA	
Printed Name		Printed Name	No Signature Required
Signature	<i>Kelly R. Divine</i>	Signature	as per FHWA-KYTC
Date	Date: 2021.08.12 13:55:23 -05'00'	Date	Current Stewardship Agreement

UTILITIES AND RAIL CERTIFICATION NOTE

**BOONE COUNTY
NHPP IM 2759(138)
FD52 008 0275 013-014
ADDRESS PAVEMENT CONDITION OF I-275 IN BOTH DIRECTIONS FROM MP 13.076 TO MP 13.7
ITEM NUMBER: 06-20005.00**

PROJECT NOTES ON UTILITIES

Utility coordination efforts determined that no utility owner relocation work is required to complete the project. **Should utilities be found during construction, the Contractor is fully responsible for protection of those utilities.**

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

There are several overhead utility lines that cross over the project. None of these should be in conflict with the project.

CAUTION!

TRUCK DRIVERS, HEAVY EQUIPMENT OPERATORS AND ALL OTHERS WORKING ON THIS PROJECT, SHOULD BE VIGILENT IN KEEPING THEMSELVES AWARE OF THE PRESENCE OF OVERHEAD UTILITY LINES WHEN TRUCK BEDS ARE RAISED. TRUCK BEDS SHOULD BE LOWERED WHEN WORKING UNDER UTILITY LINES TO PREVENT SNAGGING OVERHEAD LINES. SNAGGING UTILITY LINES, ESPECIALLY ELECTRIC LINES, AND PULLING THEM DOWN CAN BE DANGEROUS.

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

Not Applicable

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

Not Applicable

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

Not Applicable

UTILITIES AND RAIL CERTIFICATION NOTE

BOONE COUNTY
NHPP IM 2759(138)
FD52 008 0275 013-014
ADDRESS PAVEMENT CONDITION OF I-275 IN BOTH DIRECTIONS FROM MP 13.076 TO MP 13.7
ITEM NUMBER: 06-20005.00

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

No Rail Involvement **Rail Involved** **Rail Adjacent**

AREA FACILITY OWNER CONTACT LIST

UTILITY CONTACT INFORMATION WILL BE PROVIDED AS NEEDED AT THE PRECONSTRUCTION MEETING OR DURING CONSTRUCTION.

THE FOLLOWING RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

No Rail Involved **Minimal Rail Involved (See Below)** **Rail Involved (See Below)**

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor’s responsibility to verify all utilities and their respective locations before excavating.

BEFORE YOU DIG

UTILITIES AND RAIL CERTIFICATION NOTE

**BOONE COUNTY
NHPP IM 2759(138)
FD52 008 0275 013-014
ADDRESS PAVEMENT CONDITION OF I-275 IN BOTH DIRECTIONS FROM MP 13.076 TO MP 13.7
ITEM NUMBER: 06-20005.00**

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

Please Note: The information presented in this Utility Certification is informational and not guaranteed.

PART II
SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

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

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

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

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

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

2.3 Power.

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

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

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

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

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

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

11

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

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

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

Effective June 15, 2012

SPECIAL NOTE FOR LONGITUDINAL PAVEMENT JOINT ADHESIVE

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

2.1 Joint Adhesive. Provide material conforming to Subsection 2.1.1.

2.1.1 Provide an adhesive conforming to the following requirements:

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

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

2.2. Equipment.

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

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

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

3. CONSTRUCTION.

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

11N

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

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

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

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

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

11N

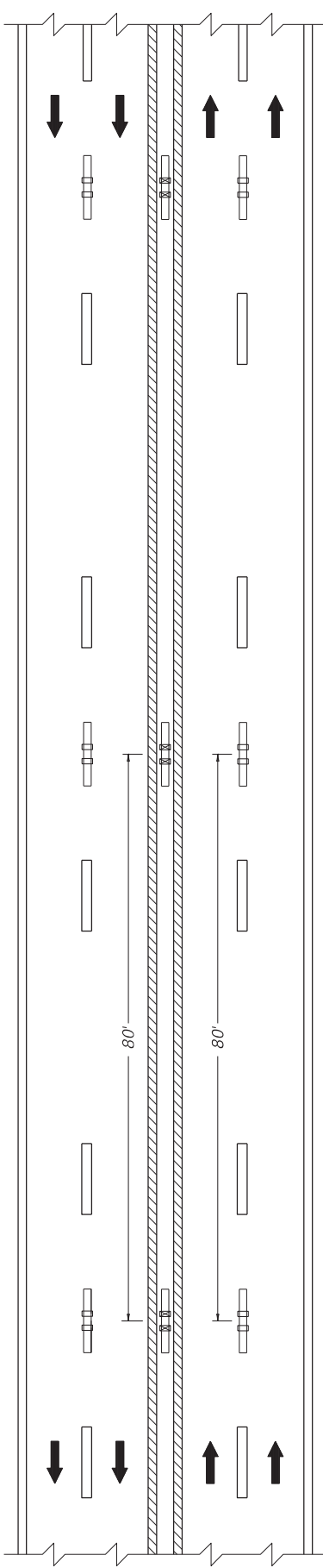
Pavement Joint Adhesive Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Joint Adhesive Referenced in Subsection 2.1.1						
Viscosity, 400 ° F (Pa•s) ASTM D 3236	4.0-10.0	3.5-10.5	3.0-3.4 10.6-11.0	2.5-2.9 11.1-11.5	2.0-2.4 11.6-12.0	≤1.9 ≥ 12.1
Cone Penetration,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

Code
20071EC

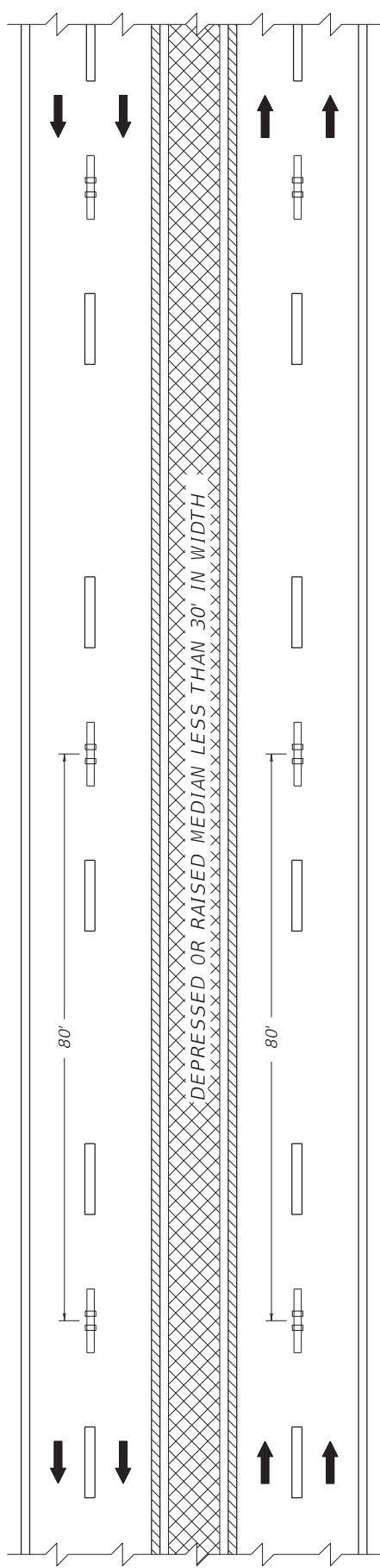
Pay Item
Joint Adhesive

Pay Unit
Linear Foot

May 7, 2014



ARRANGEMENT "A" (UNDIVIDED HIGHWAY)



ARRANGEMENT "B" (DIVIDED HIGHWAY WITH DEPRESSED OR RAISED MEDIAN LESS THAN 30' IN WIDTH)

- ~ NOTES ~
1. MARKERS INSTALLED WITH DOUBLE YELLOW CENTERLINES SHOULD BE PLACED BETWEEN THE TWO LINES.
 2. MARKERS INSTALLED ALONG LANE LINES SHOULD BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
 3. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.
 4. MARKERS SHALL BE INSTALLED AT 40' SPACING ALONG SOLID WHITE AUXILIARY LANES. MARKER COLOR SHALL MATCH THE MARKERS INSTALLED ALONG THE WHITE LANE LINES.
 BID ITEMS
 06610 - INLAID PAVEMENT MARKER - MW
 06612 - INLAID PAVEMENT MARKER - BY
 UNIT TO BID
 EACH
 EACH

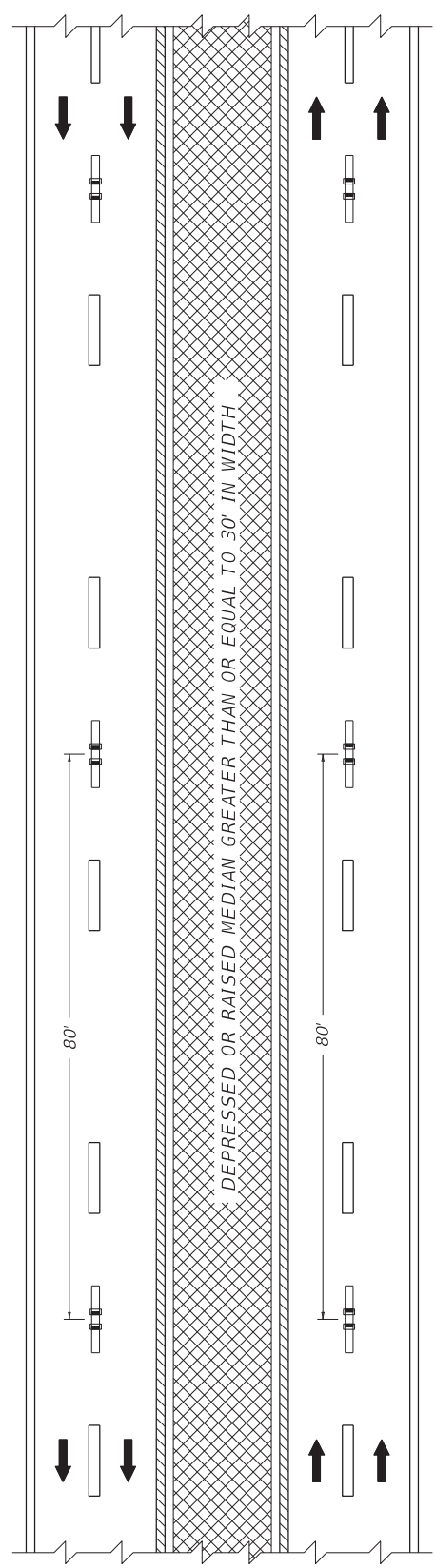
LEGEND

	BI-DIRECTIONAL PAVEMENT MARKER (YELLOW)
	MONO-DIRECTIONAL PAVEMENT MARKER (WHITE)
	MARKINGS (YELLOW)
	MARKINGS (WHITE)
	DEPRESSED OR RAISED MEDIAN

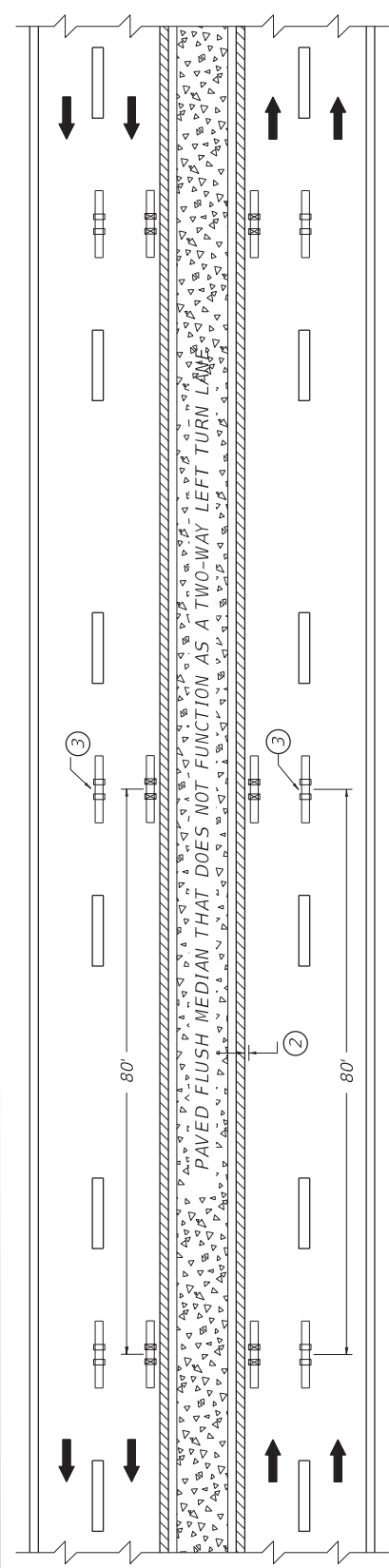
DRAWING NOT TO SCALE

KENTUCKY
DEPARTMENT OF HIGHWAYS
INLAID PAVEMENT MARKER
ARRANGEMENTS
MULTI-LANE ROADWAYS

SUBMITTED DIVISION DIRECTOR
06-09-21 DATE
006



ARRANGEMENT "C" (DIVIDED HIGHWAY WITH DEPRESSED OR RAISED MEDIAN GREATER THAN OR EQUAL TO 30' IN WIDTH)



ARRANGEMENT "D" (DIVIDED HIGHWAY WITH PAVED FLUSH MEDIAN THAT DOES NOT FUNCTION AS A TWO-WAY LEFT TURN LANE)

- ~ NOTES ~
1. MARKERS INSTALLED ALONG LANE LINES SHOULD BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
 2. MARKERS INSTALLED ALONG EDGE LINES SHOULD BE PLACED SO THAT THE NEAR EDGE OF THE GROOVE IS NO MORE THAN 1" FROM THE NEAR EDGE OF THE LINE.
 3. IF WIDTH OF PAVED FLUSH MEDIAN IS GREATER THAN OR EQUAL TO 30', BI-DIRECTIONAL (WHITE-RED) MARKERS SHALL BE USED ALONG THE LANE LINES IN LIEU OF MONO-DIRECTIONAL (WHITE) MARKERS.
 4. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.
 5. MARKERS SHALL BE INSTALLED AT 40' SPACING ALONG SOLID WHITE AUXILIARY LANES. MARKER COLOR SHALL MATCH THE MARKERS INSTALLED ALONG THE WHITE LANE LINES.
- BID ITEMS
 06610 - INLAID PAVEMENT MARKER - MW
 06612 - INLAID PAVEMENT MARKER - BY
 06613 - INLAID PAVEMENT MARKER - B W/R

LEGEND

	BI-DIRECTIONAL PAVEMENT MARKER (YELLOW)
	BI-DIRECTIONAL PAVEMENT MARKER (WHITE-RED)
	MONO-DIRECTIONAL PAVEMENT MARKER (WHITE)
	MARKINGS (YELLOW)
	MARKINGS (WHITE)
	FLUSH MEDIAN
	DEPRESSED OR RAISED MEDIAN

DRAWING NOT TO SCALE

KENTUCKY
DEPARTMENT OF HIGHWAYS
INLAID PAVEMENT MARKER
ARRANGEMENTS
MULTI-LANE ROADWAYS

SUBMITTED _____ 06-09-21
DIVISION DIRECTOR _____ DATE
Jim A.
007

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

**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.

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

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.

EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (7) provides:

No present or former public servant shall, within six (6) months following termination of his office or employment, accept employment, compensation, or other economic benefit from any person or business that contracts or does business with, or is regulated by, the state in matters in which he was directly involved during the last thirty-six (36) months of his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, or for which he received, prior to his state employment, a professional degree or license, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his tenure in state government. This subsection shall not prohibit the performance of ministerial functions, including but not limited to filing tax returns, filing applications for permits or licenses, or filing incorporation papers, nor shall it prohibit the former officer or public servant from receiving public funds disbursed through entitlement programs.

KRS 11A.040 (9) states:

A former public servant shall not represent a person or business before a state agency in a matter in which the former public servant was directly involved during the last thirty-six (36) months of his tenure, for a period of one (1) year after the latter of:

- a) The date of leaving office or termination of employment; or
- b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, 3 Fountain Place, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: January 27, 2017

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

 PER HOUR

BEGINNING JULY 24, 2009

OVERTIME PAY At least 1½ 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.
- Some state laws provide greater employee protections; employers must comply with both.
- 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.

For additional information:



1-866-4-USWAGE

(1-866-487-9243)

TTY: 1-877-889-5627



WWW.WAGEHOUR.DOL.GOV

PART IV
INSURANCE

Refer to
Kentucky Standard Specifications for Road and Bridge Construction,
current edition

PART V
BID ITEMS

PROPOSAL BID ITEMS

211347

Page 1 of 1

Report Date 10/19/21

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00100		ASPHALT SEAL AGGREGATE	2.00	TON		\$	
0020	00103		ASPHALT SEAL COAT	1.00	TON		\$	
0030	00194		LEVELING & WEDGING PG76-22	100.00	TON		\$	
0040	00342		CL4 ASPH SURF 0.38A PG76-22	1,249.00	TON		\$	
0050	02677		ASPHALT PAVE MILLING & TEXTURING	1,349.00	TON		\$	
0060	20071EC		JOINT ADHESIVE	7,737.00	LF		\$	
0070	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	6.00	TON		\$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0080	02351		GUARDRAIL-STEEL W BEAM-S FACE	100.00	LF		\$	
0090	02367		GUARDRAIL END TREATMENT TYPE 1	1.00	EACH		\$	
0100	02381		REMOVE GUARDRAIL	50.00	LF		\$	
0110	02484		CHANNEL LINING CLASS III	125.00	TON		\$	
0120	02562		TEMPORARY SIGNS	1,500.00	SQFT		\$	
0130	02575		DITCHING AND SHOULDERING	1,800.00	LF		\$	
0140	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0150	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		\$	
0160	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		\$	
0170	02696		SHOULDER RUMBLE STRIPS	7,200.00	LF		\$	
0180	02775		ARROW PANEL	2.00	EACH		\$	
0190	05950		EROSION CONTROL BLANKET	2,500.00	SQYD		\$	
0200	06511		PAVE STRIPING-TEMP PAINT-6 IN	500.00	LF		\$	
0210	06542		PAVE STRIPING-THERMO-6 IN W	4,810.00	LF		\$	
0220	06543		PAVE STRIPING-THERMO-6 IN Y	3,545.00	LF		\$	
0230	06613		INLAID PAVEMENT MARKER-B W/R	67.00	EACH		\$	
0240	20411ED		LAW ENFORCEMENT OFFICER	80.00	HOUR		\$	
0250	25075EC		QUEUE PROTECTION VEHICLE	200.00	HOUR		\$	
0260	25117EC		FURNISH QUEUE PROTECTION VEHICLES	3.00	MONT		\$	
0270	26136EC		PORTABLE QUEUE WARNING ALERT SYSTEM	3.00	MONT		\$	
0280	26137EC		QUEUE WARNING PCMS	18.00	MONT		\$	
0290	26138EC		QUEUE WARNING PORTABLE RADAR SENSORS	18.00	MONT		\$	

Section: 0003 - MOBILIZATION&DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0300	02569		DEMOBILIZATION	1.00	LS		\$	