



**CALL NO. 337**

**CONTRACT ID. 242985**

**ANDERSON COUNTY**

**FED/STATE PROJECT NUMBER FE02 003 9002 B00007L&R 61.90**

**DESCRIPTION BLUEGRASS PARKWAY (BG 9002)**

**WORK TYPE BRIDGE REPAIR MISCELLANEOUS WORK**

**PRIMARY COMPLETION DATE 1/31/2026**

**LETTING DATE: April 25,2024**

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME April 25,2024. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

**NO PLANS ASSOCIATED WITH THIS PROJECT.**

**DEFERRED PAYMENT**

**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"><li>• PROJECT(S), COMPLETION DATE(S), &amp; LIQUIDATED DAMAGES</li><li>• CONTRACT NOTES</li><li>• STATE CONTRACT NOTES</li><li>• SPECIAL NOTE(S) APPLICABLE TO PROJECT</li><li>• DOLOMITIC POLISH-RESISTANT AGGREGATE CLASS A 0.38-IN AND 0.50-IN NOMINAL ASPHALT MIXTURES</li><li>• BRIDGE DEMOLITION, RENOVATION AND ASBESTOS ABATEMENT</li><li>• ASBESTOS ABATEMENT REPORT</li></ul>
PART II	SPECIFICATIONS AND STANDARD DRAWINGS
	<ul style="list-style-type: none"><li>• STANDARD AND SUPPLEMENTAL SPECIFICATIONS</li></ul>
PART III	EMPLOYMENT, WAGE AND RECORD REQUIREMENTS
	<ul style="list-style-type: none"><li>• LABOR AND WAGE REQUIREMENTS</li><li>• EXECUTIVE BRANCH CODE OF ETHICS</li><li>• KENTUCKY EQUAL EMPLOYMENT OPPORTUNITY ACT OF 1978 LOCALITY / STATE</li><li>• PROJECT WAGE RATES / STATE FUNDED</li></ul>
PART IV	INSURANCE
PART V	BID ITEMS

**PART I**  
**SCOPE OF WORK**

## ADMINISTRATIVE DISTRICT - 07

**CONTRACT ID - 242985**

**FE02 003 9002 B00007L&R 61.90**

**COUNTY - ANDERSON**

**PCN - MB00390022401**

**FE02 003 9002 B000007**

BLUEGRASS PARKWAY (BG 9002) BRIDGE OF KY RIVER AT MP 69.10BRIDGE REPLACEMENT  
GEOGRAPHIC COORDINATES LATITUDE 37:59:06.00 LONGITUDE -84:49:23.00  
ADT

**COMPLETION DATE(S):**

COMPLETED BY 01/31/2026

APPLIES TO ENTIRE CONTRACT

## **CONTRACT NOTES**

### **PROPOSAL ADDENDA**

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

### **BID SUBMITTAL**

Bidder must use the Department's electronic bidding software. The Bidder must download the bid file located on the Bid Express website ([www.bidx.com](http://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 email to [kytc.projectquestions@ky.gov](mailto: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/construction-procurement](http://www.transportation.ky.gov/construction-procurement)). 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.

### **BOYCOTT PROVISIONS**

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

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

### **LOBBYING PROHIBITIONS**

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

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

## **1.0 BUY AMERICA REQUIREMENT.**

Follow the “Buy America” provisions as required by 23 U.S.C. § 313 and 23 C.F.R. § 635.410. Except as expressly provided herein all manufacturing processes of steel or iron materials including but not limited to structural steel, guardrail materials, corrugated steel, culvert pipe, structural plate, prestressing strands, and steel reinforcing bars shall occur in the United States of America, including the application of:

- Coating,
- Galvanizing,
- Painting, and
- Other coating that protects or enhances the value of steel or iron products.

The following are exempt, unless processed or refined to include substantial amounts of steel or iron material, and may be used regardless of source in the domestic manufacturing process for steel or iron material:

- Pig iron,
- Processed, pelletized, and reduced iron ore material, or
- Processed alloys.

The Contractor shall submit a certification stating that all manufacturing processes involved with the production of steel or iron materials occurred in the United States.

Produce, mill, fabricate, and manufacture in the United States of America all aluminum components of bridges, tunnels, and large sign support systems, for which either shop fabrication, shop inspection, or certified mill test reports are required as the basis of acceptance by the Department.

Use foreign materials only under the following conditions:

- 1) When the materials are not permanently incorporated into the project; or
- 2) When the delivered cost of such materials used does not exceed 0.1 percent of the total Contract amount or \$2,500.00, whichever is greater.

The Contractor shall submit to the Engineer the origin and value of any foreign material used.

## **2.0 – BUILD AMERICA, BUY AMERICA (BABA)**

Contractor shall comply with the Federal Highway Administration (FHWA) Buy America Requirement in 23 C.F.R. § 635.410 and all relevant provisions of the Build America, Buy America Act (BABA), contained within the Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, §§ 70901-52 enacted November 15, 2021. The BABA requires iron, steel, manufactured products, and construction materials used in infrastructure projects funded by federal financial assistance to be produced in the United States. Comply with 2 C.F.R § 184.

BABA permits FHWA participation in the Contract only if domestic steel and iron will be used on the Project. To be considered domestic, all steel and iron used, and all products manufactured from steel and iron must be produced in the United States and all manufacturing processes, including application of a coating, for these materials must occur in the United States. Coating includes all processes that protect or enhance the value of the material to which the coating is applied. This requirement does not preclude a minimal use of foreign steel and iron materials, provided the cost of such materials does not exceed 0.1% of the total contract amount under the Contract or \$2,500.00 whichever is greater.

BABA permits FHWA participation in the Contract only if all “construction materials” as defined in the Act are made in the United States. The Buy America preference applies to the following construction materials



SPECIAL NOTE – BUY AMERICA REQUIREMENTS AND BUILD AMERICA, BUY AMERICA (BABA) ACT

10/26/2023

incorporated into infrastructure projects: non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); Fiber optic cable; optical fiber; lumber; engineered wood; and drywall. Contractor will be required to use construction materials produced in the United States on this Project. The Contractor shall submit a certification stating that all construction materials are certified to be BABA compliant.

Finally, BABA permits the continuation of FHWA's current general applicability waivers for manufactured products, raw materials, and ferryboat parts, but these waivers are subject to reevaluation, specifically the general applicability waiver for manufactured products.

The Contractor has completed and submitted, or shall complete and submit, to the Cabinet a Buy America/Build America, Buy America Certificate prior to the Cabinet issuing the notice to proceed, in the format below. After submittal, the Contractor is bound by its original certification.

A false certification is a criminal act in violation of 18 U.S.C. § 1001. The Contractor has the burden of proof to establish that it is in compliance.

At the Contractor's request, the Cabinet may, but is not obligated to, seek a waiver of Buy America requirements if grounds for the waiver exist under 23 C.F.R. § 635.410(c) or will comply with the applicable Buy America requirements if a waiver of those requirements is not available or not pursued by the Cabinet.

Please refer to the Federal Highway Administration's Buy America webpage for more information.

[Buy America - Construction Program Guide - Contract Administration - Construction - Federal Highway Administration \(dot.gov\)](#)

October 26, 2023 Letting

SPECIAL NOTE – BUY AMERICA REQUIREMENTS AND BUILD AMERICA, BUY AMERICA (BABA) ACT 10/26/2023

**BUY AMERICA / BUILD AMERICA, BUY AMERICA (ACT) MATERIALS CERTIFICATE OF COMPLIANCE**

The Contractor hereby certifies that it will comply with all relevant provisions of the Build America, Buy America Act, contained within the Infrastructure Investment and Jobs Act, Pub. L. NO. 117-58, §§ 70901-52, the requirements of 23 U.S.C. § 313, 23 C.F.R. § 635.410 and 2 C.F.R § 184.

Date Submitted: \_\_\_\_\_

Contractor: \_\_\_\_\_

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

**NOTE: THIS CERTIFICATION IS IN ADDITION TO ANY AND ALL REQUIREMENTS OUTLINED IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND/OR SPECIAL NOTES CONTAINED IN THE PROJECT PROPOSAL.**

## **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

**SPECIAL NOTES  
DISTRICT NO. 7  
ANDERSON COUNTY  
BRIDGE REPAIR MISCELLANEOUS WORK  
CID 242985**

**FE02 003 9002 B00007L 61.90**

Anderson County ~ BG 9002 WB (Blue Grass Parkway) over Kentucky River

***Geographic Coordinates***

Latitude 37° 59' 06.00" (37.9851)

Longitude -84° 49' 23.00" (-84.8231)

Description:

130'-220'-230'-220' WSPG Drawing No. 15806.

**FE02 003 9002 B00007N 61.90**

Anderson County ~ BG 9002 EB (Blue Grass Parkway) over Kentucky River

***Geographic Coordinates***

Latitude 37° 59' 06.00" (37.9851)

Longitude -84° 49' 23.00" (-84.8231)

Description:

130'-220'-230'-220' WSPG Drawing No. 15806.

**SPECIAL NOTES FOR  
BRIDGE REPAIR MISCELLANEOUS WORK**

SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACTS

SPECIAL NOTE FOR CONCRETE COATING

SPECIAL NOTE CONCRETE PATCHING REPAIR

SPECIAL NOTE FOR CONCRETE SEALING

SPECIAL NOTE FOR EMBEDDED GALVANIC ANODES

SPECIAL NOTE FOR INSPECTION WALKWAY REPLACEMENT

SPECIAL NOTE FOR MAINTENANCE OF TRAFFIC

SPECIAL NOTE FOR NON-TACKING TACK COAT

SPECIAL NOTE FOR PAINTING STRUCTURAL STEEL REPAIRS

SPECIAL NOTE FOR PORTAVLE CHANGEABLE MESSAGE SIGNS

SPECIAL NOTE FOR PORTABLE QUEUE WARNING ALERT SYSTEM

SPECIAL NOTE FOR TRAFFIC QUEUE PROTECTION VEHICLE

SPECIAL NOTE FOR WATERBLASTING STRIPING REMOVAL

SPECIAL NOTE FOR CLEARING BRIDGE SITE

SPECIAL NOTE FOR BRIDGE PLANS

## **SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACTS**

### **I. COMPLETION DATE.**

The Contractor has the option of selecting the starting date for this Contract. Once selected, notify the Department in writing of the date selected at least two weeks prior to beginning work. All work is to be completed by January 31, 2026. An allotted number of Calendar days are assigned to the structure in this contract as shown below.

### **II. LIQUIDATED DAMAGES.**

Liquidated damages will be assessed to the Contractor in accordance with the Transportation Cabinet, Department of Highway's Standard Specifications for Road and Bridge Construction CE, Section 108.09, when the January 31, 2026 Completion date is exceeded.

All construction must be completed in accordance with the weather limitations specified in Section 606 and/or Section 601 as applicable. No extension of Contract time will be granted due to inclement weather or temperature limitations that occur due to starting work on the Contract or a structure late in the construction season.

## **SPECIAL NOTE FOR CONCRETE COATING**

### **I. DESCRIPTION**

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highways current Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the Contract Documents. Section references are to the Standard Specifications.

This work consists of the following:

1. Furnish all labor, materials, tools, equipment, and incidental items necessary to complete the work.
2. Provide safe access to the bridge, in accordance with Section 107.01.01, for the Engineer to sound possible repair areas and for workers to complete the construction.
3. Repair delaminated or spalled areas as applicable in accordance with the Special Note for Concrete Patching.
4. Apply Ordinary Surface Finish.
5. Prepare the surfaces to receive coating.
6. Apply concrete coating.
7. Any other work as specified as part of this contract.

### **II. MATERIALS**

**Concrete Coatings.** See The Division of Material's list of approved materials for concrete coatings and Section 821.

### **III. CONSTRUCTION**

- A. Perform Concrete Repairs.** Repair concrete surface in accordance with the Special Note for Concrete Patching Repair.
- B. Apply Ordinary Surface Finish.** In addition to new concrete, areas receiving epoxy injection, concrete patching, and other surface imperfections, including areas of minor cracking, should receive Ordinary Surface Finish in accordance with Section 601.03.18 of the Standard Specifications. Use mortar of the same cement and fine aggregate as the concrete patching, or as directed by the Engineer. Payment will be incidental to Concrete Coating.

**C. Areas to Receive Concrete Coating:**

1. Apply concrete coating to all faces of the Pier 2 and Pier 5 caps.

**D. Prepare Concrete Surfaces for Coating.** All areas specified shall be pressure washed. Equip the pressure washers with calibrated gages and pressure regulators to ascertain and regulate water pressure. All equipment for pressure washing shall be operated at a minimum pressure of up 3,500 to 4,500 psi with 0 degree spinner tip and/or fan tips as determined by the engineer at the working location with a minimum flow rate of 3.5 gal/minute provided that these pressures do not damage any components of the structure. Pressure and flow rates shall be reduced to a level satisfactory to the Engineer should any damage occur due to power washing procedures. The washing wand must be approximately perpendicular to the washed surface and within a maximum of 12 inches of the surface. Wand extensions greater than 36 inches will be subject to Division of Construction approval. Pressure washing of any bridge element will proceed from top of wash area to bottom of wash area. Perform all pressure washing at temperatures above 40 degrees Fahrenheit.

**E. Apply Concrete Coating.** All areas specified shall have concrete coating applied to as specified after debris removal and power washing. New concrete shall be allowed to properly cure in accordance with the manufacturer's recommendations prior to application. Use compressed air to remove any loose debris from the surfaces that are to be coated after power washing. All coatings shall be applied within manufacturers recommended dry film thickness range. Comply with KYTC "Standard Specifications for Road and Bridge Construction" Section 614.03.02 and coatings supplier recommended conditions for application. Allow the surfaces to be coated to dry a minimum of 24 hours before any coating is applied. The coating must be applied with 72 hours of pressure washing. The coating must be applied to a clean and dry surface. All coating application shall be executed using brushes, rollers, etc. No spray application will be permitted.

The Department requires acceptance testing of samples obtained on a per-lot basis per-shipment. The Division of Materials shall perform acceptance testing. Test samples shall be taken at the Contractor's paint storage site. Department personnel shall perform sampling. Allow (10) working days for testing and approval of the sampled paint. It is the Contractor's responsibility to maintain an adequate inventory of approved paint. The Department shall assume no responsibility for lost work due to rejection of paint or approved paint subsequently found to be defective during the application process. Perform all concrete coating application at temperatures above 40 degrees Fahrenheit or in accordance with manufactures specifications.

#### **IV. MEASUREMENT**

The Department will measure the quantity as lump sum. The Department will not measure preparation of the site for the Engineer's access or removal and reapplication of coatings that do not satisfy the Engineer's approval for payment and will consider them incidental to "Concrete Coating".



**V. PAYMENT**

The Department will make payment for the completed and accepted quantities of concrete coating under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24982EC	Concrete Coating	Lump Sum

The plans may show an estimate quantity in square feet. The Department will consider payment as full compensation for all work required as described in this note.

## SPECIAL NOTE FOR CONCRETE PATCHING REPAIR

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

### I. DESCRIPTION

Perform all work in accordance with the Department's current Standard Specifications for Roads and Bridges, and applicable Supplemental Specifications, the attached sketches, and these Notes. Section references are to the Standard Specifications.

This work consists of: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing spalled/delaminated concrete; (3) Prepare the existing surface for concrete patching; (4) Place hook fasteners and welded wire fabric over surfaces to be repaired (where applicable); (5) Apply concrete patching as specified by this note and as shown on the attached detail drawings; (6) Finish and cure the new Concrete Patches; (7) Maintain & control traffic; and, (8) Any other work specified as part of this contract.

### II. MATERIALS

- A. **Self-Consolidating Concrete.** Refer to list of approved materials or Kentucky Product Evaluation List.
- B. **Vertical and Overhead Patch Material.** From approved KYTC Division of Materials List.
- C. **Steel Reinforcement.** Use Grade 60. See Section 602.
- D. **Welded Steel Wire Fabric (WWF).** Conform to Section 811.
- E. **Hook Fasteners.** Use commercial grade galvanized hook fasteners. Minimum 3/16" diameter.

### III. CONSTRUCTION

- A. **Concrete Removal and Preparation.** The Contractor, as directed by the Engineer shall locate and remove all loose, spalled, deteriorated and delaminated concrete. Sounding shall be used to locate delaminated areas. Care shall be exercised not to damage areas of sound concrete or reinforcing steel during concrete removal operations. Concrete removal shall be in accordance with a sequence approved by the Engineer.

Concrete removal shall be accomplished by chipping with hand picks, chisels or light duty pneumatic or electric chipping hammers (not to exceed 15 lbs.). Remove all deteriorated loose concrete a minimum depth of 3/4" behind bar, and at least 1/4" greater than the largest size of aggregate in the repair mix. Care shall be taken to not damage bond to adjacent non-exposed reinforcing steel during concrete removal processes. Unless specifically *directed by the Engineer*, depth of removal shall not exceed 6 inches. The outer edges of all chipped areas shall

be saw cut to a minimum depth of 1 inch to prevent featheredging unless otherwise approved by the Engineer.

The perimeter of all areas where concrete is removed shall be saw cut at a 90° angle.

After all deteriorated concrete has been removed; the repair surface to receive concrete patching shall be prepared by abrasive blast cleaning or water blast cleaning (greater than 5,000 psi). Abrasive blast cleaning shall remove all fractured surface concrete and all traces of any unsound material or contaminants such as oil, grease, dirt, slurry, or any materials which could interfere with the bond of freshly placed concrete. The abrasive blast cleaning shall produce a Concrete Surface Profile (CSP) of a 6 or greater as per the current guidelines established by the International Concrete Repair Institute (ICRI), Technical Guideline 310.2R-2013.

The Contractor shall dispose all removed material in an approved site.

- B. Steel Reinforcement.** All corroded reinforcing steel exposed during concrete removal shall have corrosion products removed by abrasive grit blasting or wire brush whichever is more appropriate. Furnish for replacement, as directed by the Engineer, additional linear feet of steel reinforcing bars ½” diameter by 20-foot lengths. Place these bars in areas deemed by the Engineer to require additional reinforcement. Field cutting and bending is permitted. Deliver unused bars to the nearest County Maintenance Barn.

Reinforcing steel displaying deep pitting or loss of more than 20 percent of cross sectional area shall be removed and replaced. Reinforcement shall be placed such that the minimum spacing around each bar is three times the maximum aggregate size to allow for proper encapsulation with concrete patching.

Intersecting reinforcing bars shall be tightly secured to each other using tie wire and adequately supported to minimize movement during concrete placement.

- C. Concrete Repairs.** Place and finish the new concrete for the patching area in accordance with the manufacturer’s recommendations, as shown on the attached detail drawings, and as directed by the Engineer. For repairs greater than 1 square foot in surface area, the contractor must use self-consolidating repairs and use a form-and-pour technique (hand application is not allowed). Vertical and Overhead Patching material may be applied by hand troweling for repairs less than one square foot. The Engineer shall approve the Contractor’s method of placing and consolidating the concrete prior to the beginning of this operation.

- D. Curing.** On completion of finishing operation, patching concrete shall immediately be prevented from drying out and cracking by fogging, wetting,

and/or any appropriate method approved by the Engineer. Curing shall continue for the duration recommended by the product manufacturer.

- E. Quality Control/Testing.** After completion of the curing, tensile bond testing shall be performed. The testing shall be in accordance with ICRI Technical Guideline 210.3R and ASTM C1583/C1583M. Up to one location per substructure unit and one location per span shall be performed, as directed by the Engineer. Repair of the test areas is to follow the guidance in this note. No additional payment will be made for testing or for the repair of testing locations.

Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his bid and shall thoroughly familiarize 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. Quantities given are approximate. The quantity for "Concrete Patching Repair" shall be bid with the contingency that quantities may be increased, decreased, or eliminated by the Engineer. Dispose of all removed material entirely away from the job site as approved by the Engineer. This work is incidental to the contract unit price for "Concrete Patching Repair".

#### **IV. MEASUREMENT**

- A. Concrete Patching Repair.** The Department will measure the quantity per square feet of each area restored. Double payment will not be made on both faces of corner repairs.
- B. Steel Reinforcement.** See Section 602. Steel reinforcement will not be measured for payment but shall be considered incidental to "Concrete Patching Repair".

#### **V. PAYMENT**

- A. Concrete Patching Repair.** Payment at the contract unit price per square feet is full compensation for the following: (1) Furnish all labor, materials, tools, equipment; (2) preparation of specified areas including removing and disposing of specified existing materials; (3) place, finish and cure new concrete patches; and (4) all incidentals necessary to complete the work as specified by this note and as shown on the attached detail drawings.
- B. Steel Reinforcement.** See Section 602.

The Department will consider payment as full compensation for all work required by these notes and detail drawings.

### SPECIAL NOTE FOR CONCRETE SEALING

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

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

This work consists of:

1. Furnish all labor, materials, tools, equipment, and incidental items necessary to complete the work.
2. Provide safe access to the bridge, in accordance with Section 107.01.01, for the Engineer to sound possible repair areas and for workers to complete the construction.
3. Repair delaminated or spalled areas as applicable in accordance with the Special Note for Concrete Patching.
4. Apply Ordinary Surface Finish.
5. Prepare the surfaces to receive sealing.
6. Apply concrete sealing.
7. Any other work as specified as part of this contract.

**II. MATERIALS.**

**A. Sealer.** Use one of the following:

<b>Product</b>	<b>Supplier</b>
Protectosil BHN	Evonik Industries
Protectosil 300S	Evonik Industries
TK-590-40 Tri-Silane 40%	TK Products
SW-244-100	Chemical Products Industries, Inc.
TK-590-1 MS Tri-Silane	TK Products
MasterProtect H1000	BASF
Aquanil Plus 40	ChemMasters
SIL-ACT ATS-100	Advanced Chemical Technologies
Certivex Penseal BTS 100%	Vexcon
Pentreat 244-40	W.R. Meadows
Aquanil Plus 40A	ChemMasters

- B. Coverage Rate:** Follow all manufacturers recommendations for coverage rates except the application rate must not exceed the square footage coverage rate per gallon of sealer as given in the chart below. If the manufacturer recommends a coverage rate greater than given in the table below, apply sealer at the rate given in the table below for the chosen sealers silane percentage.

% Silane	Coverage rate (ft <sup>2</sup> /gallon)
100	300
40	120
20	60

**III. CONSTRUCTION.**

- A. Perform Concrete Repairs.** Repair concrete surface in accordance with the Special Note for Concrete Patching.
- B. Curing Compound.** Contrary to Section 609.03.12 of the specifications, curing compound is not to be used on the deck due to potentially causing issues with the concrete sealer. During the deck pour, finishing, and tining operations the Class AA concrete shall be kept continuously moist with the use of a mister until burlap or curing blankets are applied to the surface. At no point should water be pooling or running off the surface or the surface of the concrete be allowed to become dry. After the burlap or curing blankets are installed, cure in accordance with the specifications. Include all costs in the unit price bid for Class AA concrete. Failure to properly cure the concrete in accordance with this note and the specifications may result in weakened or cracked concrete. If the concrete is weakened or cracked due to improper curing, the contractor will be responsible for providing alternates to fix the issues to the Engineer for review and the contractor will be solely responsible for all costs to do so, up to complete replacement. Do not begin any construction on fixing any issues without approval of the Engineer.
- C. Apply Ordinary Surface Finish.** In addition to new concrete, areas receiving epoxy injection, concrete patching, and other surface imperfections, including areas of minor cracking, should receive Ordinary Surface Finish in accordance with Section 601.03.18 of the Standard Specifications. Existing structural items not newly placed, patched, or repaired may be exempt from Ordinary Surface Finish. Use mortar of the same cement and fine aggregate as the concrete patching, or as directed by the Engineer. Payment will be incidental to Concrete Sealing. Finish surface of bridge decks in accordance with Section 609 of the Standard Specifications.
- D. Areas to Receive Concrete Sealing:**
  - 1. Every exposed surface above the groundline of the Pier 2 and Pier 5 columns and struts.
  - 2. All exposed surfaces of the barrier walls, parapets, curbs, and underside of deck overhang.

3. If the contract documents include the Special Note for Concrete Coating, do not apply concrete sealer to the areas where Concrete Coating is specified.
- E. Cleaning the Concrete Surfaces to be sealed.** Dry clean the concrete to remove all loose debris. Remove all visible hydrocarbons from the surface with detergent approved by the manufacturer of the deck sealant. Pressure wash all surfaces to be sealed at 2000 to 3000 psi. Install pressure gauges at each wand to verify pressure. Use 30° fan tip or as recommended by the manufacturer of the sealant. Hold pressure washing wand a minimum of 45° from the surfaces with a maximum stand-off distance of 12 inches.
- F. Sealing the Concrete.** Allow new concrete to cure a minimum 28 days prior to application of sealer. Monitor weather conditions prior to sealer application. Refer to manufacturer's recommendations for proper ambient conditions. Do not apply sealer if precipitation is anticipated within the time stated by the manufacturer. Allow the concrete to dry 24 hours (after washing or rain event) before sealer application. The bridge deck can be reopened to traffic while drying. Sealer must be applied within 48 hours of washing or the concrete must be rewashed. Divide the concrete into predefined areas of specific square footage to aid in determining usage. Comply with manufacturer's usage recommendation. Using a low-pressure pump, apply sealer and spread evenly with broom or squeegee; do not allow pooling to remain. When each predefined area is complete, measure the amount of sealer used to verify proper usage. After sealing, follow manufacturer's recommended cure time before opening to traffic. On vertical surfaces, apply the sealer in a flooding application from the bottom up, so the material runs down 6 to 8 inches below the spray pattern.
- G. Inspection:** Monitor all aspects of the project to assure compliance to this specification. Observe and document general conditions during the entirety of the project. Verify that each phase of work has been satisfactorily completed prior to beginning the next phase. Phases are described as follows:
1. Dry cleaning to remove loose debris, verify and document:
    - a. All debris has been removed and disposed of properly.
  2. Removal of hydrocarbons, verify and document:
    - a. The manufacturer's recommended detergent is used for removal.
    - b. Hydrocarbons have been satisfactorily removed.
  3. Pressure washing, verify and document:
    - a. Washing pressure at the wand.
    - b. Tip size used.
    - c. Wash angle and stand-off distance.
    - d. The concrete is satisfactorily cleaned.
  4. Sealer application, verify and document:
    - a. Proper cure time for new concrete.
    - b. Concrete surface is dry.
    - c. Document time since washed.
    - d. Was the bridge deck opened to traffic after washing?

- e. Document ambient temperature, surface temperature, relative humidity, and dew point.
- f. Application and distribution method.
- g. Coverage to be complete and even.
- h. Material is not allowed to remain pooled.
- i. Monitor material usage.
- j. No traffic on the bridge decks until proper cure time is allowed.

**IV. MEASUREMENT**

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

**V. PAYMENT**

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



## **SPECIAL NOTE FOR EMBEDDED GALVANIC ANODES**

### **I. DESCRIPTION**

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's current Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the Contract Documents. Section references are to the Standard Specifications.

The work under this section shall consist of furnishing all labor, tools, materials, equipment, and services necessary to properly install embedded galvanic anodes.

Embedded galvanic anodes are designed to provide localized corrosion protection. When placed at the appropriate spacing along the perimeter of concrete patches or along the interface between new/existing concrete, the anodes mitigate active corrosion and the formation of new corrosion sites in the adjacent existing concrete.

### **II. REFERENCES**

- A. ACI 222R-19 – Guide to Protection of Reinforcing Steel in Concrete against Corrosion (2019)
- B. ASTM B418-16a – Standard Specification for Cast and Wrought Galvanic Zinc Anodes (2021)
- C. ICRI Guideline 310.1R – Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion (2008)

### **III. ADDITIONAL SOURCES OF INFORMATION**

The following publications provide further guidance regarding the use of galvanic anodes in concrete protection applications.

- A. ACI RAP Bulletin 8 – Field Guide to Concrete Repair Application Procedures: Installation of Embedded Galvanic Anodes (2010)
- B. ISO 12696 – Cathodic Protection of Steel in Concrete (2016)

### **IV. MATERIALS**

#### **1. Embedded Galvanic Anodes**

Use a product in any appropriate phase of review in the Kentucky Product Evaluation List (KYPEL). <http://kypel.engr.uky.edu/Login.aspx/>. Phase explanations can be found at <http://kypel.engr.uky.edu/PhaseExplanation.aspx> . Product chosen must be submitted and approved by the Engineer before use.

Embedded galvanic anodes shall meet the following requirements:

- A. The anode shall have approximate dimensions of 1.3 in. x 1.38 in. x 5.12 in.
- B. The anode shall be pre-manufactured.
- C. The zinc core shall consist of a minimum of 5.6 oz (160 grams) of zinc in compliance with ASTM B418 Type II.

- D. The zinc core shall be cast around an integral un-spliced, uncoated, non-galvanized double loop steel tie wire in compliance with ASTM A1064 for wrapping around the reinforcing steel and twisting to provide a durable steel-to-steel connection between the tie wire and the reinforcing steel.
- E. The zinc core shall be encased in a highly alkaline cementitious shell with a pH of 14 or greater.
- F. The anode shall contain no added constituents that are corrosive to reinforcing steel or detrimental to concrete according to ACI 222R, e.g. Chloride, bromide, sulfates, etc.
- G. The anode service life shall provide be a minimum of 20 years.

## **2. Patching Materials**

In addition to the requirements of the Special Note for Concrete Patching Repair, the patching material used to patch areas repaired using embedded galvanic anodes shall meet the following requirements:

- A. The mortar shall be an ionically conductive, cement-based repair mortar or concrete.
- B. Non-conductive repair materials such as epoxy, urethane, or magnesium phosphate shall not be permitted.
- C. Insulating materials such as epoxy bonding agents shall not be used unless otherwise called for in the design.

## **3. Storage**

Deliver, store, and handle all materials in accordance with manufacturer's instructions. Anode units shall be stored in dry conditions in the original unopened containers in a manner to avoid exposure to extremes of temperature and humidity.

# **V. CONSTRUCTION**

## **1. Submittals**

The Contractor shall submit installation and product data for the galvanic anode system including the following information:

- A. Provide details and notes for connection of anodes to the existing reinforcing.
- B. The high-purity zinc anode contains an alkali-activated mortar with a pH of 14 or greater.
- C. The anode unit does not contain any corrosive constituents detrimental to reinforcing steel, e.g. chloride, sulfate, bromide, etc.
- D. Proven track record of the anode technology showing satisfactory field performance with a minimum of three projects of similar size and application.
- E. Independent third-party evaluation of the anode technology, e.g. Hitec, Concrete Innovations Appraisal Service, BRE, etc.

## **2. Personnel**

- A. The contractor shall enlist and pay for the services of a cathodic protection technician (CPT) working under the direction of a cathodic protection specialist (CPS) certified by NACE International with documented experience in design and installation Quality Control of cathodic protection systems for reinforced concrete. The CPT shall be provided by the anode Manufacturer. CPT shall have a minimum of five years of documented experience installing cathodic protection systems for reinforced concrete.
- B. The contractor shall coordinate its work schedule with the designated CPT to allow for installation training during project startup and initial anode installation.
- C. The CPT shall be responsible for training the contractor's employees and State personnel in the following areas:
  - a. Anode storage and handling safety precautions.
  - b. Verification of reinforcing steel electrical continuity and electrical continuity corrections.
  - c. Anode installation process.
- D. The CPT shall prepare and submit to the Contractor a letter report certifying that the installation training has been completed containing the date(s) when training occurred, the names of personnel trained, and that the individuals demonstrated competency in the various aspects of the installation and quality control procedures.

## **3. Concrete Removal**

- A. Remove loose or delaminated concrete as per the requirements of the Special Note for Concrete Patching Repair.
- B. Undercut all exposed reinforcing steel by removing concrete from the full circumference of the steel as per ICRI R370.1R. The minimum clearance between the concrete substrate and the reinforcing steel shall be 3/4 in. or 1/4 in. larger than the top size aggregate in the repair material, whichever is greater.

## **4. Cleaning and Repairing Reinforcing Steel**

- A. Clean exposed reinforcing steel of rust, mortar, etc. to provide sufficient electrical connection and mechanical bond.
- B. If significant reduction in the cross section of the reinforcing steel has occurred, replace or install supplemental reinforcement as directed by the Engineer.
- C. Secure loose reinforcing steel by tying tightly to other bars with steel tie wire.
- D. Verify electrical continuity of all reinforcing steel, including supplemental steel, as per Section 6 below.

## **5. Surface Conditioning of Concrete**

- A. Concrete patches shall be square or rectangular in shape with square corners per ICRI Guideline 310.1R.
- B. Saw cut boundaries shall be as per the requirements of the Special Note for Concrete Patching Repair.

- C. Create a clean, sound substrate by removing bond-inhibiting materials in the patch area with high pressure water blasting or abrasive materials. All waste materials shall be collected and disposed of away from site or as approved by the Engineer.

#### **6. Electrical Continuity**

- A. Confirm electrical connection between the anode tie wire and reinforcing steel by measuring DC resistance (ohm W) or DC potential (mV) with a multi-meter. Electrical connection is acceptable if the DC resistance measured with the multi-meter is 1 W or less or the DC potential is 1 mV or less.
- B. Confirm electrical continuity of the exposed reinforcing steel within the repair area. Electrical continuity shall be established by tying discontinuous steel to continuous steel using steel tie wire when necessary. Electrical continuity within the repair area is acceptable if the DC resistance measured with multi-meter is 1 W or less or the potential is 1 mV or less.

#### **7. Galvanic Anode Installation**

- A. Galvanic anodes shall be installed along the perimeter of the patch area at a maximum spacing of approximately 16 inches on center above the top of the pier strut and 24 inches on center below the top of the pier strut. The Engineer may need to adjust the number of anodes in the repair based on changes in the reinforcement density and level of chloride in the concrete.
- B. Place the galvanic anodes as close as possible to the interface with the parent concrete (maximum 4 in.) while still providing sufficient clearance between anodes and substrate to allow the repair material to fully encase the anode.
  - a. If bar fit grooves are provided, place the anode so that the groove fits along the bar.
  - b. The anodes shall be installed such that there is at least 1 in. of concrete cover.
  - c. If less than 1 in. (25 mm) of concrete cover is expected, place anode beneath the bar and secure to clean reinforcing steel.
- C. Wrap the tie wires around the clean reinforcing steel at least one full turn in opposite directions and bring the two free ends together and twist tight to create a secure electrical connection and allow no anode movement during concrete placement. Electrical continuity of the anodes and existing reinforcing steel network shall be confirmed by the Engineer prior to form installation.
- D. Install anodes and concrete patch material promptly after preparation of the patch area substrate and reinforcement. Anodes shall not be exposed to water for longer than 20 minutes.

#### **8. Patching Material Installation**

Place patching material as per the requirements of the Special Note for Concrete Patching Repair.

## **VI. MEASUREMENT**

- A. **Galvanic Anode.** The embedded galvanic anodes will be individually measured for payment. The quantity of anodes listed on the plans is estimated based on the estimated size of the concrete patches. The areas of patching were determined from inspection and are shown on the plans. The final locations and number of anodes required shall be as determined by the Engineer.

## **VII. PAYMENT**

- A. **Galvanic Anode.** Payment at the contract unit price per each is full compensation for materials, installation, and all incidental items necessary to complete the work in accordance with this Special Note and as shown on the plans.

## SPECIAL NOTE FOR INSPECTION WALKWAY REPLACEMENT

### I. DESCRIPTION

Perform all work in accordance with the Department's current Standard Specifications and applicable Supplemental Specifications, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following:

- (1) Furnish all labor, materials, tools, and equipment
- (2) Remove existing inspection walkway as specified in detail drawings
- (3) Install new inspection walkway as specified in the attached detail drawings
- (4) Install new inspection walkway gate
- (5) Any other work specified as part of this contract

### II. MATERIALS

- A. Inspection Walkway Grating.** Use Grip Strut 12 ga., 24" wide steel grating with 4½" deep side channels, hot-dipped and mill galvanized after fabrication.
- B. Structural Steel (HSS sections, tees, channels, angles, and plates).** Use AASHTO M270 (ASTM A709) Grade 36 steel, galvanized unless noted on the attached detail drawings. The Engineer will base acceptance on visual inspection.
- C. High Strength Bolts, Nuts, and Washers.** Ensure all 5/8" bolted connections are AASHTO M164 (ASTM A325) galvanized high strength bolts, nuts, and locking washers.
- D. Low-Carbon Steel Bolts.** Ensure all 3/8" bolted connections are ASTM A307 galvanized bolts, nuts, and washers.
- E. Anchoring Device Clips.** Use Diamond Washer 12262 designed for use with the grip strut grating. Attach with 5/16" carriage head bolts galvanized in accordance with ASTM A153. Use galvanized locking washers and nuts.
- F. Pipe Rail.** Use 2" nominal dia. galvanized grade A standard weight pipe (ASTM A53).

### III. CONSTRUCTION

- A. Dimensions.** Dimensions shown on these plans are approximate. The Contractor shall verify elevations and dimensions, including thickness of parts, with field measurements prior to ordering materials or fabricating steelwork.
- B. Shop Plans.** Shop plans are required in accordance with the Standard Specifications.
- C. Remove Existing Materials.** Remove existing materials as shown on the attached detail drawings. Dispose of all removed material away from the job site. This work will be incidental to the contract unit price for "Inspection Walkway Replacement".
- D. Field Prepare Existing Surfaces.** Clean surfaces of steel to be welded until free of all corrosion, debris, and deleterious substances.

- E. Installation.** Install new inspection hanger assemblies, walkway grating, pipe rail supports, pipe rail, and walkway gate as shown on the attached detail drawings and in accordance with Section 607.
- F. Prohibited Field Welding.** No welding of any nature shall be performed on the bridge except as shown on the attached drawings without the written consent of the Director, Division of Bridge Design, and then only in the manner and at the locations designated in the authorization.
- G. Welding Specifications.** All welding and welding materials shall conform to "Joint Specification ANSI/AASHTO/AWS D1.5M-D1.5-2008 Bridge Welding Code". Modification and additions as stated on the plans and Special Provision for Welding Steel Bridges shall supersede the Joint Specifications. The cost of welding, welding materials, straightening, altering, and burning new or existing steel shall be included in the unit price bid for the appropriate items.
- H. Lead Paint.** Residual lead paint may be on the bridge even through previous sandblastings and painting of the bridge. The Contractor is advised to take all necessary protective measures when removing, cutting, or performing any other actions on the existing steel.
- I. Damage to the Structure.** The Contractor shall bear full responsibility and expense for any and all damage to the structure, should such damage result from the Contractor's actions.
- J. Touch-Up Painting.** All new steel and areas of existing non-galvanized structural steel on which the paint has been damaged by the Contractor with weld burns or by other means during construction, shall be wire brush cleaned and spot painted accordance with Section 607.03.23 "Cleaning and Painting Structural Steel Bridges". Paint color shall closely match color of existing paint. The cost of this touch-up painting is to be included in the price bid for appropriate items.

#### IV. MEASUREMENT

- A. Inspection Walkway.** Measurement will be per linear foot of walkway grating installed.

#### V. PAYMENT

- A. Inspection Walkway.** Payment at the contract unit price is full compensation for removing and disposing of specified existing materials, drilling reaming, cutting, welding, all new materials (including walkway gate, galvanized structural steel, structural steel, galvanized pipe rail, bolts, nuts, and washers), labor, equipment, tools, and incidentals necessary to complete the work as shown on the attached detail drawings and in accordance with Section 607.

The Department will consider payment as full compensation for all work required by this note and the attached detail drawings.

## SPECIAL NOTE FOR MAINTENANCE OF TRAFFIC

1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE STANDARD DRAWINGS, CURRENT EDITIONS.

2. 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" AS SET FORTH IN THE CURRENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION UNLESS OTHERWISE PROVIDED FOR IN THESE NOTES. THE LUMP SUM BID TO "MAINTAIN AND CONTROL TRAFFIC" SHALL ALSO INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING ITEMS AND OPERATIONS:

- A. ALL GRADING (UNLESS A BID ITEM FOR DETOUR CONSTRUCTION IS INCLUDED) FOR THE ROADWAY. IF A BID ITEM FOR DETOUR CONSTRUCTION IS INCLUDED, GRADING WILL BE PAID FOR IN THE BID ITEM "DETOUR CONSTRUCTION".
- B. ALL LABOR AND MATERIALS NECESSARY FOR CONSTRUCTION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES AND MARKINGS.
- C. ALL FLAG PERSONS AND TRAFFIC CONTROL DEVICES SUCH AS, BUT NOT LIMITED TO, FLASHERS, SIGNS, BARRICADES AND VERTICAL PANELS, PLASTIC DRUMS (STEEL DRUMS WILL NOT BE PERMITTED) AND CONES NECESSARY FOR THE CONTROL AND PROTECTION OF VEHICULAR AND PEDESTRIAN TRAFFIC AS SPECIFIED IN THESE NOTES, THE PLANS, THE MUTCD OR THE ENGINEER.

3. ANY TEMPORARY TRAFFIC CONTROL ITEMS, DEVICES, MATERIALS, AND INCIDENTALS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR WHEN NO LONGER NEEDED.

4. THE CONTRACTOR SHALL MAINTAIN INGRESS AND EGRESS TO ALL PROPERTIES WITHIN THE PROJECT LIMITS AT ALL TIMES.

5. THE CONTRACTOR SHALL COMPLETELY COVER ANY SIGNS, EITHER EXISTING, PERMANENT OR TEMPORARY, WHICH DO NOT PROPERLY APPLY TO THE CURRENT TRAFFIC PHASING AND SHALL MAINTAIN THE COVERING UNTIL THE SIGNS ARE APPLICABLE OR ARE REMOVED. ALL TEMPORARY SIGNS SHALL BE MAINTAINED DURING CONSTRUCTION.

6. IN GENERAL, ALL TRAFFIC CONTROL DEVICES SHALL BE PLACED STARTING AND PROCEEDING IN THE DIRECTION OF THE FLOW OF TRAFFIC AND REMOVED STARTING AND PROCEEDING IN THE DIRECTION OPPOSITE THE FLOW OF TRAFFIC.



7. THE ENGINEER AND THE CONTRACTOR, OR THEIR AUTHORIZED REPRESENTATIVES, SHALL REVIEW THE SIGNING BEFORE TRAFFIC IS ALLOWED TO USE ANY LANE CLOSURES, CROSSOVERS OR DETOURS. ALL SIGNING SHALL BE APPROVED BY THE ENGINEER BEFORE WORK CAN BE STARTED BY THE CONTRACTOR.

8. IF THE CONTRACTOR DESIRES TO DEVIATE FROM THE TRAFFIC CONTROL SCHEME AND CONSTRUCTION SCHEDULE OUTLINED IN THESE PLANS AND THIS PROPOSAL, HE SHALL PREPARE AN ALTERNATE PLAN AND PRESENT IT IN WRITING TO THE ENGINEER. THIS ALTERNATE PLAN CAN BE USED ONLY AFTER REVIEW AND APPROVAL.

9. IF TRAFFIC SHOULD BE STOPPED DUE TO CONSTRUCTION OPERATIONS AND AN EMERGENCY VEHICLE ON AN OFFICIAL EMERGENCY RUN ARRIVES AT THE SCENE, THE CONTRACTOR SHALL MAKE THE PROVISIONS NECESSARY FOR THE SAFE PASSAGE OF THAT VEHICLE AS QUICKLY AS POSSIBLE.

10. THE CONTRACTOR SHALL PROVIDE A MINIMUM CLEAR LANE WIDTH OF 12 FEET.

11. THE RELOCATION OF SIGNS FOR MAINTENANCE OF TRAFFIC DURING CONSTRUCTION, INCLUDING MOUNTING HARDWARE AND POSTS, SHALL BE INCIDENTAL TO OTHER ITEMS OF WORK. CHANGES IN THE TRAFFIC CONTROL PLAN WILL REQUIRE APPROVAL OF THE ENGINEER.

12. ALL BARRELS/DRUMS MAY BE ALLOWED FOR LONG TERM USE AND ARE TO BE SPACED NO MORE THAN 50 FEET APART DURING ALL PHASES OF CONSTRUCTION AS SHOWN ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER. GRABBER CONES CAN ONLY BE USED IF REMOVED DAILY.

13. WORK WILL BE PERMITTED EACH DAY DURING THE WEEK.

14. THE POSTED SPEED LIMIT DURING CONSTRUCTION WILL BE 55 MPH.

15. DURING EACH CONSTRUCTION PHASE THE CONTRACTOR SHALL CONSTRUCT EROSION CONTROLS AT RUNOFF DISCHARGE POINTS AND/OR ANY LOCATIONS THAT SEDIMENT MAY LEAVE THE PROJECT SITE. UTILIZE TEMPORARY DIVERSION DITCHES AS NECESSARY TO DIRECT FLOW TO THE TEMPORARY EROSION CONTROLS.

16. 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, CURRENT EDITION. 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, MAINTAIN THE SIGNING AND DEVICES, AND RELOCATE PORTABLE CHANGEABLE MESSAGE SIGNS AS QUEUE LENGTHS CHANGE. THE PERSONNEL WILL HAVE ACCESS ON THE PROJECT TO A RADIO OR TELEPHONE TO BE USED IN CASE OF EMERGENCIES OR ACCIDENTS.

<u>CODE</u>	<u>PAY ITEM</u>	<u>PAY UNIT</u>
02650	MAINTAIN & CONTROL TRAFFIC	LUMP SUM

### 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 <sup>1</sup> , %	50 min.	AASHTO T 59
Oil Distillate, %	1.0 max.	AASHTO T 59
Residue Penetration, 77 ° F	0 - 30	AASHTO T 49
Original Dynamic Shear (G*/sin δ), 82 ° C	1.0 min.	AASHTO T 315
Softening Point, ° F	149 min.	AASHTO T 53
Solubility, %	97.5 min.	AASHTO T 44

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

2.2. Equipment. Provide a distributor truck capable of heating, circulating, and spraying the tack between 170 °F and 180 °F. Do not exceed 180 °F. Circulate the material while heating. Provide the correct nozzles that is recommend by the producer to ensure proper coverage of tack is obtained. Ensure the bar can be raised to between 14” and 18” from the roadway.

2.3. Personnel. Ensure the tack supplier has provided training to the contractor on the installation procedures for this product. Make a technical representative from the supplier available at the request of the Engineer.

3. CONSTRUCTION.

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

3.2 Non-tracking Tack Application. Placement of non-tracking tack is not permitted from October 1<sup>st</sup> to May 15<sup>th</sup>. 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 1<sup>st</sup> to May 15<sup>th</sup>. During this timeframe, the department will allow the use of an approved asphalt emulsion in lieu of a non-tracking tack product but will not adjust the unit bid price of the material. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

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

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

Revised: May 23, 2022

## **SPECIAL NOTE FOR PAINTING STRUCTURAL STEEL REPAIRS**

### **I. DESCRIPTION**

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings (Current Editions), this Note, and the attached Contract Documents. Section references are to the Standard Specifications.

This work consists of the following:

- (1) Furnish all labor, materials, tools, equipment, and incidental items necessary to complete the work.
- (2) Provide safe access to the bridge, in accordance with Section 107.01.01, for the Engineer to sound possible repair areas and for workers to complete the construction.
- (3) Clean and prime the existing structural steel in accordance with this note and the attached detail drawings.
- (4) Prepare and prime the new structural steel in accordance with this note and the attached detail drawings.
- (5) Any other work specified as part of this contract.

### **II. MATERIALS**

- A. Paint.** Conform to Section 607.

### **III. CONSTRUCTION**

- A. Clean and Prime Existing Structural Steel.** All existing faying surfaces where new steel is to be installed shall be cleaned and receive the prime coat as specified in Section 607 before any new steel is installed. Level of cleaning shall be to an SSPC-SP 15 (Commercial Grade Power Tool Cleaning). All Power tools shall be equipped with vacuum shrouds and fitted with HEPA filters at their air exhausts. Maintain and operate all vacuum shrouded power tools to collect generated debris.
- B. Prepare and Prime New Structural Steel.** All new structural steel painting shall be in accordance with Section 607. New structural steel shall receive shop surface preparation and shop applied prime coating. Necessary touch up/repair of the shop applied prime coat on the new steel may be performed in the field. Faying surfaces shall receive only the prime coat. Necessary touch up/repair of the shop applied prime coat on the new steel may be performed in the field.
- C. Lead Paint**  
Residual lead paint may be on the bridge even through previous sandblastings and painting of the bridge. The Contractor is advised to take all necessary protective measures including worker safety and environmental regulations when performing surface preparation. The Department will not consider any claims based on residual lead paint.

#### **IV. MEASUREMENT**

All items of work necessary to complete cleaning and painting as specified in this Note shall be considered incidental to the unit prices bid for the repairs being completed.

#### **V. PAYMENT**

The Department will make payment for the completed and accepted quantities of cleaning and painting structural steel repairs as part of the unit prices for the repairs being completed. The Department will consider payment as full compensation for all work required.

### **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.

#### **2.0 MATERIALS.**

**2.1 General.** Use LED or flip disk/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) Allow direct wiring for operation of the sign or arrow board from an external power source when desired.
- 7) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
- 8) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
- 9) 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.
- 10) 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.
- 11) Provide a flat black UV protected coating on the sign hardware, character PCB, and appropriate lens areas.



11

- 12) Provide a photocell control to provide automatic dimming.
- 13) Allow an on-off flashing sequence at an adjustable rate.
- 14) Provide a sight to aim the message.
- 15) Provide a LED display color of approximately 590 nm amber.
- 16) 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 Requirements for Flip-Disc Type Signs.** Flip-disc type signs will have the following additional requirements:

- 1) Disc faces are fluorescent yellow on one side, and flat black on the reverse.
- 2) Discs are at least 3.5 square inches with a minimum character size of 5 discs horizontally by 7 discs vertically.
- 3) Discs are designed to operate without lubrication for at least 200 million operations.
- 4) Line change speed of 600 milliseconds or less.
- 5) When power is lost, the sign automatically becomes blank or displays a preprogrammed default message.

#### **2.4 Power.**

- 1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. 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.
- 2) Diesel Power Source. Ensure the following is provided for:
  - a) At least 24 spare bulbs available on the project for quick replacement of burned out bulbs.
  - b) Black light at both top and bottom of each line to illuminate discs for visibility at night or under adverse weather conditions, for flip disk signs.
  - c) Diesel generator and electric start assembly, including batteries and a fuel capacity adequate to provide at least 72 hours continuous operation without refueling.
  - d) Fuel gage.
  - e) Provide all other specific features, such as bulb size, protection from sun glare, and shock protection for electronics and bulbs, to the

11

satisfaction of the Engineer.

**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. Unless the Contract specifies flip-disk signs, use Class I signs on interstates and parkways.

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 or disk.

When the sign is not needed, move it outside the clear zone or where the Engineer directs.

**4.0 MEASUREMENT.** The final quantity of Variable Message Sign will be the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

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

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

January 1, 2008

## 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 2<sup>nd</sup> 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

10W

**SPECIAL NOTE FOR WATERBLASTING STRIPING REMOVAL**

This Special Note will apply where indicated on the plans or in the proposal. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

**1.0 DESCRIPTION.** Remove pavement striping, temporary or permanent, from asphalt or concrete pavement using ultra-high pressure water.

**2.0 MATERIALS AND EQUIPMENT.**

**2.1 Truck Mounted Ultra-high Pressure Pump and Water Tank.** Use a truck having a separate hydrostatic transmission capable of speed increments of ±1 foot per minute at operator's discretion. Use a pump capable of delivering a minimum of 30,000 psi to a bumper mounted deck containing an operator controlled rotating manifold that is speed variable up to at least 3,000 rpm and accepts interchangeable waterjet nozzles. Provide all necessary waterjet nozzle setups and patterns to ensure clean sufficient removal. Ensure the deck's discharge directs the water and removal material in a manner that is not hazardous to vehicles or pedestrians.

**2.2 Water.** Conform to Section 803.

**3.0 CONSTRUCTION.** Before starting work, provide the Engineer with a contractor work history of 2 projects where striping removal was completed acceptably for a similar type of pavement. If no history is available, complete 1,000 linear feet of striping removal and obtain the Engineer's approval before continuing.

Conduct striping removal under lane closures meeting the conditions of the MUTCD and Kentucky Standard Drawings and Specifications. Waterblast to remove temporary or permanent striping completely as the Engineer directs. Do not damage the pavement in any way and protect all joint seals. If damage is observed, stop the removal process until the operator can make changes and demonstrate acceptable striping removal. Repair any damage to the pavement. Vacuum all marking material and removal debris concurrently with the blasting operation.

**4.0 MEASUREMENT.** The Department will measure the quantity in linear feet. When the removal area's width exceeds 8 inches and a second pass is required, the Department will measure the length of the additional pass for Payment. The Department will not measure for payment additional passes for widths of 8 inches or less or passes to further eradicate markings. The Department will not measure repair of damaged pavement for payment and will consider it incidental to this item of work.

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

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
---	Waterblast Stripe Removal	Linear Foot

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

January 1, 2008

## SPECIAL NOTE FOR CLEARING BRIDGE SITE

### I. DESCRIPTION

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highways current Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the Contract Documents. Section references are to the Standard Specifications.

This work consists of the following:

1. Furnish all labor, materials, tools, equipment, and incidental items necessary to complete the work.
2. Cut all trees, brush, and other woody vines or plants located within the clearing limits specified in this Note.
3. Remove all vines or other vegetation growing on or attached to any bridge elements.
4. Remove and dispose of all cut vegetation and any debris within the designated clearing limits.
5. Cleanup and remove all driftwood, trash, and debris within the designated clearing limits.
6. Treat cut stumps and stubs to prevent re-sprouting.
7. Perform Permanent Seeding and Protection as required.
8. Any other work specified as part of this contract.

### II. MATERIALS

Provide herbicide material for the treatment of cut stumps meeting the following criteria:

Active ingredient:

Glyphosate*, N-(phosphonomethyl) glycine, in the form of its isopropylamine salt.....	41.0%
Inert ingredients .....	59.0%
Total.....	100.0%

\*Contains 480 grams per liter (4 pounds per U. S. gallon) of the active ingredient, glyphosate, in the form of its isopropylamine salt. Equivalent to 356 grams per liter (3 pounds per U. S. gallon) of the acid, glyphosate.

### III. CONSTRUCTION

**A. Clearing.** The Contractor shall cut all trees, brush, and other woody vines flush to the ground or as close to the ground as possible. Remove all vines or other vegetation growing on or attached to any bridge element by hand and cut this vegetation as close to the ground as possible.

**B. Clearing Limits.** The clearing limits shall be defined as the entire areas of Span 1 and Span 5 and a (30) foot perimeter around each pier. Areas in Spans 1 and 5 shall be from the abutment backwalls to the face of the piers and extend (30) feet beyond the dripline of the bridge fascia, including the area between bridges. Exceptions of these areas include the

area of the normal pool level of the Kentucky River plus an additional twenty (20) feet on each riverbank where only removal of driftwood, trash, and debris are allowed. These limits are subject to the direction of the Engineer.

**C. Treatment of Cut Stumps.** Mix the herbicide as a 50 percent solution with water in the presence of the Engineer. Include a color indicator in the herbicide solution to mark the treated stumps.

Spray or paint the herbicide solution onto all cut stumps and stubs within eight hours after their cutting. Apply the herbicide solution in a manner to avoid drifting the herbicide solution onto surrounding vegetative ground cover. Comply with current laws and regulations established by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and by KRS 217B that regulate the handling, use, and application of pesticides.

**D. Cleanup and Removal of Debris and Wood Waste.** Remove all debris, trees, and brush from the work site and dispose of it off the right-of-way. Keep the accumulated waste material and debris at a site that will prevent it from washing away at all times until disposal. Dispose of waste material promptly after cutting.

Minimize disturbance of other ground cover while performing this work. Grade exposed earth and any erodible areas to a uniform cross section or slope immediately after clearing. Perform permanent seeding and protection in accordance with Section 212 at the earliest practical time. Contrary to Section 212, any Permanent Seeding and Protection required by the Engineer shall be considered incidental to the pay item "Clearing And Grubbing".

**E. Equipment.** Provide suitable tree and brush removal equipment in good working condition. Conform to all Occupational Safety and Health Administration (OSHA) regulations. Furnish all equipment and accessory items necessary for the efficient operation and completion of the work.

**IV. MEASUREMENT**

The Department will measure the quantity as one lump sum. The Department will not measure the Herbicide Treatment of Cut Stumps, the Cleanup and Removal of Debris and Wood Waste, or Permanent Seeding and Protection and will consider these items incidental to the pay item "Clearing And Grubbing".

**V. PAYMENT**

The Department will make payment for the completed and accepted quantities of clearing under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02545	Clearing And Grubbing	Lump Sum

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

**SPECIAL NOTE FOR BRIDGE PLANS**

See Project Related Information for Bridge Plans.  
Drawing Number 28839.

**SPECIAL NOTE FOR DOLOMITIC POLISH-RESISTANT AGGREGATE IN CLASS A 0.38-IN. AND 0.50-IN. NOMINAL ASPHALT MIXTURES**

**Contrary to Subsection 403.03.03**, when utilizing a dolomitic polish-resistant aggregate as the coarse portion of the Class A 0.38-in. or 0.50-in.-nominal asphalt surface mixture, provide an asphalt mixture conforming to the following requirements:

- 70 percent of total combined aggregate is Class A polish-resistant aggregate.
- Any coarse aggregate utilized in the mixture shall be classified as Class A polish-resistant.
- Non-dolomitic substitutes from other Class A sources may be used as direct substitutes
- All mixes must have DFT testing/results submitted to Division of Materials with any supporting documentation prior to completion of the project.

*Dynamic Friction Testing Procedure.* Prepare samples for DFT analysis in accordance with PP 104. Friction testing shall be conducted by an AASHTO-accredited facility and data shall be provided in accordance with ASTM E1911 conforming to the following three-wheel polishing schedule. Variations to the testing frequency or methodology shall be coordinated with Division of Materials prior to testing.

<b><i>Polishing Cycles</i></b>
5,000
25,000
75,000
150,000

### **Special Note for Bridge Demolition, Renovation and Asbestos Abatement**

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

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



**Andy Beshear**  
GOVERNOR

## TRANSPORTATION CABINET

200 Mero Street  
Frankfort, Kentucky 406 01

**Jim Gray**  
SECRETARY

# Asbestos Inspection Survey

To: Tom Mathews

District: Central Office

Date: October 13, 2023

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

---

## Project and Structure Identification

Project Number: CID 232996

Structure ID: Anderson 003B00007L

Structure Location: BG 9002 (Blue Grass Parkway) over Kentucky River

Sample Description: Any suspect materials collected were negative for asbestos.

Inspection Date: October 11, 2023

## Results and Recommendations

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

It is recommended that this report accompany the 10-Day Notice of Intent for Demolition ([Notification Form DEP 7036](#)) which is to be submitted to the Kentucky Division of Air Quality prior to abatement, demolition, or renovation of any building or structure in the Commonwealth.





**MRS, INC.**

MRS, Inc. Analytical Laboratory Division

332 West Broadway / Suite # 902  
Louisville, Kentucky - 40202 - 2133

Phone #: (502) 495-1212  
E-Mail Address: CEOMRSInc@AOL.Com

<b>Client:</b>	<u>K Y T C</u>	<b>Project No:</b>	<u># 3310116 B</u>
<b>Address:</b>	<u>200 Mero Street - 4th Floor W</u>	<b>Sample ID:</b>	<u># 7 - 1</u>
	<u>Frankfort, KY</u>	<b>Sampled:</b>	<u>11-Oct-22</u>
	<u>40622</u>	<b>Received:</b>	<u>11-Oct-22</u>
		<b>Analyzed:</b>	<u>11-Oct-22 - Point Count -</u>
	<u>Attention: O'Dail Lawson</u>		

**Bulk Sample Analysis**

**Sampled By :** O'Dail Lawson

**Facility/Location:** Anderson County - Bridge # 003B00007L

**Field Description:** Guard Rail Mastic

**Laboratory Description:**

Gray Material

**Asbestos Materials:**

Chrysotile = 1/400 = 0.25 % ( < 1 % ) Sample Is Negative

**Non-Asbestos Fibrous Materials :**

Cellulose 0.25 %

Binders 99.50 %

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

**Analyst:** Winterford Mensah

**Reviewed By:**   
Signature

AIHA #102459

/

AIHA #102459

/

AIHA #102459



Chain of Custody Record  
Kentucky Transportation Cabinet

200 Mero Street, 4th Floor West  
Frankfort, Kentucky 40622  
(502) 564-7250 fax (502) 564-5655

Martha Layne Collins over the KY River,

O'Dail Lawson o'dail.lawson@ky.gov W4-06-06 200 Mero Street Frankfort KY Phone: Fax: 502-564-5655 PO#: N/A = Not Applicable Project ID: Anderson 003R06607L Client Information: KY TRANSPORTATION CABINET Area Square footage:		KY TRANSPORTATION CABINET Date/Time:					
Received By: <i>Martha Layne Collins</i> Relinquished By: <i>Martha Layne Collins</i> Received at Lab By:		Date/Time: <i>10/11/23</i> Date/Time:					
Sample ID	Sample Description	Collected	Analysis Requested	Matrix	Color	Cont. Type	Preservative
7-1	Joint Company	Date: 10/11/22 Time: 11:15	Asbestos bulk	Asbestos	black	N/A	
7-2	Surface Coating			paint	grey		
7-3	Guam Rail Marsh			MASS	grey		
Relinquished By:		Date/Time:					

Samplers (signature): *Martha Layne Collins*

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

Certification Number: ETC-AIR-032223-00200


# O'Dail Lawson


has on 03-22-2023 attended and successfully completed the requirements and passed the examination with a score of 70% of better on the entitled course.

## ASBESTOS INSPECTOR REFRESHER

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

Conducted at: 1520 Alliant Ave., Louisville, KY

  
Name - Training Manager

Expiration Date: 03-22-2024  
  
Name - Instructor

**PART II**  
**SPECIFICATIONS AND STANDARD DRAWINGS**

### **STANDARD SPECIFICATIONS**

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

### **SUPPLEMENTAL SPECIFICATIONS**

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

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

Revised: May 23, 2022

### **Kentucky Equal Employment Opportunity Act of 1978**

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

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

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

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

For questions or assistance please contact the Finance and Administration Cabinet by email at **[finance.contractcompliance@ky.gov](mailto: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**

242985

Page 1 of 2

Report Date 3/21/24

**Section: 0001 - ROADWAY**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00003		CRUSHED STONE BASE	3,188.00	TON		\$	
0020	00217		CL4 ASPH BASE 1.00D PG64-22	3,812.00	TON		\$	
0030	00219		CL4 ASPH BASE 1.00D PG76-22	1,525.00	TON		\$	
0040	00342		CL4 ASPH SURF 0.38A PG76-22	762.00	TON		\$	
0050	00522		STORM SEWER PIPE-18 IN	2,358.00	LF		\$	
0060	01440		SLOPED BOX INLET-OUTLET TYPE 1	4.00	EACH		\$	
0070	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	3.00	EACH		\$	
0080	01983		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	6.00	EACH		\$	
0090	02014		BARRICADE-TYPE III	8.00	EACH		\$	
0100	02165		REMOVE PAVED DITCH	257.00	SQYD		\$	
0110	02351		GUARDRAIL-STEEL W BEAM-S FACE	450.00	LF		\$	
0120	02352		GUARDRAIL-STEEL W BEAM-D FACE	275.00	LF		\$	
0130	02360		GUARDRAIL TERMINAL SECTION NO 1	2.00	EACH		\$	
0140	02365		CRASH CUSHION TYPE IX-A	2.00	EACH		\$	
0150	02367		GUARDRAIL END TREATMENT TYPE 1	3.00	EACH		\$	
0160	02381		REMOVE GUARDRAIL	1,050.00	LF		\$	
0170	02397		TEMP GUARDRAIL	750.00	LF		\$	
0180	02483		CHANNEL LINING CLASS II	50.00	TON		\$	
0200	02562		TEMPORARY SIGNS	500.00	SQFT		\$	
0230	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0240	02655		CROSSOVER CROSSOVER NO. 1 & NO. 2	1.00	LS		\$	
0250	02655		CROSSOVER CROSSOVER NO. 3 & NO. 4	1.00	LS		\$	
0260	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		\$	
0270	02696		SHOULDER RUMBLE STRIPS	4,620.00	LF		\$	
0280	02775		ARROW PANEL	2.00	EACH		\$	
0290	03171		CONCRETE BARRIER WALL TYPE 9T	1,200.00	LF		\$	
0300	03225		TUBULAR MARKERS	276.00	EACH		\$	
0330	06511		PAVE STRIPING-TEMP PAINT-6 IN	45,000.00	LF		\$	
0340	06542		PAVE STRIPING-THERMO-6 IN W	15,000.00	LF		\$	
0350	06543		PAVE STRIPING-THERMO-6 IN Y	12,000.00	LF		\$	
0360	06549		PAVE STRIPING-TEMP REM TAPE-B	500.00	LF		\$	
0370	06613		INLAID PAVEMENT MARKER-B W/R	150.00	EACH		\$	
0390	08903		CRASH CUSHION TY VI CLASS BT TL3	2.00	EACH		\$	
0400	20318ES508		RELOCATE CONC BARRIER WALL	1,200.00	LF		\$	
0410	20432ES112		REMOVE CRASH CUSHION	2.00	EACH		\$	
0420	21415ND		EROSION CONTROL	1.00	LS		\$	
0460	23139EN		STRIPING REMOVAL	45,000.00	LF		\$	
0510	23952EC		DRAINAGE JUNCTION BOX TY B	6.00	EACH		\$	
0600	25078ED		THRIE BEAM GUARDRAIL TRANSITION TL-3	8.00	EACH		\$	

**Section: 0002 - BRIDGE - 003B00007L&R OVER KY RVER**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
------	----------	-----	-------------	----------	------	-----------	----	--------

**PROPOSAL BID ITEMS**

242985

Page 2 of 2

Report Date 3/21/24

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0190	02545		CLEARING AND GRUBBING -	1.00	LS		\$	
0310	03295		EXPAN JOINT REPLACE 2 IN	60.00	LF		\$	
0320	03299		ARMORED EDGE FOR CONCRETE	60.00	LF		\$	
0380	08151		STEEL REINFORCEMENT-EPOXY COATED	268.00	LB		\$	
0430	22146EN		CONCRETE PATCHING REPAIR	5,099.00	SQFT		\$	
0440	23032EN		BRIDGE BARRIER RETROFIT	4,596.00	LF		\$	
0450	23070NN		GIRDER REPAIR	4.00	EACH		\$	
0470	23378EC		CONCRETE SEALING	78,660.00	SQFT		\$	
0480	23494EC		INSPECTION WALKWAY	2,162.00	LF		\$	
0490	23859EC		FINGER EXPANSION JOINT	132.00	LF		\$	
0500	23949EC		BRIDGE CLEANING & PREVENTIVE MAINTENANCE	1.00	LS		\$	
0520	24084EC		STRINGER REPAIR	5.00	EACH		\$	
0530	24422EC		FLOOR BEAM RETROFIT	20.00	EACH		\$	
0540	24692EC		DECK DRAIN RETROFIT	84.00	EACH		\$	
0550	24879EC		STEEL REPAIR FLOORBEAM GRINDING	62.00	EACH		\$	
0560	24879EC		STEEL REPAIR TACK WELD REMOVAL	44.00	EACH		\$	
0570	24879EC		STEEL REPAIR TRIAXIAL CONSTRAINT	224.00	EACH		\$	
0580	24982EC		CONCRETE COATING -	1.00	LS		\$	
0590	25075EC		QUEUE PROTECTION VEHICLE	720.00	HOURL		\$	
0610	25117EC		FURNISH QUEUE PROTECTION VEHICLES	18.00	MONT		\$	
0620	26136EC		PORTABLE QUEUE WARNING ALERT SYSTEM	18.00	MONT		\$	
0630	26137EC		QUEUE WARNING PCMS	108.00	MONT		\$	
0640	26138EC		QUEUE WARNING PORTABLE RADAR SENSORS	108.00	MONT		\$	
0650	26141EC		GALVANIC ANODE	2,940.00	EACH		\$	

**Section: 0003 - DEMOBILIZATION/MOBILIZATION**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0210	02568		MOBILIZATION	1.00	LS		\$	
0220	02569		DEMOBILIZATION	1.00	LS		\$	