



CALL NO. 380

CONTRACT ID. 232969

KENTON COUNTY

FED/STATE PROJECT NUMBER FE02 059 VARS BRIDGES

DESCRIPTION I-71 / I-75 / I-275 INTERCHANGE

WORK TYPE BRIDGE REPAIRS

PRIMARY COMPLETION DATE 11/30/2023

LETTING DATE: May 25, 2023

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME May 25, 2023. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

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

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PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 06

CONTRACT ID - 232969
FE02 059 VARS BRIDGES
COUNTY - KENTON
PCN - MB05902752301
FE02 059 VARS BRIDGES

I-71 / I-75 / I-275 INTERCHANGE 6 BRIDGES I-71/I-75/I-275 INTERCHANGE BRIDGE SUBSTRUCTURE REHAB
GEOGRAPHIC COORDINATES LATITUDE 39:02:05.00 LONGITUDE 84:35:58.00
ADT

COMPLETION DATE(S):

COMPLETED BY 11/30/2023	APPLIES TO ENTIRE CONTRACT - SEE PROPOSAL NOTE
60 CALENDAR Days	APPLIES TO 059B00054L
45 CALENDAR Days	APPLIES TO 059B00056N

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

JOINT VENTURE BIDDING

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

UNDERGROUND FACILITY DAMAGE PROTECTION

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

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

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

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

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

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

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

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

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

HARDWOOD REMOVAL RESTRICTIONS

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

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

ACCESS TO RECORDS

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

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

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

BUILD AMERICA, BUY AMERICA ACT (BABA)

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

The Act will apply to construction materials as outlined in the guidance issued in OMB [M-22-11](#).

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

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

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

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

BOYCOTT PROVISIONS

If applicable, the contractor represents that, pursuant to [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.

February 1, 2023

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

RECIPROCAL PREFERENCE TO BE GIVEN BY PUBLIC AGENCIES TO RESIDENT BIDDERS

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

April 30, 2018

**SPECIAL NOTES
DISTRICT NO. 6
BRIDGE REPAIRS
KENTON COUNTY
CID 232969**

FE02 059 0275 B00053L 184.66

Kenton County ~ I-71/I-75 SB over I-275 Ramps

Geographic Coordinates

Latitude 39° 02' 06.00"

Longitude -84° 35' 59.00"

FE02 059 0275 B00053R 184.69

Kenton County ~ I-71/I-75 NB over I-275 Ramps

Geographic Coordinates

Latitude 39° 02' 05.00"

Longitude -84° 35' 58.00"

FE02 059 0275 B00054L 00.02

Kenton County ~ I-275 SB over I-75 and I-275 Ramps

Geographic Coordinates

Latitude 39° 02' 06.00"

Longitude -84° 35' 58.00"

FE02 059 0275 B00054R 00.02

Kenton County ~ I-275 NB over I-75 and I-275 Ramps

Geographic Coordinates

Latitude 39° 02' 06.00"

Longitude -84° 35' 58.00"

FE02 059 0275 B00055N 184.71

Kenton County ~ I-71/I-75 NB Ramp over I-71/I-75 and Ramps

Geographic Coordinates

Latitude 39° 02' 06.00"

Longitude -84° 35' 56.00"

FE02 059 0275 B00056N 184.71

Kenton County ~ I-71/I-75 SB Ramp over I-71/I-75 and Ramps

Geographic Coordinates

Latitude 39° 02' 06.00"

Longitude -84° 35' 56.00"

SPECIAL NOTES FOR BRIDGE REPAIRS

SPECIAL NOTE FOR ACCESS HOLE COVER PLATE REPLACEMENT

SPECIAL NOTE FOR EXPANSION JOINT REPLACEMENT – 1 IN

SPECIAL NOTE FOR EXPANSION JOINT REPLACEMENT – 4 IN

SPECIAL NOTE FOR GIRDER WEB CRACK REPAIR

SPECIAL NOTE FOR BRIDGE DECK RESTORATION AND WATERPROOFING
WITH CONCRETE OVERLAYS

SPECIAL NOTE FOR STRIP SEAL GLAND REPLACEMENT

SPECIAL NOTE FOR USE OF HYDRODEMOLITION METHOD

SPECIAL NOTE FOR PREVENTIVE MAINTENANCE

SPECIAL NOTE FOR TRAFFIC CONTROL

SPECIAL NOTE FOR PORTABLE QUEUE WARNING ALERT SYSTEM

SPECIAL NOTE FOR TRAFFIC QUEUE PROTECTION VEHICLE

SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND PENALTIES ON
BRIDGE REPAIR CONTRACTS

SPECIAL NOTE FOR BRIDGE PLANS

SPECIAL NOTE FOR ACCESS HOLE COVER PLATE REPLACEMENT

1. DESCRIPTION.

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2019 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings.

This work consists of the following: (1) Furnish all labor, materials, tools, equipment, and all necessary incidental items; (2) Replace all bolts and nuts that are broken, seized, or missing as shown on Sheet M11; (3) Remove existing cover plates, bolts, and nuts at the locations to be replaced as indicated on the attached detail drawings; (4) Install new bolts, nuts, cover plates, angles at indicated locations; and (5) Paint new steel, exposed faying surfaces, and steel with paint damaged by the hatch replacements. (6) Any other work specified as part of this contract.

2. MATERIALS.

- A. Steel.** Use ASTM A709 Grade 50 Galvanized.
- B. Cover Plate.** Plexiglas.
- C. Bolts.** Use ASTM F3125 Grade A325 Type 1 Galvanized.
- D. Nuts.** Use ASTM A194 Grade 2H Galvanized.
- E. Washers.** Use ASTM F436 Galvanized in steel connections. Use neoprene washers in Plexiglas access hatch connections.
- F. Threaded Rods.** Use ASTM A316.
- G. Gasket.** Neoprene.
- H. Magnets.** 1 inch diameter by 1/2 inch thick.
- I. Handles.** Use ASTM A316 round bar stock.
- J. Paint.** See paint note below.

3. CONSTRUCTION.

- A. Remove Existing Materials.** Remove existing steel cover plates and bolts at locations indicated on the attached detail drawings. Remove welded nuts from the inside of the cross girder end plates. Grind existing welds flush. Drill out any seized or broken bolts. Properly dispose all materials off-site.

Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Steel Repair (Replace Access Cover Plate)".

- B. Repair Area Preparation.** See paint notes below.

C. Replacing Materials on Existing Hatches. The Contractor shall remove and replace broken and seized bolts and replace missing bolts and nuts at the locations described on Sheet M11. All identified bolts and nuts shall be replaced in kind. This work is incidental to the contract unit price for “Steel Repair (Replace Access Cover Plate)”.

D. Replacement Cover Plates. The Contractor shall provide cover plates per the attached detail drawings.

The Contractor shall verify all dimensions on the attached detail drawings prior to starting work. If any of the existing bolt hole dimensions vary from the detail drawings, the Contractor shall prepare a template for the fabrication of the cover plates at each affected location.

A 1/2 inch wide, 3/4 inch thick, one piece neoprene gasket shall be installed between the existing cross girder end plates and the cover plates. Neoprene washers 1/8” thick shall be installed between the A325 bolts and the cover plates.

Install six 1/2 inch diameter length of threaded rods as shown at the attached detail drawings.

Install six 1 inch diameter by 1/2 inch thick magnets on each Plexiglas cover plate as shown on the attached detail drawings.

Install two stainless steel handles each with formed from 3/8 inch diameter round bar stock. Cut threads on the ends of the handles and attached to each Plexiglas cover plate as shown on the attached detail drawings.

Install 6 inch by 6 inch by 1/2 inch thick angles 19 inches long above and below the access hole as shown on the attached detail drawings. Install three 1/2 inch diameter bolts in each angle as shown on the attached detail drawings.

E. Repair Area Finishing. See paint notes below.

4. PAINT.

A. Cleaning and Painting. All areas below existing steel access hole cover plates that are being replaced shall be cleaned and receive the prime coat as specified in accordance with Section 607.03.23. 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. All bare metal left by construction activities shall be cleaned and have the prime coating applied in accordance with Section 607.03.23. After all new steel is installed shall be hot dip

galvanized. Paint all damaged galvanizing with 2 coats of zinc dust-zinc oxide paint conforming to Federal Specification TT-P-641.

Steel surfaces below and adjacent to existing access hatches that are being replaced shall receive the same cleaning, preparation, and painted as above prior to the installation of the new access hatches.

B. Residual lead paint may still be on bridge. The Contractor is advised to take all necessary protective measures including worker safety and environmental regulations when performing surface preparation and other work. The Department will not consider any claims based on residual lead paint.

5. **MEASUREMENT.**

A. Replace Access Hole Cover Plate. The Department will measure the quantity as each.

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

<u>Code</u>	<u>Pay Item</u>	<u>Supplemental Description</u>	<u>Pay Unit</u>
24879EC	STEEL REPAIR	REPLACE ACCESS COVER PLATE	EACH

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

SPECIAL NOTE FOR EXPANSION JOINT REPLACEMENT – 1 IN

- I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2019 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, 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, equipment, and all necessary incidental items; (2) Remove existing concrete and compression joints on 059B00056N as indicated on the attached detail drawings; (3) Install armored edges, reinforcing steel with the appropriate lap length or mechanical couplers, and new concrete as specified and in accordance with the attached detail drawings; (4) Install new pre-compressed horizontal expansion joint systems; and (5) Any other work specified as part of this contract.

All construction will be in accordance with Section 606 unless otherwise specified.

II. MATERIALS.

- A. Class "M" Concrete.** Use either "M1" or "M2". See Section 601.
- B. Structural Steel.** Use new, commercial grade steel suitable for welding. The Engineer will base acceptance on visual inspection. See Standard Drawing BJE-001, current edition.
- C. Stud Anchors.** The armored edge stud anchors are 3/4" x 6" embedded stud shear connectors conforming to ASTM A108, Grade 1015 (Nelson Studs or equal).
- D. Steel Reinforcement.** Use Grade 60 epoxy coated. See Section 602.
- E. Epoxy Bond Coat.** See Section 511.
- F. Pre-compressed Horizontal Expansion Joint System.** It shall have a cellular, or micro-cell, polyurethane foam impregnated with a hydrophobic acrylic emulsion, or a hydrophobic polymer. The polyurethane foam external facing shall be factory coated and cured with highway-grade, fuel resistant silicone or a highway-grade elastomeric coating at a width greater than the maximum joint expansion. See attached detail drawings and Section 807.
- G. Wash water.** Use clean potable water for all pressure washing.

III. EQUIPMENT.

- A. Hammer.** Provide power driven hammers lighter than nominal 45 lb. class. See Section 606.02.10 B.
- B. Sawing Equipment.** Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth. See Section 606.02.10 C.
- C. Hydraulic Impact Equipment.** Hydraulic impact/skid steer type equipment with a maximum rated striking energy of 360 ft-lbs is permitted only in areas of concrete removal more than 1 foot away from existing beams, girders or other supporting structures that are to remain in service or more than 6 inches away from boundaries of surface areas to remain in service. The Contractor is to

provide data information to the Engineer on the equipment they wish to utilize to ensure compliance with this note. See Section 606.02.10 D.

IV. CONSTRUCTION.

- A. Remove Existing Materials.** Sawcut as shown on the attached detail drawings. Remove existing specified areas of concrete and armored edges as shown on the attached detail drawings and as shown on page 4 of this Note. Remove debris and/or expansion joint filler as directed by the Engineer. Clean and leave all existing longitudinal steel reinforcement and some transverse steel reinforcement as specified in the plans encountered in the deck and railing in place. Damaged steel reinforcement will be repaired/replaced as directed by the Engineer at no additional cost to the Department.

To expedite construction, the Contractor has the option request permission from the Engineer to cut the existing longitudinal reinforcing steel in the deck and railing rather than salvaging it. If the Contractor selects this option and is granted permission by the Engineer, new longitudinal reinforcing steel of the same size and spacing shall be drilled and secured with epoxy conforming to Section 826 Type IV. The new longitudinal reinforcing steel shall be drilled the depth recommended by the epoxy manufacturer, the new reinforcing steel shall be placed as close as practical to the existing bars, and the new bars shall have the same cover (i.e. shall be placed in the same horizontal planes as the existing bars). The new longitudinal reinforcing steel shall be provided and installed at no additional cost to the Department.

Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Expansion Joint Replacement 1 in".

- B. Place New Concrete and Armored Edges.** After all specified existing materials have been removed; place new armored edges to the original grade (see attached detail drawings). Form as required using removable forms; stay-in-place forms are not permitted. Place new reinforcing steel and place new Class "M" concrete to the level of the deck once the overlay has been removed and finish with broom strokes drawn transversely from railing to railing.

All new structural steel shall be cleaned and painted in accordance with requirements of Section 607.03.23, except for surfaces to come in contact with concrete are not to be painted.

Blast clean all areas of existing concrete and structural steel to come in contact with new concrete until free of all laitance and deleterious substances immediately prior to the placement of the Class "M" Concrete. The surface areas of existing concrete to come in contact with the new Class "M" Concrete are to be coated with an epoxy bond coat immediately prior to placing new concrete in accordance with

Section 511. The interfaces of the new and old concrete shall be as nearly vertical and horizontal as possible.

- C. Additional Steel Reinforcement.** Furnish for replacement, steel reinforcement as per the details on Sheets M9 and M10 of the attached detail drawings, including the bar sizes, spacings, and minimum lap lengths. The contractor is required to develop a Bill of Reinforcement to reflect the reinforcing steel to be installed, which matches the length of joints to be replaced in each phase based on the Contractor's selected maintenance of traffic. Do not place any additional steel reinforcement above the height of the top row of Nelson Studs on the armored edges. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04 prior to pouring the new Class "M" concrete.
- D. Stage Construction.** Remove and install concrete and armored edges in two (or more if specified) stages as shown on Sheets M9 and M10. Join the armored edges as shown, field weld, and grind smooth.
- E. Pre-Compressed Horizontal Expansion Joint System.** System shall be supplied in pre-compressed sticks for easy installation. System shall be installed in accordance with manufacturer's recommendations concerning approved adhesives, welds between sticks and appurtenances, and adhesion to concrete deck or armored edges. Joint seal is to be installed 1/2" recessed from the surface.
- F. Shop Plans.** Shop plans will not be required. The Contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work.

IV. MEASUREMENT. See Section 606 and the following:

- A. Expansion Joint Replacement 1 In.** The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint. Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing, and installing the new armored edges, concrete, expansion joint seal, reinforcing steel, mechanical couplers, and all incidental items necessary to complete the work within the specified pay limits as specified by this Note and as shown on the attached detail drawings. Construction of joints within the concrete railings is incidental to this bid item.

- V. PAYMENT.** The Department will make payment for the completed and accepted quantities per Section 606 and under the following bid items:

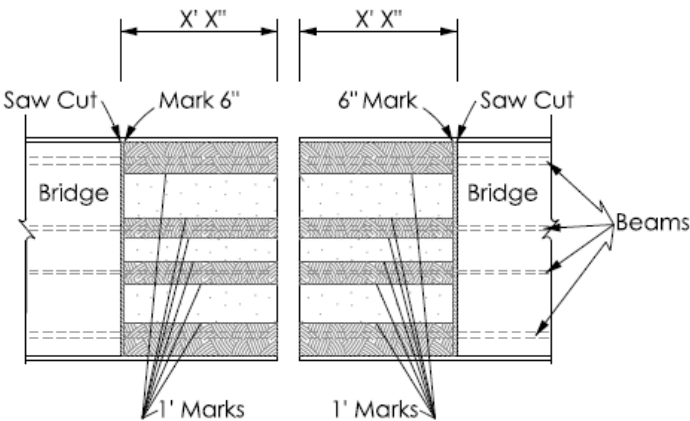
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
03293	EXPAN JOINT REPLACE 1 IN	Lin. Ft.

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

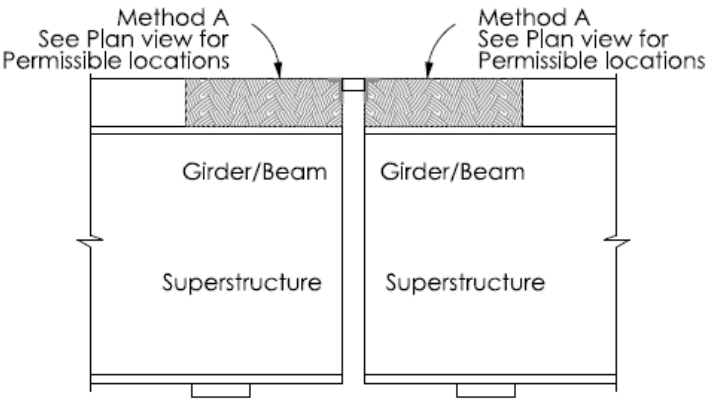
Concrete Removal Methods

Method A: Lighter than 45 lb. class hammer

Method B: Lighter than 360 ft-lb hammer
pneumatic/hydraulic/power driven



PLAN VIEW



CROSS SECTION

SPECIAL NOTE FOR EXPANSION JOINT REPLACEMENT – 4 IN

- I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2019 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, 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, equipment, and all necessary incidental items; (2) Remove existing concrete and strip seal joints on 059B00054L and 059B00056N; (3) Install armored edges, reinforcing steel with the appropriate lap length or mechanical couplers, and new concrete as specified and in accordance with the attached detail drawings; (4) Install new strip seal glands; and (5) Any other work specified as part of this contract.

All construction will be in accordance with Section 606 unless otherwise specified.

II. MATERIALS.

- A. Class "M" Concrete.** Use either "M1" or "M2". See Section 601.
- B. Structural Steel.** Use new, commercial grade steel suitable for welding. The Engineer will base acceptance on visual inspection. For armored edges that make up the 4" neoprene joint, use Steelflex Strip Seal expansion joint by DS Brown, or approved equal. To be approved, armored edge extrusions must be embedded.
- C. Stud Anchors.** The armored edge stud anchors are 3/4" x 6" embedded stud shear connectors conforming to ASTM A108, Grade 1015 (Nelson Studs or equal).
- D. Steel Reinforcement.** Use Grade 60 epoxy coated. See Section 602.
- E. Epoxy Bond Coat.** See Section 511.
- F. Neoprene Strip Seals.** See attached detail drawings and Section 807.
- G. Wash water.** Use clean potable water for all pressure washing.

III. EQUIPMENT.

- A. Hammer.** Provide power driven hammers lighter than nominal 45 lb. class. See Section 606.02.10 B.
- B. Sawing Equipment.** Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth. See Section 606.02.10 C.
- C. Hydraulic Impact Equipment.** Hydraulic impact/skid steer type equipment with a maximum rated striking energy of 360 ft-lbs is permitted only in areas of concrete removal more than 1 foot away from existing beams, girders or other supporting structures that are to remain in service or more than 6 inches away from boundaries of surface areas to remain in service. The Contractor is to provide data information to the Engineer on the equipment they wish to utilize to ensure compliance with this note. See Section 606.02.10 D.

IV. CONSTRUCTION.

- A. Remove Existing Materials.** Sawcut as shown on the attached detail drawings. Remove existing specified areas of concrete and armored edges as shown on the attached detail drawings and as shown on page 4 of this Note. Remove debris and/or expansion joint filler as directed by the Engineer. Clean and leave all existing longitudinal steel reinforcement and some transverse steel reinforcement as shown in the plans encountered in the deck and railing in place. Damaged steel reinforcement will be repaired/replaced as directed by the Engineer at no additional cost to the Department.

Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Expansion Joint Replacement 4 in".

- B. Place New Concrete and Armored Edges.** After all specified existing materials have been removed; place new armored edges to the original grade (see attached detail drawings). Form as required using removable forms; stay-in-place forms are not permitted. Place new reinforcing steel and place new Class "M" concrete to the level of the deck once the overlay has been removed and finish with broom strokes drawn transversely from railing to railing.

All new structural steel shall be cleaned and painted in accordance with requirements of Section 607.03.23, except for surfaces to come in contact with concrete are not to be painted.

Blast clean all areas of existing concrete and structural steel to come in contact with new concrete until free of all laitance and deleterious substances immediately prior to the placement of the Class "M" Concrete. The surface areas of existing concrete to come in contact with the new Class "M" Concrete are to be coated with an epoxy bond coat immediately prior to placing new concrete in accordance with Section 511. The interfaces of the new and old concrete shall be as nearly vertical and horizontal as possible.

- C. Additional Steel Reinforcement.** Furnish for replacement, steel reinforcement as per the details on Sheets M8, M9, and M10 of the attached detail drawings, including the bar sizes, spacings, and minimum lap lengths. The contractor is required to develop a Bill of Reinforcement to reflect the reinforcing steel to be installed, which matches the length of joints to be replaced in each phase based on the Contractor's selected maintenance of traffic. Do not place any additional steel reinforcement above the height of the top row of Nelson Studs on the armored edges. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04 prior to pouring the new Class "M" concrete.
- D. Stage Construction.** Remove and install concrete and armored edges in two (or more if specified) stages as shown on Sheets M8, M9, and M10. Join the armored edges as shown, field weld, and grind smooth.

- E. **Preformed Neoprene Strip Seal.** Place the preformed joint seal in one continuous, unbroken length. Place neoprene strip seals as recommended by the manufacturer and in accordance with Section 609.03.04.
- F. **Shop Plans.** Shop plans will not be required. The Contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work.

IV. **MEASUREMENT.** See Section 606 and the following:

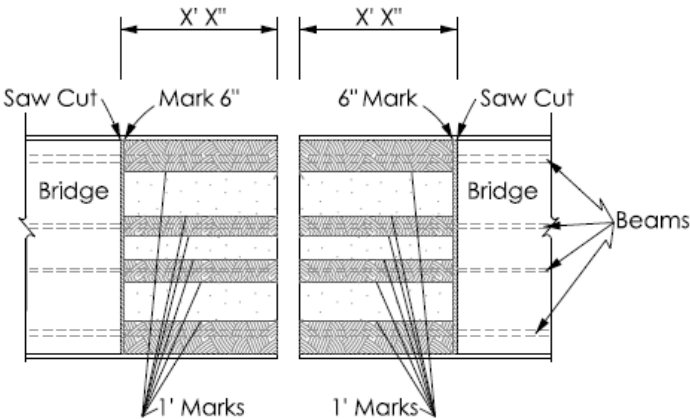
- A. **Expansion Joint Replacement 4 In.** The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint. Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing, and installing the new armored edges, concrete, expansion joint seal, reinforcing steel, mechanical couplers, and all incidental items necessary to complete the work within the specified pay limits as specified by this Note and as shown on the attached detail drawings. Construction of joints within the concrete railings is incidental to this bid item.
- B. **Armored Edge for Concrete.** The Department will measure the quantity in linear feet from gutterline to gutterline along the face of the bridge end. Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, and furnishing and installing the new armored edges, concrete, and all incidental items necessary to complete the work (except the overlay material) within the specified pay limits as specified by this Note and as shown on the attached detail drawings.

V. **PAYMENT.** The Department will make payment for the completed and accepted quantities per Section 606 and under the following bid items:

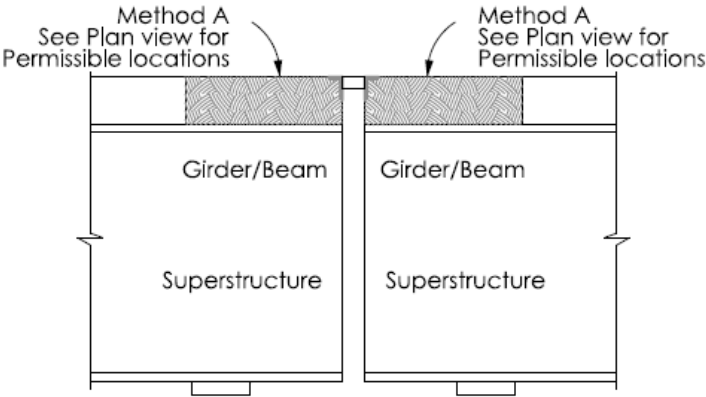
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
03298	EXPAN JOINT REPLACE 4 IN	Lin. Ft.
03299	ARMORED EDGE FOR CONCRETE	Lin. Ft.

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

Concrete Removal Methods
Method A: Lighter than 45 lb. class hammer
Method B: Lighter than 360 ft-lb hammer
pneumatic/hydraulic/power driven



PLAN VIEW



CROSS SECTION

SPECIAL NOTE FOR GIRDER WEB CRACK REPAIRS

1. **DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2019 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings.

Drilled Repair:

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove the indicated portion of the existing girder web at the tip of the crack; and (3) Paint new steel, exposed faying surfaces, and steel with paint damaged by the repairs. (4) Any other work specified as part of this contract. The locations of the repairs and repair details are shown on Sheets M12-M15.

Bolted Repair:

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing specified areas of concrete and portions of existing steel reinforcement in the deck as specified in the plans; (3) Install new angles, top flange plate, and fill plates at indicated locations; prepare surfaces per the Paint note; and (5) Place new reinforcing steel, mechanical couplers, and new Class "M" concrete to the level of the deck once the overlay has been removed. (6) Any other work specified as part of this contract. The locations of the repairs and repair details are shown on Sheets M12-M15.

2. **MATERIALS.**

- A. **Class "M" Concrete.** Use either "M1" or "M2". See Section 601.
- B. **Steel.** Use ASTM A709 Grade 50 Galvanized.
- C. **Bolts.** Use ASTM F3125 Grade A325 Type 1 Galvanized.
- D. **Washers.** Use ASTM F436 Galvanized.
- E. **Nuts.** Use ASTM A194 Grade 2H Galvanized.
- F. **Direct Tension Indicators (DTIs).** Use ASTM F959 Galvanized. See Section 607.
- G. **Steel Reinforcement.** Use Grade 60 epoxy coated. See Section 602.
- H. **Paint.** See Paint note below.

3. **EQUIPMENT.**

- A. **Hammer.** Provide power driven hammers lighter than nominal 45 lb. class. See Section 606.02.10 B.
- B. **Sawing Equipment.** Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth. See Section 606.02.10 C.

- C. **Hydraulic Impact Equipment.** Hydraulic impact/skid steer type equipment with a maximum rated striking energy of 360 ft-lbs is permitted only in areas of concrete removal more than 1 foot away from existing beams, girders or other supporting structures that are to remain in service or more than 6 inches away from boundaries of surface areas to remain in service. The Contractor is to provide data information to the Engineer on the equipment they wish to utilize to ensure compliance with this note. See Section 606.02.10 D.

4. **CONSTRUCTION.**

A. **Girder drilled repair procedure.**

- i. **Locate cracks and indications.** The ends of cracks and/or indications to be drilled shall be verified by magnetic particle testing performed by certified personnel.
- ii. **Removal.** For the locations indicated on Sheets M4 and M5, remove the portion of the girder web shown on Sheet M12. The web shall be removed via drilling at the tip of the crack.

Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for “Steel Repair (Drilled Repair)”.

Note: Crack measurements were taken in September 2021. Cracks may have grown subsequent to that inspection. Calculations for arrestor hole dimensions should be reanalyzed with the updated crack lengths.

- iii. **Verify removal.** The Contractor shall use ultrasonic testing, conducted by certified personnel, to verify that the end of the cracks and/or indications have been removed.
- iv. **Preparation.** Clean and paint the affected portions of the girder web per the paint notes below.
- v. **Painting.** Once the new arrest holes are drilled, paint any areas with paint damaged during the installation per the paint notes below.

B. **Girder bolted repair procedure.**

- i. **Timing.** Removal of specified portions of the deck, installation of bolted repairs, and placing new reinforcing steel and deck concrete must be completed prior to placing the new overlay. Removal of the existing overlay may be performed prior to or following the work described in this

section. No vehicles of any kind are permitted within 5 feet of the repair areas once sections of deck are removed until the new deck concrete is set. Temporary concrete barriers shall be set to prevent vehicle access as shown on the attached detail drawings. The cost of the concrete barriers shall be incidental to the unit price for "Steel Repair (Bolted Repair)".

- ii. **Removal.** Remove the portion of the deck and debris above the girders and cross girders shown on Sheet M4 and on Sheets M12-M15 for the bolted repair. Sawcut as shown on the attached detail drawings. Accurately locate girder top flanges prior to saw cutting; any damage to structural steel components will be repaired to the satisfaction of the Engineer at no cost to the Department. Clean and leave some longitudinal and some transverse steel reinforcement encountered in the deck in place as specified in the attached detail drawings. Damaged steel reinforcement will be repaired/replaced as directed by the Engineer at no additional cost to the Department.

Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Steel Repair (Bolted Repair)".

- iii. **Preparation.** Clean and paint the affected portions of the girder web and top flange per the paint notes below. The new angles, top flange plate, and fill plates shall be painted prior to installation for the Bolted Repair.
- iv. **Field drill holes.** Holes in the retrofit plates may be shop drilled or field drilled. Plate sizes and hole locations may need to be adjusted due to the slope or skew of the girders. Proposed adjustments must be approved by the Engineer. The Contractor is responsible for verifying the geometry of the girders prior to fabricating retrofit plates. For the steel repairs, the Contractor shall utilize the hole pattern and dimensions shown on the attached detail drawings except if a hole would be within 1 1/4" of a crack (measured from the center of the hole to the crack); in that case, the hole shall be shifted laterally to maintain a minimum distance of 1 1/4" (measured from the center of the hole to the crack). The spacing of bolts shall not exceed 5 1/2" (measured from the center to center of holes). Using the retrofit plates as a template, field drill holes in the existing girders.

- v. **Install new angles, top flange plate, and fill plates.** Use the new angles to mark the location of the 45 new bolt holes through the girder web and the existing top flange. Drill the new holes and install the new angles, top flange plate, fill plates, the 36 bolts that extend through the new angles, existing top flange, and new top flange plate, and the 9 bolts that extend through the new angles, fill plates, and existing web. DTIs shall be installed on all new bolts.
- vi. **Painting.** Once the angles, top flange plate, and fill plates are installed, paint any areas with paint damaged during the installation per the paint notes, below.
- vii. **Place New Concrete.** After all specified existing materials have been removed, form as required using removable forms; stay-in-place forms are not permitted. Place new reinforcing steel and place new Class “M” concrete to the level of the deck once the overlay has been removed.
- viii. **Additional Steel Reinforcement.** Furnish for replacement, steel reinforcement as shown on the Bill of Reinforcement on Sheet M14. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04 prior to pouring the new Class “M” concrete.

5. PAINT.

- A. **Cleaning and Painting.** All faying surfaces of existing steel where new steel is to be installed shall be cleaned and receive the prime coat as specified in accordance with Section 607.03.23. 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. All bare metal left by construction activities shall be cleaned and have the prime coating applied in accordance with Section 607.03.23. All new steel installed shall be hot dip galvanized. Paint all damaged galvanizing with 2 coats of zinc dust-zinc oxide paint conforming to Federal Specification TT-P-641.
- B. **Residual lead paint may still be on bridge.** The Contractor is advised to take all necessary protective measures including worker safety and environmental regulations when performing surface preparation and other work. The Department will not consider any claims based on residual lead paint.

6. MEASUREMENT.

- A. **Steel Repair (Drilled Repair).** The Department will measure the quantity of individual girder webs repaired as each. This includes furnishing all material,

labor, and equipment necessary for removal of a portion of the girder web via drilling and painting as described in this Note and shown in the attached detail drawings.

B. Steel Repair (Bolted Repair). The Department will measure the quantity of individual girder webs repaired as each. This includes furnishing all material, labor, and equipment necessary for removal of a portion of the deck, installation of new angles, top flange plate, and fill plates, new reinforcing steel and concrete, and painting as described in this Note and shown in the attached detail drawings.

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

<u>Code</u>	<u>Pay Item</u>	<u>Supplemental Description</u>	<u>Pay Unit</u>
24879EC	STEEL REPAIR	DRILLED REPAIR	EACH
24879EC	STEEL REPAIR	BOLTED REPAIR	EACH

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

SPECIAL NOTE FOR BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS

- I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2019 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, 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, equipment, and all necessary incidental items; (2) Remove the existing overlay; (3) Complete full depth and partial depth repairs as directed by the Engineer; (4) Repair/replace damaged and corroded reinforcing bars; (5) Place new concrete overlay and epoxy-sand slurry in accordance with Section 606; and (6) Any other work specified as part of this contract.

All construction will be in accordance with Section 606 unless otherwise specified.

II. MATERIALS.

- A. Latex Concrete.** See Section 606.03.17.
- B. Class "M" Concrete.** Use either "M1" or "M2". See Section 601.
- C. Epoxy-Sand Slurry.** See Section 606.03.10.

III. CONSTRUCTION.

- A. Remove Existing Overlay.** In addition to Section 606.03.03, remove the existing concrete overlay by mechanical scarification to the specified depth or as directed by the Engineer. Following scarification, perform hydrodemolition over the entire deck surface per the Special Note for Use of the Hydrodemolition Method.
- B. Partial Depth Slab Repair and Latex Overlay.** Remove areas determined to be unsound by the Engineer via hydrodemolition or via hand held jackhammers weighing less than 45 lbs. in accordance with Section 606.02.10 D. Repair/replace all damaged or severely corroded reinforcing bars prior to partial depth repair operation. The Department will not measure material removal and will consider this work incidental to the bid item "PARTIAL DEPTH PATCHING". Mix and place latex modified concrete overlay in accordance with Sections 606.03.08 and 606.03.17.
- C. Full Depth Patching.** See Section 606.03.05 and the Special Note for the Use of the Hydrodemolition Method.
- D. Surface Texturing.** Texture the concrete surface of the overlay in accordance with Section 609.03.10.
- E. Epoxy-Sand Slurry.** Place epoxy-sand slurry per Section 606.03.10.

IV. MEASUREMENT. See Section 606 and the following:

- A. Latex Modified Concrete for Overlay.** The Department will measure the quantity in cubic yards using the theoretical volume as follows for each bridge:

059B00054L	(416.42' x 51.25' x 2")	= 131.8 cu yd
059B00056N	(806.92' x 39.25' x 1")	= 97.8 cu yd

- B. Latex Modified Concrete for Partial Depth Patching and Variable Thickness of Overlay.** The Department will measure the quantity in cubic yards by deducting the theoretical volume of bridge deck overlay (LMC) from the total volume (as indicated by the batch quantity tickets) of concrete required to obtain the finished grade shown on the plans or established by the Engineer.
- C. Full Depth Patching.** The Department will measure the quantity of full depth patching in cubic yards, which shall include all labor, equipment, and material needed to complete this work.
- D. Remove Existing Overlay.** The Department will measure the removal of the existing overlay in square yards, which shall include all labor, equipment, and material needed to complete this work.
- E. Steel Reinforcement.** The Department will measure any reinforcing steel necessary for the partial or full depth patch in pounds, which shall include all labor, equipment, and material needed to complete this work.
- F. Epoxy-Sand Slurry.** The Department will measure the quantity in square yards. The Department will measure the entire area covered, including the 12 inch width of the overlay and the 2 inch height on the face of the railing or the full height and width of the curb per the Standard Drawing.

V. PAYMENT. The Department will make payment for the completed and accepted quantities per Section 606 and under the following bid items:

- A. Latex Modified Concrete for Overlay.** The Department will make payment for the latex modified concrete overlay under bid item #08534 "CONCRETE OVERLAY – LATEX" for the theoretical quantity.
- B. Latex Modified Concrete for Partial Depth Patching and Variable Thickness of Overlay.** The Department will make payment for the partial depth patching under bid item #24094EC "PARTIAL DEPTH PATCHING". Payment will be for the quantity per cubic yard complete in place.

- C. Full Depth Patching.** The Department will make payment for the Full Depth Patching under bid item #08526 “CONC CLASS M FULL DEPTH PATCH”. Payment will be for the quantity per cubic yard complete in place.
- D. Remove Existing Overlay.** The Department will make payment for the removal of the existing overlay under the bid item #08510 “REM EPOXY BIT FOREIGN OVERLAY”. Payment will be for the square yard complete.
- E. Steel Reinforcement.** The Department will make payment for steel reinforcement, if necessary, under bid item #08151 “STEEL REINFORCEMENT – EPOXY COATED”. Payment will be at the unit price per pound.
- F. Epoxy-Sand Slurry.** The Department will make payment for placement of epoxy-sand slurry under bid item #08504 “EPOXY-SAND SLURRY”. Payment will be for the square yard in place.

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

SPECIAL NOTE FOR STRIP SEAL GLAND REPLACEMENT

- I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2019 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, 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, equipment, and all necessary incidental items; (2) Remove debris from the joints that are to remain on 059B00053R and 059B00055N; (3) Remove existing bridge strip seal gland at 059B00053R Abutment 1; (4) Prepare the existing armored edges; (5) Install new strip seal gland; and (6) Any other work specified as part of this contract.

All construction will be in accordance with Section 606 unless otherwise specified.

II. MATERIALS.

- A. Neoprene Strip Seals.** Match the gland to the existing retainers. See attached detail drawings, Call No. 101 Contract I.D. 161025 from April 2016, and Section 807. If the gland installed in the 2016 project is no longer available for purchase, proceed as directed by the Engineer.
- B. Wash water.** Use clean potable water for all pressure washing.

III. CONSTRUCTION.

- A. Remove Debris.** Remove debris from the strip seal gland at Abutment 2 on bridge 059B00053R and from the five strip seal glands on bridge 059B00055N. Equipment for removing debris shall be determined by the Contractor, subject to the approval of the Engineer. The Contractor shall prevent any debris from entering the bridge drainage system or lanes carrying traffic. All debris removed shall be disposed of in a suitable off-site disposal facility. Strip seal glands damaged by debris removal operations shall be repaired or replaced by the Contractor at no additional cost to the Department.
- B. Remove Existing Materials.** Remove existing strip seal gland at Abutment 1 on bridge 059B00053R as shown on the detail drawings. The joint seal is to be removed shortly before replacement. Clean and leave all steel armored edges in place. Steel armored edges damaged by the Contractor's actions will be repaired or replaced as directed by the Engineer at no additional cost to the Department. Any damage that occurred between the last inspection and the start of construction that requires repair or replacement will be compensated and have additional time allocated.

Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Joint Seal Replacement".

- C. **Joint Preparation.** Prepare the existing armored edges per Section 606.03.11.

- D. **Preformed Neoprene Strip Seal.** Place neoprene strip seals as recommended by the manufacturer and in accordance with Section 609.03.04 (E) and the attached detail drawings. The seal shall be installed in one continuous piece with no joint permitted at the construction joint.

IV. **MEASUREMENT.** See Section 606 and the following:

- A. **Joint Seal Replacement.** The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint. The length of joint seal installed within the concrete railings is incidental to this bid item.

- B. **Debris Removal.** The Department will measure the quantity in linear feet of strip seal gland from gutterline to gutterline along the centerline of the joint. Debris removed on the strip seal glands within the concrete railings is incidental to this bid item.

V. **PAYMENT.** The Department will make payment for the completed and accepted quantities per Section 606 and under the following bid items:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
23386EC	JOINT SEAL REPLACEMENT	Lin. Ft.
24543EC	CLEAN	Lin. Ft.

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

SPECIAL NOTE FOR USE OF THE HYDRODEMOLITION METHOD

- I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2019 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings.

This work consists of bridge surface deck preparation using hydrodemolition to provide a uniform depth, highly bondable surface and to remove all variable depth, unsound material. This item also includes the removal and disposal of all concrete and debris, vacuuming, shielding, water control, additional jack hammering, and all other aspects of work necessary to prepare the deck for the placement of the new latex modified concrete overlay. This note applies to the hydrodemolition of the overlays on 059B00054L and 059B00056N.

II. EQUIPMENT.

- A. Sawing Equipment.** Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.
- B. Mechanical Scarifying Equipment.** The scarifying equipment shall be a power operated mechanical scarifier capable of uniformly scarifying or removing the existing latex modified concrete or integral concrete wearing surface from the bridge deck to the depths required in this Note or as directed by the Engineer. The equipment shall be self-propelled with sufficient power, traction, and stability to maintain accurate depth of cut and slope. The equipment shall be capable of accurately and automatically establishing profile grades along each edge of the machine by referencing the existing bridge deck by means of a ski or matching shoe or from an independent grade control; in addition, it shall be equipped with an integral loading means to remove the material being cut from the bridge deck and to discharge the cuttings into a truck all in a single operation.
- C. Hydrodemolition Equipment.** The hydrodemolition equipment shall consist of a filtering and pumping unit operating with a self-propelled computerized robot that utilizes a high pressure water jet capable of removing concrete to the depth specified in this Note or as directed by the Engineer and be capable of removing rust and concrete particles from reinforcing steel. The equipment shall provide a rough and bondable surface and remove all unsound concrete during the initial pass. The minimum water usage shall be 43 gal/min operating at 13,000 psi minimum.
- D. Vacuum Cleanup Equipment.** The vacuum cleanup equipment shall be equipped

with fugitive dust control devices and be capable of removing wet debris and water all in the same pass. Provide equipment capable of washing the deck with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface.

- E. Hand Held Blast Cleaning Equipment.** Hand held blast shall be either sand or water as necessary to expose fine and coarse aggregates, thoroughly clean all exposed reinforcing steel, and remove any unsound concrete or laitance layers from the proposed concrete overlay surface. If sand blasting equipment is utilized, the equipment shall have oil traps. If water blasting equipment is utilized, the equipment must be capable of delivering a minimum of 5,000 psi.
- F. Power Driven Hand Tools.** Power driven hand tools and jackhammers will be permitted but shall not be heavier than the nominal 45 lb. class. Chipping hammers shall not be heavier than the nominal 15 lb. class. Only hand chipping tools shall be used when removing concrete within 1 in. of reinforcing steel. Mechanically driven tools shall be operated at a maximum angle of 45 degrees from the bridge deck surface.

III. CONSTRUCTION.

- A. General.** Perform hydrodemolition surface preparation over the entire top surface of the reinforced concrete bridge deck to provide a rough and bondable surface and to remove all unsound concrete during the initial hydrodemolition surface preparation pass. The use of hand chipping tools, either hand or mechanically driven, shall be limited to trim work and areas inaccessible or inconvenient for the hydrodemolition equipment.
- B. Description.** This work shall consist of furnishing the necessary labor, materials, and equipment to provide a rough and bondable surface in accordance with the Specifications and this Note and in reasonably close conformity with the grades, thickness, or sections shown on the attached detail drawings or as directed by the Engineer. This work shall include the removal of patches other than sound Portland cement concrete and all loose and unsound concrete by hydrodemolition; preparation of the sound existing concrete deck; removal, forming, and concrete for full depth repairs; blast cleaning or high pressure water cleaning the existing deck prior to placement of the modified concrete overlay; and all other operations necessary to complete this work according to these specifications and to the satisfaction of the Engineer.
- C. Preparation of Existing Deck.** No operations performed without reasonably available engineering controls that limit fugitive dust will be acceptable.

The Contractor shall be aware that there are federal, state, regional, and local government agencies that have requirements regarding the control of fugitive dust generated by concrete removal and blasting operations.

The Contractor is responsible for protecting traffic traveling adjacent to and under the work zone while removing bridge deck concrete.

Where the deck is sound for less than one third of its original depth, the concrete shall be removed full depth for limited areas as designated by the Engineer. Full depth repairs shall be completed as specified for Full Depth Repair.

- D. Removal of Existing Concrete Overlays.** The existing Portland cement concrete overlay on the original bridge deck surface to be prepared by hydrodemolition must be removed, and the bridge deck cleaned, prior to commencement of the hydrodemolition operation. The Contractor may utilize conventional scarifying equipment conforming to these specifications to remove the existing concrete overlay from the original bridge deck. Mechanical scarification shall be performed to between 1/8" and 1/4" above the original bridge deck surface. Total surface hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete. A depth of no more than 1/16" of the surface of the existing deck shall be removed by hydrodemolition unless deteriorated concrete is encountered; ideally the hydrodemolition equipment will be calibrated to not remove any depth of the deck. If deteriorated concrete is encountered, notify the Engineer immediately.

Existing overlay material, which is sound and well bonded following both mechanical scarification and hydrodemolition shall be left in place.

If hydrodemolition extends to a depth more of more than 1/16" into the deck, hydrodemolition shall be immediately stopped and recalibrated to meet the removal limits described above.

E. Concrete Removal by Hydrodemolition.

- i. **General.** The total surface area of the reinforced concrete bridge deck shall be completely prepared by hydrodemolition as necessary to provide a highly roughened and bondable surface prior to placement of the proposed bridge deck overlay while removing any deteriorated and unsound concrete in the initial pass. Unsound concrete is defined as existing bridge deck concrete that is deteriorated, spalled, or determined by the Engineer to be unsound.

With the use of hydrodemolition surface preparation, the requirement to provide a minimum 1/4" clearance around all reinforcing bars that are more than 1/2" diameter exposed is waived, providing that the existing concrete is sound. The amount of steel exposed shall be kept to a minimum.

Damaged or dislodged reinforcing steel shall be repaired or replaced at the Contractor's expense. Replacement shall include the removal of any additional concrete required to position the new reinforcing steel at the correct height and to provide the required lap splice lengths as required.

- ii. **Calibration.** Prior to commencement of the hydrodemolition removal operation, the hydrodemolition equipment shall be calibrated on an existing sound concrete surface as designated by the Engineer. The calibration area shall be a minimum of 7 feet wide by 7 feet long to demonstrate the desired result of this specification.

Move the hydrodemolition equipment to a second area (7'x7') as designated by the Engineer to demonstrate the desired result of this specification which is providing a highly rough and bondable surface and removing all unsound concrete during the initial pass is being achieved without removing more than a 1/16" depth of the existing concrete deck.

The Engineer shall verify the following settings:

1. Water pressure gauge (13,000 psi minimum)
2. Machine staging control (step)
3. Nozzle size
4. Nozzle speed (travel)
5. Depth of removal
6. Minimum water usage (43 gallons per minute)

During the hydrodemolition operations, any or all of the above settings may be modified in order to achieve removal of all unsound concrete and to provide a highly bondable surface. The settings may be changed by the Contractor to achieve total removal of unsound concrete, but the Engineer must be notified of all changes. The Engineer may change any or all of the settings in order to achieve the desired results with hydrodemolition. The removals and depth shall be verified, as necessary, and at least every 30 feet along the cutting path. The readings shall be documented and, if necessary, the equipment recalibrated to insure the hydrodemolition process achieves the desired results and removal of unsound concrete.

Calibration shall be required on each structure, each time hydrodemolition is performed, and as required to achieve the results specified by the plan.

- iii. **Debris and Fluid Containment.** Prior to commencement of the hydrodemolition operation, the Contractor shall submit a plan for approval to the Engineer for control and filtering of all water discharged during operation. The Contractor, at a minimum, shall block all drains on the deck and install aggregate dams every 150 feet; 6 inches high by 1 foot wide minimum, to strain runoff. The deck shall be used as a settlement basin within itself unless an alternate method of water control, satisfactory to the Engineer and meeting the environmental requirements of any associated Regulatory Agency, is required.

The Contractor shall provide shielding, as necessary, to ensure containment of all dislodged concrete within the removal area in order to protect the public from flying debris both on and under the work site.

- F. **Cleaning.** Cleaning shall be performed with a vacuum system capable of removing wet debris and water all in the same pass. The vacuum equipment shall be capable of washing the deck with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface. Cleaning shall be done in a timely manner, before debris and water is allowed to dry on the deck surface.
- G. **Resounding.** After the hydrodemolition operation has completed the removal, and the deck is cleaned and allowed to dry, the deck shall be resounded to assure that all unsound concrete deck material has been removed. The final sounding of the deck shall be done by the Engineer and shall be performed only when the entire deck is completely dry. In no case shall the final sounding be made unless the deck is dry and frost-free. Final sounding shall consist of as many successive resoundings as required to ensure that all deteriorated and fractured concrete has been removed. Additional removal shall be performed with 45 lb. maximum weight jackhammers operated at an angle of not more than 45 degrees from horizontal. Aerosol spray paint for outlining and sounding chains shall be provided by the Contractor.
- H. **Full Depth Repair.** Where the deck is sound for less than one third of its original depth, the concrete shall be removed full depth except for limited areas as may be designated by the Engineer. Forms shall be provided to support concrete placed in full depth repair areas. The forms for areas of up to 4 square feet may be suspended from wires from the reinforcing steel. For areas greater than 4 square feet, the forms shall be suspended from the primary members of the superstructure or by shoring below. Areas of full depth repair shall have the concrete faces and

reinforcing steel cleaned. Only those areas marked in the field by the Engineer as full depth repair will be paid for as full depth repair.

- I. **Preparation Prior to Overlay Placement.** Vehicles other than approved construction equipment will not be permitted on those sections of the deck where hydrodemolition has begun. Contamination of the deck by construction equipment or from any other source shall be prevented.

- IV. **MEASUREMENT.** See Section 606, the Special Note for Bridge Restoration and Waterproofing with Concrete Overlays, and the following:
 - A. **Surface Preparation Using Hydrodemolition.** The Department will measure the quantity hydrodemolition as the actual deck area in square yards overlaid and shall include the costs of hydrodemolition, removal of the surface preparation debris, cleaning, any incidental materials, and all labor and equipment necessary to complete the work as described in this Note, in the attached detail drawings, and the Specifications.

- V. **PAYMENT.** The Department will make payment for the completed and accepted quantities per Section 606 and under the following bid item:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
08550	HYDRODEMOLITION	SQ YD

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

SPECIAL NOTE FOR PREVENTIVE MAINTENANCE

1. 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 Attached Detailed Drawings. Section references are to the Standard Specifications. This work consists of the following: (1) Furnish all labor, materials, tools, and equipment, (2) Bridge Cleaning, (3) Concrete Coatings (4) Bearing Lubrication (5) Any other work specified as part of this contract.

2. MATERIALS.

A. Wash Water

Use clean potable water for all pressure washing.

B. Concrete Coatings

See The Division of Material’s list of approved materials for concrete coatings and Section 821.

C. Bearing Lubricant

Use one of the lubricants from the following manufactures:

Manufacture	Lubricant
Bostik Inc.	Never Seez - Mariner’s Choice
Mobil Oil	Mobil Centaur Moly NLGI Grades 1 or 2
Certified Labs	Premalube #1 WG

3. CONSTRUCTION.

A. Bridge Cleaning.

All debris shall be removed from the abutment seats, bearings, and beam ends per the detail on Sheet M3 of the attached detailed drawings as well as deck drains and associated downspouts and/or drain pipes when present (drains are only present on bridges 059B00055N and 059B00056N). Equipment for removing debris from the bridge components shall be determined by the Contractor, subject to the approval of the Engineer. The Contractor shall prevent any debris from entering any body of water, bridge drainage system, or traffic lanes. All debris removed shall be disposed of in a suitable off-site disposal facility. Prior to all cleaning work, the Contractor shall confirm that any bridge drainage system is not blocked by un-removable debris. A blocked drainage system is considered to be one from which debris cannot be removed using the means specified in this note. If the Engineer has been notified, and concurs that the drainage system is blocked prior to performing other cleaning work, then proceed at the direction of the Engineer. If the Contractor does not inspect the bridge drainage system and notify the Engineer prior to beginning work any blocked drains will be considered to be the result of the Contractor’s operations, and all clearing and cleaning of the drainage system shall be done as part of the work of the specification. All vegetation present in areas to be cleaned and coated shall be removed as determined by the Engineer.

All cost to complete Debris Removal, Clean Deck Drains, and Remove Vegetation shall as specified shall be included in the Lump Sum price for “Bridge Cleaning”.

B. Stratified and Pack Rust Removal.

Stratified and pack rust shall be removed from all steel bearing devices and specified limits of beams. Removal is not required on the two elastomeric bearings on each abutment for bridges 059B00053L and 059B00053R. Any existing bearing lubrication shall be removed. See attached detailed drawings for each bridge showing location and quantity of the bearing devices. Hand tools including wire brushes, scrapers, or impact devices (hand hammers or power chisels) are to be used for removing stratified and pack rust. All surfaces to have stratified and pack rust removed shall be cleaned to an SSPC SP-2 level. All debris collected shall be disposed of in a suitable off-site disposal facility. **All cost to complete Stratified and Pack Rust Removal and removal of existing bearing lubricant shall be considered incidental to the unit price bid for "Lubricate Bearing".**

C. Pressure Washing.

Specified bridge components shall be pressure washed. See attached detailed drawings addressing components to be pressure washed. All equipment for pressure washing shall be operated at a minimum pressure of up 4,000 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. Pressure washing shall be operated at distance of approximately six inches from and perpendicular to the surface. All pressure washing wands shall be equipped with a gauge to accurately determine the amount pressure used. Pressure washing of any bridge element will proceed from top of wash area to bottom of wash area. Wash water will not be released to a bridge element previously washed. Perform all pressure washing at temperatures above 40 degrees Fahrenheit. **All cost to complete Pressure Washing as specified shall be included in the Lump Sum price for "Bridge Cleaning".**

D. Concrete Coatings Application.

Specified bridge components shall have concrete coating applied to as specified after bridge cleaning. See attached detailed drawings for addressing the bridge components. Use compressed air to remove any loose debris from the surfaces that are to be coated after power washing. See concrete coating detail on Sheet M3. All coatings shall be applied within manufacturers recommended dry film thickness range. For recommended conditions for application, see Section 614.03.02 and coatings supplier specifications. Allow the surfaces to be coated to dry before any coating is applied. 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 will perform acceptance testing. See Section 821.04. The finish coat shall be Light Gray for Concrete. See Section 821.02. **All cost to complete Concrete Coating Application as specified shall be included in the Lump Sum price for "Concrete Coatings".**

E. Bearing Lubrication Application.

Steel bearing devices shall be lubricated as specified after all stratified rust and pack rust is removed and power washing is complete; this work does not apply to the two elastomeric bearings on each abutment for bridges 059B00053L and 059B00053R. Steel bearing devices shall have lubricant applied to all surfaces of the bearing including bearing plates and points of movement. See attached detailed drawings for each bridge showing location and quantity of the bearing devices. Allow bearing devices to dry before lubricant is applied. Perform all bearing lubrication application at temperatures above 40 degrees Fahrenheit or in accordance with manufactures specifications. **All cost to complete Bearing Lubrication Application as specified shall be included in the unit price Each for "Lubricate Bearing".**

F. Sequence of Work.

Complete work in the sequence listed below:

1. Debris Removal
2. Stratified Rust Removal
3. Pressure Washing
4. Concrete Coating Application
5. Bearing Lubrication Application

G. Inspection.

The Cabinet will provide inspection for all items required in this contract. Visual inspection will be required upon completion of each work item for each structure component or at the discretion of the Engineer at any time. All visual inspection shall be performed within arm's length distance.

1. **Debris Removal:** Visual Inspection.
2. **Stratified Rust or Pack Rust Removal:** Visual Inspection and Scraper
Test any surface cleaned to SSPC SP2 will be inspected by a dull scraper test to ascertain adherence of existing coating and a hammer test for tightness of pack rust.
3. **Power Washing:** Visual Inspection.
4. **Concrete Coating:**
Prime Coat Application Check for wet film thickness, and defects in the Paint.
Finish Coat Application Check for wet film thickness, paint appearance color and quality of application.
5. **Bearing Lubrication.** Visual Inspection.

H. Verifying Field Conditions.

The Contractor shall be familiar with all conditions at each bridge site. The Cabinet will not consider any claims due to the Contractor having not familiarized themselves with requirements of this work.

I. Residual Lead.

Residual lead paint may still be on 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.

J. Damage to the structure.

The Contractor shall bear all responsibility and expense for any and all damage to the structure during the repair work, even to the removal and replacement of a fallen span, should the fallen span result from the Contractors actions.

4. MEASUREMENT.

- A. Bridge Cleaning.** The Cabinet will measure this item by lump sum, completed and accepted. Payment at the contract unit price for lump sum is full compensation for debris removal, deck drain cleaning, pressure washing, vegetation removal, and all incidental items required to complete this with as specified in this note and attached detailed drawings.
- B. Concrete Coating.** The Cabinet will measure this item by lump sum, completed and accepted. Payment at the contract unit price for lump sum is full compensation for applying the concrete coatings and all incidental items required to complete this work as specified in this note and attached detailed drawings.
- C. Bearing Lubrication:** The Cabinet will measure this item by each, completed and accepted. Payment at the contract unit price each is full compensation for applying bearing lubrication and all incidental items required to complete this work as specified in this note and attached detailed drawings.

5. 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>
24981EC	BRIDGE CLEANING	Lump Sum
24982EC	CONCRETE COATING	Lump Sum
24983EC	BEARING LUBRICATION	Each

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

SPECIAL NOTE FOR TRAFFIC CONTROL

**THIS PROJECT IS
CONTROLLED ACCESS BY
PERMIT HIGHWAY**

1. **TRAFFIC CONTROL GENERAL.** Except as provided herein, maintain and control traffic in accordance with the 2019 Standard Specifications, the current edition of Standard Drawings, and the attached detail drawings. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic".

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

Night work may be necessary on this project. The Contractor shall submit the method of lighting to the Engineer for approval prior to use.

2. **SIGNS.** All signs used at night shall be either retroreflective with a material that has a smooth, sealed outer surface or illuminated to show the same shape and similar color both day and night. The requirement for sign illumination shall not be considered to be satisfied by street, highway, or strobe lighting. Just prior to erecting long term Traffic Control Devices (for closures in place continuously for more than 3 days), reduce the speed to 10 mph below the posted speed limit. Payment for the signs shall be at the square foot bid price for Signs. Setting, resetting, removing, covering, and relocating of the signs shall be incidental to the unit price bid for Signs.

Traffic control signs in addition to normal lane closure signing details in the drawings may be required by the Engineer. Signage for restricting width and reduced speed limit shall be furnished, relocated, and maintained by the Contractor. Setting, resetting, removing, covering, and relocating signs shall be incidental to the price bid for Signs.

Signs to be located along the bridge shall be clamped to the concrete bridge railing. No welding or drilling shall be permitted.

Contrary to Section 112.04.02, only long-term signs (sign intended to be continuously in place for more than 3 days) will be measured for payment; short term signs (signs intended to be left in place for 3 days or less) will not be measured for payment but will be incidental to "Maintain and Control Traffic".

The contractor is to install warning signs for wide loads in advance of the bridge under the direction of the Engineer. The Department will not measure installation, maintenance, or removal for payment, and will consider these incidentals to "Maintain and Control Traffic".

3. **TEMPORARY PAVEMENT STRIPING.** Permanent removal of all pavement striping for traffic control shall be considered incidental to Maintain and Control Traffic. Temporary pavement striping shall be paid only once per course in accordance with Section 112.04.07. The Contractor shall replace any temporary striping that becomes damaged or fails to adhere to the pavement before dark on the day of the notification. Liquidated damages shall be assessed to the Contractor at a rate of \$500 per day for failing to replace temporary striping within this time limit.
4. **PROJECT PHASING & CONSTRUCTION PROCEDURES.** Portable Changeable Message Signs (PCMSs) are not anticipated on this project. The Department will provide and maintain PCMSs, if needed, at the time of construction.

The length of lane closures shall be only that needed for the diversion of traffic and shall be left in place only long enough to complete each phase of the work. It is anticipated that all lane closures on structure 059B00053L, 059B00053R, 059B00054R, and 059B00055N will be short term closures (continuously in place for less than 3 consecutive days). Conform to the standard drawings for lane closures for signs, buffer zones, and taper lengths.

For 059B00053L (I-71/75 Southbound), no set number of days are allotted for all work subject to the contract completion date. The Contractor may close one shoulder with no time restrictions, may close a single left or right lane from 9:00 PM through 5:00 AM, and may close two lanes from 11:00 PM through 5:00 AM. The ground-level ramps from I-71/I-75 to I-275 may be closed, one at a time, from 11:00 PM through 5:00 AM for a maximum of 4 closures; this limit applies to the work performed on all structures. Lane closures shall be in accordance with Standard Drawing No. TTC-115.

For 059B00053R (I-71/75 Northbound), no set number of days are allotted for all work subject to the contract completion date. The contractor may close one shoulder with no time restrictions, may close a single left or right lane from 9:00 PM through 5:00 AM, and may close two lanes from 11:00 PM through 5:00 AM. The ground-level ramps from I-71/I-75 to I-275 may be closed, one at a time, from 11:00 PM through 5:00 AM for a maximum of 4 closures; this limit applies to the work performed on all structures. Lane closures shall be in accordance with Standard Drawing No. TTC-115.

For 059B00054L (I-275 Westbound) 60 days are allotted for all work. The contractor shall maintain a single lane of traffic, minimum 11'-0", and a shoulder, 8'-0" minimum, and a 1'-0" minimum buffer between the temporary concrete barrier and the temporary lane line, during construction in accordance with Standard Drawing No. TTC-120 and the attached detail drawings.

For 059B00054R (I-275 Eastbound) no set number of days are allotted for all work subject to the contract completion date. The contractor may close the outside shoulder with no time restrictions and may close a single lane from 9:00 PM through 5:00 AM in accordance with Standard Drawing No. TTC-115.

For 059B00055N (I-275 to I-71/75 Northbound), no set number of days are allotted for all work subject to the contract completion date. The contractor may close the inside shoulder with no time restrictions and may close a single lane from 9:00 PM through 5:00 AM in accordance with Standard Drawing No. TTC-115.

For 059B00056N (I-275 to I-71/75 Southbound) 45 days are allotted for all work. The contractor shall maintain a single lane of traffic, minimum 11'-0", and a shoulder, 1'-0" minimum, and a 1'-0" minimum buffer between the temporary concrete barrier and the temporary lane line, during construction in accordance with Standard Drawing No. TTC-120. Short term single lane closures may be performed between 9:00 PM and 5:00 AM, following the same widths described above per Standard Drawing No. TTC-115.

For the full duration of the construction, the Contractor shall post at 10 miles per hour below the posted speed limit for the extents of the construction activities.

Lane closures will not be permitted on structure 059B00056N on the following days:

Memorial Day Weekend (Friday-Monday)

Independence Day

Labor Day Weekend (Friday-Monday)

Work must be completed and bridges fully open to traffic no later than 11:59 PM on November 30, 2023.

Upon approval immediately notify the following of the scheduled lane closures:

Kenton County Judge Executive

US Postal Service

Fire Department

Ambulance Service

Kentucky State Police Department

Kenton County, KY Police and Sheriff Departments

The Department will provide public notification.

5. **BARRICADES.** Contrary to Section 112.04.04 of the Standard Specifications, barricades used to protect removal areas and to close lanes will be incidental to "Maintain and Control Traffic".
6. **TRAFFIC COORDINATOR.** Designate an employee to be Traffic Coordinator as per Section 112. The Traffic Coordinator shall inspect the project maintenance of traffic, at least three times daily, or as directed by the Engineer, during the Contractor's operations and at any time a lane closure is in place. The project personnel shall have access on the project to a radio or telephone to be used in case of emergencies or accidents. The Traffic Coordinator shall report all incidents throughout the work zone to the Engineer on the project. The Contractor shall furnish the name and telephone number where the Traffic Coordinator can be contacted at all times. The Department will consider the cost of the Traffic Coordinator incidental to the price bid for "Maintain and Control Traffic".
7. **PROTECTION BELOW THE STRUCTURE.** No material should be allowed to drop onto the roadway below or on to the ground below the structure unless the area is blocked from public access, where applicable, and permission is given by the Engineer.
8. **MEASUREMENT**
 - A. **Delineators for Barrier.** The Department will measure the quantity of delineators per Section 509.04.04 of the Standard Specifications.
 - B. **Relocate Temporary Concrete Barrier.** The Department will measure the length of concrete barrier wall to be relocated per Section 509.04.03 of the Standard

Specifications.

- C. **Signs.** The Department will measure the quantity of Temporary Signs per Section 112.04.02 of the Standard Specifications except as noted in Section 2 above.
 - D. **Lane Closures.** The Department will measure the quantity of Long Term Lane Closures per Section 112.04.17 of the Standard Specifications. The Department will not measure water filled barriers, including installation, moving, and removal, barricades, or barrels in conjunction with Lane Closures and will consider them incidental to this work.
 - E. **Arrow Panels.** The Department will measure the quantity by each individual unit per Section 112.04.05 of the Standard Specifications.
 - F. **Relocate Crash Cushion.** The Department will measure the number of individual times that a temporary crash cushion has to be moved and assembled at a new location between successive phases of the project.
 - G. **Concrete Barrier Wall Type 9T.** The Department will measure the length of concrete barrier wall installed and accepted per Section 509.04.01.
 - H. **Pavement Striping.** The Department will measure the quantity of Permanent Pavement Striping per Section 713.04.01 of the Standard Specifications.
 - I. **Temporary Pavement Striping.** The Department will measure the quantity of Temporary Pavement Striping per Section 112.04.07 of the Standard Specifications.
 - J. **Crash Cushion Type VI Class BT TL3.** The Department will measure the quantity of temporary crash cushions per 112.04.12.
 - K. **Maintain and Control Traffic.** The Department will measure the quantity by lump sum per Section 112.04.01 of the Standard Specifications. All materials and labor necessary to maintain and control traffic per this Note, the Standard Specifications, and the attached detail drawings that are not listed above shall be considered incidental to this item of work.
9. **PAYMENT.** The Department will make payment for the completed and accepted quantities under the following definitions:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
01984	Delineator for Barrier – White	Each
01985	Delineator for Barrier – Yellow	Each
02003	Relocate Temporary Concrete Barrier	Linear Foot
02562	Temporary Signs	Square Foot
02650	Maintain and Control Traffic	Lump Sum
02653	Lane Closure	Each
02775	Arrow Panel	Each
02898	Relocate Crash Cushion	Each
03171	Concrete Barrier Wall Type 9T	Linear Foot
06550	Pave Striping – Temp Rem Tape – W	Linear Foot
06551	Pave Striping – Temp Rem Tape – Y	Linear Foot
06556	Pave Striping – Dur Ty 1-6 In W	Linear Foot
06657	Pave Striping – Dur Ty 1-6 In Y	Linear Foot
08903	Crash Cushion Ty VI Class BT TL3	Each

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

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, 2 line 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

7.0 Project-Specific Notes A Portable Queue Warning Alert System conforming to the standards described above shall be utilized while lane closures are in place on any of the structures. It is the intention of the project that crowd sourcing data shall be used in lieu of portable radar sensors. A minimum of two Queue Warning PCMSs (three on 059B00056N) shall be in place at locations directed by the Engineer. Additional PCMSs may be required if queues are lengthier than anticipated. Two Queue Protection Vehicles shall be provided while lane closures are in place on 059B00056N; the need for queue protection vehicles is not anticipated on the other structures. It is anticipated that these vehicles will be needed for approximately 12 hours per day. Initial placement of the vehicles and hours of operation shall be as directed by the Engineer.

Special Note for Traffic Queue Protection Vehicle

1.0 DESCRIPTION. Furnish, Operate, and Maintain Traffic Queue Protection Vehicle at locations and times described herein. The Queue Protection Vehicle is expected to alert motorists (inside and outside of project limits) of all stopped traffic caused by construction activities or incidents within the project limits.

2.0 MATERIALS. The contractor shall provide a minimum of one (1) queue protection vehicle for each traveling direction where traffic flow is reduced or modified in a manner where a queue could occur. One (1) additional queue protection vehicle shall be onsite in reserve. The Traffic Queue Protection Vehicle must fulfill the following minimum requirements:

1. A truck mounted attenuators that meets or exceeds NCHRP TL-3 requirements.
2. Four (4) round yellow strobe lights (with auto-dimmers) positioned rear facing
 - Two (2) mounted under rear bumper
 - Two (2) mounted at cab level
 - Visibility of strobe lights can not be deterred by attenuator
3. One (1) standard cab mounted light bar.
4. A truck mounted message board with a minimum of 3 Lines and 8 Characters per line.
5. Four Hour National Traffic Incident Management (TIM) Responder Training for Queue Truck Operators.

3.0. CONSTRUCTION. A queue will be defined as anytime that traffic traveling through the project is reduced to a speed of twenty (20) miles per hour or less. The following procedures will be followed when a traffic queue occurs until free flow traffic conditions are present:

- The queue protection vehicle shall be positioned no further than ½ mile upstream from the back of the slow moving traffic.
- The queue protection vehicle shall be positioned on the shoulder and clear of the traveled way so as not to impede traffic.
- The queue protection vehicle shall relocate as needed to maintain approximately ½ mile distance from the back of the slow moving traffic.
- The 2nd queue protection vehicle shall be held in reserve, on site, and support the primary vehicle if conditions prevent repositioning by reverse. This vehicle shall not be paid for idle time.
- Queue Protection Vehicles shall be kept in project limits during planned lane closures and other project activities expected to cause a queue. One Queue Protection Vehicle shall remain on the project at all times available to respond to incidents within the project limits in a timely manner.
- Queue length estimates and traffic conditions shall be reported to the KYTC project engineer or designee at the following periods:
 1. At 30 minute intervals
 2. At significant changes
 3. When free flow traffic is achieved
- The KYTC project engineer or designee will document all daily queue reports and provide these logs to the Director of Maintenance and Director of Construction at the end of each month.

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

4. MEASUREMENT.

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

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

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

5. PAYMENT.

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

**SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND
PENALTIES 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 November 30, 2023. An allotted amount of time is assigned to each structure in this contract as shown below.

<u>STRUCTURE</u>	<u>ALLOTTED CALENDAR DAYS</u>	<u>COMPLETION DATE</u>
059B00053L	-	November 30, 2023
059B00053R	-	November 30, 2023
059B00054L	60	November 30, 2023
059B00054R	-	November 30, 2023
059B00055N	-	November 30, 2023
059B00056N	45	November 30, 2023

Contrary to Section 108.07.03, the Engineer will begin charging calendar days for a structure on the day the Contractor starts work or sets up traffic control on that particular structure. A penalty of \$5,000.00 per day will be assessed when the allotted number of calendar days is exceeded for each structure or the 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 BRIDGE PLANS

See Project Related Information for Bridge Plans.
Drawing Number 28703.



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: March 30, 2023

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Kenton CID 232965

Structure ID: 059B00053R

Structure Location: I-71/I-75 SB over I-275 Ramps

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

Inspection Date: March 28th, 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.



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

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N#	# 3303293 A	Address:	Kenton County - 059 B00053 R
Client Name:	K Y T C		
Sampled By:	O'Dail Lawson		

[illegible]

Reviewed By: Winters Mena
Signature

The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government. Partial Reproduction of any part of this report is strictly prohibited. Samples shall be retained for (30) days.

AJHA #1 02459

TEAM KENTUCKY

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



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: March 30, 2023

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Kenton CID 232965

Structure ID: 059B00054R

Structure Location: I-275 NB over I-75 and I-275 Ramps

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

Inspection Date: March 28th, 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.



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

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N#	# 3303293 B	Address:	Kenton County - 059 B00054 R
Client Name:	K Y T C		
Sampled By:	O'Dail Lawson		

[illegible]

Reviewed By: Winters Mena
Signature

The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government. Partial Reproduction of any part of this report is strictly prohibited. Samples shall be retained for (30) days.

AJHA #1 02459

TEAM KENTUCKY

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



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: March 30, 2023

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Kenton CID 232965

Structure ID: 059B00055N

Structure Location: I-71 / I-75 NB ramp over I-71 / I-75 and ramps

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

Inspection Date: March 28th, 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.



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

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N#	# 3303293 C	Address:	Kenton County - 059 B00055N
Client Name:	K Y T C		
Sampled By:	O'Dail Lawson		

[illegible]

Reviewed By: Winters Mena
Signature

The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government. Partial Reproduction of any part of this report is strictly prohibited. Samples shall be retained for (30) days.

AJHA #1 02459

(502) 564-7250 fax (502) 564-5655

TEAM KENTUCKY

[illegible]



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: March 30, 2023
Conducted By: O'Dail Lawson
Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Kenton CID 232965
Structure ID: 059B00056N
Structure Location: I-71 / I-75 SB ramp over I-71 / I-75 and ramps
Sample Description: Any suspect materials collected were negative for asbestos.
Inspection Date: March 28th, 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.

Analysis N#	# 3303293 D	Address:	Kenton County - 059 B00056N
Client Name:	K Y T C		
Sampled By:	O'Dail Lawson		

[illegible]

Date Analyzed : 29-Mar-23
Analyst : Winterford Mensah

Reviewed By: Winters Mena
Signature

The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government. Partial Reproduction of any part of this report is strictly prohibited. Samples shall be retained for (30) days.

AIHA # 102459

AJHA #1 02459

(502) 564-7250 fax (502) 564-5655

KYTC Asbestos COC 3.3.23

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

Certification Number: ETC-AIR-032223-00200

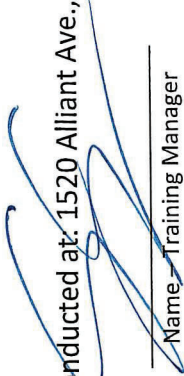
O'Dail Lawson

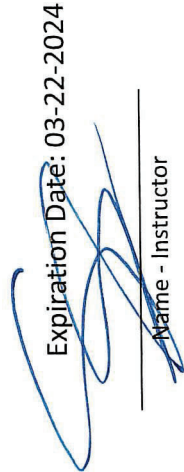
has on 03-22-2023 attended and successfully completed the requirements and passed the examination with a score of 70% of better on the entitled course.

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

059B00053L / R, 059B00054L / R, 059B00055N, 059B00056N
I-71 / I-75 / I-275 INTERCHANGE

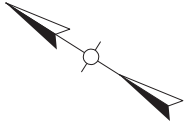
**I-71 / I-75 / I-275 INTERCHANGE
PROPOSED WORK: INTERCHANGE
BRIDGES REPAIR PLANS**



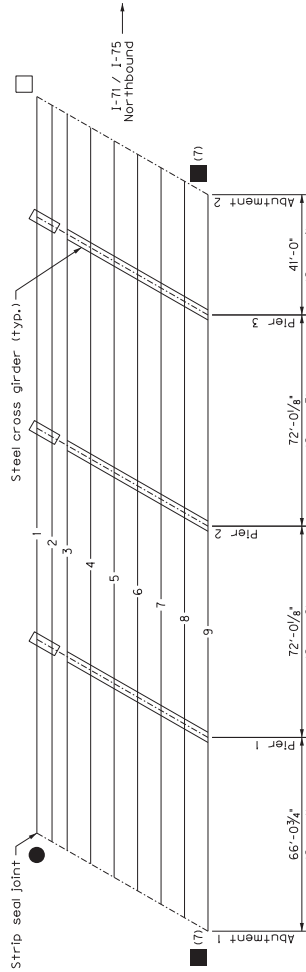
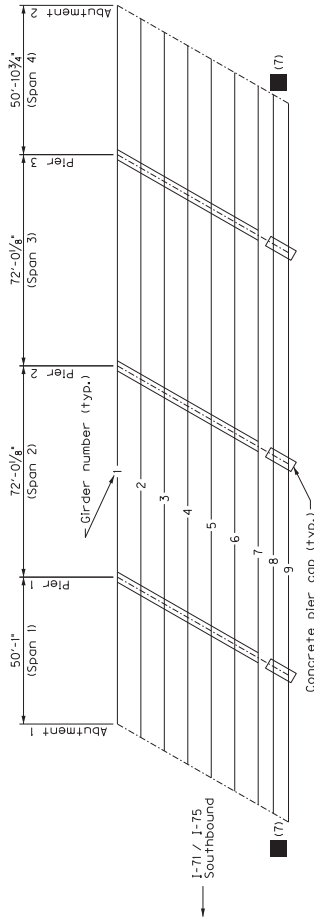
Scott
Ribble

BY Scott Miller DATE April 28, 2023

BY John Kama
DATE April 28, 2023



PLAN
059B00053L - I-71/75 SOUTHBOUND



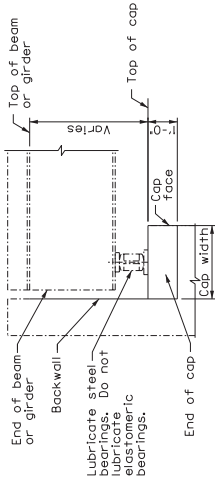
PLAN
059B00053R - I-71/75 NORTHBOUND

- NOTES:**
- 1) See the general notes and Special Notes for additional material and construction specifications, construction procedures, and pay items.
 - 2) The Contractor shall field verify all relevant existing dimensions.
 - 3) See Sheet M7 and the Special Note for Strip Seal Gland Replacement for gland replacement details.
 - 4) See the Special Note for Strip Seal Gland Replacement for strip seal joint cleaning.
 - 5) See the Special Note for Preventive Maintenance for cleaning, concrete coating, and bearing lubrication details.

PREVENTIVE MAINTENANCE
The front face of the backwall, the top and the face of the cap for the entire length of the cap including cap ends, beam ends, and end diaphragms shall have debris removed with pressure washers and have concrete sealant applied to all concrete surfaces as specified within the limits shown.

LEGEND:

- = Strip seal gland replacement
- = Pressure wash, seal abutment seat and backwall, and lubricate steel bearings (number of bearings shown). Apply concrete sealant to concrete coating 1400 SF 53L and 1250 SF 53R.
- = Remove debris from strip seal gland



SECTION THROUGH ABUTMENT CAP AND BEAM END



USER: RIBBLE

REVISION	DATE

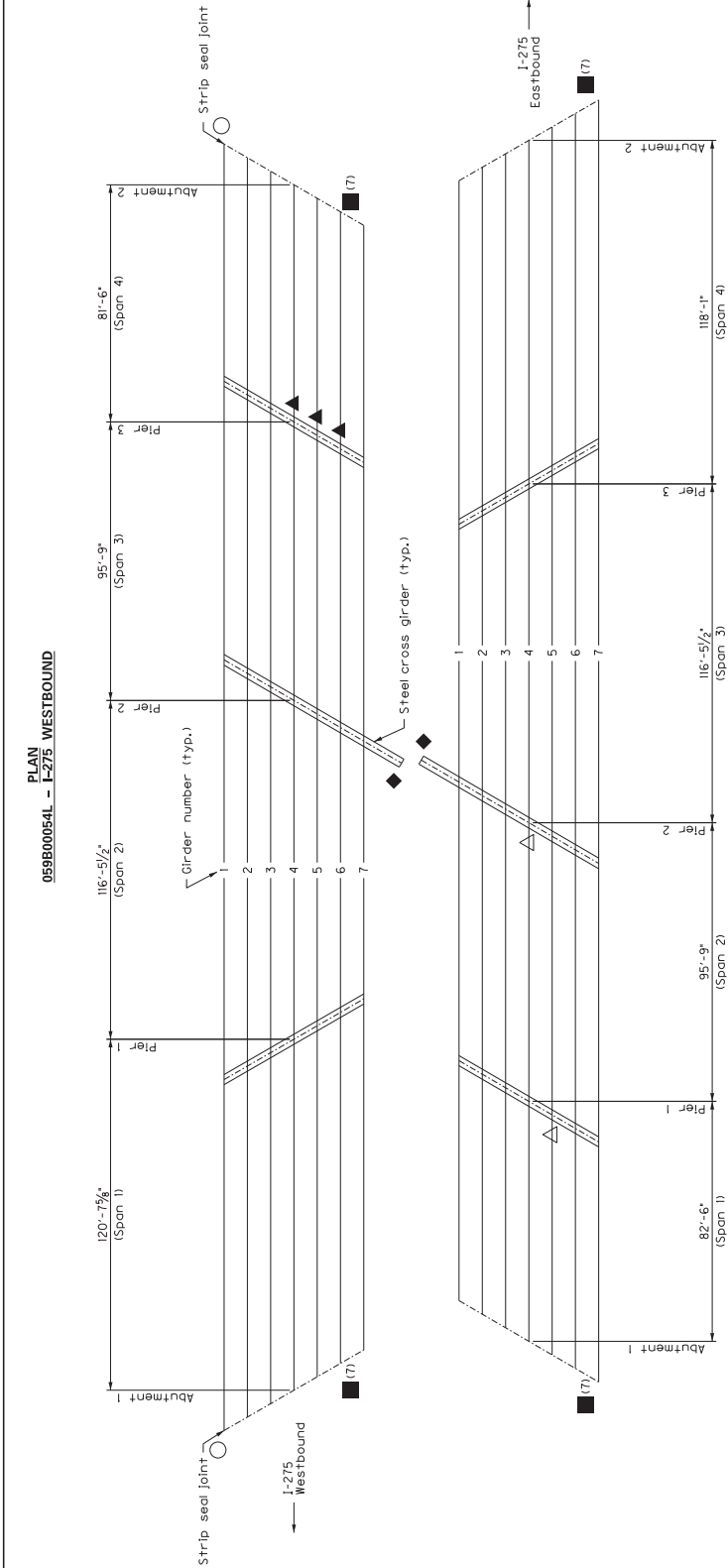
PREPARED BY
BURGESS & NIPLE
Engineers ■ Architects ■ Planners

DATE: April 28, 2023
DESIGNED BY: S. Ribble
CHECKED BY: D. Richardson
FILE NAME: P:\PPR9281\CA00\SHEETS\LAYOUT 059B00053L.RDGN

ROUTE
1-71/75/275

LAYOUT - 059B00053L/R
CROSSING

ITEM NO.
SHEET NO.
M3
COUNT OF
KENTON
DRAWN BY
28703

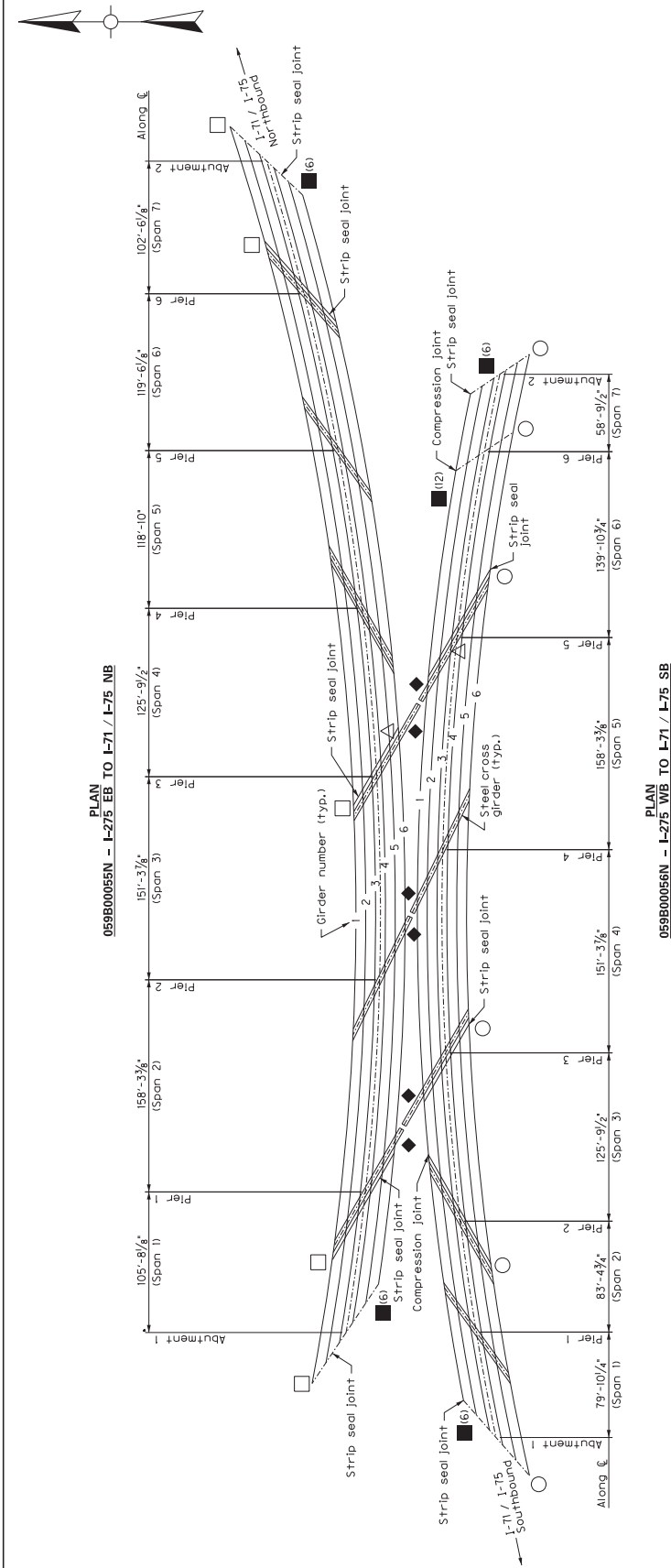


- NOTES:**
- 1) See the general notes and Special Notes for additional material and construction specifications, construction procedures, and pay items.
 - 2) The Contractor shall field verify all relevant existing dimensions.
 - 3) Milling, hydrodemolition, and placement of the new overlay shall be from abutment to abutment and from face of railing to face of railing on the westbound bridge. See the Special Notes.
 - 4) See Sheet M3 and the Special Note for Milling, hydrodemolition, and bearing lubrication details.
 - 5) See Sheets M8 and M10 and the Special Note for expansion joint replacement details.
 - 6) See Sheet M11 and the Special Note for access hole cover plate replacement details.
 - 7) See Sheets M12-M15 and the Special Note for girder web crack repair details.

- LEGEND:**
- ◆ = Replace access hole cover plate
 - = Bridge joint replacement
 - ▲ = Steel repair (bolted repair)
 - = Steel repair (drilled repair)
 - = Pressure wash, seal abutment seat and bearing stiffeners, and seal bearings (number of bearings shown). Approximate area of concrete coating 1600 SF 54L and 1600 SF 54R.

	COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	USER: RIBBLE	DATE PLOTTED: April 28, 2023	PREPARED BY BURGESS & NIPL Engineers ■ Architects ■ Planners	DATE: April 28, 2023 DESIGNED BY: S. Ribble CHECKED BY: D. Richardson FILE NAME: P:\VPB9281\CA00\SHEETS\LAYOUT 059B00054L.RDSN	CROSSING	ROUTE I-71/75/275	ITEM NO. M4	COUNT OF DRAWINGS 28703	KENTON COUNTY

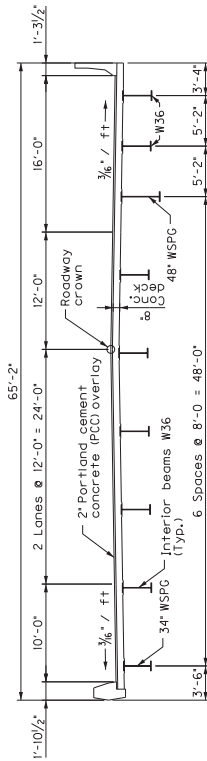
LAYOUT - 059B00054L.R



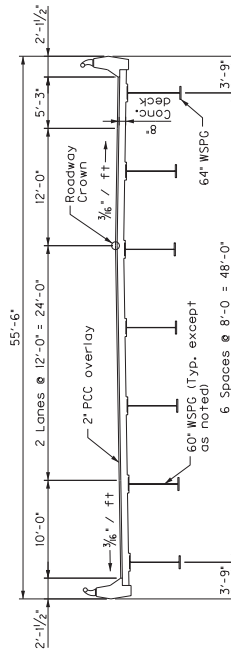
- NOTES:**
- 1) See the general notes and Special Notes for additional information regarding construction procedures, and pay items.
 - 2) The Contractor shall field verify all relevant existing dimensions.
 - 3) Milling, hydrodemolition, and placement of the new overlay shall be from abutment to abutment, including the full width of the face of railing on both the southbound bridge. See the Special Notes.
 - 4) See Sheet M3 and the Special Note for Preventive Maintenance for cleaning, concrete coating, and bearing lubrication details.
 - 5) See Sheets M8 and M10 and the Special Note for expansion joint replacement details.
 - 6) See Sheet M11 and the Special Note for access hole cover plate replacement details.
 - 7) See Sheets M12 and the Special Note for girder web crack repair details.
 - 8) See the Special Note for Strip Seal Gland Replacement for strip seal joint cleaning.

	COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS		DATE PLOTTED: April 28, 2023		USER: RIBBLE	
	REVISION	DATE				
PREPARED BY BURGESS & NIPL Engineers ■ Architects ■ Planners			DATE: April 28, 2023 DESIGNED BY: S. Ribble DETAILED BY: D. Richardson	CHECKED BY D. Richardson S. Ribble	LAYOUT - 059B00055N/059B00056N	
			CROSSING		ROUTE 1-71/75/275	COUNTY OF KENTON DRAWN BY S. Ribble SHEET NO. M5 28703

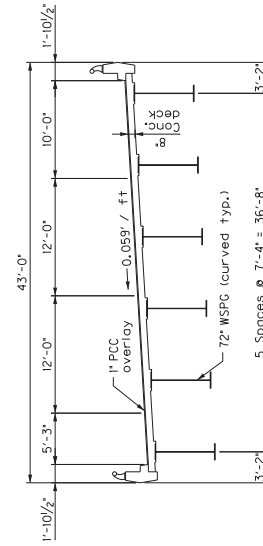
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TYPICAL SECTION
059B00053L



TYPICAL SECTION
059800054L




TYPICAL SECTION
059800005N

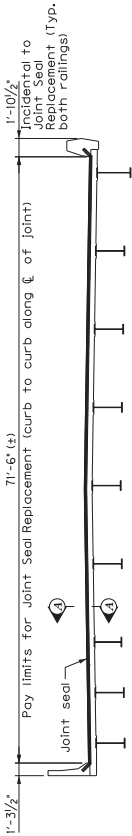
 COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	 REGISTERED PROFESSIONAL ENGINEER STATE OF KENTUCKY	REVISION		DATE	PREPARED BY	CHECKED BY					ROUTE	ITEM NO.	COUNTY OF	
						BURGESS & NIPLE								KENTON
						Engineers ■ Architects ■ Planners	DESIGNED BY: S. Riddle		D. Richardson			-7/175/275	SHEET NO.	DRAWING NUMBER
							DETAILED BY: D. Richardson		S. Riddle				M6	28703
							FILE NAME: P:\PR9528\CAAD\SHEETS\TYPICAL SECTIONS.DGN							
USER: Riddle														

NOTES:

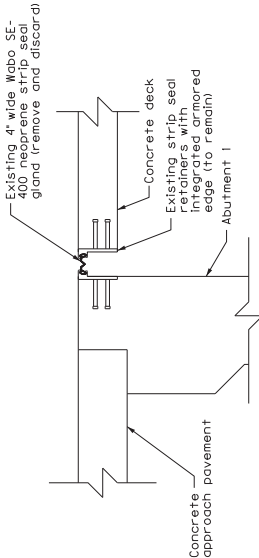
- 1) See the general notes and the Special Note for Joint Seal Replacement for additional material and construction specifications, construction procedures, and pay items.
- 2) The Contractor shall field verify all relevant existing dimensions and member sizes.

LEGEND:

 = Strip seal



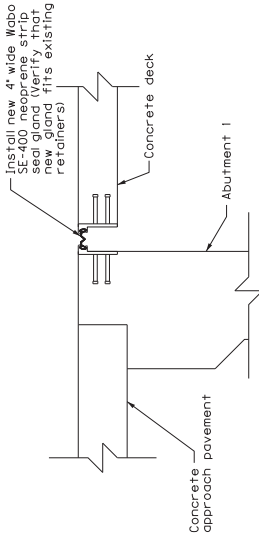
TYPICAL SECTION
059B00053R



SECTION A - A - REMOVAL
At Abutment 1 - 059B00053R



ABUTMENT 1 JOINT
059B00053R



SECTION A - A - SEAL REPLACEMENT
At Abutment 1 - 059B00053R

 <div>COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS</div>		 <div>REVISION</div>		<div>DATE</div>		<div>PREPARED BY</div>		<div>DATE: April 28, 2023</div>		<div>CHECKED BY</div>		<div>ROUTE</div>		<div>ITEM NO.</div>		<div>COUNTY OF</div>	
						<div>BURGESS & NIPLER Engineers ■ Architects ■ Planners</div>				<div>D. Richardson</div>		<div>I-71/75/275</div>		<div>M7</div>		<div>KENTON</div>	
										<div>S. Ribble</div>		<div>CROSSING</div>		<div>DRAWING NUMBER</div>		<div>28703</div>	
				<div>DATE PLOTTED: March 15, 2023</div>						<div>FILE NAME: P:\VPR9281\CA00\SHEETS\JOINT SEAL REPLACEMENT DETAILS.DGN</div>							

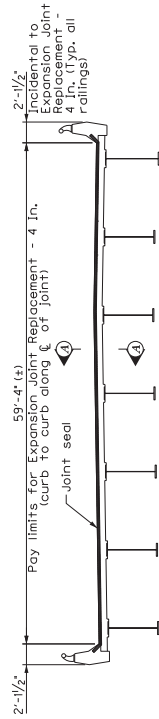
NOTES:

- 1) See the general notes and the Special Note for Bridges Restoration and Waterproofing with Concrete Overlays. The Contractor shall be responsible for the removal and replacement of the existing material and construction of the new overlay, for additional material and construction specifications, construction procedures, and pay items.
- 2) Removal of the existing overlay away from the joints must be performed before the joints are replaced. The Contractor shall be responsible for the removal and replacement of the existing material and construction of the new overlay, for additional material and construction specifications, construction procedures, and pay items.
- 3) The Contractor shall verify all relevant existing dimensions and member sizes.
- 4) The cross slope and crown information is from the original section on Sheet M6. No information is available for the existing overlay. The Contractor is responsible for verifying the geometry of the existing deck and matching the existing cross slope and crown.

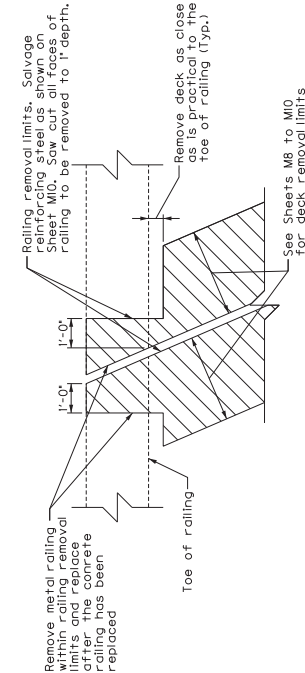
LEGEND:

- Joint seal gland
- Limits of removal
- New Concrete

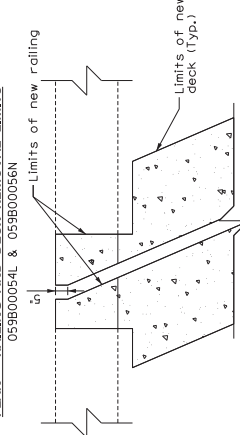
** With the permission of the Engineer, rather than salvaging the existing longitudinal reinforcement, the Contractor has the option to cut these bars and drill and epoxy new longitudinal reinforcing steel at the same size and spacing as the existing bars. If the Contractor chooses this option, the Contractor shall be responsible for the cost of providing and installing new reinforcing steel will be at the Contractor's expense.



TYPICAL SECTION
059800054L



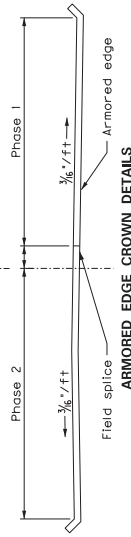
PLAN - RAILING AND DECK REMOVAL LIMITS
059800054L & 059800056N



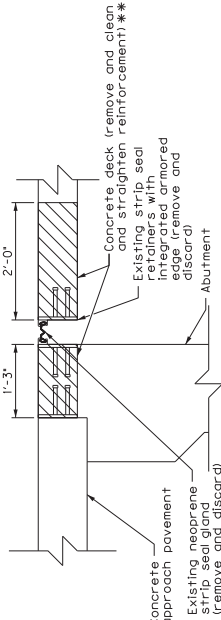
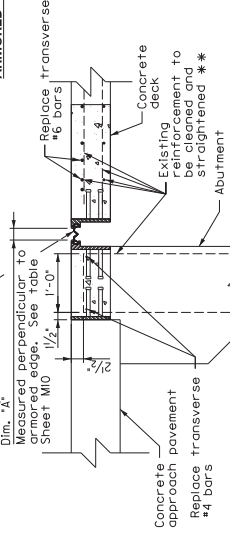
PLAN - RAILING AND DECK LIMITS - PROPOSED
059800054L & 059800056N

UPTURN AT RAILING

STUD LAYOUT



ARMORED EDGE CROWN DETAILS



SECTION A - A - REMOVAL
At Abutments - 059800054L

ABUTMENT 1 JOINT
059800054L
(Typ. at Abutments)

SECTION A - A - SEAL INSTALLATION
At Abutments - 059800054L



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

BURGESS & NIPLE
Engineers - Architects - Planners

DATE: April 28, 2023	CHECKED BY: D. Richardson
DESIGNED BY: S. Ribble	DETAILS BY: D. Richardson

JOINT REPLACEMENT DETAILS 1

ROUTE
1-71/75/275

ITEM NO.
M8

COUNTY OF
KENTON
SHEET NO.
28703

FILE NAME: P:\PR5928\CARD\SHEETS\JOINT REPLACEMENT DETAILS.DGN

DATE PLOTTED: April 28, 2023

USER: Ribble

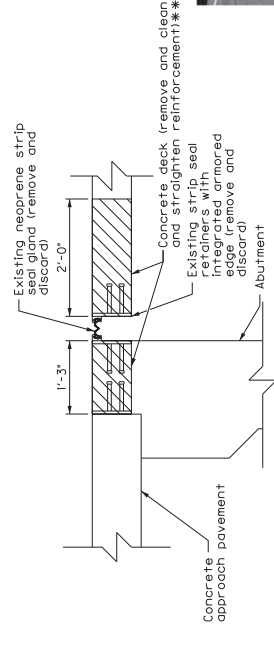
MicroStation v8.11.2.9.9

NOTES:

- 1) See the general notes and the Special Notes for Expansion Joint Replacement 1 in. and 4 in. for addition of neoprene seal, reinforcement, and pay items.
- 2) Removal of the existing overlay away from the joints may be performed before or after the joints are replaced. Removal of the existing overlay should be completed prior to installation of the new overlay. The new overlay shall extend over the joint header and be finished flush with the top of the new armored edges. The existing overlay shall be removed to the silicone facing and neoprene facing during placement of the overlay or shall install the seals and glands after the overlay.
- 3) The Contractor shall verify all relevant existing dimensions and member sizes.
- 4) The cross slope and crown information is from the original design and shall be maintained. The local section on Sheet M6. No information is available for the existing overlay. The Contractor is responsible for verifying the geometry of the existing deck and matching the existing cross slope and crown.

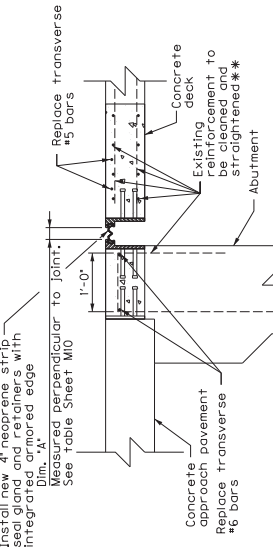
JOINT DIMENSIONS

DIMENSION	ABUTMENT 1	PIER 2	PIER 3	PIER 5	PIER 6	ABUTMENT 2
B	79'-9" (+)	101'-0" (+)	71'-11" (+)	97'-7" (+)	54'-11" (+)	56'-7" (+)



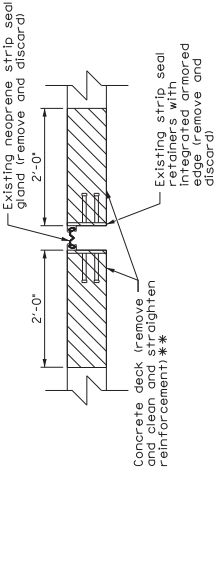
SECTION A - A - REMOVAL

At Abutments - 059B00056N



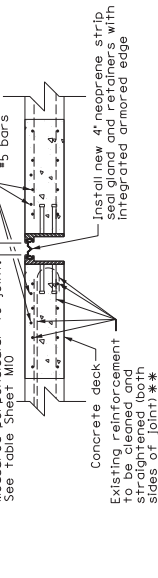
SECTION A - A - SEAL INSTALLATION

At Abutments - 059B00056N



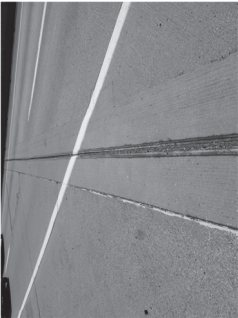
SECTION B - B - REMOVAL

Near Piers 3 and 5 - 059B00056N

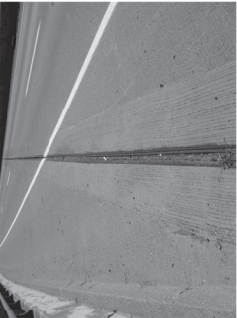


SECTION B - B - SEAL INSTALLATION

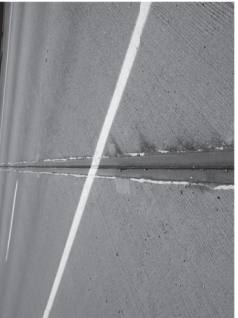
Near Piers 3 and 5 - 059B00056N



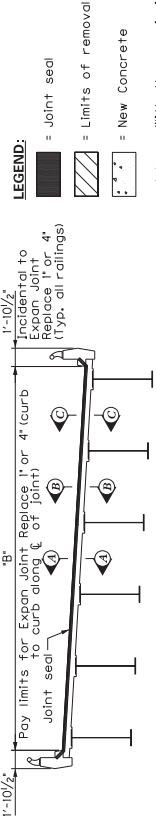
ABUTMENT 2 JOINT
059B00056N
(Typ. of Abutments)



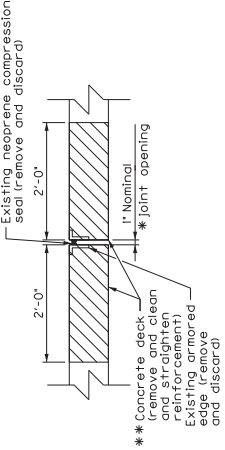
PIER 5 JOINT
059B00056N
(Typ. of Piers 3 and 5)



PIER 6 JOINT
059B00056N
(Typ. of Piers 2 and 6)

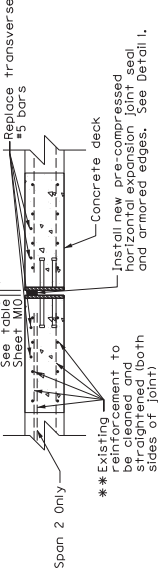


TYPICAL SECTION
059B00056N



SECTION C - C - REMOVAL

Near Piers 2 and 6 - 059B00056N



SECTION C - C - SEAL INSTALLATION

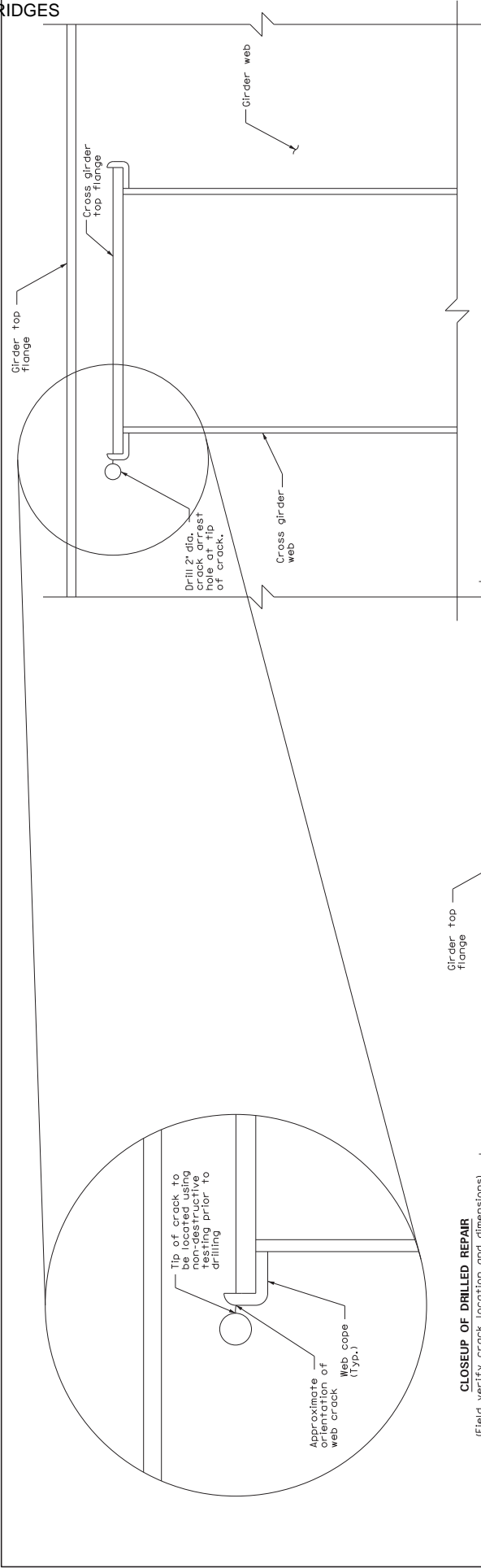
Near Piers 2 and 6 - 059B00056N

DETAIL 1

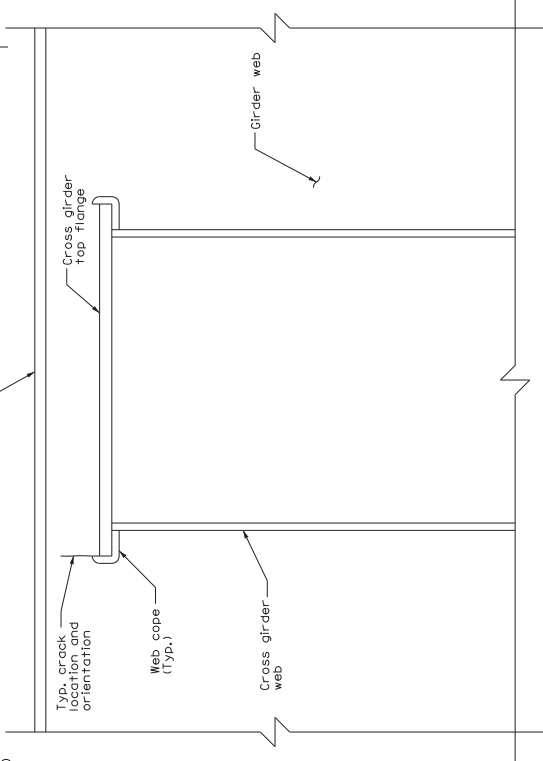
	COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	DATE April 28, 2023	CHECKED BY D. Richardson	JOINT REPLACEMENT DETAILS 2		ROUTE I-71/75/275	ITEM NO. M6	COUNTY OF KENTON
	US-11 US-275 US-275B	DESIGNED BY: S. Ribble DRAWN BY: D. Richardson	FILE NAME: P:\PDS928\CARD\SHEETS\JOINT REPLACEMENT DETAILS 2.DGN	CROSSING			SHEET NO. M6	DRAWN BY 28703
DATE PLOTTED: March 15, 2023		USER: Ribble						

PLAN - STRIP SEAL AND COMPRESSION SEAL JOINTS - PROPOSED





ELEVATION - TYPICAL GIRDER CRACK LOCATION FOR DRILLED REPAIR
(Field verify crack location and dimensions)



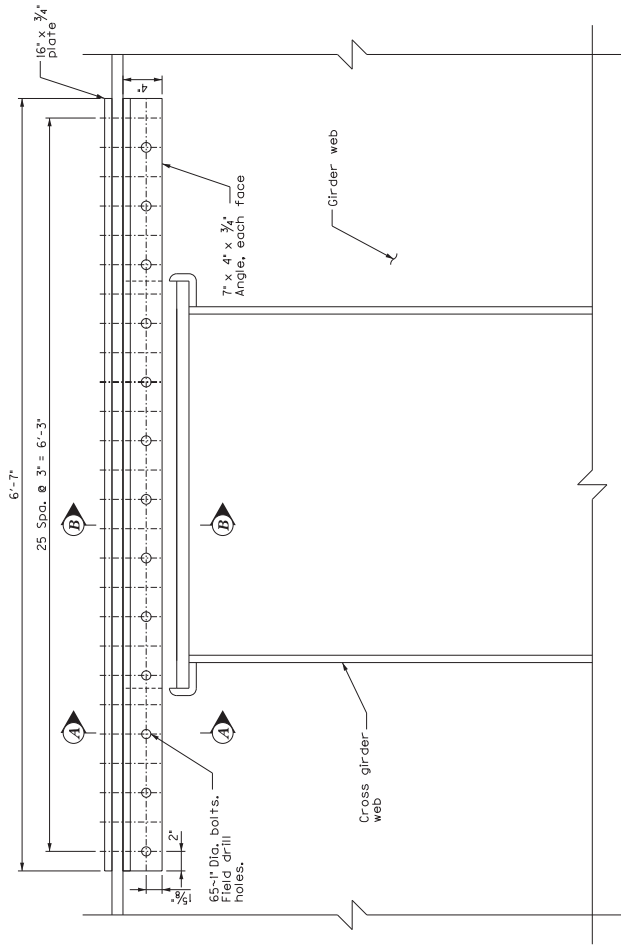
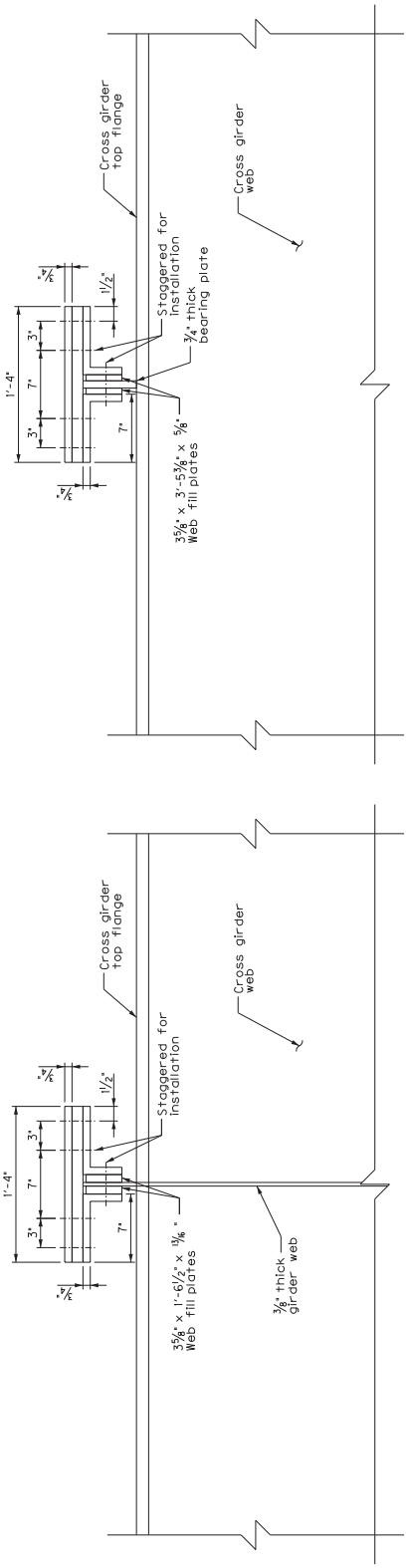
ELEVATION - TYPICAL GIRDER CRACK LOCATION FOR BOLTED REPAIR
(Field verify crack location and dimensions)

NOTES:

- 1) See the General Notes and Special Notes for additional information concerning specifications, construction procedures, and pay items.
- 2) See Sheets M4-M5 for the locations of the girder repairs.
- 3) The Contractor shall field verify all relevant existing dimensions and member locations and compare them with non-destructive testing methods.

DRILLED REPAIR LOCATIONS					
BRIDGE	SPAN	CROSS GIRDER	GIRDER	CRACK LOCATION	CRACK ORIENTATION
54R	1	1	5	Web cope	Horizontal
	2	2	4	Web cope	Horizontal
55N	4	3	5	Web cope	Diagonal
56N	5	4	5	Web cope	Diagonal

	COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS		<div>REVISION</div> <div>DATE</div> <div>PREPARED BY</div>	CRACK REPAIR DETAILS 1		ITEM NO.	COUNT OF		
				CROSSING	SHEET NO.				
BURGESS & NIPLE Engineers ■ Architects ■ Planners		DATE: April 28, 2023		CHECKED BY: D. Richardson		ROUTE	COUNT OF		
USER: Rbb16		DESIGNED BY: T. Buiz		T. Buiz				I-71/75/275	KENTON
FILE NAME: P:\P959281\CA00\SHEETS\CRACK REPAIR DETAILS.DGN						28703			



- NOTES:**
- 1) See the general notes and Special Notes for additional material and construction specifications, construction procedures, and pay items.
 - 2) See Sheets M4-M5 for the locations of the girder repairs.
 - 3) The Contractor shall field verify all relevant existing dimensions and member sizes and the growth of cracks with non-destructive testing methods.
 - 4) If it is necessary to adjust the layout of bolts due to the geometry of members, the minimum spacing between bolts shall be 3 inches. The maximum spacing between bolts shall not be greater than 5 1/2". Spacing is measured center to center of bolts. No bolt shall be placed closer than 1/4" to the edge of the member. This measurement is from the center of bolt to the edge or crack.
 - 5) Hole diameter shall be 1/4" larger than the diameter of the bolt.

BOLTED REPAIR LOCATIONS					
BRIDGE	SPAN	CROSS GIRDER	GIRDER	CRACK LOCATION ORIENTATION	2021 CRACK LENGTH
54L	4	3	4	Web cope Vertical	3 1/4"
			5	Web cope Vertical	1 1/2"
			6	Web cope Vertical	1 1/8"

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DATE: April 28, 2023
DESIGNED BY: T. Buiz
CHECKED BY: D. Richardson
FILE NAME: P:\P9281\CA00\SHEETS\CRACK REPAIR DETAILS 2.DGN

DATE PLOTTED: March 15, 2023
USER: Rabbie

REVISION

NO.	DATE	DESCRIPTION

CRACK REPAIR DETAILS 2

CROSSING

ROUTE

1-71/75/275

ITEM NO.

M13

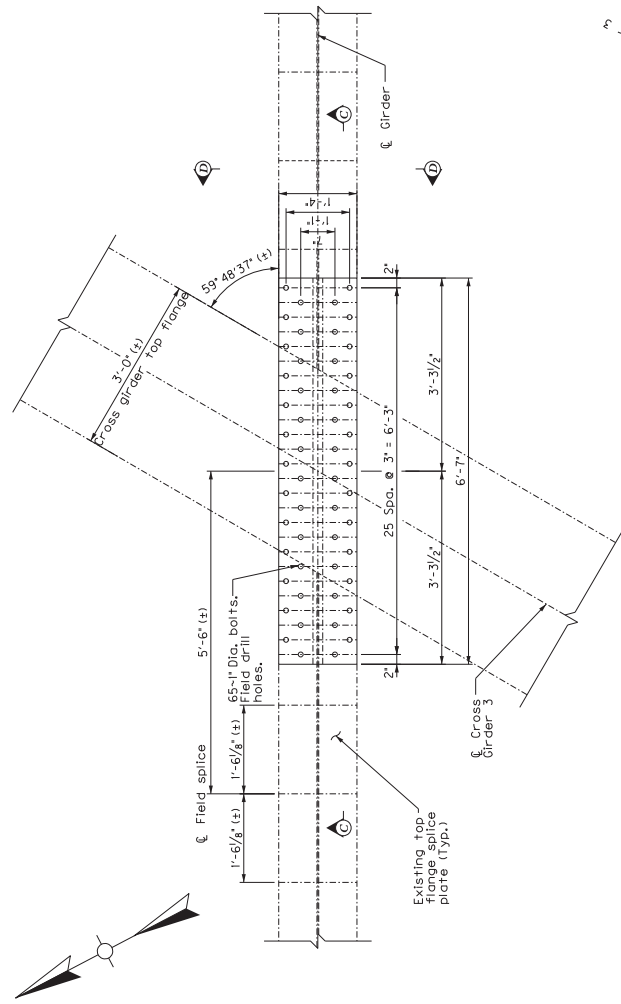
SHEET NO.

28703

COUNTY OF

KENTON

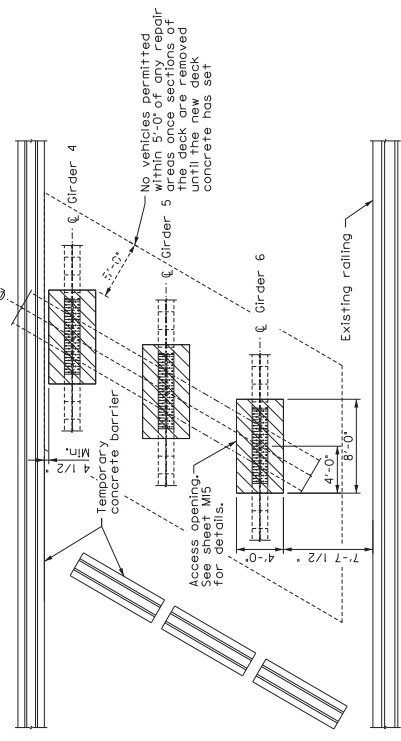
BILL OF REINFORCEMENT				LOCATION
MARK	TYPE	NO.	SIZE	LENGTH
S1(E)	STR	45	6	3'-8"
S2(E)	STR	6	6	7'-8"
S3(E)	STR	21	5	7'-8"



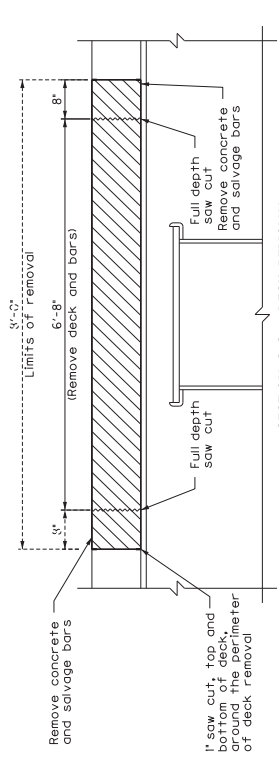
PLAN - TYPICAL GIRDER BOLTED REPAIR

- LEGEND:**
- [Hatched box] = Limits of removal
 - [Box with dots] = New Concrete

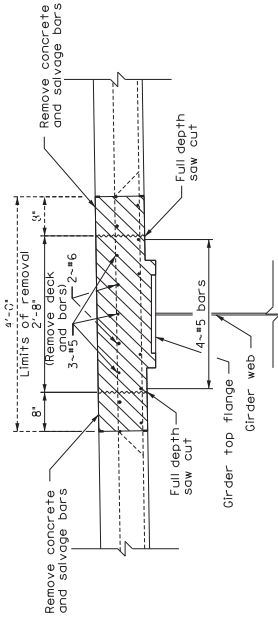
- NOTES:**
- See the general notes and Special Notes for additional material and construction specifications, construction procedures, and pay items.
 - See Sheets M4-M5 for the locations of the girder repairs.
 - The Contractor shall field verify all relevant existing dimensions.
 - If it is necessary to adjust the layout of bolts due to the geometry of members, the minimum spacing between bolts shall not be less than 2 1/4". and shall not be greater than 3 1/2". Spacing is measured center to center of bolts. No bolt shall be placed closer than 1/4" from the edge of the deck. This measurement is from the center of bolt to the edge or crack.
 - Hole diameter shall be 1/4" larger than the diameter of the bolt.



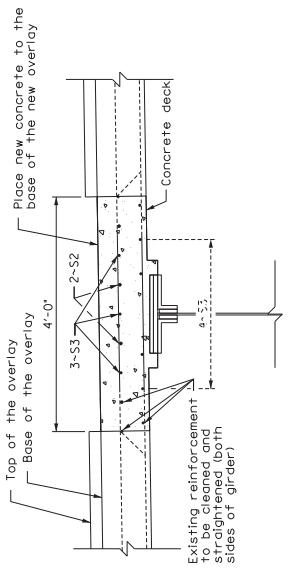
PLAN - DECK REMOVAL AT BOLTED REPAIR
(Field verify repair locations and dimensions)





SECTION C-C - DECK REMOVAL
059B00054L

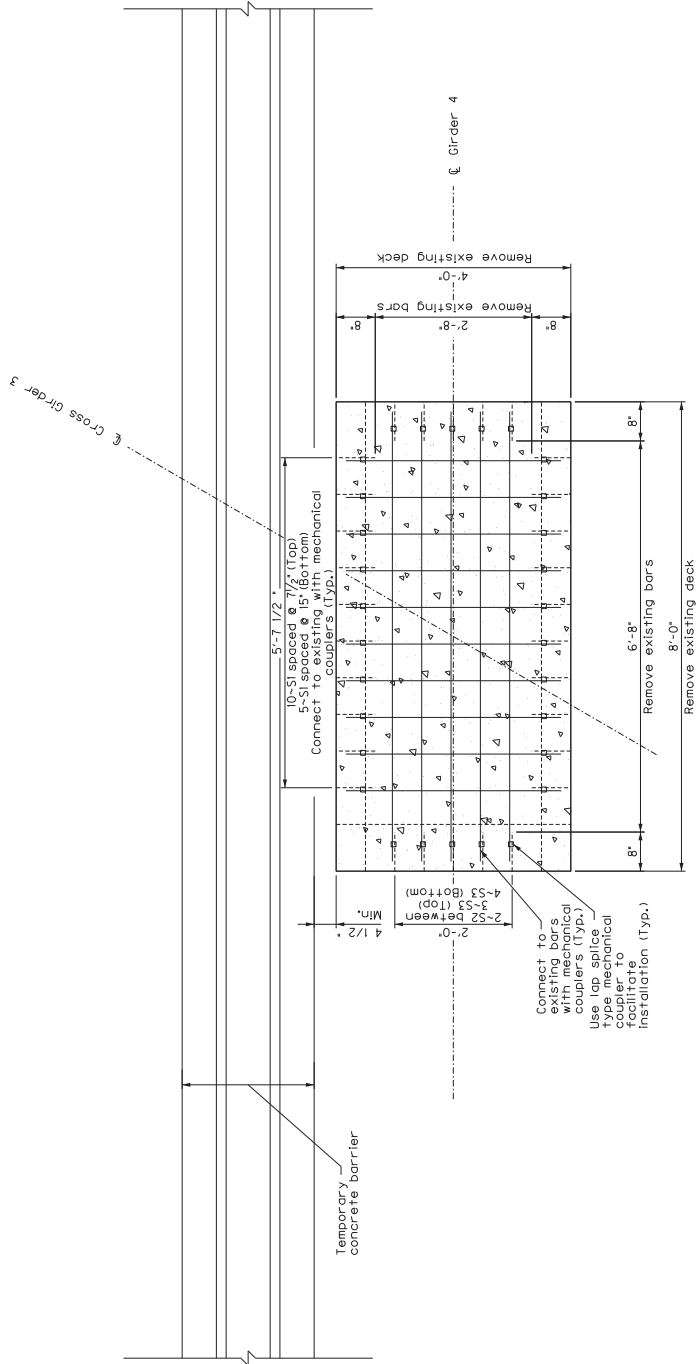
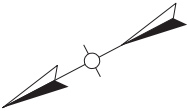


SECTION D-D - DECK REMOVAL
059B00054L



SECTION D-D - DECK REPLACEMENT
059B00054L

	COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	 KENTUCKY DEPARTMENT OF TRANSPORTATION KENTON COUNTY	REVISION	DATE	PREPARED BY		DATE: April 28, 2023	CHECKED BY	ROUTE	ITEM NO.	COUNT OF KENTON
					BURGESS & NIPLER Engineers & Planners		DESIGNED BY: T. Buiz CHECKED BY: D. Richardson	CROSSING			
USER: Rable			DATE PLOTTED: March 15, 2023		FILE NAME: P:\P\9281\CA00\SHEETS\CRACK REPAIR DETAILS 3.DGN						
Main Station: v6.1.9.319											



PLAN - BOLTED REPAIR ACCESS OPENING
(Girder 4 shown, other locations are similar)
(Field verify repair location and dimensions)

NOTES:

- 1) See the general notes and Special Notes for additional material and construction specifications, construction procedures, and pay items.
- 2) See Sheets M4-M5 for the locations of the girder repairs.
- 3) The Contractor shall field verify all dimensions and member sizes.

LEGEND:



= New Concrete

	COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	DATE March 15, 2023	DATE PLOTTED: March 15, 2023	USER: Rabbie	PREPARED BY BURGESS & NIPLE Engineers & Architects & Planners	DATE: April 28, 2023 DESIGNED BY: T. Buiz CHECKED BY: D. Richardson T. Buiz	ROUTE 1-71/75/275	ITEM NO. M15	COUNT OF KENTON 28703

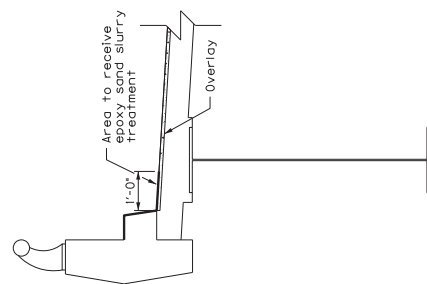
CRACK REPAIR DETAILS 4

CROSSING

FILE NAME: P:\P99281\CA00\SHEETS\CRACK REPAIR DETAILS 4.DGN



COUNTY OF
KENTON
DRAWING NUMBER
00700

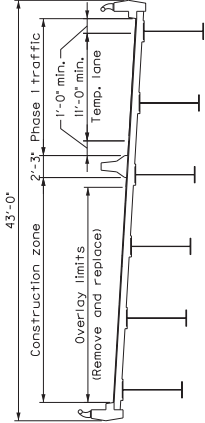


EPOXY SAND SLURRY DETAIL

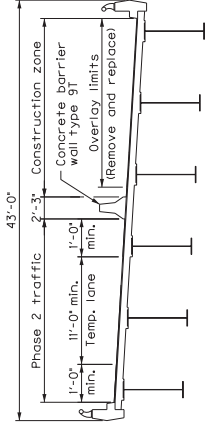
NOTES:

- 1) See the general notes and Special Notes for additional material and construction specifications, construction procedures, and pay items.
- 2) The Contractor shall field verify all relevant existing dimensions.
- 3) Milling, hydrodemolition, and placement of the new overlay shall be from abutment and from face of rolling to face of rolling. See the Special Notes.
- 4) Longitudinal construction joints shall comply with Section 606.03.08
- 5) See the Special Notes for Expansion Joint Replacement - 1 in. and 4 in.

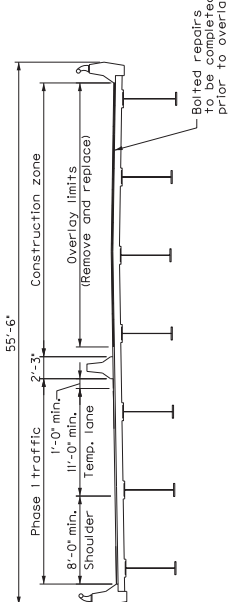
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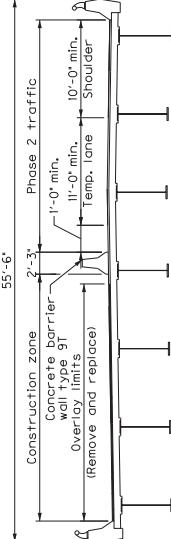
PHASE 1 OVERLAY CONSTRUCTION
059B00056N



PHASE 2 OVERLAY CONSTRUCTION
059B00056N





PHASE 1 OVERLAY CONSTRUCTION
059B00054L



PHASE 2 OVERLAY CONSTRUCTION
059B00054L

LEGEND:
= Overlay

- NOTES:
- 1) See the general notes and Special Notes for construction details, materials, construction procedures, and pay items.
 - 2) The sections are all facing ahead station.
 - 3) The Contractor shall field verify all relevant existing dimensions.
 - 4) Milling, hydrodemolition, and placement of the new overlay shall be from abutment to abutment and from face of railing to face of railing. See the Special Notes.
 - 5) Longitudinal construction joints shall comply with Section 606.03.08
 - 6) Temporary concrete barriers and temporary lanes shall be set per this sheet and the Special Note for Traffic Control. This information is included on this sheet to show the proximity of the proposed work to the temporary lanes and barriers.

 COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS		 KENTUCKY TRANSPORTATION DIVISION		REVISION		DATE		PREPARED BY		DATE: April 28, 2023		CHECKED BY		OVERLAY DETAILS 3		ITEM NO.		ROUTE		COUNTY OF KENTON	
								BURGESS & NIPLER Engineers & Architects ■ Planners		DESIGNED BY: S. Ribble		D. Richardson				SHEET NO. M18		DRAWING NUMBER 28703			
USER: Ribble				DATE PLOTTED: March 15, 2023				FILE NAME: P:\VPR9281\CA001\SHEETS\OVERLAY DETAILS SECTIONS.DGN		DETAILED BY: D. Richardson		S. Ribble									
MainStation v6.1.9.319																					

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

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

SUPPLEMENTAL SPECIFICATIONS

The contractor shall use the Supplemental Specifications that are effective at the time of letting.
The Supplemental Specifications can be found at the following link:

<http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx>

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

CHILD LABOR

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

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

No more than

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

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

TIP CREDIT

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

ENFORCEMENT

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

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

ADDITIONAL INFORMATION

- Certain occupations and establishments are exempt from the minimum wage and/or overtime pay provisions.
- Special provisions apply to workers in American Samoa and the Commonwealth of the Northern Mariana Islands.
- 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

232969

PROPOSAL BID ITEMS

Report Date 5/1/23

Page 1 of 2

Section: 0001 - BRIDGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	01984		DELINEATOR FOR BARRIER - WHITE	122.00	EACH		\$	
0020	01985		DELINEATOR FOR BARRIER - YELLOW	122.00	EACH		\$	
0030	02003		RELOCATE TEMP CONC BARRIER	2,424.00	LF		\$	
0040	02562		TEMPORARY SIGNS	340.00	SQFT		\$	
0050	02650		MAINTAIN & CONTROL TRAFFIC - 059B00053L	1.00	LS		\$	
0060	02650		MAINTAIN & CONTROL TRAFFIC - 059B00053R	1.00	LS		\$	
0070	02650		MAINTAIN & CONTROL TRAFFIC - 059B00054L	1.00	LS		\$	
0080	02650		MAINTAIN & CONTROL TRAFFIC - 059B00054R	1.00	LS		\$	
0090	02650		MAINTAIN & CONTROL TRAFFIC - 059B00055N	1.00	LS		\$	
0100	02650		MAINTAIN & CONTROL TRAFFIC - 059B00056N	1.00	LS		\$	
0110	02653		LANE CLOSURE	3.00	EACH		\$	
0120	02775		ARROW PANEL	3.00	EACH		\$	
0130	02898		RELOCATE CRASH CUSHION	2.00	EACH		\$	
0140	03171		CONCRETE BARRIER WALL TYPE 9T	2,424.00	LF		\$	
0150	03293		EXPAN JOINT REPLACE 1 IN	155.00	LF		\$	
0160	03298		EXPAN JOINT REPLACE 4 IN	426.00	LF		\$	
0170	03299		ARMORED EDGE FOR CONCRETE	257.00	LF		\$	
0180	06550		PAVE STRIPING-TEMP REM TAPE-W	5,747.00	LF		\$	
0190	06551		PAVE STRIPING-TEMP REM TAPE-Y	5,747.00	LF		\$	
0200	06556		PAVE STRIPING-DUR TY 1-6 IN W	1,634.00	LF		\$	
0210	06557		PAVE STRIPING-DUR TY 1-6 IN Y	1,224.00	LF		\$	
0220	08504		EPOXY SAND SLURRY	538.20	SQYD		\$	
0230	08510		REM EPOXY BIT FOREIGN OVERLAY	5,890.40	SQYD		\$	
0240	08526		CONC CLASS M FULL DEPTH PATCH	15.00	CUYD		\$	
0250	08534		CONCRETE OVERLAY-LATEX	229.60	CUYD		\$	
0260	08549		BLAST CLEANING	6,516.10	SQYD		\$	
0270	08550		HYDRODEMOLITION	5,890.40	SQYD		\$	
0280	08903		CRASH CUSHION TY VI CLASS BT TL3	2.00	EACH		\$	
0290	23386EC		JOINT SEAL REPLACEMENT	78.00	LF		\$	
0300	24094EC		PARTIAL DEPTH PATCHING	46.00	CUYD		\$	
0310	24543EC		CLEAN SPECIFIED BRIDGE JOINTS	604.00	LF		\$	
0320	24879EC		STEEL REPAIR ACCESS COVER PLATE	8.00	EACH		\$	
0330	24879EC		STEEL REPAIR BOLTED REPAIR	4.00	EACH		\$	
0340	24879EC		STEEL REPAIR DRILLED REPAIR	3.00	EACH		\$	
0350	24981EC		BRIDGE CLEANING - 059B00053L	1.00	LS		\$	
0360	24981EC		BRIDGE CLEANING - 059B00053R	1.00	LS		\$	
0370	24981EC		BRIDGE CLEANING - 059B00054L	1.00	LS		\$	

Report Date 5/1/23

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0380	24981EC		BRIDGE CLEANING - 059B00054R	1.00	LS		\$	
0390	24981EC		BRIDGE CLEANING - 059B00055N	1.00	LS		\$	
0400	24981EC		BRIDGE CLEANING - 059B00056N	1.00	LS		\$	
0410	24982EC		CONCRETE COATING - 059B00053L	1.00	LS		\$	
0420	24982EC		CONCRETE COATING - 059B00053R	1.00	LS		\$	
0430	24982EC		CONCRETE COATING - 059B00054L	1.00	LS		\$	
0440	24982EC		CONCRETE COATING - 059B00054R	1.00	LS		\$	
0450	24982EC		CONCRETE COATING - 059B00055N	1.00	LS		\$	
0460	24982EC		CONCRETE COATING - 059B00056N	1.00	LS		\$	
0470	24983EC		BEARING LUBRICATION	92.00	EACH		\$	
0480	25075EC		QUEUE PROTECTION VEHICLE	1,080.00	HOUR		\$	
0490	25117EC		FURNISH QUEUE PROTECTION VEHICLES	3.00	MONT		\$	
0500	26136EC		PORTABLE QUEUE WARNING ALERT SYSTEM	5.30	MONT		\$	
0510	26137EC		QUEUE WARNING PCMS	12.00	MONT		\$	

Section: 0002 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0520	02569		DEMOBILIZATION	1.00	LS		\$	