CALL NO. 323

CONTRACT ID. 252974

JEFFERSON COUNTY

FED/STATE PROJECT NUMBER FE02 056 0065 B00196N

DESCRIPTION I-65 RAMP (I-65)

WORK TYPE BRIDGE REPAIR MISCELLANEOUS WORK

PRIMARY COMPLETION DATE 11/15/2025

LETTING DATE: May 22,2025

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME May 22,2025. 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 - 05

CONTRACT ID - 252974

FE02 056 0065 B00195N

COUNTY - JEFFERSON

PCN - MB05600652574
FE02 056 0065 B00195N

I-65 RAMP (I-65) BRIDGE 056B00196N OVER SOUTH FLOYD STREET AT MP 135.75BRIDGE REPAIRS
GEOGRAPHIC COORDINATES LATITUDE 38:15:01.00 LONGITUDE 85:44:54.00
ADT

COMPLETION DATE(S):

COMPLETED BY 11/15/2025	APPLIES TO ENTIRE CONTRACT (SEE SPECIAL NOTES)
90 CALENDAR Days	APPLIES TO 056B00196N (SEE SPECIAL NOTE)

CONTRACT NOTES

INSURANCE

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

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 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/construction-procurement). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

HARDWOOD REMOVAL RESTRICTIONS

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

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

ACCESS TO RECORDS

The state agency certifies that it is in compliance with the provisions of KRS 45A.150, "Access to contractor's books, documents, papers, records, or other evidence directly pertinent to the contract." The Contractor, as defined in KRS 45A.030, 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 agreement for the purpose of financial audit or program review. 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. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the agreement and shall be exempt from disclosure as provided in KRS 61.878(1)(c).

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.

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

1.0 BUY AMERICA REQUIREMENT.

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

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

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

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

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

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

Use foreign materials only under the following conditions:

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

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

2.0 – BUILD AMERICA, BUY AMERICA (BABA)

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

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

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

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

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

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

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

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

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

Buy America - Construction Program Guide - Contract Administration - Construction - Federal Highway Administration (dot.gov)

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

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

Date Submitted:_____

Contractor:_____

Signature:_____

Printed Name:_____

Title:_____

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

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

RECIPROCAL PREFERENCE TO BE GIVEN BY PUBLIC AGENCIES TO RESIDENT BIDDERS

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

April 30, 2018

SPECIAL NOTES
DISTRICT NO. 5
JEFFERSON COUNTY
BRIDGE REPAIRS
CID 252974

FE02 056 1003 B00196N 00.23
Jefferson County ~ I-65 Ramp D over S Floyd St

Geographic Coordinates

Latitude 38° 15’ 8.80” (38.2524)
Longitude -85° 44’ 54.51” (-85.7485)

Description:
35.5’ RCDG (Vaulted Abutment) Approach Span #1, 62’ WSPG Main Span, 30.5’ RCDG (Vaulted Abutment) Approach Span #2, Drawing No. 15308 & 19847

SPECIAL NOTES FOR BRIDGE REPAIRS

SPECIAL NOTE FOR JACK AND SUPPORT BRIDGE SPAN

SPECIAL NOTE FOR CONCRETE PATCHING REPAIR - SUBSTRUCTURE

SPECIAL NOTE FOR CONCRETE PATCHING REPAIR – SUPERSTRUCTURE

SPECIAL NOTE FOR DISTRIBUTED ANODE PROTECTION

SPECIAL NOTE FOR EMBEDDED GALVANIC ANODES – TYPE 1A CLASS C

SPECIAL NOTE FOR TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS

SPECIAL NOTE FOR TRAFFIC QUEUE PROTECTION VEHICLE

SPECIAL NOTE FOR PORTABLE QUEUE WARNING ALERT SYSTEM

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

SPECIAL NOTE FOR PREVENTIVE MAINTENANCE

SPECIAL NOTE FOR DECK RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS

SPECIAL NOTE FOR UTILITIES AND SIGNS

SPECIAL NOTE FOR CONCRETE SEALING

SPECIAL NOTE FOR JOINT SEAL REPLACEMENT

SPECIAL NOTE FOR JACK AND SUPPORT BRIDGE SPAN

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) and this note. Section references are to the Standard Specifications. This work consists of the following: (1) Furnish all labor, materials, tools, and equipment. (2) Jack and Support Bridge Span. (3) Any other work specified as part of this contract.

2. CONSTRUCTION.

A. Jack and Support. Jack and Support the beams under full dead and live loads for the specified repairs.

BRIDGE	SERVICE LOAD	JACKING CAPACITY
056B00196N	45 Tons	90 Tons

Jack capacity is per beam line and safety factor of 1.5 per beam line shall be required. Jacks shall be locked during bearing replacement. The Contractor shall submit his jack and support plan to the Engineer for approval. This plan must be prepared, signed and stamped by a licensed Kentucky professional engineer.

B. Verifying Field Conditions. The Contractor shall field verify all plate and shape dimensions, bolt patterns and locations before ordering any material. New material that is unsuitable due to variation in existing structure shall be replaced at the Contractor's expense.

C. 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 Contractor's actions.

3. MEASUREMENT.

A. Jack and Support Bridge Span. The Department will measure the quantity as Lump Sum, completed and accepted.

4. PAYMENT.

A. Jack and Support Bridge Span (08435). Payment at the contact "Lump Sum" includes all items necessary to jack and support bridge span as specified.

SPECIAL NOTE FOR CONCRETE PATCHING REPAIR - SUBSTRUCTURE

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

1. DESCRIPTION.

Perform all work in accordance with the Department's current Standard Specifications, and applicable Supplemental Specifications, the attached sketches, and these Notes. Section references are to the Standard Specifications. This work consists of: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing spalled/delaminated concrete; (3) Prepare the existing surface for concrete patching using a formed and poured/pumped technique; (4) Place concrete patching material as specified by this note and as shown on the attached detail drawings; (5) Finish and cure the new Concrete Patches; and (7) Any other work specified as part of this contract.

2. MATERIALS.

A. Class "A" Concrete. See Section 601.

B Steel Reinforcement. Use Grade 60. See Section 602.

3. CONSTRUCTION.

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

Concrete removal shall be accomplished by chipping with hand picks, chisels, or light duty pneumatic or electric chipping hammers (not to exceed 15 lbs.). Remove all deteriorated loose concrete to a minimum depth of 5". When reinforcing steel is exposed, concrete removal shall continue until there is a 1-inch clearance around the exposed reinforcing bar. Care shall be taken to not damage bond to adjacent non-exposed reinforcing steel during concrete removal processes. Unless specifically directed by the Engineer, depth of removal shall not exceed 6 inches.

The perimeter of all areas where concrete is removed shall be tapered at an approximately 45° angle, except that the outer edges of all chipped areas shall be cut to minimum depth of 1 inch to prevent feather edging unless otherwise approved by the Engineer.

After all deteriorated concrete has been removed; the repair surface to receive concrete patching shall be prepared by abrasive blast cleaning. Abrasive blast cleaning shall remove all fractured surface concrete and all traces of any unsound material or contaminants such as oil, grease, dirt,

slurry, or any materials which could interfere with the bond of freshly placed concrete.

The Contractor shall dispose all removed material off State Right of Way in an approved site.

Ensure the surface of the existing concrete is in a saturated surface-dry (SSD) condition. Remove all free (ponding) water just before placing the concrete. Do not use an epoxy bond coat with the formed concrete patching.

B. **Steel Reinforcement.** All corroded reinforcing steel exposed during concrete removal shall have corrosion products removed by abrasive grit blasting or wire brush whichever is more appropriate. Furnish for replacement, as directed by the Engineer, additional linear feet of steel reinforcing bars ½" diameter by 20-foot lengths. Place these bars in areas deemed by the Engineer to require additional reinforcement. Field cutting and bending is permitted. Deliver unused bars to the nearest County Maintenance Barn. Payment will be made in accordance with Section 602.

Reinforcing steel displaying deep pitting or loss of more than 25 percent of cross-sectional area shall be removed and replaced. Reinforcing bars shall be placed in accordance with Section 602.

Intersecting reinforcing bars shall be tightly secured to each other using tie wire and adequately supported to minimize movement during concrete placement. Large knots of tie wire which could result in sand pockets and voids during patching shall be avoided.

C. **Class A Concrete.** Place and finish the new concrete for the patching area in accordance with the manufacturer's recommendations, as shown on the attached detail drawings, or as directed by the Engineer. The Engineer shall approve the Contractor's method of placing and consolidating the concrete prior to the beginning of this operation.

D. **Curing.** On completion of finishing operation, patching concrete shall immediately be prevented from drying out and cracking by fogging, wetting, and/or any appropriate method approved by the Engineer. See Section 501.03.15.

Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his bid and shall thoroughly familiarize himself with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department. Quantities given are approximate. The quantity for "Concrete Repair" shall be bid with the contingency that quantities may be increased, decreased, or eliminated by the Engineer. Dispose of all

removed material entirely away from the job site as approved by the Engineer. This work is incidental to the contract unit price for "Concrete Patching Repair".

4. MEASUREMENT

A. Concrete Patching Repair. The Department will measure the quantity per square feet of each area restored, completed, and accepted. Double payment will not be made on both faces of corner repairs.

B. Steel Reinforcement. See Section 602.

5. PAYMENT

A. Concrete Patching Repair (22146EN). Payment at the contract unit price per square feet is full compensation for the following: (1) Furnish all labor, materials, tools, equipment; (2) preparation of specified areas including removing and disposing of specified existing materials; (3) form, place, finish and cure new concrete patches; and (4) all incidentals necessary to complete the work as specified by this note and as shown on the attached detail drawings.

B. Steel Reinforcement. See Section 602.

SPECIAL NOTE FOR CONCRETE PATCHING REPAIR - SUPERSTRUCTURE

1. DESCRIPTION.

Perform all work in accordance with the Department's Standard Specifications and applicable Supplemental Specifications (current editions), this note and the attached detailed drawings. Section references are to the Standard Specifications. This work consists of: (1) Furnish all labor, materials, tools, and equipment, (2) Remove existing spalled/delaminated concrete, (3) Prepare the existing surface for concrete patching, (4) Apply concrete patching as specified by this note and as shown on the attached detail drawings, (6) Finish and cure the new Concrete Patches, (7) Any other work specified as part of this contract. See attachment detailed drawing “Layout Sheet” for locations.

2. MATERIALS.

A. Concrete. “M” Concrete. Use either “M1” or “M2”. See Section 601.

B Steel Reinforcement. Use Grade 60. See Section 602.

C. Epoxy Bond Coat. See Section 511.

D. Welded Steel Wire Fabric (WWF). Conform to Section 811**.**

A. Hook Fasteners. Use commercial grade galvanized hook fasteners. Minimum 3/16” diameter.

3. CONSTRUCTION.

A. Concrete Removal and Preparation. The Contractor, as directed by the Engineer shall locate and remove all loose, spalled, deteriorated, and delaminated concrete. Care shall be exercised not to damage areas of sound concrete or reinforcing steel during concrete removal operations. Unless specifically *directed by the Engineer*, depth of removal shall not exceed 4 inches. Concrete removal shall be in accordance with a sequence approved by the Engineer. Concrete removal shall be accomplished by chipping with hand picks, chisels, or light duty pneumatic or electric chipping hammers (not to exceed 35 lbs.). If sound concrete is encountered before existing reinforcing steel is exposed, the surface shall be prepared and repaired without further removal of the concrete. When corroded reinforcing steel is exposed, concrete removal shall continue until there is a minimum ¾ inch clearance around the exposed, corroded reinforcing bar. Care shall be taken to not damage bond to adjacent non-exposed reinforcing steel during concrete removal processes. The perimeter of all areas where concrete is removed shall be tapered at an approximately 45° angle, except that the outer edges of all chipped areas shall be cut to minimum depth of 1 inch to prevent feather edging unless otherwise approved by the Engineer. After all deteriorated concrete has been removed; the repair surface to receive concrete patching shall be prepared by blast cleaning. Blast cleaning shall remove all fractured surface concrete and all traces of any unsound material or contaminants such as oil, grease, dirt, slurry, or any materials which could interfere with the bond of freshly placed concrete. The Contractor shall dispose all removed material off State Right of Way in an approved site.

B. **Steel Reinforcement.** All corroded reinforcing steel exposed during concrete removal shall have corrosion products removed by abrasive blasting or wire brush whichever is more appropriate. If required, furnish for replacement, as directed by the Engineer, adequate quantity of steel reinforcing bars ½" diameter for the patch in curb areas. Place these bars in areas deemed by the Engineer to require additional reinforcement. Field cutting and bending is permitted.

C. **Concrete Patching Repair.** Place and finish the new concrete for the patching area in accordance with the manufacturer's recommendations, as shown on the attached detail drawings, or as directed by the Engineer. The Engineer shall approve the Contractor's method of placing and consolidating the concrete prior to the beginning of this operation.

D. **Curing.** On completion of finishing operation, patching concrete shall immediately be prevented from drying out and cracking by fogging, wetting, and/or any appropriate method approved by the Engineer. Curing shall continue for duration recommended by the product manufacturer.

Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his bid and shall thoroughly familiarize himself with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department. Quantities given are approximate. The quantity for "Concrete Repair" shall be bid with the contingency that quantities may be increased, decreased, or eliminated by the Engineer. Dispose of all removed material entirely away from the job site as approved by the Engineer. This work is incidental to the contract unit price for "Concrete Patching Repair".

4. MEASUREMENT

A. **Concrete Patching Repair.** The Department will measure the quantity per square feet of each area restored, completed, and accepted.

B. **Steel Reinforcement, Welded Wire Fabric & Hook Fasteners.** Steel Reinforcement, Welded Wire Fabric and Hook Fasteners will not be measured for payment but shall be considered incidental to "Concrete Patching Repair".

5. PAYMENT

A. **Concrete Patching Repair (22146EN).** Payment at the contract unit price per square feet is full compensation for the following: (1) Furnish all labor, materials, tools, equipment; (2) preparation of specified areas including removing and disposing of specified existing materials; (3) place, finish and cure new concrete patches; and (4) all incidentals necessary to complete the work as specified by this note and as shown on the attached detail drawings.

SPECIAL NOTE FOR DISTRIBUTED ANODE SYSTEM FOR GALVANIC PROTECTION OF CONCRETE STRUCTURES

SECTION 03770 – DISTRIBUTED GALVANIC CORROSION PROTECTION

PART 1 GENERAL

1.1 DESCRIPTION

A. The work under this section consists of supplying, installing, and energizing a zinc-based galvanic corrosion protection system, including required electrical connections, materials, testing, and ensuring continuity of the reinforcing steel to all elements as outlined in the construction drawings.

B. Distributed embedded galvanic anodes are designed to provide galvanic corrosion protection. The anodes are connected to reinforcing steel and embedded in concrete to mitigate corrosion.

1.2 REFERENCES

A. ACI Guideline No. 222 – Corrosion of Metals in Concrete

B. ICRI Guideline 310.1R-2008 Guide for Surface Preparation for the Repair of Deteriorated Concrete resulting from Reinforcing Steel Corrosion

C. ASTM B418 – Standard Specification for Cast and Wrought Galvanic Zinc Anodes

1.3 BID QUANTITY

Base bids on the quantity, dimensions, length, weight and information in this specification and shown on the drawings.

1.4 SUBMITTALS

Shop drawings showing typical galvanic corrosion protection system installation details, such as distributed anode installation locations steel connections, and inter-anode connections shall be prepared by the Contractor and submitted for approval prior to any field installations.

PART 2 PRODUCTS

2.1 DISTRIBUTED ANODE SYSTEM

The distributed galvanic anode units shall be alkali-activated with a pH greater than 14 and shall not contain intentionally added constituents that are corrosive to reinforcing steel as per ACI 222R such as chlorides, bromides, or other halides. The anode core shall be manufactured with zinc in compliance with ASTM B418 Type II (Z13000) with iron content less than 15 ppm and that is evenly distributed around a steel core which is continuous along the length of the unit. Unless otherwise specified, the anode unit shall be supplied with a pair of uncoated steel tie wires with optional loop ties to make connections to the reinforcing steel.

Individual anode units shall be approximately 1.1" x 1.5" (28mm x 38mm). The length of individual anode units shall be as shown on the drawings. Anode units shall be supplied with uncoated, steel tie wires for direct connection to the steel or connection to an inter-anode connecting header wire as per the design. Distributed galvanic anodes shall be Galvashield DAS available from Vector Corrosion Technologies (www.vector-corrosion.com) USA (813) 830-7566, Canada (204) 489-9611, UK (44) 1384 671 400 or approved equal.

The spacing of the distributed galvanic anode units shall be as shown on the drawings as per the design. The basis of design is as follows:

Anode: Galvashield DAS
Service Life: 15 years minimum
Efficiency*Utilization Factor: 75%
Minimum current density delivered over the anode service life:
- High Corrosion Risk – 1.2 mA/m2

Anode aging factor: 12.5 years (approximate half-life, the time when anode current drops by 50%)

Application for approved equals shall be requested in writing two weeks before submission of project bids. Application for galvanic anode approved equals shall include verification of the following information:

1. Type of activation mechanism must be stated and demonstrated.
2. The distributed anode contains no intentionally added constituents corrosive to reinforcing steel or detrimental to concrete, e.g. chloride, bromide, sulfate, etc.
3. Initial startup current per anode per area at specified average annual temperature of structure.
4. Aging term - This is the number of years over which the electric current produced by the installed anode drops to half of the initial measured current.
5. Submittal of monitored performance data for two examples of satisfactory field performance where said aging term has been achieved.
6. Efficiency and utilization determined from site performance data of no less than seven years.
7. Anode spacing to achieve specified current density at 20 years
8. Initial mass of zinc and projected consumption over the life of the anode.
9. Anode units contains zinc around uncoated, (non-galvanized) steel tie wires.
10. Third party product evaluation, such as from Concrete Innovations Appraisal Service, BBA, etc.
11. Using the information above, model how the alternative design will meet the minimum current density at the end of life of 15 years.

2.2 CONCRETE

Concrete mixture shall be of sufficient consistency to encapsulate the anodes without voids or segregation. Concrete shall have an electrical resistivity of less than 50,000 ohm-cm. Concrete mixtures that contain elevated levels of pozzolanic materials such as silica fume, ground-granulated blast-furnace slag, or fly ash will reduce the electrical conductivity of the concrete and may not be suitable for use. If higher resistance concrete is used, or the resistivity is unknown, use Galvashield Embedding Mortar to create a conductive bridge to the substrate prior to concrete installation.

PART 3 – EXECUTION

3.0 GENERAL DESCRIPTION

The galvanic corrosion protection system shall consist of alkali-activated distributed galvanic anodes placed evenly across the concrete surface. The anode units are connected to the reinforcing steel to be protected and encased in concrete with a minimum of 1 ½ in. (38mm) of clear concrete cover over the anode units. After the anode units are installed and encased in concrete, the system provides galvanic protection to the embedded reinforcing steel.

3.1 MANUFACTURER TECHNICAL ASSISTANCE

A. The contractor will enlist and pay for the services of a NACE-qualified cathodic protection technician (CP2 or greater) supplied by the galvanic anode manufacturer. The qualified corrosion technician shall have verifiable experience in the installation and testing of embedded galvanic protection systems for reinforced concrete structures.

B. The technician shall provide contractor training and support for development of application procedures, shop drawings for submittals, anode and concrete installation, reinforcing steel connection procedures, and verification of electrical continuity of embedded steel. The contractor shall coordinate its work with the designated technician to allow for site support during project startup and initial anode installation.

3.2 CONCRETE REMOVAL

Remove loose or delaminated concrete. Use the smallest practical size chipping hammer to minimize damage to sound concrete. Undercut all exposed reinforcing steel by removing concrete from the full circumference of the steel as per ICRI R310.1R. The minimum clearance between the concrete substrate and reinforcing steel shall be ¾ inch (19 mm) or ¼ inch (6 mm) larger than the top size aggregate in the repair material, whichever is greater. Concrete removal shall continue along the reinforcing steel until no further delamination, cracking, or significant rebar corrosion exists and the reinforcing steel is well bonded to the surrounding concrete as per ICRI R310.1R.

3.3 CLEANING AND REPAIR OF REINFORCING STEEL

Clean exposed reinforcing steel of rust, mortar, etc. to provide sufficient electrical connection and mechanical bond. If significant reduction in the cross section of the reinforcing steel has occurred, replace or install supplemental reinforcement as directed by the engineer of record. Secure loose reinforcing steel by tying tightly to other bars with steel tie wire. Verify electrical continuity of all reinforcing steel, including supplemental steel, as per Section 3.5.

3.4 CONCRETE PREPARATION

Concrete repairs shall be square or rectangular in shape with squared corners per ICRI Guideline 310.1R-2008. Saw cut the repair boundary ½ inch (13 mm) deep or less if required to avoid cutting reinforcing steel. Create a clean, sound substrate to receive the repair material by removing bond-inhibiting materials from the concrete substrate by high pressure water blasting or abrasive blasting.

3.5 ELECTRICAL CONTINUITY OF STEEL AND ANODES

Reinforcing steel shall be tested for electrical continuity by procedures as directed by the cathodic protection technician. Electrical connection is acceptable if the DC resistance measured with the multi-meter is 1 Ω or less or the DC potential is 1 mV or less. Reinforcing steel found to be discontinuous shall be bonded to continuous reinforcement by steel tie wire.

Any new steel added to the structure, such as supplemental reinforcing, wire mesh or rebar shall be electrically continuous. The new steel shall be connected to the anode grid or bonded to existing reinforcing steel. After the distributed galvanic anodes are installed, the continuity of the connection between anode tie wire and reinforcing steel is verified using the same procedures prior to concrete placement.

3.6 DISTRIBUTED ANODE PLACEMENT

Distributed anodes shall be placed in locations as per the design and indicated on the drawings. Secure anodes to prevent movement during concrete placements. Do not allow the anodes to soak in water greater than 20 minutes prior to concrete placement.

3.7 REINFORCING STEEL CONNECTIONS

Distributed anode system must be connected to the reinforcing steel to be protected. The anodes are directly tied to cleaned exposed steel or can be interconnected to header wires to create a distributed anode grid. The anode grid shall be connected to reinforcing steel with a minimum of two connections per 500 ft^2 (46 m^2) of concrete area.

If no exposed steel exists after preparation of the substrate, a small area of concrete shall be removed to expose reinforcing steel for anode connection. Electrical connections to the reinforcing steel shall be established by tying the header wire to the exposed steel or by alternate methods. Proposed electrical connection details shall be approved by the anode manufacturer and shall be detailed on the shop drawing submittal for approval by the engineer.

3.8 CONCRETE PLACEMENT

After the distributed galvanic anodes have been installed. Place approved concrete taking care to avoid damage to the anodes, connections, and wiring. Consolidate concrete around anodes assuring no voids exist. Minimum concrete cover depth over the anodes shall be ¾ in. (20mm).

END OF SPECIFICATION

Galvashield® XP2 - Anode Type 1A - galvanic anodes embedded within concrete repairs to provide corrosion prevention.

SECTION 03700 – EMBEDDED GALVANIC ANODES

PART 1 GENERAL

1.1 Related Documents

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 Summary

A. This Section includes furnishing all labor, tools, materials, equipment and services necessary to properly install embedded galvanic anodes.

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

1.3 References

A. ACI Repair Application Procedure (RAP) Bulletin 8 – Installation of Embedded Galvanic Anodes

B. ACI Guideline No. 222 – Corrosion of Metals in Concrete

C. ACI 562 - Code Requirements for Evaluation, Repair and Rehabilitation of Concrete Buildings

D. ASTM B418– Standard Specification for Cast and Wrought Galvanic Zinc Anodes

E. ICRI Guideline 310.1R - Guide for Surface Preparation for the Repair of Deteriorated Concrete resulting from Reinforcing Steel Corrosion

F. ISO 12696 – Cathodic Protection of Steel in Concrete

1.4 Manufacturer Extended Limited Warranty

A. Contractor shall provide a Limited Warranty with a notarized signature from a corporate officer of the anode manufacturer.

B. The Limited Warranty shall state the following:

1. The published anode spacing guidelines for anode size and spacing are based on an estimated minimum 15-year anode service life in the environment it is installed.

2. The galvanic anodes will remain electrochemically active and produce galvanic current in relation to the environment in which it is installed for a minimum of 5 years from the date of anode installation.

3. The anode unit, including its constituents, does not include intentionally added substances that may cause corrosion to reinforcing steel over the life of the structure.

4. The galvanic anodes meet all building and repair code requirements.

1.5. Anode Manufacturer Corrosion Technician

A. The contractor will enlist and pay for a technical representative employed by the galvanic anode manufacturer to provide training and on-site technical assistance during the initial installation of the galvanic anodes. The technical representative shall be a NACE-qualified corrosion technician (NACE CP2 Cathodic Protection Technician or higher).

B. The qualified corrosion technician shall have verifiable experience in the installation and testing of embedded galvanic protection systems for reinforced concrete structures.

C. The contractor shall coordinate its work with the designated corrosion technician to allow for site support during project startup and initial anode installation. The corrosion technician shall provide contractor training and support for development of application procedures, verification of electrical continuity, and project documentation.

PART 2 PRODUCTS

2.1 Embedded Galvanic Anodes

Embedded galvanic anodes shall be Anode Type 1A with the following nominal dimensions: 32 x 34 x 100 mm (1.25 x 1.34 x 4 in.). The anodes shall be pre-manufactured with zinc in compliance with ASTM B418 Type II cast around an integral, unspliced, uncoated, non-galvanized double loop steel tie wire and encased in a highly alkaline cementitious shell with a pH of 14 or greater.

The galvanic anodes shall be alkali-activated and shall contain no intentionally added chloride, bromide or other constituents that are corrosive to reinforcing steel as per ACI 562. The anode size and spacing shall deliver a minimum current density to the steel adjacent to the repair of 0.8mA/m2 (0.07mA/ft2) for the 15-year design life taking into account an anode aging factor calculated from previous field installations and the in-service environment.

Embedded galvanic anodes shall be Galvashield® XP2 available from Vector Corrosion Technologies (www.vector-corrosion.com) USA (813) 830-7566, Canada (204) 489-9611, UK +44 (0) 1384 671414 or approved equal.

Application for approved equals shall be requested in writing two weeks before submission of project bids. Application for galvanic anode approved equals shall include verification of the following information:

1. The zinc anode is alkali-activated with an alkaline cementitious shell with a pH of 14 or greater.
2. The galvanic anode shall contain no intentionally added constituents which are corrosive to reinforcing steel, e.g. chloride, bromide, etc.
3. The anode manufacturer shall provide documented performance data from field installations showing that the anodes have remained active for a minimum of 15 years in service and meet the ISO 12696 Cathodic Prevention Standard.
4. Project design calculations showing that the minimum specified current density to reinforcing steel adjacent to the repair will be achieved 15 years after installation. The design calculations shall take into consideration expected in-service temperature and humidity conditions in the environment in which the anodes are to be placed in service and use a galvanic anode aging factor derived from field monitoring for at least one anode aging step (time until the current halves). The aging factor for Galvashield is 12.5 years at average annual temperature of 10-15°C (50-60°F).
5. The galvanic anode shall have been used in a minimum of ten projects of similar size and application.
6. The galvanic anode units shall be supplied with solid zinc core (ASTM B418) cast around an uncoated, non-galvanized, non-spliced steel tie wire for wrapping around the reinforcing steel and twisting to provide a durable steel-to-steel connection between the tie wire and the reinforcing steel.
7. The anode manufacturer shall provide third party product evaluation, such as from Concrete Innovations Appraisal Service, BBA, etc.

2.2 Repair Materials

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

B. If repair materials have a saturated bulk resistivity of 50,000 ohm-cm or greater, pack Galvashield® Embedding Mortar or another repair mortar with a resistivity of 15,000 ohm-cm or less between the anode and the substrate to provide an ionically conductive path to the substrate.

2.3 Storage

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

PART 3 EXECUTION

3.1 Concrete Removal

A. Remove loose or delaminated concrete in accordance with the **Special Note for Concrete Patching Repair - Substructure**.

B. Undercut all exposed reinforcing steel by removing concrete from the full circumference of the steel as per ICRI R310.1R. The minimum clearance between the concrete substrate and reinforcing steel shall be ¾ inch (19 mm) or ¼ inch (6 mm) larger than the top size aggregate in the repair material, whichever is greater.

C. Concrete removal shall continue along the reinforcing steel until no further delamination, cracking, or significant rebar corrosion exists and the reinforcing steel is well bonded to the surrounding concrete as per ICRI R310.1R.

3.2 Cleaning and Repair of Reinforcing Steel

A. Clean exposed reinforcing steel of rust, mortar, etc. to provide sufficient electrical connection and mechanical bond.

B. If significant reduction in the cross section of the reinforcing steel has occurred, replace or install supplemental reinforcement as directed by the engineer of record.

C. Secure loose reinforcing steel by tying tightly to other bars with steel tie wire.

D. Verify electrical continuity of all exposed reinforcing steel, including supplemental steel, as per Section 3.4.E.

E. If the reinforcing steel is to receive a barrier coating, do not coat the reinforcing steel within 1 in. (25mm) of the anode and do not apply coating to any surface of the anode or the steel tie wires.

3.3 Edge and Surface Conditioning of Concrete

A. Concrete repairs shall be square or rectangular in shape with squared corners per ICRI Guideline 310.1R.

B. Saw cut the repair boundary ½ inch (13 mm) deep or less if required to avoid cutting reinforcing steel.

C. Create a clean, sound substrate by removing bond-inhibiting materials from the concrete substrate by high pressure water blasting or abrasive blasting.

3.4 Galvanic Anode Installation

A. Install anode units and repair material immediately following preparation and cleaning of the steel reinforcement.

B. Galvanic anodes shall be installed in a grid pattern throughout the entire repair area at a maximum spacing of 15.75 in. (400 mm).

C. Place the galvanic anodes as close as possible to the interface with the parent concrete [maximum 4 in. (100mm)] while still providing sufficient clearance between anodes and substrate to allow the repair material to fully encase the anode.

1. Place the anode such that the preformed BarFit™ groove fits along a single bar or at the intersection between two bars and secure to each clean bar.

2. If less than 1 in. (25 mm) of concrete cover is expected, place anode beneath the bar and secure to clean reinforcing steel or increase the size of the repair cavity to accommodate the anodes.

D. Wrap the tie wires around the clean reinforcing steel at least one full turn in opposite directions and bring the two free ends together and twist tight to create a secure electrical connection that will not allow anode movement during concrete placement.

E. Electrical Continuity

1. Confirm electrical connection between anode tie wire and reinforcing steel by measuring DC resistance (ohm Ω) or DC potential (mV) with a multi-meter. Electrical connection is acceptable if the DC resistance measured with the multi-meter is 1 Ω or less or the DC potential is 1 mV or less.

2. Confirm electrical continuity of the exposed reinforcing steel within the repair area. Electrical continuity shall be established by tying discontinuous steel to continuous steel using steel tie wire when necessary. Electrical continuity within the repair area is acceptable if the DC resistance measured with multi-meter is 1 Ω or less or the potential is 1 mV or less.

3.5 Concrete or Mortar Replacement

A. If the repair procedures require the concrete surface to be saturated with water, do not damage the anode nor allow the anode units to be soaked for greater than 20 minutes.

B. Complete the repair with the repair material, taking care not to damage, loosen or leave voids around the anode.

END OF SECTION

SPECIAL NOTE FOR TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS

1. TRAFFIC CONTROL GENERAL

Except as provided herein, traffic shall be maintained in accordance with the Standard Specifications (current edition), Section 112. 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 new condition, at the beginning of the work and maintained in like new condition until completion of the work.

2. TRAFFIC COORDINATOR

Furnish a 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 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.

This project is designated a "Significant Project" and subject to the requirements of Section 112.03.12 of the Specifications for projects of that designation.

3. SIGNS

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.

4. TEMPORARY PAVEMENT STRIPING

Skip lines and/or solid lines through the length of the tapers for lane closures and other striping as directed by the Engineer shall be temporarily covered with 6" black removable tape. Permanent removal of all other pavement striping for traffic control shall be considered incidental to Maintain and Control Traffic. Temporary pavement markings 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. **A penalty of $500.00 per day will be assessed** for failing to replace temporary striping within this time limit.

Use 6" removable tape for all temporary striping. Use 2 adjacent runs of 6" white temporary striping, and use 2 adjacent runs of 6" black removable tape where required to reconfigure 12" gore area striping.

Remove or cover any existing pavement marker lenses that are not in compliance with the traffic scheme in use, and in accordance with the Standard Drawings. Covering or removal and replacement of existing pavement markings will be considered incidental to the item "Maintain and Control Traffic".

5. PROJECT PHASING & CONSTRUCTION PROCEDURES

Maintain one lane of traffic on the bridge at all times in accordance with Standard Drawing No. TTC-115 and TTC-120. The minimum clear lane width required is as follows:

Structure	Clear Lane Width	Construction Phase
056B00196N	11'-0"	Phase I
056B00196N	10'-0"	Phase II

Phase I – Erect detour signage and cover signs until immediately prior to closure of South Floyd Street. Erect lane closure, closing the right auxiliary lane in advance of Exit 136C. Utilizing traffic drums on 40' spacing temporarily shift traffic as necessary to place temporary lane tape for placement of traffic onto shoulders in phase I, to eradicate rumble strips within the Phase I proposed lane shift limits, and install temporary concrete barrier wall. Close South Floyd Street and shift ramp traffic partially onto the left ramp shoulder and complete all Phase I bridge construction operations. Prepare Phase I bridge ends for application of traffic by backfilling bridge ends with asphalt base if necessary.

Phase II – Reconfigure striping for the Phase II traffic scheme and place Phase II temporary barrier wall from approximate MOT station 4+50 to station 7+30. Eradicate rumble strips on the right ramp shoulder within the proposed Phase II traffic shift limits. Remove the crash cushion and approximately 180' of the leading end of the PH I temporary barrier wall. Protect the end of the exposed barrier wall at all times with a Truck Mounted Attenuator. Complete temporary striping and place traffic in the Phase II configuration. Install the remainder of the Phase II temporary barrier wall and install the Phase II crash cushion. Once the Phase I crash cushion is removed, work continuously (pursue work uninterruptedly to completion) to complete construction of the Phase II temporary barrier wall and crash cushion. Complete Phase II bridge construction items, prepare Phase II bridge ends for application of traffic by backfilling with asphalt base, remove temporary concrete barrier and crash cushion and open South Floyd Street to traffic.

Phase III – Complete resurfacing of bridge approaches in the right ramp lane and right ramp shoulder, complete striping for the right ramp lane, and construct sawed rumble strips in the right shoulder. Utilizing drums on 40' spacing shift traffic to the right ramp lane and complete resurfacing of bridge approaches in the left lane and left shoulder, complete striping for the left lane, and construct sawed rumble strips in the left shoulder. Complete any other remaining items of work.

6. SHOULDER PREPARATION

Traffic will be required to travel on the existing shoulders for prescribed activities and prescribed locations on the project. Clean any debris from the shoulders prior to

beginning any work on the project and periodically when debris accumulates throughout the duration of the project. Monitor shoulder conditions and perform repairs as necessary if damage develops by placement of asphalt patching materials or as directed by the engineer. No direct payment will be made for potential shoulder pavement repairs and will be considered incidental to the item Asphalt Approach Pavement. No additional mobilization or traffic control will be considered for payment for these potential repairs.

7. WIDE LOAD SIGNAGE

Wide loads shall be prohibited on the southbound Floyd Street exit ramp during construction. Notify the office for permitting of Over-Dimensional loads as soon as the contract is awarded notifying of the time frame wide loads will be prohibited on the ramp. Erect signs "WIDE LOAD PROHIBITED EXIT 136C" in advance of the ramp gore 500' and in advance of the auxiliary ramp gore.

8. ROAD CLOSURE

South Floyd Street will be allowed to be closed during bridge construction activities. Limit the duration of the road closure to the minimum duration required to complete the bridge construction activities. Erect detour signage in accordance with the detour plans. Notify the engineer 2 weeks prior to the proposed begin closure date. Cover detour signage until immediately prior to closure of South Floyd Street. Remove detour signage and open South Floyd Street as soon as all overhead bridge work is completed.

9. REDUCED SPEED LIMIT AND HIGHER FINE ZONES

Reduce speed limit from 50 MPH to 40 MPH within the work for the duration of the project. Install all signing for speed zone reductions in accordance with Standard Drawing TTD-130. Utilize higher fine zone signs in strict accordance with Standard Drawing TTD-120-03.

10. LAW ENFORCEMENT OFFICER

Utilize Law Enforcement Officers when reconfiguring striping and temporary barrier for new traffic schemes, during construction activities to be performed while not protected by temporary barrier such as approach paving and final pavement markings, and during other times as directed by the engineer.

The contractor will be required to establish an agreement with a local law enforcement agency to provide an officer and police cruiser to be used to warn traffic of lane closures and stopped traffic ahead. The contractor will be responsible for reimbursing the agency of the costs for this service. This requirement is solely for the intent of warning traffic of a potential danger ahead and not for the purpose of the issuance of traffic violations. The officer should however have authority to issue citations if necessary and at his discretion. Patrolling for speeding and issuance of higher fine citations should be performed by a separate officer and the contractor will not be required to reimburse the agency for that operation.

11. TYPE III BARRICADES

Utilize Type III Barricades to deter traffic from entering a closed lane and at all other locations required by the Standard Drawings or MUTCD, or as directed by the engineer.

12. TEMPORARY BARRIER WALL

A quantity of temporary barrier wall is required to be in place simultaneously for both phases when transitioning from Phase I to Phase II. Adequate quantities of 03171 Concrete Barrier Wall Type 9T and 08904 Crash Cushion Ty VI Class C have been established for payment of temporary barrier wall and crash cushions for both Phase I and Phase II. A portion of the Phase I temporary barrier may be relocated and reused in Phase II provided all requirements in Project Phasing & Construction Procedures are met and as approved by the engineer. All temporary barrier wall and crash cushions will be paid as 03171 Concrete Barrier Wall Type 9T and 08904 Crash Cushion Type VI Class C regardless of whether it is a first installation or relocation from a prior phase. No measurement or payment will be made for removal or temporary storage of temporary barrier wall or crash cushions.

13. MOT STATIONING, LANE CLOSURE, AND LANE SHIFTS

The existing ramp curve east of the South Floyd Street bridge has an existing radius of 600'. Traffic is to be shifted for phased construction utilizing similar 600' radii curves. An approximate alignment is depicted in the Maintenance of Traffic plan view sheets. This alignment was derived from aerial photography and is only approximate in nature and was developed to provide a sketch of the approximate layout and stationing of various MOT features. This alignment is not considered to be precise and was not intended to be provided for contract staking. The contractor will be responsible for field measuring and establishing the layout of MOT features, including field establishing the layout of the proposed 600' Radii curves to be utilized for lane shifts in phased construction. Other short duration lane shifts will be required for reconfiguring striping and temporary barrier and shall be required to be 40:1 taper rate or flatter and by use of traffic drums at 40' spacing.

Only long-term lane closure (intended to be in place for more than 3 days) will be measured for payment.

One lane closure will be established to close the right auxiliary lane in advance of the project and for the duration of project. No direct measurement or payment will be made for diversions or lane shifts to shift traffic for phased construction or for temporary traffic shifts necessary to complete other items of work and will be considered incidental to the item Maintain and Control Traffic.

14. PORTABLE CHANGEABLE MESSAGE SIGNS

Provide portable changeable message signs (PCMS) in advance of and within the project at locations to be determined by the Engineer. PCMS being bid independently of the Queue Warning System shall be used as directed by the engineer. The PCMS will be in operation at all times. In the event of damage or mechanical/electrical failure, the contractor will repair or replace the PCMS immediately. PCMS will be paid for once, no matter how many times they are moved or relocated. The Department WILL NOT take possession of the signs upon completion of the work.

15. TRUCK MOUNTED ATTENUATORS

Furnish and install MUTCD approved truck mounted attenuators (TMA) in advance of work areas when workers are present less than 12 feet from traffic and not protected by

temporary barrier. If there is less than 500 feet between work sites, only a single TMA will be required at a location directed by the Engineer. Locate the TMAs at the individual work sites and move them as the work zone moves within the project limits. All details of the TMA installations shall be approved by the Engineer. TMA will not be measured for payment, but are incidental to "Maintain and Control Traffic," Lump Sum. The Department WILL NOT take possession of the TMAs upon completion of the work.

16. COORDINATE OF WORK

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

Notify the Indiana Department of Transportation prior to placement of any signs that may become necessary or PCMS placement within INDOT jurisdiction.

17. CONTRACTOR'S AND CONTRACTOR'S EMPLOYEE'S VEHICLES

In accordance with Section 112.03.03 of the Specifications, place all construction equipment and materials outside the clear zone, beyond the ditch, behind guardrail or barrier walls, or off the existing right of way when not in use.

18. MEASUREMENT.

Temporary Signs:

The Cabinet will measure this item by "Square Feet".

Maintain and Control Traffic:

The Cabinet will measure this item by "Lump Sum".

Lane Closure, Arrow Panel, Portable Changeable Message Sign, Crash Cushion Ty VI Class C, Delineator for Barrier – W, Y, Barricade-Type III, Pavement Marker Ty IVA-MW Temp, Pavement Marker Ty IVA-MY Temp:

The Cabinet will measure this item by "Each".

Concrete Barrier Wall Type 9T and Pave Striping-Temp Rem Tape-B, W, Y:

The Department will measure the quantity in "Linear Feet".

Queue Warning System, Sensors, and Protection Vehicles.

See Special Notes.

Law Enforcement Officer

The Department will measure the quantity in "Hour" representing the hours Law Enforcement Officers are in place on the project.

19. PAYMENT.

Temporary Signs (02562)

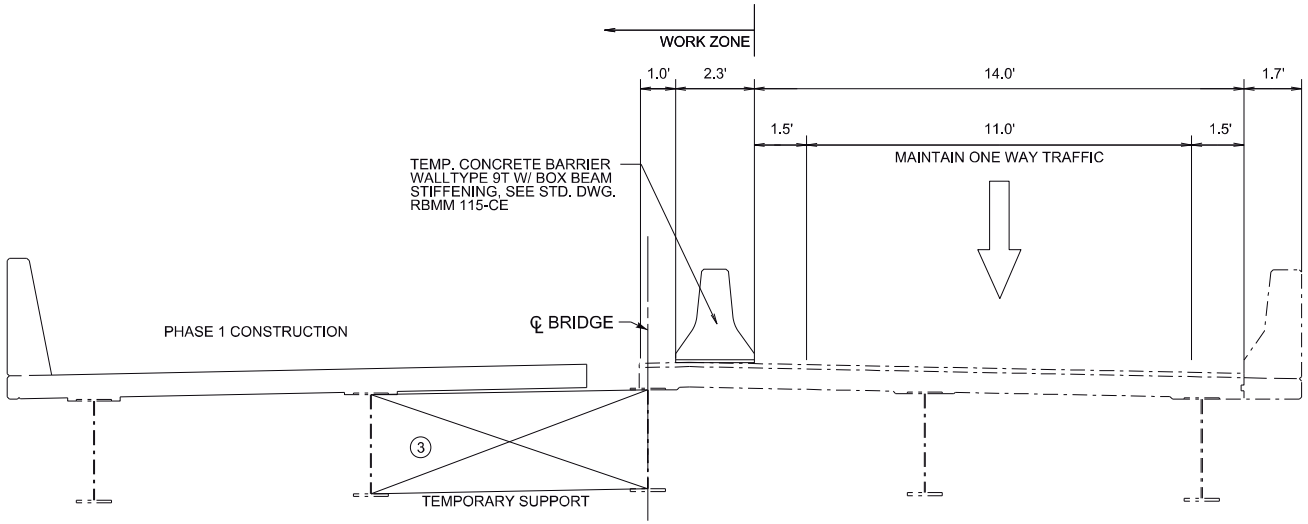
Payment at the contract unit price for "Square Feet" is full compensation for all items to complete this work as specified.

Maintain and Control Traffic (02650):

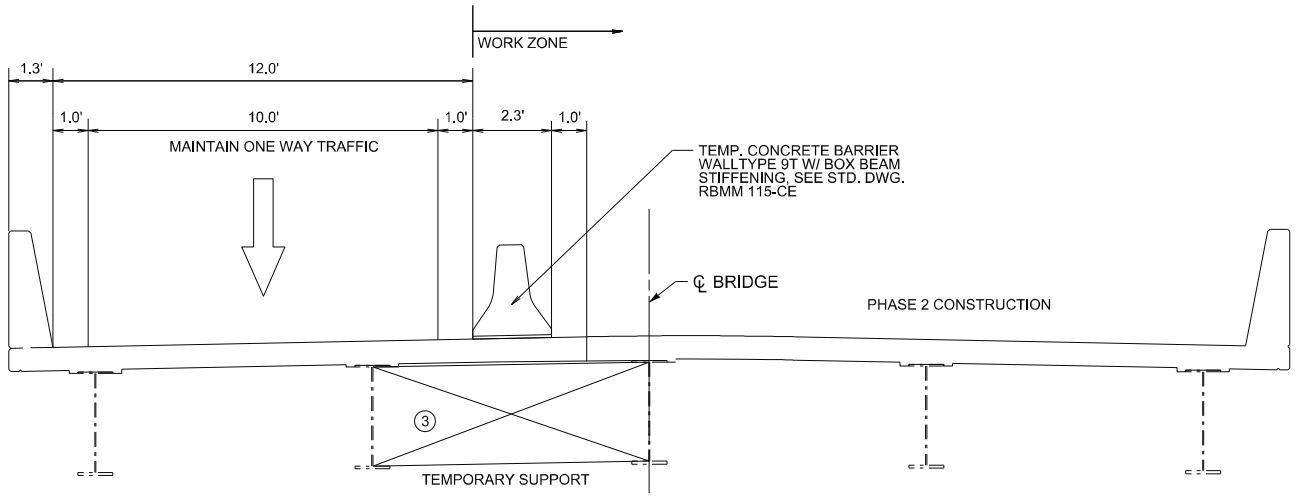
Payment at the contract unit price for "Lump Sum" is full compensation for all items to complete this work as specified.

Lane Closure (02653), Arrow Panel (02775), Crash Cushion Ty VI Class C (08904), Delineator for Barrier – W (01984), Y (01985), Barricade Type III (02014), Portable Changeable Message Signs (02671), Pavement Marker Ty IVA-MW Temp (06550) Pavement Marker Ty IVA-MY Temp (06586):
Payment at the contract unit price "Each" is full compensation for all items to complete this work as specified.
Concrete Barrier Wall Type 9T (03171) and Pave Striping-Temp Rem Tape-B (06549), W (06550), Y (06551):
Payment at the contract unit price "Lineal Feet" is full compensation for all items to complete this work as specified.
Queue Warning System, Sensors, and Protection Vehicles.
See Special Notes.
Law Enforcement Officer
Payment at the contract unit price "Hour" is full compensation for all items to complete this work as specified.

MOT TYPICAL SECTIONS



TYPICAL SECTION FOR PHASE 1 CONSTRUCTION



TYPICAL SECTION FOR PHASE 2 CONSTRUCTION

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

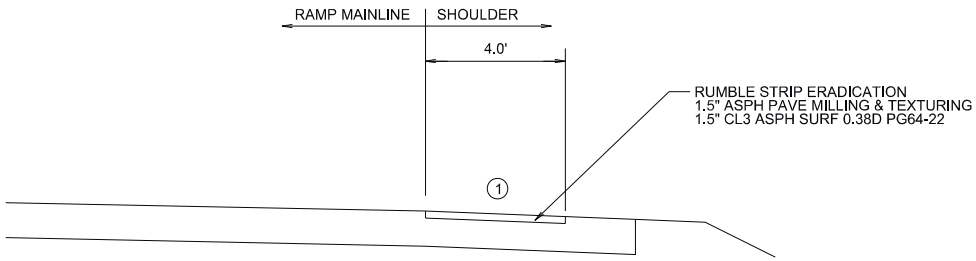
DRAWING TITLE: MOT TYPICAL SECTIONS

0' X' XX' XX'
NOT TO SCALE

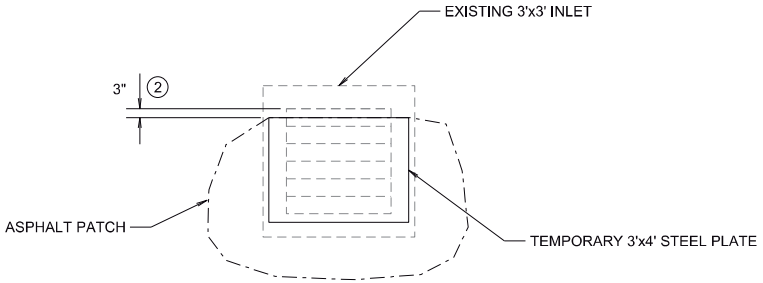
ITEM NO.	COUNTY OF
00.0000.00	KENTUCKY
SHEET NO.	

OpenRoads Designer v10.12.02.4 USER: jrobertson
FILE NAME: P:\ENGR\1477 STW MAINTENANCE 2024\1477.02 LA #2 JEFFERSON CO B196 & B138\056B00196N\MOT\CAD\DETAILS\MOT TYPICAL SECTIONS.DGN

MOT TYPICAL SECTIONS



RUMBLE STRIP ERADICATION DETAIL



STEEL PLATE COVER DETAIL

1. REMOVE RUMBLE STRIPS TO LIMITS SHOWN ON PLANS PRIOR TO SHIFTING TRAFFIC ONTO SHOULDERS
2. PRIOR TO SHIFTING TRAFFIC ONTO SHOULDER IN PHASE II TEMPORARILY PLACE STEEL PLATE OVER INLET, AND PLACE ASPHALT PATCHING MATERIAL OVER PLATE AND EXISTING DEPRESSION SURROUNDING INLET. SIZE PLATE TO LEAVE A 3" WIDE OPENING.
3. SEE STRUCTURE PLANS FOR TEMPORARY SUPPORT REQUIRMENTS.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: MOT TYPICAL SECTIONS

0' X' XX' XX'
NOT TO SCALE

ITEM NO.	COUNTY OF
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SHEET NO.	

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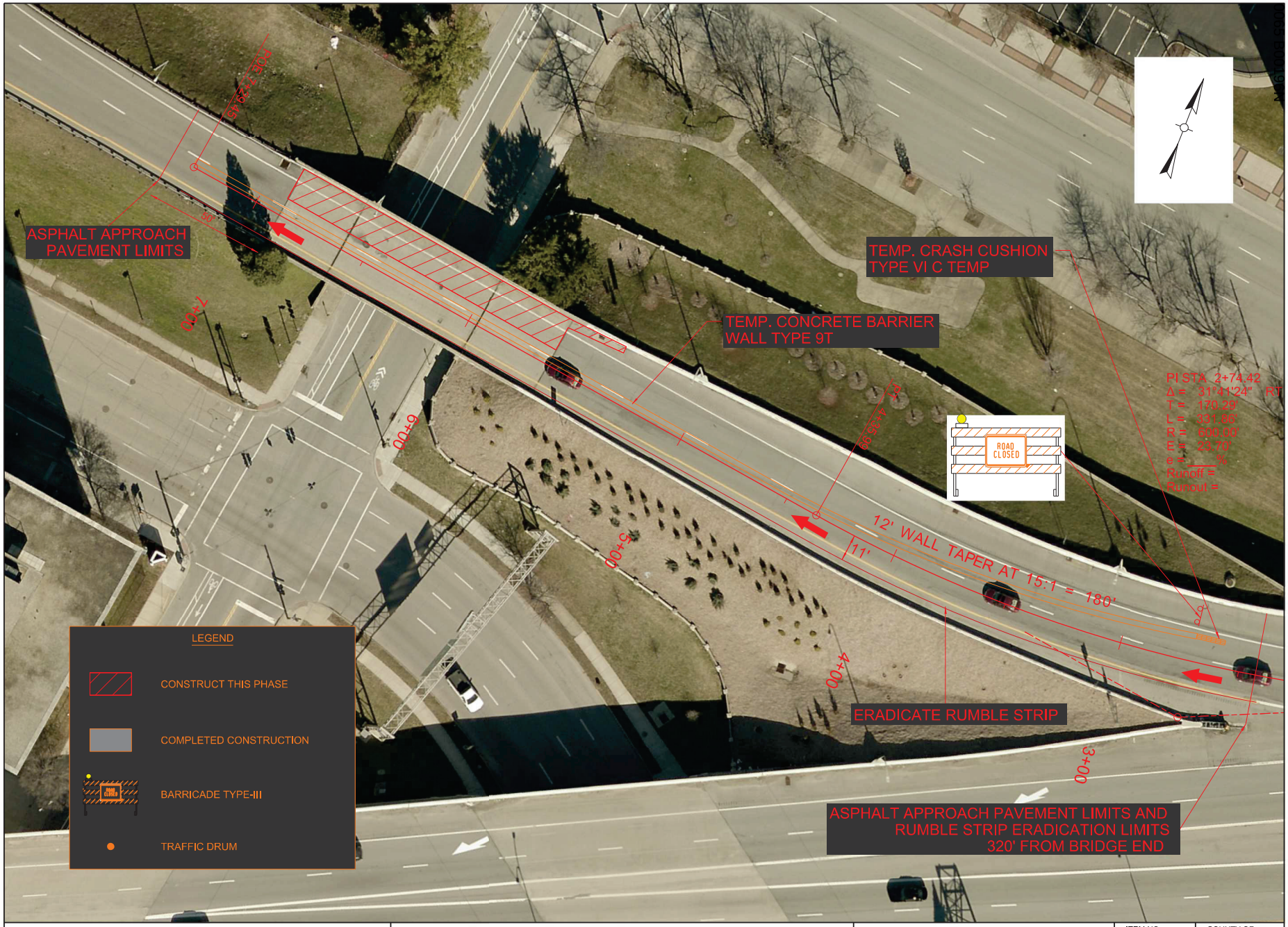
FILE NAME: P:\ENGR\1477 STW MAINTENANCE 2024\1477.02 LA #2 JEFFERSON CO B196 & B138\056B00196N\MOT\CAD\DETAILS\MOT TYPICAL SECTIONS.DGN



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: MOT - PHASE 1 - SHEET 1 OF 4

0' 50' 100' 200'
HORIZONTAL SCALE: 1"=50'

ITEM NO.	COUNTY OF
00.0000.00	JEFFERSON
SHEET NO.	

OpenRoads Designer v10.12.02.4 USER: jrobertson
FILE NAME: P:\ENGR\1477 STW MAINTENANCE 2024\1477.02 LA #2 JEFFERSON CO B196 & B138\056B00196N\MOT\CAD\DETAILS\PHASE I PLAN SHEET 1.DGN

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: MOT - PHASE 1 - SHEET 2 OF 4

0' 50' 100' 200'
HORIZONTAL SCALE: 1"=50'

ITEM NO.	COUNTY OF
00.0000.00	JEFFERSON
SHEET NO.	

OpenRoads Designer v10.12.02.4 USER: jrobertson
FILE NAME: P:\ENGR\1477 STW MAINTENANCE 2024\1477.02 LA #2 JEFFERSON CO B196 & B138\056B00196N\MOT\CAD\DETAILS\PHASE I PLAN SHEET 2.DGN

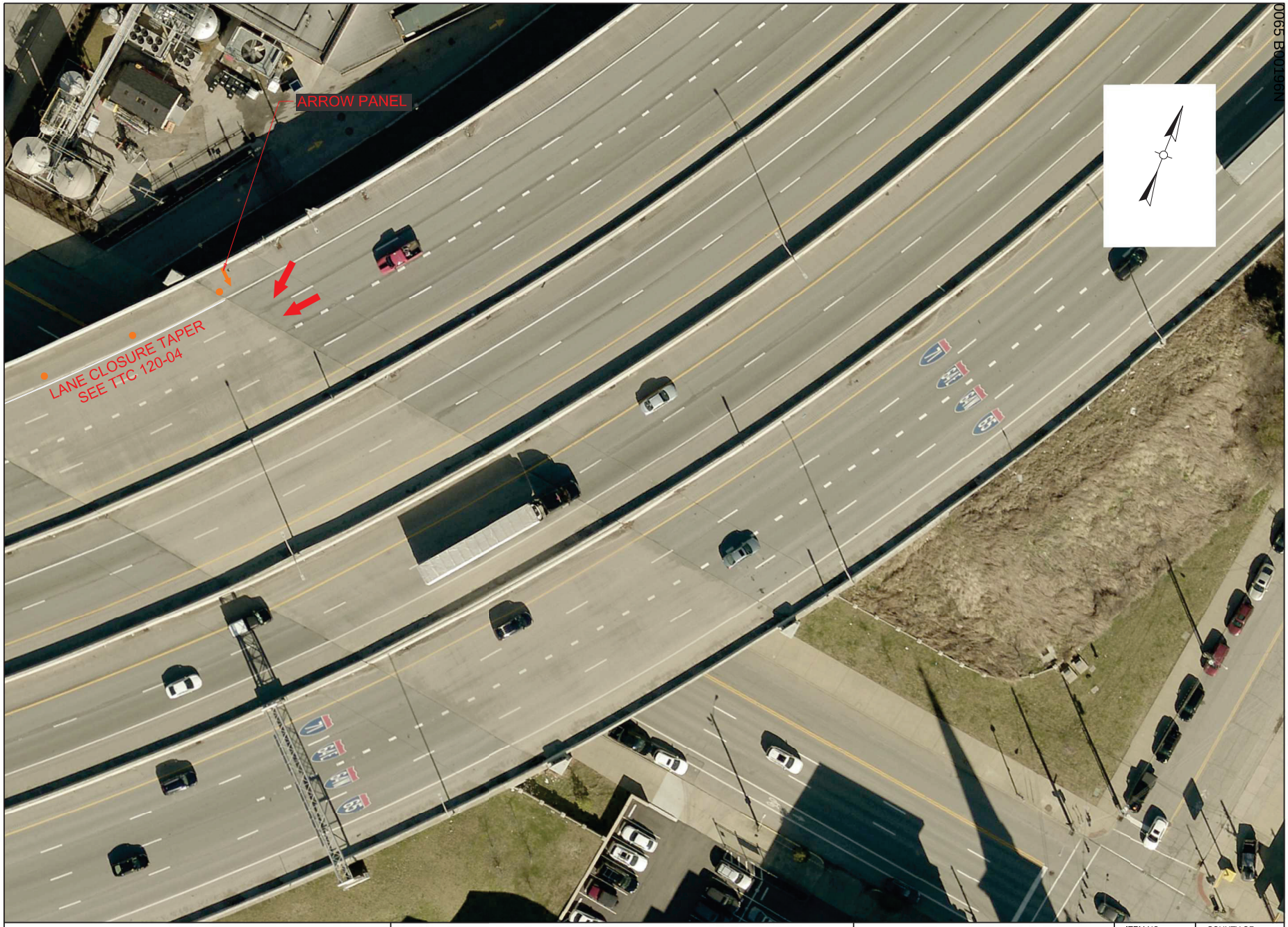
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: MOT - PHASE 1 - SHEET 3 OF 4

0' 50' 100' 200'
HORIZONTAL SCALE: 1"=50'

ITEM NO.	COUNTY OF
00.0000.00	JEFFERSON
SHEET NO.	

OpenRoads Designer v10.12.02.4 USER: jrobertson
FILE NAME: P:\ENGR\1477 STW MAINTENANCE 2024\1477.02 LA #2 JEFFERSON CO B196 & B138\056B00196N\MOT\CAD\DETAILS\PHASE I PLAN SHEET 3.DGN



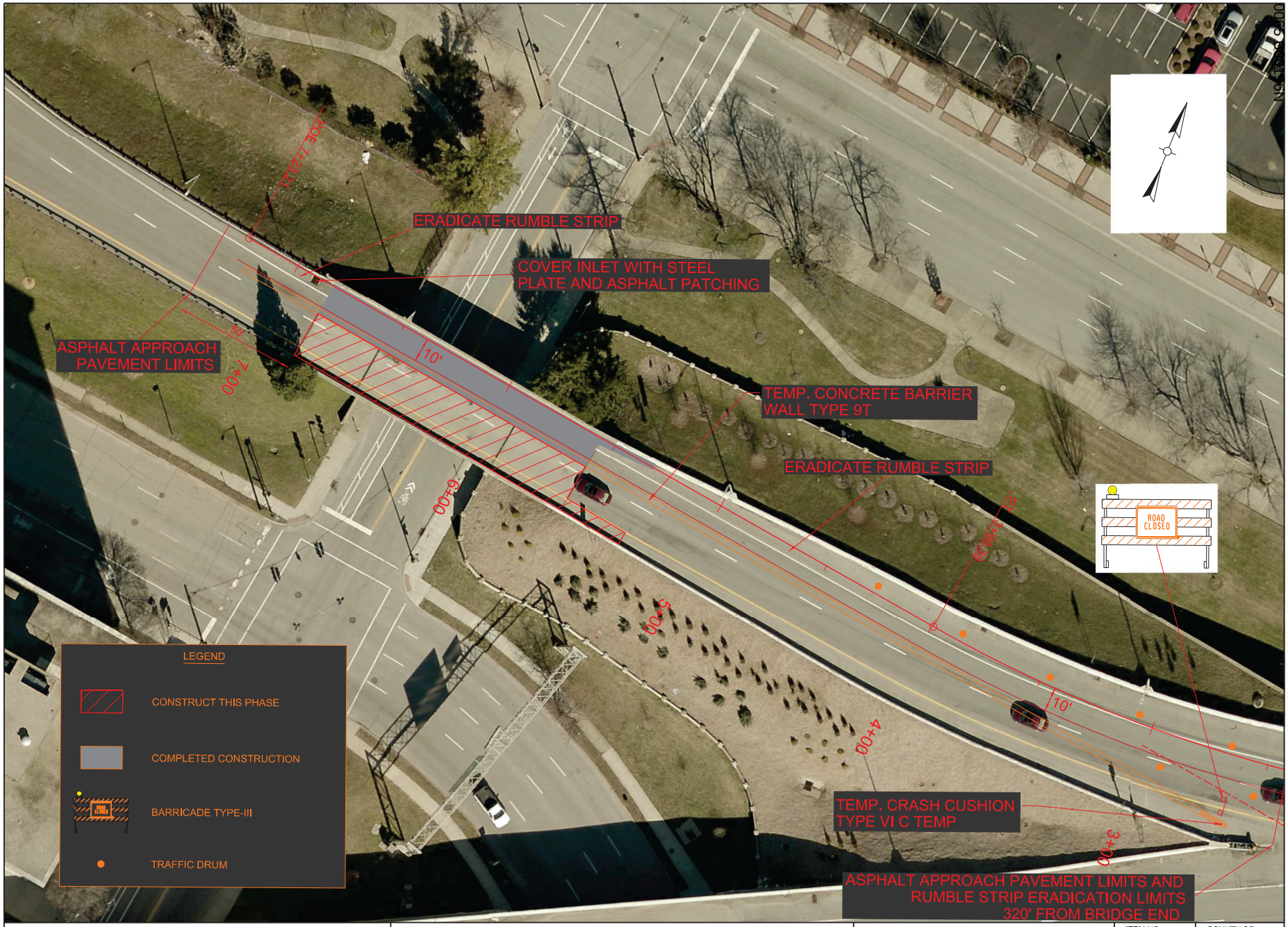
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: MOT- PHASE 1 - SHEET 4 OF 4

0' 50' 100' 200'
HORIZONTAL SCALE: 1"=50'

ITEM NO.	COUNTY OF
00.0000.00	JEFFERSON
SHEET NO.	

OpenRoads Designer v10.12.02.4 USER: jrobertson
FILE NAME: P:\ENGR\1477 STW MAINTENANCE 2024\1477.02 LA #2 JEFFERSON CO B196 & B138\056B00196N\MOT\CAD\DETAILS\PHASE I PLAN SHEET 4.DGN



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: MOT - PHASE 2 - SHEET 1 OF 4

0' 50' 100' 200'
HORIZONTAL SCALE: 1"=50'

ITEM NO.	COUNTY OF
00.0000.00	JEFFERSON
SHEET NO.	

OpenRoads Designer v10.12.02.4 USER: jrobertson
FILE NAME: P:\ENGR\1477 STW MAINTENANCE 2024\1477.02 LA #2 JEFFERSON CO B196 & B138\056B00196N\MOT\CAD\DETAILS\PHASE II PLAN SHEET 1.DGN

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: MOT - PHASE 2 - SHEET 2 OF 4

0' 50' 100' 200'
HORIZONTAL SCALE: 1"=50'

ITEM NO.	COUNTY OF
00.0000.00	JEFFERSON
SHEET NO.	

OpenRoads Designer v10.12.02.4 USER: jrobertson
FILE NAME: P:\ENGR\1477 STW MAINTENANCE 2024\1477.02 LA #2 JEFFERSON CO B196 & B138\056B00196N\MOT\CAD\DETAILS\PHASE II PLAN SHEET 2.DGN

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: MOT - PHASE 2 - SHEET 3 OF 4

0' 50' 100' 200'
HORIZONTAL SCALE: 1"=50'

ITEM NO.	COUNTY OF
00.0000.00	JEFFERSON
SHEET NO.	

OpenRoads Designer v10.12.02.4 USER: jrobertson
FILE NAME: P:\ENGR\1477 STW MAINTENANCE 2024\1477.02 LA #2 JEFFERSON CO B196 & B138\056B00196N\MOT\CAD\DETAILS\PHASE II PLAN SHEET 3.DGN

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: MOT- PHASE 2 - SHEET 4 OF 4

0' 50' 100' 200'
HORIZONTAL SCALE: 1"=50'

ITEM NO.	COUNTY OF
00.0000.00	JEFFERSON
SHEET NO.	

OpenRoads Designer v10.12.02.4 USER: jrobertson
FILE NAME: P:\ENGR\1477 STW MAINTENANCE 2024\1477.02 LA #2 JEFFERSON CO B196 & B138\056B00196N\MOT\CAD\DETAILS\PHASE II PLAN SHEET 4.DGN

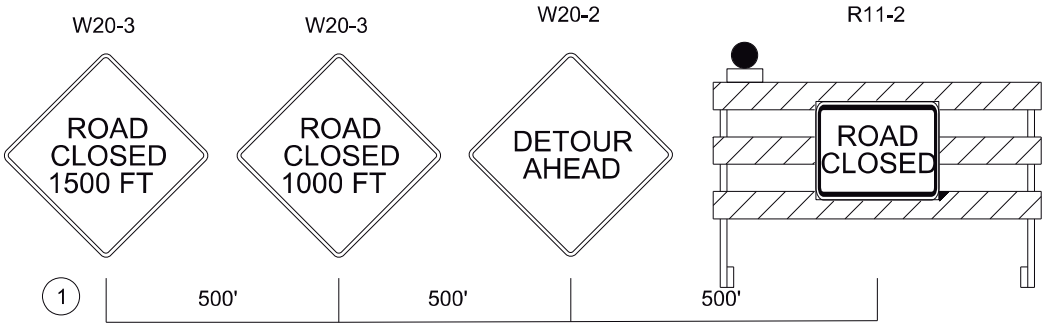
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

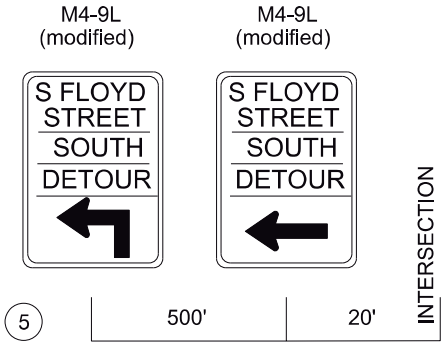
DRAWING TITLE: DETOUR MAP

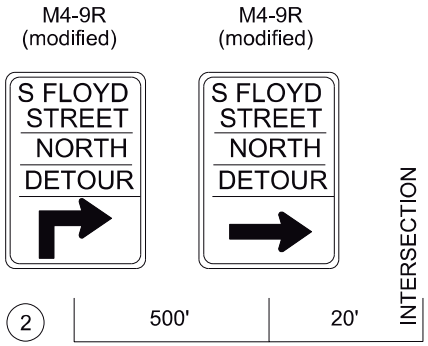
0' 300' 600' 1200'
HORIZONTAL SCALE: 1"=300'

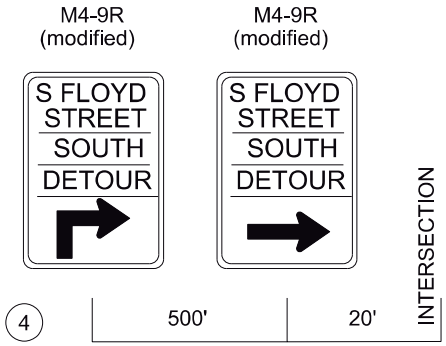
ITEM NO.	COUNTY OF
00.0000.00	JEFFERSON
SHEET NO.	

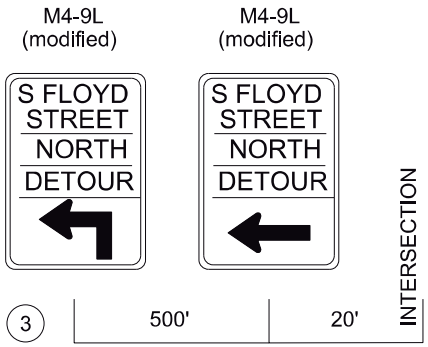
OpenRoads Designer v10.12.02.4 USER: jrobertson
FILE NAME: P:\ENGR\1477 STW MAINTENANCE 2024\1477.02 LA #2 JEFFERSON CO B196 & B138\056B00196N\MOT\CAD\DETAILS\DETOUR.DGN











1.DIRECTIONAL ARROWS ON MAP INDICATE THE DIRECTION OF TRAVEL MOTORISTS WILL BE VIEWING THE PROPOSED DETOUR SIGNS OR SERIES OF SIGNS.

2.TRAFFIC CONTROL DEVICES AND LOCATIONS DEPICTED HEREIN ARE INTENDED TO PORTRAY A GENERAL SOLUTION REQUIRED TO CLOSE S FLOYD ST DURING CONSTRUCTION. TRAFFIC CONTROL IS TO BE PROVIDED IN ACCORDANCE WITH THE DEPARTMENT'S SPECIFICATIONS, STANDARD DRAWINGS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. EXACT LOCATIONS OF SIGNS AND SELECTION OF MOST APPLICABLE DEVICES TO BEST SUIT CURRENT CONSTRUCTION ACTIVITIES WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

3.SEE TRAFFIC CONTROL PLAN FOR ALLOWABLE TIMES, DATES, AND DURATION OF ROAD CLOSURE. PROVIDE 2 WEEKS NOTICE TO THE ENGINEER PRIOR TO ERECTING THE CLOSURE.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: DETOUR MAP LEGEND AND NOTES

0' 300' 600' 1200'
HORIZONTAL SCALE: 1"=50'

ITEM NO.	COUNTY OF
00.0000.00	JEFFERSON
SHEET NO.	

OpenRoads Designer v10.12.02.4 USER: jrobertson
FILE NAME: P:\ENGR\1477 STW MAINTENANCE 2024\1477.02 LA #2 JEFFERSON CO B196 & B138\056B00196N\MOT\CAD\DETAILS\DETOUR.DGN

SPECIAL NOTE FOR TRAFFIC QUEUE PROTECTION VEHICLE

1. 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. 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. 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.

A. 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.

B. 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.

Code	Pay Item	Pay Unit
25075EC	Queue Protection Vehicle	Hour
25117EC	Furnish Queue Protection Vehicles	Month

SPECIAL NOTE FOR PORTABLE QUEUE WARNING SYSTEM

1. 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. 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. 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.

2. **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
3. **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).
    6. The PCMS unit shall be a Full Matrix 24 rows x 50 columns and shall be capable of1 line, 2line or 3 line messages
    7. The PCMS unit shall be legible from a distance over twelve hundred feet (1200')
    8. The height and size of characters shall be 18" to 58"
    9. The PCMS shall be capable of storing up to 199 pre-programmed messages and up to 199 user-defined messages
    10. The PCMS shall have a weather tight control cabinet with back lit LCD handheld controller.

11. The PCMS shall utilize a hydraulic lift to raise the unit to display height
12. The PCMS unit shall include solar recharging ports to allow for recharging of the portable radar sensors when they are not deployed.
13. The PCMS shall be NTCIP compliant and shall have an active Modem with active cellular service.
14. The user shall have the ability to communicate and override the PCMS remotely in the event of an emergency, Amber Alert, etc.
15. 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. CONSTRUCTION.

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. 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. 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

A. 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.

B. 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.

C. 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. PAYMENT.

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

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

1. 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 the date listed below. An allotted number of Calendar days are assigned to each structure in this contract as shown below.

STRUCTURE	NO. OF CALENDAR DAYS	COMPLETION DATE
056B00196N	90	November 15, 2025

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 $500.00 per day** will be assessed when the allotted number of calendar days is exceeded for each structure.

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 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. Rust Inhibitor

Use the follow rust inhibitor or approve equivalent:

Manufacture	**Lubricant**
Rhomar,	Black Max

D. 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 bridge components. See attached detailed drawings addressing components having debris removal. 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 at areas of the bridge that are to be addressed in this proposal 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 Pact Rust Removal.

Stratified and pack rust shall be removed from all bearing devices and specified limits of beams. All 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, 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. Preform 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 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 diagram. 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. Rust Inhibitor Application.

After all stratified rust is removed from the member surface. The specified rust inhibitor shall be applied to the rusted areas of the structural steel within 4 feet of the joint or centerline of pier. This includes all primary steel members (beams, stringers, floor beams, diaphragms, etc.) in the specified limits. **All cost to complete Rust Inhibitor Application as specified shall be included in the unit price Each for "Bearing Lubrication".**

F. Bearing Lubrication Application.

Bearing devices shall be lubricated as specified after all stratified rust and pack rust is removed and power washing is complete, 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. Preform 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"**

G. 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. Rust Inhibitor Application
6. Bearing Lubrication Application

H. 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 pact rust.
3. **Pressure 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. **Rust Inhibitor Application:** Visual Inspection. (054B00165N only)
6. **Bearing Lubrication.** Visual Inspection. (054B00165N only)

I. 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.

J. 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.

K. 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.

B. Concrete Coating.
The Cabinet will measure this item by Lump Sum, completed and accepted.

C. Bearing Lubrication:
The Cabinet will measure this item by Each, completed and accepted.

5. PAYMENT.

A. Bridge Cleaning (24981EC).
Payment at the contract unit price for "Lump Sum" is full compensation for Debris Removal, Deck Drain Cleaning, Pressure Washing and all incidental items required to complete this with as specified in this note and attached detailed drawings.

B. Concrete Coating (24982EC).
Payment at the contract unit price for "Lump Sum" is full compensation for applying the concreate coatings and all incidental items required to complete this work as specified in this note and attached detailed drawings.

C. Bearing Lubrication (24983EC): 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.

SPECIAL NOTE FOR BRIDGE DECK RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS

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 the attached detail drawings. Section references are to the Standard Specifications. This work consists of the following: (1) Furnish all labor, materials, tools, and equipment, (2) Machine prep the existing slab, (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, (6) Complete asphalt approach pavement, and (7) Any other work specified as part of this contract. All construction will be in accordance with Section 606 unless otherwise specified.

2. MATERIALS.

A. Latex Concrete. See Section 606.03.17.

B. Class "M" Concrete. Use either "M1" or "M2". See Section 601.

C. Bituminous Asphalt. Use CL2 ASPH SURF 0.38D PG64-22.

D. Epoxy-Sand Slurry. See Section 606.03.10.

3. CONSTRUCTION.

A. Remove Existing Overlay. In addition to Section 606.03.03, totally remove the existing concrete overlay by milling.

B. Partial Depth Slab Repair and Latex Overlay. Remove areas determined to be unsound by the Engineer via hydro-demolition or via handheld jackhammers weighing less than 45lbs. 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. Asphalt Approach Pavement. Mill each existing asphalt approach to the distance indicated in the attached detailed drawings. Remove the bituminous material uniformly by making an edge key, so as to provide a smooth transition to the finished bridge when a new bituminous overlay of compacted depth of approximately 1½" is added to the approaches. The grinding depth may vary depending on the condition of the existing approach and final elevation of bridge end. Dispose of all removed material away from the site.

D. Surface Texturing. Texture the concrete surface of the overlay in accordance with Section 609.03.10.

E. Pavement Markings. Restore pavement markings to original patterns and/or as directed by the Engineer in accordance with Sections 713, 714 and 837. See Standard Drawings TPM-115 and TPM-207 Current Edition.

F. Verifying Field Conditions. The Contractor shall field verify all dimensions before ordering any material. New material that is unsuitable due to variation in existing structure shall be replaced at the Contractors expense.

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

4. 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:

056B00196N (128'0" x 37'4.5" x 1.5") = 22.2 CY

B. Remove Epoxy Bit Foreign Overlay, Blast Cleaning, Epoxy Sand Slurry and Bridge Overlay Approach Pavement. The Department will measure the removal of the existing overlay in square yards.

C. Partial Depth Patching. 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.

D. Concrete Class M Full Depth Patch and Concrete Latex Overlay. The Department will measure the quantity in cubic yards.

E. Steel Reinforcement. The Department will measure any reinforcing steel necessary for the partial or full depth patch in pounds.

F. Durable Waterborne Marking – 6 Inch W. The Department will measure the quantity in lineal feet.

G. Durable Waterborne Marking – 6 Inch Y. The Department will measure the quantity in lineal feet.

5. PAYMENT. See Section 606 and the following:

A. Remove Epoxy Bit Foreign Overlay (08510). The Department will make payment for the removal of the existing overlay.

B. Partial Depth Patching (24094EC). The Department will make payment for removing exiting materials, furnishing and placing all new materials completed and accepted.

C. Concrete Class M Full Depth Patch (08526). The Department will make payment for removing exiting materials, furnishing, and placing all new materials.

D. Blast Cleaning (08549). The Department will make payment for blast cleaning all surfaces specified.

E. Epoxy Sand Slurry (08504). The Department will make payment for furnishing and placing all new materials as specified.

F. Concrete Latex Overlay (08534). The Department will make payment for furnishing and placing all new material as specified.

G. Steel Reinforcement (08150). The Department will make payment for steel reinforcement, if necessary.

H. Bridge Overlay Approach Pavement (03304). The Department will make payment for removing existing materials, furnishing and placing all new materials as specified.

I. Durable Waterborne Marking – 6 Inch W (24189ER). The Department will make payment for furnishing and placing permanent striping as specified.

J. Durable Waterborne Marking – 6 Inch Y (24190ER). The Department will make payment for furnishing and placing permanent striping as specified.

SPECIAL NOTE FOR UTILITIES AND SIGNS

All utilities and traffic signs shall be maintained and protected from damage.

All electric power that may be on or in conflict with construction near the structure shall be de-energized. The Contractor shall coordinate with the Department to have the power de-energized.

SPECIAL NOTE FOR CONCRETE SEALING

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

I. DESCRIPTION. Perform all work in accordance with the Department's 2019 Standard Specifications, and applicable Supplemental Specifications, the attached sketches, and these Notes. Section references are to the Standard Specifications.
This work consists of: (1) Furnish all labor, materials, tools, and equipment; (2) Clean the bridge deck; (3) Seal the bridge deck; (4) Maintain & control traffic; and, (5) Any other work specified as part of this contract.

II. MATERIALS.

A. Sealer. Use one of the following:

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

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

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

III. CONSTRUCTION.

A. Curing Compound. Contrary to Section 609.03.12 of the specifications, curing compound is not to be used on this deck due to potentially causing issues with the concrete sealer. During the deck pour, finishing, and tining operations the Class AA concrete shall be kept continuously moist with the use of a mister until burlap or curing blankets are applied to the surface. At no point should water be pooling or running off the surface or the surface of the concrete be allowed to become dry. After the burlap or curing blankets are installed, cure in accordance with the specifications. Include all costs in the unit price bid for Class AA concrete. Failure to properly cure the concrete in accordance with this note and the specifications may result in weakened or cracked concrete. If the concrete is weakened or cracked due to improper curing, the contractor will be responsible for providing alternates to fix the issues to the Engineer for review and the contractor will be solely responsible for all costs to do so, up to complete replacement. Do not begin any construction on fixing any issues without approval of the Engineer.

B. Contract Time. Concrete Sealing may need to be installed after contract time has elapsed in a separate mobilization and after the Engineer has declared the project otherwise complete. Liquidated damages shall not be charged provided Concrete Sealing is complete within 60 days after the last concrete pour on the structure. When the Contractor has not completed Concrete Sealing within the time frame allotted, Liquidated Damages shall be charged at 25 percent of the original contract daily charge from the expiration of the time allowed until the Contractor completes the work except the Department will not deduct liquated damages when weather limitations prohibit the Contractor from performing the work.

C. Cleaning the Deck. Dry clean the deck to remove all loose debris. Remove all visible hydrocarbons from the surface with detergent approved by the manufacturer of the deck sealant. Pressure wash all surfaces to be sealed at 2000 to 3000 psi. Install pressure gauges at each wand to verify pressure. Use 30° fan tip or as recommended by the

manufacturer of the deck sealant. Hold pressure washing wand a minimum of 45° from the deck with a maximum stand-off distance of 12 inches.

D. Sealing the Deck. Allow new concrete to cure a minimum 28 days prior to application of sealer. Monitor weather conditions prior to sealer application. Refer to manufacturer's recommendations for proper ambient conditions. Do not apply sealer if precipitation is anticipated within the time stated by the manufacturer. Allow the deck to dry 24 hours (after washing or rain event) before sealer application. The deck can be reopened to traffic while drying. Sealer must be applied within 48 hours of washing or the deck must be rewashed. Divide the deck into predefined areas of specific square footage to aid in determining usage. Comply with manufacturer's usage recommendation. Using a low pressure pump, apply sealer and spread evenly with broom or squeegee; do not allow pooling to remain. When each predefined area is complete, measure the amount of sealer used to verify proper usage. After sealing, follow manufacturer's recommended cure time before opening to traffic. On vertical surfaces, apply the sealer in a flooding application from the bottom up, so the material runs down 6 to 8 inches below the spray pattern.

E. Inspection: Monitor all aspects of the project to assure compliance to this specification. Observe and document general conditions during the entirety of the project. Verify that each phase of work has been satisfactorily completed prior to beginning the next phase. Phases are described as follows:

1. Dry cleaning to remove loose debris, verify and document:
    a. All debris has been removed and disposed of properly.
2. Removal of hydrocarbons, verify and document:
    a. The manufacturer's recommended detergent is used for removal.
    b. Hydrocarbons have been satisfactorily removed.
3. Pressure washing, verify and document:
    a. Washing pressure at the wand.
    b. Tip size used.
    c. Wash angle and stand-off distance.
    d. The deck is satisfactorily cleaned.
4. Sealer application, verify and document:
    a. Proper cure time for new concrete.
    b. Deck surface is dry.
        1. Document time since washed.
        2. Was deck opened to traffic after washing?
    c. Ambient conditions.
        1. Document ambient temperature, surface temperature, relative humidity, and dew point.
    d. Application and distribution method.
    e. Coverage to be complete and even.
    f. Material is not allowed to remain pooled.
    g. Monitor material usage.

h. No traffic until proper cure time is allowed.

IV. MEASUREMENT

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

B. Mobilization – For Concrete Surface Treatment. The Department will pay the lump sum bid for an additional mobilization when Concrete Sealing must be performed after the Engineer has deemed the project complete except for Concrete Sealing, structure is opened to traffic, and Contractor has fully demobilized.

V. PAYMENT

A. **23378EC - Concrete Sealing – Sq. Ft.** Payment at the contract unit price per square feet is full compensation for the following: (1) Furnish all labor, materials, tools, and equipment; (2) Clean the bridge deck; (3) Seal the bridge deck; (4) Maintain & control traffic; and, (5) Any other work specified as part of this contract.

B. **26233EC - Mobilization – For Concrete Surface Treatment – L.S.** Payment at the contract lump sum price bid shall be full compensation for the Contractor to remobilize on the project to perform Concrete Sealing as detailed herein this special note.

SPECIAL NOTE FOR JOINT SEAL REPLACEMENT

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) Remove existing joint seal; (3) Install joint seal as specified and (4) Any other work specified as part of this contract.

2. MATERIALS.

A. Expansion Joint Seals.

See The Division of Material's list of approved materials and Standard Drawing BJE-005 C.E.

3. CONSTRUCTION.

A. Remove Existing Materials.
Remove the existing joint seal. Armored edges to remain.

B. New Joint Material. Use a system listed in 2. Materials to reseal joints. Install as recommended from the manufacture. Provide the engineer with the manufacture's documents for installation

C. Verifying Field Conditions. The Contractor shall field verify all joint openings, locations and manufacture before ordering any material. New material that is unsuitable due to variation in existing structure shall be replaced at the Contractors expense.

4. MEASUREMENT.

A. JOINT SEAL REPLACEMENT. The Department will measure the quantity in linear feet from gutter line to gutter line along the centerline of the joint. The Department will not measure the portion of the new seal extending through the barrier. The portion of the joint seal extending through the barriers will be considered incidental.

5. PAYMENT.

A. JOINT SEAL REPLACEMENT (23386EC) - Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the new specified system, and all incidental items necessary to complete the work within the specified pay limits as specified by this note and the standard specification.

Special Note for Bridge Demolition, Renovation and Asbestos Abatement

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

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

Andy Beshear
GOVERNOR

TRANSPORTATION CABINET
200 Mero Street
Frankfort, Kentucky 406 01

Jim Gray
SECRETARY

Asbestos Inspection Survey

To: Tom Mathews

District: Central Office

Date: April 29, 2025

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: CID 252974

Structure ID: Jefferson 056B00196N

Structure Location: I-65 (I-65 Ramp) over South Floyd Street

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

Inspection Date: April 16, 2025

Results and Recommendations

This asbestos survey was performed in accordance with the current USEPA regulations, specifically 40 CFR Part 61, Asbestos National Emissions Standards for Hazardous Air Pollutants (NESHAP) revision, final rule effective November 20, 1990.

The results of the samples collected were negative for the presence of asbestos above 1%. No abatement is required at this time. However, the OSHA Standard 1926.1101 applies if any level of asbestos is present in the samples collected.

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. This form can be submitted electronically at the EEC Forms Homepage

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

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

(502) 568 - 2088 or (502) 495 - 1212
Fax: (502) 495 - 0566

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N# # 3504293 B
Client Name: K Y T C
Sampled By: O'Dail Lawson

Address: Jefferson County - 056 B00196N

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Sample ID	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
# 196-1	Black	Yes	No				None				100%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 29-Apr-25
Analyst : Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA # 102459

AJHA #1 02459

TEAM KENTUCKY

Chain of Custody Record

Kentucky Transportation Cabinet

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

O'Dail Lawson o'dail.lawson@ky.gov W4-06-06 Address: 200 Mero Street Frankfort KY Phone: Fax: 502-564-5655 PO#:	**Client Information** KY TRANSPORTATION CABINET Area Square footage: I-65 Ramp over Sourt Flays Street N/A = Not Applicable Samplers (signature):
Project ID Jefferson 056 B 00196N	

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Matrix	Color	Cont. Type	Preservative
1961	Joint Material	4/16/25	1430	Asbestos bulk	Rubber	black		N/A

Relinquished By:	Date/Time:	
Received By:	Date/Time:	
Relinquished By:	Date/Time:	
Received at Lab By: Winterfield Merak	Date/Time: 4/16/25	

Commonwealth of Kentucky
Department for Environmental Protection
Division for Air Quality

Tilmon ODail Lawson

Has met the requirements of 401 KAR 58:005 and is accredited as an:

Asbestos Inspector

Agency Interest Id: 159146
License Number: 86094
Issue Date: 03/11/2025
Expiration Date: 03/05/2026

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

Certification Number: ETC-AIR-030525-00169

O'Dail Lawson

has on 03-05-2025 attended and successfully completed the requirements and passed the examination with a score of 70% or 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: 03-05-2026

Name - Instructor

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

STANDARD SPECIFICATIONS

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

SUPPLEMENTAL SPECIFICATIONS

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

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

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

I. APPLICATION

1. These contract provisions shall apply to all work performed on the contract by the contractor with his own organization and with the assistance of workmen under his immediate superintendence and to all work performed on the contract by piecework, station work or by subcontract. The contractor's organization shall be construed to include only workmen employed and paid directly by the contractor and equipment owned or rented by him, with or without operators.

2. The contractor shall insert in each of his subcontracts all of the stipulations contained in these Required Provisions and such other stipulations as may be required.

3. A breach of any of the stipulations contained in these Required Provisions may be grounds for termination of the contract.

II. NONDISCRIMINATION OF EMPLOYEES

AN ACT OF THE KENTUCKY
GENERAL ASSEMBLY TO PREVENT
DISCRIMINATION IN EMPLOYMENT
KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (forty and above); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age forty (40) and over. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age forty (40) and over, in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administrating agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017

EXECUTIVE BRANCH CODE OF ETHICS

The Executive Branch Code of Ethics created by Kentucky Revised Statutes (KRS) Chapter 11A, effective July 14, 1992, establishes the ethical standards that govern the conduct of all executive branch employees. The Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (7) provides:

A present or former public servant listed in KRS 11A.010(9)(a) to (g) shall not, within one (1) year following termination of his or her 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 one (1) year, he or she personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his or her 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 to obtain private benefits.

If you have worked for the executive branch of state government within the past year, 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 105, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: March 11, 2025

Kentucky Equal Employment Opportunity Act of 1978

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

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

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

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

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

EMPLOYEE RIGHTS
UNDER THE FAIR LABOR STANDARDS ACT

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

FEDERAL MINIMUM WAGE
$7.25 PER HOUR
BEGINNING JULY 24, 2009

OVERTIME PAY

At least 1½ times your regular rate of pay for all hours worked over 40 in a workweek.

CHILD LABOR

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

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

No more than
- **3** hours on a school day or **18** hours in a school week;
- **8** hours on a non-school day or **40** hours in a non-school week.

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

TIP CREDIT

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

ENFORCEMENT

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

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

ADDITIONAL INFORMATION

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

For additional information:

1-866-4-USWAGE

(1-866-487-9243) TTY: 1-877-889-5627

WHD U.S. Wage and Hour Division

WWW.WAGEHOUR.DOL.GOV

U.S. Department of Labor | Wage and Hour Division

WHD Publication 1088 (Revised July 2009)

PART IV

BID ITEMS

252974

PROPOSAL BID ITEMS

Report Date 4/17/25

Section: 0001 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	01984		DELINEATOR FOR BARRIER - WHITE	10.00	EACH		$	
0020	01985		DELINEATOR FOR BARRIER - YELLOW	10.00	EACH		$	
0030	02014		BARRICADE-TYPE III	6.00	EACH		$	
0040	02562		TEMPORARY SIGNS	800.00	SQFT		$	
0050	02650		MAINTAIN & CONTROL TRAFFIC APPLIES TO 056B00196N	1.00	LS		$	
0060	02653		LANE CLOSURE	1.00	EACH		$	
0070	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		$	
0080	02696		SHOULDER RUMBLE STRIPS	640.00	LF		$	
0090	02775		ARROW PANEL	1.00	EACH		$	
0100	03171		CONC BARRIER WALL TYPE 9T	920.00	LF		$	
0110	04960		REMOVE AND REPLACE SIDEWALK	23.00	SQYD		$	
0120	06549		PAVE STRIPING-TEMP REM TAPE-B	1,480.00	LF		$	
0130	06550		PAVE STRIPING-TEMP REM TAPE-W	2,474.00	LF		$	
0140	06551		PAVE STRIPING-TEMP REM TAPE-Y	1,050.00	LF		$	
0150	06585		PAVEMENT MARKER TY IVA-MW TEMP	77.00	EACH		$	
0160	06586		PAVEMENT MARKER TY IVA-MY TEMP	24.00	EACH		$	
0170	06613		INLAID PAVEMENT MARKER-B W/R	6.00	EACH		$	
0180	06614		INLAID PAVEMENT MARKER-B Y/R	6.00	EACH		$	
0190	08904		CRASH CUSHION TY VI CLASS C	2.00	EACH		$	
0200	20411ED		LAW ENFORCEMENT OFFICER	100.00	HOUR		$	
0210	22880ED		BARRIER WALL TRANSITION	50.00	LF		$	
0220	24189ER		DURABLE WATERBORNE MARKING-6 IN W	650.00	LF		$	
0230	24190ER		DURABLE WATERBORNE MARKING-6 IN Y	520.00	LF		$	
0240	25075EC		QUEUE PROTECTION VEHICLE	320.00	HOUR		$	
0250	25079ED		THRIE BEAM GUARDRAIL TRANSITION TL-2	2.00	EACH		$	
0260	25117EC		FURNISH QUEUE PROTECTION VEHICLES	2.00	MONT		$	
0270	26136EC		PORTABLE QUEUE WARNING ALERT SYSTEM	2.00	MONT		$	
0280	26137EC		QUEUE WARNING PCMS	6.00	MONT		$	
0290	26138EC		QUEUE WARNING PORTABLE RADAR SENSORS	6.00	MONT		$	

Section: 0002 - BRIDGE - 056B00196N

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0300	01643		JUNCTION BOX-24 IN	3.00	EACH		$	
0310	02403		REMOVE CONCRETE MASONRY	115.00	CUYD		$	
0320	03299		ARMORED EDGE FOR CONCRETE	171.00	LF		$	
0330	03304		BRIDGE OVERLAY APPROACH PAVEMENT	1,674.00	SQYD		$	
0340	04792		CONDUIT-1 IN	4.00	LF		$	
0350	04797		CONDUIT-3 IN	326.00	LF		$	
0360	04942		REMOVE STORE & REINSTALL POLE	1.00	EACH		$	
0370	08100		CONCRETE-CLASS A	12.10	CUYD		$	
0380	08104		CONCRETE-CLASS AA	78.30	CUYD		$	
0390	08140		MECHANICAL REINF COUPLER #5 EPOXY COATED	132.00	EACH		$	

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PROPOSAL BID ITEMS

Report Date 4/17/25

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0400	08141		MECHANICAL REINF COUPLER #6 EPOXY COATED	128.00	EACH		$	
0410	08150		STEEL REINFORCEMENT	3,467.00	LB		$	
0420	08151		STEEL REINFORCEMENT-EPOXY COATED	19,918.00	LB		$	
0430	08160		STRUCTURAL STEEL ANCHOR BOLTS	1.00	LS		$	
0440	08170		SHEAR CONNECTORS APPLIES TO 056B00196N	1.00	LS		$	
0450	08435		JACK & SUPPORT BRIDGE SPAN APPLIES TO 056B00196N	1.00	LS		$	
0460	08504		EPOXY SAND SLURRY	17.00	SQYD		$	
0470	08510		REM EPOXY BIT FOREIGN OVERLAY	473.00	SQYD		$	
0480	08526		CONC CLASS M FULL DEPTH PATCH	20.00	CUYD		$	
0490	08534		CONCRETE OVERLAY-LATEX	9.80	CUYD		$	
0500	08549		BLAST CLEANING	248.00	SQYD		$	
0510	08551		MACHINE PREP OF SLAB	239.00	SQYD		$	
0520	22146EN		CONCRETE PATCHING REPAIR	708.00	SQFT		$	
0530	23378EC		CONCRETE SEALING	4,911.00	SQFT		$	
0540	23386EC		JOINT SEAL REPLACEMENT	69.00	LF		$	
0550	24094EC		PARTIAL DEPTH PATCHING	20.00	CUYD		$	
0560	24981EC		BRIDGE CLEANING APPLIES TO 056B00196N	1.00	LS		$	
0570	24982EC		CONCRETE COATING APPLIES TO 056B00196N	1.00	LS		$	
0580	24983EC		BEARING LUBRICATION	5.00	EACH		$	
0590	25028ED		RAIL SYSTEM SINGLE SLOPE - 40 IN	275.70	LF		$	
0600	26141EC		GALVANIC ANODE TYPE DAS	131.00	EACH		$	
0610	26141EC		GALVANIC ANODE TYPE XP2	58.00	EACH		$	
0620	26233EC		MOBILIZATION FOR CONCRETE SURF TREATMENT APPLIES TO 056B00196N	1.00	LS		$	

Section: 0003 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0630	02569		DEMOBILIZATION	1.00	LS		$	