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Michael W. Hancock, P.E. Secretary

March 3, 2015

CALL NO. 404

CONTRACT ID NO. 152907

ADDENDUM # 1

Subject: Various Counties, 121GR15M020-FE02

Letting March 20, 2015

(1) Revised - Notes - Pages 11-19 of 80

(2) Revised - Material Summary - Page 24 of 80

(3) Revised - Bid Items - Page 80 of 80

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Proposal revisions are available at  $\frac{\text{http://transportation.ky.gov/Construction-Procurement/.}}{\text{Procurement/.}}$ 

If you have any questions, please contact us at 502-564-3500.

Sincerely,

Diana Castle Radcliffe

Director

Division of Construction Procurement

DR:ks

Enclosures



Page 11 of 80

# SPECIAL NOTE FOR BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS

**I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove the existing overlay; (3) Complete full-depth and partial depth repairs as directed by the Engineer; (4) Repair/replace damaged and corroded reinforcing bars; (5) Place new concrete overlay and epoxy-sand slurry in accordance with Section 606; (6) Complete asphalt approach pavement; (7) Maintain and control traffic; and (8) Any other work specified as part of this contract.

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

# II. MATERIALS.

- **A. Latex Concrete.** See Section 606.03.17.
- **B.** Class "M" Concrete. Use either "M1" or "M2". See Section 601.
- C. Bituminous Asphalt. Use CL2 ASPH SURF 0.38D PG64-22.
- **D. Epoxy-Sand Slurry.** See Section 606.03.10.

# III. 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 hydrodemolition or via hand held 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 for a distance of 50' from the bridge end. 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 of 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.

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

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

045B00005N	(66' x 24' x 1.50")	=	<b>7.3 cuyd</b>
045B00023N	(129' x 22' x 1.50")	=	13.1 cuyd
068B00073N	(114' x 20' x 1.50")	=	13.3 cuyd
081B00036N	(206' x 26' x 1.50")	=	24.8 cuyd
091B00034N	(190' x 22' x 1.50")	=	19.4 cuyd

- **B.** Latex Modified Concrete for Partial Depth Patching and variable thickness of Overlay. The Department will measure the quantity in cubic yards by deducting the theoretical volume of bridge deck overlay (LMC) from the total volume (as indicated by the batch quantity tickets) of Concrete required to obtain the finished grade shown on the Plans or established by the Engineer.
- **C. Remove Existing Overlay.** The Department will measure the removal of the existing overlay in square yards, which shall include all labor, equipment, and material needed to complete this work.
- **D. Steel Reinforcement.** The Department will measure any reinforcing steel necessary for the partial or full depth patch in pounds, which shall include all labor, equipment, and material needed to complete this work.
- **E. Asphalt Approach Pavement.** The Department will measure the quantity in square yards, which shall include all labor, equipment, and material needed to complete this work.
- **V. PAYMENT.** See Section 606 and the following:
  - **A. Latex Modified Concrete for Overlay.** The Department will make payment for the Latex Modified Concrete under bid item #08534 "CONCRETE OVERLAY LATEX" for the theoretical quantity.
  - **B.** Latex Modified Concrete for Partial Depth Patching and variable thickness of Overlay. The Department will make payment for the Partial Depth Patching under bid item #24094EC "PARTIAL DEPTH PATCHING". Payment will be for the quantity per cubic yard complete in place.
  - **C. Remove Existing Overlay.** The Department will make payment for the removal of the existing overlay under the bid item #08510 "REM EPOXY BIT FOREIGN OVERLAY". Payment will be for the square yard complete.
  - **D. Steel Reinforcement.** The Department will make payment for steel reinforcement, if necessary, under bid item #08150 "STEEL REINFORCEMENT". Payment will be at the unit price per pound.
  - **E. Asphalt Approach Pavement.** The Department will make payment for the completed and accepted quantity of this work under the bid item #03304 "BRIDGE OVERLAY APPROACH PAVEMENT".

Page 13 of 80

ADDENDUM #1 - REVISED: 3-3-15

# SPECIAL NOTE FOR REPLACING EXPANSION DAMS AND/OR INSTALLING ARMORED EDGES FOR CONCRETE ON BRIDGES

I. **DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing concrete and expansion device(s) and/or bridge ends; (3) Install armored edges and new concrete as specified and in accordance with the attached detail drawings; (4) Maintain and control traffic; and (5) Any other work specified as part of this contract.

#### II. MATERIALS.

- **A. Class "M" Concrete.** Use either "M1" or "M2". See Section 601.
- **B. Structural Steel.** Use new, commercial grade steel suitable for welding. The Engineer will base acceptance on visual inspection. See Standard Drawing BJE-001, current edition.
- C. Stud Anchors. The armored edge stud anchors are 34" x 6" embedded stud shear connectors conforming to ASTM A108, Grade 1015 (Nelson Studs or equal).
- **D. Steel Reinforcement.** Use Grade 60. See Section 602.
- E. Epoxy Bond Coat. See Section 511.

#### III. **EQUIPMENT.**

- A. Hammers. See Section 606.02.10 B.
- **B. Sawing Equipment**. See Section 606.02.10 C.
- C. Hydraulic Impact Equipment. See Section 606.02.10 D.

#### CONSTRUCTION. IV.

- Remove existing Expansion Dam, Bridge End, A. Remove Existing Materials. Armored Edges and specified areas of concrete as shown on the attached sketches. Remove debris and/or expansion joint filler as directed by the Engineer. . Clean and leave all existing steel reinforcement encountered in place. Damaged steel reinforcement will be repaired/replaced as directed by the Engineer at no additional cost to the Department.
  - Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Expansion Joint Replacement" or "Armored Edge for Concrete".
- B. Place New Concrete and Armored Edges. After all specified existing materials have been removed; place new armored edges to match the grade of the proposed overlay or to match the original grade (See attached detail drawings). Place the new Class "M" concrete to the scarified grade and finish to receive the new overlay or place the new Class "M" concrete to the original grade and finish with broom strokes drawn transversely from curb to curb.

Page 14 of 80

ADDENDUM #1 - REVISED: 3-3-15

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

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

- C. Additional Steel Reinforcement. Furnish for replacement, as directed by the Engineer, 6050 linear feet of #4 steel reinforcing bars in 20' lengths. Place these bars in areas deemed by the Engineer to require additional reinforcement. Field cutting and bending is permitted. Do not place any additional steel reinforcement above the height of the top row of Nelson Studs on the armored edges. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04 prior to pouring the new Class "M" concrete. Deliver unused bars to the Local County Maintenance Barn. Payment will be made in accordance with Section 602.
- **D. Stage Construction.** Installation of concrete and armored edges in two (or more if specified) stages is necessary. Join the armored edges at or near the centerline of the roadway or lane line, field weld and grind smooth.
- E. Shop Plans. Shop plans will not be required. The Contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work.

#### $\mathbf{V}$ MEASUREMENT.

- A. Armored Edge for Concrete. The Department will measure the quantity in linear feet from gutterline to gutterline along the face of the bridge end.
- B. Steel Reinforcement. See Section 602.

#### VI. PAYMENT.

- **A. Armored Edge for Concrete.** Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the new armored edges, concrete and all incidental items necessary to complete the work (except the overlay material) within the specified pay limits as specified by this note and as shown on the attached detail drawings.
- **B. Steel Reinforcement.** See Section 602.

Page 15 of 80

ADDENDUM #1 - REVISED: 3-3-15

# SPECIAL NOTE FOR ELIMINATING TRANSVERSE JOINTS **ON BRIDGES**

I. **DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction.

Remove existing concrete and existing joint material to eliminate the transverse joint. Install additional reinforcing steel and place concrete.

#### II. MATERIALS.

- **A. Class "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.

#### III. **EQUIPMENT.**

- A. Hammers. See Section 606.02.10 B.
- **B. Sawing Equipment**. See Section 606.02.10 C.
- C. Hydraulic Impact Equipment. See Section 606.02.10 D.

#### IV. CONSTRUCTION.

- A. Remove Existing Materials. Remove the existing transverse joints, joint filler, and specified areas of concrete as shown on the plans, in accordance with Section 606.02.10 and 606.03.03, and as directed by the Engineer. Clean and leave all existing steel reinforcement encountered in place. Damaged steel reinforcement will be repaired/replaced as directed by the Engineer at no additional cost to the Department. Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Eliminate Transverse Joint".
- B. Additional Steel Reinforcement. Furnish for this work steel reinforcing bars as shown on the plans. Splice these bars to the existing longitudinal reinforcement in the deck and curb/sidewalk in the areas of removed concrete to tie the slabs together as shown on the plans. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04 prior to pouring the new Class "M" concrete.
- C. Place New Concrete. Blast clean all areas of existing concrete and structural steel to come in contact with new concrete until free of all laitance and deleterious substances immediately prior to the placement of the Class "M" Concrete. The surface areas of existing concrete to come in contact with the new Class "M" Concrete are to be coated with an epoxy bond coat immediately prior to placing new concrete in accordance with Section 511. The interfaces of the new and old concrete shall be as nearly vertical and horizontal as possible.

Place new Class "M" Concrete to the specified grade and finish to receive the new overlay or as shown on the plans. On the sidewalk and curb, place the new concrete to original grade and finish to match the existing curb/sidewalk.

#### V. MEASUREMENT.

A. Eliminate Transverse Joint. The Department will measure the quantity in linear feet from plinth to plinth perpendicular to the centerline of the bridge.

ADDENDUM #1 - REVISED: 3-3-15

Contract ID: 152907

Page 16 of 80

**B. Steel Reinforcement.** See Section 602.

# VI. PAYMENT.

- **A. Eliminate Transverse Joint.** Payment at the contract unit price per linear foot is full compensation for furnishing equipment, labor, tools and materials needed to complete removal and disposal of the specified existing materials, cleaning and straighting of existing steel reinforcement, furnishing and installing the concrete, and all incidental items necessary to complete the work (except the overlay material if specified elsewhere in the contract) within the specified pay limits as indicated on the drawings.
- B. Steel Reinforcement. See Section 602.

Page 17 of 80

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

I. **COMPLETION DATE.** The Contractor has the option of selecting the starting date for this Contract. Once selected, notify the Department in writing of the date selected at least two weeks prior to beginning work. All work is to be completed by November 15, 2015. An allotted number of Calendar days are assigned to each structure in this contract as shown below.

<u>STRUCTURE</u>	NO. OF CALENDAR DAYS	COMPLETION DATE
045B00005N	30	November 15, 2015
045B00023N	30	November 15, 2015
068B00073N	30	November 15, 2015
081B00036N	30	November 15, 2015
091B00034N	30	November 15, 2015

Contrary to Section 108.07.02, 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.

II. LIQUIDATED DAMAGES. Liquidated damages will be assessed the Contractor in accordance with the Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction, Section 108.09, when either the allotted number of calendar days or the November 15, 2015 date is exceeded.

Contrary to the Standard Specifications, liquidated damages will be assessed the Contractor during the months of December, January, February and March when the contract time has expired on any individual bridge or bridges. Contract time will be charged during these months.

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.

ADDENDUM #1 - REVISED: 3-3-15

Contract ID: 152907

Page 18 of 80

### SPECIAL NOTE FOR TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS

### I. TRAFFIC CONTROL GENERAL

Except as provided herein, traffic shall be maintained in accordance with the 2012 Standard Specifications, 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.

## II. 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.

# III. 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.

# IV. 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 striping shall be paid only once per course in accordance with Section 112.04.07. The Contractor shall replace any temporary striping that becomes damaged or fails to adhere to the pavement before dark on the day of the notification. Liquidated damages shall be assessed to the Contractor at a rate of \$500 per day for failing to replace temporary striping within this time limit.

Page 19 of 80

# V. PROJECT PHASING & CONSTRUCTION PROCEDURES

Maintain one lane of traffic during construction in accordance with Standard Drawing No. TTC-110 for lane closures, and the attached detail drawing. The minimum clear lane width required is as follows:

045B00005N	11'-0"
045B00023N	10'-6"
068B00073N	9'-6"
081B00036N	12'-0"
091B00034N	10'-6"

# VI. TEMPORARY SIGNAL

Provide, install, and maintain a temporary 2 phase or multi phase traffic signal as specified below. The Contractor must provide a 24-hour contact person and number available to maintain the temporary signals as needed.

045B00005N	2 phase
045B00023N	multi phase
068B00073N	multi phase
081B00036N	2 phase
091B00034N	2 phase

Contract ID: 152907 Page 24 of 80

ADDENDUM #1 - REVISED: 3-3-15

# **MATERIAL SUMMARY**

CONTRACT ID: 152907	121GR15M020-FE02	MB08100081501

KY 8 (MP 7.122). BRIDGE OVER LAWRENCE CREEK BRIDGE DECK RESTORATION & WATERPROOFING.

Project Line No	Bid Code DESCRIPTION Quantity		Quantity	Unit
0002	02562	TEMPORARY SIGNS	149.00	SQFT
0003		MAINTAIN & CONTROL TRAFFIC - APPLIES TO 081B00036N	1.00	LS
0004	02653	LANE CLOSURE	2.00	EACH
0006	03299	ARMORED EDGE FOR CONCRETE	60.00	LF
0007	03304	BRIDGE OVERLAY APPROACH PAVEMENT	289.00	SQYD
8000	04933	TEMP SIGNAL 2 PHASE	1.00	EACH
0009	06514	PAVE STRIPING-PERM PAINT-4 IN	1,019.00	LF
0010	06549	PAVE STRIPING-TEMP REM TAPE-B	500.00	LF
0011	06550	PAVE STRIPING-TEMP REM TAPE-W	1,000.00	LF
0012	06551	PAVE STRIPING-TEMP REM TAPE-Y	2,000.00	LF
0013	08150	STEEL REINFORCEMENT	267.20	LB
0014	08504	EPOXY SAND SLURRY	175.50	SQYD
0015	08510	REM EPOXY BIT FOREIGN OVERLAY	595.00	SQYD
0016	08526	CONC CLASS M FULL DEPTH PATCH	2.00	CUYD
0017	08534	CONCRETE OVERLAY-LATEX	24.80	CUYD
0018	08549	BLAST CLEANING	771.00	SQYD
0019	23879EC	ACRYLIC GLASS	139.90	SQFT
0020	24094EC	PARTIAL DEPTH PATCHING	16.50	CUYD
0021	02569	DEMOBILIZATION	1.00	LS

Contract ID: 152907 Page 80 of 80

152907

# **PROPOSAL BID ITEMS**

ADDENDUM #1 - REVISED: 3-3-15

Page 1 of 1

Report Date 3/3/15

Section: 0001 - BRIDGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	<b>UNIT PRIC</b>	FP	<b>AMOUNT</b>
0020	02562		TEMPORARY SIGNS	745.00	SQFT		\$	
0030	02650		MAINTAIN & CONTROL TRAFFIC APPLIES TO 045B00005N	1.00	LS		\$	
0040	02650		MAINTAIN & CONTROL TRAFFIC APPLIES TO 045B00023N	1.00	LS		\$	
0050	02650		MAINTAIN & CONTROL TRAFFIC APPLIES TO 068B00073N	1.00	LS		\$	
0060	02650		MAINTAIN & CONTROL TRAFFIC APPLIES TO 091B00034N	1.00	LS		\$	
0070	02650		MAINTAIN & CONTROL TRAFFIC APPLIES TO 081B00036N	1.00	LS		\$	
0800	02653		LANE CLOSURE	10.00	EACH		\$	
0100	03299		ARMORED EDGE FOR CONCRETE	250.20	LF		\$	
0110	03300		ELIMINATE TRANSVERSE JOINT	249.30	LF		\$	
0120	03304		BRIDGE OVERLAY APPROACH PAVEMENT	1,488.40	SQYD		\$	
0130	04933		TEMP SIGNAL 2 PHASE	3.00	EACH		\$	
0140	04934		TEMP SIGNAL MULTI PHASE	2.00	EACH		\$	
0150	06514		PAVE STRIPING-PERM PAINT-4 IN	3,209.00	LF		\$	
0160	06549		PAVE STRIPING-TEMP REM TAPE-B	2,500.00	LF		\$	
0170	06550		PAVE STRIPING-TEMP REM TAPE-W	5,000.00	LF		\$	
0180	06551		PAVE STRIPING-TEMP REM TAPE-Y	10,000.00	LF		\$	
0190	08150		STEEL REINFORCEMENT	4,041.40	LB		\$	
0200	08504		EPOXY SAND SLURRY	626.20	SQYD		\$	
0210	08510		REM EPOXY BIT FOREIGN OVERLAY	1,870.00	SQYD		\$	
0220	08526		CONC CLASS M FULL DEPTH PATCH	12.00	CUYD		\$	
0230	08534		CONCRETE OVERLAY-LATEX	77.90	CUYD		\$	
240	08549		BLAST CLEANING	2,497.00	SQYD		\$	
0250	23879EC		ACRYLIC GLASS	266.40	SQFT		\$	
0260	24094EC		PARTIAL DEPTH PATCHING	52.00	CUYD		\$	

Section: 0002 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	<b>UNIT PRIC</b>	FP	AMOUNT
0270	02569		DEMOBILIZATION	1.00	LS		\$	