



Andy Beshear
GOVERNOR

TRANSPORTATION CABINET

200 Mero Street
Frankfort, Kentucky 40601

Jim Gray
SECRETARY

April 23, 2024

CALL NO. 100
CONTRACT ID NO. 242984
ADDENDUM # 3

Subject: Daviess County, NH 0101 (101)
Letting April 25, 2024

- (1) Revised - Special Note - Page 31-33 of 158
- (2) Revised - Proposal Bid Items - Page 158 of 158

Proposal revisions are available at <http://transportation.ky.gov/Construction-Procurement/>.

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

Sincerely,

A handwritten signature in black ink that reads "Rachel Mills".

Rachel Mills, P.E.
Director
Division of Construction Procurement

RM:so
Enclosures

SPECIAL NOTE FOR FRICTION DAMPER RETROFIT

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

Installation will commence after installation of the Cable Stay Protective Tape Repair is completed. Contractor shall consider the installation of the Cable Stay Protective Tape Repair will occur before friction damper retrofit installation and after removal of the wind tie assemblies. This shall be addressed in the procedures in Section 4B-i. All internal damper systems must meet the design requirements within this Special Note. Contractor may submit a different internal damper system, provided it meets the design requirements within this Special Note and subject to the Engineers Approval.

This work consists of the following: (1) Design for performance and service life of friction dampers based on provided performance criteria; (2) Furnish all labor, materials, tools, and equipment including all necessary electrical power and lighting; (3) Wind tie removal; (4) Install new steel guide pipe; (5) Install new friction damper; (6) Install new neoprene boot; and (7) Any other work specified as part of this contract.

2. **MATERIALS.**

- A. **Friction Damper Retrofit Design and Installation.** The Contractor shall submit to the Engineer, for review and approval, all design shop drawings, installation procedures, in-situ friction damper test procedures, material specifications, and working drawings that describe the details and materials required to complete the repair work, eight weeks before commencement of the work. Submittals shall include but not be limited to; mill certifications of all structure steel components used, and material certifications of all steel components used not including a mill certificate. **The Contractor shall provide an inspection and maintenance manual for the friction dampers that provides information on the inspection, care, and maintenance of the friction dampers for review and approval by the Engineer. Required maintenance should be limited to five- or ten-year intervals. Care and maintenance information shall be sufficient to allow for the friction damper to perform satisfactory for its stated service life.**
- B. **Steel Guide Pipe.** Use ASTM A709 Grade 50 Galvanized, per ASTM A123.
- C. **Neoprene Boot and Zipper.** See Special Note for Replacement of Upper Neoprene Boots.
- D. **Stainless Steel Punch Lock Band Clamp.** See the Special Note for Replacement of Upper Neoprene Boots.
- E. **SIKAFLEX Construction Sealant.** 111 Stick & Seal in gray color or approved equal.

3. EQUIPMENT.

- A. **Equipment.** The Contractor shall provide all necessary equipment to perform the repair procedures. The Contractor shall submit the equipment specifications for approval by the Engineer.

4. CONSTRUCTION.

A. **Wind Tie Removal Friction Damper Retrofit**

- i. **Removal of wind ties.** After approval of the shop drawings for the proposed friction damper retrofit design and installation, the contractor shall submit procedures for the removal of the existing stay cable wind ties (wind ties). Removal of the wind ties shall consider sequencing of the friction damper installation with the removal of the wind ties and stay cable protective tape repair and ensure the stay cables throughout construction.
- ii. **Installation of new friction damper retrofit.** The Contractor shall utilize approved shop drawings of the proposed friction damper retrofit design and installation procedures for installation of the friction damper retrofit. Shop drawings shall include the damper, new steel guide pipe, and neoprene boot, as well as other required items. Contractor is responsible for all components of the friction damper retrofit, utilizing the wind analysis data as shown in the design drawings. The friction damper retrofit shall provide the recommended minimum damping percentage for each stay cable per the governing excitation source.
- iii. **Installation of new steel guide pipe and friction damper.** The Contractor shall install a new steel guide pipe that will encapsulate the new friction damper retrofit. The new guide pipes shall be mechanically connected to the existing guide pipes and allow removal for future inspection; no welding will be allowed as shown on sheet New Friction Damper Schematic in the design plans. The friction damper will be installed at the high end of the steel guide pipe.
- iv. **Installation of neoprene boots.** The Contractor shall install the protective neoprene boot so that the zipper is at the bottom face of the cable. **The neoprene boot shall not be installed until the protective tape has been installed.** The zippered protective boots shall be clamped securely by two (2) stainless steel punch lock clamps around the new steel guide pipe and the HDPE lower connection sleeve or HDPE pipe, respectively. Compress the boot 1 inch to provide excess material between upper and lower clamps, before installation of the clamps. The neoprene boots shall overlap the protective tape a minimum of 6". The protective tape shall be double wrapped and extended 6" into the neoprene boot and 12" up slope along the stay pipe from the end of the neoprene boot. A bead of 100% high grade SIKAFLEX sealant, or approved equal, shall be applied to the top and bottom edges of the protective boots and at the ends of the zippers to seal it along the steel guide pipe and the HDPE lower connection sleeve or HDPE

pipe. See the Special Note for Stay Cable Protective Tape Repair for addition information on the tape repair.

B. Damper Verification Testing

- i. **Damper verification testing.** The Contractor is responsible for performing force measurement testing (testing) on a portion of the stay cables after installation of the new damper system per the damper system manufacturer’s recommendations. The manufacture of the damper system shall comply with the recommended minimum damping for each stay cable as shown in the design plans. The Contractor shall perform the tests on a minimum of 10 percent of the stay cables of the structure. The stay cables to be tested shall be approved by the Engineer, as well as the test results. Following completion of these tests, the Contractor shall provide a cable damping evaluation report that demonstrates the performance of the vibration suppression system meets or exceeds the required performance level to the Engineer.

5. MEASUREMENT.

- A. Friction Damper Retrofit.** The Department will measure quantity of friction damper retrofit by each. This includes furnishing all material, labor, and equipment necessary for the work described in this Note except for the removal of the wind tie system.
- B. Wind Tie System Removal.** The Department will measure quantity of the removal of the wind tie system by lump sum. This includes furnishing all material, labor, and equipment necessary for removal of the wind tie system.

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

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
26215EC	FRICION DAMPER	EACH
26221ED	WIND TIE SYSTEM REMOVAL	LUMP SUM

PROPOSAL BID ITEMS

Report Date 4/23/24

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Section: 0001 - BRIDGE - B00164N OVER OHIO RIVER

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	02003		RELOCATE TEMP CONC BARRIER	480.00	LF		\$	
0020	02562		TEMPORARY SIGNS	765.00	SQFT		\$	
0030	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0040	02775		ARROW PANEL	3.00	EACH		\$	
0050	02898		RELOCATE CRASH CUSHION	1.00	EACH		\$	
0060	03171		CONCRETE BARRIER WALL TYPE 9T	860.00	LF		\$	
0070	03225		TUBULAR MARKERS	182.00	EACH		\$	
0080	06514		PAVE STRIPING-PERM PAINT-4 IN	7,371.00	LF		\$	
0090	06550		PAVE STRIPING-TEMP REM TAPE-W	23,926.00	LF		\$	
0100	06551		PAVE STRIPING-TEMP REM TAPE-Y	39,063.00	LF		\$	
0110	06556		PAVE STRIPING-DUR TY 1-6 IN W	3,628.00	LF		\$	
0120	06557		PAVE STRIPING-DUR TY 1-6 IN Y	13,875.00	LF		\$	
0130	08903		CRASH CUSHION TY VI CLASS BT TL3	1.00	EACH		\$	
0140	26214EC		STAY CABLE FREE LENGTH REPAIR TYPE A	2.00	EACH		\$	
0145	26214EC		STAY CABLE FREE LENGTH REPAIR TYPE B	2.00	EACH		\$	
0150	26215EC		FRICTION DAMPER	96.00	EACH		\$	
0160	26216EC		VOID REPAIR LCS	96.00	EACH		\$	
0165	26216EC		VOID REPAIR UCS	96.00	EACH		\$	
0170	26217EC		CONNECTION SLEEVE REPAIR LCS	3.00	EACH		\$	
0172	26217EC		CONNECTION SLEEVE REPAIR UCS	2.00	EACH		\$	
0174	26217EC		CONNECTION SLEEVE REPAIR LCS COUPLERS ONLY	93.00	EACH		\$	
0176	26217EC		CONNECTION SLEEVE REPAIR UCS COUPLERS ONLY	94.00	EACH		\$	
0180	26218EC		GREASE REPLACEMENT LAC	96.00	EACH		\$	
0182	26218EC		GREASE REPLACEMENT UAC	96.00	EACH		\$	
0190	26219EC		NEOPRENE BOOT REPLACEMENT	96.00	EACH		\$	
0200	26220EC		STAY CABLE PROTECTIVE TAPE REPAIR	1.00	LS		\$	
0210	26221ED		WIND TIE SYSTEM REMOVAL	1.00	LS		\$	

Section: 0002 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0220	02568		MOBILIZATION	1.00	LS		\$	
0230	02569		DEMOBILIZATION	1.00	LS		\$	