

General Notes ~ Expansion Joint Replacement

SPECIFICATIONS: All references to the Specifications are to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. All references to the AASHTO Specifications are to the current edition of the AASHTO LRFD Bridge Design Specifications.

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.
- D. Joint Seal System. Use a joint seal system for the specified width in accordance with section 807.

EQUIPMENT.

- A. See Section 606.

CONSTRUCTION.

A. **Remove Existing Materials.** Remove existing Expansion Dam, Bridge End, 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 as directed by the Engineer at no additional cost to the Department. Dispose of all removed material entirely away from the job site.

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. 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. 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 and no field coating will be required. 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 Epoxy Coated Steel Reinforcement.** Furnish for replacement, as directed by the Engineer, 200 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 studs on the armored edges. Ensure that all exposed steel reinforcement is tied in accordance with Section 602. prior to pouring the new Class "M" Concrete. Deliver unused bars as directed by the Engineer.

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. **Pre-Compressed Foam Expansion Joint Systems.** System shall be supplied in pre-compressed sticks for easy installation. System shall be installed in accordance with manufacture's recommendations concerning approved adhesives, welds between sticks, appurtenances, and adhesion to concrete or armored edges and section 609.

CONSTRUCTION. (Continued)

F. **Preformed Neoprene Strip Seals and V Seals.** Place the seals in one continuous, unbroken length. Place neoprene strip seals as recommended by the manufacturer and in accordance with Section 609.

G. **Approach Pavement Repair.** If no bridge overlay approach is specified the Contractor shall repair any and all damage to the approach pavement due to this construction. A new asphalt surface wedge up to three feet long and the width of the bridge deck shall be placed and compacted to the satisfaction of the Engineer prior to allowing traffic back onto the structure after each section of the joint is replaced. No additional payment will be allowed for this work, as it will be considered incidental to the pay item "Armored Edge for Concrete".

H. **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.

I. **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 removal and replacement of a fallen span, should the fallen span result from the Contractor's actions.

J. **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.

MEASUREMENT.

A. **Expansion Joint Replace - 1", 1/2", 2", 2 1/2", 3", 4" & 5"** The Department will measure the quantity in linear feet from gutter line to gutter line along the centerline of the joint.

B. **Armored Edge for Concrete.** The Department will measure the quantity in linear feet from gutter line to gutter line along the centerline of the joint.

C. **Steel Reinforcement.** The Department will measure the quantity in LBS.

PAYMENT:

A. **Expansion Joint Replace - 1", 1 1/2", 2" 2 1/2", 3", 4" & 5".** Payment at the contract unit price per linear foot shall be full compensation for removing specified existing materials, furnishing and installing the new armored edges, concrete, seal, and all incidental items necessary to complete the work within the specified pay limits.

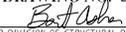
B. **Armored Edge for Concrete.** Payment at the contract unit price per linear foot shall be full compensation for furnishing and installing new armored edges at each end of bridge.

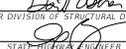
C. **Steel Reinforcement.** See Section 602.

KENTUCKY
DEPARTMENT OF HIGHWAYS

EXPANSION JOINT
REPLACEMENT
GENERAL NOTES

STANDARD DRAWING NO. BJE-005

SUBMITTED  02-26-20
DIRECTOR DIVISION OF STRUCTURAL DESIGN DATE

APPROVED  02-26-20
STATE PROFESSIONAL ENGINEER DATE