**SPECIAL NOTE FOR END BENT ENCASEMENT**

**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) Remove existing concrete and expansion device(s) and/or bridge ends, (3) Install New concrete, armored edge and steel reinforcement as specified in this note and the attached detail drawings and (4) Any other work specified as part of this contract.

**2. MATERIALS.**

**A. Class “AA” Concrete.** See Section 601.

**B. Epoxy Coated Steel Reinforcement.** Use Grade 60. See Section 602.

**C. 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.

**D. Stud Anchors.** The armored edge stud anchors are ¾” x 6” embedded stud shear connectors conforming to ASTM A108, Grade 1015 (Nelson Studs or equal).

**E. Epoxy Bond Coat.** See Section 511.

**3. EQUIPMENT.**

**A. Hammer.** Provide Power driven hammers lighter than nominal 45 lb. class.

**B.** **Sawing Equipment**. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.

**C. Hydraulic Impact Equipment.** Hydraulic Impact/Skid Steer Type Equipment with a maximum rated striking Energy of 360 ft-lbs. are permitted only in areas of concrete removal more than 6 inches away from boundaries of surface areas to remain in service. The Contractor is to provide data information to the engineer on the equipment they wish to utilize to ensure compliance with this note.

**4. CONSTRUCTION.**

**A. Remove Existing Materials.** Remove existing expansion material and specified areas of concrete as shown on the attached detailed drawings. 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.

**B. Placing Class AA Concrete and Armored Edges.** After all specified existing materials have been removed; place new armored edges to match the grade of the existing bridge deck. (See attached detail drawings). Place the new Class “AA” concrete to match the grade of the existing bridge deck or and finish with broom strokes drawn transversely from curb to curb (See attached detail drawings). 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 "AA" Concrete. The surface areas of existing concrete to come in contact with the new Class "AA" 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.

**D. Epoxy Coated Steel Reinforcement.** Place all steel reinforcement as specified in this note, the attached detailed drawings and section 602 of the standard specification.

**C. 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.

**D.** **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.

**E. 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 fall span, should the fallen span result from the Contractor’s actions.

**F. 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.

**G. Approach Pavement Repair**. The Contractor shall repair any and all damage to the approach pavement and traffic striping due to this construction. A new asphalt surface wedge for all approaches to each structure in this project 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. 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.

1. **Order of Work.** All end bent encasement work must be completed before any cleaning and painting production operations in the adjacent area.

**5. MEASUREMENT.**

1. **Remove Concrete Masonry.** The Department will measure the quantity inCubic Yards

**B. Concrete Class AA**. The Department will measure the quantity in Cubic Yards.

**C. Armored Edge for Concrete.**  The Department will measure the quantity in linear feet from gutter line to gutter line along the face of the bridge end.

**D. Epoxy Coated Steel Reinforcement.**  See Section 602.

**6. PAYMENT.**

**A. Remove Concrete Masonry (02403).** Payment at the contract unit price per

Cubic Yard is full compensation for removing specified materials including

expansion devises as specified pay limits as specified by this note and as

shown on the attached detailed drawings.

**B. Concrete Class AA (08104).** Payment at the contract unit price per Cubic Yard is full compensation for placing all new Class AA Concrete and all incidental items necessary to complete the work within the specified pay limits as specified by this note and as shown on the attached detailed drawings.

**C. Armored Edge for Concrete (03299).** Payment at the contract unit price per linear foot is full compensation for placing new armored edge and any approach pavement repair, traffic striping repair and all incidental items necessary to complete the work within the specified pay limits as specified by this note and as shown on the attached detailed drawings.

**D. Epoxy Coated Steel Reinforcement (08151).** See Section 602.