SPECIAL NOTE FOR STEEL REPAIRS

**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 detailed drawings for Steel Repairs. Section references are to the Standard Specifications. This work consists of the following: (1) Furnish all labor, materials, tools, and equipment, (3) Bearing Repair, Floor Beam Repair and Replace Bridge Rail, (4) Any other work specified as part of this contract.

**2. MATERIALS.**

1. **Structural Steel**

ASTM Material, A709 Grade 50 Structural Steel Plates and Shapes. Minimum structural steel strength ~ 50,000 psi.

1. **High Strength Bolts and Anchor Bolts**

All bolted connection shall be ASTM A325 the diameter as specified high strength bolts, nuts, and washers. Holes shall be the diameter as specified. Furnish type 1 bolts as described in AASHTO M164.

**Paint**

See Special Note for Bridge Cleaning and Painting.

**3. CONSTRUCTION.**

1. **Bearing Repair, Floor Beam Repair and Replace Bridge Rail.**

Complete these items as specified in this special note and shown in the attached detailed drawings.

1. **High Strength Bolts and Anchor Bolts.**

Install all high strength bolted field connections using “direct tension indicators” (DTIs) in accordance with the Standard Specifications and ASTM F959. Install DTIs under the bolt head with the bumps facing the underside of the bolt head. Place a hardened washer under the nut tension connection from the nut side. See section 607.03.03 for edge distance. For anchor bolt installation see Section 511 of the Standard Specifications and the attached detailed drawings.

1. **Jack and Support (Bearing Repair).**

Jack and support the rocker bents under full dead and HS25 live load while replacing the pin and making the bearing repair. A jacking plan must be submitted to the Engineer for approval. The plan is to be signed and stamped by a professional engineer licensed to practice in Kentucky. The jack must have the capacity to carry 150% of the dead and live loads as calculated by the contractor’s engineer. Any wind bracing required shall be included in the jack and support plan and be considered incidental to unit price bid for Jack and Support Bridge Span. Repair any damage caused by the jacking operations to the satisfaction of the Engineer.

1. **Paint.**

All existing faying surfaces where new steel is to be installed shall be cleaned and receive the prime coat as specified in Special Note for Surface Preparation and Paint Application. Level of cleaning shall be to an SSPC-SP 15 (Commercial Grade Power Tool Cleaning). All Power tools shall be equipped with vacuum shrouds and fitted with HEPA filters at their air exhausts. Maintain and operate all vacuum shrouded power tools to collect generated debris. All new structural steel shall be painted with the prime coat only as specified in Special Note for Bridge Cleaning and Painting. Necessary touch up/repair of the shop applied prime coat on the new steel may be performed in the field. All items necessary to complete painting as specified in this note shall be considered incidental to unit price bid for each work item.

1. **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 Contractors expense.

1. **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.

1. **Order of Work.**

All steel repair work must be completed before any cleaning and painting production operations in the adjacent area.

**4. MEASUREMENT.**

1. **Bearing Repair.** The Department will measure the quantity for “Each” bearing repair.
2. **Floor Beam Repair.** The Department will measure the quantity for “Each” Floor Beam Repair.
3. **Replace Bridge Rail.** The Department will measure the quantity in “Lineal Feet for the replace bridge rail.
4. **Jack and Support Bridge Span.** The Department will measure the quantity as “Lump Sum” for Jack and Support Bridge Span.

**5. PAYMENT.**

1. **Bearing Repair (23853EC).** Payment at the contract unit price for “Each” is full compensation for furnishing and installing all material as specified.
2. **Floor Beam Repair (24083EC).** Payment at the contract unit price for “Each” is full compensation for furnishing and installing all material as specified.
3. **Replace Bridge Rail (08191).** Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing, and installing all material as specified.
4. **Jack and Support Bridge Span (08435).** Payment at the contact “Lump Sum” includes all items necessary to jack and support bridge span as specified.