

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	87 N-0612-01	2015	34	84



**GENERAL NOTES (CONT.)**

**TEMPORARY SHORING:** The bid item "Temporary Shoring" includes all labor and materials necessary to finish shoring at the location shown on the plans for temporary bracing of the embankment or structure during excavation and demolition. Maintain the temporary shoring until the Engineer authorizes its removal.

**BOLTS:** All bolts, nuts and hardened flat washers shall conform to the heavy hex structural requirements of ASTM A325, Type 3, and KDOT Specifications unless otherwise noted. Direct Tension Indicators (DTIs) are to comply with the requirements of the latest edition of ASTM F959. No allowance will be made for high strength bolts used for permanent or temporary connections. This work is subsidiary to the bid item, "Structural Steel". The number of bolts is shown for the convenience of the Contractor.

**Secondary Member Connections:** Use 7/8 inch diameter heavy hex structural bolts for the secondary member connections. Use 15/16 inch diameter bolt holes. Oversized and/or slotted holes, as specified in the KDOT Specifications, may be used in only one of the two members connected and must be shown in the approved shop drawings. Oversized and/or slotted holes may require additional standard hardened washers or plate washers. Report to the Engineer prior to any required field reaming that will remove more than 1/4 inch of material from one ply of the connected parts.

Use Direct Tension Indicators (DTIs) on all high strength bolts. Place the DTI under the bolt head and turn the nut to tighten. This method is preferred whenever possible. Face the protrusions on the DTI to the underside of the bolt head. Place a hardened flat washer under the nut. See KDOT Specifications.

**FILLETS:** Camber the steel beams for the total dead load deflection and the vertical curvature, if necessary. The ordinates shown for concrete dead load deflection represent the amount of camber that should be in the girders after they are erected and bolted but prior to placing the floor forms. After the structural steel is completely erected and the falsework bents are removed, measure the camber in the field by taking a profile of each girder. Correct any variation between the actual camber and the concrete dead load deflection shown in the plans by varying the depth of the concrete fillets over the girders so that the finished floor is constructed to the theoretical grade. The minimum depth of the slab over the girder shall be 9 1/2 inches.

The theoretical amount of concrete required for the fillets is 1.0 C.Y. for each phase or 2.0 C.Y. for the bridge. This amount of concrete is included in the Summary of Quantities. Any additional concrete required to construct the fillets will be subsidiary.

**OPTIONAL PERMANENT STEEL DECK FORMS:** At the Contractor's option, an approved permanent steel deck form may be used in place of conventional wood forms. Use Type 1 steel deck forms conforming to ASTM A446. Support hangers shall be a non welded system. Do not weld to any flange. The pay quantity of the concrete slab shall be computed from the nominal slab dimension with no allowance for corrugations. No direct payment will be made for deck forms or any additional concrete. Permanent steel deck forms shall be used inside the girders (non exposed area) only.

**CONCRETE PLACING SEQUENCE:** The Superstructure Deck Concrete shall be placed as shown in the construction sequence. If, due to an unforeseen emergency situation, the concrete placement is stopped, a transverse construction joint shall be installed 1/4 of the span length short of a pier as directed by the Engineer. The following information shall be provided to the Engineer: The proposed rate of concrete placement in cubic yards per hour, the plant capacity, a description of the equipment used in placing the concrete, proposed admixtures, and the quantity of concrete in each placing segment. Any additional cost for the Contractor's plan of placing concrete, including admixtures, shall be at the Contractor's expense and considered subsidiary to the bid item "Concrete (Grade 4.0)(AE)(SA)". Approval of the Contractor's sequence is required prior to placement of concrete for the Superstructure. The Contractor may submit an alternate placing sequence for review. All falsework supports shall be released and provide adequate deflection for dead load prior to casting the Deck. Depending on the Contractor's placing sequence, an uplift may occur at girder ends. The falsework plans may need to include hold-downs or anchor bolts at girder ends.

**CONSTRUCTION LOADS:** Limited traffic is permitted on the new sub-deck, one-course deck or any concrete overlay during the curing period, keep any exposed deck wet during the curing period. See KDOT Specifications Section 710 Tables 710-1 & 710-2 for additional information.

**BRIDGE DECK GROOVING:** After the bridge deck has cured, transversely groove the deck in accordance with KDOT Specifications. For phased construction groove each completed phase before opening to traffic. Align the grooves from each adjacent phase across the bridge deck without jogs or discontinuities. For skewed bridges all grooving will be perpendicular to the centerline of the bridge.

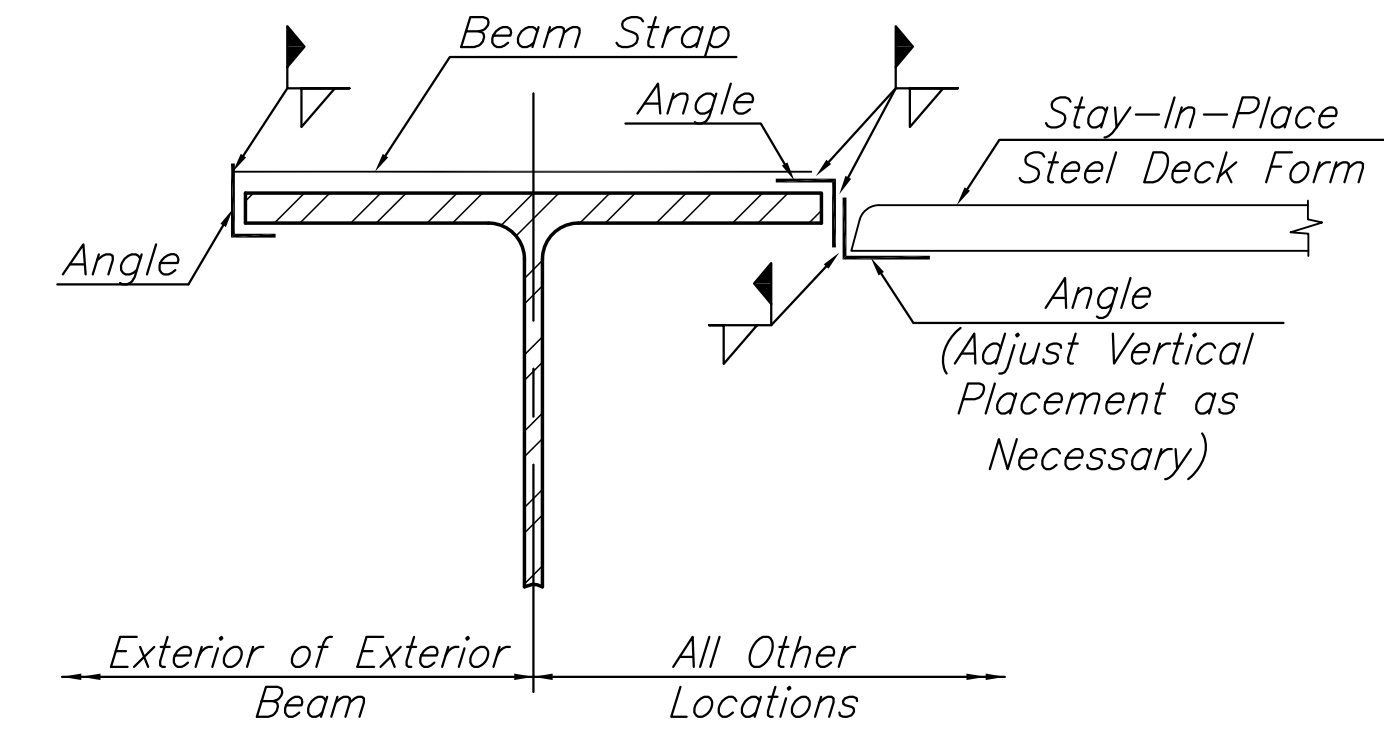
**QUANTITIES:** Items not listed separately in the Summary of Quantities are subsidiary to other items in the proposal.

**DIMENSIONS:** All dimensions shown on the design plans are horizontal dimensions unless otherwise noted. Make necessary allowances for roadway grade and cross slope.

**REMOVAL OF EXISTING STRUCTURE:** Removal of existing structure is included in the bid item, "Removal of Existing Structures", Lump Sum. All materials removed from the existing structure shall become the property of the Contractor and removed from the construction site.

**CONTRACTOR ANALYSIS:** The Contractor shall provide an analysis of constructibility as provided and listed in Section 6, 1-Section Flexural Members, AASHTO LRFD Bridge Design Specifications, 6th Edition with Interims. The analysis will be prepared by a Kansas Licensed Professional Engineer and presented to the Owner's Engineer prior to fabrication.

**SOIL EXCAVATION AND GROUNDWATER MANAGEMENT PLAN:** Special Provision "307 - Soil Excavation and Groundwater Management Plan" applies to all excavations made for the removal of portions of the existing structure and for the construction of the new bridge.



**STAY-IN-PLACE STEEL DECK FORM FLANGE CONNECTION DETAIL**

**NOTE:** Do not weld to the top flange or studs. Report any arc strike, weld splatter or welding on top flange to Engineer immediately.

**STAY-IN-PLACE DECK FORM NOTES:**

The Contractor may use Stay-In-Place Deck Forms if the minimum Deck Slab thickness of 8 1/2" is obtained by measuring from the top of the deck slab to the top portion of the steel corrugation. Preferred corrugation filler, composed of polystyrene or other material, may be used if bonded to the deck forms. No additional concrete weight of the deck slab is permitted. The total additional weight of the deck form and filler shall not exceed 5 p.s.f. Costs of Stay-In-Place Steel Deck Forms to be included in the contract unit price of Concrete Grade 4.0 (AE)(SA). Galvanize stay-in-place form items in accordance with AASHTO M111.

The Contractor may substitute stay-in-place deck forms at no additional cost to the city, if the following condition is met:

The Engineer reviews shop drawings and structural calculations for the forms, submitted by the Contractor, that are sealed by a Professional Engineer licensed in the State of Kansas.

CONSTRUCTION PLANS FOR  
**21ST STREET BRIDGE AT DERBY REFINERY**  
WICHITA, KANSAS

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GENERAL NOTES (CONT.)		
PROJECT NO.	472-85120	
DATE	JULY 2015	
SCALE	NO SCALE	
DESIGNED	DRAWN	CHECKED
KJS	DMU	KJS
NO.	REVISION	DATE
SHEET NO.		
34 OF 84		

PLOTTECH, Tuesday, July 21, 2015 @ 10:15AM