

GENERAL NOTES

CONSTRUCTION SEQUENCE: The concrete removal shall be completed in stages, beginning with removal of deteriorated concrete in Area ①. If more than 15 longitudinal bars in Area ① are debonded for a distance of greater than 4 feet along the bars, the concrete removal shall stop and the patch area filled with Class AAA Concrete (AE). The patch shall cure a minimum of 3 days before concrete removal resumes in that area. Following the completion of work in Area ① concrete removal may begin in area ②. Concrete removal shall not begin in Area ② until the patching concrete in adjacent Area ① has cured a minimum of 3 days. The maximum width of any full depth patch shall be limited to 4 feet measured perpendicular to centerline of bridge. All patching and bridge deck wearing surface concrete shall cure according to the KDOT Specifications, Section 722 prior to allowing traffic on that lane.

ASPHALT REMOVAL: The asphalt covering of the bridge of approximately 1/2 inch shall be removed by use of wheeled front end loaders and small pneumatic chipping hammers of 15 pounds or lighter capacity. Rotary milling or mechanical abrading equipment will not be allowed on the bridge. Removal equipment that removes the asphalt covering by impact will not be allowed. The asphalt debris will become the property of the Contractor. This work shall be subsidiary to the bridge item "Hydrodemolition and Pavement Replacement".

HYDRODEMOLITION: This item shall consist of preparing the deck for a bridge deck wearing surface by removing concrete from the roadway surface of the bridge deck to a depth of 1/4". The hydrodemolition of the deck shall be accomplished according to Section 724 of the "Standard Specification for State Road and Bridge Construction", 1990. In addition to any permits required by Section 107 of the Standard Specifications for State Road and Bridge Construction, 1990 Edition, the Contractor must obtain a National Pollutant Discharge Elimination System (NPDES) permit when Hydrodemolition is used. The permit application may be obtained through the Kansas Department of Health and Environment (KDHE) by calling (913) 296-5553, (913) 296-5556 or (913) 296-5557.

AREA PREPARED FOR PATCHING: This item shall consist of removing unsound concrete and bituminous patches from the bridge deck, cleaning reinforcing bars, filling the removed patched areas with concrete and preparing the entire area of deck for bridge deck wearing surface. Quantity shown is an estimate of the areas involved. The exact areas shall be determined by tapping before, during and after chipping operation to assure that all unsound concrete has been removed. See KDOT Specifications, Section 722.

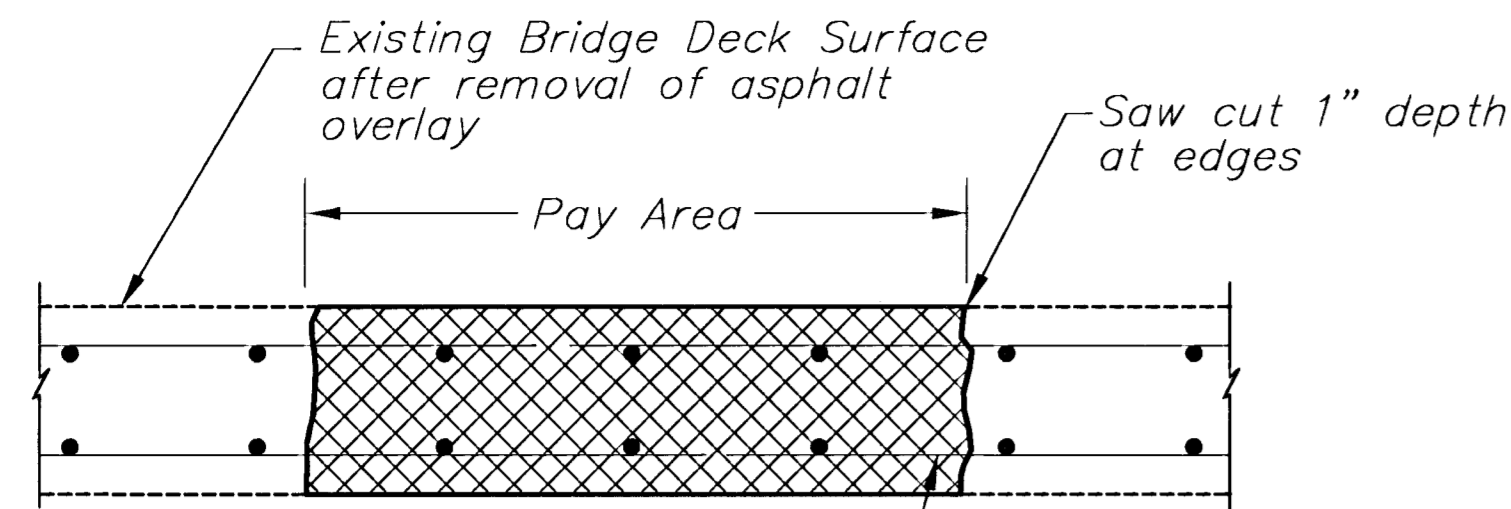
FULL DEPTH PATCHING: Forms shall be provided to enable placement of concrete in areas of full depth removal of bridge slab. The forms may be suspended from existing reinforcing bars by wire ties or a method approved by the Engineer may be used. See KDOT Specifications Section 722 for method of measurement and basis of payment.

REINFORCING IN BRIDGE DECK: Care should be exercised to prevent cutting, stretching or damaging exposed reinforcing steel. Extreme care should be exercised to avoid breaking the bond between the reinforcing steel and concrete where bars are partially exposed yet remain anchored in sound concrete. Reinforcing steel damaged, cut or deteriorated shall be replaced as directed by the Engineer. See table on this sheet for minimum splice length required. Replacement of bars damaged by the contractor shall be subsidiary to "Area Prepared for Patching".

SILICA FUME OVERLAY: The roadway Silica Fume Overlay shall conform to the special provision 90 P-158 of the Kansas Department of Transportation Special Provision to the Standard Specifications Edition of 1990. All labor, materials, and equipment shall be subsidiary to the bid item "Silica Fume Overlay".

SILICA FUME OVERLAY CONSTRUCTION JOINTS: All vertical construction joints in the wearing surface and the vertical joint between the wearing surface and the curbs shall be sealed by sandblasting and then painting the joints with an approved 2 part cement based acrylic polymer grout 72 hours after placement of the bridge deck wearing surface.

LOCATION OF PATCHING AREAS: Prior to repair, the bridge deck will be sounded by the Engineer to determine the exact areas of repair. The sounding will be performed in accordance with ASTM D4580, Procedure B.

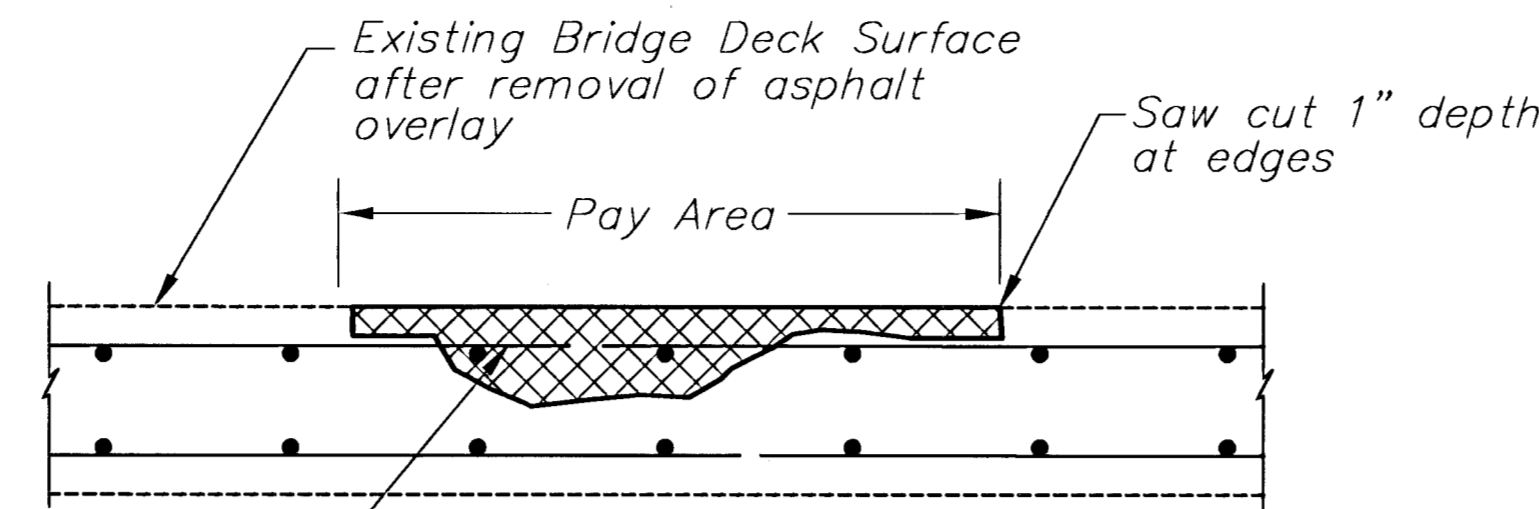


Removal of existing concrete by use of small chipping hammers. Existing reinforcing will be preserved.

FULL DEPTH BRIDGE DECK REPAIR

This bid item shall include the removal and casting in place a repair. The saw cut shall be subsidiary to the bid item "Full Depth Bridge Deck Repair". Reinforcing may be added at the unit bid price.

The maximum dimension, longitudinal or transverse, at a full depth repair shall be 5'-0".

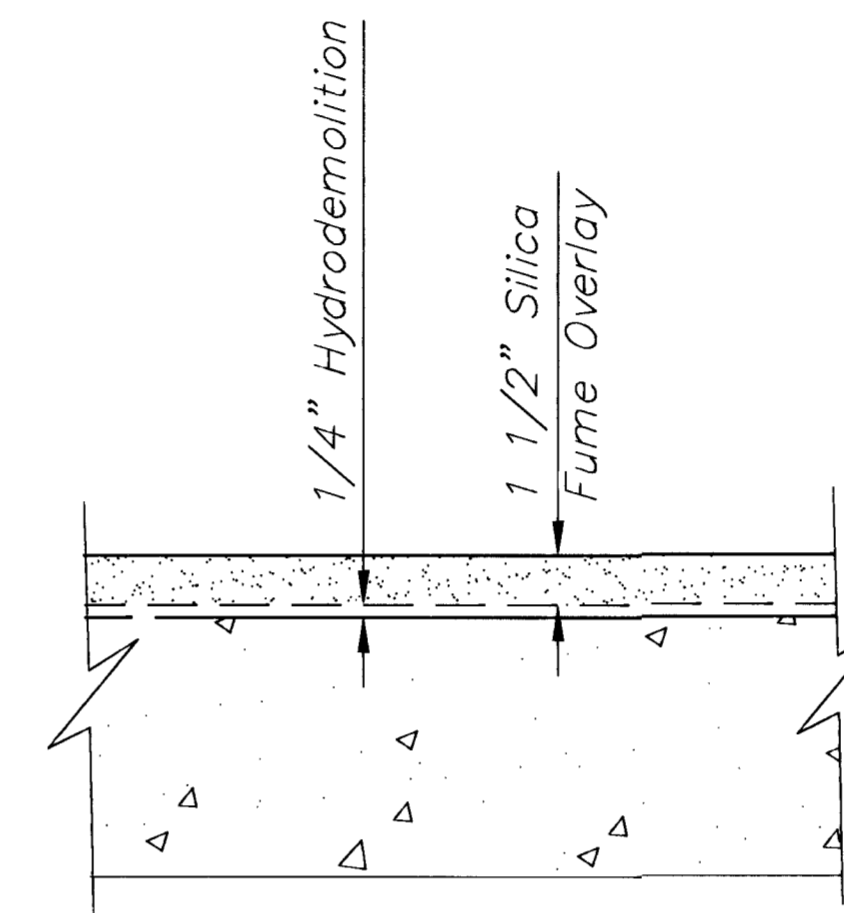


Removal of existing concrete by use of small chipping hammers. Existing reinforcing will be preserved.

PARTIAL DEPTH BRIDGE DECK REPAIR

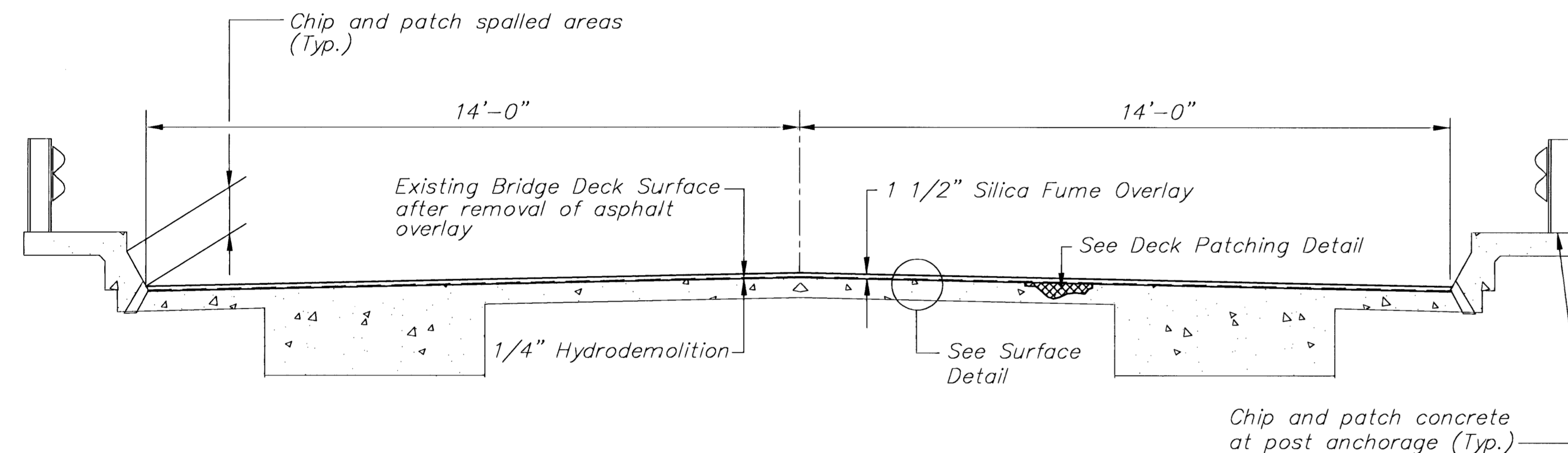
All patch areas which have debonded reinforcing shall be pre-poured. Pre-poured patches shall cure a min. of 24 hours prior to placing bridge deck wearing surface.

If the patch does not de-bond the top layer of reinforcing steel, the patch area shall be filled monolithic with the bridge deck wearing surface.

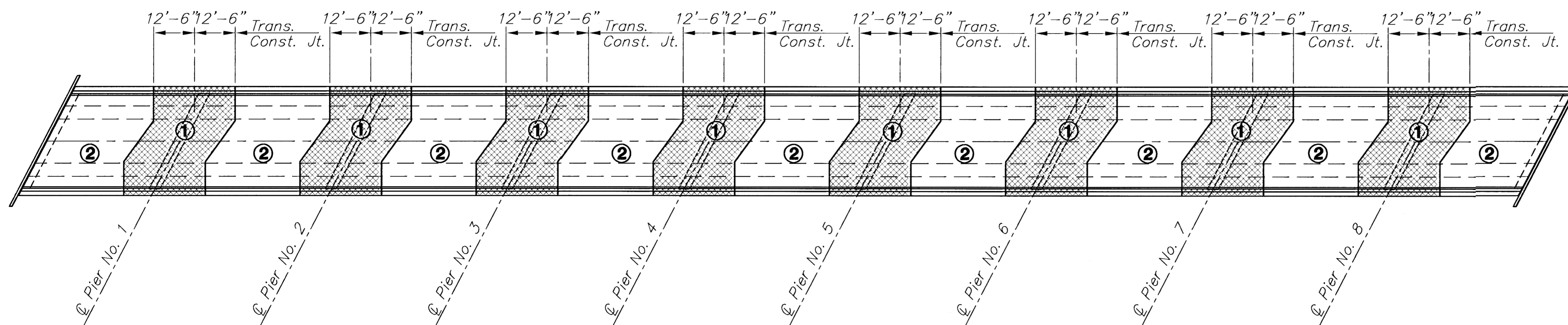


SURFACE DETAIL

MINIMUM REBAR SPLICE LENGTHS	
BAR SIZE	MIN. SPL. LEN.
#4	12"
#5	13"
#6	16"
#7	20"
#8	26"
#9	33"
#10	42"
#11	52"



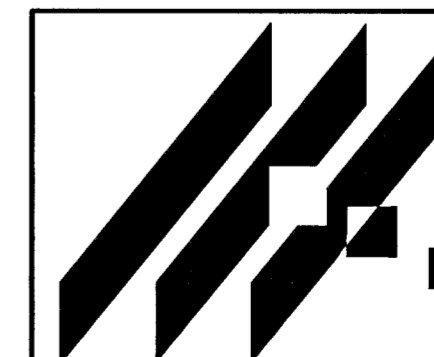
TYPICAL BRIDGE SECTION AT MID-GIRDER



DECK PATCHING PLAN

LEGEND

① Construction Sequence Area



MID-KANSAS ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

37TH STREET NORTH BRIDGE
PROJECT NAME

BRIDGE DECK PATCHING DETAILS
SHEET TITLE

KJS DESIGN BY:	DPG DRAWN BY:	CHECKED BY:
APRIL 1998 DATE	96085 JOB NO.	9 / 23 SHEET OF