

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS				

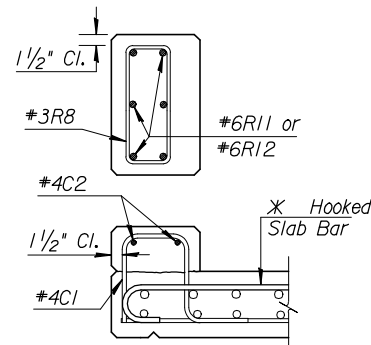
GENERAL NOTES

SLAB: The Designer shall make sure that all layers of reinforcing will fit in the slab design thickness. The Designer shall provide for clearance between the skewed slab transverse reinforcing and the outstanding leg of the post reinforcing. Slabs less than 1'-0" in thickness require the slab transverse reinforcing steel to have a hook as detailed on this sheet (See Alternate No. 2) and placed at a maximum of 1'-0" centers, or the use of 5-#5SPI bars at each post (See Alternate No. 1). Longitudinally Reinforced Slabs less than 1'-0" require 5-#5SB2 bars as detailed. If X is less than 10" (See #4R4 bar at bottom of this sheet) the #4R4 bar shall extend 1'-10" in the plane of the bottom transverse reinforcing.

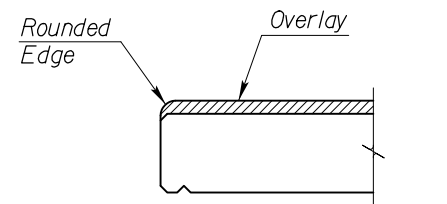
The Designer may want to add a note such as:
 "The Contractor may need to adjust the longitudinal reinforcing spacing under the rail."
 The top clearance may vary from 2 1/2" to 3" due to design criteria. For this reason, top clearance is not shown on the details.
 All rail reinforcing shall be epoxy coated for primary routes, unless noted otherwise.

UNIT STRESSES :
 Class AAA(AE) Concrete $f'_c = 4,000$ p.s.i.
 Reinforcing Steel (Grade 60) (Epoxy Coated) $f_y = 60,000$ p.s.i.

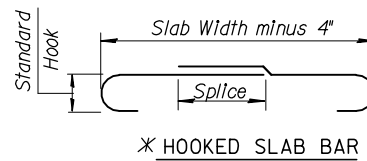
LOADING : AASHTO Specifications
 10 Kip Transverse (Outward)
 2.5 Kip Vertical Load
 2.5 Kip Transverse (Inward)



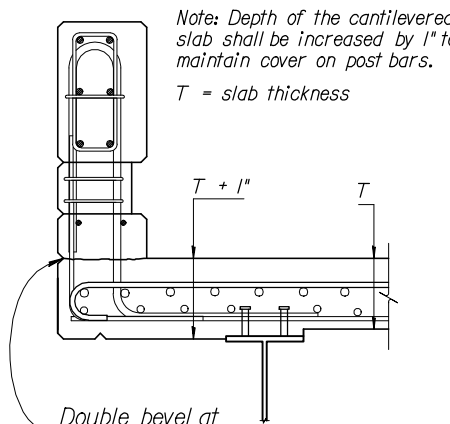
TYPICAL SECTION BETWEEN POSTS WITH CURB



OVERLAY DETAIL BETWEEN POSTS WITHOUT CURB



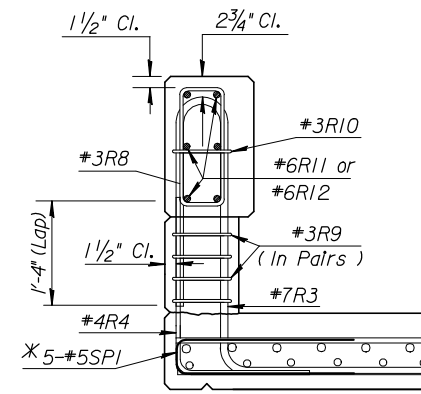
*** HOOKED SLAB BAR**



Double bevel at post (With or without overlay)

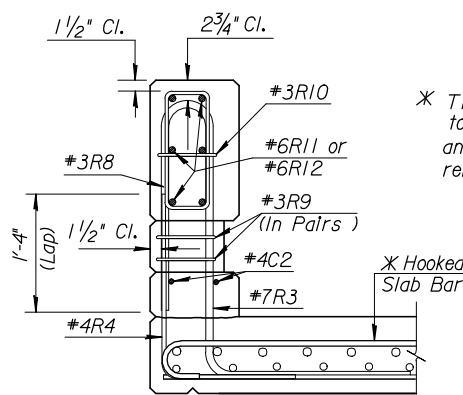
OVERHANG DETAILS

Note: Depth of the cantilevered slab shall be increased by 1" to maintain cover on post bars.
 $T =$ slab thickness



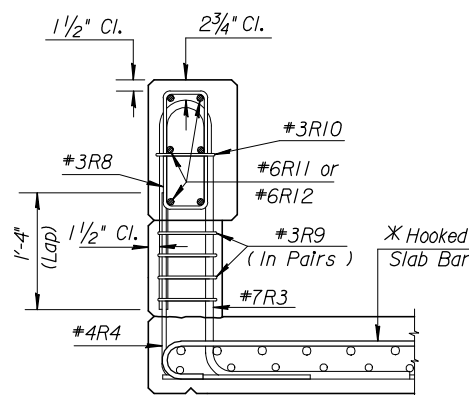
TRANSVERSE REINFORCED SLAB

(Alternate No. 1)



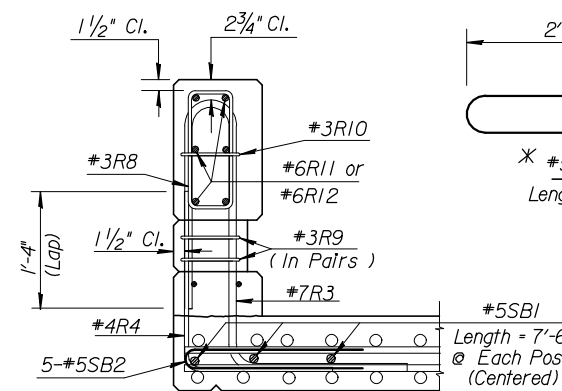
SECTION WITH CURB

* The hook may be canted to provide clearance and/or fit between reinforcing.



SECTION WITHOUT CURB

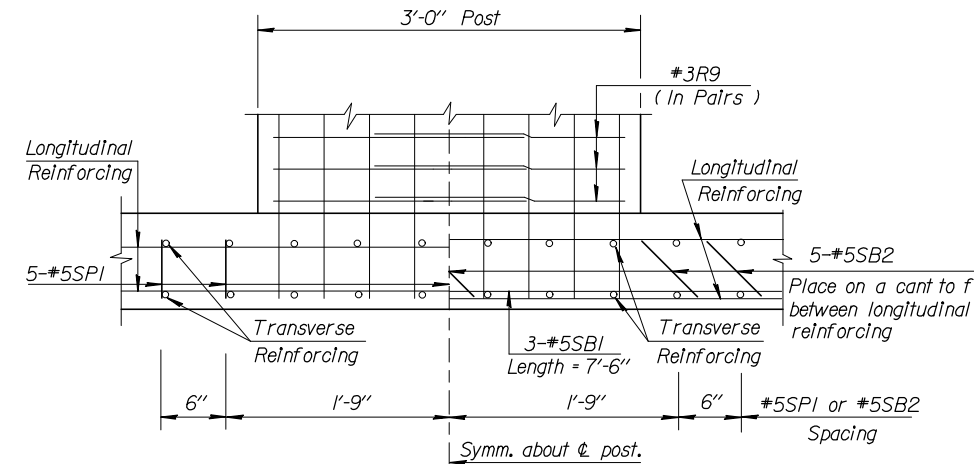
TRANSVERSE REINFORCED SLAB
 (Alternate No. 2)



LONGITUDINAL REINFORCED SLAB & R.C.B.'S

(Less Than 1'-0" Thick)

NOTE : This detail is to be used mainly for Corral Rails placed on RCB's with slabs less than 1'-0" thick.



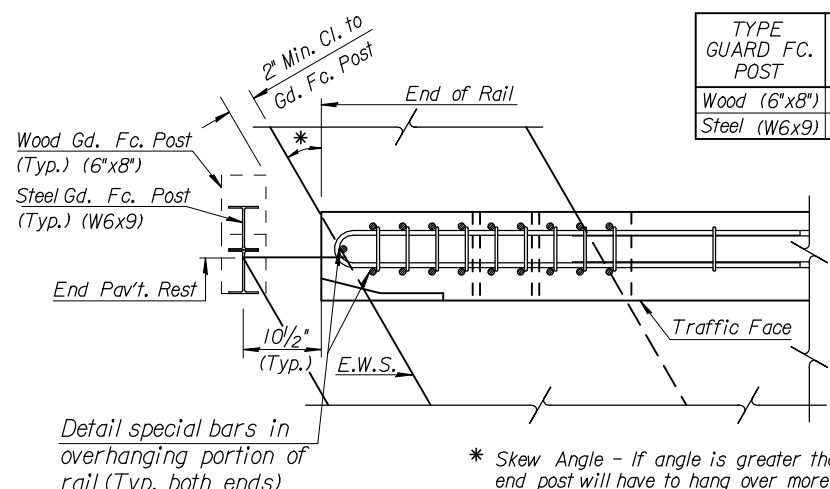
TRANSVERSE REINFORCED SLAB

(Alternate No. 1)

LONGITUDINAL REINFORCED SLAB & R.C.B.'S

(Less Than 1'-0" Thick)

ELEVATION SHOWING SPI, SBI & SB2 BAR PLACEMENT



Detail special bars in overhanging portion of rail (Typ. both ends)

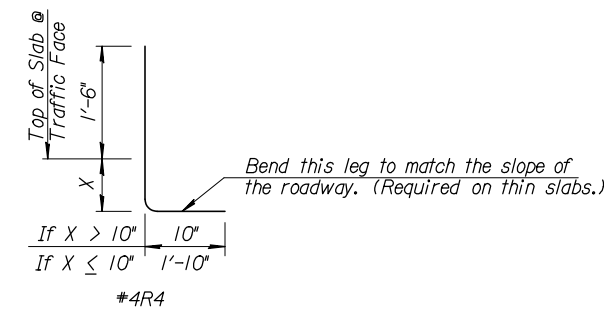
* Skew Angle - If angle is greater than shown, end post will have to hang over more

SKETCH FOR SKEWED STRUCTURE

TYPE GUARD F.C. POST	* MAXIMUM SKEW ANGLE (2° CL.)
Wood (6"x8")	49°
Steel (W6x9)	76°

Information note for designers

Deduct: Taper & Blockout
 -0.3403 C.F./End Post
 -0.012 C.Y./End Post
 Delete this note after plans are completed.



If $X > 10"$
 If $X \leq 10"$

#4R4

3				
2				
1	7-9-97	Current Release	BY	APP'D
NO.	DATE	REVISIONS	BY	APP'D
KANSAS DEPARTMENT OF TRANSPORTATION				
Br. No.				St.d.
32" KANSAS CORRAL RAIL AUXILIARY DETAILS				
Proj. No.				Co.
SHEET NO.	OF	SCALE	APP'D	
DESIGNED	DETAILED	QUANTITIES	CADD	
DESIGN CK.	DETAIL CK.	QUAN. CK.	CADD CK.	

Std. Base File: br182e.dgn
 Plotted By: hazelton
 File: \\af06705\af06705\bridge\standards\us\br182e.dgn
 Plot Date: 10-FEB-2004 08:41

Plot Location: Bridge Design