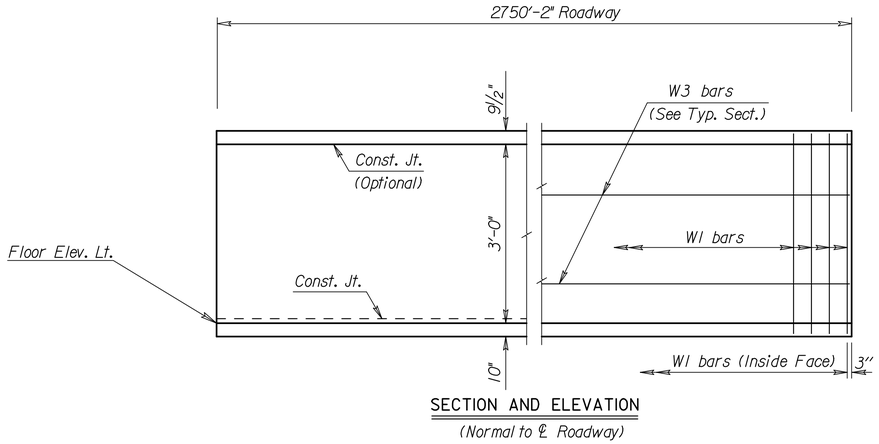
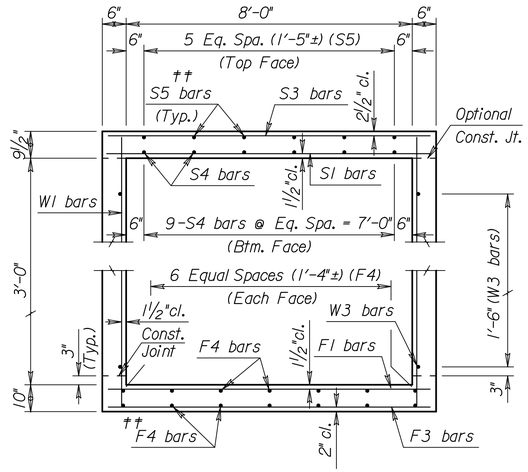
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-84320	2012	139	374



SECTION AND ELEVATION
(Normal to ℄ Roadway)

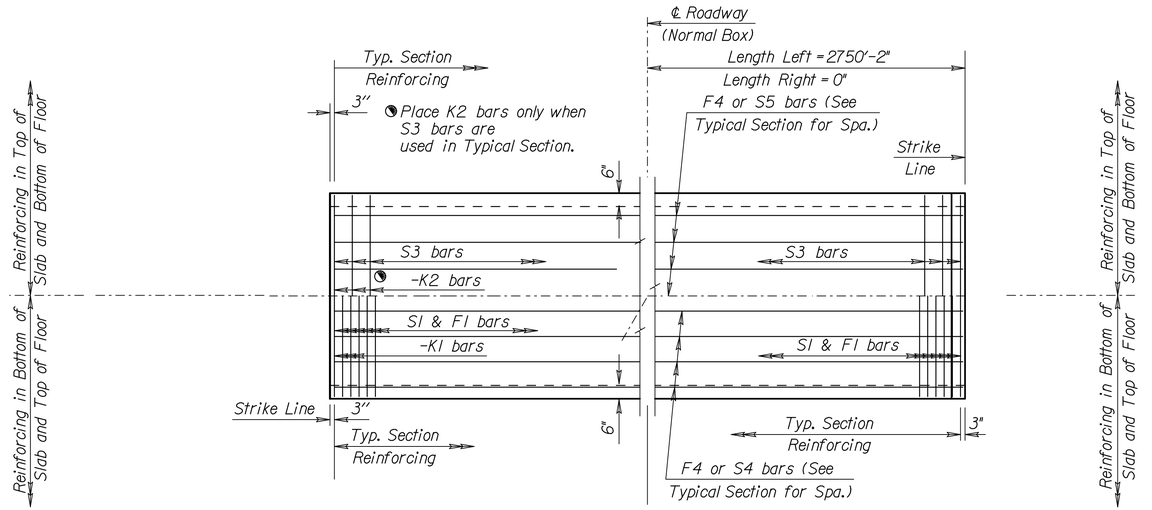


TYPICAL SECTION

Note:
S3 bars omitted unless grade box or slab thickness is greater than or equal to 12".

Note:
F3 bars omitted unless floor thickness is greater than or equal to 12.".

†† Omit S5 bars when S3 bars are omitted and omit the bottom layer of F4 bars when F3 bars are omitted.



Normal Box

PLAN

GENERAL NOTES

LOADING: HS20-44 AASHTO Specifications, 1983 Edition.
UNIT STRESSES: Grade 4.0 Concrete; f'c = 4,000 p.s.i.
Reinforcing Steel; fy = 60,000 p.s.i.
FILL HEIGHT: Unless otherwise noted, the Design Fill Height is measured from the riding surface at the culvert and shall include the surfacing.
CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a ¾inch triangular moulding. Where Grade 4.0 Concrete (AE) is specified, it shall be placed in the top slab above the Construction Joint.
REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted.
EXCAVATION: Excavation for culverts less than bridge length shall not be paid for directly but shall be subsidiary to Grade 4.0 Concrete. Excavation for RCB Bridges shall be paid for as Class III Excavation.
SEAL COURSE: A Seal Course may be required by the Engineer. The Seal Course shall be unreinforced Concrete (Commercial Grade) to a minimum depth of 3 inches or as determined by the Engineer. Concrete for the seal course shall be paid for at the unit price set for Concrete for Seal Course.
FOUNDATION STABILIZATION: The Foundation Stabilization quantity has been calculated to the limits shown on the "RCB Auxiliary Details" sheet. The depth may be increased by the Engineer. The Contractor may underrun Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.
QUANTITIES: The quantities shown in the Culvert Summary include apron and/or soil saver quantities when their construction is required by the plans. Payment for additional quantities that result from including seal course and/or floating apron, as a change in original plans, shall be made at the Unit Price bid for the various items involved.
GRANULAR BACKFILL (WINGWALLS): Special backfill procedures may be required at the direction of the Engineer. See Auxiliary Details Sheet.
STRIKE LINE: Wingwalls and that portion of the RCB outside the Strike Line shall be constructed level. Footing for wingwalls shall be constructed with the culvert floor. See wingwall detail sheet.

⧖For design purposes ONLY. Do NOT use for Construction — CULVERT SUMMARY — ⊕includes any apron welded wire fabric

Floor Elev. Lt.	Floor Elev. Rt.	Crown Gr. Elev.	⧖Design Fill Ht.	Skew	Left Wings	Right Wings	Scour Apron	Soil Saver	Concrete Barrel (Cu.Yds.)	Concrete Wings (Cu.Yds.)	Concrete Total (Cu.Yds.)	Reinf. Steel (Gr. 60) Barrel (Lbs.)	Reinf. Steel (Gr. 60) ⊕Wings (Lbs.)	Reinf. Steel (Gr. 60) Total (Lbs.)
1294.59	1300.32	1302.23	0	0	NONE	NONE	NO	NO	1795.59		1795.59	247045		247045

△ Epoxy Coated Bars

BAR SCHEDULE

F1 Size	Spa.	No.	Length					F3 Size	Spa.	No.	Length	F4 Size	No.	Length	△ S1 Size	Spa.	No.	Length		△ S3 Size	Spa.	No.	Length	△ S4 Size	No.	Length	△ S5 Size	No.	Length
6	5½"	6000	8'-8"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	504	39'-7"	6	5½"	6000	8'-8"	N/A	N/A	N/A	N/A	4	1'-6"	1834	8'-8"	5	432	59'-0"	4	432	39'-7"

△ K1 Size	Spa.	No.	Length	△ K2 Size	Spa.	No.	Length	W1 Size	Spa.	No.	Length	W3 Size	No.	Length		△ G1 Size	No.	Length	△ G2 Size	No.	Length		△ S5 Size	Spa.	No.	Length
N/A	N/A	N/A		N/A	N/A	N/A		4	9"	7334	4'-4"	4	288	39'-7"	N/A	5	4	8'-8"	N/A	N/A	N/A					

Minimum Splice Lengths	
#4	1'-4"
#5	1'-8"
#6	2'-0"

SUMMARY OF QUANTITIES

Concrete (Grade 4.0)	1069.5	C.Y.
Concrete (Grade 4.0)(AE)	726.1	C.Y.
Reinforcing Steel (Gr. 60)	120280	Lbs.
Reinforcing Steel (Gr. 60)(Epoxy Coated)	126770	Lbs.
Class III Excavation		C.Y.
Foundation Stabilization	663	C.Y.
Concrete for Seal Course (Set)	1	C.Y.
Granular Backfill (Wingwalls)(Set)	1	C.Y.

NO.	DATE	REVISIONS	BY	APP'D
1				

KANSAS DEPARTMENT OF TRANSPORTATION
Sta. -0+35.53 to 27+11.36
SINGLE 8 ft x 3 ft RCB

Sedgwick Co.

FHWA APPROVAL		6-5-91	APP'D	KENNETH F. HURST
DESIGNED	DETAILED		QUANTITIES	CADD
DESIGN CK.	DETAIL CK.		QUAN. CK.	CADD CK.

CADconform Certify This File

Sh. No. 139

Plotted By: $$USERNAME$$ | Plot Location: $UNIT$
File: $$$$$$$$$$$$DGNSPEC$$$$$$$$$$$$$
Plot Date: $$$$$$STIME$$$$$$

CADconform Certify This File