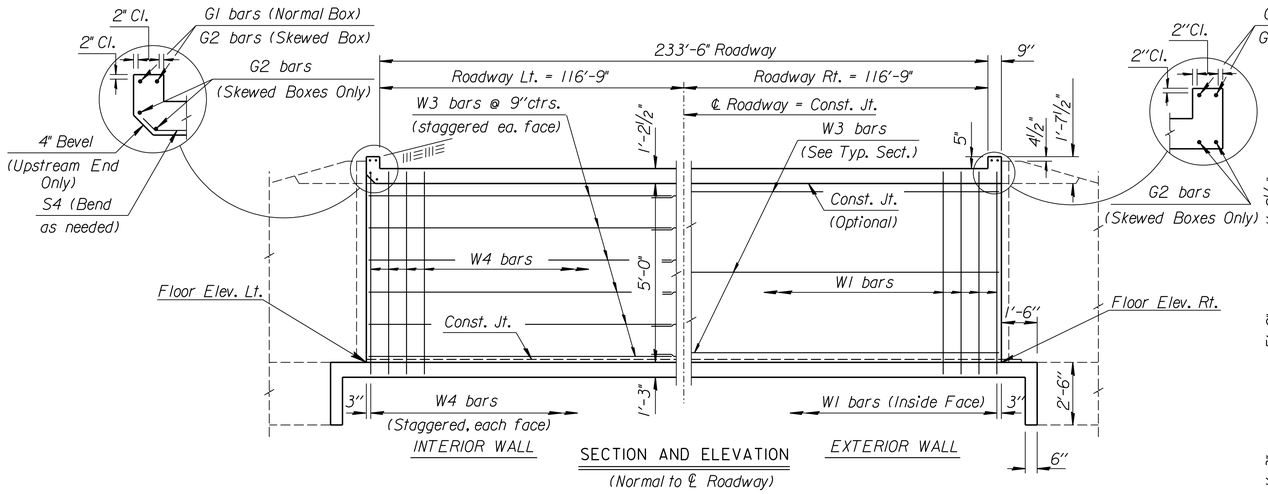
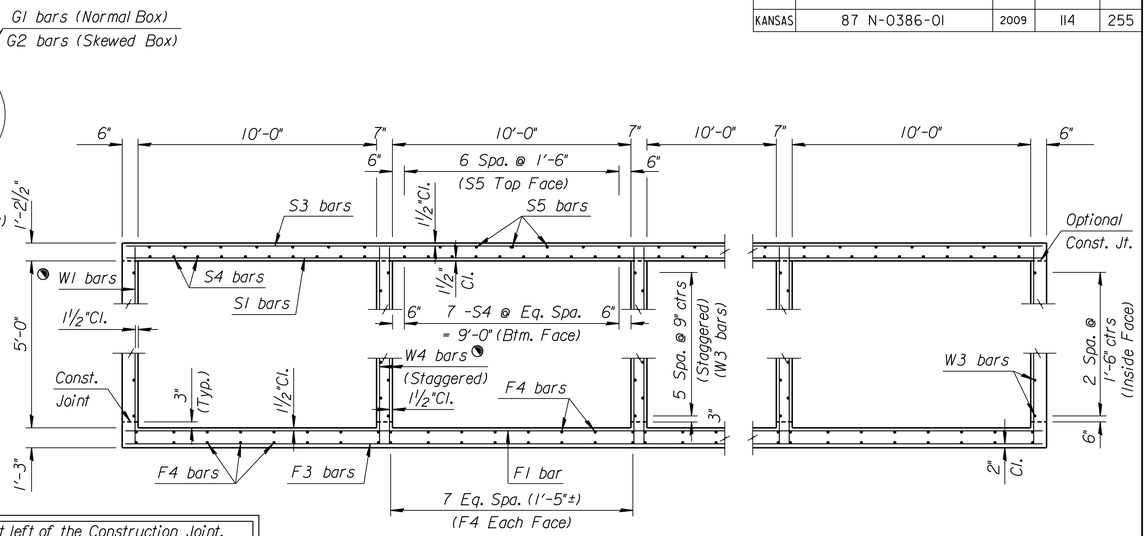
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	87 N-0386-01	2009	114	255



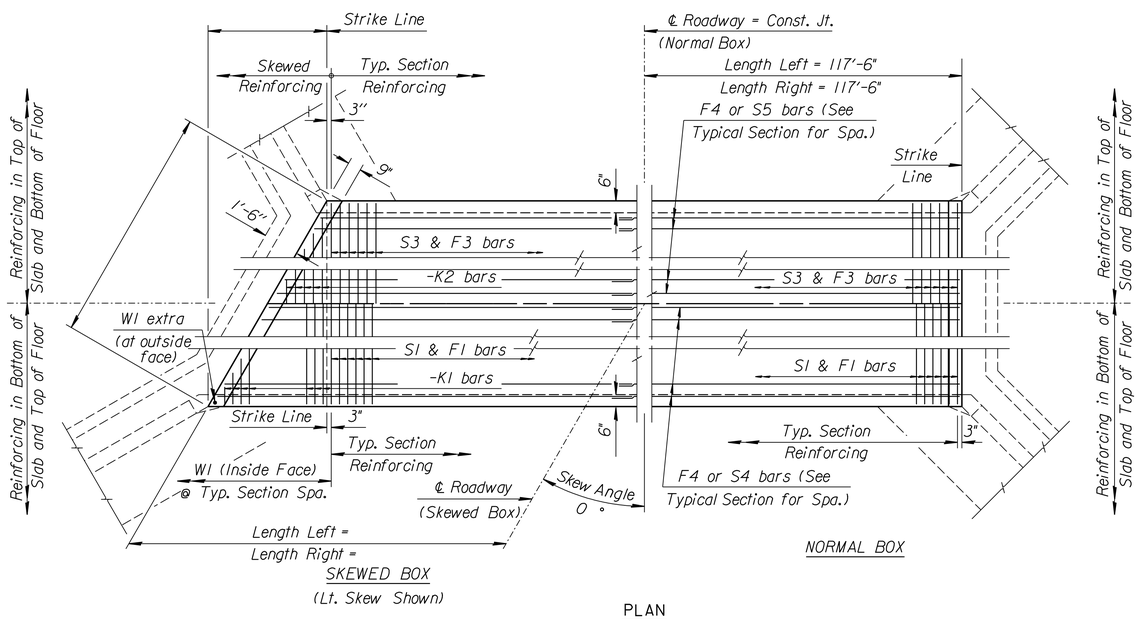
SECTION AND ELEVATION
(Normal to ℄ Roadway)



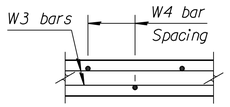
TYPICAL SECTION

Just left of the Construction Joint, lap F4, S4, S5 & W3 bars to the projected bars from right of the Const. Jt. with the minimum splice length corresponding to the bar size.

See RCB Auxiliary Details for Optional Splice.



PLAN



PLAN OF INTERIOR WALL

NOTE: A construction joint is required approximately half-way in the box (left), ~58'-9" from Strike Line. Place construction joint to avoid splice locations of F4, S4, S5 & W3 bars. No additional payment will be made for this joint.

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 3/4 inch 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.

CULVERT SUMMARY

For design purposes ONLY. Do NOT use for Construction — includes any apron and soil saver 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 (Left of Const. Jt.) Barrel (Cu.Yds.)	Wings (Cu.Yds.)	Soil Saver (Cu.Yds.)	Total (Cu.Yds.)	Reinf. Steel (Gr. 60) (Left of Const. Jt.) Barrel (Lbs.)	Wings (Lbs.)	Total (Lbs.)
1336.01	1335.27	1362.69	25	0	FLARED	FLARED	YES-RT.	YES-LT.	517.59	9.84	9.05	536.48	79,753	954	80,707

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

BAR SCHEDULE (LEFT OF CONSTRUCTION JOINT)

F1 Size	Spa.	No.	Length	F3 Size	Spa.	No.	Length	F4 Size	Spa.	No.	Length	S1 Size	Spa.	No.	Length	S3 Size	Spa.	No.	Length	S4 Size	Spa.	No.	Length	S5 Size	Spa.	No.	Length
6	7"	201	42'-5"	N/A	N/A	N/A	N/A	6	5"	282	42'-5"	4	192	40'-0"	6	7"	201	42'-5"	N/A	N/A	N/A	N/A	6	5"	282	42'-5"	4	84	40'-0"	4	84	40'-0"

W1 Size	Spa.	No.	Length	W3 Size	Spa.	No.	Length	W4 Size	Spa.	No.	Length	G1 Size	No.	Length
N/A	N/A	N/A		N/A	N/A	N/A		5	8"	352	7'-2"	N/A	N/A	N/A	N/A	4	72	40'-0"	5	8"	528	7'-2"	5	2	42'-5"	N/A	N/A	N/A

SUMMARY OF QUANTITIES (LEFT OF CONST. JT.)	
Concrete (Grade 4.0)	536.5 C.Y.
Concrete (Grade 4.0)(AE)	0.0 C.Y.
Reinforcing Steel (Gr. 60)	80,710 Lbs.
Reinforcing Steel (Gr. 60)(Epoxy Coated)	0 Lbs.
Class III Excavation	276 C.Y.
Foundation Stabilization	103 C.Y.

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION
BR. NO. 4304008700SBT08 Sta. 5091+94.61
QUADRUPLE 10 ft X 5 ft RCB
LEFT OF CONSTRUCTION JOINT

~~BR 3.10.5 P~~ Sedgwick Co.

FHWA APPROVAL 6-5-91 APP'D KENNETH F. HURST
DESIGNED BS DETAILED BS QUANTITIES BS TRACED
DESIGN CK. AH DETAIL CK. AH QUAN.CK. SB TRACE CK.

Plotted By: -
Plot Location: $UNITS
File: $$$$$$$$$$$$DGNSPEC$$$$$$$$$$$$$$
Plot Date: 11/24/2009