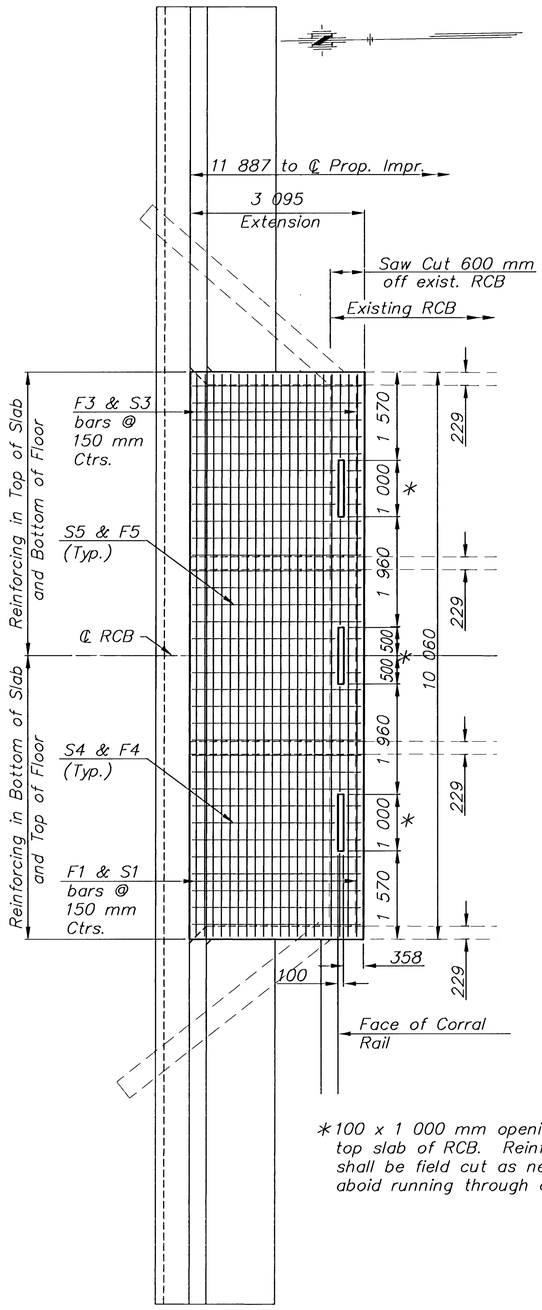
FHWA REG NO.	STATE	PROJECT NO.	YEAR	SHEET NO	TOTAL SHEETS
7	KANSAS	87 N-0203-01	2002	16	48

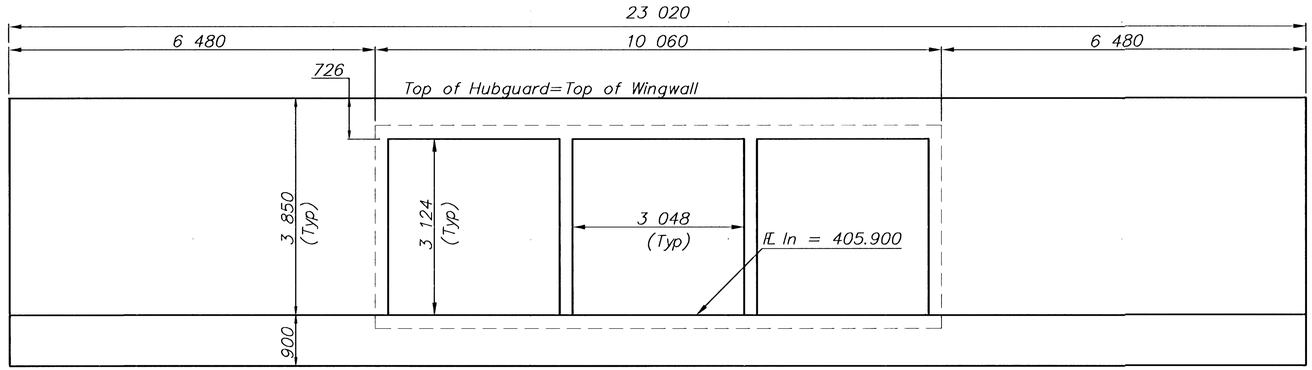
GENERAL NOTES

LOADING: MS18-44 AASHTO Specifications, 1996 Edition.
UNIT STRESSES: Concrete; f'c = 28 MPa
Reinforcing Steel (Grade 420); fy = 420 MPa
FILL HEIGHT: Unless otherwise noted, the Design Fill Height is measured from the riding surface at the culvert and shall include the surfacing.
CONCRETE: Class AAA Concrete shall be used throughout. Bevel all exposed edges with a 20 mm triangular moulding. Where Class AAA Concrete (AE) is specified, it shall be placed in the top slab above the Construction Joint.
REINFORCING: All reinforcing shall conform to ASTM A615M, Grade 420, Epoxy Coated. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted.
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.
CONCRETE ENCASEMENT: All materials and labor to construct the concrete encasement for the proposed sanitary sewer shall be Subsidiary to Class AAA Concrete. Coordinate all concrete encasement construction with Sanitary Sewer Contractor.

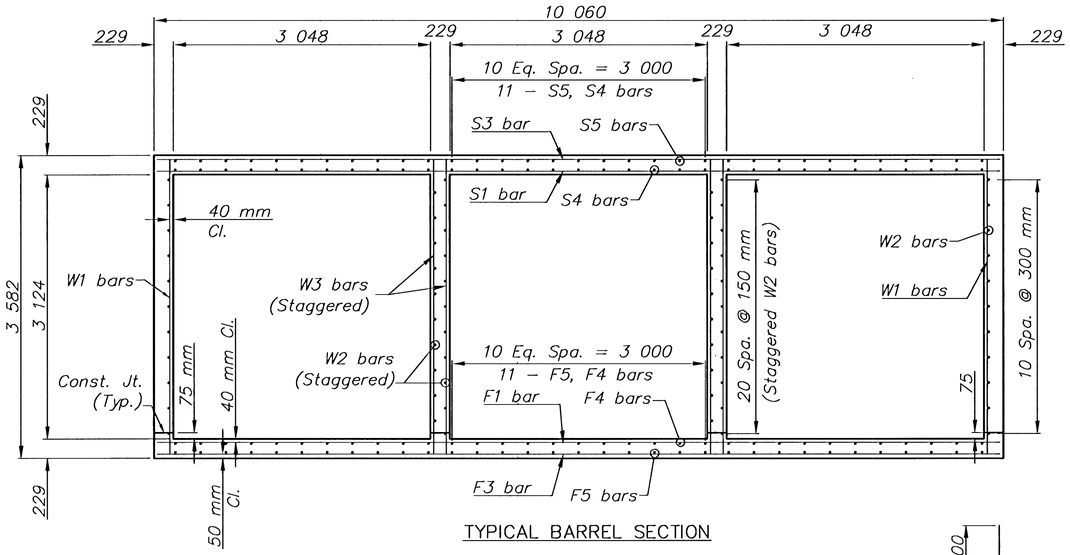


NORTH END PLAN

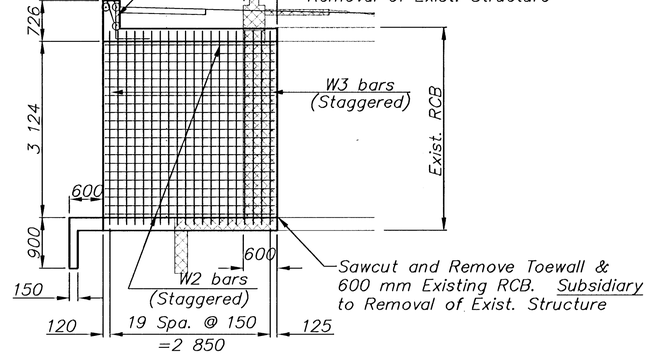
* 100 x 1 000 mm opening through top slab of RCB. Reinforcing steel shall be field cut as necessary to aboid running through opening.



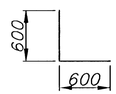
NORTH END ELEVATION



TYPICAL BARREL SECTION



NORTH END LONGITUDINAL SECTION



BENDING DIAGRAM

Minimum Splice Lengths	
#10	400 mm
#13	500 mm
#16	600 mm

BAR SCHEDULE

	F1				F3				F4 & F5				S1				S3				S4 & S5			
	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length
Ext.Rt.	22	150	43	9980	19	150	43	9980	13	300	33	6300	22	150	43	9980	19	150	43	9980	13	300	33	6300
Ext.Lt.	22	150	21	9980	19	150	21	9980	13	300	33	3000	22	150	21	9980	19	150	21	9980	13	300	33	3000

	W1				W2				W3				G1			G2				
	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	No.	Length	Size	Spa.	No.	Length	
Ext.Rt.	16	150	84	3480	13	300	64	6300	13	300	84	3480	16	3	9980	16	300	33	1200	
Ext.Lt.	16	150	40	3480	13	300	64	3000	13	300	40	3480	16	3	22900	16	300	76	1200	

SUMMARY OF QUANTITIES		
(Includes Barrel and Wingwalls)		
Class AAA Concrete (AE)	134.4	m^3
Reinforcing Steel (Gr. 420)(Epoxy Coated)	12,738	kg

NO.	DATE	REVISIONS	BY	APP'D
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

TRIPLE 3.048 x 3.124 m
NORTH END (0° SKEW)

PROJ. NO. 87 N-0141-01 SEDGWICK CO.

MKEC ENGINEERING CONSULTANTS, INC.
WICHITA, KANSAS

DESIGNED BY:	KJS	CHECKED BY:	KJS	
DRAWN BY:	RSB	DATE: JAN. 2003	SHEET 16 OF 48	

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