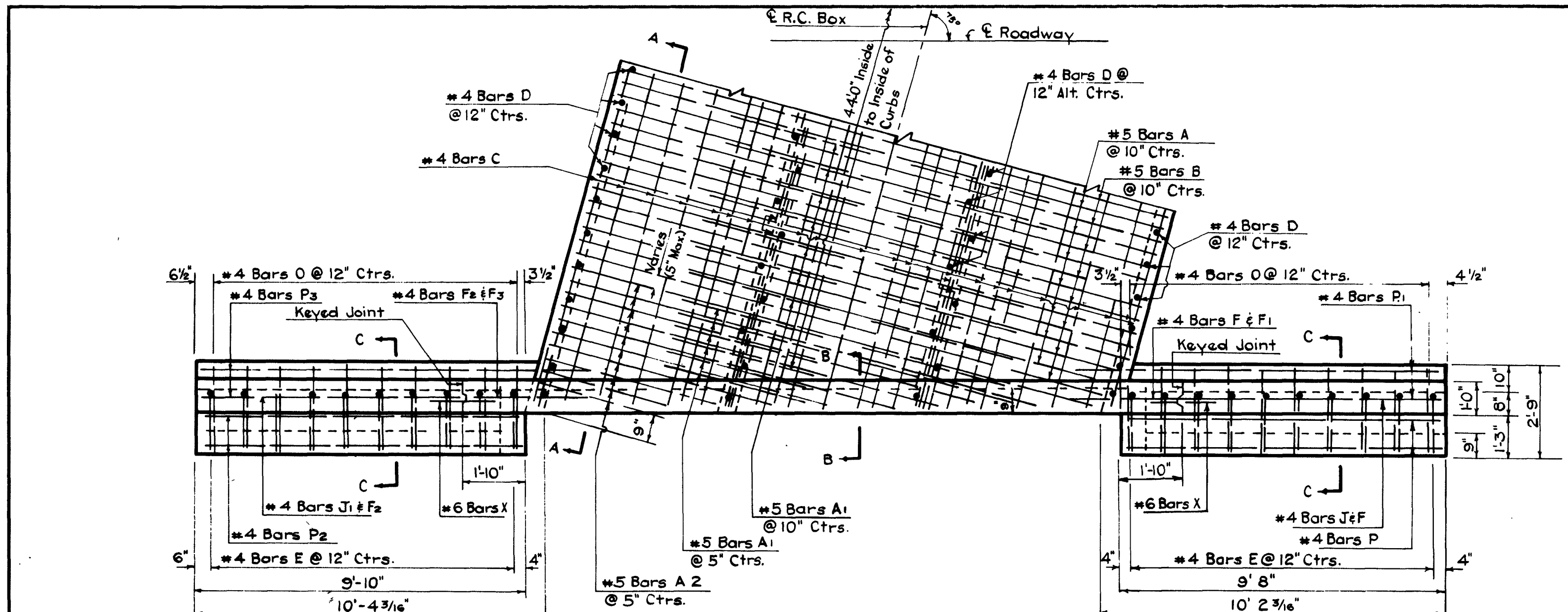
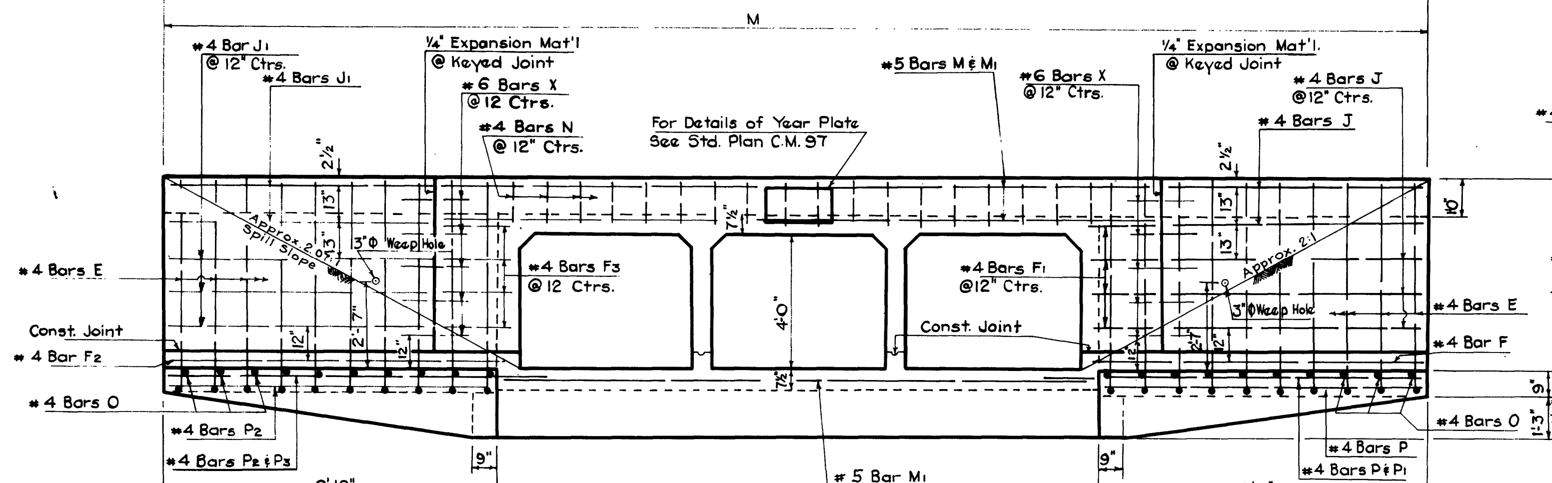
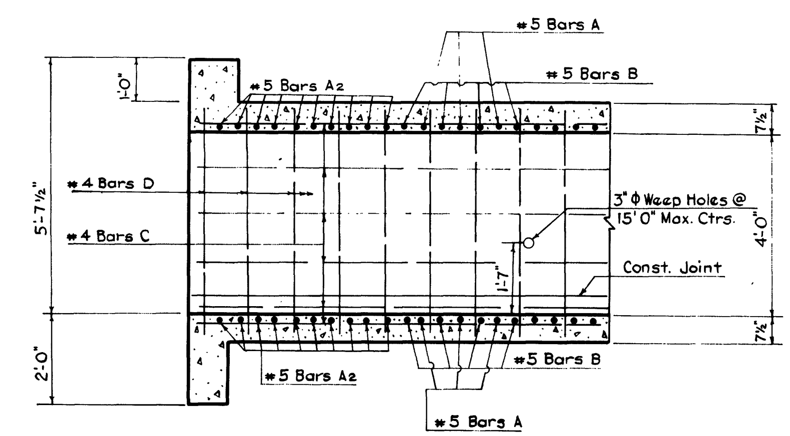
STATE PROJECT	PARISH	SHEET NO.



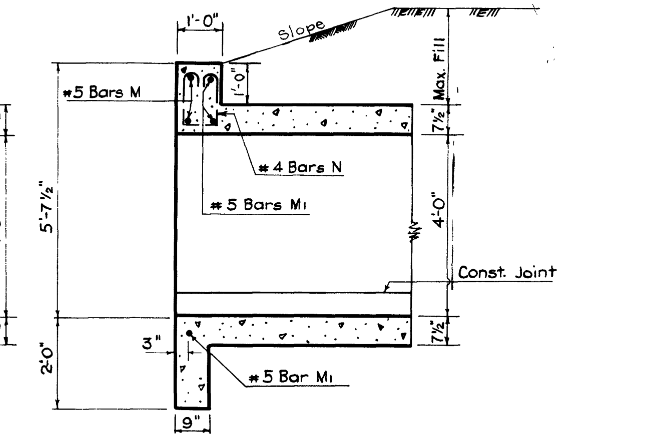
PLAN



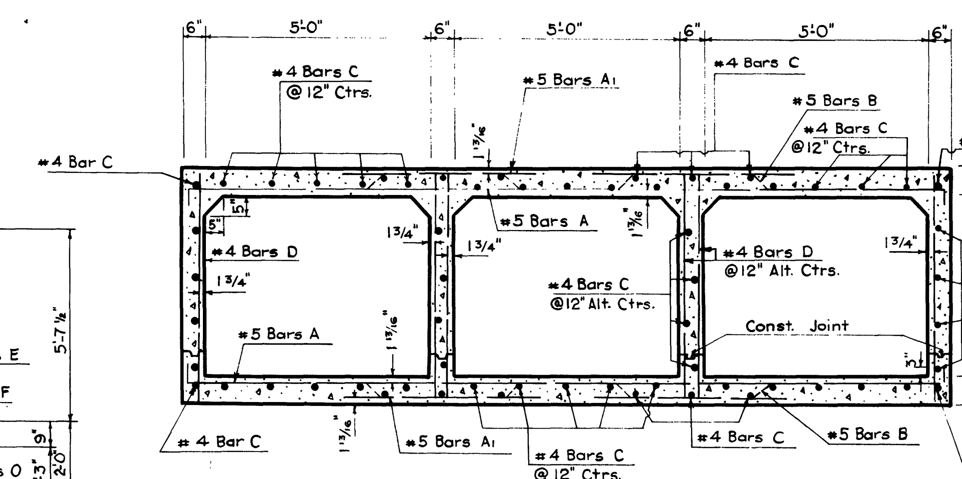
ELEVATION



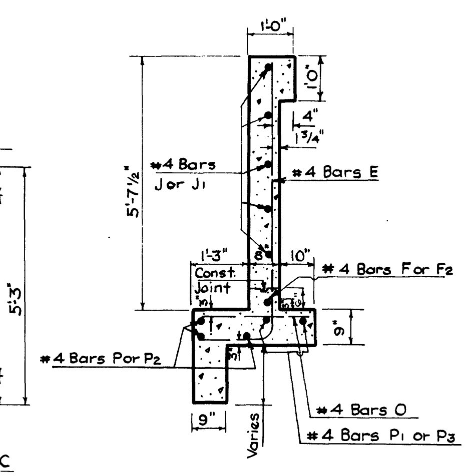
SECTION A-A



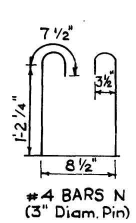
SECTION B-B



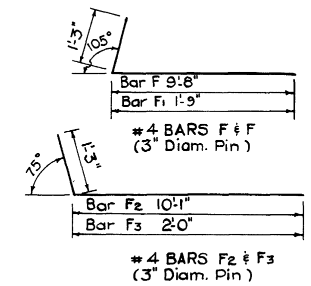
SECTION THRU BARREL



SECTION C-C

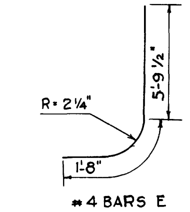


#4 BARS N
(3" Diam. Pin)

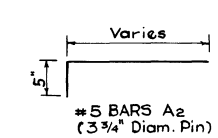


#4 BARS F & F
(3" Diam. Pin)

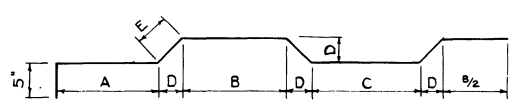
#4 BARS F2 & F3
(3" Diam. Pin)



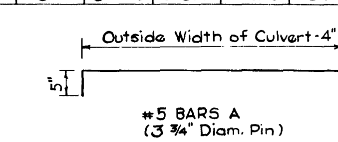
#4 BARS E



#5 BARS A2
(3 3/4" Diam. Pin)



DIMENSIONS FOR BARS B						
Size	Pin. Diam.	A	B	C	D	E
5' x 4'	3 3/4"	3'-11 1/16"	2'-8 1/8"	2'-2 1/8"	3 7/8"	5 1/2"



#5 BARS A
(3 3/4" Diam. Pin)

DIMENSIONS					QUANTITIES				OPENINGS	
OPENINGS		MAX. FILL		WINGS & CURBS	PER LINEAR FOOT OF BARREL		FOR 44'-0" OF CULVERT		OPENINGS	
SIZE	NO.	AREA	SLAB	WALL	M	STEEL	CONCRETE	STEEL	CONCRETE	NO.	SIZE
FEET		SQ. FT.	FEET	FEET	FEET - INCHES	LBS.	CU. YDS.	LBS.	CU. YDS.		FEET
5 x 4	2	40	21		31 - 4 7/8	109.51	0.7675	5877	46.93	2	5 x 4
	3	60	27	13	37 - 1 3/16	165.22	1.1026	8610	63.23	3	
	4	80			42 - 9 1/2	220.92	1.4378	11314	79.52	4	
	5	100			48 - 5 7/8	276.62	1.7729	14125	95.82	5	
	6	120			54 - 2 3/16	332.33	2.1080	16832	112.12	6	

BILL OF REINFORCING STEEL FOR 44'-0" CULVERT

BARREL REINFORCEMENT

SIZE		#5 BARS A		#5 BARS A1		#5 BARS A2				#5 BARS B		#4 BARS C		#4 BARS D	
SIZE	NO.	NO.	LENGTH	NO.	LENGTH	NO.	SHORT BAR	VAR.	LONG BAR	NO.	LENGTH	NO.	LENGTH ①	NO.	LENGTH
FEET			Ft.-In.		Ft.-In.		Ft.-In.	In.	Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.
5x4	2	102	12-0	110	4-4	24	2-11	18.6000	10-8	104	12-3 1/4	42	47-2	138	4-11
	3	98	17-6	232	4-4	40	2-11	18.6667	16-11	100	18-0 1/2	62	47-2	184	4-11
	4	96	23-0	356	4-4	52	2-11	18.6667	21-7	96	23-9 3/4	82	47-2	230	4-11
	5	92	28-6	496	4-4	68	2-11	18.6250	27-9	92	29-7	102	47-2	276	4-11
	6	88	34-0	624	4-4	80	2-11	18.6316	32-5	90	35-4 1/4	122	47-2	322	4-11

WINGS AND CURBS REINFORCEMENT

#4 BARS E		#4 BARS F		#4 BARS F1		#4 BARS F2		#4 BARS F3		#4 BARS J		#4 BARS J1		#4 BARS O		#4 BARS P		#4 BARS P1		#4 BARS P2		#4 BARS P3		#5 BARS M		#5 BARS M1		#4 BARS N		#6 BARS X Ⓐ		OPENINGS	
NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	SIZE
	Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		Ft.-In.		FEET
40	7-5 1/2	2	10-11	8	3-0	2	11-4	8	3-3	10	7-6	10	7-8	40	2-4	6	9-4	4	10-11	6	9-6	4	11-6	4	15-0	6	11-6	24	4-4	20	2-0	2	5x4
																								4	20-8	6	17-3	36	4-4			3	
																								4	26-5	6	22-11	48	4-4			4	
																								4	32-1	6	28-7	58	4-4			5	
																								4	37-9	6	34-4	70	4-4			6	

① Includes 1 - 1'-6" Lap Splice

Ⓐ #6 Bars X to be 3/4" ϕ Smooth & Greased for 1'-0" of Length.

GENERAL NOTES

Construction Specifications: Latest Approved La. Dept. of Hwy. Standard Specifications.
Design Specifications: A.A.S.H.O. 1969 as Amended by Int. Specs., 1972.
Live Load: HS 20-44 or Military Loading, Whichever is Greater.
All Concrete to be Class "A".
All Exposed Corners to have 3/4" Chamfer, Unless Otherwise Noted. Reinforcement Shall be Billet-Steel A.S.T.M. A615 or Rail-Steel A.S.T.M.A. 616 or Axle-Steel A.S.T.M.A. 617.
Dimensions relating to Reinforcing Steel are to Bar Centers.
A 1'-6" Square of Plastic Filter Cloth (See Qualified Products List) shall be placed in contact with Concrete behind each Weep Hole, in addition to approx. 2 Cu. Ft. of Concrete Sand. For Detail of Joints, See Std. Plan C.M.-49.

C.C.S.M. 5-R. 75°.1

APPROVED BY:

Original Signed by Chief Engineer
CHIEF ENGINEER DATE

STANDARD PLAN
MULTIPLE OPENING REINFORCED CONCRETE BOX CULVERT

STRAIGHT WINGS 75° CROSSING
2:1 SPILL SLOPE NORMAL TO CHANNEL
DATED Feb. 1973 2 THRU 6-5'x4'

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DESIGNED W. Marcum	DETAILED C. Johnston	TRACED donna knight
CHECKED N. Brown	CHECKED J.J. Ribas	CHECKED C.D.J.

DATE	DESCRIPTION	BY
1-11-78	Rev. Weep Hole Note	W.T.J.
5-30-75	Revised Spill Slope	W.T.J.

REVISIONS

RIDGWAY 3M 10-69 IMPERIAL #284