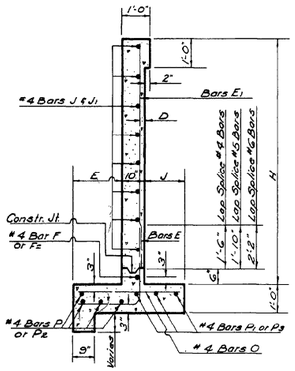
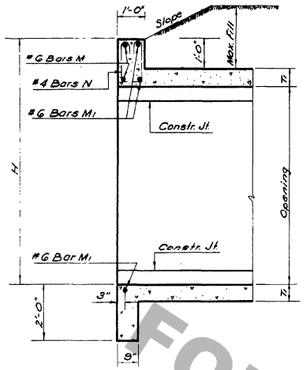
F.A.P.	STATE PROJECT	PARISH	SHEET NO.

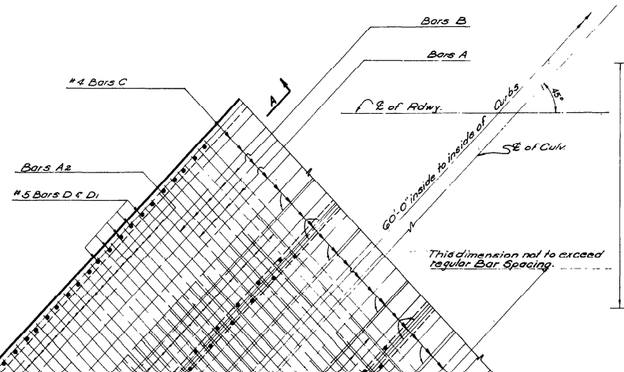
09:56
28-NOV-2007
R:\Standard Plans\English\Old Sheets\CCSM7-10S45_1.dgn

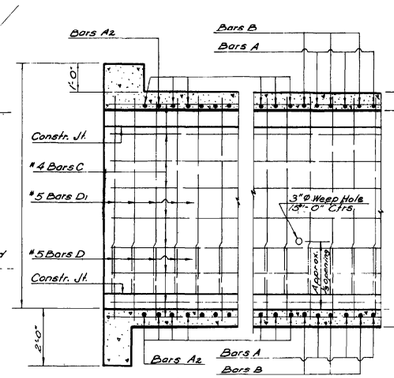


SECTION B - B

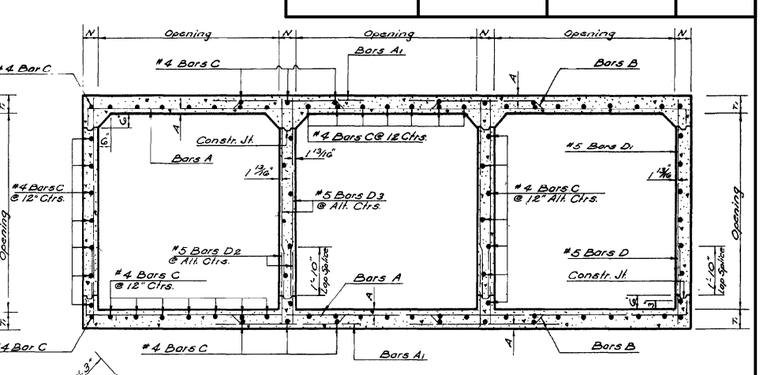


SECTION C-C

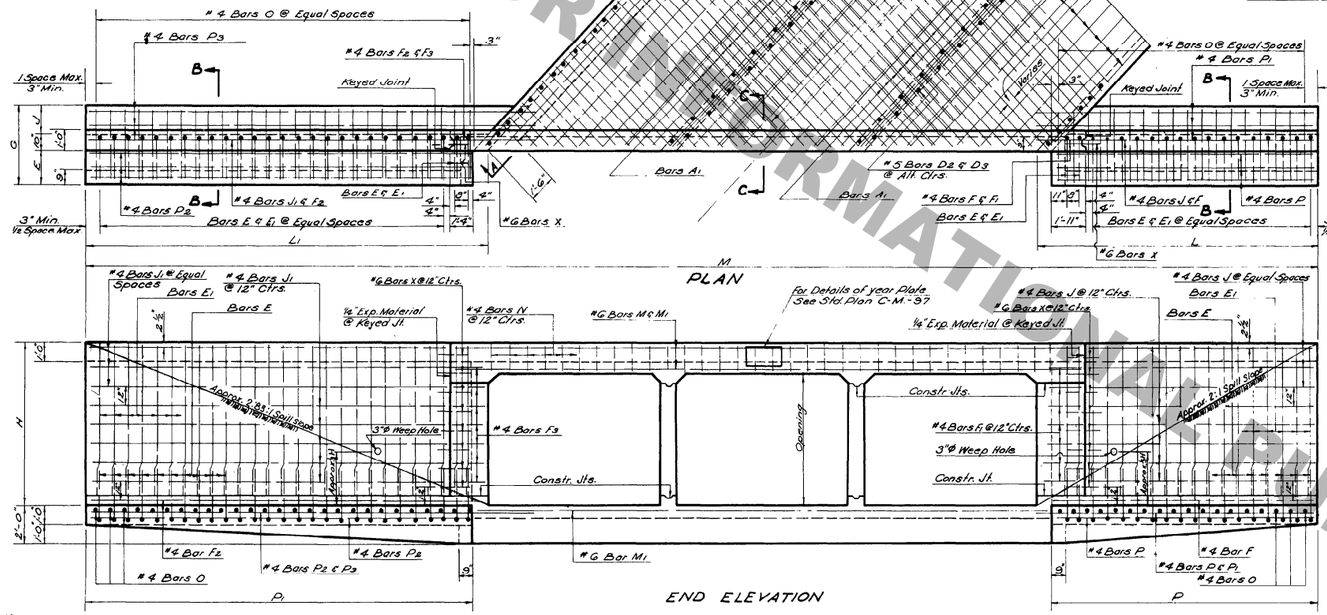


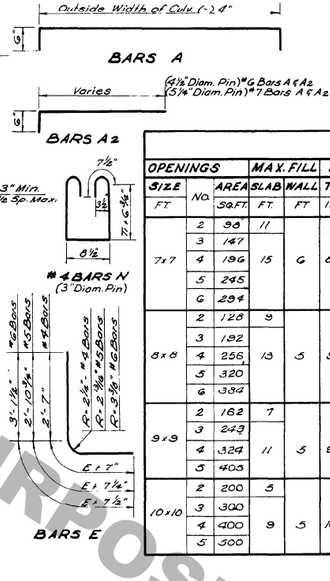


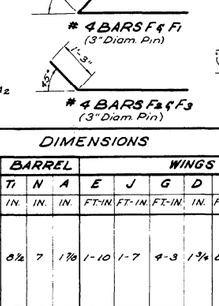
SECTION A - A

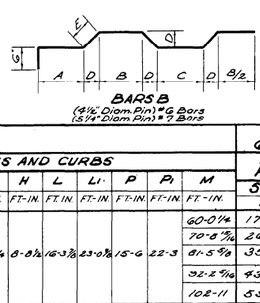


SECTION THRU BARREL









DIMENSIONS FOR BARS B					
SIZE	A	B	C	D	E
7'x 7'	5'-5⅝	3'-8¼	3'-1⅛	4'-½"	6'-½"
8'x 8'	6'-3⅜	4'-2⅝	3'-6⅜	5'-½	7'-⅜
9'x 9'	7'-1⅛	4'-3⅛	4'-0⅛	5'-½	8'-⅛
10'x 10'	7'-10⅝	5'-3⅞	4'-5⅞	6'-⅛	8'-⅝

DIMENSIONS																					QUANTITIES GO'-0" ALONG ℄ OF CULVERT			
OPENINGS			MAX. FILL	BARREL			WINGS AND CURBS														PER LINEAR FOOT OF BARREL		TOTAL QUANTITIES	
SIZE	NO.	AREA	SLAB	WALL	Ti	N	A	E	J	G	D	H	L	L1	P	P1	M	STEEL	CONC.	STEEL	CONC. ⊕
FT.		SQ.FT.	FT.	FT.	IN.	IN.	IN.	FT-IN.	FT-IN.	FT-IN.	IN.	FT-IN.	FT-IN.	FT-IN.	FT-IN.	FT-IN.	FT-IN.	LBS.	CU.YDS.	LBS.	CU.YDS.
7x7	2	98	11	G	6½	7	1⅜	1-10	1-7	4-3	1¾	8-8½	16-3⅜	23-0⅝	15-6	22-3		60-0¼	177.86	1.2906	1.3563	118.77
	3	147																70-6⅞	264.85	1.8570	1.9530	165.42
	4	196	15															81-5⅝	351.83	2.4154	2.5748	192.07
	5	245																92-4⅜	438.82	2.9730	3.1263	228.71
	6	294																102-11	537.82	3.5322	3.7163	265.36
8x8	2	128	9	G	6½	7	1⅜	2-0	2-0	4-10	1¾	9-9	18-5⅛	26-2⅝	17-6	25-3		63-2½	210.50	1.6111	1.6407	147.89
	3	192																80-5⅜	313.92	2.2994	2.3641	192.89
	4	256	13															92-8⅝	417.34	2.9877	3.1063	237.90
	5	320																104-11⅞	533.78	3.6759	3.9096	282.90
	6	384																117-2¾	637.20	4.3642	4.7463	327.90
9x9	2	162	7	G	6½	9	1⅜	2-2	2-4	5-4	1¾	10-9½	20-3⅝	29-0⅜	18-9	28-0		75-10⅝	252.18	1.9560	2.0089	179.26
	3	243																89-6⅛	375.65	2.7370	2.8675	233.42
	4	324	11															103-5⅜	499.44	3.6181	3.7631	287.57
	5	405																117-3⅛	637.39	4.4491	4.7663	341.73
10x10	2	200	5	G	6½	10	1 5/16	2-5	2-8	5-11	1⅞	11-10	22-10⅝	32-2⅛	21-8	31-0		84-5⅛	299.05	2.3333	2.4979	215.00
	3	300																99-9⅛	445.65	3.3200	3.5216	279.11
	4	400	9															115-1½	610.35	4.3066	4.6472	343.23
	5	500																130-5⅞	756.04	5.2932	5.7911	407.34

⊕ Quantities do not include Expansion Joint Block

FOR INFORMATION ONLY
NOT FOR CONSTRUCTION

BILL OF REINFORCING STEEL FOR 60'-0" CULVERT

BARREL REINFORCEMENT

OPENINGS		BARS A			BARS A1			BARS A2				BARS B				#5 BARS D & D1			#5 BARS D2 & D3			#4 BARS C		
SIZE	NO.	SIZE	NO.	LENGTH	SP.	SIZE	NO.	LENGTH	SP.	SIZE	NO.	SHORT BAR	VARIATION	LONG BAR	SP.	SIZE	NO.	LENGTH	SP.	NO.	LGTH. BARS D	LGTH. BARS D1	SP.	NO.	LGTH. BARS D2	LGTH. BARS D3	SP.	NO.	①LENGTH
FT.				FT-IN.	IN.			FT-IN.	IN.			FT-IN.	IN.	FT-IN.	IN.			FT-IN.	IN.		FT-IN.	FT-IN.	IN.		FT-IN.	FT-IN.	IN.		FT-IN.
7x7	2	#6	86	16-5	13	#6	122	5-8	13	#6	104	2-2	6.5000	15-8½	12	#6	88	16-9	13	126	2-10	7-0	12	63	2-10	7-0	12	55	63-10
	3	#6	72	24-0	13	#6	272	5-8	13	#6	160	2-2	6.5000	23-3½	12	#6	74	24-8	13	126	2-10	7-0	12	126	2-10	7-0	12	86	63-10
	4	#6	58	31-7	13	#6	450	5-8	13	#6	216	2-2	6.5000	30-10½	12	#6	60	32-7	13	126	2-10	7-0	12	189	2-10	7-0	12	113	63-10
	5	#6	44	39-2	13	#6	634	5-8	13	#6	272	2-2	6.5000	38-5½	12	#6	46	40-6	13	126	2-10	7-0	12	252	2-10	7-0	12	140	63-10
	6	#6	30	②48-11	13	#6	630	5-8	13	#6	320	2-2	6.5000	②46-0½	12	#6	32	②50-7	13	126	2-10	7-0	12	315	2-10	7-0	12	167	63-10
8x8	2	#6	90	18-8	12	#6	134	6-3	12	#6	128	2-3	6.0000	17-9	6	#6	90	19-0¼	12	126	2-11	8-1	12	63	2-11	8-1	12	66	63-10
	3	#6	72	27-4	12	#6	306	6-3	12	#6	200	2-3	6.0000	26-3	6	#6	72	28-0½	12	126	2-11	8-1	12	126	2-11	8-1	12	96	63-10
	4	#6	54	36-0	12	#6	510	6-3	12	#6	268	2-3	6.0000	35-3	6	#6	56	37-0¾	12	126	2-11	8-1	12	189	2-11	8-1	12	126	63-10
	5	#6	38	②48-10	12	#6	748	6-3	12	#6	336	2-3	6.0000	②43-9	6	#6	38	②48-3	12	126	2-11	8-1	12	252	2-11	8-1	12	156	63-10
	6	#6	20	②55-6	12	#6	1032	6-3	12	#6	408	2-3	6.0000	②52-8	6	#6	20	②57-3¼	12	126	2-11	8-1	12	315	2-11	8-1	12	186	63-10
9x9	2	#6	92	20-11	11	#6	152	6-9	12	#6	160	2-4	5.5000	20-2½	5½	#6	94	21-3¾	11	142	2-11	9-1	10½	72	2-11	9-1	10½	73	63-10
	3	#6	72	30-8	11	#6	344	6-9	12	#6	240	2-4	5.5000	29-10	5½	#6	72	31-5½	11	144	2-11	9-1	10½	144	2-11	9-1	10½	106	63-10
	4	#6	96	40-5	11	#6	580	6-9	12	#6	332	2-4	5.5000	39-11	5½	#6	50	41-7¼	11	139	2-11	9-1	10½	216	2-11	9-1	10½	139	63-10
	5	#6	28	②52-4	11	#6	860	6-9	12	#6	416	2-4	5.5000	②49-6½	5½	#6	30	②53-11	11	142	2-11	9-1	10½	285	2-11	9-1	10½	172	63-10
10x10	2	#7	70	23-2	14	#7	118	7-8	14	#7	140	2-5	7.0000	22-3	7	#7	70	23-7	14	168	3-0	10-2	9	83	3-0	10-2	9	80	63-10
	3	#7	50	34-0	14	#7	276	7-8	14	#7	216	2-5	7.0000	33-4	7	#7	50	34-10	14	168	3-0	10-2	9	168	3-0	10-2	9	116	63-10
	4	#7	32	②47-5	14	#7	464	7-8	14	#7	288	2-5	7.0000	②43-10	7	#7	34	②48-8	14	168	3-0	10-2	9	252	3-0	10-2	9	152	63-10
	5	#7	12	②58-3	14	#7	696	7-8	14	#7	360	2-5	7.0000	②54-11	7	#7	12	②59-11	14	168	3-0	10-2	9	336	3-0	10-2	9	188	63-10

WINGS AND CURBS REINFORCEMENT

BARS E			BARS E1			#4 BARS F		#4 BARS F1		#4 BARS F2		#4 BARS F3		#4 BARS J		#4 BARS J1		BARS O		#4 BARS P		#4 BARS P1		#4 BARS P2		#4 BARS P3		#4 BARS N		#6 BARS M		#6 BARS M1		#6 BARS X	
SIZE	NO.	LENGTH	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	SIZE	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
		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.
#4	84	5-0	#4	84	8-0	2	16-6	14	2-9½	2	24-6½	14	3-6	16	13-3	16	20-7	#5	76	3-10	12	8	15-2	6	16-2	8	21-11	6	25-3	44	4-6	4	25-0	6	21-9	32	2-0
																														66	4-6	4	35-8	6	32-6	32	2-0
#5	104	5-6	#4	100	9-1	2	18-7½	16	2-11	2	27-8	16	3-7½	18	15-3	18	23-7	#5	86	4-5	12	8	17-2	6	18-2	8	24-11	6	29-2	100	4-7	4	②48-10	6	②41-8	32	2-0
																														124	4-7	4	②57-1	6	②63-11	36	2-0
#5	140	5-6	#4	140	10-1	6	20-6	18	3-0½	2	30-6	18	3-8½	22	17-0	22	26-4	#5	116	4-11	10	8	18-11	6	19-11	8	27-8	6	32-1	112	4-8	4	②51-0	6	②57-11	40	2-0
																														140	4-8	4	②58-10	6	②71-8	40	2-0
#5	168	6-2	#5	168	11-2	8½	23-0½	20	3-2	2	33-7½	20	3-10	24	19-5	24	29-4	#5	136	5-6	11	8	21-4	6	22-4	8	30-8	6	35-7	124	4-9	4	②57-6	6	②64-1	44	2-0
																														154	4-9	4	②66-10	6	②79-5	44	2-0

① Includes one 1'-6" Lap Splice
② Includes one 2"-2" Lap Splice
③ Does not include Lap Splice, when length of Bar exceeds 40'-0", add 2'-2" Lap Splice.
④ Includes One 2'-7" Lap Splice
⑤ Does not include Lap Splice, when Length of Bar Exceeds 40'-0", add 2'-7" Lap Splice
⑥ Includes Two 2'-8" Lap Splices

Ⓐ #6 Bars X to be ⅜"ø Smooth and Greased for 1'-0" of Length

APPROVED BY:
Dwight D. White
CHIEF ENGINEER
1-11-78
DATE

GENERAL NOTES:
CONSTRUCTION SPECIFICATIONS: Latest Approved La. Dept. of Highways Std. Specs.
DESIGN SPECIFICATIONS: A.A.S.H.O. 1961 as amended by Int. Spec. 1964
LIVE LOAD: HS 20-44, or Military Loading, whichever is Greater.
All Concrete to be Class "A"
All Exposed Corners to have ¾" chamfer, unless otherwise noted.
Reinforcement shall be Billet Steel A.S.T.M. A 615 or Rail Steel A.S.T.M. A 616 or Axle Steel A.S.T.M. A 617
For Detail of Joints See Std. Plan C.M.-98
Dimensions relating to Reinforcing Steel are to Bar Ctrs.
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.

CC·S·M·7-10·S·45°-1

STANDARD PLAN
MULTIPLE OPENINGS
REINFORCED CONCRETE BOX CULVERTS
STRAIGHT WINGS 45° CROSSING
2:1 SPILL SLOPE NORMAL TO CHANNEL
DATED ...MAR. 8, 4 ... 1962 7'x 7' TO 10'x 10'

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DESIGNED M. Yoshii	DETAILED M. Yoshii	TRACED [illegible]
CHECKED J. A. Hester	CHECKED H. C. Hansen	CHECKED H. C. Hansen

DATE	DESCRIPTION	BY
1-11-78	Rev. Weep Hole Note	W.T.J.
6-10-75	Rev. Slope Intercept	W.T.J.
6-8-72	Rev. General Notes for Steel	W.E.M.
5-2-67	Added hole Steel	W.E.M.
12-16-64	Rev. General Notes	W.E.M.
6-15-64	6'x 6' & 8'E. 10'x 10' Added	W.E.M.
4-8-64	DEFORMED DOWELS X'D SMOOTH	W.E.M.

REVISIONS