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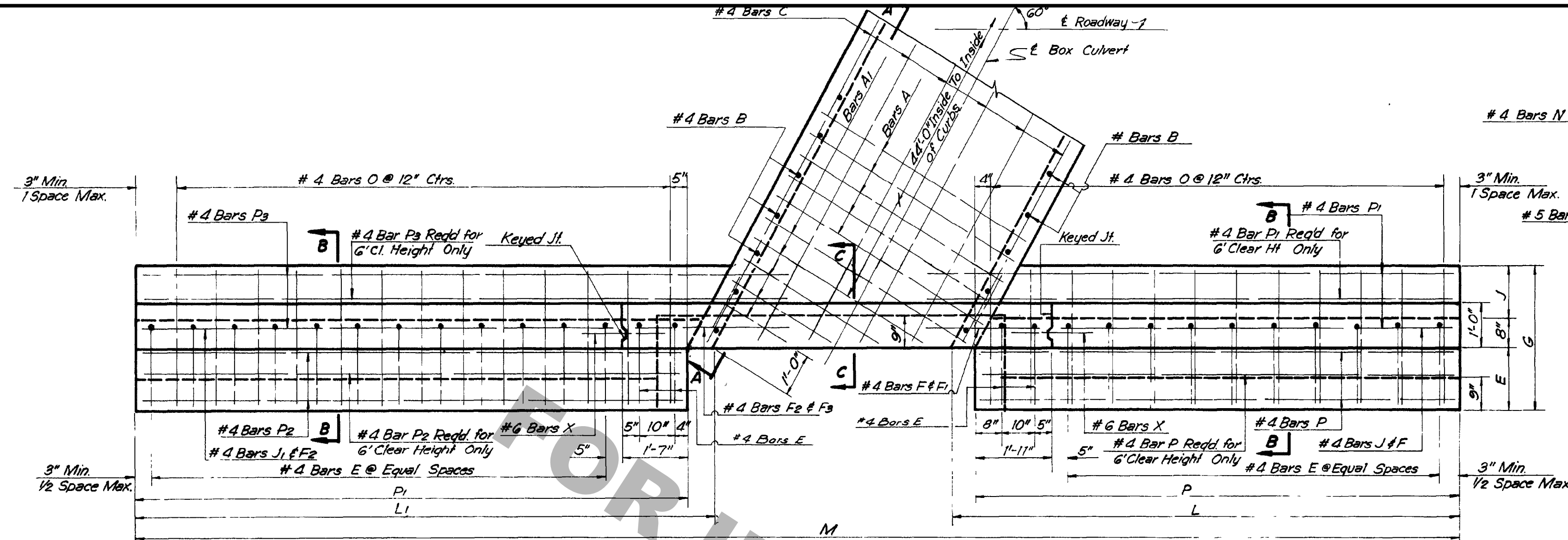
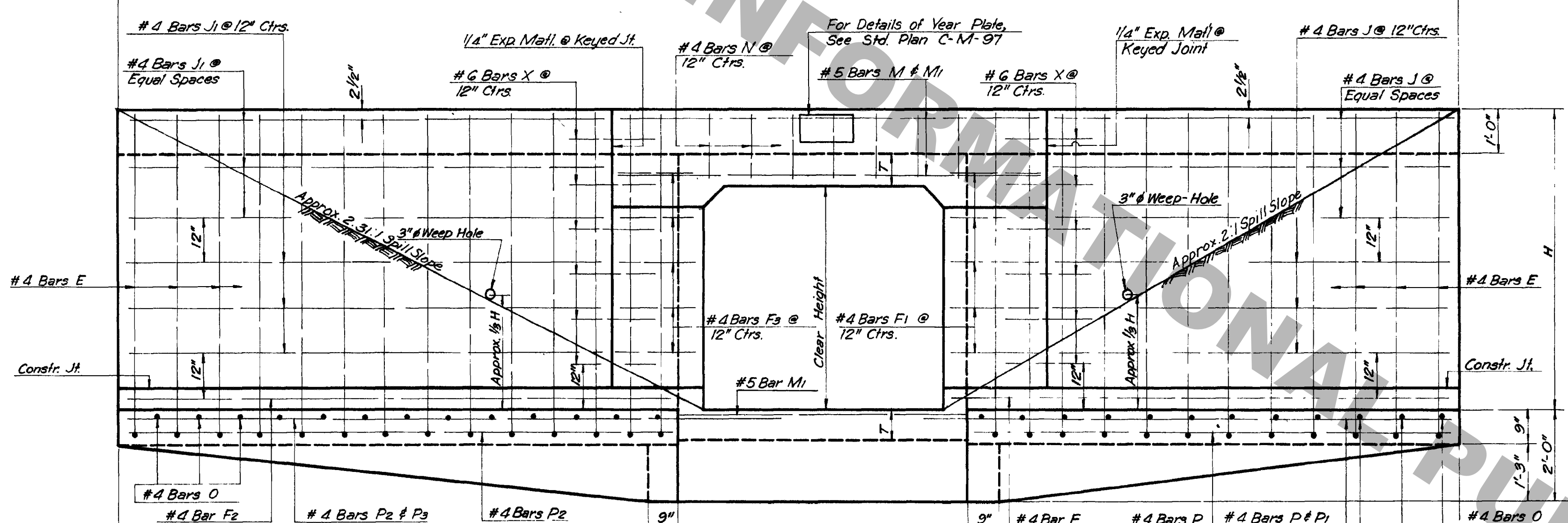
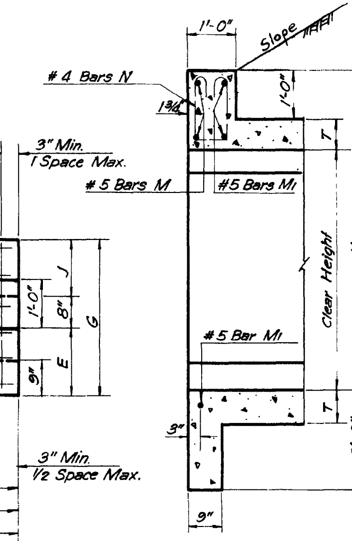
F.A.P.	STATE PROJECT	PARISH	SHEET NO.



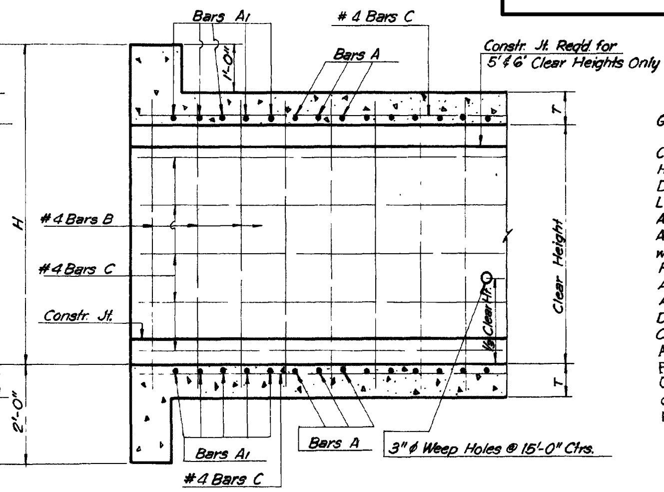
PLAN



END ELEVATION



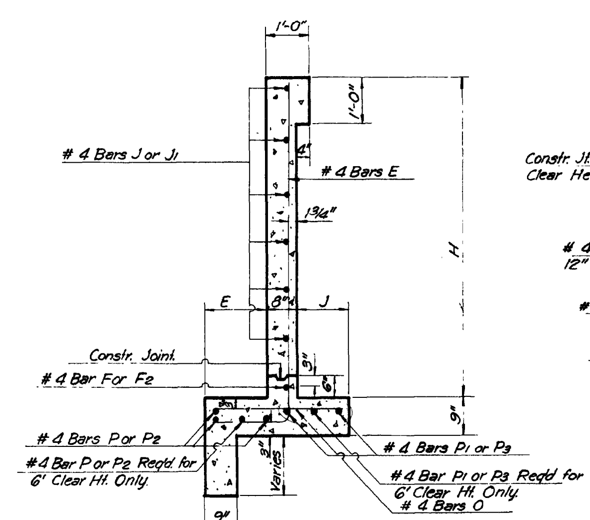
SECTION C-C



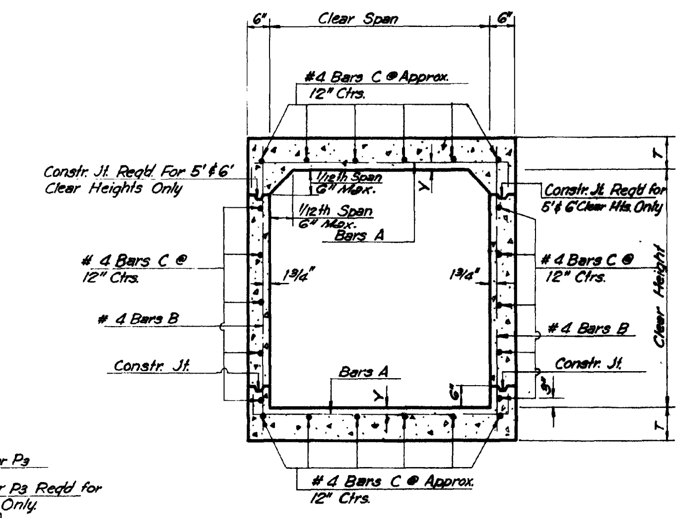
SECTION A-A

GENERAL NOTES:

Construction Specifications: Latest Approved La. Dept of Highways Standard Specifications.
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 3/4" Chamfer, Unless Otherwise Noted.
Reinforcement Shall Be Billet-Steel A.S.T.M. A615 or Rail-Steel A.S.T.M. A616 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.



SECTION B-B



SECTION THRU BARREL

C·C·S·S·4-7·R·S·60°·1

DIMENSIONS

Openings: Clear Span (FT.)	Openings: Clear Height (FT.)	Area (SQ.FT.)	Max. Fill: Slab (FT.)	Max. Fill: Wall (FT.)	Barrel: T (IN.)	Barrel: Y (IN.)	Wings and Curbs: E (FT-IN)	J (FT-IN)	G (FT-IN)	H (FT-IN)	L (FT-IN)	L1 (FT-IN)	P (FT-IN)	P1 (FT-IN)	M (FT-IN)
4	3	12	28	23	7½	1 13/16	1-0	0-8	2-4	4-7½	8-2 15/16	9-9 15/16	7-8	9-3	22-8 5/16
4	4	16	28	13	7½	1 13/16	1-3	0-10	2-9	5-7½	10-2 15/16	11-9 15/16	9-8	11-3	26-8 5/16
5	3	15	22	23	8	1 7/8	1-0	0-8	2-4	4-8	8-3 15/16	9-9 15/16	7-9	9-3	23-11 3/16
5	4	20	22	12	8	1 7/8	1-3	0-10	2-9	5-8	10-3 15/16	11-10 15/16	9-9	11-4	28-0 3/16
5	5	25	21	7	8	1 7/8	1-5	1-2	3-3	6-8	12-3 15/16	13-11 15/16	11-9	13-5	32-1 3/16
6	3	18	17	22	8½	1 7/8	1-0	0-8	2-4	4-8½	8-4 15/16	9-9 15/16	7-10	9-3	25-2
6	4	24	17	12	8½	1 7/8	1-3	0-10	2-9	5-8½	10-4 15/16	11-11 15/16	9-10	11-5	29-4
6	5	30	17	7	8½	1 7/8	1-5	1-2	3-3	6-8½	12-4 15/16	13-11 15/16	11-10	13-5	33-4
6	6	36	17	5	8½	1 7/8	1-7	1-7	3-10	7-8½	14-4 15/16	16-9 15/16	13-10	16-3	38-2
7	3	21	15	21	9	1 7/8	1-0	0-8	2-4	4-9	8-4 15/16	9-9 15/16	7-10	9-3	26-3 7/8
7	4	28	15	12	9	1 7/8	1-3	0-10	2-9	5-9	10-4 15/16	11-11 15/16	9-10	11-5	30-5 7/8
7	5	35	14	6	9	1 7/8	1-5	1-2	3-3	6-9	12-4 15/16	14-9 15/16	11-10	14-3	35-3 7/8
7	6	42	14	5	9	1 7/8	1-7	1-7	3-10	7-9	14-4 15/16	16-9 15/16	13-10	16-3	39-3 7/8

① Includes 1-1'-6" Lap Splice

BILL OF REINFORCING STEEL FOR 44'-0" CULVERT

BARREL REINFORCEMENT

Clear Span	Clear Height	Bars A: Size	Bars A: No.	Bars A: Lgth (FT-IN)	Bars A: Spac (IN)	Bars A1: Size	Bars A1: No	Bars A1: Short Bar (FT-IN)	Bars A1: Var (IN)	Bars A1: Long Bar (FT-IN)	Bars A1: Spac (IN)	#4 Bars B: No.	#4 Bars B: Lgth (FT-IN)	#4 Bars B: Spac (IN)	#4 Bars C: No.	#4 Bars C: Lgth ① (FT-IN)
4	3	#5	232	5-6	4½	#5	20	2-2	7.7500	4-9	4½	92	3-11	12	16	47-5
4	4	#5	232	5-6	4½	#5	20	2-2	7.7500	4-9	4½	92	4-11	12	18	47-5
5	3	#6	188	6-6	5½	#6	20	2-2	9.5000	5-4	5½	92	4-0	12	18	47-5
5	4	#6	188	6-6	5½	#6	20	2-2	9.5000	5-4	5½	92	5-0	12	20	47-5
5	5	#6	188	6-6	5½	#6	20	2-2	9.5000	5-4	5½	92	6-0	12	22	47-5
6	3	#6	184	7-6	5½	#6	28	2-2	9.5000	6-11	5½	92	4-1	12	20	47-5
6	4	#6	184	7-6	5½	#6	28	2-2	9.5.000	6-11	5½	92	5-1	12	22	47-5
6	5	#6	184	7-6	5½	#6	28	2-2	9.5.000	6-11	5½	92	6-1	12	24	47-5
6	6	#6	184	7-6	5½	#6	28	2-2	9.5000	6-11	5½	112	7-1	10	26	47-5
7	3	#6	200	8-6	5	#6	36	2-2	8.6250	7-11	5	92	4-2	12	22	47-5
7	4	#6	200	8-6	5	#6	36	2-2	8.6250	7-11	5	92	5-2	12	24	47-5
7	5	#6	200	8-6	5	#6	36	2-2	8.6250	7-11	5	92	6-2	12	26	47-5
7	6	#6	200	8-6	5	#6	36	2-2	8.6250	7-11	5	112	7-2	10	28	47-5

WINGS AND CURB REINFORCEMENT (No. / Lgth FT-IN)

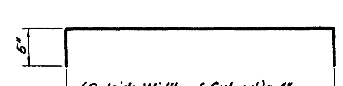
Clear Span	Clear Height	#4 Bars E: No.	E: Lgth	E: Spac (IN)	#4 Bars F: No.	F: Lgth	#4 Bars F1: No.	F1: Lgth	#4 Bars F2: No.	F2: Lgth	#4 Bars F3: No.	F3: Lgth	#4 Bars J: No.	J: Lgth	#4 Bars J1: No.	J1: Lgth	#4 Bars N: No.	N: Lgth
4	3	36	6-2½	12	2	8-10	6	3-0	2	11-0	6	3-3	8	5-5	8	7-4	10	4-4
4	4	44	7-5½	12	2	10-10	8	3-0	2	13-0	8	3-3	10	7-5	10	9-4	10	4-4
5	3	36	6-3	12	2	8-11	6	3-0	2	11-0	6	3-3	8	5-6	8	7-4	14	4-5
5	4	44	7-6	12	2	10-11	8	3-0	2	13-1	8	3-3	10	7-6	10	9-5	14	4-5
5	5	52	8-8	12	2	12-11	10	3-0	2	15-2	10	3-3	12	9-6	12	11-6	14	4-5
6	3	36	6-3½	12	2	9-0	6	3-0	2	11-0	6	3-3	8	5-7	8	7-4	16	4-6
6	4	44	7-6½	12	2	11-0	8	3-0	2	13-2	8	3-3	10	7-7	10	9-6	16	4-6
6	5	52	8-8½	12	2	13-0	10	3-0	2	15-2	10	3-3	12	9-7	12	11-6	16	4-6
6	6	62	9-10½	12	2	15-0	12	3-0	2	18-0	12	3-3	14	11-7	14	14-4	16	4-6
7	3	36	6-4	12	2	9-0	6	3-0	2	11-0	6	3-3	8	5-7	8	7-4	18	4-7
7	4	44	7-7	12	2	11-0	8	3-0	2	13-2	8	3-3	10	7-7	10	9-6	18	4-7
7	5	54	8-9	12	2	13-0	10	3-0	2	16-0	10	3-3	12	9-7	12	12-4	18	4-7
7	6	62	9-11	12	2	15-0	12	3-0	2	18-0	12	3-3	14	11-7	14	14-4	18	4-7

Clear Span	Clear Height	#4 Bars O: No.	O: Lgth	#4 Bars P: No.	P: Lgth	#4 Bars P1: No.	P1: Lgth	#4 Bars P2: No.	P2: Lgth	#4 Bars P3: No.	P3: Lgth	#5 Bars M: No.	M: Lgth	#5 Bars M1: No.	M1: Lgth	#6 Bars X (A): No.	X: Lgth
4	3	34	1-11	6	7-4	4	8-9	6	8-11	4	11-2	4	8-9	6	5-4	16	2-0
4	4	42	2-4	6	9-4	4	10-9	6	10-11	4	13-3	4	8-9	6	5-4	20	2-0
5	3	34	1-11	6	7-5	4	8-10	6	8-11	4	11-2	4	9-10	6	6-6	16	2-0
5	4	42	2-4	6	9-5	4	10-10	6	11-0	4	13-4	4	9-10	6	6-6	20	2-0
5	5	50	2-10	6	11-5	4	12-10	6	13-1	4	15-8	4	9-10	6	6-6	24	2-0
6	3	34	1-11	6	7-6	4	8-11	6	8-11	4	11-2	4	11-0	6	7-8	16	2-0
6	4	42	2-4	6	9-6	4	10-11	6	11-1	4	13-5	4	11-0	6	7-8	20	2-0
6	5	50	2-10	6	11-6	4	12-11	6	13-1	4	15-8	4	11-0	6	7-8	24	2-0
6	6	60	3-5	8	13-6	6	14-11	8	15-11	6	18-9	4	11-0	6	7-8	28	2-0
7	3	34	1-11	6	7-6	4	8-11	6	8-11	4	11-2	4	12-2	6	8-10	16	2-0
7	4	42	2-4	6	9-6	4	10-11	6	11-1	4	13-5	4	12-2	6	8-10	20	2-0
7	5	52	2-10	6	11-6	4	12-11	6	13-11	4	16-6	4	12-2	6	8-10	24	2-0
7	6	60	3-5	8	13-6	6	14-11	8	15-11	6	18-9	4	12-2	6	8-10	28	2-0

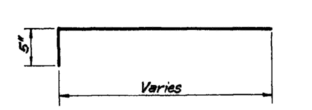
QUANTITIES

Openings: Clear Span (FT-IN)	Openings: Clear Height (FT-IN)	Per Linear Ft. of Barrel: Steel (LBS.)	Per Linear Ft. of Barrel: Conc. (CU. YDS.)	44'-0" Culvert: Steel (LBS.)	44'-0" Culvert: Conc. (CU. YDS.)
4	3	46.52	0.3467	2729	24.18
4	4	49.19	0.3837	3042	29.11
5	3	59.97	0.4138	3368	27.51
5	4	62.64	0.4509	3683	32.51
5	5	65.31	0.4879	4086	38.20
6	3	67.97	0.4877	3773	31.15
6	4	70.64	0.5247	4089	36.80
6	5	73.32	0.5617	4432	41.86
6	6	77.88	0.5988	5018	48.82
7	3	81.54	0.5648	4424	34.91
7	4	84.22	0.6019	4741	39.97
7	5	86.89	0.6389	5112	46.11
7	6	91.48	0.6759	5671	52.61

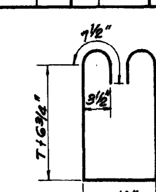
(A) #6 Bars X to be 3/4"ø Smooth and Greased for 1'-0" of Length



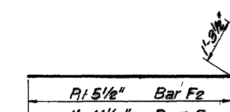
BARS A
(3 3/4" Diam. Pin - #5 Bars)
(4 1/2" Diam. Pin - #6 Bars)



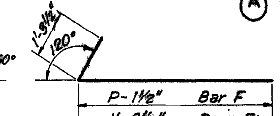
BARS A1
(3 3/4" Diam. Pin - #5 Bars)
(4 1/2" Diam. Pin - #6 Bars)



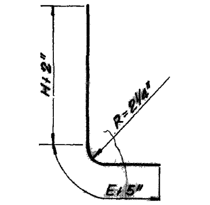
4 BARS N
(3" Diam. Pin)



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



4 BARS F & F1
(3" Diam. Pin)



#4 BARS E

REVISIONS

DATE	DESCRIPTION	BY
1-11-78	Rev. Weep Hole Note	W.T.J.
2-20-75	Rev. Slope Intercept	W.T.J.
6-8-72	Rev. General Notes For Steel	W.E.M.
4-27-67	Added Axle Steel	W.E.M.
12-14-66	Rev. 4' & 5' Spans to Military Loading & Deleted 3' Span	W.E.M.
4-9-64	DEFORMED DOWELS 'X' TO SMOOTH	W.E.M.
8-16-62	3', 4', 6' & 7' Spans Added	M.Y.Y. J.H.A.

APPROVED BY: [signature] CHIEF ENGINEER
1-11-78 DATE

STANDARD PLAN
REINF. CONCRETE BOX CULVERTS
STRAIGHT WINGS — 60° CROSSING
2:1 SPILL SLOPE NORMAL TO CHANNEL
3' THRU 6' HEIGHTS — 4' THRU 7' SPANS
DATED JULY 24, 1962

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DESIGNED M. YOSHII	DETAILED J. H. ALLEN	TRACED B.C. MOORE
CHECKED D. HESTER	CHECKED M. YOSHII	CHECKED M. YOSHII
IN CHARGE OF		

FOR INFORMATIONAL PURPOSES ONLY