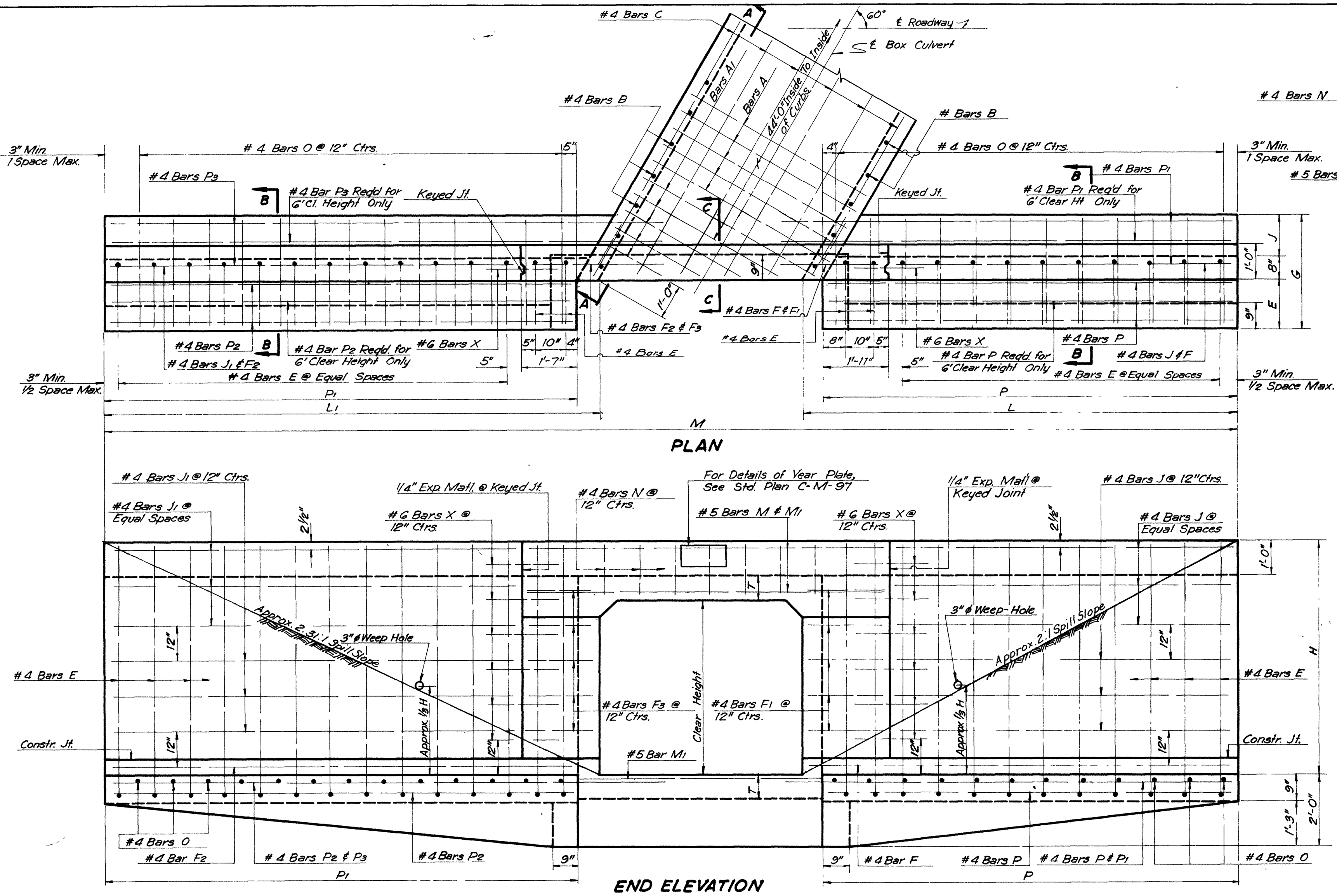
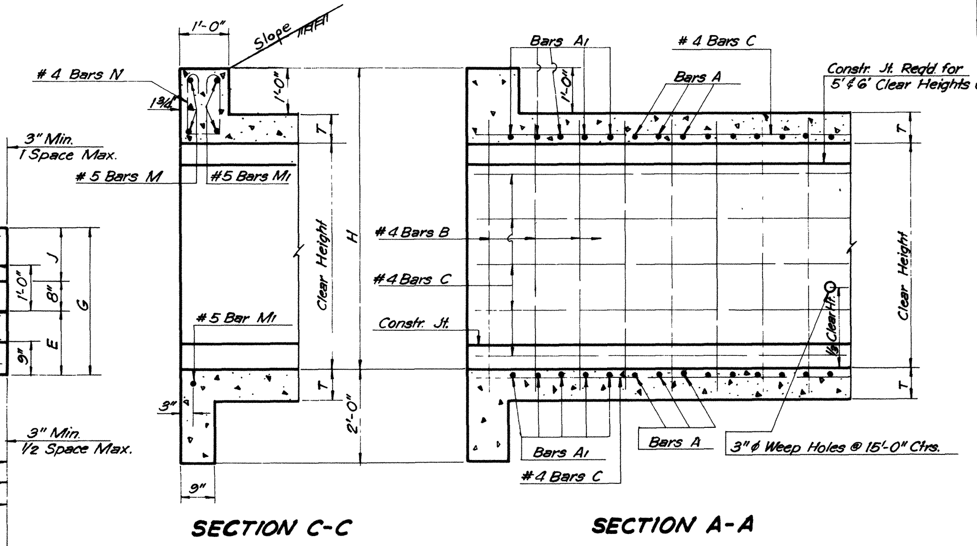
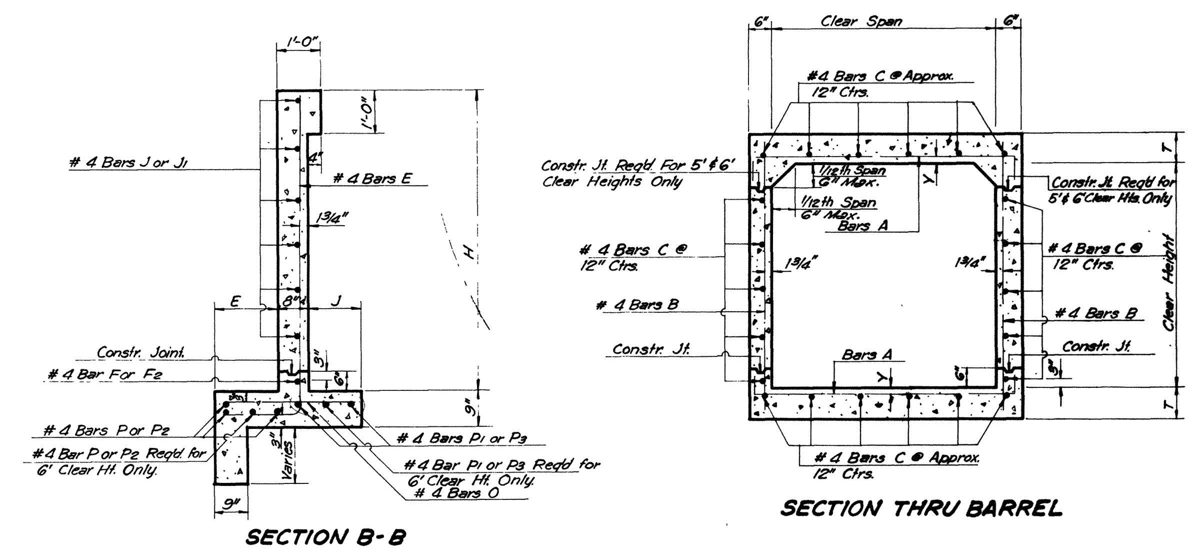






GENERAL NOTES:

Construction Specifications: Latest Approved La. Dept of Highways Standard Specifications.
Design Specifications: AASHO 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.

DIMENSIONS

Clear Span (FT.)	Clear Height (FT.)	Area (SQ.FT.)	Max. Fill Slab (FT.)	Max. Fill Wall (FT.)	Barrel T (IN.)	Barrel Y (IN.)	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	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	23-1 3/16
	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	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
	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
	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	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
	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
	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
	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	#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
	4	#6	188	6-6	5½	#6	20	2-2	9.5000	5-4	5½	92	5-0	12	20	47-5
	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
	4	#6	184	7-6	5½	#6	28	2-2	9.5.000	6-11	5½	92	5-1	12	22	47-5
	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	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
	4	#6	200	8-6	5	#6	36	2-2	8.6250	7-11	5	92	5-2	12	24	47-5
	5	#6	200	8-6	5	#6	36	2-2	8.6250	7-11	5	92	6-2	12	26	47-5
	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

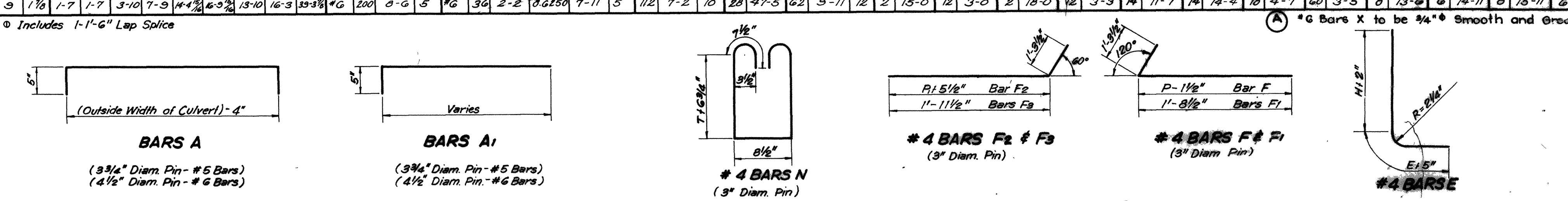
Clear Span	Clear Height	#4 Bars E No	#4 Bars E Lgth (FT-IN)	#4 Bars E Spac (IN)	#4 Bars F No	#4 Bars F Lgth (FT-IN)	#4 Bars F1 No	#4 Bars F1 Lgth (FT-IN)	#4 Bars F2 No	#4 Bars F2 Lgth (FT-IN)	#4 Bars F3 No	#4 Bars F3 Lgth (FT-IN)	#4 Bars J No	#4 Bars J Lgth (FT-IN)	#4 Bars J1 No	#4 Bars J1 Lgth (FT-IN)	#4 Bars N No	#4 Bars N Lgth (FT-IN)	#4 Bars O No	#4 Bars O Lgth (FT-IN)
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	34	1-11
	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	42	2-4
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	34	1-11
	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	42	2-4
	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	50	2-10
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	34	1-11
	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	42	2-4
	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	50	2-10
	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	60	3-5
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	34	1-11
	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	42	2-4
	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	52	2-10
	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	60	3-5

Clear Span	Clear Height	#4 Bars P No	#4 Bars P Lgth (FT-IN)	#4 Bars P1 No	#4 Bars P1 Lgth (FT-IN)	#4 Bars P2 No	#4 Bars P2 Lgth (FT-IN)	#4 Bars P3 No	#4 Bars P3 Lgth (FT-IN)	#5 Bars M No	#5 Bars M Lgth (FT-IN)	#5 Bars M1 No	#5 Bars M1 Lgth (FT-IN)	#6 Bars X Ⓐ No	#6 Bars X Lgth (FT-IN)
4	3	6	7-4	4	8-9	6	8-11	4	11-2	4	8-9	6	5-4	16	2-0
	4	6	9-4	4	10-9	6	10-11	4	13-3	4	8-9	6	5-4	20	2-0
5	3	6	7-5	4	8-10	6	8-11	4	11-2	4	9-10	6	6-6	16	2-0
	4	6	9-5	4	10-10	6	11-0	4	13-4	4	9-10	6	6-6	20	2-0
	5	6	11-5	4	12-10	6	13-1	4	15-8	4	9-10	6	6-6	24	2-0
6	3	6	7-6	4	8-11	6	8-11	4	11-2	4	11-0	6	7-8	16	2-0
	4	6	9-6	4	10-11	6	11-1	4	13-5	4	11-0	6	7-8	20	2-0
	5	6	11-6	4	12-11	6	13-1	4	15-8	4	11-0	6	7-8	24	2-0
	6	8	13-6	6	14-11	8	15-11	6	18-9	4	11-0	6	7-8	28	2-0
7	3	6	7-6	4	8-11	6	8-11	4	11-2	4	12-2	6	8-10	16	2-0
	4	6	9-6	4	10-11	6	11-1	4	13-5	4	12-2	6	8-10	20	2-0
	5	6	11-6	4	12-11	6	13-11	4	16-6	4	12-2	6	8-10	24	2-0
	6	8	13-6	6	14-11	8	15-11	6	18-9	4	12-2	6	8-10	28	2-0

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

QUANTITIES

Clear Span (FT-IN)	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	49.19	0.3837	3042	29.11
5	3	59.97	0.4138	3368	27.51
	4	62.64	0.4509	3683	32.51
	5	65.31	0.4879	4026	38.20
6	3	67.97	0.4877	3773	31.15
	4	70.64	0.5247	4089	36.20
	5	73.32	0.5617	4432	41.86
	6	77.88	0.5988	5018	48.82
7	3	81.54	0.5648	4424	34.91
	4	84.22	0.6019	4741	39.97
	5	86.89	0.6389	5112	46.11
	6	91.48	0.6759	5671	52.61



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.
4-3-64	DEFORMED DOWELS 'X' TO SMOOTH	W.E.M.
8-16-62	3', 4', 6' & 7' Spans Added	M.Y.Y. J.H.A.

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 Q. HESTER | CHECKED M. YOSHII | CHECKED M. YOSHII
IN CHARGE OF

APPROVED BY:

Original Signed by Chief Engineer

CHIEF ENGINEER DATE

STATE PROJECT	PARISH	SHEET NO.

C·C·S·S·4-7·R·S·60°·1

C·C·S·S·4-7·R·S·60°·1