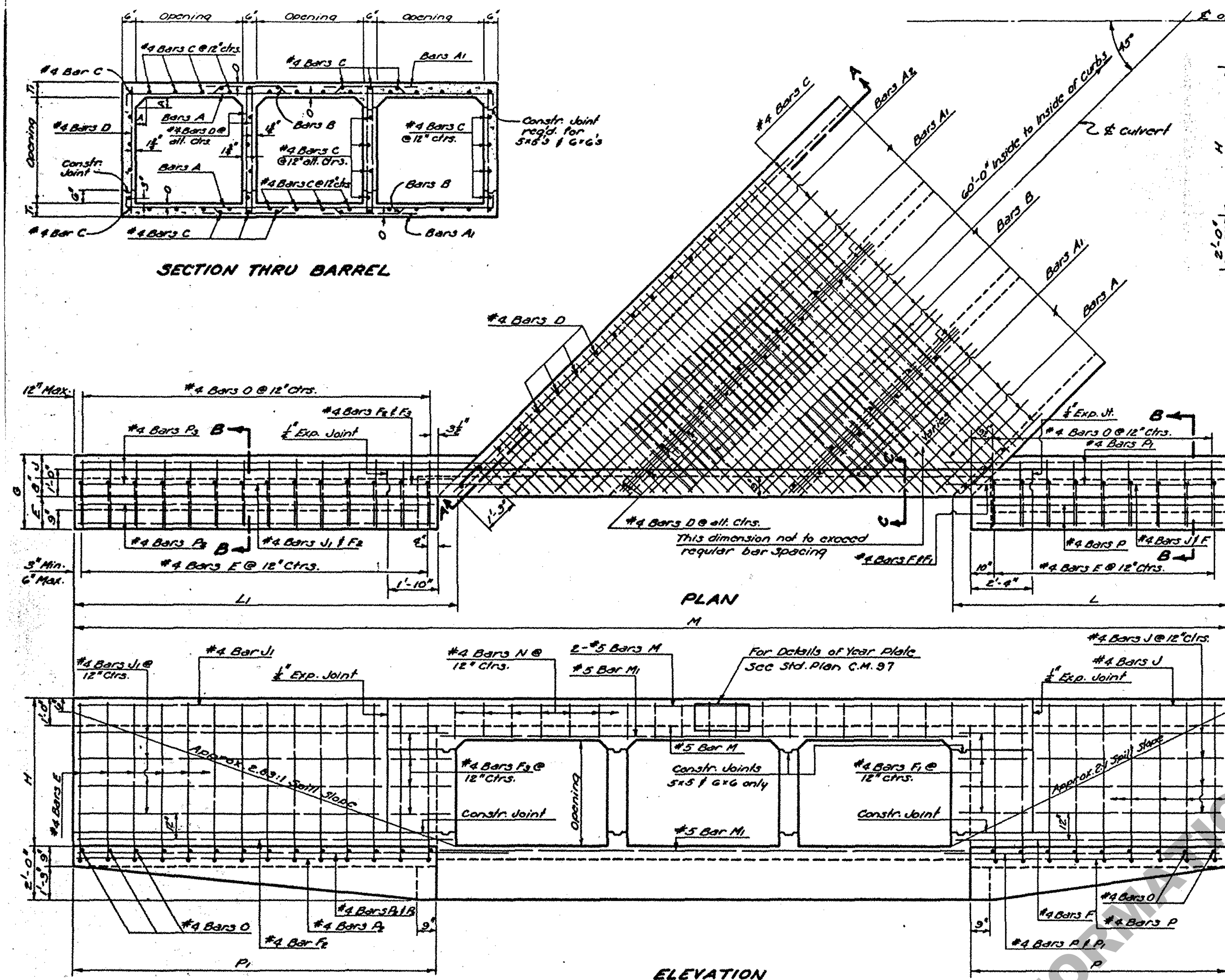

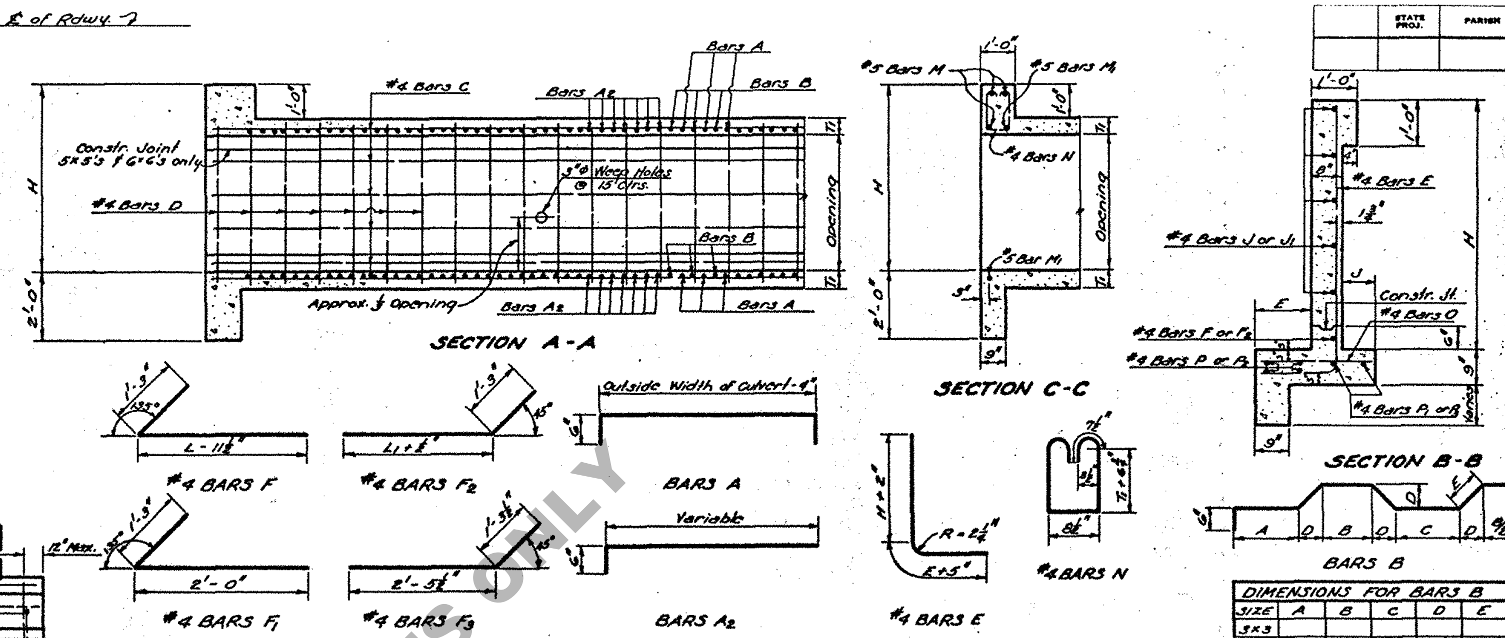

DIMENSIONS FOR BARS B

SIZE	A	B	C	D	E
3×3					
4×4	3'-2 3/4"	2'-3 1/2"	1'-9 1/2"	2 1/2"	3 1/2"
5×5	3'-11 9/16"	2'-9 3/8"	2'-3 5/8"	2 3/8"	4 5/8"
6×6	4'-8 5/16"	3'-2 5/8"	2'-8 3/8"	3 3/8"	4 3/8"

DIMENSIONS																		QUANTITIES				OPENINGS	
OPENINGS			MAX. FILL		BARREL			WINGS AND CURB										PER LIN. FT. OF BARREL		60'-0" CULVERT			
SIZE FEET	Nº	AREA SQ. FT.	SLAB FT.	WALL FT.	T_1 In.	A In.	O In.	E Ft.-In.	U Ft.-In.	G Ft.-In.	H Ft.-In.	L Ft.-In.	L_1 Ft.-In.	P Ft.-In.	P_1 Ft.-In.	M Ft.-In.	STEEL LBS.	CONCRETE CU. YDS.	STEEL LBS.	CONCRETE CU. YDS.	Nº	SIZE FEET
3×3	2	18																			2	3×3
	3	27																			3	
	4	36																			4	
	5	45																			5	
	6	54																			6	
4×4	2	32	18	14	6	4	1 3/4	1-3	0-9	2-8	5-6	10-0 1/2	14-3 1/2	9-4	13-7	36-4 1/4	82.83	0.5823	6121	49.31	2	4×4
	3	48	21													42-8 5/8	123.36	0.8272	8837	66.29	3	
	4	64														49-1	163.88	1.0720	11609	82.68	4	
	5	80														55-5 3/8	204.41	1.3169	14439	99.06	5	
	6	96														61-9 11/16	244.94	1.5617	17363	115.45	6	
5×5	2	50	14	9	6 1/2	5	1 13/16	1-5	1-1	3-2	6-6 1/2	12-0 1/2	17-3 1/2	11-4	16-7	44-2 3/16	107.29	0.7520	7977	65.61	2	5×5
	3	75	18													51-11 1/2	160.53	1.0717	11584	86.90	3	
	4	100														59-8 7/8	213.77	1.3914	15295	108.19	4	
	5	125														67-6 3/16	267.00	1.7111	19114	129.49	5	
	6	150														75-3 9/16	320.24	2.0308	23039	150.78	6	
6×6	2	72	11	8	7	6	1 13/16	1-7	1-5	3-8	7-7	14-0 1/2	20-3 1/2	13-4	19-7	52-0 1/8	136.60	0.9352	10145	82.94	2	6×6
	3	108	14													61-2 7/16	203.92	1.3364	14728	109.54	3	
	4	144														70-4 3/4	271.25	1.7377	19407	136.17	4	
	5	180														79-7 1/16	338.59	2.1389	24317	162.77	5	
	6	216														88-9 3/8	410.50	2.5401	29462	183.40	6	

BILL OF REINFORCING STEEL FOR 60'-0" CULVERT

BARREL REINFORCEMENT

SIZE FEET	Nº	Bars A Size	Bars A Nº	Bars A Lgth Ft.-In.	Bars A Spac. In.	Bars A_1 Size	Bars A_1 Nº	Bars A_1 Lgth. Ft.-In.	Bars A_1 Spac. In.	Bars A_2 Size	Bars A_2 Nº	Short Bar Ft.-In.	Var. In.	Long Bar Ft.-In.	Spac. In.	Bars B Size	Bars B Nº	Bars B Lgth. Ft.-In.	Bars B Spac. In.	#4 Bars C Nº	#4 Bars C Lgth.① Ft.-In.	#4 Bars D Nº	#4 Bars D Lgth. Ft.-In.	#4 Bars D Spac. In.
3×3	2																							
	3																							
	4																							
	5																							
	6																							
4×4	2	#4	160	10-2	8	#4	192	3-6	4 & 8	#4	96	1-10	4	9-6	4	#4	160	10-4	8	38	63-10	189	4-8	12
	3	#4	146	14-8	8	#4	412	3-6	4 & 8	#4	148	1-10	4	13-10	4	#4	148	15-0	8	56	63-10	252	4-8	12
	4	#4	132	19-2	8	#4	652	3-6	4 & 8	#4	204	1-10	4	18-6	4	#4	134	19-8	8	74	63-10	315	4-8	12
	5	#4	120	23-8	8	#4	928	3-6	4 & 8	#4	256	1-10	4	22-10	4	#4	120	24-4	8	92	63-10	378	4-8	12
	6	#4	106	28-2	8	#4	1226	3-6	4 & 8	#4	312	1-10	4	27-6	4	#4	106	29-0	8	110	63-10	441	4-8	12
5×5	2	#5	112	12-2	11	#5	144	4-4	5½ & 11	#5	88	1-10	5½	11-5½	5½	#5	112	12-4½	11	45	63-10	189	5-9	12
	3	#5	100	17-8	11	#5	312	4-4	5½ & 11	#5	136	1-10	5½	16-11½	5½	#5	100	18-1	11	66	63-10	252	5-9	12
	4	#5	88	23-2	11	#5	504	4-4	5½ & 11	#5	184	1-10	5½	22-5½	5½	#5	88	23-3½	11	87	63-10	315	5-9	12
	5	#5	76	28-8	11	#5	720	4-4	5½ & 11	#5	232	1-10	5½	27-11½	5½	#5	76	29-6	11	108	63-10	378	5-9	12
	6	#5	64	34-2	11	#5	960	4-4	5½ & 11	#5	280	1-10	5½	33-5½	5½	#5	64	35-2½	11	129	63-10	491	5-9	12
6×6	2	#5	118	14-2	10	#5	158	4-10	5 & 10	#5	116	1-10	5	13-6	5	#5	118	14-4 3/4	10	52	63-10	252	6-10	9
	3	#5	104	20-8	10	#5	348	4-10	5 & 10	#5	176	1-10	5	19-9	5	#5	104	21-1½	10	76	63-10	336	6-10	9
	4	#5	86	27-2	10	#5	564	4-10	5 & 10	#5	240	1-10	5	26-5	5	#5	88	27-10½	10	100	63-10	420	6-10	9
	5	#5	70	33-8	10	#5	820	4-10	5 & 10	#5	304	1-10	5	33-1	5	#5	72	34-7	10	124	63-10	504	6-10	9
	6	#5	56	②40-2	10	#5	1100	4-10	5 & 10	#5	364	1-10	5	39-4	5	#5	58	②43-1¼	10	148	63-10	588	6-10	9

CURB AND WING REINFORCEMENT

SIZE FEET	Nº	#4 Bars E Nº	#4 Bars E Lgth. Ft.-In.	#4 Bars F Nº	#4 Bars F Lgth. Ft.-In.	#4 Bars F_1 Nº	#4 Bars F_1 Lgth. Ft.-In.	#4 Bars F_2 Nº	#4 Bars F_2 Lgth. Ft.-In.	#4 Bars F_3 Nº	#4 Bars F_3 Lgth. Ft.-In.	#4 Bars J Nº	#4 Bars J Lgth. Ft.-In.	#4 Bars J_1 Nº	#4 Bars J_1 Lgth. Ft.-In.	#4 Bars O Nº	#4 Bars O Lgth. Ft.-In.	#4 Bars P Nº	#4 Bars P Lgth. Ft.-In.	#4 Bars P_1 Nº	#4 Bars P_1 Lgth. Ft.-In.	#4 Bars P_2 Nº	#4 Bars P_2 Lgth. Ft.-In.	#4 Bars P_3 Nº	#4 Bars P_3 Lgth. Ft.-In.	#4 Bars N Nº	#4 Bars N Lgth. Ft.-In.	#5 Bars M Nº	#5 Bars M Lgth. Ft.-In.	#5 Bars M_1 Nº	#5 Bars M_1 Lgth. Ft.-In.
3×3	2																														
	3																														
	4																														
	5																														
	6																														
4×4	2	46	7-4	2	10-4	8	3-3	2	15-7	8	3-9	10	6-8	10	11-5	46	2-3	8	9-0	4	10-2	8	13-3	4	16-1	26	4-1	6	17-1	4	13-0
	3																									40	4-1	6	23-5	4	19-4
	4																									52	4-1	6	29-9	4	25-8
	5																									64	4-1	6	36-2	4	32-1
	6																									78	4-1	6	②44-4	4	38-5
5×5	2	56	8-6½	2	12-4	10	3-3	2	18-7	10	3-9	12	8-8	12	14-5	56	2-9	8	11-0	4	12-2	8	16-3	4	19-5	32	4-2	6	19-10	4	15-9
	3																									48	4-2	6	27-8	4	23-7
	4																									64	4-2	6	35-5	4	31-4
	5																									78	4-2	6	②45-0	4	39-1
	6																									94	4-2	6	②52-10	4	②48-9
6×6	2	66	9-9	2	14-4	12	3-3	2	21-7	12	3-9	14	10-8	14	17-5	66	3-3	8	13-0	4	14-2	8	19-3	4	22-9	38	4-3	6	22-9	4	18-7
	3																									56	4-3	6	31-11	4	27-9
	4																									74	4-3	6	②42-11	4	37-0
	5																									94	4-3	6	②52-2	4	②48-0
	6																									112	4-3	6	②61-4	4	②57-2

① Includes One 1'-6" Lap Splice.

② Includes One 1'-10" Lap Splice.

GENERAL NOTES:
CONSTRUCTION SPECIFICATIONS: Latest approved La. Dept. of Highway Standard Specifications.
DESIGN SPECIFICATIONS: A.A.S.H.O. 1957 as amended to Dec. 31, 1960.
Live Load: H20-S16-44.
All Concrete to be Class "A".
All exposed corners to have ¾" Chamfer, unless otherwise noted.
Reinforcement shall be Intermediate or Hard Grade A.S.T.M. A15, or Rail Steel A.S.T.M. A16, conforming to A.S.T.M. A305.
Dimensions relating to reinforcing steel are to bar centers.
Place about 2 cu. ft. of large size gravel or loose rock behind and around each weep-hole.
For details of expansion and construction joints, see Standard Plan C.M. 49.

VOID
SEE REVISED SHEET CC-143-20
12/11/61
R.J.M.

DATE	DESCRIPTION	BY
7-27-61	Mult. 6×6 Added	deBarros

REVISIONS

STANDARD PLAN
MULTIPLE OPENINGS
REINF. CONCRETE BOX CULVERTS
STRAIGHT WINGS 45° CROSSING
3'x3' 4'x4' 5'x5' 6'x6'
DATED June 28, 1961

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DESIGNED L.V. deBarros | DETAILED deBarros | TRACED E. Hinkley
CHECKED G.M. M. Manti | CHECKED M. Yoshii | CHECKED deBarros

BRIDGE DESIGN SECTION