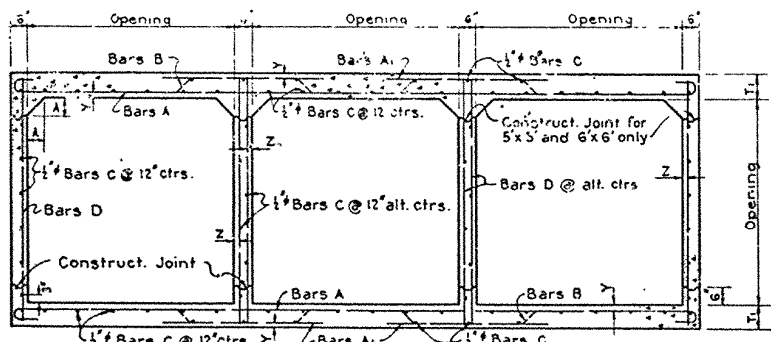
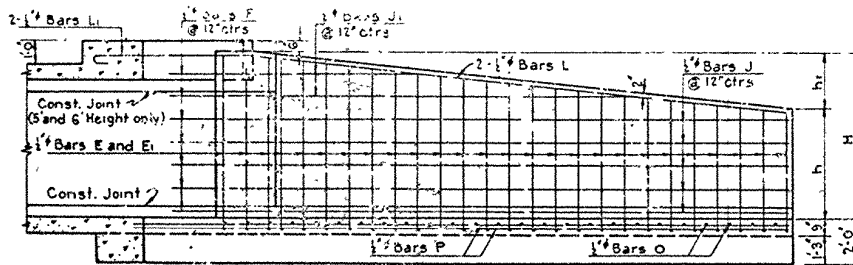




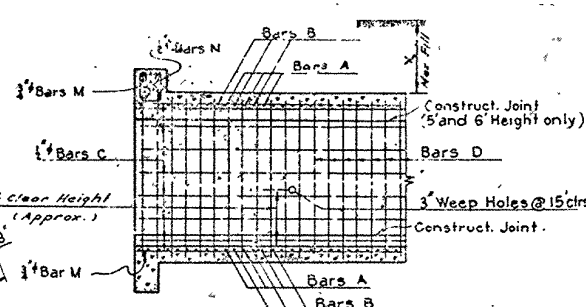
SECTION THRU BARREL



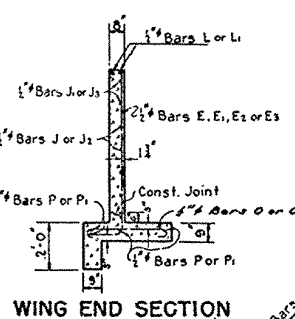
SECTION B-B



SECTION D-D



SECTION C-C



WING END SECTION

SECTION A-A

DIMENSIONS																										QUANTITIES				OPENINGS
OPENINGS		BARREL		WINGS AND CURBS																		Per Lin. Ft. of Barrel		For 44' Culvert						
Size	No.	Area	Tr.	A	Y	Z	h	h ₁	h ₂	L	L ₁	F	J	K	N	N ₁	R	R ₁	M	Steel	Concrete	Feet	Concrete	No.	Size					
Feet		Sq. Ft.	In.	In.	In.	In.	Ft. In.	In.	Ft. In.	Ft. In.	Ft. In.	In.	Ft. In.	Ft. In.	In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Lbs.	Cu. Yds.	Lbs.	Cu. Yds.		Feet					
3'x3'	2	12	41	25	64	3	1 1/2	1 1/2	2-0 1/2	1-1 1/2	4-0 1/2	1-1 1/2	5-10	9	0-10	0-10	0-10	0-10	0-10	18-7 1/2	67.08	0.4722	51.01	33.76	2	3'x3'				
	3	17																		17-7 1/2	100.09	0.6706	74.09	33.43	3					
	4	25																		28-6 1/2	133.01	0.8689	97.27	67.10	4					
	5	36																		37-5 1/2	165.93	1.0672	121.15	80.74	5					
	6	54																		37-5 1/2	138.27	1.2655	144.98	94.63	6					
4'x4'	2	16	20	21	7 1/2	4	1 7/8	1 7/8	3-5	1-8 1/2	5-1 1/2	17-10 1/2	7-4 1/2	9	1-6	0-10	4 1/2	7 1/2	2'-0 1/2	5-6 1/2	15-5 1/2	91.70	0.6703	69.92	56.73	2	4'x4'			
	3	24																		21-10	135.45	0.9568	100.53	76.33	3					
	4	36																		28-2 1/2	179.20	1.2433	131.66	95.93	4					
	5	50																		34-6 1/2	222.95	1.5298	163.86	115.52	5					
	6	72																		40-11 1/2	266.10	1.8164	196.11	135.12	6					
5'x5'	2	20	20	19	8	5	1 7/8	1 7/8	4-1 1/2	2-0 1/2	6-2	21-5 1/2	8-10 1/2	9	1-10	1-0	5'	9 1/2	2-5	6-4	18-3 1/2	122.46	0.8586	92.94	73.41	2	5'x5'			
	3	30																		26-0 1/2	183.13	1.2292	133.96	98.57	3					
	4	40																		33-18 1/2	237.80	1.5998	174.93	123.46	4					
	5	50																		41-7 1/2	295.44	1.9705	217.20	149.20	5					
	6	72																		49-4 1/2	353.14	2.3411	260.38	174.46	6					
6'x6'	2	24	15	16	8 1/2	6	1 7/8	1 7/8	4-9 1/2	2-4 1/2	7-2 1/2	25-1 1/2	10-4 1/2	11	2-3	1-4	6 1/2	0-11 1/2	3-2 1/2	7-4	21-1 1/2	151.06	1.0607	116.68	57.35	2	6'x6'			
	3	36																		30-3 1/2	226.65	1.5216	167.67	121.58	3					
	4	48																		39-6 1/2	299.00	1.9830	220.17	151.70	4					
	5	60																		46-8 1/2	371.33	2.4444	273.93	196.06	5					
	6	72																		51-10 1/2	444.06	2.9058	327.89	217.88	6					

BILL OF STEEL FOR 44' CULVERTS (LENGTH 1 TO 1 OF RDWY.)

OPENINGS		BARREL REINFORCEMENT																																WING AND CURB REINFORCEMENT																OPENINGS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Size Feet	No.	BARS A				BARS A ₁				BARS A ₂				BARS B				BARS C				BARS D				BARS E				BARS E ₁				BARS E ₂				BARS E ₃				BARS F				BARS J				BARS J ₁				BARS J ₂				BARS J ₃				BARS L				BARS L ₁				BARS L ₂				BARS L ₃				BARS O				BARS O ₁				BARS P				BARS P ₁				BARS P ₂				BARS N																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Short Bar Ft. In.	Variation In.	Long Bar Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	Size	No.	Lgth Ft. In.	Spec. In.	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Detail of Bars A

Detail of Bars B

Detail of Bars C

Detail of Bars D

Detail of Bars E

Detail of Bars F

Detail of Bars G

Detail of Bars H

Detail of Bars I

Detail of Bars J

Detail of Bars K

Detail of Bars L

Detail of Bars M

Detail of Bars N

GENERAL NOTES

Const. Spacing, Latest Approved L.A. Dep. Hwy. Std. Spacing.

Design: Spacing: 12" O.C. (12" O.C. 1953 as Amended to Dec 31, 1955).

Live Load: 120-S15-44 (Modified).

Dimensions to Reinforcing Steel are to Bar centering.

All Corners are to be Chamfered 3/4" unless otherwise noted.

Place about 1/2" of concrete in bottom of culvert.

And Around Each 1/2" Hole.

Reinforcement shall be Intermediate or Hard State A.S.T.M. A15 or A15.1.

For Details of Expansion and Construction Joints, See Std. Plan C.M.49

STANDARD PLAN

MULTIPLE OPENINGS

REINFORCED CONCRETE BOX CULVERT

3'x3' - 4'x4' - 5'x5' - 6'x6'

4:1 SLOPE 45° CROSSING

DATE: July 10, 1956

DESIGNED: E. J. Haddad

CHECKED: J. J. Haddad

IN CHARGE: J. J. Haddad

STATE OF LOUISIANA

DEPARTMENT OF HIGHWAYS

PROJECT: 100-138-20