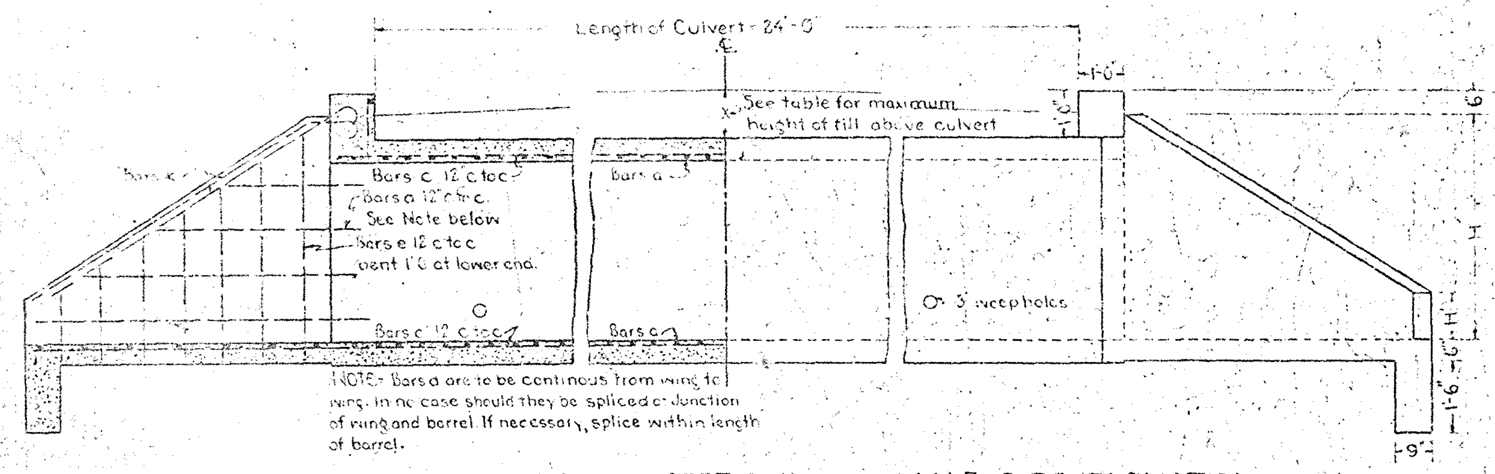
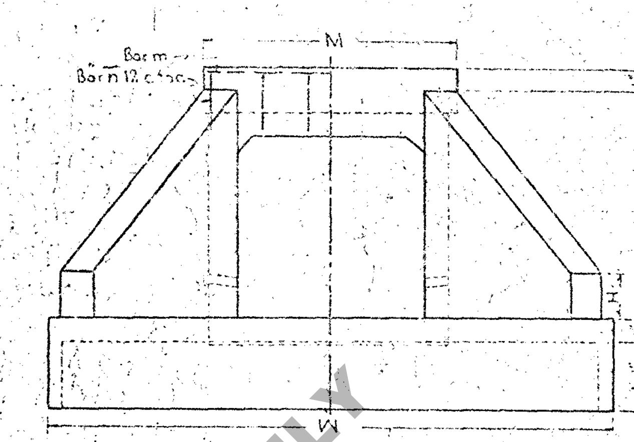
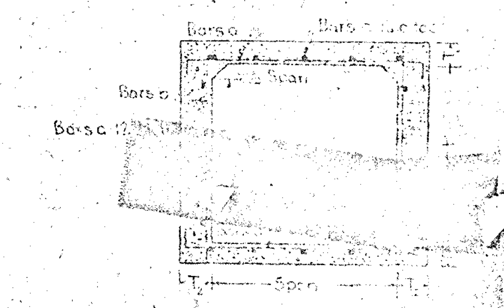


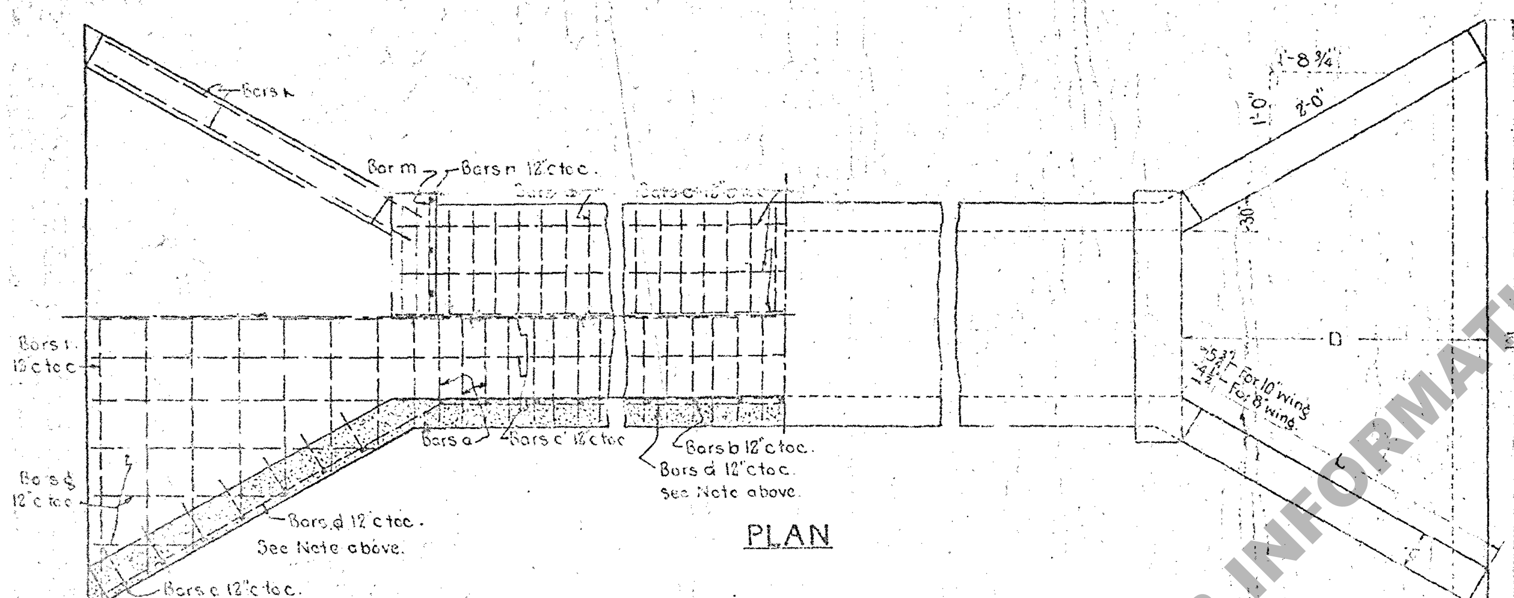
HALF LONGITUDINAL SECTION   HALF SIDE ELEVATION



END VIEW



SECTION OF BARREL



PLAN

STEEL SCHEDULE FOR 24'-0" CULVERT.

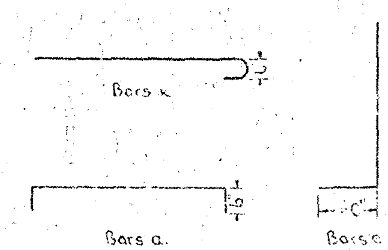
OPENING Clear Span Ft.	Clear Height Ft-In	BARREL REINFORCEMENT: Bars a No.	Bars a Length	Bars a Spac.	Bars b No.	Bars b Length	Bars c No.	Bars c Length	Bars c' No.	Bars c' Length	Bars d † Short bar	Bars d Variation	Bars d Long bar	Bars d No. of each length
2	2-0	79	3-9	8"	50	2-9	3	25-9	3	32-6	31'-3"			2
3	2-0	89	4-9	7"	50	2-9	4	25-9	4	32-6	31'-3"			2
	2-6	89	4-9	7"	50	3-3	4	25-9	4	33-6	31'-3"			2
	3-0	89	4-9	7"	50	3-9	4	25-9	4	34'-6	31'-3"	3'-6"	34'-9	2
4	2-0	104	5-9	6"	50	2-11"	5	25-9	5	32-6"	31'-6"			2
	2-6	104	5-9	6"	50	3-5	5	25-9	5	33'-6	31'-6"			2
	3-0	104	5-9	6"	50	3-11"	5	25-9	5	34'-6"	31'-6"	3'-6"	35-0	2
	4-0	104	6-1"	6"	50	4-11"	5	25-9	5	36-6	31'-6"	3'-6"	35-0	2
5	2-0	104	6-9	6"	50	3'-0	6	25-9	6	32-9	31'-8			2
	2-6	104	6-9	6"	50	3-6	6	25-9	6	33'-9	31'-8"			2
	3-0	104	6-9	6"	50	4'-0	6	25-9	6	34'-9	31'-8	3'-6"	35-2	2
	4-0	104	7-1	6"	50	5-0	6	25-9	6	37-0	31'-8"	3'-6	35-2	2
	5-0	104	7-1	6"	50	6-0	6	25-9	6	39'-6	31'-8"	3'-6	38'-8	2

OPENING Clear Span Ft.	Clear Height Ft-In	WING-WALL and FLOOR REINFORCEMENT: Bars e † Short bar	Bars e Variation	Bars e Long bar	Bars e No. of each length	Bars f † Short bar	Bars f Variation	Bars f Long bar	Bars f No. of each length	Bars g † Short bar	Bars g Variation	Bars g Long bar	Bars g No. of each length	Bars k No.	Bars k Length	Bars m No.	Bars m Length	Bars n No.	Bars n Length	Bars o No.	Bars o Length
2	2-0	2-4'	7"	4'-1"	4	4-0"	1-2"	6-4'	2			3-0	4	8	5-4	2	[illegible]	8	[illegible]	2	[illegible]
3	2-0	2-4	7"	4-1"	4	5'-0"	1-2"	7-4"	2			3'-0"	4	8	5-4	[illegible]	[illegible]	10	1-3	2	[illegible]
	2-6	2-6	7"	4'-3"	4	5-0"	1-2"	7-4'	2	1'-9"	1'-9"	3-6"	4	8	6-0	[illegible]	[illegible]	10	[illegible]	2	[illegible]
	3-0	2-8	7"	5-0	4	5-0	1'-2"	8-6'	2	2-3"	1'-9"	4-0'	4	8	6-9	2	4'-3"	10	1-3	2	[illegible]
4	2-0	2-4"	7"	4-1"	4	6-0"	1-2"	8'-4"	2			3-0"	4	8	5-6"	2	5-3"	12	1-3"	2	[illegible]
	2-6	2-6	7"	4'-10	4	6-0"	1-2"	8-4"	2	1'-9"	1'-9"	3'-6"	4	8	6-2	2	5'-3"	12	1-3"	2	[illegible]
	3-0	2-8	7"	5'-0"	4	6-0	1-2"	9-6'	2	2-3"	1'-9"	4-0	4	8	6-10"	2	5'-3"	12	1-3	2	[illegible]
	4-0	[illegible]	7"	5-11"	4	6-0'	1-2"	10-8"	2	1'-6"	1'-9"	5'-0	4	8	8'-3	2	5'-8	12	1-3	[illegible]	[illegible]
5	2-0	2'-4'	7"	4-1"	4	7-0"	1'-2"	9-4'	2			3'-0	4	8	5'-8"	2	6'-3	[illegible]	1-3	[illegible]	[illegible]
	2-6	2'-6'	7"	4'-10	4	7-0"	1'-2"	9-4"	2	1'-9"	1'-9"	3-6'	4	8	6'-3"	2	6'-3	[illegible]	[illegible]	[illegible]	[illegible]
	3-0	2'-8	7"	5'-0	4	7-0"	1'-2"	10-6	2	2'-3"	1'-9"	4-0"	4	8	7-0"	2	6'-5"	[illegible]	[illegible]	[illegible]	[illegible]
	4-0	3-0	7"	5'-11	4	7-0"	1'-2"	11'-8"	2	1'-6"	1'-9"	5'-0"	4	8	5-4"	2	6-[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	5-0	3'-2"	7"	7-3"	4	7-0	1'-2"	12'-10	2	2-10	1'-9	6'-4"	[illegible]	8	10-0"	2	6'-8"	14	1-3	[illegible]	[illegible]

† Note - To obtain lengths of intermediate bars, use "variation" as increment between short and long bar. No. of each length is also given.

DIMENSIONS and QUANTITIES FOR 24-0 CULVERT.

OPENING Clear Span Ft.	Clear Height Ft-In	Area Sq. Ft.	BARREL T_1 In.	T_2 In.	WINGS and FLOOR M Ft-In	H Ft-In	H' Ft-In	L Ft-In	A In.	W Ft-In	D Ft-In	X Ft.	PER LIN. FT. BARREL Steel Lbs.	Conc. Cu. Yds.	TOTAL QUANTITIES Steel Lbs.	Conc. Cu. Yds.
2	2-0	4.0	6	6	3-6	3-0	1-0	3-10	8	7-4	3-4	[illegible]	22	.186	758	7.1
3	2-0	6.0	6	6	4-6	3-0	1-0	3-10	8	8-4	3-4	12	29	.225	921	8.4
	2-6	7.5	6	6	4-6	3-6	1-2	4-5	8	8-11	3-10	12	31	.243	961	9.2
	3-0	9.0	6	6	4-6	4-0	1-4	5-0	8	9-6	4-4	12	32	.261	1106	10.3
4	2-0	8.0	7	6	5-6	3-1	1-0	4-0	8	9-6	[illegible]-5	9	36	.294	1140	10.5
	2-6	10.0	7	6	5-6	3-7	1-2	4-6	8	10-0	[illegible]-11	9	38	.312	1195	11.5
	3-0	12.0	7	6	5-6	4-1	1-4	5-1	8	10-7	4-5	9	39	.331	1310	12.5
	4-0	16.0	7	8	5-11	[illegible]	1-8	6-4	10	[illegible]	[illegible]	9	44	.432	1526	[illegible]
5	2-0	10.0	7½	6	6-6	3-1½	1-0	4-1	8	10-9	[illegible]	5	41	[illegible]	1263	[illegible]
	2-6	12.5	7½	6	6-6	3-7½	1-2	4-7	8	11-1	4-0	5	44	[illegible]	1353	[illegible]
	3-0	15.0	7½	6	6-6	4-1½	1-4	5-2	8	11-8	4-6	5	45	.395	1468	[illegible]
	4-0	20.0	7½	8	6-11	5-1½	1-8	6-5	10	13-4	5-7	5	49	[illegible]	1689	[illegible]
	5-0	25.0	7½	8	[illegible]	[illegible]	[illegible]	7-11	10	14-10	[illegible]	5	53	[illegible]	1914	[illegible]



BENDING DIAGRAM

GENERAL NOTES and DESIGN DATA.

General Specifications:- LOUISIANA HIGHWAY COMMISSION Spec.
Concrete - All Class "A" 1:6 mix.
Steel - All 1/2" ° bars, deformed.
All exposed corners to be chamfered 3/4 in.
All exposed surfaces to be given a smooth finish
Reinforcing bars should be wired at intersections and properly secured against displacement during depositing of concrete.
Design Loads:-
Concentrated load - 15 ton typical truck, with 30% impact allowance distributed as specified in general specifications.
Entire weight of fill above culvert assumed as acting on culvert.
Horizontal component of earth pressure taken as 30 lbs per sq ft
Steel in tension - 16,000 lbs. Concrete in compression 650 lbs.
Fill above slab of culvert is not to exceed the maximum height X as given in table.
For multiple opening use same dimensions and steel. Intermediate walls to be of same thickness as wings, reinforced same as side walls.
All dimensions refering to bars are to centers of bars.
Bars at splices to be lapped 2'-0" and Separated 2".

Designed: A.F.J. 8/1/21.
Drawn and Traced: A.F.J. 8/1/21.
Checked:
Retraced: [illegible] 2/21/27.

Revised 7-30-29. Bars under curb & quantities

CONCRETE BOX CULVERTS.
FLARING WING-WALLS
2 FT. TO 5 FT. SPANS

LOUISIANA HIGHWAY COMMISSION
NEW ORLEANS, LA. [illegible] JANUARY [illegible]
APPROVED [illegible]