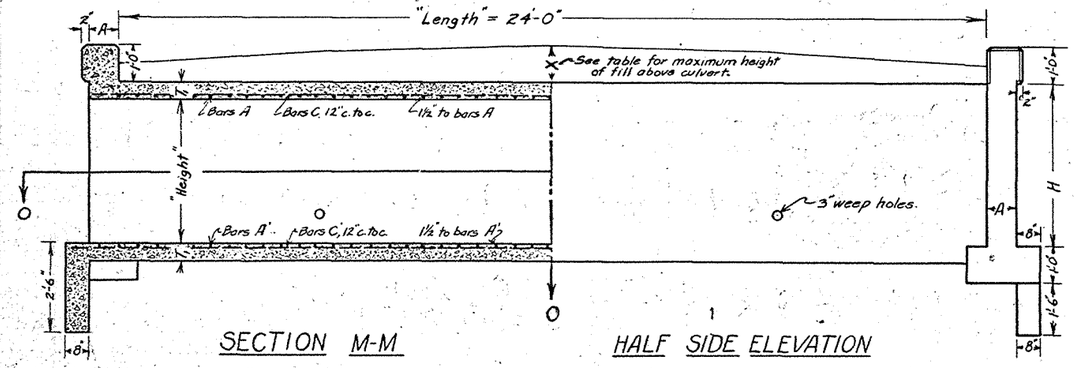
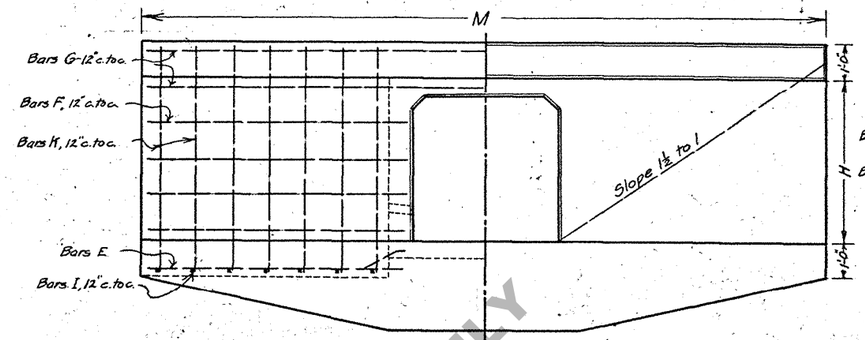
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	LA.				

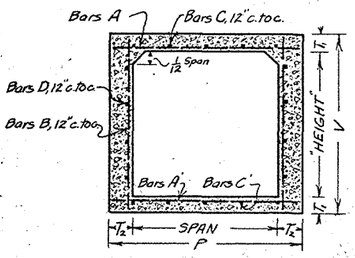


SECTION M-M

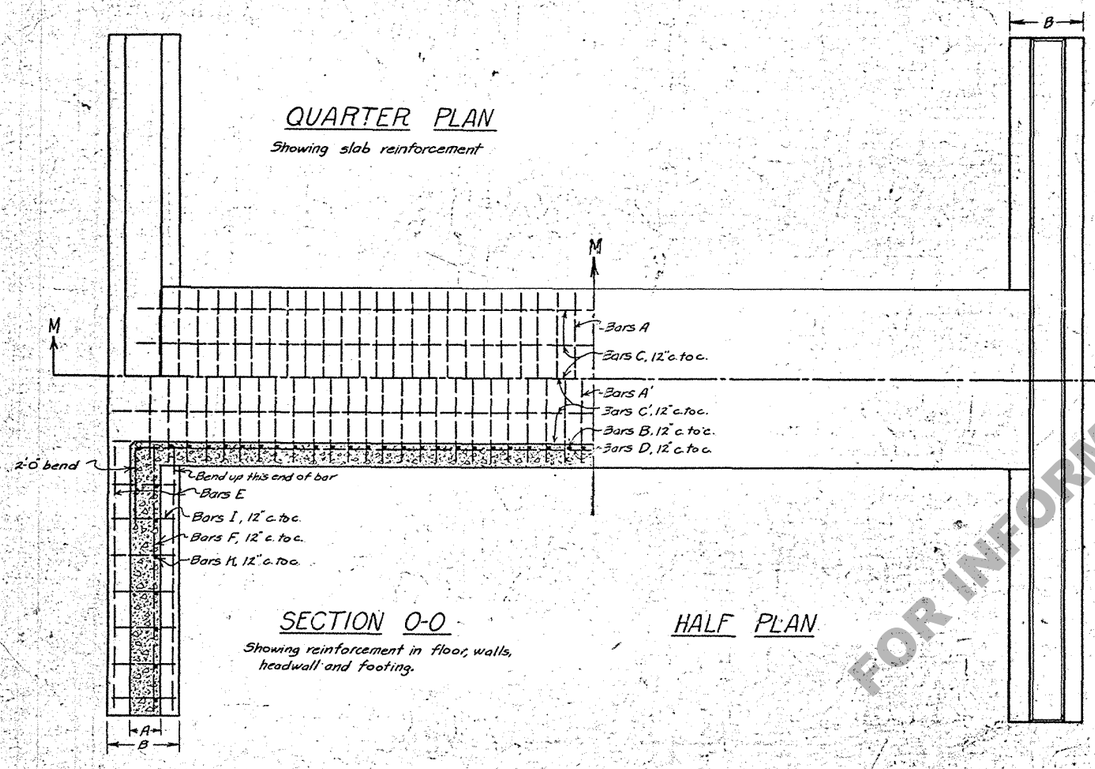
HALF SIDE ELEVATION



FRONT ELEVATION



SECTION OF BARREL



QUARTER PLAN

Showing slab reinforcement

SECTION O-O

Showing reinforcement in floor, walls, headwall and footing.

HALF PLAN

STEEL SCHEDULE FOR 24' CULVERT

OPENING		BARREL OF CULVERT												TWO HEADWALLS										
		STEEL REINFORCEMENT ALL ½" ø BARS.										CONCRETE		STEEL REINFORCEMENT ALL ½" ø BARS										CONC.
		BARS A			BARS B		BARS C		BARS D		WEIGHT			BARS E		BARS F		BARS G		BARS K		BARS I	WEIGHT	
CLEAR SPAN FT.	CLEAR HEIGHT FT.-IN	LENGTH	NO. REQ'D.	SPCG C-C	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D	LENGTH	NO. REQ'D	PER LINEAL FOOT	TOTAL LBS.	PER LINEAL FOOT CU. YDS	TOTAL CU. YDS.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D	LENGTH	NO. REQ'D	LENGTH	NO. REQ'D	TOTAL LBS	TOTAL CU. YDS.
2	2-0	2'-9"	74	8"	2'-9"	52	2'5'-1"	6	2'9'-1'	4	20#	521	.186	4.46	4'-3"	8	4'-3"	8	10'-9"	4	4'-3"	20	1'-5"	20	191	3.56
3	2-0	3'-9"	85	7"	2'-9"	52	2'5'-1"	8	2'9'-1"	4	26	602	.225	5.40	4'-3"	8	4'-3"	8	11'-9"	4	4'-3"	20	1'-5"	20	194	3.78
	2-6	3'-9"	85	7"	3'-3"	52	2'5'-1"	8	2'9'-1"	6	28	734	.243	5.83	5'-0"	8	5'-0"	12	13'-3"	4	4'-9"	20	1'-5"	20	235	4.56
	3-0	3'-9"	85	7"	3'-9"	52	2'5'-5"	8	2'9'-5"	6	29	760	.261	6.26	5'-9"	8	5'-9"	12	14'-9"	4	5'-3"	24	1'-9"	24	291	6.45
4	2-0	4'-9"	99	6"	2'-11"	52	2'5'-1"	10	2'9'-1"	4	33	841	.294	7.06	4'-3"	8	4'-3"	8	12'-9"	4	4'-4"	20	1'-5"	20	199	4.09
	2-6	4'-9"	99	6"	3'-5"	52	2'5'-1"	10	2'9'-1"	6	35	913	.312	7.49	5'-0"	8	5'-0"	12	14'-3"	4	4'-10"	20	1'-5"	20	240	4.87
	3-0	4'-9"	99	6"	3'-11"	52	2'5'-5"	10	2'9'-5"	6	36	939	.331	7.94	5'-9"	8	5'-9"	12	15'-9"	4	5'-4"	24	1'-9"	24	296	6.80
	4-0	5'-1"	99	6"	4'-11"	52	2'5'-5"	10	2'9'-5"	8	41	1061	.432	10.37	7'-3"	8	7'-3"	16	18'-9"	4	6'-4"	32	1'-11"	32	436	9.31
5	2-0	5'-9"	99	6"	3'-0"	52	2'5'-1"	12	2'9'-1"	4	38	972	.358	8.59	4'-3"	8	4'-3"	8	13'-9"	4	4'-4"	20	1'-5"	20	202	4.36
	2-6	5'-9"	99	6"	3'-6"	52	2'5'-1"	12	2'9'-1"	6	41	1043	.377	9.05	5'-0"	8	5'-0"	12	15'-3"	4	4'-10"	20	1'-5"	20	243	5.15
	3-0	5'-9"	99	6"	4'-0"	52	2'5'-5"	12	2'9'-5"	6	42	1070	.395	9.48	5'-9"	8	5'-9"	12	16'-9"	4	5'-4"	24	1'-9"	24	299	7.13
	4-0	6'-1"	99	6"	5'-0"	52	2'5'-5"	12	2'9'-5"	8	46	1192	.497	11.93	7'-3"	8	7'-3"	16	19'-9"	4	6'-4"	32	1'-11"	32	440	9.66
	5-0	6'-1"	99	6"	6'-0"	52	2'5'-5"	12	2'9'-5"	10	50	1287	.546	13.10	8'-9"	8	8'-9"	20	22'-9"	4	7'-4"	36	2'-1"	36	574	12.70

GENERAL NOTES & DESIGN DATA

General Specifications:- La. State Highway Dept. Spec.
Concrete - all class A - 1:2:4 mix.
Steel - all ½" ø bars, deformed.
All exposed corners to be chamfered 3/4 in.
All exposed surfaces to be given a smooth finish.
In computing the total quantities for "Barrel of Culvert" above, the barrel was assumed as extending the clear width of roadway only.
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 - 16000 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 8" thick, with same reinforcement as side walls.
All dimensions refering to bars are to centers of bars.
Reinforcing bars should be wired at intersections and properly secured against displacement during depositing of concrete.

DIMENSIONS & TOTAL QUANTITIES

SPAN	HEIGHT	AREA	T_1	T_2	M	H	A	B	X	V	P	STEEL	CONCRETE
FT.	FT-IN.	SQ. FT.	IN.	IN.	FT-IN.	FT-IN.	IN.	FT-IN	FT.	FT-IN	FT-IN.	LBS.	CU YDS.
2	2-0	4.0	6	6	11-0	2-6	8	1-8	12	3-0	3-0	712	8.0
3	2-0	6.0	6	6	12-0	2-6	8	1-8	12	3-0	4-0	796	9.2
	2-6	7.5	6	6	13-6	3-0	8	1-8	12	3-6	4-0	969	10.4
	3-0	9.0	6	6	15-0	3-6	10	2-0	12	4-0	4-0	1051	12.7
4	2-0	8.0	7	6	13-0	2-7	8	1-8	9	3-2	5-0	1040	11.2
	2-6	10.0	7	6	14-6	3-1	8	1-8	9	3-8	5-0	1153	12.4
	3-0	12.0	7	6	16-0	3-7	10	2-0	9	4-2	5-0	1235	14.7
	4-0	16.0	7	8	19-0	4-7	10	2-2	9	5-2	5-4	1497	19.7
5	2-0	10.0	7½	6	14-0	2-7½	8	1-8	5	3-3	6-0	1174	13.0
	2-6	12.5	7½	6	15-6	3-1½	8	1-8	5	3-9	6-0	1286	14.2
	3-0	15.0	7½	6	17-0	3-7½	10	2-0	5	4-3	6-0	1369	16.6
	4-0	20.0	7½	8	20-0	4-7½	10	2-2	5	5-3	6-4	1632	21.6
	5-0	25.0	7½	8	23-0	5-7½	10	2-4	5	6-3	6-4	1861	25.8

CONCRETE BOX CULVERTS

STRAIGHT HEADWALLS

2 FT. TO 5 FT. SPANS.

Louisiana State Highway Department
Board of State Engineers

NEW ORLEANS, LA. SCALE ½ IN. = 1 FT. JULY 1921.

APPROVED:- [signature]
STATE HIGHWAY ENGINEER.

DESIGN - Adopted from B.P.R. standard plan G-223
REVISED - July 25, 1921, superceding Plan B-2-5

B-2-5.a

FOR INFORMATIONAL PURPOSES ONLY