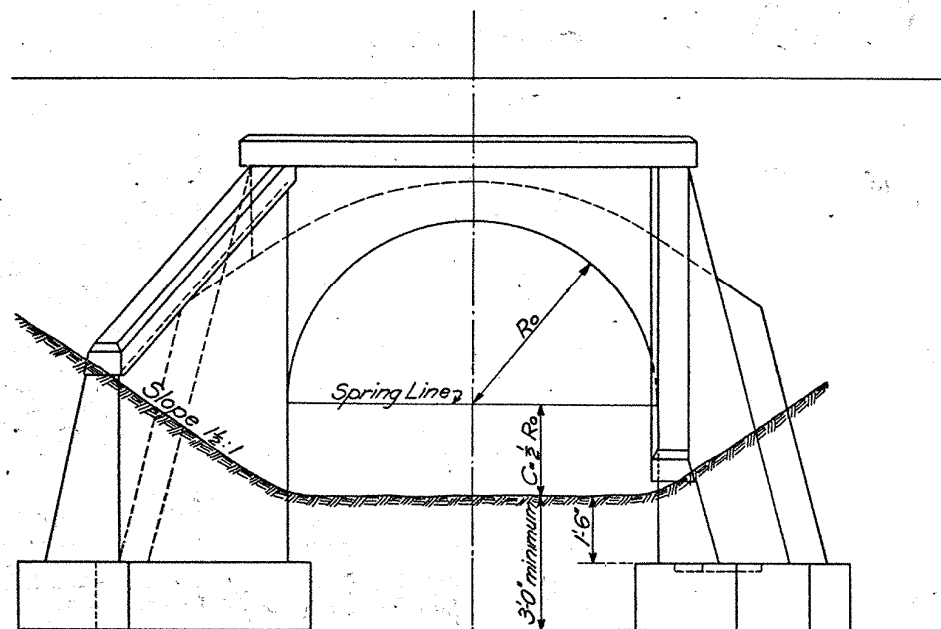
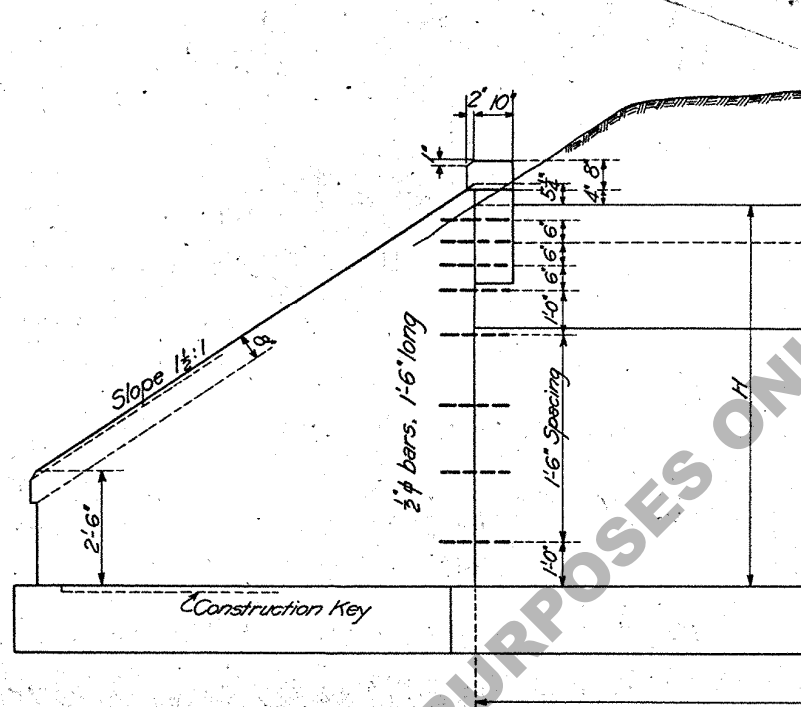


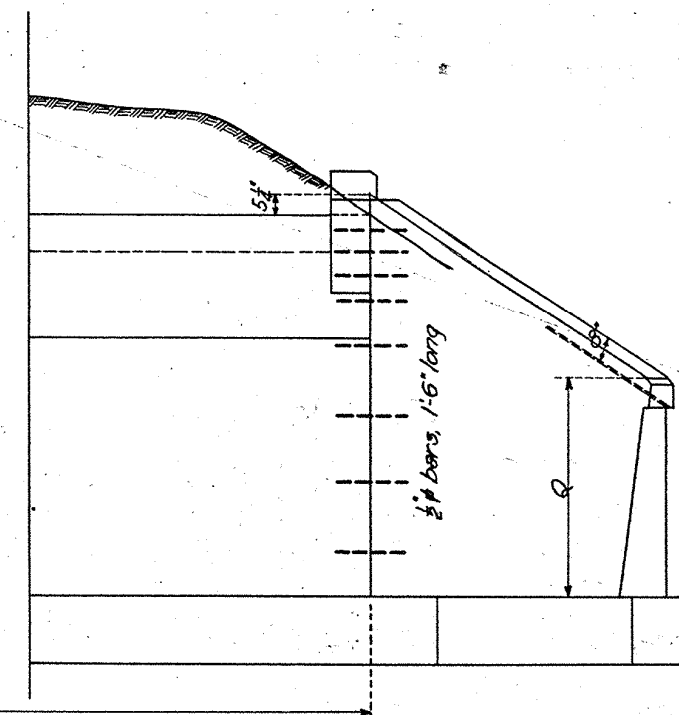


UPSTREAM ELEVATION

DOWNSTREAM ELEVATION



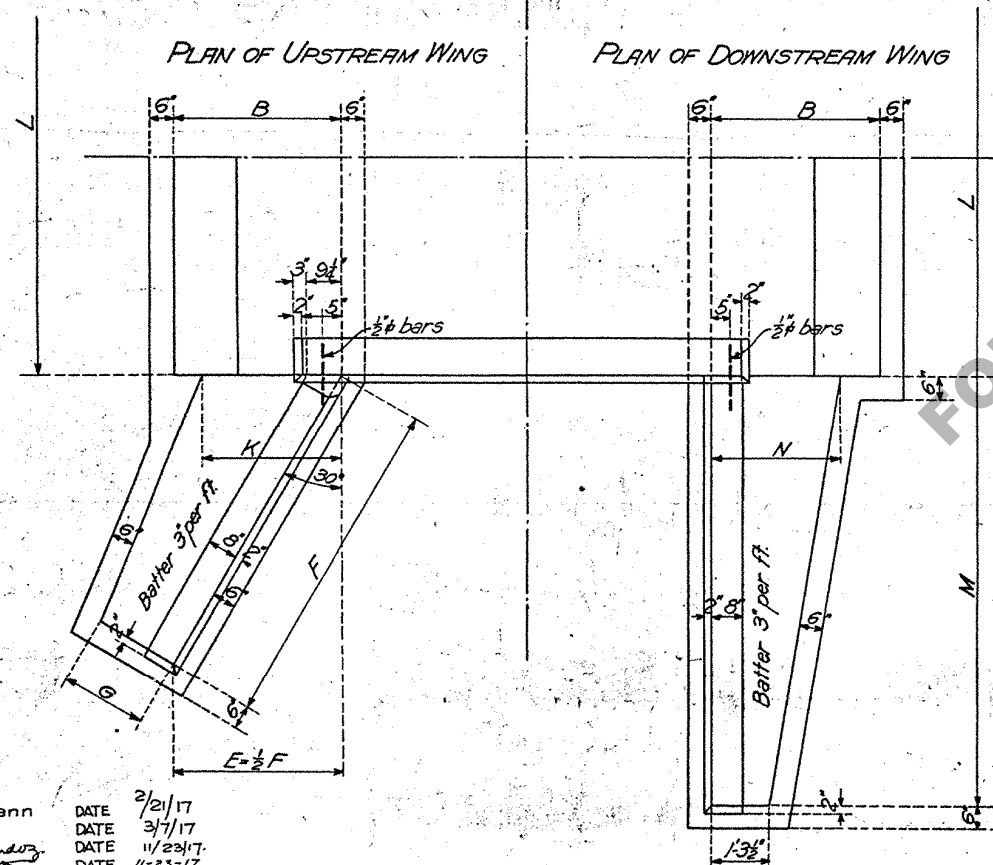
DOWNSTREAM SIDE VIEW



UPSTREAM SIDE VIEW

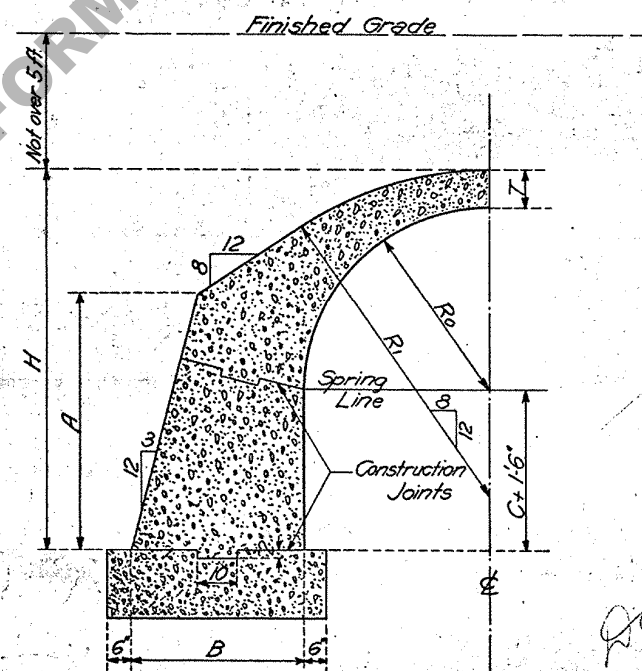
NOTES.

Extra rip-rap or paving for channel protection should be provided where necessary, especially near outlets.
The footings shown are intended for use on firm foundation material. Where soft or unstable material is found the footings should be deepened, widened, or otherwise modified, to obtain stable foundations.
If other materials are added or the dimensions of the footings changed, the quantities and cost should be adjusted accordingly.



PLAN OF UPSTREAM WING

PLAN OF DOWNSTREAM WING



HALF SECTION THRU ARCH RING

DIMENSIONS AND ESTIMATED QUANTITIES															
Based on a Length of Culvert, L=30 ft.															
Clear Span	Area of Waterway	Dimensions													
		R ₀	R ₁	C	B	T	A	H	E	F	G	K	Q	M	N
6'-0"	23.17	3'-0"	5'-7 1/2"	1'-6"	3'-0"	0'-9"	4'-8"	6'-9"	2'-3"	5'-6"	1'-8 1/2"	2'-7 1/2"	4'-2 1/2"	7'-0"	2'-5 1/2"
8'-0"	41.17	4'-0"	7'-3"	2'-0"	3'-8"	0'-10"	5'-7 1/2"	8'-4"	3'-3 1/2"	7'-3"	1'-10 1/2"	3'-0 1/2"	4'-9 1/2"	9'-4 1/2"	2'-10 1/2"
10'-0"	64.37	5'-0"	8'-10 1/2"	2'-6"	4'-4"	0'-11"	6'-7"	9'-11"	4'-5"	9'-0"	2'-0"	3'-5 1/2"	5'-4 1/2"	11'-9"	3'-3"
Quantities															
Concrete - Cu. Yds.															Steel Bars
		Arch		2 Cuts		2 Wings		2 Wings		Total of 1:3:6 Mix.		Total of 1:2 1/2:5 Mix.		Total of All Conc.	
Footings	Barrel	Footings	Barrel	Footings	Barrel	Footings	Barrel	Footings	Barrel	Footings	Barrel	Footings	Barrel	Footings	Barrel
Per Ft. Length	Total	Per Ft. Length	Total	Per Ft. Length	Total	Per Ft. Length	Total	Per Ft. Length	Total	Per Ft. Length	Total	Per Ft. Length	Total	Per Ft. Length	Total
6'-0"	0.222	6.66	1.167	35.00	0.73	1.80	2.94	2.39	3.38	10.85	42.05	52.90	28	36	46
8'-0"	0.259	7.78	1.748	52.44	1.00	2.58	5.12	3.37	5.74	13.73	64.30	78.03	32	41	46
10'-0"	0.296	8.89	2.444	73.32	1.28	3.47	8.08	4.15	8.89	16.82	91.57	108.39	36	46	46

Notes: Concrete for all footings 1:3:6 Mix.
All Concrete above footings 1:2 1/2:5 Mix.
2" bars to be of deformed type and of net sectional area not less than 0.25 sq. in.

ARCH CULVERTS

SPANS, 6 TO 10 FT. IN CLEAR PLAIN CONCRETE BASED ON 30 FT. CULVERT
(U. S. OFFICE OF PUBLIC ROADS STANDARD, FILE NO G-221)

HIGHWAY DEPARTMENT,
BOARD OF STATE ENGINEERS,
New Orleans, La.
Nov., 1917.

Approved: *James P. ...*
State Highway Engineer

DESIGNED BY C. D. Mann
DRAWN BY
TRACED BY E. J. Sander
CHECKED BY
DATE 2/21/17
DATE 3/7/17
DATE 11/23/17
DATE 11-23-17