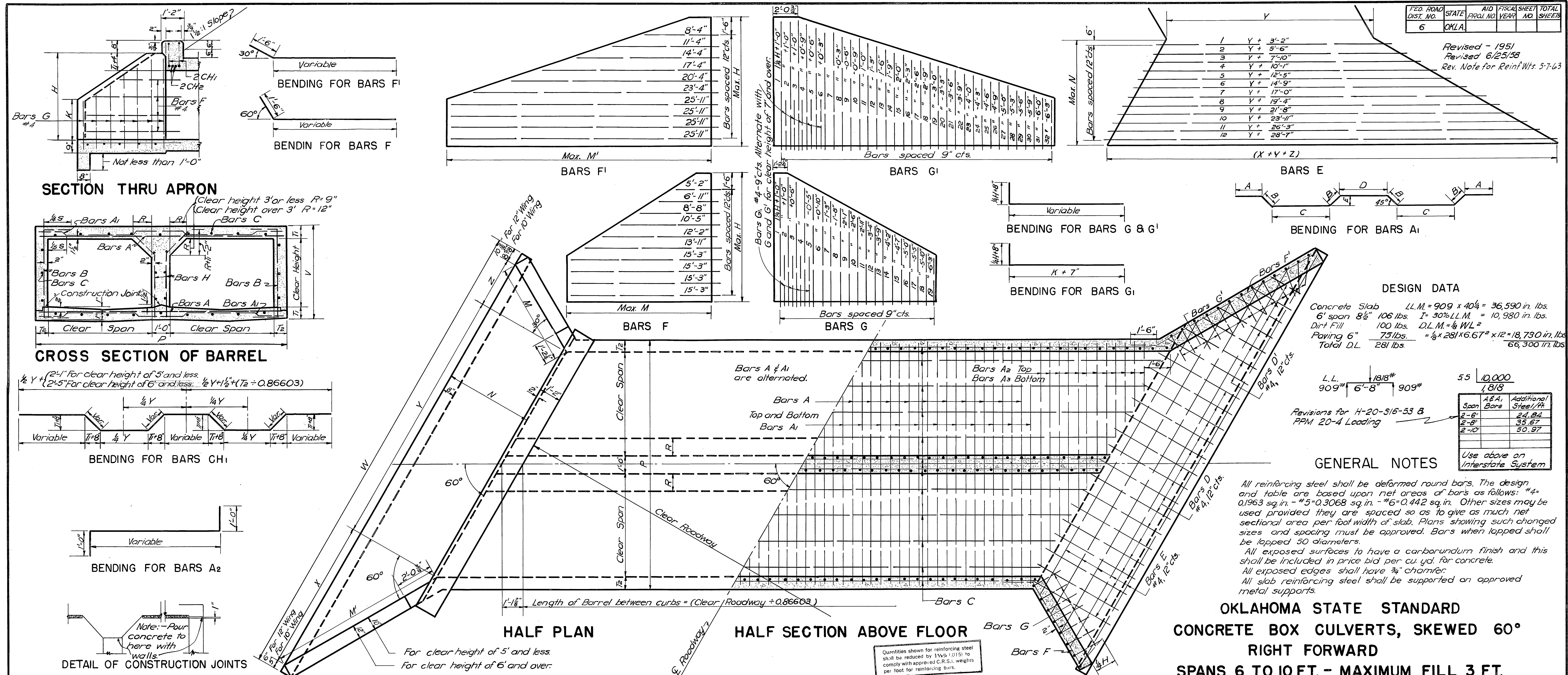


FED. ROAD DIST. NO.	STATE	AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				

Revised - 1951
Revised 6/25/58
Rev. Note for Reinf' Wfs: 5-7-63



DESIGN DATA
Concrete Slab LL.M. = 909 x 40 1/4 = 36,590 in. lbs.
6' span 8 1/2" 106 lbs. I = 30% LL.M. = 10,980 in. lbs.
Dirt Fill 100 lbs. D.L.M. = 1/8 WL²
Paving 6" 75 lbs. = 1/8 x 281 x 6.67² x 12 = 18,730 in. lbs.
Total D.L. 281 lbs. = 66,300 in. lbs.

L.L.	909"	6'-8"	909"
Span	6'-0"	8'-0"	10'-0"
A&A, Same Size	24.84	35.67	50.97
Additional Steel/lft			

GENERAL NOTES
All reinforcing steel shall be deformed round bars. The design and table are based upon net areas of bars as follows: #4 = 0.1963 sq. in. - #5 = 0.3068 sq. in. - #6 = 0.442 sq. in. Other sizes may be used provided they are spaced so as to give as much net sectional area per foot width of slab. Plans showing such changed sizes and spacing must be approved. Bars when lapped shall be lapped 50 diameters.
All exposed surfaces to have a carborundum finish and this shall be included in price bid per cu. yd. for concrete.
All exposed edges shall have 3/4" chamfer.
All slab reinforcing steel shall be supported on approved metal supports.

**OKLAHOMA STATE STANDARD
CONCRETE BOX CULVERTS, SKEWED 60°
RIGHT FORWARD
SPANS 6 TO 10 FT. - MAXIMUM FILL 3 FT.**

DESIGN NO.	BARREL OF CULVERT										TWO WINGS AND ONE APRON										TWO CURBS		TOTAL QUANTITIES		DESIGN NO.																									
	DIMENSIONS					REINFORCING STEEL					DIMENSIONS					REINFORCING STEEL					QUANTITIES		QUANTITIES																											
	Clear Span	Clear Height	Area of Opening	T1	T2	V	P	BARS A AND A1		BARS A2 AND A3		BARS B Bent	BARS C	BARS H	H	K	M	M'	N	W	X	Y	Z	BARS D		BARS D'	BARS E	BARS F	BARS F'	BARS G	BARS G'	BARS G1	Reinf. Steel Lbs.	Class A Concrete Cu. Yds.	Reinf. Steel Lbs.	Class A Concrete Cu. Yds.														
1	2'-0"	24.0	8 1/2"	6"	3'-5"	14'-0"	#5-13"	13'-8"	14'-3"	1'-2"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	24	14/10/4/8	12/10/2/6	#4-9"	6'-1"	#4-18"	26	#4-9"	3'-7"	69.83	0.903	3'-0"	1'-11"	3'-2"	5'-6"	2'-9"	22 1/2"	4'-9"	15'-0"	1'-7"	17	3'-2"	2	2 1/2"	3	132	2.29	20'-1"	16'-1"	153	1.46	0.556	3729	40.52	1
2	2'-6"	30.0	8 1/2"	6"	3'-11"	14'-0"	#5-13"	13'-8"	14'-3"	1'-2"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	24	14/10/4/8	12/10/2/6	#4-9"	6'-1"	#4-18"	26	#4-9"	3'-7"	91.64	0.940	3'-6"	2'-0"	3'-0"	5'-6"	3'-4"	23'-0"	5'-9"	15'-0"	1'-11"	17	3'-9"	3	3 1/2"	3	164	2.93	20'-1"	16'-1"	153	1.46	0.589	3861	43.23	2
3	3'-0"	36.0	8 1/2"	8"	4'-5"	14'-4"	#5-13"	14'-0"	14'-7"	1'-4"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	24	15/10/4/8	13/10/2/8	#4-9"	7'-1"	#4-18"	30	#4-9"	4'-7"	97.48	1.032	4'-0"	2'-2"	4'-6"	7'-9"	3'-0"	25'-3"	6'-9"	15'-0"	2'-3"	17	4'-4"	4	3 1/2"	4	206	3.60	20'-4"	16'-3"	155	1.48	0.621	4162	48.05	3
4	4'-0"	48.0	8 1/2"	8"	5'-5"	14'-4"	#5-13"	14'-0"	14'-7"	1'-4"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	24	15/10/4/8	13/10/2/8	#4-9"	7'-1"	#4-18"	30	#4-9"	5'-9"	101.41	1.135	5'-0"	2'-4"	5'-9"	10'-1"	5'-0"	27'-9"	8'-8"	15'-0"	2'-10"	17	5'-6"	6	5 1/2"	6	292	5.14	20'-4"	16'-3"	155	1.48	0.686	4481	55.07	4
5	5'-0"	60.0	8 1/2"	10"	6'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	24	15/21/6/10	13/10/2/10	#4-9"	9'-1"	#4-18"	34	#4-9"	6'-9"	109.06	1.300	6'-0"	2'-7"	7'-2"	12'-5"	6'-2"	30'-8"	10'-9"	15'-0"	3'-7"	17	6'-8"	8	6 1/2"	8	390	6.91	20'-6"	16'-6"	157	1.50	0.753	4960	64.87	5
6	6'-0"	72.0	8 1/2"	10"	7'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	24	15/21/6/10	13/10/2/10	#4-9"	9'-1"	#4-18"	38	#4-9"	7'-9"	115.40	1.399	7'-0"	2'-0"	8'-3"	14'-8"	7'-4"	33'-4"	12'-8"	15'-0"	4'-3"	17	7'-9"	10	7 1/2"	10	504	9.74	20'-10"	16'-9"	159	1.52	0.824	5425	74.34	6
7	7'-0"	84.0	8 1/2"	12"	8'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	30	15/21/6/10	13/10/2/10	#4-9"	10'-1"	#4-18"	32	#4-9"	4'-5"	139.93	1.368	8'-0"	2'-1"	3'-0"	14'-8"	8'-9"	34'-4"	12'-8"	15'-0"	4'-3"	22	3'-9"	3	3 1/2"	3	188	3.36	25'-1"	20'-1"	280	1.86	0.703	5841	60.54	7
8	8'-0"	96.0	8 1/2"	12"	9'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	30	15/21/6/10	13/10/2/10	#4-9"	10'-1"	#4-18"	32	#4-9"	4'-11"	141.74	1.411	4'-2"	2'-3"	4'-6"	14'-8"	8'-9"	34'-4"	12'-8"	15'-0"	4'-3"	22	7'-9"	10	7 1/2"	10	234	4.13	25'-1"	20'-1"	280	1.86	0.735	6000	63.73	8
9	9'-0"	108.0	8 1/2"	12"	10'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	30	15/21/6/10	13/10/2/10	#4-9"	10'-4"	#4-18"	36	#4-9"	6'-0"	148.24	1.514	5'-2"	2'-6"	5'-9"	10'-1"	5'-0"	32'-4"	12'-8"	15'-0"	2'-10"	22	5'-6"	6	4 1/2"	6	328	5.85	25'-1"	20'-1"	280	1.86	0.800	6429	71.10	9
10	10'-0"	120.0	8 1/2"	12"	11'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	30	15/21/6/10	13/10/2/10	#4-9"	11'-4"	#4-18"	40	#4-9"	8'-0"	159.95	1.781	7'-2"	2'-11"	8'-3"	12'-8"	8'-9"	37'-1"	12'-8"	15'-0"	4'-3"	22	6'-8"	8	5 1/2"	8	433	7.80	25'-4"	21'-1"	282	1.88	0.867	6932	81.40	10
11	11'-0"	132.0	8 1/2"	12"	12'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	30	15/21/6/10	13/10/2/10	#4-9"	12'-4"	#4-18"	44	#4-9"	9'-0"	166.29	1.880	8'-2"	3'-2"	9'-9"	17'-0"	8'-6"	40'-7"	14'-8"	15'-0"	4'-10"	22	8'-11"	12	5 1/2"	12	535	10.18	25'-8"	21'-4"	286	1.90	0.938	7314	89.95	11
12	12'-0"	144.0	8 1/2"	12"	13'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	30	15/21/6/10	13/10/2/10	#4-9"	13'-4"	#4-18"	48	#4-9"	10'-0"	173.61	2.039	9'-2"	3'-5"	11'-2"	19'-4"	9'-8"	43'-3"	16'-8"	15'-0"	5'-7"	22	10'-1"	14	6 1/2"	14	640	13.40	26'-2"	21'-6"	286	1.90	1.003	8161	100.18	12
13	13'-0"	156.0	8 1/2"	12"	14'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	30	15/21/6/10	13/10/2/10	#4-9"	13'-4"	#4-18"	48	#4-9"	10'-0"	173.61	2.039	9'-2"	3'-5"	11'-2"	19'-4"	9'-8"	43'-3"	16'-8"	15'-0"	5'-7"	22	10'-1"	14	6 1/2"	14	640	13.40	26'-2"	21'-6"	286	1.90	1.070	8787	111.97	13
14	14'-0"	168.0	8 1/2"	12"	15'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	44	22/10/6/10	13/10/2/10	#4-9"	9'-0"	#4-18"	38	#4-9"	4'-7"	187.26	1.754	3'-9"	2'-2"	3'-0"	6'-8"	3'-4"	33'-1"	12'-8"	15'-0"	4'-3"	26	3'-9"	3	3 1/2"	3	209	3.82	29'-0"	25'-6"	336	2.24	0.817	7682	76.32	14
15	15'-0"	180.0	8 1/2"	12"	16'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	44	22/10/6/10	13/10/2/10	#4-9"	9'-6"	#4-18"	38	#4-9"	5'-1"	189.08	1.797	4'-3"	2'-4"	4'-6"	7'-9"	3'-0"	34'-4"	12'-8"	15'-0"	4'-3"	26	4'-4"	4	260	4.66	29'-0"	25'-6"	336	2.24	0.849	7852	79.66	15		
16	16'-0"	192.0	8 1/2"	12"	17'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	44	22/10/6/10	13/10/2/10	#4-9"	10'-6"	#4-18"	42	#4-9"	6'-3"	193.73	1.900	5'-3"	2'-7"	5'-9"	10'-1"	5'-0"	37'-0"	14'-8"	15'-0"	2'-10"	26	5'-6"	6	4 1/2"	6	361	6.54	29'-10"	25'-6"	336	2.24	0.914	8300	87.36	16
17	17'-0"	204.0	8 1/2"	12"	18'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	44	22/10/6/10	13/10/2/10	#4-9"	11'-6"	#4-18"	42	#4-9"	7'-3"	201.38	2.070	6'-3"	2'-0"	7'-2"	11'-6"	6'-2"	39'-8"	10'-9"	15'-0"	3'-7"	26	6'-8"	8	474	8.64	30'-0"	25'-8"	339	2.26	0.981	8677	97.99	17		
18	18'-0"	216.0	8 1/2"	12"	19'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	44	22/10/6/10	13/10/2/10	#4-9"	12'-6"	#4-18"	46	#4-9"	8'-3"	207.72	2.169	7'-3"	3'-0"	8'-3"	14'-8"	7'-4"	42'-7"	12'-8"	15'-0"	4'-3"	26	7'-9"	10	5 1/2"	10	603	11.79	30'-4"	26'-0"	342	2.28	1.052	9171	108.11	18
19	19'-0"	228.0	8 1/2"	12"	20'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	44	22/10/6/10	13/10/2/10	#4-9"	13'-6"	#4-18"	50	#4-9"	9'-3"	214.07	2.268	8'-3"	3'-3"	9'-3"	17'-0"	8'-6"	45'-2"	14'-8"	15'-0"	4'-10"	26	8'-11"	12	6 1/2"	12	740	13.40	30'-4"	26'-0"	342	2.28	1.117	10097	117.47	19
20	20'-0"	240.0	8 1/2"	12"	21'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	44	22/10/6/10	13/10/2/10	#4-9"	14'-6"	#4-18"	50	#4-9"	10'-3"	218.71	2.426	9'-3"	3'-6"	11'-2"	19'-4"	9'-8"	47'-1"	16'-8"	15'-0"	5'-7"	26	10'-1"	14	9 1/2"	14	840	15.40	30'-7"	26'-2"	346	2.30	1.184	10661	129.64	20
21	21'-0"	252.0	8 1/2"	12"	22'-5"	14'-8"	#5-13"	14'-4"	14'-11"	1'-6"	6 1/2"	3'-7"	2'-8"	4 1/2"	#5-6 1/2"	44	22/10/6/10	13/10/2/10	#4-9"	15'-6"	#4-18"	54	#4-9"	11'-3"	226.07	2.599	10'-3"	3'-9"	12'-6"	21'-8"	10'-10"	50'-7"	18'-8"	15'-0"	6'-3"	26	11'-3"	16	11 1/2"	16	1106	17.40	30'-7"	26'-2"	346	2.30	1.251	11334	142.67	21
22	22'-0"	264.0	8 1/2"	12"	23'-5"	14'-8"																																												