STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
GA.	7SAP 193(9)	79	135

APRON QUANTITIES FOR CONCRETE BOX CULVERTS*

SIZE (FEET)	SKEW 90° W LIN. FT.	90° CONCRETE CU. YDS.	90° STEEL LBS.	75° W LIN. FT.	75° CONCRETE CU. YDS.	75° STEEL LBS.	60° W LIN. FT.	60° CONCRETE CU. YDS.	60° STEEL LBS.	45° W LIN. FT.	45° CONCRETE CU. YDS.	45° STEEL LBS.
SINGLE												
4 x 4	13.183	1.70	138	14.468	1.91	155	16.469	2.28	183	23.238	3.17	249
4 x 5	15.000	2.23	173	16.458	2.49	193	19.025	2.96	228	25.958	3.97	300
4x6	16.733	2.57	202	18.318	2.86	226	21.091	3.47	271	29.387	4.72	364
5x4	14.183	1.89	152	15.502	2.11	169	17.616	2.52	200	24.648	3.46	271
5x5	15.983	2.34	185	17.487	2.62	207	20.171	3.19	249	28.002	4.31	333
5x6	17.733	2.80	219	19.353	3.12	244	22.236	3.77	293	30.798	5.08	390
6x4	15.183	2.09	166	16.537	2.32	184	18.763	2.77	218	26.060	3.76	292
6x5	16.983	2.55	200	18.521	2.84	223	21.318	3.46	269	29.414	4.64	357
6x6	18.783	3.05	238	20.388	3.37	262	23.382	4.08	315	32.209	5.44	416
7x4	17.933	2.75	215	18.173	2.69	211	21.285	3.36	261	29.037	4.44	341
7x5	19.733	3.29	253	20.158	3.25	253	23.447	4.03	310	31.943	5.30	405
7x6	21.533	3.84	296	21.945	3.75	289	25.414	4.63	355	34.627	6.07	463
7x7	23.333	4.44	339	24.551	4.64	355	28.359	5.73	436	39.099	7.55	572
8x4	18.933	2.97	230	19.450	2.90	231	22.431	3.62	280	31.463	4.96	379
8x5	20.733	3.51	270	21.374	3.54	273	24.987	4.41	338	33.802	5.74	437
8x6	22.533	4.10	314	23.299	4.16	319	27.149	5.17	394	36.709	6.71	509
8x7	24.333	4.72	360	25.330	5.00	381	30.161	6.19	470	40.959	8.09	610
8x8	26.133	5.39	409	27.752	5.72	434	32.262	7.07	535	43.865	9.21	693
9x4	20.533	3.36	259	20.904	3.31	256	24.170	4.08	314	32.978	5.39	411
9x5	22.333	3.96	302	22.409	3.78	290	26.133	4.70	359	35.214	6.08	462
9x6	24.133	4.57	348	24.514	4.47	342	28.296	5.49	417	38.568	7.20	544
9x7	25.933	5.23	396	27.049	5.34	400	31.246	6.55	490	42.810	8.62	649
9x8	27.733	5.93	448	28.970	6.09	461	33.407	7.46	562	45.724	9.79	735
9x9	28.933	6.42	434	31.516	7.06	532	36.737	8.73	656	48.819	11.01	824
9x10	31.033	7.32	550	33.435	7.91	595	39.297	9.89	742	51.724	12.32	921
10x4	22.133	3.79	290	22.542	3.73	287	25.976	4.59	350	34.468	5.83	442
10x5	23.933	4.40	335	24.349	4.35	332	28.141	5.37	400	37.468	6.97	526
10x6	25.733	5.06	383	26.272	4.99	380	30.101	6.08	460	40.502	7.83	590
10x7	26.933	5.52	417	28.805	5.92	448	33.047	7.20	543	44.730	9.32	700
10x8	28.733	6.24	470	30.600	6.67	503	35.603	8.27	622	47.657	10.54	789
10x9	30.533	7.01	526	32.172	7.15	538	37.176	8.99	674	50.340	11.61	868
10x10	32.333	7.81	585	34.109	8.11	609	39.145	9.86	738	53.024	12.73	950
10x11	34.133	8.65	647	35.906	8.98	673	41.703	11.10	829	55.930	14.14	1053
10x12	35.933	9.54	712	37.707	9.88	739	43.863	12.25	914	58.837	15.61	1161
DOUBLE												
4x4	17.800	2.59	202	19.297	2.87	223	21.828	3.42	264	41.126	6.90	517
5x4	19.800	2.97	230	21.366	3.28	253	24.129	3.91	299	32.649	5.13	390
5x5	21.600	3.54	271	23.352	3.92	300	26.678	4.75	362	36.003	6.19	468
6x4	21.800	3.35	257	23.436	3.69	282	26.431	4.40	335	35.474	5.72	433
6x5	23.683	3.98	303	25.508	4.40	334	29.074	5.33	404	38.945	6.88	518
6x6	25.483	4.63	351	27.373	5.07	384	31.134	6.13	462	41.740	7.98	592
7x4	25.766	4.43	355	26.280	4.36	331	30.281	5.39	407	40.097	6.86	516
7x5	27.566	5.13	397	28.266	5.11	386	32.447	6.29	473	43.006	7.99	598
7x6	29.366	5.87	441	29.950	5.76	434	34.403	7.09	531	45.686	8.98	672
7x7	31.166	6.64	498	32.658	6.91	518	37.547	8.51	636	50.159	10.84	808
8x4	27.766	4.86	366	28.590	4.85	367	32.583	5.91	445	43.366	7.60	569
8x5	29.566	5.60	420	30.516	5.65	425	35.131	7.00	524	46.275	8.80	657
8x6	31.366	6.38	478	32.442	6.48	486	37.297	8.01	598	49.185	10.07	750
8x7	33.166	7.21	538	34.970	7.58	567	40.232	9.36	692	53.428	11.82	879
8x8	35.133	8.12	605	37.067	8.56	639	42.589	10.56	785	56.573	13.32	989
9x4	30.366	5.54	416	31.082	5.49	412	35.481	6.72	503	46.865	8.56	638
9x5	32.166	6.34	474	32.586	6.13	459	37.432	7.58	566	49.101	9.49	707
9x6	33.966	7.18	536	34.692	7.07	529	39.598	8.65	645	52.455	10.97	815
9x7	35.766	8.06	600	37.221	8.23	614	42.531	10.07	749	56.698	12.81	950
9x8	37.733	9.04	671	39.318	9.27	690	44.888	11.33	841	59.843	14.39	1066
9x9	38.933	9.68	718	41.656	10.52	781	48.182	12.99	963	62.934	15.94	1179
9x10	41.033	10.84	803	43.777	11.60	861	50.737	14.48	1072	65.843	17.58	1299
10x4	32.966	6.26	469	33.756	6.21	465	38.445	7.59	566	49.778	9.38	697
10x5	34.766	7.12	531	35.564	7.07	528	40.612	8.69	647	53.178	10.92	810
10x6	36.566	8.02	596	37.495	7.95	592	42.560	9.66	718	55.804	12.18	866
10x7	37.766	8.64	642	40.013	9.19	683	45.489	11.18	829	60.047	14.03	1038
10x8	39.733	9.66	716	41.990	10.24	760	48.231	12.60	938	63.193	15.69	1159
10x9	41.533	10.67	789	43.555	11.09	822	49.803	13.61	1007	65.873	17.06	1260
10x10	43.333	11.72	866	45.485	12.13	898	51.761	14.75	1090	68.554	18.49	1364
10x11	45.133	12.80	945	47.287	13.25	980	54.314	16.35	1207	71.463	20.26	1494
10x12	46.933	13.93	1028	49.090	14.40	1064	56.478	17.83	1315	74.372	22.11	1628
TRIPLE												
4x4	22.466	3.48	266	24.125	3.83	292	27.198	4.56	346	36.415	5.92	447
5x4	25.466	4.06	308	27.230	4.44	337	30.654	5.29	399	40.654	6.80	510
5x5	27.266	4.75	358	29.216	5.22	394	33.193	6.32	475	44.007	8.06	603
6x4	28.466	4.63	349	30.336	5.06	381	34.111	6.02	451	44.893	7.69	574
6x5	30.433	5.43	407	32.495	5.95	446	36.846	7.20	538	48.483	9.11	679
6x6	32.233	6.23	466	34.360	6.77	506	38.903	8.17	609	51.277	10.33	767
7x4	33.600	6.11	456	34.388	6.03	451	39.301	7.43	554	51.165	9.29	690
7x5	35.400	6.98	520	36.374	6.97	520	41.468	8.55	636	54.076	10.68	792
7x6	37.200	7.89	586	38.058	7.77	579	43.416	9.54	708	56.754	11.89	881
7x7	39.000	8.84	656	40.765	9.18	682	46.558	11.29	836	61.225	14.13	1045
8x4	36.600	6.75	502	37.733	6.76	504	42.758	8.21	610	55.847	10.37	768
8x5	38.400	7.69	571	39.659	7.76	577	45.301	9.58	717	58.759	11.86	877
8x6	40.200	8.67	642	41.586	8.80	653	47.468	10.85	803	61.669	13.43	991
8x7	42.000	9.69	716	44.111	9.98	740	50.392	12.52	925	65.907	15.56	1148
8x8	44.133	10.85	801	46.382	11.41	843	52.942	14.04	1036	69.288	17.44	1284
9x4	40.200	7.72	572	41.261	7.66	569	46.814	9.36	693	60.762	11.73	866
9x5	42.000	8.74	647	42.765	8.48	628	48.757	10.46	773	62.998	12.90	952
9x6	43.800	9.80	724	44.870	9.67	715	50.925	11.82	872	66.351	14.74	1036
9x7	45.600	10.90	804	47.397	11.12	822	53.846	13.60	1003	70.589	17.01	1252
9x8	47.733	12.14	895	49.668	12.45	918	56.396	15.21	1120	73.970	18.99	1397
9x9	48.933	12.93	952	52.201	13.98	1030	59.666	17.25	1269	77.060	20.86	1533
9x10	51.033	14.35	1055	54.124	15.30	1127	62.217	19.07	1402	79.970	22.84	1678
10x4	43.800	8.75	646	44.970	8.69	643	50.935	10.60	782	65.094	12.92	951
10x5	45.600	9.84	726	46.779	9.79	723	53.102	12.02	885	68.494	14.88	1094
10x6	47.400	10.98	809	48.698	10.91	805	55.043	13.25	975	71.121	16.31	1199
10x7	48.600	11.76	866	51.225	12.47	919	57.961	15.16	1115	75.356	18.73	1377
10x8	50.733	13.07	961	53.376	13.82	1017	60.889	17.08	1255	78.738	20.84	1530
10x9	52.533	14.33	1053	54.940	14.87	1094	62.460	18.24	1340	81.415	22.52	1652
10x10	54.333	15.62	1147	56.867	16.15	1188	64.411	19.65	1443	84.094	24.24	1778
10x11	56.133	16.95	1244	58.671	17.52	1287	66.959	21.61	1585	87.004	26.38	1934
10x12	57.933	18.33	1344	60.476	18.92	1389	69.125	23.40	1716	89.915	28.60	2095

* THE QUANTITIES SHOWN ABOVE ARE FOR OUTLET END APRONS FOR INLET END QUANTITIES REDUCE THE ABOVE QUANTITIES AS FOLLOWS:

CONCRETE: REDUCE OUTLET QUANTITY BY (WX0.0092 CU.YDS./FT)

STEEL: REDUCE OUTLET QUANTITY BY (WX0.334 LBS/LIN.FT)

APRON QUANTITIES FOR CONCRETE BOX CULVERTS

SHEET 2 OF 2

SEPT. 5, 1967

3-1-71

R.M.U. - REV. DBL 10X6 (45°) -3-11-80

ADD SINGLE 4x5