

DESIGN OF MAT FOUNDATION

Job Details

Job Name : Mat

Included Support	X (ft)	Y (ft)	Z (ft)
1	1.821	-10.000	25.270
2	5.762	-10.000	39.444
3	22.479	-10.000	36.156
4	39.220	-10.000	32.864
5	46.878	-10.000	31.744
6	44.751	-10.000	41.724
7	42.573	-10.000	51.215
8	56.688	-10.000	52.216
9	58.778	-10.000	43.457
10	61.122	-10.000	33.432
11	64.697	-10.000	17.807
12	67.396	-10.000	4.462
13	53.587	-10.000	1.317
14	50.280	-10.000	16.121
15	18.525	-10.000	21.985
16	35.310	-10.000	18.684

Load Details

Included Loads

Load Case No 5: 1.5(DL+LL)

Primary Primary

Serviceability Factor 1.000

Design Factor 1.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	-2.968	-67.697	-25.421	-143.662	-0.824	9.776
43	-3.673	11.988	-22.652	-133.713	-0.879	16.304
44	-0.419	-24.769	-21.767	-127.132	-0.957	4.755
45	0.284	-22.182	-20.614	-119.337	-1.035	1.515
46	-0.996	-89.121	-23.243	-126.060	-1.032	5.344
47	-2.035	-68.472	-25.696	-134.568	-0.980	12.032
48	-3.165	5.477	-21.184	-120.192	-0.907	18.792
49	-1.532	23.183	-19.793	-112.236	-1.057	13.837
50	0.551	-59.747	-23.460	-123.816	-1.022	4.147
51	1.382	-83.290	-21.220	-115.886	-1.037	-1.870
52	3.345	-64.415	-21.981	-117.475	-1.063	-13.550
53	4.062	-64.668	-19.290	-107.892	-1.129	-20.493

54	1.616	-58.739	-20.732	-116.125	-0.997	-13.529
55	1.954	-79.609	-24.179	-128.323	-1.039	-9.569
56	0.619	-94.472	-25.690	-140.936	-0.943	-3.059
57	0.976	-84.358	-24.026	-131.507	-1.013	-5.436

Load Case No 6: 1.2(DL+LL+ELX)

Primary Primary

Serviceability Factor 1.000

Design Factor 1.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	5.974	-30.520	-19.341	-109.787	-0.512	-44.379
43	5.578	17.872	-17.289	-102.497	-0.578	-40.334
44	10.292	-30.953	-17.108	-99.511	-0.629	-56.350
45	11.461	4.909	-16.454	-94.701	-0.692	-60.776
46	10.744	-83.432	-18.743	-100.944	-0.709	-58.651
47	7.748	-27.927	-20.733	-107.814	-0.688	-46.516
48	6.633	41.744	-17.219	-96.582	-0.635	-40.704
49	7.998	-7.024	-16.166	-90.743	-0.752	-44.898
50	9.695	-81.402	-19.333	-100.828	-0.720	-52.484
51	10.007	-98.267	-17.481	-94.361	-0.719	-55.825
52	11.398	-77.783	-18.144	-95.936	-0.722	-63.964
53	11.754	-78.873	-15.486	-86.699	-0.769	-68.234
54	9.809	-26.707	-16.276	-91.662	-0.657	-62.566
55	12.266	-50.219	-19.744	-103.666	-0.710	-67.197
56	10.889	-71.441	-20.222	-110.346	-0.619	-61.212
57	11.045	-56.692	-19.018	-103.770	-0.678	-62.556

Load Case No 7: 1.2(DL+LL+ELY)

Primary Primary

Serviceability Factor 1.000

Design Factor 1.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	-1.649	-36.334	-12.949	-71.380	-1.003	4.254
43	-2.977	-13.919	-10.515	-62.380	-1.039	13.542
44	-0.586	-42.646	-9.036	-53.224	-1.100	4.638
45	0.411	-37.049	-7.590	-43.916	-1.159	0.260
46	-1.037	-51.468	-7.960	-42.975	-1.151	4.582
47	-2.515	-40.069	-9.316	-47.951	-1.104	13.104
48	-3.706	-33.043	-7.878	-43.767	-1.057	20.458
49	-2.277	-32.103	-6.121	-34.182	-1.162	16.190
50	-0.691	-41.847	-6.983	-36.468	-1.142	7.781
51	0.555	-58.056	-5.850	-32.110	-1.154	0.003
52	2.884	-66.182	-6.309	-32.624	-1.170	-13.478
53	4.501	-36.614	-5.934	-30.611	-1.207	-23.834

54	2.817	-17.204	-7.651	-40.109	-1.121	-19.487
55	1.789	-56.103	-8.663	-44.371	-1.149	-10.539
56	0.938	-52.307	-12.315	-65.047	-1.090	-5.440
57	1.543	-41.773	-10.396	-54.218	-1.144	-8.736

Load Case No 8: 1.2(DL+LL-ELX)

Primary Primary

Serviceability Factor 1.000

Design Factor 1.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	-10.723	-77.795	-21.332	-120.071	-0.806	60.021
43	-11.455	1.309	-18.954	-111.443	-0.829	66.420
44	-10.963	-8.678	-17.719	-103.900	-0.902	63.959
45	-11.006	-40.400	-16.529	-96.239	-0.965	63.199
46	-12.338	-59.161	-18.447	-100.752	-0.942	67.201
47	-11.004	-81.628	-20.380	-107.495	-0.879	65.767
48	-11.696	-32.981	-16.675	-95.725	-0.816	70.771
49	-10.450	44.116	-15.504	-88.835	-0.940	67.037
50	-8.814	-14.194	-18.203	-97.277	-0.915	59.118
51	-7.797	-34.997	-16.471	-91.057	-0.941	52.833
52	-6.045	-25.281	-17.025	-92.024	-0.979	42.284
53	-5.255	-24.596	-15.378	-85.929	-1.037	35.445
54	-7.223	-67.275	-16.895	-94.138	-0.938	40.920
55	-9.139	-77.156	-18.942	-101.651	-0.952	51.888
56	-9.899	-79.715	-20.882	-115.151	-0.889	56.318
57	-9.484	-78.281	-19.423	-106.642	-0.943	53.858

Load Case No 9: 1.2(DL+LL-ELY)

Primary Primary

Serviceability Factor 1.000

Design Factor 1.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	-3.101	-71.982	-27.725	-158.478	-0.315	11.387
43	-2.901	33.100	-25.728	-151.560	-0.368	12.545
44	-0.084	3.016	-25.791	-150.188	-0.431	2.970
45	0.044	1.557	-25.392	-147.024	-0.497	2.164
46	-0.557	-91.126	-29.229	-158.721	-0.500	3.968
47	-0.740	-69.487	-31.797	-167.358	-0.464	6.147
48	-1.357	41.806	-26.016	-148.540	-0.394	9.609
49	-0.175	69.195	-25.548	-145.396	-0.530	5.948
50	1.573	-53.749	-30.553	-161.638	-0.493	-1.147
51	1.656	-75.209	-28.102	-153.308	-0.506	-2.995
52	2.469	-36.882	-28.860	-155.336	-0.531	-8.202
53	1.997	-66.855	-24.931	-142.017	-0.599	-8.955

54	-0.231	-76.778	-25.519	-145.691	-0.474	-2.160
55	1.338	-71.272	-30.023	-160.946	-0.513	-4.771
56	0.053	-98.849	-28.789	-160.450	-0.418	0.545
57	0.018	-93.201	-28.045	-156.194	-0.478	0.038

Load Case No 10: 1.5(DL+ELX)

Primary Primary

Serviceability Factor 1.000

Design Factor 1.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	8.464	0.367	0.260	3.244	0.183	-58.894
43	8.888	-28.040	2.797	11.419	0.152	-61.053
44	13.863	-82.267	2.095	8.434	0.170	-77.182
45	15.509	-23.932	1.289	5.099	0.172	-82.389
46	13.503	-76.285	0.403	1.870	0.146	-75.744
47	10.436	-6.577	-0.493	-1.035	0.121	-66.086
48	10.291	20.318	-0.054	0.463	0.114	-65.974
49	12.597	-66.153	0.233	0.990	0.118	-73.563
50	12.915	-95.255	-0.481	-1.423	0.123	-74.270
51	12.464	-110.221	0.283	0.995	0.139	-72.392
52	12.586	-105.461	-0.698	-2.396	0.162	-72.021
53	12.166	-65.724	-0.920	-3.243	0.171	-69.927
54	9.697	-0.718	-0.829	-2.403	0.176	-61.677
55	12.702	-52.723	-1.101	-3.177	0.153	-72.322
56	12.701	-44.238	-1.390	-2.865	0.168	-72.602
57	12.831	-31.580	-1.394	-3.563	0.166	-72.862

Load Case No 11: 1.5(DL+ELY)

Primary Primary

Serviceability Factor 1.000

Design Factor 1.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	-1.064	-6.900	8.251	51.253	-0.430	1.898
43	-1.806	-67.778	11.264	61.565	-0.425	6.291
44	0.265	-96.885	12.185	66.293	-0.419	-0.947
45	1.696	-76.379	12.368	68.581	-0.412	-6.095
46	-1.223	-36.329	13.881	74.330	-0.406	3.297
47	-2.393	-21.754	13.779	73.794	-0.399	8.438
48	-2.633	-73.165	11.622	66.482	-0.414	10.478
49	-0.247	-97.502	12.789	71.692	-0.395	2.798
50	-0.068	-45.812	14.957	79.028	-0.405	1.061
51	0.649	-59.957	14.822	78.809	-0.405	-2.607
52	1.944	-90.960	14.095	76.744	-0.398	-8.914
53	3.101	-12.900	11.020	66.867	-0.376	-14.426

54	0.957	11.161	9.951	62.038	-0.405	-7.827
55	-0.393	-60.079	12.751	70.942	-0.397	-1.499
56	0.262	-20.320	8.494	53.758	-0.421	-2.887
57	0.953	-12.930	9.383	58.377	-0.416	-5.587

Load Case No 12: 1.5(DL-ELX)

Primary Primary

Serviceability Factor 1.000

Design Factor 1.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	-12.407	-58.727	-2.228	-9.611	-0.184	71.606
43	-12.404	-48.743	0.716	0.237	-0.162	72.390
44	-12.706	-54.424	1.331	2.948	-0.171	73.204
45	-12.575	-80.568	1.195	3.177	-0.169	72.580
46	-15.350	-45.946	0.773	2.109	-0.145	81.570
47	-13.004	-73.703	-0.050	-0.636	-0.119	74.267
48	-12.620	-73.087	0.626	1.534	-0.113	73.371
49	-10.463	-2.228	1.060	3.375	-0.117	66.356
50	-10.220	-11.246	0.932	3.016	-0.121	65.233
51	-9.791	-31.134	1.546	5.125	-0.138	63.430
52	-9.217	-39.834	0.700	2.494	-0.159	60.789
53	-9.094	2.122	-0.785	-2.281	-0.164	59.672
54	-11.593	-51.427	-1.603	-5.499	-0.176	67.680
55	-14.053	-86.395	-0.098	-0.658	-0.150	76.534
56	-13.284	-54.580	-2.214	-8.871	-0.169	74.310
57	-12.831	-58.566	-1.900	-7.153	-0.165	72.655

Load Case No 13: 1.5(DL-ELY)

Primary Primary

Serviceability Factor 1.000

Design Factor 1.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	-2.879	-51.460	-10.219	-57.620	0.429	10.814
43	-1.710	-9.004	-7.752	-49.910	0.414	5.046
44	0.892	-39.806	-8.759	-54.912	0.418	-3.031
45	1.238	-28.121	-9.885	-60.304	0.415	-3.714
46	-0.623	-85.902	-12.705	-70.351	0.408	2.530
47	-0.175	-58.526	-14.322	-75.465	0.401	-0.258
48	0.303	20.396	-11.050	-64.485	0.415	-3.082
49	2.380	29.120	-11.495	-67.326	0.396	-10.005
50	2.762	-60.689	-14.506	-77.435	0.406	-10.098
51	2.025	-81.398	-12.993	-72.689	0.405	-6.355
52	1.425	-54.335	-14.093	-76.646	0.401	-2.318
53	-0.029	-50.702	-12.726	-72.391	0.383	4.171

54	-2.853	-63.306	-12.384	-69.940	0.405	13.831
55	-0.958	-79.040	-13.949	-74.777	0.399	5.711
56	-0.845	-78.498	-12.099	-65.495	0.419	4.595
57	-0.953	-77.215	-12.677	-69.093	0.417	5.379

Load Case No 14: .9DL+1.5ELX

Primary Primary

Serviceability Factor 1.000

Design Factor 1.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	9.253	12.039	0.654	4.518	0.183	-61.437
43	9.591	-12.683	2.094	9.088	0.154	-63.320
44	13.631	-54.929	1.410	6.157	0.171	-76.386
45	14.922	-3.032	0.792	3.444	0.171	-80.427
46	13.872	-51.838	0.168	1.074	0.146	-76.909
47	10.950	9.479	-0.384	-0.701	0.120	-67.722
48	10.757	30.872	-0.169	0.064	0.113	-67.453
49	12.170	-52.477	-0.026	0.117	0.118	-72.122
50	12.376	-73.955	-0.571	-1.741	0.122	-72.463
51	11.930	-81.950	-0.083	-0.229	0.139	-70.600
52	11.912	-76.402	-0.699	-2.416	0.161	-69.774
53	11.552	-53.004	-0.579	-2.139	0.170	-67.876
54	10.076	9.711	-0.343	-0.823	0.176	-62.878
55	12.972	-24.900	-0.861	-2.410	0.152	-73.165
56	12.818	-24.474	-0.669	-0.518	0.168	-72.944
57	12.831	-13.551	-0.735	-1.420	0.166	-72.821

Load Case No 15: .9DL+1.5ELY

Primary Primary

Serviceability Factor 1.000

Design Factor 1.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	-0.275	4.772	8.645	52.526	-0.430	-0.645
43	-1.103	-52.422	10.562	59.234	-0.422	4.024
44	0.033	-69.546	11.500	64.017	-0.418	-0.151
45	1.109	-55.479	11.871	66.925	-0.412	-4.133
46	-0.854	-11.883	13.646	73.534	-0.407	2.131
47	-1.880	-5.698	13.888	74.128	-0.399	6.802
48	-2.167	-62.611	11.507	66.082	-0.414	8.999
49	-0.673	-83.826	12.530	70.818	-0.395	4.239
50	-0.607	-24.511	14.866	78.709	-0.405	2.869
51	0.114	-31.686	14.456	77.585	-0.405	-0.815
52	1.270	-61.901	14.094	76.725	-0.398	-6.668
53	2.487	-0.180	11.361	67.972	-0.378	-12.375

54	1.336	21.590	10.438	63.618	-0.405	-9.028
55	-0.123	-32.255	12.990	71.709	-0.397	-2.342
56	0.378	-0.556	9.215	56.105	-0.420	-3.228
57	0.953	5.099	10.042	60.520	-0.416	-5.545

Load Case No 16: .9DL-1.5ELX

Primary Primary

Serviceability Factor 1.000

Design Factor 1.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	-11.619	-47.055	-1.834	-8.338	-0.184	69.064
43	-11.701	-33.387	0.013	-2.094	-0.160	70.122
44	-12.937	-27.085	0.646	0.671	-0.171	74.000
45	-13.162	-59.668	0.698	1.522	-0.169	74.541
46	-14.980	-21.500	0.538	1.313	-0.145	80.405
47	-12.490	-57.647	0.058	-0.302	-0.119	72.631
48	-12.155	-62.533	0.512	1.134	-0.113	71.891
49	-10.890	11.448	0.802	2.502	-0.117	67.798
50	-10.759	10.054	0.841	2.697	-0.122	67.041
51	-10.325	-2.863	1.181	3.901	-0.138	65.222
52	-9.891	-10.775	0.699	2.475	-0.159	63.035
53	-9.709	14.842	-0.444	-1.176	-0.165	61.723
54	-11.214	-40.998	-1.116	-3.919	-0.176	66.480
55	-13.783	-58.572	0.142	0.109	-0.150	75.692
56	-13.168	-34.817	-1.493	-6.524	-0.169	73.969
57	-12.831	-40.537	-1.241	-5.009	-0.166	72.696

Load Case No 17: .9DL-1.5ELY

Primary Service

Serviceability Factor 1.000

Design Factor 0.000

Reactions

NODE NO.	Fx (kip)	Fy (kip)	Fz (kip)	Mx (kip-ft)	My (kip-ft)	Mz (kip-ft)
42	-2.090	-39.788	-9.825	-56.346	0.430	8.272
43	-1.007	6.352	-8.455	-52.241	0.416	2.778
44	0.661	-12.468	-9.444	-57.188	0.418	-2.235
45	0.651	-7.221	-10.381	-61.959	0.415	-1.753
46	-0.254	-61.456	-12.940	-71.147	0.408	1.364
47	0.339	-42.470	-14.213	-75.131	0.401	-1.894
48	0.769	30.950	-11.164	-64.884	0.415	-4.561
49	1.953	42.797	-11.754	-68.199	0.396	-8.563
50	2.224	-39.389	-14.596	-77.754	0.406	-8.291
51	1.490	-53.127	-13.359	-73.913	0.405	-4.562
52	0.751	-25.276	-14.094	-76.666	0.400	-0.072
53	-0.643	-37.982	-12.385	-71.286	0.382	6.222

54	-2.474	-52.877	-11.897	-68.360	0.405	12.630
55	-0.688	-51.216	-13.710	-74.010	0.399	4.868
56	-0.728	-58.734	-11.378	-63.147	0.419	4.253
57	-0.953	-59.186	-12.018	-66.950	0.417	5.421

Properties Details

Region	Thickness(ft)	Material
1	1.000	Concrete

Soil Details

Boundary	Subgrade Modulus	Soil Height Above Mat	Soil Density	Soil Pressure
1	0.040 kip/in ² /in	0.000 ft	0.000 lb/ft ³	0.000 kip/ft ²

Mat Dimension

Boundary Name : 1

Node No	X Coor(ft)	Y Coor(ft)	Z Coor(ft)
1	37.167	-10.000	29.500
2	63.167	-10.000	29.500
3	63.167	-10.000	55.500
4	37.167	-10.000	55.500

Analysis Results

Node Displacement Summary Table

-	Node Number	Load Case	Dx(ft)	Dy(ft)	Dz(ft)	Rx (Rad)	Ry (Rad)	Rz (Rad)
Max Dx	1	5	0.00000	-0.02722	0.00000	-0.00256	0.00000	-0.00054
Max Dy	4	9	0.00000	1216493.83333	0.00000	- 46788.22266	0.00000	-0.00970
Max Dz	1	5	0.00000	-0.02722	0.00000	-0.00256	0.00000	-0.00054
Max Rx	601	15	0.00000	-0.01487	0.00000	0.00152	0.00000	-0.00006
Max Ry	1	5	0.00000	-0.02722	0.00000	-0.00256	0.00000	-0.00054
Max Rz	64	8	0.00000	0.07167	0.00000	-0.00517	0.00000	0.00578
Min Dx	1	5	0.00000	-0.02722	0.00000	-0.00256	0.00000	-0.00054
Min Dy	2	9	0.00000	-0.44392	0.00000	- 46788.21875	0.00000	-0.01266
Min Dz	1	5	0.00000	-0.02722	0.00000	-0.00256	0.00000	-0.00054
Min Rx	3	9	0.00000	1216493.58333	0.00000	- 46788.23828	0.00000	-0.01173
Min Ry	1	5	0.00000	-0.02722	0.00000	-0.00256	0.00000	-0.00054

Min Rz	34	9	0.00000	233940.66667	0.00000	-	46788.22266	0.00000	-0.01294
--------	----	---	---------	--------------	---------	---	-------------	---------	----------

Plate Stress Summary Table

-	Plate	Load Case	SQx (kip/ft ²)	SQy (kip/ft ²)	Sx (kip/ft ²)	Sy (kip/ft ²)	Sxy (kip/ft ²)	Mx (kip-ft/ft)	My (kip-ft/ft)	Mxy (kip-ft/ft)
Max SQX	602	9	36.20080	40.86194	0.00000	0.00000	0.00000	10.23051	62.85199	11.00199
Max SQY	602	9	36.20080	40.86194	0.00000	0.00000	0.00000	10.23051	62.85199	11.00199
Max SX	1	5	0.56854	0.55019	0.00000	0.00000	0.00000	0.84161	0.65861	-0.45801
Max SY	1	5	0.56854	0.55019	0.00000	0.00000	0.00000	0.84161	0.65861	-0.45801
Max SXY	1	5	0.56854	0.55019	0.00000	0.00000	0.00000	0.84161	0.65861	-0.45801
Max MX	262	6	-27.45200	22.52602	0.00000	0.00000	0.00000	31.86337	16.32187	-15.83444
Max MY	560	9	8.42483	32.44680	0.00000	0.00000	0.00000	14.44856	73.79015	4.85617
Max MXY	26	9	-27.32754	-52.39088	0.00000	0.00000	0.00000	10.50504	-135.07347	60.13711
Min SQX	52	9	-44.52044	32.92880	0.00000	0.00000	0.00000	4.79289	4.27965	17.46896
Min SQY	26	9	-27.32754	-52.39088	0.00000	0.00000	0.00000	10.50504	-135.07347	60.13711
Min SX	1	5	0.56854	0.55019	0.00000	0.00000	0.00000	0.84161	0.65861	-0.45801
Min SY	1	5	0.56854	0.55019	0.00000	0.00000	0.00000	0.84161	0.65861	-0.45801
Min SXY	1	5	0.56854	0.55019	0.00000	0.00000	0.00000	0.84161	0.65861	-0.45801
Min MX	518	9	-0.78853	26.38924	0.00000	0.00000	0.00000	-25.10245	-23.96178	3.86063
Min MY	26	9	-27.32754	-52.39088	0.00000	0.00000	0.00000	10.50504	-135.07347	60.13711
Min MXY	263	9	-5.33658	11.87894	0.00000	0.00000	0.00000	14.32213	10.46111	-19.67525

Base Pressure Summary

-	Node	X-Coor(ft)	Y-Coor(ft)	Z-Coor(ft)	Load Case	Base Pressure (kip/ft ²)
Maximum Base Pressure	2	63.167	-10.000	29.500	9	30.68402
Minimum Base Pressure	3	63.167	-10.000	55.500	5	0.00000

Base Pressure Summary for Service Load conditions

-	Node	X-Coor(ft)	Y-Coor(ft)	Z-Coor(ft)	Load Case	Base Pressure (kip/ft ²)
Maximum Base Pressure	2	63.167	-10.000	29.500	9	30.68402
Minimum Base Pressure	3	63.167	-10.000	55.500	5	0.00000

Contact Area

Load Case	Area in Contact(ft ²)	% of Total Area	Area out of Contact(ft ²)	% of Total Area
5	401.50000	59.39349	274.50000	40.60651

6	266.00000	39.34911	410.00000	60.65089
7	676.00000	100.00000	0.00000	0.00000
8	341.25000	50.48077	334.75000	49.51923
9	13.00000	1.92308	663.00000	98.07692
10	491.25000	72.67012	184.75000	27.32988
11	676.00000	100.00000	0.00000	0.00000
12	639.25000	94.56361	36.75000	5.43639
13	372.50000	55.10355	303.50000	44.89645
14	359.00000	53.10651	317.00000	46.89349
15	676.00000	100.00000	0.00000	0.00000
16	414.00000	61.24260	262.00000	38.75740
17	200.50000	29.65976	475.50000	70.34024

[Print Calculation Sheet](#)