REPORT #34A
MARCH 1, 1971

REVISION - STRUCTURAL DESIGN OF 65-METER HOMOLOGY TELESCOPE

Woon-Yin Wong; NRAO, Charlottesville, Virginia

The design of the 65 meter telescope has been updated due to the following changes or requirements:

A. To overcome the low dynamic behavior of the declination wheel, a cable has been added between point 54 and point 45. The dynamic frequency of the wheel about its long axis (43-58) has been increased to 3.5 cps by introducing this cable with a cross-sectional area of 2.00 in^2 (Figure 1).

B. Point 48 has been lifted by 5 inches. This enables a bigger depth for the long member 56-59, this will in turn increase the dynamical frequency of the member.

C. The thickness of panel A,B, and C, which is the distance from the surface to the supporting points, has been increased by 5 inches. This will require the adjustment of point coordinates of points no. 5 to 14.

D. All members of the telescope structure are divided in 4 types: (Report #35)

Type	Number in one quadrant
1 Normal	139
2 Special order	17
3 Special design	12
4 Fictitious	61
5 Cable	1

Please note that 12 "Special order" has been eliminated and 12 "Normal" has been added. This is due to the fact that the table from which the selections are based on is not just one COR-TEN pipe, but also the PLATN END pipes.

The list of coordinates and member tables in this report will supersede those in Report #34.

The code name of the structure is EK031, dated 03/01/71.

POINT	COORDINATES X	Y	Z	RESTRAINTS OMEGA=1 X Y Z	OMEGA=2 X Y Z	OMEGA=6 X Y Z	POINT LOADS	MU
1	133.153	0.0	49.033	0 1 0	0 1 0	1 0 1	452.40	2
2	388.746	0.0	14.104	0 1 0	0 1 0	1 0 1	1151.20	2
3	274.884	274.884	14.104	0 0 0	0 0 0	0 0 0	2302.30	4
4	0.0	388.746	14.104	1 0 0	0 1 1	1 0 0	1151.20	2
5	679.875	0.0	-69.302	0 1 0	0 1 0	1 0 1	1019.60	2
6	628.122	260.177	-69.302	0 0 0	0 0 0	0 0 0	2039.20	4
7	480.744	480.744	-69.302	0 0 0	0 0 0	0 0 0	2039.20	4
8	260.177	628.122	-69.302	0 0 0	0 0 0	0 0 0	2039.20	4
9	0.0	679.875	-69.302	1 0 0	0 1 1	1 0 0	1019.60	2
10	974.362	0.0	-146.557	0 1 0	0 1 0	1 0 1	1454.20	2
11	900.193	372.872	-146.558	0 0 0	0 0 0	0 0 0	2908.40	4
12	688.978	688.978	-146.557	0 0 0	0 0 0	0 0 0	2908.40	4
13	372.872	900.193	-146.558	0 0 0	0 0 0	0 0 0	2908.40	4
14	0.0	974.362	-146.557	1 0 0	0 1 1	1 0 0	1454.20	2
15	1256.277	0.0	-264.031	0 1 0	0 1 0	1 0 1	1361.10	2
16	1160.649	480.757	-264.031	0 0 0	0 0 0	0 0 0	2722.20	4
17	888.322	888.322	-264.031	0 0 0	0 0 0	0 0 0	2722.20	4
18	480.757	1160.649	-264.031	0 0 0	0 0 0	0 0 0	2722.20	4
19	0.0	1256.277	-264.031	1 0 0	0 1 1	1 0 0	1361.10	2
20	0.0	133.153	49.033	1 0 0	0 1 1	1 0 0	452.40	2
21	450.000	150.000	184.600	0 0 0	0 0 0	0 0 0	0.0	4
22	150.000	450.000	184.600	0 0 0	0 0 0	0 0 0	0.0	4
23	0.0	450.000	184.600	1 1 1	0 1 1	1 1 1	0.0	0
24	746.410	0.0	87.806	1 1 1	1 1 1	1 0 1	0.0	0
25	746.410	235.000	87.806	0 0 0	0 0 0	0 0 0	0.0	4
26	551.000	551.000	100.000	0 0 0	0 0 0	0 0 0	0.0	4
27	207.055	746.410	87.806	0 0 0	0 0 0	0 0 0	0.0	4
28	0.0	746.410	87.806	1 1 1	0 1 1	1 1 1	0.0	0
29	1050.000	0.0	24.885	0 1 0	0 1 0	1 0 1	0.0	2
30	1030.000	190.000	-46.114	0 0 0	0 0 0	0 0 0	0.0	4

Table 1: Points

31	970.074	401.818	24.885	0 0 0	0 0 0	0 0 0	0.0	4
32	873.043	583.349	-46.114	0 0 0	0 0 0	0 0 0	0.0	4
33	742.462	742.462	24.885	0 0 0	0 0 0	0 0 0	0.0	4
34	583.349	873.043	-46.114	0 0 0	0 0 0	0 0 0	0.0	4
35	401.818	970.074	35.000	0 0 0	0 0 0	0 0 0	0.0	4
36	204.945	1029.825	-46.114	0 0 0	0 0 0	0 0 0	0.0	4
37	0.0	1050.000	24.885	1 0 0	0 1 1	1 0 0	0.0	2
38	450.000	0.0	184.600	1 1 1	1 1 1	1 0 1	0.0	0
39	346.455	0.0	310.000	1 1 1	1 1 1	1 0 1	0.0	0
40	346.455	143.506	310.000	0 0 0	0 0 0	0 0 0	0.0	4
41	143.506	346.455	310.000	0 0 0	0 0 0	0 0 0	0.0	4
42	0.0	346.455	310.000	1 1 1	0 1 1	1 1 1	0.0	0
43	780.685	0.0	230.000	0 1 0	0 1 0	1 0 1	0.0	2
44	659.394	259.051	230.000	0 0 0	0 0 0	0 0 0	0.0	4
45	538.102	538.102	230.000	0 0 0	0 0 0	0 0 0	0.0	4
46	250.000	600.000	245.000	0 0 0	0 0 0	0 0 0	0.0	4
47	0.0	688.700	230.000	1 0 0	0 1 1	1 0 0	0.0	2
48	0.0	200.000	195.000	1 0 0	0 1 1	1 0 0	0.0	2
49	0.0	0.0	90.000	1 1 0	0 1 1	1 0 1	2250.00	1
50	200.000	0.0	200.000	0 1 0	0 1 0	1 0 1	0.0	2
51	325.000	75.000	560.000	0 0 0	0 0 0	0 0 0	0.0	4
52	325.000	0.0	560.000	1 1 1	1 1 1	1 0 1	0.0	0
53	727.758	0.0	635.524	0 1 0	0 1 0	1 0 1	0.0	2
54	560.045	0.0	796.545	0 1 0	0 1 0	1 0 1	0.0	2
55	303.997	0.0	971.608	0 1 0	0 1 0	1 0 1	0.0	2
56	0.0	0.0	217.200	1 1 0	0 1 1	1 0 1	500.00	1
57	0.0	0.0	-1090.560	1 1 0	0 1 1	1 0 1	5000.00	1
58	0.0	0.0	1033.200	1 1 0	1 1 1	1 1 1	41000.00	1
59	0.0	800.000	252.200	1 0 1	1 1 1	1 1 1	0.0	2
60	91.924	0.0	-40.000	0 1 0	0 1 0	1 0 1	1125.00	2
61	65.000	65.000	-40.000	0 0 0	0 0 0	0 0 0	2250.00	4
62	0.0	91.924	-40.000	1 0 0	0 1 1	1 0 0	1125.00	2
63	91.924	0.0	90.000	0 1 0	0 1 0	1 0 1	0.0	2
64	65.000	65.000	90.000	0 0 0	0 0 0	0 0 0	0.0	4
65	0.0	91.924	90.000	1 0 0	0 1 1	1 0 0	0.0	2

Table 1: Points (cont.)

NO	INC	NU	DENS	AREA	LENGTH	P	DIA	T	TABLE
1	1-20	4	0.479	0.609	188.306				SPECIAL DESIGN
2	1- 4	4	0.164	3.144	412.398				SPECIAL DESIGN
3	2-20	4	0.164	3.144	412.398				SPECIAL DESIGN
4	1- 3	4	9.594	0.476	311.238				SPECIAL DESIGN
5	3-20	4	9.594	0.476	311.238				SPECIAL DESIGN
6	2- 3	4	0.517	4.613	297.532				SPECIAL DESIGN
7	3- 4	4	0.517	4.613	297.532				SPECIAL DESIGN
8	1- 2	3	0.164	1.337	257.969				SPECIAL DESIGN
9	4-20	3	0.164	1.337	257.969				SPECIAL DESIGN
10	2- 4	4	0.479	4.206	549.759				SPECIAL DESIGN
11	2- 7	4	0.709	2.279	496.153				SPECIAL DESIGN
12	2- 5	4	0.709	2.279	496.154				SPECIAL DESIGN
13	3- 9	4	0.709	2.279	496.154				SPECIAL DESIGN
14	4- 7	4	0.709	2.279	496.153				SPECIAL DESIGN
15	2- 6	4	4.943	0.649	363.085				SPECIAL DESIGN
16	3- 8	4	4.943	0.649	363.085				SPECIAL DESIGN
17	3- 9	4	4.943	0.649	363.085				SPECIAL DESIGN
18	4- 8	4	4.943	0.649	363.085				SPECIAL DESIGN
19	5- 6	4	0.683	4.683	264.701				SPECIAL DESIGN
20	6- 7	4	0.683	4.683	264.701				SPECIAL DESIGN
21	7- 8	4	0.683	4.683	264.701				SPECIAL DESIGN
22	8- 9	4	0.683	4.683	264.701				SPECIAL DESIGN
23	2- 5	3	0.709	1.887	302.733				SPECIAL DESIGN
24	3- 7	4	0.709	3.774	302.733				SPECIAL DESIGN
25	4- 9	3	0.709	1.887	302.738				SPECIAL DESIGN
26	5- 7	4	0.641	2.747	519.230				SPECIAL DESIGN
27	7- 9	4	0.641	2.747	519.230				SPECIAL DESIGN
28	5-11	4	1.221	2.537	439.066				SPECIAL DESIGN
29	6-10	4	1.221	2.537	439.066				SPECIAL DESIGN
30	6-12	4	1.221	2.537	439.065				SPECIAL DESIGN
31	7-11	4	1.221	2.537	439.066				SPECIAL DESIGN
32	7-13	4	1.221	2.537	439.066				SPECIAL DESIGN
33	8-12	4	1.221	2.537	439.065				SPECIAL DESIGN
34	8-14	4	1.221	2.537	439.066				SPECIAL DESIGN

Table 2: Members

NO	INC	NL	DENS	AREA	LENGTH	R	DIA	T	TABLE
35	9-13	4	1.221	2.537	439.066				SPECIAL DESIGN
36	5-10	3	0.747	1.478	303.394				SPECIAL DESIGN
37	6-11	4	0.747	2.956	303.394				SPECIAL DESIGN
38	7-12	4	0.747	2.956	303.894				SPECIAL DESIGN
39	8-13	4	0.747	2.956	303.394				SPECIAL DESIGN
40	9-14	3	0.747	1.478	303.394				SPECIAL DESIGN
41	10-11	4	1.168	5.917	379.399				SPECIAL DESIGN
42	11-12	4	1.168	5.917	379.400				SPECIAL DESIGN
43	12-13	4	1.168	5.917	379.400				SPECIAL DESIGN
44	13-14	4	1.168	5.917	379.399				SPECIAL DESIGN
45	10-15	4	0.092	2.697	528.508				SPECIAL DESIGN
46	11-15	4	0.092	2.697	523.305				SPECIAL DESIGN
47	11-17	4	0.092	2.697	523.507				SPECIAL DESIGN
48	12-16	4	0.092	2.697	528.507				SPECIAL DESIGN
49	12-18	4	0.092	2.697	523.507				SPECIAL DESIGN
50	13-17	4	0.092	2.697	528.507				SPECIAL DESIGN
51	13-19	4	0.092	2.697	528.506				SPECIAL DESIGN
52	14-19	4	0.092	2.697	528.508				SPECIAL DESIGN
53	10-15	3	1.761	1.665	305.528				SPECIAL DESIGN
54	11-16	4	1.761	3.329	305.528				SPECIAL DESIGN
55	12-17	4	1.761	3.329	305.528				SPECIAL DESIGN
56	13-18	4	1.761	3.329	305.528				SPECIAL DESIGN
57	14-19	3	1.761	1.665	305.528				SPECIAL DESIGN
58	15-16	4	1.761	4.691	490.175				SPECIAL DESIGN
59	16-17	4	1.761	4.691	490.174				SPECIAL DESIGN
60	17-18	4	1.761	4.691	490.174				SPECIAL DESIGN
61	18-19	4	1.761	4.691	490.175				SPECIAL DESIGN
62	1-21	4	0.292	4.337	375.360	1.856	5.250	0.281	D-420
63	1-50	3	0.292	8.705	165.105				SPECIAL ORDER
64	2-21	4	0.292	2.129	235.204	1.591	4.500	0.156	D-365
65	2-50	3	0.292	5.917	264.319	3.624	10.250	0.375	D-579
66	3-21	4	0.292	14.579	274.463	4.508	12.750	0.375	A- 74
67	3-22	4	0.292	4.418	274.463	1.458	4.125	0.375	D-348
68	3-43	4	0.292	2.945	337.479	1.591	4.500	0.219	D-367
69	3-50	4	0.292	3.829	340.186	1.812	5.125	0.250	D-411

Table 2: Members (cont.)

NO	IMC	NL	DENS	AREA	LENGTH	P	DIA	T	TABLE
70	4-22	4	0.292	2.101	235.204	1.812	5.125	0.134	D-407
71	4-43	3	0.292	1.421	241.435	1.237	3.500	0.281	D-307
72	5-21	4	0.292	4.387	376.279	1.856	5.250	0.281	D-420
73	5-25	4	0.292	2.916	293.355	1.812	5.125	0.188	D-409
74	6-21	4	0.292	3.232	331.031	2.386	6.750	0.156	D-487
75	6-25	4	0.292	4.712	202.801	2.210	6.250	0.250	D-465
76	6-26	4	0.292	5.400	347.779	2.342	6.625	0.281	D-484
77	7-21	4	0.292	16.770	420.125				SPECIAL ORDER
78	7-22	4	0.292	12.223	420.125	3.801	10.750	0.375	D-587
79	7-26	4	0.292	1.655	201.172	0.928	2.625	0.219	D-250
80	8-22	4	0.292	3.232	331.031	2.386	6.750	0.156	D-487
81	8-26	4	0.292	3.771	347.779	3.624	10.250	0.313	D-577
82	8-27	4	0.292	1.981	208.051	1.900	5.375	0.120	D-425
83	9-22	4	0.292	16.202	376.279				SPECIAL ORDER
84	9-27	4	0.292	9.355	271.485	3.182	9.000	0.344	D-553
85	10-25	4	0.292	6.112	404.201	2.121	6.000	0.344	D-457
86	10-29	3	0.292	0.785	192.386	0.884	2.500	0.219	D-242
87	11-25	4	0.292	4.665	314.514	2.475	7.000	0.219	D-497
88	11-26	4	0.292	6.084	464.465	2.298	6.500	0.313	D-478
89	11-30	4	0.292	14.579	243.044	4.508	12.750	0.375	A- 74
90	11-32	4	0.292	1.323	237.263	1.370	3.875	0.156	D-327
91	12-25	4	0.292	7.035	515.147	2.917	8.250	0.281	D-533
92	12-26	4	0.292	14.579	316.319	4.508	12.750	0.375	A- 74
93	12-27	4	0.292	8.983	539.362	2.828	8.000	0.375	D-530
94	12-33	4	0.292	1.741	192.386	0.972	2.750	0.219	D-258
95	13-26	4	0.292	6.293	464.465	2.917	8.250	0.250	D-532
96	13-27	4	0.292	14.579	327.759	4.508	12.750	0.375	A- 74
97	13-34	4	0.292	2.206	237.263	1.900	5.375	0.134	D-426
98	13-36	4	0.292	2.251	237.263	1.414	4.000	0.188	A- 31
99	14-27	4	0.292	5.890	388.620	2.740	7.750	0.250	D-519
100	14-37	3	0.292	3.461	192.386	2.386	6.750	0.344	D-493
101	15-29	3	0.292	31.067	354.396				SPECIAL ORDER
102	15-30	4	0.292	6.653	367.135	2.298	6.500	0.344	D-479
103	16-30	4	0.292	7.035	386.130	2.917	8.250	0.281	D-533
104	16-31	4	0.292	4.025	354.396	1.900	5.375	0.250	D-430

Table 2: Members (cont.)

NO	INC	NL	DENS	AREA	LENGTH	R	DIA	T	TABLE
105	16-32	4	0.292	6.152	375.140	2.563	7.250	0.281	D-506
106	17-32	4	0.292	4.516	375.139	2.121	6.000	0.250	D-454
107	17-33	4	0.292	6.263	354.396	2.917	8.250	0.250	D-532
108	17-34	4	0.292	4.287	375.139	1.856	5.250	0.281	D-420
109	18-34	4	0.292	8.099	375.140	2.563	7.250	0.375	D-509
110	18-35	4	0.292	4.171	363.276	2.563	7.250	0.188	D-503
111	18-36	4	0.292	6.152	375.139	2.563	7.250	0.281	D-506
112	19-36	4	0.292	6.627	375.139	2.121	6.000	0.375	D-458
113	19-37	3	0.292	13.571	354.996				SPECIAL ORDER
114	20-22	4	0.292	4.387	375.860	1.856	5.250	0.281	D-420
115	20-43	3	0.292	0.867	160.546	1.105	3.125	0.188	D-280
116	21-22	4	0.292	20.199	424.264				SPECIAL ORDER
117	21-26	4	0.292	5.269	422.089	2.210	6.250	0.281	D-466
118	21-39	2	0.292	34.891	150.000				SPECIAL ORDER
119	21-40	4	0.292	2.273	162.754	0.928	2.625	0.313	D-253
120	21-43	4	0.292	5.437	365.042	1.900	5.375	0.344	D-433
121	21-50	4	0.292	5.838	291.954	2.210	6.250	0.313	D-467
122	22-23	2	0.292	3.354	150.000	2.475	7.000	0.156	D-495
123	22-26	4	0.292	22.951	422.089				SPECIAL ORDER
124	22-41	4	0.292	2.503	162.754	0.884	2.500	0.375	D-247
125	22-47	4	0.292	2.842	285.550	1.237	3.500	0.281	D-307
126	22-48	4	0.292	3.547	291.733	1.900	5.375	0.219	D-429
127	24-25	2	0.292	73.045	235.000				SPECIAL ORDER
128	25-26	4	0.292	5.838	371.739	2.210	6.250	0.313	D-467
129	25-29	4	0.292	27.535	399.038				SPECIAL ORDER
130	25-30	4	0.292	32.860	316.833				SPECIAL ORDER
131	25-32	4	0.292	6.921	394.103	2.210	6.250	0.375	D-469
132	25-40	4	0.292	7.476	465.583	3.094	8.750	0.281	D-546
133	25-43	4	0.292	5.154	276.301	1.679	4.750	0.375	D-388
134	25-44	4	0.292	2.765	170.148	1.105	3.125	0.313	D-284
135	25-45	4	0.292	7.313	394.312	2.740	7.750	0.313	D-521
136	26-27	4	0.292	6.084	395.767	2.298	6.500	0.313	D-478
137	26-33	4	0.292	4.321	280.994	2.298	6.500	0.219	D-475
138	26-40	4	0.292	6.814	501.386	2.829	8.000	0.281	D-527
139	26-41	4	0.292	7.805	501.386	2.917	8.250	0.313	D-534

Table 2: Members (cont.)

NO	INC	NL	DENS	AREA	LENGTH	R	DIA	T	TABLE
140	26-44	4	0.292	7.559	328.853	2.828	8.000	0.313	D-528
141	26-46	4	0.292	4.456	337.579	2.740	7.750	0.188	D-517
142	27-28	2	0.292	15.377	207.055	5.557	16.000	0.312	A- 95
143	27-34	4	0.292	6.283	419.908	2.917	8.250	0.250	D-532
144	27-36	4	0.292	4.240	313.470	1.635	4.625	0.313	D-378
145	27-37	4	0.292	4.456	372.824	2.740	7.750	0.188	D-517
146	27-41	4	0.292	9.572	461.023	3.005	8.500	0.375	D-542
147	27-45	4	0.292	14.579	416.177	4.508	12.750	0.375	A- 74
148	27-46	4	0.292	2.945	219.066	1.591	4.500	0.219	D-367
149	27-47	4	0.292	21.506	257.723				SPECIAL ORDER
150	29-30	4	0.292	2.452	203.316	2.342	6.625	0.120	D-481
151	30-31	4	0.292	1.661	231.298	1.061	3.000	0.188	D-272
152	30-43	4	0.292	13.417	417.728	4.950	14.000	0.312	A- 84
153	30-44	4	0.292	7.296	468.367	3.005	8.500	0.281	D-539
154	31-32	4	0.292	1.639	217.737	1.237	3.500	0.156	D-303
155	31-44	4	0.292	4.732	355.249	1.812	5.125	0.313	D-413
156	32-33	4	0.292	2.206	217.737	1.900	5.375	0.134	D-426
157	32-44	4	0.292	5.575	469.753	2.475	7.000	0.313	D-500
158	32-45	4	0.292	7.458	436.430	3.536	10.000	0.250	D-570
159	33-34	4	0.292	2.206	217.737	1.900	5.375	0.134	D-426
160	33-45	4	0.292	5.594	354.399	2.740	7.750	0.281	D-520
161	34-35	4	0.292	3.276	221.242	1.193	3.375	0.344	D-301
162	34-45	4	0.292	8.580	436.430	3.536	10.000	0.281	D-571
163	34-46	4	0.292	9.394	520.020	2.652	7.500	0.375	D-516
164	35-36	4	0.292	3.005	221.242	1.105	3.125	0.344	D-285
165	35-46	4	0.292	5.838	451.778	2.210	6.250	0.313	D-467
166	36-37	4	0.292	2.101	217.737	1.812	5.125	0.134	D-407
167	36-46	4	0.292	8.050	521.091	3.005	8.500	0.313	D-540
168	36-47	4	0.292	6.333	484.321	2.210	6.250	0.344	D-468
169	37-47	3	0.292	4.271	415.463	3.182	9.000	0.313	D-552
170	39-40	2	0.292	26.477	143.506				SPECIAL ORDER
171	40-44	4	0.292	2.777	346.543	2.121	6.000	0.219	D-453
172	40-41	4	0.292	31.412	297.013				SPECIAL ORDER
173	40-43	4	0.292	2.814	464.273	3.005	8.500	0.344	D-541
174	40-45	4	0.292	7.035	445.908	2.917	8.250	0.281	D-533

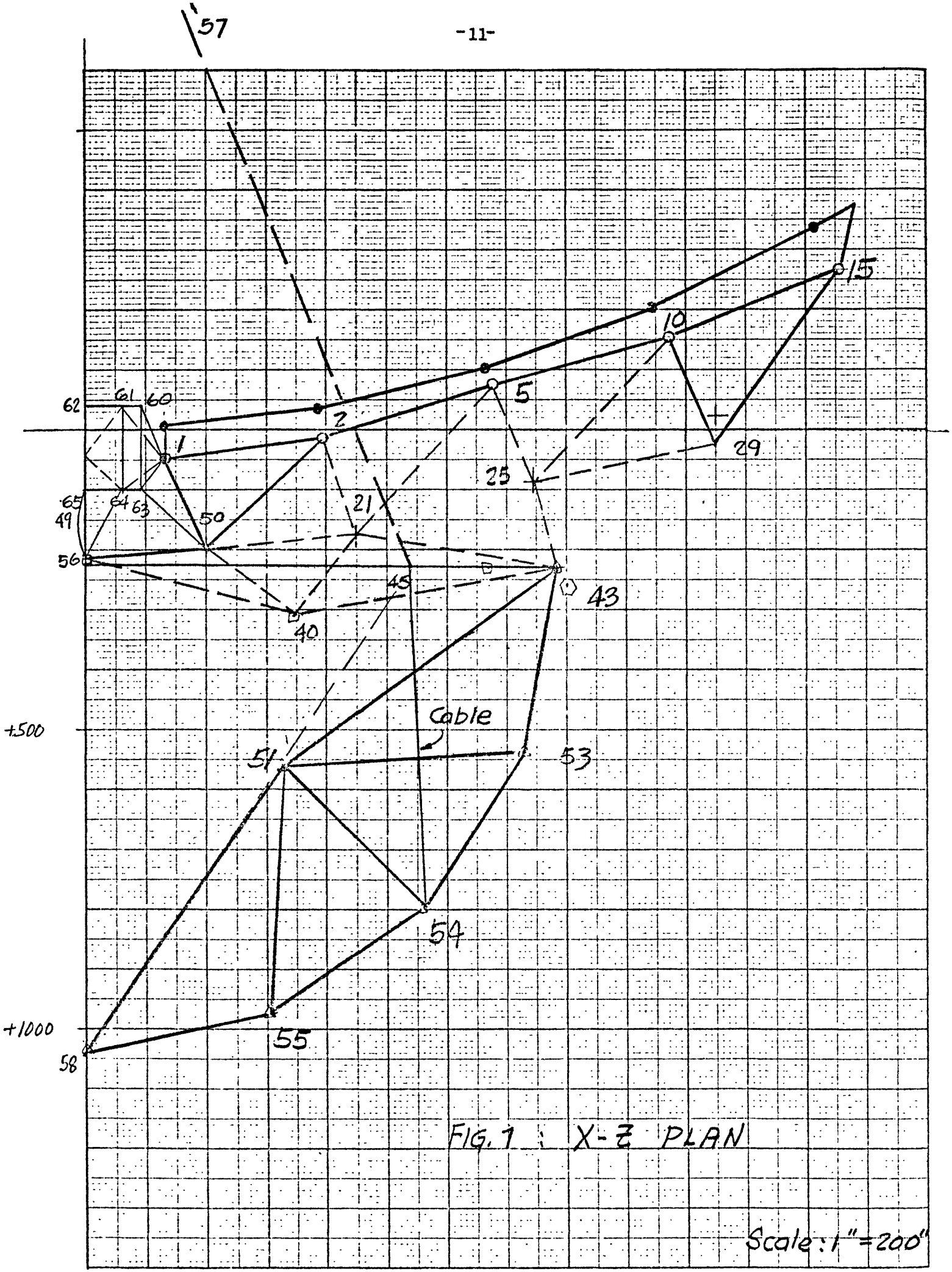
Table 2: Members (cont.)

NO	INC	NP	DENS	AREA	LENGTH	R	DIA	T	TABLE
175	41-51	4	0.292	7.256	411.251	3.005	8.500	0.281	D-539
176	40-56	4	0.292	6.207	386.312	2.342	6.625	0.313	D-485
177	40-50	4	0.292	8.688	232.586	2.740	7.750	0.375	D-523
178	41-42	2	0.292	21.923	143.506				SPECIAL ORDER
179	41-45	4	0.292	13.417	445.308	4.950	14.000	0.312	A- 84
180	41-47	4	0.292	5.931	379.639	2.475	7.000	0.281	D-499
181	41-48	4	0.292	6.921	235.091	2.210	6.250	0.375	D-469
182	41-56	4	0.292	8.099	386.312	2.563	7.250	0.375	D-509
183	43-44	4	0.292	4.828	295.127	2.033	5.750	0.281	D-447
184	44-45	4	0.292	14.579	295.127	4.508	12.750	0.375	A- 74
185	45-46	4	0.292	15.377	295.058	5.657	16.000	0.312	A- 95
186	45-57	4	0.423	7.035	1524.134				SPECIAL DESIGN
187	46-47	4	0.292	9.522	265.593	2.828	8.000	0.375	D-530
188	48-56	2	0.292	2.635	201.228	2.210	6.250	0.281	D-466
189	48-50	4	0.292	13.417	282.337	4.950	14.000	0.312	A- 84
190	51-52	2	0.292	4.828	75.000	2.033	5.750	0.281	D-447
191	56-50	3	0.292	1.043	200.738	1.149	3.250	0.219	D-289
192	43-51	4	0.292	55.264	567.604				SPECIAL ORDER
193	43-53	3	0.310	33.231	310.195				SPECIAL DESIGN
194	53-54	3	0.310	38.233	310.166				SPECIAL DESIGN
195	54-55	3	0.310	38.228	310.166				SPECIAL DESIGN
196	55-58	3	0.310	38.236	310.165				SPECIAL DESIGN
197	51-58	4	0.292	55.283	578.037				SPECIAL ORDER
198	51-53	4	0.292	12.376	410.396	4.508	12.750	0.330	A- 73
199	51-54	4	0.292	6.814	341.795	2.828	8.000	0.281	D-527
200	51-55	4	0.292	6.814	418.914	2.828	8.000	0.281	D-527
201	45-58	4	0.292	40.853	1106.452				SPECIAL DESIGN
202	47-59	2	0.292	20.061	1058.034				SPECIAL DESIGN
203	45-59	4	0.310	51.203	598.363				SPECIAL DESIGN
204	56-59	3	0.310	72.446	800.765				SPECIAL DESIGN
205	58-59	3	0.310	104.924	1118.016				SPECIAL DESIGN
206	1-64	4	0.292	4.271	102.704	1.414	4.000	0.375	D-340
207	1-60	3	0.292	1.035	98.115	0.928	2.625	0.281	D-252
208	1-61	4	0.292	0.923	129.802	0.719	1.750	0.188	D-171
209	1-63	3	0.292	0.720	58.121	0.928	2.625	0.188	D-249

Table 2: Members (cont.)

NO	INC	NI	DENS	AREA	LENGTH	R	DIA	T	TABLE
210	20-64	4	0.292	1.669	102.704	0.840	2.375	0.250	D-235
211	20-61	4	0.292	3.142	129.602	1.503	4.250	0.250	D-352
212	20-62	3	0.292	0.991	98.115	1.900	5.375	0.120	D-425
213	20-65	3	0.292	0.962	58.121	0.751	2.125	0.344	D-222
214	48-64	4	0.292	7.519	182.962	3.270	9.250	0.281	D-556
215	48-65	3	0.292	2.307	150.583	2.828	8.000	0.188	D-524
216	64-50	4	0.292	1.292	185.376	0.840	2.375	0.188	D-233
217	64-56	4	0.292	2.630	156.939	2.298	6.500	0.134	D-472
218	64-61	4	0.292	1.463	130.000	0.685	1.938	0.281	D-204
219	64-63	4	0.413	1.718	70.355	1.812	5.125	0.109	D-405
220	64-65	4	0.413	0.873	70.355	0.685	1.938	0.156	D-200
221	50-63	3	0.292	0.932	154.209	0.928	2.625	0.250	D-251
222	60-61	4	0.413	1.041	70.355				SPECIAL DESIGN
223	60-63	3	0.292	0.574	130.000	0.884	2.500	0.156	D-240
224	61-62	4	0.413	0.955	70.355				SPECIAL DESIGN
225	62-65	3	0.292	1.344	130.000	1.458	4.125	0.219	D-343
226	49-63	3	0.292	0.941	91.924	1.193	3.375	0.188	D-296
227	49-64	4	0.292	1.887	91.924	1.812	5.125	0.120	D-406
228	49-65	3	0.292	1.252	91.924	0.884	2.500	0.375	D-247
229	49-56	1	0.292	0.245	127.200	0.530	1.500	0.250	D-135
230	45-54	4	0.292	2.000	781.577				SPECIAL DESIGN

Table 2: Members (cont.)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40
Cable
+500
51
53
54
+1000
55
58
Scale: 1" = 200'

FIG. 1 : X-Z PLAN