

ATTACHMENT II

ROCK LONG-TERM LOAD COMPUTER ANALYSIS RESULTS

THIS ATTACHMENT CONTAINS THE COMPUTER ANALYSIS RESULTS EXTRACTED FROM ESF GROUND SUPPORT DESIGN ANALYSIS (REFERENCE 5.20). THE RESULTS PRESENTED HERE ARE THE REPRESENTATION OF THE CATEGORY I ROCK MASS PROPERLY LOADING FOR BOTH W 8 X 31 AND W 6 X 20 STEEL SETS. ONLY THE FORCE RESULTS IN STEEL SET ARE INCLUDED. THE COMPUTER ANALYSIS WAS PERFORMED BY THE GEOTECHNICAL GROUP. THE ANALYSIS HAS CONSIDERED DEAD LOAD, SEISMIC LOAD AND UTILITY LOADS ON THE STEEL SET AT VARIOUS STRATA ALONG THE ESF MAIN LOOP.

96φ919φ1φ8 - Part 2

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

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JOB TITLE : Structural Node ID

FLAC (Version 3.22)

LEGEND

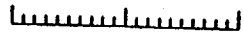
8/10/1995 08:34

step 5218

-5.000E+00 <x< 5.000E+00

-5.000E+00 <y< 5.000E+00

Grid plot

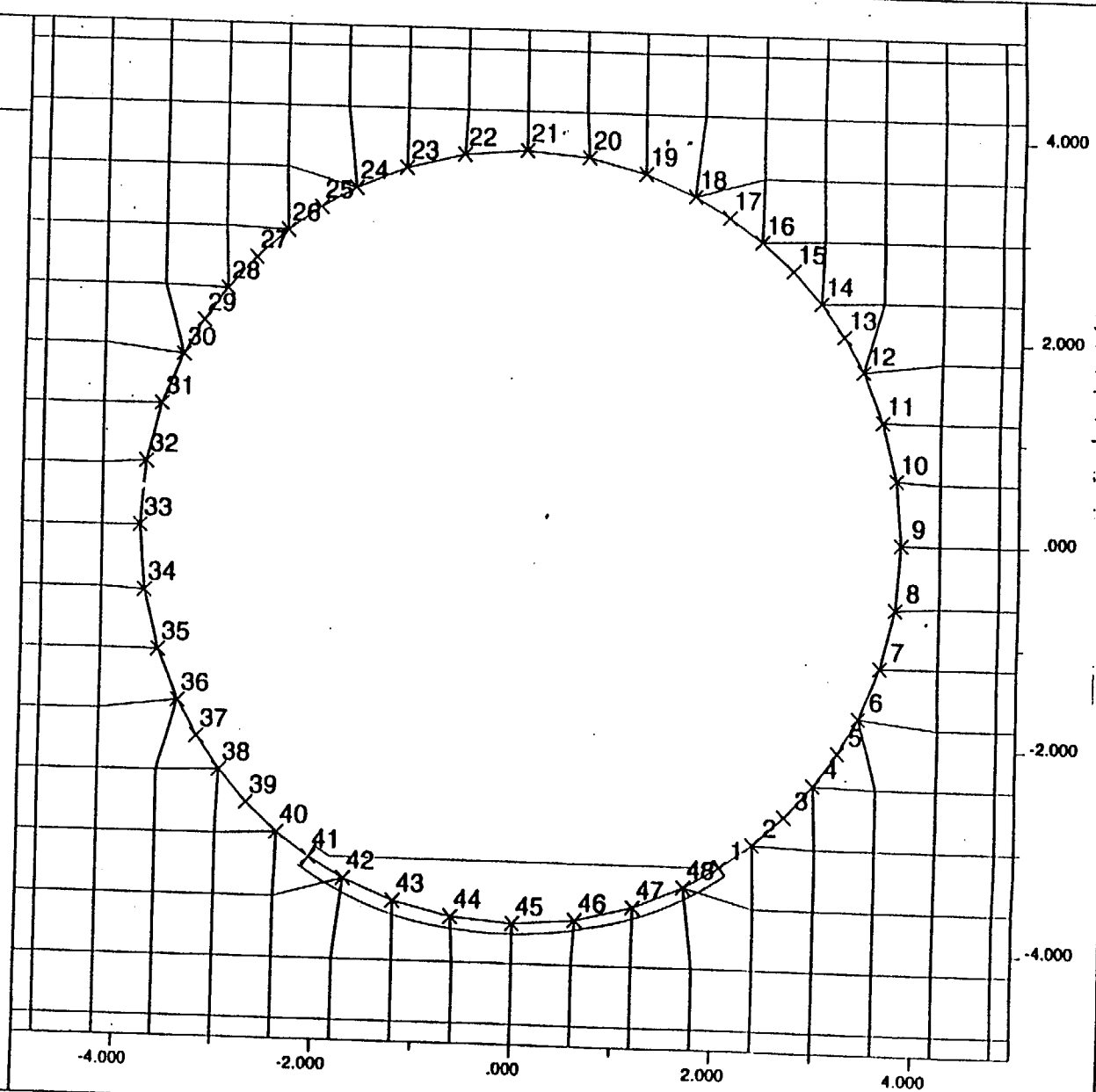


0 2E 0

Structural Node Numbers

COMPUTER MODEL

CRWMS M & O



Title: ESF Ground Support - Structural Steel Analysis

DI: BABEE0000-01717-0200-00003 REV 04

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JOB TITLE : Structural Element ID

FLAC (Version 3.22)

LEGEND

8/10/1995 08:34

step 5218

-5.000E+00 <x< 5.000E+00

-5.000E+00 <y< 5.000E+00

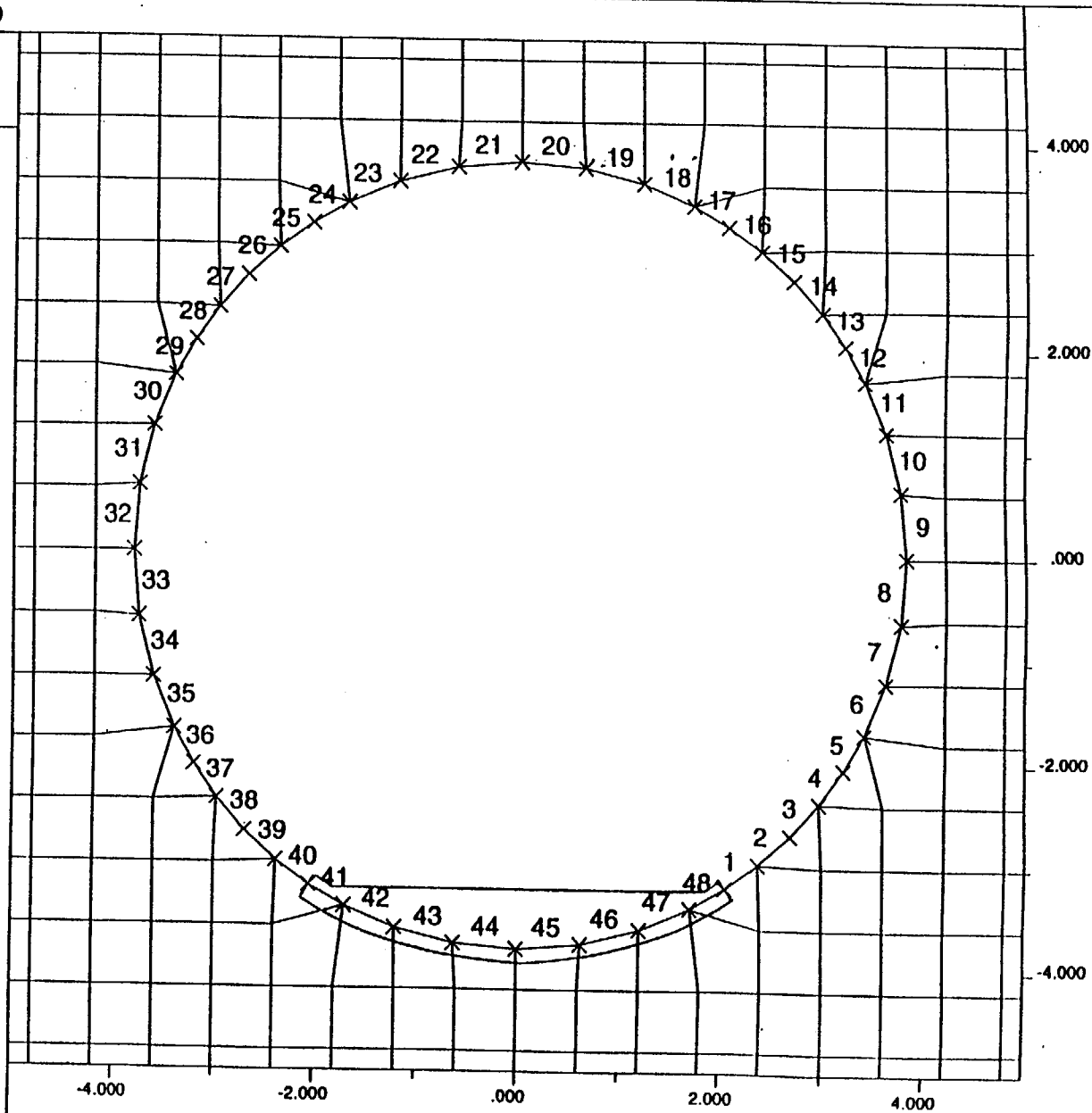
Grid plot

0 2E 0

Structural Element Numbers

COMPUTER MODEL

CRWMS M & O



Title: ESF Ground Support - Structural Steel Analysis

DI: BABEE0000-01717-0200-00003 REV 02
ATTACHMENT II
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LAC log-file opened 7-Aug-95 8:59

STATION: PTN @ 10+00

LOADING: STATIC: DL+UTIL

STEEL SET: W8X31 @ 2'-0" O.C.

From File : m10k250w.sav
>or stru

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix	
48	1.704E+00	-3.408E+00	1.129E-04	2.042E-03	-4.581E-04	no	no	no	
47	1.205E+00	-3.614E+00	4.070E-05	2.265E-03	-3.911E-04	no	no	no	
46	6.264E-01	-3.758E+00	1.114E-06	2.457E-03	-2.584E-04	no	no	no	
45	0.000E+00	-3.810E+00	-5.098E-06	2.544E-03	-2.606E-05	no	no	no	
44	-6.264E-01	-3.758E+00	-9.474E-06	2.481E-03	2.330E-04	no	no	no	
43	-1.205E+00	-3.614E+00	-4.786E-05	2.287E-03	4.021E-04	no	no	no	
42	-1.704E+00	-3.408E+00	-1.223E-04	2.066E-03	4.743E-04	no	no	no	
41	-2.053E+00	-3.209E+00	-2.023E-04	1.889E-03	0.000E+00	no	no	no	
40	-2.380E+00	-2.975E+00	-2.769E-04	1.612E-03	7.118E-04	no	no	no	
39	-2.694E+00	-2.694E+00	-4.027E-04	1.293E-03	7.904E-04	no	no	no	
38	-2.975E+00	-2.380E+00	-5.480E-04	9.557E-04	7.966E-04	no	no	no	
37	-3.209E+00	-2.053E+00	-7.041E-04	6.330E-04	7.365E-04	no	no	no	
36	-3.408E+00	-1.704E+00	-8.359E-04	3.427E-04	5.202E-04	no	no	no	
35	-3.614E+00	-1.205E+00	-9.258E-04	4.610E-05	2.646E-04	no	no	no	
34	-3.758E+00	-6.264E-01	-9.793E-04	-2.593E-04	1.465E-04	no	no	no	
33	-3.810E+00	0.000E+00	-9.967E-04	-5.825E-04	3.502E-06	no	no	no	
32	-3.758E+00	6.264E-01	-9.806E-04	-9.038E-04	-1.469E-04	no	no	no	
31	-3.614E+00	1.205E+00	-9.207E-04	-1.214E-03	-2.942E-04	no	no	no	
30	-3.408E+00	1.704E+00	-8.074E-04	-1.525E-03	-5.882E-04	no	no	no	
29	-3.209E+00	2.053E+00	-6.496E-04	-1.835E-03	-8.254E-04	no	no	no	
28	-2.975E+00	2.380E+00	-4.624E-04	-2.176E-03	-9.038E-04	no	no	no	
27	-2.694E+00	2.694E+00	-2.916E-04	-2.551E-03	-8.759E-04	no	no	no	
26	-2.380E+00	2.975E+00	-1.544E-04	-2.886E-03	-7.184E-04	no	no	no	
25	-2.053E+00	3.209E+00	-8.694E-05	-3.141E-03	-5.358E-04	no	no	no	
24	-1.704E+00	3.408E+00	-4.541E-05	-3.340E-03	-4.369E-04	no	no	no	
23	-1.205E+00	3.614E+00	-1.952E-05	-3.560E-03	-3.577E-04	no	no	no	
22	-6.264E-01	3.758E+00	-1.157E-07	-3.741E-03	-2.132E-04	no	no	no	
21	0.000E+00	3.810E+00	5.438E-06	-3.795E-03	2.951E-05	no	no	no	
20	6.264E-01	3.758E+00	1.031E-05	-3.702E-03	2.658E-04	no	no	no	
19	1.205E+00	3.614E+00	3.291E-05	-3.497E-03	3.939E-04	no	no	no	
18	1.704E+00	3.408E+00	6.387E-05	-3.263E-03	4.434E-04	no	no	no	
17	2.053E+00	3.209E+00	1.053E-04	-3.071E-03	5.222E-04	no	no	no	
16	2.380E+00	2.975E+00	1.714E-04	-2.825E-03	6.812E-04	no	no	no	
15	2.694E+00	2.694E+00	2.915E-04	-2.504E-03	8.125E-04	no	no	no	
14	2.975E+00	2.380E+00	4.473E-04	-2.148E-03	8.677E-04	no	no	no	
13	3.209E+00	2.053E+00	6.333E-04	-1.802E-03	8.774E-04	no	no	no	
12	3.408E+00	1.704E+00	7.988E-04	-1.485E-03	6.260E-04	no	no	no	
11	3.614E+00	1.205E+00	9.184E-04	-1.174E-03	3.447E-04	no	no	no	
10	3.758E+00	6.264E-01	9.837E-04	-8.643E-04	1.416E-04	no	no	no	
9	3.810E+00	0.000E+00	9.995E-04	-5.484E-04	-1.104E-05	no	no	no	
8	3.758E+00	-6.264E-01	9.739E-04	-2.327E-04	-1.511E-04	no	no	no	
7	3.614E+00	-1.205E+00	9.184E-04	6.737E-05	-2.723E-04	no	no	no	
6	3.408E+00	-1.704E+00	8.188E-04	3.635E-04	-5.402E-04	no	no	no	
5	3.209E+00	-2.053E+00	6.777E-04	6.588E-04	-7.621E-04	no	no	no	
4	2.975E+00	-2.380E+00	5.134E-04	9.789E-04	-8.096E-04	no	no	no	
3	2.694E+00	-2.694E+00	3.705E-04	1.312E-03	-7.434E-04	no	no	no	
2	2.380E+00	-2.975E+00	2.604E-04	1.609E-03	-6.549E-04	no	no	no	
1	2.053E+00	-3.209E+00	1.911E-04	1.865E-03	0.000E+00	no	no	no	
N-4e	X-load	Y-load	Moment	i	j	Pin	Sh. force	Angle	Bond
	0.000E+00	0.000E+00	0.000E+00	39	30	no			
	0.000E+00	0.000E+00	0.000E+00	38	30	no			
46	0.000E+00	0.000E+00	0.000E+00	37	30	no			
45	0.000E+00	0.000E+00	0.000E+00	36	30	no			

44	0.000E+00	0.000E+00	0.000E+00	35	30	no
43	0.000E+00	0.000E+00	0.000E+00	34	30	no
42	0.000E+00	0.000E+00	0.000E+00	33	30	no
41	0.000E+00	-9.099E+01	0.000E+00	33	31	yes
40	0.000E+00	-1.381E+03	0.000E+00	32	31	no
39	0.000E+00	-2.993E+03	0.000E+00	32	32	no
38	0.000E+00	-2.988E+03	0.000E+00	31	32	no
37	0.000E+00	-1.819E+02	0.000E+00	31	33	no
36	0.000E+00	-2.131E+02	0.000E+00	30	33	no
35	0.000E+00	-2.571E+02	0.000E+00	30	34	no
34	0.000E+00	-2.771E+02	0.000E+00	30	35	no
33	0.000E+00	-2.845E+02	0.000E+00	30	36	no
32	0.000E+00	-2.771E+02	0.000E+00	30	37	no
31	0.000E+00	-2.571E+02	0.000E+00	30	38	no
30	0.000E+00	-2.131E+02	0.000E+00	30	39	no
29	0.000E+00	-1.819E+02	0.000E+00	31	39	no
28	0.000E+00	-1.863E+02	0.000E+00	31	40	no
27	0.000E+00	-1.907E+02	0.000E+00	32	40	no
26	0.000E+00	-1.863E+02	0.000E+00	32	41	no
25	0.000E+00	-5.413E+03	0.000E+00	33	41	no
24	0.000E+00	-2.131E+02	0.000E+00	33	42	no
23	0.000E+00	-2.571E+02	0.000E+00	34	42	no
22	0.000E+00	-2.771E+02	0.000E+00	35	42	no
21	0.000E+00	-1.052E+04	0.000E+00	36	42	no
20	0.000E+00	-2.771E+02	0.000E+00	37	42	no
19	0.000E+00	-2.571E+02	0.000E+00	38	42	no
18	0.000E+00	-2.131E+02	0.000E+00	39	42	no
17	0.000E+00	-5.413E+03	0.000E+00	39	41	no
16	0.000E+00	-1.863E+02	0.000E+00	40	41	no
15	0.000E+00	-1.907E+02	0.000E+00	40	40	no
14	0.000E+00	-1.863E+02	0.000E+00	41	40	no
13	0.000E+00	-1.518E+04	9.085E+03	41	39	no
12	0.000E+00	-1.521E+04	9.085E+03	42	39	no
11	0.000E+00	-1.525E+04	9.085E+03	42	38	no
10	0.000E+00	-2.771E+02	0.000E+00	42	37	no
9	0.000E+00	-2.845E+02	0.000E+00	42	36	no
8	0.000E+00	-2.771E+02	0.000E+00	42	35	no
7	0.000E+00	-2.571E+02	0.000E+00	42	34	no
6	0.000E+00	-2.131E+02	0.000E+00	42	33	no
5	0.000E+00	-1.819E+02	0.000E+00	41	33	no
4	0.000E+00	-1.863E+02	0.000E+00	41	32	no
3	0.000E+00	-1.907E+02	0.000E+00	40	32	no
2	0.000E+00	-1.863E+02	0.000E+00	40	31	no
1	0.000E+00	-9.099E+01	0.000E+00	39	31	yes

Structural element data ...

Elem ID	Nod1	Nod2	Prop		F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3	beam	1.805E+04	3.410E+05	7.253E+03 -7.597E-04
47	1	47	48	3	beam	3.049E+03	2.825E+05	8.901E+03 -7.254E+03
46	1	46	47	3	beam	1.874E+04	1.250E+05	2.007E+04 -8.902E+03
45	1	45	46	3	beam	1.271E+04	1.413E+04	2.806E+04 -2.007E+04
44	1	44	45	3	beam	-3.905E+03	1.173E+04	2.560E+04 -2.806E+04
43	1	43	44	3	beam	-2.397E+04	1.227E+05	1.132E+04 -2.560E+04
42	1	42	43	3	beam	-9.689E+03	2.891E+05	6.082E+03 -1.132E+04
41	1	41	42	3	beam	-1.513E+04	3.543E+05	-5.462E-04 -6.083E+03
40	2	40	41	2	beam	1.246E+04	4.875E+05	5.009E+03 1.872E-04
39	2	39	40	2	beam	-1.049E+04	5.488E+05	5.906E+02 -5.010E+03
38	2	38	39	2	beam	-1.759E+03	7.255E+05	-1.503E+02 -5.911E+02
37	2	37	38	2	beam	-1.042E+04	8.162E+05	-4.337E+03 1.477E+02
36	2	36	37	2	beam	-1.863E+04	9.068E+05	-1.182E+04 4.336E+03

35	2	35	36	2	beam	1.747E+04	8.610E+05	-2.383E+03	1.182E+04
34	2	34	35	2	beam	-1.985E+03	9.420E+05	-3.565E+03	2.382E+03
33	2	33	34	2	beam	4.821E+02	9.861E+05	-3.263E+03	3.566E+03
32	2	32	33	2	beam	-1.053E+03	9.899E+05	-3.924E+03	3.262E+03
31	2	31	32	2	beam	7.175E+02	9.502E+05	-3.495E+03	3.923E+03
30	2	30	31	2	beam	-1.730E+04	8.707E+05	-1.284E+04	3.496E+03
29	2	29	30	2	beam	1.981E+04	9.220E+05	-4.876E+03	1.284E+04
28	2	28	29	2	beam	9.680E+03	8.187E+05	-9.844E+02	4.875E+03
27	2	27	28	2	beam	9.388E+03	7.643E+05	2.971E+03	9.849E+02
26	2	26	27	2	beam	1.254E+04	5.683E+05	8.253E+03	-2.969E+03
25	2	25	26	2	beam	-7.132E+03	4.624E+05	5.385E+03	-8.251E+03
24	2	24	25	2	beam	-8.413E+03	2.882E+05	2.003E+03	-5.385E+03
23	2	23	24	2	beam	7.243E+02	2.178E+05	2.396E+03	-2.005E+03
22	2	22	23	2	beam	4.179E+03	7.996E+04	4.884E+03	-2.393E+03
21	2	21	22	2	beam	2.902E+03	-3.030E+03	6.709E+03	-4.885E+03
20	2	20	21	2	beam	-3.396E+03	5.596E+03	4.576E+03	-6.710E+03
19	2	19	20	2	beam	-4.519E+03	8.945E+04	1.880E+03	-4.573E+03
18	2	18	19	2	beam	-1.868E+03	2.188E+05	8.704E+02	-1.879E+03
17	2	17	18	2	beam	1.031E+04	2.779E+05	5.017E+03	-8.735E+02
16	2	16	17	2	beam	4.578E+03	4.457E+05	6.856E+03	-5.016E+03
15	2	15	16	2	beam	-1.035E+04	5.716E+05	2.496E+03	-6.857E+03
14	2	14	15	2	beam	-2.528E+03	7.514E+05	1.435E+03	-2.500E+03
13	2	13	14	2	beam	-5.343E+03	8.371E+05	-7.126E+02	-1.435E+03
12	2	12	13	2	beam	2.033E+03	9.393E+05	-8.980E+03	9.798E+03
11	2	11	12	2	beam	3.794E+04	8.681E+05	2.429E+03	1.806E+04
10	2	10	11	2	beam	5.168E+03	9.376E+05	-3.574E+03	6.654E+03
9	2	9	10	2	beam	-2.231E+02	9.701E+05	-3.715E+03	3.575E+03
8	2	8	9	2	beam	1.178E+03	9.666E+05	-2.975E+03	3.715E+03
7	2	7	8	2	beam	-2.511E+02	9.259E+05	-3.126E+03	2.976E+03
6	2	6	7	2	beam	-1.599E+04	8.476E+05	-1.176E+04	3.127E+03
5	2	5	6	2	beam	1.730E+04	8.952E+05	-4.809E+03	1.176E+04
4	2	4	5	2	beam	1.511E+04	8.020E+05	1.263E+03	4.811E+03
3	2	3	4	2	beam	5.194E+03	7.072E+05	3.451E+03	-1.263E+03
2	2	2	3	2	beam	-1.416E+03	5.300E+05	2.855E+03	-3.452E+03
1	2	1	2	2	beam	-7.099E+03	4.667E+05	-7.314E-06	-2.854E+03

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	5.90000E-03	3.27870E+11	4.57800E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

> set log off

* log-file recording stopped 7-Aug-95 8:59

Title: ESF Ground Support - Structural Steel Analysis

ATTACHMENT II

Page: II-7 of II-62

FLAC log-file opened 5-Aug-95 8:42

From File : m18k250w.sav
>pr stru

STATION: TSW1 @ 18+00

LOADING: STATIC: DL+UTIL

STEEL SET: W8X31 @ 4'-0" O.C.

structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	7.423E-05	1.625E-03	-2.621E-04	no	no	no
47	1.205E+00	-3.614E+00	3.068E-05	1.744E-03	-1.949E-04	no	no	no
46	6.264E-01	-3.758E+00	1.017E-05	1.828E-03	-1.012E-04	no	no	no
45	0.000E+00	-3.810E+00	7.714E-06	1.849E-03	1.268E-05	no	no	no
44	-6.264E-01	-3.758E+00	3.380E-06	1.813E-03	1.315E-04	no	no	no
43	-1.205E+00	-3.614E+00	-2.070E-05	1.709E-03	2.165E-04	no	no	no
42	-1.704E+00	-3.408E+00	-6.614E-05	1.587E-03	2.666E-04	no	no	no
41	-2.053E+00	-3.209E+00	-1.148E-04	1.487E-03	0.000E+00	no	no	no
40	-2.380E+00	-2.975E+00	-1.336E-04	1.360E-03	2.772E-04	no	no	no
39	-2.694E+00	-2.694E+00	-1.634E-04	1.231E-03	2.824E-04	no	no	no
38	-2.975E+00	-2.380E+00	-1.835E-04	1.076E-03	2.649E-04	no	no	no
37	-3.209E+00	-2.053E+00	-1.933E-04	9.128E-04	2.686E-04	no	no	no
36	-3.408E+00	-1.704E+00	-2.120E-04	7.240E-04	2.391E-04	no	no	no
35	-3.614E+00	-1.205E+00	-2.074E-04	4.695E-04	1.380E-04	no	no	no
34	-3.758E+00	-6.264E-01	-2.005E-04	1.471E-04	9.709E-05	no	no	no
33	-3.810E+00	0.000E+00	-2.041E-04	-2.304E-04	3.711E-06	no	no	no
32	-3.758E+00	6.264E-01	-2.032E-04	-6.049E-04	-9.814E-05	no	no	no
31	-3.614E+00	1.205E+00	-2.138E-04	-9.372E-04	-1.201E-04	no	no	no
30	-3.408E+00	1.704E+00	-2.245E-04	-1.189E-03	-2.562E-04	no	no	no
29	-3.209E+00	2.053E+00	-1.953E-04	-1.392E-03	-3.172E-04	no	no	no
8	-2.975E+00	2.380E+00	-1.784E-04	-1.564E-03	-2.725E-04	no	no	no
27	-2.694E+00	2.694E+00	-1.638E-04	-1.719E-03	-2.603E-04	no	no	no
26	-2.380E+00	2.975E+00	-1.407E-04	-1.843E-03	-2.645E-04	no	no	no
25	-2.053E+00	3.209E+00	-1.154E-04	-1.959E-03	-2.778E-04	no	no	no
24	-1.704E+00	3.408E+00	-7.995E-05	-2.053E-03	-2.150E-04	no	no	no
23	-1.205E+00	3.614E+00	-5.530E-05	-2.155E-03	-2.079E-04	no	no	no
22	-6.264E-01	3.758E+00	-1.871E-05	-2.298E-03	-2.605E-04	no	no	no
21	0.000E+00	3.810E+00	-2.584E-06	-2.389E-03	6.708E-06	no	no	no
20	6.264E-01	3.758E+00	1.590E-05	-2.287E-03	2.889E-04	no	no	no
19	1.205E+00	3.614E+00	5.725E-05	-2.122E-03	2.560E-04	no	no	no
18	1.704E+00	3.408E+00	8.134E-05	-2.007E-03	1.993E-04	no	no	no
17	2.053E+00	3.209E+00	1.032E-04	-1.917E-03	2.533E-04	no	no	no
16	2.380E+00	2.975E+00	1.253E-04	-1.798E-03	2.601E-04	no	no	no
15	2.694E+00	2.694E+00	1.495E-04	-1.685E-03	2.447E-04	no	no	no
14	2.975E+00	2.380E+00	1.621E-04	-1.540E-03	2.452E-04	no	no	no
13	3.209E+00	2.053E+00	1.786E-04	-1.370E-03	3.780E-04	no	no	no
12	3.408E+00	1.704E+00	2.132E-04	-1.162E-03	3.150E-04	no	no	no
11	3.614E+00	1.205E+00	2.151E-04	-9.099E-04	2.188E-04	no	no	no
10	3.758E+00	6.264E-01	2.096E-04	-5.809E-04	7.447E-05	no	no	no
9	3.810E+00	0.000E+00	2.076E-04	-2.057E-04	9.770E-07	no	no	no
8	3.758E+00	-6.264E-01	2.052E-04	1.731E-04	-1.001E-04	no	no	no
7	3.614E+00	-1.205E+00	2.116E-04	5.039E-04	-1.410E-04	no	no	no
6	3.408E+00	-1.704E+00	2.152E-04	7.609E-04	-2.494E-04	no	no	no
5	3.209E+00	-2.053E+00	1.895E-04	9.511E-04	-2.773E-04	no	no	no
4	2.975E+00	-2.380E+00	1.808E-04	1.112E-03	-2.599E-04	no	no	no
3	2.694E+00	-2.694E+00	1.645E-04	1.269E-03	-2.706E-04	no	no	no
2	2.380E+00	-2.975E+00	1.420E-04	1.400E-03	-2.736E-04	no	no	no
1	2.053E+00	-3.209E+00	1.231E-04	1.524E-03	0.000E+00	no	no	no
e	X-load	Y-load	Moment	i j Pin	Sh. force	Angle	Bond	
47	0.000E+00	0.000E+00	0.000E+00	39 30	no			
46	0.000E+00	0.000E+00	0.000E+00	38 30	no			
45	0.000E+00	0.000E+00	0.000E+00	37 30	no			
45	0.000E+00	0.000E+00	0.000E+00	36 30	no			

44	0.000E+00	0.000E+00	0.000E+00	35	30	no
43	0.000E+00	0.000E+00	0.000E+00	34	30	no
42	0.000E+00	0.000E+00	0.000E+00	33	30	no
41	0.000E+00	-9.099E+01	0.000E+00	33	31	yes
40	0.000E+00	-1.381E+03	0.000E+00	32	31	no
39	0.000E+00	-2.993E+03	0.000E+00	32	32	no
38	0.000E+00	-2.988E+03	0.000E+00	31	32	no
37	0.000E+00	-1.819E+02	0.000E+00	31	33	no
36	0.000E+00	-2.131E+02	0.000E+00	30	33	no
35	0.000E+00	-2.571E+02	0.000E+00	30	34	no
34	0.000E+00	-2.771E+02	0.000E+00	30	35	no
33	0.000E+00	-2.845E+02	0.000E+00	30	36	no
32	0.000E+00	-2.771E+02	0.000E+00	30	37	no
31	0.000E+00	-2.571E+02	0.000E+00	30	38	no
30	0.000E+00	-2.131E+02	0.000E+00	30	39	no
29	0.000E+00	-1.819E+02	0.000E+00	31	39	no
28	0.000E+00	-1.863E+02	0.000E+00	31	40	no
27	0.000E+00	-1.907E+02	0.000E+00	32	40	no
26	0.000E+00	-1.863E+02	0.000E+00	32	41	no
25	0.000E+00	-5.413E+03	0.000E+00	33	41	no
24	0.000E+00	-2.131E+02	0.000E+00	33	42	no
23	0.000E+00	-2.571E+02	0.000E+00	34	42	no
22	0.000E+00	-2.771E+02	0.000E+00	35	42	no
21	0.000E+00	-1.052E+04	0.000E+00	36	42	no
20	0.000E+00	-2.771E+02	0.000E+00	37	42	no
19	0.000E+00	-2.571E+02	0.000E+00	38	42	no
18	0.000E+00	-2.131E+02	0.000E+00	39	42	no
7	0.000E+00	-5.413E+03	0.000E+00	39	41	no
16	0.000E+00	-1.863E+02	0.000E+00	40	41	no
15	0.000E+00	-1.907E+02	0.000E+00	40	40	no
14	0.000E+00	-1.863E+02	0.000E+00	41	40	no
13	0.000E+00	-1.518E+04	9.085E+03	41	39	no
12	0.000E+00	-1.521E+04	9.085E+03	42	39	no
11	0.000E+00	-1.525E+04	9.085E+03	42	38	no
10	0.000E+00	-2.771E+02	0.000E+00	42	37	no
9	0.000E+00	-2.845E+02	0.000E+00	42	36	no
8	0.000E+00	-2.771E+02	0.000E+00	42	35	no
7	0.000E+00	-2.571E+02	0.000E+00	42	34	no
6	0.000E+00	-2.131E+02	0.000E+00	42	33	no
5	0.000E+00	-1.819E+02	0.000E+00	41	33	no
4	0.000E+00	-1.863E+02	0.000E+00	41	32	no
3	0.000E+00	-1.907E+02	0.000E+00	40	32	no
2	0.000E+00	-1.863E+02	0.000E+00	40	31	no
1	0.000E+00	-9.099E+01	0.000E+00	39	31	yes

Structural element data ...

Elem	ID	Nod1	Nod2	Prop		F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3	beam	1.655E+04	1.207E+05	6.651E+03	-7.684E-04
47	1	47	48	3	beam	5.372E+03	9.402E+04	9.552E+03	-6.650E+03
46	1	46	47	3	beam	2.290E+03	4.622E+03	1.092E+04	-9.551E+03
45	1	45	46	3	beam	2.783E+03	-1.150E+04	1.266E+04	-1.092E+04
44	1	44	45	3	beam	-1.164E+03	-1.018E+04	1.193E+04	-1.267E+04
43	1	43	44	3	beam	-8.901E+03	1.712E+04	6.630E+03	-1.194E+04
42	1	42	43	3	beam	-2.174E+03	9.187E+04	5.456E+03	-6.630E+03
41	1	41	42	3	beam	-1.358E+04	1.309E+05	1.105E-04	-5.459E+03
40	2	40	41	2	beam	-1.143E+03	1.442E+05	-4.594E+02	-8.322E-05
39	2	39	40	2	beam	2.624E+03	1.516E+05	6.461E+02	4.597E+02
38	2	38	39	2	beam	-4.544E+03	2.320E+05	-1.269E+03	-6.461E+02
37	2	37	38	2	beam	6.660E+03	3.090E+05	1.408E+03	1.269E+03
36	2	36	37	2	beam	-9.749E+03	3.697E+05	-2.511E+03	-1.408E+03

35	2	35	36	2	beam	4.093E+03	4.258E+05	-2.996E+02	2.510E+03
34	2	34	35	2	beam	-7.248E+02	5.141E+05	-7.317E+02	2.997E+02
33	2	33	34	2	beam	-1.221E+03	5.794E+05	-1.499E+03	7.317E+02
32	2	32	33	2	beam	8.996E+02	5.767E+05	-9.340E+02	1.499E+03
31	2	31	32	2	beam	2.205E+03	5.289E+05	3.806E+02	9.338E+02
30	2	30	31	2	beam	-8.412E+03	4.247E+05	-4.163E+03	-3.802E+02
29	2	29	30	2	beam	1.505E+04	3.925E+05	1.886E+03	4.164E+03
28	2	28	29	2	beam	-5.234E+03	3.155E+05	-2.177E+02	-1.886E+03
27	2	27	28	2	beam	2.072E+03	2.436E+05	6.552E+02	2.179E+02
26	2	26	27	2	beam	-3.463E+03	1.529E+05	-8.045E+02	-6.549E+02
25	2	25	26	2	beam	2.761E+03	1.190E+05	3.050E+02	8.046E+02
24	2	24	25	2	beam	4.317E+03	3.940E+04	2.040E+03	-3.052E+02
23	2	23	24	2	beam	-7.187E+03	2.440E+04	-1.842E+03	-2.040E+03
22	2	22	23	2	beam	3.958E+03	-1.096E+02	5.166E+02	1.842E+03
21	2	21	22	2	beam	8.514E+03	-1.259E+04	5.868E+03	-5.169E+02
20	2	20	21	2	beam	-7.947E+03	-1.277E+04	8.734E+02	-5.868E+03
19	2	19	20	2	beam	-4.319E+03	1.282E+03	-1.701E+03	-8.729E+02
18	2	18	19	2	beam	3.381E+03	3.830E+04	1.255E+02	1.701E+03
17	2	17	18	2	beam	4.397E+03	6.143E+04	1.893E+03	-1.255E+02
16	2	16	17	2	beam	-8.790E+03	1.224E+05	-1.641E+03	-1.892E+03
15	2	15	16	2	beam	6.484E+03	1.301E+05	1.092E+03	1.641E+03
14	2	14	15	2	beam	-5.140E+03	2.326E+05	-1.074E+03	-1.092E+03
13	2	13	14	2	beam	1.769E+04	3.142E+05	6.036E+03	1.074E+03
12	2	12	13	2	beam	9.316E+03	3.965E+05	6.957E+02	3.049E+03
11	2	11	12	2	beam	2.611E+04	4.166E+05	5.714E+03	8.389E+03
10	2	10	11	2	beam	5.213E+03	5.225E+05	-2.643E+02	3.371E+03
9	2	9	10	2	beam	-1.954E+03	5.770E+05	-1.492E+03	2.639E+02
8	2	8	9	2	beam	9.051E+02	5.833E+05	-9.228E+02	1.492E+03
7	2	7	8	2	beam	1.369E+03	5.259E+05	-1.071E+02	9.233E+02
6	2	6	7	2	beam	-5.181E+03	4.315E+05	-2.906E+03	1.070E+02
5	2	5	6	2	beam	1.187E+04	3.644E+05	1.864E+03	2.907E+03
4	2	4	5	2	beam	-7.659E+03	3.046E+05	-1.215E+03	-1.863E+03
3	2	3	4	2	beam	4.871E+03	2.417E+05	8.369E+02	1.216E+03
2	2	2	3	2	beam	-4.223E+03	1.638E+05	-9.428E+02	-8.365E+02
1	2	1	2	2	beam	2.345E+03	1.462E+05	2.073E-04	9.425E+02

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	5.90000E-03	1.64000E+11	4.57800E-05	0.00000E+00	Not Set
Prop. Cable Bond Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

>set log off

* log-file recording stopped 5-Aug-95 8:42

Title: ESF Ground Support - Structural Steel Analysis

ATTACHMENT II

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FLAC log-file opened 2-Aug-95 15:44

STATION: TCW @ 7+00

From File : m07k250w.sav
>pr stru

LOADING: STATIC: DL+UTIL

STEEL SET: W8X31 @ 4'-0" O.C.

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	1.027E-04	8.365E-04	-1.537E-04	no	no	no
47	1.205E+00	-3.614E+00	6.510E-05	9.084E-04	-1.462E-04	no	no	no
46	6.264E-01	-3.758E+00	3.118E-05	9.848E-04	-1.234E-04	no	no	no
45	0.000E+00	-3.810E+00	2.577E-07	1.042E-03	-3.798E-05	no	no	no
44	-6.264E-01	-3.758E+00	-2.723E-05	1.027E-03	7.945E-05	no	no	no
43	-1.205E+00	-3.614E+00	-6.043E-05	9.648E-04	1.422E-04	no	no	no
42	-1.704E+00	-3.408E+00	-1.015E-04	8.843E-04	1.868E-04	no	no	no
41	-2.053E+00	-3.209E+00	-1.424E-04	8.158E-04	0.000E+00	no	no	no
40	-2.380E+00	-2.975E+00	-1.757E-04	7.431E-04	1.843E-04	no	no	no
39	-2.694E+00	-2.694E+00	-2.106E-04	6.727E-04	1.901E-04	no	no	no
38	-2.975E+00	-2.380E+00	-2.453E-04	5.887E-04	1.808E-04	no	no	no
37	-3.209E+00	-2.053E+00	-2.741E-04	5.132E-04	1.685E-04	no	no	no
36	-3.408E+00	-1.704E+00	-2.989E-04	4.196E-04	1.575E-04	no	no	no
35	-3.614E+00	-1.205E+00	-3.246E-04	3.053E-04	1.019E-04	no	no	no
34	-3.758E+00	-6.264E-01	-3.429E-04	1.775E-04	5.791E-05	no	no	no
33	-3.810E+00	0.000E+00	-3.495E-04	3.893E-05	1.112E-06	no	no	no
32	-3.758E+00	6.264E-01	-3.451E-04	-9.878E-05	-5.362E-05	no	no	no
31	-3.614E+00	1.205E+00	-3.293E-04	-2.245E-04	-9.608E-05	no	no	no
30	-3.408E+00	1.704E+00	-3.055E-04	-3.347E-04	-1.492E-04	no	no	no
29	-3.209E+00	2.053E+00	-2.809E-04	-4.251E-04	-1.686E-04	no	no	no
8	-2.975E+00	2.380E+00	-2.551E-04	-5.013E-04	-1.663E-04	no	no	no
27	-2.694E+00	2.694E+00	-2.284E-04	-5.788E-04	-1.735E-04	no	no	no
26	-2.380E+00	2.975E+00	-1.973E-04	-6.490E-04	-1.780E-04	no	no	no
25	-2.053E+00	3.209E+00	-1.700E-04	-7.202E-04	-1.864E-04	no	no	no
24	-1.704E+00	3.408E+00	-1.370E-04	-7.843E-04	-1.633E-04	no	no	no
23	-1.205E+00	3.614E+00	-9.993E-05	-8.547E-04	-1.477E-04	no	no	no
22	-6.264E-01	3.758E+00	-5.410E-05	-9.304E-04	-1.023E-04	no	no	no
21	0.000E+00	3.810E+00	-2.157E-06	-9.511E-04	1.188E-05	no	no	no
20	6.264E-01	3.758E+00	4.947E-05	-9.213E-04	9.767E-05	no	no	no
19	1.205E+00	3.614E+00	9.371E-05	-8.562E-04	1.294E-04	no	no	no
18	1.704E+00	3.408E+00	1.297E-04	-7.918E-04	1.525E-04	no	no	no
17	2.053E+00	3.209E+00	1.643E-04	-7.328E-04	1.861E-04	no	no	no
16	2.380E+00	2.975E+00	1.924E-04	-6.609E-04	1.826E-04	no	no	no
15	2.694E+00	2.694E+00	2.232E-04	-5.893E-04	1.767E-04	no	no	no
14	2.975E+00	2.380E+00	2.501E-04	-5.109E-04	1.523E-04	no	no	no
13	3.209E+00	2.053E+00	2.772E-04	-4.350E-04	2.281E-04	no	no	no
12	3.408E+00	1.704E+00	3.054E-04	-3.459E-04	1.900E-04	no	no	no
11	3.614E+00	1.205E+00	3.323E-04	-2.371E-04	1.849E-04	no	no	no
10	3.758E+00	6.264E-01	3.522E-04	-1.086E-04	3.376E-05	no	no	no
9	3.810E+00	0.000E+00	3.543E-04	2.922E-05	1.526E-06	no	no	no
8	3.758E+00	-6.264E-01	3.469E-04	1.661E-04	-6.308E-05	no	no	no
7	3.614E+00	-1.205E+00	3.243E-04	2.935E-04	-1.063E-04	no	no	no
6	3.408E+00	-1.704E+00	2.990E-04	4.055E-04	-1.488E-04	no	no	no
5	3.209E+00	-2.053E+00	2.739E-04	4.935E-04	-1.733E-04	no	no	no
4	2.975E+00	-2.380E+00	2.422E-04	5.685E-04	-1.745E-04	no	no	no
3	2.694E+00	-2.694E+00	2.118E-04	6.487E-04	-1.895E-04	no	no	no
2	2.380E+00	-2.975E+00	1.716E-04	7.228E-04	-1.889E-04	no	no	no
1	2.053E+00	-3.209E+00	1.352E-04	7.840E-04	0.000E+00	no	no	no
	X-load	Y-load	Moment	i j Pin	Sh. force	Angle	Bond	
47	0.000E+00	0.000E+00	0.000E+00	39 30	no			
46	0.000E+00	0.000E+00	0.000E+00	38 30	no			
45	0.000E+00	0.000E+00	0.000E+00	37 30	no			
45	0.000E+00	0.000E+00	0.000E+00	36 30	no			

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44	0.000E+00	0.000E+00	0.000E+00	35	30	no
43	0.000E+00	0.000E+00	0.000E+00	34	30	no
42	0.000E+00	0.000E+00	0.000E+00	33	30	no
41	0.000E+00	-9.099E+01	0.000E+00	33	31	yes
40	0.000E+00	-1.381E+03	0.000E+00	32	31	no
39	0.000E+00	-2.993E+03	0.000E+00	32	32	no
38	0.000E+00	-2.988E+03	0.000E+00	31	32	no
37	0.000E+00	-1.819E+02	0.000E+00	31	33	no
36	0.000E+00	-2.131E+02	0.000E+00	30	33	no
35	0.000E+00	-2.571E+02	0.000E+00	30	34	no
34	0.000E+00	-2.771E+02	0.000E+00	30	35	no
33	0.000E+00	-2.845E+02	0.000E+00	30	36	no
32	0.000E+00	-2.771E+02	0.000E+00	30	37	no
31	0.000E+00	-2.571E+02	0.000E+00	30	38	no
30	0.000E+00	-2.131E+02	0.000E+00	30	39	no
29	0.000E+00	-1.819E+02	0.000E+00	31	39	no
28	0.000E+00	-1.863E+02	0.000E+00	31	40	no
27	0.000E+00	-1.907E+02	0.000E+00	32	40	no
26	0.000E+00	-1.863E+02	0.000E+00	32	41	no
25	0.000E+00	-5.413E+03	0.000E+00	33	41	no
24	0.000E+00	-2.131E+02	0.000E+00	33	42	no
23	0.000E+00	-2.571E+02	0.000E+00	34	42	no
22	0.000E+00	-2.771E+02	0.000E+00	35	42	no
21	0.000E+00	-1.052E+04	0.000E+00	36	42	no
20	0.000E+00	-2.771E+02	0.000E+00	37	42	no
19	0.000E+00	-2.571E+02	0.000E+00	38	42	no
18	0.000E+00	-2.131E+02	0.000E+00	39	42	no
7	0.000E+00	-5.413E+03	0.000E+00	39	41	no
6	0.000E+00	-1.863E+02	0.000E+00	40	41	no
15	0.000E+00	-1.907E+02	0.000E+00	40	40	no
14	0.000E+00	-1.863E+02	0.000E+00	41	40	no
13	0.000E+00	-1.518E+04	9.085E+03	41	39	no
12	0.000E+00	-1.521E+04	9.085E+03	42	39	no
11	0.000E+00	-1.525E+04	9.085E+03	42	38	no
10	0.000E+00	-2.771E+02	0.000E+00	42	37	no
9	0.000E+00	-2.845E+02	0.000E+00	42	36	no
8	0.000E+00	-2.771E+02	0.000E+00	42	35	no
7	0.000E+00	-2.571E+02	0.000E+00	42	34	no
6	0.000E+00	-2.131E+02	0.000E+00	42	33	no
5	0.000E+00	-1.819E+02	0.000E+00	41	33	no
4	0.000E+00	-1.863E+02	0.000E+00	41	32	no
3	0.000E+00	-1.907E+02	0.000E+00	40	32	no
2	0.000E+00	-1.863E+02	0.000E+00	40	31	no
1	0.000E+00	-9.099E+01	0.000E+00	39	31	yes

Structural element data ...

Elem ID	Nod1	Nod2	Prop		F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3	beam	-1.270E+03	-5.178E+04	-5.104E+02
47	1	47	48	3	beam	5.260E+03	-1.075E+05	2.324E+03
46	1	46	47	3	beam	5.462E+02	-2.109E+05	2.647E+03
45	1	45	46	3	beam	1.974E+04	-3.577E+05	1.505E+04
44	1	44	45	3	beam	-9.200E+03	-3.420E+05	9.271E+03
43	1	43	44	3	beam	-8.124E+03	-2.519E+05	4.429E+03
42	1	42	43	3	beam	3.520E+03	-1.108E+05	6.332E+03
41	1	41	42	3	beam	-1.576E+04	-2.465E+04	9.477E-05
40	2	40	41	2	beam	-1.682E+03	3.749E+04	-6.762E+02
9	2	39	40	2	beam	3.699E+03	4.637E+04	8.824E+02
38	2	38	39	2	beam	-4.972E+03	9.083E+04	-1.213E+03
37	2	37	38	2	beam	4.878E+03	1.098E+05	7.488E+02
36	2	36	37	2	beam	-4.746E+03	1.650E+05	-1.159E+03

					V	F-AXIAL	M-1	M-2	
35	2	35	36	2	beam	1.430E+03	1.711E+05	-3.868E+02	1.159E+03
34	2	34	35	2	beam	-5.591E+02	1.968E+05	-7.201E+02	3.869E+02
33	2	33	34	2	beam	1.319E+02	2.125E+05	-6.371E+02	7.200E+02
32	2	32	33	2	beam	-5.353E+01	2.105E+05	-6.706E+02	6.370E+02
31	2	31	32	2	beam	4.558E+02	1.943E+05	-3.990E+02	6.707E+02
30	2	30	31	2	beam	-1.259E+03	1.653E+05	-1.079E+03	3.987E+02
29	2	29	30	2	beam	3.564E+03	1.591E+05	3.547E+02	1.078E+03
28	2	28	29	2	beam	-1.547E+03	1.178E+05	-2.674E+02	-3.543E+02
27	2	27	28	2	beam	6.660E+02	9.180E+04	1.131E+01	2.694E+02
26	2	26	27	2	beam	-4.345E+02	5.391E+04	-1.716E+02	-1.148E+01
25	2	25	26	2	beam	6.988E+01	4.647E+04	-1.427E+02	1.707E+02
24	2	24	25	2	beam	2.867E+03	7.445E+03	1.008E+03	1.446E+02
23	2	23	24	2	beam	-2.932E+03	-1.291E+04	-5.760E+02	-1.008E+03
22	2	22	23	2	beam	3.859E+03	-4.303E+04	1.723E+03	5.775E+02
21	2	21	22	2	beam	-1.144E+03	-7.760E+04	1.004E+03	-1.723E+03
20	2	20	21	2	beam	6.363E+01	-7.503E+04	1.045E+03	-1.005E+03
19	2	19	20	2	beam	-2.163E+03	-4.469E+04	-2.449E+02	-1.044E+03
18	2	18	19	2	beam	2.097E+03	-1.755E+04	8.878E+02	2.450E+02
17	2	17	18	2	beam	-1.293E+03	1.104E+02	3.682E+02	-8.878E+02
16	2	16	17	2	beam	-2.181E+03	4.829E+04	-5.037E+02	-3.728E+02
15	2	15	16	2	beam	1.876E+03	5.586E+04	2.890E+02	5.015E+02
14	2	14	15	2	beam	-3.427E+03	9.133E+04	-1.157E+03	-2.873E+02
13	2	13	14	2	beam	1.282E+04	1.119E+05	3.994E+03	1.160E+03
12	2	12	13	2	beam	2.178E+04	1.516E+05	3.665E+03	5.091E+03
11	2	11	12	2	beam	1.980E+04	1.638E+05	5.278E+03	5.419E+03
10	2	10	11	2	beam	6.390E+03	1.965E+05	7.856E-01	3.808E+03
9	2	9	10	2	beam	-1.230E+03	2.123E+05	-7.715E+02	-1.439E+00
8	2	8	9	2	beam	3.706E-01	2.105E+05	-7.717E+02	7.719E+02
7	2	7	8	2	beam	7.654E+02	1.909E+05	-3.163E+02	7.726E+02
6	2	6	7	2	beam	-1.015E+03	1.689E+05	-8.644E+02	3.160E+02
5	2	5	6	2	beam	2.012E+03	1.574E+05	-5.481E+01	8.633E+02
4	2	4	5	2	beam	1.660E+02	1.052E+05	1.131E+01	5.543E+01
3	2	3	4	2	beam	-1.314E+03	8.943E+04	-5.432E+02	-1.036E+01
2	2	2	3	2	beam	2.629E+03	4.419E+04	5.639E+02	5.438E+02
1	2	1	2	2	beam	-1.403E+03	1.379E+04	-1.816E-05	-5.640E+02

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	5.90000E-03	1.64000E+11	4.57800E-05	0.00000E+00	Not Set
Prop. Cable Bond Num.	Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

>set log off

* log-file recording stopped 2-Aug-95 15:44

Title: ESF Ground Support - Structural Steel Analysis

ATTACHMENT II

Page: II-13 of II-62

LAC log-file opened 14-Aug-95 14:08

From File : flac.ini
>pr stru

m34k250x.sav

The following state has been restored:

date	time	step	grid	version
10-Aug-95	13:42	5218	70 X 70	3.22

Title:

>pr stru

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	2.196E-04	1.784E-03	-4.640E-04	no	no	no
47	1.205E+00	-3.614E+00	1.287E-04	1.998E-03	-3.870E-04	no	no	no
46	6.264E-01	-3.758E+00	4.900E-05	2.186E-03	-2.941E-04	no	no	no
45	0.000E+00	-3.810E+00	-7.204E-06	2.283E-03	-2.191E-05	no	no	no
44	-6.264E-01	-3.758E+00	-6.003E-05	2.200E-03	2.799E-04	no	no	no
43	-1.205E+00	-3.614E+00	-1.416E-04	2.019E-03	4.039E-04	no	no	no
42	-1.704E+00	-3.408E+00	-2.335E-04	1.797E-03	4.547E-04	no	no	no
41	-2.053E+00	-3.209E+00	-3.215E-04	1.632E-03	0.000E+00	no	no	no
40	-2.380E+00	-2.975E+00	-3.930E-04	1.441E-03	4.860E-04	no	no	no
39	-2.694E+00	-2.694E+00	-4.755E-04	1.237E-03	4.947E-04	no	no	no
38	-2.975E+00	-2.380E+00	-5.572E-04	1.022E-03	4.637E-04	no	no	no
37	-3.209E+00	-2.053E+00	-6.322E-04	8.199E-04	4.608E-04	no	no	no
36	-3.408E+00	-1.704E+00	-7.119E-04	5.838E-04	4.212E-04	no	no	no
35	-3.614E+00	-1.205E+00	-7.859E-04	2.982E-04	2.736E-04	no	no	no
34	-3.758E+00	-6.264E-01	-8.409E-04	-4.460E-05	1.672E-04	no	no	no
33	-3.810E+00	0.000E+00	-8.658E-04	-4.173E-04	1.336E-05	no	no	no
32	-3.758E+00	6.264E-01	-8.567E-04	-7.939E-04	-1.443E-04	no	no	no
31	-3.614E+00	1.205E+00	-8.145E-04	-1.143E-03	-2.660E-04	no	no	no
30	-3.408E+00	1.704E+00	-7.486E-04	-1.444E-03	-4.138E-04	no	no	no
29	-3.209E+00	2.053E+00	-6.778E-04	-1.683E-03	-4.464E-04	no	no	no
28	-2.975E+00	2.380E+00	-6.084E-04	-1.892E-03	-4.760E-04	no	no	no
27	-2.694E+00	2.694E+00	-5.312E-04	-2.127E-03	-5.194E-04	no	no	no
26	-2.380E+00	2.975E+00	-4.500E-04	-2.338E-03	-4.988E-04	no	no	no
25	-2.053E+00	3.209E+00	-3.801E-04	-2.542E-03	-4.958E-04	no	no	no
24	-1.704E+00	3.408E+00	-3.068E-04	-2.720E-03	-4.699E-04	no	no	no
23	-1.205E+00	3.614E+00	-2.172E-04	-2.951E-03	-4.822E-04	no	no	no
22	-6.264E-01	3.758E+00	-1.134E-04	-3.196E-03	-3.691E-04	no	no	no
21	0.000E+00	3.810E+00	-1.026E-06	-3.321E-03	-1.173E-05	no	no	no
20	6.264E-01	3.758E+00	1.111E-04	-3.207E-03	3.702E-04	no	no	no
19	1.205E+00	3.614E+00	2.126E-04	-2.958E-03	4.814E-04	no	no	no
18	1.704E+00	3.408E+00	2.983E-04	-2.726E-03	4.560E-04	no	no	no
17	2.053E+00	3.209E+00	3.718E-04	-2.549E-03	4.935E-04	no	no	no
16	2.380E+00	2.975E+00	4.427E-04	-2.354E-03	5.060E-04	no	no	no
15	2.694E+00	2.694E+00	5.231E-04	-2.139E-03	5.156E-04	no	no	no
14	2.975E+00	2.380E+00	5.971E-04	-1.905E-03	4.622E-04	no	no	no
13	3.209E+00	2.053E+00	6.670E-04	-1.696E-03	4.932E-04	no	no	no
12	3.408E+00	1.704E+00	7.443E-04	-1.443E-03	4.488E-04	no	no	no
11	3.614E+00	1.205E+00	8.154E-04	-1.150E-03	3.052E-04	no	no	no
10	3.758E+00	6.264E-01	8.546E-04	-8.077E-04	1.248E-04	no	no	no
9	3.810E+00	0.000E+00	8.632E-04	-4.395E-04	-6.536E-06	no	no	no
8	3.758E+00	-6.264E-01	8.413E-04	-7.385E-05	-1.639E-04	no	no	no
7	3.614E+00	-1.205E+00	7.882E-04	2.669E-04	-2.690E-04	no	no	no
6	3.408E+00	-1.704E+00	7.177E-04	5.497E-04	-4.103E-04	no	no	no
5	3.209E+00	-2.053E+00	6.357E-04	7.849E-04	-4.736E-04	no	no	no
4	2.975E+00	-2.380E+00	5.589E-04	9.913E-04	-4.727E-04	no	no	no

43	1	43	44	3	beam	-2.514E+04	-3.961E+05	6.053E+03	-2.104E+04
42	1	42	43	3	beam	2.438E+02	-5.945E+04	6.183E+03	-6.052E+03
41	1	41	42	3	beam	-1.538E+04	1.082E+05	8.291E-04	-6.183E+03
40	2	40	41	2	beam	-2.068E+03	2.647E+05	-8.314E+02	-1.172E-04
39	2	39	40	2	beam	5.408E+03	3.220E+05	1.448E+03	8.312E+02
38	2	38	39	2	beam	-1.211E+04	5.061E+05	-3.653E+03	-1.448E+03
37	2	37	38	2	beam	1.762E+04	5.864E+05	3.430E+03	3.653E+03
36	2	36	37	2	beam	-2.443E+04	7.838E+05	-6.388E+03	-3.430E+03
35	2	35	36	2	beam	8.470E+03	8.558E+05	-1.813E+03	6.388E+03
34	2	34	35	2	beam	-2.906E+03	1.037E+06	-3.545E+03	1.813E+03
33	2	33	34	2	beam	-4.145E+02	1.145E+06	-3.805E+03	3.544E+03
32	2	32	33	2	beam	1.297E+02	1.163E+06	-3.723E+03	3.805E+03
31	2	31	32	2	beam	2.213E+03	1.062E+06	-2.405E+03	3.724E+03
30	2	30	31	2	beam	-6.313E+03	9.208E+05	-5.814E+03	2.404E+03
29	2	29	30	2	beam	2.288E+04	8.380E+05	3.383E+03	5.815E+03
28	2	28	29	2	beam	-2.234E+04	6.163E+05	-5.596E+03	-3.383E+03
27	2	27	28	2	beam	1.922E+04	5.719E+05	2.503E+03	5.595E+03
26	2	26	27	2	beam	-8.391E+03	3.806E+05	-1.033E+03	-2.503E+03
25	2	25	26	2	beam	5.699E+03	2.874E+05	1.258E+03	1.032E+03
24	2	24	25	2	beam	-1.453E+03	1.172E+05	6.735E+02	-1.258E+03
23	2	23	24	2	beam	-3.758E+03	2.373E+04	-1.356E+03	-6.736E+02
22	2	22	23	2	beam	1.411E+04	-1.283E+05	7.052E+03	1.356E+03
21	2	21	22	2	beam	4.719E+03	-3.143E+05	1.002E+04	-7.052E+03
20	2	20	21	2	beam	-2.854E+03	-3.188E+05	8.224E+03	-1.002E+04
19	2	19	20	2	beam	-1.819E+04	-1.150E+05	-2.621E+03	-8.224E+03
18	2	18	19	2	beam	7.088E+03	3.579E+04	1.208E+03	2.621E+03
17	2	17	18	2	beam	9.514E+02	1.024E+05	1.591E+03	-1.209E+03
16	2	16	17	2	beam	-5.608E+03	2.832E+05	-6.609E+02	-1.593E+03
15	2	15	16	2	beam	4.778E+03	3.899E+05	1.349E+03	6.640E+02
14	2	14	15	2	beam	-1.542E+04	5.753E+05	-5.150E+03	-1.348E+03
13	2	13	14	2	beam	3.137E+04	6.281E+05	7.462E+03	5.149E+03
12	2	12	13	2	beam	-1.638E+02	8.448E+05	-1.689E+03	1.623E+03
11	2	11	12	2	beam	2.511E+04	8.978E+05	2.794E+03	1.077E+04
10	2	10	11	2	beam	5.869E+03	1.048E+06	-2.794E+03	6.292E+03
9	2	9	10	2	beam	-1.090E+03	1.135E+06	-3.480E+03	2.795E+03
8	2	8	9	2	beam	-8.926E+02	1.124E+06	-4.040E+03	3.479E+03
7	2	7	8	2	beam	4.681E+03	1.035E+06	-1.249E+03	4.040E+03
6	2	6	7	2	beam	-9.918E+03	8.496E+05	-6.607E+03	1.250E+03
5	2	5	6	2	beam	2.112E+04	7.863E+05	1.880E+03	6.607E+03
4	2	4	5	2	beam	-9.167E+03	5.898E+05	-1.806E+03	-1.879E+03
3	2	3	4	2	beam	4.766E+03	4.946E+05	2.012E+02	1.807E+03
2	2	2	3	2	beam	-2.811E+03	3.258E+05	-9.838E+02	-2.008E+02
1	2	1	2	2	beam	2.449E+03	2.539E+05	4.451E-05	9.842E+02

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	5.90000E-03	3.27870E+11	4.57800E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

log off

log-file recording stopped 14-Aug-95 14:09

Title: ESF Ground Support - Structural Steel Analysis

LAC log-file opened 9-Aug-95 14:17

From File : p10k2dy.sav

>pr stru

STATION: PTN @ 10+00

LOADING: SEISMIC + DL+UTIL

STEEL SET: W8X31 @ 2'-0" O.C.

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix	
48	1.704E+00	-3.408E+00	2.040E-03	-1.827E-03	-5.381E-04	no	no	no	
47	1.205E+00	-3.614E+00	1.969E-03	-1.569E-03	-4.280E-04	no	no	no	
46	6.264E-01	-3.758E+00	1.942E-03	-1.366E-03	-2.480E-04	no	no	no	
45	0.000E+00	-3.810E+00	1.953E-03	-1.296E-03	2.272E-05	no	no	no	
44	-6.264E-01	-3.758E+00	1.961E-03	-1.401E-03	3.126E-04	no	no	no	
43	-1.205E+00	-3.614E+00	1.927E-03	-1.656E-03	5.199E-04	no	no	no	
42	-1.704E+00	-3.408E+00	1.841E-03	-1.954E-03	6.343E-04	no	no	no	
41	-2.053E+00	-3.209E+00	1.740E-03	-2.198E-03	0.000E+00	no	no	no	
40	-2.380E+00	-2.975E+00	1.647E-03	-2.622E-03	1.039E-03	no	no	no	
39	-2.694E+00	-2.694E+00	1.487E-03	-3.095E-03	1.112E-03	no	no	no	
38	-2.975E+00	-2.380E+00	1.306E-03	-3.580E-03	1.054E-03	no	no	no	
37	-3.209E+00	-2.053E+00	1.125E-03	-4.020E-03	9.308E-04	no	no	no	
36	-3.408E+00	-1.704E+00	9.764E-04	-4.420E-03	6.577E-04	no	no	no	
35	-3.614E+00	-1.205E+00	8.842E-04	-4.844E-03	3.287E-04	no	no	no	
34	-3.758E+00	-6.264E-01	8.375E-04	-5.285E-03	1.669E-04	no	no	no	
33	-3.810E+00	0.000E+00	8.360E-04	-5.748E-03	-3.152E-05	no	no	no	
32	-3.758E+00	6.264E-01	8.811E-04	-6.208E-03	-2.402E-04	no	no	no	
31	-3.614E+00	1.205E+00	9.841E-04	-6.652E-03	-4.495E-04	no	no	no	
30	-3.408E+00	1.704E+00	1.157E-03	-7.095E-03	-8.363E-04	no	no	no	
29	-3.209E+00	2.053E+00	1.378E-03	-7.527E-03	-1.138E-03	no	no	no	
8	-2.975E+00	2.380E+00	1.634E-03	-7.997E-03	-1.244E-03	no	no	no	
7	-2.694E+00	2.694E+00	1.866E-03	-8.517E-03	-1.199E-03	no	no	no	
26	-2.380E+00	2.975E+00	2.043E-03	-8.980E-03	-9.607E-04	no	no	no	
25	-2.053E+00	3.209E+00	2.118E-03	-9.323E-03	-6.802E-04	no	no	no	
24	-1.704E+00	3.408E+00	2.149E-03	-9.577E-03	-5.059E-04	no	no	no	
23	-1.205E+00	3.614E+00	2.147E-03	-9.829E-03	-3.638E-04	no	no	no	
22	-6.264E-01	3.758E+00	2.132E-03	-1.001E-02	-1.919E-04	no	no	no	
21	0.000E+00	3.810E+00	2.103E-03	-1.005E-02	6.558E-05	no	no	no	
20	6.264E-01	3.758E+00	2.071E-03	-9.930E-03	3.031E-04	no	no	no	
19	1.205E+00	3.614E+00	2.054E-03	-9.684E-03	4.808E-04	no	no	no	
18	1.704E+00	3.408E+00	2.058E-03	-9.356E-03	6.432E-04	no	no	no	
17	2.053E+00	3.209E+00	2.098E-03	-9.052E-03	7.986E-04	no	no	no	
16	2.380E+00	2.975E+00	2.182E-03	-8.667E-03	1.014E-03	no	no	no	
15	2.694E+00	2.694E+00	2.342E-03	-8.186E-03	1.161E-03	no	no	no	
14	2.975E+00	2.380E+00	2.546E-03	-7.675E-03	1.164E-03	no	no	no	
13	3.209E+00	2.053E+00	2.771E-03	-7.205E-03	1.111E-03	no	no	no	
12	3.408E+00	1.704E+00	2.966E-03	-6.773E-03	7.932E-04	no	no	no	
11	3.614E+00	1.205E+00	3.103E-03	-6.335E-03	4.288E-04	no	no	no	
10	3.758E+00	6.264E-01	3.171E-03	-5.891E-03	1.747E-04	no	no	no	
9	3.810E+00	0.000E+00	3.179E-03	-5.437E-03	-3.327E-05	no	no	no	
8	3.758E+00	-6.264E-01	3.133E-03	-4.983E-03	-2.273E-04	no	no	no	
7	3.614E+00	-1.205E+00	3.050E-03	-4.549E-03	-3.944E-04	no	no	no	
6	3.408E+00	-1.704E+00	2.914E-03	-4.126E-03	-7.324E-04	no	no	no	
5	3.209E+00	-2.053E+00	2.734E-03	-3.721E-03	-9.993E-04	no	no	no	
4	2.975E+00	-2.380E+00	2.527E-03	-3.288E-03	-1.073E-03	no	no	no	
3	2.694E+00	-2.694E+00	2.345E-03	-2.827E-03	-1.017E-03	no	no	no	
2	2.380E+00	-2.975E+00	2.207E-03	-2.406E-03	-9.031E-04	no	no	no	
1	2.053E+00	-3.209E+00	2.127E-03	-2.041E-03	0.000E+00	no	no	no	
e	X-load	Y-load	Moment	i	j	Pin	Sh. force	Angle	Bond
47	0.000E+00	0.000E+00	0.000E+00	39	30	no			
46	0.000E+00	0.000E+00	0.000E+00	38	30	no			
45	0.000E+00	0.000E+00	0.000E+00	37	30	no			
45	0.000E+00	0.000E+00	0.000E+00	36	30	no			

44	0.000E+00	0.000E+00	0.000E+00	35	30	no
43	0.000E+00	0.000E+00	0.000E+00	34	30	no
42	0.000E+00	0.000E+00	0.000E+00	33	30	no
41	0.000E+00	-9.099E+01	0.000E+00	33	31	yes
40	0.000E+00	-1.381E+03	0.000E+00	32	31	no
39	0.000E+00	-2.993E+03	0.000E+00	32	32	no
38	0.000E+00	-2.988E+03	0.000E+00	31	32	no
37	0.000E+00	-1.819E+02	0.000E+00	31	33	no
36	0.000E+00	-2.131E+02	0.000E+00	30	33	no
35	0.000E+00	-2.571E+02	0.000E+00	30	34	no
34	0.000E+00	-2.771E+02	0.000E+00	30	35	no
33	0.000E+00	-2.845E+02	0.000E+00	30	36	no
32	0.000E+00	-2.771E+02	0.000E+00	30	37	no
31	0.000E+00	-2.571E+02	0.000E+00	30	38	no
30	0.000E+00	-2.131E+02	0.000E+00	30	39	no
29	0.000E+00	-1.819E+02	0.000E+00	31	39	no
28	0.000E+00	-1.863E+02	0.000E+00	31	40	no
27	0.000E+00	-1.907E+02	0.000E+00	32	40	no
26	0.000E+00	-1.863E+02	0.000E+00	32	41	no
25	0.000E+00	-5.413E+03	0.000E+00	33	41	no
24	0.000E+00	-2.131E+02	0.000E+00	33	42	no
23	0.000E+00	-2.571E+02	0.000E+00	34	42	no
22	0.000E+00	-2.771E+02	0.000E+00	35	42	no
21	0.000E+00	-1.052E+04	0.000E+00	36	42	no
20	0.000E+00	-2.771E+02	0.000E+00	37	42	no
19	0.000E+00	-2.571E+02	0.000E+00	38	42	no
18	0.000E+00	-2.131E+02	0.000E+00	39	42	no
17	0.000E+00	-5.413E+03	0.000E+00	39	41	no
16	0.000E+00	-1.863E+02	0.000E+00	40	41	no
15	0.000E+00	-1.907E+02	0.000E+00	40	40	no
14	0.000E+00	-1.863E+02	0.000E+00	41	40	no
13	0.000E+00	-1.518E+04	9.085E+03	41	39	no
12	0.000E+00	-1.521E+04	9.085E+03	42	39	no
11	0.000E+00	-1.525E+04	9.085E+03	42	38	no
10	0.000E+00	-2.771E+02	0.000E+00	42	37	no
9	0.000E+00	-2.845E+02	0.000E+00	42	36	no
8	0.000E+00	-2.771E+02	0.000E+00	42	35	no
7	0.000E+00	-2.571E+02	0.000E+00	42	34	no
6	0.000E+00	-2.131E+02	0.000E+00	42	33	no
5	0.000E+00	-1.819E+02	0.000E+00	41	33	no
4	0.000E+00	-1.863E+02	0.000E+00	41	32	no
3	0.000E+00	-1.907E+02	0.000E+00	40	32	no
2	0.000E+00	-1.863E+02	0.000E+00	40	31	no
1	0.000E+00	-9.099E+01	0.000E+00	39	31	yes

Structural element data ...

Elem	ID	Nod1	Nod2	Prop		F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3	beam	2.946E+04	5.693E+05	1.184E+04	-3.379E-04
47	1	47	48	3	beam	5.757E+03	5.106E+05	1.480E+04	-1.169E+04
46	1	46	47	3	beam	1.654E+04	3.308E+05	2.458E+04	-1.472E+04
45	1	45	46	3	beam	1.060E+04	2.177E+05	3.136E+04	-2.470E+04
44	1	44	45	3	beam	-5.685E+03	2.312E+05	2.824E+04	-3.182E+04
43	1	43	44	3	beam	-2.058E+04	3.771E+05	1.651E+04	-2.878E+04
42	1	42	43	3	beam	-1.030E+04	5.811E+05	1.100E+04	-1.657E+04
41	1	41	42	3	beam	-2.737E+04	6.597E+05	-2.812E-04	-1.100E+04
40	2	40	41	2	beam	1.350E+04	8.288E+05	5.425E+03	2.297E-05
9	2	39	40	2	beam	-1.371E+04	9.084E+05	-2.830E+02	-5.494E+03
38	2	38	39	2	beam	-9.147E+03	1.117E+06	-3.974E+03	1.192E+02
37	2	37	38	2	beam	-3.449E+03	1.207E+06	-5.301E+03	3.915E+03
36	2	36	37	2	beam	-2.412E+04	1.324E+06	-1.505E+04	5.357E+03

Title: ESF Ground Support - Structural Steel Analysis

35	2	35	36	2	beam	2.168E+04	1.279E+06	-3.287E+03	1.500E+04
34	2	34	35	2	beam	-2.755E+03	1.375E+06	-4.897E+03	3.255E+03
33	2	33	34	2	beam	1.843E+02	1.419E+06	-4.682E+03	4.798E+03
32	2	32	33	2	beam	-1.059E+03	1.407E+06	-5.306E+03	4.640E+03
31	2	31	32	2	beam	9.126E+02	1.340E+06	-5.000E+03	5.544E+03
30	2	30	31	2	beam	-2.100E+04	1.226E+06	-1.642E+04	5.080E+03
29	2	29	30	2	beam	2.517E+04	1.282E+06	-6.203E+03	1.632E+04
28	2	28	29	2	beam	1.157E+04	1.131E+06	-1.631E+03	6.280E+03
27	2	27	28	2	beam	1.511E+04	1.069E+06	4.773E+03	1.593E+03
26	2	26	27	2	beam	1.761E+04	8.268E+05	1.220E+04	-4.780E+03
25	2	25	26	2	beam	-9.095E+03	6.785E+05	8.650E+03	-1.231E+04
24	2	24	25	2	beam	-1.085E+04	4.625E+05	4.330E+03	-8.689E+03
23	2	23	24	2	beam	-1.245E+03	3.552E+05	3.612E+03	-4.285E+03
22	2	22	23	2	beam	2.456E+03	1.892E+05	5.064E+03	-3.600E+03
21	2	21	22	2	beam	3.618E+03	9.972E+04	7.281E+03	-5.007E+03
20	2	20	21	2	beam	-5.310E+03	1.263E+05	4.004E+03	-7.342E+03
19	2	19	20	2	beam	1.710E+03	2.464E+05	4.981E+03	-3.962E+03
18	2	18	19	2	beam	-2.019E+03	4.368E+05	3.969E+03	-5.060E+03
17	2	17	18	2	beam	8.646E+03	5.504E+05	7.557E+03	-4.081E+03
16	2	16	17	2	beam	2.533E+03	7.647E+05	8.524E+03	-7.505E+03
15	2	15	16	2	beam	-1.572E+04	9.190E+05	1.946E+03	-8.570E+03
14	2	14	15	2	beam	-8.992E+03	1.137E+06	-1.782E+03	-2.007E+03
13	2	13	14	2	beam	-7.199E+02	1.215E+06	-2.142E+03	1.853E+03
12	2	12	13	2	beam	-2.814E+03	1.349E+06	-1.243E+04	1.130E+04
11	2	11	12	2	beam	4.195E+04	1.267E+06	1.210E+03	2.145E+04
10	2	10	11	2	beam	4.843E+03	1.356E+06	-4.958E+03	7.844E+03
9	2	9	10	2	beam	2.642E+01	1.397E+06	-4.959E+03	4.976E+03
8	2	8	9	2	beam	1.227E+03	1.387E+06	-4.254E+03	5.026E+03
7	2	7	8	2	beam	-2.018E+02	1.326E+06	-4.272E+03	4.152E+03
6	2	6	7	2	beam	-1.897E+04	1.218E+06	-1.451E+04	4.261E+03
5	2	5	6	2	beam	2.258E+04	1.260E+06	-5.428E+03	1.451E+04
4	2	4	5	2	beam	1.336E+04	1.126E+06	-6.017E+01	5.431E+03
3	2	3	4	2	beam	9.299E+03	1.026E+06	3.931E+03	-1.232E+01
2	2	2	3	2	beam	5.240E+02	8.119E+05	4.187E+03	-3.966E+03
1	2	1	2	2	beam	-1.025E+04	7.314E+05	2.214E-04	-4.121E+03

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	5.90000E-03	3.27870E+11	4.57800E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

>set log off

* log-file recording stopped 9-Aug-95 14:17

JOB TITLE : Seismic Model @ 10+00: Cat-1, Ko=0.25, W/ Internal Loads, W8x31 Steel Set

FLAC (Version 3.22)

LEGEND

9/08/1995 15:29

step 8220

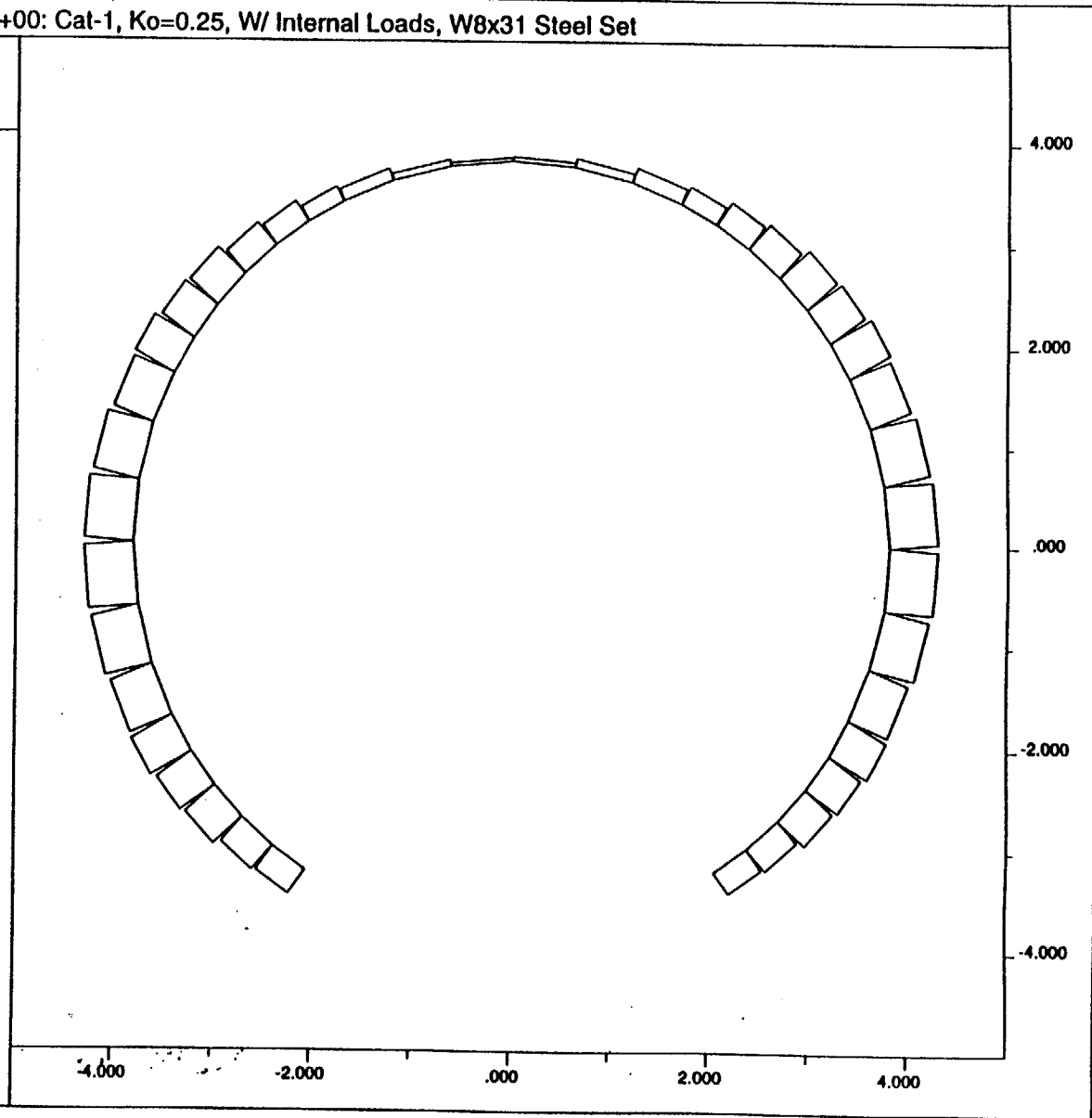
-5.000E+00 <x< 5.000E+00

-5.000E+00 <y< 5.000E+00

Axial Force on Beam 2

Max Value = 1.419E+06

CRWMS M & O



Title: ESF Ground Support - Structural Steel Analysis

DI: BABEE0000-01717-0200-00003 REV 04
ATTACHMENT II
Page: II-14 of II-62

JOB TITLE : Seismic Model @10+00: Cat-1, Ko=0.25, W/ Internal Loads, W8x31 Steel Set

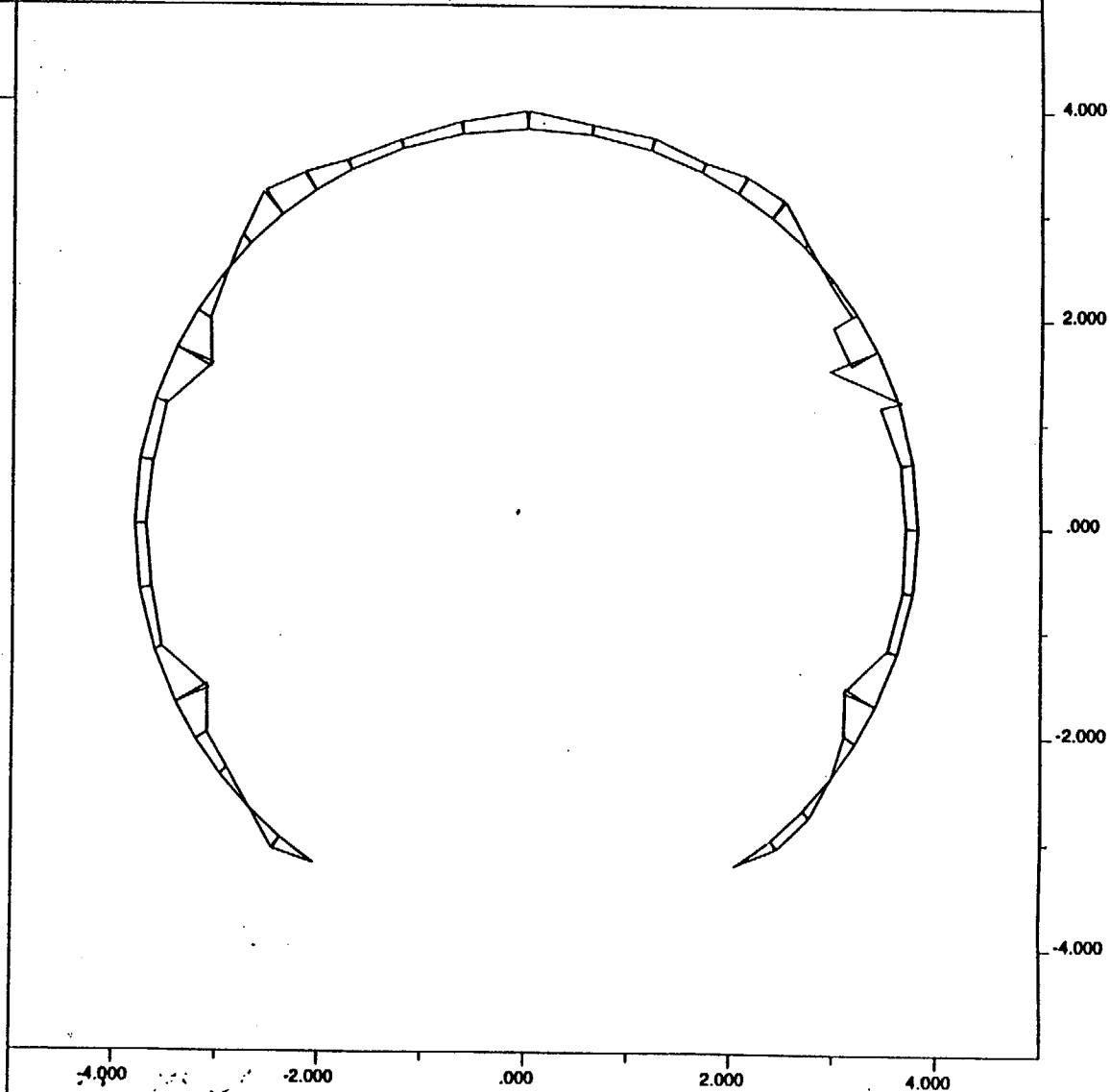
FLAC (Version 3.22)

LEGEND

9/08/1995 15:29
step 8220
-5.000E+00 <x< 5.000E+00
-5.000E+00 <y< 5.000E+00

Moment on Beam 2
Max Value = -2.145E+04

CRWMS M & O



Title: ESF Ground Support - Structural Steel Analysis

DI: BABEE0000-01717-0200-00003 REV 02
ATTACHMENT II
Page: II-20 of II-62

JOB TITLE : Seismic Model @ 10+00: Cat-1, Ko=0.25, W/ Internal Loads, W8x31 Steel Set

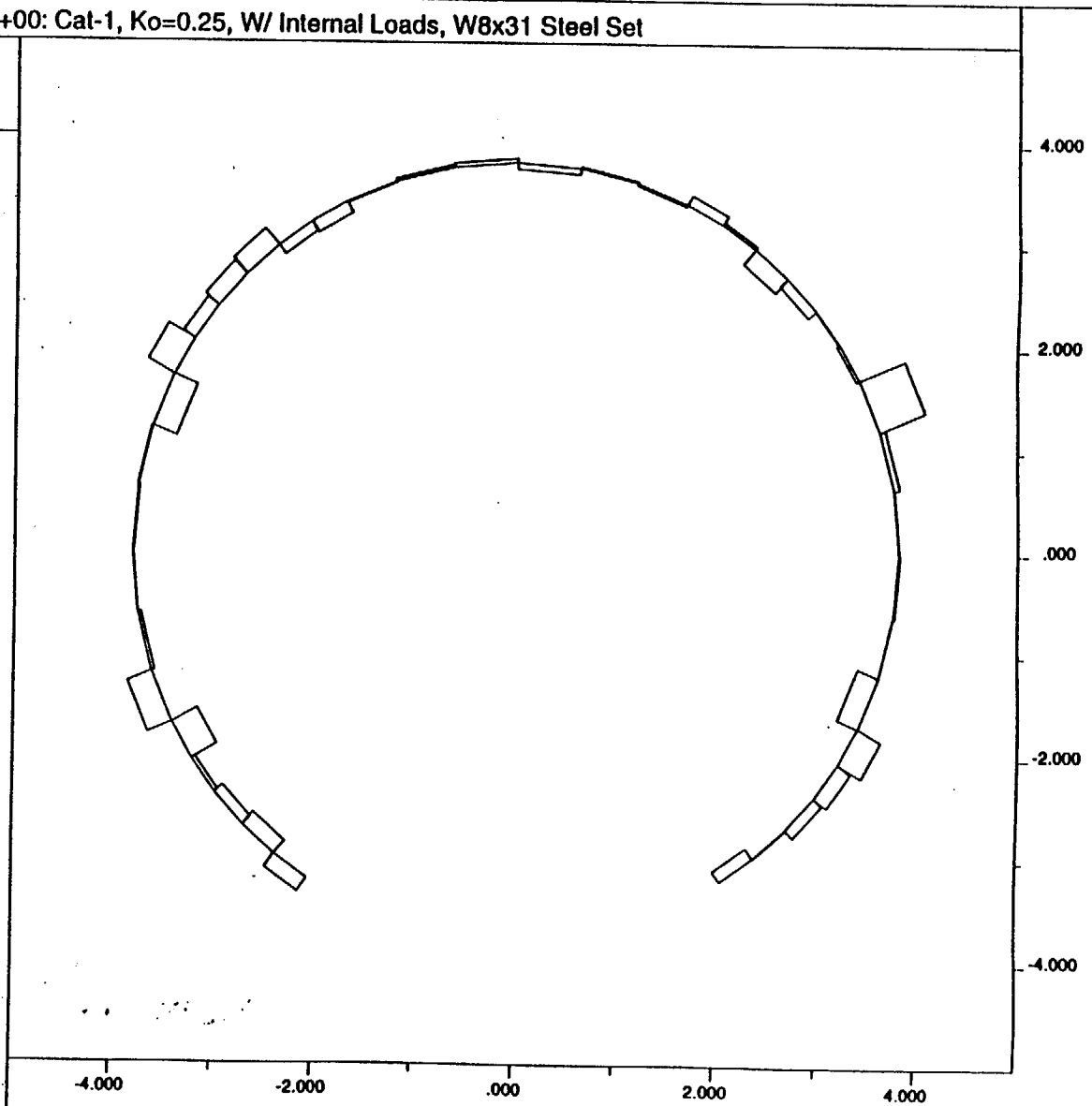
FLAC (Version 3.22)

LEGEND

9/08/1995 15:29
step 8220
-5.000E+00 <x< 5.000E+00
-5.000E+00 <y< 5.000E+00

Shear Force on Beam 2
Max Value = 4.195E+04

CRWMS M & O



Title: ESF Ground Support - Structural Steel Analysis

DI: BABEE0000-01717-0200-00003 REV 02
ATTACHMENT II
Page: II-21 of II-62

Title: ESF Ground Support - Structural Steel Analysis

LAC log-file opened 9-Aug-95 14:12

STATION: TCW @ 7+00

From File : p07k2dy.sav
>br stru

LOADING: SEISMIC + DL+UTIL

STEEL SET: W8X31 @ 4'-0" O.C.

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix	
48	1.704E+00	-3.408E+00	1.630E-03	-6.819E-03	-2.086E-04	no	no	no	
47	1.205E+00	-3.614E+00	1.590E-03	-6.723E-03	-1.793E-04	no	no	no	
46	6.264E-01	-3.758E+00	1.558E-03	-6.639E-03	-1.002E-04	no	no	no	
45	0.000E+00	-3.810E+00	1.535E-03	-6.615E-03	2.086E-05	no	no	no	
44	-6.264E-01	-3.758E+00	1.509E-03	-6.665E-03	1.360E-04	no	no	no	
43	-1.205E+00	-3.614E+00	1.475E-03	-6.767E-03	2.103E-04	no	no	no	
42	-1.704E+00	-3.408E+00	1.430E-03	-6.881E-03	2.435E-04	no	no	no	
41	-2.053E+00	-3.209E+00	1.384E-03	-6.969E-03	0.000E+00	no	no	no	
40	-2.380E+00	-2.975E+00	1.356E-03	-7.081E-03	2.582E-04	no	no	no	
39	-2.694E+00	-2.694E+00	1.322E-03	-7.195E-03	2.709E-04	no	no	no	
38	-2.975E+00	-2.380E+00	1.288E-03	-7.332E-03	2.595E-04	no	no	no	
37	-3.209E+00	-2.053E+00	1.257E-03	-7.455E-03	2.422E-04	no	no	no	
36	-3.408E+00	-1.704E+00	1.226E-03	-7.599E-03	2.240E-04	no	no	no	
35	-3.614E+00	-1.205E+00	1.197E-03	-7.783E-03	1.525E-04	no	no	no	
34	-3.758E+00	-6.264E-01	1.173E-03	-7.992E-03	8.272E-05	no	no	no	
33	-3.810E+00	0.000E+00	1.169E-03	-8.214E-03	-5.715E-06	no	no	no	
32	-3.758E+00	6.264E-01	1.179E-03	-8.436E-03	-8.582E-05	no	no	no	
31	-3.614E+00	1.205E+00	1.202E-03	-8.638E-03	-1.467E-04	no	no	no	
30	-3.408E+00	1.704E+00	1.232E-03	-8.815E-03	-2.166E-04	no	no	no	
29	-3.209E+00	2.053E+00	1.262E-03	-8.953E-03	-2.341E-04	no	no	no	
28	-2.975E+00	2.380E+00	1.292E-03	-9.069E-03	-2.402E-04	no	no	no	
7	-2.694E+00	2.694E+00	1.323E-03	-9.193E-03	-2.531E-04	no	no	no	
6	-2.380E+00	2.975E+00	1.359E-03	-9.298E-03	-2.451E-04	no	no	no	
25	-2.053E+00	3.209E+00	1.387E-03	-9.402E-03	-2.428E-04	no	no	no	
24	-1.704E+00	3.408E+00	1.421E-03	-9.487E-03	-2.077E-04	no	no	no	
23	-1.205E+00	3.614E+00	1.455E-03	-9.582E-03	-1.799E-04	no	no	no	
22	-6.264E-01	3.758E+00	1.498E-03	-9.673E-03	-1.188E-04	no	no	no	
21	0.000E+00	3.810E+00	1.546E-03	-9.701E-03	2.158E-05	no	no	no	
20	6.264E-01	3.758E+00	1.594E-03	-9.650E-03	1.327E-04	no	no	no	
19	1.205E+00	3.614E+00	1.635E-03	-9.559E-03	1.943E-04	no	no	no	
18	1.704E+00	3.408E+00	1.668E-03	-9.446E-03	2.357E-04	no	no	no	
17	2.053E+00	3.209E+00	1.700E-03	-9.349E-03	2.627E-04	no	no	no	
16	2.380E+00	2.975E+00	1.724E-03	-9.236E-03	2.574E-04	no	no	no	
15	2.694E+00	2.694E+00	1.752E-03	-9.120E-03	2.540E-04	no	no	no	
14	2.975E+00	2.380E+00	1.776E-03	-8.991E-03	2.220E-04	no	no	no	
13	3.209E+00	2.053E+00	1.803E-03	-8.868E-03	2.993E-04	no	no	no	
12	3.408E+00	1.704E+00	1.833E-03	-8.723E-03	2.547E-04	no	no	no	
11	3.614E+00	1.205E+00	1.857E-03	-8.541E-03	2.206E-04	no	no	no	
10	3.758E+00	6.264E-01	1.874E-03	-8.332E-03	5.434E-05	no	no	no	
9	3.810E+00	0.000E+00	1.877E-03	-8.107E-03	2.913E-06	no	no	no	
8	3.758E+00	-6.264E-01	1.870E-03	-7.884E-03	-8.511E-05	no	no	no	
7	3.614E+00	-1.205E+00	1.848E-03	-7.677E-03	-1.456E-04	no	no	no	
6	3.408E+00	-1.704E+00	1.821E-03	-7.495E-03	-2.193E-04	no	no	no	
5	3.209E+00	-2.053E+00	1.792E-03	-7.352E-03	-2.375E-04	no	no	no	
4	2.975E+00	-2.380E+00	1.762E-03	-7.235E-03	-2.435E-04	no	no	no	
3	2.694E+00	-2.694E+00	1.730E-03	-7.107E-03	-2.511E-04	no	no	no	
2	2.380E+00	-2.975E+00	1.697E-03	-7.001E-03	-2.420E-04	no	no	no	
1	2.053E+00	-3.209E+00	1.671E-03	-6.896E-03	0.000E+00	no	no	no	
Node	X-load	Y-load	Moment	i	j	Pin	Sh. force	Angle	Bond
	0.000E+00	0.000E+00	0.000E+00	39	30	no			
46	0.000E+00	0.000E+00	0.000E+00	38	30	no			
45	0.000E+00	0.000E+00	0.000E+00	37	30	no			
	0.000E+00	0.000E+00	0.000E+00	36	30	no			

44	0.000E+00	0.000E+00	0.000E+00	35	30	no
43	0.000E+00	0.000E+00	0.000E+00	34	30	no
42	0.000E+00	0.000E+00	0.000E+00	33	30	no
41	0.000E+00	-9.099E+01	0.000E+00	33	31	yes
40	0.000E+00	-1.381E+03	0.000E+00	32	31	no
39	0.000E+00	-2.993E+03	0.000E+00	32	32	no
38	0.000E+00	-2.988E+03	0.000E+00	31	32	no
37	0.000E+00	-1.819E+02	0.000E+00	31	33	no
36	0.000E+00	-2.131E+02	0.000E+00	30	33	no
35	0.000E+00	-2.571E+02	0.000E+00	30	34	no
34	0.000E+00	-2.771E+02	0.000E+00	30	35	no
33	0.000E+00	-2.845E+02	0.000E+00	30	36	no
32	0.000E+00	-2.771E+02	0.000E+00	30	37	no
31	0.000E+00	-2.571E+02	0.000E+00	30	38	no
30	0.000E+00	-2.131E+02	0.000E+00	30	39	no
29	0.000E+00	-1.819E+02	0.000E+00	31	39	no
28	0.000E+00	-1.863E+02	0.000E+00	31	40	no
27	0.000E+00	-1.907E+02	0.000E+00	32	40	no
26	0.000E+00	-1.863E+02	0.000E+00	32	41	no
25	0.000E+00	-5.413E+03	0.000E+00	33	41	no
24	0.000E+00	-2.131E+02	0.000E+00	33	42	no
23	0.000E+00	-2.571E+02	0.000E+00	34	42	no
22	0.000E+00	-2.771E+02	0.000E+00	35	42	no
21	0.000E+00	-1.052E+04	0.000E+00	36	42	no
20	0.000E+00	-2.771E+02	0.000E+00	37	42	no
19	0.000E+00	-2.571E+02	0.000E+00	38	42	no
18	0.000E+00	-2.131E+02	0.000E+00	39	42	no
17	0.000E+00	-5.413E+03	0.000E+00	39	41	no
16	0.000E+00	-1.863E+02	0.000E+00	40	41	no
15	0.000E+00	-1.907E+02	0.000E+00	40	40	no
14	0.000E+00	-1.863E+02	0.000E+00	41	40	no
13	0.000E+00	-1.518E+04	9.085E+03	41	39	no
12	0.000E+00	-1.521E+04	9.085E+03	42	39	no
11	0.000E+00	-1.525E+04	9.085E+03	42	38	no
10	0.000E+00	-2.771E+02	0.000E+00	42	37	no
9	0.000E+00	-2.845E+02	0.000E+00	42	36	no
8	0.000E+00	-2.771E+02	0.000E+00	42	35	no
7	0.000E+00	-2.571E+02	0.000E+00	42	34	no
6	0.000E+00	-2.131E+02	0.000E+00	42	33	no
5	0.000E+00	-1.819E+02	0.000E+00	41	33	no
4	0.000E+00	-1.863E+02	0.000E+00	41	32	no
3	0.000E+00	-1.907E+02	0.000E+00	40	32	no
2	0.000E+00	-1.863E+02	0.000E+00	40	31	no
1	0.000E+00	-9.099E+01	0.000E+00	39	31	yes

Structural element data ...

Structural element data ...									
Elem ID	Nod1	Nod2	Prop		F-shear	F-axial	Mom-1	Mom-2	
48	1	48	1	3	beam	6.615E+03	4.946E+04	2.659E+03	2.891E-04
47	1	47	48	3	beam	3.295E+03	-3.546E+03	4.401E+03	-2.621E+03
46	1	46	47	3	beam	1.356E+04	-1.582E+05	1.269E+04	-4.613E+03
45	1	45	46	3	beam	-3.830E+02	-2.858E+05	1.241E+04	-1.265E+04
44	1	44	45	3	beam	-2.592E+03	-2.812E+05	1.112E+04	-1.275E+04
43	1	43	44	3	beam	-9.723E+03	-1.324E+05	5.211E+03	-1.101E+04
42	1	42	43	3	beam	-2.983E+03	2.392E+04	3.186E+03	-4.797E+03
41	1	41	42	3	beam	-6.926E+03	7.383E+04	-2.296E-05	-2.784E+03
40	2	40	41	2	beam	-1.342E+03	1.048E+05	-5.393E+02	9.698E-05
39	2	39	40	2	beam	3.775E+03	1.172E+05	1.021E+03	5.700E+02
38	2	38	39	2	beam	-5.586E+03	1.808E+05	-1.384E+03	-9.701E+02
37	2	37	38	2	beam	5.482E+03	1.975E+05	7.788E+02	1.425E+03
36	2	36	37	2	beam	-5.770E+03	2.665E+05	-1.496E+03	-8.231E+02

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35	2	35	36	2	beam	1.782E+03	2.857E+05	-5.119E+02	1.474E+03
34	2	34	35	2	beam	-1.230E+03	3.199E+05	-1.245E+03	5.118E+02
33	2	33	34	2	beam	7.088E+02	3.416E+05	-8.317E+02	1.277E+03
32	2	32	33	2	beam	-2.091E+02	3.402E+05	-1.024E+03	8.931E+02
31	2	31	32	2	beam	9.684E+02	3.113E+05	-4.792E+02	1.056E+03
30	2	30	31	2	beam	-2.015E+03	2.710E+05	-1.517E+03	4.285E+02
29	2	29	30	2	beam	5.780E+03	2.523E+05	8.340E+02	1.489E+03
28	2	28	29	2	beam	-4.414E+03	1.886E+05	-9.993E+02	-7.748E+02
27	2	27	28	2	beam	3.264E+03	1.653E+05	4.561E+02	9.193E+02
26	2	26	27	2	beam	-1.575E+03	1.006E+05	-1.826E+02	-4.811E+02
25	2	25	26	2	beam	1.944E+03	8.876E+04	4.321E+02	3.495E+02
24	2	24	25	2	beam	1.239E+03	3.161E+04	8.999E+02	-4.018E+02
23	2	23	24	2	beam	-2.441E+03	8.560E+03	-2.714E+02	-1.047E+03
22	2	22	23	2	beam	3.536E+03	-3.293E+04	1.825E+03	2.827E+02
21	2	21	22	2	beam	-1.989E+02	-7.116E+04	1.612E+03	-1.737E+03
20	2	20	21	2	beam	-8.895E+02	-6.683E+04	1.045E+03	-1.604E+03
19	2	19	20	2	beam	-1.003E+03	-2.862E+04	4.775E+02	-1.075E+03
18	2	18	19	2	beam	1.282E+02	2.052E+04	6.174E+02	-5.481E+02
17	2	17	18	2	beam	-3.545E+02	4.992E+04	4.357E+02	-5.782E+02
16	2	16	17	2	beam	-1.732E+03	1.146E+05	-4.462E+02	-2.499E+02
15	2	15	16	2	beam	2.426E+03	1.284E+05	4.459E+02	5.764E+02
14	2	14	15	2	beam	-4.737E+03	1.842E+05	-1.568E+03	-4.285E+02
13	2	13	14	2	beam	1.542E+04	2.068E+05	4.533E+03	1.663E+03
12	2	12	13	2	beam	1.857E+04	2.666E+05	2.904E+03	4.562E+03
11	2	11	12	2	beam	2.092E+04	2.825E+05	5.177E+03	6.124E+03
10	2	10	11	2	beam	6.119E+03	3.255E+05	-2.712E+02	3.918E+03
9	2	9	10	2	beam	-1.077E+03	3.449E+05	-9.490E+02	2.723E+02
8	2	8	9	2	beam	-2.388E+02	3.425E+05	-1.130E+03	9.802E+02
7	2	7	8	2	beam	1.123E+03	3.198E+05	-4.257E+02	1.095E+03
6	2	6	7	2	beam	-2.392E+03	2.800E+05	-1.669E+03	3.771E+02
5	2	5	6	2	beam	7.011E+03	2.687E+05	1.066E+03	1.752E+03
4	2	4	5	2	beam	-5.819E+03	1.894E+05	-1.281E+03	-1.059E+03
3	2	3	4	2	beam	5.606E+03	1.697E+05	1.049E+03	1.314E+03
2	2	2	3	2	beam	-3.172E+03	1.053E+05	-5.019E+02	-8.347E+02
1	2	1	2	2	beam	1.695E+03	9.691E+04	-1.222E-05	6.813E+02

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	5.90000E-03	1.64000E+11	4.57800E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

>set log off

* log-file recording stopped 9-Aug-95 14:12

* FLAC log-file opened 9-Aug-95 14:13

From File : p07k2dy.sav
stru

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	1.630E-03	-6.819E-03	-2.086E-04	no	no	no

FLAC log-file opened 9-Aug-95 14:12

STATION: TSW1 @ 18+00

From File : p18k2dy.sav
>pr stru

LOADING: SEISMIC + DL+UTIL

STEEL SET: W8X31 @ 4'-0" O.C.

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	1.620E-03	-2.294E-03	-2.920E-04	no	no	no
47	1.205E+00	-3.614E+00	1.579E-03	-2.160E-03	-2.132E-04	no	no	no
46	6.264E-01	-3.758E+00	1.568E-03	-2.070E-03	-9.266E-05	no	no	no
45	0.000E+00	-3.810E+00	1.579E-03	-2.063E-03	5.219E-05	no	no	no
44	-6.264E-01	-3.758E+00	1.586E-03	-2.132E-03	1.891E-04	no	no	no
43	-1.205E+00	-3.614E+00	1.567E-03	-2.274E-03	2.826E-04	no	no	no
42	-1.704E+00	-3.408E+00	1.519E-03	-2.438E-03	3.468E-04	no	no	no
41	-2.053E+00	-3.209E+00	1.461E-03	-2.572E-03	0.000E+00	no	no	no
40	-2.380E+00	-2.975E+00	1.461E-03	-2.762E-03	3.450E-04	no	no	no
39	-2.694E+00	-2.694E+00	1.461E-03	-2.943E-03	3.302E-04	no	no	no
38	-2.975E+00	-2.380E+00	1.464E-03	-3.165E-03	3.326E-04	no	no	no
37	-3.209E+00	-2.053E+00	1.476E-03	-3.403E-03	3.397E-04	no	no	no
36	-3.408E+00	-1.704E+00	1.470E-03	-3.674E-03	2.994E-04	no	no	no
35	-3.614E+00	-1.205E+00	1.496E-03	-4.031E-03	1.628E-04	no	no	no
34	-3.758E+00	-6.264E-01	1.519E-03	-4.476E-03	1.178E-04	no	no	no
33	-3.810E+00	0.000E+00	1.521E-03	-4.981E-03	-9.893E-06	no	no	no
32	-3.758E+00	6.264E-01	1.534E-03	-5.475E-03	-1.453E-04	no	no	no
31	-3.614E+00	1.205E+00	1.528E-03	-5.912E-03	-1.727E-04	no	no	no
30	-3.408E+00	1.704E+00	1.518E-03	-6.249E-03	-3.339E-04	no	no	no
29	-3.209E+00	2.053E+00	1.549E-03	-6.521E-03	-4.093E-04	no	no	no
28	-2.975E+00	2.380E+00	1.563E-03	-6.754E-03	-3.432E-04	no	no	no
7	-2.694E+00	2.694E+00	1.569E-03	-6.954E-03	-2.982E-04	no	no	no
26	-2.380E+00	2.975E+00	1.587E-03	-7.100E-03	-2.939E-04	no	no	no
25	-2.053E+00	3.209E+00	1.606E-03	-7.236E-03	-3.105E-04	no	no	no
24	-1.704E+00	3.408E+00	1.638E-03	-7.345E-03	-2.352E-04	no	no	no
23	-1.205E+00	3.614E+00	1.653E-03	-7.459E-03	-2.138E-04	no	no	no
22	-6.264E-01	3.758E+00	1.677E-03	-7.602E-03	-2.484E-04	no	no	no
21	0.000E+00	3.810E+00	1.679E-03	-7.679E-03	4.575E-05	no	no	no
20	6.264E-01	3.758E+00	1.680E-03	-7.545E-03	3.464E-04	no	no	no
19	1.205E+00	3.614E+00	1.704E-03	-7.337E-03	3.236E-04	no	no	no
18	1.704E+00	3.408E+00	1.713E-03	-7.176E-03	2.622E-04	no	no	no
17	2.053E+00	3.209E+00	1.723E-03	-7.049E-03	3.279E-04	no	no	no
16	2.380E+00	2.975E+00	1.729E-03	-6.883E-03	3.094E-04	no	no	no
15	2.694E+00	2.694E+00	1.721E-03	-6.725E-03	2.763E-04	no	no	no
14	2.975E+00	2.380E+00	1.707E-03	-6.519E-03	3.043E-04	no	no	no
13	3.209E+00	2.053E+00	1.703E-03	-6.276E-03	4.536E-04	no	no	no
12	3.408E+00	1.704E+00	1.726E-03	-5.985E-03	3.784E-04	no	no	no
11	3.614E+00	1.205E+00	1.711E-03	-5.637E-03	2.462E-04	no	no	no
10	3.758E+00	6.264E-01	1.693E-03	-5.195E-03	9.286E-05	no	no	no
9	3.810E+00	0.000E+00	1.682E-03	-4.701E-03	-1.470E-05	no	no	no
8	3.758E+00	-6.264E-01	1.670E-03	-4.204E-03	-1.412E-04	no	no	no
7	3.614E+00	-1.205E+00	1.677E-03	-3.765E-03	-1.802E-04	no	no	no
6	3.408E+00	-1.704E+00	1.690E-03	-3.423E-03	-3.118E-04	no	no	no
5	3.209E+00	-2.053E+00	1.671E-03	-3.162E-03	-3.516E-04	no	no	no
4	2.975E+00	-2.380E+00	1.674E-03	-2.939E-03	-3.190E-04	no	no	no
3	2.694E+00	-2.694E+00	1.674E-03	-2.734E-03	-2.984E-04	no	no	no
2	2.380E+00	-2.975E+00	1.673E-03	-2.573E-03	-3.067E-04	no	no	no
1	2.053E+00	-3.209E+00	1.670E-03	-2.409E-03	0.000E+00	no	no	no
Node	X-load	Y-load	Moment	i j Pin	Sh. force	Angle	Bond	
	0.000E+00	0.000E+00	0.000E+00	39 30	no			
46	0.000E+00	0.000E+00	0.000E+00	38 30	no			
45	0.000E+00	0.000E+00	0.000E+00	37 30	no			
	0.000E+00	0.000E+00	0.000E+00	36 30	no			

44	0.000E+00	0.000E+00	0.000E+00	35	30	no
43	0.000E+00	0.000E+00	0.000E+00	34	30	no
42	0.000E+00	0.000E+00	0.000E+00	33	30	no
41	0.000E+00	-9.099E+01	0.000E+00	33	31	yes
40	0.000E+00	-1.381E+03	0.000E+00	32	31	no
39	0.000E+00	-2.993E+03	0.000E+00	32	32	no
38	0.000E+00	-2.988E+03	0.000E+00	31	32	no
37	0.000E+00	-1.819E+02	0.000E+00	31	33	no
36	0.000E+00	-2.131E+02	0.000E+00	30	33	no
35	0.000E+00	-2.571E+02	0.000E+00	30	34	no
34	0.000E+00	-2.771E+02	0.000E+00	30	35	no
33	0.000E+00	-2.845E+02	0.000E+00	30	36	no
32	0.000E+00	-2.771E+02	0.000E+00	30	37	no
31	0.000E+00	-2.571E+02	0.000E+00	30	38	no
30	0.000E+00	-2.131E+02	0.000E+00	30	39	no
29	0.000E+00	-1.819E+02	0.000E+00	31	39	no
28	0.000E+00	-1.863E+02	0.000E+00	31	40	no
27	0.000E+00	-1.907E+02	0.000E+00	32	40	no
26	0.000E+00	-1.863E+02	0.000E+00	32	41	no
25	0.000E+00	-5.413E+03	0.000E+00	33	41	no
24	0.000E+00	-2.131E+02	0.000E+00	33	42	no
23	0.000E+00	-2.571E+02	0.000E+00	34	42	no
22	0.000E+00	-2.771E+02	0.000E+00	35	42	no
21	0.000E+00	-1.052E+04	0.000E+00	36	42	no
20	0.000E+00	-2.771E+02	0.000E+00	37	42	no
19	0.000E+00	-2.571E+02	0.000E+00	38	42	no
18	0.000E+00	-2.131E+02	0.000E+00	39	42	no
17	0.000E+00	-5.413E+03	0.000E+00	39	41	no
16	0.000E+00	-1.863E+02	0.000E+00	40	41	no
15	0.000E+00	-1.907E+02	0.000E+00	40	40	no
14	0.000E+00	-1.863E+02	0.000E+00	41	40	no
13	0.000E+00	-1.518E+04	9.085E+03	41	39	no
12	0.000E+00	-1.521E+04	9.085E+03	42	39	no
11	0.000E+00	-1.525E+04	9.085E+03	42	38	no
10	0.000E+00	-2.771E+02	0.000E+00	42	37	no
9	0.000E+00	-2.845E+02	0.000E+00	42	36	no
8	0.000E+00	-2.771E+02	0.000E+00	42	35	no
7	0.000E+00	-2.571E+02	0.000E+00	42	34	no
6	0.000E+00	-2.131E+02	0.000E+00	42	33	no
5	0.000E+00	-1.819E+02	0.000E+00	41	33	no
4	0.000E+00	-1.863E+02	0.000E+00	41	32	no
3	0.000E+00	-1.907E+02	0.000E+00	40	32	no
2	0.000E+00	-1.863E+02	0.000E+00	40	31	no
1	0.000E+00	-9.099E+01	0.000E+00	39	31	yes

Structural element data ...

Elem ID	Nod1	Nod2	Prop		F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3	beam	1.809E+04	2.272E+05	7.269E+03 -7.848E-04
47	1	47	48	3	beam	7.143E+03	2.314E+05	1.141E+04 -7.551E+03
46	1	46	47	3	beam	3.216E+03	1.493E+05	1.417E+04 -1.225E+04
45	1	45	46	3	beam	3.323E+03	1.541E+05	1.604E+04 -1.396E+04
44	1	44	45	3	beam	-4.808E+03	1.768E+05	1.265E+04 -1.567E+04
43	1	43	44	3	beam	-8.403E+03	2.201E+05	7.700E+03 -1.271E+04
42	1	42	43	3	beam	-1.098E+03	3.095E+05	7.480E+03 -8.073E+03
41	1	41	42	3	beam	-1.776E+04	3.082E+05	1.119E-04 -7.139E+03
40	2	40	41	2	beam	-5.996E+03	2.688E+05	-2.410E+03 -1.524E-04
39	2	39	40	2	beam	1.044E+04	2.827E+05	1.936E+03 2.465E+03
38	2	38	39	2	beam	-9.304E+03	3.816E+05	-1.917E+03 -2.003E+03
37	2	37	38	2	beam	1.026E+04	4.851E+05	2.196E+03 1.928E+03
36	2	36	37	2	beam	-1.440E+04	5.577E+05	-3.650E+03 -2.139E+03

35	2	35	36	2	beam	6.202E+03	6.099E+05	-2.223E+02	3.573E+03
34	2	34	35	2	beam	-1.174E+03	7.132E+05	-9.163E+02	2.167E+02
33	2	33	34	2	beam	-1.870E+03	7.761E+05	-2.113E+03	9.377E+02
32	2	32	33	2	beam	1.626E+03	7.586E+05	-1.106E+03	2.128E+03
31	2	31	32	2	beam	2.501E+03	6.928E+05	3.987E+02	1.092E+03
30	2	30	31	2	beam	-9.900E+03	5.649E+05	-4.912E+03	-4.360E+02
29	2	29	30	2	beam	1.777E+04	5.357E+05	2.159E+03	4.983E+03
28	2	28	29	2	beam	-4.405E+03	4.393E+05	3.546E+02	-2.125E+03
27	2	27	28	2	beam	2.629E+03	3.324E+05	1.355E+03	-2.468E+02
26	2	26	27	2	beam	-5.559E+03	1.955E+05	-1.102E+03	-1.241E+03
25	2	25	26	2	beam	3.339E+03	1.588E+05	3.622E+02	9.799E+02
24	2	24	25	2	beam	5.143E+03	6.551E+04	2.447E+03	-3.796E+02
23	2	23	24	2	beam	-7.343E+03	4.819E+04	-1.686E+03	-2.280E+03
22	2	22	23	2	beam	4.068E+03	1.904E+04	7.730E+02	1.652E+03
21	2	21	22	2	beam	8.501E+03	8.056E+03	6.179E+03	-8.362E+02
20	2	20	21	2	beam	-8.201E+03	1.750E+04	1.019E+03	-6.173E+03
19	2	19	20	2	beam	-4.311E+03	4.508E+04	-1.561E+03	-1.008E+03
18	2	18	19	2	beam	2.710E+03	9.596E+04	-1.248E+02	1.588E+03
17	2	17	18	2	beam	7.151E+03	1.271E+05	2.659E+03	2.149E+02
16	2	16	17	2	beam	-1.487E+04	2.226E+05	-3.339E+03	-2.638E+03
15	2	15	16	2	beam	1.297E+04	2.521E+05	2.140E+03	3.324E+03
14	2	14	15	2	beam	-7.851E+03	3.783E+05	-1.152E+03	-2.156E+03
13	2	13	14	2	beam	1.937E+04	4.879E+05	6.688E+03	1.098E+03
12	2	12	13	2	beam	4.946E+03	5.821E+05	-4.131E+02	2.401E+03
11	2	11	12	2	beam	2.847E+04	5.875E+05	5.854E+03	9.528E+03
10	2	10	11	2	beam	4.623E+03	7.060E+05	-5.523E+02	3.308E+03
9	2	9	10	2	beam	-2.120E+03	7.603E+05	-1.956E+03	6.237E+02
8	2	8	9	2	beam	1.311E+03	7.636E+05	-1.094E+03	1.918E+03
7	2	7	8	2	beam	2.036E+03	6.962E+05	1.120E+02	1.101E+03
6	2	6	7	2	beam	-7.187E+03	5.792E+05	-3.772E+03	-1.107E+02
5	2	5	6	2	beam	1.497E+04	5.193E+05	2.271E+03	3.747E+03
4	2	4	5	2	beam	-8.096E+03	4.425E+05	-1.020E+03	-2.234E+03
3	2	3	4	2	beam	6.783E+03	3.506E+05	1.792E+03	1.066E+03
2	2	2	3	2	beam	-9.694E+03	2.448E+05	-2.187E+03	-1.898E+03
1	2	1	2	2	beam	5.482E+03	2.344E+05	1.652E-04	2.203E+03

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	5.90000E-03	1.64000E+11	4.57800E-05	0.00000E+00	Not Set
Prop Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

set log off

log-file recording stopped 9-Aug-95 14:12

FLAC log-file opened 9-Aug-95 14:17

from File : pl8k2dy.sav

stru

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	1.620E-03	-2.294E-03	-2.920E-04	no	no	no

Title: ESF Ground Support - Structural Steel Analysis

ATTACHMENT II

Page: II-28 of II-62

LAC log-file opened 11-Aug-95 0:34

STATION: TSW2 @ 34+00

LOADING: SEISMIC + DL+UTIL

STEEL SET: W8X31 @ 2'-0" O.C.

From File :

>res p34k2dyx.sav

following state has been restored:

date	time	step	grid	version
10-Aug-95	15:10	8218	70 X 70	3.22

Title:

>pr stru

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	1.806E-03	-2.554E-03	-5.189E-04	no	no	no
47	1.205E+00	-3.614E+00	1.712E-03	-2.316E-03	-4.219E-04	no	no	no
46	6.264E-01	-3.758E+00	1.634E-03	-2.112E-03	-3.067E-04	no	no	no
45	0.000E+00	-3.810E+00	1.582E-03	-2.017E-03	-5.976E-06	no	no	no
44	-6.264E-01	-3.758E+00	1.533E-03	-2.118E-03	3.218E-04	no	no	no
43	-1.205E+00	-3.614E+00	1.449E-03	-2.332E-03	4.691E-04	no	no	no
42	-1.704E+00	-3.408E+00	1.349E-03	-2.595E-03	5.465E-04	no	no	no
41	-2.053E+00	-3.209E+00	1.247E-03	-2.799E-03	0.000E+00	no	no	no
40	-2.380E+00	-2.975E+00	1.171E-03	-3.047E-03	6.014E-04	no	no	no
39	-2.694E+00	-2.694E+00	1.082E-03	-3.308E-03	6.042E-04	no	no	no
38	-2.975E+00	-2.380E+00	9.950E-04	-3.582E-03	5.551E-04	no	no	no
37	-3.209E+00	-2.053E+00	9.172E-04	-3.839E-03	5.478E-04	no	no	no
36	-3.408E+00	-1.704E+00	8.311E-04	-4.136E-03	5.009E-04	no	no	no
35	-3.614E+00	-1.205E+00	7.564E-04	-4.499E-03	3.147E-04	no	no	no
34	-3.758E+00	-6.264E-01	7.045E-04	-4.930E-03	1.837E-04	no	no	no
33	-3.810E+00	0.000E+00	6.867E-04	-5.397E-03	3.353E-06	no	no	no
32	-3.758E+00	6.264E-01	7.020E-04	-5.867E-03	-1.815E-04	no	no	no
31	-3.614E+00	1.205E+00	7.543E-04	-6.297E-03	-3.247E-04	no	no	no
30	-3.408E+00	1.704E+00	8.338E-04	-6.665E-03	-5.034E-04	no	no	no
29	-3.209E+00	2.053E+00	9.182E-04	-6.959E-03	-5.377E-04	no	no	no
28	-2.975E+00	2.380E+00	9.990E-04	-7.211E-03	-5.663E-04	no	no	no
27	-2.694E+00	2.694E+00	1.087E-03	-7.495E-03	-6.117E-04	no	no	no
26	-2.380E+00	2.975E+00	1.179E-03	-7.744E-03	-5.813E-04	no	no	no
25	-2.053E+00	3.209E+00	1.255E-03	-7.985E-03	-5.735E-04	no	no	no
24	-1.704E+00	3.408E+00	1.335E-03	-8.190E-03	-5.258E-04	no	no	no
23	-1.205E+00	3.614E+00	1.428E-03	-8.444E-03	-5.112E-04	no	no	no
22	-6.264E-01	3.758E+00	1.532E-03	-8.700E-03	-3.749E-04	no	no	no
21	0.000E+00	3.810E+00	1.644E-03	-8.819E-03	9.925E-06	no	no	no
20	6.264E-01	3.758E+00	1.753E-03	-8.684E-03	4.169E-04	no	no	no
19	1.205E+00	3.614E+00	1.852E-03	-8.400E-03	5.456E-04	no	no	no
18	1.704E+00	3.408E+00	1.936E-03	-8.126E-03	5.323E-04	no	no	no
17	2.053E+00	3.209E+00	2.011E-03	-7.911E-03	5.870E-04	no	no	no
16	2.380E+00	2.975E+00	2.081E-03	-7.667E-03	5.979E-04	no	no	no
15	2.694E+00	2.694E+00	2.163E-03	-7.405E-03	6.054E-04	no	no	no
14	2.975E+00	2.380E+00	2.238E-03	-7.115E-03	5.448E-04	no	no	no
13	3.209E+00	2.053E+00	2.309E-03	-6.856E-03	5.721E-04	no	no	no
12	3.408E+00	1.704E+00	2.390E-03	-6.549E-03	5.180E-04	no	no	no
11	3.614E+00	1.205E+00	2.460E-03	-6.179E-03	3.398E-04	no	no	no
10	3.758E+00	6.264E-01	2.494E-03	-5.753E-03	1.371E-04	no	no	no
9	3.810E+00	0.000E+00	2.494E-03	-5.292E-03	-1.553E-05	no	no	no
8	3.758E+00	-6.264E-01	2.469E-03	-4.835E-03	-1.920E-04	no	no	no
7	3.614E+00	-1.205E+00	2.413E-03	-4.411E-03	-3.156E-04	no	no	no
6	3.408E+00	-1.704E+00	2.337E-03	-4.058E-03	-4.879E-04	no	no	no
5	3.209E+00	-2.053E+00	2.247E-03	-3.766E-03	-5.592E-04	no	no	no
4	2.975E+00	-2.380E+00	2.164E-03	-3.513E-03	-5.549E-04	no	no	no
3	2.694E+00	-2.694E+00	2.078E-03	-3.248E-03	-5.797E-04	no	no	no
2	2.380E+00	-2.975E+00	1.986E-03	-3.001E-03	-5.982E-04	no	no	no

...

File
4

Elem	ID	Nod1	Nod2	Prop	F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3	beam 4.106E+04	2.219E+05	1.650E+04	5.261E-04
47	1	47	48	3	beam -1.887E+04	2.905E+04	6.640E+03	-1.683E+04
6	1	46	47	3	beam 1.935E+04	-3.223E+05	1.838E+04	-6.844E+03
5	1	45	46	3	beam 4.075E+04	-5.881E+05	4.394E+04	-1.832E+04
44	1	44	45	3	beam -3.089E+04	-5.958E+05	2.421E+04	-4.363E+04
43	1	43	44	3	beam -2.820E+04	-3.101E+05	7.691E+03	-2.450E+04
42	1	42	43	3	beam 5.901E+03	6.768E+04	1.091E+04	-7.725E+03

Title: ESF Ground Support - Structural Steel Analysis

41	1	41	42	3	beam	-2.736E+04	2.459E+05	2.122E-07	-1.100E+04
40	2	40	41	2	beam	-3.537E+03	4.062E+05	-1.422E+03	-8.372E-05
39	2	39	40	2	beam	7.992E+03	4.743E+05	1.777E+03	1.591E+03
38	2	38	39	2	beam	-1.588E+04	6.949E+05	-5.093E+03	-1.600E+03
37	2	37	38	2	beam	2.351E+04	7.896E+05	4.448E+03	5.000E+03
36	2	36	37	2	beam	-3.135E+04	1.027E+06	-8.042E+03	-4.557E+03
35	2	35	36	2	beam	1.141E+04	1.110E+06	-2.088E+03	8.249E+03
34	2	34	35	2	beam	-3.750E+03	1.317E+06	-4.426E+03	2.191E+03
33	2	33	34	2	beam	4.248E+02	1.437E+06	-4.179E+03	4.446E+03
32	2	32	33	2	beam	-7.024E+02	1.446E+06	-4.630E+03	4.189E+03
31	2	31	32	2	beam	2.995E+03	1.311E+06	-2.709E+03	4.494E+03
30	2	30	31	2	beam	-8.295E+03	1.125E+06	-7.202E+03	2.721E+03
29	2	29	30	2	beam	2.950E+04	1.033E+06	4.653E+03	7.202E+03
28	2	28	29	2	beam	-2.772E+04	7.550E+05	-6.655E+03	-4.488E+03
27	2	27	28	2	beam	2.423E+04	7.060E+05	3.482E+03	6.727E+03
26	2	26	27	2	beam	-1.119E+04	4.579E+05	-1.281E+03	-3.434E+03
25	2	25	26	2	beam	8.441E+03	3.686E+05	2.005E+03	1.388E+03
24	2	24	25	2	beam	-1.313E+03	1.531E+05	1.511E+03	-2.039E+03
23	2	23	24	2	beam	-4.978E+03	4.384E+04	-9.515E+02	-1.737E+03
22	2	22	23	2	beam	1.459E+04	-1.227E+05	7.797E+03	8.971E+02
21	2	21	22	2	beam	4.819E+03	-3.122E+05	1.071E+04	-7.683E+03
20	2	20	21	2	beam	-2.750E+03	-3.057E+05	8.846E+03	-1.057E+04
19	2	19	20	2	beam	-1.897E+04	-7.934E+04	-2.415E+03	-8.893E+03
18	2	18	19	2	beam	7.572E+03	1.010E+05	1.677E+03	2.413E+03
17	2	17	18	2	beam	1.591E+03	1.874E+05	2.350E+03	-1.711E+03
16	2	16	17	2	beam	-1.078E+04	4.235E+05	-1.762E+03	-2.570E+03
15	2	15	16	2	beam	9.068E+03	5.272E+05	2.179E+03	1.642E+03
14	2	14	15	2	beam	-2.042E+04	7.649E+05	-6.456E+03	-2.149E+03
13	2	13	14	2	beam	3.731E+04	8.182E+05	8.533E+03	6.463E+03
12	2	12	13	2	beam	-6.273E+03	1.082E+06	-3.294E+03	7.722E+02
11	2	11	12	2	beam	2.710E+04	1.137E+06	2.363E+03	1.227E+04
10	2	10	11	2	beam	5.223E+03	1.317E+06	-3.540E+03	6.653E+03
9	2	9	10	2	beam	-4.550E+01	1.420E+06	-3.661E+03	3.632E+03
8	2	8	9	2	beam	-1.746E+03	1.404E+06	-4.767E+03	3.670E+03
7	2	7	8	2	beam	5.207E+03	1.294E+06	-1.556E+03	4.660E+03
6	2	6	7	2	beam	-1.184E+04	1.075E+06	-7.978E+03	1.581E+03
5	2	5	6	2	beam	2.797E+04	1.004E+06	2.945E+03	8.300E+03
4	2	4	5	2	beam	-1.379E+04	7.548E+05	-2.612E+03	-2.932E+03
3	2	3	4	2	beam	7.540E+03	6.494E+05	6.999E+02	2.477E+03
2	2	2	3	2	beam	-6.711E+03	4.458E+05	-2.064E+03	-7.635E+02
1	2	1	2	2	beam	5.026E+03	3.794E+05	1.074E-04	2.020E+03

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	5.90000E-03	3.27870E+11	4.57800E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

set log off

-file recording stopped 11-Aug-95 0:34

JOB TITLE : Structural Node ID

FLAC (Version 3.22)

LEGEND

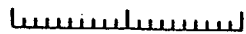
8/10/1995 08:34

step 5218

-5.000E+00 <x< 5.000E+00

-5.000E+00 <y< 5.000E+00

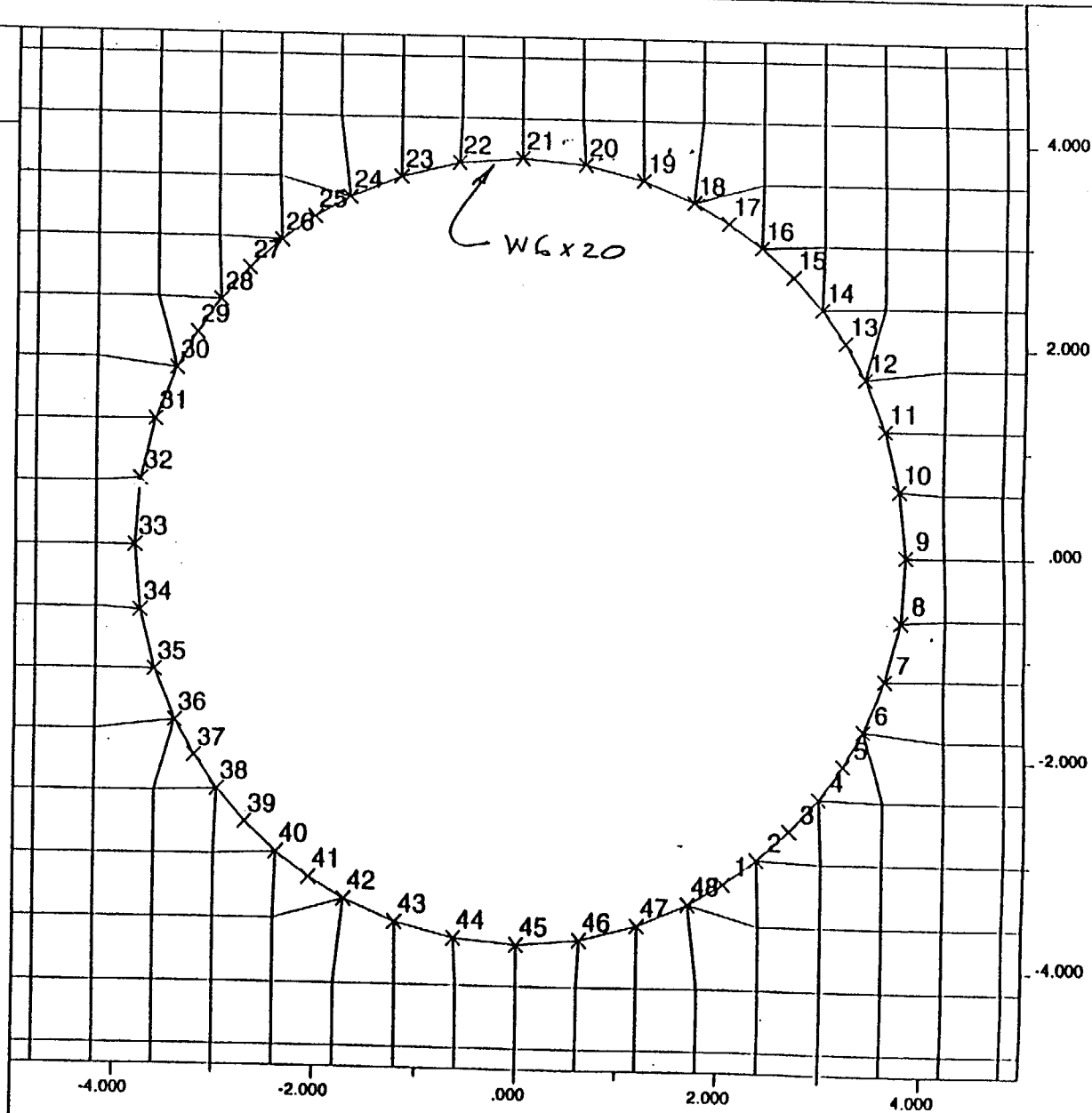
Grid plot



0 2E 0

Structural Node Numbers

CRWMS M & O



Title: ESF Ground Support - Structural Steel Analysis

ATTACHMENT II

Page: II-32 of II-62

LAC log-file opened 10-Aug-95 12:09
 Seismic Model @07+00: Ctg-3, Ko=0.25, W6x20 Steel Set
 From File : m07_k2dy.sav
 >pr stru

STATION: TCW @ 7+00

LOADING: SEISMIC + DL+UTII

STEEL SET: W6X20 @ 4'-0" O.C.

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	9.613E-04	-6.995E-03	-1.010E-04	no	no	no
47	1.205E+00	-3.614E+00	9.417E-04	-6.951E-03	-8.028E-05	no	no	no
46	6.264E-01	-3.758E+00	9.231E-04	-6.910E-03	-5.913E-05	no	no	no
45	0.000E+00	-3.810E+00	9.055E-04	-6.893E-03	-1.576E-06	no	no	no
44	-6.264E-01	-3.758E+00	8.869E-04	-6.910E-03	6.338E-05	no	no	no
43	-1.205E+00	-3.614E+00	8.654E-04	-6.957E-03	1.022E-04	no	no	no
42	-1.704E+00	-3.408E+00	8.407E-04	-7.014E-03	1.259E-04	no	no	no
41	-2.053E+00	-3.209E+00	8.159E-04	-7.060E-03	0.000E+00	no	no	no
40	-2.380E+00	-2.975E+00	8.010E-04	-7.116E-03	1.373E-04	no	no	no
39	-2.694E+00	-2.694E+00	7.786E-04	-7.176E-03	1.450E-04	no	no	no
38	-2.975E+00	-2.380E+00	7.627E-04	-7.248E-03	1.298E-04	no	no	no
37	-3.209E+00	-2.053E+00	7.471E-04	-7.310E-03	1.281E-04	no	no	no
36	-3.408E+00	-1.704E+00	7.311E-04	-7.387E-03	1.191E-04	no	no	no
35	-3.614E+00	-1.205E+00	7.174E-04	-7.486E-03	7.614E-05	no	no	no
34	-3.758E+00	-6.264E-01	7.076E-04	-7.500E-03	4.468E-05	no	no	no
33	-3.810E+00	0.000E+00	7.034E-04	-7.723E-03	1.033E-06	no	no	no
32	-3.758E+00	6.264E-01	7.065E-04	-7.843E-03	-4.321E-05	no	no	no
31	-3.614E+00	1.205E+00	7.158E-04	-7.953E-03	-6.896E-05	no	no	no
30	-3.408E+00	1.704E+00	7.260E-04	-8.043E-03	-1.054E-04	no	no	no
29	-3.209E+00	2.053E+00	7.405E-04	-8.115E-03	-1.212E-04	no	no	no
	-2.975E+00	2.380E+00	7.558E-04	-8.175E-03	-1.217E-04	no	no	no
	-2.694E+00	2.694E+00	7.695E-04	-8.238E-03	-1.232E-04	no	no	no
26	-2.380E+00	2.975E+00	7.878E-04	-8.289E-03	-1.197E-04	no	no	no
25	-2.053E+00	3.209E+00	8.003E-04	-8.341E-03	-1.193E-04	no	no	no
24	-1.704E+00	3.408E+00	8.188E-04	-8.382E-03	-1.068E-04	no	no	no
23	-1.205E+00	3.614E+00	8.383E-04	-8.431E-03	-8.973E-05	no	no	no
22	-6.264E-01	3.758E+00	8.644E-04	-8.470E-03	-5.858E-05	no	no	no
21	0.000E+00	3.810E+00	8.949E-04	-8.485E-03	7.502E-06	no	no	no
20	6.264E-01	3.758E+00	9.252E-04	-8.460E-03	7.443E-05	no	no	no
19	1.205E+00	3.614E+00	9.504E-04	-8.411E-03	1.059E-04	no	no	no
18	1.704E+00	3.408E+00	9.687E-04	-8.353E-03	1.198E-04	no	no	no
17	2.053E+00	3.209E+00	9.853E-04	-8.305E-03	1.281E-04	no	no	no
16	2.380E+00	2.975E+00	9.960E-04	-8.249E-03	1.239E-04	no	no	no
15	2.694E+00	2.694E+00	1.012E-03	-8.191E-03	1.410E-04	no	no	no
14	2.975E+00	2.380E+00	1.023E-03	-8.123E-03	7.989E-05	no	no	no
13	3.209E+00	2.053E+00	1.036E-03	-8.062E-03	2.683E-04	no	no	no
12	3.408E+00	1.704E+00	1.050E-03	-7.987E-03	2.062E-04	no	no	no
11	3.614E+00	1.205E+00	1.061E-03	-7.893E-03	2.868E-04	no	no	no
10	3.758E+00	6.264E-01	1.070E-03	-7.782E-03	-1.664E-05	no	no	no
9	3.810E+00	0.000E+00	1.072E-03	-7.662E-03	1.586E-05	no	no	no
8	3.758E+00	-6.264E-01	1.070E-03	-7.541E-03	-4.601E-05	no	no	no
7	3.614E+00	-1.205E+00	1.062E-03	-7.429E-03	-6.708E-05	no	no	no
6	3.408E+00	-1.704E+00	1.052E-03	-7.335E-03	-1.092E-04	no	no	no
5	3.209E+00	-2.053E+00	1.039E-03	-7.262E-03	-1.170E-04	no	no	no
4	2.975E+00	-2.380E+00	1.026E-03	-7.204E-03	-1.163E-04	no	no	no
3	2.694E+00	-2.694E+00	1.013E-03	-7.137E-03	-1.309E-04	no	no	no
2	2.380E+00	-2.975E+00	9.936E-04	-7.084E-03	-1.222E-04	no	no	no
1	2.053E+00	-3.209E+00	9.820E-04	-7.033E-03	0.000E+00	no	no	no
	X-load	Y-load	Moment	i	j	Pin	Sh. force	Angle
47	0.000E+00	0.000E+00	0.000E+00	39	30	no		Bond
46	0.000E+00	0.000E+00	0.000E+00	38	30	no		
45	0.000E+00	0.000E+00	0.000E+00	37	30	no		
				36	30	no		

Title: ESF Ground Support - Structural Steel Analysis

44	0.000E+00	0.000E+00	0.000E+00	35	30	no
43	0.000E+00	0.000E+00	0.000E+00	34	30	no
42	0.000E+00	0.000E+00	0.000E+00	33	30	no
41	0.000E+00	-5.870E+01	0.000E+00	33	31	yes
40	0.000E+00	-1.321E+03	0.000E+00	32	31	no
39	0.000E+00	-2.925E+03	0.000E+00	32	32	no
38	0.000E+00	-2.922E+03	0.000E+00	31	32	no
37	0.000E+00	-1.174E+02	0.000E+00	31	33	no
36	0.000E+00	-1.375E+02	0.000E+00	30	33	no
35	0.000E+00	-1.659E+02	0.000E+00	30	34	no
34	0.000E+00	-1.788E+02	0.000E+00	30	35	no
33	0.000E+00	-1.835E+02	0.000E+00	30	36	no
32	0.000E+00	-1.788E+02	0.000E+00	30	37	no
31	0.000E+00	-1.659E+02	0.000E+00	30	38	no
30	0.000E+00	-1.375E+02	0.000E+00	30	39	no
29	0.000E+00	-1.174E+02	0.000E+00	31	39	no
28	0.000E+00	-1.202E+02	0.000E+00	31	40	no
27	0.000E+00	-1.230E+02	0.000E+00	32	40	no
26	0.000E+00	-1.202E+02	0.000E+00	32	41	no
25	0.000E+00	-5.366E+03	0.000E+00	33	41	no
24	0.000E+00	-1.375E+02	0.000E+00	33	42	no
23	0.000E+00	-1.659E+02	0.000E+00	34	42	no
22	0.000E+00	-1.788E+02	0.000E+00	35	42	no
21	0.000E+00	-1.041E+04	0.000E+00	36	42	no
20	0.000E+00	-1.788E+02	0.000E+00	37	42	no
19	0.000E+00	-1.659E+02	0.000E+00	38	42	no
18	0.000E+00	-1.375E+02	0.000E+00	39	42	no
17	0.000E+00	-5.366E+03	0.000E+00	39	41	no
16	0.000E+00	-1.202E+02	0.000E+00	40	41	no
15	0.000E+00	-1.230E+02	0.000E+00	40	40	no
14	0.000E+00	-1.202E+02	0.000E+00	41	40	no
13	0.000E+00	-1.511E+04	9.085E+03	41	39	no
12	0.000E+00	-1.513E+04	9.085E+03	42	39	no
11	0.000E+00	-1.516E+04	9.085E+03	42	38	no
10	0.000E+00	-1.788E+02	0.000E+00	42	37	no
9	0.000E+00	-1.835E+02	0.000E+00	42	36	no
8	0.000E+00	-1.788E+02	0.000E+00	42	35	no
7	0.000E+00	-1.659E+02	0.000E+00	42	34	no
6	0.000E+00	-1.375E+02	0.000E+00	42	33	no
5	0.000E+00	-1.174E+02	0.000E+00	41	33	no
4	0.000E+00	-1.202E+02	0.000E+00	41	32	no
3	0.000E+00	-1.230E+02	0.000E+00	40	32	no
2	0.000E+00	-1.202E+02	0.000E+00	40	31	no
1	0.000E+00	-5.870E+01	0.000E+00	39	31	yes

Structural element data ...

Elem ID	Nod1	Nod2	Prop		F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3	beam	9.245E+03	2.151E+04	3.716E+03
47	1	47	48	3	beam	-3.887E+03	-1.651E+04	-2.881E-04
46	1	46	47	3	beam	2.837E+03	-1.234E+05	1.443E+03
45	1	45	46	3	beam	9.133E+03	-2.129E+05	-1.464E+03
44	1	44	45	3	beam	-7.120E+03	-2.254E+05	8.828E+03
43	1	43	44	3	beam	-1.390E+03	-1.388E+05	-3.088E+03
42	1	42	43	3	beam	-2.746E+03	-1.262E+04	-8.979E+03
41	1	41	42	3	beam	-4.998E+03	2.083E+04	3.821E+03
2	2	40	41	2	beam	1.162E+02	3.195E+04	-4.649E+03
2	2	39	40	2	beam	-1.815E+01	4.672E+01	-2.009E+03
38	2	38	39	2	beam	-7.887E+02	6.347E+04	2.388E-05
37	2	37	38	2	beam	1.220E+03	6.496E+04	-5.546E+01
36	2	36	37	2	beam	-1.424E+03	9.104E+04	-6.442E+01
							2.335E+02	2.569E+02
							-3.489E+02	-2.233E+02

35	2	35	36	2	beam	4.953E+02	9.929E+04	-9.082E+01	3.584E+02
34	2	34	35	2	beam	-1.677E+02	1.131E+05	-1.994E+02	9.946E+01
33	2	33	34	2	beam	1.793E+00	1.213E+05	-1.963E+02	1.974E+02
32	2	32	33	2	beam	-4.232E+01	1.183E+05	-2.116E+02	1.850E+02
31	2	31	32	2	beam	3.156E+02	1.084E+05	-2.778E+01	2.159E+02
30	2	30	31	2	beam	-5.650E+02	9.198E+04	-3.443E+02	3.910E+01
29	2	29	30	2	beam	1.073E+03	8.448E+04	1.054E+02	3.258E+02
28	2	28	29	2	beam	-5.206E+02	6.159E+04	-1.081E+02	-1.012E+02
27	2	27	28	2	beam	5.152E+02	5.633E+04	9.829E+01	1.188E+02
26	2	26	27	2	beam	-3.720E+02	3.058E+04	-5.306E+01	-1.037E+02
25	2	25	26	2	beam	3.318E+02	2.969E+04	6.780E+01	6.558E+01
24	2	24	25	2	beam	1.436E+02	7.402E+03	1.160E+02	-5.833E+01
23	2	23	24	2	beam	-1.358E+02	7.612E+02	5.271E+01	-1.261E+02
22	2	22	23	2	beam	2.718E+02	-1.574E+04	2.281E+02	-6.608E+01
21	2	21	22	2	beam	1.891E+02	-2.919E+04	3.579E+02	-2.390E+02
20	2	20	21	2	beam	-1.414E+02	-2.816E+04	2.568E+02	-3.457E+02
19	2	19	20	2	beam	-3.124E+02	-1.242E+04	5.497E+01	-2.412E+02
18	2	18	19	2	beam	4.295E+01	6.534E+03	8.461E+01	-6.141E+01
17	2	17	18	2	beam	-1.874E+02	1.416E+04	2.126E+01	-9.659E+01
16	2	16	17	2	beam	-2.972E+02	3.626E+04	-8.909E+01	-3.035E+01
15	2	15	16	2	beam	1.008E+03	3.966E+04	3.271E+02	9.757E+01
14	2	14	15	2	beam	-3.426E+03	6.366E+04	-1.132E+03	-3.113E+02
13	2	13	14	2	beam	1.217E+04	6.558E+04	3.771E+03	1.121E+03
12	2	12	13	2	beam	2.426E+04	8.984E+04	4.439E+03	5.311E+03
11	2	11	12	2	beam	1.877E+04	9.530E+04	5.490E+03	4.647E+03
10	2	10	11	2	beam	7.221E+03	1.107E+05	7.136E+02	3.590E+03
9	2	9	10	2	beam	-1.797E+03	1.186E+05	-4.185E+02	-7.107E+02
8	2	8	9	2	beam	4.710E+02	1.189E+05	-1.305E+02	4.266E+02
7	2	7	8	2	beam	9.385E+01	1.114E+05	-7.181E+01	1.278E+02
6	2	6	7	2	beam	-5.809E+02	9.599E+04	-3.779E+02	6.407E+01
5	2	5	6	2	beam	1.576E+03	8.739E+04	2.632E+02	3.705E+02
4	2	4	5	2	beam	-1.251E+03	6.219E+04	-2.464E+02	-2.566E+02
3	2	3	4	2	beam	7.421E+02	6.067E+04	5.804E+01	2.547E+02
2	2	2	3	2	beam	-1.758E+00	3.136E+04	5.797E+01	-5.871E+01
1	2	1	2	2	beam	-1.525E+02	3.071E+04	-9.769E-06	-6.130E+01

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	3.78700E-03	1.64000E+11	1.72300E-05	0.00000E+00	Not Set
Prop. Cable Bond Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

set log off

log-file recording stopped 10-Aug-95 12:09

FLAC log-file opened 10-Aug-95 12:22

Seismic Model @07:00: Ctg-3, Ko=0.25, W6x20 Steel Set

FromFile : m07_k2dy.sav

stru

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	9.613E-04	-6.995E-03	-1.010E-04	no	no	no

MCA
11-10-95

Title: ESF Ground Support - Structural Steel Analysis

FLAC log-file opened 10-Aug-95 12:22
 Seismic Model @18+00: Ctg-3, Ko=0.25, W6x20 Steel Set
 From File : m18_k2dy.sav
 >pr stru

STATION: TSW1 @ 18+00

LOADING: SEISMIC + DL+UTIL

STEEL SET: W6X20 @ 4'-0" O.C.

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix	
48	1.704E+00	-3.408E+00	7.685E-04	-1.136E-03	-1.164E-04	no	no	no	
47	1.205E+00	-3.614E+00	7.564E-04	-1.086E-03	-8.744E-05	no	no	no	
46	6.264E-01	-3.758E+00	7.475E-04	-1.037E-03	-6.602E-05	no	no	no	
45	0.000E+00	-3.810E+00	7.476E-04	-1.020E-03	1.716E-05	no	no	no	
44	-6.264E-01	-3.758E+00	7.475E-04	-1.056E-03	9.793E-05	no	no	no	
43	-1.205E+00	-3.614E+00	7.378E-04	-1.125E-03	1.151E-04	no	no	no	
42	-1.704E+00	-3.408E+00	7.231E-04	-1.189E-03	1.423E-04	no	no	no	
41	-2.053E+00	-3.209E+00	6.982E-04	-1.251E-03	0.000E+00	no	no	no	
40	-2.380E+00	-2.975E+00	6.984E-04	-1.333E-03	1.648E-04	no	no	no	
39	-2.694E+00	-2.694E+00	6.862E-04	-1.415E-03	1.746E-04	no	no	no	
38	-2.975E+00	-2.380E+00	6.742E-04	-1.509E-03	1.491E-04	no	no	no	
37	-3.209E+00	-2.053E+00	6.603E-04	-1.590E-03	1.790E-04	no	no	no	
36	-3.408E+00	-1.704E+00	6.422E-04	-1.717E-03	1.538E-04	no	no	no	
35	-3.614E+00	-1.205E+00	6.638E-04	-1.864E-03	2.666E-05	no	no	no	
34	-3.758E+00	-6.264E-01	7.025E-04	-2.082E-03	1.906E-05	no	no	no	
33	-3.810E+00	0.000E+00	7.208E-04	-2.362E-03	-4.517E-06	no	no	no	
32	-3.758E+00	6.264E-01	7.092E-04	-2.634E-03	-2.913E-05	no	no	no	
31	-3.614E+00	1.205E+00	6.815E-04	-2.834E-03	-3.729E-05	no	no	no	
30	-3.408E+00	1.704E+00	6.727E-04	-2.966E-03	-1.671E-04	no	no	no	
29	-3.209E+00	2.053E+00	6.953E-04	-3.091E-03	-1.743E-04	no	no	no	
28	-2.975E+00	2.380E+00	7.140E-04	-3.156E-03	-1.437E-04	no	no	no	
27	-2.694E+00	2.694E+00	7.248E-04	-3.253E-03	-1.682E-04	no	no	no	
26	-2.380E+00	2.975E+00	7.421E-04	-3.321E-03	-1.428E-04	no	no	no	
25	-2.053E+00	3.209E+00	7.509E-04	-3.387E-03	-1.449E-04	no	no	no	
24	-1.704E+00	3.408E+00	7.621E-04	-3.445E-03	-1.353E-04	no	no	no	
23	-1.205E+00	3.614E+00	7.724E-04	-3.514E-03	-1.011E-04	no	no	no	
22	-6.264E-01	3.758E+00	7.837E-04	-3.560E-03	-8.994E-05	no	no	no	
21	0.000E+00	3.810E+00	7.980E-04	-3.605E-03	5.750E-06	no	no	no	
20	6.264E-01	3.758E+00	8.115E-04	-3.548E-03	1.278E-04	no	no	no	
19	1.205E+00	3.614E+00	8.200E-04	-3.472E-03	1.349E-04	no	no	no	
18	1.704E+00	3.408E+00	8.248E-04	-3.389E-03	1.507E-04	no	no	no	
17	2.053E+00	3.209E+00	8.331E-04	-3.323E-03	1.642E-04	no	no	no	
16	2.380E+00	2.975E+00	8.373E-04	-3.246E-03	1.459E-04	no	no	no	
15	2.694E+00	2.694E+00	8.460E-04	-3.172E-03	1.740E-04	no	no	no	
14	2.975E+00	2.380E+00	8.469E-04	-3.067E-03	9.743E-05	no	no	no	
13	3.209E+00	2.053E+00	8.614E-04	-2.996E-03	3.284E-04	no	no	no	
12	3.408E+00	1.704E+00	8.805E-04	-2.859E-03	2.667E-04	no	no	no	
11	3.614E+00	1.205E+00	8.641E-04	-2.721E-03	2.407E-04	no	no	no	
10	3.758E+00	6.264E-01	8.287E-04	-2.517E-03	-4.453E-05	no	no	no	
9	3.810E+00	0.000E+00	8.058E-04	-2.243E-03	7.715E-06	no	no	no	
8	3.758E+00	-6.264E-01	8.184E-04	-1.968E-03	-3.301E-05	no	no	no	
7	3.614E+00	-1.205E+00	8.494E-04	-1.758E-03	-3.195E-05	no	no	no	
6	3.408E+00	-1.704E+00	8.646E-04	-1.619E-03	-1.599E-04	no	no	no	
5	3.209E+00	-2.053E+00	8.423E-04	-1.494E-03	-1.847E-04	no	no	no	
4	2.975E+00	-2.380E+00	8.227E-04	-1.420E-03	-1.548E-04	no	no	no	
3	2.694E+00	-2.694E+00	8.086E-04	-1.325E-03	-1.683E-04	no	no	no	
2	2.380E+00	-2.975E+00	7.954E-04	-1.253E-03	-1.407E-04	no	no	no	
1	2.053E+00	-3.209E+00	7.908E-04	-1.186E-03	0.000E+00	no	no	no	
Node	X-load	Y-load	Moment	i	j	Pin	Sh. force	Angle	Bond
7	0.000E+00	0.000E+00	0.000E+00	39	30	no			
46	0.000E+00	0.000E+00	0.000E+00	38	30	no			
45	0.000E+00	0.000E+00	0.000E+00	37	30	no			
				36	30	no			

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44	0.000E+00	0.000E+00	0.000E+00	35	30	no
43	0.000E+00	0.000E+00	0.000E+00	34	30	no
42	0.000E+00	0.000E+00	0.000E+00	33	30	no
41	0.000E+00	-5.870E+01	0.000E+00	33	31	yes
40	0.000E+00	-1.321E+03	0.000E+00	32	31	no
39	0.000E+00	-2.925E+03	0.000E+00	32	32	no
38	0.000E+00	-2.922E+03	0.000E+00	31	32	no
37	0.000E+00	-1.174E+02	0.000E+00	31	33	no
36	0.000E+00	-1.375E+02	0.000E+00	30	33	no
35	0.000E+00	-1.659E+02	0.000E+00	30	34	no
34	0.000E+00	-1.788E+02	0.000E+00	30	35	no
33	0.000E+00	-1.835E+02	0.000E+00	30	36	no
32	0.000E+00	-1.788E+02	0.000E+00	30	37	no
31	0.000E+00	-1.659E+02	0.000E+00	30	38	no
30	0.000E+00	-1.375E+02	0.000E+00	30	39	no
29	0.000E+00	-1.174E+02	0.000E+00	31	39	no
28	0.000E+00	-1.202E+02	0.000E+00	31	40	no
27	0.000E+00	-1.230E+02	0.000E+00	32	40	no
26	0.000E+00	-1.202E+02	0.000E+00	32	41	no
25	0.000E+00	-5.366E+03	0.000E+00	33	41	no
24	0.000E+00	-1.375E+02	0.000E+00	33	42	no
23	0.000E+00	-1.659E+02	0.000E+00	34	42	no
22	0.000E+00	-1.788E+02	0.000E+00	35	42	no
21	0.000E+00	-1.041E+04	0.000E+00	36	42	no
20	0.000E+00	-1.788E+02	0.000E+00	37	42	no
19	0.000E+00	-1.659E+02	0.000E+00	38	42	no
18	0.000E+00	-1.375E+02	0.000E+00	39	42	no
17	0.000E+00	-5.366E+03	0.000E+00	39	41	no
16	0.000E+00	-1.202E+02	0.000E+00	40	41	no
15	0.000E+00	-1.230E+02	0.000E+00	40	40	no
14	0.000E+00	-1.202E+02	0.000E+00	41	40	no
13	0.000E+00	-1.511E+04	9.085E+03	41	39	no
12	0.000E+00	-1.513E+04	9.085E+03	42	39	no
11	0.000E+00	-1.516E+04	9.085E+03	42	38	no
10	0.000E+00	-1.788E+02	0.000E+00	42	37	no
9	0.000E+00	-1.835E+02	0.000E+00	42	36	no
8	0.000E+00	-1.788E+02	0.000E+00	42	35	no
7	0.000E+00	-1.659E+02	0.000E+00	42	34	no
6	0.000E+00	-1.375E+02	0.000E+00	42	33	no
5	0.000E+00	-1.174E+02	0.000E+00	41	33	no
4	0.000E+00	-1.202E+02	0.000E+00	41	32	no
3	0.000E+00	-1.230E+02	0.000E+00	40	32	no
2	0.000E+00	-1.202E+02	0.000E+00	40	31	no
1	0.000E+00	-5.870E+01	0.000E+00	39	31	yes

Structural element data ...

Elem	ID	Nod1	Nod2	Prop	F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3	beam	2.114E+04	1.051E+05	8.496E+03
47	1	47	48	3	beam	-1.825E+04	1.247E+05	-4.947E-05
46	1	46	47	3	beam	1.235E+04	3.590E+04	-8.395E+03
45	1	45	46	3	beam	8.771E+03	2.244E+04	1.327E+03
44	1	44	45	3	beam	-8.593E+03	4.643E+04	-5.876E+03
43	1	43	44	3	beam	-1.319E+04	8.965E+04	-1.105E+04
42	1	42	43	3	beam	1.915E+04	1.792E+05	-5.786E+03
41	1	41	42	3	beam	-2.202E+04	1.531E+05	1.878E+03
40	2	40	41	2	beam	-2.530E+02	7.635E+04	-8.849E+03
39	2	39	40	2	beam	8.506E+02	6.820E+04	1.897E-05
38	2	38	39	2	beam	-1.899E+03	9.264E+04	1.129E+02
37	2	37	38	2	beam	3.990E+03	8.863E+04	-2.290E+02
36	2	36	37	2	beam	-6.063E+03	1.564E+05	5.926E+02
							-1.394E+03	-1.043E+03

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35	2	35	36	2	beam	2.690E+03	1.674E+05	6.106E+01	1.392E+03
34	2	34	35	2	beam	-2.697E+02	2.301E+05	-1.173E+02	-4.344E+01
33	2	33	34	2	beam	-2.990E+01	2.779E+05	-1.141E+02	9.531E+01
32	2	32	33	2	beam	5.310E+01	2.698E+05	-9.496E+01	1.283E+02
31	2	31	32	2	beam	2.500E+02	2.103E+05	3.458E+01	1.144E+02
30	2	30	31	2	beam	-2.769E+03	1.436E+05	-1.425E+03	-7.034E+01
29	2	29	30	2	beam	6.849E+03	1.516E+05	1.326E+03	1.427E+03
28	2	28	29	2	beam	-5.447E+03	6.572E+04	-8.814E+02	-1.308E+03
27	2	27	28	2	beam	3.400E+03	9.634E+04	5.541E+02	8.787E+02
26	2	26	27	2	beam	-1.772E+03	4.858E+04	-2.031E+02	-5.435E+02
25	2	25	26	2	beam	9.993E+02	4.756E+04	1.866E+02	2.151E+02
24	2	24	25	2	beam	-4.766E+02	2.919E+04	-2.842E+01	-1.632E+02
23	2	23	24	2	beam	7.762E+02	1.931E+04	3.857E+02	3.358E+01
22	2	22	23	2	beam	-1.200E+03	5.690E+02	-3.030E+02	-4.124E+02
21	2	21	22	2	beam	2.329E+03	-1.043E+04	1.162E+03	3.014E+02
20	2	20	21	2	beam	-1.919E+03	-8.451E+03	-5.519E+01	-1.151E+03
19	2	19	20	2	beam	2.375E+02	1.047E+04	1.056E+02	3.592E+01
18	2	18	19	2	beam	-1.306E+02	3.106E+04	4.782E+01	-1.184E+02
17	2	17	18	2	beam	2.014E+02	4.026E+04	1.331E+02	-5.211E+01
16	2	16	17	2	beam	-1.355E+03	6.308E+04	-3.986E+02	-1.459E+02
15	2	15	16	2	beam	2.972E+03	6.445E+04	8.146E+02	4.377E+02
14	2	14	15	2	beam	-6.271E+03	1.145E+05	-1.837E+03	-8.058E+02
13	2	13	14	2	beam	1.713E+04	7.636E+04	5.068E+03	1.818E+03
12	2	12	13	2	beam	1.799E+04	1.705E+05	3.181E+03	4.049E+03
11	2	11	12	2	beam	2.143E+04	1.534E+05	5.651E+03	5.926E+03
10	2	10	11	2	beam	6.971E+03	2.168E+05	7.275E+02	3.428E+03
9	2	9	10	2	beam	-1.558E+03	2.715E+05	-2.555E+02	-7.235E+02
8	2	8	9	2	beam	2.665E+02	2.729E+05	-1.012E+02	2.687E+02
7	2	7	8	2	beam	2.581E+02	2.204E+05	8.542E+01	6.843E+01
6	2	6	7	2	beam	-2.746E+03	1.553E+05	-1.412E+03	-7.175E+01
5	2	5	6	2	beam	6.242E+03	1.515E+05	1.078E+03	1.431E+03
4	2	4	5	2	beam	-4.382E+03	7.561E+04	-6.698E+02	-1.091E+03
3	2	3	4	2	beam	2.849E+03	9.097E+04	5.096E+02	6.909E+02
2	2	2	3	2	beam	-1.478E+03	5.658E+04	-1.268E+02	-4.960E+02
1	2	1	2	2	beam	2.872E+02	5.643E+04	1.383E+03	1.155E+02

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	3.78700E-03	1.64000E+11	1.72300E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

>set log off

* log-file recording stopped 10-Aug-95 12:22

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FLAC log-file opened 10-Aug-95 12:22
 Seismic Model @27+00: Ctg-3, Ko=0.25, W6x20 Steel Set
 From File : m27_k2dy.sav
 >pr stru

STATION: TSW2 @ 27+00

LOADING: SEISMIC + DL+UTIL

STEEL SET: W6X20 @ 4'-0" O.C.

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix	
48	1.704E+00	-3.408E+00	9.567E-04	-1.137E-03	-2.504E-04	no	no	no	
47	1.205E+00	-3.614E+00	9.055E-04	-1.028E-03	-2.029E-04	no	no	no	
46	6.264E-01	-3.758E+00	8.548E-04	-9.256E-04	-1.920E-04	no	no	no	
45	0.000E+00	-3.810E+00	8.044E-04	-8.514E-04	3.425E-06	no	no	no	
44	-6.264E-01	-3.758E+00	7.541E-04	-9.338E-04	2.122E-04	no	no	no	
43	-1.205E+00	-3.614E+00	7.013E-04	-1.050E-03	2.251E-04	no	no	no	
42	-1.704E+00	-3.408E+00	6.486E-04	-1.168E-03	2.688E-04	no	no	no	
41	-2.053E+00	-3.209E+00	5.910E-04	-1.271E-03	0.000E+00	no	no	no	
40	-2.380E+00	-2.975E+00	5.597E-04	-1.400E-03	2.964E-04	no	no	no	
39	-2.694E+00	-2.694E+00	5.188E-04	-1.528E-03	3.060E-04	no	no	no	
38	-2.975E+00	-2.380E+00	4.838E-04	-1.684E-03	2.764E-04	no	no	no	
37	-3.209E+00	-2.053E+00	4.510E-04	-1.813E-03	2.705E-04	no	no	no	
36	-3.408E+00	-1.704E+00	4.173E-04	-1.989E-03	2.685E-04	no	no	no	
35	-3.614E+00	-1.205E+00	3.837E-04	-2.195E-03	1.622E-04	no	no	no	
34	-3.758E+00	-6.264E-01	3.638E-04	-2.436E-03	8.985E-05	no	no	no	
33	-3.810E+00	0.000E+00	3.608E-04	-2.710E-03	-3.924E-06	no	no	no	
32	-3.758E+00	6.264E-01	3.700E-04	-2.976E-03	-9.629E-05	no	no	no	
31	-3.614E+00	1.205E+00	3.929E-04	-3.213E-03	-1.624E-04	no	no	no	
30	-3.408E+00	1.704E+00	4.270E-04	-3.408E-03	-2.537E-04	no	no	no	
29	-3.209E+00	2.053E+00	4.622E-04	-3.575E-03	-2.745E-04	no	no	no	
28	-2.975E+00	2.380E+00	4.970E-04	-3.704E-03	-2.660E-04	no	no	no	
27	-2.694E+00	2.694E+00	5.328E-04	-3.841E-03	-2.816E-04	no	no	no	
26	-2.380E+00	2.975E+00	5.790E-04	-3.953E-03	-2.808E-04	no	no	no	
25	-2.053E+00	3.209E+00	6.108E-04	-4.071E-03	-2.682E-04	no	no	no	
24	-1.704E+00	3.408E+00	6.530E-04	-4.161E-03	-2.355E-04	no	no	no	
23	-1.205E+00	3.614E+00	6.961E-04	-4.275E-03	-2.085E-04	no	no	no	
22	-6.264E-01	3.758E+00	7.543E-04	-4.379E-03	-1.726E-04	no	no	no	
21	0.000E+00	3.810E+00	8.303E-04	-4.429E-03	4.943E-06	no	no	no	
20	6.264E-01	3.758E+00	9.063E-04	-4.372E-03	1.916E-04	no	no	no	
19	1.205E+00	3.614E+00	9.630E-04	-4.255E-03	2.243E-04	no	no	no	
18	1.704E+00	3.408E+00	1.004E-03	-4.132E-03	2.514E-04	no	no	no	
17	2.053E+00	3.209E+00	1.044E-03	-4.033E-03	2.786E-04	no	no	no	
16	2.380E+00	2.975E+00	1.073E-03	-3.911E-03	2.833E-04	no	no	no	
15	2.694E+00	2.694E+00	1.113E-03	-3.788E-03	3.059E-04	no	no	no	
14	2.975E+00	2.380E+00	1.145E-03	-3.643E-03	2.151E-04	no	no	no	
13	3.209E+00	2.053E+00	1.173E-03	-3.514E-03	4.217E-04	no	no	no	
12	3.408E+00	1.704E+00	1.206E-03	-3.337E-03	3.591E-04	no	no	no	
11	3.614E+00	1.205E+00	1.235E-03	-3.138E-03	3.612E-04	no	no	no	
10	3.758E+00	6.264E-01	1.250E-03	-2.904E-03	2.714E-05	no	no	no	
9	3.810E+00	0.000E+00	1.253E-03	-2.634E-03	1.420E-05	no	no	no	
8	3.758E+00	-6.264E-01	1.248E-03	-2.362E-03	-9.538E-05	no	no	no	
7	3.614E+00	-1.205E+00	1.228E-03	-2.124E-03	-1.619E-04	no	no	no	
6	3.408E+00	-1.704E+00	1.194E-03	-1.919E-03	-2.636E-04	no	no	no	
5	3.209E+00	-2.053E+00	1.160E-03	-1.748E-03	-2.685E-04	no	no	no	
4	2.975E+00	-2.380E+00	1.126E-03	-1.621E-03	-2.741E-04	no	no	no	
3	2.694E+00	-2.694E+00	1.088E-03	-1.472E-03	-2.955E-04	no	no	no	
2	2.380E+00	-2.975E+00	1.044E-03	-1.355E-03	-2.861E-04	no	no	no	
1	2.053E+00	-3.209E+00	1.011E-03	-1.230E-03	0.000E+00	no	no	no	
Node	X-load	Y-load	Moment	i	j	Pin	Sh. force	Angle	Bond
47	0.000E+00	0.000E+00	0.000E+00	39	30	no			
46	0.000E+00	0.000E+00	0.000E+00	38	30	no			
45	0.000E+00	0.000E+00	0.000E+00	37	30	no			
45	0.000E+00	0.000E+00	0.000E+00	36	30	no			

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44	0.000E+00	0.000E+00	0.000E+00	35	30	no
43	0.000E+00	0.000E+00	0.000E+00	34	30	no
42	0.000E+00	0.000E+00	0.000E+00	33	30	no
41	0.000E+00	-5.870E+01	0.000E+00	33	31	yes
40	0.000E+00	-1.321E+03	0.000E+00	32	31	no
39	0.000E+00	-2.925E+03	0.000E+00	32	32	no
38	0.000E+00	-2.922E+03	0.000E+00	31	32	no
37	0.000E+00	-1.174E+02	0.000E+00	31	33	no
36	0.000E+00	-1.375E+02	0.000E+00	30	33	no
35	0.000E+00	-1.659E+02	0.000E+00	30	34	no
34	0.000E+00	-1.788E+02	0.000E+00	30	35	no
33	0.000E+00	-1.835E+02	0.000E+00	30	36	no
32	0.000E+00	-1.788E+02	0.000E+00	30	37	no
31	0.000E+00	-1.659E+02	0.000E+00	30	38	no
30	0.000E+00	-1.375E+02	0.000E+00	30	39	no
29	0.000E+00	-1.174E+02	0.000E+00	31	39	no
28	0.000E+00	-1.202E+02	0.000E+00	31	40	no
27	0.000E+00	-1.230E+02	0.000E+00	32	40	no
26	0.000E+00	-1.202E+02	0.000E+00	32	41	no
25	0.000E+00	-5.366E+03	0.000E+00	33	41	no
24	0.000E+00	-1.375E+02	0.000E+00	33	42	no
23	0.000E+00	-1.659E+02	0.000E+00	34	42	no
22	0.000E+00	-1.788E+02	0.000E+00	35	42	no
21	0.000E+00	-1.041E+04	0.000E+00	36	42	no
20	0.000E+00	-1.788E+02	0.000E+00	37	42	no
19	0.000E+00	-1.659E+02	0.000E+00	38	42	no
18	0.000E+00	-1.375E+02	0.000E+00	39	42	no
17	0.000E+00	-5.366E+03	0.000E+00	39	41	no
16	0.000E+00	-1.202E+02	0.000E+00	40	41	no
15	0.000E+00	-1.230E+02	0.000E+00	40	40	no
14	0.000E+00	-1.202E+02	0.000E+00	41	40	no
13	0.000E+00	-1.511E+04	9.085E+03	41	39	no
12	0.000E+00	-1.513E+04	9.085E+03	42	39	no
11	0.000E+00	-1.516E+04	9.085E+03	42	38	no
10	0.000E+00	-1.788E+02	0.000E+00	42	37	no
9	0.000E+00	-1.835E+02	0.000E+00	42	36	no
8	0.000E+00	-1.788E+02	0.000E+00	42	35	no
7	0.000E+00	-1.659E+02	0.000E+00	42	34	no
6	0.000E+00	-1.375E+02	0.000E+00	42	33	no
5	0.000E+00	-1.174E+02	0.000E+00	41	33	no
4	0.000E+00	-1.202E+02	0.000E+00	41	32	no
3	0.000E+00	-1.230E+02	0.000E+00	40	32	no
2	0.000E+00	-1.202E+02	0.000E+00	40	31	no
1	0.000E+00	-5.870E+01	0.000E+00	39	31	yes

Structural element data ...

Elem ID	Nod1	Nod2	Prop	F-shear	F-axial	Mom-1	Mom-2		
48	1	48	1	3	beam	2.517E+04	1.300E+04	1.012E+04	-6.228E-04
47	1	47	48	3	beam	-1.623E+04	-9.084E+04	1.345E+03	-1.011E+04
46	1	46	47	3	beam	-8.478E+02	-3.252E+05	9.166E+02	-1.422E+03
45	1	45	46	3	beam	6.151E+04	-6.061E+05	3.955E+04	-8.946E+02
44	1	44	45	3	beam	-5.715E+04	-5.975E+05	3.683E+03	-3.960E+04
43	1	43	44	3	beam	-7.453E+03	-3.142E+05	-8.160E+02	-3.626E+03
42	1	42	43	3	beam	2.329E+04	-5.331E+04	1.155E+04	1.029E+03
41	1	41	42	3	beam	-2.845E+04	3.529E+04	6.196E-04	-1.144E+04
40	2	40	41	2	beam	-1.020E+03	8.315E+04	-4.099E+02	1.170E-05
39	2	39	40	2	beam	2.291E+03	7.949E+04	5.471E+02	4.182E+02
38	2	38	39	2	beam	-3.465E+03	1.359E+05	-9.287E+02	-5.313E+02
37	2	37	38	2	beam	4.392E+03	1.346E+05	8.427E+02	9.226E+02
36	2	36	37	2	beam	-4.333E+03	2.104E+05	-8.861E+02	-8.557E+02

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35	2	35	36	2	beam	1.229E+03	2.024E+05	-2.241E+02	8.880E+02
34	2	34	35	2	beam	-3.878E+02	2.418E+05	-4.588E+02	2.277E+02
33	2	33	34	2	beam	1.100E+02	2.705E+05	-3.869E+02	4.560E+02
32	2	32	33	2	beam	-7.586E+01	2.620E+05	-4.386E+02	3.909E+02
31	2	31	32	2	beam	4.598E+02	2.354E+05	-1.774E+02	4.514E+02
30	2	30	31	2	beam	-1.147E+03	1.937E+05	-7.869E+02	1.673E+02
29	2	29	30	2	beam	3.136E+03	1.951E+05	4.841E+02	7.765E+02
28	2	28	29	2	beam	-2.161E+03	1.329E+05	-3.754E+02	-4.932E+02
27	2	27	28	2	beam	1.260E+03	1.158E+05	1.622E+02	3.689E+02
26	2	26	27	2	beam	-6.152E+02	6.116E+04	-1.231E+02	-1.361E+02
25	2	25	26	2	beam	1.254E+03	6.446E+04	3.397E+02	1.643E+02
24	2	24	25	2	beam	-6.645E+02	1.290E+04	9.495E+01	-3.620E+02
23	2	23	24	2	beam	5.238E+01	4.353E+03	1.545E+02	-1.262E+02
22	2	22	23	2	beam	9.373E+01	-3.359E+04	1.994E+02	-1.435E+02
21	2	21	22	2	beam	1.926E+03	-7.019E+04	1.404E+03	-1.939E+02
20	2	20	21	2	beam	-1.811E+03	-6.894E+04	2.697E+02	-1.408E+03
19	2	19	20	2	beam	-2.919E+02	-2.841E+04	6.690E+01	-2.409E+02
18	2	18	19	2	beam	2.661E+02	1.034E+04	2.135E+02	-6.976E+01
17	2	17	18	2	beam	-3.061E+02	2.252E+04	1.299E+02	-2.529E+02
16	2	16	17	2	beam	-6.545E+02	7.210E+04	-9.768E+01	-1.654E+02
15	2	15	16	2	beam	1.234E+03	7.790E+04	4.123E+02	1.077E+02
14	2	14	15	2	beam	-4.629E+03	1.284E+05	-1.584E+03	-3.663E+02
13	2	13	14	2	beam	1.515E+04	1.393E+05	4.497E+03	1.591E+03
12	2	12	13	2	beam	2.080E+04	2.119E+05	3.739E+03	4.621E+03
11	2	11	12	2	beam	1.993E+04	1.982E+05	5.392E+03	5.375E+03
10	2	10	11	2	beam	6.991E+03	2.349E+05	5.019E+02	3.665E+03
9	2	9	10	2	beam	-1.748E+03	2.662E+05	-6.079E+02	-4.906E+02
8	2	8	9	2	beam	3.819E+02	2.681E+05	-3.730E+02	6.131E+02
7	2	7	8	2	beam	1.547E+02	2.377E+05	-2.682E+02	3.604E+02
6	2	6	7	2	beam	-9.483E+02	2.032E+05	-7.904E+02	2.782E+02
5	2	5	6	2	beam	3.763E+03	2.034E+05	7.230E+02	7.895E+02
4	2	4	5	2	beam	-3.865E+03	1.298E+05	-8.157E+02	-7.379E+02
3	2	3	4	2	beam	3.170E+03	1.261E+05	5.258E+02	8.099E+02
2	2	2	3	2	beam	-2.043E+03	6.751E+04	-3.689E+02	-4.920E+02
1	2	1	2	2	beam	8.836E+02	7.251E+04	2.242E-05	3.551E+02

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	3.78700E-03	1.64000E+11	1.72300E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

>set log off

* log-file recording stopped 10-Aug-95 12:22

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ATTACHMENT II

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FLAC log-file opened 1-Sep-95 13:48

From File : m34c2k2d.sav
>pr stru

STATION: TSW2 @ 34+00

LOADING: SEISMIC + DL+UTIL

STEEL SET: W6X20 @ 4'-0" O.C.

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix	
48	1.704E+00	-3.408E+00	1.303E-03	-1.607E-03	-3.877E-04	no	no	no	
47	1.205E+00	-3.614E+00	1.225E-03	-1.430E-03	-3.139E-04	no	no	no	
46	6.264E-01	-3.758E+00	1.154E-03	-1.290E-03	-1.987E-04	no	no	no	
45	0.000E+00	-3.810E+00	1.098E-03	-1.246E-03	4.405E-05	no	no	no	
44	-6.264E-01	-3.758E+00	1.044E-03	-1.347E-03	2.788E-04	no	no	no	
43	-1.205E+00	-3.614E+00	9.712E-04	-1.524E-03	3.501E-04	no	no	no	
42	-1.704E+00	-3.408E+00	8.923E-04	-1.711E-03	3.933E-04	no	no	no	
41	-2.053E+00	-3.209E+00	8.158E-04	-1.852E-03	0.000E+00	no	no	no	
40	-2.380E+00	-2.975E+00	7.701E-04	-2.023E-03	4.156E-04	no	no	no	
39	-2.694E+00	-2.694E+00	7.069E-04	-2.206E-03	4.301E-04	no	no	no	
38	-2.975E+00	-2.380E+00	6.550E-04	-2.407E-03	3.555E-04	no	no	no	
37	-3.209E+00	-2.053E+00	6.088E-04	-2.575E-03	4.088E-04	no	no	no	
36	-3.408E+00	-1.704E+00	5.506E-04	-2.835E-03	3.799E-04	no	no	no	
35	-3.614E+00	-1.205E+00	5.197E-04	-3.101E-03	1.800E-04	no	no	no	
34	-3.758E+00	-6.264E-01	5.050E-04	-3.450E-03	1.182E-04	no	no	no	
33	-3.810E+00	0.000E+00	5.088E-04	-3.843E-03	-1.366E-05	no	no	no	
32	-3.758E+00	6.264E-01	5.167E-04	-4.228E-03	-1.182E-04	no	no	no	
31	-3.614E+00	1.205E+00	5.295E-04	-4.562E-03	-1.727E-04	no	no	no	
30	-3.408E+00	1.704E+00	5.605E-04	-4.823E-03	-3.754E-04	no	no	no	
29	-3.209E+00	2.053E+00	6.137E-04	-5.079E-03	-3.910E-04	no	no	no	
28	-2.975E+00	2.380E+00	6.635E-04	-5.241E-03	-3.644E-04	no	no	no	
27	-2.694E+00	2.694E+00	7.113E-04	-5.452E-03	-4.199E-04	no	no	no	
26	-2.380E+00	2.975E+00	7.721E-04	-5.614E-03	-3.651E-04	no	no	no	
25	-2.053E+00	3.209E+00	8.177E-04	-5.765E-03	-3.685E-04	no	no	no	
24	-1.704E+00	3.408E+00	8.747E-04	-5.896E-03	-3.471E-04	no	no	no	
23	-1.205E+00	3.614E+00	9.365E-04	-6.064E-03	-3.150E-04	no	no	no	
22	-6.264E-01	3.758E+00	1.020E-03	-6.219E-03	-2.690E-04	no	no	no	
21	0.000E+00	3.810E+00	1.129E-03	-6.315E-03	-1.613E-05	no	no	no	
20	6.264E-01	3.758E+00	1.237E-03	-6.229E-03	2.744E-04	no	no	no	
19	1.205E+00	3.614E+00	1.324E-03	-6.057E-03	3.601E-04	no	no	no	
18	1.704E+00	3.408E+00	1.389E-03	-5.870E-03	3.769E-04	no	no	no	
17	2.053E+00	3.209E+00	1.442E-03	-5.721E-03	4.041E-04	no	no	no	
16	2.380E+00	2.975E+00	1.483E-03	-5.550E-03	3.877E-04	no	no	no	
15	2.694E+00	2.694E+00	1.537E-03	-5.378E-03	4.170E-04	no	no	no	
14	2.975E+00	2.380E+00	1.576E-03	-5.170E-03	3.013E-04	no	no	no	
13	3.209E+00	2.053E+00	1.618E-03	-5.009E-03	5.404E-04	no	no	no	
12	3.408E+00	1.704E+00	1.671E-03	-4.738E-03	4.840E-04	no	no	no	
11	3.614E+00	1.205E+00	1.701E-03	-4.472E-03	3.949E-04	no	no	no	
10	3.758E+00	6.264E-01	1.713E-03	-4.126E-03	4.581E-05	no	no	no	
9	3.810E+00	0.000E+00	1.704E-03	-3.739E-03	1.002E-05	no	no	no	
8	3.758E+00	-6.264E-01	1.706E-03	-3.345E-03	-1.188E-04	no	no	no	
7	3.614E+00	-1.205E+00	1.691E-03	-2.998E-03	-1.880E-04	no	no	no	
6	3.408E+00	-1.704E+00	1.656E-03	-2.726E-03	-3.855E-04	no	no	no	
5	3.209E+00	-2.053E+00	1.598E-03	-2.470E-03	-3.978E-04	no	no	no	
4	2.975E+00	-2.380E+00	1.554E-03	-2.302E-03	-3.625E-04	no	no	no	
3	2.694E+00	-2.694E+00	1.499E-03	-2.092E-03	-4.417E-04	no	no	no	
2	2.380E+00	-2.975E+00	1.431E-03	-1.916E-03	-4.110E-04	no	no	no	
1	2.053E+00	-3.209E+00	1.381E-03	-1.749E-03	0.000E+00	no	no	no	
Node	X-load	Y-load	Moment	i	j	Pin	Sh. force	Angle	Bond
48	0.000E+00	0.000E+00	0.000E+00	39	30	no			
47	0.000E+00	0.000E+00	0.000E+00	38	30	no			
46	0.000E+00	0.000E+00	0.000E+00	37	30	no			
45	0.000E+00	0.000E+00	0.000E+00	36	30	no			

44	0.000E+00	0.000E+00	0.000E+00	35	30	no
43	0.000E+00	0.000E+00	0.000E+00	34	30	no
42	0.000E+00	0.000E+00	0.000E+00	33	30	no
41	0.000E+00	-5.870E+01	0.000E+00	33	31	yes
40	0.000E+00	-1.321E+03	0.000E+00	32	31	no
39	0.000E+00	-2.925E+03	0.000E+00	32	32	no
38	0.000E+00	-2.922E+03	0.000E+00	31	32	no
37	0.000E+00	-1.174E+02	0.000E+00	31	33	no
36	0.000E+00	-1.375E+02	0.000E+00	30	33	no
35	0.000E+00	-1.659E+02	0.000E+00	30	34	no
34	0.000E+00	-1.788E+02	0.000E+00	30	35	no
33	0.000E+00	-1.835E+02	0.000E+00	30	36	no
32	0.000E+00	-1.788E+02	0.000E+00	30	37	no
31	0.000E+00	-1.659E+02	0.000E+00	30	38	no
30	0.000E+00	-1.375E+02	0.000E+00	30	39	no
29	0.000E+00	-1.174E+02	0.000E+00	31	39	no
28	0.000E+00	-1.202E+02	0.000E+00	31	40	no
27	0.000E+00	-1.230E+02	0.000E+00	32	40	no
26	0.000E+00	-1.202E+02	0.000E+00	32	41	no
25	0.000E+00	-5.233E+03	0.000E+00	33	41	no
24	0.000E+00	-1.375E+02	0.000E+00	33	42	no
23	0.000E+00	-1.659E+02	0.000E+00	34	42	no
22	0.000E+00	-1.788E+02	0.000E+00	35	42	no
21	0.000E+00	-1.041E+04	0.000E+00	36	42	no
20	0.000E+00	-1.788E+02	0.000E+00	37	42	no
19	0.000E+00	-1.659E+02	0.000E+00	38	42	no
18	0.000E+00	-1.375E+02	0.000E+00	39	42	no
17	0.000E+00	-5.233E+03	0.000E+00	39	41	no
16	0.000E+00	-1.202E+02	0.000E+00	40	41	no
15	0.000E+00	-1.230E+02	0.000E+00	40	40	no
14	0.000E+00	-1.202E+02	0.000E+00	41	40	no
13	0.000E+00	-1.511E+04	9.085E+03	41	39	no
12	0.000E+00	-1.513E+04	9.085E+03	42	39	no
11	0.000E+00	-1.516E+04	9.085E+03	42	38	no
10	0.000E+00	-1.788E+02	0.000E+00	42	37	no
9	0.000E+00	-1.835E+02	0.000E+00	42	36	no
8	0.000E+00	-1.788E+02	0.000E+00	42	35	no
7	0.000E+00	-1.659E+02	0.000E+00	42	34	no
6	0.000E+00	-1.375E+02	0.000E+00	42	33	no
5	0.000E+00	-1.174E+02	0.000E+00	41	33	no
4	0.000E+00	-1.202E+02	0.000E+00	41	32	no
3	0.000E+00	-1.230E+02	0.000E+00	40	32	no
2	0.000E+00	-1.202E+02	0.000E+00	40	31	no
1	0.000E+00	-5.870E+01	0.000E+00	39	31	yes

Structural element data ...

Elem	ID	Nod1	Nod2	Prop		F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3	beam	1.224E+04	3.408E+04	4.920E+03	7.436E-04
47	1	47	48	3	beam	1.471E+04	-8.274E+04	1.284E+04	-4.891E+03
46	1	46	47	3	beam	-4.140E+02	-4.607E+05	1.248E+04	-1.273E+04
45	1	45	46	3	beam	4.180E+04	-6.958E+05	3.826E+04	-1.199E+04
44	1	44	45	3	beam	-4.524E+04	-6.383E+05	1.009E+04	-3.853E+04
43	1	43	44	3	beam	-8.835E+03	-3.679E+05	5.164E+03	-1.043E+04
42	1	42	43	3	beam	7.250E+02	-2.962E+04	5.407E+03	-5.015E+03
41	1	41	42	3	beam	-1.283E+04	7.048E+04	-6.804E-04	-5.156E+03
40	2	40	41	2	beam	2.859E+02	9.673E+04	1.149E+02	-9.523E-06
39	2	39	40	2	beam	-3.852E+01	1.086E+05	8.724E+01	-1.035E+02
38	2	38	39	2	beam	-3.044E+03	1.700E+05	-1.139E+03	-1.440E+02
37	2	37	38	2	beam	7.595E+03	1.746E+05	1.904E+03	1.149E+03
36	2	36	37	2	beam	-1.045E+04	3.030E+05	-2.308E+03	-1.894E+03

35	2	35	36	2	beam	4.502E+03	2.683E+05	1.685E+02	2.263E+03
34	2	34	35	2	beam	-1.577E+03	3.511E+05	-7.597E+02	-1.805E+02
33	2	33	34	2	beam	5.959E+02	3.889E+05	-4.072E+02	7.817E+02
32	2	32	33	2	beam	-2.776E+02	3.808E+05	-5.575E+02	3.830E+02
31	2	31	32	2	beam	9.520E+02	3.342E+05	2.836E+01	5.391E+02
30	2	30	31	2	beam	-4.007E+03	2.647E+05	-2.145E+03	-1.966E+01
29	2	29	30	2	beam	1.021E+04	3.059E+05	1.944E+03	2.160E+03
28	2	28	29	2	beam	-8.473E+03	1.555E+05	-1.517E+03	-1.889E+03
27	2	27	28	2	beam	5.533E+03	1.859E+05	7.916E+02	1.540E+03
26	2	26	27	2	beam	-2.190E+03	9.413E+04	-9.109E+01	-8.318E+02
25	2	25	26	2	beam	3.659E+02	7.653E+04	4.763E+01	9.945E+01
24	2	24	25	2	beam	3.598E+02	2.497E+04	2.202E+02	-7.559E+01
23	2	23	24	2	beam	-4.343E+02	6.712E+03	5.334E+01	-2.880E+02
22	2	22	23	2	beam	5.869E+02	-4.162E+04	3.940E+02	-4.415E+01
21	2	21	22	2	beam	2.349E+03	-9.944E+04	1.873E+03	-3.964E+02
20	2	20	21	2	beam	-1.784E+03	-1.022E+05	7.469E+02	-1.868E+03
19	2	19	20	2	beam	-1.101E+03	-4.084E+04	7.766E+01	-7.337E+02
18	2	18	19	2	beam	-1.918E+01	1.497E+04	8.330E+01	-9.366E+01
17	2	17	18	2	beam	5.881E+02	4.057E+04	3.106E+02	-7.421E+01
16	2	16	17	2	beam	-2.079E+03	1.010E+05	-5.359E+02	-2.998E+02
15	2	15	16	2	beam	3.358E+03	1.086E+05	9.029E+02	5.121E+02
14	2	14	15	2	beam	-7.922E+03	1.926E+05	-2.441E+03	-8.967E+02
13	2	13	14	2	beam	2.055E+04	1.666E+05	5.809E+03	2.452E+03
12	2	12	13	2	beam	1.408E+04	3.208E+05	2.432E+03	3.228E+03
11	2	11	12	2	beam	2.279E+04	2.714E+05	5.693E+03	6.618E+03
10	2	10	11	2	beam	5.969E+03	3.466E+05	1.226E+02	3.435E+03
9	2	9	10	2	beam	-9.118E+02	3.837E+05	-4.487E+02	-1.244E+02
8	2	8	9	2	beam	-4.532E+02	3.887E+05	-7.193E+02	4.344E+02
7	2	7	8	2	beam	1.353E+03	3.501E+05	7.453E+01	7.318E+02
6	2	6	7	2	beam	-4.106E+03	2.741E+05	-2.143E+03	-7.483E+01
5	2	5	6	2	beam	1.029E+04	2.975E+05	1.981E+03	2.155E+03
4	2	4	5	2	beam	-8.626E+03	1.738E+05	-1.484E+03	-1.983E+03
3	2	3	4	2	beam	4.496E+03	1.747E+05	4.160E+02	1.479E+03
2	2	2	3	2	beam	-9.207E+02	1.012E+05	1.164E+01	-3.996E+02
1	2	1	2	2	beam	3.147E+01	8.650E+04	6.371E-05	1.265E+01

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	3.78700E-03	1.64000E+11	1.72300E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

>set log off

* log-file recording stopped 1-Sep-95 13:48

* FLAC log-file opened 1-Sep-95 13:52

From File : m34c2k2d.sav

>pr stru

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
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[illegible]

Title: ESF Ground Support - Structural Steel Analysis

FLAC log-file opened 10-Aug-95 12:23

Seismic Model @53+00: Ctg-3, Ko=0.25, W6x20 Steel Set
From File : m53_k2dy.sav

>pr stru

STATION: TSW2 @ 53+00

LOADING: SEISMIC + DL+UTIL

STEEL SET: W6X20 @ 4'-0" O.C.

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix	
48	1.704E+00	-3.408E+00	9.579E-04	-1.127E-03	-2.457E-04	no	no	no	
47	1.205E+00	-3.614E+00	9.082E-04	-1.020E-03	-1.987E-04	no	no	no	
46	6.264E-01	-3.758E+00	8.575E-04	-9.185E-04	-1.893E-04	no	no	no	
45	0.000E+00	-3.810E+00	8.077E-04	-8.474E-04	4.899E-06	no	no	no	
44	-6.264E-01	-3.758E+00	7.583E-04	-9.285E-04	2.073E-04	no	no	no	
43	-1.205E+00	-3.614E+00	7.062E-04	-1.042E-03	2.227E-04	no	no	no	
42	-1.704E+00	-3.408E+00	6.532E-04	-1.159E-03	2.639E-04	no	no	no	
41	-2.053E+00	-3.209E+00	5.977E-04	-1.257E-03	0.000E+00	no	no	no	
40	-2.380E+00	-2.975E+00	5.648E-04	-1.390E-03	3.026E-04	no	no	no	
39	-2.694E+00	-2.694E+00	5.199E-04	-1.515E-03	3.116E-04	no	no	no	
38	-2.975E+00	-2.380E+00	4.834E-04	-1.671E-03	2.765E-04	no	no	no	
37	-3.209E+00	-2.053E+00	4.495E-04	-1.801E-03	2.756E-04	no	no	no	
36	-3.408E+00	-1.704E+00	4.157E-04	-1.979E-03	2.721E-04	no	no	no	
35	-3.614E+00	-1.205E+00	3.826E-04	-2.190E-03	1.628E-04	no	no	no	
34	-3.758E+00	-6.264E-01	3.647E-04	-2.433E-03	8.601E-05	no	no	no	
33	-3.810E+00	0.000E+00	3.637E-04	-2.707E-03	-6.605E-06	no	no	no	
32	-3.758E+00	6.264E-01	3.729E-04	-2.978E-03	-9.557E-05	no	no	no	
31	-3.614E+00	1.205E+00	3.942E-04	-3.212E-03	-1.561E-04	no	no	no	
30	-3.408E+00	1.704E+00	4.271E-04	-3.407E-03	-2.576E-04	no	no	no	
29	-3.209E+00	2.053E+00	4.618E-04	-3.578E-03	-2.753E-04	no	no	no	
28	-2.975E+00	2.380E+00	4.957E-04	-3.708E-03	-2.684E-04	no	no	no	
27	-2.694E+00	2.694E+00	5.306E-04	-3.851E-03	-2.863E-04	no	no	no	
26	-2.380E+00	2.975E+00	5.705E-04	-3.972E-03	-2.886E-04	no	no	no	
25	-2.053E+00	3.209E+00	6.012E-04	-4.098E-03	-3.017E-04	no	no	no	
24	-1.704E+00	3.408E+00	6.466E-04	-4.205E-03	-2.719E-04	no	no	no	
23	-1.205E+00	3.614E+00	6.923E-04	-4.336E-03	-2.327E-04	no	no	no	
22	-6.264E-01	3.758E+00	7.599E-04	-4.444E-03	-1.591E-04	no	no	no	
21	0.000E+00	3.810E+00	8.393E-04	-4.478E-03	2.132E-05	no	no	no	
20	6.264E-01	3.758E+00	9.147E-04	-4.418E-03	1.970E-04	no	no	no	
19	1.205E+00	3.614E+00	9.717E-04	-4.291E-03	2.266E-04	no	no	no	
18	1.704E+00	3.408E+00	1.011E-03	-4.173E-03	2.507E-04	no	no	no	
17	2.053E+00	3.209E+00	1.054E-03	-4.069E-03	3.035E-04	no	no	no	
16	2.380E+00	2.975E+00	1.081E-03	-3.940E-03	2.828E-04	no	no	no	
15	2.694E+00	2.694E+00	1.118E-03	-3.820E-03	2.895E-04	no	no	no	
14	2.975E+00	2.380E+00	1.149E-03	-3.677E-03	2.187E-04	no	no	no	
13	3.209E+00	2.053E+00	1.179E-03	-3.547E-03	4.307E-04	no	no	no	
12	3.408E+00	1.704E+00	1.214E-03	-3.363E-03	3.676E-04	no	no	no	
11	3.614E+00	1.205E+00	1.244E-03	-3.161E-03	3.669E-04	no	no	no	
10	3.758E+00	6.264E-01	1.260E-03	-2.917E-03	2.764E-05	no	no	no	
9	3.810E+00	0.000E+00	1.260E-03	-2.642E-03	1.063E-05	no	no	no	
8	3.758E+00	-6.264E-01	1.255E-03	-2.368E-03	-9.623E-05	no	no	no	
7	3.614E+00	-1.205E+00	1.234E-03	-2.123E-03	-1.657E-04	no	no	no	
6	3.408E+00	-1.704E+00	1.199E-03	-1.914E-03	-2.709E-04	no	no	no	
5	3.209E+00	-2.053E+00	1.164E-03	-1.738E-03	-2.784E-04	no	no	no	
4	2.975E+00	-2.380E+00	1.126E-03	-1.612E-03	-2.781E-04	no	no	no	
3	2.694E+00	-2.694E+00	1.089E-03	-1.460E-03	-2.952E-04	no	no	no	
2	2.380E+00	-2.975E+00	1.046E-03	-1.345E-03	-2.856E-04	no	no	no	
1	2.053E+00	-3.209E+00	1.011E-03	-1.218E-03	0.000E+00	no	no	no	
Node	X-load	Y-load	Moment	i	j	Pin	Sh. force	Angle	Bond
48	0.000E+00	0.000E+00	0.000E+00	39	30	no			
47	0.000E+00	0.000E+00	0.000E+00	38	30	no			
46	0.000E+00	0.000E+00	0.000E+00	37	30	no			
45	0.000E+00	0.000E+00	0.000E+00	36	30	no			

Title: ESF Ground Support - Structural Steel Analysis

44	0.000E+00	0.000E+00	0.000E+00	35	30	no
43	0.000E+00	0.000E+00	0.000E+00	34	30	no
42	0.000E+00	0.000E+00	0.000E+00	33	30	no
41	0.000E+00	-5.870E+01	0.000E+00	33	31	yes
40	0.000E+00	-1.321E+03	0.000E+00	32	31	no
39	0.000E+00	-2.925E+03	0.000E+00	32	32	no
38	0.000E+00	-2.922E+03	0.000E+00	31	32	no
37	0.000E+00	-1.174E+02	0.000E+00	31	33	no
36	0.000E+00	-1.375E+02	0.000E+00	30	33	no
35	0.000E+00	-1.659E+02	0.000E+00	30	34	no
34	0.000E+00	-1.788E+02	0.000E+00	30	35	no
33	0.000E+00	-1.835E+02	0.000E+00	30	36	no
32	0.000E+00	-1.788E+02	0.000E+00	30	37	no
31	0.000E+00	-1.659E+02	0.000E+00	30	38	no
30	0.000E+00	-1.375E+02	0.000E+00	30	39	no
29	0.000E+00	-1.174E+02	0.000E+00	31	39	no
28	0.000E+00	-1.202E+02	0.000E+00	31	40	no
27	0.000E+00	-1.230E+02	0.000E+00	32	40	no
26	0.000E+00	-1.202E+02	0.000E+00	32	41	no
25	0.000E+00	-5.366E+03	0.000E+00	33	41	no
24	0.000E+00	-1.375E+02	0.000E+00	33	42	no
23	0.000E+00	-1.659E+02	0.000E+00	34	42	no
22	0.000E+00	-1.788E+02	0.000E+00	35	42	no
21	0.000E+00	-1.041E+04	0.000E+00	36	42	no
20	0.000E+00	-1.788E+02	0.000E+00	37	42	no
19	0.000E+00	-1.659E+02	0.000E+00	38	42	no
18	0.000E+00	-1.375E+02	0.000E+00	39	42	no
17	0.000E+00	-5.366E+03	0.000E+00	39	41	no
16	0.000E+00	-1.202E+02	0.000E+00	40	41	no
15	0.000E+00	-1.230E+02	0.000E+00	40	40	no
14	0.000E+00	-1.202E+02	0.000E+00	41	40	no
13	0.000E+00	-1.511E+04	9.085E+03	41	39	no
12	0.000E+00	-1.513E+04	9.085E+03	42	39	no
11	0.000E+00	-1.516E+04	9.085E+03	42	38	no
10	0.000E+00	-1.788E+02	0.000E+00	42	37	no
9	0.000E+00	-1.835E+02	0.000E+00	42	36	no
8	0.000E+00	-1.788E+02	0.000E+00	42	35	no
7	0.000E+00	-1.659E+02	0.000E+00	42	34	no
6	0.000E+00	-1.375E+02	0.000E+00	42	33	no
5	0.000E+00	-1.174E+02	0.000E+00	41	33	no
4	0.000E+00	-1.202E+02	0.000E+00	41	32	no
3	0.000E+00	-1.230E+02	0.000E+00	40	32	no
2	0.000E+00	-1.202E+02	0.000E+00	40	31	no
1	0.000E+00	-5.870E+01	0.000E+00	39	31	yes

Structural element data ...

Elem	ID	Nod1	Nod2	Prop		F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3	beam	2.456E+04	1.328E+04	9.870E+03	-9.821E-04
47	1	47	48	3	beam	-1.650E+04	-9.763E+04	1.204E+03	-1.012E+04
46	1	46	47	3	beam	-1.485E+03	-3.244E+05	6.037E+02	-1.489E+03
45	1	45	46	3	beam	6.224E+04	-5.979E+05	3.964E+04	-5.273E+02
44	1	44	45	3	beam	-5.935E+04	-5.905E+05	2.343E+03	-3.965E+04
43	1	43	44	3	beam	-1.590E+03	-3.004E+05	1.214E+03	-2.162E+03
42	1	42	43	3	beam	1.476E+04	-7.188E+04	8.908E+03	-9.359E+02
41	1	41	42	3	beam	-2.250E+04	4.287E+04	-6.072E-04	-9.045E+03
40	2	40	41	2	beam	-5.696E+02	7.827E+04	-2.289E+02	-2.570E-05
39	2	39	40	2	beam	1.379E+03	7.542E+04	3.514E+02	2.298E+02
38	2	38	39	2	beam	-2.703E+03	1.348E+05	-8.057E+02	-3.334E+02
37	2	37	38	2	beam	4.039E+03	1.346E+05	8.039E+02	8.195E+02
36	2	36	37	2	beam	-4.199E+03	2.138E+05	-8.667E+02	-8.209E+02

Title: ESF Ground Support - Structural Steel Analysis

35	2	35	36	2	beam	1.104E+03	2.102E+05	-2.731E+02	8.692E+02
34	2	34	35	2	beam	-2.609E+02	2.421E+05	-4.421E+02	2.866E+02
33	2	33	34	2	beam	8.347E+01	2.708E+05	-3.911E+02	4.435E+02
32	2	32	33	2	beam	-5.726E+01	2.672E+05	-4.174E+02	3.814E+02
31	2	31	32	2	beam	4.537E+02	2.332E+05	-1.518E+02	4.223E+02
30	2	30	31	2	beam	-1.400E+03	1.930E+05	-9.094E+02	1.533E+02
29	2	29	30	2	beam	3.878E+03	2.014E+05	6.564E+02	9.022E+02
28	2	28	29	2	beam	-2.745E+03	1.358E+05	-5.045E+02	-5.988E+02
27	2	27	28	2	beam	1.740E+03	1.213E+05	2.450E+02	4.881E+02
26	2	26	27	2	beam	-1.440E+03	7.437E+04	-3.158E+02	-2.910E+02
25	2	25	26	2	beam	1.239E+03	7.659E+04	1.570E+02	3.412E+02
24	2	24	25	2	beam	3.245E+02	2.170E+04	2.745E+02	-1.441E+02
23	2	23	24	2	beam	-1.883E+02	7.873E+03	1.531E+02	-2.548E+02
22	2	22	23	2	beam	6.731E+02	-4.108E+04	5.497E+02	-1.484E+02
21	2	21	22	2	beam	7.895E+02	-7.525E+04	1.059E+03	-5.627E+02
20	2	20	21	2	beam	-9.206E+02	-6.806E+04	5.002E+02	-1.079E+03
19	2	19	20	2	beam	-1.217E+03	-2.736E+04	-2.208E+02	-5.043E+02
18	2	18	19	2	beam	1.338E+03	9.211E+03	4.863E+02	2.367E+02
17	2	17	18	2	beam	-6.803E+02	2.407E+04	2.353E+02	-5.088E+02
16	2	16	17	2	beam	-1.924E+03	8.265E+04	-5.297E+02	-2.434E+02
15	2	15	16	2	beam	2.903E+03	7.583E+04	6.557E+02	5.677E+02
14	2	14	15	2	beam	-5.312E+03	1.275E+05	-1.595E+03	-6.437E+02
13	2	13	14	2	beam	1.540E+04	1.398E+05	4.586E+03	1.605E+03
12	2	12	13	2	beam	2.026E+04	2.172E+05	3.628E+03	4.516E+03
11	2	11	12	2	beam	2.021E+04	2.024E+05	5.454E+03	5.463E+03
10	2	10	11	2	beam	6.737E+03	2.452E+05	4.013E+02	3.614E+03
9	2	9	10	2	beam	-1.510E+03	2.712E+05	-5.517E+02	-3.973E+02
8	2	8	9	2	beam	2.513E+02	2.694E+05	-4.023E+02	5.602E+02
7	2	7	8	2	beam	2.391E+02	2.437E+05	-2.570E+02	3.995E+02
6	2	6	7	2	beam	-1.002E+03	2.081E+05	-8.227E+02	2.817E+02
5	2	5	6	2	beam	3.776E+03	2.078E+05	7.077E+02	8.100E+02
4	2	4	5	2	beam	-3.676E+03	1.291E+05	-7.356E+02	-7.419E+02
3	2	3	4	2	beam	3.033E+03	1.280E+05	5.228E+02	7.551E+02
2	2	2	3	2	beam	-2.105E+03	6.810E+04	-3.791E+02	-5.080E+02
1	2	1	2	2	beam	9.359E+02	7.082E+04	-2.541E-05	3.762E+02

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	3.78700E-03	1.64000E+11	1.72300E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

>set log off

* log-file recording stopped 10-Aug-95 12:23

Title: ESF Ground Support - Structural Steel Analysis

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STATION: TCW @ 07+00

LOADING: STATIC; DL+UTIL

STEEL SET: W6X20 @ 4'-0" O.C.

FLAC log-file opened 11-Aug-95 14:31

From File : flac.ini

>res m07_k2.sav

a following state has been restored:

date	time	step	grid	version
8-Aug-95	10:18	5220	70 X 70	3.22

Title:

>pr stru

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	5.018E-05	4.332E-04	-6.863E-05	no	no	no
47	1.205E+00	-3.614E+00	3.413E-05	4.638E-04	-5.933E-05	no	no	no
46	6.264E-01	-3.758E+00	1.791E-05	4.952E-04	-5.040E-05	no	no	no
45	0.000E+00	-3.810E+00	2.110E-06	5.117E-04	-9.144E-06	no	no	no
44	-6.264E-01	-3.758E+00	-1.408E-05	5.054E-04	3.975E-05	no	no	no
43	-1.205E+00	-3.614E+00	-3.136E-05	4.761E-04	6.507E-05	no	no	no
42	-1.704E+00	-3.408E+00	-4.940E-05	4.408E-04	7.672E-05	no	no	no
41	-2.053E+00	-3.209E+00	-6.530E-05	4.147E-04	0.000E+00	no	no	no
40	-2.380E+00	-2.975E+00	-7.822E-05	3.852E-04	8.145E-05	no	no	no
39	-2.694E+00	-2.694E+00	-9.550E-05	3.527E-04	8.723E-05	no	no	no
38	-2.975E+00	-2.380E+00	-1.078E-04	3.136E-04	7.657E-05	no	no	no
37	-3.209E+00	-2.053E+00	-1.200E-04	2.806E-04	7.741E-05	no	no	no
36	-3.408E+00	-1.704E+00	-1.317E-04	2.377E-04	7.276E-05	no	no	no
35	-3.614E+00	-1.205E+00	-1.423E-04	1.817E-04	4.610E-05	no	no	no
34	-3.758E+00	-6.264E-01	-1.491E-04	1.178E-04	2.664E-05	no	no	no
33	-3.810E+00	0.000E+00	-1.521E-04	4.832E-05	9.577E-07	no	no	no
32	-3.758E+00	6.264E-01	-1.496E-04	-1.995E-05	-2.688E-05	no	no	no
31	-3.614E+00	1.205E+00	-1.429E-04	-8.366E-05	-4.262E-05	no	no	no
30	-3.408E+00	1.704E+00	-1.354E-04	-1.363E-04	-6.593E-05	no	no	no
29	-3.209E+00	2.053E+00	-1.242E-04	-1.789E-04	-7.875E-05	no	no	no
28	-2.975E+00	2.380E+00	-1.126E-04	-2.156E-04	-7.943E-05	no	no	no
27	-2.694E+00	2.694E+00	-1.020E-04	-2.540E-04	-7.866E-05	no	no	no
26	-2.380E+00	2.975E+00	-8.889E-05	-2.866E-04	-7.974E-05	no	no	no
25	-2.053E+00	3.209E+00	-7.910E-05	-3.208E-04	-8.314E-05	no	no	no
24	-1.704E+00	3.408E+00	-6.548E-05	-3.498E-04	-7.733E-05	no	no	no
23	-1.205E+00	3.614E+00	-4.967E-05	-3.859E-04	-7.142E-05	no	no	no
22	-6.264E-01	3.758E+00	-2.788E-05	-4.187E-04	-5.288E-05	no	no	no
21	0.000E+00	3.810E+00	-1.787E-06	-4.354E-04	-2.273E-06	no	no	no
20	6.264E-01	3.758E+00	2.444E-05	-4.209E-04	4.993E-05	no	no	no
19	1.205E+00	3.614E+00	4.654E-05	-3.894E-04	7.074E-05	no	no	no
18	1.704E+00	3.408E+00	6.292E-05	-3.536E-04	7.809E-05	no	no	no
17	2.053E+00	3.209E+00	7.655E-05	-3.248E-04	8.123E-05	no	no	no
16	2.380E+00	2.975E+00	8.661E-05	-2.918E-04	7.702E-05	no	no	no
15	2.694E+00	2.694E+00	1.002E-04	-2.580E-04	9.209E-05	no	no	no
14	2.975E+00	2.380E+00	1.106E-04	-2.200E-04	3.531E-05	no	no	no
13	3.209E+00	2.053E+00	1.222E-04	-1.856E-04	2.264E-04	no	no	no
12	3.408E+00	1.704E+00	1.344E-04	-1.418E-04	1.676E-04	no	no	no
11	3.614E+00	1.205E+00	1.442E-04	-8.857E-05	2.619E-04	no	no	no
10	3.758E+00	6.264E-01	1.516E-04	-2.438E-05	-3.258E-05	no	no	no
9	3.810E+00	0.000E+00	1.533E-04	4.428E-05	1.440E-05	no	no	no
8	3.758E+00	-6.264E-01	1.502E-04	1.136E-04	-3.247E-05	no	no	no
7	3.614E+00	-1.205E+00	1.428E-04	1.782E-04	-4.391E-05	no	no	no
6	3.408E+00	-1.704E+00	1.329E-04	2.329E-04	-7.335E-05	no	no	no
5	3.209E+00	-2.053E+00	1.202E-04	2.760E-04	-7.847E-05	no	no	no
4	2.975E+00	-2.380E+00	1.080E-04	3.088E-04	-7.580E-05	no	no	no
3	2.694E+00	-2.694E+00	9.540E-05	3.475E-04	-8.764E-05	no	no	no
2	2.380E+00	-2.975E+00	7.760E-05	3.795E-04	-8.119E-05	no	no	no

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Node	X-load	Y-load	Moment	i	j	Pin	Sh. force	Angle	Bond
1	2.053E+00	-3.209E+00	6.523E-05	4.088E-04	0.000E+00	no	no	no	
48	0.000E+00	0.000E+00	0.000E+00	39	30	no			
47	0.000E+00	0.000E+00	0.000E+00	38	30	no			
46	0.000E+00	0.000E+00	0.000E+00	37	30	no			
45	0.000E+00	0.000E+00	0.000E+00	36	30	no			
44	0.000E+00	0.000E+00	0.000E+00	35	30	no			
43	0.000E+00	0.000E+00	0.000E+00	34	30	no			
42	0.000E+00	0.000E+00	0.000E+00	33	30	no			
41	0.000E+00	-5.870E+01	0.000E+00	33	31	yes			
40	0.000E+00	-1.321E+03	0.000E+00	32	31	no			
39	0.000E+00	-2.925E+03	0.000E+00	32	32	no			
38	0.000E+00	-2.922E+03	0.000E+00	31	32	no			
37	0.000E+00	-1.174E+02	0.000E+00	31	33	no			
36	0.000E+00	-1.375E+02	0.000E+00	30	33	no			
35	0.000E+00	-1.659E+02	0.000E+00	30	34	no			
34	0.000E+00	-1.788E+02	0.000E+00	30	35	no			
33	0.000E+00	-1.835E+02	0.000E+00	30	36	no			
32	0.000E+00	-1.788E+02	0.000E+00	30	37	no			
31	0.000E+00	-1.659E+02	0.000E+00	30	38	no			
30	0.000E+00	-1.375E+02	0.000E+00	30	39	no			
29	0.000E+00	-1.174E+02	0.000E+00	31	39	no			
28	0.000E+00	-1.202E+02	0.000E+00	31	40	no			
27	0.000E+00	-1.230E+02	0.000E+00	32	40	no			
26	0.000E+00	-1.202E+02	0.000E+00	32	41	no			
25	0.000E+00	-5.366E+03	0.000E+00	33	41	no			
24	0.000E+00	-1.375E+02	0.000E+00	33	42	no			
23	0.000E+00	-1.659E+02	0.000E+00	34	42	no			
22	0.000E+00	-1.788E+02	0.000E+00	35	42	no			
21	0.000E+00	-1.041E+04	0.000E+00	36	42	no			
20	0.000E+00	-1.788E+02	0.000E+00	37	42	no			
19	0.000E+00	-1.659E+02	0.000E+00	38	42	no			
18	0.000E+00	-1.375E+02	0.000E+00	39	42	no			
17	0.000E+00	-5.366E+03	0.000E+00	39	41	no			
16	0.000E+00	-1.202E+02	0.000E+00	40	41	no			
15	0.000E+00	-1.230E+02	0.000E+00	40	40	no			
14	0.000E+00	-1.202E+02	0.000E+00	41	40	no			
13	0.000E+00	-1.511E+04	9.085E+03	41	39	no			
12	0.000E+00	-1.513E+04	9.085E+03	42	39	no			
11	0.000E+00	-1.516E+04	9.085E+03	42	38	no			
10	0.000E+00	-1.788E+02	0.000E+00	42	37	no			
9	0.000E+00	-1.835E+02	0.000E+00	42	36	no			
8	0.000E+00	-1.788E+02	0.000E+00	42	35	no			
7	0.000E+00	-1.659E+02	0.000E+00	42	34	no			
6	0.000E+00	-1.375E+02	0.000E+00	42	33	no			
5	0.000E+00	-1.174E+02	0.000E+00	41	33	no			
4	0.000E+00	-1.202E+02	0.000E+00	41	32	no			
3	0.000E+00	-1.230E+02	0.000E+00	40	32	no			
2	0.000E+00	-1.202E+02	0.000E+00	40	31	no			
1	0.000E+00	-5.870E+01	0.000E+00	39	31	yes			

Structural element data ...

Elem	ID	Nod1	Nod2	Prop	F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3 beam	4.352E+03	-1.685E+04	1.749E+03	6.234E-05
47	1	47	48	3 beam	-2.327E+03	-4.802E+04	4.921E+02	-1.749E+03
46	1	46	47	3 beam	1.619E+03	-1.211E+05	1.457E+03	-4.923E+02
45	1	45	46	3 beam	8.959E+03	-1.896E+05	7.089E+03	-1.458E+03
44	1	44	45	3 beam	-6.443E+03	-2.038E+05	3.039E+03	-7.088E+03
43	1	43	44	3 beam	-9.190E+02	-1.411E+05	2.491E+03	-3.039E+03
42	1	42	43	3 beam	-4.028E+03	-4.895E+04	3.149E+02	-2.491E+03

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41	1	41	42	3	beam	-7.839E+02	-1.633E+04	-2.540E-05	-3.151E+02
40	2	40	41	2	beam	2.307E+02	9.822E+03	9.271E+01	1.183E-05
39	2	39	40	2	beam	-2.562E+02	1.326E+04	-1.522E+01	-9.276E+01
38	2	38	39	2	beam	-2.671E+02	3.095E+04	-1.278E+02	1.521E+01
37	2	37	38	2	beam	6.654E+02	3.138E+04	1.397E+02	1.278E+02
36	2	36	37	2	beam	-8.577E+02	4.836E+04	-2.051E+02	-1.397E+02
35	2	35	36	2	beam	2.427E+02	5.474E+04	-7.394E+01	2.050E+02
34	2	34	35	2	beam	-6.132E+01	6.323E+04	-1.105E+02	7.394E+01
33	2	33	34	2	beam	-1.580E+01	6.861E+04	-1.205E+02	1.105E+02
32	2	32	33	2	beam	-1.504E+01	6.744E+04	-1.299E+02	1.204E+02
31	2	31	32	2	beam	1.854E+02	6.256E+04	-1.936E+01	1.299E+02
30	2	30	31	2	beam	-3.798E+02	5.309E+04	-2.245E+02	1.937E+01
29	2	29	30	2	beam	6.687E+02	4.811E+04	4.424E+01	2.245E+02
28	2	28	29	2	beam	-2.437E+02	3.595E+04	-5.376E+01	-4.420E+01
27	2	27	28	2	beam	2.800E+02	3.215E+04	6.420E+01	5.378E+01
26	2	26	27	2	beam	-3.392E+02	1.746E+04	-7.874E+01	-6.419E+01
25	2	25	26	2	beam	2.730E+02	1.780E+04	3.097E+01	7.875E+01
24	2	24	25	2	beam	4.905E+01	4.289E+03	5.071E+01	-3.099E+01
23	2	23	24	2	beam	-7.348E+01	-6.132E+02	1.104E+01	-5.074E+01
22	2	22	23	2	beam	2.579E+02	-1.302E+04	1.648E+02	-1.106E+01
21	2	21	22	2	beam	1.996E+02	-2.466E+04	2.902E+02	-1.648E+02
20	2	20	21	2	beam	-1.767E+02	-2.502E+04	1.792E+02	-2.902E+02
19	2	19	20	2	beam	-2.700E+02	-1.378E+04	1.819E+01	-1.792E+02
18	2	18	19	2	beam	7.496E+01	-1.087E+03	5.868E+01	-1.819E+01
17	2	17	18	2	beam	-1.819E+02	3.830E+03	-1.445E+01	-5.865E+01
16	2	16	17	2	beam	-7.518E+01	1.619E+04	-4.469E+01	1.447E+01
15	2	15	16	2	beam	6.914E+02	1.844E+04	2.467E+02	4.464E+01
14	2	14	15	2	beam	-2.978E+03	3.191E+04	-1.008E+03	-2.467E+02
13	2	13	14	2	beam	1.170E+04	3.297E+04	3.695E+03	1.008E+03
12	2	12	13	2	beam	2.476E+04	4.925E+04	4.562E+03	5.390E+03
11	2	11	12	2	beam	1.857E+04	5.252E+04	5.510E+03	4.523E+03
10	2	10	11	2	beam	7.311E+03	6.301E+04	7.827E+02	3.575E+03
9	2	9	10	2	beam	-1.818E+03	6.798E+04	-3.602E+02	-7.827E+02
8	2	8	9	2	beam	4.754E+02	6.833E+04	-6.137E+01	3.601E+02
7	2	7	8	2	beam	2.408E+01	6.391E+04	-4.703E+01	6.138E+01
6	2	6	7	2	beam	-3.960E+02	5.384E+04	-2.610E+02	4.706E+01
5	2	5	6	2	beam	1.119E+03	4.763E+04	1.889E+02	2.610E+02
4	2	4	5	2	beam	-8.466E+02	3.111E+04	-1.514E+02	-1.889E+02
3	2	3	4	2	beam	3.420E+02	3.044E+04	-7.293E+00	1.514E+02
2	2	2	3	2	beam	2.395E+02	1.206E+04	9.366E+01	7.255E+00
1	2	1	2	2	beam	-2.331E+02	1.043E+04	4.395E-06	-9.371E+01

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	3.78700E-03	1.64000E+11	1.72300E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Set log off

log-file recording stopped 11-Aug-95 14:31

Title: ESF Ground Support - Structural Steel Analysis

FLAC log-file opened 11-Aug-95 14:23

STATION: TSW1 @ 18+00

From File : flac.ini

LOADING: STATIC: DL+UTIL

>res m18_k2.sav

The following state has been restored:

STEEL SET: W6X20 @ 4'-0" O.C.

date	time	step	grid	version
8-Aug-95	11:16	5210	70 X 70	3.22

Title:

>pr stru

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	3.192E-05	7.437E-04	-9.968E-05	no	no	no
47	1.205E+00	-3.614E+00	1.753E-05	7.855E-04	-7.790E-05	no	no	no
46	6.264E-01	-3.758E+00	5.011E-06	8.302E-04	-6.525E-05	no	no	no
45	0.000E+00	-3.810E+00	-1.251E-06	8.509E-04	1.199E-07	no	no	no
44	-6.264E-01	-3.758E+00	-7.676E-06	8.304E-04	6.979E-05	no	no	no
43	-1.205E+00	-3.614E+00	-2.081E-05	7.814E-04	8.182E-05	no	no	no
42	-1.704E+00	-3.408E+00	-3.607E-05	7.387E-04	1.032E-04	no	no	no
41	-2.053E+00	-3.209E+00	-5.695E-05	6.941E-04	0.000E+00	no	no	no
40	-2.380E+00	-2.975E+00	-6.520E-05	6.420E-04	1.234E-04	no	no	no
39	-2.694E+00	-2.694E+00	-8.349E-05	5.853E-04	1.394E-04	no	no	no
38	-2.975E+00	-2.380E+00	-1.001E-04	5.172E-04	1.218E-04	no	no	no
37	-3.209E+00	-2.053E+00	-1.176E-04	4.598E-04	1.421E-04	no	no	no
36	-3.408E+00	-1.704E+00	-1.374E-04	3.692E-04	1.307E-04	no	no	no
35	-3.614E+00	-1.205E+00	-1.362E-04	2.633E-04	3.985E-05	no	no	no
34	-3.758E+00	-6.264E-01	-1.161E-04	1.093E-04	2.063E-05	no	no	no
33	-3.810E+00	0.000E+00	-1.061E-04	-9.443E-05	4.901E-07	no	no	no
32	-3.758E+00	6.264E-01	-1.165E-04	-2.953E-04	-2.018E-05	no	no	no
31	-3.614E+00	1.205E+00	-1.353E-04	-4.411E-04	-3.546E-05	no	no	no
30	-3.408E+00	1.704E+00	-1.349E-04	-5.415E-04	-1.394E-04	no	no	no
29	-3.209E+00	2.053E+00	-1.153E-04	-6.387E-04	-1.354E-04	no	no	no
28	-2.975E+00	2.380E+00	-1.008E-04	-6.894E-04	-1.160E-04	no	no	no
27	-2.694E+00	2.694E+00	-8.783E-05	-7.659E-04	-1.430E-04	no	no	no
26	-2.380E+00	2.975E+00	-7.077E-05	-8.217E-04	-1.230E-04	no	no	no
25	-2.053E+00	3.209E+00	-6.107E-05	-8.774E-04	-1.246E-04	no	no	no
24	-1.704E+00	3.408E+00	-4.947E-05	-9.259E-04	-1.210E-04	no	no	no
23	-1.205E+00	3.614E+00	-3.586E-05	-9.886E-04	-9.684E-05	no	no	no
22	-6.264E-01	3.758E+00	-1.975E-05	-1.034E-03	-9.291E-05	no	no	no
21	0.000E+00	3.810E+00	-2.681E-07	-1.083E-03	-1.005E-05	no	no	no
20	6.264E-01	3.758E+00	1.984E-05	-1.040E-03	1.021E-04	no	no	no
19	1.205E+00	3.614E+00	3.584E-05	-9.845E-04	1.036E-04	no	no	no
18	1.704E+00	3.408E+00	4.790E-05	-9.238E-04	1.181E-04	no	no	no
17	2.053E+00	3.209E+00	6.050E-05	-8.751E-04	1.272E-04	no	no	no
16	2.380E+00	2.975E+00	6.998E-05	-8.201E-04	1.166E-04	no	no	no
15	2.694E+00	2.694E+00	8.604E-05	-7.650E-04	1.501E-04	no	no	no
14	2.975E+00	2.380E+00	9.718E-05	-6.899E-04	7.139E-05	no	no	no
13	3.209E+00	2.053E+00	1.133E-04	-6.409E-04	2.886E-04	no	no	no
12	3.408E+00	1.704E+00	1.349E-04	-5.404E-04	2.453E-04	no	no	no
11	3.614E+00	1.205E+00	1.386E-04	-4.393E-04	2.560E-04	no	no	no
10	3.758E+00	6.264E-01	1.208E-04	-2.930E-04	-4.138E-05	no	no	no
9	3.810E+00	0.000E+00	1.079E-04	-9.282E-05	1.350E-05	no	no	no
8	3.758E+00	-6.264E-01	1.184E-04	1.103E-04	-2.456E-05	no	no	no
7	3.614E+00	-1.205E+00	1.383E-04	2.643E-04	-3.588E-05	no	no	no
6	3.408E+00	-1.704E+00	1.403E-04	3.696E-04	-1.364E-04	no	no	no
5	3.209E+00	-2.053E+00	1.182E-04	4.644E-04	-1.499E-04	no	no	no
4	2.975E+00	-2.380E+00	9.944E-05	5.228E-04	-1.311E-04	no	no	no
3	2.694E+00	-2.694E+00	8.039E-05	5.952E-04	-1.445E-04	no	no	no
2	2.380E+00	-2.975E+00	6.312E-05	6.520E-04	-1.191E-04	no	no	no

Title: ESF Ground Support - Structural Steel Analysis

Node	2.053E+00 X-load	-3.209E+00 Y-load	5.266E-05 Moment	7.019E-04 i j Pin	0.000E+00 Sh. force	no Angle	no Bond
48	0.000E+00	0.000E+00	0.000E+00	39 30 no			
47	0.000E+00	0.000E+00	0.000E+00	38 30 no			
46	0.000E+00	0.000E+00	0.000E+00	37 30 no			
45	0.000E+00	0.000E+00	0.000E+00	36 30 no			
44	0.000E+00	0.000E+00	0.000E+00	35 30 no			
43	0.000E+00	0.000E+00	0.000E+00	34 30 no			
42	0.000E+00	0.000E+00	0.000E+00	33 30 no			
41	0.000E+00	-5.870E+01	0.000E+00	33 31 yes			
40	0.000E+00	-1.321E+03	0.000E+00	32 31 no			
39	0.000E+00	-2.925E+03	0.000E+00	32 32 no			
38	0.000E+00	-2.922E+03	0.000E+00	31 32 no			
37	0.000E+00	-1.174E+02	0.000E+00	31 33 no			
36	0.000E+00	-1.375E+02	0.000E+00	30 33 no			
35	0.000E+00	-1.659E+02	0.000E+00	30 34 no			
34	0.000E+00	-1.788E+02	0.000E+00	30 35 no			
33	0.000E+00	-1.835E+02	0.000E+00	30 36 no			
32	0.000E+00	-1.788E+02	0.000E+00	30 37 no			
31	0.000E+00	-1.659E+02	0.000E+00	30 38 no			
30	0.000E+00	-1.375E+02	0.000E+00	30 39 no			
29	0.000E+00	-1.174E+02	0.000E+00	31 39 no			
28	0.000E+00	-1.202E+02	0.000E+00	31 40 no			
27	0.000E+00	-1.230E+02	0.000E+00	32 40 no			
26	0.000E+00	-1.202E+02	0.000E+00	32 41 no			
25	0.000E+00	-5.366E+03	0.000E+00	33 41 no			
24	0.000E+00	-1.375E+02	0.000E+00	33 42 no			
23	0.000E+00	-1.659E+02	0.000E+00	34 42 no			
22	0.000E+00	-1.788E+02	0.000E+00	35 42 no			
21	0.000E+00	-1.041E+04	0.000E+00	36 42 no			
20	0.000E+00	-1.788E+02	0.000E+00	37 42 no			
19	0.000E+00	-1.659E+02	0.000E+00	38 42 no			
18	0.000E+00	-1.375E+02	0.000E+00	39 42 no			
17	0.000E+00	-5.366E+03	0.000E+00	39 41 no			
16	0.000E+00	-1.202E+02	0.000E+00	40 41 no			
15	0.000E+00	-1.230E+02	0.000E+00	40 40 no			
14	0.000E+00	-1.202E+02	0.000E+00	41 40 no			
13	0.000E+00	-1.511E+04	9.085E+03	41 39 no			
12	0.000E+00	-1.513E+04	9.085E+03	42 39 no			
11	0.000E+00	-1.516E+04	9.085E+03	42 38 no			
10	0.000E+00	-1.788E+02	0.000E+00	42 37 no			
9	0.000E+00	-1.835E+02	0.000E+00	42 36 no			
8	0.000E+00	-1.788E+02	0.000E+00	42 35 no			
7	0.000E+00	-1.659E+02	0.000E+00	42 34 no			
6	0.000E+00	-1.375E+02	0.000E+00	42 33 no			
5	0.000E+00	-1.174E+02	0.000E+00	41 33 no			
4	0.000E+00	-1.202E+02	0.000E+00	41 32 no			
3	0.000E+00	-1.230E+02	0.000E+00	40 32 no			
2	0.000E+00	-1.202E+02	0.000E+00	40 31 no			
1	0.000E+00	-5.870E+01	0.000E+00	39 31 yes			

Structural element data ...

Elem	ID	Nod1	Nod2	Prop		F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3	beam	1.645E+04	4.356E+04	6.611E+03	-2.174E-04
47	1	47	48	3	beam	-1.476E+04	4.555E+04	-1.362E+03	-6.611E+03
46	1	46	47	3	beam	9.212E+03	-3.098E+04	4.127E+03	1.363E+03
45	1	45	46	3	beam	8.416E+03	-5.682E+04	9.414E+03	-4.125E+03
44	1	44	45	3	beam	-6.996E+03	-5.556E+04	5.016E+03	-9.414E+03
43	1	43	44	3	beam	-1.243E+04	-2.457E+04	-2.391E+03	-5.017E+03
42	1	42	43	3	beam	1.841E+04	4.486E+04	7.554E+03	2.390E+03

41	1	41	42	3	beam	-1.879E+04	4.925E+04	1.211E-04	-7.553E+03
40	2	40	41	2	beam	1.172E+02	3.892E+04	4.709E+01	1.409E-05
39	2	39	40	2	beam	2.833E+02	3.647E+04	1.666E+02	-4.724E+01
38	2	38	39	2	beam	-1.352E+03	5.880E+04	-4.031E+02	-1.667E+02
37	2	37	38	2	beam	2.720E+03	5.640E+04	6.901E+02	4.034E+02
36	2	36	37	2	beam	-3.835E+03	1.068E+05	-8.513E+02	-6.901E+02
35	2	35	36	2	beam	1.392E+03	1.147E+05	-9.922E+01	8.511E+02
34	2	34	35	2	beam	2.748E+01	1.607E+05	-8.294E+01	9.932E+01
33	2	33	34	2	beam	-2.416E+01	2.021E+05	-9.813E+01	8.294E+01
32	2	32	33	2	beam	1.659E+01	1.992E+05	-8.770E+01	9.813E+01
31	2	31	32	2	beam	5.135E+01	1.532E+05	-5.714E+01	8.775E+01
30	2	30	31	2	beam	-1.802E+03	1.062E+05	-1.031E+03	5.718E+01
29	2	29	30	2	beam	5.268E+03	1.165E+05	1.087E+03	1.030E+03
28	2	28	29	2	beam	-4.729E+03	5.092E+04	-8.138E+02	-1.087E+03
27	2	27	28	2	beam	3.004E+03	7.170E+04	4.518E+02	8.139E+02
26	2	26	27	2	beam	-1.511E+03	3.734E+04	-1.846E+02	-4.519E+02
25	2	25	26	2	beam	8.653E+02	3.661E+04	1.633E+02	1.846E+02
24	2	24	25	2	beam	-6.877E+02	2.209E+04	-1.133E+02	-1.631E+02
23	2	23	24	2	beam	8.893E+02	1.310E+04	3.667E+02	1.137E+02
22	2	22	23	2	beam	-1.168E+03	-4.622E+03	-3.294E+02	-3.667E+02
21	2	21	22	2	beam	2.233E+03	-1.524E+04	1.074E+03	3.293E+02
20	2	20	21	2	beam	-1.815E+03	-1.615E+04	-6.607E+01	-1.074E+03
19	2	19	20	2	beam	2.466E+02	-2.000E+03	8.075E+01	6.622E+01
18	2	18	19	2	beam	-1.867E+01	1.355E+04	7.063E+01	-8.071E+01
17	2	17	18	2	beam	-3.371E+01	2.080E+04	5.712E+01	-7.067E+01
16	2	16	17	2	beam	-6.536E+02	3.680E+04	-2.057E+02	-5.697E+01
15	2	15	16	2	beam	2.041E+03	3.775E+04	6.544E+02	2.056E+02
14	2	14	15	2	beam	-5.610E+03	7.192E+04	-1.709E+03	-6.545E+02
13	2	13	14	2	beam	1.610E+04	4.742E+04	4.763E+03	1.710E+03
12	2	12	13	2	beam	1.999E+04	1.191E+05	3.714E+03	4.322E+03
11	2	11	12	2	beam	2.009E+04	1.056E+05	5.483E+03	5.371E+03
10	2	10	11	2	beam	7.356E+03	1.535E+05	7.824E+02	3.602E+03
9	2	9	10	2	beam	-1.704E+03	1.988E+05	-2.888E+02	-7.822E+02
8	2	8	9	2	beam	3.745E+02	2.018E+05	-5.344E+01	2.888E+02
7	2	7	8	2	beam	-9.566E-01	1.608E+05	-5.389E+01	5.338E+01
6	2	6	7	2	beam	-1.747E+03	1.140E+05	-9.977E+02	5.386E+01
5	2	5	6	2	beam	4.490E+03	1.112E+05	8.070E+02	9.977E+02
4	2	4	5	2	beam	-3.356E+03	5.675E+04	-5.420E+02	-8.069E+02
3	2	3	4	2	beam	2.146E+03	6.081E+04	3.621E+02	5.420E+02
2	2	2	3	2	beam	-9.113E+02	3.770E+04	-2.161E+01	-3.624E+02
1	2	1	2	2	beam	5.369E+01	3.370E+04	4.256E-06	2.158E+01

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	3.78700E-03	1.64000E+11	1.72300E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

set log off

log-file recording stopped 11-Aug-95 14:24

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FLAC log-file opened 11-Aug-95 14:24

From File : flac.ini

>res m27_k2.sav

a following state has been restored:

date	time	step	grid	version
8-Aug-95	11:40	5210	70 X 70	3.22

Title:

>pr stru

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	1.471E-04	1.053E-03	-2.200E-04	no	no	no
47	1.205E+00	-3.614E+00	9.827E-05	1.149E-03	-1.854E-04	no	no	no
46	6.264E-01	-3.758E+00	4.858E-05	1.244E-03	-1.820E-04	no	no	no
45	0.000E+00	-3.810E+00	-1.381E-06	1.316E-03	-5.148E-06	no	no	no
44	-6.264E-01	-3.758E+00	-5.121E-05	1.246E-03	1.846E-04	no	no	no
43	-1.205E+00	-3.614E+00	-1.018E-04	1.148E-03	1.903E-04	no	no	no
42	-1.704E+00	-3.408E+00	-1.500E-04	1.051E-03	2.233E-04	no	no	no
41	-2.053E+00	-3.209E+00	-2.002E-04	9.672E-04	0.000E+00	no	no	no
40	-2.380E+00	-2.975E+00	-2.322E-04	8.653E-04	2.454E-04	no	no	no
39	-2.694E+00	-2.694E+00	-2.714E-04	7.636E-04	2.530E-04	no	no	no
38	-2.975E+00	-2.380E+00	-3.053E-04	6.408E-04	2.296E-04	no	no	no
37	-3.209E+00	-2.053E+00	-3.378E-04	5.396E-04	2.257E-04	no	no	no
36	-3.408E+00	-1.704E+00	-3.693E-04	3.995E-04	2.251E-04	no	no	no
35	-3.614E+00	-1.205E+00	-4.030E-04	2.352E-04	1.420E-04	no	no	no
34	-3.758E+00	-6.264E-01	-4.261E-04	4.360E-05	8.076E-05	no	no	no
33	-3.810E+00	0.000E+00	-4.320E-04	-1.739E-04	1.846E-07	no	no	no
32	-3.758E+00	6.264E-01	-4.255E-04	-3.857E-04	-7.822E-05	no	no	no
31	-3.614E+00	1.205E+00	-4.054E-04	-5.794E-04	-1.387E-04	no	no	no
30	-3.408E+00	1.704E+00	-3.757E-04	-7.400E-04	-2.033E-04	no	no	no
29	-3.209E+00	2.053E+00	-3.455E-04	-8.700E-04	-2.281E-04	no	no	no
28	-2.975E+00	2.380E+00	-3.142E-04	-9.807E-04	-2.318E-04	no	no	no
27	-2.694E+00	2.694E+00	-2.816E-04	-1.095E-03	-2.392E-04	no	no	no
26	-2.380E+00	2.975E+00	-2.404E-04	-1.190E-03	-2.443E-04	no	no	no
25	-2.053E+00	3.209E+00	-2.110E-04	-1.291E-03	-2.330E-04	no	no	no
24	-1.704E+00	3.408E+00	-1.733E-04	-1.369E-03	-2.086E-04	no	no	no
23	-1.205E+00	3.614E+00	-1.329E-04	-1.473E-03	-1.951E-04	no	no	no
22	-6.264E-01	3.758E+00	-7.694E-05	-1.572E-03	-1.697E-04	no	no	no
21	0.000E+00	3.810E+00	-3.057E-06	-1.625E-03	-5.893E-06	no	no	no
20	6.264E-01	3.758E+00	7.174E-05	-1.579E-03	1.653E-04	no	no	no
19	1.205E+00	3.614E+00	1.277E-04	-1.481E-03	1.898E-04	no	no	no
18	1.704E+00	3.408E+00	1.690E-04	-1.380E-03	2.128E-04	no	no	no
17	2.053E+00	3.209E+00	2.081E-04	-1.299E-03	2.350E-04	no	no	no
16	2.380E+00	2.975E+00	2.383E-04	-1.201E-03	2.405E-04	no	no	no
15	2.694E+00	2.694E+00	2.792E-04	-1.101E-03	2.611E-04	no	no	no
14	2.975E+00	2.380E+00	3.120E-04	-9.839E-04	1.841E-04	no	no	no
13	3.209E+00	2.053E+00	3.424E-04	-8.781E-04	3.819E-04	no	no	no
12	3.408E+00	1.704E+00	3.759E-04	-7.407E-04	3.156E-04	no	no	no
11	3.614E+00	1.205E+00	4.059E-04	-5.784E-04	3.482E-04	no	no	no
10	3.758E+00	6.264E-01	4.251E-04	-3.900E-04	1.860E-05	no	no	no
9	3.810E+00	0.000E+00	4.313E-04	-1.730E-04	1.669E-05	no	no	no
8	3.758E+00	-6.264E-01	4.265E-04	4.476E-05	-8.147E-05	no	no	no
7	3.614E+00	-1.205E+00	4.058E-04	2.369E-04	-1.403E-04	no	no	no
6	3.408E+00	-1.704E+00	3.732E-04	4.050E-04	-2.241E-04	no	no	no
5	3.209E+00	-2.053E+00	3.413E-04	5.437E-04	-2.277E-04	no	no	no
4	2.975E+00	-2.380E+00	3.080E-04	6.471E-04	-2.356E-04	no	no	no
3	2.694E+00	-2.694E+00	2.712E-04	7.705E-04	-2.533E-04	no	no	no
2	2.380E+00	-2.975E+00	2.301E-04	8.669E-04	-2.471E-04	no	no	no

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Node	X-load	Y-load	Moment	i	j	Pin	Sh. force	Angle	Bond
1	2.053E+00	-3.209E+00	1.957E-04	9.720E-04	0.000E+00	no	no	no	
48	0.000E+00	0.000E+00	0.000E+00	39	30	no			
47	0.000E+00	0.000E+00	0.000E+00	38	30	no			
46	0.000E+00	0.000E+00	0.000E+00	37	30	no			
45	0.000E+00	0.000E+00	0.000E+00	36	30	no			
44	0.000E+00	0.000E+00	0.000E+00	35	30	no			
43	0.000E+00	0.000E+00	0.000E+00	34	30	no			
42	0.000E+00	0.000E+00	0.000E+00	33	30	no			
41	0.000E+00	-5.870E+01	0.000E+00	33	31	yes			
40	0.000E+00	-1.321E+03	0.000E+00	32	31	no			
39	0.000E+00	-2.925E+03	0.000E+00	32	32	no			
38	0.000E+00	-2.922E+03	0.000E+00	31	32	no			
37	0.000E+00	-1.174E+02	0.000E+00	31	33	no			
36	0.000E+00	-1.375E+02	0.000E+00	30	33	no			
35	0.000E+00	-1.659E+02	0.000E+00	30	34	no			
34	0.000E+00	-1.788E+02	0.000E+00	30	35	no			
33	0.000E+00	-1.835E+02	0.000E+00	30	36	no			
32	0.000E+00	-1.788E+02	0.000E+00	30	37	no			
31	0.000E+00	-1.659E+02	0.000E+00	30	38	no			
30	0.000E+00	-1.375E+02	0.000E+00	30	39	no			
29	0.000E+00	-1.174E+02	0.000E+00	31	39	no			
28	0.000E+00	-1.202E+02	0.000E+00	31	40	no			
27	0.000E+00	-1.230E+02	0.000E+00	32	40	no			
26	0.000E+00	-1.202E+02	0.000E+00	32	41	no			
25	0.000E+00	-5.366E+03	0.000E+00	33	41	no			
24	0.000E+00	-1.375E+02	0.000E+00	33	42	no			
23	0.000E+00	-1.659E+02	0.000E+00	34	42	no			
22	0.000E+00	-1.788E+02	0.000E+00	35	42	no			
21	0.000E+00	-1.041E+04	0.000E+00	36	42	no			
20	0.000E+00	-1.788E+02	0.000E+00	37	42	no			
19	0.000E+00	-1.659E+02	0.000E+00	38	42	no			
18	0.000E+00	-1.375E+02	0.000E+00	39	42	no			
17	0.000E+00	-5.366E+03	0.000E+00	39	41	no			
16	0.000E+00	-1.202E+02	0.000E+00	40	41	no			
15	0.000E+00	-1.230E+02	0.000E+00	40	40	no			
14	0.000E+00	-1.202E+02	0.000E+00	41	40	no			
13	0.000E+00	-1.511E+04	9.085E+03	41	39	no			
12	0.000E+00	-1.513E+04	9.085E+03	42	39	no			
11	0.000E+00	-1.516E+04	9.085E+03	42	38	no			
10	0.000E+00	-1.788E+02	0.000E+00	42	37	no			
9	0.000E+00	-1.835E+02	0.000E+00	42	36	no			
8	0.000E+00	-1.788E+02	0.000E+00	42	35	no			
7	0.000E+00	-1.659E+02	0.000E+00	42	34	no			
6	0.000E+00	-1.375E+02	0.000E+00	42	33	no			
5	0.000E+00	-1.174E+02	0.000E+00	41	33	no			
4	0.000E+00	-1.202E+02	0.000E+00	41	32	no			
3	0.000E+00	-1.230E+02	0.000E+00	40	32	no			
2	0.000E+00	-1.202E+02	0.000E+00	40	31	no			
1	0.000E+00	-5.870E+01	0.000E+00	39	31	yes			

Structural element data ...

Elem	ID	Nod1	Nod2	Prop	F-shear	F-axial	Mom-1	Mom-2	
48	1	46	1	3	beam	2.040E+04	-2.092E+04	3.201E+03	2.263E-05
47	1	47	48	3	beam	-1.491E+04	-1.307E+05	1.464E+02	-8.202E+03
46	1	46	47	3	beam	7.590E+02	-3.389E+05	5.993E+02	-1.469E+02
45	1	45	46	3	beam	5.638E+04	-6.023E+05	3.603E+04	-5.970E+02
44	1	44	45	3	beam	-5.213E+04	-6.055E+05	3.265E+03	-3.603E+04
43	1	43	44	3	beam	-8.864E+03	-3.460E+05	-2.018E+03	-3.266E+03
42	1	42	43	3	beam	2.221E+04	-1.157E+05	9.979E+03	2.019E+03

41	1	41	42	3	beam	-2.483E+04	-2.027E+04	5.002E-04	-9.979E+03
40	2	40	41	2	beam	-8.040E+02	5.721E+04	-3.232E+02	-1.031E-05
39	2	39	40	2	beam	1.776E+03	5.546E+04	4.253E+02	3.233E+02
38	2	38	39	2	beam	-2.762E+03	1.014E+05	-7.386E+02	-4.251E+02
37	2	37	38	2	beam	3.538E+03	9.945E+04	6.833E+02	7.387E+02
36	2	36	37	2	beam	-3.423E+03	1.639E+05	-6.922E+02	-6.836E+02
35	2	35	36	2	beam	9.537E+02	1.580E+05	-1.770E+02	6.922E+02
34	2	34	35	2	beam	-3.798E+02	1.910E+05	-4.034E+02	1.770E+02
33	2	33	34	2	beam	1.309E+02	2.150E+05	-3.211E+02	4.034E+02
32	2	32	33	2	beam	-9.939E+01	2.089E+05	-3.837E+02	3.213E+02
31	2	31	32	2	beam	3.250E+02	1.916E+05	-1.901E+02	3.838E+02
30	2	30	31	2	beam	-5.466E+02	1.594E+05	-4.852E+02	1.900E+02
29	2	29	30	2	beam	1.542E+03	1.496E+05	1.352E+02	4.847E+02
28	2	28	29	2	beam	-8.025E+02	1.128E+05	-1.872E+02	-1.353E+02
27	2	27	28	2	beam	6.548E+02	9.421E+04	8.851E+01	1.874E+02
26	2	26	27	2	beam	-5.823E+02	4.904E+04	-1.568E+02	-8.852E+01
25	2	25	26	2	beam	1.176E+03	5.298E+04	3.162E+02	1.566E+02
24	2	24	25	2	beam	-7.169E+02	9.906E+03	2.739E+01	-3.155E+02
23	2	23	24	2	beam	1.614E+02	2.604E+03	1.139E+02	-2.671E+01
22	2	22	23	2	beam	2.263E+01	-3.238E+04	1.275E+02	-1.140E+02
21	2	21	22	2	beam	1.937E+03	-6.791E+04	1.345E+03	-1.277E+02
20	2	20	21	2	beam	-1.831E+03	-6.873E+04	1.944E+02	-1.345E+03
19	2	19	20	2	beam	-2.616E+02	-3.249E+04	3.805E+01	-1.940E+02
18	2	18	19	2	beam	3.055E+02	2.172E+02	2.031E+02	-3.810E+01
17	2	17	18	2	beam	-2.330E+02	9.407E+03	1.094E+02	-2.030E+02
16	2	16	17	2	beam	-3.534E+02	4.982E+04	-3.300E+01	-1.090E+02
15	2	15	16	2	beam	8.122E+02	5.474E+04	3.092E+02	3.303E+01
14	2	14	15	2	beam	-3.921E+03	9.601E+04	-1.342E+03	-3.100E+02
13	2	13	14	2	beam	1.360E+04	1.083E+05	4.123E+03	1.342E+03
12	2	12	13	2	beam	2.237E+04	1.593E+05	4.030E+03	4.962E+03
11	2	11	12	2	beam	1.935E+04	1.582E+05	5.396E+03	5.055E+03
10	2	10	11	2	beam	7.133E+03	1.881E+05	5.633E+02	3.688E+03
9	2	9	10	2	beam	-1.820E+03	2.132E+05	-5.804E+02	-5.632E+02
8	2	8	9	2	beam	4.418E+02	2.150E+05	-3.025E+02	5.802E+02
7	2	7	8	2	beam	7.897E+01	1.913E+05	-2.555E+02	3.025E+02
6	2	6	7	2	beam	-6.758E+02	1.645E+05	-6.205E+02	2.554E+02
5	2	5	6	2	beam	2.958E+03	1.620E+05	5.687E+02	6.204E+02
4	2	4	5	2	beam	-3.103E+03	1.013E+05	-6.789E+02	-5.686E+02
3	2	3	4	2	beam	2.658E+03	9.849E+04	4.412E+02	6.787E+02
2	2	2	3	2	beam	-1.897E+03	4.989E+04	-3.584E+02	-4.412E+02
1	2	1	2	2	beam	8.914E+02	5.366E+04	2.011E-05	3.583E+02

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	3.78700E-03	1.64000E+11	1.72300E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

set log off

log-file recording stopped 11-Aug-95 14:24

Title: ESF Ground Support - Structural Steel Analysis

STATION: TSW2 @ 34+00

LOADING: STATIC: DL+UTIL

STEEL SET: W6X20 @ 4'-0" O.C.

FLAC log-file opened 11-Aug-95 14:24

From File : flac.ini

>res m34_k2.sav

a following state has been restored:

date	time	step	grid	version
8-Aug-95	12:04	5210	70 X 70	3.22

Title:

>pr stru

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	1.441E-04	1.093E-03	-2.515E-04	no	no	no
47	1.205E+00	-3.614E+00	8.922E-05	1.211E-03	-2.180E-04	no	no	no
46	6.264E-01	-3.758E+00	3.737E-05	1.303E-03	-1.049E-04	no	no	no
45	0.000E+00	-3.810E+00	-9.367E-06	1.315E-03	5.615E-05	no	no	no
44	-6.264E-01	-3.758E+00	-5.336E-05	1.242E-03	1.727E-04	no	no	no
43	-1.205E+00	-3.614E+00	-1.013E-04	1.126E-03	2.243E-04	no	no	no
42	-1.704E+00	-3.408E+00	-1.504E-04	1.015E-03	2.292E-04	no	no	no
41	-2.053E+00	-3.209E+00	-1.957E-04	9.329E-04	0.000E+00	no	no	no
40	-2.380E+00	-2.975E+00	-2.288E-04	8.273E-04	2.504E-04	no	no	no
39	-2.694E+00	-2.694E+00	-2.722E-04	7.278E-04	2.598E-04	no	no	no
38	-2.975E+00	-2.380E+00	-3.116E-04	6.053E-04	2.408E-04	no	no	no
37	-3.209E+00	-2.053E+00	-3.474E-04	5.012E-04	2.347E-04	no	no	no
36	-3.408E+00	-1.704E+00	-3.809E-04	3.642E-04	2.253E-04	no	no	no
35	-3.614E+00	-1.205E+00	-4.145E-04	1.979E-04	1.430E-04	no	no	no
34	-3.758E+00	-6.264E-01	-4.375E-04	3.843E-06	8.348E-05	no	no	no
33	-3.810E+00	0.000E+00	-4.478E-04	-2.182E-04	1.055E-05	no	no	no
32	-3.758E+00	6.264E-01	-4.467E-04	-4.435E-04	-7.992E-05	no	no	no
31	-3.614E+00	1.205E+00	-4.261E-04	-6.486E-04	-1.423E-04	no	no	no
30	-3.408E+00	1.704E+00	-3.959E-04	-8.148E-04	-2.228E-04	no	no	no
29	-3.209E+00	2.053E+00	-3.625E-04	-9.615E-04	-2.501E-04	no	no	no
28	-2.975E+00	2.380E+00	-3.302E-04	-1.078E-03	-2.390E-04	no	no	no
27	-2.694E+00	2.694E+00	-2.988E-04	-1.200E-03	-2.488E-04	no	no	no
26	-2.380E+00	2.975E+00	-2.598E-04	-1.306E-03	-2.692E-04	no	no	no
25	-2.053E+00	3.209E+00	-2.304E-04	-1.426E-03	-2.737E-04	no	no	no
24	-1.704E+00	3.408E+00	-1.911E-04	-1.518E-03	-2.336E-04	no	no	no
23	-1.205E+00	3.614E+00	-1.501E-04	-1.634E-03	-2.366E-04	no	no	no
22	-6.264E-01	3.758E+00	-8.510E-05	-1.766E-03	-1.968E-04	no	no	no
21	0.000E+00	3.810E+00	-4.011E-06	-1.816E-03	-1.336E-05	no	no	no
20	6.264E-01	3.758E+00	7.888E-05	-1.781E-03	1.803E-04	no	no	no
19	1.205E+00	3.614E+00	1.471E-04	-1.655E-03	2.347E-04	no	no	no
18	1.704E+00	3.408E+00	1.917E-04	-1.540E-03	2.352E-04	no	no	no
17	2.053E+00	3.209E+00	2.317E-04	-1.448E-03	2.809E-04	no	no	no
16	2.380E+00	2.975E+00	2.620E-04	-1.322E-03	2.786E-04	no	no	no
15	2.694E+00	2.694E+00	3.002E-04	-1.208E-03	2.763E-04	no	no	no
14	2.975E+00	2.380E+00	3.307E-04	-1.077E-03	1.947E-04	no	no	no
13	3.209E+00	2.053E+00	3.616E-04	-9.651E-04	4.023E-04	no	no	no
12	3.408E+00	1.704E+00	3.973E-04	-8.086E-04	3.370E-04	no	no	no
11	3.614E+00	1.205E+00	4.258E-04	-6.364E-04	3.487E-04	no	no	no
10	3.758E+00	6.264E-01	4.429E-04	-4.344E-04	1.812E-05	no	no	no
9	3.810E+00	0.000E+00	4.452E-04	-2.059E-04	1.093E-05	no	no	no
8	3.758E+00	-6.264E-01	4.380E-04	2.091E-05	-8.338E-05	no	no	no
7	3.614E+00	-1.205E+00	4.184E-04	2.197E-04	-1.439E-04	no	no	no
6	3.408E+00	-1.704E+00	3.850E-04	3.931E-04	-2.294E-04	no	no	no
5	3.209E+00	-2.053E+00	3.507E-04	5.349E-04	-2.441E-04	no	no	no
4	2.975E+00	-2.380E+00	3.145E-04	6.493E-04	-2.620E-04	no	no	no
3	2.694E+00	-2.694E+00	2.754E-04	7.863E-04	-2.745E-04	no	no	no
2	2.380E+00	-2.975E+00	2.328E-04	8.923E-04	-2.647E-04	no	no	no

Title: ESF Ground Support - Structural Steel Analysis

Node	1	2.053E+00	-3.209E+00	1.962E-04	1.005E-03	0.000E+00	no	no	no
		X-load	Y-load	Moment	i j Pin	Sh. force	Angle	Bond	
48	0.000E+00	0.000E+00	0.000E+00	0.000E+00	39 30 no				
47	0.000E+00	0.000E+00	0.000E+00	0.000E+00	38 30 no				
46	0.000E+00	0.000E+00	0.000E+00	0.000E+00	37 30 no				
45	0.000E+00	0.000E+00	0.000E+00	0.000E+00	36 30 no				
44	0.000E+00	0.000E+00	0.000E+00	0.000E+00	35 30 no				
43	0.000E+00	0.000E+00	0.000E+00	0.000E+00	34 30 no				
42	0.000E+00	0.000E+00	0.000E+00	0.000E+00	33 30 no				
41	0.000E+00	-5.870E+01	0.000E+00	0.000E+00	33 31 yes				
40	0.000E+00	-1.321E+03	0.000E+00	0.000E+00	32 31 no				
39	0.000E+00	-2.925E+03	0.000E+00	0.000E+00	32 32 no				
38	0.000E+00	-2.922E+03	0.000E+00	0.000E+00	31 32 no				
37	0.000E+00	-1.174E+02	0.000E+00	0.000E+00	31 33 no				
36	0.000E+00	-1.375E+02	0.000E+00	0.000E+00	30 33 no				
35	0.000E+00	-1.659E+02	0.000E+00	0.000E+00	30 34 no				
34	0.000E+00	-1.788E+02	0.000E+00	0.000E+00	30 35 no				
33	0.000E+00	-1.835E+02	0.000E+00	0.000E+00	30 36 no				
32	0.000E+00	-1.788E+02	0.000E+00	0.000E+00	30 37 no				
31	0.000E+00	-1.659E+02	0.000E+00	0.000E+00	30 38 no				
30	0.000E+00	-1.375E+02	0.000E+00	0.000E+00	30 39 no				
29	0.000E+00	-1.174E+02	0.000E+00	0.000E+00	31 39 no				
28	0.000E+00	-1.202E+02	0.000E+00	0.000E+00	31 40 no				
27	0.000E+00	-1.230E+02	0.000E+00	0.000E+00	32 40 no				
26	0.000E+00	-1.202E+02	0.000E+00	0.000E+00	32 41 no				
25	0.000E+00	-5.366E+03	0.000E+00	0.000E+00	33 41 no				
24	0.000E+00	-1.375E+02	0.000E+00	0.000E+00	33 42 no				
23	0.000E+00	-1.659E+02	0.000E+00	0.000E+00	34 42 no				
22	0.000E+00	-1.788E+02	0.000E+00	0.000E+00	35 42 no				
21	0.000E+00	-1.041E+04	0.000E+00	0.000E+00	36 42 no				
20	0.000E+00	-1.788E+02	0.000E+00	0.000E+00	37 42 no				
19	0.000E+00	-1.659E+02	0.000E+00	0.000E+00	38 42 no				
18	0.000E+00	-1.375E+02	0.000E+00	0.000E+00	39 42 no				
17	0.000E+00	-5.366E+03	0.000E+00	0.000E+00	39 41 no				
16	0.000E+00	-1.202E+02	0.000E+00	0.000E+00	40 41 no				
15	0.000E+00	-1.230E+02	0.000E+00	0.000E+00	40 40 no				
14	0.000E+00	-1.202E+02	0.000E+00	0.000E+00	41 40 no				
13	0.000E+00	-1.511E+04	9.085E+03	0.000E+00	41 39 no				
12	0.000E+00	-1.513E+04	9.085E+03	0.000E+00	42 39 no				
11	0.000E+00	-1.516E+04	9.085E+03	0.000E+00	42 38 no				
10	0.000E+00	-1.788E+02	0.000E+00	0.000E+00	42 37 no				
9	0.000E+00	-1.835E+02	0.000E+00	0.000E+00	42 36 no				
8	0.000E+00	-1.788E+02	0.000E+00	0.000E+00	42 35 no				
7	0.000E+00	-1.659E+02	0.000E+00	0.000E+00	42 34 no				
6	0.000E+00	-1.375E+02	0.000E+00	0.000E+00	42 33 no				
5	0.000E+00	-1.174E+02	0.000E+00	0.000E+00	41 33 no				
4	0.000E+00	-1.202E+02	0.000E+00	0.000E+00	41 32 no				
3	0.000E+00	-1.230E+02	0.000E+00	0.000E+00	40 32 no				
2	0.000E+00	-1.202E+02	0.000E+00	0.000E+00	40 31 no				
1	0.000E+00	-5.870E+01	0.000E+00	0.000E+00	39 31 yes				

Structural element data ...

Elem	ID	Nod1	Nod2	Prop	F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3 beam	8.100E+03	-2.764E+04	3.256E+03	7.747E-04
47	1	47	48	3 beam	2.901E+03	-9.395E+04	4.826E+03	-3.259E+03
46	1	46	47	3 beam	2.527E+04	-3.998E+05	1.988E+04	-4.823E+03
45	1	45	46	3 beam	-1.021E+04	-5.963E+05	1.347E+04	-1.988E+04
44	1	44	45	3 beam	-4.449E+03	-5.213E+05	1.067E+04	-1.347E+04
43	1	43	44	3 beam	-1.692E+04	-2.766E+05	5.904E+02	-1.067E+04
42	1	42	43	3 beam	-7.777E+00	-3.478E+04	5.865E+02	-5.907E+02

41	1	41	42	3	beam	-1.458E+03	2.165E+04	7.710E-04	-5.860E+02
40	2	40	41	2	beam	-5.700E+02	5.361E+04	-2.291E+02	-3.635E-05
39	2	39	40	2	beam	1.387E+03	4.903E+04	3.556E+02	2.291E+02
38	2	38	39	2	beam	-2.292E+03	9.586E+04	-6.101E+02	-3.556E+02
37	2	37	38	2	beam	2.820E+03	1.013E+05	5.232E+02	6.102E+02
36	2	36	37	2	beam	-2.929E+03	1.580E+05	-6.544E+02	-5.231E+02
35	2	35	36	2	beam	8.277E+02	1.643E+05	-2.072E+02	6.543E+02
34	2	34	35	2	beam	-2.513E+02	1.906E+05	-3.570E+02	2.072E+02
33	2	33	34	2	beam	9.230E+01	2.188E+05	-2.989E+02	3.569E+02
32	2	32	33	2	beam	-3.434E+02	2.216E+05	-5.147E+02	2.988E+02
31	2	31	32	2	beam	7.353E+02	2.033E+05	-7.644E+01	5.147E+02
30	2	30	31	2	beam	-1.277E+03	1.658E+05	-7.661E+02	7.643E+01
29	2	29	30	2	beam	2.856E+03	1.692E+05	3.818E+02	7.661E+02
28	2	28	29	2	beam	-1.511E+03	1.193E+05	-2.254E+02	-3.818E+02
27	2	27	28	2	beam	7.603E+02	1.033E+05	9.480E+01	2.256E+02
26	2	26	27	2	beam	-1.102E+03	6.191E+04	-3.696E+02	-9.480E+01
25	2	25	26	2	beam	1.682E+03	6.779E+04	3.071E+02	3.691E+02
24	2	24	25	2	beam	-1.284E+02	2.115E+04	2.557E+02	-3.073E+02
23	2	23	24	2	beam	-1.004E+03	7.381E+03	-2.868E+02	-2.554E+02
22	2	22	23	2	beam	1.597E+03	-3.367E+04	6.648E+02	2.869E+02
21	2	21	22	2	beam	5.079E+02	-7.529E+04	9.842E+02	-6.650E+02
20	2	20	21	2	beam	-3.605E+02	-7.864E+04	7.576E+02	-9.842E+02
19	2	19	20	2	beam	-1.676E+03	-3.736E+04	-2.417E+02	-7.574E+02
18	2	18	19	2	beam	9.033E+02	2.939E+03	2.462E+02	2.417E+02
17	2	17	18	2	beam	3.743E+02	2.034E+04	3.968E+02	-2.464E+02
16	2	16	17	2	beam	-2.058E+03	7.131E+04	-4.299E+02	-3.972E+02
15	2	15	16	2	beam	1.970E+03	7.185E+04	4.001E+02	4.301E+02
14	2	14	15	2	beam	-4.496E+03	1.123E+05	-1.495E+03	-4.000E+02
13	2	13	14	2	beam	1.470E+04	1.160E+05	4.413E+03	1.495E+03
12	2	12	13	2	beam	2.096E+04	1.813E+05	3.754E+03	4.672E+03
11	2	11	12	2	beam	1.996E+04	1.709E+05	5.453E+03	5.331E+03
10	2	10	11	2	beam	6.930E+03	2.010E+05	4.982E+02	3.632E+03
9	2	9	10	2	beam	-1.688E+03	2.261E+05	-5.629E+02	-4.982E+02
8	2	8	9	2	beam	4.418E+02	2.240E+05	-2.852E+02	5.628E+02
7	2	7	8	2	beam	-6.844E+00	1.970E+05	-2.892E+02	2.851E+02
6	2	6	7	2	beam	-5.833E+02	1.696E+05	-6.045E+02	2.894E+02
5	2	5	6	2	beam	2.494E+03	1.649E+05	3.982E+02	6.045E+02
4	2	4	5	2	beam	-2.612E+03	1.123E+05	-6.513E+02	-3.985E+02
3	2	3	4	2	beam	2.694E+03	1.078E+05	4.841E+02	6.513E+02
2	2	2	3	2	beam	-1.984E+03	5.906E+04	-3.522E+02	-4.838E+02
1	2	1	2	2	beam	8.765E+02	5.838E+04	-4.022E-05	3.523E+02

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	3.78700E-03	1.64000E+11	1.72300E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

Set log off

log-file recording stopped 11-Aug-95 14:24

Title: ESF Ground Support - Structural Steel Analysis

FLAC log-file opened 11-Aug-95 14:24

From File : flac.ini

>res m53_k2.sav

following state has been restored:

	date	time	step
	8-Aug-95	12:27	5210

STATION: TSW2 @ 53+00

LOADING: STATIC: DL+UTIL

STEEL SET: W6X20 @ 4'-0" O.C.

grid	version
70 X 70	3.22

Title:

>pr stru

Structural node data ...

Node	X	Y	X-disp	Y-disp	Ang-disp	Xfix	Yfix	Rfix
48	1.704E+00	-3.408E+00	1.438E-04	1.062E-03	-2.145E-04	no	no	no
47	1.205E+00	-3.614E+00	9.692E-05	1.155E-03	-1.794E-04	no	no	no
46	6.264E-01	-3.758E+00	4.759E-05	1.248E-03	-1.781E-04	no	no	no
45	0.000E+00	-3.810E+00	-1.428E-06	1.317E-03	-3.590E-06	no	no	no
44	-6.264E-01	-3.758E+00	-4.986E-05	1.249E-03	1.794E-04	no	no	no
43	-1.205E+00	-3.614E+00	-9.957E-05	1.153E-03	1.875E-04	no	no	no
42	-1.704E+00	-3.408E+00	-1.479E-04	1.058E-03	2.174E-04	no	no	no
41	-2.053E+00	-3.209E+00	-1.957E-04	9.785E-04	0.000E+00	no	no	no
40	-2.380E+00	-2.975E+00	-2.295E-04	8.741E-04	2.503E-04	no	no	no
39	-2.694E+00	-2.694E+00	-2.722E-04	7.758E-04	2.579E-04	no	no	no
38	-2.975E+00	-2.380E+00	-3.079E-04	6.525E-04	2.296E-04	no	no	no
37	-3.209E+00	-2.053E+00	-3.415E-04	5.516E-04	2.304E-04	no	no	no
36	-3.408E+00	-1.704E+00	-3.735E-04	4.089E-04	2.289E-04	no	no	no
35	-3.614E+00	-1.205E+00	-4.063E-04	2.401E-04	1.418E-04	no	no	no
34	-3.758E+00	-6.264E-01	-4.276E-04	4.756E-05	7.668E-05	no	no	no
33	-3.810E+00	0.000E+00	-4.312E-04	-1.696E-04	-2.761E-06	no	no	no
32	-3.758E+00	6.264E-01	-4.244E-04	-3.857E-04	-7.753E-05	no	no	no
31	-3.614E+00	1.205E+00	-4.057E-04	-5.749E-04	-1.320E-04	no	no	no
30	-3.408E+00	1.704E+00	-3.771E-04	-7.346E-04	-2.082E-04	no	no	no
29	-3.209E+00	2.053E+00	-3.468E-04	-8.693E-04	-2.305E-04	no	no	no
28	-2.975E+00	2.380E+00	-3.163E-04	-9.797E-04	-2.330E-04	no	no	no
27	-2.694E+00	2.694E+00	-2.843E-04	-1.100E-03	-2.420E-04	no	no	no
26	-2.380E+00	2.975E+00	-2.494E-04	-1.202E-03	-2.508E-04	no	no	no
25	-2.053E+00	3.209E+00	-2.212E-04	-1.312E-03	-2.670E-04	no	no	no
24	-1.704E+00	3.408E+00	-1.797E-04	-1.406E-03	-2.440E-04	no	no	no
23	-1.205E+00	3.614E+00	-1.365E-04	-1.525E-03	-2.159E-04	no	no	no
22	-6.264E-01	3.758E+00	-7.162E-05	-1.627E-03	-1.536E-04	no	no	no
21	0.000E+00	3.810E+00	4.960E-06	-1.662E-03	1.159E-05	no	no	no
20	6.264E-01	3.758E+00	7.839E-05	-1.614E-03	1.725E-04	no	no	no
19	1.205E+00	3.614E+00	1.344E-04	-1.505E-03	1.924E-04	no	no	no
18	1.704E+00	3.408E+00	1.734E-04	-1.408E-03	2.102E-04	no	no	no
17	2.053E+00	3.209E+00	2.148E-04	-1.323E-03	2.586E-04	no	no	no
16	2.380E+00	2.975E+00	2.428E-04	-1.216E-03	2.387E-04	no	no	no
15	2.694E+00	2.694E+00	2.788E-04	-1.121E-03	2.435E-04	no	no	no
14	2.975E+00	2.380E+00	3.112E-04	-1.006E-03	1.859E-04	no	no	no
13	3.209E+00	2.053E+00	3.430E-04	-8.999E-04	3.888E-04	no	no	no
12	3.408E+00	1.704E+00	3.774E-04	-7.562E-04	3.217E-04	no	no	no
11	3.614E+00	1.205E+00	4.080E-04	-5.928E-04	3.521E-04	no	no	no
10	3.758E+00	6.264E-01	4.282E-04	-3.959E-04	1.997E-05	no	no	no
9	3.810E+00	0.000E+00	4.323E-04	-1.759E-04	1.473E-05	no	no	no
8	3.758E+00	-6.264E-01	4.279E-04	4.273E-05	-8.171E-05	no	no	no
7	3.614E+00	-1.205E+00	4.073E-04	2.405E-04	-1.425E-04	no	no	no
6	3.408E+00	-1.704E+00	3.748E-04	4.123E-04	-2.302E-04	no	no	no
5	3.209E+00	-2.053E+00	3.420E-04	5.559E-04	-2.359E-04	no	no	no
4	2.975E+00	-2.380E+00	3.062E-04	6.585E-04	-2.384E-04	no	no	no
3	2.694E+00	-2.694E+00	2.691E-04	7.832E-04	-2.534E-04	no	no	no
2	2.380E+00	-2.975E+00	2.275E-04	8.779E-04	-2.464E-04	no	no	no

Title: ESF Ground Support - Structural Steel Analysis

Node	1	2.053E+00	-3.209E+00	1.922E-04	9.834E-04	0.000E+00	no	no	no
		X-load	Y-load	Moment	i j Pin	Sh. force	Angle	Bond	
48		0.000E+00	0.000E+00	0.000E+00	39 30 no				
47		0.000E+00	0.000E+00	0.000E+00	38 30 no				
46		0.000E+00	0.000E+00	0.000E+00	37 30 no				
45		0.000E+00	0.000E+00	0.000E+00	36 30 no				
44		0.000E+00	0.000E+00	0.000E+00	35 30 no				
43		0.000E+00	0.000E+00	0.000E+00	34 30 no				
42		0.000E+00	0.000E+00	0.000E+00	33 30 no				
41		0.000E+00	-5.870E+01	0.000E+00	33 31 yes				
40		0.000E+00	-1.321E+03	0.000E+00	32 31 no				
39		0.000E+00	-2.925E+03	0.000E+00	32 32 no				
38		0.000E+00	-2.922E+03	0.000E+00	31 32 no				
37		0.000E+00	-1.174E+02	0.000E+00	31 33 no				
36		0.000E+00	-1.375E+02	0.000E+00	30 33 no				
35		0.000E+00	-1.659E+02	0.000E+00	30 34 no				
34		0.000E+00	-1.788E+02	0.000E+00	30 35 no				
33		0.000E+00	-1.835E+02	0.000E+00	30 36 no				
32		0.000E+00	-1.788E+02	0.000E+00	30 37 no				
31		0.000E+00	-1.659E+02	0.000E+00	30 38 no				
30		0.000E+00	-1.375E+02	0.000E+00	30 39 no				
29		0.000E+00	-1.174E+02	0.000E+00	31 39 no				
28		0.000E+00	-1.202E+02	0.000E+00	31 40 no				
27		0.000E+00	-1.230E+02	0.000E+00	32 40 no				
26		0.000E+00	-1.202E+02	0.000E+00	32 41 no				
25		0.000E+00	-5.366E+03	0.000E+00	33 41 no				
24		0.000E+00	-1.375E+02	0.000E+00	33 42 no				
23		0.000E+00	-1.659E+02	0.000E+00	34 42 no				
22		0.000E+00	-1.788E+02	0.000E+00	35 42 no				
21		0.000E+00	-1.041E+04	0.000E+00	36 42 no				
20		0.000E+00	-1.788E+02	0.000E+00	37 42 no				
19		0.000E+00	-1.659E+02	0.000E+00	38 42 no				
18		0.000E+00	-1.375E+02	0.000E+00	39 42 no				
17		0.000E+00	-5.366E+03	0.000E+00	39 41 no				
16		0.000E+00	-1.202E+02	0.000E+00	40 41 no				
15		0.000E+00	-1.230E+02	0.000E+00	40 40 no				
14		0.000E+00	-1.202E+02	0.000E+00	41 40 no				
13		0.000E+00	-1.511E+04	9.085E+03	41 39 no				
12		0.000E+00	-1.513E+04	9.085E+03	42 39 no				
11		0.000E+00	-1.516E+04	9.085E+03	42 38 no				
10		0.000E+00	-1.788E+02	0.000E+00	42 37 no				
9		0.000E+00	-1.835E+02	0.000E+00	42 36 no				
8		0.000E+00	-1.788E+02	0.000E+00	42 35 no				
7		0.000E+00	-1.659E+02	0.000E+00	42 34 no				
6		0.000E+00	-1.375E+02	0.000E+00	42 33 no				
5		0.000E+00	-1.174E+02	0.000E+00	41 33 no				
4		0.000E+00	-1.202E+02	0.000E+00	41 32 no				
3		0.000E+00	-1.230E+02	0.000E+00	40 32 no				
2		0.000E+00	-1.202E+02	0.000E+00	40 31 no				
1		0.000E+00	-5.870E+01	0.000E+00	39 31 yes				

Structural element data ...

Elem	ID	Nod1	Nod2	Prop	F-shear	F-axial	Mom-1	Mom-2
48	1	48	1	3 beam	2.058E+04	-2.727E+04	8.271E+03	-9.727E-04
47	1	47	48	3 beam	-1.499E+04	-1.365E+05	1.723E+02	-8.271E+03
46	1	46	47	3 beam	-7.394E+01	-3.360E+05	1.271E+02	-1.711E+02
45	1	45	46	3 beam	5.710E+04	-5.907E+05	3.601E+04	-1.274E+02
44	1	44	45	3 beam	-5.430E+04	-5.918E+05	1.884E+03	-3.601E+04
43	1	43	44	3 beam	-3.358E+03	-3.295E+05	-1.156E+02	-1.886E+03
42	1	42	43	3 beam	1.376E+04	-1.333E+05	7.317E+03	1.129E+02

Title: ESF Ground Support - Structural Steel Analysis

41	1	41	42	3	beam	-1.820E+04	-1.464E+04	-5.853E-04	-7.317E+03
40	2	40	41	2	beam	-4.445E+02	5.212E+04	-1.786E+02	-3.660E-05
39	2	39	40	2	beam	1.091E+03	5.117E+04	2.812E+02	1.787E+02
38	2	38	39	2	beam	-2.235E+03	9.969E+04	-6.605E+02	-2.812E+02
37	2	37	38	2	beam	3.314E+03	9.885E+04	6.717E+02	6.603E+02
36	2	36	37	2	beam	-3.398E+03	1.671E+05	-6.938E+02	-6.718E+02
35	2	35	36	2	beam	8.822E+02	1.656E+05	-2.172E+02	6.938E+02
34	2	34	35	2	beam	-3.065E+02	1.909E+05	-4.000E+02	2.173E+02
33	2	33	34	2	beam	1.363E+02	2.143E+05	-3.143E+02	4.000E+02
32	2	32	33	2	beam	-6.954E+01	2.128E+05	-3.580E+02	3.143E+02
31	2	31	32	2	beam	3.341E+02	1.884E+05	-1.589E+02	3.580E+02
30	2	30	31	2	beam	-8.863E+02	1.579E+05	-6.376E+02	1.589E+02
29	2	29	30	2	beam	2.392E+03	1.559E+05	3.239E+02	6.377E+02
28	2	28	29	2	beam	-1.700E+03	1.141E+05	-3.594E+02	-3.241E+02
27	2	27	28	2	beam	1.420E+03	9.885E+04	2.388E+02	3.594E+02
26	2	26	27	2	beam	-1.412E+03	6.172E+04	-3.562E+02	-2.387E+02
25	2	25	26	2	beam	1.203E+03	6.485E+04	1.276E+02	3.559E+02
24	2	24	25	2	beam	1.680E+02	1.744E+04	1.951E+02	-1.276E+02
23	2	23	24	2	beam	-1.768E+02	5.300E+03	9.929E+01	-1.948E+02
22	2	22	23	2	beam	6.576E+02	-3.989E+04	4.914E+02	-9.946E+01
21	2	21	22	2	beam	7.998E+02	-7.235E+04	9.941E+02	-4.914E+02
20	2	20	21	2	beam	-8.607E+02	-6.711E+04	4.530E+02	-9.940E+02
19	2	19	20	2	beam	-1.204E+03	-3.067E+04	-2.647E+02	-4.531E+02
18	2	18	19	2	beam	1.325E+03	-2.179E+02	4.511E+02	2.644E+02
17	2	17	18	2	beam	-5.508E+02	1.195E+04	2.297E+02	-4.511E+02
16	2	16	17	2	beam	-1.835E+03	6.147E+04	-5.089E+02	-2.287E+02
15	2	15	16	2	beam	2.566E+03	5.255E+04	5.725E+02	5.089E+02
14	2	14	15	2	beam	-4.552E+03	9.505E+04	-1.345E+03	-5.734E+02
13	2	13	14	2	beam	1.379E+04	1.088E+05	4.197E+03	1.345E+03
12	2	12	13	2	beam	2.198E+04	1.633E+05	3.945E+03	4.888E+03
11	2	11	12	2	beam	1.962E+04	1.608E+05	5.458E+03	5.140E+03
10	2	10	11	2	beam	6.887E+03	1.965E+05	4.777E+02	3.627E+03
9	2	9	10	2	beam	-1.595E+03	2.166E+05	-5.247E+02	-4.776E+02
8	2	8	9	2	beam	2.900E+02	2.152E+05	-3.425E+02	5.247E+02
7	2	7	8	2	beam	1.814E+02	1.963E+05	-2.343E+02	3.424E+02
6	2	6	7	2	beam	-8.307E+02	1.690E+05	-6.830E+02	2.342E+02
5	2	5	6	2	beam	3.200E+03	1.672E+05	6.034E+02	6.830E+02
4	2	4	5	2	beam	-3.090E+03	1.003E+05	-6.388E+02	-6.032E+02
3	2	3	4	2	beam	2.554E+03	9.902E+04	4.372E+02	6.389E+02
2	2	2	3	2	beam	-1.851E+03	4.919E+04	-3.426E+02	-4.373E+02
1	2	1	2	2	beam	8.523E+02	5.076E+04	-2.051E-05	3.426E+02

Structural Properties ...

Prop Num.	Area	E	I	Dynamic Density	Plastic Moment
3	3.04800E-01	2.75800E+10	2.36000E-03	0.00000E+00	Not Set
2	3.78700E-03	1.64000E+11	1.72300E-05	0.00000E+00	Not Set
Prop. Num.	Cable Bond Stiffness	Cable Bond Strength	Yield Strength	Compressive Yield	Support Stiffness
3	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

set log off

log-file recording stopped 11-Aug-95 14:24