Lawrence Livermore Laboratory

SEISMIC ANALYSIS OF THE NUCLEAR FUEL SERVICE REPROCESSING

PLANT AT WEST VALLEY, NEW YORK: DOCUMENTATION

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April 26, 1977

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INTRODUCTION

This material was generated as part of a seismic case review of the NFS Reprocessing Plant. This study is documented in "Seismic Analysis of the Nuclear Fuel Service Reprocessing Plant at West Valley, New York", UCRL-52266. The Lawrence Livermore Laboratory conducted this study for the Nuclear Regulatory Commission.

The material contained in this document was used to:

- Help generate the mathematical model of the facility.
- Perform the structural analysis.
- Aid in interpreting the results.

The information has been divided into two parts.

Part 1 - Mathematical Model Information - contains all the information required to develop the model.

Part 2 - Ultimate Load Calculations and Comparisons - contains the data needed to support the results of the analysis.

I. Mathematical Model Information

PART 1

MATHEMATICAL MODEL INFORMATION

Global Coord.
of Cells

GLOBAL COORDINATES
OF CELLS

ENGINEERING NOTESUBJECT **#2 - PROCESS MECHANICAL CELL**NAME **T.D.**DATE **1-27-76****GLOBAL COORDINATES**

NOTE - NODES 1, 2, 3, 6, 7, 8
DETERMINED FROM GPC
WALLS.

NODE	X	Y	Z	PLANE	THICK.
1	107.917	125.417	-1.75	1-2-3-6-7-8-9-10	5.5'
2	94.417	125.417	-1.75	3-4-5-6	3.5'
3	92.917	140.417	-1.75	11-12-13-14	2.333'
4	50.417	140.417	-1.75	15-16-17-18	2.0
5	50.417	157.917	-1.75	19-20-23-24-25-26- -27-	2.0
6	92.917	157.917	-1.75	20-21-22-23	6.0
7	92.917	168.167	-1.75	11-12-20-19	2.0
8	107.917	168.167	-1.75	10-4-21-20	5.5
9	107.917	157.917	-1.75	14-13-23-27	2.0
10	107.917	140.417	-1.75	9-5-22-23	5.5
11	138.5	140.417	14.0	18-17-25-26	2.0
12	107.917	140.417	14.0		

ENGINEERING NOTE

2

SUBJECT #2 - PMC

NAME T.D

DATE 1-27-76

GLOBAL COORDINATES.

NODE	X	Y	Z	PLANE	THICK
13	107.917	157.917	14.0	11-19-27-26-18-15-14	2.0
14	138.5	157.917	14.0	16-17-25-24	1.0
15	138.5	157.917	18.583	9-10-12-13	5.5
16	130.583	157.917	18.583	13-12-20-23	0
17	130.583	164.667	18.583	4-5-22-21	5.5
18	138.5	164.667	18.583		
19	138.5	140.417	28.0		
20	107.917	140.417	28.0		
21	50.417	140.417	28.0		
22	50.417	157.917	28.0		
23	107.917	157.917	28.0		
24	130.583	157.917	28.0		
25	130.583	164.667	28.0		
26	138.5	164.667	28.0		
27	138.5	157.917	28.0		

ENGINEERING NOTE

SUBJECT #3 - GENERAL PURPOSE CELL

NAME T.D.

DATE 1-27-76

GLOBAL COORDINATES

NODE	X	Y	Z	PLANE	THICK
1	124.667	125.917	-24.5	1-2-3-4-5-6-8-9-10-11	2.0
2	114.667	125.917	-24.5	-12-13-14-15-16-17	
3	114.667	120.167	-24.5	21-22-23-24	1.0
4	101.667	120.167	-24.5	25-26-31-32-33-34	2.0
5	101.667	125.917	-24.5	26-27-29-30	w/ PMCB CFC
6	94.417	125.917	-24.5	3-4-23-22	1.0
7	92.917	140.417	-24.5	1-18-26-25	1.5
8	92.917	209.167	-24.5	18-6-27-26	1.5
9	107.917	209.167	-24.5	19-7-28-39	4.667
10	107.917	204.542	-24.5	16-17-38-37	1.25
11	115.542	204.542	-24.5	15-14-35-36	1.25
12	115.542	191.167	-24.5	13-20-40-34	1.5
13	124.667	191.167	-24.5	20-41-42-43	3.5
14	124.667	175.042	-24.5	11-10-31-32	1.25
15	134.708	175.042	-24.5	9-8-29-30	2.0
16	134.708	157.292	-24.5	15-16-37-36	1.25
				13-1-25-34	1.5

ENGINEERING NOTE**2**

SUBJECT

#3 GPC

NAME

T.D

DATE

GLOBAL COORDINATES

NODE	X	Y	Z	PLANE	THICK.
17	124.667	157.292	-24.5	2-3-22-21	1.0
18	107.917	125.917	-24.5	11-12-33-32	1.25
19	107.917	140.417	-24.5	9-19-39-30	4.0
20	107.917	191.167	-24.5	19-18-26-39	3.5
21	114.667	125.917	-14.0	5-4-23-24	1.0
22	114.667	120.167	-14.0	7-6-27-28	2.0
23	101.667	120.167	-14.0	8-7-28-29	4.0
24	101.667	125.917	-14.0	35-36-37-38	0
25	124.667	125.917	-1.75		
26	107.917	125.917	-1.75		
27	94.417	125.917	-1.75		
28	92.917	140.417	-1.75		
29	92.917	209.167	-1.75		
30	107.917	209.167	-1.75		
31	107.917	204.542	-1.75		
32	115.542	204.542	-1.75		
33	115.542	191.167	-1.75		
34	124.667	191.167	-1.75		
35	124.667	175.042	-1.75		
36	134.708	175.042	-1.75		
37	134.708	157.292	-1.75		
38	124.667	157.292	-1.75		
39	107.917	140.417	-1.75		
40	107.917	191.167	-1.75		
41	92.917	191.167	-24.5		
42	92.917	191.167	-13.0		
43	107.917	191.167	-13.0		

ENGINEERING NOTESUBJECT **#3-6PC - COMPUTER MODEL**NAME **T.D**DATE **2-10-76** **COMPUTER ANALYSIS**

- REMOVED NODES 42 & 43 FROM GLOBAL COORDINATES MODEL
- REMOVED ELEMENT 20-41-42-43

NODE	X	Y	Z	NODE	X	Y	Z
1	124.67	125.92	-24.5	17	124.67	157.29	-24.5
2	115.54	125.92	-24.5	18	115.54	157.29	-24.5
3	107.92	125.92	-24.5	19	107.92	157.29	-24.5
4	94.42	125.92	-24.5	20	92.92	157.29	-24.5
5	124.67	125.92	-1.75	21	134.71	157.29	-1.75
6	115.54	125.92	-1.75	22	124.67	157.29	-1.75
7	107.92	125.92	-1.75	23	107.92	157.29	-1.75
8	94.42	125.92	-1.75	24	92.92	157.29	-1.75
9	124.67	140.42	-24.5	25	134.71	175.04	-24.5
10	115.54	140.42	-24.5	26	124.67	175.04	-24.5
11	107.92	140.42	-24.5	27	115.54	175.04	-24.5
12	92.92	140.42	-24.5	28	107.92	175.04	-24.5
13	124.67	140.42	-1.75	29	92.92	175.04	-24.5
14	107.92	140.42	-1.75	30	134.71	175.04	-1.75
15	92.92	140.42	-1.75	31	124.67	175.04	-1.75
16	134.71	157.29	-24.5	32	107.92	175.04	-1.75

ENGINEERING NOTE

SUBJECT #3 GPC - COMPUTER MODEL

NAME T.D

DATE 7-9-76

NODE	X	Y	Z
33	92.92	175.04	-1.75
34	124.67	191.17	-24.5
35	115.54	191.17	-24.5
36	107.92	191.17	-24.5
37	92.92	191.17	-24.5
38	124.67	191.17	-1.75
39	115.54	191.17	-1.75
40	107.92	191.17	-1.75
41	92.92	191.17	-1.75
42	115.54	204.54	-24.5
43	107.92	204.54	-24.5
44	92.92	204.54	-24.5
45	115.54	204.54	-1.75
46	107.92	204.54	-1.75
47	92.92	204.54	-1.75
48	107.92	209.17	-24.5
49	92.92	209.17	-24.5
50	107.92	209.17	-1.75
51	92.92	209.17	-1.75
52	115.54	140.42	-1.75
53	115.54	157.29	-1.75
54	115.54	175.04	-1.75

ENGINEERING NOTE

SUBJECT

#4 - CHEMICAL PROCESS CELL

NAME

T.D.

DATE

1-28-76

GLOBAL COORDINATES

+ POINTS MOVED SOUTH
0.5 FT TO MATCH
WITH EDC

** FROM EDC

*** 1'-8" THK STEEL DOOR

NODE	X	Y	Z	PLANE	THICK
1	121.667 *	222.417	-1.75	1-2-3-4-5-6-7-8-9-10	3.5
2	121.667 *	191.167	-1.75	13-14-15-16-17-18-20	3.0
3	146.583	191.167	-1.75	23-24-48-26-27-28 -29-30-31-32	2.0
4	146.583	176.042	-1.75	41-43-44-45-46-47	5.0
5	106.333	176.042	-1.75	37-38-39-40	2.0
6	100.167	179.542	-1.75	1-31-30-10	2.0
7	4.667	179.542	-1.75	8-12-13-20-28-36-41-47	5.75
8	4.667	207.292	-1.75	3-25-35-22-19-11	3.0
9	112.167	207.292	-1.75	4-16-17-5	3.25
10	112.167	222.417	-1.75	22-17-18-6	3.5
11	100.167	191.167	-1.75	26-42-46-7-6-27	5.75
12	121.667 *	207.292	-1.75	38-43-44-39	2.0
13	121.667 *	207.292	15.5	3-4-16-15	0
14	121.667 *	191.167	15.5	1-12-13-14-34-31	2.0
15	146.583	191.167	15.5	10-9-21-22-35-30	2.0
16	146.583	176.042	15.5		

ENGINEERING NOTE**2**SUBJECT **#4 - CPC**NAME **T.D**DATE **1-28-75****GLOBAL COORDINATES**

NODE	X	Y	Z	PLANE	THICK
17	106.333	176.042	15.5	18-27-28-20	4.0
18	100.167	179.542	15.5	6-18-19-11	4.0 ***
19	100.167	191.167	15.5	36-26-37-38-43-41	2.0
20	100.167	207.292	15.5	39-44-45-40	2.0
21	112.167	207.292	15.5	7-8-47-46	5.0
22	112.167	191.167	15.5		
23 **	156.667	237.917	26.0		
24 **	156.667	191.167	26.0		
25	146.583	191.167	26.0		
26	139.667	179.542	26.0		
27	100.167	179.542	26.0		
28	100.167	207.292	26.0		
29	112.167	207.292	26.0		
30	112.167	222.417	26.0		
31	121.667	222.417	26.0		
32 **	121.667	237.917	26.0		
33	121.667 *	207.292	26.0		
34	121.667 *	191.167	26.0		
35	112.167 *	191.167	26.0		
36	139.667	207.292	26.0		
37	139.667	179.542	30.0		
38	139.667	172.885	30.0		
39	129.667	172.885	30.0		
40	129.667	179.542	30.0		
41	139.667	207.292	45.5		
42	139.667	179.542	45.5		
43	139.667	172.885	45.5		
44	129.667	172.885	45.5		
45	129.667	179.542	45.5		
46	4.667	179.542	45.5		
47	4.667	207.292	45.5		
48	139.667	191.167	26.0		
49	109.417	176.042	-1.75		
50	109.417	167.917	-1.75		
51	94.417	167.917	-1.75		

1-10

3

NAME T.D.

DATE 1-28-76

NODE	X	Y	Z	PLANE	THICK
52	94.417	179.542	-1.75		

ENGINEERING NOTE

SUBJECT

#4 & #10

NAME

T.D

DATE

2-23-76

NODE	X	Y	Z	NODE	X	Y	Z
1	156.67	237.92	-1.75	37	146.58	179.54	-1.75
2	156.67	237.92	15.5	38	146.58	179.54	15.5
3	156.67	237.92	26.0	39	139.67	237.92	-1.75
4	156.67	222.42	-1.75	40	139.67	237.92	15.5
5	156.67	222.42	15.5	41	139.67	237.92	26.0
6	156.67	222.42	26.0	42	139.67	222.42	-16.75
7	156.67	207.29	-1.75	43	139.67	222.42	-1.75
8	156.67	207.29	15.5	44	139.67	222.42	26.0
9	156.67	207.29	26.0	45	139.67	207.29	-16.75
10	156.67	191.17	-1.75	46	139.67	207.29	-1.75
11	156.67	191.17	15.5	47	139.67	207.29	26.0
12	156.67	191.17	26.0	48	139.67	207.29	45.5
13	151.08	237.92	-1.75	49	139.67	191.17	-1.75
14	151.08	237.92	15.5	50	139.67	191.17	15.5
15	151.08	237.92	26.0	51	139.67	191.17	26.0
16	151.08	222.42	-16.75	52	139.67	191.17	45.5
17	151.08	222.42	-1.75	53	139.67	179.54	-1.75
18	151.08	222.42	26.0	54	139.67	179.54	15.5
19	151.08	207.29	-16.75	55	139.67	179.54	26.0
20	151.08	207.29	-1.75	56	139.67	179.54	45.5
21	151.08	207.29	26.0	57	126.58	237.92	-1.75
22	151.08	191.17	-1.75	58	126.58	237.92	15.5
23	151.08	191.17	15.5	59	126.58	237.92	26.0
24	151.08	191.17	26.0	60	126.58	222.42	-16.75
25	146.58	237.92	-1.75	61	126.58	222.42	-1.75
26	146.58	237.92	15.5	62	126.58	222.42	26.0
27	146.58	237.92	26.0	63	126.58	207.29	-16.75
28	146.58	222.42	-16.75	64	126.58	207.29	-1.75
29	146.58	222.42	-1.75	65	126.58	207.29	26.0
30	146.58	222.42	26.0	66	126.58	207.29	45.5
31	146.58	207.29	-16.75	67	126.58	191.17	-1.75
32	146.58	207.29	-1.75	68	126.58	191.17	15.5
33	146.58	207.29	26.0	69	126.58	191.17	26.0
34	146.58	191.17	-1.75	70	126.58	191.17	45.5
35	146.75	191.17	15.5	71	126.58	179.54	-1.75
36	146.58	191.17	26.0	72	126.58	179.54	15.5

ENGINEERING NOTE**2**

SUBJECT

#4 & #10

NAME

T.D

DATE

2-23-76

Node	X	Y	Z	Node	X	Y	Z
73	126.58	179.54	26.φ	109	100.17	207.29	15.5
74	126.58	179.54	45.5	110	100.17	207.29	26.0
75	121.67	237.92	-1.75	111	100.17	207.29	45.5
76	121.67	237.92	15.5	112	100.17	191.17	-1.75
77	121.67	237.92	26.φ	113	100.17	191.17	15.5
78	121.67	222.42	-1.75	114	100.17	191.17	26.0
79	121.67	222.42	15.5	115	100.17	191.17	45.5
80	121.67	222.42	26.φ	116	100.17	179.54	-1.75
81	121.67	207.29	-1.75	117	100.17	179.54	15.5
82	121.67	207.29	15.5	118	100.17	179.54	26.φ
83	121.67	207.29	26.φ	119	100.17	179.54	45.5
84	121.67	207.29	45.5	120	4.47	207.29	-1.75
85	121.67	191.17	-1.75	121	4.47	207.29	15.5
86	121.67	191.17	15.5	122	4.47	207.29	26.φ
87	121.67	191.17	26.φ	123	4.47	207.29	45.5
88	121.67	191.17	45.5	124	4.47	191.17	-1.75
89	121.67	179.54	-1.75	125	4.47	191.17	15.5
90	121.67	179.54	15.5	126	4.47	191.17	26.φ
91	121.67	179.54	26.φ	127	4.47	191.17	45.5
92	121.67	179.54	45.5	128	4.47	179.54	-1.75
93	112.17	222.42	-1.75	129	4.47	179.54	15.5
94	112.17	222.42	15.5	130	4.47	179.54	26.φ
95	112.17	222.42	26.φ	131	4.47	179.54	45.5
96	112.17	207.29	-1.75				
97	112.17	207.29	15.5				
98	112.17	207.29	26.φ				
99	112.17	207.29	45.5				
100	112.17	191.17	-1.75				
101	112.17	191.17	15.5				
102	112.17	191.17	26.φ				
103	112.17	191.17	45.5				
104	112.17	179.54	-1.75				
105	112.17	179.54	15.5				
106	112.17	179.54	26.φ				
107	112.17	179.54	45.5				
108	100.17	207.29	-1.75				

ENGINEERING NOTE

FILE NO.

PAGE

SUBJECT

#5 - ACID RECOVERY & OFF-GAS CELL

NAME

T.D.

DATE

2-2-76

NODE	X	Y	Z	PLANE	THICK.
1	+2.167	+176.667	-0.5	1-4-6-9	1.0
2	-10.833	+176.667	-0.5	11-12-13-14-15-16-17	1.0
3	-24.083	+176.667	-0.5	20-21-23-24-25-31-27-28	1.0
4	-41.083	+176.667	-0.5	32-38-40-42	0.5
5	-41.083	+185.833	-0.5	2-20-28-8	2.0
6	-41.083	209.667	-0.5	3-12-16-7	1.0
7	-24.083	209.667	-0.5	12-34-36-13	1.0
8	-10.833	209.667	-0.5	5-37-36-10	1.0
9	+2.167	209.667	-0.5	4-38-40-6	1.0
10	-24.083	+185.833	-0.5	31-25-26-27	0
11	-10.833	+176.667	11.0	19-33-43-30	0.5
12	-24.083	+176.667	11.0	22-35-43-30	0.667
13	-24.083	185.833	11.0	25-39-44-31	1.0
14	-41.083	185.833	11.0	31-44-41-27	1.0
15	-41.083	209.667	11.0	6-40-42-29-28-8	1.0
16	-24.083	209.667	11.0	8-28-29-9	3.0
17	-10.833	209.667	11.0	18-20-28-29	2.75

ENGINEERING NOTE

2

SUBJECT #5 - AR06

NAME T.D.

DATE 2-2-76

NODE	X	Y	Z	PLANE	THICK
18	+2.167	+176.667	30.5		
19	-5.5	+176.667	30.5		
20	-10.833	+176.667	30.5		
21	-24.083	+176.667	30.5		
22	-24.083	182.0	30.5		
23	-24.083	185.833	30.5		
24	-41.083	185.833	30.5		
25	-41.083	197.417	30.5		
26	-41.083	209.667	30.5		
27	-29.583	209.667	30.5		
28	-10.833	209.667	30.5		
29	+2.167	209.667	30.5		
30	-5.5	182.0	30.5		
31	-29.583	197.417	30.5		
32	+2.167	+176.667	43.75		
33	-5.5	+176.667	43.75		
34	-24.083	+176.667	43.75		
35	-24.083	182.0	43.75		
36	-24.083	185.833	43.75		
37	-41.083	185.833	43.75		
38	-41.083	+176.667	43.75		
39	-41.083	197.417	43.75		
40	-41.083	209.667	43.75		
41	-29.583	209.667	43.75		
42	+2.167	209.667	43.75		
43	-5.5	182.0	43.75		
44	-29.583	197.417	43.75		

ENGINEERING NOTE

SUBJECT

#6 - LIQUID WASTE CELL

NAME

T.D.

DATE

1-26-76

GLOBAL COORDINATES.

ENGINEERING NOTE

2

SUBJECT

#6

NAME

T.D

DATE

1-26-76

GLOBAL COORDINATES

NODE	X	Y	Z	PLANE	THICK.
1	49.792	176.667	-9.25	1-2-12-11	2.75
2	49.792	160.987	-9.25	2-3-13-12	2.75
3	47.055	158.25	-9.25	3-4-14-13	2.75
4	19.292	158.25	-9.25	4-5-15-14	2.75
5	19.292	139.25	-9.25	5-6-16-15	2.75
6	2.167	139.25	-9.25	6-8-18-16	0
7	2.167	165.625	-9.25	8-9-19-18	0
8	2.167	173.167	-9.25	9-1-11-19	0
9	5.667	176.667	-9.25	11-12-13-14-15-16-17	3.0
10	19.667	176.667	-9.25	-22-21-20	
11	49.792	176.667	13.0	17-18-19-20-21-22	3.5
12	49.792	160.987	13.0		
13	47.055	158.25	13.0		
14	19.292	158.25	13.0		
15	19.292	139.25	13.0		
16	2.167	139.25	13.0		
17	2.167	165.625	13.0		
18	2.167	173.167	13.0		
19	5.667	176.667	13.0		
20	19.667	176.667	13.0		
21	19.667	169.793	13.0		
22	12.948	165.625	13.0		
23	19.667	169.793	-9.25		
24	12.948	165.625	-9.25		

ENGINEERING NOTE

7

FILE NO.

PAGE

SUBJECT

UPPER & LOWER WARM ISLE & AIRLOCK

NAME

BP

DATE

1-22-76

NODE #	X _N	Y _W	Z _{EL}	PLANE	THK
1	-41'-1"	+176'-2"	-0'-6"	1, 13, 14, 2	12"
2	-24'-9"	+176'-2"	-0'-6"	6, 12, 9, 3	8"
3	-24'-9"	+94'-8"	-0'-6"	12, 18, 15, 9	0
4	-24'-9"	+84'-4"	-0'-6"	5, 17, 16, 4	8"
5	-41'-1"	+84'-4"	-0'-6"	1, 2, 4, 5	12"
6	-41'-1"	+95'-0"	-0'-6"	7, 8, 10, 11	12"
7	-41'-1"	+176'-2"	+14'-6"	13, 14, 16, 17	14"
8	-24'-9"	+176'-2"	+14'-6"	14, 16, 4, 2	12"
9	-24'-9"	+94'-8"	+14'-6"	18, 17, 5, 6	12"
10	-24'-9"	+84'-4"	+14'-6"	13, 18, 6, 1	0
11	-41'-1"	+84'-4"	+14'-6"		
12	-41'-1"	+95'-0"	+14'-6"		
13	-41'-1"	+176'-2"	+34'-1"		
14	-24'-9"	+176'-2"	+34'-1"		
15	-24'-9"	+94'-8"	+34'-1"		
16	-24'-9"	+84'-4"	+34'-1"		
17	-41'-1"	+84'-4"	+34'-1"		
18	-41'-1"	+95'-0"	+34'-1"		

ENGINEERING NOTE

SUBJECT #8 - EPC

NAME T.D

DATE 1-21-76

GLOBAL COORDINATES.

NOTE
NODE 15 IS
DIRECTLY
BELOW #7
& 16 IS BELOW
LINE 8-9.

@ EL 98'-3"

NODE	X	Y	Z	PLANE	THICKNESS
1	0.667	96.167	-1.75'	15-16-9A-7	3'-0"
2	-23.583	96.167	-1.75'	1-2-6-7	3'-6"
3	-23.583	114.417	-1.75'	12-14-17-18	1'-0"
4	-23.583	130.917	-1.75'	1-2-20-19	3'-0"
5	-23.583	154.167	-1.75'	2-3-21-20	3'-0"
6	-23.583	174.167	-1.75'	3-4-22-21	3'-0"
7	0.667	174.167	-1.75'	4-5-23-22	3'-0"
8	0.667	154.167	-1.75'	5-6-24-23	5'-3"
9	0.667	130.917	-1.75'	6-7-25-24	5'-0"
10	0.667	114.417	-1.75'	7-8-26-25	5'-0"
11	-16.583	114.417	-1.75'	8-1-19-26	3'-0"
12	-16.583	106.917	-1.75'	5-8-26-23	3'-0"
13	-16.583	100.667	-1.75'	4-9-27-22	1'-6"
14	3.333	106.917	-1.75'	3-10-28-21	1'-6"
15	0.667	174.167	-8.5	11-13-29-30	1'-0"
16	0.667	137.875	-8.5	19-20-23-26	3'-0"
17	-3.333	106.917	13.5	23-24-25-26	5'-0"
18	-16.583	106.917	13.5		

ENGINEERING NOTE**2**

SUBJECT #8 EPL

NAME T.D.

DATE 1-22-76

GLOBAL COORDINATES.

@ EL 157'

NODE	X	Y	Z
19	0.667	96.167	58.5
20	-23.583	96.167	58.5
21	-23.583	114.417	58.5
22	-23.583	130.917	58.5
23	-23.583	154.167	58.5
24	-23.583	174.167	58.5
25	0.667	174.167	58.5
26	0.667	154.167	58.5
27	0.667	130.917	58.5
28	0.667	114.417	58.5
29	-16.583	100.667	58.5
30	-16.583	114.417	58.3

#8 EPC

NAME T.D

DATE 1-22-76

GLOBAL COORDINATES

ENGINEERING NOTE

SUBJECT # 9 URANIUM PRODUCT CELL

NAME *BR*

DATE 1-22-76

NODE #	X _{NO}	Y _W	Z _{EL}	PLANE	THK
1	+ 2'-2"	+ 95'-6 1/2"	+ 14'-3"	1, 2, 3, 4, 5, 6	1'-9"
2	+ 49'	+ 95'-6 1/2"	+ 14'-3"	7, 8, 9, 10, 11, 12	1'-3"
3	+ 49'	+ 23'-9 1/2"	+ 14'-3"	1, 6, 12, 7	0
4	+ 12'	+ 23'-9 1/2"	+ 14'-3"	6, 5, 11, 12	1'-9"
5	+ 12'	+ 13'-8"	+ 14'-3"	5, 4, 10, 11	1'-9"
6	+ 2'-2"	+ 13'-8"	+ 14'-3"	4, 3, 9, 10	1'-9"
7	+ 2'-2"	+ 95'-6 1/2"	- 0'-7 1/2"	2, 3, 9, 8	1'-9"
8	+ 49'	+ 95'-6 1/2"	- 0'-7 1/2"	1, 2, 8, 7	1'-9"
9	+ 49'	+ 23'-9 1/2"	- 0'-7 1/2"		
10	+ 12'	+ 23'-9 1/2"	- 0'-7 1/2"		
11	+ 12'	+ 13'-8"	- 0'-7 1/2"		
12	+ 2'-2"	+ 13'-8"	- 0'-7 1/2"		

ENGINEERING NOTE

SUBJECT #10 - EQUIP. DECONTAMINATION ROOM

NAME T.D.

DATE 1-26-76

GLOBAL COORDINATES.

NOTE - ROOF SUPPLIED W/
CPC CELL- WALL HEIGHT SET TO
BE AT ϕ OF ROOF

- ROOF IS 2.0 FT THK

ENGINEERING NOTE

2

SUBJECT

#10 EDC

NAME

T.D

DATE

1-26-76

NODE	X	Y	Z	PLANE	THICK
1	126.583	200.667	-16.75	1-2-3-4	1.5'
2	126.583	220.167	-16.75	1-2-6-5	1.5'
3	151.083	220.167	-16.75	2-3-7-6	1.5'
4	151.083	200.667	-16.75	3-4-8-7	1.5'
5	126.583	200.667	-0.75	4-1-5-8	1.5'
6	126.583	220.167	-0.75	9-10-11-12-17-18-19-20	1.5'
7	151.083	220.167	-0.75	11-12-22-24	3.0
8	151.083	200.667	-0.75	12-13-27-26	3.0
9	124.167	192.667	-0.75	13-14-28-27	3.0
10	124.167	222.917	-0.75	14-15-29-28	2.0
11	121.667	222.917	-0.75	26-27-28-29-30	2.0
12	121.667	237.917	-0.75	12-17-23-22	3.0
13	121.667	244.917	-0.75	17-18-24-23	3.0
14	132.167	244.917	-0.75	18-19-25-24	3.0
15	132.167	242.792	-0.75		
16	132.167	237.917	-0.75		
17	156.667	237.917	-0.75		
18	156.667	191.167	-0.75		
19	146.583	191.167	-0.75		
20	146.583	192.667	-0.75		
21	121.667	222.917	26.0		
22	121.667	237.917	26.0		
23	156.667	237.917	26.0		
24	156.667	191.167	26.0		
25	146.583	191.167	26.0		
26	121.667	237.917	8.0		
27	121.667	244.917	8.0		
28	132.167	244.917	8.0		
29	132.167	242.792	8.0		
30	132.167	237.917	8.0		

ENGINEERING NOTE

SUBJECT

#11 - VWR

NAME

T.D.

DATE

1-22-76

GLOBAL COORDINATES

NODE	X	Y	Z	PLANE	THICK
1	18.0	159.667	13.875	1-2-3-4	1.25'
2	43.5	159.667	13.875	5-6-7-8	1.167'
3	43.5	138.167	13.875	9-10-12-13	1.0'
4	18.0	138.167	13.875	8-9-14-5	1.0'
5	18.0	156.083	29.333	1-2-7-6	2.0
6	18.0	159.667	29.333	2-3-10-7	0
7	43.5	159.667	29.333	3-4-11-10	1.0'
8	43.5	156.083	29.333	4-1-6-11	1.0'
9	43.5	156.083	30.5		
10	43.5	138.167	30.5		
11	18.0	138.167	30.5		
12	1.667	138.167	30.5		
13	1.667	156.083	30.5		
14	18.0	156.083	30.5		

ENGINEERING NOTE

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FILE NO.

PAGE

1 of 2

SUBJECT

ANALYTICAL CELL

NAME

Bj

DATE

1-22-76

NODE #	X _N	Y _W	Z _{EL}	NODE #	X _N	Y _W	Z _{EL}
1	+ 2'-1"	+ 178'-2"	+ 41'-6"	22	+ 2'-1"	+ 178'-2"	+ 30'-0"
2	+ 53'-4"	+ 178'-2"	+ 41'-6"	23	+ 53'-4"	+ 178'-2"	
3	+ 61'-5"	+ 178'-2"	+ 41'-6"	24	+ 61'-5"	+ 178'-2"	
4	+ 61'-5"	+ 152'-11"	+ 41'-6"	25	+ 61'-5"	+ 152'-11"	
5	+ 53'-11"	+ 152'-11"	+ 41'-6"	26	+ 53'-11"	+ 152'-11"	
6	+ 53'-4"	+ 157'-2"	↑	27	+ 52'-5"	+ 157'-2"	
7	+ 44'-2"	+ 157'-2"		28	+ 44'-2"	+ 157'-2"	
8	+ 36'-8"	+ 157'-2"		29	+ 36'-8"	+ 157'-2"	
9	+ 29'-2"	+ 157'-2"		30	+ 29'-2"	+ 157'-2"	
10	+ 21'-8"	+ 157'-2"		31	+ 21'-8"	+ 157'-2"	
11	+ 14'-2"	+ 157'-2"		32	+ 14'-2"	+ 157'-2"	
12	+ 7'-9 1/2"	+ 157'-2"		33	+ 7'-9 1/2"	+ 157'-2"	
13	+ 2'-1"	+ 157'-2"		34	+ 2'-1"	+ 157'-2"	
14	+ 2'-1"	+ 169'-2"		35	+ 2'-1"	+ 169'-2"	
15	+ 7'-9 1/2"	+ 169'-2"		36	+ 7'-9 1/2"	+ 169'-2"	
16	+ 14'-2"	+ 169'-2"		37	+ 14'-2"	+ 169'-2"	
17	+ 21'-8"	+ 169'-2"		38	+ 21'-8"	+ 169'-2"	
18	+ 29'-2"	+ 169'-2"		39	+ 29'-2"	+ 169'-2"	
19	+ 36'-8"	+ 169'-2"		40	+ 36'-8"	+ 169'-2"	
20	+ 44'-2"	+ 169'-2"	↓	41	+ 44'-2"	+ 169'-2"	↓
21	+ 52'-5"	+ 169'-2"	+ 41'-6"	42	+ 52'-5"	+ 169'-2"	+ 30'-0"

ENGINEERING NOTE

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FILE NO.

PAGE

2 of 2

SUBJECT

ANALYTICAL CELL

NAME

Bf

DATE

1-22-76

PLANE

THK.

4, 3, 24, 25	3'-0"
4, 25, 26, 5	3'-0"
5, 6, 27, 26	3'-0"
6, 2, 23, 27	3'-0"
1, 3, 24, 22	0
13, 6, 27, 34	0
13, 14, 35, 34	2'-0
12, 15, 36, 33	3'-3"
11, 16, 37, 32	1'-6"
10, 17, 38, 31	1-6
9, 18, 39, 30	1-6
8, 19, 40, 29	1-6
7, 20, 41, 28	1-6
14, 1, 22, 35	0
1, 3, 4, 5, 6, 13	3'-0
22, 24, 25, 26, 27, 34	2'-0

Cell Nodes &
Elements

CELL NODES
AND ELEMENTS

THE AOC

- NODES

THE AOC

- NODES AND WALLS

THE AOC

- NODES AND FLOORS

THE CPC

- NODES

THE CPC
- NODES AND WALLS

THE CPC
- NODES AND FLOORS

THE EDR

- NODES

THE EDR
- NODES AND WALLS

THE EDR

- NODES AND FLOORS

THE WA
- NODES

THE WA
- NODES AND WALLS

THE WA
- NODES AND FLOORS

THE EPC

- NODES

- NODES AND WALLS

THE EPC

- NODES AND FLOORS

THE UPC

- NODES, WALLS, AND FLOORS

THE LWC

- NODES

THE LWC

- NODES AND WALLS

THE LWC

- NODES AND FLOORS

THE VWR

- NODES, WALLS, AND FLOORS

THE AC

- NODES AND WALLS

THE AC
- NODES AND FLOORS

THE PMC

- NODES

THE PMC
- NODES AND WALLS

THE PMC

- NODES AND FLOORS

- NODES

THE GPC
- NODES AND WALLS

THE GPC
- NODES AND FLOORS

THE TOP

- NODES

THE TOP
- NODES AND WALLS

1-58

- NODES AND FLOORS

Interconnection
of Cells

INTERCONNECTION OF CELLS

ENGINEERING NOTE

SUBJECT NRC & NFS

NAME A.M.D

CONNECTION OF CELLS

DATE 4-12-76

1. UPC TO EPC

a. BTM SLAB (EL. 100') - 15A-Q-22

SUPPORT IN Z (FROM BTM SIDE ONLY)
 FRICTION IN X (NORTH) (CAN MOVE
 IF OVERCOMES FRICTION)

IN Y-DIRECTION - FRICTION ALONG EPC

ADJOINING SLAB

-STEEL NOT CONTINUOUS.

b. TOP SLAB (EL. 114'-6") - 15A-M-40

SUPPORT IN Z - BOTH UP & DOWN
 FRICTION ONLY IN X & Y

c. WALLS TO EPC (15A-M-41) #5
 - NO RESISTANCE X, Y OR Z

d. NORTH END OF CELL

e. AT VARIOUS POINTS ALONG TOP HAVE STEEL
 PLATES THAT PROVIDE FOR ATTACHMENT OF
 ADJACENT SLABS (ON WEST SIDE BLDG.)

ENGINEERING NOTE

SUBJECT NRC: NFS

NAME A.M.D

CONNECTION OF CELLS.

DATE 4-12-76

2. WA TO EPC

- ① BTM SLAB @ EL. 100 15A-Q-29
- RIGID CONNECTION - X, Y, Z

SLABS STIFFENED
BY PUMP NITCHES

- ② SLAB @ 114'-6"
- RIGID in X, Y, Z

- ③ TOP SLAB @ 134'-2" 15A-M-107
- RIGID in X, Y, Z

WA TO AROC

- ① SOUTH WALL (15A-M-107)
Dowels

- ② BTM SLAB Doweled to AROC - Sect 4 15A-Q-29

ENGINEERING NOTE

SUBJECT

NRC:NFS

NAME

A.M.D

CONNECTION OF CELLS

DATE

4-12-76

3. AROC to W/A

- ① BTM SLAB - EL 100' - (ISA-Q-16) sect 3
 - SLABS DOWELED TOGETHER
 - NO OTHER SLABS SUPPORTED
 - SOUTH WALL - DOWELED TO W/A - WALL

AROC TO EPL

- ① BTM SLAB - EL 100' (ISA-Q-16) sect 4
 - SLABS DOWELED TOGETHER
 ② SLAB @ 131'-0" - sect 14 ISA-M-146

VERT SUPPORT IN BOTH DIRECTIONS
 HORIZ - FRICTION SUPPORT.

- ③ SLAB @ 111'-6" SAME AS 131'-0" (ISA-M-22) Plan 111'-6"
 AROC TO CPC

- ① BTM SLAB - EL 100' (ISA-Q-16) sect 1
 - VERT SUPPORT ONLY
 - HORIZ - FRICTION

- ② SLABS @ 111'-6" & 131'-0" - BTM SUPPORT in vert

no contact

- HORIZ - FRICTION
 - HAVE EXPANSION JOINT.

- ③ West wall to CPC - not attached - expansion joint
 ④ SLAB @ 144' - Simple support -
 - STEEL BEAMS ATTACHED TO WALL

ENGINEERING NOTE

FILE NO.

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SUBJECT

NRC: NFS

NAME

A.M.D

DATE

4-12-76

CONNECTION OF CELLS

④ EPC TO ADC

① - Rigid w/ dowels (EL 100 - 15A-Q-18)

EPC TO WA

- RIGID w/ dowels @ EL 100 - 15A-Q-18

- EPC - LWC

- vert support in both directions @ EL 100

- 15A-Q-18

- HORIZ - N-S - Friction

- HORIZ - E-W - Friction

- EPC - CPC

- NO SUPPORT @ EL 100

ENGINEERING NOTE

FILE NO.

PAGE

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SUBJECT

NEC : NFS

NAME

J.M.D

CONNECTION OF CELLS

DATE

4-12-76

⑤ LWC TO EPC

- BTM SLAB @ EL 92' - (ISA-Q-20) sect 1, 2, & 3)

- VERTICAL SUPPORT IN BOTH DIRECTIONS

- N-S direction - FRICTION

- E-W direction - FRICTION

- SAME AS LWC TO CPC @ 114'-6"

- East wall to EPC

NO RESISTANCE IN ANY DIRECTION

LWC to CPC

- SAME AS LWC TO EPC @ 92' (ISA-Q-20) sect 2, 3)

- @ 114'-6" (ISA-M-34) - sect 2

- vertical support in both directions

- HORIZ N-S - FRICTION

- HORIZ E-W - FRICTION

- NORTH WALL TO CPC

- SAME AS EAST WALL OF LWC TO EPC

NOTE - ONLY LATERAL COUPLING BTN CPC & EPC IS FRICTION RESISTANCE.

ENGINEERING NOTE

6

SUBJECT *NRC : NFS*NAME *A.M.D**CONNECTION TO CELLS*DATE *4-12-76*

6. PMC TO GPC (@ EL 100) 15A-D-11 sect ①
- RIGID in all directions

PMC TO LWC - 15A-Q-12 (EL 96.5') sect 10

- Vert. support as shown (one direction only)
- HORIZ N-S = friction
- HORIZ E-W = friction.

PMC TO VWR - @ 114'-6" (15A-M-127)

- BTM SLAB - vert as shown - 1-D only

- HORIZ - friction - NS
- HORIZ E-W - friction (paper bet concrete)

- Vertical walls - NO SUPPORT.

PMC TO AC - 15A-M-2 TOP PAD

- VERTICAL SUPPORT (UPWARD) - 1-D only
- HORIZONTAL - STEEL-STEEL FRICTION BEARING PLATES.

ENGINEERING NOTE

SUBJECT

NRC: NFS

NAME

A.M.D

DATE

4-12-76

CONNECTIONS TO CELLS

7- GPC TO P.M.C

- RIGID - GPC ROOF IS P.M.C SLAB

- GPC TO CPC

- RIGID GPC ROOF IS CPC SLAB

ENGINEERING NOTE

SUBJECT

NRC: NFS

NAME

A.M.D

CONNECTION TO CELLS

DATE

4-13-76

⑧ VWR TO LWC

- BTM SLAB (EL 114'-6") 15A-M-127 sect 1 & 2
- RIGID TO LWC (has const. joint but steel is continuous)
- WEST & SOUTH WALLS (15A-M-127)
- RIGID TO LWC.

VWR TO PMC

- BTM SLAB (15A-M-127)

VERT SUPPORT FROM BTM ONLY

- HORIZ - FRICTION BOTH DIRECTIONS

- TOP SLAB (15A-M-127)
- SAME AS BOTTOM SLAB

- WALLS TO PMC (15A-M-127)
- NO RESISTANCE

VWR TO EPC

- TOP SLAB @ EL 131'-0" (15A-M-127)

VERTICAL - BOTH WAYS
HORIZONTAL - FRICTION

VWR TO AC (15A-M-126)

- @ TOP SLAB

- VERT SUPPORT FROM BOTTOM ONLY
- HORIZONTAL - FRICTION BTN STEEL PLATES.

ENGINEERING NOTE

SUBJECT NRC & NFS

NAME A.M.D

CONNECTION TO CELLS

DATE 4-13-76

⑨ AC TO EPC

- BTM SLAB - 15A-M-57 (sect 12)
 - VERT SUPPORT FROM BTM ONLY
 - HORIZONTAL - FRICTION - STEEL TO STEEL
- TOP SLAB
 - NO RESISTANCE

AC TO VWR

- BTM SLAB
 - VERT SUPPORT FROM BTM
 - HORIZ - FRICTION - STEEL TO STEEL
- TOP SLAB - NO SUPPORT

AC TO PMC

- BTM SLAB
 - VERT SUPPORT FROM BOTTOM
 - HORIZ - FRICTION - STEEL TO STEEL

AC TO CPC - 15A-M-21

- BTM SLAB ; TOP SLAB ; 2ea N. WALLS
- RIGID CONNECTION IN X, Y & Z.

ENGINEERING NOTE

SUBJECT

NRC: NFS

NAME

A.M.D

CONNECTION TO CELLS

DATE

4-13-76

⑩ EDR TO CPC

BTM SLAB - @ 100' - 15A-R-26

- VERT SUPPORT - BOTH DIRECTIONS

- HORIZ - FRICTION - BOTH DIR.

BTM SLAB TO EDR WALLS

- PIN CONNECTION - HAVE STEEL DOWELS
- NOT MOMENT RESISTANT.

WALLS TO CPC

- RIGID CONNECTION

EDR WALLS TO TOP SLAB

- RIGID CONNECTION

TOP SLAB TO CPC - 15A-M-49

- RIGID CONNECTION

EQUIPMENT MASSES

SUBJECT N.CONTRACT NO. 124-41

FLOW SHEET NO. _____

AREA NO. _____

ITEM NO. _____

DRAWING NO. _____

EQUIPMENT WEIGHTSMADE BY AL. MOOREDATE 2-27-76CHECKED BY REOLADATE 3-2-76

APPROVED BY _____

DATE _____

APPROVED BY _____

DATE _____

PAGE 1 OF _____EXTRACTION CELLS SS #12,13,14,15

XCL #1 4D-1 16,500 #
 4D-2 15,000 #
 7D-1 12,000 #
 MISC. EQUIPM 9 pcf (30,000 # TOTAL)
 XCL #2 MISC. EQUIPM 26 pcf (30,000 # TOTAL)
 XCL #3 MISC. EQUIPM 44 pcf (22,600 # TOTAL)
 PPC MISC. EQUIPM 30 pcf (15,500 # TOTAL)

over entire volume

EXTRACTION CHEM ROOM (ABOVE XCL'S SS #15 & 71)

MISC. EQUIPM ON FLOOR @ EL 160 TOT 29,500 # (SS #16)
 " " " TOT 61,500 # (SS #71)

ANALYTICAL CELLS

MISC. EQUIPM 5 pcf (12,500 # TOTAL)
 25,000 # (EUSP. DURING REGIONAL 130.0)

ARC & OGC SS #17,18,19

MISC. EQUIPM 30 pcf ON FLOOR @ EL 100.0 TOT 22,000 #
 " 34 pcf " EL 111.5 TOT 26,200 #
 " 34 pcf " EL 131.0 TOT 23,000 #

3' ABOVE
 Floor
 (on hold)

> 10k - SEPMAGE
 5-10k - ?
 < 5k - Uniform #

EQUIPMENT WEIGHTSMADE BY M. MACKDATE 2-27-76CHECKED BY □□DATE 3-2-76

APPROVED BY _____

DATE _____

APPROVED BY _____

DATE _____

AREA NO. _____

ITEM NO. _____

DRAWING NO. _____

PAGE 2 OF _____

CALCULATION

LWC SS #26

7D-8 16,000 #

4D-10 30,000 #

4D-13 30,000 #

7D-2 44,000 #

4D-3 6,000 #

MISC. EQUIPM 9 psf (10,000 # TOTAL) @ EL 92.0

UPC SS #24

5D-15A 100,000 #

5D-15B 100,000 #

GPC SS #02

2V-35 10,000 #

2V-79 24,000 #

2V-73 4,000 # (POWER MANIPULATOR)

2V-34 3,500 # (CRANE BRIDGE)

MISC. EQUIPMENT 20,000 # ON FLOOR @ EL 74.0

CPC SS #04, 05, 06

3V-2 8,500 # (LOWER CRANE) } 2500# BASKET

3V-1 13,000 # (UPPER CRANE) } WT.

7D-4 13,000 #

7D-10 13,000 #

7C-A 20,000 #

6,000 # (SCR. REMOVAL CRANE)

DRAVO CORPORATION • CHEMICAL PLANTS, DIV. • PITTSBURGH, PA.

SUBJECT NFS

CONTRACT NO. _____

FLOW SHEET NO. _____

EQUIPMENT WEIGHTSMADE BY M. NOCHODATE 2-27-76CHECKED BY EDDATE 3-2-76

APPROVED BY _____

DATE _____

APPROVED BY _____

DATE _____

AREA NO. _____

ITEM NO. _____

DRAWING NO. _____

PAGE 3 OF _____

CALCULATION

CPC (CONT)

3D-1 16,700 #

3C-1 40,000 #

3C-2 40,000 #

FUTURE TANK 40,000 #

NEW EQUIPM 76,600 # (LOCATED NEAR THE SOUTH WALL OF CPC)

MISC. EQUIPM 30 per TOT 61,500 # ONTLOOR @ EL 100.0
$$\begin{array}{r} 2550 \\ 41500 \\ \hline 30 \end{array}$$
PMC SS # 01 & 02

2V-4 20,000 #

2V-1A 6,000 # (UPPER CRANE)

2V-1B 6,000 # (UPPER CRANE)

2V-6 8,000 # (LOWER CRANE)

6,300 # (SHIELDING DOORS OF TRANSFER PORT)

MISC. EQUIPM 48 per (TOT 30,000 #) @ EL 100.0EDR SS # 09

15V-21 8,000 # (CRANE BRIDGE)

15V-12 46,000 # (TRANSFER CAR, LOADED)

DRAVC CORPORATION • CHEMICAL PLANTS, DIV. • PITTSBURGH, PA.

SUBJECT N75

CONTRACT NO. 500

FLOW SHEET NO. _____

EQUIPMENT WEIGHTS

MADE BY M. MORNO

DATE 2.1.76

CHECKED BY RR

DATE 3.3.76

APPROVED BY _____

DATE _____

APPROVED BY _____

DATE _____

AREA NO. _____

ITEM NO. _____

DRAWING NO. _____

PAGE 4 OF _____

CALCULATION

ROOMS ABOVE CPC SS #07

MISC EQUIPM 35,500 # @ EL 148.0

UPPER WARM AISLE SS #21

34,500 # SUSP PIPING @ EL 133.0

VWR SS #27

15V-13 10,000 # AIR WASHER

6,600 # SUSP PIPING

VENT. SUPPLY ROOM SS #28

15 K-S 9,000 # AIR WASHER

SST SS #29

7D-5 34,000 # TANK

CPC HIST. ENCLOSURE SS #36 & 37

8,700 # (SHIELD. DOOR'S OPERATING EQUIPM)

LAB @ EL 131.0 SS #29A

25,600 # PIPE RK

NEW LAB. AREA @ EL 114.5 SS #30

13,000 # SUSP PIPING @ EL 130.0

2,000 # GL. BOX

DRAVO CORPORATION • CHEMICAL PLANTS, DIV. • PITTSBURGH, PA.

EQUIPMENT MASS

SUMMARY

CELL	EQUIP INT.	% OF TOTAL CELL WEIGHT
EPC	202.6 K	2.2 %
AC	37.5 K	2.4 %
AOL	81.2 K	4.0 %
LWC	136.0 K	5.5 %
UPC	200 K	15.7 %
GPC	62.3 K	1.1 %
CPC	308.3 K	1.8 %
PMC	76.3 K	1.3 %
EDR	54.0 K	2.2 %

$$\Sigma W_{\text{EQUIP}} = 1158.2 \text{ K}$$

TOTAL APPROX PLANT WEIGHT EQUALS

NO. OF PILES X PILE WORKING LOAD

$$= 497 \times 140 \text{ K} = 69580 \text{ K}$$

% OF EQUIP TO TOTAL WEIGHT

$$= \frac{1158.2}{69580} \times 100 = \underline{\underline{1.7 \%}}$$

4-20-77

EQUIPMENT MASSES

- APPROXIMATE PERCENT OF EQUIPMENT MASS TO TOTAL MASS FOR EACH CELL
- EQUIPMENT MASS TAKEN FROM DRAVO NOTES

• EPL

• EQUIPMENT MASS

$$16.5 + 16.0 + 12.0 + 8.0 + 30.0 + 22.6 + 15.5 + 20.5 + 61.5$$

$$W_E = 202.6 \text{ K}$$

• CELL MASS

BTM	=	24.25' W x 78.0' L x 3.5' t	=	6420.25
S. SIDE	=	58.0' L x 60.25' h x 3.0' t		
	+	20.0' L x 60.25' h x 5.25' t	=	16809.75
N. SIDE	=	58.0' L x 60.25' h x 3.0' t		
	+	20.0' L x 60.25' h x 5.0' t	=	16508.5
W. SIDE	=	24.25' L x 60.25' h x 5.0' t	=	7305.3
E. SIDE	=	24.25' L x 60.25' h x 3.0' t	=	4383.2
PART. #1	=	24.25' L x 60.25' h x 3.0' t	=	4383.2
PART. #2	=	24.25' L x 60.25' h x 1.5' t	=	2191.6
PART. #3	=	24.25' L x 60.25' h x 1.5' t	=	2191.6
PART. #4	=	13.75' L x 60.25' h x 1.0' t	=	828.4
PART. #5	=	13.25' L x 15.25' h x 1.0' t	=	202.1

ASSUME

$$\gamma_{\text{CONCRETE}} = 150 \text{ #/FT}^3$$

$$V = 61423.9 \text{ FT}^3$$

$$W_s = 9213.6 \text{ KIPS}$$

$$W_{\text{TOTAL}} = W_E + W_s = 9416.2 \text{ K}$$

$$\% \text{ OF EQUIP} = \frac{202.6}{9416.2} \times 100 = \underline{\underline{2.15\%}}$$

• AC

$$12.5 + 25.0 = 37.5 \text{ K} = W_E$$

• S. WALL	12.0' L x 11.5' h x 2.0' t =	276.0
• NEXT N.	12.0' L x 11.5' h x 3.25' t =	448.5
• NEXT N.	12.0' L x 11.5' h x 1.5' t =	207.0
• NEXT N.	12.0' L x 11.5' h x 1.5' t =	207.0
• NEXT N.	12.0' L x 11.5' h x 1.5' t =	207.0
• NEXT N.	12.0' L x 11.5' h x 1.5' t =	207.0
• NEXT N.	12.0' L x 11.5' h x 1.5' t =	207.0
• NEXT N.	25.25' L x 11.5' h x 3.0' t =	871.1
• NORTH WALL	25.25' L x 11.5' h x 3.0' t =	871.1
• E. WALL	7.5' L x 11.5' h x 3.0' t =	258.8
• BTM	21.0' W x 51.25' L x 2.0' t	
	+ 8.08' W x 21.0' L x 2.0' t	
	+ 4.25' W x $\left[\frac{7.5 + 8.08}{2} \right] \times 2.0' t =$	2558.1
• TOP	21.0' W x 51.25' L x 3.0' t	
	+ 8.08' W x 21.0' L x 3.0' t	
	+ 4.25' W x $\left[\frac{7.5 + 8.08}{2} \right] \times 3.0' t =$	3837.1

$$V = 10155.7 \text{ ft}^3$$

$$W_s = 1523.4 \text{ Kips}$$

$$W_T = 1523.4 + 37.5 = 1560.9 \text{ K}$$

$$\% \text{ OF EQUIPMENT} = \frac{37.5}{1560.9} \times 100 = \underline{\underline{24.02}}$$

4-20-77

3

EQUIPMENT MASS CONT'D

• AOC

• EQUIPMENT MASS

$$W_E = 22.0 + 26.2 + 33.0 = 81.2 \text{ KIPS}$$

• CELL MASS

• BTM	43.25' L x 33.0' W x 1.0' t =	1427.3
• 1 ST FLR	13.25' W x 33.0' L x 1.0' t	
	+ 17.0' W x 23.834' L x 1.0' t =	842.4
• 2 ND FLR	33.0' L x 13.25' W x 1.0' t	
	+ 17.0' W x 23.834' L x 1.0' t	
	= 11.5' W x 12.25' L x 1.0' t =	701.6
• ROOF	43.25' L x 33.0' W x 0.5' t =	713.6
• S. WALL	44.25' h x 33.0' L x 1.0' t =	1460.3
• NEXT N.	12.25' L x 13.25' h x 1.0' t =	162.3
• NEXT N.	11.5' h x 33.0' L x 1.0' t	
	+ 9.166' W x 32.75' h x 1.0' t =	679.7
• NEXT N.	33.0' L x 31.0' h x 2.0' t =	2046.0
• NEXT N.	5.33' W x 13.25' h x 0.5' t =	35.3
• W. WALL	43.25' L x 44.25' h x 1.0' t	
	+ 13.0' W x 31.0' h x 2.0' t =	2719.8
• NEXT W.	11.5' W x 13.25' h x 1.0' t =	152.4
• NEXT W.	17.0' W x 44.25' h x 1.0' t =	752.3
• NEXT W.	13.25' h x 18.583' W x 0.667' t =	164.2
• 2 ND FLR	13.0' W x 33.0' L x 2.75' t =	1179.8

$$V = 13036.9 \text{ FT}^3$$

$$W_s = 1955.5 \text{ K}$$

$$W_T = 1955.5 + 81.2 = 2036.7$$

$$\% \text{ OF EQUIP} = \frac{81.2}{2036.7} \times 100 = \underline{\underline{3.99\%}}$$

4-20-77

4

EQUIPMENT MASS CONT'D

• LWC

• EQUIPMENT MASS

$$W_E = 16.0 + 30.0 + 30.0 + 44.0 + 6.0 + 10.0 = 136.0^K$$

• CELL MASS

• N. WALL	18.417' W x 22.25' H x 2.75' t =	1126.9
• NEXT S.	19.0' W x 22.25' H x 2.75' t =	1162.6
• NEXT S.	6.875' W x 22.25' H x 1.5' t =	229.5
• S. WALL	9.25' H x 33.917' W x 3.0' t =	941.2
• W. WALL	9.25' H x 44.125' L x 3.0' t =	1224.5
• NEXT W.	10.781' L x 22.25' H x 1.5' t =	359.8
• NEXT W.	27.763' L x 22.25' H x 2.75' t =	1698.7
• NEXT W.	130.5' L x 22.25' H x 2.75' t =	1866.2
• INTER DIAG.	7.91' L x 22.25' H x 1.5' t =	264.0
• BTM	18.417' W x 47.625' L x 2.5' t =	
	+ 19.0' W x 17.125' L x 2.5' t =	3006.2
• TOP	18.417' W x 47.625' L x 3.0' t =	
	+ 19.0' W x 17.125' L x 3.0' t =	
	+ $[17.5 \times 6.874 + 4.168 \times \frac{17.5 + 10.781}{2}] \times 0.5' t =$	3697.1

$$V = 15576.7$$

$$W_S = 2336.5 \text{ kips}$$

$$W_t = 136 + 2336.5 = 2472.5$$

$$\% \text{ OF EQUIPMENT} = \frac{136}{2472.5} \times 100 = \underline{\underline{5.50\%}}$$

4-20-77

5

EQUIPMENT MASS CONT'D

• UPC

• EQUIPMENT MASS

$$W_E = 100.0 + 100.0 = 200.0 \text{ K}$$

• CELL MASS

• N. WALL

$$27.62' L \times 14.875' W \times 1.75' t = 719.0$$

• NEXT S.

$$9.37' L \times 14.875' W \times 1.75' t = 243.9$$

• W. WALL

$$37.0' L \times 14.875' W \times 1.75' t = 963.2$$

• NEXT E

$$11.33' L \times 14.875' W \times 1.75' t = 294.9$$

• E. WALL

$$48.33' L \times 14.875' W \times 1.75' t = 1258.1$$

• BTM

$$27.62' L \times 48.33' W \times 1.25' t =$$

$$- 9.37' L \times 11.33' W \times 1.25' t = 1535.9$$

• TOP

$$27.62' L \times 48.33' W \times 1.75' t =$$

$$- 9.37' L \times 11.33' W \times 1.75' t = \underline{2150.2}$$

$$V = 7165.2 \text{ FT}^3$$

$$W_s = 1074.8 \text{ K}$$

$$W_T = 1074.8 + 200 = 1274.8$$

$$\% \text{ EQUIP} = \frac{200}{1274.8} \times 100 = \underline{\underline{15.69\%}}$$

42.381 50 SHEETS 5 SQUARE
42.382 100 SHEETS 5 SQUARE
42.389 200 SHEETS 5 SQUARE

NATIONAL

4-20-77

6

EQUIPMENT MASS CONT'D

• GPC

• EQUIPMENT MASS

$$W_E = 10.0 + 24.0 + 4.0 + 3.5 + 20.8 = 62.3 \text{ K}$$

• CELL MASS

14.5

• S. WALL	74.578' L x 22.75' h x 2.0' t	
	+ 68.75' L x 22.75' h x 4.0' t =	6919.5
• NEXT N.	5.75' L x 10.5' h x 1.0' t =	60.4
• NEXT N.	14.5' L x 22.75' h x 3.5' t	
	+ 68.75' L x 22.75' h x 4.0' t =	7410.8
• NEXT N.	13.375' L x 22.75' h x 1.25' t =	380.4
• NEXT N.	65.25' L x 22.75' h x 1.5' t =	2226.7
• NEXT N.	5.75' L x 10.5' h x 1.0' t =	60.4
• NEXT N.	17.75' L x 22.75' h x 1.25' t =	504.8
• E. WALL	13.0' L x 10.5' h x 1.0' t =	136.5
• NEXT W.	30.25' L x 22.75' h x 1.5' t =	1032.3
• NEXT W.	15.0' L x 22.75' h x 4.667' t =	1592.6
• NEXT W.	10.041' L x 22.75' h x 1.25' t =	285.5
• NEXT W.	10.041' L x 22.75' h x 1.25' t =	285.5
• NEXT W.	16.75' L x 22.75' h x 1.5' t =	571.6
	+ 15.0' L x 11.5' h x 3.5' t =	603.8
• NEXT W.	7.625' L x 22.75' h x 1.25' t =	216.8
• NEXT W.	15.0' L x 22.75' h x 2.0' t =	682.5
• BTM	[31.75 x (68.75 + 14.5)	
	+ 5.75 x 13 + 10.041 x 17.75	
	- 1/2(1.5)(14.5) - 9.125(13.375)	
	- 4.625(7.625 + 9.125)] x 2.0' t =	5371.5
• NEXT UP	5.75' W x 13.0' L x 1.0' t =	74.8
• TOP (NOT W/ PMC OR CPC)	[16.75 x 78.625	
	- 13.75 x 9.125] x 2.0' t =	2383.0
• TOP W/PMC + GPC	[15 x 68.75 + 14.5(15.0 + 13.5)]	
	x 5.5' t =	6808.3

$$V = 37607.7 \text{ FT}^3$$

$$W_S = 5641.1 \text{ KIPS}$$

$$\text{TOTAL WEIGHT} = 5703.4 \text{ K}$$

$$\% \text{ OF EQUIP} = \frac{62.3}{5703.4} \times 100 = \underline{\underline{1.09\%}}$$

4-20-77

7

EQUIPMENT MASS CONT'D

• CPC

• EQUIPMENT MASS

$$W_E = 8.5 + 13.0 + 13.0 + 13.0 + 20.0 + 6.0 + 16.7 + 40.0 + 40.0 + 76.6 + 61.5 = 308.3 K$$

• CELL MASS

• N. WALL	27.75' L x 10.5' h x 2.0' t =	1082.3
	+ 6.657' L x 15.5' h x 2.0' t =	206.4
• NEXT S.	6.657' L x 15.5' h x 2.0' t =	206.4
• NEXT S.	15.125' L x 27.75' h x 2.0' t =	839.4
	+ 16.125' L x 10.5' h x 2.0' t =	338.6
• NEXT S.	15.125' L x 27.75' h x 2.0' t =	839.4
	+ 16.125' L x 10.5' h x 2.0' t =	338.6
• NEXT S.	7.09' L x 17.25' h x 3.5' t =	428.1
• NEXT S.	27.75' L x 10.5' h x 4.0' t =	1165.5
	+ 11.625' L x 17.25' h x 4.0' t =	802.1
• S. WALL	27.75' L x 47.25' h x 5.0' t =	6555.9
• EAST WALL	10.0' L x 15.5' h x 2.0' t =	310.0
• NEXT W.	135.0' L x 10.5' h x 5.75' t =	15136.9
	+ 95.5' L x 27.75' h x 5.75' t =	15238.2
• NEXT W.	40.25' L x 17.25' h x 3.25' t =	2256.5
• NEXT W.	46.416' L x 17.25' h x 3.0' t =	2402.0
	+ 34.416' L x 10.5' h x 3.0' t =	1084.1
• NEXT W.	135' L x 10.5' h x 5.75' t =	15136.9
	+ 95.5' L x 10.5' h x 5.75' t =	5765.8
	+ 21.5' L x 17.25' h x 5.75' t =	2132.5
• WEST WALL	9.5' L x 27.75' h x 2.0' t =	527.3
• BTM	[15.125 x 40.25 + 6.166 (15.125 + 11.625)]	

$$+ 95.5 \times 27.75 + 16.125 \times 21.5 + 9.5 \times 15.125 \times 3.5' t = 13411.1$$

$$\bullet 1^{ST} \text{ FLR } [46.416 \times 31.25 - \frac{1}{2}(3.5)(6.166) - 24.916(16.125)] \times 3.0' t = 3113.8$$

$$\bullet 2^{ND} \text{ FLR } [39.5 \times 27.75 + 15.125 \times 9.5] \times 2.0' t = 2479.6$$

$$\bullet \text{ Next up } 6.657' L \times 10.0' w \times 2.0' t = 133.1$$

$$\bullet \text{ TOP } [135.0' L \times 27.75' w + 6.657 \times 10] \times 5.0' t = 19064.1$$

$$V = 110994.8 \text{ FT}^3$$

$$W_S = 16649.2 K$$

$$W_t = 16649.2 + 308.3 = 16957.5$$

$$\% \text{ EQUIP} = \frac{308.3}{16957.5} \times 100 = \underline{\underline{1.82\%}}$$

4-20-77

8

EQUIPMENT MASS CONT'D

• PMC

• EQUIPMENT MASS

$$W_E = 20.0 + 6.0 + 6.0 + 8.0 + 6.3 + 30.0 = 76.3 \text{ K}$$

• CELL MASS

• S. WALL	17.5' L x 29.75' h x 5.5' t =	2863.4
• Next N	17.5' L x 15.75' h x 5.5' t =	1515.9
• Next N	6.75' L x 9.417' h x 10' t =	63.6
• No. wall	17.5' L x 14.0' h x 2.0' t =	490.0
	+ 4.75' L x 9.417' h x 2.0' t =	127.1
• E. WALL	57.5' L x 29.75' h x 5.5' t =	9408.4
	+ 30.583' L x 14.0' h x 2.0' t =	856.3
• Next W.	57.5' L x 29.75' h x 5.5' t =	9408.4
	+ 30.583' L x 14.0' h x 2.0' t =	856.3
• W. WALL	7.917' L x 9.417' h x 2.0' t =	149.1
• BTM	17.5' W x 57.5' L x 3.5' t =	3521.9
• Next up	30.583' W x 17.5' L x 2.333' t =	1248.6
• Next up	6.75' L x 7.917' W x 2.0' t =	106.9
• TOP	17.5' W x 57.5' L x 5.5' t =	5534.4
	+ 30.583' L x 17.5' W x 2.0' t =	1070.4
	+ 6.75' L x 7.917' W x 2.0' t =	106.9

$$V = 37327.7 \text{ FT}^3$$

$$W_S = 5599.2 \text{ K}$$

$$W_T = 5599.2 + 76.3 = 5675.5 \text{ K}$$

$$\% \text{ EQUIP} = \frac{76.3}{5675.5} \times 100 = \underline{\underline{1.34\%}}$$

4-20-77

9

EQUIPMENT MASS CONT'D

• EDR

• EQUIPMENT MASS

$$W_E = 8.0 \times 46.0 = 54.0 \text{ K}$$

• CELL MASS

• W. WALL	10.5' L x 8.75' h x 2.0' t =	183.8
• Next E	35.0' L x 26.75' h x 3.0' t =	2808.8
• Next E	24.5' L x 16.0' h x 1.5' t =	588.0
• Next E	24.5' L x 16.0' h x 1.5' t =	588.0
• Next E	10.084' L x 26.75' h x 3.0' t =	809.2
• S. WALL	15.0' L x 26.75' h x 3.0' t =	1203.8
	+ 5.0' L x 8.75' h x 3.0' t =	131.3
• Next N	19.5' L x 16.0' h x 1.5' t =	468.0
• Next N	19.5' L x 16.0' h x 1.5' t =	468.0
• W. WALL	46.75' L x 26.75' h x 3.0' t =	3751.9
• BTM	[46.75 x 35.0 + 5.0 x 10.5 - 22.416 x 1.5 - 23.75 x 2.5] x 1.5' t =	2374.9
• TOP	[46.75 x 35.0 - 18 x 16.125] x 2.0' t =	2692.0

$$V = 16067.3 \text{ FT}^3$$

$$W_s = 2410.1 \text{ K}$$

$$W_t = 2410.1 + 54.0 = 2464.1 \text{ K}$$

$$\% \text{ EQUIP} = \frac{54}{2464.1} \times 100 = 2.19\%$$

ENGINEERING NOTE

1

SUBJECT

EPC

NAME

AMD

- MASSES FOR EQUIPMENT

DATE

6-3-76

- ALL EQUIPMENT MASSES USE ARE FROM DRABO NOTES.

EPC - #1

4D-1 (16.5 K) - ADD 4125# TO NODES 3, 11, 243, 282

4D-2 (16.0 K) - ADD 4000# TO NODES 2, 10, 242, 281

7D-1 (12.0 K) - ADD 3000# TO NODES 4, 12, 285, 283

ESTIMATED D.L. OF THE EPC

END WALLS & PART.

- 22.91 FT. WIDE X 60.25 FT HIGH

- total thickness = 5 + 3 + 1.5 + 1.5 + 3 = 14 FT

$$W/Y = 150 \#/\text{FT}^3$$

$$W_{EW} = 22.91 \times 60.25 \times 14 \times 150 = 28987 \text{ K}$$

SIDE WALLS.

- 1ea @ t = 5.25' & 1ea @ t = 5.0'

- WIDTH = 16.25' ; H = 60.25

$$W_{SW_1} = 16.25 \times 60.25 \times (10.25) \times 150 = 1505.3 \text{ K}$$

SIDE WALLS 2

- 2ea @ t = 3.0

- WIDTH = 61.75' H = 60.25

$$W_{SW_2} = 61.75 \times 60.25 \times 6.0 \times 150.0 = 3348.4 \text{ K}$$

BASE

- t = 3.6'

- WIDTH = 22.91 FT - LENGTH = 78'

$$W_B = 22.91 \times 78 \times 3.6 \times 150 = 965 \text{ K}$$

TOP, - t = 3.0'

- WIDTH = 22.91 L = 61.75

$$W_T = 22.91 \times 61.75 \times 3.0 \times 150 = 636.6 \text{ K}$$

ENGINEERING NOTE

SUBJECT

EPC - EQUIP MASSES

NAME

A.M.D

DATE

6-3-76

DL EST. CONT'D

TOP₂ - t = 5.0'

WIDTH = 22.91 - LENGTH = 16.25'

$$W_{T_2} = 22.91 \times 16.25 \times 5.0 \times 150.0 = \underline{279.2^k}$$

$$\text{TOTAL EST. WEIGHT} = 9633.2^k$$

$$\text{TOTAL MISC EQUIP.} = 8 + 30 + 22.6 + 15.5 = 76.1^k$$

$$\text{TOTAL WEIGHT} = 9709.3$$

$$\frac{9633.2}{150} = 6422.13 \text{ FT}^3$$

$$\gamma_{\text{New}} = \frac{9709.3}{6422.13} = \underline{151.2 \text{ \#/FT}^3}$$

$$\% \text{ change} = \underline{0.8\%}$$

EXTRACTION CHEM ROOM

- TOTAL EQUIP @ EL 160 = 82^k

TOTAL ROOF WEIGHT

$$= 636.8 + 279.2 = 916^k \Rightarrow V = 6106.67 \text{ FT}^3$$

$$= w / \gamma = 151.2 \text{ \#/FT}^3 \quad w_t = 923.3^k$$

$$w / \text{EQUIP} \quad W = 923.3 + 82 = 1005.3^k$$

$$\gamma = \frac{1005.3}{6106.67} = \underline{164.6 \text{ \#/FT}^3}$$

SUMMARY EPC

- BASE & ALL VERT WALLS

$$\gamma_{\text{New}} = 151.2 \text{ \#/FT}^3$$

- TOP

$$\gamma_{\text{New}} = \underline{164.6 \text{ \#/FT}^3}$$

ENGINEERING NOTE

SUBJECT

AC - EQUIPMENT

NAME

AMD

DATE

6-3-76

- TOTAL UNIFORM EQUIP = 12.5K

- DL OF BTM

- $t = 2'$

- WIDTH = 21.62 LENGTH = 60.75'

- WIDTH = 5.0 LENGTH = 11.63'

$$W_B = \left\{ [21.62 \times 60.75] + [5.0 \times 11.63] \right\} 2.0 \times 150 = \underline{411.5^K}$$

$$V_B = 2743.13^*$$

- DL - TOP

- $t = 3.0$

$$W_t = \frac{3}{2} (2743.13) 150 = \underline{617.2^K}$$

- VERT WALLS

- $t = 3.0'$ - $H = 13.25'$ $L = (21.62)2 + 11.63 = 54.87^{\text{FT}}$

$$W_T = 13.25 \times 54.87 \times 3.0 \times 150 = \underline{327.2^K}$$

- $T = 3.56'$ - $H = 13.25$ $L = 21.62$

$$W_{T2} = 13.25 \times 21.62 \times 3.56 \times 150 = \underline{153.0^K}$$

- $t = 4.0$ - $H = 13.25$ $L = 21.62$

$$W_T = 13.25 \times 21.62 \times 4 \times 150 = \underline{171.9^K}$$

$$\text{TOTAL DL} = 1680.8^K = 11205.33^{\text{FT}^3}$$

$$w/\text{EQUIP} = 1693.3^K$$

$$\gamma_{\text{new}} = \frac{1693.3}{11205.33} = 151.1^{\text{#}/\text{FT}^3}$$

ADD THE 25K SUSP PIPE TO BTM

$$W_{T3} = \frac{151.1}{150} \times 411.5 = 414.5 \Rightarrow V = 2743.33$$

$$W_T = 439.5 \Rightarrow \gamma = 439.5/V = \underline{160.2^{\text{#}/\text{FT}^3}}$$

ENGINEERING NOTE

FILE NO.

PAGE

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SUBJECT

AC - EQUIP

NAME

AMD

DATE

6-3-76

- NEW γ 's
- VERT WALLS & ROOF
- BTM SLAB

$$\gamma_{\text{new}} = 151.1 \text{ \#/FT}^3$$

$$\gamma_{\text{new}} = 160.2 \text{ \#/FT}^3$$

ENGINEERING NOTE**5**

SUBJECT

AOC - EQUIP

NAME

AMD

DATE

6-3-76**BASE SLAB**

$$WT. OF BASE SLAB = 41.75 \times 33.12 \times 1 \times 150 = 207414 \#$$

$$t = 1.0'$$

$$V_{BASE} = 1382.76 \text{ FT}^3$$

$$NEW WEIGHT = 229414 \# \Rightarrow \gamma_{BASE} = 165.91 \#/\text{FT}^3$$

FIRST FLOOR

$$V = A(1) = 757.83 \text{ FT}^3 \quad W = 119674 \#$$

$$W_{new} = 145874$$

$$\Rightarrow \gamma_{1ST} = 192.49 \#/\text{FT}^3$$

SECOND FLOOR

$$V = [A_{1ST} - (17.5) \times (9.87)] 1.0 + A_{(2)} \times 2.75$$

$$= (585.105)(1.0) + 502.62(2.75) = 1967.31 \text{ FT}^3$$

$$W_t = 295096.5$$

$$W_{new} = 328096$$

$$\gamma_{new} = 166.77 \#/\text{FT}^3$$

ENGINEERING NOTE

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SUBJECT

LWC

NAME

AMD

DATE

6-7-76

- EQUIP WEIGHTS

$$A = 18.62(40.29) - \frac{1}{2}(5.37)(4.0) + 21.62(30.5) = 1398.87 \text{ FT}^2$$

$$V = 3497.17 \text{ FT}^3$$

$$W_k = V \times 150 = 524576 \text{ \#}$$

$$W_{\text{new}} = W_k + 136 \text{ K} = 660576 \text{ \#}$$

$$\gamma_{\text{new}} = 188.89 \frac{\text{\#}}{\text{FT}^3}$$

BASE SLAB ONLY

ENGINEERING NOTE

SUBJECT

UPC

NAME

AMD

-EQUIP WEIGHTS

DATE

6-8-76

$$A = 48.33(27.62) - 11.33(9.37) = 1228.71 \text{ Ft}^2$$

$$V = A \times 1.25 = 1535.89 \text{ Ft}^3$$

$$W_t = V \times 150 = 230.383 \text{ K}$$

$$W_{\text{new}} = W_t + 200000 = 430.383 \text{ K}$$

BASE SLABS ONLY $\rightarrow \gamma_{\text{new}} = \frac{W_{\text{new}}}{V} = 280.218 \frac{\text{K}}{\text{Ft}^3}$

ENGINEERING NOTE

SUBJECT

GPC

NAME

AMAD

-MASSES FOR EQUIPMENT

DATE

6-14-76

THICKNESS = 2.0 FT

$$A = 1210.55 \text{ FT}^2$$

$$V = 2421.105 \text{ FT}^3$$

$$W_t = V \times 150 = 363166 \#$$

NEW WEIGHT

$$W = \frac{363166}{54800}$$

$$W_{\text{new}} = 417966 \#$$

FOR BASE ELEMENTS

$$\gamma_{\text{new}} = \frac{W_{\text{new}}}{V} = \underline{\underline{172.63 \#/\text{FT}^3}}$$

183

186

190

193

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GPC CRANES TO BASE OF CPC - BELOW CRANE ROOM

$$A = 416.25 \text{ FT}^2$$

$$V = A \times 3 = 1248.75 \text{ FT}^3$$

$$W = V \times 150 =$$

$$= 187312$$

$$t = 3'$$

$$\text{new } W = 187312 + 7500 = 194812$$

$$\gamma_{\text{new}} = \frac{W_{\text{new}}}{V} = 156.0 \#/\text{FT}^3$$

TO ELEM

71, 72, 106 & 107 ONLY.
(See Sheet #9)

ENGINEERING NOTE

SUBJECT

CPC

NAME

AMD

DATE

6-14-76

MASSES FOR EQUIPMENT

$$A = 2865.19 \text{ FT}^2$$

$$V = 8595.56 \text{ FT}^3$$

$$W = V \times 150 = 1289334 \text{ \#}$$

$$\text{New } W_t = 1289334 + 320800 = 1610134 \text{ \#}$$

FOR ELEM.

69, 70, 100 - 105

$$\gamma_{\text{new}} = \frac{W_{\text{new}}}{V} = 187.32 \text{ \#/FT}^3$$

NOTE ELEM 106, 107, 71 & 72 TO HAVE $\gamma = 193.32 \text{ \#/FT}^3$ —
(THE ADDITIONAL $6 \text{ \#/FT}^3$ FROM GPC CRANE)

SCRAP REMOVAL CRANES

$$t = 3.0'$$

$$A = 539.75 \text{ FT}^2$$

$$V = 1619.24 \text{ FT}^3$$

$$W = V \times 150 = 242886.7 \text{ \#}$$

$$W_{\text{new}} = 242886.7 + 6000 = 248886.7$$

FOR ELEM

64 - 68 ONLY

$$\gamma_{\text{new}} = \frac{W}{V} = 153.71 \text{ \#/FT}^3$$

ENGINEERING NOTE

SUBJECT

CPC

NAME

AAD

MASSES FOR EQUIPMENT

DATE

6-14-76

-ADD UPPER & LOWER CRANE WT TO ROOF

$t = 5.0'$

FOR

ELEM - 31-40 & 94-99

$$A = 3746.25 \text{ FT}^2 \quad V = 18731.25 \text{ FT}^3$$

$$W = V \times 150 = 2809687.5 \text{ \#}$$

$$W_{\text{new}} = W + 21500 + 38500 \text{ \# from rooms above}$$

$$= 2869687.5 \text{ \#} \Rightarrow \gamma_{\text{new}} = 153.20 \text{ \#/FT}^3$$

Use 153.7

HOIST ENCLOSURE - ~~ELEM~~ 43 $t = 2'$

$$A = 208.04 \text{ FT}^2 \quad V = 416.07 \text{ FT}^3 \quad W = 62411 \text{ \#}$$

$$W_{\text{new}} = 62411 + 8700 = 71111.0 \text{ \#}$$

$$\gamma_{\text{new}} = 170.91 \text{ \#/FT}^3$$

ENGINEERING NOTE

SUBJECT

PMC

NAME

AMD

DATE

6-14-76

-MASSES FOR EQUIPMENT

$$t = 5.5'$$

$$A = 805.24 \text{ FT}^2$$

$$V = 4428.8 \text{ FT}^3$$

$$W = 664320 \text{ #}$$

$$W_{\text{new}} = W + 56300 = 720620.6 \text{ #}$$

$$\gamma_{\text{new}} = 162.71 \text{ #/FT}^3$$

FOR NODES
170 # 172

ROOF OF PMC - ADD 20' FOR CRANES

$$A = A_1 + A_2$$

$$= 570.93 + 1085.287$$

$$V = A_1 \times 2 + A_2 \times 6$$

$$= 1141.8 + 6511.7$$

$$V = 7653.58 \text{ FT}^3$$

$$W = 1148037$$

$$W_{\text{new}} = W + 20,000 = 1168037 \text{ #}$$

$$\gamma_{\text{new}} = \underline{\underline{152.61 \text{ #/FT}^3}}$$

ENGINEERING NOTE

SUBJECT

EDR

NAME

A.M.D

MASSES FOR EQUIPMENT

DATE

6-14-76

TRANSFER CR

$$A = 564.2 \text{ FT}^2 \quad V = 846.3 \text{ FT}^3 \quad W = 126945 \text{ \#}$$

$$W_{\text{new}} = 126945 + 46000 = 172945 \Rightarrow \gamma_{\text{new}} = 204.35 \text{ \#/FT}^3$$

CRANE BRIDGE

$$A = 1636.25 \text{ FT}^2$$

$$V = 3272.5 \text{ FT}^3$$

$$W = 490875 \text{ \#}$$

$$W_{\text{new}} = 490875 + 8000 = 498875 \text{ \#}$$

$$\gamma_{\text{new}} = 152.44 \text{ \#/FT}^3$$

$$\text{Use } 152.6$$

ENGINEERING NOTE

SUBJECT

WA

NAME

AMD

- MASSES FOR EQUIPMENT

DATE

6-15-76

@ EL 133

$$A = 1585.19 \text{ FT}^2 \quad V = 1854.67 \text{ FT}^3 \quad W = 278200$$

$$W_{\text{new}} = 278200 + 34500 + 34000 = 346700$$

$$\gamma = 186.93 \text{ #/FT}^3$$

Use 187.3

ENGINEERING NOTE

SUBJECT

VWR

NAME

AMD

MASSES FOR EQUIPMENT

DATE

6-14-76

FLOOR

$$t = 1.25$$

$$A = 569.44 \text{ FT}^2$$

$$V = 711.79 \text{ FT}^3$$

$$W = 106769 \text{ \#}$$

$$W_{\text{new}} = 106769 + 10000 = 116769 \text{ \#}$$

$$\gamma_{\text{new}} = 164.05 \text{ \#/FT}^3$$

Use 164.6

ROOF

FOR 2LBM

155-157

$$t = 1.0$$

$$A = 569.44 \text{ FT}^2$$

$$V = 569.44 \text{ FT}^3$$

$$W = 85416 \text{ \#}$$

$$W_{\text{new}} = 85416 + 6600 = 92016 \text{ \#}$$

$$\gamma = 161.59 \text{ \#/FT}^3$$

Use 162.7

Mass of Process
§ Office Bldg.

**MASS OF PROCESS
AND OFFICE BUILDINGS**

ENGINEERING NOTE

SUBJECT

PROCESS BUILDING

NAME

AMD

DATE

6-22-76

- SUMMARY

OVER EPC

- @ 178'-8 $\frac{1}{2}$ "- SLAB = 237.5 K

- WALLS TO EL. 160

$$- 322.2 \text{ FT} \times 106.7 \text{ \#/FT} = 34.37 \text{ K/FT OF HEIGHT}$$

$$= 34.37 \times 18.708 = \underline{642.97 \text{ K TOTAL}}$$

- WALLS FROM EL. 160 TO EL. 144

$$- 187.33 \text{ F} \times 106.7 \text{ \#/FT} = 19.98 \text{ K/FT OF HEIGHT}$$

$$= 19.98 \times 16 = \underline{319.71 \text{ K TOTAL}}$$

OVER CPC

- @ 178'-8 $\frac{1}{2}$ "- SLAB 22.3 K- WALLS TO EL. 164'-2 $\frac{1}{2}$ "
$$- 87.667' \times 106.7 = 9.35 \text{ K/FT}$$

$$= 9.35 \times 14.625 = \underline{136.76 \text{ K TOTAL}}$$
- TOTAL SLAB @ EL. 164'-2 $\frac{1}{2}$ " = 167.82 K- WALLS FROM 164'-2 $\frac{1}{2}$ " TO 148'-0"

- 12" BLOCK

$$- 280.83' \times 150 = 42.124 \text{ K/FT}$$

$$= 42.124 \times = \underline{682.77 \text{ K TOTAL}}$$

- 8" BLOCK

$$- 211.415 \text{ FT} \times 106.7 \text{ \#/FT} = 22.55 \text{ K/FT}$$

$$= 22.55 \times 16.208 = \underline{365.51 \text{ K TOTAL}}$$

OVER EPC @ 159'-8"

- SLAB = 148.8 K

- WALLS FROM 159'-8" TO 146'

$$- 158.875 \text{ FT} \times 106.66 = 16.95 \text{ K/FT}$$

$$= 16.95 \times 16 = \underline{271.15 \text{ K TOTAL}}$$

ENGINEERING NOTE**II**

SUBJECT

PROCESS BLDG

NAME

AMD

DATE

6-22-76

- SUMMARY - CONT'D

- AT EL 144'

$$- \text{SLAB @ EL } 154' - 2\frac{1}{2}" = 15.19 \text{ K}$$

$$- \text{WALLS FROM } 154' - 2\frac{1}{2}" \text{ TO } 144'$$

$$- 67.3' \times 106.66 = 7.18 \text{ K/FT}$$

$$= 7.18 \times 10.208 = 73.28 \text{ K TOTAL}$$

$$- \text{SLAB AT } 144' = 374.28 \text{ K}$$

$$- \text{WALLS FROM } 144' \text{ TO } 131'$$

$$- 141.33 \text{ FT} \times 106.66 = 15.08 \text{ K/FT OF HEIGHT}$$

$$= 15.08 \times 13 = 195.98 \text{ K TOTAL}$$

- AT EL 131'

$$- \text{SLAB} = 272.15 \text{ K}$$

$$- \text{WALLS TO EL } 114' - 6"$$

$$- 12" \text{ WALLS} - 27.17' \times 150 = 4.08 \text{ K/FT} \times 16.5 = 67.32 \text{ K TOTAL}$$

$$- 8" \text{ WALLS} - 393.21 \text{ FT} \times 106.66 = 41.94 \text{ K/FT}$$

$$= 41.94 \times 16.5 = 692.05 \text{ K TOTAL}$$

- AT 114.5'

$$- \text{SLAB} = 392.4 \text{ K}$$

$$- \text{WALLS TO EL } 100$$

$$- 550 \times 106.666 = 58.67 \text{ K/FT}$$

$$= 58.67 \times 14.5 = 850.67 \text{ K TOTAL}$$

TOTAL WEIGHT IN PROCESS BLDG

$$- \text{SLABS} = 1630.5 \text{ K}$$

$$- \text{WALLS} = 4298.2 \text{ K}$$

$$\Sigma = 5928.9 \text{ K}$$

ENGINEERING NOTE

FILE NO.

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SUBJECT

PROCESS BUILDING

NAME

AMD

DATE

6-16-76

- ROOF ELEVATION @ EL 178'-8 1/8"

ENGINEERING NOTE

SUBJECT

PROCESS BUILDING

NAME

AMD

X-SECT @ EL 178'-8 1/2"

DATE

6-16-76

COORDINATES OF NODES: ELEV. 178'-8 1/2"

	X	Y	Z
1	-24.25	176.333	78.708
2	-18.25	176.333	}
3	-18.25	185.333	
4	2.5	185.333	
5	2.5	176.333	
6	18.5	176.333	
7	18.5	101.0	
8	23.25	101.0	
9	23.25	95.0	
10	35.833	95.0	
11	35.833	84.333	
12	10.917	84.333	
13	10.917	95.0	
14	-24.25	95.0	78.708

APPROX WEIGHT OF ROOF STEEL DECKING

- INLAND B-20 STL DECK (2.35 #/FT²) =

- 12ea 12B19 @ 19'-5" = 233' x 19 = 4427 #

- 13ea 12B19 @ 22'-0" = 286' x 19 = 5434 #

- 1ea 12WF31 @ 41'-5" = 41'-5" @ 31 = 1284

- 2ea 8WF17 @ 5'-11" =

- 4ea 8WF17 @ 8'-8" =

- 2ea 8WF17 @ 3'-9" =

- 2ea 8WF17 @ 9'-7" =

- 2ea 8WF17 @ 10'-2" =

- 1ea 8WF17 @ 3'-9" =

- 1ea 8WF17 @ 8'-1" =

- 2ea 8WF17 @ 10'-6" =

- 1ea 8WF17 @ 3'-4" =

- 1ea 8WF17 @ 8'-2" =

- 1ea 12B19 @ 160' = 160' x 19 = 3040 #

- 16t 2 1/2 x 2 1/2 x 1/4 @ 300' @ 4.1 #/FT = 1230 #

137'83" @ 17 = 2343 #

17760 #
3477 #/FT²W = 5.10 #/FT²WAPPROX for STEEL
Deck = 10 #/FT²W/4" CONC = 10 + 50 = 60 #/FT²

SUBJECT ADDRESS BUILDING

FILE NO.

PAGE

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NAME

AMM

DATE

6-17-76

Roof Elevation @ 164'-2 1/2" (154-M-63)

ROOF = STEEL DECK w/ 4" CONCRETE SLAB

TOTAL LENGTH OF 12" BLK WALL = 280.83'

TOTAL LENGTH OF 8" BLK WALL = 96.915' + 26'-10" + 87'-8" = 211.415'

TOTAL WEIGHT OF 6" SLAB = 476.91 FT² × 150/2 = 35.77 KIPS

TOTAL WEIGHT OF 4" SLAB = 2200.9 FT² × 60#/FT² = 132.05 KIPS

TOTAL WEIGHT OF SLAB AT 178'-10" = 371.8 × 60 = 22.3 K

BOTTOM ELEVATION @ 148'-0"

To 178'-10" EL.

ENGINEERING NOTE

4

SUBJECT

PROCESS BUILDING

NAME

AMD

DATE

6-17-76

- ROOF @ ELEV 164'-2 1/2"

NODE	X	Y	Z
1	2.667	209.667	64.208
2	17.417	209.667	
3	43.917	209.667	
4	62.167	209.667	
5	76.833	209.667	
6	2.667	193.5	
7	17.417	193.5	
8	43.917	188.167	
9	48.083	188.167	
10	62.167	188.167	
11	48.083	180.833	
12	52.167	184.167	
13	52.167	180.833	
14	62.167	180.833	
15	2.667	177.333	
16	17.417	177.333	
17	43.917	177.333	
18	43.917	168.833	
19	76.833	168.833	
20	48.083	184.333	
21	103.667	209.667	64.208
22	115.167	209.667	
23	103.667	177.333	
24	115.167	177.333	64.208

(2)

78.833

78.833

78.833

78.833

ENGINEERING NOTE

SUBJECT

PROCESS BUILDING

NAME

AMD

DATE

6-17-76

ROOF @ EL $159'-8\frac{1}{2}"$ - SAME AS @ EL $178'-8\frac{1}{2}"$ PLUS

ADDITIONAL LENGTH OF 8" BUC WALL

= 71 FT INSIDE ROOM W/ ROOF @ $178'-8\frac{1}{2}"$
 + $87'-10\frac{1}{2}"$ NEW OUTSIDE WALL

NODE	X	Y	Z
1	49.5417	168.833	59.708
2	49.5417	75.0	59.708
3	35.833	95.0	59.708

6

DATE 6-17-76

ENGINEERING NOTE

SUBJECT

PROCESS BUILDING

NAME

AMD

DATE

6-17-76

ROOF @ EL 131'-0"

TOTAL WEIGHT OF SUB = $4535.8 \text{ FT}^2 \times 60 = 272.15 \text{ K}$

TOTAL LENGTH OF 12" BLK WALL = 27.167'

TOTAL LENGTH OF 8" BLK WALL = 393.21 FT

ENGINEERING NOTE**8**SUBJECT **PROCESS BUILDING**NAME **AMD**DATE **6-17-76****- ROOF @ EL 114'-6"**

- ① TOTAL WEIGHT OF SLABS = $6539.8 \text{ FT}^2 \times 60$
 $= 392.4 \text{ KIPS}$
 TOTAL LENGTH OF 8" BLK WALL = 424 FT

TOTAL LENGTH OF 8" BLOCK WALL FROM ELEV 100.0 TO 114'-6"
 $= 550 \text{ FT}$

ENGINEERING NOTE

FILE NO.

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SUBJECT

OFFICE BLDG

NAME

A.M. DAVITO

MASS DISTRIBUTION

DATE

7-8-76

NORTH COORDINATE OF POINTS OF ATTACHMENT
OF OFFICE BLDG TO THE CPC

LINE NO.	COORD (X)	NODES	X	COORD Z
1	4.04	50, 51, 52	4.67	13.0, 30.5, 43.75
2	25.958	208, 209, 210	19.29	"
3	52.375	198, 199, 200	49.79	"
4	74.375	188, 189, 190	61.42	"
5	96.292	173, 174, 175	100.17	"

X - DIRECTION MASSES

- SUB

$$A_1 = 438.32/2$$

$$A_2 = 966.64/2$$

$$A_3 = 968.32/2$$

$$A_4 = 878.32/2$$

$$A_5 = 438.32/2$$

$$M_1 = A_1 \times 50 \frac{\#}{\text{Ft}} \left(\frac{1}{1000 \times 32.2} \right) = 0.34$$

$$M_2 = 0.75$$

$$M_3 = 0.75$$

$$M_4 = 0.68$$

$$M_5 = 0.34$$

- WALLS

$$L_1 = 20' \text{ OF } 12" \text{ BLK}$$

$$L_2 = 0$$

$$L_3 = 0$$

$$L_4 = 0$$

$$L_5 = 20' \text{ OF } 12" \text{ BLK}$$

$$h_{117 \text{ FUR}} = 15.25'$$

$$h_{208 \text{ FUR}} = 16.475'$$

$$h_{300 \text{ FUR}} = 6.625'$$

ENGINEERING NOTE

2

SUBJECT

OFFICE BLDG

NAME

AMD

MASS DISTRIBUTION

DATE

7-8-76

X-DIRECTION MASSES CONT'D

- WALLS

FLOOR	M_{x1}	M_{x2}	M_{x3}	M_{x4}	M_{x5}
1	1.42	—	—	—	1.42
2	1.53	—	—	—	1.53
3	0.62	—	—	—	0.62

Y-DIRECTION MASSES

- SLABS

$A_1 = 438.32$	$M_1 = 0.68$
$A_2 = 966.64$	$M_2 = 1.50$
$A_3 = 968.32$	$M_3 = 1.50$
$A_4 = 878.32$	$M_4 = 1.36$
$A_5 = 438.32$	$M_5 = 0.68$

- WALLS

- $L_1 = 40' \text{ OF } 12" \text{ BLK} + 10.958' \text{ OF } 6" \text{ BLK}$
 $L_2 = 24.166 \text{ FT OF } 6" \text{ BLK}$
 $L_3 = 24.208' \text{ OF } 6"$
 $L_4 = 21.958' \text{ OF } 6"$
 $L_5 = 40' \text{ OF } 12" + 10.958' \text{ OF } 6"$

FLOOR	M_{y1}	M_{y2}	M_{y3}	M_{y4}	M_{y5}
1	3.23	0.86	0.86	0.78	3.23
2	3.49	0.93	0.93	0.84	3.49
3	1.40	0.37	0.37	0.34	1.40

Z-DIRECTION MASSES

- SLAB

$A_1 = 23/2 \times 10.958 = 126.2$	$M_1 = 0.20$
$A_2 = 277.91$	$M_2 = 0.43$
$A_3 = 278.39$	$M_3 = 0.43$
$A_4 = 252.52$	$M_4 = 0.39$
$A_5 = 126.2$	$M_5 = 0.20$

- WALLS

- NO MASS CONTRIBUTION FROM WALL OF OFFICE BLDG. IN "Z" DIRECTION.

ENGINEERING NOTE

3

SUBJECT OFFICE BLDG

NAME AMD

MASS DISTRIBUTION

DATE 7-8-76

- NODAL MASSES

NODE	SLAB	X	WALL	SLAB	Y	WALL	SLAB	Z	WALL
50	0.34		1.42	0.68		3.23	0.2		0.0
51	0.34		1.53	0.68		3.49	0.2		
52	0.34		0.62	0.68		1.40	0.2		
173	0.34		1.42	0.68		3.23	0.2		
174	0.34		1.53	0.68		3.49	0.2		
175	0.34		0.62	0.68		1.40	0.2		
188	0.68		⊖	1.36		0.78	0.39		
189	0.68		⊖	1.36		0.84	0.39		
190	0.68		⊖	1.36		0.34	0.39		
198	0.75		⊖	1.50		0.86	0.43		
199	0.75		⊖	1.50		0.93	0.43		
200	0.75		⊖	1.50		0.37	0.43		
208	0.75		⊖	1.50		0.86	0.43		
209	0.75		⊖	1.50		0.93	0.43		1
210	0.75		⊖	1.50		0.37	0.43		0.0

NODE	M _x	M _y	M _z
50	1.76	3.91	0.2
51	1.87	4.17	0.2
52	0.96	2.08	0.2
173	1.76	3.91	0.2
174	1.87	4.17	0.2
175	0.96	2.08	0.2
188	0.68	2.14	0.39
189	0.68	2.20	0.39
190	0.68	1.70	0.39
198	0.75	2.36	0.43
199	0.75	2.43	0.43
200	0.75	1.87	0.43
208	0.75	2.36	0.43
209	0.75	2.43	0.43
210	0.75	1.87	0.43

ENGINEERING NOTE**A**

SUBJECT

PROCESS BUILDING

NAME

AMD**- BUILDING MASS DISTRIBUTION**

DATE

6-31-76**SLABS & WALLS**

NODE	M_x	M_y	M_z
118	0.4104	0.3222	0.1252
119	0.4507	0.3585	0.1252
120	0.3946	0.7066	0.1252
136	0.2134	0.3005	0.1502
137	0.2170	0.3905	0.1502
138	0.2170	0.4458	0.1502
154	0.2134	0.2838	0.1419
155	0.2170	0.2754	0.1377
156	0.2170	0.4211	0.1419
169	0.2134	0.1836	0.1836
170	0.2170	0.1794	0.1794
171	0.2170	1.4850	0.1794
181	0.2134	0.2504	0.3839
182	0.2170	0.2504	0.3839
183	0.2170	2.4348	0.3839
194	0.2134	0.7094	0.4173
195	0.2170	0.2587	0.3213
196	0.2170	0.6709	0.3255
204	0.2134	0.1002	0.1002
218	5.0239	0.8606	0.3362
219	2.0932	0.2445	0.3727
221	3.4804	0.4156	0.0543
224	1.0014	0.8606	0.1118
225	1.9775	0.2445	0.1141
251	1.0014	1.9474	1.0621
252	3.6893	0.7034	0.5963
253	4.3601	0.4391	0.3354
254	2.6273	1.6614	0.3354
258	0.2143	0.3112	0.0546
259	2.5135	0.3229	0.6522
260	2.3990	0.4391	0.6334
261	1.6071	1.6614	0.6429
265	0.4847	0.3112	0.1071
266	1.5594	0.3229	0.1770

MASS UNITS

$$= \frac{K \cdot \text{SEC}^2}{\text{FT}}$$

ENGINEERING NOTE**B**

SUBJECT

PROCESS BUILDING

NAME

AMD**- BUILDING MASS DISTRIBUTION**

DATE

6-30-76**SLABS & WALLS**

NODE	M_x	M_y	M_z
267	3.3191	0.4391	0.4658
268	1.1413	1.6614	0.4565
273	0.2289	0.3112	0.0932
274	0.9396	0.3229	0.0627
275	2.6664	0.4391	0.3564
276	1.2345	1.6614	0.4938
283	1.0793	0.4092	0.1293
284	1.6071	1.6614	0.6429
288	1.8260	1.6614	1.2671
290	0.2514	1.9016	3.2872
291	0.2514	1.7649	3.5126
292	0.2143	0.3368	0.0546
293	-	-	1.5826
294	2.3217	0.3368	0.2834
295	3.5310	1.6089	2.0669
305	0.3735	0.1002	0.3589
312	0.2289	0.9540	0.2096
318	0.2289	0.6195	0.1572
320	0.2289	0.6306	0.3144
321	0.7216	2.8317	0.2772
323	0.7216	4.2466	0.5963
326	0.9106	0.8748	0.7764
327	0.3255	0.2587	0.2629
328	0.9106	0.8748	0.3835
329	1.3256	2.7249	2.5912
330	1.3256	2.7249	2.5912
331	1.0793	3.5024	0.3727
340	0.3663	1.3227	0.1514
341	0.2289	1.6838	0.3377
342	0.3735	0.6844	0.4841
343	0.3735	0.1836	0.3923
344	0.5705	0.3222	0.2671
346	0.7216	1.7041	0.2112
347	0.7216	1.5032	0.3069

ENGINEERING NOTE

C

SUBJECT - PROCESS BUILDING

NAME AMD

- BUILDING MASS DISTRIBUTION

DATE 6-30-76

SLABS & WALLS

NODE	M_x	M_y	M_z
348	0.3255	0.6427	0.3839
349	0.3255	0.1794	0.3839
350	0.5592	0.3589	0.2671
351	0.7216	1.3730	0.2772

ENGINEERING NOTE

SUBJECT

PROCESS BUILDING

NAME

AMD

BUILDING MASS DISTRIBUTION

DATE

6-29-76

SLABS

NODE	M_x	M_y	M_z
218	1.4878	0.3385	0.3362
221	1.4878	0.1087	0.0543
224	0.1689	0.3385	0.1118
251	0.1689	0.8288	0.4262
290	0.1689	1.1366	0.5742
291	0.1689	0.8762	0.4322
258	0.0404	0.0721	0.0546
265	0.4847	0.0721	0.1071
273	0.2289	0.0721	0.0932
292	0.0404	0.0977	0.0546
294	0.4847	0.0977	0.2834
295	0.4847	0.4336	1.0365
312	0.2289	0.4322	0.2096
318	0.2289	0.0977	0.1572
320	0.2289	0.4336	0.3144
340	0.2289	0.1776	0.1514
341	0.2289	0.1776	0.3377
118	0.2134	0.1252	0.1252
136	0.2134	0.3005	0.1502
154	0.2134	0.2838	0.1419
169	0.2134	0.1836	0.1836
181	0.2134	0.2504	0.3839
194	0.2134	0.7094	0.4173
204	0.2134	0.1002	0.1002
305	0.3735	0.1002	0.3589
342	0.3735	0.6844	0.4841
343	0.3735	0.1836	0.3923
344	0.3735	0.1252	0.2671
219	0.5497	0.1141	0.3727
225	1.2275	0.1141	0.1141
252	1.2275	0.5465	0.5963
259	1.3179	0.1660	0.6522
266	0.4154	0.1660	0.1770
274	0.4154	0.1660	0.0627

MASS UNITS

$$= \frac{\text{K-sec}^2}{\text{FT}}$$

EL 13.0

EL 30.5

ENGINEERING NOTE

II

SUBJECT

PROCESS BUILDING

NAME

AMD

- BLDG MASS DISTRIBUTION

DATE

6-29-76

SLABS

	NODE	M_x	M_y	M_z
	321	0.4154	1.1267	0.2772
	323	0.4154	2.0404	0.5963
	346	0.4154	0.4348	0.2112
	347	0.4154	0.6318	0.3069
	351	0.4154	0.5774	0.2772
	119	0.2170	0.1252	0.1252
	137	0.2170	0.3005	0.1502
	155	0.2170	0.2754	0.1377
	170	0.2170	0.1794	0.1794
	182	0.2170	0.2504	0.3839
	195	0.2170	0.2587	0.3213
	327	0.3255	0.2587	0.2629
	348	0.3255	0.6427	0.3839
	349	0.3255	0.1794	0.3839
	350	0.3255	0.1252	0.2671
	120	0.2170	0.2504	0.1252
	138	0.2170	0.3005	0.1502
	156	0.2170	0.2838	0.1419
	171	0.2170	0.9682	0.1794
	183	0.2170	2.0714	0.3839
	196	0.2170	0.6709	0.3255
	253	0.6918	0.1767	0.3354
	260	1.2298	0.1767	0.6334
	267	2.2430	0.1767	0.4658
	275	2.2015	0.1767	0.3564
	283	0.5715	0.1767	0.1293
	326	0.5715	0.6709	0.7764
	328	0.5715	0.6709	0.3835
	329	0.5715	0.8677	0.3552
	330	0.5715	0.8677	0.3552
	331	0.5715	2.3397	0.3727
	254	0.6708	0.9689	0.3354
	261	1.2857	0.9689	0.6429
	268	0.9130	0.9689	0.4565

EL. 30.5
↑
↓
EL. 43.5

43.5
↑
↓
58.5

ENGINEERING NOTE

III

SUBJECT

PROCESS BUILDING

NAME

AMD

- BUILDING MASS DISTRIBUTION

DATE

6-30-76

SLABS

NODE	M_x	M_y	M_z
276	0.9876	0.9689	0.4938
284	1.2857	0.9689	0.16429
288	0.7453	0.9689	0.3727

ENGINEERING NOTEIV

SUBJECT

PROCESS BUILDING

NAME

AMD

- BLDG MASS DISTRIBUTION

DATE

6-30-76

WALLS

NODE	M_x	M_y	M_z
118	0.1970	0.1970	-
119	0.2337	0.2337	-
120	0.1776	0.4562	-
138	-	0.1453	-
156	-	0.1373	-
171	-	0.5168	-
183	-	0.3634	-
218	3.5361	0.5221	-
219	1.5435	0.1304	-
221	1.9926	0.3069	-
224	0.8325	0.5221	-
225	0.7500	0.1304	-
251	0.8325	1.1186	0.6359
252	2.4618	0.1569	-
253	3.6683	0.2624	-
254	1.9565	0.6925	-
258	0.1739	0.2391	-
259	1.1956	0.1569	-
260	1.1692	0.2624	-
261	0.3214	0.6925	-
265	-	0.2391	-
266	1.1440	0.1569	-
267	1.0761	0.2624	-
268	0.2283	0.6925	-
273	-	0.2391	-
274	0.5242	0.1569	-
275	0.4649	0.2624	-
276	0.2469	0.6925	-
283	0.5078	0.2325	-
284	0.3214	0.6925	-
288	1.0807	0.6925	0.8944
291	0.0825	0.8887	3.0804
292	0.1739	0.2391	-
293	-	-	1.5826
294	1.8370	0.2391	-

* -

ENGINEERING NOTE

FILE NO.

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SUBJECT

PROCESS BLDG

NAME

AMD

DATE

6-30-76

- BLDG MASS DISTRIBUTION

WALLS

	NODE	M_x	M_y	M_z
	295	3.0463	1.1753	1.0304
	312	—	0.5218	—
	318	—	0.5218	—
** —	320	—	0.1970	—
	323	0.3062	2.2062	—
	326	0.3391	0.2039	—
	328	0.3391	0.2039	—
	329	0.7541	1.8572	2.2360
	330	0.7541	1.8572	2.2360
	331	0.5078	1.1627	—
	340	0.1374	1.1451	—
	341	—	1.5062	—
	344	0.1970	0.1970	—
	346	0.3062	1.2693	—
	347	0.3062	0.8714	—
	350	0.2337	0.2337	—
	351	0.3062	0.7956	—
* —	290	0.0825	0.7650	2.7130
** —	321	0.3062	1.7050	—

ENGINEERING NOTE

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SUBJECT

PROCESS BUILDING

NAME

AMD

- BLDG MASS DISTRIBUTION

DATE

6-29-76

EL = 13.0 //

IN "Y" DIRECTION - SLAB ONLY

NODE	AREA	MASS ($\frac{K \cdot sec^2}{ft}$)
221	$8 \times 8.75 =$	$70 \text{ FT}^2 \Rightarrow A \times 50 \frac{lb}{ft^3} / 32.2 \times 1000 = 0.1087$
218 & 224	$(8.75 \times 8 + 12 \times 30.5) / 2 =$	$218 \text{ FT}^2 = 0.3385$
251	$12 \times 30.5 + 5.5 \times 30.5 =$	$533.75 \text{ FT}^2 = 0.8288$
290	$5.5 \times 30.5 + 18.5 \times 30.5 =$	$732 \text{ FT}^2 = 1.1366$
291	$30.5 \times 18.5 =$	$564.25 \text{ FT}^2 = 0.8762$

WALLS ONLY - FROM -1.75 to 13.0

221	$(8 + 8.75) \left[\frac{13.0 + 1.75}{2} \right] =$	$123.53 \text{ FT}^2 \Rightarrow A \times 80 / 32.2 \times 1000 = 0.3069$
218 & 224	$[(8.75 + 10 + 12 + 12)(7.375)] / 2 =$	$157.62 \text{ FT}^2 = 0.3917$
251	$(18 + 18 + 12) 7.375 =$	$354 \text{ FT}^2 = 0.8195$
290	$(5.75 + 12 + 24)(7.375) =$	$301.91 \text{ FT}^2 = 0.7650$
291	$(18.5 + 30)(7.375) =$	$357.69 \text{ FT}^2 = 0.8887$

IN "X" DIRECTION - SLAB ONLY

224/251	$72.5 \times 6 / 4 =$	$108.75 = 0.1689$
290 & 291	$72.5 \times 6 + 17.5 \times 8 + 18.5 \times 72.5 / 2 =$	$958.13 = 1.4878$

WALLS ONLY

224, 251	$18 \times 7.375 / 4 =$	$33.19 = 0.0825$
290 & 291	$(18 + 72.5 + 72.5 + 18.5 + 18.5 + 17.5) 7.375 / 2 =$	$802.03 = 1.9926$

IN "Z" DIRECTION

221	$4 \times 8.75 =$	$35 \text{ FT}^2 = 0.0543$
218	$12 \times 6 + 12 \times 9.125 + 8.75 \times 4 =$	$216.5 \text{ FT}^2 = 0.3362$
224	$12 \times 6 =$	$72 \text{ FT}^2 = 0.1118$
251	$18 \times 15.25 =$	$274.5 \text{ FT}^2 = 0.4262$
290	$24.25 \times 15.25 =$	$369.81 \text{ FT}^2 = 0.5742$
291	$18.25 \times 15.25 =$	$278.31 \text{ FT}^2 = 0.4322$

ENGINEERING NOTE

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SUBJECT

PROCESS BLDG

NAME

AMD

DATE

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- BLDG MASS DISTRIBUTION

EL = 13.0 //

- SLAB IN "Y" DIRECTION

258/265/273	$24.75 \times 5.625 / 3 = 46.41$	=	0.0721
292/294/318	$24.75 \times 5.625 + 15.25 \times 3.25 / 3 =$	=	0.0977
312	$3.25 \times 15.25 + 15.25 \times 15$	=	0.4322
295/320	$15.25 [15 + 21.625] / 2 =$	=	0.4336
340/341	$7.5 \times 15.25 / 2 =$	=	0.1776

- SLAB IN "X" DIRECTION

258/292	$9.25/2 \times 11.25 / 2 =$	=	0.0404
265/294/295	$[9.25/2 \times 11.25 + 15.25/2 \times 11.6] / 3 =$	=	0.4847
273/318/312/320 341/340	$[15.25/2 \times 11.6] / 6 =$	=	0.2289

- SLAB IN "Z" DIRECTION

258/292	$11.25 \times 6.25 / 2 =$	=	0.0546
265	$5.75 \times 12 =$	=	0.1071
273	$6 \times 10 =$	=	0.0932
294	$5.75 \times 12.5 + 7.5 \times 14.75 =$	=	0.2834
318	$7.5 \times 13.5 =$	=	0.1572
312	$7.5 \times 18 =$	=	0.2096
295	$7.5 \times 89 =$	=	1.0365
320	$7.5 \times 27 =$	=	0.3144
341	$7.5 \times 29 =$	=	0.3377
340	$7.5 \times 19 =$	=	0.1514

- WALLS IN X

295	$66 \times 7.375 =$	=	1.2093
340	$7.5 \times 7.375 =$	=	0.1374

WALLS IN Y

340	$(15.25 + 7.5)(7.375) =$	=	0.4168
341	$30 \times 7.375 =$	=	0.5497
295/320	$21.5 \times 7.375 / 2 =$	=	0.1970

ENGINEERING NOTE

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SUBJECT

PROCESS BUILDING

NAME

AMD

DATE

6-29-76

BLDG MASS DISTRIBUTION

EL=13.0

-Y- DIRECTION - SLAB

118/344	$21.5 \times 7.5 / 2$	=	0.1252
136	21.5×9	=	0.3005
154	$21.5 [8.5]$	=	0.2838
169/343	$21.5 [11] / 2$	=	0.1836
181	$21.5 [7.5]$	=	0.2504
342	$21.5 [15.75 + 4.75]$	=	0.6844
194	$21.5 [5.75 + 15.5]$	=	0.7094
204/305	$21.5 \times 6 / 2$	=	0.1002

- X - DIRECTION SLAB

305/342/343 344	$21.5 / 2 \times 89.5 / 4$	=	0.3735
204/194/181 169/154/136/ 118	$21.5 / 2 \times 89.5 / 7$	=	0.2134

- Z DIRECTION SLAB

118	$21.5 \times 7.5 / 2$	=	0.1252
136	$21.5 \times 9 / 2$	=	0.1502
154	$21.5 \times 8.5 / 2$	=	0.1419
169	$21.5 \times 11 / 2$	=	0.1836
181	$21.5 \times 23 / 2$	=	0.3839
194	$21.5 \times 25 / 2$	=	0.4173
204	$21.5 \times 6 / 2$	=	0.1002
305	$21.5 \times 21.5 / 2$	=	0.3589
342	$21.5 \times 29 / 2$	=	0.4841
343	$21.5 \times 23.5 / 2$	=	0.3923
344	$21.5 \times 16 / 2$	=	0.2671

WALL in Y

118/344	$21.5 \times 7.375 / 2$	=	0.1970
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WALL in X

118/344	$21.5 \times 7.375 / 2$	=	0.1970
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ENGINEERING NOTE

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SUBJECT

PROCESS BUILDING

NAME

AMD

- BLDG MASS DISTRIBUTION

DATE

6-29-76

EL. 130.5

- "Y" DIRECTION SLAB

219/225	$12.25 \times 12 / 2$	=	0.1141
252	$12.25 \times 21.75 + 9.5 \times 9$	=	0.5465
259/266/274	$9.5 \times 33.75 / 3$	=	0.1660
323	54.75×24	=	2.0404
321	$14.5 \times 42.5 + 6.25 \times 17.5$	=	1.1267
351	21.25×17.5	=	0.5774
347	23.25×17.5	=	0.6318
346	16×17.5	=	0.4348

- "X" DIRECTION SLAB

219	6×59	=	0.5497
225/252	$[6 \times 59 + 9 \times 48.5] / 2$	=	1.2275
259	17.5×48.5	=	1.3179
266/274/323 321/351/347 346	$17.5 \times 107 / 7$	=	0.4154

- Z DIRECTION SLAB

219	40×6	=	0.3727
225	6×12.25	=	0.1141
252	$6 \times 28 + 9 \times 24$	=	0.5963
259	24×17.5	=	0.6522
266	12×9.5	=	0.1770
274	4.25×9.5	=	0.0627
323	16×24	=	0.5963
321	21×8.5	=	0.2772
351	21×8.5	=	0.2772
347	23.25×8.5	=	0.3069
346	16×8.5	=	0.2112

- "X" WALLS

219	$59 \times 17.5/2 + 12 \times 17.5/2$	=	1.5435
225/252	$48 \times 17.5/2 + 12 \times 17.5/2 + 9 \times 17.5/2$	=	0.7500
259	$16 \times 17.5/2$	=	0.3478
266/274/323 321/351/347 346	$84.5 \times 17.5/2$	=	0.3062

ENGINEERING NOTE

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PROCESS BLDG

NAME

AMD

-BLDG MASS DISTRIBUTION

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-Y-DIRECTION WALLS

210/225	$12 \times 17.5 / 2$	=	0.1304
252/259/266	$22 \times 17.5 / 4$	=	0.1196
274	$48 \times 17.5 / 2$	=	1.0435
323	$(20+25)(17.5) / 2$	=	0.9783
321	$21 \times 17.5 / 2$	=	0.4565
351	$23 \times 17.5 / 2$	=	0.5000
347	$(16+17.5) 17.5 / 2$	=	0.7283
346			

ENGINEERING NOTE

6

SUBJECT

PROCESS BUILDING

NAME

AMID

- BUILDING MASS DISTRIBUTION

DATE

6-29-76

EL 130.5 /

- "Y" DIRECTION

SLAB

119 / 350	$21.5 \times 7.5 / 2$	=	0.1252
137	21.5×9.0	=	0.3005
155	21.5×8.25	=	0.2754
170 / 349	$10.75 \times 21.5 / 2$	=	0.1794
182	7.5×21.5	=	0.2504
348	19.25×21.5	=	0.6427
195 / 327	$15.5 \times 21.5 / 2$	=	0.2587

- X DIRECTION SLAB

119 / 137 / 155 / 170 / 182 / 195

$$\frac{21.5}{2} \times 78 / 6 = 0.2170$$

327 / 348 / 349 / 350

$$\frac{21.5}{2} \times 78 / 4 = 0.3255$$

- Z DIRECTION SLAB

119	$21.5 \times 7.5 / 2$	=	0.1252
137	$21.5 \times 9 / 2$	=	0.1502
155	$21.5 \times 8.25 / 2$	=	0.1377
170	$21.5 \times 10.75 / 2$	=	0.1794
182	$21.5 \times 23 / 2$	=	0.3839
195	$21.5 \times 19.25 / 2$	=	0.3213
327	$21.5 \times 15.75 / 2$	=	0.2629
348	$21.5 \times 23 / 2$	=	0.3839
349	$21.5 \times 23 / 2$	=	0.3839
350	$21.5 \times 16 / 2$	=	0.2671

- X-DIRECTION WALL

$$119 / 350 \quad 21.5 \times 8.75 / 2 = 0.2337$$

- Y DIRECTION WALL

$$119 / 350 \quad 21.5 \times 8.75 / 2 = 0.2337$$

ENGINEERING NOTE

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SUBJECT

PROCESS BLDG

NAME

AMD

-BLDG MASS DISTRIBUTION

DATE

6-30-76

EL 143.5

- "Y" DIRECTION SLAB

253/260(267
275/283 $9.25 \times 61.5/5$

=

0.1767

331

 61.5×24.5

=

2.3397

329/330

 $[61.5 \times 15.25 + 5.75 \times 31.25]/2 =$

=

0.8677

196/326/328

 $[31.25 \times 5.75 + 19.25 \times 58]/3 =$

=

0.6709

183

 58×23

=

2.0714

171

 58×10.75

=

0.9682

156

 8.5×21.5

=

0.2838

138

 9×21.5

=

0.3005

120

 7.5×21.5

=

0.2504

- "X" DIRECTION SLAB

120/138/156/171/183/196

 $78 \times 10.75/6$

=

0.2170

283/326/328/329/330/331

 $[78 \times 10.75 + 103 \times 9.25 +$
 $+ 11.5 \times 4.25]/5$

=

0.5715

275

 107×13.25

=

2.2015

267

 107×13.5

=

2.2430

260

 49.5×16

=

1.2298

253

 49.5×9

=

0.6918

- "Z" DIRECTION SLAB

120

 $1/2 \times 21.5 \times 7.5$

=

0.1252

138

 $1/2 \times 21.5 \times 9.0$

=

0.1502

156

 $1/2 \times 21.5 \times 8.5$

=

0.1419

171

 $1/2 \times 21.5 \times 10.75$

=

0.1794

183

 $1/2 \times 21.5 \times 23$

=

0.3839

196

 $1/2 \times 21.5 \times 19.5$

=

0.3255

253

 24×9

=

0.3354

260

 24×17

=

0.6334

267

 24×12.5

=

0.4658

275

 17×13.5

=

0.3564

283

 9×9.25

=

0.1293

(331)

 15×16

=

0.3727

326

 20×25

=

0.7764

328

 19×13

=

0.3835

329/330

 $[21 \times 20 + 15 \times 25]/2$

=

0.3552

ENGINEERING NOTE

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PROCESS BUILDING

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A.M.D.

DATE

9-30-76

- BLDG MASS DISTRIBUTION

EL 143.5

- "X" DIRECTION WALLS

253	$[49 + 24 + 24 + 9](6.5)$	=	1.7118
260/267	$[29.5 + 57.5 + 18](6.5)/2$	=	0.8478
275	$13.5(6.5)$	=	0.2180
329/330	$30.5(6.5)/2$	=	0.2463
326/328	$42(6.5)/2$	=	0.3391
120	$11(6.5)$	=	0.1776

- "Y" DIRECTION WALLS

253/260/267/275/283	$9.25(6.5)/5$	=	0.0299
331	$[24 + 24 + 24] 6.5$	=	1.1627
329/330	$[15.5 + 83 + 5.5](6.5)/2$	=	0.8398
326/328	$25.25(6.5)/2$	=	0.2039
183	$22.5(6.5)$	=	0.3634
171	$(4 + 21.5 + 6.5)(6.5)$	=	0.5168
156	$8.5(6.5)$	=	0.1373
138	$9(6.5)$	=	0.1453
120	$[7.5 + 20.5](6.5)$	=	0.4562

ENGINEERING NOTE

SUBJECT

PROCESS BLDG

NAME

AMD

- BUILDING MASS DISTRIBUTION

DATE

6-30-76

EL 158.5

- "Y" DIRECTION SLAB

254/261/268/

276/284/288

48 x 78 / 6

=

0.9689

- "X" DIRECTION SLAB

254

48 x 9

=

0.6708

261

48 x 17.25

=

1.2857

268

48 x 12.25

=

0.9130

276

48 x 13.25

=

0.9876

284

48 x 17.25

=

1.2857

288

48 x 10

=

0.7453

- "Z" DIRECTION SLAB

254

48 x 9 / 2

=

0.3354

261

48 x 17.25 / 2

=

0.6429

268

48 x 12.25 / 2

=

0.4565

276

48 x 13.25 / 2

=

0.4938

284

48 x 17.25 / 2

=

0.6429

288

48 x 10 / 2

=

0.3727

- "X" DIRECTION WALLS

254

[48 + 24 + 24 + 9] 7.5

=

1.9565

261

17.25 (7.5)

=

0.3214

268

12.25 (7.5)

=

0.2283

276

13.25 (7.5)

=

0.2469

284

17.25 (7.5)

=

0.3214

288

[10 + 48] (7.5)

=

1.0807

- "Y" DIRECTION WALL

254/261/268

[48 + 48 + 9 + 17.25

276/284/288

+ 12.25 + 13.25 + 17.25

=

0.6925

+ 10 + 48] 7.5 / 6

ENGINEERING NOTE

SUBJECT

PROCESS BUILDING

NAME

AMD

- BUILDING MASS DISTRIBUTION

DATE

6-29-76

EL 143.5

- "X" DIRECTION WALLS FROM 158.5

253	=	1.9565
260	=	0.3214
267	=	0.2283
275	=	0.2469
331/283/330	=	0.5078
329		
$1.2857 + 0.17453/4$		

- "Y" DIRECTION WALLS FROM 158.5

253/260/267	$[24+24+24] 6.5/5$	=	0.2325
275/283/			
329/330	$[78+48] 6.5/2$	=	1.0174

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SUBJECT PROCESS BLDG

NAME AMD

- BLDG MASS DISTRIBUTION

DATE 6-30-76

EL 130.5

- "X" DIRECTION WALLS FROM 143.5

252	=	1.7118
259/266	=	0.8478
274	=	0.2180

- "Y" DIRECTION WALLS FROM 143.5

252/259/266/274	=	$9.25(6.5)(4)$	=	0.0373
323	=		=	1.1627
321	$0.9783 \left(\frac{6.5}{8.75} \right)$	=		0.7267
351	$0.4565 \left(\frac{6.5}{8.75} \right)$	=		0.3391
347	$0.15 \left(\frac{6.5}{8.75} \right)$	=		0.3714
346	$0.7283 \left(\frac{6.5}{8.5} \right)$	=		0.5410

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PROCESS BLDG

NAME

A.M.D.

- BLDG MASS DISTRIBUTION

DATE

6-30-76

EL 113.0

- "X" DIRECTION WALLS FROM 130.5

218	=	1.5435
224/251	=	0.750
258/292	=	0.1739
295/294	=	1.8370

0.3478/2

84.5 x 17.5 / 2

- "Y" DIRECTION WALLS FROM 130.5

218/224	=	0.11304
251/258/265 } 273/292/294 }	=	0.2391
318/312	=	0.5218
295	=	0.9783
341	=	0.9565
340	=	0.7283

22 x 17.5 / 2 / 2

1.0435/2

= 0.4565 + 0.5000

ENGINEERING NOTE

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SUBJECT PROCESS BLDGNAME AMD- BLDG MASS DISTRIBUTIONDATE 6-30-76EL 143.5- "Z" DIRECTION MASS FROM 158.5

288	24 (15)	=	0.8944
329/330	(36+24) (15)	=	2.2360

EL 113.0- "Z" DIRECTION MASS FROM 158.5

251	(11.25) x 45.5	/2	=	0.6359
290	(24 x 45.5)		=	2.7130
291	27.25 x 45.5		=	3.0804
new hole 293	14 x 45.5		=	1.5826
295	4.5 x 45.5 + 14 (15)		=	1.0304

EMBEDDED STRUCTURE SPRING CALCULATIONS

LOCATION OF THE SOIL SPRINGS
FOR THE GPC AND LWC.

ENN76-69

SOIL STRUCTURE INTERACTION
FOR EMBEDDED STRUCTURES AT NFS

W. V. Brewer

WVB

July 1976

SOIL STRUCTURE INTERACTION
FOR EMBEDDED STRUCTURES AT NFS

PURPOSE: Estimate lateral spring constants for the soil of embedded structures (GPC and LWC) to be included in "Seismic Analysis of NFS Fuel Plant."

For the two embedded structures identified as the General Purpose Cell (GPC) and the Liquid Waste Cell (LWC), lumped spring constants are proportioned over the upper and lower nodes on two sides (Figures 1 to 4) representing soil resistance to horizontal translation in two directions. Maximum and minimum values are indicated for each spring as explained below. The spread in range of values applied to the lower nodes is greater than for the upper ones because the maximum value assumes shear on the bottom slab and the minimum assumes the ground has settled away from the pile supported structure thus eliminating shear on the bottom slab.

A range for lumped stiffness parameters is used for the two directions at each node to compensate for the uncertainties inherent in the determination and application of such constants. Estimates are made using the results of a finite element method for determining static constants proposed by Johnson, Christiano, and Epstein [1] and also a combination of methods suggested by Parmelee and Kudder [2] and Parmelee and Wronkiewicz [3] for determining dynamic constants derived from the motions of the semi-infinite elastic half space.

Approaching the problem with different techniques these authors treat the same two geometries with state-of-the-art methods. The two cases treated are the plane strain case of an infinite strip foundation embedded in the half space (Figure 5) and an axisymmetric case of a cylinder embedded in the half space (Figure 6). Since neither of these geometries correspond

identically to those under study a third method was synthesized using axisymmetric results but separating the radius dimension variable into two categories r_t (transverse) and r_p (parallel) depending on the direction of the forcing function. Separation is accomplished by comparison of the dimensions in the axisymmetric expressions with those corresponding to the plane strain case (Figures 7,8,9). Using the results of two methods and three geometries creates a matrix of six estimates for each spring constant thus determined. The range can be further broadened by using stiffer shear wave velocities to determine the high values and the more compliant torsional shear tests for the low ones. Six estimates for each parameter are tabulated (Figures 10 and 11) where

- K_s = surface shear value
- K_{cu} = compression on upper nodes
- K_{cl} = compression on lower nodes
- K_{cls} = compression and shear on lower slab
- K_t = total horizontal resistance of the soil.

Distribution of the lumped parameter K_t vertically over the upper and lower nodes (ceiling slab and floor slab) is accomplished by

- a) Assuming that the shear resistance K_s is calculated from the case of a rigid footing resting on the surface of an elastic half space.
- b) Assuming all the shear resistance is on the bottom slab only and is equal to K_s .
- c) Assuming that the sum of the distributed constants is equal to the lumped parameter K_t for the maximum embedded depth under consideration.

Depths were determined by separating the wall area equidistant from the nodes. If

$$D_o = \text{grade level} = 0$$

$$D_u = \text{depth below grade of upper nodes}$$

$$D_l = \text{depth below grade of lower nodes}$$

then

$$K_s = K_s(D_o)$$

$$K_u = \left(K_u \frac{D_u + D_l}{2} \right)$$

$$K_{cu} = K_u - K_s$$

$$K_l = K_l(D_l) = K_t$$

$$K_{cl} = K_l - K_u$$

$$K_{cls} = K_{cl} + K_s = K_l - K_{cu}$$

$$K_t = K_{cu} + K_{cls} = K_{cu} + (K_{cl} + K_s)$$

Values for the above were determined from equations or graphs (Figures 7, 8, and 9) and tabulated (Figures 10 and 11).

Horizontal distribution was proportioned according to wall contributory area (Figures 12 to 16).

REFERENCES

- [1] Johnson, Christiano, and Epstein, "Stiffness Coefficients for Embedded Footings," Journal of the Geotechnical Division, ASCE, August 1975, p 789.
- [2] Parmelee and Kudder, "Seismic Soil-Structure Interaction of Embedded Buildings," Fifth World Conference on Earthquake Engineering, No. 241a, Rome 1973.
- [3] Parmelee and Wronkiewicz, "Dynamic Coefficients for Evaluating the Seismic Response of Soil-Structure Interaction Systems," Fifth World Conference on Earthquake Engineering, No. 330, Rome 1973.
- [4] Richart, Hall, Woods, Vibrations of Soils and Foundations, Prentice-Hall, 1970.

Figure 1 Upper Nodes GPC | W. V. Brewer

Figure 2 Lower Nodes GPC | W. V. Brewer

(Kcps/ft)

Figure 3 Upper Nodes L W C

W.V. Brew

GRAPHIC CORPORATION Buffalo, New York
Printed in U.S.A.
SQUARE 10 X 10 TO THE INCH AS 8007-51

Figure 4 Lower Nodes L W C

W. V. Brewster

(kips/ft)

$k_{cis\ max}$ $112 \cdot 10^3$ $452 \cdot 10^3$ $280 \cdot 10^3$

$k_{cl\ min}$ $20.5 \cdot 10^3$ $54 \cdot 10^3$ $33.5 \cdot 10^3$

ENGINEERING NOTE

F5

SUBJECT Soil Structure Interaction

NAME W.V. Brewer

Figure 5 Plane Strain Case

DATE 6/27/76

ENGINEERING NOTE

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SUBJECT

Soil Structure Interaction

NAME

W. V. Brewer

DATE

6/27/76

Figure 6 Axisymmetric Case

GEOPHYSICAL DATA

$$G = 5400 \text{ to } 5700 \text{ Ksf} = \text{shear modulus obtained from shear wave velocity } V_s$$

$$\text{Use avg.} = 5550 \text{ Ksf}$$

$$\nu = .45 = \text{Poisson's Ratio}$$

$$\rho = 130 \text{ pcf}$$

$$E = 2(1 + \nu) G$$

$$\rho V_s^2 = G = 5550 \text{ Ksf}$$

Depth to bedrock = 80' to 100' from grade. Use $H_1 + H_2 = 80'$ to maximize this effect which is taken into account in the methods of reference [1] only.

ELASTIC CONTINUUM SOLUTIONS

Plane Strain

$$k_s = \frac{1.68}{1.34 - \nu} \rho V_s^2 \quad \text{ref. [2] Eqn. (7)}$$

$$K_s = k_s (2r_t) \quad \text{where } r_t \text{ is half the planform dimension perpendicular to the direction of motion}$$

$$K_u = K_s e^{1.1 \frac{D_u + D_l}{2b}} \quad \text{ref. [2] Eqns. (13 & 17)}$$

$$K_{cu} = K_u - K_s \quad K_u \text{ includes bottom shear at depth } \frac{D_u + D_l}{2}$$

where only normal force is desired.

FIGURE 7

ELASTIC CONTINUUM (continued)

$$K_l = K_s e^{1.1} \frac{D_l}{b}$$

$$K_{cl} = K_l - K_u = K_l - K_{cu} - K_s \quad \text{compression only}$$

$$K_{cls} = K_{cl} + K_s$$

Assumption b) shear acting at all depths below grade is the same as on the surface.

then

$$K_t = K_l = K_{cls} + K_{cu}$$

satisfying assumption c)

Axisymmetric $r = \sqrt{A/\pi}$ where A = plan area

$$K_s = \frac{6.77 r \rho v_s^2}{(1.79 - \nu)} \quad \text{ref. [3] Eqn. (1)}$$

$$K_u = K_s e^{1.1} \frac{D_u + D_l}{2r}$$

ref. [2] Eqns (13 & 17) are used for the embedment coefficient which may be strictly applicable to the plane strain case only

$$K_l = K_s e^{1.1} \frac{D_l}{r}$$

$$K_{cu}, K_{cl}, K_{cls}, K_t$$

as above

Modified Axisymmetric ($2r_t = \frac{A}{2r_p}$) for GPC

$$K_s = \frac{6.77 r_t \rho v_s^2}{(1.79 - \nu)} \quad \text{ref. [3] Eqn. (1)}$$

$$K_u = K_s e^{1.1} \frac{D_u + D_l}{2r_p}$$

r_t = half the planform dimension perpendicular to the motion r_p = half the planform dimension parallel to the motion

$$K_l = K_s e^{1.1} \frac{D_l}{r_p}$$

$$K_{cu}, K_{cl}, K_{cls}, K_t \text{ as above.}$$

FIGURE 8

FINITE ELEMENT SOLUTIONS

Reference [1]

Plane Strain

$$K_s = \left(\frac{k}{E}\right) E(2r_t)$$

$\frac{k}{E}$ is found by entering Fig. 3 page 272 with

$$\frac{H_1}{b} = \frac{D}{b} \quad \frac{H_2}{b} = \frac{0}{b}$$

$$K_u \text{ same with } \longrightarrow \quad \frac{H_1}{b} = \frac{D - H_2}{b} \text{ where } \frac{H_2}{b} = \frac{D_u + D_1}{2b}$$

$$K_{cu} = K_u - K_s$$

$$K_l \longrightarrow \quad \frac{H_1}{b} = \frac{D - H_2}{b} \text{ where } \frac{H_2}{b} = \frac{D_1}{b}$$

$$K_{cl} = K_l - K_u = K_l - (K_{cu} + K_s) \quad \text{Note: All plane strain solutions corrected for } \nu = .45 \text{ using Fig. 4 page 794.}$$

$$K_{cls} = K_{cl} + K_s$$

$$K_t = K_l = K_{cls} + K_{cu}$$

Axisymmetric $r = \sqrt{A/\pi}$

$$K_s = \frac{K_x}{K_\infty} K_\infty \quad K_\infty = \frac{8G}{2 - \nu} r \quad \frac{K_x}{K_\infty} \text{ from Fig. 2 page 791}$$

$$\frac{H_1}{r} = \frac{D}{r} \quad \frac{H_2}{r} = \frac{0}{r}$$

$$K_u \longrightarrow \quad \frac{H_1}{r} = \frac{D - H_2}{r} \text{ where } \frac{H_2}{r} = \frac{D_u + D_1}{2r}$$

$$K_l \longrightarrow \quad \frac{H_1}{r} = \frac{D - H_2}{r} \text{ where } \frac{H_2}{r} = \frac{D_1}{r}$$

$K_{cu}, K_{cl}, K_{cls}, K_t$ as above

Modified Axisymmetric from Fig. 2 page 791

$$K_s = \frac{K_x}{K_\infty} K_\infty \quad K_\infty = \frac{8G}{2 - \nu} r_t \quad \frac{H_1}{r_p} = \frac{D}{r_p} \quad \frac{H_2}{r_p} = \frac{0}{r_p}$$

$$K_u \quad \frac{H_1}{r_p} = \frac{D - H_2}{r_p} \quad \frac{H_2}{r_p} = \frac{D_u + D_1}{2r_p}$$

$K_l, K_{cu}, K_{cl}, K_{cls}, K_t$ similar to the above

FIGURE 9

GPC Lumped Spring Constants

Note: All numbers divided by 10^6

2-D Plane Strain			3-D Modified Cylinder $A = (2r_t)(2r_p)$		3-D Cylinder $r = \sqrt{A/\pi}$	
	Dynamic Contin.	f.e. Static	Dynamic Contin.	f.e. Static	Dynamic Contin.	f.e. Static
N-S $b = 15.88$ $t = 40.7$			$r_p = 23.4$	$r_t = 40.7$	$r = 30.1$	
K_s	.853	.830	1.14 (.902)	1.29	.844	.993
K_{cu}	1.26	.357	.975 (1.15)	1.03	.520	.687
K_{cl}	2.54	.294	1.49 (2.14)	.667	.702	.460
K_{cls}	3.39	1.12	2.63 (3.04)	1.96	1.55	1.45
K_t	4.65	1.48	3.61 (4.19)	2.99	2.07	2.14
E-W $b = 40.7$ $t = 15.88$			$r_p = 40.7$	$r_t = 23.4$	$r = 30.1$	
K_s	.333	.450	.655 (.816)	.830	.844	.993
K_{cu}	.142	.178	.279 (.348)	.416	.520	.687
K_{cl}	.171	.044	.336 (.419)	.772	.702	.460
K_{cls}	.504	.494	.991 (1.24)	1.60	1.55	1.45
K_T	.646	.672	1.27 (1.58)	2.02	2.07	2.14

() Result from a rectangular footing resting on elastic halfspace from Reference [4], p. 351 is shown for comparison. Embedment is accomplished using the exponential term as elsewhere.

FIGURE 10.

LWC Lumped Spring Constants

Note: All numbers divided by

	2-D Plane Strain	3-D Modified Cylinder		3-D Cylinder $r = \sqrt{A/\pi}$
		Dynamic Contin.	f.e. Static	Dynamic f.e., Contin. Static
N-S		$r_p = 24.56$	$r_t = 20.15$	$r = 21.2$
K_s		.565	.664	.594 .673
K_{cu}		.158	.204	.198 .242
K_{cl}		.132	.153	.168 .108
K_{cls}		.697	.817	.762 .781
K_T		.855	1.021	.960 1.023
E-W		$r_p = 20.15$	$r_t = 24.56$	$r = 21.2$
K_s		.688	.772	.594 .673
K_{cu}		.241	.280	.198 .242
K_{cl}		.210	.125	.168 .108
K_{cls}		.898	.904	.762 .781
K_T		1.139	1.184	.960 1.023

Data for plane strain was omitted for LWC as totally unrealistic model for the geometry.

FIGURE 11

GPC Horizontal Distribution

Translational Spring Constant Range for Bilevel Distribution of Lumped Soil Stiffness

Lower Nodes

Node	Fraction	(Kips/ft) K high K low	(Kips/ft) k high k low	Direction
355	.0813	$\left\{ \begin{array}{l} 3.39 \cdot 10^6 \\ .294 \cdot 10^6 \end{array} \right.$	$\left\{ \begin{array}{l} 276 \cdot 10^3 \\ 23.9 \cdot 10^3 \end{array} \right.$	NS
361	.1966	$\left\{ \begin{array}{l} 3390 \cdot 10^3 \\ 294 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 666 \cdot 10^3 \\ 57.8 \cdot 10^3 \end{array} \right.$	NS
367	.2476	$\left\{ \begin{array}{l} 3390 \cdot 10^3 \\ 294 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 839 \cdot 10^3 \\ 72.8 \cdot 10^3 \end{array} \right.$	NS
374	.2043	$\left\{ \begin{array}{l} 3390 \cdot 10^3 \\ 294 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 693 \cdot 10^3 \\ 60 \cdot 10^3 \end{array} \right.$	NS
378	.1705	$\left\{ \begin{array}{l} 3390 \cdot 10^3 \\ 294 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 578 \cdot 10^3 \\ 50.1 \cdot 10^3 \end{array} \right.$	NS
381	.0991	$\left\{ \begin{array}{l} 3390 \cdot 10^3 \\ 294 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 336 \cdot 10^3 \\ 29.1 \cdot 10^3 \end{array} \right.$	NS

FIGURE 12

GPC Horizontal Distribution

Translational Spring Constant Range for Bilevel Distribution of Lumped Soil Stiffness

Upper Nodes

Node	Fraction	K high K low	k high k low	Direction
333	.0813	$\left\{ \begin{array}{l} 1.26 \cdot 10^6 \\ .357 \cdot 10^6 \end{array} \right.$	$\left\{ \begin{array}{l} 102 \cdot 10^3 \\ 29 \cdot 10^3 \end{array} \right.$	NS
334	.1966	$\left\{ \begin{array}{l} 1260 \cdot 10^3 \\ 357 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 248 \cdot 10^3 \\ 70.2 \cdot 10^3 \end{array} \right.$	NS
336	.2476	$\left\{ \begin{array}{l} 1260 \cdot 10^3 \\ 357 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 312 \cdot 10^3 \\ 88.4 \cdot 10^3 \end{array} \right.$	NS
186	.2043	$\left\{ \begin{array}{l} 1260 \cdot 10^3 \\ 357 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 257 \cdot 10^3 \\ 72.9 \cdot 10^3 \end{array} \right.$	NS
185	.1705	$\left\{ \begin{array}{l} 1260 \cdot 10^3 \\ 357 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 214 \cdot 10^3 \\ 60.9 \cdot 10^3 \end{array} \right.$	NS
184	.0991	$\left\{ \begin{array}{l} 1260 \cdot 10^3 \\ 357 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 124 \cdot 10^3 \\ 35.4 \cdot 10^3 \end{array} \right.$	NS

FIGURE 13

GPC Horizontal Distribution

Translational Spring Constant Range for Bilevel Distribution of Lumped Soil Stiffness

Lower Nodes

Node	Fraction	K High K Low	k High k Low	Direction
381	.1604	$\left\{ \begin{array}{l} 1.60 \cdot 10^6 \\ .044 \cdot 10^6 \end{array} \right.$	$\left\{ \begin{array}{l} 257 \cdot 10^3 \\ 7.1 \cdot 10^3 \end{array} \right.$	EW
380	.3396	$\left\{ \begin{array}{l} 1600 \cdot 10^3 \\ 44 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 543 \cdot 10^3 \\ 14.9 \cdot 10^3 \end{array} \right.$	EW
375	.3396	$\left\{ \begin{array}{l} 1600 \cdot 10^3 \\ 44 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 543 \cdot 10^3 \\ 14.9 \cdot 10^3 \end{array} \right.$	EW
370	.1604	$\left\{ \begin{array}{l} 1600 \cdot 10^3 \\ 44 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 257 \cdot 10^3 \\ 7.1 \cdot 10^3 \end{array} \right.$	EW

Upper Nodes

184	.1604	$\left\{ \begin{array}{l} .687 \cdot 10^6 \\ .142 \cdot 10^6 \end{array} \right.$	$\left\{ \begin{array}{l} 110 \cdot 10^3 \\ 22.8 \cdot 10^3 \end{array} \right.$	EW
160	.3396	$\left\{ \begin{array}{l} 687 \cdot 10^3 \\ 142 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 233 \cdot 10^3 \\ 48 \cdot 10^3 \end{array} \right.$	EW
131	.3396	$\left\{ \begin{array}{l} 687 \cdot 10^3 \\ 142 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 233 \cdot 10^3 \\ 48 \cdot 10^3 \end{array} \right.$	EW
117	.1604	$\left\{ \begin{array}{l} 687 \cdot 10^3 \\ 142 \cdot 10^3 \end{array} \right.$	$\left\{ \begin{array}{l} 110 \cdot 10^3 \\ 22.8 \cdot 10^3 \end{array} \right.$	EW

FIGURE 14

Translational Spring Constant Range for Bilevel Distribution of Lumped Soil Stiffness

Lower Nodes

Node	Fraction	K high K low	k high k low	Direction
313	.268	$\begin{cases} .817 \cdot 10^6 \\ .108 \cdot 10^6 \end{cases}$	$\begin{cases} 218 \cdot 10^3 \\ 28.9 \cdot 10^3 \end{cases}$	NS
279	.5	$\begin{cases} 817 \cdot 10^3 \\ 108 \cdot 10^3 \end{cases}$	$\begin{cases} 409 \cdot 10^3 \\ 54 \cdot 10^3 \end{cases}$	NS
271	.232	$\begin{cases} 817 \cdot 10^3 \\ 108 \cdot 10^3 \end{cases}$	$\begin{cases} 198 \cdot 10^3 \\ 25 \cdot 10^3 \end{cases}$	NS
287	.190	$\begin{cases} .904 \cdot 10^6 \\ .108 \cdot 10^6 \end{cases}$	$\begin{cases} 172 \cdot 10^3 \\ 20.5 \cdot 10^3 \end{cases}$	EW
306	.5	$\begin{cases} 904 \cdot 10^3 \\ 108 \cdot 10^3 \end{cases}$	$\begin{cases} 452 \cdot 10^3 \\ 54 \cdot 10^3 \end{cases}$	EW
302	.31	$\begin{cases} 904 \cdot 10^3 \\ 108 \cdot 10^3 \end{cases}$	$\begin{cases} 280 \cdot 10^3 \\ 33.5 \cdot 10^3 \end{cases}$	EW

FIGURE 15

Translational Spring Constant Range for Bilevel Distribution of Lumped Soil Stiffness

Upper Nodes

Node	Fraction	K high K low	k high k low	Direction
17	.268	$\begin{cases} .242 \cdot 10^6 \\ .158 \cdot 10^6 \end{cases}$	$\begin{cases} 64.9 \cdot 10^3 \\ 42.3 \cdot 10^3 \end{cases}$	NS
280	.5	$\begin{cases} 242 \cdot 10^3 \\ 158 \cdot 10^3 \end{cases}$	$\begin{cases} 121 \cdot 10^3 \\ 79 \cdot 10^3 \end{cases}$	NS
272	.232	$\begin{cases} 242 \cdot 10^3 \\ 158 \cdot 10^3 \end{cases}$	$\begin{cases} 56.1 \cdot 10^3 \\ 36.7 \cdot 10^3 \end{cases}$	NS
1	.190	$\begin{cases} .280 \cdot 10^6 \\ .198 \cdot 10^6 \end{cases}$	$\begin{cases} 53.2 \cdot 10^3 \\ 37.6 \cdot 10^3 \end{cases}$	EW
213	.5	$\begin{cases} 280 \cdot 10^3 \\ 198 \cdot 10^3 \end{cases}$	$\begin{cases} 140 \cdot 10^3 \\ 99 \cdot 10^3 \end{cases}$	EW
203	.31	$\begin{cases} 280 \cdot 10^3 \\ 198 \cdot 10^3 \end{cases}$	$\begin{cases} 86.8 \cdot 10^3 \\ 61.4 \cdot 10^3 \end{cases}$	EW

FIGURE 16

WVB:sac

Distribution

W. Brewer L-90
T. Davito L-90
V. Karpenko L-113
R. Murray L-90
T. Nelson L-90
F. Tokarz L-90
ME Library L-129
File

Pile Spring
Calculations

**PILE SPRING
CALCULATIONS**

MAP SHOWING TOPOGRAPHY LOCATIONS OF BORINGS AND FACILITIES AT THE SITE

KEY:

CROSS-SECTIONS

- DAMES & MOORE BORINGS:
- BORINGS 1-10, 12, 16-25, REFER TO -
SITE INVESTIGATION
PROPOSED SPENT NUCLEAR FUEL PROCESSING PLANT
NEAR SPRINGVILLE, NEW YORK
(APPENDIX 6 TO S.A.R.)
- BORINGS 26 & 27 REFER TO -
SOILS AND FOUNDATION INVESTIGATION
PROPOSED IODINE RECOVERY BUILDING
WEST VALLEY, NEW YORK
JOB NO. 3945-007-10
SEPTEMBER 29, 1970
(APPENDIX 9 TO S.A.R.)
- BORINGS 28-32 REFER TO -
SOILS AND FOUNDATION INVESTIGATION
PROPOSED HIGH LEVEL WASTE FACILITY
WEST VALLEY, NEW YORK
JOB NO. 3945-009-10
NOVEMBER 23, 1971
(APPENDIX 10 TO S.A.R.)
- BORINGS 33-43, CURRENT BORINGS
- DAMES & MOORE TEST PITS

REFERENCE TO SECTION DRAWINGS:

SECTION A	SEE PLATES 3A, 3B & 3C
IN APPENDIX 6 TO S.A.R.
SECTION B	
SECTION C	
SECTION D	
SECTION E	
SECTION F	SEE PLATE 3 IN APPENDIX 10 TO S.A.R.
SECTION G	
SECTION H	
SECTION J	SEE PLATES 3, 4, & 5 RESPECTIVELY
IN THIS REPORT
SECTION K	
SECTION L	

NOTES:

1. NORTH AS SHOWN ON DRAWINGS IS AN ASSUMED PLANT NORTH OF
FOR TRUE NORTH DEFLECT 20° EAST.
2. ALL COORDINATES SHOWN ON DRAWINGS ARE BASED ON PLANT
COORDINATES SYSTEM. NEW YORK STATE COORDINATES N892,800
& E480,840 ARE EQUAL TO N50,000 & E10,000 OF THE PLANT
COORDINATE SYSTEM
3. PLANT ELEVATION OF 100.00' IS EQUAL TO ELEVATION 1415.0'
OF U.S.G.S. MEAN SEA LEVEL DATUM.

REFERENCE:

THE BASE MAP WAS PREPARED FROM A DRAWING BY DRAVO CORP. BLAW-
KNOX CHEMICAL PLANTS DIVISION, PITTSBURGH PA. ENTITLED "SPENT
FUEL PROCESSING PLANT" AND NUMBERED 2401-30-200-5 DATED 12-5-74

DAMES & MOORE

SUBSURFACE SECTION L-L

NOTES:

1. ELEVATIONS REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.
2. THE SUBSURFACE SECTION SHOWN REPRESENTS OUR EVALUATION OF THE MOST PROBABLE CONDITIONS BASED UPON INTERPRETATION OF PRESENTLY AVAILABLE DATA. SOME VARIATIONS FROM THESE CONDITIONS MUST BE EXPECTED.
3. THE DISCUSSION IN THE TEXT OF THE REPORT IS NECESSARY FOR A PROPER UNDERSTANDING OF THE NATURE OF THE SUBSURFACE MATERIALS.

DAMES & MOORE

SUBSURFACE SECTION J-J

- NOTES:
1. ELEVATIONS REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.
 2. THE SUBSURFACE SECTION SHOWN REPRESENTS OUR EVALUATION OF THE MOST PROBABLE CONDITIONS BASED UPON INTERPRETATION OF PRESENTLY AVAILABLE DATA. SOME VARIATIONS FROM THESE CONDITIONS MUST BE EXPECTED.
 3. THE DISCUSSION IN THE TEXT OF THE REPORT IS NECESSARY FOR A PROPER UNDERSTANDING OF THE NATURE OF THE SUBSURFACE MATERIALS.

DAMES & MOORE

PLATE 3

CORRELATION BETWEEN RELATIVE DENSITY AND STANDARD PENETRATION RESISTANCE

NOTES:

1. THE GROUND WATER LEVEL WAS ASSUMED TO BE AT A DEPTH OF 10 FEET BELOW THE GROUND SURFACE.
2. THE SATURATED UNIT WEIGHT (γ_{sat}) OF THE SOIL WAS TAKEN TO BE 132 PCF. THE BUOYANT UNIT WEIGHT (γ_b) OF THE SOIL WAS TAKEN TO BE 70 PCF.
3. THE GIBBS AND HOLTZ CORRELATION BETWEEN RELATIVE DENSITY AND STANDARD PENETRATION RESISTANCE IS DISCUSSED IN "RESEARCH ON DETERMINING THE DENSITY OF SAND BY SPOON PENETRATION POTENTIAL", PROC. 4TH INTER. CONF. ON SOIL MECHANICS AND FOUNDATION ENGINEERING, VOL. I, 1957.

KEY:

- $\bullet$ DATA FROM BORINGS DRILLED FOR THIS INVESTIGATION (BORINGS B-33 THROUGH B-43)
- $+$ DATA FROM PREVIOUS BORINGS DRILLED (BORINGS B-1 THROUGH B-32)-SEE APPENDIX TO SAR ENTITLED GEOLOGY AND FOUNDATION ENGINEERING GIBBS AND HOLTZ (1957)

D_r INDICATES RELATIVE DENSITY IN PERCENT

DAMES & MOORE

PLATE 6

ASSUMPTIONS

1. Pile top is pinned to the footing
2. Poulos' method includes L in formulation. Find K_H for maximum and minimum L and average.
3. Novaks Method is not yet developed for H piles.
4. Cohesionless Soil, Modulus varies linearly with depth.

L = LENGTH OF PILE

ENGINEERING NOTE

SUBJECT

NFS

NAME

TAN

PILE STIFFNESSES

DATE

6/76

PILE DATA - 12 BP 53

$$A = 15.58 \text{ in}^2$$

$$I_x = 394.8 \text{ in}^4$$

$$I_y = 127.3 \text{ in}^4$$

$$E = 29 \times 10^6 \text{ psi}$$

$$EI_x = 1.145 \times 10^{10} \text{ #-in}$$

$$EI_y = 3.692 \times 10^9 \text{ #-in}$$

$$AE = 4.518 \times 10^8 \text{ #}$$

ENGINEERING NOTE**2**

SUBJECT

NFS

NAME

TAN**PILE STIFFNESSES**

DATE

6/76**SOIL DATA**

Upper layer - 15'-25' Med dense to dense
GRAVEL with fine to coarse SAND
and CLAYEY SILT. (1)

Perched water table 0'-14' below ground surface (1)

Relative Density = 45-90% (based on N & (1)
Gibbs & Holtz)

NOTE: Only 1 point @ 45% - see plate 6

a more reasonable lower limit would be 55-60%

$\therefore$ USE $D_R = 55-95\%$ [AVG = 75]

$f = 25-55$ TCF (2) [AVG = 40]

$V = 0.45$ (shear wave velocity study)

$\gamma = 130$ PCF (")

1. Dames & Moore, Soils Investigation, Section II, Appendix
II-5.0, October 22, 1975, Transmitted via suppl. 17.

2. NAVFAC DM-7

ENGINEERING NOTE**3**

SUBJECT

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TAN

PILE STIFFNESSES

DATE

LATERAL STIFFNESSReese & Matlock

$$\textcircled{1} \quad f = 25 \text{ TCF} = \underline{29 \text{ \#/in}^3}$$

$$T_x = \left(\frac{EI_x}{f} \right)^{1/5} = \left(\frac{1.145 \times 10^{10}}{29} \right)^{1/5} = \underline{52.4 \text{ in.}}$$

Evaluate f for depth of $2.5T = 131'' = 10.9'$ O.K. - still
in upper layer

$$5T_x = 21.8' < L, \therefore F_s = 2.4$$

$$K_{Hx} = \frac{1}{2.4} \left(\frac{EI_x}{T_x^3} \right) = 3.3 \times 10^4 \text{ \#/in} = \underline{400 \text{ K/ft}} = \underline{K_{Hx}}$$

$$T_y = \left(\frac{EI_y}{f} \right)^{1/5} = \left(\frac{3.692 \times 10^9}{29} \right)^{1/5} = \underline{41.8 \text{ in}} < T_x$$

$$K_{Hy} = \frac{1}{2.4} \left(\frac{EI_y}{T_y^3} \right) = 2.1 \times 10^4 \text{ \#/in} = \underline{250 \text{ K/ft}} = \underline{K_{Hy}}$$

$$\textcircled{2} \quad f = 55 \text{ TCF} = \underline{64 \text{ \#/in}^3}$$

$$T_x = \left(\frac{1.145 \times 10^{10}}{55} \right)^{1/5} = \underline{46.1 \text{ in}}$$

$$K_{Hx} = \frac{1}{2.4} \left(\frac{EI_x}{T_x^3} \right) = 4.87 \times 10^4 \text{ \#/in} = \underline{580 \text{ K/ft}} = \underline{K_{Hx}}$$

$$T_y = \left(\frac{3.692 \times 10^9}{55} \right)^{1/5} = \underline{36.8 \text{ in}}$$

$$K_{Hy} = \frac{1}{2.4} \left(\frac{EI_y}{T_y^3} \right) = 3.10 \times 10^4 \text{ \#/in.} = \underline{370 \text{ K/ft.}} = \underline{K_{Hy}}$$

ENGINEERING NOTE

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PILE STIFFNESSES

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LATERAL STIFFNESSPoulos

$$\textcircled{1} \quad N_h = f = 29 \text{ #/in}^3$$

$$\text{Try } L = 57' = 684''$$

$$K_{NX} = \frac{E_p I_{Px}}{N_h L^5} = \frac{1.145 \times 10^{10}}{29 (684)^5} = 2.6 \times 10^{-6}$$

$$\frac{L}{d} = \frac{684''}{12''} = 57$$

$$I_{PH_x} \approx 350$$

(Poulos fig. 21)

$$K_{HX} = \frac{N_h L^2}{I_{PH_x}} = \frac{29 (684)^2}{350} = 3.88 \times 10^4 \text{ #/in} = \underline{470 \text{ K/ft} = K_{HX}}$$

$$\text{Try } L = 32' = 384''$$

$$K_{NX} = \frac{1.145 \times 10^{10}}{29 (384)^5} = 4.7 \times 10^{-5}, \quad \frac{L}{d} = 32$$

$$I_{PH_x} \approx 120$$

$$K_{HX} = \frac{N_h L^2}{I_{PH_x}} = \frac{29 (384)^2}{120} = 3.56 \times 10^4 \text{ #/in} = \underline{430 \text{ K/ft} = K_{HX}}$$

USE 450 K/ft = K_{HX}

ENGINEERING NOTE

5

SUBJECT

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PILE STIFFNESSES

DATE

Poulos (cont.)

$$\textcircled{2} \quad N_h = f = 64 \text{ #/in}^3$$

$$\text{Try } L = 57' = 684''$$

$$K_{NX} = \frac{E_p I_{px}}{N_h L^3} = \frac{1.145 \times 10^{10}}{64 (684)^3} = 1.2 \times 10^{-6}, \quad \frac{L}{d} = 57$$

$$I_{PHx} \approx 500$$

$$K_{Hx} = \frac{N_h L^2}{I_{PHx}} = \frac{64 (684)^2}{500} = 5.98 \times 10^4 \text{ #/in} = \underline{\underline{720 \text{ K/ft}}}$$

$$\text{Try } L = 32' = 384''$$

$$K_{NX} = \frac{1.145 \times 10^{10}}{64 (384)^3} = 2.1 \times 10^{-5}, \quad \frac{L}{d} = 32$$

$$I_{PHx} \approx 180$$

$$K_{Hx} = \frac{64 (384)^2}{180} = 5.24 \times 10^4 \text{ #/in} = \underline{\underline{630 \text{ K/ft}}}$$

$$\text{USE } \underline{\underline{K_{Hx} = 680 \text{ K/ft}}} \leftarrow$$

ENGINEERING NOTE

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PILE STIFFNESSES

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Poulos (cont.)

$$\textcircled{1} \quad f = 29 \text{ \#/in}^3$$

$$\text{Try } L = 57' = 684''$$

$$K_{NY} = \frac{E_p I_{py}}{N_h L^5} = \frac{3.692 \times 10^9 \text{ \#/in}}{29 (684)^5} = 8.5 \times 10^{-7}, \quad \frac{L}{d} = 57$$

$$I_{PHY} \approx 600$$

$$K_{HY} = \frac{29(684)^2}{600} = 2.26 \times 10^4 \text{ \#/in} = \underline{\underline{270 \text{ k/ft.} = K_{HY}}}$$

$$\text{Try } L = 32' = 384''$$

$$K_{NY} = \frac{3.692 \times 10^9}{29(384)^5} = 1.5 \times 10^{-5}, \quad \frac{L}{d} = 32$$

$$I_{PHY} \approx 200$$

$$K_{HY} = \frac{29(384)^2}{200} = 2.14 \times 10^4 \text{ \#/in} = \underline{\underline{260 \text{ k/ft.} = K_{HY}}}$$

ENGINEERING NOTE

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TAN

PILE STIFFNESSES

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6/76

Poulos

$$\textcircled{2} f = 64 \text{ #/in}^3$$

$$\text{TRY } L = 57' = 684''$$

$$K_{NY} = \frac{E_p I_{py}}{N_h L^5} = \frac{3.692 \times 10^9}{64 (684)^5} = 3.9 \times 10^{-7}, \frac{L}{d} = 57$$

$$I_{PHY} \approx 700$$

(Extrapolated)

$$K_{HY} = \frac{64 (684)^2}{700} = 4.28 \times 10^4 \text{ #/in} = \underline{\underline{510 \text{ #/ft}}} = K_{HY}$$

$$\text{TRY } L = 32' = 384''$$

$$K_{NY} = \frac{3.692 \times 10^9}{64 (384)^5} = 6.9 \times 10^{-6}, \frac{L}{d} = 32$$

$$I_{PHY} \approx 240$$

$$K_{HY} = \frac{64 (384)^2}{240} = 3.93 \times 10^4 \text{ #/in} = \underline{\underline{470 \text{ #/ft}}} = K_{HY}$$

USE $K_{HY} = 490 \text{ #/ft}$ ←

ENGINEERING NOTE

SUBJECT

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NAME

TAN.

DATE

5-28-76

Pile Length Data - Supplement 4, # 7

PILE NO	Orig. Ground ELEV.	Approx Final ELEV	Pile TIP ELEV	Penet.	Final Length	
96	82'-0"	72'	40'-2"	41'-10"	31.8'	
97	80'-11"	"	41'-0"	39'-11"	31.0'	
B * 99	79'-8"	"	39'-8"	40'-0"	32.3	SAY 32'
101	79'-1"	"	39'-1"	40'-0"	32.9	
102	78'-11"	"	38'-6"	40'-5"	33.5	
387	96'-9"	96'-6"	38'-10"	57'-11"	57.7	
388	96'-9"	"	36'-7"	60'-2"	60.3	SAY 57'
A * 390	96'-9"	"	38'-8"	58'-1"	57.8	
392	96'-9"	"	38'-0"	58'-9"	58.5	
393	96'-9"	"	39'-9"	57'-0"	56.8	

*Test piles

Range of pile tip elevations = +32' to +42'

ELEV 100' plant datum = 1415' M.S.L. datum
 40' " " = 1355' "

$$\frac{AE}{L} \leq \text{Vert} \leq \frac{2AE}{L}$$

ENGINEERING NOTE

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PILE STIFFNESSES

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6/76

VERTICAL STIFFNESS32' PILES (GPC)

$$K_{Vmin} = \frac{AE}{L} = \frac{4.518 \times 10^5 K}{32'} = \underline{\underline{1.4 \times 10^4 K/ft.}} \quad \text{min.}$$

$$K_{Vmax} = \frac{2AE}{L} = \underline{\underline{2.8 \times 10^4 K/ft.}} \quad \text{max.}$$

50' PILES (LWC)

$$K_{Vmin} = \frac{4.518 \times 10^5 K}{50'} = \underline{\underline{9.0 \times 10^3 K/ft.}} \quad \text{min}$$

$$K_{Vmax} = \underline{\underline{1.8 \times 10^4 K/ft.}} \quad \text{max}$$

57' to 60' PILES

$$K_{Vmin} = \frac{4.518 \times 10^5 K}{60'} = \underline{\underline{7.5 \times 10^3 K/ft.}} \quad \text{min}$$

$$K_{Vmax} = \frac{4.518 \times 10^5 K}{57'} \times 2 = \underline{\underline{1.6 \times 10^4 K/ft.}} \quad \text{max}$$

ENGINEERING NOTE

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PILE STIFFNESSES

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SUMMARY OF
LATERAL STIFFNESSES

	MIN.	MAX.
K _{HX} - Major axis	400 K/ft.	680 K/ft.
K _{HY} - Minor axis	250 K/ft.	490 K/ft.

PILES - DISTRIBUTION OF STIFFNESS

The number of piles lumped at a particular node and the associated pile spring constants were determined by overlaying the scaled drawing of the existing piles and a drawing of the nodes at or below grade. From this overlay, the number of piles tied to a particular node as well as the strong axis direction were determined. The actual spring stiffnesses in the three directions were then evaluated.

PILE STIFFNESS

NODE	NO. * NORTH	NO. ** WEST	NODE	NO. NORTH	NO. WEST
5	-	2	250	1	3
9	3	7	257	4	4
13	2	-	264	3	4
21	3	-	271	5 (4s)	4
25	2	2	279	4-S	8
29	3	-	287	3-S	6
33	3	-	296	1	2
37	1	-	297	4	-
41	3	-	298	5	-
45	2	-	299	3	-
49	6	1	300	-	2
53	-	3	301	1	2
57	-	3	302	14 (8s)	-
61	1	1	303	4 (3s)	15
65	1	1	306	9 (6s)	-
68	2	-	307	6-S	-
71	1	3	308	5-S	-
74	1	-	313	7 (3s)	-
86	-	1	315	1-S	-
89	-	1	335	-	13
103	-	1	352	1-S	-
113	-	3	354	-	3-S
121	-	1	355	-	2-S
139	1	1	358	1-S	-
142	-	3	360	-	3-S
157	-	1-S ***	361	-	17-S
187	12	-	363	1-S	-
193	12	-	364	4-S	-
197	13	-	366	-	19-S
207	9	-	367	-	10-S
217	1	-	370	1-S	3-S
220	1	-	371	4-S	-
223	1	3	373	-	9-S
226	2	-	374	8-S	7-S
229	5	4	375	3-S	-
232	2	-	377	-	8-S
235	3	3	378	-	7-S
238	3	-	379	-	5-S
241	3	8	380	-	6-S
244	3	-	381	8-S	7-S
247	4	5			

* NO. OF PILES WITH WEB IN N-S DIRECTION
 ** NO. OF PILES WITH WEB IN E-W DIRECTION
 *** INDICATES SHORT PILE

PILE STIFFNESS

NODE	MINIMUM VALUES			MAXIMUM VALUES		
	K_x K/FT X 10^3	K_y K/FT X 10^3	K_z K/FT X 10^3	K_x K/FT X 10^3	K_y K/FT X 10^3	K_z K/FT X 10^3
5	0.5	0.8	15.0	0.98	1.36	32.0
9	2.95	3.55	75.0	5.47	6.23	160.0
13	0.8	0.5	15.0	1.36	0.98	32.0
21	1.2	0.75	22.5	2.04	1.47	48.0
25	1.3	1.3	30.0	2.34	2.34	64.0
29	1.2	0.75	22.5	2.04	1.47	48.0
33	1.2	0.75	22.5	2.04	1.47	48.0
37	0.4	0.25	7.5	0.68	0.49	16.0
41	1.2	0.75	22.5	2.04	1.47	48.0
45	0.8	0.5	15.0	1.36	0.98	32.0
49	2.65	1.9	52.5	4.57	3.62	112.0
53	0.75	1.2	22.5	1.47	2.04	48.0
57	0.75	1.2	22.5	1.47	2.04	48.0
61	0.65	0.65	15.0	1.17	1.17	32.0
65	0.65	0.65	15.0	1.17	1.17	32.0
68	0.8	0.5	15.0	1.36	0.98	32.0
71	1.15	1.45	30.0	2.15	2.53	64.0
74	0.4	0.25	7.5	0.68	0.49	16.0
86	0.25	0.4	7.5	0.49	0.68	16.0
89	0.25	0.4	7.5	0.49	0.68	16.0
103	0.25	0.4	7.5	0.49	0.68	16.0
113	0.75	1.2	22.5	1.47	2.04	48.0
121	0.25	0.4	7.5	0.49	0.68	16.0
139	0.65	0.65	15.0	1.17	1.17	32.0
142	0.75	1.2	22.5	1.47	2.04	48.0
157	0.25	0.4	7.5	0.49	0.68	16.0
187	4.8	3.0	90.0	8.16	5.88	192.0
193	4.8	3.0	90.0	8.16	5.88	192.0
197	5.2	3.25	97.5	8.84	6.37	208.0
207	3.6	2.25	67.5	6.12	4.41	144.0
217	0.4	0.25	7.5	0.68	0.49	16.0
220	0.4	0.25	7.5	0.68	0.49	16.0
223	1.15	1.45	30.0	2.15	2.53	64.0
226	0.8	0.5	15.0	1.36	0.98	32.0
229	3.0	2.85	67.5	5.36	5.17	144.0
232	0.8	0.5	15.0	1.36	0.98	32.0
235	1.95	1.95	45.0	3.51	3.51	96.0
238	1.2	0.75	22.5	2.04	1.47	48.0
241	3.2	3.95	82.5	5.96	6.91	176.0
244	1.2	0.75	22.5	2.04	1.47	48.0
247	2.85	3.0	67.5	5.17	5.36	144.0
250	1.15	1.45	30.0	2.15	2.53	64.0
257	2.6	2.6	60.0	4.68	4.68	128.0
264	2.2	2.35	52.5	4.0	4.19	112.0
271	3.0	2.85	73.5	5.36	5.17	152.0

PILE STIFFNESS

NODE	MINIMUM VALUE			MAXIMUM VALUE		
	K_x K/FT X 10^3	K_y K/FT X 10^3	K_z K/FT X 10^3	K_x K/FT X 10^3	K_y K/FT X 10^3	K_z K/FT X 10^3
279	3.6	4.2	96.0	6.64	7.4	200.0
287	2.7	3.15	72.0	4.98	5.55	150.0
296	0.9	1.05	22.5	1.66	1.85	48.0
297	1.6	1.0	30.0	2.72	1.96	64.0
298	2.0	1.25	37.5	3.4	2.45	80.0
299	1.2	0.75	22.5	2.04	1.47	48.0
300	0.5	0.8	15.0	0.98	1.36	32.0
301	0.9	1.05	22.5	1.66	1.85	48.0
302	5.6	3.5	117.0	9.52	6.86	240.0
303	5.35	7.0	147.0	10.07	12.16	310.0
306	3.6	2.25	76.5	6.12	4.41	156.0
307	3.6	2.25	54.0	6.12	4.41	108.0
308	2.0	1.25	45.0	3.4	2.45	90.0
313	2.8	1.75	57.0	4.76	3.43	118.0
315	0.4	0.25	9.0	0.68	0.49	18.0
335	3.25	5.2	97.5	6.37	8.84	208.0
352	0.4	0.25	14.0	0.68	0.49	28.0
354	0.75	1.2	42.0	1.47	2.04	84.0
355	0.5	0.8	28.0	0.98	1.36	56.0
358	0.4	0.25	14.0	0.68	0.49	28.0
360	2.0	3.2	112.0	3.92	5.44	224.0
361	4.25	6.8	238.0	8.33	11.56	476.0
363	0.4	0.24	14.0	0.68	0.49	28.0
364	1.6	1.0	56.0	2.72	1.96	112.0
366	2.5	4.0	140.0	4.9	6.8	280.0
367	4.75	7.6	266.0	9.31	12.92	532.0
370	1.15	1.45	56.0	2.15	2.53	112.0
371	1.6	1.0	56.0	2.72	1.96	112.0
373	2.25	3.6	126.0	4.41	6.12	252.0
374	4.95	4.8	210.0	8.87	8.68	420.0
375	1.2	0.75	42.0	2.04	1.47	84.0
377	2.0	3.2	112.0	3.92	5.44	224.0
378	1.75	2.8	98.0	3.43	4.76	196.0
379	1.25	2.0	70.0	2.45	3.4	140.0
380	1.5	2.4	84.0	2.94	4.08	168.0
381	4.95	4.8	210.0	8.87	8.68	420.0

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SUBJECT

PMC- PILE & COL SPRINGS

NAME

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7-12-76

COL. SPRING

$$K = \frac{P}{\Delta} = \frac{AE}{L} = \frac{\pi(z)^2}{4} \frac{(0.4527)(10^6)}{13.0} = 109400.0 \text{ K/F}$$

PILE SPRING

MIN

$$K = 2(7500) = 15000$$

MAX

$$K = 2(16000) = 32000$$

$$K_{min} = \frac{K_1 K_2}{K_1 + K_2} = \frac{109400 (15000)}{109400 + 15000} = 13190.0 \text{ K/F}$$

$$K_{max} = \frac{109400 (32000)}{109400 + 32000} = 24760.0 \text{ K/F}$$

Ultimate Load
Calc. & Compar.

II. Ultimate Load Calculations and Comparisons

PART 2

ULTIMATE LOAD CALCULATIONS AND COMPARISONS

Ultimate Load
Calc. & Compar.

ULTIMATE CAPACITIES OF
SHEAR WALLS

ENGINEERING NOTE

FILE NO.

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SUBJECT ULTIMATE SHEAR STRENGTH

NAME AND

AOC

DATE 7-31-76

ELEMENT	h	h _w	L _w	REINFORCEMENT				ULTIMATE SHEAR CAPACITY (K)	ULTIMATE SHEAR STRESS (PSI)
				VERTICAL		HORIZONTAL			
				OUTSIDE	INSIDE	OUTSIDE	INSIDE		
1	1'-0"	11'-6"	29.125	#9@12	#7@12	#5@17	#5@17	832.6/3	282.0
2	1'-0 _{BLK}	32.5	32.5	#5@32	#5@32	#5@32	—	—	68.0
3	1'-0 _{BLK}	32.5	32.5	#5@32	#5@32	#5@32	—	—	68.0
4	1'-0	11.5	29.125	#9@12	#7@12	#5@17	#5@17	832.6/3	282.0
5	1'-0 _{BLK}	32.5	32.5	#5@32	#5@32	#5@32	—	—	68.0
6	1'-0 _{BLK}	32.5	32.5	#5@32	#5@32	#5@32	—	—	68.0
7	1'-0	11.5	29.125	#9@12	#7@12	#5@17	#5@17	832.6/3	282.0
8	1'-0 _{BLK}	32.5	32.5	#5@32	#5@32	#5@32	—	—	68.0
9	1'-0 _{BLK}	32.5	32.5	#5@32	#5@32	#5@32	—	—	68.0
10	1'-0	11.5	28.75	#9@12	#7@12	#5@17	#5@17	821.9/2	282.0
11	1'-0 _{BLK}	32.5	28.75	#5@32	#5@32	#5@32	—	—	68.0
12	1'-0 _{BLK}	32.5	28.75	#5@32	#5@32	#5@32	—	—	68.0
13	1'-0	11.5	28.75	#9@12	#7@12	#5@17	#5@17	821.9/2	282.0
14	1'-0 _{BLK}	32.5	28.75	#5@32	#5@32	#5@32	—	—	68.0
15	1'-0 _{BLK}	32.5	28.75	#5@32	#5@32	#5@32	—	—	68.0
16	3'-0	31.0	14.0	#8@12	#7@12	#8@18	#7@18	185.3	229.0
17	3'-0	31.0	14.0	#8@12	#7@12	#8@18	#7@18		229.0
18	1'-0 _{BLK}	13.0	14.0	#5@32	#5@32	#5@32	—	—	68.0
19	1'-0	11.5	16.0	#5@16	#5@16	#5@17	#5@17	802.4/3	282.0
20	1'-0 _{BLK}	32.5	16.0	#5@32	#5@32	#5@32	—	—	68.0
21	1'-0 _{BLK}	32.5	16.0	#5@32	#5@32	#5@32	—	—	68.0
22	12" BLK	13.0	10.5	#5@32	#5@32	#5@32	—	—	68.0
23	1'-0	11.5	28.125	#6@12	#6@12	#5@17	#5@17	802.4/3	282.0
24	1'-0 _{BLK}	17.5	8'-8"	#5@32	#5@32	#5@32	—	—	68.0
25	1'-0 _{BLK}	17.5	8'-8"	#5@32	#5@32	#5@32	—	—	68.0
26	1'-0	11.5	28.125	#6@12	#6@12	#5@17	#5@17	802.4/3	282.0
27	1'-0	11.5	28.125	#6@12	#6@12	#5@17	#5@17	802.4/3	282.0
28	12" BLK	13.0	11.25	#5@32	#5@32	#5@32	—	—	68.0
29	2'-0	31.0	30.5	#5@18	#5@18	#6@14	#6@14	260.75	272.0
30	2'-0	31.0	30.5	}	}	}	}		272.0
31	2'-0	31.0	30.5						272.0
32	2'-0	31.0	30.5						272.0
33	2'-0	31.0	30.5						272.0
34	2'-0	31.0	30.5						272.0
									272.0

2-3

ENGINEERING NOTE

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AND

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10-14-76

ELEM #1, 4, 7, 10, 13, 23, 26, 29,

HORIZ #5@17 EF

 $h = 1.0 \text{ FT}$

$$A_s = 2(.31) = 0.62 \text{ in}^2/17''$$

$$A_g = 12(17) = 204 \text{ in}^2/17''$$

$$\rho = \frac{A_s}{A_g} = \frac{0.62}{204} = 0.00304$$

$$v_c = 2\sqrt{f'_c} = 2\sqrt{2500} = 100$$

$$f_y = 60 \text{ ksi}$$

$$v = v_s + v_c = 0.00304(60000) + 100 = \underline{\underline{282.4 \text{ psi}}}$$

Elem #16, 17

 $h = 3.0$

$$A_s = \begin{cases} \#8@18 & = .79/18 \\ \#7@18 & = .60/18 \end{cases} = 1.39 \text{ in}^2/18''$$

$$A_g = 3.0(18)(12) = 648 \text{ in}^2$$

$$\rho = \frac{1.39}{648} = 0.00215$$

$$v = 0.00215(60000) + 100 = \underline{\underline{228.7 \text{ psi}}}$$

Elem #19

 $h = 1.0$

$$A_s = \begin{cases} \#5@16 \text{ EF} = & \frac{.62}{16} \end{cases}$$

$$\rho = \frac{.62}{12(16)} = 0.00323$$

$$v = 0.00323(60000) + 100 = \underline{\underline{293.8 \text{ psi}}}$$

Elem 29 thru 34

$$A_s = \begin{cases} \#5@18 \text{ EF} = & \frac{.62}{18} \end{cases}$$

$$\rho = \frac{.62}{24(18)} = 0.00287$$

$$v = 0.00287(60000) + 100 = \underline{\underline{272.2 \text{ psi}}}$$

ENGINEERING NOTE

SUBJECT

SHEAR CAPACITY

NAME

AMD

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8-2-76

AOC

ELEMENTS 2, 3, 5, 6, 8 & 9

$$\frac{h}{d} = \frac{32.5}{32.5} = 1.0$$

$$V_{\text{ult}} = 100 - 1.0(100 - 68) = 68 \text{ psi}$$

ELEMENTS 11, 12, 14, & 15

$$\frac{h}{d} = \frac{32.5}{28.75} = 1.13 > 1.0$$

$$V_{\text{ult}} = 68.0 \text{ psi}$$

ELEMENT 18

$$\frac{h}{d} = \frac{13}{14} = 0.929$$

$$V_{\text{ult}} = 100 - 0.929(100 - 68) = 70.3 \text{ psi}$$

ELEMENT 20 & 21

$$\frac{h}{d} = \frac{32.5}{16} = 2.03 > 1.0$$

$$V_{\text{ult}} = 68.0 \text{ psi}$$

ELEMENT 22

$$\frac{h}{d} = \frac{13}{10.5} = > 1.0$$

$$V_{\text{ult}} = 68.0 \text{ psi}$$

ELEMENT #24 & 25

$$\frac{h}{d} = \frac{17.5}{8.667} = 2.019 > 1.0$$

$$V_{\text{ult}} = 68.0 \text{ psi}$$

ELEMENT #28

$$\frac{h}{d} = \frac{13}{11.25} = 1.155 > 1.0$$

$$V_{\text{ult}} = 68.0 \text{ psi}$$

ENGINEERING NOTE

SUBJECT

ULTIMATE SHEAR CAPACITY

NAME

AMD

CPC & EDR

DATE

7-28-76

ELEMENT	h	h _w	L _w	REINFORCEMENT				ULTIMATE SHEAR CAPACITY (K)	ULTIMATE SHEAR STRESS (PSI)
				VERTICAL		HORIZONTAL			
				OUTSIDE	INSIDE	OUTSIDE	INSIDE		
35	5'-9"	43'-0"	93'-0"	#11@6"	#9@16"	#9 & #11@14"	#9@14"	16159.7	321
36	5'-9"	43'-0"	93'-0"	#11@6"	#9@16"	#9 & #11@14"	#9@14"		321
37	5'-9"	43'-0"	93'-0"	#11@6"	#9@16"	#9 & #11@14"	#9@14"		321
38	5'-9"	14'-0"	11'-0"	#11@6"	#9@16"	#11@9"	#9@18"	693.6	299
39	5'-9"	16'-0"	11'-0"	#9@12"	#9@16"	#11@9"	#9@18"	263.4	227
40	5'-9"	16'-0"	35'-5"	#9@12"	#9@16"	#8@12"	#8@12"	2769.0	176
41	5'-9"	16'-0"	35'-5"	#9@12"	#9@16"	#8@12"	#8@12"		176
42	5'-9"	16'-0"	35'-5"	#9@12"	#9@16"	#8@12"	#8@12"		176
43	2'-0"	14'-0"	11'-3"	#8@14"	#9@14"	#5@10"	#5@10"	240.48	255
44	2'-0"	8'-0"	28'-0"	#6@12"	#6@12"	#5@10"	#5@10"	1449.5	255
45	2'-0"	8'-0"	28'-0"	#6@12"	#6@12"	#5@10"	#5@10"		255
46	2'-0"	25'-0"	8'-0"	#8@14"	8@14"	#5@10"	#5@10"		63.5
47	2'-0"	25'-0"	8'-0"	8@14"	8@14"	#5@10"	#5@10"		255
48	3'-0"	25'-0"	13'-6"	#7@12"	#6@12"	#6@12"	#6@12"	143.28	222
49	3'-0"	25'-0"	13'-6"	#7@12"	#6@12"	#6@12"	#6@12"		222
50	2'-0"	14'-0"	15'-0"	#8@14"	#9@14"	#5@10"	#5@10"	478.9	255
51	2'-0"	8'-0"	28'-0"	#6@12"	#6@12"	#5@10"	#5@10"	1449.5	255
52	2'-0"	8'-0"	28'-0"	#6@12"	#6@12"	#5@10"	#5@10"		255
53	3'-0"	25'-0"	32'-0"	#7@12"	#6@12"	#6@12"	#6@12"		
54								903.8	222
55									222
56									222
57									222
58									222
59									222
60									222
61									222
62	3'-0"	25'-0"	32'-0"	#7@12"	#6@12"	#6@12"	#6@12"	1475.3 ^K	222
63	3'-0"	25'-0"	43'-0" (12'-6" DOCK)	#7@12"	#6@12"	#6@12"	#6@12"		222
64									222
65		14'-0" High DOCK						60.7	222
66									222
67									222
68	3'-0"	25'-0"	15'-0" (12'-0" DOCK)	#7@12"	#6@12"	#6@12"	#6@12"	60.7	222
69	3'-0"	25'-0"	8'-7"	#7@12"	#6@12"	#6@12"	#6@12"		222

ENGINEERING NOTE

SUBJECT SHEAR STRENGTH

NAME AMID

LPC & EDR

DATE 7-28-76

ELEMENT	h	h _w	L _w	REINFORCEMENT				ULTIMATE SHEAR CAPACITY (K)	ULTIMATE SHEAR STRESS (PSI)
				VERTICAL		HORIZONTAL			
				OUTSIDE	INSIDE	OUTSIDE	INSIDE		
70	3'-0	25'-0	8'-7	#7@12	6@12	6@12	6@12		222
71	3'-0	25'-0	8'-7	7@12	6@12	6@12	6@12	607	222
72	3'-0	25'-0	8'-7	7@12	6@12	6@12	6@12		222
73	3'-0	14'-0	46'-5	7@12	6@12	7@14	7@14	1901.3/5	243
74	4'-0"	8'-0	35'-5	7@12	7@12	7@12	7@12	3117.7/4	225
75	3'-0	14'-0	46'-5	7@12	6@12	7@14	7@14	1901.3/5	243
76	4'-0"	8'-0	35'-5	7@12	7@12	7@12	7@12	3117.7/4	225
77	3'-0	14'-0	46'-5	7@12	6@12	7@14	7@14	1901.3/5	243
78	4'-0"	8'-0	35'-5	7@12	7@12	7@12	7@12	3117.7/4	225
79	3'-0	14'-0	46'-5	7@12	6@12	7@14	7@14	1901.3/5	243
80	4'-0"	8'-0	35'-5	7@12	7@12	7@12	7@12	3117.7/4	225
81	3'-0	14'-0	46'-5	7@12	6@12	7@14	7@14	1901.3/5	243
82	3'-3"	14'-0	35'-5	#6@12	#6@12	#7@14	#7@14	1593.8/4	232
83	3'-3"	14'-0	35'-5	#6@12	#6@12	#7@14	#7@14	1593.8/4	213
84	4'-0	16'-0	35'-5	#7@12	#9@16	#7@12	#7@12	2787.1/3	225
85	3'-3"	14'-0	35'-5	#6@12	#6@12	#7@14	#7@14	1593.8/4	213
86	4'-0	16'-0	35'-5	#7@12	#9@16	#7@12	#7@12	2787.1/3	225
87	3'-3"	14'-0	35'-5	#6@12	#6@12	#7@14	#7@14	1593.8/4	213
88	4'-0"	16'-0	35'-5	#7@12	#9@16	#7@12	#7@12	2787.1/3	225
89	3'-3"	14'-0	11'-0	#6@12	#6@12	#7@14	#7@14	162.0	213
90	5'-9"	16'-0	11'-0	#9@12	#9@16	#6@14	#6@14	263.4	155
91	5'-9	43'-0	93'-0	#11@6	#9@16	#9#11@14	#9@14	16159.7	321
92	5'-9	43'-0	93'-0	#11@6	#9@16	#9#11@14	#9@14		321
93	5'-9	43'-0	93'-0	#11@6	#9@16	#9#11@14	#9@14		321
94	5'-0	43'-0	22'-0	#9@9	#9@18	#11@7	#9@14		267
95								455.1	267
96								267	
97								267	
98								267	
99	5'-0"	43'-0"	22'-0	#9@9	#9@18	#11@7	#9@14		267
100	4'-0	8'-0	33'-6	#7@12	#7@12	#9@14	#11@7	3527.8	225
101	4'-0	8'-0	33'-6	#7@12	#7@12	#9@14	#11@7		225
102	2'-0	16'-0	29'-6	#7@12	#7@16	#6@14	#6@14	1163.7	257
103	2'-0"	16'-0	29'-6	#7@12	#7@16	#6@14	#6@14		257
104	1'-6"	16'-0	12'-0	#7@12	#7@12	#5@14	#5@14	- 223.5	252

ENGINEERING NOTE

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SUBJECT

SHEAR STRENGTH

NAME

AMID

CPC & EDR

DATE

7-28-76

ELEMENT	h	h _w	L _w	REINFORCEMENT				ULTIMATE SHEAR CAPACITY (K)	ULTIMATE SHEAR STRESS (PSI)
				VERTICAL		HORIZONTAL			
				OUTSIDE	INSIDE	OUTSIDE	INSIDE		
105	1'-6	16'-0	22'-0	7@12	7@12	5@14	5@14	752.0	252
106			↓						252
107		↓	22'-0						252
108	1'-6	16'-0	12'-0	7@12	7@12	5@14	5@14	223.8	252
109	1'-6	16'-0	22'-0	7@12	7@12	5@14	5@14	752.0	252
110	1'-6	16'-0		↓	↓		↓		252
111	1'-6	16'-0	22'-0	7@12	7@12	5@14	5@14		252
112	5'-9"	43'-0	93'-0'	#11@6"	#9@16"	#9 & #11@14"	#9@14"	16159.7	321
113	5'-9"	↑	↑			↑	↑		321
114	5'-9"								321
115	5'-9"								321
116	5'-9"								321
117	5'-9"								321
118	5'-9"								321
119	5'-9"								321
120	5'-9"	↓	↓	↓	↓	↓	↓	321	
121	5'-9"	43'-0"	93'-0'	#11@6"	#9@16"	#9 & #11@14"	#9@14"	16159.7	321
122	5'-9"	43'-0"	93'-0'	#11@6"	#9@16"	#9 & #11@14"	#9@14"		321
123		↑							321
124									321
125									321
126									321
127									321
128									321
129									321
130	↓	↓	↓	↓	↓	↓	↓	321	
131	5'-9"	43'-0"	93'-0'	#11@6"	#9@16"	#9 & #11@14"	#9@14"	321	

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$$f'_c = 2500 \text{ psi}$$

$$2\sqrt{f'_c} = 100 \text{ psi}$$

$$f_y = 60000 \text{ psi}$$

$$V_u = 2\sqrt{f'_c} + \rho_{\min} f_y$$

TYPE 1 (308.6)

$$h = 5'-9" \quad \rho_{\min} (\text{Horiz}) = \frac{\#9 \& 11 @ 14" \text{ O}}{\#9 @ 14" \text{ C}} = \frac{1 + 1.56 + 1}{14" \times (5.75' \times 12)} = \frac{3.56}{69}$$

$$\rho_{\min} f_y = .0037 \times 60000 = 221$$

$$V_u = 100 + 221 = 321 \text{ psi}$$

TYPE 2 (112.0)

$$h = 5'-9" \quad \rho_{\min} (\text{Horiz}) = \frac{\#11 @ 9" \text{ O}}{\#9 @ 18" \text{ C}} = \left(\frac{1.56}{9} + \frac{1.00}{18} \right) \frac{1}{5.75' \times 12}$$

$$\rho_{\min} f_y = .0033 \times 60000 = 199$$

$$V_u = 299 \text{ psi}$$

TYPE 3 (42.5)

$$h = 5'-9" \quad \rho_{\min} (\text{Vert}) = \frac{\#9 @ 12" \text{ O}}{\#9 @ 16" \text{ C}} = \left(\frac{1}{12} + \frac{1}{16} \right) \frac{1}{69}$$

$$\rho_{\min} f_y = .0021 \times 60000 = 126.8$$

$$V_u = 227 \text{ psi}$$

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Type 4 (138.9)

$$h = 5'-9"$$

$$p_{min}(H) = \#8 @ 12" = 2 \left(\frac{.79}{12} \right) \frac{1}{69}$$

$$8 @ 12"$$

$$p_{min} f_y = .00127 \times 60000 = 76$$

$$v_u = 176 \text{ psi}$$

Type 5 (109.1)

$$h = 2'$$

$$p_{min}(H) = \#5 @ 10" = 2 \left(\frac{.31}{10} \right) \frac{1}{2 \times 12}$$

$$5 @ 10"$$

$$p_{min} f_y = .0026 \times 60000 = 155$$

$$v_u = 255 \text{ psi}$$

Type 6 (36.1)

$$h = 3'$$

$$p_{min}(H) \begin{matrix} 6 @ 12 \\ 6 @ 12 \end{matrix} = 2 \left(\frac{.44}{12} \right) \frac{1}{3 \times 12}$$

$$p_{min} f_y = .00204 \times 60000 = 122$$

$$v_u = 222 \text{ psi}$$

Type 7

$$h = 3$$

$$p_{min}(H) \begin{matrix} 7 @ 14 \\ 7 @ 14 \end{matrix} = 2 \left(\frac{.60}{14} \right) \frac{1}{3 \times 12}$$

$$p f_y = .0024 \times 60000 = 143$$

$$v_u = 243 \text{ psi}$$

Type 8

$$h = 4$$

$$p_{min}(V \text{ or } H) \begin{matrix} 7 @ 12 \\ 7 @ 12 \end{matrix} = 2 \left(\frac{.6}{12} \right) \frac{1}{48}$$

$$p f_y = .0021 \times 60000 = 125$$

$$v_u = 225 \text{ psi}$$

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Type 9

$$h = 3'-3"$$

$$p_{min} = \frac{\#6 @ 12}{6 @ 12} = 2 \left(\frac{.44}{12} \right) \frac{1}{39}$$

$$p_{fy} = .0019 \times 60000 = 113$$

$$\underline{v_u = 213 \text{ psi}}$$

Type 10

$$h = 5'-9"$$

$$p_{min} = \frac{\#6 @ 14}{6 @ 14} = 2 \left(\frac{.44}{14} \right) \frac{1}{69}$$

$$p_{fy} = .00091 \times 60000 = 54.7$$

$$\underline{v_u = 155 \text{ psi}}$$

Type 11

$$h = 2'$$

$$p_{fy} = \frac{\#6 @ 14}{24} \quad f_y = .0026 \times 60000 = 157$$

$$\underline{v_u = 257 \text{ psi}}$$

Type 12

$$h = 5'$$

$$p_{min} = \frac{\#9 @ 9}{\#9 @ 18} \quad \text{Vert.} = \left(\frac{1}{9} + \frac{1}{18} \right) \frac{1}{60}$$

$$p_{fy} = .0028 \times 60000 = 167$$

$$\underline{v_u = 267 \text{ psi}}$$

Type 13

$$h = 1'-6"$$

$$p_{min} = \frac{\#5 @ 14}{5 @ 14} = 2 \left(\frac{.31}{14} \right) \frac{1}{18}$$

$$p_{fy} = .0025 \times 60000 = 152$$

$$\underline{v_u = 252 \text{ psi}}$$

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ENGINEERING NOTE

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Elem 134, 136, 138, 140, 142

$$A_s = \#5 @ 14 = \frac{.62}{14}$$

$$\rho = \frac{.62}{12(14)} = 0.00369$$

$$V = 0.00369(60000) + 100 = \underline{321.4 \text{ psi}}$$

Elem 135, 137, 139, 141, 143

$$A_s = \#4 @ 12 \text{ ef} = \frac{.4}{12}$$

$$\rho = \frac{.4}{12(12)} = 0.00278$$

$$V = 0.00278(60000) + 100 = \underline{266.7 \text{ psi}}$$

Elem 133

$$h = 8^4$$

$$A_s = \#4 @ 14 \text{ ef} = \frac{.4}{14}$$

$$\rho = \frac{.4}{8(14)} = 0.00357$$

$$V = 0.00357(60000) + 100 = \underline{314.3 \text{ psi}}$$

Elem 132

$$h = 12 \quad \#5 @ 14 \text{ ef}$$

$$\rho = \frac{.62}{(12)(14)} = 0.00369$$

$$V = 0.00369(60000) + 100 = \underline{321.4 \text{ psi}}$$

Elem 144 same as 132

Elem 145

$$h = 12$$

$$A_s = \#4 @ 14 \text{ ef}$$

$$\frac{.4}{(12)(14)} = 0.00238$$

$$V = 0.00238(60000) + 100 = \underline{242.9 \text{ psi}}$$

Elem 146

$$h = 12^4 \quad \#5 @ 14 \text{ ef} = 321.4$$

Elem 147 - same as 133

Elem 148

$$\frac{.62}{(8)(14)} = 0.00554$$

$$V = 0.00554(60000) + 100 = 432.1$$

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ELEM NO.	h	h _w	l _w	REINFORCEMENT				ULT SHEAR CAPACITY (K)	ULT SHEAR STRESS (PSI)
				VERTICAL		HORIZONTAL			
				OUTSIDE	INSIDE	OUTSIDE	INSIDE		
149	3'	14.5'	21.25	#7@7	#7@14	#6+#5 @12	#6@12		265
150	3'	16.5'	21.25	"	"	"	"		265
151	3'	13'	21.25	#8@7	#7@14	#11@12	#6@12		360
152	3'	13'	21.25	"	"	"	"		360
153	3'	14.5'	19.75	#9@7	#7@14	#6@12	"		222
154	3'	16.5'	19.75	"	"	"	"		222
155	3'	13'	19.75	"	"	#11@12	"		378
156	3'	13'	19.75	"	"	"	"		378
157	3'	14.5'	16.5	#7@7	#6@14	#6@12	"		222
158	3'	16.5'	16.5	"	#7@14	"	"		222
159	3'	13'	16.5	#9@7	"	#11@12	"		378
160	3'	13'	16.5	"	"	"	"		378
161	3'	14.5'	10.0	#7@7	#6@14	#6@12	"		222
162	3'	16.5'	10.0	"	#7@14	"	"		222
163	3'	13'	10.0	#9@7	"	#11@12	"		378
164	3'	13'	10.0	"	"	"	"		378
165	3'	14.5'	11.75	#7@7	#6@14	#6@12	"		222
166	3'	16.5'	11.75	"	#7@14	"	"		222
167	3'	13'	11.75	#9@7	"	#11@12	"		378
168	3'	13'	11.75	"	"	"	"		378
169	5.25'	14.5	24	#7@7	"	#7@12	#7@12		195
170	5.25'	16.5	24	#10@7	"	"	"		195
171	5.25'	13.0	24	"	"	#11@12	"		271
172	5.25'	13	24	"	"	"	"		271
173	5.0	14.5	16.5	#7@7	"	#7+#5 @12	"		226
174	5.0	16.5	16.5	#10@7	"	#11@12	"		280
175	5.0	13	16.5	"	"	"	"		280
176	5.0	13	16.5	"	"	"	"		280
177	5.0	13	16.5	"	"	"	"		280
178	5.0	14.5	16.5	#7@7	"	#7+#5 @12	"		226
179	5.0	16.5	16.5	#10@7	"	#11@12	"		280
180	5.0	13	16.5	"	"	"	"		280
181	3.0	4.6	24	#9@14	EF	#7@14	EF		243
182	3.0	14.5	24	#7@7	#7@14	#7@12	EF		267
183	3.0	16.5	24	"	"	"	"		267

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ELEM NO.	h	h _w	l _w	REINFORCEMENT				ULT SHEAR CAPACITY (K)	ULT SHEAR STRESS (Psi)
				VERTICAL		HORIZONTAL			
				OUTSIDE	INSIDE	OUTSIDE	INSIDE		
184	3'	13	24	#7@7	#7@14	#11@12	#7@12		350
185	3'	13	24	"	"	"	"		350
186	3'	4.5	11.75	#9@14	#9@14	#7@14	EF		243
187	3'	14.5	11.75	#7@7	#6@14	#6@12	12 EF		222
188	3'	16.5	11.75	"	#7@14	"	"		222
189	3'	13	11.75	"	"	#9@12	#6@12		300
190	3'	13	11.75	"	"	"	"		300
191	3'	14.5	10	"	#6@14	#6@12	#6@12		222
192	3'	16.5	10	"	#7@14	"	"		222
193	3'	13	10	"	"	#9@12	"		300
194	3'	13	10	"	"	"	"		300
195	3'	14.5	16.5	"	#6@14	#6@12	EF		222
196	3'	16.5	16.5	"	#7@14	"	"		222
197	3'	13	16.5	"	"	#9@12	#6@12		300
198	3'	13	16.5	"	"	"	"		300
199	8'	10'-9	19.75	#6@14	"	#7@14	"		336
200	3'	16.5	19.75	#7@7	#7@14	#6@12	#6@12		222
201	3	13	19.75	"	"	#9@12	"		300
202	3	13	19.75	"	"	"	"		300
203	1.5	14.5	21.75	#6@14	EF	#5@12	12 EF		272
204	1.5	16.5	21.75	"	"	"	"		272
205	1.5	13	21.75	"	"	"	"		272
206	1.5	13	21.75	"	"	"	"		272
207	1.5	14.5	21.75	"	"	"	"		272
208	1.5	16.5	21.75	"	"	"	"		272
209	1.5	13	21.75	"	"	"	"		272
210	1.5	13	21.75	"	"	"	"		272
211	3	14.5	16.5	#7@14	EF	#6@12	EF		222
212	3	16.5	16.5	"	"	"	"		222
213	3	13	16.5	"	"	"	"		222
214	3	13	16.5	"	"	"	"		222
215	5	13	16.5	#10@7	#7@14	#11@12	#7@12		280

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149, 150
h = 36"

$$A_s = \frac{3(.6)}{(36)(14)} = 0.003571 = \rho$$

$$A_s = \frac{2-\#6@12}{+\#5@12} = \frac{.88 + .31}{36(12)} = 0.00275$$

$$V = 0.00275(60000) + 100 = \underline{265.3 \text{ psi}}$$

Elem 151, 152

$$h=36 \quad A_s = 2-\#8 + \#7@14 \Rightarrow \rho = \frac{2(.79) + .6}{36(14)} = 0.004325$$

$$A_s = \frac{1.56 + .44}{36(12)} = 0.00463$$

$$V = 0.00433(60000) + 100 = \underline{359.5 \text{ psi}}$$

Elem 153, 154

$$h=36 \quad A_s = 2-\#9 + \#7@14 = \frac{2(1.0) + .6}{36(14)} = 0.005159$$

$$A_s = 2-\#6@12 = \frac{2(.44)}{36(12)} = 0.00204$$

$$V = 0.00204(60000) + 100 = \underline{222.2 \text{ psi}}$$

Elem 155, 156, 159, 160, 163, 164, 167, 168

$$h=36 \quad A_s = \#1 + \#6@12 = \frac{1.56 + 0.44}{36(12)} = 0.00463$$

$$V = 0.00463(60000) + 100 = \underline{377.8 \text{ psi}}$$

Elem 157, 158, 161, 162, 165, 166

$$h=36 \quad A_s = 2-\#7 + \#6@14 = \frac{1.2 + .44}{36(14)} = 0.00325$$

$$A_s = \#6@12 \text{ EF} = 0.00204 \Rightarrow 222.2$$

Elem 169, 170

$$h=63" \quad A_s = 3-\#7@14 = \frac{3(.6)}{63(14)} = 0.00204$$

$$A_s = 2-\#7@12 = \frac{2(.6)}{63(12)} = 0.00159$$

$$V = 0.00159(60000) + 100 = \underline{195.2 \text{ psi}}$$

Elem 171, 172

$$h=63" \quad A_s = 2-\#10 + \#7@14 \Rightarrow \frac{2(1.27) + 0.6}{63(14)} = 0.00356$$

$$A_s = \#11 + \#7@12 \Rightarrow \frac{1.56 + 0.60}{63(12)} = 0.00286$$

$$V = 0.00286(60000) + 100 = \underline{271.4 \text{ psi}}$$

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Elem 173, 178

h=60

$$A_s = 3\#7@14 = \frac{3(0.6)}{60(14)} = 0.00214$$

$$A_s = 2\#7 + \#5@12 = \frac{2(0.6) + .31}{60(12)} = 0.002097$$

$$V = 0.002097(60000) + 100 = \underline{\underline{225.8 \text{ psi}}}$$

Elem

174, 175, 176, 177, 179, 180

h=60

$$A_s = \#10@7 + \#7@14 \Rightarrow \frac{2(1.27) + 0.6}{60(14)} = 0.00374$$

$$A_s = \#11 + \#7@12 \Rightarrow \frac{1.56 + 0.6}{60(12)} = 0.003$$

$$V = 0.003(60000) + 100 = \underline{\underline{280 \text{ psi}}}$$

Elem 181

h=36

$$A_s = 2\#7@14 = \frac{1.2}{36(14)} = 0.00238$$

$$V_u = 0.00238(60000) + 100 = \underline{\underline{242.9 \text{ psi}}}$$

Elem 182

h=36

$$A_s = 2\#7@12 = \frac{1.2}{36(12)} = 0.00278$$

$$V = 0.00278(60000) + 100 = \underline{\underline{266.7 \text{ psi}}}$$

Elem 184, 185

h=36

$$A_s = 3\#7@14 = \frac{3(0.6)}{36(14)} = 0.00417$$

$$A_s = \#11 + \#7@12 = \frac{1.56 + 0.6}{36(12)} = 0.005$$

$$V = 0.00417(60000) + 100 = \underline{\underline{350 \text{ psi}}}$$

Elem 189, 190

h=36

$$A_s = 3\#7@14 = \frac{3(0.6)}{36(14)} = 0.00357$$

$$A_s = \#9 + \#6@12 = \frac{1.0 + .44}{36(12)} = 0.00333$$

$$V = 0.00333(60000) + 100 = \underline{\underline{300 \text{ psi}}}$$

ENGINEERING NOTE

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Elem 203 thru 210

 $h = 18"$

$$A_s = 2-\#6 @ 1' = \frac{2(.44)}{18(14)} = 0.00349$$

$$A_s = 2-\#5 @ 12" = \frac{2(.31)}{18(12)} = 0.00287$$

$$v = 0.00287(60000) + 100 = \underline{\underline{272.2 \text{ psi}}}$$

Elem 193

 $h = 8"$

$$A_s = \#6 @ 14" = \frac{.44}{18(14)} = 0.00393$$

$$v = 0.00393(60000) + 100 = \underline{\underline{335.7 \text{ psi}}}$$

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Elem 216 thru 222

h = 21

 $A_s = 3-\#7 @ 18$

$$= \frac{3(.16)}{21(18)} = 0.00076$$

 $A_s = \#7 + \#5 @ 16$

$$= \frac{16 + .31}{21(16)} = 0.00271$$

$$v = 0.00271(\text{cancel}) + 100 = \underline{\underline{262.5}} \text{ psi}$$

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ENGINEERING NOTE

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Elem 223 thru 232

 $f = 33''$ $A_s = \#10 @ 14 + \#7 @ 18$

$$\frac{1.27}{33(14)} + \frac{1.6}{33(18)^2}$$

 $A_s = \#7 @ 14 \text{ ef} =$

$$\frac{2(1.6)}{33(14)} = 0.002597$$

$$2(0.002597)(60000) + 100 = \underline{\underline{255.8 \text{ psi}}}$$

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Elem 238

 $h = 127$

$$A_s = \frac{16 + 131}{12(14)} = 0.00541$$

$$v = 0.00541(60000) + 100 = \underline{\underline{425 \text{ psi}}}$$

Elem 239

 $h = 24$ $A_s = \#7 @ 4$

$$\frac{(24.6)}{24(14)} = 0.00357$$

$$v = 0.00357(60000) + 100 = \underline{\underline{314.3 \text{ psi}}}$$

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SUBJECT ULTIMATE SHEAR STRENGTH

NAME AMD

AC

DATE 7-31-76

ELEMENT	h	h _w	L _w	REINFORCEMENT				ULTIMATE SHEAR CAPACITY (K)	ULTIMATE SHEAR STRESS (PSI)
				VERTICAL		HORIZONTAL			
				OUTSIDE	INSIDE	OUTSIDE	INSIDE		
240	3.0	9.0	23.75	#9@12	#9@12	#7@12	#7@12	1928.0	267
241	3.0	9.0	23.75	#9@12	#9@12	#7@12	#7@12		267
242	3.0	9.0	6.0	#9@12	#9@12	#7@12	#7@12	166.9	267
243	3.0	9.0	23.75	#9@12	#9@12	#7@12	#7@12	1928.0	267
244	3.0	9.0	23.75	#9@12	#9@12	#7@12	#7@12		267
245									267
246									267

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Elem 240 thru 244 and 245, 246

$$h = 36'' \quad A_s = \#7 @ 12'' \text{ EF} = \frac{2(16)}{36(12)} = 0.00278$$

$$v = 0.00278(10000) + 100 = 266.7$$

ENGINEERING NOTE

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PMC

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Elem 247

 $h = 66''$

$$A_s = 2-\#9 @ 12 = \frac{2.0}{66(12)} = 0.00253$$

$$v = 0.00253(60000) + 100 = \underline{251.5 \text{ psi}}$$

Elem 248, 249

 $h = 66''$

$$A_s = 4-\#9 @ 18 = \frac{4.0}{66(18)} = 0.00337$$

$$v = 0.00337(60000) + 100 = \underline{302.0 \text{ psi}}$$

Elem 250

 $h = 66$

$$A_s = 2.5-\#9 @ 18 = \frac{2.5}{66(18)} = 0.00210$$

$$v = 0.00210(60000) + 100 = \underline{226.3 \text{ psi}}$$

Elem 253, 254

 $h = 24''$

$$A_s = 2-\#5 @ 12 = \frac{2(.31)}{24(12)} = 0.00215$$

$$v = 0.00215(60000) + 100 = \underline{229.2 \text{ psi}}$$

Elem 255, 256, 258, 259

 $h = 42''$

$$A_s = 3-\#9 @ 18 = \frac{3.0}{42(18)} = 0.00397$$

$$v = 0.00397(60000) + 100 = \underline{338.1 \text{ psi}}$$

Elem 257

 $h = 123''$

$$A_s = 2.5-\#9 @ 18 = \frac{2.5}{123(18)} = 0.00113$$

$$v = 0.00113(60000) + 100 = \underline{167.8 \text{ psi}}$$

ENGINEERING NOTE

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ULTIMATE SHEAR CAPACITY

NAME

AMD

GPC

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7-27-76

ELEMENT	h	h _w	L _w	REINFORCEMENT				ULTIMATE SHEAR CAPACITY (K)	ULTIMATE SHEAR STRESS (psi)
				VERTICAL		HORIZONTAL			
				OUTSIDE	INSIDE	OUTSIDE	INSIDE		
265	1'-6"	21'-6"	14'-0"	#8@14	#6@14	#6@18	#6@18	200.15	263
266	1'-6"	21'-6"	14'-0"	#8@14	#6@14	#6@18	#6@18	200.15	263
267	1'-6"	18'-0"	11'-0"	#8@7	#6@7	#8@14	#6@14	342.11	393
268	2'-0"	18'-0"	13'-6"	#8@7	#8@14	#8@14	#6@14	364.3	320
269	4'-0	19'-6	64'-4	#8@7	#8@14	#10@14	#6@14	7509	253
270	4'-0	19'-6	64'-4	#8@7	#8@14	#10@14	#6@14		253
271	4'-0	19'-6	64'-4	#8@7	#8@14	#10@14	#6@14		253
272	4'-0	19'-6	64'-4	#8@7	#8@14	#10@14	#6@14		253
273	2'-0"	22'-9"	14'-0"	#8#6@14	#6@14	#6@14	#6@14	256.6	257
274	1'-3"	21'-6"	5'-0"	#6@18	#6@18	#6@14	#6@14	12.97	296
275	1'-3"	20'-0"	13'-0"	#6@18	#6@18	#6@14	#8@14	96.7	296
276	1'-6"	20'-0"	7'-9"	#8@14	#8@14	#6@18	#6@18	76.0	263
277	1'-6"	21'-6	63'-3"	#8@14	#6@14	#6@18	#6@18	2296.7	263
278	1'-3	23'-6	8'-8	#6@18	#6@18	#6@12	#6@12	34.3	296
279	1'-3	23'-6	16'-6	#6@14	#6@14	#8@12	#6@12	192.5	351
280	1'-3	23'-6	8'-8	#6@18	#6@18	#6@12	#6@12	34.3	296
281	1'-6	21'-6	63'-3"	#8@14	#6@14	#6@18	#6@18	2296.7	263
282	1'-6	21'-6	63'-3"	#8@14	#6@14	#6@18	#6@18		263
283	1'-6	21'-6	63'-3"	#8@14	#6@14	#6@18	#6@18		263
284	3'-6	18'-0"	13'-6	#10#6@14	#6@14	#6@14	#8@14	340.2	226
285	4'-0	18'-0	63'-3"	#8@14	#10@14	#6@14	#8@14	5152.9	209
286	4'-0	18'-0	63'-3"	#8@14	#10@14	#6@14	#8@14		209
287	4'-0	18'-0	63'-3"	#8@14	#10@14	#6@14	#8@14		209
288	4'-0	18'-0	63'-3"	#8@14	#10@14	#6@14	#8@14		209
289	1'-6"	6'-5 3/4	2'-4"	#8@14	#8@14	#6@18	#6@18	23.4	263
290	3'-6"	18'-0"	11'-0"	#10@14	#8@14	#6@14	#8@14	212.8	226
291	2'-0"	22'-9	14'-0	#6#8@14	#6@14	#6@14	#6@14	256.6	257

(Dose)

ENGINEERING NOTE

SUBJECT

GPC

NAME

AMD

DATE

Elem 265, 266

 $h = 18"$

$$A_s = 2-\#6 @ 18$$

$$\frac{2(1.44)}{18(18)} = 0.002716$$

$$v = 0.002716(60000) + 100 = \underline{263.0 \text{ psi}}$$

Elem 267

 $h = 18"$

$$A_s = \#8 + \#6 @ 14" = \frac{.79 + .44}{18(14)} = 0.00488$$

$$v = 0.00488(60000) + 100 = \underline{392.9 \text{ psi}}$$

Elem 268

 $h = 24"$

$$A_s = \#8 + \#6 @ 14" = \frac{.79 + .44}{24(14)} = 0.00366$$

$$v = 0.00366(60000) + 100 = \underline{319.6 \text{ psi}}$$

269 thru 272

 $h = 48"$

$$A_s = \#10 + \#6 @ 14" = \frac{1.27 + .44}{48(14)} = 0.002544$$

$$v = 0.002544(60000) + 100 = \underline{252.7 \text{ psi}}$$

Elem 273

 $h = 24"$

$$A_s = 2-\#6 @ 14" = \frac{2(1.44)}{24(14)} = 0.00262$$

$$v = 0.00262(60000) + 100 = \underline{257.1 \text{ psi}}$$

Elem 274, 275

 $h = 15"$

$$A_s = 2-\#6 @ 18" = \frac{2(1.44)}{15(18)} = 0.00326$$

$$v = 0.00326(60000) + 100 = \underline{295.6 \text{ psi}}$$

Elem 279

 $h = 15"$

$$A_s = 2-\#6 @ 14" = \frac{0.44(2)}{15(14)} = 0.00419$$

$$v = 0.00419(60000) + 100 = \underline{351.4 \text{ psi}}$$

Elem 384

 $h = 42"$

$$A_s = \#6 + \#8 @ 14" = \frac{.44 + .79}{42(14)} = 0.00209$$

$$v = 0.00209(60000) + 100 = \underline{225.5 \text{ psi}}$$

Elem 285-288

 $h = 48"$

$$A_s = \#6 + \#8 @ 14" = \frac{.79 + .44}{48(14)} = 0.00183$$

$$v = 0.00183(60000) + 100 = \underline{109.8 \text{ psi}}$$

ENGINEERING NOTE

SUBJECT

ULTIMATE SHEAR CAPACITY

NAME

AMD

TOP BLOCK WALLS

DATE

8-2-76

ELEMENT	h	h _w	L _w	REINFORCEMENT				ULTIMATE SHEAR CAPACITY (K)	ULTIMATE SHEAR STRESS (PSI)
				VERTICAL		HORIZONTAL			
				OUTSIDE	INSIDE	OUTSIDE	INSIDE		
292	12" BLK	19'	82'						92.0
293	↑	↓	↓						92.0
294	↓	↓	↓						92.0
295	↓	↓	↓						92.0
296	↓	19'	82'						92.0
297	↓	19'	41.5						84.0
298	↓	19'	82'						92.6
299	↓	↓	↓						92.6
300	↓	↓	↓						92.6
301	↓	↓	↓						92.6
302	↓	19'	82'						92.6
303	12" BLK	19'	36						83.0
304	12" BLK	23	23						68.0
305	↓	↓	12						68.0
306	↓	↓	12						68.0
307	12" BLK	23	23						68.0
308	12"	38.8	34'						68.0
309	↓	↓	34'						68.0
310	↓	↓	12'						68.0
311	↓	↓	34						68.0
312	↓	38.8	34						68.0
313	12" BLK	16.5	113'						95.0
314	↓	↑	↑						95.0
315	↓	↓	↓						95.0
316	↓	↓	↓						95.0
317	12" BLK	16.5	113'						95.0
318	↑	16.5	37						85.0
319	↓	16.5	37						85.0
320	12" BLK	16.5	42.5						87.0
321	12" BLK	16.5	42.5						87.0
322	12" BLK	16.5	32.0						84.0
323	12" BLK	16.5	40.0						87.0
324	12" BLK	16.5	40.0						87.0
325	12" BLK	16.5	37.0						89.0
326	12" BLK	16.5	37.0						89.0

2-31

2

AMID

8-2-76

2-32

Assume $f'_m = 1500 \text{ psi}$

Assume a special inspection will be made.

$\therefore$ allowable shear with no reinforcement is:

$$\frac{M}{Vd} \geq 1 \quad \cdot 9\sqrt{f'_m} \quad 34 \text{ max} \quad \text{use } \underline{\underline{34 \text{ psi}}} \leftarrow$$

$$\frac{M}{Vd} = 0 \quad 2.0\sqrt{f'_m} \quad 50 \text{ max} \quad \text{use } \underline{\underline{50 \text{ psi}}} \leftarrow$$

Note $\frac{M}{Vd} = \frac{h}{2d}$ For fixed-fixed wall

$\frac{M}{Vd} = \frac{h}{d}$ for cantilever wall

Interpolate linearly for intermediate values of $\frac{M}{Vd}$

For ultimate strength values multiply working stress values by 2.0.

$$\therefore \quad \sqrt{a_{ult.}} = 68 \text{ psi} \quad \frac{M}{Vd} \geq 1$$

$$\sqrt{a_{ult.}} = 100 \text{ psi} \quad \frac{M}{Vd} = 0$$

Row R

Fixed-Free

$$\frac{m}{vd} = \frac{h}{d} = \frac{19}{82} = 0.23$$

$$v_{ult.} = 100 - .23(100 - 68) = 92.6 \text{ psi} \leftarrow$$

Row M

$$\frac{m}{vd} = \frac{h}{d} = \frac{19}{77.77} = 0.25$$

$$v_{ult.} = 100 - .25(100 - 68) = 92 \text{ psi} \leftarrow$$

Row 3 Pier ① - Fixed-Fixed

$$\frac{M}{Vd} = \frac{h}{2d} = \frac{9}{18} = 0.5$$

$$\sqrt{a_{ult.}} = 100 - .5(100 - 68) = 84 \text{ psi} \leftarrow$$

Pier ② - Fixed-Fixed

$$\frac{M}{Vd} = \frac{h}{2d} = \frac{9}{52} = 0.17$$

$$\sqrt{a_{ult.}} = 100 - .17(100 - 68) = 94.6 \text{ psi} \leftarrow$$

Row II

$$\frac{M}{Vd} = \frac{h}{d} = \frac{19}{36} = 0.53$$

$$\sqrt{a_{ult.}} = 100 - .53(100 - 68) = 83 \text{ psi} \leftarrow$$

Row 1.1

$$\frac{M}{vd} = \frac{h}{d} = \frac{16.5}{113} = 0.15$$

$$N_{a_{ult.}} = 100 - 0.15(100 - 68) = 95 \text{ psi} \leftarrow$$

Row 1.9

$$\frac{M}{vd} = \frac{h}{d} = \frac{16.5}{42.5} = 0.39$$

$$N_{a_{ult.}} = 100 - .39(100 - 68) = 87.5 \text{ psi} \leftarrow$$

Row 3.4

$$\text{Pier ①} - \frac{M}{vd} = \frac{h}{2d} = \frac{7}{14} = .5 \quad N_{a_{ult.}} = 100 - .5(100 - 68) = 84 \text{ psi} \leftarrow$$

$$\text{Pier ②} - \frac{M}{vd} = \frac{h}{2d} = \frac{7}{50} = .14 \quad N_{a_{ult.}} = 100 - .14(100 - 68) = 95.5 \text{ psi} \leftarrow$$

Row K.3

Pier ①

$$\frac{M}{Vd} = \frac{h}{2d} = \frac{7}{20} = .35 \quad \sqrt{a_{ult.}} = 100 - .35(100 - 68) = 88.8 \text{ psi} \leftarrow$$

$$\text{Pier ②} \quad \frac{M}{Vd} = \frac{h}{2d} = \frac{7}{54} = 0.13 \quad \sqrt{a_{ult.}} = 100 - .13(100 - 68) = 95.8 \text{ psi} \leftarrow$$

Row G.9

$$\frac{M}{Vd} = \frac{h}{d} = \frac{16.5}{40} = 0.41 \quad \sqrt{a_{ult.}} = 100 - .41(100 - 68) = 86.9 \text{ psi} \leftarrow$$

Row H.7

$$\frac{M}{Vd} = \frac{h}{d} = \frac{16.5}{37} = .45 \quad \sqrt{a_{ult.}} = 100 - .45(100 - 68) = 85.6 \text{ psi} \leftarrow$$

Row L.9

Worst case: -

$$\frac{M}{Vd} = \frac{h}{2d} = \frac{1.67}{3.0} = 0.56$$

$$V_{a_{ult.}} = 100 - 0.56(100 - 68) = 82 \text{ psi} \leftarrow$$

Row 1.5

$$\frac{M}{Vd} = \frac{h}{d} = \frac{16.5}{16} = 1.03 \quad \therefore V_{a_{ult.}} = 68 \text{ psi} \leftarrow$$

Row C.6

$$\text{Pier ①} - \frac{M}{vd} = \frac{h}{2d} = \frac{7}{10} = .7 \quad \sqrt{a_{ult.}} = 100 - .7(100 - 68) = 77.6 \text{ psi} \leftarrow$$

$$\text{Pier ②} - \frac{M}{vd} = \frac{h}{2d} = \frac{7}{50} = .14 \quad \sqrt{a_{ult.}} = 100 - .14(100 - 68) = 95.5 \text{ psi} \leftarrow$$

Row B.6

$$\frac{M}{vd} = \frac{h}{d} = \frac{38.8}{34} > 1 \quad \therefore \sqrt{a_{ult.}} = 68 \text{ psi} \leftarrow$$

Row 2.0

$$\frac{M}{vd} = \frac{h}{d} = \frac{38.8}{12} > 1 \quad \therefore \sqrt{a_{ult.}} = 68 \text{ psi} \leftarrow$$

Row 4.1

$$\text{Pier ①} - \frac{M}{Vd} = \frac{h}{d} = \frac{9}{12} = .75 \quad \sqrt{a_{ult}} = 100 - .75(100 - 68) = 76 \text{ psi} \leftarrow$$

$$\text{Pier ②} - \frac{M}{Vd} = \frac{h}{d} = \frac{15}{35} = .43 \quad \sqrt{a_{ult}} = 100 - .43(100 - 68) = 86.2 \text{ psi} \leftarrow$$

Row 6.5

$$\frac{M}{Vd} = \frac{h}{d} > 1 \quad \therefore \sqrt{a_{ult}} = 68 \text{ psi} \leftarrow$$

Row C

$$\frac{M}{Vd} = 1 \quad \therefore \sqrt{a_{ult}} = 68 \text{ psi} \leftarrow$$

1	282.0	59	222.0	119	321.0	179	280.0	239	314.0	299	92.0
2	68.0	60	222.0	120	321.0	180	280.0	240	267.0	300	92.0
3	68.0	61	222.0	121	321.0	181	243.0	241	267.0	301	92.0
4	282.0	62	222.0	122	321.0	182	267.0	242	267.0	302	92.0
5	68.0	63	222.0	123	321.0	183	267.0	243	267.0	303	83.0
6	68.0	64	222.0	124	321.0	184	350.0	244	267.0	304	68.0
7	282.0	65	222.0	125	321.0	185	350.0	245	267.0	305	68.0
8	68.0	66	222.0	126	321.0	186	243.0	246	267.0	306	68.0
9	68.0	67	222.0	127	321.0	187	222.0	247	252.0	307	68.0
10	282.0	68	222.0	128	321.0	188	222.0	248	302.0	308	68.0
11	68.0	69	222.0	129	321.0	189	300.0	249	302.0	309	68.0
12	68.0	70	222.0	130	321.0	190	300.0	250	226.0	310	68.0
13	282.0	71	222.0	131	321.0	191	222.0	251	302.0	311	68.0
14	68.0	72	222.0	132	321.0	192	222.0	252	302.0	312	68.0
15	68.0	73	243.0	133	314.0	193	300.0	253	229.0	313	95.0
16	229.0	74	225.0	134	321.0	194	300.0	254	229.0	314	95.0
17	229.0	75	243.0	135	267.0	195	222.0	255	338.0	315	95.0
18	68.0	76	225.0	136	321.0	196	222.0	256	338.0	316	95.0
19	294.0	77	243.0	137	267.0	197	300.0	257	168.0	317	95.0
20	68.0	78	225.0	138	321.0	198	300.0	258	338.0	318	86.0
21	68.0	79	243.0	139	267.0	199	336.0	259	338.0	319	86.0
22	68.0	80	225.0	140	321.0	200	222.0	260	229.0	320	87.0
23	282.0	81	243.0	141	267.0	201	300.0	261	338.0	321	87.0
24	68.0	82	232.0	142	321.0	202	300.0	262	226.0	322	84.0
25	68.0	83	213.0	143	267.0	203	272.0	263	226.0	323	87.0
26	282.0	84	225.0	144	321.0	204	272.0	264	338.0	324	87.0
27	282.0	85	213.0	145	243.0	205	272.0	265	263.0	325	89.0
28	68.0	86	225.0	146	321.0	206	272.0	266	263.0	326	89.0
29	272.0	87	213.0	147	314.0	207	272.0	267	393.0	327	82.0
30	272.0	88	225.0	148	432.0	208	272.0	268	320.0	328	82.0
31	272.0	89	213.0	149	265.0	209	272.0	269	253.0	329	68.0
32	272.0	90	155.0	150	265.0	210	272.0	270	253.0	330	68.0
33	272.0	91	321.0	151	360.0	211	222.0	271	253.0	331	68.0
34	272.0	92	321.0	152	360.0	212	222.0	272	253.0	332	68.0
35	321.0	93	321.0	153	222.0	213	222.0	273	257.0	333	68.0
36	321.0	94	267.0	154	222.0	214	222.0	274	296.0	334	68.0
37	321.0	95	267.0	155	378.0	215	280.0	275	296.0		
38	299.0	96	267.0	156	378.0	216	263.0	276	263.0		
39	227.0	97	267.0	157	222.0	217	263.0	277	263.0		
40	176.0	98	267.0	158	222.0	218	263.0	278	296.0		
41	176.0	99	267.0	159	378.0	219	263.0	279	351.0		
42	176.0	100	225.0	160	378.0	220	263.0	280	296.0		
43	255.0	101	225.0	161	222.0	221	263.0	281	263.0		
44	255.0	102	257.0	162	222.0	222	263.0	282	263.0		
45	255.0	103	257.0	163	378.0	223	256.0	283	263.0		
46	255.0	104	252.0	164	378.0	224	256.0	284	226.0		
47	255.0	105	252.0	165	222.0	225	256.0	285	210.0		
48	222.0	106	252.0	166	222.0	226	256.0	286	210.0		
49	222.0	107	252.0	167	378.0	227	256.0	287	210.0		
50	255.0	108	252.0	168	378.0	228	256.0	288	210.0		
51	255.0	109	252.0	169	195.0	229	256.0	289	263.0		
52	255.0	110	252.0	170	195.0	230	256.0	290	226.0		
53	222.0	111	252.0	171	271.0	231	256.0	291	257.0		
54	222.0	112	321.0	172	271.0	232	256.0	292	92.0		
55	222.0	113	321.0	173	226.0	233	243.0	293	92.0		
56	222.0	114	321.0	174	280.0	234	243.0	294	92.0		
57	222.0	115	321.0	175	280.0	235	243.0	295	92.0		
58	222.0	116	321.0	176	280.0	236	243.0	296	92.0		
		117	321.0	177	200.0	237	321.0	297	84.0		
		118	321.0	178	226.0	38	425.0	298	92.0		

ALLOWABLE SHEAR STRESSES

ELEMENT
 MAX. ALLOW.
 SHEAR STRESS
 (psi)

LATERAL PILE LOAD CAPACITY

PILE - LATERAL CAPACITY

- SHEARING OF 12BP53 Pile
ASSUME

$$f_y = 36 \text{ ksi}$$

$$\text{depth} = 11.78 \text{ in}$$

$$t_{\text{web}} = 0.436 \text{ in}$$

$$A_v = d \cdot t_{\text{web}} = 5.136 \text{ in}^2$$

$$f_v = 0.6 f_y = 21.6 \text{ ksi}$$

$$f_v = \frac{3V}{2A} \Rightarrow V = \frac{2}{3} A f_v = \frac{2}{3} (5.136) (21.6) \\ = 74 \text{ K/pile}$$

THIS VALUE IS GREATER THAN MAX
FROM PILE BENDING

- TEAROUT OF PILE CAP

ASSUME - MUST TEAR OUT 12" WIDE
SECTION OF PILE CAP

$$S_u \cdot 2\sqrt{f'_c} = 100 \text{ psi}$$

$$V = S_u \cdot A_v = 100 [(12+6+6)(6)] \\ = \underline{\underline{43.2 \text{ K}}}$$

THIS VALUE IS APPROXIMATELY
EQUAL TO MAX FROM PILE
BENDING $\therefore$ USE PILE
BENDING CAPACITY AS LIMIT

* DOES NOT CONSIDER ANY REINFORCEMENT
EFFECTS

MAXIMUM BASE SHEAR ON THE PILES

The calculations and table shown below give the values of the maximum lateral spring forces allowed for each particular pile spring. These values will be compared with the spring forces calculated from SAP4 to determine if any of the piles are being overloaded.

ENGINEERING NOTE

SUBJECT

MAX BASE SHEAR ON PILES

NAME

AMD

DATE

8-3-76

REF. ~~RESISTANCE~~ NATLOCK - NON-DIMENSIONAL SOLN TO PILES

FIG. 15

$$M_A = A_m (V, T)$$

$$T = \left(\frac{EI}{K} \right)^{1/3}$$

$$A_{m_{max}} = 0.775$$

FOR 12BP53

$$T_x = 52.4$$

$$T_y = 41.8$$

FROM PILE
CALCS - BY
T. NELSON

(MAX. VALUES)

$$M_A = 0.775 V \left(\begin{matrix} 52.4 \\ 41.8 \end{matrix} \right) = \left\{ \begin{matrix} 40.61 \\ 32.40 \end{matrix} \right\} V$$

EACH PILE HAS $P_{AXIAL} = 70 \text{ tons} = 140 \text{ K}$

$$f_{axial} = \frac{P}{A} = \frac{140}{15.6} = 8.97 \text{ ksi}$$

$$f_a + f_b \leq f_y$$

w/ 36 ksi yield strength Piles

$$8.97 + \frac{M}{S} = 36.0 \text{ ksi}$$

$$\frac{M}{S} = 27.03 \text{ ksi}$$

$$M_{max} = 27.03 \left\{ \begin{matrix} S_x \\ S_y \end{matrix} \right\} = 27.03 \left\{ \begin{matrix} 66.9 \\ 21.1 \end{matrix} \right\} = \left\{ \begin{matrix} 1808.3 \\ 570.3 \end{matrix} \right\}$$

$$M_{max} = \left\{ \begin{matrix} 40.61 \\ 32.40 \end{matrix} \right\} V = \left\{ \begin{matrix} 1808.3 \\ 570.3 \end{matrix} \right\}$$

$$V_{max} = \left\{ \begin{matrix} 44.53 \text{ K} \\ 17.6 \text{ K} \end{matrix} \right\} \begin{matrix} \longrightarrow \text{ in } x \text{ direction} \\ \longrightarrow \text{ in } y \text{ direction} \end{matrix}$$

USE THESE VALUES TO DETERMINE THE MAX ALLOW HORIZONTAL SHEAR IN EACH PILE GROUP.

*NOTE: THE ULT. SHEAR CALCULATED FOR THE PILE SHEARING OFF AT THE PILE CAP OR TEAROUT OF THE PILE CAP ARE LARGER THAN THESE VALUES.

ENGINEERING NOTESUBJECT *MAX PILE BASE SHEAR*NAME *AMD*DATE *8-4-76*

	NODE	NO. NORTH	NO. WEST	$V_{K \max}$ (K)	$V_{Y \max}$ (K)	ELEM. NO
	5	-	2	35.2	89.1	2,3
	9	3	7	256.8	364.5	5,6
	13	2	-	89.1	35.2	8,9
	21	3	-	133.6	52.8	12,13
	25	2	2	124.3	124.3	15,16
	29	3	-	133.6	52.8	18,19
	33	3	-	133.6	52.8	21,22
	37	1	-	44.5	17.6	24,25
	41	3	-	133.6	52.8	27,28
	45	2	-	89.1	35.2	30,31
	49	6	1	284.8	150.1	33,34
	53	-	3	52.8	133.6	36,37
	57	-	3	52.8	133.6	39,40
	61	1	1	62.1	62.1	42,43
	65	1	1	62.1	62.1	45,46
	68	2	-	89.1	35.2	48,49
	71	1	3	97.3	151.2	51,52
	74	1	-	44.5	17.6	54,55
	86	-	1	17.6	44.5	57,58
	89	-	1	17.6	44.5	60,61
	103	-	1	17.6	44.5	63,64
	113	-	3	52.8	133.6	66,67
	121	-	1	17.6	44.5	70,71
	139	1	1	62.1	62.1	74,75
	142	-	3	52.8	133.6	77,78
	157	-	1	17.6	44.5	80,81
	187	12	-	534.4	211.2	83,89
	193	12	-	534.4	211.2	91,92
	197	13	-	578.9	228.8	94,95
	207	9	-	400.8	158.4	98,99
	217	1	-	44.5	17.6	102,103
	220	1	-	44.5	17.6	105,106
	223	1	3	97.3	151.2	108,109
	226	2	-	89.1	35.2	111,112
	229	5	4	293.1	266.1	114,115
	232	2	-	89.1	35.2	117,118

ENGINEERING NOTE

2

SUBJECT

MAX PILE BASE SHEAR

NAME

AMD

DATE

8-4-76

NODE	NO. NORTH	NO. WEST	$V_{x \max}$ (K)	$V_{y \max}$ (K)	ELEV. NO.
235	3	3	186.4	186.4	120, 121
238	3	—	133.6	52.8	123, 124
241	3	8	274.4	409.0	126, 127
244	3	—	133.6	52.8	129, 130
247	4	5	266.1	293.1	132, 133
250	1	3	97.3	151.2	135, 136
257	4	4	248.5	248.5	138, 139
264	3	4	204.0	230.9	141, 142
271	5	4	293.1	266.1	144, 145
279	4	8	318.9	426.6	148, 149
287	3	6	239.2	320.0	152, 153
296	1	2	79.7	106.7	155, 156
297	4	—	178.1	70.4	158, 159
298	5	—	222.7	88.0	161, 162
299	3	—	133.6	52.8	164, 165
300	—	2	35.2	89.1	167, 168
301	1	2	79.7	106.7	170, 171
302	14	—	623.4	246.4	173, 174
303	4	15	442.1	738.4	176, 177
306	9	—	400.8	158.4	179, 180
307	6	—	267.2	105.6	182, 183
308	5	—	222.7	88.0	185, 186
313	7	—	311.7	123.2	188, 189
315	1	—	44.5	17.6	191, 192
335	—	13	228.8	578.9	196, 197
352	1	—	44.5	17.6	202, 203
354	—	3	52.8	133.6	205, 206
355	—	2	35.2	89.1	208, 209
358	1	—	44.5	17.6	211, 212
360	—	8	140.8	356.2	214, 215
361	—	17	299.2	757.0	217, 218
363	1	—	44.5	17.6	220, 221
364	4	—	178.1	70.4	223, 224
366	—	10	176.0	445.3	226, 227
367	—	19	334.4	846.1	229, 230
370	1	3	97.3	151.2	232, 233

ENGINEERING NOTE**3**

SUBJECT

MAX PILE BASE SHEAR

NAME

AMD

DATE

8-4-76

NODE	NO. NORTH	NO. WEST	V_x max (K)	V_y max (K)	ELEM. NO.
371	4	-	178.1	70.4	235, 236
373	-	9	158.4	400.8	238, 239
374	8	7	479.4	452.5	241, 242
375	3	-	133.6	52.8	244, 245
377	-	8	140.8	356.2	247, 248
378	-	7	123.2	311.7	250, 251
379	-	5	88.0	222.7	253, 254
380	-	6	105.6	267.2	256, 257
381	8	7	479.4	452.5	259, 260

$$\left. \begin{array}{l} T_x = 46.1 \text{ in} \\ T_y = 36.8 \text{ in} \end{array} \right\} \underline{\text{min value}} \\ A_{max} = 0.775$$

$$M_x = A_m (V.T)$$

$$M_x = 0.775 V \left\{ \begin{array}{l} 46.1 \\ 36.8 \end{array} \right\} = \left\{ \begin{array}{l} 35.73 \\ 28.52 \end{array} \right\} V$$

$$f_a = \frac{P}{A} = 8.97$$

$$f_a + f_b < f_y \Rightarrow 8.97 + \frac{M}{S} = 36.0 \text{ ksi}$$

$$\frac{M}{S} = 27.03 \text{ ksi}$$

$$M_{max} = 27.03 \left\{ \begin{array}{l} S_x \\ S_y \end{array} \right\} = 27.03 \left\{ \begin{array}{l} 66.9 \\ 21.1 \end{array} \right\} = \left\{ \begin{array}{l} 1808.3 \\ 570.3 \end{array} \right\}$$

$$M_{max} = \left\{ \begin{array}{l} 35.73 \\ 28.52 \end{array} \right\} V = \left\{ \begin{array}{l} 1808.3 \\ 570.3 \end{array} \right\}$$

$$V_{max} = \left\{ \begin{array}{l} 50.61 \\ 20.0 \end{array} \right\} \begin{array}{l} \text{---}^* \text{---} \\ \text{---} \end{array} \begin{array}{l} \text{x direction} \\ \text{y direction} \end{array}$$

* NOTE

NOT USED SINCE LATERAL CAPACITY OF
PILES OR FOR 0.2g ACCELERATION
WITH MAX SOIL CONDITION.

ALLOWABLE LATERAL LOAD CAPACITIES

2	35.2	102	44.5	209	89.1
3	89.1	103	17.6	211	44.5
5	256.8	105	44.5	212	17.6
6	364.5	106	17.6	214	140.8
8	89.1	108	97.3	215	365.2
9	35.2	109	151.2	218	757.0
12	133.6	111	89.1	220	44.5
13	52.8	112	35.2	221	17.6
15	124.3	114	293.1	223	178.1
16	124.3	115	266.1	224	70.4
18	133.6	117	89.1	226	176.0
19	52.8	118	35.2	227	445.3
21	133.6	120	186.4	230	846.1
22	52.8	121	186.4	232	97.3
24	44.5	123	133.6	235	178.1
25	17.6	124	52.8	236	70.4
27	133.6	126	274.4	238	158.4
28	52.8	127	409.0	239	400.8
30	89.1	129	133.6	242	452.5
31	35.2	130	52.8	244	133.6
33	284.8	132	266.1	247	140.8
34	150.1	133	293.1	248	356.2
36	52.8	135	97.3	251	311.7
37	133.6	136	151.2	253	88.0
39	52.8	138	248.5	254	222.7
40	133.6	139	248.5	256	105.6
42	62.1	141	204.0		
43	62.1	142	230.9		
45	62.1	145	266.1		
46	62.1	149	426.6		
48	89.1	152	239.2		
49	35.2	155	79.7		
51	97.3	156	106.7		
52	151.2	158	178.1		
54	44.5	159	70.4		
55	17.6	161	222.7		
57	17.6	162	88.0		
58	44.5	164	133.6		
60	17.6	165	52.8		
61	44.5	167	35.2		
63	17.6	168	89.1		
64	44.5	170	79.7		
66	52.8	171	106.7		
67	133.6	173	623.4		
70	17.6	176	442.1		
71	44.5	177	738.4		
74	62.1	179	400.8		
75	62.1	182	267.2		
77	52.8	183	105.6		
78	133.6	185	222.7		
80	17.6	186	88.0		
81	44.5	189	123.2		
88	534.4	191	44.5		
89	211.2	192	17.6		
91	534.4	196	228.8		
92	211.2	197	578.9		
94	570.9	202	44.5		
95	228.8	203	17.6		
98	400.8	205	52.8		
99	154.8	206	133.6		

↑
ELEMENT
↑
MAX. ALLOW.
LATERAL LOAD
(KIPS)

Shear Stress
Comp., Case 1-4

SHEAR STRESS

COMPARISONS

CASE 1-4

ADDP (10/10/76 U 08.369
CODE VERSION 10/16 U 05.10.22

SUM OF ELEMENT-CENTER STRESSES FROM PREPOST OUTPUT FILES... FRPOA PRPOB

DESCRIPTOR BLOCK FROM FILE FRPOA

PREPOST RUN 10/11/76 Z 11.314
CODE VERSION 10/08 U 12.12.38

USING SAP40 INPUT FILES NAMED... SAP40IAEV SAP40IA-7

THE NPS PLANT (UNITS=K-FT-SEC) 7/14/76

BOX R07 DAVITO/IA-7 59 1

DESCRIPTOR BLOCK FROM FILE PRPOB

PREPOST RUN 10/11/76 Z 10.979
CODE VERSION 10/08 U 12.12.38

USING SAP40 INPUT FILE NAMED... SAP40DL-I
THE NPS PLANT (UNITS=K-FT-SEC) 7/14/76

BOX R07 DAVITO/DL-I 59 1

DESCRIPTOR FROM ALLOWABLE-SHEAR-STRESS-FILE SHEAR

ELEMENT ULT. SHEAR VALUES**NPS**10-15-76

NUM ELE = 334 ACCEL FACTOR = 0.200

*WILL NOT APPLY PSI FACTOR IN THIS CODE.

SUM OF STRESSES FROM THE TWO FILES

STRESSES FROM FILE PRFOA

TYPE	ELEM	MX PR STRS	MN PR STRS	MXPR SHR -	MXPR SHR +
3	1	1.4551E+02	-9.7897E+01	1.2170E+02	1.4460E+02
3	2	1.6899E+02	-2.4109E+01	9.6540E+01	1.3571E+02
3	3	1.1667E+02	-2.7232E+01	7.1954E+01	8.7714E+01
3	4	1.4519E+02	-1.2430E+02	1.3474E+02	1.4726E+02
3	5	9.7615E+01	-9.0027E+01	9.3020E+01	9.9219E+01
3	6	8.2780E+01	-8.0403E+01	8.1591E+01	8.1928E+01
3	7	1.5995E+02	-1.2524E+02	1.4260E+02	1.6026E+02
3	8	1.0164E+02	-8.6626E+01	9.4136E+01	9.7650E+01
3	9	7.2117E+01	-5.5969E+01	6.4043E+01	6.6091E+01
3	10	1.6387E+02	-1.3236E+02	1.4811E+02	1.6270E+02
3	11	1.2041E+02	-9.8631E+01	1.0952E+02	1.1789E+02
3	12	6.8138E+01	-5.4547E+01	6.1342E+01	6.3041E+01
3	13	1.6940E+02	-1.4594E+02	1.5767E+02	1.6495E+02
3	14	1.1678E+02	-1.1000E+02	1.1743E+02	1.2036E+02
3	15	7.0028E+01	-7.0347E+01	7.0188E+01	7.0388E+01
3	16	1.2975E+02	-8.3870E+01	1.0681E+02	1.1705E+02
3	17	8.1026E+01	-8.4839E+01	8.2933E+01	8.4957E+01
3	18	6.5403E+01	-6.0534E+01	6.2969E+01	6.4702E+01
3	19	1.1155E+02	-1.0272E+02	1.0713E+02	1.1700E+02
3	20	8.0110E+01	-8.2817E+01	8.5464E+01	9.1666E+01
3	21	6.3247E+01	-6.5196E+01	6.4221E+01	6.4563E+01
3	22	5.2747E+01	-5.1718E+01	5.2232E+01	5.2585E+01
3	23	1.2004E+02	-1.1597E+02	1.1001E+02	1.2307E+02
3	24	1.0182E+02	-9.6196E+01	9.9011E+01	1.0297E+02
3	25	1.2694E+02	-8.1300E+01	1.0412E+02	1.0701E+02
3	26	1.2908E+02	-1.2219E+02	1.2564E+02	1.3156E+02
3	27	1.3303E+02	-1.1784E+02	1.2544E+02	1.3372E+02
3	28	6.8920E+01	-6.4348E+01	6.6634E+01	6.6768E+01
3	29	1.0283E+02	-1.2478E+02	1.1381E+02	1.1574E+02
3	30	8.8370E+01	-9.4316E+01	9.1323E+01	9.3176E+01
3	31	1.1569E+02	-1.2352E+02	1.1961E+02	1.2211E+02
3	32	9.1123E+01	-9.5509E+01	9.3316E+01	9.5107E+01
3	33	1.2404E+02	-1.1034E+02	1.1715E+02	1.2150E+02
3	34	8.7105E+01	-9.1637E+01	8.9371E+01	9.0916E+01
3	35	9.5070E+01	-6.6306E+01	8.0691E+01	8.6781E+01
3	36	7.2285E+01	-6.5077E+01	6.8681E+01	7.2240E+01
3	37	5.5245E+01	-5.0553E+01	5.2899E+01	5.5821E+01
3	38	7.6121E+01	-8.4374E+01	8.0247E+01	8.9783E+01
3	39	7.1572E+01	-6.0634E+01	6.6153E+01	6.8944E+01
3	40	7.1123E+01	-4.9040E+01	6.8085E+01	6.2084E+01
3	41	7.3003E+01	-4.0556E+01	5.7229E+01	5.9847E+01
3	42	7.8693E+01	-3.3184E+01	5.5639E+01	5.8682E+01
3	43	3.8061E+02	-2.1412E+02	2.5736E+02	2.7117E+02
3	44	8.9545E+01	-9.8040E+00	4.9874E+01	8.5058E+01
3	45	4.0531E+01	-5.0495E+01	4.9513E+01	5.3648E+01
3	46	1.0391E+02	-6.0310E+01	8.2109E+01	8.9651E+01
3	47	5.2644E+01	-3.0200E+01	4.5426E+01	4.8859E+01
3	48	1.2244E+02	-8.3219E+01	1.0283E+02	1.0855E+02
3	49	7.1043E+01	-5.0294E+01	6.5135E+01	6.6779E+01
3	50	1.9769E+02	-1.7210E+02	1.8409E+02	1.9395E+02
3	51	1.2030E+02	-3.3335E+01	7.6020E+01	1.0050E+02
3	52	1.3010E+02	-3.6404E+01	8.3251E+01	1.1399E+02
3	53	9.1890E+01	-3.8623E+01	6.5298E+01	7.2022E+01
3	54	5.5254E+01	-1.8015E+01	3.6635E+01	4.2472E+01

MX PR STRS	MN PR STRS	MXPR SHR -	MXPR SHR +
1.5508E+02	-1.5433E+01	8.5255E+01	1.0815E+02
1.7152E+02	1.8094E+01	7.6711E+01	1.1587E+02
1.1594E+02	-3.4133E+00	5.9679E+01	7.5439E+01
1.6066E+02	-2.1157E+01	9.0907E+01	1.0343E+02
1.0773E+02	-2.9162E+01	6.8445E+01	7.3844E+01
8.3227E+01	-6.3265E+01	7.3246E+01	7.3583E+01
1.7951E+02	-8.5342E+00	9.4022E+01	1.1168E+02
1.0874E+02	-2.1415E+01	6.5079E+01	6.8593E+01
7.0707E+01	-3.7958E+01	5.4332E+01	5.6380E+01
1.6774E+02	-1.5537E+01	9.1630E+01	1.0623E+02
1.1632E+02	-1.9713E+01	6.8014E+01	7.6390E+01
5.2234E+01	-2.4426E+01	3.8330E+01	4.0029E+01
1.5203E+02	-4.4632E+01	9.8352E+01	1.0561E+02
1.0565E+02	-4.5621E+01	7.5654E+01	7.8583E+01
5.1986E+01	-3.9787E+01	4.5887E+01	7.3087E+01
1.2450E+02	-2.2541E+01	7.3521E+01	8.3760E+01
7.7074E+01	-3.9988E+01	5.8531E+01	6.0555E+01
6.0303E+01	-2.5499E+01	4.2901E+01	4.4634E+01
1.1242E+02	-9.4140E+00	6.0917E+01	7.0862E+01
8.5694E+01	-1.2970E+01	4.9332E+01	5.9534E+01
5.8321E+01	-3.4676E+01	4.2498E+01	4.2840E+01
3.7146E+01	-2.4071E+01	3.0688E+01	3.0961E+01
1.2966E+02	-4.4719E+01	8.7190E+01	9.2253E+01
1.0943E+02	-3.9717E+01	7.4575E+01	7.8535E+01
1.2905E+02	-5.5480E+01	9.2264E+01	9.5955E+01
1.4094E+02	-4.5493E+01	9.3216E+01	9.9144E+01
1.4706E+02	-3.4547E+01	9.0806E+01	9.5089E+01
6.9613E+01	-5.7993E+01	6.3003E+01	6.3937E+01
1.1361E+02	-6.1183E+01	8.7397E+01	8.9335E+01
9.5900E+01	-4.9112E+01	7.2506E+01	7.4359E+01
1.2564E+02	-6.3600E+01	9.4621E+01	9.7126E+01
9.8576E+01	-5.1547E+01	7.5061E+01	7.6052E+01
1.3358E+02	-5.1988E+01	9.2684E+01	9.6992E+01
9.3953E+01	-5.1107E+01	7.2530E+01	7.4075E+01
1.0142E+02	-2.4299E+01	6.2862E+01	6.0952E+01
7.4548E+01	-3.2091E+01	5.3319E+01	5.6078E+01
5.7686E+01	-2.3284E+01	4.0465E+01	4.3407E+01
9.0245E+01	-1.9432E+00	4.6094E+01	5.5630E+01
7.0929E+01	-2.3983E+01	4.7456E+01	5.0247E+01
6.5843E+01	-2.3101E+01	4.4472E+01	4.6971E+01
6.4712E+01	-2.1627E+01	4.3169E+01	4.5787E+01
6.5662E+01	-1.9416E+01	4.2559E+01	4.5582E+01
3.0630E+02	-1.4582E+02	2.2606E+02	2.3907E+02
9.0419E+01	2.8035E+01	3.0792E+01	6.5976E+01
4.9495E+01	-5.2898E+00	2.7392E+01	3.1519E+01
1.0569E+02	-6.2099E+00	5.5949E+01	6.3491E+01
5.0240E+01	-2.3676E+00	2.6304E+01	2.9737E+01
1.2531E+02	-4.1740E+01	8.3524E+01	8.9339E+01
6.9109E+01	-3.1685E+01	5.0397E+01	5.2008E+01
2.0670E+02	-9.7942E+01	1.5232E+02	1.6136E+02
1.2175E+02	-2.8467E+00	6.2506E+01	8.6033E+01
1.3022E+02	1.2549E+01	6.2833E+01	9.3578E+01
8.9686E+01	-2.1788E+00	4.5924E+01	5.3568E+01
4.8270E+01	-1.3595E+00	2.4915E+01	3.0652E+01

57	6.4142E+01	-5.7518E+01	6.0029E+01	6.1710E+01	6.2322E+01	-3.3747E+01	4.8034E+01	4.8915E+01
58	5.2623E+01	-4.4929E+01	4.8776E+01	4.9041E+01	4.5482E+01	-3.0156E+01	3.7819E+01	3.8084E+01
59	6.3471E+01	-5.5010E+01	5.9240E+01	6.0043E+01	6.2351E+01	-3.5177E+01	4.8764E+01	4.9567E+01
60	5.1730E+01	-4.5259E+01	4.8494E+01	4.8746E+01	4.5593E+01	-3.2220E+01	3.8910E+01	3.9162E+01
61	6.9355E+01	-4.9908E+01	5.9631E+01	6.0810E+01	6.8839E+01	-3.5499E+01	5.2169E+01	5.3356E+01
62	5.7310E+01	-4.3127E+01	5.0210E+01	5.1070E+01	5.3305E+01	-3.0957E+01	4.2131E+01	4.2983E+01
63	8.8712E+01	-7.1551E+01	8.0131E+01	8.0815E+01	9.0421E+01	-5.5430E+01	7.2925E+01	7.3609E+01
64	7.4770E+01	-6.4550E+01	6.9664E+01	7.0069E+01	7.3892E+01	-5.5540E+01	6.4720E+01	6.5125E+01
65	1.0049E+02	-9.8848E+01	1.0367E+02	1.0428E+02	1.1083E+02	-7.2962E+01	9.1908E+01	9.2519E+01
66	9.5380E+01	-8.4542E+01	8.9961E+01	9.0265E+01	9.3150E+01	-7.4129E+01	8.3639E+01	8.3943E+01
67	1.2179E+02	-1.1254E+02	1.1716E+02	1.1784E+02	1.2173E+02	-8.6255E+01	1.0399E+02	1.0467E+02
68	1.0630E+02	-9.5249E+01	1.0082E+02	1.0126E+02	1.0546E+02	-7.7097E+01	9.1275E+01	9.1271E+01
69	9.7421E+01	-6.7900E+01	8.2700E+01	8.4422E+01	8.8637E+01	-3.4195E+01	6.1416E+01	6.3130E+01
70	7.4985E+01	-6.2751E+01	6.8868E+01	7.1519E+01	6.9012E+01	-2.6047E+01	4.7530E+01	5.0181E+01
71	9.0849E+01	-8.0983E+01	8.5915E+01	8.7487E+01	7.5512E+01	-3.7813E+01	5.6662E+01	5.8234E+01
72	7.0424E+01	-7.1231E+01	7.4827E+01	7.7758E+01	7.1831E+01	-1.8787E+01	4.5309E+01	4.8240E+01
73	5.7354E+01	-5.5577E+01	5.6465E+01	6.0814E+01	5.7051E+01	-6.0242E+00	3.2537E+01	3.6886E+01
74	6.2666E+01	-5.7372E+01	6.0010E+01	6.9565E+01	7.0201E+01	2.6145E+00	3.3793E+01	4.2340E+01
75	6.8299E+01	-6.8140E+01	6.8219E+01	7.8363E+01	7.7215E+01	4.8462E+00	3.6184E+01	4.6328E+01
76	6.1027E+01	-6.7165E+01	6.4097E+01	7.2150E+01	6.9680E+01	1.0940E+00	3.4297E+01	4.2350E+01
77	7.4174E+01	-9.1808E+01	7.7991E+01	9.0590E+01	8.8795E+01	0.5531E+00	4.0120E+01	5.2719E+01
78	5.9406E+01	-7.2907E+01	6.6197E+01	7.3535E+01	6.8798E+01	-9.6041E-01	3.4879E+01	4.2217E+01
79	6.5779E+01	-8.7795E+01	7.6786E+01	8.7265E+01	8.1379E+01	4.6421E+00	3.8368E+01	4.8847E+01
80	5.5374E+01	-7.1644E+01	6.3509E+01	6.9292E+01	6.3650E+01	-4.6160E+00	3.4133E+01	3.9916E+01
81	5.0685E+01	-9.3761E+01	7.6272E+01	8.4280E+01	7.4330E+01	-8.9264E-01	3.7611E+01	4.5669E+01
82	5.4459E+01	-4.1220E+01	4.7839E+01	5.1482E+01	4.9952E+01	-7.5887E+00	2.8770E+01	3.2413E+01
83	5.9614E+01	-5.0559E+01	5.5087E+01	6.4795E+01	6.6366E+01	6.5627E+00	2.9902E+01	3.9610E+01
84	5.8758E+01	-2.8684E+01	4.3721E+01	4.6313E+01	5.9833E+01	-1.8777E+01	3.9305E+01	4.1897E+01
85	7.3454E+01	-6.3834E+01	6.8649E+01	8.1552E+01	8.5826E+01	9.7598E+00	3.8033E+01	5.0936E+01
86	4.9867E+01	-3.6941E+01	4.3003E+01	4.4188E+01	5.8279E+01	-2.3684E+01	3.7881E+01	3.8266E+01
87	6.8498E+01	-7.0680E+01	6.9509E+01	8.0667E+01	8.1396E+01	5.9619E+00	3.7717E+01	4.8795E+01
88	4.4749E+01	-4.9064E+01	4.6906E+01	4.7746E+01	4.7501E+01	-2.5516E+01	3.6500E+01	3.7340E+01
89	6.1911E+01	-7.8846E+01	7.0378E+01	7.8451E+01	7.4221E+01	-9.1284E-01	3.7567E+01	4.5640E+01
90	4.6524E+01	-6.4945E+01	5.5734E+01	5.7134E+01	5.2304E+01	-2.2795E+01	3.7549E+01	3.8949E+01
91	6.0184E+01	-7.6467E+01	6.8325E+01	7.1624E+01	6.9164E+01	-2.2056E+01	4.5610E+01	4.8989E+01
92	4.5349E+01	-6.4601E+01	5.4975E+01	5.6479E+01	5.2546E+01	-2.2171E+01	3.7358E+01	3.8062E+01
93	5.2834E+01	-5.7292E+01	5.5053E+01	5.5350E+01	5.0582E+01	-3.6308E+01	4.3445E+01	4.3740E+01
94	1.1375E+02	-1.3072E+02	1.2224E+02	1.2364E+02	1.1863E+02	-7.6954E+01	9.7892E+01	9.7895E+01
95	1.0936E+02	-1.1577E+02	1.1256E+02	1.1327E+02	1.1142E+02	-8.0300E+01	9.5861E+01	9.6568E+01
96	6.4256E+01	-6.8221E+01	6.6239E+01	6.6894E+01	6.8133E+01	-4.3691E+01	5.5912E+01	5.6567E+01
97	1.2745E+02	-1.1537E+02	1.2142E+02	1.2279E+02	1.3152E+02	-7.2534E+01	1.0203E+02	1.0341E+02
98	1.0190E+02	-1.0347E+02	1.0266E+02	1.0375E+02	1.0324E+02	-7.0921E+01	8.7000E+01	8.8147E+01
99	7.4344E+01	-6.8737E+01	7.1540E+01	7.3425E+01	7.9531E+01	-3.7059E+01	5.8295E+01	6.0150E+01
100	5.5732E+01	-6.3361E+01	5.9546E+01	6.6323E+01	6.5973E+01	-2.1261E+00	3.4849E+01	4.0026E+01
101	4.1326E+01	-4.8056E+01	4.4691E+01	4.8739E+01	4.8507E+01	-5.1621E+00	2.6835E+01	3.8883E+01
102	2.1391E+02	-1.7432E+02	1.9412E+02	1.9509E+02	2.0257E+02	-1.5014E+02	1.7636E+02	1.7733E+02
103	2.0480E+02	-1.8513E+02	1.9450E+02	1.9515E+02	1.8569E+02	-1.6026E+02	1.7297E+02	1.7320E+02
104	4.0840E+01	-1.0547E+01	2.5290E+01	2.5966E+01	2.6089E+01	-1.2576E+01	1.9738E+01	2.0406E+01
105	3.7821E+01	1.3580E-01	1.0043E+01	2.1653E+01	2.9311E+01	-1.1797E+00	1.5246E+01	1.8096E+01
106	3.4313E+01	-3.9945E+00	1.9154E+01	2.0272E+01	2.2047E+01	-5.3204E+00	1.3684E+01	1.4309E+01
107	3.5087E+01	-3.5424E+00	1.9315E+01	2.0290E+01	1.9952E+01	-5.9990E+00	1.2926E+01	1.3909E+01
108	2.8018E+01	-4.7782E+00	1.7297E+01	1.7840E+01	1.6855E+01	-6.7324E+00	1.1843E+01	1.2366E+01
109	3.3252E+01	-4.0795E+00	1.8665E+01	1.9802E+01	2.2204E+01	-5.0245E+00	1.4054E+01	1.5191E+01
110	3.3525E+01	-1.1136E+00	1.9020E+01	2.1004E+01	2.4566E+01	-5.1791E+00	1.3873E+01	1.5857E+01
111	4.8590E+01	1.7809E+00	2.3404E+01	2.6896E+01	3.1426E+01	-3.7493E-01	1.5906E+01	1.5392E+01
112	7.9630E+01	-7.9506E+01	7.9568E+01	8.3679E+01	8.0806E+01	-2.9001E+01	3.8535E+01	6.2646E+01
113	6.8193E+01	-6.1949E+01	6.5071E+01	6.8134E+01	7.3915E+01	-2.6065E+01	4.9990E+01	5.3053E+01
114	5.4769E+01	-4.4430E+01	4.9599E+01	5.1028E+01	5.7942E+01	-2.3935E+01	4.8930E+01	4.2367E+01

3	100	8.5794E+01	-8.3989E+01	8.4892E+01	8.9368E+01
3	101	7.4834E+01	-6.8545E+01	7.1689E+01	7.4505E+01
3	117	6.4842E+01	-4.0691E+01	5.2366E+01	5.4684E+01
3	119	8.6270E+01	-9.1646E+01	8.8950E+01	9.3272E+01
3	119	7.6746E+01	-5.6575E+01	6.6661E+01	7.2540E+01
3	120	6.4813E+01	-4.5083E+01	5.4948E+01	5.9415E+01
3	121	8.0911E+01	-9.2931E+01	8.6921E+01	9.5595E+01
3	122	6.2808E+01	-8.3417E+01	7.2713E+01	7.9291E+01
3	123	5.8067E+01	-9.2777E+01	7.5423E+01	7.8287E+01
3	124	5.7560E+01	-7.3605E+01	6.5583E+01	7.0010E+01
3	125	4.9518E+01	-5.3259E+01	5.1389E+01	5.4597E+01
3	126	5.4360E+01	-9.4084E+01	7.4222E+01	7.5076E+01
3	127	4.4711E+01	-6.8237E+01	5.6474E+01	5.8381E+01
3	128	5.9677E+01	-5.2968E+01	5.6322E+01	5.7785E+01
3	129	5.4337E+01	-8.3332E+01	6.8835E+01	7.0441E+01
3	130	5.1678E+01	-6.8997E+01	6.0337E+01	6.2684E+01
3	131	5.7012E+01	-5.9904E+01	5.8458E+01	5.8713E+01
3	132	1.5545E+02	-1.0960E+02	1.3252E+02	1.3735E+02
3	133	1.3003E+02	-1.1735E+02	1.2369E+02	1.2459E+02
3	134	9.8595E+01	-5.9933E+01	7.5264E+01	8.0921E+01
3	135	5.6686E+01	-4.2878E+01	4.9742E+01	5.1119E+01
3	136	9.0693E+01	-8.3873E+01	8.7283E+01	9.0603E+01
3	137	6.5870E+01	-6.0949E+01	6.3409E+01	6.4592E+01
3	138	9.2749E+01	-1.0336E+02	9.8057E+01	1.0090E+02
3	139	7.0896E+01	-7.5321E+01	7.3108E+01	7.3971E+01
3	140	9.3586E+01	-1.1263E+02	1.0311E+02	1.0552E+02
3	141	7.0871E+01	-7.8704E+01	7.4780E+01	7.5689E+01
3	142	1.0506E+02	-1.1114E+02	1.0810E+02	1.1216E+02
3	143	7.4758E+01	-7.6866E+01	7.5812E+01	7.7029E+01
3	144	9.3431E+01	-8.9814E+01	9.1623E+01	9.9662E+01
3	145	8.2934E+01	-7.8774E+01	8.0055E+01	8.4223E+01
3	146	1.0240E+02	-6.2731E+01	8.2563E+01	9.1297E+01
3	147	6.4683E+01	-5.3693E+01	5.9188E+01	6.3924E+01
3	148	1.5917E+02	-1.1300E+02	1.2612E+02	1.3010E+02
3	149	1.4022E+02	-6.2225E+01	1.0522E+02	1.3450E+02
3	150	1.2539E+02	-6.4579E+01	9.4982E+01	1.1284E+02
3	151	7.9390E+01	-6.0874E+01	7.0132E+01	7.4491E+01
3	152	3.8469E+01	-3.7207E+01	3.7838E+01	3.9366E+01
3	153	1.0055E+02	-0.8222E+01	9.4386E+01	1.0140E+02
3	154	6.5616E+01	-6.5561E+01	6.5589E+01	7.0180E+01
3	155	7.6383E+01	-7.0591E+01	7.3487E+01	7.5077E+01
3	156	5.6625E+01	-4.7984E+01	5.2304E+01	5.3366E+01
3	157	9.7620E+01	-1.1089E+02	1.0426E+02	1.0973E+02
3	158	7.2065E+01	-8.2007E+01	7.7435E+01	8.1125E+01
3	159	7.2256E+01	-7.7347E+01	7.4801E+01	7.6187E+01
3	160	5.8825E+01	-5.8648E+01	5.8737E+01	5.9443E+01
3	161	9.6580E+01	-1.1791E+02	1.0720E+02	1.1203E+02
3	162	7.5613E+01	-8.7845E+01	8.1729E+01	8.5197E+01
3	163	7.4942E+01	-7.9282E+01	7.7112E+01	7.9873E+01
3	164	6.3451E+01	-6.3183E+01	6.3387E+01	6.4385E+01
3	165	9.3327E+01	-1.1663E+02	1.0498E+02	1.0533E+02
3	166	7.4727E+01	-8.1883E+01	7.8305E+01	8.2077E+01
3	167	7.7007E+01	-6.9323E+01	7.3164E+01	7.7240E+01
3	168	7.7745E+01	-5.7126E+01	6.7435E+01	7.0644E+01
3	169	9.2185E+01	-1.0371E+02	9.7943E+01	1.0286E+02
3	170	7.3134E+01	-6.9175E+01	7.1185E+01	7.6033E+01
3	171	9.5551E+01	-2.8988E+01	6.2269E+01	8.2494E+01
3	172	1.0218E+02	-4.8808E+01	7.5132E+01	8.4881E+01
3	173	7.1999E+01	-8.6822E+01	7.9411E+01	8.4588E+01
3	174	6.2816E+01	-6.3521E+01	6.3169E+01	6.7639E+01

TRIANGLE
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9.4839E+01	-2.8260E+01	6.1558E+01	6.6026E+01
8.0698E+01	-2.5574E+01	5.3136E+01	5.5951E+01
6.6823E+01	-1.9071E+01	4.2947E+01	4.5265E+01
9.5088E+01	-2.0226E+01	5.7637E+01	6.1971E+01
7.8533E+01	-1.3787E+01	4.6168E+01	5.2047E+01
6.6617E+01	-1.6892E+01	4.1455E+01	4.5922E+01
9.5580E+01	-8.6727E+00	5.2126E+01	6.0800E+01
7.3296E+01	-6.5633E+00	3.9931E+01	4.6509E+01
6.4881E+01	-1.7820E+01	4.1351E+01	4.4215E+01
6.2094E+01	-1.2429E+01	3.7262E+01	4.1689E+01
5.2544E+01	-1.4633E+01	3.3589E+01	3.6797E+01
6.5386E+01	-3.1018E+01	4.8262E+01	4.8956E+01
5.3586E+01	-1.9312E+01	3.6449E+01	3.8356E+01
5.7091E+01	-2.5095E+01	4.1093E+01	4.2556E+01
6.3060E+01	-2.8735E+01	4.5902E+01	4.7566E+01
5.9421E+01	-2.0527E+01	3.9974E+01	4.2241E+01
5.1446E+01	-3.7713E+01	4.4579E+01	4.4934E+01
1.5298E+02	-6.0658E+01	1.0678E+02	1.1161E+02
1.2180E+02	-8.3116E+01	1.0246E+02	1.0336E+02
9.4809E+01	-2.0528E+01	5.7660E+01	6.3325E+01
5.6561E+01	-2.5965E+01	4.1263E+01	4.2640E+01
9.5697E+01	-3.5672E+01	6.5684E+01	6.9004E+01
6.7170E+01	-3.5610E+01	5.1390E+01	5.2573E+01
1.0092E+02	-4.2971E+01	7.1946E+01	7.4788E+01
7.3647E+01	-4.4782E+01	5.9214E+01	6.0077E+01
1.0440E+02	-4.0510E+01	7.6468E+01	7.6970E+01
7.5850E+01	-4.7273E+01	6.1562E+01	6.2383E+01
1.1647E+02	-4.4248E+01	8.0361E+01	8.4420E+01
8.0110E+01	-4.5207E+01	6.2659E+01	6.3876E+01
9.2284E+01	-8.1239E+00	5.0204E+01	5.0243E+01
7.2396E+01	-2.1053E+01	4.6725E+01	5.0935E+01
1.0889E+02	-1.2919E+01	6.0902E+01	6.9636E+01
7.1087E+01	-1.2916E+01	4.2801E+01	4.6737E+01
1.3700E+02	-5.7390E+01	9.7186E+01	1.0116E+02
1.5943E+02	-3.8091E+00	8.1621E+01	1.1090E+02
1.3444E+02	-1.9837E+01	7.7137E+01	9.4992E+01
7.9888E+01	-2.6353E+01	5.3121E+01	5.7460E+01
3.9683E+01	-1.4941E+01	2.7312E+01	2.8840E+01
1.0923E+02	-2.1016E+01	6.5124E+01	7.2142E+01
7.2723E+01	-1.4361E+01	4.3542E+01	4.8141E+01
8.0022E+01	-3.2830E+01	5.6826E+01	5.8416E+01
5.8482E+01	-2.5957E+01	4.2219E+01	4.3281E+01
1.0966E+02	-2.9698E+01	6.9680E+01	7.5151E+01
8.0663E+01	-2.3900E+01	5.2281E+01	5.5971E+01
7.8800E+01	-4.0512E+01	5.9256E+01	6.0642E+01
6.2230E+01	-3.5885E+01	4.9862E+01	4.9768E+01
1.1000E+02	-3.3974E+01	7.1985E+01	7.6811E+01
8.4329E+01	-2.7552E+01	5.5941E+01	5.9489E+01
8.0695E+01	-4.1616E+01	6.1151E+01	6.2912E+01
6.6746E+01	-4.0245E+01	5.3497E+01	5.4495E+01
1.0702E+02	-3.5332E+01	7.1178E+01	7.5527E+01
8.3474E+01	-2.5868E+01	5.4277E+01	5.8349E+01
8.2540E+01	-3.1927E+01	5.7233E+01	6.1309E+01
8.0634E+01	-3.5886E+01	5.8268E+01	6.1069E+01
1.0460E+02	-3.8234E+01	6.7415E+01	7.2532E+01
8.0976E+01	-1.7401E+01	4.9189E+01	5.4037E+01
9.7755E+01	5.7718E+00	4.5991E+01	6.6216E+01
1.0187E+02	-2.9108E+01	6.5487E+01	7.4436E+01
7.5985E+01	-1.2992E+01	4.4489E+01	4.9666E+01
6.5088E+01	-1.0501E+01	3.7795E+01	4.2265E+01

3	1	1.1893E+01	-3.0764E+01	5.6329E+01	6.5721E+01	8.6080E+01	2.7117E-01	4.2985E+01	5.2297E+01
3	1	1.6915E+01	-1.0200E+01	3.9557E+01	5.5594E+01	7.1232E+01	9.6255E+00	3.0603E+01	4.6844E+01
3	177	5.0591E+01	7.2380E+00	2.1677E+01	4.2250E+01	5.2551E+01	1.0776E+01	1.6887E+01	3.7460E+01
3	178	6.4710E+01	-0.7326E+01	7.6017E+01	8.0311E+01	6.7619E+01	-1.7482E+01	4.2550E+01	4.6844E+01
3	179	5.2107E+01	-5.7009E+01	5.4556E+01	5.7922E+01	5.2379E+01	-1.2991E+01	3.2685E+01	3.6049E+01
3	180	3.5333E+01	-3.0192E+01	3.6763E+01	3.0794E+01	4.0167E+01	-1.0640E+01	2.5404E+01	2.7435E+01
3	181	4.2580E+02	-4.9283E+02	4.5931E+02	4.6121E+02	4.5157E+02	-3.4106E+02	3.9631E+02	3.9021E+02
3	182	6.5060E+01	-1.1170E+02	9.0303E+01	1.0006E+02	9.5077E+01	-5.0716E+01	7.2897E+01	7.4570E+01
3	183	9.7347E+01	-1.0653E+02	1.0194E+02	1.0304E+02	1.0433E+02	-6.4984E+01	8.4636E+01	8.5759E+01
3	184	6.0037E+01	-5.5107E+01	5.8013E+01	5.9547E+01	6.5072E+01	-3.0497E+01	4.7785E+01	4.9319E+01
3	185	1.0055E+02	-7.9226E+01	8.9092E+01	9.1892E+01	1.0039E+02	-5.0740E+01	7.5587E+01	7.7567E+01
3	186	4.2462E+02	-4.9438E+02	4.5950E+02	4.6160E+02	4.5133E+02	-3.3610E+02	3.9372E+02	3.9582E+02
3	187	9.3642E+01	-9.5672E+01	9.4656E+01	9.7075E+01	1.0186E+02	-4.6083E+01	7.4371E+01	7.6790E+01
3	188	9.1360E+01	-1.2036E+02	1.0586E+02	1.0700E+02	1.0136E+02	-6.1293E+01	8.1336E+01	8.2560E+01
3	189	7.6421E+01	-5.0332E+01	6.7377E+01	7.4121E+01	7.4640E+01	-2.1010E+01	4.0229E+01	5.4973E+01
3	190	9.7030E+01	-4.9641E+01	7.3339E+01	8.3674E+01	9.5023E+01	-1.9374E+01	5.7198E+01	6.7533E+01
3	191	1.2419E+02	-1.2262E+02	1.2341E+02	1.2536E+02	1.2387E+02	-6.7261E+01	9.5560E+01	9.7518E+01
3	192	1.4391E+02	-1.2340E+02	1.3369E+02	1.4021E+02	1.3435E+02	-3.7802E+01	9.6115E+01	1.0264E+02
3	193	1.0171E+02	-6.3315E+01	8.2512E+01	9.4583E+01	9.4750E+01	-1.6323E+01	5.5337E+01	6.7606E+01
3	194	6.5131E+01	-5.7790E+01	6.1450E+01	6.3596E+01	6.4797E+01	-3.2851E+01	4.0024E+01	5.0970E+01
3	195	1.2711E+02	-1.1446E+02	1.2076E+02	1.2360E+02	1.2871E+02	-5.5392E+01	9.2049E+01	9.4068E+01
3	196	1.2014E+02	-9.4121E+01	1.0713E+02	1.1379E+02	1.1448E+02	-3.5640E+01	7.5063E+01	8.1729E+01
3	197	8.9097E+01	-6.8626E+01	7.8062E+01	8.4808E+01	8.5103E+01	-2.5905E+01	5.5544E+01	6.1490E+01
3	198	6.2599E+01	-5.3797E+01	5.8197E+01	5.9890E+01	6.1023E+01	-2.9460E+01	4.5241E+01	4.6542E+01
3	199	1.4039E+02	-8.5641E+01	1.1301E+02	1.2262E+02	1.4074E+02	-2.0396E+01	8.0567E+01	9.0171E+01
3	200	1.1423E+02	-7.4250E+01	9.4242E+01	9.8644E+01	1.1516E+02	-2.0656E+01	6.7907E+01	7.2309E+01
3	201	7.7987E+01	-5.5256E+01	6.5622E+01	7.1107E+01	7.3998E+01	-1.9013E+01	4.6506E+01	5.1071E+01
3	202	5.4725E+01	-4.8937E+01	5.1031E+01	5.3054E+01	5.3259E+01	-2.4557E+01	3.0986E+01	4.0131E+01
3	203	1.3333E+02	-7.0660E+01	1.0599E+02	1.3109E+02	1.4577E+02	-1.0736E+01	7.8251E+01	1.0335E+02
3	204	1.1752E+02	-6.1044E+01	8.9281E+01	1.1407E+02	1.2650E+02	-2.0475E+00	6.4674E+01	8.9463E+01
3	205	7.9413E+01	-5.7109E+01	6.8261E+01	7.6170E+01	8.0072E+01	-1.9731E+01	4.9902E+01	5.7011E+01
3	206	3.1032E+01	-2.5455E+01	2.8243E+01	3.0374E+01	3.1999E+01	-4.0017E+00	1.8040E+01	2.0171E+01
3	207	7.3564E+01	-9.5000E+01	8.4201E+01	8.7000E+01	7.8040E+01	-2.2229E+01	5.0534E+01	5.3333E+01
3	208	6.9058E+01	-6.1006E+01	6.5472E+01	7.6270E+01	6.7750E+01	-4.9901E+00	3.6370E+01	4.7160E+01
3	209	7.0692E+01	-5.7409E+01	6.4005E+01	7.1233E+01	6.9963E+01	-1.7106E+01	4.3534E+01	5.0717E+01
3	210	2.8212E+01	-2.8546E+01	2.6379E+01	3.0015E+01	2.5421E+01	-4.0220E+00	1.7122E+01	1.9556E+01
3	211	5.3560E+01	-6.5314E+01	5.9441E+01	7.4896E+01	6.1379E+01	5.0791E+00	2.7750E+01	4.2405E+01
3	212	6.4245E+01	-2.6084E+01	4.5165E+01	7.4566E+01	7.2515E+01	2.6096E+01	2.3209E+01	5.2610E+01
3	213	1.0223E+02	-2.4255E+01	6.3240E+01	8.2157E+01	1.0564E+02	5.3310E+00	5.0152E+01	6.9069E+01
3	214	1.1074E+02	-6.8958E+01	9.3048E+01	1.0300E+02	1.2024E+02	-4.0252E+01	8.0243E+01	8.9396E+01
3	215	9.1933E+01	-3.4380E+01	6.3156E+01	6.8470E+01	9.3638E+01	-2.3070E+01	5.8754E+01	6.4068E+01
3	216	4.5978E+01	-3.5596E+01	4.0787E+01	4.6220E+01	5.0124E+01	-5.7600E+01	2.5330E+01	3.0703E+01
3	217	7.8491E+01	-5.5090E+01	6.5790E+01	7.0033E+01	7.9660E+01	-2.6050E+01	4.9069E+01	5.4112E+01
3	218	3.7461E+01	-3.8073E+01	3.7767E+01	4.1354E+01	4.1034E+01	-4.0543E+00	2.2944E+01	2.6531E+01
3	219	1.0444E+02	-6.4721E+01	8.4500E+01	9.1605E+01	1.1116E+02	-2.1676E+01	6.6416E+01	7.3521E+01
3	220	1.1766E+02	-1.0021E+02	1.0054E+02	1.1004E+02	1.1903E+02	-6.5556E+01	9.2264E+01	9.4104E+01
3	221	8.0698E+01	-7.4512E+01	7.7605E+01	8.1132E+01	5.5413E+01	-2.7035E+01	5.6624E+01	6.0151E+01
3	222	7.8415E+01	-5.4222E+01	8.1310E+01	8.2007E+01	7.7625E+01	-4.9483E+01	6.3554E+01	6.4323E+01
3	223	4.4079E+02	-5.4077E+02	4.9077E+02	4.9162E+02	4.6390E+02	-3.9039E+02	4.2715E+02	4.2800E+02
3	224	1.2354E+02	-1.2300E+02	1.2371E+02	1.2510E+02	1.2012E+02	-0.0500E+01	1.0431E+02	1.0570E+02
3	225	1.3993E+02	-1.5982E+02	1.4900E+02	1.5919E+02	1.5555E+02	-4.5471E+01	1.0051E+02	1.0582E+02
3	226	8.5319E+01	-1.0444E+02	9.4079E+01	9.7754E+01	9.1037E+01	-4.0723E+01	6.9080E+01	7.2755E+01
3	227	1.7907E+02	-2.0091E+02	1.9489E+02	1.9536E+02	1.8459E+02	-1.4400E+02	1.6473E+02	1.6780E+02
3	228	1.7777E+02	-1.9926E+02	1.0050E+02	1.0913E+02	1.0290E+02	-1.5145E+02	1.5710E+02	1.5701E+02
3	229	1.5630E+02	-1.3406E+02	1.4562E+02	1.5270E+02	1.6210E+02	-6.0400E+01	1.1129E+02	1.1045E+02
3	230	1.1702E+02	-1.0491E+02	1.1137E+02	1.1375E+02	1.2149E+02	-4.4757E+01	8.3123E+01	8.5507E+01
3	231	2.1437E+02	-2.1116E+02	2.1274E+02	2.2555E+02	2.2560E+02	-9.3753E+01	1.5973E+02	1.7255E+02
3	232	1.3115E+02	-9.3726E+01	1.0744E+02	1.2234E+02	1.2044E+02	-2.7200E+01	7.7023E+01	9.2725E+01
3	233	3.4477E+02	-3.9230E+02	3.6050E+02	3.7225E+02	3.7010E+02	-2.3755E+02	3.0367E+02	3.0754E+02
3	234	9.3004E+01	-1.0013E+02	1.0101E+02	1.0449E+02	1.0292E+02	-4.6763E+01	7.4043E+01	7.8320E+01

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3	237	1.2613E+02	-1.9432E+02	1.6122E+02	1.6518E+02
3	238	1.4661E+02	-2.0300E+02	1.7481E+02	1.8147E+02
3	239	1.0581E+02	-1.0068E+02	1.0324E+02	1.0428E+02
3	240	1.2007E+02	-1.1622E+02	1.1814E+02	1.2618E+02
3	241	6.2700E+01	-8.0032E+01	7.1405E+01	7.2532E+01
3	242	9.7177E+01	-5.9142E+01	7.8158E+01	8.6748E+01
3	243	8.2194E+01	-5.6370E+01	6.9282E+01	7.4823E+01
3	244	1.2443E+02	-1.0954E+02	1.1699E+02	1.2103E+02
3	245	6.5014E+01	-6.0393E+01	6.2704E+01	6.6591E+01
3	246	5.4109E+01	-5.5602E+01	5.4056E+01	5.6373E+01
3	247	5.2080E+01	-4.5417E+01	4.8749E+01	4.9558E+01
3	248	6.0837E+01	-5.5187E+01	5.8013E+01	5.9547E+01
3	249	9.0733E+01	-9.0710E+01	9.4726E+01	9.7003E+01
3	250	1.2689E+02	-5.2335E+01	8.9615E+01	1.1704E+02
3	251	1.1896E+02	-7.2860E+01	9.5906E+01	1.0786E+02
3	252	1.4525E+02	-1.5537E+02	1.5031E+02	1.5060E+02
3	253	7.5524E+01	-8.4524E+01	8.0024E+01	8.2941E+01
3	254	1.1930E+02	-7.1491E+01	9.5393E+01	1.1429E+02
3	255	1.7024E+02	-1.4854E+02	1.5939E+02	1.5950E+02
3	256	5.4601E+01	-5.1281E+01	5.2941E+01	5.3478E+01
3	257	7.5501E+01	-2.7642E+01	5.1572E+01	7.4557E+01
3	258	8.5406E+01	-5.4206E+01	6.8846E+01	7.6217E+01
3	259	1.4821E+02	-1.5983E+02	1.5402E+02	1.5424E+02
3	260	4.7519E+01	-6.0206E+01	5.3863E+01	5.5953E+01
3	261	6.7355E+01	-2.7329E+01	4.7342E+01	6.6528E+01
3	262	3.6141E+01	-4.1165E+01	3.8653E+01	3.9289E+01
3	263	6.0166E+01	-5.5558E+01	5.7862E+01	5.8657E+01
3	264	1.9337E+02	7.4507E+01	5.9435E+01	1.6737E+02
3	265	1.9903E+02	-9.2573E+01	1.4580E+02	1.6493E+02
3	266	4.0324E+01	-5.9783E+01	5.4053E+01	5.5259E+01
3	267	2.2700E+02	-1.3915E+02	1.8307E+02	1.8445E+02
3	268	2.0553E+02	-1.4718E+02	1.7636E+02	1.7785E+02
3	269	2.2441E+02	-1.7322E+02	1.9801E+02	2.0373E+02
3	270	1.4360E+02	-1.0252E+02	1.2306E+02	1.4209E+02
3	271	1.2459E+02	-1.3874E+02	1.3167E+02	1.4851E+02
3	272	9.9829E+01	-1.7331E+02	1.3657E+02	1.4770E+02
3	273	1.0250E+02	-1.8391E+02	1.4371E+02	1.5619E+02
3	274	1.4801E+02	-2.0060E+02	1.7431E+02	1.9721E+02
3	275	4.3091E+02	-4.5913E+02	4.4501E+02	4.5607E+02
3	276	3.8051E+02	-4.0206E+02	3.9129E+02	3.9817E+02
3	277	1.6313E+02	-1.8790E+02	1.7551E+02	1.8580E+02
3	278	2.8392E+02	-3.0839E+02	2.9615E+02	2.9678E+02
3	279	1.5519E+02	-1.7156E+02	1.6338E+02	1.6757E+02
3	280	2.5464E+02	-2.3256E+02	2.4360E+02	2.4013E+02
3	281	2.0261E+02	-9.5911E+01	1.4926E+02	1.7329E+02
3	282	1.3016E+02	-6.8652E+01	1.0341E+02	1.1316E+02
3	283	1.4613E+02	-1.3710E+02	1.4162E+02	1.4420E+02
3	284	1.4950E+02	-1.0124E+02	1.2537E+02	1.2732E+02
3	285	1.6064E+02	-8.4934E+01	1.2520E+02	1.2728E+02
3	286	1.1720E+02	-6.4642E+01	9.0922E+01	1.0785E+02
3	287	1.0573E+02	-1.1103E+02	1.0830E+02	1.2315E+02
3	288	9.2627E+01	-1.5826E+02	1.2545E+02	1.3824E+02
3	289	9.9312E+01	-1.0374E+02	1.4152E+02	1.5971E+02
3	290	1.1144E+02	-1.5246E+02	1.3195E+02	1.4079E+02
3	291	2.8005E+02	-3.2202E+02	3.0135E+02	3.0371E+02
3	292	2.6353E+02	-2.3563E+02	2.4950E+02	2.6372E+02
3	293	3.0136E+02	-4.1069E+02	3.9613E+02	4.0435E+02
3	294	3.0981E+01	-3.1739E+01	3.5360E+01	3.6873E+01
3	295	2.9853E+01	-3.8315E+01	3.3604E+01	3.4133E+01
3	296	2.9315E+01	-3.7727E+01	3.3471E+01	3.4006E+01

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1.4959E+02	-6.6646E+01	1.0012E+02	1.1208E+02
1.7053E+02	-5.0712E+01	1.1462E+02	1.2120E+02
1.0488E+02	-6.6462E+01	8.5672E+01	8.6710E+01
1.2694E+02	-6.9245E+01	9.7644E+01	9.9680E+01
6.7666E+01	-3.6065E+01	5.2365E+01	5.3492E+01
1.0644E+02	-4.5506E+00	5.5494E+01	6.6004E+01
8.8683E+01	-1.8065E+01	5.3374E+01	5.8915E+01
1.2264E+02	-4.7152E+01	6.4596E+01	8.8638E+01
7.2156E+01	-1.7931E+01	4.5044E+01	4.8931E+01
5.9054E+01	-2.6408E+01	4.2771E+01	4.4280E+01
5.4490E+01	-3.0792E+01	4.2641E+01	4.3450E+01
6.5072E+01	-3.0497E+01	4.7785E+01	4.9319E+01
9.8960E+01	-4.6756E+01	7.2865E+01	7.5142E+01
1.3723E+02	-3.4995E+00	6.6867E+01	9.4293E+01
1.2348E+02	-1.9923E+01	7.1781E+01	8.3677E+01
1.4793E+02	-1.1561E+02	1.3177E+02	1.3226E+02
7.8731E+01	-3.4468E+01	5.6595E+01	5.9512E+01
1.2137E+02	-1.3545E+01	6.7455E+01	8.6351E+01
1.5479E+02	-1.3863E+02	1.4671E+02	1.4682E+02
5.5301E+01	-3.5426E+01	4.5363E+01	4.5900E+01
8.0403E+01	1.1824E+01	3.4290E+01	5.7275E+01
8.1339E+01	-1.9405E+01	5.0372E+01	5.7745E+01
1.4930E+02	-1.2711E+02	1.3828E+02	1.3842E+02
4.8742E+01	-2.1644E+01	3.5193E+01	3.7283E+01
6.7189E+01	1.1648E+01	2.7770E+01	4.6956E+01
3.4284E+01	-1.7794E+01	2.6039E+01	2.6675E+01
5.5214E+01	-3.1710E+01	4.3452E+01	4.4257E+01
1.0448E+02	1.0227E+02	4.1107E+01	1.4904E+02
1.9755E+02	-5.3151E+01	1.2535E+02	1.4440E+02
4.9842E+01	-2.3211E+01	3.6526E+01	3.7732E+01
2.0430E+02	-1.4211E+02	1.7328E+02	1.7458E+02
2.0471E+02	-1.4002E+02	1.7237E+02	1.7386E+02
2.3414E+02	-1.1534E+02	1.7474E+02	1.7965E+02
1.6142E+02	3.2231E+00	7.9097E+01	9.8125E+01
1.4020E+02	1.1368E+00	7.3572E+01	9.0419E+01
1.2723E+02	-1.0726E+01	6.8978E+01	8.0191E+01
1.3320E+02	-8.3407E+00	7.0770E+01	8.3252E+01
1.8310E+02	6.1202E+00	8.7492E+01	1.1039E+02
4.7048E+02	-2.2285E+02	3.4666E+02	3.5772E+02
4.1100E+02	-2.2288E+02	3.1694E+02	3.2382E+02
1.8736E+02	-4.5364E+01	1.1636E+02	1.2665E+02
3.0245E+02	-1.9918E+02	2.5081E+02	2.5344E+02
1.7093E+02	-7.8066E+01	1.2450E+02	1.2869E+02
2.6923E+02	-1.4612E+02	2.0766E+02	2.1221E+02
2.0992E+02	-4.3585E+01	1.2714E+02	1.5117E+02
1.3976E+02	-5.1140E+01	9.5453E+01	1.0521E+02
1.5520E+02	-8.3331E+01	1.1927E+02	1.2193E+02
1.5145E+02	-8.9449E+01	1.2045E+02	1.2240E+02
1.4947E+02	-6.7500E+01	1.1845E+02	1.2040E+02
1.3209E+02	-4.5200E+00	6.8309E+01	8.5230E+01
1.0076E+02	-1.0646E+01	7.0702E+01	8.5405E+01
1.2613E+02	-1.5955E+01	7.2043E+01	8.4034E+01
1.4379E+02	-5.6761E+00	7.4730E+01	9.2918E+01
1.3813E+02	4.6271E+00	6.6756E+01	8.3550E+01
3.0051E+02	-2.0217E+02	2.5134E+02	2.5372E+02
2.9624E+02	-1.0460E+02	2.0048E+02	2.1468E+02
4.1471E+02	-2.1023E+02	3.1247E+02	3.2069E+02
4.1630E+01	-1.4968E+01	2.8303E+01	2.5916E+01
3.2374E+01	-1.8672E+01	2.5523E+01	2.5872E+01
3.2604E+01	-1.7750E+01	2.5177E+01	2.5712E+01

3	2	2.9325E+01	-3.4875E+01	3.2100E+01	3.2862E+01
3	2	4.2539E+01	-2.2712E+01	3.2625E+01	3.6132E+01
3	297	6.2564E+01	-5.5616E+01	5.9090E+01	5.9720E+01
3	298	4.4394E+01	-3.2135E+01	3.8265E+01	4.0195E+01
3	299	3.3277E+01	-3.0828E+01	3.6852E+01	3.6716E+01
3	300	3.2757E+01	-4.0182E+01	3.6475E+01	3.7029E+01
3	301	3.2278E+01	-3.8987E+01	3.5632E+01	3.6214E+01
3	302	4.3724E+01	-2.5627E+01	3.4476E+01	3.7401E+01
3	303	5.2711E+01	-5.1541E+01	5.2126E+01	5.2530E+01
3	304	2.6772E+01	-2.3841E+01	2.5306E+01	2.6557E+01
3	305	2.7688E+01	-1.9364E+01	2.3526E+01	2.5666E+01
3	306	2.2575E+01	-2.5215E+01	2.3895E+01	2.4686E+01
3	307	2.3531E+01	-2.1833E+01	2.2582E+01	2.3816E+01
3	308	1.3538E+02	-5.6217E+01	9.4797E+01	1.0219E+02
3	309	2.8009E+02	-4.2850E+01	1.6108E+02	2.0217E+02
3	310	4.6216E+02	-4.4160E+02	4.5188E+02	4.5208E+02
3	311	2.9366E+02	-3.2325E+01	1.6285E+02	2.1472E+02
3	312	2.8147E+02	-3.0570E+01	1.5602E+02	1.8703E+02
3	313	1.3012E+02	-3.7467E+01	8.3792E+01	1.0360E+02
3	314	1.2601E+02	-1.8434E+01	7.2678E+01	9.7191E+01
3	315	2.1400E+01	-1.9521E+01	2.0514E+01	2.1424E+01
3	316	2.3991E+01	-2.2211E+01	2.3101E+01	2.4241E+01
3	317	2.6019E+01	-1.8575E+01	2.2346E+01	2.4320E+01
3	318	3.1544E+01	-2.7326E+01	2.9285E+01	3.0331E+01
3	319	2.7909E+01	-2.7033E+01	2.7511E+01	2.8179E+01
3	320	1.9933E+01	-1.9775E+01	1.9855E+01	2.0778E+01
3	321	1.9258E+01	-2.3340E+01	2.1149E+01	2.1786E+01
3	322	1.9887E+01	-1.6384E+01	1.8135E+01	1.9952E+01
3	323	2.5424E+01	-2.8709E+01	2.9096E+01	2.9795E+01
3	324	2.8195E+01	-3.2946E+01	3.0571E+01	3.0750E+01
3	325	2.6772E+01	-3.4970E+01	3.0870E+01	3.1102E+01
3	326	2.9192E+01	-3.4644E+01	3.1918E+01	3.2247E+01
3	327	2.5781E+01	-3.4350E+01	3.0066E+01	3.0273E+01
3	328	2.8606E+01	-3.3420E+01	3.1013E+01	3.1447E+01
3	329	1.3037E+01	-2.2204E+01	1.7621E+01	1.7951E+01
3	330	1.6420E+01	-2.3206E+01	1.9814E+01	2.0310E+01
3	331	1.3775E+02	-5.0091E+01	9.7920E+01	1.0011E+02
3	332	2.2156E+02	-1.6265E+02	1.9216E+02	1.9396E+02
3	333	1.3257E+02	-5.0566E+01	9.1665E+01	9.6436E+01
3	334	1.8540E+02	-1.7936E+02	1.8237E+02	1.8244E+02

TRIANGLE

TRIANGLE

3.2649E+01	-1.5265E+01	2.3957E+01	2.4719E+01
4.5202E+01	-5.8505E+00	2.5526E+01	2.9030E+01
6.4943E+01	-4.1602E+01	5.3273E+01	5.3903E+01
4.7041E+01	-1.5348E+01	3.1195E+01	3.3125E+01
3.6610E+01	-1.9189E+01	2.7099E+01	2.8563E+01
3.6164E+01	-2.0195E+01	2.8188E+01	2.8734E+01
3.5599E+01	-1.9387E+01	2.7493E+01	2.8075E+01
4.5951E+01	-8.9666E+00	2.7459E+01	3.0364E+01
5.5068E+01	-3.7662E+01	4.6365E+01	4.6769E+01
2.9252E+01	-9.2430E+00	1.9240E+01	2.0490E+01
3.0161E+01	-4.7671E+00	1.7464E+01	1.9604E+01
2.5054E+01	-1.0617E+01	1.7036E+01	1.8547E+01
2.5816E+01	-7.2347E+00	1.6526E+01	1.7760E+01
1.3710E+02	-3.4030E+01	8.5568E+01	9.2958E+01
2.8184E+02	-1.7691E+01	1.4977E+02	1.9066E+02
4.6427E+02	-4.1456E+02	4.3962E+02	4.3982E+02
2.9500E+02	-4.7320E+00	1.5827E+02	2.0214E+02
2.0610E+02	-3.2654E+00	1.4468E+02	1.7569E+02
1.3108E+02	-1.3117E+01	7.2499E+01	9.2303E+01
1.2701E+02	-2.7860E+00	6.4896E+01	8.3417E+01
2.3325E+01	-7.8351E+00	1.5580E+01	1.6490E+01
2.6374E+01	-8.1871E+00	1.7281E+01	1.8421E+01
2.8378E+01	-4.6890E+00	1.6533E+01	1.8515E+01
3.3775E+01	-1.3583E+01	2.3679E+01	2.4725E+01
3.0110E+01	-1.4402E+01	2.2296E+01	2.2964E+01
2.2088E+01	-7.0774E+00	1.4583E+01	1.5507E+01
2.1611E+01	-8.9092E+00	1.5260E+01	1.5897E+01
2.2207E+01	-2.4011E+00	1.2304E+01	1.4121E+01
3.1670E+01	-1.5294E+01	2.3482E+01	2.4181E+01
3.0164E+01	-2.1358E+01	2.5757E+01	2.5944E+01
2.9236E+01	-1.9675E+01	2.4455E+01	2.4687E+01
3.1680E+01	-1.9949E+01	2.5019E+01	2.6148E+01
2.8304E+01	-1.9370E+01	2.3837E+01	2.4044E+01
3.1172E+01	-1.7956E+01	2.4305E+01	2.5218E+01
1.5439E+01	-7.5634E+00	1.1501E+01	1.1831E+01
1.0919E+01	-8.3752E+00	1.3649E+01	1.4144E+01
1.3735E+02	-4.0856E+01	9.3201E+01	9.5366E+01
2.2067E+02	-1.9352E+02	1.0728E+02	1.0906E+02
1.3252E+02	-4.1423E+01	8.6977E+01	9.1744E+01
1.8453E+02	-1.7024E+02	1.7738E+02	1.7745E+02

TYPE	ELEM	ALLOWD SHR	STATC SHR+	DYNAM SHR+	STATIC+DYN	DYN FCCL FCTR
3	1	282.000	36.448	100.150	144.598	0.454
3	2	68.000	19.837	115.870	135.707	0.083
3	3	68.000	12.275	75.439	87.714	0.140
3	4	282.000	43.834	103.430	147.264	0.461
3	5	68.000	25.375	73.044	99.219	0.115
3	6	68.000	8.345	73.583	81.928	0.162
3	7	202.000	40.578	111.600	160.258	0.410
3	8	68.000	29.057	68.593	97.650	0.114
3	9	68.000	9.711	56.306	66.091	0.207
3	10	202.000	56.475	106.230	162.705	0.425
3	11	68.000	41.503	76.390	117.893	0.065
3	12	68.000	23.012	40.029	63.041	0.225
3	13	282.000	59.339	105.610	164.949	0.422
3	14	68.000	41.773	70.583	120.356	0.067
3	15	68.000	24.301	46.087	70.388	0.198
3	16	229.000	33.294	83.768	117.054	0.467
3	17	229.000	24.402	60.555	84.957	0.676
3	18	68.000	20.068	44.634	64.702	0.215
3	19	294.000	46.217	70.862	117.079	0.699
3	20	68.000	36.132	55.534	91.666	0.115
3	21	68.000	21.723	42.040	64.563	0.216
3	22	68.000	21.624	38.961	52.585	0.300
3	23	282.000	30.819	92.253	123.072	0.545
3	24	68.000	24.436	78.535	102.971	0.111
3	25	68.000	11.854	95.955	107.809	0.117
3	26	202.000	32.419	99.144	131.563	0.503
3	27	282.000	34.633	99.009	133.722	0.499
3	28	68.000	2.831	63.937	66.768	0.204
3	29	272.000	26.400	89.335	115.743	0.550
3	30	272.000	10.917	74.359	93.176	0.681
3	31	272.000	24.986	97.128	122.114	0.509
3	32	272.000	10.255	76.052	95.107	0.660
3	33	272.000	24.505	96.992	121.497	0.510
3	34	272.000	16.041	74.075	90.916	0.689
3	35	321.000	17.029	60.952	86.781	0.879
3	36	321.000	15.362	56.878	72.240	1.075
3	37	321.000	12.414	43.407	55.821	1.422
3	38	299.000	34.153	55.630	89.783	0.952
3	39	227.000	10.697	50.247	60.944	0.829
3	40	176.000	15.613	46.971	62.584	0.683
3	41	176.000	14.060	45.787	59.847	0.707
3	42	176.000	13.100	45.502	58.602	0.715
3	43	255.000	31.303	239.070	271.173	0.187
3	44	255.000	19.082	65.976	85.058	0.715
3	45	255.000	22.121	31.519	53.640	1.478
3	46	255.000	26.160	63.491	89.651	0.721
3	47	255.000	19.122	29.737	48.859	1.586
3	48	222.000	19.307	89.339	108.646	0.454
3	49	222.000	14.771	52.000	66.779	0.797
3	50	255.000	32.572	161.380	193.952	0.276
3	51	255.000	14.520	86.033	100.553	0.559
3	52	255.000	20.410	93.570	113.980	0.501
3	53	222.000	19.334	53.560	72.902	0.757
3	54	222.000	11.020	38.652	42.472	1.371
3	55	222.000	16.716	47.108	63.924	0.872
3	56	222.000	12.103	32.361	44.544	1.297

2-60

067
069
083

111

114

115

115

117

118

1162

1190

Ave = .107

AOC

Range 0.07 - 0.19

Ave 0.12 //

CPC

1.187

12

55	222.000	12.795	48.515	61.710	0.855
56	222.000	10.957	38.084	49.041	1.108
57	222.000	10.476	49.567	60.043	0.853
58	222.000	9.584	39.162	48.746	1.085
59	222.000	7.462	53.356	60.018	0.804
60	222.000	8.087	42.003	51.070	0.995
61	222.000	7.206	73.609	58.015	0.584
62	222.000	4.944	65.125	70.069	0.667
63	222.000	11.762	92.519	104.201	0.454
64	222.000	6.322	83.943	90.265	0.514
65	222.000	13.174	104.670	117.044	0.399
66	222.000	9.538	91.721	101.259	0.463
67	222.000	21.204	63.138	84.422	0.636
68	222.000	21.338	50.181	71.519	0.800
69	222.000	29.253	59.234	87.487	0.662
70	222.000	29.518	40.240	77.759	0.793
71	243.000	23.928	36.086	60.814	1.168
72	225.000	26.225	42.340	60.565	0.939
73	243.000	32.055	46.328	78.363	0.911
74	225.000	29.000	42.350	72.150	0.922
75	243.000	37.071	52.719	90.590	0.778
76	225.000	31.318	42.217	73.535	0.918
77	243.000	38.418	48.847	87.265	0.838
78	225.000	29.376	39.916	69.292	0.980
79	243.000	38.611	45.669	84.200	0.895
80	232.000	19.069	32.413	51.492	1.314
81	213.000	25.185	39.610	64.795	0.948
82	225.000	4.416	41.057	46.313	1.053
83	213.000	30.616	50.936	81.552	0.716
84	225.000	5.922	30.266	44.188	1.145
85	213.000	31.872	48.795	60.667	0.742
86	225.000	10.398	37.348	47.746	1.149
87	213.000	32.811	45.640	78.451	0.798
88	155.000	18.185	38.949	57.134	0.703
89	321.000	22.715	40.909	71.624	1.220
90	321.000	17.617	30.862	56.479	1.561
91	321.000	11.618	43.740	55.358	1.415
92	267.000	24.344	99.295	123.639	0.489
93	267.000	16.704	96.568	113.272	0.510
94	267.000	10.327	56.567	66.094	0.988
95	267.000	19.385	103.410	122.795	0.479
96	267.000	15.601	88.147	103.748	0.570
97	267.000	13.245	60.180	73.425	0.643
98	225.000	25.497	40.826	66.323	0.977
99	225.000	17.856	30.883	48.739	1.341
100	257.000	17.757	177.330	195.087	0.270
101	257.000	21.991	173.200	195.191	0.271
102	252.000	5.560	20.406	25.966	2.415
103	252.000	3.597	18.096	21.693	2.745
104	252.000	5.470	14.809	26.279	3.323
105	252.000	6.389	13.909	20.298	3.532
106	252.000	5.454	12.306	17.848	3.981
107	252.000	4.611	15.191	19.382	3.257
108	252.000	5.947	15.857	21.804	3.103
109	252.000	7.504	19.392	26.896	2.522
110	321.000	21.033	62.645	83.679	0.958
111	321.000	15.081	53.053	68.134	1.153
112	321.000	8.661	42.367	51.028	1.474
113	321.000	23.342	66.026	89.368	0.902
114	321.000	10.553	55.532	74.585	1.081

3	117	321.000	9.419	45.265	54.684	1.377
3	118	321.000	31.301	61.971	53.272	0.935
3	119	321.000	20.501	52.047	72.549	1.155
3	120	321.000	13.495	45.922	59.415	1.339
3	121	321.000	34.795	60.800	55.595	0.941
3	122	321.000	32.782	46.509	79.291	1.239
3	123	321.000	34.072	44.215	78.287	1.290
3	124	321.000	28.321	41.605	70.010	1.484
3	125	321.000	17.000	36.797	54.597	1.640
3	126	321.000	26.020	49.056	75.076	1.183
3	127	321.000	20.025	38.356	58.361	1.569
3	128	321.000	15.229	42.556	57.785	1.437
3	129	321.000	22.933	47.500	70.441	1.255
3	130	321.000	20.363	42.241	62.604	1.423
3	131	321.000	13.879	44.834	58.713	1.370
3	132	321.000	25.744	111.610	137.354	0.529
3	133	314.000	21.231	103.360	124.591	0.567
3	134	321.000	17.596	63.325	80.921	0.950
3	135	267.000	8.479	42.640	51.119	1.213
3	136	321.000	21.599	69.004	90.603	0.860
3	137	267.000	12.019	52.573	64.592	0.970
3	138	321.000	26.111	74.708	100.899	0.789
3	139	267.000	13.894	60.077	73.971	0.843
3	140	321.000	26.640	78.970	105.618	0.745
3	141	267.000	13.226	62.383	75.609	0.814
3	142	321.000	27.741	84.420	112.161	0.695
3	143	267.000	13.153	63.076	77.029	0.795
3	144	321.000	41.419	58.243	99.662	0.960
3	145	243.000	34.130	50.093	84.223	0.634
3	146	321.000	21.661	65.636	91.297	0.860
3	147	314.000	17.187	46.737	63.924	1.270
3	148	432.000	28.937	101.160	130.097	0.797
3	149	265.000	23.603	110.900	134.503	0.435
3	150	265.000	17.045	94.992	112.837	0.520
3	151	360.000	17.011	57.480	74.491	1.192
3	152	360.000	10.526	20.040	39.366	2.424
3	153	222.000	29.262	72.142	101.404	0.534
3	154	222.000	22.047	40.141	70.188	0.831
3	155	378.000	16.661	58.416	75.077	1.237
3	156	378.000	10.005	43.281	53.366	1.700
3	157	222.000	34.575	75.151	109.726	0.499
3	158	222.000	25.154	55.971	81.125	0.703
3	159	378.000	15.545	60.642	76.187	1.195
3	160	378.000	9.675	49.760	59.443	1.490
3	161	222.000	35.216	76.011	112.027	0.485
3	162	222.000	25.780	59.409	85.197	0.661
3	163	378.000	15.961	62.912	78.073	1.151
3	164	378.000	9.010	54.495	64.305	1.351
3	165	222.000	33.004	75.527	109.331	0.490
3	166	222.000	24.020	59.049	82.077	0.682
3	167	378.000	15.931	61.309	77.240	1.181
3	168	378.000	9.175	61.669	70.044	1.196
3	169	195.000	30.520	72.352	102.060	0.455
3	170	195.000	21.996	54.037	76.033	0.640
3	171	271.000	16.270	66.216	52.494	0.769
3	172	271.000	9.645	74.436	84.001	0.782
3	173	226.000	34.922	49.666	84.588	0.769
3	174	290.000	25.374	42.265	67.639	1.205
3	175	290.000	13.424	52.297	65.721	1.019
3	176	293.000	9.754	46.040	55.594	1.150

3	1	280.000	4.790	37.460	42.250	1.469
3	1	226.000	33.467	46.944	80.311	0.822
3	179	280.000	21.073	36.049	57.922	1.432
3	180	280.000	11.359	27.435	38.794	1.950
3	181	243.000	63.003	398.210	461.213	0.090
3	182	267.000	25.406	74.570	100.056	0.640
3	183	267.000	17.201	83.759	103.040	0.552
3	184	350.000	10.228	49.319	59.547	1.370
3	185	350.000	14.325	77.567	91.892	0.866
3	186	243.000	65.763	395.020	461.603	0.090
3	187	222.000	20.205	76.790	97.075	0.525
3	188	222.000	24.523	82.560	107.083	0.470
3	189	300.000	19.148	54.973	74.121	1.022
3	190	300.000	16.141	67.533	83.674	0.841
3	191	222.000	27.041	97.518	125.359	0.398
3	192	222.000	37.574	102.640	140.214	0.359
3	193	300.000	26.975	67.600	94.503	0.806
3	194	300.000	12.626	50.970	63.596	1.120
3	195	222.000	20.732	94.060	123.600	0.407
3	196	222.000	32.065	81.729	113.794	0.465
3	197	300.000	23.310	61.490	84.000	0.900
3	198	300.000	12.956	46.942	59.898	1.223
3	199	336.000	24.440	98.171	122.619	0.635
3	200	222.000	26.335	72.309	90.644	0.541
3	201	300.000	20.116	51.071	71.187	1.096
3	202	300.000	12.923	40.131	53.054	1.431
3	203	272.000	27.740	103.350	131.090	0.473
3	204	272.000	24.607	89.463	114.070	0.553
3	205	272.000	10.359	57.811	76.170	0.877
3	206	272.000	10.203	20.171	30.374	2.596
3	207	272.000	33.747	53.333	87.000	0.893
3	208	272.000	29.102	47.160	76.270	1.030
3	209	272.000	20.516	50.717	71.233	0.992
3	210	272.000	11.257	19.550	30.815	2.666
3	211	222.000	31.691	42.405	74.096	0.890
3	212	222.000	21.956	52.610	74.566	0.760
3	213	222.000	13.000	69.069	82.157	0.605
3	214	222.000	13.605	89.396	103.001	0.466
3	215	280.000	4.402	64.060	60.470	0.060
3	216	263.000	15.437	30.703	46.220	1.600
3	217	263.000	15.921	54.112	70.033	0.913
3	218	263.000	14.023	26.551	41.354	1.871
3	219	263.000	10.164	73.521	91.605	0.666
3	220	263.000	16.652	94.104	110.036	0.523
3	221	263.000	20.901	60.151	81.132	0.805
3	222	263.000	17.764	64.323	82.007	0.765
3	223	256.000	63.622	420.000	431.522	0.090
3	224	256.000	19.397	105.700	125.097	0.440
3	225	256.000	49.360	109.020	159.100	0.376
3	226	256.000	24.999	72.795	97.794	0.635
3	227	256.000	30.156	165.200	195.356	0.273
3	228	256.000	31.316	157.310	109.126	0.205
3	229	256.000	34.327	118.450	152.777	0.374
3	230	256.000	28.244	95.507	113.751	0.533
3	231	256.000	53.000	172.530	225.530	0.235
3	232	256.000	29.617	92.725	122.342	0.400
3	233	243.000	64.713	307.540	372.250	0.116
3	234	243.000	26.164	78.325	104.409	0.554
3	235	243.000	53.103	112.030	165.103	0.339
3	236	243.000	60.105	121.200	181.465	0.301

EPC

1090 } part of LWC
1090 }

LWC

Range 0.1 - 0.12
ave = 0.1

1090
1116

3	270	321.000	17.571	86.710	134.281	0.700
3	271	425.000	20.499	99.680	120.179	0.812
3	272	314.000	19.340	55.452	72.532	1.183
3	240	267.000	22.564	60.084	30.740	0.739
3	241	267.000	15.938	59.915	74.823	0.852
3	242	267.000	32.399	88.638	121.027	0.529
3	243	267.000	17.668	48.931	66.591	1.019
3	244	267.000	12.085	44.208	56.373	1.151
3	245	267.000	6.102	43.450	49.558	1.201
3	246	267.000	10.228	49.319	59.547	1.041
3	247	252.000	21.861	75.142	97.082	0.613
3	248	302.000	22.743	94.293	117.041	0.592
3	249	302.000	24.207	83.677	107.984	0.664
3	250	226.000	18.542	132.260	150.802	0.314
3	251	302.000	23.429	59.512	82.941	0.936
3	252	302.000	27.938	86.351	114.289	0.635
3	253	229.000	12.677	146.820	159.497	0.295
3	254	229.000	7.578	45.980	53.470	0.965
3	255	338.000	17.262	57.275	74.557	1.120
3	256	338.000	18.474	57.743	76.217	1.107
3	257	168.000	15.818	138.420	154.238	0.220
3	258	338.000	18.670	37.203	55.953	1.713
3	259	338.000	19.572	46.956	66.320	1.356
3	260	229.000	12.614	26.675	39.289	1.622
3	261	338.000	14.400	44.257	58.657	1.462
3	262	226.000	18.328	149.040	167.368	0.279
3	263	226.000	20.449	144.400	164.929	0.285
3	264	338.000	17.527	37.732	55.259	1.699
3	265	263.000	9.867	174.580	184.247	0.290
3	266	263.000	3.990	173.860	177.950	0.298
3	267	393.000	24.075	179.650	203.725	0.411
3	268	330.000	43.962	98.125	142.007	0.563
3	269	253.000	58.096	90.419	148.515	0.431
3	270	253.000	67.588	80.191	147.779	0.452
3	271	253.000	72.936	83.252	156.180	0.433
3	272	253.000	86.816	110.390	197.206	0.301
3	273	257.000	98.353	357.726	456.073	0.089
3	274	296.000	74.340	323.820	390.160	0.137
3	275	296.000	59.154	126.650	185.804	0.374
3	276	263.000	45.339	253.440	298.779	0.172
3	277	263.000	38.877	128.690	167.567	0.348
3	278	296.000	35.924	212.210	248.134	0.245
3	279	351.000	22.121	151.170	173.291	0.435
3	280	296.000	7.953	105.210	113.163	0.548
3	281	263.000	22.346	121.930	144.276	0.395
3	282	263.000	4.922	122.400	127.322	0.422
3	283	263.000	6.801	120.480	127.281	0.425
3	284	226.000	22.613	85.238	107.051	0.477
3	285	210.000	37.675	85.455	123.130	0.483
3	286	210.000	53.483	84.834	130.237	0.369
3	287	210.000	66.792	92.918	159.710	0.388
3	288	210.000	65.199	83.590	148.789	0.346
3	289	263.000	49.992	253.720	303.712	0.168
3	290	226.000	49.120	214.680	263.720	0.165
3	291	257.000	83.656	320.696	404.348	0.109
3	292	92.000	7.057	23.816	36.873	0.570
3	293	92.000	8.161	25.972	34.133	0.646
3	294	92.000	8.294	25.712	34.086	0.651
3	295	92.000	8.143	24.719	32.062	0.676
3	296	92.000	7.099	23.833	36.132	0.565

GPC

Range 0.09 - 0.17

Ave = 0.14 //

0.089
 0.108
 0.137
 0.165
 0.168
 0.172

34.000	5.817	53.903	59.720	0.290
92.000	7.070	33.125	40.195	0.513
92.000	8.153	20.503	36.716	0.587
92.000	8.295	28.734	37.029	0.583
92.000	8.139	28.075	36.214	0.597
92.000	7.817	30.304	37.401	0.559
83.000	5.761	46.769	52.530	0.330
68.000	6.858	20.498	26.556	0.604
60.000	6.862	19.604	25.656	0.632
68.000	6.859	18.547	24.606	0.668
68.000	6.856	17.760	23.816	0.698
68.000	9.229	92.958	102.107	0.126
68.000	11.306	190.850	202.166	0.033
68.000	12.257	439.820	452.077	0.025
68.000	12.577	202.140	214.717	0.055
68.000	11.339	175.690	187.029	0.165
95.000	11.293	92.303	103.596	0.181
55.000	7.774	89.417	97.191	0.195
95.000	4.934	16.490	21.424	1.092
95.000	5.820	16.421	24.241	0.968
95.000	5.813	18.515	24.328	0.963
86.000	5.686	24.725	30.331	0.650
86.000	5.215	22.964	28.179	0.704
87.000	5.271	15.507	20.778	1.054
87.000	5.889	15.897	21.706	1.020
84.000	5.831	14.121	19.952	1.107
87.000	5.614	24.181	29.795	0.673
87.000	4.814	25.944	30.758	0.634
89.000	6.415	24.597	31.182	0.669
89.000	6.899	26.140	32.247	0.634
87.000	6.229	24.044	30.273	0.630
82.000	6.429	25.018	31.447	0.604
88.000	6.119	11.031	17.950	1.046
68.000	6.166	14.144	20.310	0.924
68.000	4.719	95.386	100.105	0.133
68.000	4.959	189.030	193.959	0.067
68.000	4.592	91.744	96.436	0.138
68.000	4.993	177.450	182.443	0.071

Top

Range = 0.03 - 0.14

Ave = 0.08

0.025
0.055
0.059
0.065
0.067
0.071
0.126
0.133
0.138

334 ITEM LINES SUMMED, WITH LAST TYPE = 3 AND ELEM = 334

CELL	RANGE	AUE	RANKING
AOC	0.07 - 0.19	0.12	(3)
CPC	0.19	0.19	(5)
LWC	0.1 - 0.12	0.11	(2)
GPC	0.09 - 0.17	0.14	(4)
TOP	0.03 - 0.14	0.08	(1)

SHEAR STRESS

ADIPRP 10/10/76 U 08.520
CODE VERSION 10/16 U 05.10.22

SLM OF ELEMENT-CENTER STRESSES FROM PREPOST OUTPUT FILES... PRPOA PRPOB

DESCRIPTOR BLOCK FROM FILE PRPOA

PREPOST RUN 10/11/76 Z 15.515
CODE VERSION 10/08 U 12.12.38

USING SAP40 INPUT FILES NAMED... SAP40AIEV SAP40AI-7

THE NFS PLANT (UNITS=K-FT-SEC) (MAX-MIN) 8/26/76

BOX R07 DAVITO/AI-7 59 1

DESCRIPTOR BLOCK FROM FILE PRPOB

PREPOST RUN 10/11/76 Z 15.193
CODE VERSION 10/08 U 12.12.38

USING SAP40 INPUT FILE NAMED... SAP40DL-A
THE NFS PLANT (UNITS=K-FT-SEC) 7/14/76

BOX R07 DAVITO/DL-A 59 1

DESCRIPTOR FROM ALLOWABLE-SHEAR-STRESS-FILE SHEAR

ELEMENT ULT. SHEAR VALUES***NFS***10-15-76

NUM ELE = 334 ACCEL FACTOR = 0.200

*WILL NOT APPLY FSI FACTOR IN THIS CODE.

SUM OF STRESSES FROM THE TWO FILES

STRESSES FROM FILE PRPOA

TYPE	ELEM	MX PR STRS	MIN PR STRS	MXPR SHR -	MXPR SHR +
3	1	1.1344E+02	-9.0305E+01	1.0187E+02	1.2090E+02
3	2	1.3715E+02	-2.3563E+01	8.0353E+01	1.1209E+02
3	3	9.1049E+01	-1.0949E+01	5.4999E+01	6.8340E+01
3	4	1.0702E+02	-1.1363E+02	1.1033E+02	1.1982E+02
3	5	6.3497E+01	-7.0609E+01	7.1093E+01	7.4578E+01
3	6	5.4073E+01	-5.0091E+01	5.6002E+01	5.6277E+01
3	7	1.1791E+02	-1.1512E+02	1.1652E+02	1.3015E+02
3	8	6.9759E+01	-7.7932E+01	7.3845E+01	7.5624E+01
3	9	4.7002E+01	-4.0002E+01	4.3942E+01	4.5439E+01
3	10	1.4599E+02	-1.4395E+02	1.4496E+02	1.5364E+02
3	11	1.0578E+02	-1.0240E+02	1.0413E+02	1.1050E+02
3	12	5.5304E+01	-4.7585E+01	5.1444E+01	5.3167E+01
3	13	1.6117E+02	-1.5917E+02	1.6017E+02	1.6435E+02
3	14	1.0955E+02	-1.2779E+02	1.1067E+02	1.1995E+02
3	15	5.5506E+01	-6.4274E+01	5.9890E+01	5.9917E+01
3	16	1.1985E+02	-1.0111E+02	1.1040E+02	1.1481E+02
3	17	7.7425E+01	-9.6704E+01	8.7065E+01	8.7643E+01
3	18	4.8959E+01	-5.6021E+01	5.2091E+01	5.3607E+01
3	19	9.7446E+01	-1.1151E+02	1.0440E+02	1.1007E+02
3	20	7.0320E+01	-8.6472E+01	7.8400E+01	8.1465E+01
3	21	4.9220E+01	-5.7670E+01	5.3450E+01	5.5575E+01
3	22	4.3366E+01	-4.6592E+01	4.5979E+01	4.6092E+01
3	23	8.5750E+01	-1.0303E+02	9.4300E+01	9.7960E+01
3	24	6.8200E+01	-8.4255E+01	7.6220E+01	7.8707E+01
3	25	1.0362E+02	-6.5165E+01	8.4392E+01	8.8331E+01
3	26	8.7900E+01	-1.0203E+02	9.5009E+01	9.9914E+01
3	27	0.9000E+01	-9.7962E+01	9.3920E+01	1.0117E+02
3	28	4.1443E+01	-4.3439E+01	4.2441E+01	4.2501E+01
3	29	6.7941E+01	-1.0750E+02	8.7762E+01	8.8065E+01
3	30	5.0666E+01	-7.0113E+01	6.8400E+01	6.9715E+01
3	31	7.4174E+01	-9.5476E+01	8.4025E+01	0.7109E+01
3	32	5.9393E+01	-7.3423E+01	6.6400E+01	6.8051E+01
3	33	8.0761E+01	-8.2719E+01	8.1740E+01	8.6199E+01
3	34	5.2494E+01	-6.8613E+01	6.0553E+01	6.1832E+01
3	35	8.4332E+01	-7.9120E+01	8.1731E+01	8.4306E+01
3	36	6.1612E+01	-6.2493E+01	6.2053E+01	6.5246E+01
3	37	4.6069E+01	-4.0505E+01	4.7607E+01	5.0202E+01
3	38	6.1074E+01	-9.4122E+01	7.7590E+01	8.2391E+01
3	39	5.0192E+01	-7.3133E+01	6.5662E+01	6.6166E+01
3	40	6.4304E+01	-5.6870E+01	6.0591E+01	6.1764E+01
3	41	7.0955E+01	-4.5463E+01	5.8159E+01	6.0155E+01
3	42	7.5407E+01	-3.7150E+01	5.6202E+01	5.9139E+01
3	43	3.6295E+02	-2.7304E+02	3.1000E+02	3.2044E+02
3	44	1.0111E+02	-2.0002E+01	6.4957E+01	8.1255E+01
3	45	2.5905E+01	-5.7930E+01	4.0957E+01	4.2900E+01
3	46	9.0091E+01	-6.1775E+01	7.9933E+01	8.7599E+01
3	47	3.0400E+01	-3.7331E+01	3.3906E+01	3.7100E+01
3	48	1.4537E+02	-1.0020E+02	1.2602E+02	1.3200E+02
3	49	7.0573E+01	-7.5746E+01	7.3160E+01	7.3876E+01
3	50	2.3290E+02	-2.2166E+02	2.2742E+02	2.3261E+02
3	51	1.4442E+02	-3.0049E+01	9.1632E+01	1.1704E+02
3	52	1.6400E+02	-3.5192E+01	9.9035E+01	1.3472E+02
3	53	9.6000E+01	-3.6162E+01	6.6130E+01	7.5034E+01
3	54	5.1985E+01	-1.2764E+01	3.2375E+01	4.0600E+01

MX PR STRS	MIN PR STRS	MXPR SHR -	MXPR SHR +
1.2361E+02	-1.1400E+01	6.7500E+01	8.6541E+01
1.4210E+02	1.7251E+01	6.2463E+01	9.5005E+01
9.2177E+01	3.7500E+00	4.4209E+01	5.7550E+01
1.2150E+02	-1.5974E+01	6.0739E+01	7.8220E+01
7.2935E+01	-2.0905E+01	4.6920E+01	5.0405E+01
5.5567E+01	-4.3141E+01	4.9354E+01	4.9549E+01
1.3614E+02	-5.6136E+00	7.0077E+01	0.4506E+01
7.6110E+01	-1.6117E+01	4.6117E+01	4.7096E+01
4.6120E+01	-2.4240E+01	3.5100E+01	3.6677E+01
1.5157E+02	-3.4966E+01	9.3266E+01	1.0194E+02
1.0372E+02	-2.9525E+01	6.6621E+01	7.2994E+01
4.2591E+01	-2.0792E+01	3.1591E+01	3.3314E+01
1.4013E+02	-6.3576E+01	1.0505E+02	1.1004E+02
1.0105E+02	-6.0776E+01	8.1312E+01	8.2601E+01
4.1069E+01	-3.6063E+01	3.8967E+01	3.8994E+01
1.1772E+02	-4.0003E+01	7.9302E+01	8.3632E+01
7.5733E+01	-5.3902E+01	6.4850E+01	6.5441E+01
4.5251E+01	-2.4842E+01	3.5047E+01	3.5763E+01
9.9668E+01	-2.3320E+01	6.1490E+01	6.7033E+01
6.9461E+01	-2.0973E+01	4.5217E+01	4.8282E+01
3.7237E+01	-2.0490E+01	3.2060E+01	3.2993E+01
2.9967E+01	-2.3214E+01	2.6591E+01	2.6704E+01
9.5090E+01	-3.3636E+01	6.4367E+01	6.7939E+01
7.5511E+01	-2.0964E+01	5.2230E+01	5.4717E+01
1.0522E+02	-3.0015E+01	7.1610E+01	7.5557E+01
9.9191E+01	-2.7305E+01	6.3240E+01	6.8153E+01
1.0534E+02	-1.7021E+01	6.0100E+01	6.7433E+01
4.1257E+01	-3.5347E+01	3.8302E+01	3.8362E+01
7.8495E+01	-4.5626E+01	6.2061E+01	6.3164E+01
6.6017E+01	-3.3444E+01	4.9731E+01	5.1046E+01
8.4126E+01	-3.6042E+01	6.0404E+01	6.2760E+01
6.6577E+01	-5.0172E+01	4.8375E+01	5.0020E+01
9.0434E+01	-2.4014E+01	5.7624E+01	6.2083E+01
5.9217E+01	-2.8763E+01	4.3991E+01	4.5270E+01
9.1283E+01	-3.4070E+01	6.3077E+01	6.5652E+01
6.4706E+01	-2.0959E+01	4.6073E+01	5.0066E+01
4.9533E+01	-2.2106E+01	3.5859E+01	3.8374E+01
7.4819E+01	-1.3063E+01	4.4341E+01	4.9134E+01
5.9425E+01	-3.9619E+01	4.5522E+01	5.0026E+01
6.2410E+01	-3.2744E+01	4.7577E+01	4.8750E+01
6.6402E+01	-2.7509E+01	4.7035E+01	4.9031E+01
6.9911E+01	-2.3211E+01	4.6561E+01	4.9410E+01
3.6778E+02	-2.0700E+02	2.8745E+02	2.8745E+02
1.0127E+02	0.5045E+00	4.6104E+01	6.2402E+01
3.2620E+01	-6.7010E+00	1.9701E+01	2.1742E+01
1.0072E+02	-9.0966E+00	5.5300E+01	6.2974E+01
2.9622E+01	-2.6372E+00	1.6130E+01	1.9332E+01
1.4920E+02	-6.6001E+01	1.0000E+02	1.1000E+02
6.9003E+01	-3.0015E+01	5.9909E+01	6.2625E+01
2.4159E+02	-1.4909E+02	1.9554E+02	2.0053E+02
1.4548E+02	-8.1116E+00	7.6706E+01	1.0300E+02
1.7193E+02	1.4754E+01	7.8587E+01	1.1427E+02
9.6172E+01	-6.1103E+02	4.8117E+01	5.7021E+01
4.0641E+01	2.8435E+00	2.2099E+01	3.1124E+01

3	7.0651E+01	-5.5510E+01	6.3080E+01	6.5290E+01	7.0937E+01	-2.4893E+01	4.7945E+01	5.0155E+01
3	4.2079E+01	-3.8204E+01	4.0141E+01	4.0900E+01	3.8789E+01	-2.2606E+01	3.0697E+01	3.1450E+01
3	57 6.4302E+01	-6.8804E+01	6.6553E+01	6.6979E+01	6.5692E+01	-4.4504E+01	5.5130E+01	5.5542E+01
3	58 4.0360E+01	-5.1012E+01	5.0856E+01	5.0101E+01	4.5570E+01	-3.8310E+01	4.1944E+01	4.1969E+01
3	59 6.8421E+01	-6.6477E+01	6.7449E+01	6.8112E+01	7.0213E+01	-4.4034E+01	5.7524E+01	5.9197E+01
3	60 5.0840E+01	-5.2724E+01	5.1782E+01	5.1901E+01	4.8580E+01	-4.0851E+01	4.4716E+01	4.4835E+01
3	61 8.3606E+01	-6.2298E+01	7.2952E+01	7.4660E+01	8.5317E+01	-4.3241E+01	6.4279E+01	6.5867E+01
3	62 6.5247E+01	-4.9770E+01	5.7505E+01	5.0432E+01	6.3539E+01	-3.0591E+01	5.1065E+01	5.1988E+01
3	63 1.2040E+02	-1.0347E+02	1.1192E+02	1.1258E+02	1.2255E+02	-8.1563E+01	1.0225E+02	1.0291E+02
3	64 9.4743E+01	-8.7730E+01	9.1236E+01	9.1596E+01	9.4726E+01	-7.6809E+01	8.5767E+01	8.6127E+01
3	65 1.4196E+02	-1.3789E+02	1.3992E+02	1.4024E+02	1.4534E+02	-1.0797E+02	1.2665E+02	1.2697E+02
3	66 1.1095E+02	-1.1719E+02	1.1763E+02	1.1777E+02	1.1808E+02	-1.0367E+02	1.1088E+02	1.1102E+02
3	67 1.5121E+02	-1.5538E+02	1.5329E+02	1.5363E+02	1.5291E+02	-1.2496E+02	1.3853E+02	1.3927E+02
3	68 1.3740E+02	-1.2207E+02	1.2973E+02	1.3032E+02	1.3783E+02	-1.0192E+02	1.1907E+02	1.2046E+02
3	69 1.0663E+02	-8.4277E+01	9.5456E+01	9.7246E+01	1.0257E+02	-4.9760E+01	7.6165E+01	7.7955E+01
3	70 9.0850E+01	-7.6471E+01	8.3664E+01	8.6242E+01	8.8010E+01	-4.1787E+01	6.4898E+01	6.7476E+01
3	71 8.9151E+01	-9.6517E+01	9.2834E+01	9.3568E+01	7.9440E+01	-5.4271E+01	6.6855E+01	6.7589E+01
3	72 7.5071E+01	-9.0210E+01	8.3040E+01	8.4542E+01	7.2593E+01	-4.0887E+01	5.6740E+01	5.8242E+01
3	73 5.0435E+01	-6.9089E+01	5.9762E+01	6.1457E+01	5.3344E+01	-2.1401E+01	3.7412E+01	3.9187E+01
3	74 4.7767E+01	-7.3454E+01	6.0611E+01	6.3410E+01	5.6477E+01	-1.5016E+01	3.5747E+01	3.8546E+01
3	75 5.9641E+01	-7.6504E+01	6.7572E+01	7.3612E+01	6.8522E+01	-6.0255E+00	3.7274E+01	4.3314E+01
3	76 4.5813E+01	-8.1952E+01	6.3082E+01	6.6515E+01	5.5435E+01	-1.5593E+01	3.5514E+01	3.8147E+01
3	77 6.2991E+01	-8.7362E+01	7.5131E+01	8.3280E+01	7.7143E+01	-1.3815E+00	3.9252E+01	4.7411E+01
3	78 4.7073E+01	-8.6233E+01	6.6653E+01	6.9258E+01	5.7107E+01	-1.6646E+01	3.6877E+01	3.9482E+01
3	79 5.5953E+01	-9.4610E+01	7.5201E+01	8.1417E+01	7.6906E+01	-6.4021E+00	3.8654E+01	4.4790E+01
3	80 4.9011E+01	-8.2932E+01	6.5971E+01	6.8344E+01	5.7917E+01	-1.8642E+01	3.8279E+01	4.0652E+01
3	81 5.0114E+01	-1.0291E+02	7.6512E+01	8.0512E+01	6.5039E+01	-1.3601E+01	3.9330E+01	4.3330E+01
3	82 5.1369E+01	-5.2259E+01	5.1014E+01	5.3260E+01	4.9442E+01	-2.0571E+01	3.5007E+01	3.6453E+01
3	83 4.7474E+01	-5.9179E+01	5.3327E+01	5.8209E+01	5.4728E+01	-5.4015E+00	3.0065E+01	3.4547E+01
3	84 7.6376E+01	-3.4567E+01	5.5472E+01	5.8661E+01	7.7503E+01	-2.5443E+01	5.1473E+01	5.4862E+01
3	85 6.3750E+01	-6.0873E+01	6.6316E+01	7.5020E+01	7.5473E+01	-3.4266E+01	3.7565E+01	4.6269E+01
3	86 6.3104E+01	-4.3888E+01	5.3536E+01	5.4047E+01	6.4113E+01	-3.2543E+01	4.0320E+01	4.5639E+01
3	87 6.1935E+01	-7.6209E+01	6.9073E+01	7.6528E+01	7.4117E+01	-3.4040E+00	3.8761E+01	4.6216E+01
3	88 5.5036E+01	-5.0047E+01	5.6551E+01	5.7134E+01	5.7320E+01	-3.6973E+01	4.7146E+01	4.7729E+01
3	89 5.9422E+01	-8.5229E+01	7.2325E+01	7.7755E+01	7.1233E+01	-9.9266E+00	4.0581E+01	4.6031E+01
3	90 5.1107E+01	-7.6852E+01	6.3980E+01	6.4386E+01	5.6133E+01	-3.8518E+01	4.7326E+01	4.7732E+01
3	91 6.2735E+01	-1.0492E+02	8.3020E+01	8.4216E+01	7.1578E+01	-5.1598E+01	6.1584E+01	6.1972E+01
3	92 5.1015E+01	-8.1728E+01	6.6372E+01	6.6786E+01	5.8078E+01	-4.0091E+01	4.9085E+01	4.9439E+01
3	93 5.0158E+01	-6.4320E+01	6.1243E+01	6.7447E+01	5.7655E+01	-4.4976E+01	5.1321E+01	5.1525E+01
3	94 7.7123E+01	-1.1447E+02	9.5797E+01	9.6167E+01	8.3044E+01	-6.2017E+01	7.2531E+01	7.2991E+01
3	95 7.6254E+01	-9.1034E+01	8.4044E+01	8.4420E+01	7.9251E+01	-5.6631E+01	6.7941E+01	6.8317E+01
3	96 4.2717E+01	-4.7360E+01	4.5038E+01	4.5961E+01	4.6654E+01	-2.3760E+01	3.5207E+01	3.6130E+01
3	97 9.3013E+01	-9.5023E+01	9.4010E+01	9.4033E+01	9.7464E+01	-5.6578E+01	7.4021E+01	7.4036E+01
3	98 6.7430E+01	-7.0935E+01	7.3183E+01	7.3934E+01	6.9499E+01	-4.6312E+01	5.7906E+01	5.8657E+01
3	99 4.1381E+01	-5.1660E+01	4.6525E+01	4.7563E+01	4.6359E+01	-2.2230E+01	3.4255E+01	3.5333E+01
3	100 4.8426E+01	-5.9980E+01	5.4207E+01	6.0161E+01	5.8109E+01	-2.0412E+00	3.0115E+01	3.6069E+01
3	101 2.3469E+01	-4.8607E+01	3.6130E+01	3.7740E+01	3.0381E+01	-7.7868E+00	1.9084E+01	2.0686E+01
3	102 2.0100E+02	-1.4925E+02	1.7559E+02	1.7730E+02	1.9737E+02	-1.3036E+02	1.6087E+02	1.6558E+02
3	103 1.7034E+02	-1.6110E+02	1.6576E+02	1.6595E+02	1.6110E+02	-1.5976E+02	1.5044E+02	1.5063E+02
3	104 5.4945E+01	-2.9067E+01	4.2086E+01	4.2213E+01	4.1394E+01	-3.1201E+01	3.6297E+01	3.6504E+01
3	105 5.1440E+01	-9.9670E+01	2.5221E+01	2.5727E+01	4.2525E+01	-0.0562E+01	2.1515E+01	2.0021E+01
3	106 4.2140E+01	-5.0523E+00	2.3596E+01	2.5294E+01	3.8522E+01	-6.5103E+00	1.8516E+01	2.0214E+01
3	107 5.3914E+01	-1.0007E+01	2.1961E+01	2.2161E+01	1.9046E+01	-1.2351E+01	1.5695E+01	1.5090E+01
3	108 3.6301E+01	-1.1245E+01	2.3813E+01	2.3144E+01	2.3199E+01	-1.3297E+01	1.8240E+01	1.8579E+01
3	109 2.7079E+01	-7.3929E+00	1.7866E+01	1.7946E+01	1.6908E+01	-9.1803E+00	1.3080E+01	1.3398E+01
3	110 4.0261E+01	-3.8350E+01	2.0522E+01	2.2703E+01	2.6767E+01	-2.3260E+00	1.4547E+01	1.7007E+01
3	111 5.3372E+01	-3.2191E+00	2.5077E+01	2.9620E+01	3.6327E+01	-1.2003E+00	1.7564E+01	2.2107E+01
3	112 7.3591E+01	-9.8294E+01	8.6145E+01	8.7111E+01	8.2613E+01	-4.5653E+01	6.4233E+01	6.5201E+01
3	113 6.5600E+01	-7.3524E+01	6.9566E+01	7.0053E+01	7.1285E+01	-3.6269E+01	5.3777E+01	5.5045E+01
3	114 5.0815E+01	-4.9326E+01	5.0070E+01	5.0654E+01	5.3995E+01	-2.7770E+01	4.0885E+01	4.1400E+01

3	100	7.7436E+01	-1.0446E+02	9.0946E+01	9.1900E+01
3	101	6.5384E+01	-8.2278E+01	7.3831E+01	7.4608E+01
3	117	5.5917E+01	-4.9036E+01	5.2476E+01	5.3459E+01
3	118	6.6913E+01	-1.0943E+02	8.0157E+01	8.9101E+01
3	119	6.4249E+01	-6.7784E+01	6.6066E+01	6.9812E+01
3	120	5.2276E+01	-5.5112E+01	5.3694E+01	5.5901E+01
3	121	6.2345E+01	-1.0853E+02	8.5437E+01	8.8221E+01
3	122	5.9783E+01	-8.8910E+01	7.4346E+01	7.0956E+01
3	123	6.6140E+01	-1.0182E+02	8.3963E+01	8.6382E+01
3	124	6.0699E+01	-8.1446E+01	7.1073E+01	7.4526E+01
3	125	5.3731E+01	-6.2073E+01	5.7902E+01	5.9961E+01
3	126	5.5670E+01	-1.1037E+02	8.3020E+01	8.3405E+01
3	127	4.7562E+01	-7.6377E+01	6.1970E+01	6.3144E+01
3	128	5.9832E+01	-5.9062E+01	5.9448E+01	6.0246E+01
3	129	6.4733E+01	-1.0622E+02	8.5476E+01	8.5934E+01
3	130	5.4245E+01	-8.7034E+01	7.0640E+01	7.1204E+01
3	131	5.8746E+01	-6.9365E+01	6.4056E+01	6.4053E+01
3	132	1.7916E+02	-1.5191E+02	1.6554E+02	1.6014E+02
3	133	1.6291E+02	-1.5459E+02	1.5076E+02	1.5931E+02
3	134	7.7260E+01	-6.1541E+01	6.9401E+01	7.3661E+01
3	135	4.6420E+01	-4.7158E+01	4.6793E+01	4.7228E+01
3	136	7.6794E+01	-8.3038E+01	7.9916E+01	8.2300E+01
3	137	5.4754E+01	-6.4528E+01	5.9641E+01	6.0006E+01
3	138	7.1414E+01	-1.0170E+02	8.6537E+01	8.0056E+01
3	139	5.8638E+01	-7.3910E+01	6.6274E+01	6.6623E+01
3	140	6.7909E+01	-1.0788E+02	8.7893E+01	8.9113E+01
3	141	5.6907E+01	-7.2769E+01	6.4838E+01	6.5310E+01
3	142	7.8433E+01	-1.0106E+02	9.0146E+01	9.2933E+01
3	143	5.7085E+01	-6.8814E+01	6.2949E+01	6.3703E+01
3	144	8.2578E+01	-9.8543E+01	9.0561E+01	9.4959E+01
3	145	6.3047E+01	-7.5015E+01	6.9032E+01	7.0937E+01
3	146	9.5597E+01	-6.1052E+01	7.8326E+01	8.7284E+01
3	147	6.7912E+01	-5.6523E+01	6.2216E+01	6.6792E+01
3	148	1.7503E+02	-1.5072E+02	1.6327E+02	1.6625E+02
3	149	1.3143E+02	-8.9771E+01	1.1060E+02	1.2802E+02
3	150	1.3237E+02	-1.0446E+02	1.1841E+02	1.2700E+02
3	151	7.8284E+01	-8.1708E+01	7.9995E+01	8.1844E+01
3	152	3.7343E+01	-4.8487E+01	4.2915E+01	4.3479E+01
3	153	9.5764E+01	-7.7944E+01	8.6084E+01	9.5821E+01
3	154	5.3195E+01	-6.4708E+01	5.8951E+01	6.2456E+01
3	155	4.7830E+01	-7.1739E+01	5.9784E+01	6.0085E+01
3	156	4.7214E+01	-4.0269E+01	4.7742E+01	4.8435E+01
3	157	6.3764E+01	-1.0206E+02	9.2913E+01	9.8544E+01
3	158	5.7210E+01	-8.0428E+01	6.8810E+01	7.1339E+01
3	159	4.9301E+01	-7.4670E+01	6.1926E+01	6.2465E+01
3	160	4.3617E+01	-5.9290E+01	5.1453E+01	5.1592E+01
3	161	7.7158E+01	-1.1212E+02	9.4637E+01	9.8509E+01
3	162	6.0477E+01	-8.6537E+01	7.3507E+01	7.5017E+01
3	163	5.5564E+01	-7.2719E+01	6.4341E+01	6.5527E+01
3	164	5.0948E+01	-5.9337E+01	5.5142E+01	5.5755E+01
3	165	7.2549E+01	-1.1260E+02	9.2576E+01	9.5619E+01
3	166	6.1111E+01	-8.1140E+01	7.1125E+01	7.3745E+01
3	167	6.0431E+01	-6.0305E+01	6.0360E+01	6.4372E+01
3	168	6.5297E+01	-4.0451E+01	5.6874E+01	6.0497E+01
3	169	6.6606E+01	-1.0059E+02	8.3059E+01	8.6545E+01
3	170	5.3977E+01	-6.7719E+01	6.0940E+01	6.3952E+01
3	171	8.3843E+01	-2.6766E+01	5.5084E+01	7.4337E+01
3	172	6.6596E+01	-3.9413E+01	6.3004E+01	7.1077E+01
3	173	5.9760E+01	-9.4026E+01	7.6093E+01	7.9284E+01
3	174	4.2122E+01	-6.3576E+01	5.2749E+01	5.4989E+01

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8.6631E+01	-4.7217E+01	6.6924E+01	6.7878E+01
7.1133E+01	-3.9490E+01	5.4911E+01	5.5578E+01
5.8738E+01	-2.6209E+01	4.2513E+01	4.3426E+01
7.5951E+01	-3.9435E+01	5.7693E+01	5.8637E+01
6.7081E+01	-2.5521E+01	4.6301E+01	5.0047E+01
5.5086E+01	-2.6709E+01	4.0897E+01	4.3104E+01
7.6462E+01	-2.6616E+01	5.1539E+01	5.4323E+01
7.0952E+01	-1.4111E+01	4.2531E+01	4.7141E+01
7.3607E+01	-2.9395E+01	5.1503E+01	5.3902E+01
6.5606E+01	-2.2858E+01	4.4232E+01	4.7085E+01
5.6863E+01	-2.6871E+01	4.1067E+01	4.3926E+01
6.6597E+01	-4.7464E+01	5.7030E+01	5.7415E+01
5.6056E+01	-2.8945E+01	4.2501E+01	4.3675E+01
5.8574E+01	-3.3857E+01	4.6216E+01	4.7014E+01
7.5664E+01	-5.1315E+01	6.2450E+01	6.2450E+01
6.1034E+01	-4.0215E+01	5.1050E+01	5.1614E+01
5.5139E+01	-4.9469E+01	5.2329E+01	5.2366E+01
1.7636E+02	-1.0002E+02	1.3819E+02	1.4079E+02
1.5474E+02	-1.1971E+02	1.3723E+02	1.3776E+02
8.2879E+01	-2.1333E+01	5.1706E+01	5.5966E+01
4.7117E+01	-3.0524E+01	3.8821E+01	3.9256E+01
8.2405E+01	-3.4887E+01	5.8646E+01	6.1030E+01
5.6778E+01	-3.9742E+01	4.0260E+01	4.8625E+01
7.9527E+01	-4.2054E+01	6.0991E+01	6.2450E+01
6.2063E+01	-4.4108E+01	5.3295E+01	5.3444E+01
7.8602E+01	-4.4789E+01	6.1696E+01	6.2916E+01
6.1969E+01	-4.1980E+01	5.1975E+01	5.2447E+01
8.9480E+01	-3.7025E+01	6.3255E+01	6.6040E+01
6.2279E+01	-3.7985E+01	5.0132E+01	5.0866E+01
8.2592E+01	-2.0591E+01	5.1592E+01	5.5950E+01
5.4261E+01	-1.9980E+01	3.7121E+01	3.9026E+01
1.0329E+02	-9.3378E+01	5.6315E+01	6.5273E+01
7.4710E+01	-1.5544E+01	4.5127E+01	4.9701E+01
1.7347E+02	-9.3016E+01	1.3324E+02	1.3622E+02
1.4311E+02	-2.7456E+01	8.5201E+01	1.0270E+02
1.4222E+02	-5.7630E+01	9.9924E+01	1.0851E+02
7.8491E+01	-4.6344E+01	6.2417E+01	6.4266E+01
3.8566E+01	-2.6856E+01	3.2311E+01	3.2875E+01
1.0550E+02	-1.0409E+01	5.7954E+01	6.6911E+01
6.0901E+01	-1.4032E+01	3.7466E+01	4.0971E+01
5.2187E+01	-3.4108E+01	4.3147E+01	4.3440E+01
4.9091E+01	-2.6342E+01	3.7717E+01	4.0410E+01
9.6369E+01	-2.1665E+01	5.9017E+01	6.4046E+01
6.5666E+01	-2.3273E+01	4.4479E+01	4.7000E+01
5.5046E+01	-3.7956E+01	4.6501E+01	4.6980E+01
4.7026E+01	-3.6659E+01	4.1842E+01	4.1901E+01
5.0066E+01	-2.9151E+01	6.0019E+01	6.3091E+01
6.9710E+01	-2.7194E+01	4.8452E+01	5.0762E+01
6.1778E+01	-3.5412E+01	4.0594E+01	4.9700E+01
5.4332E+01	-3.6672E+01	4.5584E+01	4.6117E+01
6.6156E+01	-3.2026E+01	5.9112E+01	6.3156E+01
7.0167E+01	-2.5050E+01	4.7620E+01	5.0220E+01
6.6220E+01	-2.3514E+01	4.4867E+01	4.8871E+01
6.9494E+01	-2.7401E+01	4.7940E+01	5.1451E+01
7.8927E+01	-1.8232E+01	5.3579E+01	5.4685E+01
6.1909E+01	-1.6576E+01	3.9242E+01	4.3242E+01
6.6829E+01	8.0756E+00	3.9376E+01	5.0409E+01
6.7162E+01	-2.0271E+01	5.3716E+01	6.2509E+01
6.4283E+01	-2.2461E+01	4.3372E+01	4.5763E+01
4.5247E+01	-1.1036E+01	2.8541E+01	3.0761E+01

3	1	5.0620E+01	-2.7362E+01	4.7955E+01	5.7255E+01
3	1	7.3402E+01	-0.5130E+00	4.1958E+01	5.9904E+01
3	177	4.6670E+01	1.2247E+01	1.7216E+01	4.3130E+01
3	178	5.1135E+01	-9.5684E+01	7.3410E+01	7.4033E+01
3	179	4.2903E+01	-6.0441E+01	5.1673E+01	5.3727E+01
3	180	2.3161E+01	-4.0427E+01	3.1794E+01	3.2535E+01
3	181	1.2923E+02	-2.4584E+02	1.8753E+02	1.8925E+02
3	182	7.2570E+01	-1.2246E+02	9.7519E+01	9.7847E+01
3	183	7.8426E+01	-9.8894E+01	8.8668E+01	8.9457E+01
3	184	4.5284E+01	-4.8601E+01	4.6942E+01	4.8173E+01
3	185	7.6711E+01	-4.6438E+01	6.1575E+01	6.5618E+01
3	186	1.2451E+02	-2.4953E+02	1.8701E+02	1.8831E+02
3	187	9.1578E+01	-1.0423E+02	9.7901E+01	9.9738E+01
3	188	8.0968E+01	-1.2518E+02	1.0307E+02	1.0351E+02
3	189	7.3204E+01	-6.5972E+01	6.9629E+01	7.4151E+01
3	190	8.5990E+01	-4.9022E+01	6.7507E+01	7.5754E+01
3	191	1.2829E+02	-1.3420E+02	1.2724E+02	1.2809E+02
3	192	1.4820E+02	-1.3658E+02	1.3839E+02	1.4276E+02
3	193	9.3873E+01	-7.4117E+01	8.3595E+01	9.0851E+01
3	194	6.0336E+01	-6.3899E+01	6.2117E+01	6.3200E+01
3	195	1.1185E+02	-1.2140E+02	1.1662E+02	1.1841E+02
3	196	1.0749E+02	-1.0630E+02	1.0689E+02	1.1099E+02
3	197	7.8033E+01	-7.6566E+01	7.7300E+01	8.0962E+01
3	198	6.0626E+01	-5.8125E+01	5.9375E+01	6.0672E+01
3	199	1.1240E+02	-9.5248E+01	1.0382E+02	1.0945E+02
3	200	9.5881E+01	-8.7418E+01	9.1250E+01	9.4178E+01
3	201	7.0213E+01	-6.8760E+01	6.9487E+01	7.1134E+01
3	202	5.7323E+01	-5.2713E+01	5.5119E+01	5.6825E+01
3	203	1.0632E+02	-1.0775E+02	1.0704E+02	1.1725E+02
3	204	1.0424E+02	-1.0610E+02	1.0517E+02	1.1222E+02
3	205	8.2709E+01	-7.4109E+01	7.8409E+01	8.2884E+01
3	206	2.8104E+01	-2.3764E+01	2.1934E+01	2.4450E+01
3	207	8.3474E+01	-1.2709E+02	1.0528E+02	1.0640E+02
3	208	7.5422E+01	-6.2321E+01	7.8871E+01	8.4166E+01
3	209	7.4237E+01	-7.1550E+01	7.2893E+01	7.6701E+01
3	210	1.7867E+01	-2.6474E+01	2.1708E+01	2.4698E+01
3	211	4.9269E+01	-8.2870E+01	6.6069E+01	7.2287E+01
3	212	5.4211E+01	-3.9471E+01	4.6841E+01	6.4345E+01
3	213	8.1381E+01	-2.4621E+01	5.3801E+01	6.2479E+01
3	214	1.1823E+02	-7.2041E+01	9.5136E+01	1.0248E+02
3	215	3.6376E+01	-5.6183E+01	7.1280E+01	7.3619E+01
3	216	4.2846E+01	-5.4861E+01	4.8853E+01	5.0388E+01
3	217	6.3819E+01	-6.9699E+01	6.6360E+01	6.7214E+01
3	218	3.7988E+01	-5.4889E+01	4.6438E+01	4.7356E+01
3	219	9.6751E+01	-8.4738E+01	9.0738E+01	9.4154E+01
3	220	9.1171E+01	-1.0116E+02	9.6167E+01	9.6722E+01
3	221	7.8650E+01	-9.4819E+01	8.6735E+01	8.7935E+01
3	222	7.1225E+01	-9.1034E+01	8.1138E+01	8.1326E+01
3	223	1.7445E+02	-3.0120E+02	2.3783E+02	2.3863E+02
3	224	1.2883E+02	-1.4612E+02	1.3347E+02	1.3581E+02
3	225	1.4771E+02	-1.9514E+02	1.7143E+02	1.7675E+02
3	226	9.6684E+01	-1.3590E+02	1.1629E+02	1.1788E+02
3	227	1.8769E+02	-1.5884E+02	1.2927E+02	1.2962E+02
3	228	1.1141E+02	-1.3661E+02	1.2401E+02	1.2513E+02
3	229	1.8157E+02	-1.6690E+02	1.6427E+02	1.6717E+02
3	230	1.2734E+02	-1.3458E+02	1.3056E+02	1.3194E+02
3	231	1.8740E+02	-2.4653E+02	2.1697E+02	2.2806E+02
3	232	1.4275E+02	-1.2171E+02	1.3223E+02	1.3988E+02
3	233	1.1275E+02	-2.1711E+02	1.6422E+02	1.6807E+02
3	234	7.4110E+01	-1.2880E+02	9.7095E+01	9.7612E+01

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7.2840E+01	4.8633E+00	3.3989E+01	4.3242E+01
7.0859E+01	1.1594E+01	3.3235E+01	5.1177E+01
4.8920E+01	2.5495E+01	1.1717E+01	3.7639E+01
5.4339E+01	-2.8791E+01	4.1585E+01	4.2980E+01
4.4025E+01	-1.6934E+01	3.0480E+01	3.2534E+01
2.8012E+01	-1.2449E+01	2.0230E+01	2.8971E+01
1.5491E+02	-9.5246E+01	1.2503E+02	1.2675E+02
6.2260E+01	-6.3200E+01	7.2230E+01	7.2558E+01
8.5732E+01	-5.5226E+01	7.8479E+01	7.8766E+01
4.9663E+01	-2.2920E+01	3.6291E+01	3.7524E+01
7.8190E+01	-2.8370E+01	4.9268E+01	5.3323E+01
1.4998E+02	-9.9067E+01	1.2452E+02	1.2582E+02
1.0023E+02	-5.1615E+01	7.5921E+01	7.7758E+01
9.1046E+01	-6.5318E+01	7.8162E+01	7.9718E+01
7.3844E+01	-2.9641E+01	5.1743E+01	5.6265E+01
8.5368E+01	-2.1815E+01	5.3192E+01	6.1439E+01
1.2315E+02	-7.6714E+01	9.9931E+01	1.0078E+02
1.3459E+02	-7.2901E+01	1.0370E+02	1.0815E+02
8.0457E+01	-2.8208E+01	5.8328E+01	6.5594E+01
6.0888E+01	-3.9043E+01	4.9965E+01	5.1048E+01
1.1465E+02	-6.0335E+01	8.7491E+01	8.9272E+01
1.0325E+02	-4.6932E+01	7.5393E+01	7.585E+01
7.5669E+01	-3.3587E+01	5.4628E+01	5.8250E+01
6.0216E+01	-3.3732E+01	4.6974E+01	4.8271E+01
1.2193E+02	-3.5843E+01	7.8884E+01	8.4511E+01
9.7377E+01	-3.1765E+01	6.4571E+01	6.7495E+01
6.7111E+01	-3.1314E+01	4.9215E+01	5.0006E+01
5.7013E+01	-2.8314E+01	4.2664E+01	4.3570E+01
1.2037E+02	-3.7449E+01	7.8910E+01	8.9121E+01
1.1540E+02	-4.6405E+01	8.0903E+01	8.7951E+01
8.3360E+01	-3.5984E+01	5.9672E+01	6.4147E+01
2.1138E+01	-1.7612E+00	1.1449E+01	1.3973E+01
8.0734E+01	-5.3322E+01	7.1028E+01	7.2151E+01
7.3868E+01	-2.5962E+01	4.9515E+01	5.4010E+01
7.3347E+01	-3.1375E+01	5.2361E+01	5.6169E+01
1.9088E+01	-2.7010E+00	1.0894E+01	1.3414E+01
5.6961E+01	-1.1926E+01	3.4443E+01	4.0661E+01
6.1483E+01	1.3568E+01	2.3960E+01	4.1492E+01
8.5044E+01	5.3564E+00	3.9844E+01	4.9322E+01
1.2010E+02	-4.5986E+01	8.3842E+01	9.0389E+01
8.8762E+01	-4.2041E+01	6.5462E+01	6.7741E+01
4.7205E+01	-1.9033E+01	3.3130E+01	3.4585E+01
6.4888E+01	-3.8135E+01	5.1512E+01	5.2366E+01
4.2462E+01	-2.8710E+01	3.1586E+01	3.2504E+01
1.0333E+02	-3.9765E+01	7.1558E+01	7.4962E+01
9.0697E+01	-6.4273E+01	7.7480E+01	7.8035E+01
8.3847E+01	-4.7361E+01	6.5204E+01	6.6484E+01
6.9560E+01	-5.5482E+01	6.2521E+01	6.2717E+01
1.9861E+02	-1.4745E+02	1.7384E+02	1.7384E+02
1.2620E+02	-1.0139E+02	1.1379E+02	1.1413E+02
1.6361E+02	-7.7028E+01	1.2632E+02	1.2564E+02
1.0225E+02	-7.9121E+01	9.0685E+01	9.1594E+01
1.1259E+02	-8.6312E+01	9.9388E+01	9.9649E+01
1.1659E+02	-6.8843E+01	9.2365E+01	9.3465E+01
1.6771E+02	-9.2835E+01	1.2987E+02	1.3277E+02
1.3101E+02	-7.3652E+01	1.0233E+02	1.0351E+02
1.9926E+02	-1.3462E+02	1.6694E+02	1.7603E+02
1.4356E+02	-6.3865E+01	1.0371E+02	1.1086E+02
1.3821E+02	-6.2839E+01	1.0852E+02	1.0867E+02
8.2718E+01	-6.8986E+01	7.1652E+01	7.2369E+01

3	232	1.1638E+02	-2.1004E+02	1.6321E+02	1.6468E+02
3	233	1.2264E+02	-2.2181E+02	1.7223E+02	1.7448E+02
3	237	1.2431E+02	-1.2250E+02	1.2344E+02	1.2427E+02
3	238	1.1602E+02	-1.0698E+02	1.1150E+02	1.1441E+02
3	239	8.6038E+01	-9.7332E+01	8.8681E+01	8.9612E+01
3	240	7.5787E+01	-6.5526E+01	7.0656E+01	7.7068E+01
3	241	7.4827E+01	-6.2693E+01	6.8760E+01	7.2235E+01
3	242	1.0014E+02	-1.0010E+02	1.0012E+02	1.0322E+02
3	243	6.3351E+01	-5.4461E+01	5.8906E+01	6.3901E+01
3	244	5.3884E+01	-5.4326E+01	5.4104E+01	5.4732E+01
3	245	3.7892E+01	-4.2291E+01	4.0091E+01	4.0494E+01
3	246	4.5284E+01	-4.8601E+01	4.6942E+01	4.8175E+01
3	247	1.0577E+02	-1.1554E+02	1.1056E+02	1.1231E+02
3	248	1.3614E+02	-9.3075E+01	1.1461E+02	1.2846E+02
3	249	1.0106E+02	-8.5647E+01	9.3345E+01	9.9611E+01
3	250	1.1795E+02	-1.3046E+02	1.2421E+02	1.2477E+02
3	251	7.4475E+01	-8.9898E+01	8.2106E+01	8.4439E+01
3	252	1.2076E+02	-5.6410E+01	8.8584E+01	1.1412E+02
3	253	1.6380E+02	-1.4057E+02	1.5221E+02	1.5238E+02
3	254	4.2480E+01	-4.9805E+01	4.6143E+01	4.6234E+01
3	255	6.1734E+01	-3.1647E+01	4.6690E+01	6.1330E+01
3	256	6.7322E+01	-5.8321E+01	6.2822E+01	6.6606E+01
3	257	1.1722E+02	-1.3014E+02	1.2368E+02	1.2395E+02
3	258	5.3786E+01	-6.6607E+01	6.0197E+01	6.2003E+01
3	259	7.3763E+01	-3.4710E+01	5.4236E+01	6.9931E+01
3	260	4.1456E+01	-5.4579E+01	4.0023E+01	4.8164E+01
3	261	6.7638E+01	-6.7223E+01	6.7430E+01	6.7916E+01
3	262	1.5560E+02	5.7100E+01	4.9249E+01	1.3738E+02
3	263	1.6313E+02	-9.1159E+01	1.2715E+02	1.3989E+02
3	264	5.4655E+01	-6.4155E+01	5.9404E+01	6.0654E+01
3	265	1.9887E+02	-1.2231E+02	1.6068E+02	1.6196E+02
3	266	1.7112E+02	-1.4396E+02	1.5754E+02	1.5811E+02
3	267	1.8049E+02	-1.7052E+02	1.7950E+02	1.8216E+02
3	268	1.1158E+02	-8.8322E+01	9.9948E+01	1.1733E+02
3	269	1.0585E+02	-1.2585E+02	1.1585E+02	1.3117E+02
3	270	8.0117E+01	-1.5960E+02	1.2386E+02	1.3383E+02
3	271	8.0372E+01	-1.7317E+02	1.2677E+02	1.3549E+02
3	272	9.0383E+01	-1.9513E+02	1.4275E+02	1.5498E+02
3	273	3.7043E+02	-4.7999E+02	4.2521E+02	4.2091E+02
3	274	3.3887E+02	-4.3036E+02	3.8461E+02	3.5636E+02
3	275	9.1792E+01	-1.7993E+02	1.3587E+02	1.4034E+02
3	276	2.8372E+02	-3.6591E+02	3.2481E+02	3.2529E+02
3	277	9.0969E+01	-1.6240E+02	1.2660E+02	1.2785E+02
3	278	2.6270E+02	-3.0047E+02	2.8558E+02	2.8652E+02
3	279	1.4302E+02	-7.7930E+01	1.1047E+02	1.2973E+02
3	280	1.9296E+02	-9.8420E+01	1.4569E+02	1.5007E+02
3	281	9.4671E+01	-1.3052E+02	1.1263E+02	1.1336E+02
3	282	1.0290E+02	-8.0044E+01	9.1473E+01	9.2064E+01
3	283	1.1620E+02	-4.9616E+01	8.3907E+01	8.5464E+01
3	284	9.2346E+01	-9.3980E+01	9.3163E+01	9.9042E+01
3	285	9.2536E+01	-1.3599E+02	1.1426E+02	1.2053E+02
3	286	9.1759E+01	-1.8111E+02	1.3644E+02	1.4265E+02
3	287	8.6937E+01	-2.8784E+02	1.4737E+02	1.5518E+02
3	288	7.4441E+01	-1.6640E+02	1.2043E+02	1.2718E+02
3	289	3.8802E+02	-3.7274E+02	3.2030E+02	3.3099E+02
3	290	2.8287E+02	-2.8609E+02	2.8549E+02	2.9236E+02
3	291	3.3781E+02	-4.3915E+02	3.8849E+02	3.9115E+02
3	292	2.4900E+01	-2.0004E+01	2.4892E+01	2.7361E+01
3	293	1.6032E+01	-2.0979E+01	2.1506E+01	2.2239E+01
3	294	1.3045E+01	-3.0177E+01	2.2011E+01	2.2225E+01

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1.3731E+02	-6.5315E+01	1.1131E+02	1.1271E+02
1.4614E+02	-8.8855E+01	1.1354E+02	1.1571E+02
1.2662E+02	-8.8686E+01	1.0765E+02	1.0840E+02
1.2252E+02	-5.7215E+01	8.9066E+01	9.2775E+01
8.6175E+01	-5.3593E+01	6.9084E+01	7.8915E+01
8.4035E+01	-1.1845E+01	4.8350E+01	5.4762E+01
8.1113E+01	-2.5613E+01	5.3263E+01	5.6838E+01
1.0120E+02	-4.1073E+01	7.1137E+01	7.4236E+01
7.0545E+01	-1.1015E+01	4.0780E+01	4.5855E+01
5.8601E+01	-2.5278E+01	4.2035E+01	4.3663E+01
4.8630E+01	-2.5814E+01	3.3222E+01	3.3625E+01
4.9063E+01	-2.2920E+01	3.6291E+01	3.7524E+01
1.1395E+02	-6.4016E+01	8.9383E+01	9.1037E+01
1.4595E+02	-4.0593E+01	9.3278E+01	1.0713E+02
1.0645E+02	-3.5522E+01	7.0980E+01	7.7245E+01
1.2200E+02	-9.0753E+01	1.0638E+02	1.0694E+02
7.8982E+01	-4.1345E+01	6.0123E+01	6.2376E+01
1.2377E+02	2.1608E-01	6.1776E+01	8.7315E+01
1.5110E+02	-1.3170E+02	1.4140E+02	1.4157E+02
4.2904E+01	-3.2539E+01	3.8222E+01	3.8363E+01
6.6688E+01	5.2412E+00	3.8823E+01	4.5403E+01
6.6737E+01	-2.6229E+01	4.6403E+01	5.0267E+01
1.1984E+02	-9.7796E+01	1.0802E+02	1.0989E+02
5.6147E+01	-2.9357E+01	4.2752E+01	4.4586E+01
7.4516E+01	3.2514E+00	3.5632E+01	5.1327E+01
4.0038E+01	-3.0950E+01	3.5494E+01	3.5635E+01
6.5007E+01	-4.4410E+01	5.4708E+01	5.5196E+01
1.4919E+02	8.3675E+01	3.2756E+01	1.2089E+02
1.6343E+02	-5.2247E+01	1.0784E+02	1.2058E+02
5.7548E+01	-2.7721E+01	4.2634E+01	4.3084E+01
1.0261E+02	-1.2405E+02	1.5334E+02	1.5472E+02
1.7170E+02	-1.3425E+02	1.5297E+02	1.5345E+02
1.9781E+02	-1.1546E+02	1.5663E+02	1.5929E+02
1.2013E+02	9.7301E+00	5.9198E+01	7.6585E+01
1.2781E+02	3.6774E+00	6.2064E+01	7.7304E+01
1.1338E+02	-9.6067E+00	6.1491E+01	7.1463E+01
1.0760E+02	-1.2197E+01	5.9900E+01	6.8623E+01
1.2237E+02	-5.0479E+00	6.3700E+01	7.3938E+01
4.0660E+02	-2.6576E+02	3.3615E+02	3.3960E+02
3.6602E+02	-2.5895E+02	3.1346E+02	3.1587E+02
1.1561E+02	-3.5543E+01	7.7578E+01	8.2850E+01
3.0237E+02	-2.5602E+02	2.7919E+02	2.7967E+02
1.0720E+02	-6.6793E+01	8.6996E+01	8.8159E+01
2.7806E+02	-2.1765E+02	2.4795E+02	2.4889E+02
1.4959E+02	-2.4550E+01	8.7072E+01	1.0653E+02
1.9456E+02	-7.6135E+01	1.3535E+02	1.4773E+02
1.0459E+02	-7.2489E+01	8.8538E+01	8.9274E+01
1.0581E+02	-6.2130E+01	8.3571E+01	8.5362E+01
1.0803E+02	-8.8635E+01	7.9731E+01	8.2380E+01
1.0729E+02	-3.7666E+01	7.0520E+01	7.6407E+01
1.1707E+02	-3.7619E+01	7.7347E+01	8.3611E+01
1.2613E+02	-4.3350E+01	8.4747E+01	9.8961E+01
1.2955E+02	-3.7150E+01	8.5343E+01	9.1197E+01
9.5650E+01	-1.7767E+01	5.9728E+01	6.5462E+01
3.0799E+02	-2.5515E+02	2.8157E+02	2.8229E+02
3.1380E+02	-1.0426E+02	2.3903E+02	2.4641E+02
3.6872E+02	-2.5307E+02	3.1058E+02	3.1357E+02
3.1616E+01	-4.8243E+00	1.7020E+01	2.0229E+01
1.8144E+01	-5.3093E+00	1.3767E+01	1.4100E+01
1.7229E+01	-1.0241E+01	1.3735E+01	1.3949E+01

3	2	1.4703E+01	-2.0400E+01	2.1554E+01	2.1933E+01
3	2	3.0595E+01	-1.9523E+01	2.5060E+01	2.6039E+01
3	297	5.2173E+01	-5.9549E+01	5.5064E+01	5.5966E+01
3	298	2.5027E+01	-2.3289E+01	2.6159E+01	2.8107E+01
3	299	1.3703E+01	-3.0615E+01	2.2157E+01	2.2315E+01
3	300	1.3373E+01	-3.1049E+01	2.2214E+01	2.2358E+01
3	301	1.3177E+01	-2.9980E+01	2.1570E+01	2.1743E+01
3	302	2.7133E+01	-1.8919E+01	2.3029E+01	2.5726E+01
3	303	4.5305E+01	-5.4926E+01	5.0146E+01	5.0209E+01
3	304	2.6552E+01	-2.5641E+01	2.7147E+01	2.9303E+01
3	305	3.0336E+01	-2.5045E+01	2.7691E+01	2.9060E+01
3	306	2.6527E+01	-2.4038E+01	2.5307E+01	2.6498E+01
3	307	2.8725E+01	-2.5111E+01	2.6918E+01	2.9145E+01
3	308	7.4652E+01	-4.8626E+01	6.1644E+01	6.4745E+01
3	309	1.3104E+02	-2.1501E+01	7.6268E+01	1.0325E+02
3	310	2.1694E+02	-2.0640E+02	2.1167E+02	2.1195E+02
3	311	1.3504E+02	-2.1347E+01	7.8190E+01	1.0791E+02
3	312	1.3375E+02	-3.4450E+01	8.4101E+01	9.7581E+01
3	313	6.1330E+01	-2.6056E+01	4.3694E+01	5.5103E+01
3	314	6.6908E+01	-2.1301E+01	4.4144E+01	5.5272E+01
3	315	1.6646E+01	-2.2526E+01	1.9506E+01	1.9031E+01
3	316	1.9019E+01	-2.5904E+01	2.2501E+01	2.2921E+01
3	317	1.9525E+01	-2.2471E+01	2.0990E+01	2.1702E+01
3	318	1.9479E+01	-2.2125E+01	2.0802E+01	2.1476E+01
3	319	1.9412E+01	-2.1066E+01	2.0239E+01	2.0943E+01
3	320	1.9337E+01	-2.2601E+01	2.0569E+01	2.1506E+01
3	321	1.9677E+01	-2.6432E+01	2.3054E+01	2.3389E+01
3	322	1.8080E+01	-1.9277E+01	1.9069E+01	2.0164E+01
3	323	2.3271E+01	-2.4837E+01	2.4055E+01	2.4695E+01
3	324	2.0190E+01	-2.9108E+01	2.4649E+01	2.4717E+01
3	325	1.9416E+01	-2.9990E+01	2.4702E+01	2.4074E+01
3	326	1.9429E+01	-3.0036E+01	2.5132E+01	2.5240E+01
3	327	1.7033E+01	-2.8612E+01	2.2023E+01	2.2955E+01
3	328	1.7023E+01	-2.9017E+01	2.3020E+01	2.3151E+01
3	329	1.2508E+01	-2.4336E+01	1.6447E+01	1.8504E+01
3	330	1.4527E+01	-2.6953E+01	2.0741E+01	2.0043E+01
3	331	6.2176E+01	-3.1022E+01	4.6600E+01	4.7791E+01
3	332	1.0555E+02	-7.0310E+01	9.2131E+01	9.3477E+01
3	333	6.0230E+01	-2.0059E+01	4.4149E+01	4.6265E+01
3	334	0.4400E+01	-0.2260E+01	0.3371E+01	0.3460E+01

TRIANGLE

TRIANGLE

1.8031E+01	-8.7940E+00	1.3412E+01	1.3791E+01
3.3249E+01	-2.6240E+00	1.7937E+01	2.0911E+01
5.4561E+01	-4.5513E+01	5.0037E+01	5.0179E+01
3.1664E+01	-6.4805E+00	1.9077E+01	2.1025E+01
1.7020E+01	-1.0993E+01	1.4010E+01	1.4168E+01
1.6769E+01	-1.1105E+01	1.3936E+01	1.4090E+01
1.6489E+01	-1.0417E+01	1.3453E+01	1.3613E+01
2.9746E+01	-2.2265E+00	1.5586E+01	1.8685E+01
4.7730E+01	-4.1004E+01	4.4302E+01	4.4302E+01
3.1133E+01	-1.1045E+01	2.1080E+01	2.2244E+01
3.2010E+01	-1.0440E+01	2.1629E+01	2.3006E+01
2.9006E+01	-5.4096E+00	1.9240E+01	2.0439E+01
3.1209E+01	-1.0513E+01	2.0061E+01	2.0061E+01
7.8300E+01	-2.6471E+01	5.2426E+01	5.5527E+01
1.3278E+02	2.0574E+00	6.4501E+01	9.1940E+01
2.1905E+02	-1.7900E+02	1.9942E+02	1.9977E+02
1.3718E+02	5.9704E+00	6.5603E+01	9.5319E+01
1.3839E+02	-7.0565E+00	7.2725E+01	8.6205E+01
6.3134E+01	-1.6034E+00	3.2409E+01	4.3012E+01
6.7267E+01	-5.7042E+00	3.6485E+01	4.7613E+01
1.0544E+01	-1.0690E+01	1.4621E+01	1.4086E+01
2.1397E+01	-1.1903E+01	1.6692E+01	1.7012E+01
2.1070E+01	-0.5555E+00	1.5213E+01	1.5917E+01
2.1720E+01	-0.7166E+00	1.5216E+01	1.5892E+01
2.1565E+01	-0.3668E+00	1.4966E+01	1.5670E+01
2.1523E+01	-9.7388E+00	1.5031E+01	1.6160E+01
2.2046E+01	-1.2336E+01	1.7191E+01	1.7526E+01
2.1160E+01	-5.4300E+00	1.3303E+01	1.4398E+01
2.5459E+01	-1.1536E+01	1.8496E+01	1.9138E+01
2.2154E+01	-1.7500E+01	1.9027E+01	1.9095E+01
2.1800E+01	-1.4775E+01	1.8327E+01	1.8499E+01
2.1920E+01	-1.6152E+01	1.9036E+01	1.9144E+01
1.9550E+01	-1.3607E+01	1.6506E+01	1.6712E+01
1.9589E+01	-1.3651E+01	1.6620E+01	1.6751E+01
1.4956E+01	-9.7235E+00	1.2340E+01	1.2477E+01
1.7016E+01	-1.2115E+01	1.4567E+01	1.4669E+01
6.1973E+01	-2.1706E+01	4.1081E+01	4.3072E+01
1.0510E+02	-6.9102E+01	6.7182E+01	6.0320E+01
6.0008E+01	-1.0023E+01	3.9450E+01	4.1572E+01
0.3615E+01	-7.3147E+01	7.0370E+01	7.0407E+01

TYPE ELEM ALLOWD SHR STATC SHR+ DYNAM SHR+ STATIC+DYN DYN ACCL FCTR

3	1	292.000	34.364	86.541	120.905	0.572
3	2	60.000	17.890	95.005	112.895	0.105
3	3	60.000	10.790	57.550	68.340	0.199
3	4	202.000	41.591	79.220	119.819	0.615
3	5	60.000	24.173	50.405	74.570	0.174
3	6	60.000	6.720	49.549	56.277	0.247
3	7	232.000	45.641	84.506	130.147	0.559
3	8	60.000	27.720	47.096	75.624	0.160
3	9	60.000	8.762	36.677	45.439	0.523
3	10	262.000	51.697	101.940	153.637	0.452
3	11	60.000	37.500	72.994	110.503	0.604
3	12	60.000	19.053	33.314	53.167	0.289
3	13	202.000	54.315	110.040	164.355	0.414
3	14	60.000	37.354	82.601	119.955	0.024
3	15	60.000	20.925	35.994	59.917	0.241
3	16	229.000	51.179	83.632	114.811	0.473
3	17	229.000	22.207	65.441	87.648	0.632
3	18	60.000	17.044	35.763	53.607	0.200
3	19	294.000	42.980	67.093	110.073	0.740
3	20	60.000	33.183	48.282	81.465	0.144
3	21	60.000	20.502	32.993	53.575	0.287
3	22	60.000	19.388	26.704	46.092	0.364
3	23	202.000	30.021	67.939	97.960	0.242
3	24	60.000	23.990	54.717	78.707	0.161
3	25	60.000	12.774	75.557	88.331	0.146
3	26	202.000	31.761	60.153	99.914	0.734
3	27	202.000	33.740	67.433	101.173	0.736
3	28	60.000	4.139	32.362	42.501	0.333
3	29	272.000	25.701	63.164	88.865	0.780
3	30	272.000	18.669	51.046	69.715	0.993
3	31	272.000	24.341	62.768	87.109	0.709
3	32	272.000	18.033	50.020	68.061	1.015
3	33	272.000	24.116	62.003	86.199	0.799
3	34	272.000	16.562	45.270	61.832	1.129
3	35	321.000	18.054	65.652	84.306	0.921
3	36	321.000	15.100	50.066	65.246	1.222
3	37	321.000	11.920	39.574	50.202	1.611
3	38	299.000	33.257	40.134	82.391	1.002
3	39	227.000	16.140	50.026	66.166	0.843
3	40	176.000	13.314	48.750	61.764	0.669
3	41	176.000	11.124	49.031	60.155	0.673
3	42	176.000	9.721	49.418	59.139	0.673
3	43	255.000	30.551	297.890	320.441	0.151
3	44	255.000	10.773	62.402	81.255	0.756
3	45	255.000	21.256	21.742	42.990	2.150
3	46	255.000	24.625	62.974	87.599	0.732
3	47	255.000	17.776	19.332	37.100	2.454
3	48	222.000	10.705	113.300	132.005	0.359
3	49	222.000	13.251	60.625	73.876	0.600
3	50	255.000	32.002	200.530	232.612	0.222
3	51	255.000	14.036	103.000	117.936	0.460
3	52	255.000	20.440	114.270	134.719	0.411
3	53	222.000	10.013	57.021	75.034	0.715
3	54	222.000	9.476	31.124	40.600	1.366
3	55	222.000	15.135	50.155	65.290	0.025
3	56	222.000	9.444	31.456	40.900	1.351

0.074
1.084
1.035
1.142
1.161
1.168
1.174
1.199

Range = 0.07
- 0.12

Ave = 0.14

CPC

0.151

59	222.000	11.415	55.554	66.979	0.759
60	222.000	8.112	41.989	50.101	1.019
61	222.000	9.925	58.187	60.112	0.729
62	222.000	7.066	44.835	51.901	0.959
63	222.000	8.673	63.997	74.660	0.647
64	222.000	6.444	51.988	58.432	0.829
65	222.000	9.674	102.910	112.584	0.413
66	222.000	5.469	86.127	91.596	0.503
67	222.000	13.273	126.970	140.243	0.329
68	222.000	6.746	111.020	117.766	0.388
69	222.000	14.357	139.270	153.627	0.299
70	222.000	9.861	120.460	130.321	0.352
71	222.000	19.291	77.955	97.246	0.520
72	222.000	18.766	67.476	86.242	0.602
73	222.000	25.979	67.589	93.568	0.560
74	222.000	26.303	58.242	84.542	0.672
75	243.000	22.350	39.107	61.457	1.128
76	225.000	24.864	33.546	63.410	1.038
77	243.000	30.298	43.314	73.612	0.982
78	225.000	28.368	38.147	66.515	1.031
79	243.000	35.869	47.411	83.280	0.874
80	225.000	29.776	39.482	69.258	0.589
81	243.000	36.627	44.730	81.417	0.922
82	225.000	27.692	49.652	68.344	0.971
83	243.000	37.182	43.338	80.512	0.950
84	232.000	16.807	36.453	53.268	1.181
85	213.000	23.262	34.947	58.209	1.086
86	225.000	3.999	54.662	58.661	0.809
87	213.000	28.751	46.269	75.820	0.796
88	225.000	5.280	49.639	54.847	0.886
89	213.000	30.312	46.216	76.528	0.791
90	225.000	9.405	47.729	57.134	0.903
91	213.000	31.744	46.051	77.775	0.789
92	155.000	16.654	47.732	64.386	0.580
93	321.000	22.244	61.972	84.216	0.964
94	321.000	17.287	49.499	66.786	1.227
95	321.000	9.922	51.525	61.447	1.207
96	267.000	23.266	72.901	96.167	0.669
97	267.000	16.103	68.317	84.420	0.735
98	267.000	9.831	36.130	45.961	1.424
99	267.000	19.997	74.836	94.853	0.668
100	267.000	15.277	58.657	73.934	0.858
101	267.000	12.230	55.355	47.563	1.442
102	225.000	24.892	36.869	60.161	1.114
103	225.000	17.854	28.686	37.740	2.010
104	257.000	11.722	165.588	177.382	0.296
105	257.000	15.319	150.630	165.949	0.321
106	252.000	5.709	36.504	42.213	1.349
107	252.000	3.706	26.021	39.727	1.508
108	252.000	5.080	20.214	25.254	2.443
109	252.000	6.262	15.899	22.161	3.091
110	252.000	5.565	18.579	24.144	2.653
111	252.000	4.540	13.390	17.946	3.694
112	252.000	5.775	17.807	22.782	2.896
113	252.000	7.513	22.187	29.620	2.212
114	321.000	21.910	63.201	87.111	0.917
115	321.000	15.789	55.864	70.853	1.109
116	321.000	9.185	41.469	58.654	1.584
	321.000	24.822	67.870	91.980	0.875
	321.000	19.820	55.588	74.688	1.086

3	100	321.000	9.363	43.496	53.459	1.430
3	101	321.000	30.464	58.637	89.101	0.991
3	119	321.000	19.765	58.047	69.012	1.204
3	120	321.000	12.797	43.104	55.901	1.430
3	121	321.000	33.898	54.323	88.221	1.057
3	122	321.000	31.915	47.141	78.956	1.227
3	123	321.000	32.480	53.902	86.502	1.071
3	124	321.000	26.841	47.685	74.526	1.234
3	125	321.000	16.035	43.926	59.961	1.389
3	126	321.000	25.990	57.415	83.405	1.020
3	127	321.000	19.469	43.675	63.144	1.381
3	128	321.000	13.232	47.014	60.246	1.389
3	129	321.000	22.986	62.948	85.934	0.947
3	130	321.000	19.590	51.614	71.204	1.168
3	131	321.000	11.727	52.366	64.093	1.181
3	132	321.000	27.347	148.790	158.137	0.417
3	133	314.000	21.528	137.780	159.308	0.425
3	134	321.000	17.695	55.986	73.681	1.284
3	135	267.000	7.972	39.256	47.228	1.320
3	136	321.000	21.270	61.030	82.300	0.982
3	137	267.000	11.381	48.625	60.006	1.051
3	138	321.000	25.566	62.420	88.056	0.946
3	139	267.000	13.179	53.444	66.623	0.950
3	140	321.000	26.197	62.916	89.113	0.937
3	141	267.000	12.863	52.447	65.310	0.969
3	142	321.000	26.093	66.040	92.933	0.891
3	143	267.000	12.817	50.886	63.783	0.999
3	144	321.000	38.969	55.990	94.959	1.007
3	145	243.000	31.911	39.826	70.937	1.082
3	146	321.000	22.011	65.273	87.284	0.916
3	147	314.000	17.091	49.701	66.792	1.193
3	148	432.000	30.034	136.228	166.254	0.590
3	149	265.000	25.318	102.700	128.018	0.467
3	150	265.000	10.408	108.510	126.998	0.454
3	151	360.000	17.570	64.266	81.844	1.066
3	152	360.000	10.604	32.875	43.475	2.126
3	153	222.000	20.910	66.911	95.821	0.577
3	154	222.000	21.485	40.971	62.456	0.979
3	155	378.000	16.637	43.440	60.085	1.663
3	156	378.000	10.025	30.410	40.435	1.916
3	157	222.000	33.896	64.640	90.544	0.502
3	158	222.000	24.339	47.000	71.339	0.841
3	159	378.000	15.485	46.900	62.465	1.543
3	160	378.000	9.611	41.981	51.592	1.755
3	161	222.000	34.618	63.891	98.509	0.587
3	162	222.000	25.055	50.762	75.817	0.776
3	163	378.000	15.747	49.780	65.527	1.455
3	164	378.000	9.638	46.117	55.755	1.598
3	165	222.000	33.463	62.156	95.619	0.607
3	166	222.000	23.517	50.229	73.745	0.792
3	167	378.000	15.501	40.871	64.372	1.483
3	168	378.000	8.926	51.481	60.407	1.434
3	169	195.000	30.060	56.485	86.545	0.584
3	170	195.000	21.606	42.346	63.932	0.819
3	171	271.000	15.920	58.489	74.337	0.873
3	172	271.000	9.200	62.509	71.877	0.836
3	173	236.000	33.521	43.763	79.264	0.841
3	174	236.000	24.200	38.701	64.989	1.662
3	175	208.000	14.007	43.243	57.255	1.230
3	176	208.000	8.725	51.179	59.904	1.860

3	1	288.000	5.499	37.639	43.138	1.458
3	2	226.000	31.845	42.909	74.833	0.993
3	179	288.000	21.153	32.534	53.727	1.591
3	180	288.000	11.564	28.971	32.535	2.568
3	181	243.000	62.504	126.758	189.254	0.285
3	182	267.000	25.289	72.558	97.847	0.666
3	183	267.000	18.181	71.276	89.437	0.698
3	184	350.000	18.651	37.524	48.175	1.889
3	185	350.000	12.295	53.323	65.618	1.267
3	186	243.000	62.493	125.828	188.313	0.287
3	187	222.000	21.988	77.758	99.738	0.514
3	188	222.000	24.892	79.718	103.610	0.501
3	189	388.000	17.886	56.265	74.151	1.883
3	190	388.000	14.315	61.438	75.754	0.938
3	191	222.000	27.312	100.788	128.092	0.386
3	192	222.000	34.686	108.158	142.756	0.347
3	193	388.000	25.267	65.594	98.861	0.838
3	194	388.000	12.152	51.848	63.280	1.128
3	195	222.000	29.133	89.272	118.485	0.432
3	196	222.000	31.582	79.465	110.987	0.479
3	197	388.000	22.672	58.258	80.962	0.952
3	198	388.000	12.401	48.271	68.672	1.192
3	199	336.000	24.936	84.511	109.447	0.736
3	200	222.000	26.679	67.499	94.178	0.579
3	201	388.000	28.274	59.868	71.134	1.188
3	202	388.000	12.455	43.578	56.825	1.328
3	203	272.000	28.125	89.121	117.246	0.547
3	204	272.000	24.268	87.951	112.219	0.563
3	205	272.000	18.737	64.147	82.884	0.796
3	206	272.000	18.485	13.973	24.458	2.743
3	207	272.000	34.252	72.151	106.483	0.659
3	208	272.000	29.336	54.818	84.166	0.885
3	209	272.000	28.532	56.169	76.781	0.895
3	210	272.000	11.276	13.414	24.698	3.887
3	211	222.000	31.626	48.601	72.287	0.936
3	212	222.000	22.853	41.492	64.545	0.968
3	213	222.000	13.157	49.322	62.479	0.847
3	214	222.000	12.892	98.389	182.481	0.464
3	215	288.000	5.878	67.741	73.619	0.889
3	216	263.000	15.723	34.585	58.388	1.438
3	217	263.000	14.848	52.365	67.214	0.948
3	218	263.000	14.852	32.584	47.356	1.527
3	219	263.000	19.192	74.962	94.154	0.658
3	220	263.000	18.687	78.835	96.722	0.626
3	221	263.000	21.531	66.484	87.935	0.727
3	222	263.000	18.689	62.717	81.326	0.779
3	223	256.000	64.789	173.848	238.629	0.228
3	224	256.000	19.692	114.138	153.812	0.414
3	225	256.000	51.186	125.648	176.746	0.326
3	226	256.000	25.686	91.394	117.888	0.584
3	227	256.000	29.968	99.648	129.617	0.454
3	228	256.000	31.645	93.483	125.128	0.488
3	229	256.000	34.482	132.778	167.172	0.354
3	230	256.000	28.627	103.318	131.937	0.445
3	231	256.000	58.829	178.838	238.859	0.242
3	232	256.000	28.517	118.868	139.377	0.418
3	233	243.000	64.483	183.678	168.873	0.345
3	234	243.000	25.243	72.569	97.612	0.682
3	235	243.000	51.898	112.788	164.678	0.339
3	236	243.000	58.727	115.758	174.477	0.318

3	231	321.000	15.792	108.400	124.272	0.563
3	232	425.000	21.632	92.775	114.487	0.878
3	233	314.000	18.797	70.915	89.612	0.834
3	240	267.000	22.306	54.762	77.068	0.894
3	241	267.000	15.397	56.838	72.235	0.885
3	242	267.000	28.982	74.236	103.218	0.641
3	243	267.000	18.126	45.855	63.981	1.085
3	244	267.000	12.069	43.667	55.732	1.168
3	245	267.000	6.869	33.625	40.494	1.547
3	246	267.000	10.651	37.524	48.175	1.366
3	247	252.000	21.275	91.037	112.312	0.507
3	248	302.000	21.332	107.130	128.462	0.524
3	249	302.000	22.266	77.245	99.611	0.724
3	250	226.000	17.831	106.940	124.771	0.389
3	251	302.000	22.065	62.376	84.459	0.698
3	252	302.000	26.000	87.515	114.123	0.630
3	253	229.000	10.812	141.570	152.382	0.308
3	254	229.000	7.921	38.363	46.284	1.153
3	255	338.000	15.857	45.483	61.330	1.417
3	256	338.000	16.339	58.267	66.686	1.260
3	257	168.000	14.863	109.090	123.953	0.281
3	258	338.000	17.445	44.558	62.883	1.439
3	259	338.000	18.604	51.327	69.921	1.245
3	260	229.000	12.529	35.635	48.164	1.215
3	261	338.000	12.722	55.106	67.918	1.179
3	262	226.000	16.493	120.898	137.383	0.347
3	263	226.000	19.308	120.580	139.888	0.343
3	264	338.000	16.770	43.894	60.664	1.464
3	265	263.000	7.256	154.720	161.976	0.351
3	266	263.000	4.565	153.540	156.105	0.337
3	267	393.000	22.871	159.290	182.161	0.465
3	268	320.000	40.750	76.585	117.335	0.729
3	269	253.000	53.708	77.364	131.172	0.515
3	270	253.000	62.364	71.463	133.827	0.534
3	271	253.000	66.865	68.823	135.492	0.542
3	272	253.000	79.044	75.930	154.982	0.458
3	273	257.000	89.060	339.050	428.910	0.099
3	274	256.000	71.151	315.830	386.981	0.142
3	275	256.000	58.287	62.850	140.337	0.579
3	276	263.000	45.621	279.670	325.291	0.152
3	277	263.000	39.687	88.159	127.846	0.507
3	278	296.000	37.634	249.890	286.524	0.208
3	279	331.000	25.403	106.330	129.733	0.616
3	280	296.000	10.342	147.730	158.872	0.387
3	281	283.000	24.888	89.274	113.362	0.535
3	282	263.000	7.582	85.362	92.864	0.599
3	283	283.000	4.176	82.280	86.464	0.629
3	284	226.000	22.635	76.407	99.642	0.552
3	285	210.000	36.916	83.611	120.529	0.414
3	286	210.000	51.698	96.961	132.651	0.342
3	287	210.000	64.025	91.187	155.162	0.320
3	288	210.000	61.719	65.463	127.181	0.453
3	289	265.000	40.887	282.100	330.987	0.152
3	290	226.000	46.453	246.410	292.863	0.146
3	291	257.000	77.585	313.570	391.195	0.114
3	292	92.000	7.875	20.285	27.361	0.837
3	293	92.000	8.130	14.108	22.239	1.198
3	294	92.000	8.276	13.949	22.225	1.208
3	295	92.000	8.142	13.791	21.933	1.216
3	296	92.000	7.123	20.316	28.079	0.812

Range = 0.1 - 0.16

Ave = .13

0.099
 .114
 .142
 .146
 .152
 .155

3	84.000	5.827	50.139	55.966	0.312
3	92.000	7.062	21.025	28.107	0.006
3	299	8.147	14.168	22.315	1.184
3	300	8.278	14.080	22.358	1.189
3	301	8.125	13.618	21.743	1.232
3	302	7.043	10.685	25.728	0.909
3	303	13.000	44.400	50.289	0.348
3	304	68.000	22.244	23.303	0.557
3	305	68.000	23.086	29.068	0.536
3	306	68.000	20.435	26.498	0.686
3	307	68.000	22.088	28.145	0.561
3	308	60.000	55.527	64.745	0.212
3	309	60.000	91.348	103.247	0.123
3	310	68.000	12.247	211.947	0.055
3	311	68.000	12.587	107.986	0.116
3	312	60.000	11.376	97.591	0.131
3	313	95.000	11.205	55.103	0.382
3	314	95.000	7.659	55.272	0.367
3	315	95.000	4.965	19.831	1.211
3	316	95.000	5.809	22.821	1.049
3	317	95.000	5.785	21.702	1.121
3	318	96.000	5.584	21.476	1.012
3	319	96.000	5.273	20.943	1.039
3	320	87.000	5.338	21.586	1.010
3	321	87.000	5.863	23.389	0.926
3	322	84.000	5.766	20.164	1.007
3	323	87.000	5.557	24.695	0.851
3	324	87.000	4.822	24.717	0.826
3	325	89.000	6.375	24.874	0.893
3	326	85.000	6.036	25.240	0.866
3	327	82.000	6.243	22.955	0.907
3	328	82.000	6.400	23.151	0.902
3	329	68.000	6.107	18.584	0.992
3	330	68.000	6.174	20.043	0.843
3	331	68.000	4.719	47.791	0.294
3	332	68.000	4.949	93.477	0.122
3	333	68.000	4.693	45.265	0.305
3	334	68.000	4.993	83.469	0.160

Page 0.06 - 0.16

Ave = 0.12

1056
1116
1123
1131
1142
1161

334 ITEM LINES SUMMED, WITH LAST TYPE = 3 AND ELEM = 334

Cell	Range	Ave	Rank
ADC	0.07 - 0.20	0.14	(3)
CPC	0.15	0.15	(4)
LWC	> 0.2	> 0.2	(5)
GPC	0.1 - 0.16	0.13	(2)
TOP	0.06 - 0.16	0.12	(1)

ADDP (10/10/76 U 00.442
CODE VERSION 10/16 U 05.10.22

SUM OF ELEMENT-CENTER STRESSES FROM PREPOST OUTPUT FILES... PRPOA PRPOB

DESCRIPTOR BLOCK FROM FILE PRPOA

PREPOST RUN 10/11/76 Z 15.798
CODE VERSION 10/08 U 12.12.38

USING SAP40 INPUT FILES NAMED... SAP40IIEV SAP40II-7

THE NFS PLANT (UNITS=K.FT.SEC)***MIN PILE-MIN SOIL***8/30/76

BOX R07 DAVITO/II-7 59 1

DESCRIPTOR BLOCK FROM FILE PRPOB

PREPOST RUN 10/11/76 Z 10.979
CODE VERSION 10/08 U 12.12.38

USING SAP40 INPUT FILE NAMED... SAP40DL-I
THE NFS PLANT (UNITS=K-FT-SEC) 7/14/76

BOX R07 DAVITO/DL-I 59 1

DESCRIPTOR FROM ALLOWABLE-SHEAR-STRESS-FILE SHEAR

ELEMENT ULT. SHEAR VALUES***NFS***10-15-76

NUM ELE = 334 ACCEL FACTOR = 0.200

*WILL NOT APPLY PSI FACTOR IN THIS CODE.

SUM OF STRESSES FROM THE TWO FILES

STRESSES FROM FILE PRPOA

TYPE	ELEM	MX PR STRS	MIN PR STRS	MXPR SHR -	MXPR SHR +
3	1	1.1589E+02	-8.8719E+01	1.0231E+02	1.2421E+02
3	2	1.4037E+02	-1.9729E+01	8.4340E+01	1.2093E+02
3	3	9.7633E+01	-1.6594E+01	5.7293E+01	7.2371E+01
3	4	1.0626E+02	-1.1769E+02	1.1197E+02	1.2184E+02
3	5	6.4433E+01	-8.0350E+01	7.2391E+01	7.6267E+01
3	6	5.6868E+01	-6.1418E+01	5.9142E+01	5.9351E+01
3	7	1.1609E+02	-1.2226E+02	1.1918E+02	1.3277E+02
3	8	7.0583E+01	-8.0787E+01	7.5685E+01	7.7717E+01
3	9	5.0150E+01	-4.3714E+01	4.6933E+01	4.8441E+01
3	10	1.4278E+02	-1.4894E+02	1.4586E+02	1.5458E+02
3	11	1.0439E+02	-1.0667E+02	1.0553E+02	1.1139E+02
3	12	5.8921E+01	-5.0986E+01	5.4953E+01	5.6630E+01
3	13	1.5038E+02	-1.6097E+02	1.5967E+02	1.6381E+02
3	14	1.0891E+02	-1.2797E+02	1.1844E+02	1.1989E+02
3	15	5.9285E+01	-6.6711E+01	6.2998E+01	6.3042E+01
3	16	1.1783E+02	-9.9753E+01	1.0879E+02	1.1354E+02
3	17	7.6987E+01	-9.3869E+01	8.5429E+01	8.6243E+01
3	18	5.1625E+01	-5.0953E+01	5.5289E+01	5.6162E+01
3	19	9.7124E+01	-1.1409E+02	1.0561E+02	1.1151E+02
3	20	7.1707E+01	-8.8145E+01	7.9927E+01	8.3409E+01
3	21	5.3348E+01	-5.9972E+01	5.6660E+01	5.6851E+01
3	22	4.6643E+01	-5.0979E+01	4.8811E+01	4.8955E+01
3	23	7.9910E+01	-9.8876E+01	8.9393E+01	9.3363E+01
3	24	6.6929E+01	-8.0235E+01	7.3582E+01	7.6725E+01
3	25	1.0769E+02	-6.3097E+01	8.5395E+01	8.9853E+01
3	26	8.3214E+01	-1.0125E+02	9.2235E+01	9.7222E+01
3	27	8.5587E+01	-9.8834E+01	9.2211E+01	9.9308E+01
3	28	4.1396E+01	-4.0923E+01	4.1159E+01	4.1256E+01
3	29	6.4216E+01	-1.0127E+02	8.2742E+01	8.4297E+01
3	30	5.4143E+01	-7.3736E+01	6.3936E+01	6.5435E+01
3	31	7.0185E+01	-9.2671E+01	8.1428E+01	8.3877E+01
3	32	5.5515E+01	-7.0217E+01	6.2066E+01	6.4685E+01
3	33	7.6633E+01	-8.1180E+01	7.8907E+01	8.3264E+01
3	34	5.0346E+01	-6.5770E+01	5.8059E+01	5.9557E+01
3	35	8.2557E+01	-7.8067E+01	8.0312E+01	8.2689E+01
3	36	6.0804E+01	-6.3142E+01	6.1974E+01	6.4695E+01
3	37	4.8699E+01	-5.1325E+01	5.0012E+01	5.2364E+01
3	38	5.8518E+01	-9.4673E+01	7.6595E+01	8.1544E+01
3	39	5.7759E+01	-7.2416E+01	6.5887E+01	6.5693E+01
3	40	6.4216E+01	-5.6664E+01	6.0440E+01	6.1563E+01
3	41	7.2675E+01	-4.4717E+01	5.8636E+01	6.0668E+01
3	42	8.1268E+01	-3.4571E+01	5.7920E+01	6.1045E+01
3	43	3.3506E+02	-2.5358E+02	2.9431E+02	3.0521E+02
3	44	9.4864E+01	-2.6461E+01	6.0262E+01	7.9357E+01
3	45	2.7687E+01	-5.8017E+01	4.2052E+01	4.5720E+01
3	46	9.7489E+01	-6.3425E+01	8.0450E+01	8.7925E+01
3	47	3.0528E+01	-3.7976E+01	3.4252E+01	3.7330E+01
3	48	1.3129E+02	-9.8364E+01	1.1508E+02	1.2025E+02
3	49	6.5267E+01	-6.0614E+01	6.6940E+01	6.7741E+01
3	50	2.1483E+02	-2.0811E+02	2.1147E+02	2.1692E+02
3	51	1.3232E+02	-3.5874E+01	8.4896E+01	1.0918E+02
3	52	1.5105E+02	-3.2883E+01	9.1966E+01	1.2726E+02
3	53	8.9964E+01	-3.7858E+01	6.3917E+01	7.1776E+01
3	54	5.2503E+01	-1.3855E+01	3.2779E+01	4.0756E+01

MX PR STRS	MIN PR STRS	MXPR SHR -	MXPR SHR +
1.2546E+02	-6.2547E+00	6.5859E+01	8.7760E+01
1.5150E+02	2.2474E+01	6.4511E+01	1.0109E+02
9.6901E+01	6.8651E+00	4.5018E+01	6.0096E+01
1.2173E+02	-1.4554E+01	6.8141E+01	7.8002E+01
7.4508E+01	-1.9485E+01	4.7016E+01	5.0892E+01
5.7315E+01	-4.4280E+01	5.0797E+01	5.1006E+01
1.3565E+02	-5.5533E+00	7.0690E+01	8.4193E+01
7.7680E+01	-1.5576E+01	4.6628E+01	4.8660E+01
4.8740E+01	-2.5703E+01	3.7222E+01	3.8730E+01
1.4665E+02	-3.2117E+01	8.9384E+01	9.0108E+01
1.0030E+02	-2.7753E+01	6.4027E+01	6.9891E+01
4.3017E+01	-2.0065E+01	3.1941E+01	3.3626E+01
1.4101E+02	-5.9656E+01	1.0033E+02	1.0447E+02
9.7818E+01	-5.5518E+01	7.6664E+01	7.8113E+01
4.1243E+01	-3.6151E+01	3.8697E+01	3.8741E+01
1.1258E+02	-3.8416E+01	7.5497E+01	8.0242E+01
7.3835E+01	-4.9018E+01	6.1027E+01	6.1841E+01
4.6525E+01	-2.3918E+01	3.5221E+01	3.6094E+01
9.7999E+01	-2.0784E+01	5.9391E+01	6.5289E+01
6.9291E+01	-1.8298E+01	4.3795E+01	4.7277E+01
4.0422E+01	-2.9452E+01	3.4937E+01	3.5128E+01
3.1142E+01	-2.3332E+01	2.7187E+01	2.7351E+01
8.9525E+01	-2.7623E+01	5.8574E+01	6.2544E+01
7.4536E+01	-2.3756E+01	4.9146E+01	5.2289E+01
1.0960E+02	-3.7277E+01	7.3541E+01	7.7999E+01
9.5071E+01	-2.4568E+01	5.9816E+01	6.4003E+01
9.9615E+01	-1.5541E+01	5.7578E+01	6.4755E+01
4.2089E+01	-3.4568E+01	3.8320E+01	3.8425E+01
7.5000E+01	-3.7667E+01	5.6334E+01	5.7869E+01
6.1713E+01	-2.8526E+01	4.5119E+01	4.6618E+01
8.0138E+01	-3.2746E+01	5.6442E+01	5.8891E+01
6.2968E+01	-2.6255E+01	4.4611E+01	4.6430E+01
8.5977E+01	-2.2827E+01	5.4402E+01	5.8759E+01
5.7194E+01	-2.5240E+01	4.1217E+01	4.2716E+01
8.8907E+01	-3.6060E+01	6.2483E+01	6.4060E+01
6.3067E+01	-3.0156E+01	4.6612E+01	4.9333E+01
5.1140E+01	-2.4056E+01	3.7590E+01	3.9950E+01
7.2642E+01	-1.2242E+01	4.2442E+01	4.7391E+01
5.7016E+01	-3.5769E+01	4.6390E+01	4.6996E+01
5.8936E+01	-3.0717E+01	4.4827E+01	4.5958E+01
6.3484E+01	-2.5788E+01	4.4636E+01	4.6688E+01
6.8837E+01	-2.0803E+01	4.4820E+01	4.7945E+01
3.4075E+02	-1.8528E+02	2.6301E+02	2.7391E+02
9.4538E+01	1.2170E+01	4.1180E+01	6.0275E+01
3.6651E+01	-4.3122E+00	2.0731E+01	2.3687E+01
9.9271E+01	-9.3242E+00	5.4298E+01	6.1765E+01
2.8124E+01	-2.1356E+00	1.5130E+01	1.8208E+01
1.3466E+02	-5.6689E+01	9.5772E+01	1.0094E+02
6.2333E+01	-4.2003E+01	5.2169E+01	5.2970E+01
2.2384E+02	-1.3395E+02	1.7690E+02	1.8435E+02
1.3377E+02	-5.3868E+00	6.9576E+01	9.4859E+01
1.5917E+02	1.6870E+01	7.1540E+01	1.0684E+02
8.7762E+01	-1.4039E+00	4.4583E+01	5.2442E+01
4.5519E+01	3.6008E+00	2.0959E+01	2.8936E+01

3	6.8059E+01	-5.6697E+01	6.2778E+01	6.4580E+01	6.6296E+01	-2.5828E+01	4.6062E+01	4.786
3	4.6543E+01	-3.8699E+01	4.2621E+01	4.3438E+01	3.9039E+01	-2.1037E+01	3.0438E+01	3.125
3	6.3077E+01	-6.7004E+01	6.5041E+01	6.6169E+01	6.2058E+01	-4.4033E+01	5.3046E+01	5.3374E+01
57	5.0807E+01	-5.2123E+01	5.1465E+01	5.1506E+01	4.3566E+01	-3.7350E+01	4.0508E+01	4.0549E+01
58	6.6203E+01	-6.4531E+01	6.5406E+01	6.5872E+01	6.5163E+01	-4.4690E+01	5.4930E+01	5.5396E+01
59	5.4094E+01	-5.0772E+01	5.2433E+01	5.2617E+01	4.7957E+01	-3.7741E+01	4.2049E+01	4.3033E+01
60	7.7518E+01	-5.8279E+01	6.7890E+01	6.9077E+01	7.7002E+01	-4.3070E+01	6.0436E+01	6.1615E+01
61	6.4986E+01	-4.7401E+01	5.6193E+01	5.7184E+01	6.0911E+01	-3.5231E+01	4.8106E+01	4.9097E+01
62	1.0743E+02	-9.0417E+01	9.8924E+01	9.9443E+01	1.0914E+02	-7.4296E+01	9.1718E+01	9.2237E+01
63	0.7390E+01	-7.7050E+01	8.2224E+01	8.2626E+01	8.6512E+01	-6.8040E+01	7.7280E+01	7.7682E+01
64	1.3123E+02	-1.2250E+02	1.2686E+02	1.2725E+02	1.3357E+02	-9.6630E+01	1.1510E+02	1.1549E+02
65	1.0901E+02	-1.0449E+02	1.0675E+02	1.0690E+02	1.0678E+02	-9.4002E+01	1.0043E+02	1.0058E+02
66	1.4166E+02	-1.4115E+02	1.4140E+02	1.4174E+02	1.4160E+02	-1.1407E+02	1.2023E+02	1.2057E+02
67	1.2846E+02	-1.1108E+02	1.1977E+02	1.2033E+02	1.2754E+02	-9.2923E+01	1.1023E+02	1.1079E+02
68	1.0458E+02	-8.0539E+01	9.2559E+01	9.4246E+01	9.5795E+01	-4.6754E+01	7.1275E+01	7.2962E+01
69	9.0185E+01	-7.3993E+01	8.2009E+01	8.4752E+01	8.4212E+01	-3.7299E+01	6.0751E+01	6.3414E+01
70	9.1998E+01	-9.3343E+01	9.2670E+01	9.3477E+01	7.6661E+01	-5.0173E+01	6.3417E+01	6.4224E+01
71	7.9052E+01	-8.7393E+01	8.3222E+01	8.5078E+01	7.2459E+01	-3.4949E+01	5.3704E+01	5.5560E+01
72	5.3750E+01	-6.6876E+01	6.0313E+01	6.2209E+01	5.3447E+01	-1.9323E+01	3.6385E+01	3.8361E+01
73	5.1596E+01	-7.0671E+01	6.1133E+01	6.5023E+01	5.9131E+01	-1.0685E+01	3.4908E+01	3.8798E+01
74	5.9269E+01	-7.7681E+01	6.8475E+01	7.4010E+01	6.0185E+01	-4.6950E+00	3.6440E+01	4.2775E+01
75	5.0100E+01	-7.9411E+01	6.4756E+01	6.8537E+01	5.8760E+01	-1.1151E+01	3.4956E+01	3.8737E+01
76	6.2503E+01	-9.0303E+01	7.6443E+01	8.5023E+01	7.7202E+01	5.6200E-02	3.8572E+01	4.7152E+01
77	5.0632E+01	-8.4417E+01	6.7525E+01	7.1157E+01	5.9944E+01	-1.2470E+01	3.6207E+01	3.9839E+01
78	5.6684E+01	-9.6792E+01	7.6737E+01	8.3559E+01	7.2264E+01	-4.3550E+00	3.8319E+01	4.5141E+01
79	5.1039E+01	-8.2159E+01	6.6599E+01	6.9679E+01	5.9315E+01	-1.5131E+01	3.7223E+01	4.0303E+01
80	5.2763E+01	-1.0349E+02	7.8120E+01	8.3086E+01	6.8400E+01	-1.0626E+01	3.9517E+01	4.4475E+01
81	5.6692E+01	-5.1057E+01	5.3875E+01	5.5964E+01	5.2185E+01	-1.7426E+01	3.4006E+01	3.6895E+01
82	5.0019E+01	-6.0713E+01	5.5366E+01	6.0900E+01	5.6771E+01	-3.5914E+00	3.0181E+01	3.5715E+01
83	7.1046E+01	-3.3501E+01	5.2673E+01	5.5724E+01	7.2921E+01	-2.3594E+01	4.8257E+01	5.1308E+01
84	6.5608E+01	-7.1615E+01	6.0652E+01	7.0110E+01	7.0050E+01	1.9706E+00	3.8036E+01	4.7494E+01
85	5.9040E+01	-4.3056E+01	5.1451E+01	5.2793E+01	6.1060E+01	-2.9999E+01	4.5529E+01	4.6871E+01
86	6.4591E+01	-7.8196E+01	7.1393E+01	7.9708E+01	7.7409E+01	-1.5530E+00	3.9521E+01	4.7836E+01
87	5.3141E+01	-5.6944E+01	5.5042E+01	5.5700E+01	5.5893E+01	-3.3396E+01	4.4644E+01	4.5302E+01
88	6.2965E+01	-8.5906E+01	7.4435E+01	8.0763E+01	7.5275E+01	-7.9727E+00	4.1624E+01	4.7952E+01
89	5.1350E+01	-7.5416E+01	6.3307E+01	6.4166E+01	5.7138E+01	-3.3266E+01	4.5202E+01	4.5981E+01
90	6.9433E+01	-1.0775E+02	8.8592E+01	8.9162E+01	7.8413E+01	-5.3341E+01	6.5877E+01	6.6447E+01
91	5.5483E+01	-8.5711E+01	7.0590E+01	7.1042E+01	6.2660E+01	-4.3201E+01	5.2981E+01	5.3425E+01
92	6.4769E+01	-7.2823E+01	6.8796E+01	6.8920E+01	6.2517E+01	-5.1839E+01	5.7170E+01	5.7310E+01
93	7.3009E+01	-1.0019E+02	9.0599E+01	9.1036E+01	7.8091E+01	-5.4419E+01	6.6255E+01	6.6292E+01
94	7.2444E+01	-8.4996E+01	7.8720E+01	7.9150E+01	7.4508E+01	-4.9524E+01	6.2016E+01	6.2446E+01
95	3.9314E+01	-4.7087E+01	4.3201E+01	4.4004E+01	4.3191E+01	-2.2557E+01	3.2874E+01	3.3677E+01
96	8.6117E+01	-6.8145E+01	8.7132E+01	8.8069E+01	9.0183E+01	-4.5310E+01	6.7747E+01	6.8704E+01
97	6.3754E+01	-7.4936E+01	6.9345E+01	7.0095E+01	6.5098E+01	-4.2390E+01	5.3744E+01	5.4484E+01
98	4.0983E+01	-5.1305E+01	4.6144E+01	4.7446E+01	4.6170E+01	-1.9627E+01	3.2097E+01	3.2061E+01
99	4.9253E+01	-6.2414E+01	5.5833E+01	6.2167E+01	5.9494E+01	-1.1708E+00	3.0336E+01	3.6670E+01
100	2.5606E+01	-4.9057E+01	3.7331E+01	3.9474E+01	3.2707E+01	-6.1629E+00	1.9475E+01	2.1618E+01
101	1.9459E+02	-1.4429E+02	1.6944E+02	1.7108E+02	1.0325E+02	-1.2011E+02	1.5168E+02	1.5332E+02
102	1.7161E+02	-1.5159E+02	1.6160E+02	1.6189E+02	1.5249E+02	-1.2672E+02	1.3961E+02	1.3990E+02
103	5.2903E+01	-2.5719E+01	3.9351E+01	3.9650E+01	3.9033E+01	-2.7748E+01	3.3791E+01	3.4090E+01
104	4.9186E+01	6.9002E-01	2.4248E+01	2.8500E+01	4.0676E+01	-6.2548E-01	2.0651E+01	2.4911E+01
105	4.2240E+01	-4.7446E+00	2.3496E+01	2.5224E+01	2.9992E+01	-6.0705E+00	1.8026E+01	1.9754E+01
106	3.5752E+01	-9.0464E+00	2.2399E+01	2.2738E+01	2.0517E+01	-1.1503E+01	1.6010E+01	1.6349E+01
107	3.4632E+01	-9.4570E+00	2.2044E+01	2.2440E+01	2.1769E+01	-1.1412E+01	1.6390E+01	1.6966E+01
108	2.8497E+01	-7.6233E+00	1.8068E+01	1.8383E+01	1.7529E+01	-9.3679E+00	1.3449E+01	1.3771E+01
109	4.0353E+01	-8.0970E-01	2.0502E+01	2.2061E+01	2.6394E+01	-2.8752E+00	1.4633E+01	1.6914E+01
110	5.2051E+01	2.7662E+00	2.5042E+01	2.9325E+01	3.5687E+01	6.1041E-01	1.7538E+01	2.1021E+01
111	7.2381E+01	-9.6440E+01	8.4410E+01	8.5445E+01	8.0020E+01	-4.5935E+01	6.3377E+01	6.412E+01
112	6.3239E+01	-7.2757E+01	6.7998E+01	6.9165E+01	6.8961E+01	-3.6073E+01	5.2917E+01	5.4004E+01
113	4.9320E+01	-4.9254E+01	4.9291E+01	4.9816E+01	5.2501E+01	-2.0759E+01	4.0630E+01	4.1157E+01

3	1	7.5981E+01	-1.0227E+02	8.9124E+01	9.0195E+01
3	117	6.3548E+01	-8.0255E+01	7.1901E+01	7.2732E+01
3	118	5.3406E+01	-4.6946E+01	5.0215E+01	5.1175E+01
3	119	6.8615E+01	-1.0754E+02	8.0070E+01	8.9256E+01
3	120	6.4720E+01	-6.5192E+01	6.4956E+01	6.9305E+01
3	121	5.0105E+01	-5.0752E+01	5.0408E+01	5.3202E+01
3	122	6.1319E+01	-1.0690E+02	8.4147E+01	8.7536E+01
3	123	6.3750E+01	-8.9230E+01	7.6490E+01	8.1867E+01
3	124	7.1660E+01	-1.0369E+02	8.7678E+01	9.0419E+01
3	125	6.4083E+01	-8.3482E+01	7.3783E+01	7.7413E+01
3	126	5.5763E+01	-6.5748E+01	6.0752E+01	6.2851E+01
3	127	5.7936E+01	-1.1148E+02	8.4706E+01	8.5171E+01
3	128	5.1429E+01	-7.6796E+01	6.4112E+01	6.5714E+01
3	129	6.5680E+01	-6.6348E+01	6.6018E+01	6.6730E+01
3	130	7.0114E+01	-1.0911E+02	8.9613E+01	9.0114E+01
3	131	5.9536E+01	-9.1582E+01	7.5559E+01	7.6209E+01
3	132	6.6040E+01	-7.6991E+01	7.1916E+01	7.1968E+01
3	133	1.7863E+02	-1.5793E+02	1.6827E+02	1.7022E+02
3	134	1.5794E+02	-1.5203E+02	1.5499E+02	1.5546E+02
3	135	7.1987E+01	-6.1933E+01	6.6961E+01	7.0405E+01
3	136	4.4721E+01	-4.6771E+01	4.5746E+01	4.6107E+01
3	137	7.4360E+01	-8.1319E+01	7.7040E+01	8.0200E+01
3	138	5.2492E+01	-6.3225E+01	5.7058E+01	5.8193E+01
3	139	7.0026E+01	-9.6774E+01	8.3400E+01	8.5337E+01
3	140	5.5959E+01	-6.9702E+01	6.2871E+01	6.3320E+01
3	141	6.6943E+01	-1.0100E+02	8.3970E+01	8.5862E+01
3	142	5.3941E+01	-6.6954E+01	6.0448E+01	6.1163E+01
3	143	7.0123E+01	-9.9330E+01	8.0726E+01	9.2147E+01
3	144	5.6143E+01	-6.5386E+01	6.0764E+01	6.1793E+01
3	145	8.2307E+01	-9.0880E+01	9.0594E+01	9.5465E+01
3	146	6.6064E+01	-7.5130E+01	7.0998E+01	7.3452E+01
3	147	8.9471E+01	-5.6877E+01	7.3174E+01	8.1894E+01
3	148	6.2170E+01	-5.4330E+01	5.0250E+01	6.2509E+01
3	149	1.7608E+02	-1.5332E+02	1.6510E+02	1.6770E+02
3	150	1.3959E+02	-1.0104E+02	1.2032E+02	1.3405E+02
3	151	1.2583E+02	-1.0184E+02	1.1383E+02	1.2142E+02
3	152	7.3272E+01	-7.7892E+01	7.5582E+01	7.7270E+01
3	153	3.4630E+01	-4.4542E+01	3.9506E+01	4.0250E+01
3	154	9.1387E+01	-7.2242E+01	8.1817E+01	9.1551E+01
3	155	4.8061E+01	-6.0870E+01	5.4466E+01	5.8242E+01
3	156	4.7579E+01	-6.0408E+01	5.7994E+01	5.8480E+01
3	157	4.6246E+01	-4.7364E+01	4.6005E+01	4.7455E+01
3	158	8.0177E+01	-9.4776E+01	8.7476E+01	9.4325E+01
3	159	5.3727E+01	-7.3900E+01	6.3813E+01	6.7118E+01
3	160	4.8403E+01	-6.9611E+01	5.9047E+01	5.9817E+01
3	161	4.5047E+01	-5.6492E+01	4.9769E+01	5.0005E+01
3	162	7.3854E+01	-1.0322E+02	8.8535E+01	9.3745E+01
3	163	5.7203E+01	-7.0297E+01	6.7769E+01	7.1117E+01
3	164	5.4969E+01	-6.7834E+01	6.1401E+01	6.3045E+01
3	165	5.0623E+01	-5.6587E+01	5.3602E+01	5.4417E+01
3	166	6.9205E+01	-1.0302E+02	8.6130E+01	9.0408E+01
3	167	5.0319E+01	-7.2421E+01	6.5370E+01	6.9200E+01
3	168	5.8060E+01	-5.5010E+01	5.6934E+01	6.2036E+01
3	169	6.5993E+01	-4.6722E+01	5.6357E+01	6.0351E+01
3	170	6.3293E+01	-9.3209E+01	7.0250E+01	8.2159E+01
3	171	5.3401E+01	-6.1300E+01	5.7351E+01	6.1759E+01
3	172	8.5707E+01	-2.1336E+01	5.3523E+01	7.5479E+01
3	173	9.1117E+01	-3.9253E+01	6.5185E+01	7.4697E+01
3	174	6.8095E+01	-9.2433E+01	7.6264E+01	7.9204E+01
3	175	4.5143E+01	-6.2811E+01	5.3977E+01	5.6775E+01

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8.5026E+01	-4.6537E+01	6.5702E+01	6.6857E+01
6.9412E+01	-3.7204E+01	5.3348E+01	5.4175E+01
5.6267E+01	-2.5326E+01	4.0796E+01	4.1756E+01
7.7433E+01	-3.6121E+01	5.6777E+01	5.7955E+01
6.6507E+01	-2.2404E+01	4.4455E+01	4.8804E+01
5.2109E+01	-2.1761E+01	3.6975E+01	3.9709E+01
7.5980E+01	-2.2717E+01	4.9352E+01	5.2741E+01
7.5040E+01	-1.2376E+01	4.3708E+01	4.9085E+01
7.8474E+01	-2.8737E+01	5.3606E+01	5.6347E+01
6.8617E+01	-2.2306E+01	4.5452E+01	4.9092E+01
5.8789E+01	-2.7114E+01	4.2952E+01	4.5051E+01
6.8962E+01	-4.8410E+01	5.8686E+01	5.9151E+01
6.0304E+01	-2.7871E+01	4.4007E+01	4.5689E+01
6.3102E+01	-3.8475E+01	5.0789E+01	5.1509E+01
7.8045E+01	-3.4516E+01	6.6600E+01	6.7181E+01
6.7280E+01	-4.3112E+01	5.5186E+01	5.5846E+01
6.1274E+01	-5.4800E+01	5.8037E+01	5.8861E+01
1.7608E+02	-1.0899E+02	1.4253E+02	1.4440E+02
1.4971E+02	-1.1780E+02	1.3375E+02	1.3427E+02
7.6201E+01	-2.2520E+01	4.9355E+01	5.2869E+01
4.4676E+01	-2.9858E+01	3.7267E+01	3.7620E+01
7.9364E+01	-3.3118E+01	5.6241E+01	5.8601E+01
5.3792E+01	-3.7086E+01	4.5039E+01	4.6174E+01
7.8197E+01	-3.6301E+01	5.7289E+01	5.9226E+01
5.0710E+01	-3.9243E+01	4.0977E+01	4.9434E+01
7.7757E+01	-3.6807E+01	5.7322E+01	5.9214E+01
5.8920E+01	-3.5523E+01	4.7222E+01	4.7937E+01
8.9531E+01	-3.2440E+01	6.0995E+01	6.4406E+01
6.1495E+01	-3.3727E+01	4.7611E+01	4.8640E+01
8.1160E+01	-1.7190E+01	4.9175E+01	5.4846E+01
5.6326E+01	-1.7409E+01	3.6860E+01	3.9322E+01
9.5961E+01	-7.0652E+00	5.1513E+01	6.0233E+01
6.8574E+01	-1.3553E+01	4.1063E+01	4.5482E+01
1.7471E+02	-9.7617E+01	1.3616E+02	1.3064E+02
1.5800E+02	-4.2625E+01	9.6713E+01	1.1045E+02
1.3480E+02	-5.7096E+01	9.5980E+01	1.0357E+02
7.3770E+01	-4.3371E+01	5.8571E+01	6.0267E+01
3.5044E+01	-2.2276E+01	2.9060E+01	2.5772E+01
1.0007E+02	-5.0364E+00	5.2555E+01	6.2289E+01
5.5168E+01	-9.6703E+00	3.2419E+01	3.6195E+01
5.2010E+01	-3.0647E+01	4.1333E+01	4.1819E+01
4.0163E+01	-2.5337E+01	3.6720E+01	3.7370E+01
9.2217E+01	-1.3503E+01	5.2903E+01	5.9750E+01
6.1525E+01	-1.5793E+01	3.8659E+01	4.1964E+01
5.4227E+01	-3.2776E+01	4.3502E+01	4.4272E+01
4.6400E+01	-3.3729E+01	4.0094E+01	4.0330E+01
8.7354E+01	-1.9204E+01	5.3319E+01	5.8529E+01
6.5999E+01	-1.8004E+01	4.2801E+01	4.5329E+01
6.0712E+01	-3.0168E+01	4.5440E+01	4.7084E+01
5.3940E+01	-3.3644E+01	4.3752E+01	4.4607E+01
8.2948E+01	-2.1723E+01	5.2355E+01	5.6654E+01
6.7066E+01	-1.5615E+01	4.1342E+01	4.5180E+01
6.4393E+01	-1.7614E+01	4.1003E+01	4.1163E+01
6.0082E+01	-2.5402E+01	4.7102E+01	5.1176E+01
7.5706E+01	-1.9817E+01	4.7762E+01	5.1571E+01
6.1183E+01	-9.5264E+00	3.5359E+01	3.9743E+01
8.7911E+01	1.3422E+01	3.7245E+01	5.5201E+01
9.0086E+01	-2.0273E+01	5.5540E+01	6.5052E+01
6.4081E+01	-1.8603E+01	4.1342E+01	4.6222E+01
4.7415E+01	-9.7909E+00	2.8603E+01	3.1401E+01

3	1	7.4040E+01	-2.3685E+01	4.8063E+01	5.9518E+01
3	1	7.0230E+01	-9.7900E+00	4.4014E+01	6.0938E+01
3	177	5.1147E+01	1.3342E+01	1.8902E+01	4.4211E+01
3	178	5.2455E+01	-9.2757E+01	7.2610E+01	7.5024E+01
3	179	4.5284E+01	-5.6657E+01	5.0970E+01	5.4002E+01
3	180	2.5509E+01	-4.0552E+01	3.3030E+01	3.3769E+01
3	181	1.3310E+02	-2.2613E+02	1.7962E+02	1.8329E+02
3	182	6.9634E+01	-1.1155E+02	9.0593E+01	9.1347E+01
3	183	7.0510E+01	-8.5782E+01	8.2140E+01	8.3712E+01
3	184	3.9292E+01	-4.6679E+01	4.2986E+01	4.3872E+01
3	185	7.6713E+01	-4.8035E+01	6.2376E+01	6.6401E+01
3	186	1.1818E+02	-2.4166E+02	1.7992E+02	1.8195E+02
3	187	8.9788E+01	-8.9560E+01	8.9674E+01	9.2422E+01
3	188	7.2839E+01	-1.1872E+02	5.5779E+01	9.6252E+01
3	189	7.0815E+01	-7.0635E+01	7.0725E+01	7.3596E+01
3	190	8.8241E+01	-5.5656E+01	7.1948E+01	7.8647E+01
3	191	1.1650E+02	-1.2559E+02	1.2105E+02	1.2179E+02
3	192	1.3375E+02	-1.3734E+02	1.3554E+02	1.3889E+02
3	193	9.1277E+01	-7.8600E+01	8.4939E+01	9.0639E+01
3	194	6.0724E+01	-6.6750E+01	6.3737E+01	6.4489E+01
3	195	1.0161E+02	-1.1489E+02	1.0825E+02	1.0973E+02
3	196	9.9541E+01	-1.0262E+02	1.0108E+02	1.0443E+02
3	197	7.6400E+01	-7.6815E+01	7.6608E+01	7.9638E+01
3	198	6.2660E+01	-5.9441E+01	6.1050E+01	6.2129E+01
3	199	1.0253E+02	-9.0678E+01	9.6603E+01	1.0158E+02
3	200	8.7792E+01	-8.4365E+01	8.6079E+01	8.8430E+01
3	201	7.0812E+01	-5.5606E+01	6.8209E+01	6.9954E+01
3	202	5.9727E+01	-5.2624E+01	5.6176E+01	5.7067E+01
3	203	1.2239E+02	-1.1423E+02	1.1031E+02	1.2054E+02
3	204	1.0616E+02	-9.4405E+01	1.0028E+02	1.0988E+02
3	205	6.0074E+01	-6.9863E+01	7.4988E+01	7.9855E+01
3	206	1.8764E+01	-2.2069E+01	2.0417E+01	2.3153E+01
3	207	8.7256E+01	-1.2471E+02	1.0598E+02	1.0736E+02
3	208	7.6789E+01	-7.9840E+01	7.8315E+01	8.4504E+01
3	209	7.4398E+01	-6.9020E+01	7.1709E+01	7.6320E+01
3	210	1.8120E+01	-2.5111E+01	2.1620E+01	2.4628E+01
3	211	4.9790E+01	-7.4214E+01	6.2002E+01	7.1595E+01
3	212	5.5804E+01	-2.9961E+01	4.2833E+01	6.7225E+01
3	213	8.5442E+01	-2.2749E+01	5.4095E+01	6.5765E+01
3	214	1.2303E+02	-7.6865E+01	9.9940E+01	1.0752E+02
3	215	8.5372E+01	-5.5161E+01	7.0256E+01	7.2200E+01
3	216	3.7153E+01	-4.6044E+01	4.1598E+01	4.5691E+01
3	217	6.4184E+01	-5.9418E+01	6.1000E+01	6.3812E+01
3	218	3.2641E+01	-4.7015E+01	3.9028E+01	4.1223E+01
3	219	8.9459E+01	-8.1111E+01	8.4778E+01	8.7740E+01
3	220	8.4227E+01	-9.2646E+01	8.8437E+01	8.9092E+01
3	221	7.4657E+01	-9.1352E+01	8.3805E+01	8.4192E+01
3	222	6.5347E+01	-8.6005E+01	7.5675E+01	7.5864E+01
3	223	1.5882E+02	-2.8059E+02	2.1978E+02	2.2054E+02
3	224	1.1131E+02	-1.3218E+02	1.2175E+02	1.2227E+02
3	225	1.4659E+02	-1.8738E+02	1.6099E+02	1.7174E+02
3	226	1.5050E+02	-1.4107E+02	1.2124E+02	1.2165E+02
3	227	9.8503E+01	-1.4022E+02	1.1940E+02	1.1979E+02
3	228	1.0610E+02	-1.2452E+02	1.1546E+02	1.1691E+02
3	229	1.5629E+02	-1.7042E+02	1.6334E+02	1.6560E+02
3	230	1.3256E+02	-1.3154E+02	1.3205E+02	1.3330E+02
3	231	1.9127E+02	-2.5170E+02	2.2145E+02	2.2491E+02
3	232	1.5033E+02	-1.2332E+02	1.3683E+02	1.4360E+02
3	233	1.2298E+02	-2.0199E+02	1.6240E+02	1.6810E+02
3	234	7.4613E+01	-1.1734E+02	9.5977E+01	9.6792E+01

IGLE
TRIANGLE

TRIANGLE

7.9227E+01	7.3502E+00	3.5439E+01	4.3095E+01
8.0555E+01	1.0036E+01	3.5260E+01	5.2105E+01
5.3107E+01	2.4082E+01	1.4112E+01	3.9421E+01
5.5374E+01	-2.2913E+01	3.9143E+01	4.1557E+01
4.5556E+01	-1.2639E+01	2.9097E+01	3.2129E+01
3.0343E+01	-1.3000E+01	2.1671E+01	2.2410E+01
1.5887E+02	-7.4362E+01	1.1662E+02	1.2029E+02
7.9651E+01	-5.0563E+01	6.5107E+01	6.5061E+01
8.5495E+01	-4.4238E+01	6.4035E+01	6.4311E+01
4.3527E+01	-2.1989E+01	3.2750E+01	3.3644E+01
7.6540E+01	-1.9553E+01	4.8051E+01	5.2076E+01
1.4489E+02	-8.3383E+01	1.1414E+02	1.1617E+02
9.8006E+01	-4.6771E+01	6.9389E+01	7.2137E+01
8.2099E+01	-5.9653E+01	7.1256E+01	7.1729E+01
6.9034E+01	-3.4121E+01	5.1577E+01	5.4448E+01
8.6226E+01	-2.5389E+01	5.5807E+01	6.2506E+01
1.1618E+02	-7.0230E+01	9.3206E+01	9.3950E+01
1.2419E+02	-7.1745E+01	9.7968E+01	1.0132E+02
8.4319E+01	-3.1608E+01	5.7964E+01	6.3664E+01
6.0400E+01	-4.1821E+01	5.1111E+01	5.1863E+01
1.0321E+02	-5.5827E+01	7.9520E+01	8.1001E+01
9.3883E+01	-4.4152E+01	6.9017E+01	7.2364E+01
7.2486E+01	-3.4094E+01	5.3298E+01	5.6320E+01
6.1084E+01	-3.5104E+01	4.8094E+01	4.9173E+01
1.1080E+02	-3.3433E+01	7.2155E+01	7.7136E+01
8.8725E+01	-3.0763E+01	5.9744E+01	6.2095E+01
6.6823E+01	-2.9363E+01	4.8093E+01	4.8038E+01
5.8261E+01	-2.8244E+01	4.3253E+01	4.4144E+01
1.3483E+02	-4.6306E+01	9.0568E+01	1.0060E+02
1.1514E+02	-3.6208E+01	7.5676E+01	8.5274E+01
8.0733E+01	-3.2405E+01	5.6009E+01	6.1496E+01
1.9731E+01	-6.9658E+01	1.0214E+01	1.2950E+01
9.2532E+01	-5.1939E+01	7.2236E+01	7.3617E+01
7.4681E+01	-2.3744E+01	4.9213E+01	5.5402E+01
7.3669E+01	-2.0717E+01	5.1193E+01	5.5004E+01
1.9337E+01	-1.3078E+00	1.0363E+01	1.3371E+01
5.7601E+01	-3.8215E+00	3.0311E+01	3.9904E+01
6.4074E+01	2.2221E+01	2.0927E+01	4.5269E+01
8.8851E+01	6.8360E+00	4.1807E+01	5.2677E+01
1.2453E+02	-4.8159E+01	8.6343E+01	9.3912E+01
8.7077E+01	-4.4651E+01	6.5864E+01	6.7798E+01
4.1299E+01	-1.1024E+01	2.6161E+01	2.8254E+01
6.5381E+01	-2.6378E+01	4.5879E+01	4.7091E+01
3.7014E+01	-1.2996E+01	2.5005E+01	2.6400E+01
9.5157E+01	-3.8066E+01	6.6612E+01	6.9570E+01
8.5597E+01	-5.7973E+01	7.1795E+01	7.2440E+01
7.9372E+01	-4.4675E+01	6.2024E+01	6.3211E+01
6.4557E+01	-5.1266E+01	5.7911E+01	5.8100E+01
1.8193E+02	-1.3023E+02	1.5600E+02	1.5692E+02
1.1589E+02	-8.8666E+01	1.0235E+02	1.0287E+02
1.6221E+02	-7.3032E+01	1.1762E+02	1.2237E+02
1.0632E+02	-8.6156E+01	9.6236E+01	9.6652E+01
1.0330E+02	-7.5192E+01	8.9246E+01	8.9636E+01
1.1128E+02	-5.7003E+01	8.4143E+01	8.5596E+01
1.6209E+02	-9.5970E+01	1.2903E+02	1.3127E+02
1.3623E+02	-7.1387E+01	1.0381E+02	1.0506E+02
2.0268E+02	-1.3429E+02	1.6949E+02	1.7191E+02
1.4762E+02	-6.6794E+01	1.0721E+02	1.1308E+02
1.4839E+02	-4.7156E+01	9.7771E+01	1.0330E+02
8.3649E+01	-5.5976E+01	6.9813E+01	7.0628E+01

3	232	1.0425E+02	-1.9935E+02	1.5160E+02	1.5360E+02	1.2571E+02	-7.1685E+01	9.8698E+01	1.0052E+02
3	233	1.1933E+02	-2.0719E+02	1.6327E+02	1.6696E+02	1.4325E+02	-6.2903E+01	1.0308E+02	1.0670E+02
3	237	1.3377E+02	-1.2740E+02	1.3062E+02	1.3147E+02	1.3204E+02	-9.3269E+01	1.1305E+02	1.1390E+02
3	238	1.1159E+02	-9.4991E+01	1.0329E+02	1.0625E+02	1.1756E+02	-4.8019E+01	8.2789E+01	8.6351E+01
3	239	8.5775E+01	-1.0338E+02	9.4578E+01	9.5337E+01	9.0061E+01	-6.0216E+01	7.5538E+01	7.6297E+01
3	240	7.9901E+01	-6.3989E+01	7.1945E+01	7.9389E+01	8.9164E+01	-9.3905E+00	4.9281E+01	5.6725E+01
3	241	7.4080E+01	-6.1684E+01	6.7866E+01	7.1666E+01	8.0577E+01	-2.3379E+01	5.1978E+01	5.5750E+01
3	242	1.1699E+02	-1.0829E+02	1.1264E+02	1.1623E+02	1.1460E+02	-4.5904E+01	8.0252E+01	8.3036E+01
3	243	6.7001E+01	-5.0996E+01	5.9038E+01	6.5070E+01	7.4223E+01	-8.5343E+00	4.1378E+01	4.7410E+01
3	244	5.4342E+01	-5.0906E+01	5.2624E+01	5.4721E+01	5.9287E+01	-2.1792E+01	4.0539E+01	4.2636E+01
3	245	3.5108E+01	-3.8076E+01	3.6593E+01	3.6989E+01	3.7518E+01	-2.3451E+01	3.0435E+01	3.0435E+01
3	246	3.9292E+01	-4.6679E+01	4.2986E+01	4.3872E+01	4.3527E+01	-2.1989E+01	3.2756E+01	3.3644E+01
3	247	1.0145E+02	-1.0874E+02	1.0510E+02	1.0715E+02	1.0970E+02	-5.6773E+01	8.3237E+01	8.5293E+01
3	248	1.3492E+02	-9.1197E+01	1.1306E+02	1.2034E+02	1.4526E+02	-3.5363E+01	9.0312E+01	1.0559E+02
3	249	1.0937E+02	-9.3846E+01	1.0161E+02	1.0741E+02	1.1389E+02	-4.0909E+01	7.7398E+01	8.3206E+01
3	250	1.1311E+02	-1.2653E+02	1.1982E+02	1.2033E+02	1.1579E+02	-6.6773E+01	1.0128E+02	1.0179E+02
3	251	8.2808E+01	-9.6001E+01	8.9445E+01	9.1686E+01	8.6015E+01	-4.6017E+01	6.6016E+01	6.8257E+01
3	252	1.2117E+02	-6.1540E+01	9.1356E+01	1.1406E+02	1.2324E+02	-3.5937E+00	6.3418E+01	8.6923E+01
3	253	1.5878E+02	-1.3380E+02	1.4629E+02	1.4646E+02	1.4333E+02	-1.2389E+02	1.3361E+02	1.3376E+02
3	254	4.4682E+01	-4.9204E+01	4.6943E+01	4.7170E+01	4.5382E+01	-3.3349E+01	3.9365E+01	3.9592E+01
3	255	6.4771E+01	-3.4384E+01	4.9577E+01	6.5755E+01	6.9673E+01	5.0021E+00	3.2295E+01	4.8473E+01
3	256	7.4691E+01	-6.4372E+01	6.9532E+01	7.3194E+01	7.2625E+01	-2.9491E+01	5.1058E+01	5.4720E+01
3	257	1.1434E+02	-1.2601E+02	1.2017E+02	1.2046E+02	1.1543E+02	-9.3281E+01	1.0435E+02	1.0464E+02
3	258	5.9232E+01	-6.9944E+01	6.4588E+01	6.6405E+01	6.0455E+01	-3.1302E+01	4.5916E+01	4.7915E+01
3	259	7.3596E+01	-3.6339E+01	5.4988E+01	7.0394E+01	7.3430E+01	2.6380E+00	3.5396E+01	5.0822E+01
3	260	4.1584E+01	-5.2594E+01	4.7089E+01	4.7205E+01	3.9727E+01	-2.9223E+01	3.4475E+01	3.4671E+01
3	261	7.2503E+01	-6.8721E+01	7.0012E+01	7.1405E+01	6.7951E+01	-4.4073E+01	5.6412E+01	5.7005E+01
3	262	1.5136E+02	5.2304E+01	4.9532E+01	1.3385E+02	1.4247E+02	6.0067E+01	3.1204E+01	1.1552E+02
3	263	1.5612E+02	-8.7866E+01	1.2199E+02	1.3443E+02	1.5464E+02	-4.8444E+01	1.0154E+02	1.1396E+02
3	264	5.8350E+01	-6.8637E+01	6.3490E+01	6.4531E+01	5.9876E+01	-3.2065E+01	4.5371E+01	4.7004E+01
3	265	2.2103E+02	-1.2701E+02	1.7402E+02	1.7578E+02	1.9833E+02	-1.2997E+02	1.6415E+02	1.6551E+02
3	266	1.8552E+02	-1.4970E+02	1.6761E+02	1.6829E+02	1.8470E+02	-1.4254E+02	1.6362E+02	1.6430E+02
3	267	2.0431E+02	-1.7940E+02	1.9185E+02	1.9497E+02	2.1404E+02	-1.2152E+02	1.6778E+02	1.7090E+02
3	268	1.1950E+02	-8.7160E+01	1.0333E+02	1.2487E+02	1.3732E+02	-1.0572E+01	5.9372E+01	8.0903E+01
3	269	1.1266E+02	-1.2441E+02	1.1824E+02	1.3037E+02	1.3575E+02	-1.5471E+01	6.0142E+01	8.0270E+01
3	270	9.1339E+01	-1.5624E+02	1.2379E+02	1.3891E+02	1.1874E+02	6.3437E+00	5.6199E+01	7.1320E+01
3	271	8.3299E+01	-1.7175E+02	1.2753E+02	1.4122E+02	1.1300E+02	3.8157E+00	5.4590E+01	6.8285E+01
3	272	9.7167E+01	-2.0007E+02	1.4062E+02	1.6609E+02	1.3226E+02	8.6520E+00	6.1804E+01	7.9268E+01
3	273	3.8804E+02	-4.9698E+02	4.4250E+02	4.4751E+02	4.2761E+02	-2.6070E+02	3.4415E+02	3.4916E+02
3	274	3.5265E+02	-4.3112E+02	3.9189E+02	3.9525E+02	3.0314E+02	-2.5194E+02	3.1754E+02	3.2090E+02
3	275	5.6646E+01	-1.6499E+02	1.3082E+02	1.3872E+02	1.2008E+02	-2.2447E+01	7.1663E+01	7.9567E+01
3	276	2.9795E+02	-3.5986E+02	3.2891E+02	3.2985E+02	3.1648E+02	-2.5065E+02	2.0357E+02	2.0451E+02
3	277	9.1846E+01	-1.4315E+02	1.1750E+02	1.2011E+02	1.0759E+02	-4.9649E+01	7.8619E+01	8.1237E+01
3	278	2.7548E+02	-3.0131E+02	2.8039E+02	2.8980E+02	2.9007E+02	-2.1407E+02	2.5247E+02	2.5368E+02
3	279	1.3585E+02	-7.2811E+01	1.0333E+02	1.2157E+02	1.4016E+02	-2.2250E+01	8.1210E+01	9.9447E+01
3	280	1.9373E+02	-9.6731E+01	1.4523E+02	1.5699E+02	1.9533E+02	-7.9227E+01	1.3720E+02	1.4904E+02
3	281	9.2946E+01	-1.1116E+02	1.0205E+02	1.0361E+02	1.0202E+02	-5.7393E+01	7.9704E+01	8.1268E+01
3	282	1.0149E+02	-6.1597E+01	8.1543E+01	8.3034E+01	1.0344E+02	-4.9804E+01	7.6621E+01	7.8912E+01
3	283	1.2399E+02	-3.7176E+01	8.0583E+01	8.4383E+01	1.0782E+02	-3.9743E+01	7.3782E+01	7.5822E+01
3	284	8.2623E+01	-7.6756E+01	7.9609E+01	8.8204E+01	9.7511E+01	-1.6642E+01	5.7076E+01	6.5591E+01
3	285	0.2622E+01	-1.1058E+02	1.0860E+02	1.1004E+02	1.0765E+02	-1.0196E+01	6.2525E+01	7.2369E+01
3	286	8.2977E+01	-1.6237E+02	1.2267E+02	1.3305E+02	1.1848E+02	-2.0056E+01	6.9270E+01	7.3648E+01
3	287	8.0322E+01	-1.9043E+02	1.3537E+02	1.4078E+02	1.2480E+02	-1.2369E+01	6.8503E+01	6.1937E+01
3	288	7.3900E+01	-1.5658E+02	1.1628E+02	1.2712E+02	1.0067E+02	-1.4941E+00	5.1080E+01	6.1926E+01
3	289	2.9957E+02	-3.7256E+02	3.3606E+02	3.3706E+02	3.2003E+02	-2.5211E+02	2.8607E+02	2.6707E+02
3	290	3.0239E+02	-2.9844E+02	3.0042E+02	3.0921E+02	3.3510E+02	-1.6749E+02	2.5130E+02	2.6009E+02
3	291	3.4925E+02	-4.4612E+02	3.9768E+02	4.0137E+02	3.6239E+02	-2.4566E+02	3.1402E+02	3.1771E+02
3	292	2.5417E+01	-2.1021E+01	2.3619E+01	2.5490E+01	2.8074E+01	-5.0497E+00	1.6562E+01	1.8433E+01
3	293	1.3173E+01	-2.8787E+01	2.0980E+01	2.1235E+01	1.6494E+01	-5.1443E+00	1.2819E+01	1.3074E+01
3	294	1.3101E+01	-2.9087E+01	2.1094E+01	2.1357E+01	1.6490E+01	-9.1096E+00	1.2806E+01	1.3063E+01

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3	2	1.3831E+01	-2.7956E+01	2.0494E+01	2.0808E+01
3	2	2.5281E+01	-2.0207E+01	2.2743E+01	2.4970E+01
3	297	4.6694E+01	-5.3762E+01	5.0227E+01	5.0349E+01
3	298	2.7591E+01	-2.1712E+01	2.4651E+01	2.6772E+01
3	299	1.4455E+01	-2.8331E+01	2.1353E+01	2.1768E+01
3	300	1.3784E+01	-2.9212E+01	2.1498E+01	2.1789E+01
3	301	1.4385E+01	-2.7785E+01	2.1090E+01	2.1511E+01
3	302	2.7120E+01	-1.8126E+01	2.2623E+01	2.5523E+01
3	303	4.3278E+01	-5.1680E+01	4.7475E+01	4.7566E+01
3	304	2.8651E+01	-2.3116E+01	2.5883E+01	2.7424E+01
3	305	3.0541E+01	-2.6276E+01	2.8409E+01	2.9628E+01
3	306	2.5196E+01	-2.2469E+01	2.3832E+01	2.5154E+01
3	307	2.8674E+01	-2.6638E+01	2.7651E+01	2.8669E+01
3	308	5.0846E+01	-4.7785E+01	4.9315E+01	5.0595E+01
3	309	5.0669E+01	-1.0766E+01	3.4718E+01	5.5894E+01
3	310	1.0443E+02	-9.0423E+01	1.0141E+02	1.0188E+02
3	311	7.0473E+01	-1.6090E+01	4.3282E+01	6.4482E+01
3	312	7.6493E+01	-3.3593E+01	5.5043E+01	6.2386E+01
3	313	3.2854E+01	-1.3663E+01	2.3259E+01	3.5756E+01
3	314	4.7581E+01	-2.6165E+01	3.6874E+01	4.2217E+01
3	315	1.7125E+01	-2.3117E+01	2.0121E+01	2.0352E+01
3	316	1.9712E+01	-2.6871E+01	2.3291E+01	2.3588E+01
3	317	2.0533E+01	-2.3304E+01	2.1921E+01	2.2616E+01
3	318	1.9873E+01	-2.0348E+01	1.9713E+01	2.0596E+01
3	319	1.9181E+01	-1.9076E+01	1.9089E+01	2.0022E+01
3	320	2.0029E+01	-2.3744E+01	2.2287E+01	2.2793E+01
3	321	2.0765E+01	-2.8200E+01	2.4483E+01	2.4752E+01
3	322	1.9513E+01	-2.0304E+01	1.9910E+01	2.0924E+01
3	323	2.1995E+01	-2.3375E+01	2.2685E+01	2.3486E+01
3	324	1.8743E+01	-2.7250E+01	2.2997E+01	2.3084E+01
3	325	1.7759E+01	-2.0607E+01	2.3182E+01	2.3359E+01
3	326	1.7963E+01	-2.9206E+01	2.3584E+01	2.3709E+01
3	327	1.5447E+01	-2.7149E+01	2.1298E+01	2.1436E+01
3	328	1.5674E+01	-2.7423E+01	2.1548E+01	2.1787E+01
3	329	1.3474E+01	-2.4993E+01	1.9233E+01	1.9378E+01
3	330	1.6302E+01	-2.7646E+01	2.1975E+01	2.2115E+01
3	331	2.7636E+01	-1.5543E+01	2.1590E+01	2.2661E+01
3	332	6.0776E+01	-4.2931E+01	5.1854E+01	5.3392E+01
3	333	2.4970E+01	-1.0122E+01	2.1549E+01	2.2287E+01
3	334	3.4794E+01	-3.3602E+01	3.4190E+01	3.4387E+01

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1.6355E+01	-8.3459E+00	1.2351E+01	1.2657E+01
2.7944E+01	-3.3453E+00	1.5644E+01	1.7870E+01
4.9073E+01	-3.9748E+01	4.4418E+01	4.4532E+01
3.0238E+01	-4.9249E+00	1.7581E+01	1.9702E+01
1.7788E+01	-6.6905E+00	1.3239E+01	1.3615E+01
1.7181E+01	-9.2245E+00	1.3203E+01	1.3494E+01
1.7716E+01	-8.1854E+00	1.2951E+01	1.3372E+01
2.9747E+01	-1.4660E+00	1.5686E+01	1.6506E+01
4.5627E+01	-3.7801E+01	4.1714E+01	4.1805E+01
3.1132E+01	-8.5188E+00	1.9825E+01	2.1366E+01
3.3014E+01	-1.1679E+01	2.2347E+01	2.3566E+01
2.7675E+01	-7.8712E+00	1.7773E+01	1.9095E+01
3.1159E+01	-1.2032E+01	2.1595E+01	2.2613E+01
5.4567E+01	-2.5606E+01	4.0086E+01	4.1366E+01
6.0416E+01	1.3593E+01	2.3412E+01	4.3788E+01
1.0651E+02	-7.1799E+01	8.9154E+01	8.9627E+01
7.2612E+01	1.1203E+01	3.0705E+01	5.1905E+01
6.1126E+01	-6.2876E+00	4.3704E+01	5.1047E+01
3.4619E+01	1.0687E+01	1.1966E+01	2.4463E+01
4.7682E+01	-1.0517E+01	2.9188E+01	3.4443E+01
1.9043E+01	-1.1331E+01	1.5187E+01	1.5418E+01
2.2095E+01	-1.2847E+01	1.7471E+01	1.7768E+01
2.2898E+01	-9.3180E+00	1.6108E+01	1.6803E+01
2.1309E+01	-6.9055E+00	1.4107E+01	1.4950E+01
2.1222E+01	-6.5251E+00	1.3874E+01	1.4607E+01
2.2983E+01	-1.1046E+01	1.7015E+01	1.7521E+01
2.3118E+01	-1.4069E+01	1.8594E+01	1.8863E+01
2.1838E+01	-6.3211E+00	1.4079E+01	1.5093E+01
2.4163E+01	-9.9598E+00	1.7071E+01	1.7792E+01
2.0712E+01	-1.5654E+01	1.8183E+01	1.8276E+01
2.0223E+01	-1.3312E+01	1.6767E+01	1.6944E+01
2.0459E+01	-1.4511E+01	1.7485E+01	1.7610E+01
1.7978E+01	-1.2168E+01	1.5869E+01	1.5207E+01
1.8240E+01	-1.1998E+01	1.5119E+01	1.5270E+01
1.5876E+01	-1.0352E+01	1.3114E+01	1.3250E+01
1.0801E+01	-1.2816E+01	1.5009E+01	1.5949E+01
2.7433E+01	-6.3001E+00	1.6871E+01	1.7942E+01
5.9586E+01	-3.3804E+01	4.6095E+01	4.8433E+01
2.4030E+01	-8.0852E+00	1.6857E+01	1.7595E+01
3.3928E+01	-2.4432E+01	2.9285E+01	2.9354E+01

TYPE	ELEM	ALLOWD SHR	STATC SHR+	DYNAM SHR+	STATIC+DYN	DYN ACCL FCTR
3	1	282.000	36.448	87.760	124.208	0.560
3	2	68.000	19.837	101.090	120.927	0.095
3	3	68.000	12.275	60.096	72.371	0.185
3	4	282.000	43.834	78.002	121.836	0.611
3	5	68.000	25.375	50.892	76.267	0.168
3	6	68.000	8.345	51.806	59.351	0.234
3	7	282.000	48.578	84.193	132.771	0.554
3	8	68.000	29.057	48.660	77.717	0.160
3	9	68.000	9.711	38.730	48.441	0.301
3	10	282.000	56.475	98.108	154.583	0.460
3	11	68.000	41.503	69.891	111.394	0.076
3	12	68.000	23.012	33.626	56.638	0.268
3	13	282.000	59.339	104.470	163.809	0.426
3	14	68.000	41.773	78.113	119.886	0.067
3	15	68.000	24.301	38.741	63.042	0.226
3	16	229.000	33.294	80.242	113.536	0.488
3	17	229.000	24.402	61.841	86.243	0.662
3	18	68.000	20.068	36.094	56.162	0.266
3	19	294.000	46.217	65.289	111.506	0.259
3	20	68.000	36.132	47.277	83.409	0.135
3	21	68.000	21.723	35.128	56.851	0.263
3	22	68.000	21.624	27.331	48.955	0.339
3	23	282.000	30.819	62.544	93.363	0.803
3	24	68.000	24.436	52.289	76.725	0.162
3	25	68.000	11.854	77.999	89.853	0.144
3	26	282.000	32.419	64.803	97.222	0.770
3	27	282.000	34.633	64.755	99.388	0.764
3	28	68.000	2.831	38.425	41.256	0.339
3	29	272.000	26.408	57.889	84.297	0.848
3	30	272.000	18.817	46.618	65.435	1.086
3	31	272.000	24.986	58.891	83.877	0.839
3	32	272.000	18.255	46.430	64.685	1.093
3	33	272.000	24.505	58.759	83.264	0.842
3	34	272.000	16.841	42.716	59.557	1.195
3	35	321.000	17.829	64.860	82.689	0.935
3	36	321.000	15.362	49.333	64.695	1.239
3	37	321.000	12.414	39.950	52.364	1.545
3	38	299.000	34.153	47.391	81.544	1.118
3	39	227.000	18.697	46.996	65.693	0.886
3	40	176.000	15.613	45.950	61.563	0.690
3	41	176.000	14.060	46.608	60.668	0.695
3	42	176.000	13.100	47.945	61.045	0.685
3	43	255.000	31.303	273.918	305.213	0.163
3	44	255.000	19.082	60.275	79.357	0.783
3	45	255.000	22.121	23.687	45.728	1.973
3	46	255.000	26.160	61.765	87.925	0.741
3	47	255.000	19.122	18.280	37.330	2.591
3	48	222.000	19.307	100.940	120.247	0.482
3	49	222.000	14.771	52.970	67.741	0.782
3	50	255.000	32.572	184.350	216.922	0.241
3	51	255.000	14.528	94.659	109.179	0.508
3	52	255.000	28.410	106.840	127.250	0.435
3	53	222.000	19.334	52.442	71.776	0.773
3	54	222.000	11.820	28.936	40.756	1.453
3	55	222.000	16.716	47.864	64.580	0.858
3	56	222.000	12.183	31.255	43.438	1.343

.067
 .076
 .095
 .135
 .144
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 .168
 .185

Range 0.07 - 0.19

Ave 0.13

3	222.000	12.795	53.374	66.169	0.784
3	222.000	10.357	48.549	51.506	1.041
3	222.000	10.476	55.396	65.872	0.764
3	222.000	9.504	43.833	52.617	0.987
3	222.000	7.462	61.615	69.077	0.696
3	222.000	8.587	49.097	57.184	0.871
3	222.000	7.206	92.237	99.443	0.466
3	222.000	4.944	77.682	82.626	0.559
3	222.000	11.762	115.490	127.252	0.364
3	222.000	6.322	100.580	106.902	0.429
3	222.000	13.174	128.570	141.744	0.325
3	222.000	9.538	110.790	120.328	0.384
3	222.000	21.204	72.962	94.246	0.550
3	222.000	21.338	63.414	84.752	0.633
3	222.000	29.253	64.224	93.477	0.600
3	222.000	29.518	55.560	85.078	0.693
3	243.000	23.920	38.361	62.289	1.142
3	225.000	26.225	38.790	65.023	1.025
3	243.000	32.035	42.775	74.810	0.966
3	225.000	29.860	38.737	68.537	1.000
3	243.000	37.871	47.152	85.023	0.870
3	225.000	31.318	39.839	71.157	0.972
3	243.000	38.418	45.141	83.559	0.906
3	225.000	29.376	43.383	69.679	0.971
3	243.000	38.611	44.475	83.086	0.919
3	232.000	19.069	36.095	55.964	1.154
3	213.000	25.185	35.715	60.900	1.052
3	225.000	4.416	51.308	55.724	0.860
3	213.000	30.616	47.494	78.110	0.760
3	225.000	5.922	46.871	52.793	0.935
3	213.000	31.872	47.836	79.708	0.757
3	225.000	10.398	45.382	55.700	0.946
3	213.000	32.811	47.952	80.763	0.752
3	155.000	18.185	45.901	64.166	0.595
3	321.000	22.715	60.447	89.162	0.898
3	321.000	17.617	53.425	71.042	1.136
3	321.000	11.618	57.310	68.928	1.080
3	267.000	24.344	66.692	91.036	0.728
3	267.000	16.784	62.446	79.150	0.802
3	267.000	10.327	33.677	44.004	1.524
3	267.000	19.385	68.704	80.089	0.721
3	267.000	15.681	54.404	70.085	0.923
3	267.000	13.245	34.201	47.446	1.484
3	225.000	25.497	36.670	62.167	1.088
3	225.000	17.856	21.618	39.474	1.916
3	257.000	17.757	153.320	171.077	0.312
3	257.000	21.991	139.900	161.891	0.336
3	252.000	5.560	34.050	39.656	1.446
3	252.000	3.597	24.911	28.509	1.994
3	252.000	5.470	19.754	25.224	2.456
3	252.000	6.389	16.349	22.738	3.005
3	252.000	5.454	16.906	22.440	2.903
3	252.000	4.611	13.771	18.382	3.593
3	252.000	5.947	16.914	22.861	2.909
3	252.000	7.504	21.821	29.325	2.241
3	321.000	21.853	64.412	85.445	0.931
3	321.000	15.061	54.884	69.165	1.131
3	321.000	8.661	41.157	49.018	1.518
3	321.000	23.342	66.853	90.195	0.890
3	321.000	10.553	54.179	72.732	1.116

3	100	321.000	9.419	41.756	51.175	1.492
3	101	321.000	31.301	57.955	89.256	1.000
3	119	321.000	20.501	48.004	69.305	1.231
3	120	321.000	13.493	39.709	53.202	1.549
3	121	321.000	54.795	52.741	87.536	1.035
3	122	321.000	32.782	49.085	81.867	1.174
3	123	321.000	34.672	56.347	90.419	1.018
3	124	321.000	20.321	49.092	77.413	1.192
3	125	321.000	17.800	43.051	62.051	1.346
3	126	321.000	26.020	59.151	85.171	0.997
3	127	321.000	20.025	45.609	65.714	1.317
3	128	321.000	15.229	51.509	66.738	1.187
3	129	321.000	22.933	67.181	90.114	0.887
3	130	321.000	20.363	55.046	76.209	1.077
3	131	321.000	13.879	50.001	71.960	1.058
3	132	321.000	25.744	144.400	170.224	0.409
3	133	314.000	21.231	134.230	155.461	0.436
3	134	321.000	17.596	52.809	70.485	1.147
3	135	267.000	8.479	37.628	46.107	1.374
3	136	321.000	21.599	58.601	80.280	1.022
3	137	267.000	12.019	46.174	58.193	1.104
3	138	321.000	26.111	59.226	85.337	0.996
3	139	267.000	13.894	49.434	63.320	1.024
3	140	321.000	26.640	59.214	85.062	0.994
3	141	267.000	13.226	47.537	61.163	1.059
3	142	321.000	27.741	64.406	92.147	0.911
3	143	267.000	13.153	48.640	61.793	1.044
3	144	321.000	41.419	54.046	95.465	1.035
3	145	243.000	34.130	39.322	73.452	1.062
3	146	321.000	21.661	60.233	81.094	0.994
3	147	314.000	17.187	45.402	62.589	1.307
3	148	432.000	28.937	138.040	167.777	0.581
3	149	265.000	23.603	110.450	134.053	0.437
3	150	265.000	17.045	103.570	121.415	0.477
3	151	360.000	17.011	60.267	77.278	1.138
3	152	360.000	10.526	29.772	40.298	2.348
3	153	222.000	29.262	62.289	91.551	0.619
3	154	222.000	22.047	36.195	58.242	1.105
3	155	370.000	16.661	41.819	58.400	1.726
3	156	370.000	10.085	37.370	47.455	1.969
3	157	222.000	34.575	59.750	94.325	0.627
3	158	222.000	25.154	41.964	67.118	0.930
3	159	370.000	15.545	44.272	59.817	1.637
3	160	370.000	9.675	40.330	50.005	1.827
3	161	222.000	35.216	50.529	93.745	0.630
3	162	222.000	25.788	45.329	71.117	0.866
3	163	370.000	15.961	47.004	63.045	1.538
3	164	370.000	9.810	44.607	54.417	1.651
3	165	222.000	53.804	56.654	90.438	0.664
3	166	222.000	24.020	45.160	69.208	0.876
3	167	370.000	15.931	46.105	62.036	1.571
3	168	370.000	9.175	51.176	60.351	1.441
3	169	195.000	30.528	51.671	82.199	0.637
3	170	195.000	21.996	39.743	61.739	0.871
3	171	271.000	16.270	59.201	75.479	0.861
3	172	271.000	9.645	65.852	74.697	0.804
3	173	226.000	34.922	44.262	79.204	0.863
3	174	280.000	25.374	31.401	56.775	1.622
3	175	280.000	13.424	46.094	59.518	1.157
3	176	280.000	8.754	52.184	60.938	1.040

3	288.000	4.790	39.421	44.211	1.396
3	226.000	33.467	41.557	75.024	0.927
3	179 280.000	21.073	32.129	54.002	1.607
3	180 280.000	11.359	22.410	33.769	2.398
3	181 243.000	63.003	120.290	183.293	0.299
3	182 267.000	25.406	65.061	91.347	0.733
3	183 267.000	17.201	66.431	63.712	0.752
3	184 350.000	10.220	33.644	43.072	2.020
3	185 350.000	14.325	52.076	66.401	1.209
3	186 243.000	65.783	116.170	181.953	0.305
3	187 222.000	20.205	72.137	92.422	0.559
3	188 222.000	24.523	71.729	96.252	0.551
3	189 300.000	19.140	54.448	73.596	1.032
3	190 300.000	16.141	62.506	78.647	0.900
3	191 222.000	27.841	93.950	121.791	0.413
3	192 222.000	37.574	101.320	138.894	0.364
3	193 300.000	26.975	63.664	90.639	0.850
3	194 300.000	12.626	51.863	64.489	1.108
3	195 222.000	28.732	81.001	109.733	0.477
3	196 222.000	32.065	72.364	104.429	0.525
3	197 300.000	25.310	56.320	79.630	0.903
3	198 300.000	12.956	49.173	62.129	1.167
3	199 336.000	24.448	77.136	101.504	0.808
3	200 222.000	26.335	62.095	88.430	0.630
3	201 300.000	20.116	49.838	69.954	1.123
3	202 300.000	12.923	44.144	57.067	1.301
3	203 272.000	27.740	100.000	128.540	0.485
3	204 272.000	24.607	85.274	109.801	0.580
3	205 272.000	10.359	61.496	79.055	0.825
3	206 272.000	10.205	12.950	23.153	4.043
3	207 272.000	33.747	73.617	107.364	0.647
3	208 272.000	29.102	55.402	84.504	0.877
3	209 272.000	20.516	55.004	76.320	0.901
3	210 272.000	11.257	13.371	24.628	3.900
3	211 222.000	31.691	39.904	71.595	0.954
3	212 222.000	21.956	45.269	67.225	0.884
3	213 222.000	13.080	52.677	65.765	0.793
3	214 222.000	13.605	93.912	107.517	0.444
3	215 230.000	4.402	67.798	72.200	0.813
3	216 263.000	15.437	28.254	43.691	1.732
3	217 263.000	15.921	47.891	63.012	1.032
3	218 263.000	14.023	26.400	41.223	1.880
3	219 263.000	18.164	69.576	87.740	0.704
3	220 263.000	16.652	72.440	89.092	0.600
3	221 263.000	20.981	63.211	84.192	0.766
3	222 263.000	17.764	58.100	75.064	0.844
3	223 256.000	63.622	156.920	220.542	0.245
3	224 256.000	19.397	102.070	122.267	0.460
3	225 256.000	49.360	122.370	171.738	0.339
3	226 256.000	24.999	96.652	121.651	0.470
3	227 256.000	30.156	89.636	119.792	0.504
3	228 256.000	31.316	85.556	116.912	0.525
3	229 256.000	34.327	131.270	165.597	0.339
3	230 256.000	28.244	105.060	133.304	0.434
3	231 256.000	53.000	171.910	224.910	0.236
3	232 256.000	29.617	113.900	143.597	0.397
3	233 243.000	64.713	103.390	160.103	0.345
3	234 243.000	26.164	70.620	96.792	0.614
3	235 243.000	53.103	100.500	153.603	0.378
3	236 243.000	60.105	106.780	166.965	0.342

3	230	321.000	17.571	113.900	131.471	0.533
3	231	425.000	20.499	86.351	106.850	0.937
3	232	314.000	19.040	76.297	95.357	0.723
3	240	267.000	22.064	56.725	79.309	0.861
3	241	267.000	15.908	55.758	71.666	0.901
3	242	267.000	32.389	83.838	116.227	0.560
3	243	267.000	17.660	47.410	65.070	1.052
3	244	267.000	12.085	42.636	54.721	1.196
3	245	267.000	6.108	39.301	36.989	1.690
3	246	267.000	10.220	33.644	43.872	1.526
3	247	252.000	21.061	65.293	107.154	0.540
3	248	302.000	22.748	105.590	129.338	0.529
3	249	302.000	24.207	83.206	107.413	0.668
3	250	226.000	18.542	101.790	120.332	0.400
3	251	302.000	23.429	68.257	91.686	0.816
3	252	302.000	27.930	86.923	114.661	0.631
3	253	229.000	12.677	133.780	146.457	0.323
3	254	229.000	7.578	39.592	47.170	1.119
3	255	338.000	17.282	48.473	65.755	1.323
3	256	338.000	18.474	54.770	73.194	1.168
3	257	160.000	15.818	104.640	120.458	0.291
3	258	338.000	18.670	47.815	66.485	1.336
3	259	338.000	19.572	50.822	70.394	1.253
3	260	229.000	12.614	34.671	47.285	1.248
3	261	338.000	14.450	57.005	71.405	1.135
3	262	226.000	18.328	115.520	133.848	0.360
3	263	226.000	20.449	113.900	134.429	0.361
3	264	338.000	17.527	47.004	64.531	1.364
3	265	263.000	9.867	165.910	175.777	0.305
3	266	263.000	3.990	164.300	168.290	0.315
3	267	393.000	24.075	170.900	194.975	0.432
3	268	320.000	43.962	80.903	124.865	0.682
3	269	253.000	58.096	80.270	138.306	0.486
3	270	253.000	67.580	71.320	138.900	0.520
3	271	253.000	72.936	68.285	141.221	0.527
3	272	253.000	86.016	79.268	166.304	0.419
3	273	257.000	98.353	349.160	447.513	0.091
3	274	296.000	74.340	320.900	395.248	0.091
3	275	296.000	59.154	79.567	138.721	0.595
3	276	263.000	45.339	284.510	329.349	0.153
3	277	263.000	38.877	81.237	120.114	0.552
3	278	296.000	35.924	253.800	289.304	0.205
3	279	351.000	22.121	99.447	121.568	0.661
3	280	296.000	7.953	149.040	156.993	0.387
3	281	263.000	22.346	81.268	103.614	0.592
3	282	263.000	4.922	78.912	83.834	0.654
3	283	263.000	6.001	77.582	84.383	0.660
3	284	226.000	22.613	65.591	88.204	0.620
3	285	210.000	37.675	72.369	110.044	0.476
3	286	210.000	53.403	79.640	133.051	0.393
3	287	210.000	66.792	81.987	140.779	0.349
3	288	210.000	65.199	61.926	127.125	0.468
3	289	263.000	49.992	287.070	337.862	0.140
3	290	226.000	49.120	260.890	309.210	0.152
3	291	257.000	83.650	317.710	401.365	0.182
3	292	92.000	7.057	18.433	25.498	0.922
3	293	92.000	8.161	13.074	21.235	1.283
3	294	92.000	8.294	13.063	21.357	1.282
3	295	92.000	8.143	12.665	20.808	1.324
3	296	92.000	7.099	17.871	24.378	0.950

Range 0.09 - 0.15

Ave = 0.13

0.091
0.109
0.136
0.138
0.148
0.153

30	94.000	5.817	44.532	50.349	0.351
31	92.000	7.070	19.702	26.772	0.862
32	92.000	8.153	15.615	21.768	1.232
33	92.000	8.295	13.494	21.789	1.241
34	92.000	8.139	13.372	21.511	1.254
35	92.000	7.017	18.506	25.523	0.910
36	93.000	5.761	41.805	47.566	0.370
37	68.000	6.058	21.366	27.424	0.580
38	68.000	6.062	23.566	29.629	0.526
39	68.000	6.059	19.895	25.154	0.642
40	68.000	6.056	22.613	28.669	0.548
41	68.000	9.229	41.366	50.595	0.284
42	68.000	11.386	43.788	55.094	0.259
43	68.000	12.257	89.627	101.884	0.124
44	68.000	12.577	51.925	64.482	0.214
45	68.000	11.339	51.647	62.386	0.222
46	95.000	11.293	24.463	35.756	0.684
47	95.000	7.774	34.443	42.217	0.506
48	95.000	4.934	15.418	20.352	1.168
49	95.000	5.020	17.768	23.588	1.004
50	95.000	5.013	16.883	22.616	1.062
51	86.000	5.606	14.950	20.596	1.073
52	86.000	5.215	14.867	20.022	1.091
53	87.000	5.271	17.521	22.792	0.933
54	87.000	5.889	18.863	24.752	0.860
55	84.000	5.031	15.093	20.924	1.036
56	87.000	5.614	17.792	23.486	0.915
57	87.000	4.814	18.270	23.084	0.900
58	89.000	6.415	16.944	23.359	0.975
59	89.000	6.099	17.610	23.709	0.942
60	82.000	6.229	15.207	21.436	0.997
61	82.000	6.429	15.278	21.787	0.989
62	58.000	6.119	13.258	19.377	0.953
63	68.000	6.166	15.949	22.115	0.775
64	68.000	4.719	17.942	22.661	0.705
65	68.000	4.959	48.433	53.392	0.268
66	68.000	4.692	17.595	22.207	0.720
67	68.000	4.993	29.394	34.387	0.429

.124

334 ITEM LINES SUMMED. WITH LAST TYPE = 3 AND ELEM = 334

Cell	Range	Ave	Rank
Aoc	0.07 - 0.19	0.13	(3)
CPC	0.07 - 0.16	0.16	(4)
LWC	> 0.2	> 0.2	(5)
GPC	0.09 - 0.15	0.13	(2)
TOP	0.12	0.12	(1)

2-94

[illegible]

ADDPAP 10/18/76 U 08.598
CODE VERSION 10/16 U 05.10.22

SUM OF ELEMENT-CENTER STRESSES FROM PREPOST OUTPUT FILES... PRPOA PRPOB

DESCRIPTOR BLOCK FROM FILE PRPOA

PREPOST RUN 10/11/76 Z 15.994
CODE VERSION 10/08 U 12.12.38

USING SAP40 INPUT FILES NAMED... SAP40AAEV SAP40AA-7

THE NFS PLANT (UNITS=K-FT-SEC)***MAX PILE-MAX SOIL*** 8/31/76

BOX R07 DAVITO/AA-7 59 1

DESCRIPTOR BLOCK FROM FILE PRPOB

PREPOST RUN 10/11/76 Z 15.193
CODE VERSION 10/08 U 12.12.38

USING SAP40 INPUT FILE NAMED... SAP40DL-A
THE NFS PLANT (UNITS=K-FT-SEC) 7/14/76

BOX R07 DAVITO/DL-A 59 1

DESCRIPTOR FROM ALLOWABLE-SHEAR-STRESS-FILE SHEAR

ELEMENT ULT. SHEAR VALUES***NFS***10-15-76

NUM ELE = 334 ACCEL FACTOR = 0.200

*WILL NOT APPLY PSI FACTOR IN THIS CODE.

SUM OF STRESSES FROM THE TWO FILES

STRESSES FROM FILE PRPOA

TYPE	ELEM	MX PR STRS	MN PR STRS	MXPR SHR -	MXPR SHR +	MX PR STRS	MN PR STRS	MXPR SHR -	MXPR SHR +
3	1	1.5859E+02	-9.9531E+01	1.2906E+02	1.5333E+02	1.6876E+02	-2.0634E+01	9.4699E+01	1.1897E+02
3	2	1.8827E+02	-1.9388E+01	1.0382E+02	1.4759E+02	1.9330E+02	2.1434E+01	8.5933E+01	1.2970E+02
3	3	1.2664E+02	-2.0286E+01	7.3466E+01	9.2860E+01	1.2777E+02	2.4216E+00	6.2676E+01	8.2870E+01
3	4	1.5869E+02	-1.2571E+02	1.3828E+02	1.4972E+02	1.6517E+02	-2.8047E+01	9.6610E+01	1.0813E+02
3	5	9.8702E+01	-9.0620E+01	9.4661E+01	9.9516E+01	1.0814E+02	-3.2836E+01	7.0488E+01	7.5343E+01
3	6	8.1712E+01	-8.0100E+01	8.0906E+01	8.1180E+01	8.3206E+01	-6.5150E+01	7.4178E+01	7.4452E+01
3	7	1.6615E+02	-1.2474E+02	1.4545E+02	1.6190E+02	1.8438E+02	-1.5233E+01	9.9807E+01	1.1626E+02
3	8	1.0431E+02	-8.6660E+01	9.5483E+01	9.8794E+01	1.1067E+02	-2.4845E+01	6.7755E+01	7.1066E+01
3	9	7.2608E+01	-5.6706E+01	6.4657E+01	6.6489E+01	7.1646E+01	-4.0144E+01	5.5895E+01	5.7727E+01
3	10	1.7350E+02	-1.3641E+02	1.5496E+02	1.6801E+02	1.7908E+02	-2.7435E+01	1.0326E+02	1.1631E+02
3	11	1.2968E+02	-1.0204E+02	1.1586E+02	1.2402E+02	1.2762E+02	-2.9086E+01	7.8353E+01	8.6518E+01
3	12	6.9774E+01	-5.4622E+01	6.2198E+01	6.4156E+01	5.6861E+01	-2.7825E+01	4.2345E+01	4.4303E+01
3	13	1.8189E+02	-1.5614E+02	1.6901E+02	1.7539E+02	1.6885E+02	-6.0546E+01	1.1470E+02	1.2107E+02
3	14	1.2947E+02	-1.2593E+02	1.2770E+02	1.3040E+02	1.2177E+02	-5.6924E+01	9.0348E+01	9.3843E+01
3	15	7.0194E+01	-7.2805E+01	7.1500E+01	7.1631E+01	5.5757E+01	-4.5396E+01	5.0577E+01	5.0788E+01
3	16	1.3716E+02	-9.5021E+01	1.1609E+02	1.2495E+02	1.3503E+02	-3.4794E+01	8.4913E+01	9.3774E+01
3	17	9.2700E+01	-9.3910E+01	9.3305E+01	9.5331E+01	9.1008E+01	-5.1188E+01	7.1098E+01	7.3124E+01
3	18	6.3904E+01	-6.2641E+01	6.3273E+01	6.4439E+01	6.0155E+01	-3.0662E+01	4.5429E+01	4.6595E+01
3	19	1.1175E+02	-1.0233E+02	1.0704E+02	1.1600E+02	1.1397E+02	-1.4154E+01	6.4061E+01	7.3025E+01
3	20	8.6553E+01	-8.1567E+01	8.4060E+01	8.9591E+01	8.5686E+01	-1.6068E+01	5.0877E+01	5.6408E+01
3	21	6.1457E+01	-6.2424E+01	6.1941E+01	6.2388E+01	4.9474E+01	-3.3244E+01	4.1359E+01	4.1726E+01
3	22	5.0832E+01	-5.1125E+01	5.0978E+01	5.1255E+01	3.7433E+01	-2.5747E+01	3.1590E+01	3.1867E+01
3	23	1.1404E+02	-1.1392E+02	1.1438E+02	1.1900E+02	1.2419E+02	-4.4533E+01	8.4361E+01	8.8981E+01
3	24	9.8929E+01	-9.1888E+01	9.5402E+01	9.9509E+01	1.0624E+02	-3.6589E+01	7.1412E+01	7.5519E+01
3	25	1.4286E+02	-7.9316E+01	1.1109E+02	1.1650E+02	1.4446E+02	-5.2166E+01	9.0313E+01	1.0373E+02
3	26	1.2670E+02	-1.1837E+02	1.2254E+02	1.2847E+02	1.3790E+02	-4.3648E+01	9.0775E+01	9.6705E+01
3	27	1.3156E+02	-1.1297E+02	1.2227E+02	1.3081E+02	1.4502E+02	-3.2029E+01	8.8526E+01	9.7073E+01
3	28	6.5448E+01	-6.2853E+01	6.4150E+01	6.4268E+01	6.5262E+01	-5.4761E+01	6.0011E+01	6.0129E+01
3	29	9.4426E+01	-1.1573E+02	1.0508E+02	1.0713E+02	1.0498E+02	-5.3772E+01	7.9375E+01	8.1428E+01
3	30	7.9340E+01	-8.7243E+01	8.3291E+01	8.5137E+01	8.6671E+01	-4.2574E+01	6.4622E+01	6.5468E+01
3	31	1.0727E+02	-1.1226E+02	1.0977E+02	1.1268E+02	1.1722E+02	-5.3629E+01	8.5425E+01	8.8337E+01
3	32	8.3829E+01	-8.5517E+01	8.4673E+01	8.6830E+01	9.1013E+01	-4.2266E+01	6.6648E+01	6.8797E+01
3	33	1.1590E+02	-1.0849E+02	1.0820E+02	1.1312E+02	1.2557E+02	-4.2586E+01	8.4079E+01	8.9000E+01
3	34	8.0346E+01	-8.1156E+01	8.0751E+01	8.2733E+01	8.7069E+01	-4.1308E+01	6.4189E+01	6.6171E+01
3	35	9.7389E+01	-7.4838E+01	8.6174E+01	9.1207E+01	1.0446E+02	-3.0580E+01	6.7520E+01	7.2553E+01
3	36	7.6654E+01	-6.4113E+01	7.0383E+01	7.5254E+01	7.9828E+01	-3.0579E+01	5.5203E+01	6.0874E+01
3	37	5.7258E+01	-4.8380E+01	5.2819E+01	5.6771E+01	5.9922E+01	-2.2061E+01	4.0991E+01	4.4943E+01
3	38	6.8726E+01	-8.9427E+01	7.9077E+01	8.5805E+01	8.2471E+01	-9.1679E+00	4.5820E+01	5.2548E+01
3	39	7.6128E+01	-7.6718E+01	7.6423E+01	7.7620E+01	7.7361E+01	-4.3204E+01	6.0283E+01	6.1468E+01
3	40	7.9793E+01	-6.1450E+01	7.0622E+01	7.2400E+01	7.7899E+01	-3.7316E+01	5.7608E+01	5.9394E+01
3	41	8.4961E+01	-5.0343E+01	6.7653E+01	7.0182E+01	8.0586E+01	-3.2471E+01	5.6529E+01	5.9058E+01
3	42	8.7747E+01	-4.2635E+01	6.5191E+01	6.8351E+01	8.2251E+01	-2.8688E+01	5.5470E+01	5.8630E+01
3	43	3.6431E+02	-2.5978E+02	3.1204E+02	3.2517E+02	3.6925E+02	-1.9374E+02	2.9149E+02	2.9462E+02
3	44	1.0581E+02	-1.9551E+01	6.2679E+01	8.9415E+01	1.0597E+02	1.8156E+01	4.3906E+01	7.0642E+01
3	45	3.6233E+01	-6.0023E+01	4.8128E+01	5.0997E+01	4.4068E+01	-8.0748E+00	2.6872E+01	2.9741E+01
3	46	1.0942E+02	-5.9054E+01	8.4238E+01	9.3815E+01	1.1205E+02	-7.1757E+00	5.9613E+01	6.8390E+01
3	47	4.2664E+01	-3.8321E+01	4.0492E+01	4.4093E+01	4.1866E+01	-3.6265E+00	2.2716E+01	2.6317E+01
3	48	1.4766E+02	-9.7123E+01	1.2239E+02	1.2921E+02	1.5149E+02	-5.5718E+01	1.0361E+02	1.1042E+02
3	49	7.3575E+01	-6.8758E+01	7.1167E+01	7.2429E+01	7.2805E+01	-4.3027E+01	5.7916E+01	5.9178E+01
3	50	2.3623E+02	-2.1441E+02	2.2532E+02	2.3204E+02	2.4484E+02	-1.4164E+02	1.9324E+02	1.9956E+02
3	51	1.4902E+02	-3.6397E+01	9.3206E+01	1.2039E+02	1.4908E+02	-7.6612E+00	7.8370E+01	1.0555E+02
3	52	1.6774E+02	-3.4167E+01	1.0895E+02	1.3778E+02	1.7479E+02	1.3779E+01	8.0503E+01	1.1733E+02
3	53	1.0892E+02	-3.5528E+01	7.2222E+01	8.2340E+01	1.0899E+02	5.7346E+01	5.4205E+01	6.4327E+01
3	54	5.6893E+01	-1.3450E+01	3.4772E+01	4.3087E+01	5.2749E+01	2.1575E+00	2.5256E+01	3.3511E+01

3	8.3575E+01	-5.7188E+01	7.0381E+01	7.3350E+01	8.3921E+01	-2.6571E+01	5.5246E+01	5.8215E+01
3	5.3073E+01	-4.2955E+01	4.0014E+01	4.0947E+01	4.9783E+01	-2.7357E+01	3.8570E+01	3.9582E+01
3	57	7.5831E+01	-7.0265E+01	7.3047E+01	7.3896E+01	7.7221E+01	-4.6043E+01	6.1632E+01
3	58	5.9516E+01	-5.6139E+01	5.7827E+01	5.7999E+01	5.6786E+01	-4.2645E+01	4.9715E+01
3	59	7.0831E+01	-6.8118E+01	7.3474E+01	7.4513E+01	8.0623E+01	-4.6475E+01	6.3549E+01
3	60	5.9972E+01	-5.8269E+01	5.9120E+01	5.9273E+01	5.7712E+01	-4.6396E+01	5.2054E+01
3	61	9.2527E+01	-6.4409E+01	7.8460E+01	8.0468E+01	9.4238E+01	-4.5352E+01	6.9795E+01
3	62	7.0805E+01	-5.7495E+01	6.4150E+01	6.4839E+01	6.9097E+01	-4.6316E+01	5.7706E+01
3	63	1.2642E+02	-1.0188E+02	1.1414E+02	1.1508E+02	1.2897E+02	-7.9973E+01	1.0447E+02
3	64	9.8919E+01	-9.1847E+01	9.5383E+01	9.5709E+01	9.8902E+01	-8.0926E+01	8.9914E+01
3	65	1.4076E+02	-1.3458E+02	1.4167E+02	1.4226E+02	1.5214E+02	-1.0466E+02	1.2840E+02
3	66	1.2532E+02	-1.1907E+02	1.2220E+02	1.2241E+02	1.2535E+02	-1.0555E+02	1.1545E+02
3	67	1.5756E+02	-1.5572E+02	1.5664E+02	1.5710E+02	1.5926E+02	-1.2530E+02	1.4228E+02
3	68	1.4550E+02	-1.2598E+02	1.3574E+02	1.3637E+02	1.4593E+02	-1.0583E+02	1.2586E+02
3	69	1.1032E+02	-8.3801E+01	9.7061E+01	9.8954E+01	1.0626E+02	-4.9284E+01	7.7770E+01
3	70	9.6315E+01	-7.5840E+01	8.6078E+01	8.8915E+01	9.3467E+01	-4.1156E+01	6.7312E+01
3	71	9.3263E+01	-9.4337E+01	9.3810E+01	9.4786E+01	8.3572E+01	-5.2091E+01	6.7831E+01
3	72	8.2867E+01	-8.6591E+01	8.4729E+01	8.6678E+01	7.9590E+01	-3.7268E+01	5.8429E+01
3	73	5.1976E+01	-6.2877E+01	5.7427E+01	6.0155E+01	5.4085E+01	-1.5269E+01	3.5077E+01
3	74	5.5701E+01	-6.6928E+01	6.1314E+01	6.6227E+01	6.4411E+01	-8.4904E+00	3.6450E+01
3	75	5.0959E+01	-7.0736E+01	6.5047E+01	7.3703E+01	7.0840E+01	-2.5774E+01	3.5549E+01
3	76	5.2307E+01	-7.4496E+01	6.3401E+01	6.8157E+01	6.1029E+01	-8.1372E+00	3.5833E+01
3	77	6.0807E+01	-8.2160E+01	7.4083E+01	8.4141E+01	8.0249E+01	-3.0203E+00	3.8214E+01
3	78	5.1497E+01	-7.9078E+01	6.5287E+01	6.9686E+01	6.1531E+01	-9.4911E+00	3.5511E+01
3	79	5.7920E+01	-8.9134E+01	7.3530E+01	8.1350E+01	7.2881E+01	-9.2560E+01	3.6803E+01
3	80	5.0447E+01	-7.6777E+01	6.3612E+01	6.7172E+01	5.9353E+01	-1.2487E+01	3.5920E+01
3	81	5.1801E+01	-9.6798E+01	7.4308E+01	7.9790E+01	6.6746E+01	-7.4808E+00	3.7118E+01
3	82	5.2577E+01	-4.8951E+01	5.0764E+01	5.2742E+01	5.0650E+01	-1.7263E+01	3.3957E+01
3	83	5.3225E+01	-5.3985E+01	5.3605E+01	6.0552E+01	6.0479E+01	-2.0710E+01	3.0343E+01
3	84	8.4657E+01	-3.7584E+01	6.1121E+01	6.4687E+01	8.5784E+01	-2.8460E+01	5.7122E+01
3	85	6.7501E+01	-6.4165E+01	6.5833E+01	7.6437E+01	7.9216E+01	-5.0510E+00	3.7882E+01
3	86	7.0847E+01	-4.6954E+01	5.8908E+01	6.0445E+01	7.1776E+01	-3.5689E+01	5.3692E+01
3	87	6.3391E+01	-7.1440E+01	6.7416E+01	7.6409E+01	7.5573E+01	-1.3646E+00	3.7104E+01
3	88	6.2894E+01	-6.0511E+01	6.1703E+01	6.2531E+01	6.5159E+01	-3.9437E+01	5.2290E+01
3	89	5.8381E+01	-8.0489E+01	6.9434E+01	7.5919E+01	7.0192E+01	-5.1888E+00	3.7690E+01
3	90	5.8866E+01	-7.9041E+01	6.8954E+01	6.9683E+01	6.3892E+01	-4.0707E+01	5.2300E+01
3	91	6.2216E+01	-8.5386E+01	7.3800E+01	7.5802E+01	7.1059E+01	-3.2054E+01	5.1556E+01
3	92	5.1081E+01	-7.1331E+01	6.1206E+01	6.2345E+01	5.8144E+01	-2.9694E+01	4.3919E+01
3	93	6.3868E+01	-6.5890E+01	6.4878E+01	6.5206E+01	6.3375E+01	-4.6530E+01	5.4956E+01
3	94	9.7549E+01	-1.1822E+02	1.0789E+02	1.0913E+02	1.0347E+02	-6.5770E+01	8.4621E+01
3	95	9.6145E+01	-1.0371E+02	9.9927E+01	1.0065E+02	9.9142E+01	-6.8505E+01	8.3624E+01
3	96	5.9309E+01	-5.6770E+01	5.8039E+01	5.9190E+01	6.3246E+01	-3.3170E+01	4.8208E+01
3	97	1.1364E+02	-1.0310E+02	1.0841E+02	1.1009E+02	1.1809E+02	-5.8735E+01	8.8414E+01
3	98	8.9872E+01	-9.0083E+01	8.9570E+01	9.0810E+01	9.1141E+01	-5.7460E+01	7.4301E+01
3	99	6.3463E+01	-5.9505E+01	6.1404E+01	6.3307E+01	6.8441E+01	-3.0067E+01	4.9254E+01
3	100	5.3743E+01	-6.2813E+01	5.0277E+01	6.4066E+01	6.3505E+01	-4.0664E+00	3.4185E+01
3	101	3.3831E+01	-4.9263E+01	4.1547E+01	4.4098E+01	4.0743E+01	-8.2426E+00	2.4493E+01
3	102	2.3452E+02	-1.7563E+02	2.0498E+02	2.0671E+02	2.2981E+02	-1.5670E+02	1.9326E+02
3	103	2.0259E+02	-1.9280E+02	1.9769E+02	1.9786E+02	1.9335E+02	-1.7148E+02	1.8237E+02
3	104	4.5404E+01	-1.6619E+01	3.1052E+01	3.1552E+01	3.1933E+01	-1.0753E+01	2.5343E+01
3	105	4.7516E+01	5.3753E+01	2.3489E+01	2.7395E+01	3.9601E+01	-9.6407E+01	1.9783E+01
3	106	3.8625E+01	-5.5804E+00	2.2067E+01	2.3315E+01	2.7007E+01	-6.9664E+00	1.6987E+01
3	107	3.5106E+01	-6.2261E+00	2.0666E+01	2.1344E+01	2.0238E+01	-8.5697E+00	1.4404E+01
3	108	3.0403E+01	-4.9279E+00	1.7665E+01	1.8238E+01	1.7221E+01	-6.9797E+00	1.2108E+01
3	109	3.1797E+01	-4.2417E+00	1.8020E+01	1.8961E+01	2.0906E+01	-6.0371E+00	1.3472E+01
3	110	3.6041E+01	-1.2266E+00	1.0633E+01	2.0448E+01	2.2547E+01	-3.1691E+00	1.2858E+01
3	111	4.7452E+01	2.3408E+00	2.2556E+01	2.6190E+01	3.0407E+01	-3.2202E+01	1.5843E+01
3	112	8.4334E+01	-8.9392E+01	8.6864E+01	8.9090E+01	9.2956E+01	-3.6951E+01	6.4954E+01
3	113	7.3916E+01	-6.8665E+01	7.1291E+01	7.4034E+01	7.9593E+01	-3.1410E+01	5.5822E+01
3	114	5.7926E+01	-4.8620E+01	5.3273E+01	5.4473E+01	6.1106E+01	-2.7070E+01	4.4080E+01

3	8.8355E+01	-9.4728E+01	9.1541E+01	9.4642E+01	9.7550E+01	-3.7489E+01	6.7519E+01	7.0625E+01
3	7.6189E+01	-7.7428E+01	7.6609E+01	7.8779E+01	8.1938E+01	-3.3640E+01	5.7789E+01	5.9750E+01
3	117	6.4421E+01	-4.7950E+01	5.6186E+01	5.7743E+01	6.7242E+01	-2.5203E+01	4.6233E+01
3	118	7.9600E+01	-1.0052E+02	9.0063E+01	9.2716E+01	8.8646E+01	-3.0553E+01	5.9599E+01
3	119	7.4638E+01	-6.2206E+01	6.8421E+01	7.4344E+01	7.7370E+01	-1.9943E+01	4.8656E+01
3	120	6.6503E+01	-5.5655E+01	6.1120E+01	6.4712E+01	6.9393E+01	-2.7252E+01	4.8323E+01
3	121	7.3352E+01	-1.0222E+02	8.7785E+01	9.2929E+01	8.7469E+01	-2.0306E+01	5.3867E+01
3	122	5.8646E+01	-8.4501E+01	7.1573E+01	7.7099E+01	6.9815E+01	-9.7016E+00	3.9758E+01
3	123	6.0471E+01	-9.4877E+01	7.7674E+01	8.0872E+01	6.7938E+01	-2.2451E+01	4.5194E+01
3	124	5.8272E+01	-7.7322E+01	6.7798E+01	7.1769E+01	6.3179E+01	-1.0734E+01	4.0957E+01
3	125	6.0313E+01	-6.6489E+01	6.3401E+01	6.5431E+01	6.3445E+01	-3.1287E+01	4.7366E+01
3	126	5.4163E+01	-1.0080E+02	7.7491E+01	7.8480E+01	6.5090E+01	-3.7893E+01	5.1491E+01
3	127	4.7862E+01	-7.0953E+01	5.9418E+01	6.1046E+01	5.6376E+01	-2.3522E+01	3.9949E+01
3	128	6.4486E+01	-6.2290E+01	6.3389E+01	6.4202E+01	6.3220E+01	-3.7085E+01	5.0157E+01
3	129	5.9452E+01	-9.2175E+01	7.5813E+01	7.6964E+01	6.8383E+01	-3.7272E+01	5.2827E+01
3	130	5.5792E+01	-7.6293E+01	6.6043E+01	6.7547E+01	6.3431E+01	-2.9474E+01	4.6453E+01
3	131	6.5958E+01	-7.0616E+01	6.8287E+01	6.8434E+01	6.2401E+01	-5.0720E+01	5.6560E+01
3	132	2.1330E+02	-1.5414E+02	1.8372E+02	1.8031E+02	2.1050E+02	-1.0225E+02	1.5637E+02
3	133	2.0052E+02	-1.7366E+02	1.8710E+02	1.6817E+02	1.9235E+02	-1.3878E+02	1.6557E+02
3	134	1.1229E+02	-6.8587E+01	9.0438E+01	9.6899E+01	1.1711E+02	-2.8379E+01	7.2743E+01
3	135	6.4422E+01	-5.2741E+01	5.8591E+01	5.9597E+01	6.5111E+01	-3.6107E+01	5.0609E+01
3	136	1.1345E+02	-9.3423E+01	1.0344E+02	1.0751E+02	1.1906E+02	-4.5272E+01	8.2166E+01
3	137	7.7254E+01	-7.1526E+01	7.4390E+01	7.5414E+01	7.9278E+01	-4.6748E+01	6.3089E+01
3	138	1.1053E+02	-1.1262E+02	1.1157E+02	1.1476E+02	1.1904E+02	-5.2972E+01	8.6086E+01
3	139	8.2676E+01	-0.3609E+01	8.3143E+01	8.4036E+01	8.6041E+01	-5.3887E+01	6.9964E+01
3	140	1.0553E+02	-1.2116E+02	1.1334E+02	1.1585E+02	1.1622E+02	-5.8071E+01	8.7147E+01
3	141	8.0680E+01	-8.4541E+01	8.2614E+01	8.3528E+01	8.5750E+01	-5.3752E+01	6.9751E+01
3	142	1.1564E+02	-1.1928E+02	1.1746E+02	1.2121E+02	1.2669E+02	-5.4449E+01	9.0568E+01
3	143	8.2777E+01	-8.2082E+01	8.2429E+01	8.3661E+01	8.7971E+01	-5.1253E+01	6.9612E+01
3	144	8.9610E+01	-8.7618E+01	8.8614E+01	9.5967E+01	8.9624E+01	-9.6656E+00	4.9645E+01
3	145	7.7011E+01	-6.9871E+01	7.3441E+01	7.7492E+01	6.8225E+01	-1.4836E+01	4.1530E+01
3	146	1.2319E+02	-5.5049E+01	8.9117E+01	1.0271E+02	1.3088E+02	-3.3339E+00	6.7106E+01
3	147	9.0650E+01	-5.2240E+01	7.1446E+01	7.9340E+01	9.7448E+01	-1.1261E+01	5.4355E+01
3	148	2.0476E+02	-1.4970E+02	1.7723E+02	1.8227E+02	2.0240E+02	-9.1993E+01	1.4726E+02
3	149	1.5723E+02	-8.0056E+01	1.1864E+02	1.4396E+02	1.6891E+02	-1.7741E+01	9.3327E+01
3	150	1.6126E+02	-1.0438E+02	1.3282E+02	1.4562E+02	1.7111E+02	-5.7550E+01	1.1433E+02
3	151	1.0651E+02	-8.5745E+01	9.6126E+01	9.9866E+01	1.0672E+02	-5.0381E+01	7.8548E+01
3	152	5.3372E+01	-5.1484E+01	5.2428E+01	5.3832E+01	5.4595E+01	-2.9053E+01	4.1624E+01
3	153	1.2802E+02	-7.4463E+01	1.0124E+02	1.1464E+02	1.3774E+02	-6.9285E+00	7.2334E+01
3	154	7.8546E+01	-5.9468E+01	6.9007E+01	7.6309E+01	8.6252E+01	-8.7918E+00	4.7522E+01
3	155	7.6240E+01	-7.8034E+01	7.7137E+01	7.8348E+01	8.0557E+01	-4.0403E+01	6.0500E+01
3	156	6.1805E+01	-5.6747E+01	5.9276E+01	6.0013E+01	6.3682E+01	-3.4828E+01	4.9251E+01
3	157	1.1633E+02	-9.8547E+01	1.0744E+02	1.1718E+02	1.2094E+02	-1.0150E+01	7.3546E+01
3	158	8.2733E+01	-7.5413E+01	7.9073E+01	8.4080E+01	9.1209E+01	-1.8258E+01	5.4734E+01
3	159	7.8467E+01	-8.0936E+01	7.9702E+01	8.1391E+01	8.4212E+01	-4.4222E+01	6.4217E+01
3	160	6.3898E+01	-6.6206E+01	6.5052E+01	6.5661E+01	6.7387E+01	-4.3575E+01	5.5441E+01
3	161	1.0821E+02	-1.0871E+02	1.0846E+02	1.1593E+02	1.2194E+02	-2.5748E+01	7.3643E+01
3	162	8.5053E+01	-8.1901E+01	8.3477E+01	8.8754E+01	9.4286E+01	-2.2558E+01	5.8422E+01
3	163	8.4923E+01	-7.9587E+01	8.2254E+01	8.4971E+01	9.0735E+01	-4.2280E+01	6.6507E+01
3	164	7.3483E+01	-6.7248E+01	7.0365E+01	7.1790E+01	7.6867E+01	-4.4587E+01	6.0727E+01
3	165	9.9333E+01	-1.1120E+02	1.0527E+02	1.1056E+02	1.1298E+02	-3.0624E+01	7.1803E+01
3	166	6.4436E+01	-7.7238E+01	8.0047E+01	8.6289E+01	9.3512E+01	-2.1148E+01	5.7330E+01
3	167	8.9636E+01	-6.4840E+01	7.6742E+01	8.3383E+01	9.4425E+01	-2.0057E+01	6.1241E+01
3	168	9.2394E+01	-5.6715E+01	7.4554E+01	7.9066E+01	9.5591E+01	-3.5665E+01	6.5620E+01
3	169	8.8889E+01	-1.0272E+02	9.5005E+01	1.0039E+02	1.0113E+02	-3.0361E+01	6.5745E+01
3	170	7.8017E+01	-6.6102E+01	7.2060E+01	7.7090E+01	8.5949E+01	-1.4059E+01	5.0454E+01
3	171	1.1479E+02	-2.0310E+01	6.7550E+01	9.5183E+01	1.1778E+02	1.4532E+01	5.1622E+01
3	172	1.2096E+02	-4.7075E+01	8.4021E+01	9.6452E+01	1.2153E+02	-2.7933E+01	7.4733E+01
3	173	7.1110E+01	-8.8156E+01	7.9633E+01	8.4943E+01	7.5633E+01	-1.6591E+01	4.6112E+01
3	174	6.2017E+01	-6.4507E+01	6.3262E+01	6.7235E+01	6.5142E+01	-1.2967E+01	3.9054E+01

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3	9.4155E+01	-2.4641E+01	5.9399E+01	7.2319E+01
3	9.2790E+01	-1.1783E+01	5.2287E+01	6.9751E+01
3	5.7899E+01	1.1150E+01	2.3374E+01	4.8919E+01
3	6.4342E+01	-8.8131E+01	7.6237E+01	8.0221E+01
3	5.2162E+01	-9.7765E+01	5.4964E+01	5.8615E+01
3	2.7307E+01	-3.6168E+01	3.1778E+01	3.3451E+01
3	3.8645E+02	-4.6385E+02	4.2515E+02	4.2679E+02
3	7.9877E+01	-1.1289E+02	9.6385E+01	9.7549E+01
3	9.3354E+01	-1.8027E+02	9.8023E+01	9.9315E+01
3	5.5409E+01	-5.4294E+01	5.4051E+01	5.6235E+01
3	1.0498E+02	-6.6392E+01	8.5689E+01	8.9299E+01
3	3.7934E+02	-4.6391E+02	4.2162E+02	4.2386E+02
3	9.7228E+01	-9.6605E+01	9.6915E+01	9.9881E+01
3	9.1862E+01	-1.2644E+02	1.0875E+02	1.0964E+02
3	8.6099E+01	-7.0983E+01	7.8541E+01	8.3856E+01
3	1.1011E+02	-5.6246E+01	8.3181E+01	9.3169E+01
3	1.2796E+02	-1.2985E+02	1.2090E+02	1.3054E+02
3	1.5273E+02	-1.3720E+02	1.4497E+02	1.5062E+02
3	1.1165E+02	-7.6558E+01	9.4103E+01	1.0395E+02
3	7.6259E+01	-7.1711E+01	7.3985E+01	7.5554E+01
3	1.2242E+02	-1.1596E+02	1.1919E+02	1.2238E+02
3	1.2302E+02	-1.0315E+02	1.1308E+02	1.1942E+02
3	9.5615E+01	-7.8109E+01	8.6862E+01	9.2243E+01
3	7.5584E+01	-6.4682E+01	7.0133E+01	7.1781E+01
3	1.3075E+02	-8.7645E+01	1.0919E+02	1.1797E+02
3	1.1737E+02	-6.5138E+01	1.0126E+02	1.0542E+02
3	9.0104E+01	-6.7644E+01	7.8074E+01	8.2464E+01
3	7.2903E+01	-5.7373E+01	6.5139E+01	6.6543E+01
3	1.3064E+02	-9.4846E+01	1.1274E+02	1.3159E+02
3	1.2018E+02	-9.5456E+01	1.1182E+02	1.2581E+02
3	1.0609E+02	-7.5943E+01	9.1017E+01	9.8754E+01
3	3.5539E+01	-2.6700E+01	3.0120E+01	3.3128E+01
3	9.3383E+01	-1.1123E+02	1.0231E+02	1.0528E+02
3	8.9138E+01	-7.2078E+01	8.1008E+01	9.1472E+01
3	9.1965E+01	-7.0936E+01	8.1458E+01	8.8508E+01
3	3.0409E+01	-2.9300E+01	2.9038E+01	3.3057E+01
3	5.5427E+01	-6.3632E+01	5.9529E+01	7.5479E+01
3	7.1637E+01	-2.2702E+01	4.7178E+01	7.9052E+01
3	1.0568E+02	-2.0199E+01	6.2036E+01	8.0004E+01
3	1.4546E+02	-8.3367E+01	1.1441E+02	1.3227E+02
3	1.0287E+02	-5.6130E+01	7.9502E+01	8.3189E+01
3	4.3997E+01	-4.7610E+01	4.5803E+01	4.8447E+01
3	6.3308E+01	-6.6050E+01	6.4679E+01	6.5838E+01
3	3.6243E+01	-4.8775E+01	4.2580E+01	4.4003E+01
3	1.1321E+02	-8.1464E+01	9.7339E+01	1.0266E+02
3	1.0515E+02	-1.0523E+02	1.0519E+02	1.0613E+02
3	0.7940E+01	-9.2720E+01	9.0331E+01	9.2292E+01
3	7.4938E+01	-9.1321E+01	8.3126E+01	8.3419E+01
3	3.7735E+02	-4.9002E+02	4.3368E+02	4.3447E+02
3	1.1897E+02	-1.3034E+02	1.2465E+02	1.2584E+02
3	1.6869E+02	-1.8221E+02	1.7545E+02	1.8457E+02
3	1.0680E+02	-1.2935E+02	1.1772E+02	1.1972E+02
3	1.6116E+02	-1.9070E+02	1.7594E+02	1.7643E+02
3	1.6858E+02	-1.7536E+02	1.7198E+02	1.7516E+02
3	1.8096E+02	-1.6849E+02	1.7872E+02	1.8438E+02
3	1.4570E+02	-1.1831E+02	1.3201E+02	1.3455E+02
3	2.6176E+02	-2.5705E+02	2.5941E+02	2.6982E+02
3	1.5334E+02	-8.6379E+01	1.6866E+02	1.3932E+02
3	3.1318E+02	-3.7298E+02	3.4307E+02	3.4642E+02
3	8.7667E+01	-1.0779E+02	9.7700E+01	1.0061E+02

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9.8367E+01	7.5836E+00	4.5392E+01	5.8311E+01
9.5447E+01	8.3242E+00	4.3562E+01	6.1031E+01
6.0149E+01	2.4398E+01	1.7875E+01	4.3420E+01
6.7546E+01	-2.1230E+01	4.4392E+01	4.8376E+01
5.3284E+01	-1.4258E+01	3.3771E+01	3.7422E+01
3.2238E+01	-8.1898E+00	2.0214E+01	2.1087E+01
4.1203E+02	-3.1326E+02	3.6265E+02	3.6429E+02
8.9559E+01	-5.2633E+01	7.1096E+01	7.2260E+01
1.0064E+02	-5.9047E+01	7.9842E+01	8.1134E+01
5.9788E+01	-2.6613E+01	4.4200E+01	4.9584E+01
1.0646E+02	-4.0324E+01	7.3394E+01	7.7084E+01
4.0481E+02	-3.1345E+02	3.5913E+02	3.6057E+02
1.0588E+02	-4.3994E+01	7.4935E+01	7.7901E+01
1.0114E+02	-6.6578E+01	8.3861E+01	8.4746E+01
6.6659E+01	-3.4652E+01	6.0655E+01	6.5970E+01
1.0549E+02	-2.8239E+01	6.8866E+01	7.0654E+01
1.3082E+02	-7.2365E+01	1.0159E+02	1.0323E+02
1.4712E+02	-7.3600E+01	1.1036E+02	1.1036E+02
1.0703E+02	-3.0641E+01	6.8036E+01	7.0686E+01
7.6811E+01	-4.6855E+01	6.1353E+01	6.3402E+01
1.2522E+02	-5.4900E+01	9.0059E+01	9.3244E+01
1.1938E+02	-4.3784E+01	8.1583E+01	8.7916E+01
9.3251E+01	-3.5130E+01	6.4190E+01	6.9571E+01
7.5174E+01	-4.0289E+01	5.7732E+01	5.9380E+01
1.4028E+02	-2.8240E+01	8.4259E+01	9.3034E+01
1.1967E+02	-2.9405E+01	7.4579E+01	7.8739E+01
8.7802E+01	-3.0198E+01	5.8600E+01	6.2210E+01
7.2393E+01	-3.2974E+01	5.2684E+01	5.4008E+01
1.4469E+02	-2.4546E+01	8.4619E+01	1.0347E+02
1.3934E+02	-3.5757E+01	8.7550E+01	1.0154E+02
1.0674E+02	-3.7818E+01	7.2280E+01	8.0017E+01
3.4573E+01	-4.6973E+00	1.9635E+01	2.2643E+01
9.8643E+01	-3.7467E+01	6.8055E+01	7.1025E+01
8.6784E+01	-1.6519E+01	5.1652E+01	6.2116E+01
9.1075E+01	-3.0761E+01	6.0918E+01	6.7968E+01
3.1710E+01	-5.5349E+00	1.0622E+01	2.1701E+01
6.3119E+01	7.3126E+00	2.7903E+01	4.3853E+01
7.8909E+01	3.0275E+01	2.4317E+01	5.8299E+01
1.0934E+02	9.7779E+00	4.9779E+01	6.6847E+01
1.4733E+02	-5.7314E+01	1.0232E+02	1.1119E+02
1.0526E+02	-4.1986E+01	7.3624E+01	7.7311E+01
4.8356E+01	-1.1804E+01	3.0080E+01	3.2724E+01
6.5177E+01	-3.4486E+01	4.9031E+01	5.0990E+01
4.0717E+01	-1.4596E+01	2.7656E+01	2.9151E+01
1.1978E+02	-3.6511E+01	7.8147E+01	8.3473E+01
1.0467E+02	-6.8338E+01	8.6509E+01	8.7443E+01
9.2337E+01	-4.5262E+01	6.8000E+01	7.0761E+01
7.3265E+01	-5.5769E+01	6.4517E+01	6.4018E+01
4.0151E+02	-3.3626E+02	3.6889E+02	3.6968E+02
1.2434E+02	-8.5685E+01	1.0497E+02	1.0516E+02
1.8459E+02	-6.4101E+01	1.2434E+02	1.3346E+02
1.1165E+02	-7.2574E+01	9.2113E+01	9.4113E+01
1.6576E+02	-1.2617E+02	1.4546E+02	1.4546E+02
1.7386E+02	-1.0679E+02	1.4033E+02	1.4182E+02
1.9510E+02	-9.3544E+01	1.4422E+02	1.4929E+02
1.4937E+02	-5.7388E+01	1.0538E+02	1.0572E+02
2.7362E+02	-1.4514E+02	2.0958E+02	2.1089E+02
1.5415E+02	-2.8550E+01	9.1344E+01	1.1089E+02
3.3854E+02	-2.1871E+02	2.7867E+02	2.8262E+02
9.6215E+01	-4.8699E+01	7.2457E+01	7.5370E+01

3	237	1.4174E+02	-2.0730E+02	1.7452E+02	1.7783E+02
3	238	1.5605E+02	-2.1838E+02	1.8721E+02	1.9225E+02
3	239	1.4306E+02	-1.2656E+02	1.3480E+02	1.3622E+02
3	240	1.2994E+02	-1.0690E+02	1.1842E+02	1.2230E+02
3	241	8.3475E+01	-9.5892E+01	8.9683E+01	9.0885E+01
3	242	9.4402E+01	-7.4088E+01	8.4244E+01	9.0806E+01
3	243	8.9454E+01	-7.2988E+01	8.1221E+01	8.4526E+01
3	244	1.1983E+02	-1.1649E+02	1.1816E+02	1.2093E+02
3	245	7.0824E+01	-6.4417E+01	6.7621E+01	7.1544E+01
3	246	6.2798E+01	-6.3849E+01	6.3323E+01	6.4618E+01
3	247	4.6804E+01	-4.7146E+01	4.6974E+01	4.7519E+01
3	248	5.5409E+01	-5.4294E+01	5.4851E+01	5.6235E+01
3	249	1.0461E+02	-1.0464E+02	1.0463E+02	1.0715E+02
3	250	1.5201E+02	-8.9270E+01	1.2104E+02	1.3900E+02
3	251	1.2281E+02	-9.3403E+01	1.0810E+02	1.1535E+02
3	252	1.2551E+02	-1.3298E+02	1.2924E+02	1.2997E+02
3	253	7.7293E+01	-8.6033E+01	8.2663E+01	8.5494E+01
3	254	1.1998E+02	-5.4115E+01	8.7046E+01	1.1349E+02
3	255	1.7321E+02	-1.5087E+02	1.6203E+02	1.6217E+02
3	256	4.3469E+01	-4.0016E+01	4.6742E+01	4.7060E+01
3	257	7.6944E+01	-3.8225E+01	5.3584E+01	7.3561E+01
3	258	8.1878E+01	-6.3624E+01	7.2751E+01	7.7320E+01
3	259	1.2959E+02	-1.4140E+02	1.3549E+02	1.3576E+02
3	260	5.7531E+01	-6.7799E+01	6.2665E+01	6.4804E+01
3	261	7.9026E+01	-3.8948E+01	5.8987E+01	7.3975E+01
3	262	4.5222E+01	-5.5037E+01	5.0130E+01	5.0379E+01
3	263	7.1631E+01	-7.1681E+01	7.1656E+01	7.2091E+01
3	264	1.6875E+02	6.4685E+01	5.2035E+01	1.4011E+02
3	265	1.7680E+02	-9.0738E+01	1.3381E+02	1.4943E+02
3	266	5.4303E+01	-6.3340E+01	5.8061E+01	6.0179E+01
3	267	2.6996E+02	-1.9041E+02	2.3019E+02	2.3124E+02
3	268	2.4750E+02	-2.0524E+02	2.2638E+02	2.2715E+02
3	269	2.6194E+02	-2.3827E+02	2.4610E+02	2.4863E+02
3	270	1.3238E+02	-1.0248E+02	1.1743E+02	1.3282E+02
3	271	1.1678E+02	-1.3452E+02	1.2565E+02	1.3967E+02
3	272	9.6197E+01	-1.6739E+02	1.3179E+02	1.4083E+02
3	273	9.5752E+01	-1.7782E+02	1.3679E+02	1.4612E+02
3	274	1.2418E+02	-1.9365E+02	1.5891E+02	1.7536E+02
3	275	4.2040E+02	-4.8553E+02	4.5697E+02	4.6332E+02
3	276	3.9152E+02	-4.3566E+02	4.1358E+02	4.1801E+02
3	277	1.6526E+02	-2.1479E+02	1.9083E+02	1.9602E+02
3	278	2.9569E+02	-3.4812E+02	3.2190E+02	3.2320E+02
3	279	1.6515E+02	-2.1024E+02	1.8770E+02	1.8956E+02
3	280	2.6055E+02	-2.7932E+02	2.6993E+02	2.7199E+02
3	281	2.4990E+02	-1.2093E+02	1.8545E+02	2.1082E+02
3	282	1.9410E+02	-9.0875E+01	1.4649E+02	1.5894E+02
3	283	1.6307E+02	-1.8106E+02	1.7207E+02	1.7311E+02
3	284	1.7003E+02	-1.4085E+02	1.5544E+02	1.5648E+02
3	285	1.8306E+02	-1.1251E+02	1.4779E+02	1.4932E+02
3	286	1.2062E+02	-9.6105E+01	1.0036E+02	1.1716E+02
3	287	1.1710E+02	-1.4290E+02	1.3008E+02	1.3776E+02
3	288	1.1132E+02	-1.8942E+02	1.5037E+02	1.5726E+02
3	289	1.1312E+02	-2.1145E+02	1.6280E+02	1.7249E+02
3	290	1.0691E+02	-1.6400E+02	1.3589E+02	1.4640E+02
3	291	2.9676E+02	-3.5722E+02	3.2699E+02	3.2831E+02
3	292	3.1274E+02	-3.8395E+02	3.0035E+02	3.1639E+02
3	293	3.9072E+02	-4.4421E+02	4.1746E+02	4.2232E+02
3	294	4.2952E+01	-2.8075E+01	3.5513E+01	3.7951E+01
3	295	2.5937E+01	-3.7697E+01	3.1017E+01	3.2136E+01
3	296	2.6759E+01	-3.7206E+01	3.2023E+01	3.2449E+01

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1.6267E+02	-8.2565E+01	1.2262E+02	1.2597E+02
1.7955E+02	-7.7422E+01	1.2048E+02	1.3357E+02
1.4537E+02	-9.2659E+01	1.1981E+02	1.2043E+02
1.3644E+02	-5.7139E+01	9.6789E+01	1.0075E+02
8.9620E+01	-5.2153E+01	7.0886E+01	7.2088E+01
1.0347E+02	-2.0407E+01	6.1936E+01	6.8500E+01
9.5740E+01	-3.5908E+01	6.5824E+01	6.9129E+01
1.2089E+02	-5.7466E+01	8.9177E+01	9.1947E+01
7.8018E+01	-2.0971E+01	4.9495E+01	5.3418E+01
6.7715E+01	-3.4793E+01	5.1254E+01	5.2549E+01
4.9542E+01	-3.0669E+01	4.0105E+01	4.0650E+01
5.9788E+01	-2.0613E+01	4.4200E+01	4.5564E+01
1.1279E+02	-5.3913E+01	8.3350E+01	8.5876E+01
1.6263E+02	-3.6760E+01	9.9707E+01	1.1767E+02
1.2820E+02	-4.3278E+01	8.5739E+01	9.2984E+01
1.2956E+02	-9.3267E+01	1.1141E+02	1.1214E+02
8.1720E+01	-3.9480E+01	6.0600E+01	6.3431E+01
1.2299E+02	2.5106E+00	6.0230E+01	8.6685E+01
1.6045E+02	-1.4200E+02	1.5122E+02	1.5136E+02
4.5893E+01	-3.1750E+01	3.0821E+01	3.9139E+01
8.2098E+01	6.6632E+00	3.7717E+01	5.7694E+01
8.1293E+01	-3.1532E+01	5.6412E+01	6.0981E+01
1.3221E+02	-1.0905E+02	1.2063E+02	1.2090E+02
5.9892E+01	-3.0549E+01	4.5220E+01	4.7359E+01
7.9779E+01	-9.8735E-01	4.0383E+01	5.5371E+01
4.3794E+01	-3.1408E+01	3.7681E+01	3.7850E+01
6.9000E+01	-4.8068E+01	5.8934E+01	5.9369E+01
1.6234E+02	9.1260E+01	3.5542E+01	1.3162E+02
1.7718E+02	-5.1826E+01	1.1450E+02	1.3012E+02
5.7276E+01	-2.6906E+01	4.2091E+01	4.3409E+01
2.5370E+02	-1.9216E+02	2.2293E+02	2.2396E+02
2.4008E+02	-1.9553E+02	2.2181E+02	2.2256E+02
2.7126E+02	-1.7521E+02	2.2323E+02	2.2576E+02
1.4893E+02	-4.4235E+00	7.6676E+01	9.2074E+01
1.3874E+02	-4.9892E+00	7.1863E+01	8.5880E+01
1.2146E+02	-1.7397E+01	6.9428E+01	7.0468E+01
1.2298E+02	-1.6854E+01	6.9917E+01	7.9251E+01
1.5617E+02	-3.5669E+00	7.9869E+01	9.6314E+01
4.6457E+02	-2.7124E+02	3.6791E+02	3.7426E+02
4.2067E+02	-2.6420E+02	3.4243E+02	3.4686E+02
1.8908E+02	-7.4404E+01	1.3174E+02	1.3773E+02
3.1434E+02	-2.3823E+02	2.7628E+02	2.7758E+02
1.8138E+02	-1.1463E+02	1.4801E+02	1.4987E+02
2.7591E+02	-1.8870E+02	2.3230E+02	2.3436E+02
2.5655E+02	-6.7551E+01	1.6205E+02	1.6742E+02
1.9570E+02	-7.6594E+01	1.3615E+02	1.4060E+02
1.7299E+02	-1.2297E+02	1.4750E+02	1.4902E+02
1.7294E+02	-1.2294E+02	1.4794E+02	1.4900E+02
1.7349E+02	-1.1373E+02	1.4361E+02	1.4514E+02
1.3556E+02	-3.5891E+01	8.5726E+01	9.4530E+01
1.4163E+02	-4.4534E+01	9.3082E+01	1.0094E+02
1.4569E+02	-5.1675E+01	9.8681E+01	1.0557E+02
1.5976E+02	-4.8764E+01	9.8260E+01	1.0847E+02
1.3216E+02	-1.6198E+01	7.4173E+01	8.4756E+01
3.1673E+02	-2.3963E+02	2.7910E+02	2.7950E+02
3.4367E+02	-1.8012E+02	2.6190E+02	2.6994E+02
4.2163E+02	-2.5813E+02	3.3986E+02	3.4474E+02
4.5588E+01	-1.1295E+01	2.8441E+01	3.0889E+01
2.9249E+01	-1.8107E+01	2.3670E+01	2.3997E+01
3.8143E+01	-1.7350E+01	2.3747E+01	2.4173E+01

3	2.7001E+01	-3.5259E+01	3.1130E+01	3.1699E+01	3.0323E+01	-1.5653E+01	2.2980E+01	2.3557E+01
3	4.6889E+01	-2.3499E+01	3.5194E+01	3.8992E+01	4.9543E+01	-6.6000E+00	2.8071E+01	3.1887E+01
3	9.1045E+01	-7.6146E+01	7.8596E+01	7.8983E+01	8.3428E+01	-6.2110E+01	7.2769E+01	7.3156E+01
3	298	5.3393E+01	-2.7182E+01	4.0283E+01	4.3955E+01	5.6020E+01	-1.0382E+01	3.3261E+01
3	299	3.1792E+01	-5.6816E+01	3.4304E+01	3.5043E+01	3.5120E+01	-1.7194E+01	2.6157E+01
3	300	2.9851E+01	-3.8572E+01	3.4212E+01	3.4710E+01	3.3242E+01	-1.0625E+01	2.5984E+01
3	301	3.0633E+01	-3.6071E+01	3.3351E+01	3.4076E+01	3.3945E+01	-1.6500E+01	2.5226E+01
3	302	4.9029E+01	-2.0732E+01	3.4800E+01	3.9525E+01	5.1636E+01	-4.0391E+00	2.7037E+01
3	303	6.7771E+01	-6.8371E+01	6.8071E+01	6.8316E+01	7.0135E+01	-5.4449E+01	6.2292E+01
3	304	3.3912E+01	-2.9193E+01	3.1553E+01	3.2684E+01	3.6393E+01	-1.4595E+01	2.5494E+01
3	305	3.5421E+01	-2.2480E+01	2.8951E+01	3.1257E+01	3.7895E+01	-7.0833E+00	2.2039E+01
3	306	3.0101E+01	-2.7779E+01	2.8940E+01	2.9939E+01	3.2580E+01	-1.3181E+01	2.2001E+01
3	307	3.1201E+01	-2.3144E+01	2.7173E+01	2.8942E+01	3.3685E+01	-8.5465E+00	2.1116E+01
3	308	8.9776E+01	-6.2293E+01	7.6034E+01	7.8631E+01	9.3494E+01	-4.0138E+01	6.6816E+01
3	309	1.0276E+02	-3.5030E+00	5.3132E+01	8.6659E+01	1.0450E+02	2.0855E+01	4.1825E+01
3	310	1.6790E+02	-1.3747E+02	1.5260E+02	1.5355E+02	1.7001E+02	-1.1086E+02	1.4043E+02
3	311	1.0309E+02	-9.9470E+00	5.6919E+01	8.8529E+01	1.0603E+02	-1.7370E+01	4.4332E+01
3	312	1.2195E+02	-4.3233E+01	8.2591E+01	9.2588E+01	1.2659E+02	-1.5839E+01	7.1215E+01
3	313	5.7524E+01	-1.5159E+01	3.6341E+01	5.0927E+01	5.9328E+01	9.2160E+00	2.5056E+01
3	314	6.1175E+01	-2.2467E+01	4.1821E+01	5.1434E+01	6.1534E+01	-6.7899E+00	3.4162E+01
3	315	2.1446E+01	-2.1415E+01	2.1438E+01	2.2100E+01	2.3344E+01	-9.5869E+00	1.6465E+01
3	316	2.4876E+01	-2.4127E+01	2.4502E+01	2.5441E+01	2.7254E+01	-1.0131E+01	1.8693E+01
3	317	2.6705E+01	-2.0139E+01	2.3422E+01	2.5164E+01	2.9049E+01	-6.2241E+00	1.7637E+01
3	318	3.0093E+01	-2.5955E+01	2.8025E+01	2.9082E+01	3.2334E+01	-1.2547E+01	2.2441E+01
3	319	2.7669E+01	-2.5732E+01	2.6700E+01	2.7500E+01	2.9822E+01	-1.3033E+01	2.1427E+01
3	320	2.1979E+01	-2.1200E+01	2.1589E+01	2.2512E+01	2.4165E+01	-8.3377E+00	1.6251E+01
3	321	2.1026E+01	-2.5415E+01	2.3220E+01	2.3730E+01	2.3395E+01	-1.1319E+01	1.7357E+01
3	322	2.1100E+01	-1.0215E+01	1.9658E+01	2.1172E+01	2.3408E+01	-4.3764E+00	1.3092E+01
3	323	3.0110E+01	-2.9852E+01	2.9981E+01	3.0604E+01	3.2298E+01	-1.6551E+01	2.4424E+01
3	324	2.8314E+01	-3.4917E+01	3.1615E+01	3.1728E+01	3.0278E+01	-2.3309E+01	2.6793E+01
3	325	2.6378E+01	-3.5727E+01	3.1052E+01	3.1227E+01	2.8842E+01	-2.0512E+01	2.4677E+01
3	326	2.8716E+01	-3.5416E+01	3.2065E+01	3.2326E+01	3.1207E+01	-2.0732E+01	2.5969E+01
3	327	2.4515E+01	-3.4320E+01	2.9417E+01	2.9577E+01	2.7032E+01	-1.9317E+01	2.3174E+01
3	328	2.7200E+01	-3.3200E+01	3.0204E+01	3.0572E+01	2.9766E+01	-1.7842E+01	2.3004E+01
3	329	1.3209E+01	-2.4129E+01	1.8720E+01	1.8980E+01	1.5707E+01	-9.5164E+00	1.2612E+01
3	330	1.7347E+01	-2.5216E+01	2.1281E+01	2.1644E+01	1.9037E+01	-1.0370E+01	1.5107E+01
3	331	4.5570E+01	-2.4332E+01	3.4806E+01	3.6450E+01	4.5375E+01	-1.4790E+01	3.0087E+01
3	332	8.5539E+01	-5.5450E+01	7.0644E+01	7.3357E+01	8.5070E+01	-4.6329E+01	6.5695E+01
3	333	4.4151E+01	-2.5141E+01	3.4640E+01	3.5940E+01	4.4001E+01	-1.5905E+01	2.9953E+01
3	334	6.0904E+01	-5.1356E+01	5.6380E+01	5.6703E+01	6.0039E+01	-4.2736E+01	5.1307E+01

TRIANGLE

TRIANGLE

TYPE	ELEM	ALLOWD SHR	STATC SHR+	DYNAM SHR+	STATIC+DYN	DYN ACCL FCTR
3	1	282.000	34.364	118.970	153.334	0.416
3	2	68.000	17.890	129.700	147.590	0.077
3	3	68.000	10.790	82.870	92.860	0.139
3	4	282.000	41.591	108.130	149.721	0.445
3	5	68.000	24.173	75.343	99.516	0.116
3	6	68.000	6.728	74.452	81.180	0.165
3	7	282.000	45.641	116.260	161.901	0.407
3	8	68.000	27.728	71.056	98.794	0.113
3	9	68.000	8.762	57.727	66.489	0.205
3	10	282.000	51.697	116.310	168.007	0.395
3	11	68.000	37.509	86.510	124.019	0.070
3	12	68.000	19.853	44.583	64.156	0.217
3	13	282.000	54.315	121.070	175.385	0.376
3	14	68.000	37.354	93.045	130.397	0.066
3	15	68.000	20.923	50.700	71.631	0.106
3	16	229.000	31.179	93.774	124.953	0.422
3	17	229.000	22.207	73.124	95.331	0.566
3	18	68.000	17.844	46.595	64.439	0.215
3	19	294.000	42.980	73.025	116.005	0.687
3	20	68.000	33.183	56.408	89.591	0.123
3	21	68.000	20.502	41.726	62.308	0.227
3	22	68.000	19.388	31.867	51.255	0.305
3	23	202.000	30.021	88.981	119.002	0.566
3	24	68.000	23.990	75.519	99.509	0.112
3	25	68.000	12.774	103.730	116.504	0.106
3	26	282.000	31.761	96.705	128.466	0.518
3	27	282.000	33.740	97.073	130.813	0.511
3	28	68.000	4.139	60.129	64.268	0.212
3	29	272.000	25.701	81.428	107.129	0.605
3	30	272.000	18.669	66.468	85.137	0.762
3	31	272.000	24.341	80.337	112.678	0.561
3	32	272.000	18.033	68.797	86.830	0.738
3	33	272.000	24.116	89.000	113.116	0.557
3	34	272.000	16.562	66.171	82.733	0.777
3	35	321.000	18.654	72.553	91.207	0.833
3	36	321.000	15.180	60.074	75.254	1.018
3	37	321.000	11.828	44.943	56.771	1.376
3	38	299.000	33.257	52.540	85.805	1.011
3	39	227.000	16.140	61.486	77.628	0.686
3	40	176.000	13.014	59.394	72.408	0.549
3	41	176.000	11.124	59.058	70.182	0.558
3	42	176.000	9.721	58.630	68.351	0.562
3	43	255.000	30.551	294.620	325.171	0.152
3	44	255.000	18.773	70.642	89.415	0.669
3	45	255.000	21.256	29.741	50.997	1.572
3	46	255.000	24.625	60.390	85.015	0.674
3	47	255.000	17.776	26.317	44.093	1.803
3	48	222.000	18.785	110.420	129.205	0.368
3	49	222.000	13.251	59.170	72.429	0.705
3	50	255.000	32.082	193.960	232.042	0.223
3	51	255.000	14.036	105.500	120.386	0.455
3	52	255.000	20.440	117.330	137.770	0.400
3	53	222.000	18.013	64.327	82.340	0.634
3	54	222.000	9.476	33.611	43.087	1.265
3	55	222.000	15.135	50.215	73.350	0.711
3	56	222.000	9.444	39.503	48.947	1.076

Range 0.07 - 0.19

Ave = 0.12

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3	222.000	11.415	62.481	73.896	0.674
3	222.000	8.112	49.887	57.999	0.857
3	55 222.000	9.925	64.588	74.513	0.657
3	60 222.000	7.066	52.207	59.273	0.823
3	61 222.000	8.673	71.795	80.460	0.594
3	62 222.000	6.444	58.395	64.839	0.738
3	63 222.000	9.674	105.410	115.084	0.403
3	64 222.000	5.469	98.240	95.709	0.480
3	65 222.000	13.273	128.990	142.263	0.324
3	66 222.000	6.746	115.660	122.406	0.372
3	67 222.000	14.357	142.740	157.097	0.291
3	68 222.000	9.861	126.510	136.371	0.335
3	69 222.000	19.291	79.663	98.954	0.509
3	70 222.000	18.766	70.149	88.915	0.579
3	71 222.000	25.979	68.807	94.786	0.570
3	72 222.000	26.300	60.370	86.678	0.640
3	73 243.000	22.358	37.885	60.155	1.167
3	74 225.000	24.864	41.363	66.227	0.968
3	75 243.000	30.298	43.405	73.703	0.980
3	76 225.000	28.368	39.789	68.157	0.988
3	77 243.000	35.869	48.272	84.141	0.858
3	78 225.000	29.776	39.910	69.686	0.978
3	79 243.000	36.627	44.723	81.350	0.923
3	80 225.000	27.692	39.480	67.172	1.000
3	81 243.000	37.182	42.616	79.798	0.966
3	82 232.000	16.807	35.935	52.742	1.198
3	83 213.000	23.262	37.290	60.552	1.010
3	84 225.000	3.999	60.600	64.607	0.729
3	85 213.000	28.751	47.686	76.437	0.773
3	86 225.000	5.288	55.237	60.445	0.796
3	87 213.000	30.312	46.897	76.409	0.793
3	88 225.000	9.485	53.126	62.531	0.812
3	89 213.000	31.744	44.175	75.919	0.821
3	90 155.000	16.654	52.949	69.603	0.523
3	91 321.000	22.244	53.638	75.882	1.114
3	92 321.000	17.287	45.058	62.345	1.348
3	93 321.000	9.922	55.284	65.206	1.125
3	94 267.000	23.266	85.866	109.132	0.568
3	95 267.000	16.103	84.552	100.655	0.593
3	96 267.000	9.831	49.359	59.190	1.042
3	97 267.000	19.997	90.091	110.008	0.548
3	98 267.000	15.277	75.533	90.810	0.667
3	99 267.000	12.230	51.877	63.387	0.998
3	100 225.000	24.892	39.974	64.066	1.005
3	101 235.000	17.854	27.844	44.099	1.538
3	102 257.000	11.722	194.998	206.712	0.252
3	103 237.000	15.319	182.540	197.859	0.265
3	104 252.000	5.789	25.843	31.552	1.986
3	105 252.000	3.786	23.609	27.395	2.096
3	106 252.000	5.880	18.235	23.515	2.708
3	107 252.000	6.262	15.882	21.344	3.259
3	108 252.000	5.565	12.665	18.230	3.892
3	109 252.000	4.548	14.413	18.961	3.434
3	110 252.000	5.775	14.673	20.448	3.356
3	111 252.000	7.513	18.677	26.190	2.618
3	112 321.000	21.910	67.988	89.898	0.880
3	113 321.000	15.789	58.245	74.834	1.048
3	114 321.000	9.185	45.288	54.473	1.377
3	115 321.000	24.022	70.620	94.642	0.841
3	116 321.000	19.020	59.759	78.779	1.011

3		321.000	9.963	47.780	57.743	1.302
3		321.000	30.464	62.252	92.716	0.933
3	119	321.000	19.765	54.579	74.344	1.104
3	120	321.000	12.797	51.915	64.712	1.187
3	121	321.000	33.898	59.031	92.929	0.973
3	122	321.000	31.815	45.204	77.099	1.277
3	123	321.000	32.480	48.392	80.872	1.192
3	124	321.000	26.841	44.928	71.769	1.309
3	125	321.000	16.035	49.396	65.431	1.235
3	126	321.000	25.990	52.490	78.480	1.124
3	127	321.000	19.469	41.577	61.046	1.450
3	128	321.000	13.232	50.970	64.202	1.208
3	129	321.000	22.986	53.978	76.964	1.104
3	130	321.000	19.590	47.957	67.547	1.257
3	131	321.000	11.727	56.707	68.434	1.091
3	132	321.000	27.347	160.960	188.307	0.365
3	133	314.000	21.528	166.640	188.168	0.351
3	134	321.000	17.695	79.204	96.899	0.766
3	135	267.000	7.972	51.625	59.597	1.003
3	136	321.000	21.270	86.235	107.505	0.695
3	137	267.000	11.381	64.033	75.414	0.790
3	138	321.000	25.566	89.190	114.756	0.662
3	139	267.000	13.179	70.857	84.036	0.716
3	140	321.000	26.197	89.658	115.855	0.658
3	141	267.000	12.863	70.665	83.528	0.719
3	142	321.000	26.893	94.315	121.208	0.624
3	143	267.000	12.817	70.844	83.661	0.718
3	144	321.000	38.969	56.998	95.967	0.990
3	145	243.000	31.911	45.581	77.492	0.926
3	146	321.000	22.011	80.700	102.711	0.741
3	147	314.000	17.091	62.257	79.348	0.954
3	148	432.000	30.034	152.240	182.274	0.528
3	149	265.000	25.318	118.640	143.958	0.404
3	150	265.000	18.488	127.130	145.618	0.388
3	151	360.000	17.578	82.408	99.906	0.831
3	152	360.000	10.604	43.228	53.832	1.617
3	153	222.000	28.910	85.732	114.642	0.450
3	154	222.000	21.485	54.824	76.309	0.731
3	155	378.000	16.637	61.711	78.348	1.171
3	156	378.000	10.025	49.988	60.013	1.472
3	157	222.000	33.896	83.202	117.178	0.452
3	158	222.000	24.339	60.541	84.880	0.653
3	159	378.000	15.485	65.906	81.391	1.100
3	160	378.000	9.611	56.050	65.661	1.315
3	161	222.000	34.618	81.313	115.931	0.461
3	162	222.000	25.055	63.699	88.754	0.616
3	163	378.000	15.747	69.224	84.971	1.047
3	164	378.000	9.638	62.152	71.790	1.185
3	165	222.000	33.463	77.485	110.948	0.487
3	166	222.000	23.517	62.772	86.289	0.632
3	167	378.000	15.581	67.882	83.383	1.068
3	168	378.000	8.926	70.948	79.866	1.041
3	169	195.000	30.060	70.332	100.392	0.469
3	170	195.000	21.606	56.292	77.890	0.616
3	171	271.000	15.928	79.255	95.183	0.644
3	172	271.000	9.288	87.164	96.452	0.601
3	173	226.000	33.521	50.522	84.043	0.762
3	174	280.000	24.200	43.027	67.235	1.189
3	175	280.000	14.007	58.312	72.319	0.912
3	176	280.000	8.725	61.036	69.761	0.889

3	1	280.000	5.499	43.420	48.919	1.264
3		226.000	31.845	48.376	80.221	0.803
3	179	280.000	21.193	37.422	58.615	1.383
3	180	280.000	11.564	21.887	33.451	2.453
3	181	243.000	62.504	364.290	426.794	0.099
3	182	267.000	25.289	72.260	97.549	0.669
3	183	267.000	18.181	81.134	99.315	0.613
3	184	350.000	10.651	45.584	56.235	1.489
3	185	350.000	12.295	77.004	89.299	0.877
3	186	243.000	62.493	360.570	423.863	0.100
3	187	222.000	21.980	77.901	99.881	0.514
3	188	222.000	24.892	84.746	109.638	0.465
3	189	300.000	17.886	65.970	83.856	0.855
3	190	300.000	14.315	78.854	93.169	0.725
3	191	222.000	27.312	103.230	130.542	0.377
3	192	222.000	34.606	116.010	150.616	0.323
3	193	300.000	25.267	78.606	103.953	0.698
3	194	300.000	12.152	63.402	75.554	0.908
3	195	222.000	29.133	93.244	122.377	0.414
3	196	222.000	31.502	87.916	119.418	0.433
3	197	300.000	22.672	69.571	92.243	0.797
3	198	300.000	12.401	59.300	71.781	0.969
3	199	336.000	24.936	93.034	117.970	0.669
3	200	222.000	26.679	78.739	105.418	0.496
3	201	300.000	20.274	62.210	82.484	0.899
3	202	300.000	12.455	54.080	66.543	1.063
3	203	272.000	28.125	103.470	131.595	0.471
3	204	272.000	24.268	101.540	125.000	0.488
3	205	272.000	18.737	80.017	98.754	0.633
3	206	272.000	10.485	22.643	33.120	2.310
3	207	272.000	34.252	71.025	105.277	0.669
3	208	272.000	29.356	62.116	91.472	0.781
3	209	272.000	20.532	67.968	88.500	0.740
3	210	272.000	11.276	21.781	33.057	2.394
3	211	222.000	31.626	43.853	75.479	0.868
3	212	222.000	22.853	56.999	79.852	0.699
3	213	222.000	13.157	66.847	80.884	0.625
3	214	222.000	12.892	111.180	123.272	0.378
3	215	200.000	5.878	77.311	83.189	0.709
3	216	263.000	15.723	32.724	48.447	1.511
3	217	263.000	14.848	50.990	65.838	0.973
3	218	263.000	14.852	29.151	44.003	1.703
3	219	263.000	19.192	83.473	102.665	0.584
3	220	263.000	18.687	87.443	106.138	0.559
3	221	263.000	21.531	70.761	92.292	0.682
3	222	263.000	18.689	64.010	83.419	0.254
3	223	256.000	64.789	369.680	434.469	0.103
3	224	256.000	19.682	106.160	125.842	0.445
3	225	256.000	51.106	133.460	184.566	0.307
3	226	256.000	25.606	94.113	119.719	0.490
3	227	256.000	29.960	146.460	176.428	0.309
3	228	256.000	31.645	141.520	173.165	0.317
3	229	256.000	34.402	149.980	184.382	0.296
3	230	256.000	28.627	105.728	134.347	0.430
3	231	256.000	58.829	210.990	269.019	0.188
3	232	256.000	28.517	110.800	139.317	0.411
3	233	243.000	64.403	282.020	346.423	0.127
3	234	243.000	25.243	75.370	100.613	0.570
3	235	243.000	51.890	125.930	177.920	0.384
3	236	243.000	58.727	133.520	192.247	0.276

Range 0.1

Ave = 0.11

*0.099
1.100*

Range 0.1 - 0.19

Ave = 0.12

*0.099
1.100
1.103
1.127
1.188*

3	237	321.000	15.792	120.430	136.222	0.587
3	238	425.000	21.632	100.750	122.382	0.801
3	239	314.000	18.797	72.008	90.085	0.019
3	240	267.000	22.306	68.500	90.806	0.714
3	241	267.000	15.397	69.129	84.526	0.728
3	242	267.000	28.982	91.947	120.929	0.518
3	243	267.000	18.126	53.418	71.544	0.932
3	244	267.000	12.069	52.549	64.618	0.970
3	245	267.000	6.069	40.650	47.519	1.280
3	246	267.000	10.651	45.584	56.235	1.125
3	247	252.000	21.275	85.876	107.151	0.537
3	248	302.000	21.332	117.670	139.002	0.477
3	249	302.000	22.366	92.984	115.350	0.601
3	250	226.000	17.831	112.140	129.971	0.371
3	251	302.000	22.063	63.431	85.494	0.882
3	252	302.000	26.808	86.685	113.493	0.635
3	253	229.000	10.812	151.360	162.172	0.280
3	254	229.000	7.921	39.139	47.060	1.130
3	255	338.000	15.867	57.694	73.561	1.117
3	256	338.000	16.339	60.901	77.320	1.055
3	257	168.000	14.863	120.900	135.763	0.253
3	258	338.000	17.445	47.359	64.804	1.354
3	259	338.000	18.604	55.371	73.975	1.154
3	260	229.000	12.529	37.850	50.379	1.144
3	261	338.000	12.722	59.369	72.091	1.096
3	262	226.000	16.493	131.620	149.113	0.318
3	263	226.000	19.308	130.120	149.428	0.318
3	264	338.000	16.770	43.409	60.179	1.480
3	265	263.000	7.256	223.980	231.236	0.228
3	266	263.000	4.565	222.580	227.145	0.232
3	267	393.000	22.871	225.760	248.631	0.328
3	268	320.000	40.750	92.074	132.824	0.607
3	269	253.000	53.788	85.880	139.668	0.464
3	270	253.000	62.364	78.468	140.832	0.486
3	271	253.000	66.869	79.251	146.120	0.470
3	272	253.000	79.044	96.314	175.358	0.361
3	273	257.000	89.060	374.260	463.320	0.090
3	274	296.000	71.151	346.060	418.011	0.130
3	275	296.000	58.287	137.730	196.017	0.345
3	276	263.000	45.621	277.580	323.201	0.157
3	277	263.000	39.687	149.870	189.557	0.298
3	278	296.000	37.634	234.360	271.994	0.220
3	279	351.000	23.403	187.420	210.823	0.350
3	280	296.000	10.342	148.600	158.942	0.384
3	281	263.000	24.000	149.020	173.108	0.321
3	282	263.000	7.502	149.980	156.482	0.343
3	283	263.000	4.176	145.140	149.316	0.357
3	284	226.000	22.635	94.530	117.165	0.430
3	285	210.000	36.918	100.840	137.758	0.343
3	286	210.000	51.690	105.570	157.260	0.300
3	287	210.000	64.025	109.470	172.495	0.269
3	288	210.000	61.719	84.756	146.475	0.350
3	289	263.000	48.807	279.500	320.307	0.153
3	290	226.000	46.453	269.940	316.393	0.133
3	291	257.000	77.585	344.740	422.325	0.104
3	292	92.000	7.072	30.089	37.961	0.550
3	293	92.000	8.139	23.997	32.136	0.699
3	294	92.000	8.276	24.173	32.449	0.693
3	295	92.000	8.142	23.557	31.699	0.712
3	296	92.000	7.123	31.869	38.992	0.533

Range 0.1 - 0.16

0.14

GPC

104
130
133
153
157

3	84.000	5.627	73.156	79.983	0.214
3	82.000	7.082	36.873	43.955	0.461
3	299	8.147	26.896	35.043	0.624
3	303	8.270	26.432	34.710	0.633
3	301	8.125	25.951	34.076	0.646
3	302	7.043	32.482	39.525	0.523
3	303	5.779	62.537	68.316	0.247
3	304	6.059	26.625	32.684	0.465
3	305	6.062	25.195	31.257	0.492
3	306	6.059	23.680	29.939	0.519
3	307	6.057	22.585	28.942	0.541
3	308	9.218	69.413	78.631	0.159
3	309	11.307	75.348	86.655	0.150
3	310	12.247	141.300	153.547	0.079
3	311	12.587	75.942	88.529	0.146
3	312	11.376	81.212	92.588	0.139
3	313	11.285	39.642	50.927	0.422
3	314	7.659	43.775	51.434	0.399
3	315	4.965	17.143	22.108	1.050
3	316	5.809	19.632	25.441	0.989
3	317	5.785	19.379	25.164	0.921
3	318	5.584	23.490	29.082	0.684
3	319	5.273	22.227	27.500	0.726
3	320	5.338	17.174	22.512	0.951
3	321	5.863	17.366	23.729	0.908
3	322	5.766	15.486	21.172	1.016
3	323	5.557	25.347	30.604	0.650
3	324	4.822	26.906	31.728	0.611
3	325	6.375	24.852	31.227	0.665
3	326	6.096	26.230	32.326	0.632
3	327	6.243	23.334	29.577	0.649
3	328	6.408	24.172	30.572	0.626
3	329	6.107	12.799	18.906	0.967
3	330	6.174	15.470	21.644	0.799
3	331	4.719	31.739	36.456	0.399
3	332	4.949	60.408	73.357	0.184
3	333	4.693	31.256	35.949	0.405
3	334	4.983	51.710	56.703	0.244

Range 0.08-0.18

Ave = 0.14

1079
1139
1146
1150
1169
1184

334 ITEM LINES SUMMED. WITH LAST TYPE = 3 AND ELEM = 334

Cell	Range	Ave	Rank
AOC	0.07-0.19	0.12	①
CPC	0.15	0.15	⑤
WC	0.1-0.19	0.12	②
GPC	0.1-0.16	0.14	④
TOP	0.08-0.18	0.14	③

Onset of Fail,
Shear Case 1-4

ONSET OF FAILURE FOR ELEMENTS THAT FAILED BELOW 0.2 g

(Worst case of CASE 1-4)

THE AOC

- ONSET OF FAILURE @ 0,07 - 0,08 g's
- ONSET OF FAILURE @ 0,08 - 0,12 g's
- ONSET OF FAILURE @ 0,12 - 0,16 g's
- ONSET OF FAILURE @ 0,16 - 0,20 g's

THE CPC

- ONSET OF FAILURE @ 0.0 - 0.08 g's
- ONSET OF FAILURE @ 0.08 - 0.12 g's
- ONSET OF FAILURE @ 0.12 - 0.16 g's
- ONSET OF FAILURE @ 0.16 - 0.20 g's

THE LMC

- ONSET OF FAILURE @ 0.0 - 0.08 g's
- ONSET OF FAILURE @ 0.08 - 0.12 g's
- ONSET OF FAILURE @ 0.12 - 0.16 g's
- ONSET OF FAILURE @ 0.16 - 0.20 g's

Lat Pile Load
Comp., Case 1-4

LATERAL PILE LOAD

COMPARISONS

CASE 1-4

PILE FAILURE SUMMARY

- THE "g" LEVEL WHERE 10% OF THE PILES HAVE EXCEEDED THEIR ALLOWABLE LIMIT. (EITHER IN TENSION OR Laterally)

	"g" LEVEL w/ 5% DAMPING	"g" LEVEL w/ 7% DAMPING
CASE 1	0.150	0.168
CASE 2	0.091	0.111
CASE 3	0.117	0.162
CASE 4	0.161	0.178

- THE "g" LEVEL WHERE 15% OF THE PILES HAVE EXCEEDED THEIR ALLOWABLE LIMITS (EITHER IN TENSION OR Laterally)

	"g" LEVEL w/ 5% DAMPING	"g" LEVEL w/ 7% DAMPING
CASE 1	0.168	0.189
CASE 2	0.102	0.123
CASE 3	0.143	0.181
CASE 4	0.168	0.186

CASE 1 - MIN PILE - MAX SOIL

CASE 2 - MAX PILE - MIN SOIL

CASE 3 - MIN PILE - MIN SOIL

CASE 4 - MAX PILE - MAX SOIL

PILE - LATERAL CAPACITY SUMMARY

- 5% DAMPING.

% OF LAT. PILE FAILURES	CASE 1		CASE 2		CASE 3		CASE 4	
	# OF SPRINGS	"g" LEVEL	# OF SPRINGS	"g" LEVEL	# OF SPRINGS	"g" LEVEL	# OF SPRINGS	"g" LEVEL
10.0	⊖	>0.2	20	0.091	18	0.117	⊖	>0.2
15.0	⊖	>0.2	30	0.102	32	0.143	⊖	>0.2

- 7% DAMPING.

% OF LAT. PILE FAILURES	CASE 1		CASE 2		CASE 3		CASE 4	
	# OF SPRINGS	"g" LEVEL	# OF SPRINGS	"g" LEVEL	# OF SPRINGS	"g" LEVEL	# OF SPRINGS	"g" LEVEL
10.0	⊖	>0.2	20	0.111	19	0.162	⊖	>0.2
15.0	⊖	>0.2	30	0.123	30	0.181	⊖	>0.2

LATERAL PILE CAPACITY

ELEV	NODE	DIRECTION	
		NS	EW
	1		✓
	17	✓	
	117		✓
	131		✓
	160		✓
	184	✓	✓
	185	✓	
	186	✓	
	203		✓
	213		✓
144	(271)	✓	
	272	✓	
148	(279)	✓	
	280	✓	
153	(287)		✓
174	(302)		✓
180	(306)		✓
188	(313)	✓	
	333	✓	
	334	✓	
	336	✓	
208	(355)	✓	
217	(361)	✓	
229	(367)	✓	
233	(370)		✓
241	(374)	✓	
245	(375)		✓
250	(378)	✓	
257	(380)		✓
259, 260	(381)	✓	✓

(X) - INDICATES NODES WHERE SOIL SPRING CONSTANTS ARE ADDED TO THE PILE SPRING CONSTANTS.

CASE 1 - 5% ± 7%

- LATERAL CAPACITY OF ALL PILES SATISFACTORY

CASE 2 (TOTAL 150 LATERAL PILES.)

- 5% ALBUT 19 LAT PILES FAIL : 7% ALBUT 42 LAT PILES FAIL

CASE 3

- 5% - 90 LAT PILES FAILED : 7% 43 LAT PILES FAIL

CASE 4

CASE 2
- LATERAL CAPACITY - 5% DAMPING

LEVEL	ELEM NO	NODE NO	NO. OF PILES	TOTAL PILES	
.042	253	379 -	12	12	
.056	40	68 -	2	14	
.058	55	74 -	1	15	
.060	254	379 -	0	15	
.064	221	363 -	1	16	
.071	203	352 -	1	17	
.071	212	358 -	1	18	
.071	224	364 -	4	22	15%
.071	236	371 -	4	26	
.082	183	307 -	6	32	
.083	46	65 -	2	34	
.084	60	89 -	1	35	
.084	63	103 -	1	36	
.084	70	121 -	1	37	
.091	9	13 -	2	39	
.091	19	29 -	3	42	
.091	31	45 -	2	44	
.091	106	220 -	1	45	
.091	112	226 -	2	47	
.091	118	232 -	2	49	10%
.091	124	238 -	3	52	
.091	130	244 -	3	55	
.093	52	71 -	4	59	
.093	77	142 -	3	62	
.093	80	157 -	1	63	
.101	167	300 -	2	65	
.102	28	41 -	3	68	
.102	36	53 -	3	71	
.102	39	57 -	3	74	
.102	103	217 -	1	75	15%
.103	75	139	2	77	
.104	89	187	12	89	
.104	92	193	12	101	
.106	58	86 -	1	102	
.107	108	223	4	106	
.107	135	250	4	110	
.108	61	89	0	110	
.110	13	21	3	113	
.110	25	37	1	114	
.110	95	197	13	127	
.110	196	335	13	140	
.110	205	354	3	143	
.111	57	86	0	143	
.111	66	113	3	146	
.111	159	297	4	150	

CASE 2

- LATERAL PILE CAPACITY - 7 1/2 DRAFFING.

"g" LEVEL	ELEM NO.	NODE NO.	NO. OF PILES	TOTAL PILES	
.050	253	- 379	12	12	
.067	40	* 68	2	14	
.067	55	+ 74	1	15	
.072	254	- 379	15	15	
.077	221	- 363	1	16	
.084	203	- 352	1	17	
.084	212	- 358	1	18	
.084	224	- 364	4	22	
.084	236	- 371	4	26	52
.098	183	- 307	6	32	
.099	46	- 65	2	34	
.100	60	- 89	1	35	
.100	63	- 103	1	36	
.100	70	- 121	1	37	
.110	77	- 142	3	40	
.110	80	- 157	1	41	
.111	9	- 13	2	43	
.111	19	- 29	3	46	
.111	31	- 45	2	48	
.111	52	- 71	4	52	102
.111	106	- 220	1	53	
.111	112	- 226	2	55	
.111	118	- 232	2	57	
.111	124	- 238	3	60	
.111	130	- 244	3	63	
.119	167	- 300	2	65	
.121	36	- 53	3	68	
.121	39	- 57	3	71	
.122	75	- 139	2	73	
.123	89	- 187	12	85	152
.123	92	- 193	12	97	
.124	28	- 41	3	100	
.124	103	- 217	1	101	
.126	58	- 86	1	102	
.126	108	- 223	4	106	
.126	135	- 250	4	110	
.129	61	- 89	110	110	
.129	196	- 335	13	123	
.130	57	- 86	123	123	
.130	66	* 113	3	126	
.130	205	- 354	3	129	
.131	95	- 197	13	142	
.132	159	- 297	4	146	
.132	165	- 299	3	149	
.133	25	- 37	1	150	

CASE 3 - LATERAL PILE CAPACITY - 5% DANIPING.

"g" LEVEL	ELEM NO.	NODE NO.	NO. OF PILES	TOTAL PILES	
.057	253	379	12	12	
.080	254	379	12	12	
.081	49	68	2	14	
.081	55	74	1	15	
.094	221	363	1	16	
.104	203	352	1	17	
.104	212	358	1	18	
.104	224	364	4	22	
.104	236	371	4	26	
.110	46	65	2	28	
.117	9	13	2	30	
.117	19	29	3	33	
.117	31	45	2	35	
.117	106	220	1	36	
.117	112	226	2	38	
.117	118	232	2	40	
.117	124	238	3	43	
.117	130	244	3	46	10%
.117	183	307	6	52	
.118	60	89	1	53	
.118	63	103	1	54	
.118	70	121	1	55	
.120	52	71	4	59	
.132	58	86	1	60	
.133	28	41	3	63	
.133	77	142	3	66	
.133	80	157	1	67	
.133	103	217	1	68	
.136	61	89	1	68	
.139	75	139	2	70	
.142	64	103	1	71	
.143	67	113	3	74	15%
.145	108	223	4	78	
.145	135	250	4	82	
.146	25	37	1	83	
.146	13	21	3	86	
.148	167	380	2	88	
.149	36	53	3	91	
.149	39	57	3	94	

CASE 3
- LATERAL CAPACITY - 7% DAMPING

LEVEL	ELEM NO.	NODE NO.	NO. OF PILES	TOTAL PILES
.071	-253	-379	12	12
.103	-254	-379	0	12
.104	49	68	2	14
.104	55	-74	1	15
.121	221	-363	1	16
.134	203	-352	1	17
.134	212	-358	1	18
.134	224	-364	4	22
.134	236	-371	4	26
.142	46	-65	2	28
.150	60	-89	1	29
.150	63	-103	1	30
.150	70	-121	1	31
.155	52	-71	4	35
.157	183	-307	6	41
.162	9	-13	2	43
.162	19	-29	3	46
.162	31	-45	2	48
.162	106	-220	1	49
.162	112	-226	2	51
.162	118	-232	2	53
.162	124	-238	3	56
.162	130	-244	3	59
.167	77	-142	3	62
.167	80	-157	1	63
.171	58	-86	1	64
.176	61	-89	0	64
.178	75	-139	2	66
.181	108	-223	4	70
.181	135	-250	4	74
.181	167	-300	2	76
.183	36	-53	3	79
.183	39	-57	3	82
.184	28	-41	3	85
.184	64	-103	0	85
.184	67	-113	3	88
.184	103	-217	1	89
.189	155	-296	3	92
.197	196	-335	13	105
.197	205	-354	3	108
.199	57	-86	0	108
.199	66	-113	0	108

10%

15%

SPRING FOR CASE 1 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
3								
4								
5								
6								
7								
8	1	.0E+00	1.086900E+03	1.086900E+03	-1.086900E+03	-.0	.0	.0
9	2	.0E+00	3.399200E+00	3.399200E+00	-3.399200E+00	-.0	.0	2.071
10	3	.0E+00	1.783400E+01	1.783400E+01	-1.783400E+01	-.0	.0	.999
11	4	2.299790E+02	1.714200E+02	4.013990E+02	5.855900E+01	-.268	.268	.0
12	5	.0E+00	2.005900E+01	2.005900E+01	-2.005900E+01	-.0	.0	2.560
13	6	.0E+00	8.653200E+01	8.653200E+01	-8.653200E+01	-.0	.0	.842
14	7	1.167700E+03	9.555900E+02	2.123370E+03	2.121900E+02	-.244	.244	.0
15	8	.0E+00	5.440800E+00	5.440800E+00	-5.440800E+00	-.0	.0	3.275
16	9	.0E+00	1.362800E+01	1.362800E+01	-1.362800E+01	-.0	.0	.517
17	10	2.368210E+02	2.182000E+02	4.550210E+02	1.862100E+01	-.217	.217	.0
18	11	.0E+00	4.662400E+02	4.662400E+02	-4.662400E+02	-.0	.0	.0
19	12	.0E+00	9.312200E+00	9.312200E+00	-9.312200E+00	-.0	.0	2.869
20	13	.0E+00	1.671700E+01	1.671700E+01	-1.671700E+01	-.0	.0	.632
21	14	3.519290E+02	3.113200E+02	6.632400E+02	4.060200E+01	-.226	.226	.0
22	15	.0E+00	1.008900E+01	1.008900E+01	-1.008900E+01	-.0	.0	2.464
23	16	.0E+00	3.168200E+01	3.168200E+01	-3.168200E+01	-.0	.0	.785
24	17	4.724520E+02	4.505500E+02	9.230020E+02	2.190200E+01	-.210	.210	.0
25	18	.0E+00	9.313200E+00	9.313200E+00	-9.313200E+00	-.0	.0	2.869
26	19	.0E+00	2.043800E+01	2.043800E+01	-2.043800E+01	-.0	.0	.517
27	20	3.577720E+02	3.761400E+02	7.339120E+02	-1.836800E+01	-.190	.190	.0
28	21	.0E+00	9.987100E+00	9.987100E+00	-9.987100E+00	-.0	.0	2.675
29	22	.0E+00	1.485300E+01	1.485300E+01	-1.485300E+01	-.0	.0	.711
30	23	3.494520E+02	3.052500E+02	6.547020E+02	4.420200E+01	-.229	.229	.0
31	24	.0E+00	3.621600E+00	3.621600E+00	-3.621600E+00	-.0	.0	2.457
32	25	.0E+00	5.572000E+00	5.572000E+00	-5.572000E+00	-.0	.0	.632
33	26	1.197210E+02	1.243900E+02	2.441110E+02	-4.669000E+00	-.192	.192	.0
34	27	.0E+00	1.086600E+01	1.086600E+01	-1.086600E+01	-.0	.0	2.459
35	28	.0E+00	1.827600E+01	1.827600E+01	-1.827600E+01	-.0	.0	.578
36	29	3.585130E+02	3.970100E+02	7.555290E+02	-3.849100E+01	-.181	.181	.0
37	30	.0E+00	7.244600E+00	7.244600E+00	-7.244600E+00	-.0	.0	2.460
38	31	.0E+00	1.362400E+01	1.362400E+01	-1.362400E+01	-.0	.0	.517
39	32	2.403490E+02	2.886200E+02	5.289690E+02	-4.827100E+01	-.167	.167	.0
40	33	.0E+00	2.734100E+01	2.734100E+01	-2.734100E+01	-.0	.0	2.083
41	34	.0E+00	3.763200E+01	3.763200E+01	-3.763200E+01	-.0	.0	.798
42	35	8.425660E+02	9.213000E+02	1.763866E+03	-7.873400E+01	-.183	.183	.0
43	36	.0E+00	7.745800E+00	7.745800E+00	-7.745800E+00	-.0	.0	1.363
44	37	.0E+00	2.674700E+01	2.674700E+01	-2.674700E+01	-.0	.0	.999
45	38	3.653820E+02	4.305700E+02	7.959520E+02	-6.518800E+01	-.170	.170	.0
46	39	.0E+00	7.748400E+00	7.748400E+00	-7.748400E+00	-.0	.0	1.363
47	40	.0E+00	2.924200E+01	2.924200E+01	-2.924200E+01	-.0	.0	.914
48	41	3.632060E+02	4.530800E+02	8.162060E+02	-8.979400E+01	-.160	.160	.0
49	42	.0E+00	6.716000E+00	6.716000E+00	-6.716000E+00	-.0	.0	1.849
50	43	.0E+00	1.771100E+01	1.771100E+01	-1.771100E+01	-.0	.0	.701
51	44	2.430490E+02	3.251100E+02	5.681590E+02	-8.206100E+01	-.150	.150	.0
52	45	.0E+00	9.494700E+00	9.494700E+00	-9.494700E+00	-.0	.0	1.308
53	46	.0E+00	6.366200E+00	6.366200E+00	-6.366200E+00	-.0	.0	1.951
54	47	1.947520E+02	2.644700E+02	4.592220E+02	-6.971800E+01	-.147	.147	.0
55	48	.0E+00	9.883700E+00	9.883700E+00	-9.883700E+00	-.0	.0	1.803
56	49	.0E+00	4.896300E+00	4.896300E+00	-4.896300E+00	-.0	.0	1.438
57	50	1.843990E+02	2.129400E+02	3.973390E+02	-2.854100E+01	-.173	.173	.0

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57
58 3 FOR CASE 1 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
60								
61								
62								
63								
64								
65	51	.0E+00	1.182400E+01	1.182400E+01	-1.182400E+01	-.0	.0	1.646
66	52	.0E+00	1.419500E+01	1.419500E+01	-1.419500E+01	-.0	.0	2.130
67	53	3.480010E+02	3.614000E+02	7.094010E+02	-1.339900E+01	-.193	.193	.0
68	54	.0E+00	3.326000E+00	3.326000E+00	-3.326000E+00	-.0	.0	2.676
69	55	.0E+00	2.447100E+00	2.447100E+00	-2.447100E+00	-.0	.0	1.430
70	56	8.156520E+01	8.699600E+01	1.685612E+02	-5.430800E+00	-.188	.188	.0
71	57	.0E+00	2.078800E+00	2.078800E+00	-2.078800E+00	-.0	.0	1.693
72	58	.0E+00	3.676400E+00	3.676400E+00	-3.676400E+00	-.0	.0	2.421
73	59	8.202990E+01	8.181200E+01	1.638419E+02	2.179000E-01	-.201	.201	.0
74	60	.0E+00	3.651800E+00	3.651800E+00	-3.651800E+00	-.0	.0	.964
75	61	.0E+00	3.503900E+00	3.503900E+00	-3.503900E+00	-.0	.0	2.540
76	62	9.915600E+01	1.311400E+02	2.302960E+02	-3.198400E+01	-.151	.151	.0
77	63	.0E+00	3.651800E+00	3.651800E+00	-3.651800E+00	-.0	.0	.964
78	64	.0E+00	3.267400E+00	3.267400E+00	-3.267400E+00	-.0	.0	2.724
79	65	1.002820E+02	1.307500E+02	2.310320E+02	-3.046800E+01	-.153	.153	.0
80	66	.0E+00	6.236600E+00	6.236600E+00	-6.236600E+00	-.0	.0	1.693
81	67	.0E+00	9.788300E+00	9.788300E+00	-9.788300E+00	-.0	.0	2.730
82	68	2.485750E+02	2.162000E+02	4.647750E+02	3.237500E+01	-.230	.230	.0
83	69	.0E+00	8.971000E+02	8.971000E+02	-8.971000E+02	-.0	.0	.0
84	70	.0E+00	3.651900E+00	3.651900E+00	-3.651900E+00	-.0	.0	.964
85	71	.0E+00	2.931900E+00	2.931900E+00	-2.931900E+00	-.0	.0	3.036
86	72	1.025000E+02	1.310400E+02	2.335400E+02	-2.854000E+01	-.156	.156	.0
87	73	.0E+00	1.706100E+03	1.706100E+03	-1.706100E+03	-.0	.0	.0
88	74	.0E+00	9.495000E+00	9.495000E+00	-9.495000E+00	-.0	.0	1.308
89	75	.0E+00	4.712600E+00	4.712600E+00	-4.712600E+00	-.0	.0	2.635
90	76	2.058450E+02	2.624700E+02	4.683150E+02	-5.662500E+01	-.157	.157	.0
91	77	.0E+00	9.263800E+00	9.263800E+00	-9.263800E+00	-.0	.0	1.140
92	78	.0E+00	8.699700E+00	8.699700E+00	-8.699700E+00	-.0	.0	3.071
93	79	2.900530E+02	2.987600E+02	5.888130E+02	-8.707000E+00	-.194	.194	.0
94	80	.0E+00	3.087800E+00	3.087800E+00	-3.087800E+00	-.0	.0	1.140
95	81	.0E+00	2.924300E+00	2.924300E+00	-2.924300E+00	-.0	.0	3.043
96	82	9.891150E+01	1.002400E+02	1.991515E+02	-1.328500E+00	-.197	.197	.0
97	83	.0E+00	1.703400E+03	1.703400E+03	-1.703400E+03	-.0	.0	.0
98	84	.0E+00	1.274800E+03	1.274800E+03	-1.274800E+03	-.0	.0	.0
99	85	.0E+00	8.938700E+02	8.938700E+02	-8.938700E+02	-.0	.0	.0
100	86	.0E+00	1.779700E+03	1.779700E+03	-1.779700E+03	-.0	.0	.0
101	87	.0E+00	1.843200E+03	1.843200E+03	-1.843200E+03	-.0	.0	.0
102	88	.0E+00	4.940200E+01	4.940200E+01	-4.940200E+01	-.0	.0	2.163
103	89	.0E+00	3.448900E+01	3.448900E+01	-3.448900E+01	-.0	.0	1.225
104	90	1.260920E+03	1.073300E+03	2.334220E+03	1.876200E+02	-.235	.235	.0
105	91	.0E+00	3.445800E+01	3.445800E+01	-3.445800E+01	-.0	.0	3.102
106	92	.0E+00	3.440800E+01	3.440800E+01	-3.440800E+01	-.0	.0	1.225
107	93	1.172600E+03	5.513500E+02	1.723950E+03	6.212500E+02	-.425	.425	.0
108	94	.0E+00	5.355400E+01	5.355400E+01	-5.355400E+01	-.0	.0	2.162
109	95	.0E+00	4.242900E+01	4.242900E+01	-4.242900E+01	-.0	.0	1.079
110	96	1.409130E+03	1.260000E+03	2.669130E+03	1.491300E+02	-.224	.224	.0
111	97	.0E+00	1.133100E+03	1.133100E+03	-1.133100E+03	-.0	.0	.0
112	98	.0E+00	3.712100E+01	3.712100E+01	-3.712100E+01	-.0	.0	2.159
113	99	.0E+00	3.944900E+01	3.944900E+01	-3.944900E+01	-.0	.0	.785
114	100	1.050720E+03	1.077600E+03	2.128320E+03	-2.686000E+01	-.195	.195	.0

115
116 SPRING FOR CASE 1 WITH 7% DAMPING
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	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
121								
122	101	.0E+00	2.454400E+03	2.454400E+03	-2.454400E+03	-.0	.0	.0
123	102	.0E+00	5.804200E+00	5.804200E+00	-5.804200E+00	-.0	.0	1.533
124	103	.0E+00	6.895400E+00	6.895400E+00	-6.895400E+00	-.0	.0	.577
125	104	1.042100E+02	1.726700E+02	2.768800E+02	-6.846000E+01	-.121	.121	.0
126	105	.0E+00	5.804200E+00	5.804200E+00	-5.804200E+00	-.0	.0	1.533
127	106	.0E+00	6.819200E+00	6.819200E+00	-6.819200E+00	-.0	.0	.516
128	107	1.062210E+02	1.722900E+02	2.785110E+02	-6.606980E+01	-.123	.123	.0
129	108	.0E+00	1.455300E+01	1.455300E+01	-1.455300E+01	-.0	.0	1.337
130	109	.0E+00	3.535300E+01	3.535300E+01	-3.535300E+01	-.0	.0	.855
131	110	4.225940E+02	5.878000E+02	1.010384E+03	-1.652160E+02	-.144	.144	.0
132	111	.0E+00	1.012400E+01	1.012400E+01	-1.012400E+01	-.0	.0	1.760
133	112	.0E+00	1.363800E+01	1.363800E+01	-1.363800E+01	-.0	.0	.516
134	113	2.154370E+02	2.956300E+02	5.110670E+02	-8.019300E+01	-.146	.146	.0
135	114	.0E+00	3.016100E+01	3.016100E+01	-3.016100E+01	-.0	.0	1.944
136	115	.0E+00	6.948600E+01	6.948600E+01	-6.948600E+01	-.0	.0	.766
137	116	9.664350E+02	1.008000E+03	1.974435E+03	-4.196500E+01	-.192	.192	.0
138	117	.0E+00	8.043000E+00	8.043000E+00	-8.043000E+00	-.0	.0	2.216
139	118	.0E+00	1.363800E+01	1.363800E+01	-1.363800E+01	-.0	.0	.516
140	119	2.190350E+02	2.313000E+02	4.503550E+02	-1.224500E+01	-.189	.189	.0
141	120	.0E+00	1.568500E+01	1.568500E+01	-1.568500E+01	-.0	.0	2.377
142	121	.0E+00	4.754200E+01	4.754200E+01	-4.754200E+01	-.0	.0	.784
143	122	6.559300E+02	5.254700E+02	1.181400E+03	1.304600E+02	-.250	.250	.0
144	123	.0E+00	9.652200E+00	9.652200E+00	-9.652200E+00	-.0	.0	2.768
145	124	.0E+00	2.045500E+01	2.045500E+01	-2.045500E+01	-.0	.0	.516
146	125	3.338E30E+02	2.851400E+02	6.190230E+02	4.874300E+01	-.234	.234	.0
147	126	.0E+00	2.027100E+01	2.027100E+01	-2.027100E+01	-.0	.0	2.707
148	127	.0E+00	9.629300E+01	9.629300E+01	-9.629300E+01	-.0	.0	.849
149	128	1.251E80E+03	8.679200E+02	2.119000E+03	3.631600E+02	-.288	.288	.0
150	129	.0E+00	7.602600E+00	7.602600E+00	-7.602600E+00	-.0	.0	3.515
151	130	.0E+00	2.044900E+01	2.044900E+01	-2.044900E+01	-.0	.0	.516
152	131	3.468740E+02	2.767300E+02	6.236040E+02	7.814400E+01	-.251	.251	.0
153	132	.0E+00	2.064800E+01	2.064800E+01	-2.064800E+01	-.0	.0	2.577
154	133	.0E+00	7.313900E+01	7.313900E+01	-7.313900E+01	-.0	.0	.801
155	134	9.946420E+02	7.184900E+02	1.713132E+03	2.761520E+02	-.277	.277	.0
156	135	.0E+00	1.455400E+01	1.455400E+01	-1.455400E+01	-.0	.0	1.337
157	136	.0E+00	2.962100E+01	2.962100E+01	-2.962100E+01	-.0	.0	1.021
158	137	4.048610E+02	5.865800E+02	9.934410E+02	-1.837190E+02	-.138	.138	.0
159	138	.0E+00	2.614200E+01	2.614200E+01	-2.614200E+01	-.0	.0	1.901
160	139	.0E+00	5.311300E+01	5.311300E+01	-5.311300E+01	-.0	.0	.936
161	140	8.238150E+02	8.725700E+02	1.696385E+03	-4.875580E+01	-.189	.189	.0
162	141	.0E+00	1.769600E+01	1.769600E+01	-1.769600E+01	-.0	.0	2.306
163	142	.0E+00	4.800400E+01	4.800400E+01	-4.800400E+01	-.0	.0	.962
164	143	7.353260E+02	5.595000E+02	1.294826E+03	1.758260E+02	-.263	.263	.0
165	144	.0E+00	1.157500E+03	1.157500E+03	-1.157500E+03	-.0	.0	.0
166	145	.0E+00	4.713400E+01	4.713400E+01	-4.713400E+01	-.0	.0	1.129
167	146	1.014030E+03	6.643400E+02	1.678370E+03	3.496900E+02	-.305	.305	.0
168	147	.0E+00	4.064100E+02	4.064100E+02	-4.064100E+02	-.0	.0	.0
169	148	.0E+00	2.061800E+03	2.061800E+03	-2.061800E+03	-.0	.0	.0
170	149	.0E+00	6.945000E+01	6.945000E+01	-6.945000E+01	-.0	.0	1.229
171	150	1.372310E+03	7.670500E+02	2.139360E+03	6.852600E+02	-.358	.358	.0

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173 ...G FOR CASE 1 WITH 7% DAMPING
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	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
179	151	.0E+00	7.664400E+02	7.664400E+02	-7.664400E+02	-.0	.0	.0
180	152	.0E+00	1.580600E+01	1.580600E+01	-1.580600E+01	-.0	.0	3.827
181	153	.0E+00	2.895200E+03	2.895200E+03	-2.895200E+03	-.0	.0	.0
182	154	1.061710E+03	7.259900E+02	1.787700E+03	3.357200E+02	-.292	.292	.0
183	155	.0E+00	1.139000E+01	1.139000E+01	-1.139000E+01	-.0	.0	1.399
184	156	.0E+00	1.954700E+01	1.954700E+01	-1.954700E+01	-.0	.0	1.092
185	157	2.953510E+02	4.362600E+02	7.316110E+02	-1.409090E+02	-.135	.135	.0
186	158	.0E+00	2.025200E+01	2.025200E+01	-2.025200E+01	-.0	.0	1.759
187	159	.0E+00	1.298900E+01	1.298900E+01	-1.298900E+01	-.0	.0	1.084
188	160	3.460150E+02	5.400500E+02	8.860650E+02	-1.940350E+02	-.128	.128	.0
189	161	.0E+00	2.011500E+01	2.011500E+01	-2.011500E+01	-.0	.0	2.214
190	162	.0E+00	2.327100E+01	2.327100E+01	-2.327100E+01	-.0	.0	.756
191	163	4.993640E+02	5.270100E+02	1.026374E+03	-2.764600E+01	-.190	.190	.0
192	164	.0E+00	1.207100E+01	1.207100E+01	-1.207100E+01	-.0	.0	2.214
193	165	.0E+00	9.742100E+00	9.742100E+00	-9.742100E+00	-.0	.0	1.084
194	166	2.636340E+02	2.880700E+02	5.517040E+02	-2.443600E+01	-.183	.183	.0
195	167	.0E+00	4.431100E+00	4.431100E+00	-4.431100E+00	-.0	.0	1.589
196	168	.0E+00	1.409300E+01	1.409300E+01	-1.409300E+01	-.0	.0	1.197
197	169	2.013240E+02	1.712300E+02	3.725540E+02	3.009400E+01	-.235	.235	.0
198	170	.0E+00	7.976900E+00	7.976900E+00	-7.976900E+00	-.0	.0	1.998
199	171	.0E+00	1.363900E+01	1.363900E+01	-1.363900E+01	-.0	.0	1.565
200	172	2.660910E+02	2.359700E+02	5.020610E+02	3.012100E+01	-.226	.226	.0
201	173	.0E+00	3.571900E+01	3.571900E+01	-3.571900E+01	-.0	.0	3.491
202	174	.0E+00	2.495000E+03	2.495000E+03	-2.495000E+03	-.0	.0	.0
203	175	1.546330E+03	7.926700E+02	2.339000E+03	7.536600E+02	-.390	.390	.0
204	176	.0E+00	2.675500E+01	2.675500E+01	-2.675500E+01	-.0	.0	3.305
205	177	.0E+00	6.161100E+01	6.161100E+01	-6.161100E+01	-.0	.0	2.397
206	178	1.836510E+03	8.066100E+02	2.643120E+03	1.029900E+03	-.455	.455	.0
207	179	.0E+00	2.296400E+01	2.296400E+01	-2.296400E+01	-.0	.0	3.491
208	180	.0E+00	6.136100E+03	6.136100E+03	-6.136100E+03	-.0	.0	.0
209	181	1.097620E+03	7.152000E+02	1.812820E+03	3.824200E+02	-.307	.307	.0
210	182	.0E+00	1.799600E+01	1.799600E+01	-1.799600E+01	-.0	.0	2.970
211	183	.0E+00	3.040100E+01	3.040100E+01	-3.040100E+01	-.0	.0	.695
212	184	7.394500E+02	3.557700E+02	1.095220E+03	3.836800E+02	-.416	.416	.0
213	185	.0E+00	1.151900E+01	1.151900E+01	-1.151900E+01	-.0	.0	3.867
214	186	.0E+00	1.689200E+01	1.689200E+01	-1.689200E+01	-.0	.0	1.042
215	187	5.928070E+02	3.918400E+02	9.846470E+02	2.009670E+02	-.303	.303	.0
216	188	.0E+00	1.408400E+03	1.408400E+03	-1.408400E+03	-.0	.0	.0
217	189	.0E+00	2.778500E+01	2.778500E+01	-2.778500E+01	-.0	.0	.087
218	190	8.429000E+02	6.140900E+02	1.456990E+03	2.288100E+02	-.275	.275	.0
219	191	.0E+00	2.303700E+00	2.303700E+00	-2.303700E+00	-.0	.0	3.863
220	192	.0E+00	3.633900E+00	3.633900E+00	-3.633900E+00	-.0	.0	.969
221	193	1.205220E+02	7.805200E+01	1.993740E+02	4.167000E+01	-.306	.306	.0
222	194	.0E+00	8.061300E+02	8.061300E+02	-8.061300E+02	-.0	.0	.0
223	195	.0E+00	1.673600E+03	1.673600E+03	-1.673600E+03	-.0	.0	.0
224	196	.0E+00	2.194700E+01	2.194700E+01	-2.194700E+01	-.0	.0	2.085
225	197	.0E+00	6.750200E+01	6.750200E+01	-6.750200E+01	-.0	.0	1.715
226	198	1.188340E+03	8.309700E+02	2.027310E+03	3.493700E+02	-.283	.283	.0
227	199	.0E+00	1.912500E+03	1.912500E+03	-1.912500E+03	-.0	.0	.0
228	200	1.194720E+02	1.932800E+02	3.127520E+02	-7.380000E+01	-.124	.124	.0

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230 SPRING FOR CASE 1 WITH 7% DAMPING
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	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
233								
234								
235								
236	201	1.286610E+02	1.432200E+02	2.718810E+02	-1.455900E+01	-.180	.180	.0
237	202	.0E+00	1.415300E+00	1.415300E+00	-1.415300E+00	-.0	.0	6.288
238	203	.0E+00	8.881800E-01	8.881800E-01	-8.881800E-01	-.0	.0	3.963
239	204	1.214720E+02	2.189600E+02	3.404320E+02	-9.748800E+01	-.111	.111	.0
240	205	.0E+00	2.653000E+00	2.653000E+00	-2.653000E+00	-.0	.0	3.980
241	206	.0E+00	3.772100E+00	3.772100E+00	-3.772100E+00	-.0	.0	7.884
242	207	3.732600E+02	5.763000E+02	9.495600E+02	-2.030320E+02	-.130	.130	.0
243	208	.0E+00	9.776200E+02	9.776200E+02	-9.776200E+02	-.0	.0	.0
244	209	.0E+00	2.598000E+00	2.598000E+00	-2.598000E+00	-.0	.0	6.859
245	210	2.517940E+02	3.417600E+02	5.935540E+02	-8.996600E+01	-.147	.147	.0
246	211	.0E+00	1.035600E+00	1.035600E+00	-1.035600E+00	-.0	.0	8.594
247	212	.0E+00	8.880600E-01	8.880600E-01	-8.880600E-01	-.0	.0	3.964
248	213	1.266740E+02	1.810000E+02	3.076740E+02	-5.432600E+01	-.140	.140	.0
249	214	.0E+00	5.177800E+00	5.177800E+00	-5.177800E+00	-.0	.0	5.439
250	215	.0E+00	1.005800E+01	1.005800E+01	-1.005800E+01	-.0	.0	7.262
251	216	1.035400E+03	1.229800E+03	2.265200E+03	-1.944000E+02	-.160	.160	.0
252	217	.0E+00	1.734500E+03	1.734500E+03	-1.734500E+03	-.0	.0	.0
253	218	.0E+00	2.232500E+01	2.232500E+01	-2.232500E+01	-.0	.0	6.782
254	219	2.218100E+03	2.203400E+03	4.421500E+03	1.470000E+01	-.201	.201	.0
255	220	.0E+00	6.659300E-01	6.659300E-01	-6.659300E-01	-.0	.0	13.365
256	221	.0E+00	1.071800E+00	1.071800E+00	-1.071800E+00	-.0	.0	3.284
257	222	1.298150E+02	1.607300E+02	2.905450E+02	-3.091500E+01	-.162	.162	.0
258	223	.0E+00	2.663200E+00	2.663200E+00	-2.663200E+00	-.0	.0	13.375
259	224	.0E+00	3.549900E+00	3.549900E+00	-3.549900E+00	-.0	.0	3.966
260	225	5.349650E+02	5.412900E+02	1.076255E+03	-6.325000E+00	-.198	.198	.0
261	226	.0E+00	4.159700E+00	4.159700E+00	-4.159700E+00	-.0	.0	8.462
262	227	.0E+00	1.257000E+01	1.257000E+01	-1.257000E+01	-.0	.0	7.085
263	228	1.367410E+03	1.003400E+03	2.450810E+03	2.840100E+02	-.252	.252	.0
264	229	.0E+00	1.403200E+03	1.403200E+03	-1.403200E+03	-.0	.0	.0
265	230	.0E+00	2.494900E+01	2.494900E+01	-2.494900E+01	-.0	.0	6.783
266	231	2.613300E+03	1.628300E+03	4.241600E+03	9.850800E+02	-.321	.321	.0
267	232	.0E+00	2.398200E+00	2.398200E+00	-2.398200E+00	-.0	.0	8.114
268	233	.0E+00	1.107500E+03	1.107500E+03	-1.107500E+03	-.0	.0	.0
269	234	5.495730E+02	5.128200E+02	1.062393E+03	3.675300E+01	-.214	.214	.0
270	235	.0E+00	3.336100E+00	3.336100E+00	-3.336100E+00	-.0	.0	10.677
271	236	.0E+00	3.548600E+00	3.548600E+00	-3.548600E+00	-.0	.0	3.968
272	237	5.694150E+02	4.262000E+02	9.956150E+02	1.432150E+02	-.267	.267	.0
273	238	.0E+00	4.689000E+00	4.689000E+00	-4.689000E+00	-.0	.0	6.756
274	239	.0E+00	1.130800E+01	1.130800E+01	-1.130800E+01	-.0	.0	7.089
275	240	1.315740E+03	7.726100E+02	2.088350E+03	5.431300E+02	-.341	.341	.0
276	241	.0E+00	1.453700E+03	1.453700E+03	-1.453700E+03	-.0	.0	.0
277	242	.0E+00	1.575200E+01	1.575200E+01	-1.575200E+01	-.0	.0	5.745
278	243	2.217000E+03	1.005600E+03	3.302600E+03	1.131400E+03	-.408	.408	.0
279	244	.0E+00	3.376000E+00	3.376000E+00	-3.376000E+00	-.0	.0	7.915
280	245	.0E+00	1.927200E+03	1.927200E+03	-1.927200E+03	-.0	.0	.0
281	246	4.406530E+02	3.246500E+02	7.653130E+02	1.159930E+02	-.271	.271	.0
282	247	.0E+00	5.625400E+00	5.625400E+00	-5.625400E+00	-.0	.0	5.006
283	248	.0E+00	1.004800E+01	1.004800E+01	-1.004800E+01	-.0	.0	7.690
284	249	1.206930E+03	7.526600E+02	1.959590E+03	4.542700E+02	-.321	.321	.0
285	250	.0E+00	1.629800E+03	1.629800E+03	-1.629800E+03	-.0	.0	.0

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3 FOR CASE 1 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
290								
291								
292								
293	251	.0E+00	9.186330E+00	9.186300E+00	-9.186300E+00	-.0	.0	6.786
294	252	1.070310E+03	6.135830E+02	1.683890E+03	4.567300E+02	-.349	.349	.0
295	253	.0E+00	1.440930E+01	1.440900E+01	-1.440900E+01	-.0	.0	1.221
296	254	.0E+00	1.443430E+01	1.443400E+01	-1.443400E+01	-.0	.0	3.086
297	255	1.043080E+03	8.701830E+02	1.913260E+03	1.729000E+02	-.240	.240	.0
298	256	.0E+00	6.003100E+00	6.003100E+00	-6.003100E+00	-.0	.0	3.518
299	257	.0E+00	1.711400E+03	1.711400E+03	-1.711400E+03	-.0	.0	.0
300	258	9.355600E+02	7.374700E+02	1.673030E+03	1.960900E+02	-.254	.254	.0
301	259	.0E+00	1.363900E+03	1.363900E+03	-1.363900E+03	-.0	.0	.0
302	260	.0E+00	8.584500E+02	8.584500E+02	-8.584500E+02	-.0	.0	.0
303	261	2.354160E+03	1.025500E+03	4.179660E+03	5.286600E+02	-.258	.258	.0

ING FOR CASE 2 WITH 7% DAMPING

ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
1	.0E+00	7.064200E+02	7.064200E+02	-7.064200E+02	-.0	.0	.0
2	.0E+00	5.178900E+01	5.178900E+01	-5.178900E+01	-.0	.0	.136
3	.0E+00	7.355900E+01	7.355900E+01	-7.355900E+01	-.0	.0	.242
4	2.337000E+02	1.235100E+02	3.572100E+02	1.101900E+02	-.378	.378	.0
5	.0E+00	2.890800E+02	2.890800E+02	-2.890800E+02	-.0	.0	.170
6	.0E+00	3.608300E+02	3.608300E+02	-3.608300E+02	-.0	.0	.202
7	1.163360E+03	7.199700E+02	1.883330E+03	4.433900E+02	-.323	.323	.0
8	.0E+00	7.187500E+01	7.187500E+01	-7.187500E+01	-.0	.0	.240
9	.0E+00	6.346400E+01	6.346400E+01	-6.346400E+01	-.0	.0	.111
10	2.282430E+02	1.717300E+02	3.999730E+02	5.651300E+01	-.266	.266	.0
11	.0E+00	8.201200E+02	8.201200E+02	-8.201200E+02	-.0	.0	.0
12	.0E+00	1.106000E+02	1.106000E+02	-1.106000E+02	-.0	.0	.242
13	.0E+00	7.950800E+01	7.950800E+01	-7.950800E+01	-.0	.0	.133
14	3.562380E+02	2.319600E+02	5.881980E+02	1.242700E+02	-.307	.307	.0
15	.0E+00	1.268600E+02	1.268600E+02	-1.268600E+02	-.0	.0	.196
16	.0E+00	1.355300E+02	1.355300E+02	-1.355300E+02	-.0	.0	.103
17	4.653980E+02	3.404900E+02	8.058880E+02	1.249800E+02	-.273	.273	.0
18	.0E+00	1.106000E+02	1.106000E+02	-1.106000E+02	-.0	.0	.242
19	.0E+00	9.519400E+01	9.519400E+01	-9.519400E+01	-.0	.0	.111
20	3.393110E+02	2.920200E+02	6.318310E+02	4.779100E+01	-.233	.233	.0
21	.0E+00	1.126500E+02	1.126500E+02	-1.126500E+02	-.0	.0	.237
22	.0E+00	7.511500E+01	7.511500E+01	-7.511500E+01	-.0	.0	.141
23	3.619070E+02	2.299800E+02	5.918870E+02	1.319270E+02	-.315	.315	.0
24	.0E+00	3.854200E+01	3.854200E+01	-3.854200E+01	-.0	.0	.231
25	.0E+00	2.650200E+01	2.650200E+01	-2.650200E+01	-.0	.0	.133
26	1.205460E+02	9.582800E+01	2.164660E+02	2.402600E+01	-.252	.252	.0
27	.0E+00	1.156200E+02	1.156200E+02	-1.156200E+02	-.0	.0	.231
28	.0E+00	8.513700E+01	8.513700E+01	-8.513700E+01	-.0	.0	.124
29	3.490210E+02	3.038700E+02	6.528910E+02	4.515100E+01	-.230	.230	.0
30	.0E+00	7.708000E+01	7.708000E+01	-7.708000E+01	-.0	.0	.231
31	.0E+00	6.346200E+01	6.346200E+01	-6.346200E+01	-.0	.0	.111
32	2.249690E+02	2.232200E+02	4.481890E+02	1.749000E+00	-.202	.202	.0
33	.0E+00	2.721400E+02	2.721400E+02	-2.721400E+02	-.0	.0	.209
34	.0E+00	1.849800E+02	1.849800E+02	-1.849800E+02	-.0	.0	.162
35	8.691220E+02	7.258800E+02	1.595002E+03	1.432420E+02	-.239	.239	.0
36	.0E+00	8.752700E+01	8.752700E+01	-8.752700E+01	-.0	.0	.121
37	.0E+00	1.103400E+02	1.103400E+02	-1.103400E+02	-.0	.0	.242
38	3.669070E+02	3.405900E+02	7.074970E+02	2.631700E+01	-.215	.215	.0
39	.0E+00	8.752200E+01	8.752200E+01	-8.752200E+01	-.0	.0	.121
40	.0E+00	1.181500E+02	1.181500E+02	-1.181500E+02	-.0	.0	.226
41	3.512320E+02	3.527000E+02	7.039320E+02	-1.468000E+00	-.199	.199	.0
42	.0E+00	6.965900E+01	6.965900E+01	-6.965900E+01	-.0	.0	.170
43	.0E+00	7.576600E+01	7.576600E+01	-7.576600E+01	-.0	.0	.164
44	2.258190E+02	2.535100E+02	4.793290E+02	-2.769100E+01	-.178	.178	.0
45	.0E+00	8.417200E+01	8.417200E+01	-8.417200E+01	-.0	.0	.140
46	.0E+00	1.258000E+02	1.258000E+02	-1.258000E+02	-.0	.0	.099
47	2.328170E+02	2.734000E+02	5.062170E+02	-4.058300E+01	-.170	.170	.0
48	.0E+00	8.857000E+01	8.857000E+01	-8.857000E+01	-.0	.0	.201
49	.0E+00	1.854300E+02	1.854300E+02	-1.854300E+02	-.0	.0	.067
50	2.214450E+02	2.033100E+02	4.247550E+02	1.813500E+01	-.218	.218	.0

50 SPRING FOR CASE 2 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
51	51	.0E+00	1.280700E+02	1.280700E+02	-1.280700E+02	-.0	.0	.152
52	52	.0E+00	2.721800E+02	2.721800E+02	-2.721800E+02	-.0	.0	.111
53	53	4.192600E+02	3.351300E+02	7.543900E+02	8.413000E+01	-.250	.250	.0
54	54	.0E+00	3.754500E+01	3.754500E+01	-3.754500E+01	-.0	.0	.237
55	55	.0E+00	5.271400E+01	5.271400E+01	-5.271400E+01	-.0	.0	.067
56	56	9.894900E+01	8.831700E+01	1.872669E+02	1.063290E+01	-.224	.224	.0
57	57	.0E+00	2.705500E+01	2.705500E+01	-2.705500E+01	-.0	.0	.130
58	58	.0E+00	7.084900E+01	7.084900E+01	-7.084900E+01	-.0	.0	.126
59	59	9.832940E+01	8.211200E+01	1.804414E+02	1.621740E+01	-.240	.240	.0
60	60	.0E+00	3.525200E+01	3.525200E+01	-3.525200E+01	-.0	.0	.100
61	61	.0E+00	6.901700E+01	6.901700E+01	-6.901700E+01	-.0	.0	.129
62	62	1.171650E+02	1.336400E+02	2.508050E+02	-1.647500E+01	-.175	.175	.0
63	63	.0E+00	3.525200E+01	3.525200E+01	-3.525200E+01	-.0	.0	.100
64	64	.0E+00	6.622600E+01	6.622600E+01	-6.622600E+01	-.0	.0	.134
65	65	1.174690E+02	1.319800E+02	2.494490E+02	-1.451100E+01	-.178	.178	.0
66	66	.0E+00	8.116500E+01	8.116500E+01	-8.116500E+01	-.0	.0	.130
67	67	.0E+00	1.986500E+02	1.986500E+02	-1.986500E+02	-.0	.0	.135
68	68	2.903450E+02	2.104400E+02	5.007850E+02	7.990500E+01	-.276	.276	.0
69	69	.0E+00	8.072600E+02	8.072600E+02	-8.072600E+02	-.0	.0	.0
70	70	.0E+00	3.525200E+01	3.525200E+01	-3.525200E+01	-.0	.0	.100
71	71	.0E+00	6.031700E+01	6.031700E+01	-6.031700E+01	-.0	.0	.148
72	72	1.175760E+02	1.302100E+02	2.477860E+02	-1.263400E+01	-.181	.181	.0
73	73	.0E+00	1.547700E+03	1.547700E+03	-1.547700E+03	-.0	.0	.0
74	74	.0E+00	8.417300E+01	8.417300E+01	-8.417300E+01	-.0	.0	.148
75	75	.0E+00	1.018000E+02	1.018000E+02	-1.018000E+02	-.0	.0	.122
76	76	2.351020E+02	2.598500E+02	4.949520E+02	-2.474800E+01	-.181	.181	.0
77	77	.0E+00	9.572900E+01	9.572900E+01	-9.572900E+01	-.0	.0	.110
78	78	.0E+00	1.774900E+02	1.774900E+02	-1.774900E+02	-.0	.0	.151
79	79	3.302740E+02	2.682700E+02	5.985440E+02	6.208400E+01	-.246	.246	.0
80	80	.0E+00	3.190900E+01	3.190900E+01	-3.190900E+01	-.0	.0	.110
81	81	.0E+00	5.403700E+01	5.403700E+01	-5.403700E+01	-.0	.0	.165
82	82	1.105500E+02	8.771300E+01	1.982630E+02	2.283700E+01	-.252	.252	.0
83	83	.0E+00	1.386700E+03	1.386700E+03	-1.386700E+03	-.0	.0	.0
84	84	.0E+00	7.665700E+02	7.665700E+02	-7.665700E+02	-.0	.0	.0
85	85	.0E+00	5.949600E+02	5.949600E+02	-5.949600E+02	-.0	.0	.0
86	86	.0E+00	1.223000E+03	1.223000E+03	-1.223000E+03	-.0	.0	.0
87	87	.0E+00	1.413000E+03	1.413000E+03	-1.413000E+03	-.0	.0	.0
88	88	.0E+00	4.860000E+02	4.860000E+02	-4.860000E+02	-.0	.0	.220
89	89	.0E+00	3.428100E+02	3.428100E+02	-3.428100E+02	-.0	.0	.123
90	90	1.344260E+03	0.097900E+02	2.154050E+03	5.344700E+02	-.332	.332	.0
91	91	.0E+00	4.350100E+02	4.350100E+02	-4.350100E+02	-.0	.0	.246
92	92	.0E+00	3.428100E+02	3.428100E+02	-3.428100E+02	-.0	.0	.123
93	93	1.259240E+03	3.541300E+02	1.613370E+03	9.051100E+02	-.711	.711	.0
94	94	.0E+00	5.264800E+02	5.264800E+02	-5.264800E+02	-.0	.0	.220
95	95	.0E+00	3.402900E+02	3.402900E+02	-3.402900E+02	-.0	.0	.131
96	96	1.491740E+03	9.515800E+02	2.443320E+03	5.401600E+02	-.314	.314	.0
97	97	.0E+00	1.220900E+03	1.220900E+03	-1.220900E+03	-.0	.0	.0
98	98	.0E+00	3.644600E+02	3.644600E+02	-3.644600E+02	-.0	.0	.220
99	99	.0E+00	2.215100E+02	2.215100E+02	-2.215100E+02	-.0	.0	.140
100	100	1.094200E+03	8.362200E+02	1.930500E+03	2.580600E+02	-.262	.262	.0

116 WORKING FOR CASE 2 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
122	101	.0E+00	1.808200E+03	1.808200E+03	-1.808200E+03	-.0	.0	.0
123	102	.0E+00	5.276200E+01	5.276200E+01	-5.276200E+01	-.0	.0	.169
124	103	.0E+00	2.838100E+01	2.838100E+01	-2.838100E+01	-.0	.0	.124
125	104	1.096500E+02	1.272100E+02	2.368600E+02	-1.756000E+01	-.172	.172	.0
126	105	.0E+00	5.276200E+01	5.276200E+01	-5.276200E+01	-.0	.0	.169
127	106	.0E+00	3.173600E+01	3.173600E+01	-3.173600E+01	-.0	.0	.111
128	107	1.084670E+02	1.348100E+02	2.432770E+02	-2.634300E+01	-.161	.161	.0
129	108	.0E+00	1.540600E+02	1.540600E+02	-1.540600E+02	-.0	.0	.126
130	109	.0E+00	1.465400E+02	1.465400E+02	-1.465400E+02	-.0	.0	.206
131	110	4.401330E+02	4.280800E+02	8.690130E+02	1.125300E+01	-.205	.205	.0
132	111	.0E+00	9.745100E+01	9.745100E+01	-9.745100E+01	-.0	.0	.183
133	112	.0E+00	6.347200E+01	6.347200E+01	-6.347200E+01	-.0	.0	.111
134	113	2.178170E+02	2.305200E+02	4.483370E+02	-1.270300E+01	-.189	.189	.0
135	114	.0E+00	3.419100E+02	3.419100E+02	-3.419100E+02	-.0	.0	.171
136	115	.0E+00	2.994500E+02	2.994500E+02	-2.994500E+02	-.0	.0	.178
137	116	9.880250E+02	7.254500E+02	1.713475E+03	2.625750E+02	-.272	.272	.0
138	117	.0E+00	8.675300E+01	8.675300E+01	-8.675300E+01	-.0	.0	.205
139	118	.0E+00	6.347100E+01	6.347100E+01	-6.347100E+01	-.0	.0	.111
140	119	2.174360E+02	1.793800E+02	3.968160E+02	3.805600E+01	-.242	.242	.0
141	120	.0E+00	2.040000E+02	2.040000E+02	-2.040000E+02	-.0	.0	.183
142	121	.0E+00	2.033000E+02	2.033000E+02	-2.033000E+02	-.0	.0	.183
143	122	6.619130E+02	3.748600E+02	1.036773E+03	2.870530E+02	-.353	.353	.0
144	123	.0E+00	1.185600E+02	1.185600E+02	-1.185600E+02	-.0	.0	.225
145	124	.0E+00	9.520500E+01	9.520500E+01	-9.520500E+01	-.0	.0	.111
146	125	3.265200E+02	2.221600E+02	5.486800E+02	1.043600E+02	-.294	.294	.0
147	126	.0E+00	3.156200E+02	3.156200E+02	-3.156200E+02	-.0	.0	.174
148	127	.0E+00	4.002200E+02	4.002200E+02	-4.002200E+02	-.0	.0	.204
149	128	1.250050E+03	6.364200E+02	1.886470E+03	6.136300E+02	-.393	.393	.0
150	129	.0E+00	1.080300E+02	1.080300E+02	-1.080300E+02	-.0	.0	.247
151	130	.0E+00	9.520100E+01	9.520100E+01	-9.520100E+01	-.0	.0	.111
152	131	3.358070E+02	2.186200E+02	5.544270E+02	1.171870E+02	-.307	.307	.0
153	132	.0E+00	2.891000E+02	2.891000E+02	-2.891000E+02	-.0	.0	.184
154	133	.0E+00	3.104500E+02	3.104500E+02	-3.104500E+02	-.0	.0	.189
155	134	9.991760E+02	5.132300E+02	1.512486E+03	4.859460E+02	-.389	.389	.0
156	135	.0E+00	1.540600E+02	1.540600E+02	-1.540600E+02	-.0	.0	.126
157	136	.0E+00	1.307500E+02	1.307500E+02	-1.307500E+02	-.0	.0	.231
158	137	4.336680E+02	4.104600E+02	8.441200E+02	2.328800E+01	-.211	.211	.0
159	138	.0E+00	2.905300E+02	2.905300E+02	-2.905300E+02	-.0	.0	.166
160	139	.0E+00	2.418600E+02	2.418600E+02	-2.418600E+02	-.0	.0	.205
161	140	3.666000E+02	5.930100E+02	1.449610E+03	2.835900E+02	-.297	.297	.0
162	141	.0E+00	2.324700E+02	2.324700E+02	-2.324700E+02	-.0	.0	.176
163	142	.0E+00	2.165300E+02	2.165300E+02	-2.165300E+02	-.0	.0	.213
164	143	7.650270E+02	3.511700E+02	1.116197E+03	4.138570E+02	-.436	.436	.0
165	144	.0E+00	7.905300E+02	7.905300E+02	-7.905300E+02	-.0	.0	.0
166	145	.0E+00	2.603600E+02	2.603600E+02	-2.603600E+02	-.0	.0	.204
167	146	9.937020E+02	3.909200E+02	1.384622E+03	6.027820E+02	-.508	.508	.0
168	147	.0E+00	7.465200E+02	7.465200E+02	-7.465200E+02	-.0	.0	.0
169	148	.0E+00	1.364400E+03	1.364400E+03	-1.364400E+03	-.0	.0	.0
170	149	.0E+00	3.726600E+02	3.726600E+02	-3.726600E+02	-.0	.0	.229
171	150	1.351310E+03	4.495000E+02	1.800810E+03	9.018100E+02	-.601	.601	.0

173 SPRING FOR CASE 2 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
179	151	.0E+00	1.521400E+03	1.521400E+03	-1.521400E+03	-.0	.0	.0
180	152	.0E+00	2.586300E+02	2.586300E+02	-2.586300E+02	-.0	.0	.185
181	153	.0E+00	6.546600E+02	6.546600E+02	-6.546600E+02	-.0	.0	.0
182	154	1.044190E+03	4.826100E+02	1.526800E+03	5.615800E+02	-.433	.433	.0
183	155	.0E+00	1.189500E+02	1.189500E+02	-1.189500E+02	-.0	.0	.134
184	156	.0E+00	9.327800E+01	9.327800E+01	-9.327800E+01	-.0	.0	.229
185	157	3.174030E+02	2.958100E+02	6.132130E+02	2.159300E+01	-.215	.215	.0
186	158	.0E+00	1.949100E+02	1.949100E+02	-1.949100E+02	-.0	.0	.183
187	159	.0E+00	1.068300E+02	1.068300E+02	-1.068300E+02	-.0	.0	.132
188	160	3.596180E+02	3.375500E+02	6.971680E+02	2.206800E+01	-.213	.213	.0
189	161	.0E+00	2.168800E+02	2.168800E+02	-2.168800E+02	-.0	.0	.205
190	162	.0E+00	1.235300E+02	1.235300E+02	-1.235300E+02	-.0	.0	.142
191	163	5.246440E+02	3.317300E+02	8.563740E+02	1.929140E+02	-.316	.316	.0
192	164	.0E+00	1.301300E+02	1.301300E+02	-1.301300E+02	-.0	.0	.205
193	165	.0E+00	8.012200E+01	8.012200E+01	-8.012200E+01	-.0	.0	.132
194	166	2.668580E+02	1.822200E+02	4.490780E+02	8.463800E+01	-.293	.293	.0
195	167	.0E+00	5.916500E+01	5.916500E+01	-5.916500E+01	-.0	.0	.119
196	168	.0E+00	6.857200E+01	6.857200E+01	-6.857200E+01	-.0	.0	.260
197	169	2.089700E+02	9.805700E+01	3.070270E+02	1.109130E+02	-.426	.426	.0
198	170	.0E+00	1.002200E+02	1.002200E+02	-1.002200E+02	-.0	.0	.159
199	171	.0E+00	1.008300E+02	1.008300E+02	-1.008300E+02	-.0	.0	.212
200	172	2.661480E+02	1.643600E+02	4.305080E+02	1.017800E+02	-.324	.324	.0
201	173	.0E+00	4.993300E+02	4.993300E+02	-4.993300E+02	-.0	.0	.250
202	174	.0E+00	1.006900E+03	1.006900E+03	-1.006900E+03	-.0	.0	.0
203	175	1.554210E+03	4.799900E+02	2.034200E+03	1.074220E+03	-.648	.648	.0
204	176	.0E+00	5.228300E+02	5.228300E+02	-5.228300E+02	-.0	.0	.169
205	177	.0E+00	6.430900E+02	6.430900E+02	-6.430900E+02	-.0	.0	.230
206	178	1.889910E+03	5.726400E+02	2.462750E+03	1.317070E+03	-.660	.660	.0
207	179	.0E+00	3.210000E+02	3.210000E+02	-3.210000E+02	-.0	.0	.250
208	180	.0E+00	1.171800E+03	1.171800E+03	-1.171800E+03	-.0	.0	.0
209	181	1.070230E+03	4.662400E+02	1.544470E+03	6.119900E+02	-.463	.463	.0
210	182	.0E+00	3.177400E+02	3.177400E+02	-3.177400E+02	-.0	.0	.168
211	183	.0E+00	2.148800E+02	2.148800E+02	-2.148800E+02	-.0	.0	.098
212	184	7.122820E+02	2.017500E+02	9.140320E+02	5.105320E+02	-.706	.706	.0
213	185	.0E+00	1.860100E+02	1.860100E+02	-1.860100E+02	-.0	.0	.239
214	186	.0E+00	1.193800E+02	1.193800E+02	-1.193800E+02	-.0	.0	.142
215	187	5.727310E+02	2.509500E+02	8.236810E+02	3.217810E+02	-.456	.456	.0
216	188	.0E+00	8.009100E+02	8.009100E+02	-8.009100E+02	-.0	.0	.0
217	189	.0E+00	1.706200E+02	1.706200E+02	-1.706200E+02	-.0	.0	.144
218	190	8.276130E+02	4.153400E+02	1.242953E+03	4.122730E+02	-.399	.399	.0
219	191	.0E+00	3.720200E+01	3.720200E+01	-3.720200E+01	-.0	.0	.239
220	192	.0E+00	2.397300E+01	2.397300E+01	-2.397300E+01	-.0	.0	.147
221	193	1.157170E+02	4.842100E+01	1.641300E+02	6.729600E+01	-.470	.470	.0
222	194	.0E+00	6.271100E+02	6.271100E+02	-6.271100E+02	-.0	.0	.0
223	195	.0E+00	1.423200E+03	1.423200E+03	-1.423200E+03	-.0	.0	.0
224	196	.0E+00	3.551400E+02	3.551400E+02	-3.551400E+02	-.0	.0	.129
225	197	.0E+00	4.833400E+02	4.833400E+02	-4.833400E+02	-.0	.0	.240
226	198	1.279670E+03	7.718500E+02	2.051520E+03	5.870200E+02	-.332	.332	.0
227	199	.0E+00	1.699300E+03	1.699300E+03	-1.699300E+03	-.0	.0	.0
228	200	1.264980E+02	1.510000E+02	2.774980E+02	-2.450200E+01	-.168	.168	.0

226 NG FOR CASE 2 WITH 7% DAMPING

ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
201	1.354140E+02	1.130900E+02	2.485040E+02	2.232400E+01	-.239	.239	.0
202	.0E+00	3.763200E+01	3.763200E+01	-3.763200E+01	-.0	.0	.237
203	.0E+00	4.187200E+01	4.187200E+01	-4.187200E+01	-.0	.0	.084
204	1.294030E+02	1.999600E+02	3.293630E+02	-7.055700E+01	-.129	.129	.0
205	.0E+00	8.135000E+01	8.135000E+01	-8.135000E+01	-.0	.0	.130
206	.0E+00	1.561000E+02	1.561000E+02	-1.561000E+02	-.0	.0	.171
207	3.788400E+02	4.077000E+02	8.665400E+02	-1.088600E+02	-.155	.155	.0
208	.0E+00	5.351300E+02	5.351300E+02	-5.351300E+02	-.0	.0	.0
209	.0E+00	9.488400E+01	9.488400E+01	-9.488400E+01	-.0	.0	.188
210	2.441090E+02	2.714600E+02	5.155690E+02	-2.735100E+01	-.180	.180	.0
211	.0E+00	3.482400E+01	3.482400E+01	-3.482400E+01	-.0	.0	.256
212	.0E+00	4.187200E+01	4.187200E+01	-4.187200E+01	-.0	.0	.084
213	1.328400E+02	1.672200E+02	3.000600E+02	-3.438000E+01	-.159	.159	.0
214	.0E+00	2.007500E+02	2.007500E+02	-2.007500E+02	-.0	.0	.140
215	.0E+00	4.162700E+02	4.162700E+02	-4.162700E+02	-.0	.0	.175
216	1.035520E+03	1.032800E+03	2.068320E+03	2.720000E+00	-.201	.201	.0
217	.0E+00	1.503100E+03	1.503100E+03	-1.503100E+03	-.0	.0	.0
218	.0E+00	7.981900E+02	7.981900E+02	-7.981900E+02	-.0	.0	.190
219	2.103310E+03	1.662100E+03	3.765410E+03	4.412100E+02	-.253	.253	.0
220	.0E+00	3.238100E+01	3.238100E+01	-3.238100E+01	-.0	.0	.275
221	.0E+00	4.598000E+01	4.598000E+01	-4.598000E+01	-.0	.0	.077
222	1.371200E+02	1.659900E+02	3.031100E+02	-2.087000E+01	-.165	.165	.0
223	.0E+00	1.295200E+02	1.295200E+02	-1.295200E+02	-.0	.0	.275
224	.0E+00	1.674900E+02	1.674900E+02	-1.674900E+02	-.0	.0	.084
225	5.485400E+02	5.089100E+02	1.057450E+03	3.963000E+01	-.216	.216	.0
226	.0E+00	2.333300E+02	2.333300E+02	-2.333300E+02	-.0	.0	.151
227	.0E+00	5.203400E+02	5.203400E+02	-5.203400E+02	-.0	.0	.171
228	1.344470E+03	8.892700E+02	2.233740E+03	4.552000E+02	-.302	.302	.0
229	.0E+00	1.703700E+03	1.703700E+03	-1.703700E+03	-.0	.0	.0
230	.0E+00	8.921000E+02	8.921000E+02	-8.921000E+02	-.0	.0	.190
231	2.440810E+03	1.109400E+03	3.550210E+03	1.331410E+03	-.440	.440	.0
232	.0E+00	1.016800E+02	1.016800E+02	-1.016800E+02	-.0	.0	.191
233	.0E+00	4.795000E+02	4.795000E+02	-4.795000E+02	-.0	.0	.0
234	5.627810E+02	5.254700E+02	1.088251E+03	3.731100E+01	-.214	.214	.0
235	.0E+00	1.286400E+02	1.286400E+02	-1.286400E+02	-.0	.0	.277
236	.0E+00	1.674800E+02	1.674800E+02	-1.674800E+02	-.0	.0	.084
237	5.714110E+02	3.802800E+02	9.596910E+02	1.831310E+02	-.294	.294	.0
238	.0E+00	2.085600E+02	2.085600E+02	-2.085600E+02	-.0	.0	.152
239	.0E+00	4.683000E+02	4.683000E+02	-4.683000E+02	-.0	.0	.171
240	1.278410E+03	5.709700E+02	1.857380E+03	6.994400E+02	-.442	.442	.0
241	.0E+00	1.451400E+03	1.451400E+03	-1.451400E+03	-.0	.0	.0
242	.0E+00	5.993300E+02	5.993300E+02	-5.993300E+02	-.0	.0	.151
243	2.067450E+03	6.394600E+02	2.706910E+03	1.427990E+03	-.647	.647	.0
244	.0E+00	9.971400E+01	9.971400E+01	-9.971400E+01	-.0	.0	.260
245	.0E+00	5.887500E+02	5.887500E+02	-5.887500E+02	-.0	.0	.0
246	4.370640E+02	2.824300E+02	7.195140E+02	1.546540E+02	-.310	.310	.0
247	.0E+00	1.916000E+02	1.916000E+02	-1.916000E+02	-.0	.0	.147
248	.0E+00	4.162700E+02	4.162700E+02	-4.162700E+02	-.0	.0	.171
249	1.162820E+03	5.385200E+02	1.701340E+03	6.243000E+02	-.432	.432	.0
250	.0E+00	1.074300E+03	1.074300E+03	-1.074300E+03	-.0	.0	.0

287 SPRING FOR CASE 2 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST-DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
290	251	.0E+00	3.286783E+02	3.286700E+02	-3.286700E+02	-.0	.0	.190
291	252	9.949000E+02	3.848700E+02	1.379778E+03	6.108390E+02	-.517	.517	.0
292	253	.0E+00	3.510000E+02	3.510800E+02	-3.510800E+02	-.0	.0	.050
293	254	.0E+00	6.202100E+02	6.202100E+02	-6.202100E+02	-.0	.0	.072
294	255	1.044030E+03	7.165600E+02	1.761010E+03	3.270500E+02	-.291	.291	.0
295	256	.0E+00	1.554500E+02	1.554500E+02	-1.554500E+02	-.0	.0	.136
296	257	.0E+00	7.208100E+02	7.208100E+02	-7.208100E+02	-.0	.0	.0
297	258	8.836900E+02	5.290900E+02	1.412700E+03	3.546800E+02	-.334	.334	.0
298	259	.0E+00	1.028400E+03	1.028400E+03	-1.028400E+03	-.0	.0	.0
299	260	.0E+00	7.767700E+02	7.767700E+02	-7.767700E+02	-.0	.0	.0
300	261	2.137760E+03	1.261400E+03	3.399160E+03	8.763600E+02	-.339	.339	.0

[illegible]

CASE 3
WITH 7 %

LATERAL
PILE

[illegible]

[illegible]

1 1
2 SPRING FOR CASE 3 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
1	1	.0E+00	8.983800E+02	8.983800E+02	-8.983800E+02	- .0	.0	.0
2	2	.0E+00	3.374700E+01	3.374700E+01	-3.374700E+01	- .0	.0	.209
3	3	.0E+00	5.613900E+01	5.613900E+01	-5.613900E+01	- .0	.0	.317
4	4	2.299790E+02	1.333100E+02	3.632890E+02	9.666900E+01	- .345	.345	.0
5	5	.0E+00	1.991100E+02	1.991100E+02	-1.991100E+02	- .0	.0	.258
6	6	.0E+00	2.716800E+02	2.716800E+02	-2.716800E+02	- .0	.0	.268
7	7	1.167780E+03	7.766300E+02	1.944410E+03	3.911500E+02	- .301	.301	.0
8	8	.0E+00	5.399900E+01	5.399900E+01	-5.399900E+01	- .0	.0	.330
9	9	.0E+00	4.354200E+01	4.354200E+01	-4.354200E+01	- .0	.0	.162
10	10	2.368210E+02	1.849800E+02	4.218010E+02	5.184100E+01	- .256	.256	.0
11	11	.0E+00	1.048300E+03	1.048300E+03	-1.048300E+03	- .0	.0	.0
12	12	.0E+00	8.327400E+01	8.327400E+01	-8.327400E+01	- .0	.0	.321
13	13	.0E+00	5.262900E+01	5.262900E+01	-5.262900E+01	- .0	.0	.201
14	14	3.519280E+02	2.348000E+02	5.867280E+02	1.171280E+02	- .300	.300	.0
15	15	.0E+00	9.021600E+01	9.021600E+01	-9.021600E+01	- .0	.0	.276
16	16	.0E+00	9.948600E+01	9.948600E+01	-9.948600E+01	- .0	.0	.250
17	17	4.724520E+02	3.520100E+02	8.244620E+02	1.204420E+02	- .268	.268	.0
18	18	.0E+00	8.327700E+01	8.327700E+01	-8.327700E+01	- .0	.0	.321
19	19	.0E+00	6.531200E+01	6.531200E+01	-6.531200E+01	- .0	.0	.162
20	20	3.577720E+02	3.058100E+02	6.635820E+02	5.196200E+01	- .234	.234	.0
21	21	.0E+00	8.495300E+01	8.495300E+01	-8.495300E+01	- .0	.0	.315
22	22	.0E+00	4.837900E+01	4.837900E+01	-4.837900E+01	- .0	.0	.218
23	23	3.494520E+02	2.200400E+02	5.694920E+02	1.294120E+02	- .318	.318	.0
24	24	.0E+00	2.912700E+01	2.912700E+01	-2.912700E+01	- .0	.0	.306
25	25	.0E+00	1.754300E+01	1.754300E+01	-1.754300E+01	- .0	.0	.201
26	26	1.197210E+02	9.195900E+01	2.116800E+02	2.776200E+01	- .260	.260	.0
27	27	.0E+00	8.738000E+01	8.738000E+01	-8.738000E+01	- .0	.0	.306
28	28	.0E+00	5.739500E+01	5.739500E+01	-5.739500E+01	- .0	.0	.184
29	29	3.585190E+02	3.011700E+02	6.596890E+02	5.734900E+01	- .238	.238	.0
30	30	.0E+00	5.825300E+01	5.825300E+01	-5.825300E+01	- .0	.0	.306
31	31	.0E+00	4.354100E+01	4.354100E+01	-4.354100E+01	- .0	.0	.162
32	32	2.403490E+02	2.265800E+02	4.669290E+02	1.376900E+01	- .212	.212	.0
33	33	.0E+00	2.035000E+02	2.035000E+02	-2.035000E+02	- .0	.0	.280
34	34	.0E+00	1.225600E+02	1.225600E+02	-1.225600E+02	- .0	.0	.245
35	35	8.425660E+02	6.593800E+02	1.501946E+03	1.831860E+02	- .256	.256	.0
36	36	.0E+00	5.758800E+01	5.758800E+01	-5.758800E+01	- .0	.0	.183
37	37	.0E+00	8.420600E+01	8.420600E+01	-8.420600E+01	- .0	.0	.317
38	38	3.653820E+02	3.152200E+02	6.806020E+02	5.016200E+01	- .232	.232	.0
39	39	.0E+00	5.758500E+01	5.758500E+01	-5.758500E+01	- .0	.0	.183
40	40	.0E+00	9.183200E+01	9.183200E+01	-9.183200E+01	- .0	.0	.291
41	41	3.632060E+02	3.378800E+02	7.010860E+02	2.532600E+01	- .215	.215	.0
42	42	.0E+00	4.990600E+01	4.990600E+01	-4.990600E+01	- .0	.0	.249
43	43	.0E+00	5.660300E+01	5.660300E+01	-5.660300E+01	- .0	.0	.219
44	44	2.430490E+02	2.495700E+02	4.926190E+02	-6.521000E+00	- .195	.195	.0
45	45	.0E+00	6.097000E+01	6.097000E+01	-6.097000E+01	- .0	.0	.204
46	46	.0E+00	8.758500E+01	8.758500E+01	-8.758500E+01	- .0	.0	.142
47	47	1.947520E+02	2.292100E+02	4.239620E+02	-3.445800E+01	- .170	.170	.0
48	48	.0E+00	6.757200E+01	6.757200E+01	-6.757200E+01	- .0	.0	.264
49	49	.0E+00	6.737200E+01	6.737200E+01	-6.737200E+01	- .0	.0	.104
50	50	1.843990E+02	1.914400E+02	3.758390E+02	-7.041000E+00	- .193	.193	.0

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59 SPRING FOR CASE 3 WITH 7% DAMPING
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	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
62								
63								
64								
65	51	.0E+00	8.833700E+01	8.833700E+01	-8.833700E+01	-.0	.0	.220
66	52	.0E+00	1.953700E+02	1.953700E+02	-1.953700E+02	-.0	.0	.155
67	53	3.480010E+02	3.437600E+02	6.917610E+02	4.241000E+00	-.202	.202	.0
68	54	.0E+00	2.831400E+01	2.831400E+01	-2.831400E+01	-.0	.0	.314
69	55	.0E+00	3.368500E+01	3.368500E+01	-3.368500E+01	-.0	.0	.104
70	56	9.156520E+01	8.680500E+01	1.683702E+02	-5.239800E+00	-.188	.188	.0
71	57	.0E+00	1.769600E+01	1.769600E+01	-1.769600E+01	-.0	.0	.199
72	58	.0E+00	5.207500E+01	5.207500E+01	-5.207500E+01	-.0	.0	.171
73	59	8.202990E+01	8.155300E+01	1.635829E+02	4.769000E-01	-.201	.201	.0
74	60	.0E+00	2.345000E+01	2.345000E+01	-2.345000E+01	-.0	.0	.150
75	61	.0E+00	5.062700E+01	5.062700E+01	-5.062700E+01	-.0	.0	.176
76	62	9.915600E+01	1.104200E+02	2.095760E+02	-1.126400E+01	-.180	.180	.0
77	63	.0E+00	2.345000E+01	2.345000E+01	-2.345000E+01	-.0	.0	.150
78	64	.0E+00	4.842300E+01	4.842300E+01	-4.842300E+01	-.0	.0	.184
79	65	1.002820E+02	1.079900E+02	2.082720E+02	-7.708000E+00	-.186	.186	.0
80	66	.0E+00	5.308900E+01	5.308900E+01	-5.308900E+01	-.0	.0	.199
81	67	.0E+00	1.452600E+02	1.452600E+02	-1.452600E+02	-.0	.0	.184
82	68	2.485750E+02	2.131500E+02	4.617250E+02	3.542500E+01	-.233	.233	.0
83	69	.0E+00	1.003500E+03	1.003500E+03	-1.003500E+03	-.0	.0	.0
84	70	.0E+00	2.345000E+01	2.345000E+01	-2.345000E+01	-.0	.0	.150
85	71	.0E+00	4.376300E+01	4.376300E+01	-4.376300E+01	-.0	.0	.203
86	72	1.025000E+02	1.042600E+02	2.067600E+02	-1.760000E+00	-.197	.197	.0
87	73	.0E+00	1.909000E+03	1.909000E+03	-1.909000E+03	-.0	.0	.0
88	74	.0E+00	6.097000E+01	6.097000E+01	-6.097000E+01	-.0	.0	.204
89	75	.0E+00	6.964000E+01	6.964000E+01	-6.964000E+01	-.0	.0	.178
90	76	2.058450E+02	2.073900E+02	4.132350E+02	-1.545000E+00	-.199	.199	.0
91	77	.0E+00	6.334600E+01	6.334600E+01	-6.334600E+01	-.0	.0	.167
92	78	.0E+00	1.285700E+02	1.285700E+02	-1.285700E+02	-.0	.0	.208
93	79	2.900530E+02	2.367700E+02	5.268230E+02	5.328300E+01	-.245	.245	.0
94	80	.0E+00	2.111500E+01	2.111500E+01	-2.111500E+01	-.0	.0	.167
95	81	.0E+00	3.882500E+01	3.882500E+01	-3.882500E+01	-.0	.0	.229
96	82	9.891150E+01	7.564200E+01	1.745535E+02	2.326950E+01	-.262	.262	.0
97	83	.0E+00	1.693700E+03	1.693700E+03	-1.693700E+03	-.0	.0	.0
98	84	.0E+00	9.885100E+02	9.885100E+02	-9.885100E+02	-.0	.0	.0
99	85	.0E+00	7.199300E+02	7.199300E+02	-7.199300E+02	-.0	.0	.0
100	86	.0E+00	1.567900E+03	1.567900E+03	-1.567900E+03	-.0	.0	.0
101	87	.0E+00	1.806000E+03	1.806000E+03	-1.806000E+03	-.0	.0	.0
102	88	.0E+00	3.686600E+02	3.686600E+02	-3.686600E+02	-.0	.0	.290
103	89	.0E+00	2.084600E+02	2.084600E+02	-2.084600E+02	-.0	.0	.203
104	90	1.260920E+03	7.216900E+02	1.982610E+03	5.392300E+02	-.349	.349	.0
105	91	.0E+00	3.270600E+02	3.270600E+02	-3.270600E+02	-.0	.0	.327
106	92	.0E+00	2.084600E+02	2.084600E+02	-2.084600E+02	-.0	.0	.203
107	93	1.172600E+03	3.502600E+02	1.522860E+03	8.223400E+02	-.670	.670	.0
108	94	.0E+00	3.993700E+02	3.993700E+02	-3.993700E+02	-.0	.0	.290
109	95	.0E+00	2.118500E+02	2.118500E+02	-2.118500E+02	-.0	.0	.216
110	96	1.409130E+03	8.498200E+02	2.258950E+03	5.593100E+02	-.332	.332	.0
111	97	.0E+00	1.455600E+03	1.455600E+03	-1.455600E+03	-.0	.0	.0
112	98	.0E+00	2.764700E+02	2.764700E+02	-2.764700E+02	-.0	.0	.290
113	99	.0E+00	1.389400E+02	1.389400E+02	-1.389400E+02	-.0	.0	.223
114	100	1.050720E+03	7.548100E+02	1.805530E+03	2.959100E+02	-.278	.278	.0

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116 SPRING FOR CASE 3 WITH 7% DAMPING
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	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
119								
120								
121								
122	101	.0E+00	2.223100E+03	2.223100E+03	-2.223100E+03	-.0	.0	.0
123	102	.0E+00	4.065100E+01	4.065100E+01	-4.065100E+01	-.0	.0	.219
124	103	.0E+00	1.913300E+01	1.913300E+01	-1.913300E+01	-.0	.0	.184
125	104	1.042100E+02	1.121400E+02	2.163500E+02	-7.930000E+00	-.186	.186	.0
126	105	.0E+00	4.065100E+01	4.065100E+01	-4.065100E+01	-.0	.0	.219
127	106	.0E+00	2.177400E+01	2.177400E+01	-2.177400E+01	-.0	.0	.162
128	107	1.062210E+02	1.194100E+02	2.256310E+02	-1.318900E+01	-.178	.178	.0
129	108	.0E+00	1.075400E+02	1.075400E+02	-1.075400E+02	-.0	.0	.181
130	109	.0E+00	1.109700E+02	1.109700E+02	-1.109700E+02	-.0	.0	.273
131	110	4.225840E+02	3.886500E+02	8.112340E+02	3.393400E+01	-.217	.217	.0
132	111	.0E+00	7.481100E+01	7.481100E+01	-7.481100E+01	-.0	.0	.238
133	112	.0E+00	4.354700E+01	4.354700E+01	-4.354700E+01	-.0	.0	.162
134	113	2.154370E+02	2.112400E+02	4.266770E+02	4.197000E+00	-.204	.204	.0
135	114	.0E+00	2.481300E+02	2.481300E+02	-2.481300E+02	-.0	.0	.236
136	115	.0E+00	2.181200E+02	2.181200E+02	-2.181200E+02	-.0	.0	.244
137	116	9.664350E+02	7.028600E+02	1.669295E+03	2.635750E+02	-.275	.275	.0
138	117	.0E+00	6.616700E+01	6.616700E+01	-6.616700E+01	-.0	.0	.269
139	118	.0E+00	4.354700E+01	4.354700E+01	-4.354700E+01	-.0	.0	.162
140	119	2.190550E+02	1.772800E+02	3.963350E+02	4.177500E+01	-.247	.247	.0
141	120	.0E+00	1.459900E+02	1.459900E+02	-1.459900E+02	-.0	.0	.255
142	121	.0E+00	1.492400E+02	1.492400E+02	-1.492400E+02	-.0	.0	.250
143	122	6.559300E+02	3.998500E+02	1.055780E+03	2.560800E+02	-.328	.328	.0
144	123	.0E+00	8.983800E+01	8.983800E+01	-8.983800E+01	-.0	.0	.297
145	124	.0E+00	6.532000E+01	6.532000E+01	-6.532000E+01	-.0	.0	.162
146	125	3.338830E+02	2.387500E+02	5.726330E+02	9.513300E+01	-.280	.280	.0
147	126	.0E+00	2.165100E+02	2.165100E+02	-2.165100E+02	-.0	.0	.253
148	127	.0E+00	3.022900E+02	3.022900E+02	-3.022900E+02	-.0	.0	.271
149	128	1.251080E+03	7.327300E+02	1.983810E+03	5.183500E+02	-.341	.341	.0
150	129	.0E+00	8.119400E+01	8.119400E+01	-8.119400E+01	-.0	.0	.329
151	130	.0E+00	6.531700E+01	6.531700E+01	-6.531700E+01	-.0	.0	.162
152	131	3.468740E+02	2.459400E+02	5.928140E+02	1.009340E+02	-.282	.282	.0
153	132	.0E+00	2.046500E+02	2.046500E+02	-2.046500E+02	-.0	.0	.260
154	133	.0E+00	2.295900E+02	2.295900E+02	-2.295900E+02	-.0	.0	.255
155	134	9.946420E+02	5.751700E+02	1.569812E+03	4.194720E+02	-.346	.346	.0
156	135	.0E+00	1.075400E+02	1.075400E+02	-1.075400E+02	-.0	.0	.181
157	136	.0E+00	9.529500E+01	9.529500E+01	-9.529500E+01	-.0	.0	.317
158	137	4.048610E+02	3.640700E+02	7.689310E+02	4.079100E+01	-.222	.222	.0
159	138	.0E+00	2.150400E+02	2.150400E+02	-2.150400E+02	-.0	.0	.231
160	139	.0E+00	1.708700E+02	1.708700E+02	-1.708700E+02	-.0	.0	.291
161	140	8.238150E+02	5.430500E+02	1.366865E+03	2.807650E+02	-.303	.303	.0
162	141	.0E+00	1.647000E+02	1.647000E+02	-1.647000E+02	-.0	.0	.248
163	142	.0E+00	1.544400E+02	1.544400E+02	-1.544400E+02	-.0	.0	.299
164	143	7.353260E+02	3.607600E+02	1.096086E+03	3.745660E+02	-.408	.408	.0
165	144	.0E+00	8.499900E+02	8.499900E+02	-8.499900E+02	-.0	.0	.0
166	145	.0E+00	1.825800E+02	1.825800E+02	-1.825800E+02	-.0	.0	.291
167	146	1.014030E+03	4.489900E+02	1.463020E+03	5.650400E+02	-.452	.452	.0
168	147	.0E+00	9.586100E+02	9.586100E+02	-9.586100E+02	-.0	.0	.0
169	148	.0E+00	1.541400E+03	1.541400E+03	-1.541400E+03	-.0	.0	.0
170	149	.0E+00	2.690600E+02	2.690600E+02	-2.690600E+02	-.0	.0	.317
171	150	1.372310E+03	5.688500E+02	1.941160E+03	8.034600E+02	-.482	.482	.0

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173 SPRING FOR CASE 3 WITH 7% DAMPING
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	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
176								
177								
178								
179	151	.0E+00	1.943900E+03	1.943900E+03	-1.943900E+03	-.0	.0	.0
180	152	.0E+00	1.789900E+02	1.789900E+02	-1.789900E+02	-.0	.0	.267
181	153	.0E+00	6.790500E+02	6.790500E+02	-6.790500E+02	-.0	.0	.0
182	154	1.061710E+03	5.357200E+02	1.597430E+03	5.259900E+02	-.396	.396	.0
183	155	.0E+00	8.416400E+01	8.416400E+01	-8.416400E+01	-.0	.0	.189
184	156	.0E+00	6.592500E+01	6.592500E+01	-6.592500E+01	-.0	.0	.324
185	157	2.953510E+02	2.639300E+02	5.592810E+02	3.142100E+01	-.224	.224	.0
186	158	.0E+00	1.496300E+02	1.496300E+02	-1.496300E+02	-.0	.0	.238
187	159	.0E+00	6.499900E+01	6.499900E+01	-6.499900E+01	-.0	.0	.217
188	160	3.460150E+02	3.304400E+02	6.764550E+02	1.557500E+01	-.209	.209	.0
189	161	.0E+00	1.654200E+02	1.654200E+02	-1.654200E+02	-.0	.0	.269
190	162	.0E+00	7.848200E+01	7.848200E+01	-7.848200E+01	-.0	.0	.224
191	163	4.993640E+02	3.123400E+02	8.117040E+02	1.870240E+02	-.320	.320	.0
192	164	.0E+00	9.925200E+01	9.925200E+01	-9.925200E+01	-.0	.0	.269
193	165	.0E+00	4.874900E+01	4.874900E+01	-4.874900E+01	-.0	.0	.217
194	166	2.636340E+02	1.756900E+02	4.393240E+02	8.794400E+01	-.300	.300	.0
195	167	.0E+00	3.899500E+01	3.899500E+01	-3.899500E+01	-.0	.0	.181
196	168	.0E+00	5.022900E+01	5.022900E+01	-5.022900E+01	-.0	.0	.355
197	169	2.013240E+02	9.950300E+01	3.008270E+02	1.018210E+02	-.405	.405	.0
198	170	.0E+00	7.019100E+01	7.019100E+01	-7.019100E+01	-.0	.0	.227
199	171	.0E+00	6.824900E+01	6.824900E+01	-6.824900E+01	-.0	.0	.313
200	172	2.660910E+02	1.462500E+02	4.123410E+02	1.198410E+02	-.364	.364	.0
201	173	.0E+00	3.752400E+02	3.752400E+02	-3.752400E+02	-.0	.0	.332
202	174	.0E+00	9.865800E+02	9.865800E+02	-9.865800E+02	-.0	.0	.0
203	175	1.546330E+03	5.018900E+02	2.048220E+03	1.044440E+03	-.616	.616	.0
204	176	.0E+00	3.548400E+02	3.548400E+02	-3.548400E+02	-.0	.0	.249
205	177	.0E+00	4.404400E+02	4.404400E+02	-4.404400E+02	-.0	.0	.335
206	178	1.836510E+03	5.550000E+02	2.391510E+03	1.281510E+03	-.662	.662	.0
207	179	.0E+00	2.412200E+02	2.412200E+02	-2.412200E+02	-.0	.0	.332
208	180	.0E+00	1.309600E+03	1.309600E+03	-1.309600E+03	-.0	.0	.0
209	181	1.097620E+03	4.994100E+02	1.597030E+03	5.982100E+02	-.440	.440	.0
210	182	.0E+00	2.387700E+02	2.387700E+02	-2.387700E+02	-.0	.0	.224
211	183	.0E+00	1.346100E+02	1.346100E+02	-1.346100E+02	-.0	.0	.157
212	184	7.394500E+02	2.514000E+02	9.908500E+02	4.880500E+02	-.588	.588	.0
213	185	.0E+00	1.406100E+02	1.406100E+02	-1.406100E+02	-.0	.0	.317
214	186	.0E+00	7.478400E+01	7.478400E+01	-7.478400E+01	-.0	.0	.235
215	187	5.928070E+02	2.585900E+02	8.513970E+02	3.342170E+02	-.458	.458	.0
216	188	.0E+00	8.918300E+02	8.918300E+02	-8.918300E+02	-.0	.0	.0
217	189	.0E+00	1.098900E+02	1.098900E+02	-1.098900E+02	-.0	.0	.224
218	190	8.429000E+02	4.446300E+02	1.287530E+03	3.982700E+02	-.379	.379	.0
219	191	.0E+00	2.812200E+01	2.812200E+01	-2.812200E+01	-.0	.0	.316
220	192	.0E+00	1.519400E+01	1.519400E+01	-1.519400E+01	-.0	.0	.232
221	193	1.205220E+02	5.225300E+01	1.727750E+02	6.826900E+01	-.461	.461	.0
222	194	.0E+00	8.088400E+02	8.088400E+02	-8.088400E+02	-.0	.0	.0
223	195	.0E+00	1.826500E+03	1.826500E+03	-1.826500E+03	-.0	.0	.0
224	196	.0E+00	2.325400E+02	2.325400E+02	-2.325400E+02	-.0	.0	.197
225	197	.0E+00	3.390400E+02	3.390400E+02	-3.390400E+02	-.0	.0	.341
226	198	1.188340E+03	6.294800E+02	1.817820E+03	5.588600E+02	-.378	.378	.0
227	199	.0E+00	2.170500E+03	2.170500E+03	-2.170500E+03	-.0	.0	.0
228	200	1.194720E+02	1.682600E+02	2.877320E+02	-4.878800E+01	-.142	.142	.0

229 1
230 SPRING FOR CASE 3 WITH 7% DAMPING
231
232

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
233								
234								
235								
236	201	1.286610E+02	1.363500E+02	2.650110E+02	-7.689000E+00	-.189	.189	.0
237	202	.0E+00	2.855400E+01	2.855400E+01	-2.855400E+01	-.0	.0	.312
238	203	.0E+00	2.624400E+01	2.624400E+01	-2.624400E+01	-.0	.0	.134
239	204	1.214720E+02	1.918200E+02	3.132920E+02	-7.034800E+01	-.127	.127	.0
240	205	.0E+00	5.353800E+01	5.353800E+01	-5.353800E+01	-.0	.0	.197
241	206	.0E+00	1.114800E+02	1.114800E+02	-1.114800E+02	-.0	.0	.240
242	207	3.732680E+02	4.796800E+02	8.529480E+02	-1.064120E+02	-.156	.156	.0
243	208	.0E+00	6.560100E+02	6.560100E+02	-6.560100E+02	-.0	.0	.0
244	209	.0E+00	6.705800E+01	6.705800E+01	-6.705800E+01	-.0	.0	.266
245	210	2.517940E+02	2.723700E+02	5.241640E+02	-2.057600E+01	-.185	.185	.0
246	211	.0E+00	2.630700E+01	2.630700E+01	-2.630700E+01	-.0	.0	.338
247	212	.0E+00	2.624400E+01	2.624400E+01	-2.624400E+01	-.0	.0	.134
248	213	1.266740E+02	1.644400E+02	2.911140E+02	-3.776600E+01	-.154	.154	.0
249	214	.0E+00	1.315400E+02	1.315400E+02	-1.315400E+02	-.0	.0	.214
250	215	.0E+00	2.972800E+02	2.972800E+02	-2.972800E+02	-.0	.0	.246
251	216	1.035400E+03	1.052900E+03	2.088300E+03	-1.750000E+01	-.197	.197	.0
252	217	.0E+00	1.662000E+03	1.662000E+03	-1.662000E+03	-.0	.0	.0
253	218	.0E+00	5.634400E+02	5.634400E+02	-5.634400E+02	-.0	.0	.269
254	219	2.218100E+03	1.767100E+03	3.985200E+03	4.510000E+02	-.251	.251	.0
255	220	.0E+00	2.439000E+01	2.439000E+01	-2.439000E+01	-.0	.0	.365
256	221	.0E+00	2.908500E+01	2.908500E+01	-2.908500E+01	-.0	.0	.121
257	222	1.298150E+02	1.637500E+02	2.935650E+02	-3.393500E+01	-.159	.159	.0
258	223	.0E+00	9.755800E+01	9.755800E+01	-9.755800E+01	-.0	.0	.365
259	224	.0E+00	1.049700E+02	1.049700E+02	-1.049700E+02	-.0	.0	.134
260	225	5.349650E+02	5.257800E+02	1.060745E+03	9.185000E+00	-.203	.203	.0
261	226	.0E+00	1.524300E+02	1.524300E+02	-1.524300E+02	-.0	.0	.231
262	227	.0E+00	3.716000E+02	3.716000E+02	-3.716000E+02	-.0	.0	.240
263	228	1.367410E+03	9.807300E+02	2.348140E+03	3.866800E+02	-.279	.279	.0
264	229	.0E+00	1.903500E+03	1.903500E+03	-1.903500E+03	-.0	.0	.0
265	230	.0E+00	6.297300E+02	6.297300E+02	-6.297300E+02	-.0	.0	.269
266	231	2.613380E+03	1.340100E+03	3.953480E+03	1.273280E+03	-.390	.390	.0
267	232	.0E+00	6.996200E+01	6.996200E+01	-6.996200E+01	-.0	.0	.278
268	233	.0E+00	4.688400E+02	4.688400E+02	-4.688400E+02	-.0	.0	.0
269	234	5.495730E+02	5.489300E+02	1.098503E+03	6.430000E-01	-.200	.200	.0
270	235	.0E+00	9.733700E+01	9.733700E+01	-9.733700E+01	-.0	.0	.366
271	236	.0E+00	1.049700E+02	1.049700E+02	-1.049700E+02	-.0	.0	.134
272	237	5.694150E+02	4.307200E+02	1.000135E+03	1.386950E+02	-.264	.264	.0
273	238	.0E+00	1.368800E+02	1.368800E+02	-1.368800E+02	-.0	.0	.231
274	239	.0E+00	3.344400E+02	3.344400E+02	-3.344400E+02	-.0	.0	.240
275	240	1.315740E+03	7.029200E+02	2.018660E+03	6.128200E+02	-.374	.374	.0
276	241	.0E+00	1.628500E+03	1.628500E+03	-1.628500E+03	-.0	.0	.0
277	242	.0E+00	3.977300E+02	3.977300E+02	-3.977300E+02	-.0	.0	.228
278	243	2.217000E+03	8.472300E+02	3.064230E+03	1.369770E+03	-.523	.523	.0
279	244	.0E+00	7.586500E+01	7.586500E+01	-7.586500E+01	-.0	.0	.352
280	245	.0E+00	6.476800E+02	6.476800E+02	-6.476800E+02	-.0	.0	.0
281	246	4.406530E+02	3.156500E+02	7.563030E+02	1.250030E+02	-.279	.279	.0
282	247	.0E+00	1.264400E+02	1.264400E+02	-1.264400E+02	-.0	.0	.223
283	248	.0E+00	2.972700E+02	2.972700E+02	-2.972700E+02	-.0	.0	.240
284	249	1.206930E+03	6.406200E+02	1.847550E+03	5.663100E+02	-.377	.377	.0
285	250	.0E+00	1.283300E+03	1.283300E+03	-1.283300E+03	-.0	.0	.0

286 1
 287 SPRING FOR CASE 3 WITH 7% DAMPING
 288

289	290	291	292	293	294	295	296	297	298	299	300	301	302	303
ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G							
251	0E+00	2.320100E+02	2.320100E+02	-2.320100E-02	- .0	.0	.269							
252	1.070310E+03	4.559000E+02	1.526210E+03	6.144100E-02	-.470	.470	.0							
253	0E+00	2.483600E+02	2.483600E+02	-2.483600E-02	- .0	.0	.071							
254	0E+00	4.315700E+02	4.315700E+02	-4.315700E-02	- .0	.0	.103							
255	1.043080E+03	7.517100E+02	1.794790E+03	2.913700E+02	-.278	.278	.0							
256	0E+00	1.034900E+02	1.034900E+02	-1.034900E-02	- .0	.0	.204							
257	0E+00	7.264600E+02	7.264600E+02	-7.264600E-02	- .0	.0	.0							
258	9.355600E+02	5.788600E+02	1.514420E+03	3.567000E+02	-.323	.323	.0							
259	0E+00	1.071400E+03	1.071400E+03	-1.071400E-03	- .0	.0	.0							
260	0E+00	6.115000E+02	6.115000E+02	-6.115000E-02	- .0	.0	.0							
261	2.354160E+03	1.337600E+03	3.691760E+03	1.016560E+03	-.352	.352	.0							

[illegible][illegible]

CASE 4
WITH 7 %

FIRST PILE
FAILURE
OCCURS
@ 0.203 g's
LATERAL
PILE

[illegible]

[illegible][illegible]

1 1 SPRING FOR CASE 4 WITH 7% DAMPING

ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
1	.0E+00	9.303300E+02	9.303300E+02	-9.303300E+02	-.0	.0	.0
2	.0E+00	7.217300E+00	7.217300E+00	-7.217300E+00	-.0	.0	.975
3	.0E+00	2.637000E+01	2.637000E+01	-2.637000E+01	-.0	.0	.676
4	2.337080E+02	1.707000E+02	4.044080E+02	6.300800E+01	-.274	.274	.0
5	.0E+00	4.029600E+01	4.029600E+01	-4.029600E+01	-.0	.0	1.275
6	.0E+00	1.341500E+02	1.341500E+02	-1.341500E+02	-.0	.0	.543
7	1.163360E+03	9.796900E+02	2.143050E+03	1.836700E+02	-.237	.237	.0
8	.0E+00	1.002300E+01	1.002300E+01	-1.002300E+01	-.0	.0	1.778
9	.0E+00	2.402300E+01	2.402300E+01	-2.402300E+01	-.0	.0	.293
10	2.282430E+02	2.285400E+02	4.567830E+02	-2.970000E-01	-.200	.200	.0
11	.0E+00	4.949600E+02	4.949600E+02	-4.949600E+02	-.0	.0	.0
12	.0E+00	1.650800E+01	1.650800E+01	-1.650800E+01	-.0	.0	1.619
13	.0E+00	2.849800E+01	2.849800E+01	-2.849800E+01	-.0	.0	.371
14	3.562380E+02	3.089100E+02	6.651480E+02	4.732800E+01	-.231	.231	.0
15	.0E+00	1.893900E+01	1.893900E+01	-1.893900E+01	-.0	.0	1.313
16	.0E+00	5.037600E+01	5.037600E+01	-5.037600E+01	-.0	.0	.493
17	4.653980E+02	4.498700E+02	9.152680E+02	1.552800E+01	-.207	.207	.0
18	.0E+00	1.651200E+01	1.651200E+01	-1.651200E+01	-.0	.0	1.618
19	.0E+00	3.602300E+01	3.602300E+01	-3.602300E+01	-.0	.0	.293
20	3.398110E+02	3.793200E+02	7.191310E+02	-3.950900E+01	-.179	.179	.0
21	.0E+00	1.749100E+01	1.749100E+01	-1.749100E+01	-.0	.0	1.528
22	.0E+00	2.477400E+01	2.477400E+01	-2.477400E+01	-.0	.0	.426
23	3.619070E+02	3.031800E+02	6.650870E+02	5.872700E+01	-.239	.239	.0
24	.0E+00	6.278500E+00	6.278500E+00	-6.278500E+00	-.0	.0	1.418
25	.0E+00	9.499000E+00	9.499000E+00	-9.499000E+00	-.0	.0	.371
26	1.206460E+02	1.242600E+02	2.449060E+02	-3.614000E+00	-.194	.194	.0
27	.0E+00	1.883700E+01	1.883700E+01	-1.883700E+01	-.0	.0	1.418
28	.0E+00	3.164200E+01	3.164200E+01	-3.164200E+01	-.0	.0	.334
29	3.490210E+02	3.924900E+02	7.415110E+02	-4.346900E+01	-.178	.178	.0
30	.0E+00	1.255800E+01	1.255800E+01	-1.255800E+01	-.0	.0	1.419
31	.0E+00	2.401300E+01	2.401300E+01	-2.401300E+01	-.0	.0	.293
32	2.249690E+02	2.851600E+02	5.101290E+02	-6.019100E+01	-.158	.158	.0
33	.0E+00	4.762500E+01	4.762500E+01	-4.762500E+01	-.0	.0	1.196
34	.0E+00	6.101900E+01	6.101900E+01	-6.101900E+01	-.0	.0	.492
35	8.691220E+02	9.330000E+02	1.802122E+03	-6.387800E+01	-.186	.186	.0
36	.0E+00	1.533200E+01	1.533200E+01	-1.533200E+01	-.0	.0	.689
37	.0E+00	3.954900E+01	3.954900E+01	-3.954900E+01	-.0	.0	.676
38	3.669070E+02	4.348400E+02	8.017470E+02	-6.793300E+01	-.169	.169	.0
39	.0E+00	1.533700E+01	1.533700E+01	-1.533700E+01	-.0	.0	.689
40	.0E+00	4.391200E+01	4.391200E+01	-4.391200E+01	-.0	.0	.608
41	3.512320E+02	4.495200E+02	8.007520E+02	-9.828800E+01	-.156	.156	.0
42	.0E+00	1.220800E+01	1.220800E+01	-1.220800E+01	-.0	.0	1.017
43	.0E+00	2.866800E+01	2.866800E+01	-2.866800E+01	-.0	.0	.433
44	2.258190E+02	3.204200E+02	5.462390E+02	-9.460100E+01	-.141	.141	.0
45	.0E+00	1.716800E+01	1.716800E+01	-1.716800E+01	-.0	.0	.723
46	.0E+00	1.507400E+01	1.507400E+01	-1.507400E+01	-.0	.0	.824
47	2.328170E+02	3.508100E+02	5.836270E+02	-1.179930E+02	-.133	.133	.0
48	.0E+00	1.689200E+01	1.689200E+01	-1.689200E+01	-.0	.0	1.055
49	.0E+00	1.262300E+01	1.262300E+01	-1.262300E+01	-.0	.0	.558
50	2.214450E+02	2.664400E+02	4.878850E+02	-4.499500E+01	-.166	.166	.0

58 1
59 SPRING FOR CASE 4 WITH 7% DAMPING
60
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62	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
63								
64								
65	51	.0E+00	2.235000E+01	2.235000E+01	-2.235000E+01	-.0	.0	.871
66	52	.0E+00	3.257700E+01	3.257700E+01	-3.257700E+01	-.0	.0	.928
67	53	4.192680E+02	4.257100E+02	8.449780E+02	-6.442000E+00	-.197	.197	.0
68	54	.0E+00	5.823000E+00	5.823000E+00	-5.823000E+00	-.0	.0	1.528
69	55	.0E+00	6.308800E+00	6.308800E+00	-6.308800E+00	-.0	.0	.558
70	56	9.894990E+01	1.016700E+02	2.006199E+02	-2.720100E+00	-.195	.195	.0
71	57	.0E+00	4.196000E+00	4.196000E+00	-4.196000E+00	-.0	.0	.839
72	58	.0E+00	8.219900E+00	8.219900E+00	-8.219900E+00	-.0	.0	1.083
73	59	9.832940E+01	9.514800E+01	1.934774E+02	3.181400E+00	-.207	.207	.0
74	60	.0E+00	7.190000E+00	7.190000E+00	-7.190000E+00	-.0	.0	.490
75	61	.0E+00	7.811000E+00	7.811000E+00	-7.811000E+00	-.0	.0	1.139
76	62	1.171650E+02	1.715200E+02	2.886850E+02	-5.435500E+01	-.137	.137	.0
77	63	.0E+00	7.190100E+00	7.190100E+00	-7.190100E+00	-.0	.0	.490
78	64	.0E+00	7.197400E+00	7.197400E+00	-7.197400E+00	-.0	.0	1.237
79	65	1.174690E+02	1.691800E+02	2.866490E+02	-5.171100E+01	-.139	.139	.0
80	66	.0E+00	1.258900E+01	1.258900E+01	-1.258900E+01	-.0	.0	.839
81	67	.0E+00	2.155900E+01	2.155900E+01	-2.155900E+01	-.0	.0	1.239
82	68	2.903450E+02	2.479900E+02	5.383350E+02	4.235500E+01	-.234	.234	.0
83	69	.0E+00	1.162300E+03	1.162300E+03	-1.162300E+03	-.0	.0	.0
84	70	.0E+00	7.190300E+00	7.190300E+00	-7.190300E+00	-.0	.0	.490
85	71	.0E+00	6.014200E+00	6.014200E+00	-6.014200E+00	-.0	.0	1.480
86	72	1.175760E+02	1.655300E+02	2.831060E+02	-4.795400E+01	-.142	.142	.0
87	73	.0E+00	2.058200E+03	2.058200E+03	-2.058200E+03	-.0	.0	.0
88	74	.0E+00	1.716900E+01	1.716900E+01	-1.716900E+01	-.0	.0	.723
89	75	.0E+00	9.997500E+00	9.997500E+00	-9.997500E+00	-.0	.0	1.242
90	76	2.351020E+02	3.296700E+02	5.647720E+02	-9.456800E+01	-.143	.143	.0
91	77	.0E+00	1.825200E+01	1.825200E+01	-1.825200E+01	-.0	.0	.579
92	78	.0E+00	1.743100E+01	1.743100E+01	-1.743100E+01	-.0	.0	1.533
93	79	3.302740E+02	3.521800E+02	6.824540E+02	-2.190600E+01	-.188	.188	.0
94	80	.0E+00	6.083600E+00	6.083600E+00	-6.083600E+00	-.0	.0	.579
95	81	.0E+00	5.085500E+00	5.085500E+00	-5.085500E+00	-.0	.0	1.750
96	82	1.105500E+02	1.143400E+02	2.248900E+02	-3.790000E+00	-.193	.193	.0
97	83	.0E+00	1.742600E+03	1.742600E+03	-1.742600E+03	-.0	.0	.0
98	84	.0E+00	1.288500E+03	1.288500E+03	-1.288500E+03	-.0	.0	.0
99	85	.0E+00	7.768800E+02	7.768800E+02	-7.768800E+02	-.0	.0	.0
100	86	.0E+00	1.832900E+03	1.832900E+03	-1.832900E+03	-.0	.0	.0
101	87	.0E+00	1.951900E+03	1.951900E+03	-1.951900E+03	-.0	.0	.0
102	88	.0E+00	8.486800E+01	8.486800E+01	-8.486800E+01	-.0	.0	1.259
103	89	.0E+00	5.248700E+01	5.248700E+01	-5.248700E+01	-.0	.0	.805
104	90	1.344260E+03	1.058900E+03	2.403160E+03	2.853600E+02	-.254	.254	.0
105	91	.0E+00	6.207400E+01	6.207400E+01	-6.207400E+01	-.0	.0	1.722
106	92	.0E+00	5.248600E+01	5.248600E+01	-5.248600E+01	-.0	.0	.805
107	93	1.259240E+03	4.741200E+02	1.733360E+03	7.851200E+02	-.531	.531	.0
108	94	.0E+00	9.198800E+01	9.198800E+01	-9.198800E+01	-.0	.0	1.259
109	95	.0E+00	6.542800E+01	6.542800E+01	-6.542800E+01	-.0	.0	.699
110	96	1.491740E+03	1.242100E+03	2.733840E+03	2.496400E+02	-.240	.240	.0
111	97	.0E+00	8.914600E+02	8.914600E+02	-8.914600E+02	-.0	.0	.0
112	98	.0E+00	6.374800E+01	6.374800E+01	-6.374800E+01	-.0	.0	1.257
113	99	.0E+00	6.425900E+01	6.425900E+01	-6.425900E+01	-.0	.0	.482
114	100	1.094280E+03	1.081100E+03	2.175380E+03	1.318000E+01	-.202	.202	.0

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116 SPRING FOR CASE 4 WITH 7% DAMPING
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	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
119								
120								
121								
122	101	.0E+00	2.039800E+03	2.039800E+03	-2.039800E+03	-.0	.0	.0
123	102	.0E+00	1.112300E+01	1.112300E+01	-1.112300E+01	-.0	.0	.800
124	103	.0E+00	1.055500E+01	1.055500E+01	-1.055500E+01	-.0	.0	.333
125	104	1.096500E+02	1.865200E+02	2.961700E+02	-7.687000E+01	-.118	.118	.0
126	105	.0E+00	1.112300E+01	1.112300E+01	-1.112300E+01	-.0	.0	.800
127	106	.0E+00	1.202600E+01	1.202600E+01	-1.202600E+01	-.0	.0	.293
128	107	1.084670E+02	1.967100E+02	3.051770E+02	-8.824300E+01	-.110	.110	.0
129	108	.0E+00	3.098200E+01	3.098200E+01	-3.098200E+01	-.0	.0	.628
130	109	.0E+00	5.450000E+01	5.450000E+01	-5.450000E+01	-.0	.0	.555
131	110	4.401330E+02	6.387900E+02	1.078923E+03	-1.986570E+02	-.138	.138	.0
132	111	.0E+00	1.959800E+01	1.959800E+01	-1.959800E+01	-.0	.0	.909
133	112	.0E+00	2.405100E+01	2.405100E+01	-2.405100E+01	-.0	.0	.293
134	113	2.178170E+02	3.412600E+02	5.590770E+02	-1.234430E+02	-.128	.128	.0
135	114	.0E+00	6.251700E+01	6.251700E+01	-6.251700E+01	-.0	.0	.938
136	115	.0E+00	1.113700E+02	1.113700E+02	-1.113700E+02	-.0	.0	.478
137	116	9.880250E+02	1.09600E+03	2.097625E+03	-1.215750E+02	-.178	.178	.0
138	117	.0E+00	1.586200E+01	1.586200E+01	-1.586200E+01	-.0	.0	1.123
139	118	.0E+00	2.404900E+01	2.404900E+01	-2.404900E+01	-.0	.0	.293
140	119	2.174360E+02	2.711800E+02	4.886160E+02	-5.374400E+01	-.160	.160	.0
141	120	.0E+00	3.331000E+01	3.331000E+01	-3.331000E+01	-.0	.0	1.119
142	121	.0E+00	7.560600E+01	7.560600E+01	-7.560600E+01	-.0	.0	.493
143	122	6.619130E+02	5.845600E+02	1.246473E+03	7.735300E+01	-.226	.226	.0
144	123	.0E+00	1.935900E+01	1.935900E+01	-1.935900E+01	-.0	.0	1.380
145	124	.0E+00	3.606900E+01	3.606900E+01	-3.606900E+01	-.0	.0	.293
146	125	3.265200E+02	3.364800E+02	6.630000E+02	-9.960000E+00	-.194	.194	.0
147	126	.0E+00	4.353500E+01	4.353500E+01	-4.353500E+01	-.0	.0	1.261
148	127	.0E+00	1.488200E+02	1.488200E+02	-1.488200E+02	-.0	.0	.550
149	128	1.250050E+03	9.258400E+02	2.175890E+03	3.242100E+02	-.270	.270	.0
150	129	.0E+00	1.490400E+01	1.490400E+01	-1.490400E+01	-.0	.0	1.793
151	130	.0E+00	3.605200E+01	3.605200E+01	-3.605200E+01	-.0	.0	.293
152	131	3.358070E+02	3.071200E+02	6.429270E+02	2.868700E+01	-.219	.219	.0
153	132	.0E+00	4.436400E+01	4.436400E+01	-4.436400E+01	-.0	.0	1.200
154	133	.0E+00	1.154500E+02	1.154500E+02	-1.154500E+02	-.0	.0	.508
155	134	9.991760E+02	7.975800E+02	1.796756E+03	2.015960E+02	-.251	.251	.0
156	135	.0E+00	3.098300E+01	3.098300E+01	-3.098300E+01	-.0	.0	.628
157	136	.0E+00	4.422700E+01	4.422700E+01	-4.422700E+01	-.0	.0	.684
158	137	4.336680E+02	5.951400E+02	1.028808E+03	-1.614720E+02	-.146	.146	.0
159	138	.0E+00	5.458900E+01	5.458900E+01	-5.458900E+01	-.0	.0	.910
160	139	.0E+00	8.181100E+01	8.181100E+01	-8.181100E+01	-.0	.0	.607
161	140	8.666000E+02	8.711400E+02	1.737740E+03	-4.540000E+00	-.199	.199	.0
162	141	.0E+00	3.796100E+01	3.796100E+01	-3.796100E+01	-.0	.0	1.075
163	142	.0E+00	7.324600E+01	7.324600E+01	-7.324600E+01	-.0	.0	.630
164	143	7.650270E+02	5.497200E+02	1.314747E+03	2.153070E+02	-.278	.278	.0
165	144	.0E+00	1.419400E+03	1.419400E+03	-1.419400E+03	-.0	.0	.0
166	145	.0E+00	7.665100E+01	7.665100E+01	-7.665100E+01	-.0	.0	.694
167	146	9.937020E+02	6.217100E+02	1.615412E+03	3.719920E+02	-.320	.320	.0
168	147	.0E+00	4.813800E+02	4.813800E+02	-4.813800E+02	-.0	.0	.0
169	148	.0E+00	2.488800E+03	2.488800E+03	-2.488800E+03	-.0	.0	.0
170	149	.0E+00	1.097000E+02	1.097000E+02	-1.097000E+02	-.0	.0	.778
171	150	1.351310E+03	6.939800E+02	2.045290E+03	6.573300E+02	-.389	.389	.0

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173 SPRING FOR CASE 4 WITH 7% DAMPING
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	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
176								
177								
178								
179	151	.0E+00	8.838100E+02	8.838100E+02	-8.838100E+02	-.0	.0	.0
180	152	.0E+00	3.206700E+01	3.206700E+01	-3.206700E+01	-.0	.0	1.492
181	153	.0E+00	2.631000E+03	2.631000E+03	-2.631000E+03	-.0	.0	.0
182	154	1.044190E+03	6.728800E+02	1.717070E+03	3.713100E+02	-.310	.310	.0
183	155	.0E+00	2.392400E+01	2.392400E+01	-2.392400E+01	-.0	.0	.666
184	156	.0E+00	2.894300E+01	2.894300E+01	-2.894300E+01	-.0	.0	.737
185	157	3.174030E+02	4.214200E+02	7.388230E+02	-1.040170E+02	-.151	.151	.0
186	158	.0E+00	3.920600E+01	3.920600E+01	-3.920600E+01	-.0	.0	.909
187	159	.0E+00	2.005100E+01	2.005100E+01	-2.005100E+01	-.0	.0	.702
188	160	3.596180E+02	4.379800E+02	7.975980E+02	-7.836200E+01	-.164	.164	.0
189	161	.0E+00	3.966600E+01	3.966600E+01	-3.966600E+01	-.0	.0	1.123
190	162	.0E+00	3.833100E+01	3.833100E+01	-3.833100E+01	-.0	.0	.459
191	163	5.246440E+02	4.874600E+02	1.012104E+03	3.718400E+01	-.215	.215	.0
192	164	.0E+00	2.380300E+01	2.380300E+01	-2.380300E+01	-.0	.0	1.123
193	165	.0E+00	1.503900E+01	1.503900E+01	-1.503900E+01	-.0	.0	.702
194	166	2.668580E+02	2.232100E+02	4.900680E+02	-4.364800E+01	-.239	.239	.0
195	167	.0E+00	1.017600E+01	1.017600E+01	-1.017600E+01	-.0	.0	.692
196	168	.0E+00	2.127800E+01	2.127800E+01	-2.127800E+01	-.0	.0	.837
197	169	2.089700E+02	1.499600E+02	3.589300E+02	5.901000E+01	-.279	.279	.0
198	170	.0E+00	1.723900E+01	1.723900E+01	-1.723900E+01	-.0	.0	.925
199	171	.0E+00	1.892700E+01	1.892700E+01	-1.892700E+01	-.0	.0	1.127
200	172	2.661480E+02	1.902800E+02	4.564280E+02	7.586800E+01	-.280	.280	.0
201	173	.0E+00	6.508400E+01	6.508400E+01	-6.508400E+01	-.0	.0	1.916
202	174	.0E+00	2.112700E+03	2.112700E+03	-2.112700E+03	-.0	.0	.0
203	175	1.554210E+03	6.659200E+02	2.220130E+03	8.882900E+02	-.467	.467	.0
204	176	.0E+00	6.034100E+01	6.034100E+01	-6.034100E+01	-.0	.0	1.465
205	177	.0E+00	8.956400E+01	8.956400E+01	-8.956400E+01	-.0	.0	1.649
206	178	1.889910E+03	7.364600E+02	2.626370E+03	1.153450E+03	-.513	.513	.0
207	179	.0E+00	4.184000E+01	4.184000E+01	-4.184000E+01	-.0	.0	1.916
208	180	.0E+00	5.401100E+03	5.401100E+03	-5.401100E+03	-.0	.0	.0
209	181	1.078230E+03	6.428800E+02	1.721110E+03	4.353500E+02	-.335	.335	.0
210	182	.0E+00	3.665800E+01	3.665800E+01	-3.665800E+01	-.0	.0	1.458
211	183	.0E+00	5.220100E+01	5.220100E+01	-5.220100E+01	-.0	.0	.405
212	184	7.122820E+02	3.054600E+02	1.017742E+03	4.068220E+02	-.466	.466	.0
213	185	.0E+00	2.373400E+01	2.373400E+01	-2.373400E+01	-.0	.0	1.877
214	186	.0E+00	2.900400E+01	2.900400E+01	-2.900400E+01	-.0	.0	.607
215	187	5.727310E+02	3.650300E+02	9.377610E+02	2.077010E+02	-.314	.314	.0
216	188	.0E+00	1.522700E+03	1.522700E+03	-1.522700E+03	-.0	.0	.0
217	189	.0E+00	4.860500E+01	4.860500E+01	-4.860500E+01	-.0	.0	.507
218	190	8.276130E+02	5.696600E+02	1.397273E+03	2.579530E+02	-.291	.291	.0
219	191	.0E+00	4.746800E+00	4.746800E+00	-4.746800E+00	-.0	.0	1.875
220	192	.0E+00	6.293200E+00	6.293200E+00	-6.293200E+00	-.0	.0	.559
221	193	1.157170E+02	7.269500E+01	1.884120E+02	4.302200E+01	-.318	.318	.0
222	194	.0E+00	9.397500E+02	9.397500E+02	-9.397500E+02	-.0	.0	.0
223	195	.0E+00	1.966700E+03	1.966700E+03	-1.966700E+03	-.0	.0	.0
224	196	.0E+00	5.054200E+01	5.054200E+01	-5.054200E+01	-.0	.0	.905
225	197	.0E+00	9.008100E+01	9.008100E+01	-9.008100E+01	-.0	.0	1.285
226	198	1.279670E+03	9.493900E+02	2.229060E+03	3.302800E+02	-.270	.270	.0
227	199	.0E+00	2.183700E+03	2.183700E+03	-2.183700E+03	-.0	.0	.0
228	200	1.264980E+02	1.741000E+02	3.005980E+02	-4.760200E+01	-.145	.145	.0

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230 SPRING FOR CASE 4 WITH 7% DAMPING

ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G
231							
232							
233							
234							
235							
236	201	1.354140E+02	1.310700E+02	2.664840E+02	4.344000E+00	-.207	.207
237	202	.0E+00	2.805300E+00	2.805300E+00	-2.805300E+00	-.0	.0
238	203	.0E+00	2.363500E+00	2.363500E+00	-2.363500E+00	-.0	.0
239	204	1.294030E+02	2.170500E+02	3.464530E+02	-8.764700E+01	-.119	.119
240	205	.0E+00	6.062900E+00	6.062900E+00	-6.062900E+00	-.0	.0
241	206	.0E+00	8.580900E+00	8.580900E+00	-8.580900E+00	-.0	.0
242	207	3.788400E+02	5.497400E+02	9.285800E+02	-1.709000E+02	-.138	.138
243	208	.0E+00	1.141800E+03	1.141800E+03	-1.141800E+03	-.0	.0
244	209	.0E+00	5.450100E+00	5.450100E+00	-5.450100E+00	-.0	.0
245	210	2.441090E+02	3.197200E+02	5.638290E+02	-7.561100E+01	-.153	.153
246	211	.0E+00	2.168800E+00	2.168800E+00	-2.168800E+00	-.0	.0
247	212	.0E+00	2.363200E+00	2.363200E+00	-2.363200E+00	-.0	.0
248	213	1.328400E+02	1.789700E+02	3.118100E+02	-4.613000E+01	-.148	.148
249	214	.0E+00	1.250300E+01	1.250300E+01	-1.250300E+01	-.0	.0
250	215	.0E+00	2.288100E+01	2.288100E+01	-2.288100E+01	-.0	.0
251	216	1.035520E+03	1.146100E+03	2.181620E+03	-1.105800E+02	-.181	.181
252	217	.0E+00	2.064000E+03	2.064000E+03	-2.064000E+03	-.0	.0
253	218	.0E+00	4.629000E+01	4.629000E+01	-4.629000E+01	-.0	.0
254	219	2.103310E+03	1.953200E+03	4.056510E+03	1.501100E+02	-.215	.215
255	220	.0E+00	1.486800E+00	1.486800E+00	-1.486800E+00	-.0	.0
256	221	.0E+00	2.749800E+00	2.749800E+00	-2.749800E+00	-.0	.0
257	222	1.371200E+02	1.707100E+02	3.078300E+02	-3.359000E+01	-.161	.161
258	223	.0E+00	5.946300E+00	5.946300E+00	-5.946300E+00	-.0	.0
259	224	.0E+00	9.446100E+00	9.446100E+00	-9.446100E+00	-.0	.0
260	225	5.485400E+02	5.362400E+02	1.084780E+03	1.230000E+01	-.205	.205
261	226	.0E+00	1.070800E+01	1.070800E+01	-1.070800E+01	-.0	.0
262	227	.0E+00	2.859500E+01	2.859500E+01	-2.859500E+01	-.0	.0
263	228	1.344470E+03	9.685300E+02	2.313000E+03	3.759400E+02	-.278	.278
264	229	.0E+00	1.852900E+03	1.852900E+03	-1.852900E+03	-.0	.0
265	230	.0E+00	5.173100E+01	5.173100E+01	-5.173100E+01	-.0	.0
266	231	2.440810E+03	1.272900E+03	3.713710E+03	1.167910E+03	-.384	.384
267	232	.0E+00	4.627800E+00	4.627800E+00	-4.627800E+00	-.0	.0
268	233	.0E+00	1.455700E+03	1.455700E+03	-1.455700E+03	-.0	.0
269	234	5.627810E+02	5.572000E+02	1.119981E+03	5.581000E+00	-.202	.202
270	235	.0E+00	5.853500E+00	5.853500E+00	-5.853500E+00	-.0	.0
271	236	.0E+00	9.442300E+00	9.442300E+00	-9.442300E+00	-.0	.0
272	237	5.714110E+02	4.275200E+02	9.989310E+02	1.438910E+02	-.267	.267
273	238	.0E+00	9.485300E+00	9.485300E+00	-9.485300E+00	-.0	.0
274	239	.0E+00	2.572300E+01	2.572300E+01	-2.572300E+01	-.0	.0
275	240	1.278410E+03	6.790300E+02	1.957440E+03	5.993800E+02	-.377	.377
276	241	.0E+00	1.508800E+03	1.508800E+03	-1.508800E+03	-.0	.0
277	242	.0E+00	3.474000E+01	3.474000E+01	-3.474000E+01	-.0	.0
278	243	2.067450E+03	8.090500E+02	2.876500E+03	1.258400E+03	-.511	.511
279	244	.0E+00	5.492400E+00	5.492400E+00	-5.492400E+00	-.0	.0
280	245	.0E+00	2.619600E+03	2.619600E+03	-2.619600E+03	-.0	.0
281	246	4.370840E+02	3.293500E+02	7.664340E+02	1.077340E+02	-.265	.265
282	247	.0E+00	1.055200E+01	1.055200E+01	-1.055200E+01	-.0	.0
283	248	.0E+00	2.285800E+01	2.285800E+01	-2.285800E+01	-.0	.0
284	249	1.162820E+03	6.809600E+02	1.843780E+03	4.818600E+02	-.342	.342
285	250	.0E+00	1.564300E+03	1.564300E+03	-1.564300E+03	-.0	.0

286 1
 287 SPRING FOR CASE 4 WITH 7% DAMPING
 288

289	290	291	292	293	294	295	296	297	298	299	300	301	302	303
ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G	LATERAL G							
251	.0E+00	1.904300E+01	1.904300E+01	-1.904300E+01	-.0	.0	3.274							
252	9.949080E+02	5.044500E+02	1.499358E+03	4.904580E+02	-.394	.394	.0							
253	.0E+00	2.485300E+01	2.485300E+01	-2.485300E+01	-.0	.0	.708							
254	.0E+00	3.464600E+01	3.464600E+01	-3.464600E+01	-.0	.0	1.286							
255	1.044030E+03	9.008500E+02	1.944380E+03	1.431800E+02	-.232	.232	.0							
256	.0E+00	1.100300E+01	1.100300E+01	-1.100300E+01	-.0	.0	1.919							
257	.0E+00	2.297200E+03	2.297200E+03	-2.297200E+03	-.0	.0	.0							
258	8.836900E+02	6.905400E+02	1.574230E+03	1.931500E+02	-.256	.256	.0							
259	.0E+00	1.588600E+03	1.588600E+03	-1.588600E+03	-.0	.0	.0							
260	.0E+00	1.374400E+03	1.374400E+03	-1.374400E+03	-.0	.0	.0							
261	2.137760E+03	1.617900E+03	3.755660E+03	5.198600E+02	-.264	.264	.0							

Vertical Pile
Limits

VERTICAL PILE
LIMITS.

PILE - TENSION SUMMARY

- A TOTAL OF 83 VERTICAL SPRINGS ARE USED TO MODEL THE 497 PILES.

- 5% DAMPING

% OF PILES IN TENSION	CASE 1		CASE 2		CASE 3		CASE 4	
	# OF SPRINGS	"g" LEVEL	# OF SPRINGS	"g" LEVEL	# OF SPRINGS	"g" LEVEL	# OF SPRINGS	"g" LEVEL
10.0	23	0.150	22	0.183	23	0.174	25	0.161
15.0	29	0.168	29	0.198	32	0.195	29	0.168

- 7% DAMPING

% OF PILES IN TENSION	CASE 1		CASE 2		CASE 3		CASE 4	
	# OF SPRINGS	"g" LEVEL	# OF SPRINGS	"g" LEVEL	# OF SPRINGS	"g" LEVEL	# OF SPRINGS	"g" LEVEL
10.0	22	0.168	16	>0.2	18	>0.2	25	0.178
15.0	31	0.189	16	>0.2	18	>0.2	29	0.186

- TOTAL NO. OF PILES IN TENSION WHEN THE "G" LEVEL IS ≤ 0.2 .

DAMPING	CASE 1	CASE 2	CASE 3	CASE 4
5%	158	73	76	147
7%	120	28	32	100

- TOTAL NO. OF SPRINGS IN TENSION WHEN THE "G" LEVEL IS ≤ 0.2

DAMPING	CASE 1	CASE 2	CASE 3	CASE 4
5%	46	29	32	45
7%	40	16	18	36

CASE 1

- PILE TENSION - 5% DRAWING

"G" LEVEL	ELEM NO.	NODE NO.	NO. OF PILES	TOTAL PILES
0.098	204	352 -	1	1
0.107	104	217 -	1	2
0.109	107	220 -	1	3
0.110	200	339	1	4
0.114	160	297 -	4	8
0.115	207	354 -	3	11
0.120	157	296 -	3	14
0.122	137	250 -	4	18
0.125	213	358 -	1	19
0.128	110	223 -	4	23
0.130	113	226 -	2	25
0.130	210	355 -	2	27
0.132	47	65 -	2	29
0.133	44	61 -	2	31
0.135	62	59 -	1	32
0.137	65	108 -	1	33
0.139	72	121 -	1	34
0.139	76	139 -	2	36
0.142	41	57 -	3	39
0.145	222	363 -	1	40
0.148	32	45 -	2	42
0.150	38	53 -	3	43
0.150	216	360 -	3	51
0.156	50	68 -	2	53
0.160	29	41 -	3	56
0.162	35	49 -	7	63
0.162	201	344	1	64
0.165	166	299 -	3	67
0.168	140	257 -	8	75
0.169	163	298	5	80
0.170	20	29	3	83
0.170	119	232	2	85
0.171	26	37	1	86
0.171	116	229	9	95
0.172	56	74	1	96
0.173	79	142	3	99
0.173	100	207	9	108
0.176	53	71	4	112
0.176	82	157	1	113
0.178	225	364	4	117
0.179	219	361	17	134
0.184	59	86	1	135
0.187	17	25	4	139
0.195	10	13	2	141
0.195	234	370	4	145
0.198	96	197	13	158

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152

CASE 1
- PILE TENSION - 7% DAMPING.

"g" LEVEL	ELEM. NO.	NODE NO.	NO. OF PILES	TOTAL PILES
0.111	204	352	1	1
0.121	104	217	1	2
0.123	107	220	1	3
0.124	200	339	1	4
0.128	160	297	4	8
0.130	207	354	3	11
0.135	157	296	3	14
0.138	137	250	4	18
0.140	213	358	1	19
0.144	110	223	4	23
0.146	113	226	2	25
0.147	47	65	2	27
0.147	210	355	2	29
0.150	44	61	2	31
0.151	62	89	1	32
0.153	65	103	1	33
0.156	72	121	1	34
0.157	76	139	2	36
0.160	41	57	3	39
0.162	222	363	1	40
0.167	32	45	2	42
0.168	216	360	8	50
0.170	33	53	3	53
0.173	50	68	2	55
0.180	201	344	1	56
0.181	29	41	3	59
0.183	35	49	7	66
0.183	166	299	3	69
0.188	56	74	1	70
0.189	119	232	2	72
0.189	140	257	8	80
0.190	20	79	3	83
0.190	163	298	5	88
0.192	26	37	1	89
0.192	116	229	9	93
0.193	53	71	4	103
0.194	79	142	3	106
0.195	100	207	9	115
0.197	82	157	1	116
0.198	225	364	4	120

10%

15%

CASE 2

- PILE TENSION

- 58 DAMPING

"G" LEVEL	ELEM NO.	NODE NO.	NO. OF PILES	TOTAL PILES
0.110	204	352 -	1	1
0.132	207	354 -	3	4
0.136	213	358 -	1	5
0.137	107	220 -	1	6
0.142	222	363 -	1	7
0.144	200	339 -	4	11
0.146	47	65 -	2	13
0.146	104	217 -	1	14
0.150	62	89 -	1	15
0.151	44	61 -	2	17
0.152	65	103 -	1	18
0.153	210	355 -	2	20
0.154	72	121 -	1	21
0.154	76	139 -	2	23
0.161	113	226 -	2	25
0.169	41	57 -	3	28
0.171	32	45 -	2	30
0.172	216	360 -	3	33
0.174	110	223 -	4	42
0.180	137	250 -	4	46
0.183	38	53 -	3	49
0.183	157	296 -	3	52
0.184	160	297 -	4	56
0.185	234	320 -	4	60
0.186	225	364 -	4	64
0.188	50	68 -	2	66
0.195	29	41 -	3	69
0.195	56	74 -	1	70
0.198	20	29 -	3	73

103

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CASE 2
- PILE TENSION - 7% DAMPING

"g" LEVEL	ELEM NO	NODE NO	NO. OF PILES	TOTAL PILES
0.129	204	352 -	1	1
0.155	207	354 -	3	4
0.159	213	358 -	1	5
0.161	107	220 -	1	6
0.165	222	363 -	1	7
0.168	200	339 -	4	11
0.170	47	65 -	2	13
0.172	104	217 -	1	14
0.175	62	89 -	1	15
0.178	44	61 -	2	17
0.178	65	103 -	1	18
0.180	210	355 -	2	20
0.181	72	121 -	1	21
0.181	76	139 -	2	23
0.189	113	226 -	2	25
0.199	41	57 -	3	28

CASE 3 - PILE TENSION - 5% DAMPING

"G" LEVEL	ELEM NO.	NODE NO.	NO. OF PILES	TOTAL PILES	
0.104	204	352 -	1	1	
0.118	200	339 -	1	2	
0.126	207	354 -	3	5	
0.128	213	358 -	1	6	
0.134	222	363 -	1	7	
0.140	47	65 -	2	9	
0.143	107	220 -	1	10	
0.147	62	89 -	1	11	
0.148	104	217 -	1	12	
0.149	210	355 -	2	14	
0.151	65	103 -	1	15	
0.158	72	121 -	1	16	
0.159	44	61 -	2	18	
0.159	76	139 -	2	20	
0.162	201	344 -	1	21	
0.162	216	360 -	8	29	
0.163	50	68 -	2	31	
0.164	56	74 -	1	32	
0.166	113	226 -	2	34	
0.170	160	297 -	4	38	
0.173	225	364 -	4	42	
0.174	110	223 -	4	46	
0.174	234	370 -	4	50	
0.175	32	45 -	2	52	10%
0.175	41	57 -	3	55	
0.176	53	71 -	4	59	
0.176	59	86 -	1	60	
0.176	137	250 -	4	64	
0.177	157	296 -	3	67	
0.187	38	53 -	3	70	
0.195	20	29 -	3	73	
0.195	29	41 -	3	76	15%

CASE 3

- PILE TENSION

- 7% DAMPING.

"G" LEVEL	ELEM NO	NODE NO	NO. OF PILES	TOTAL PILES
0.127	204	352 -	1	1
0.142	200	339 -	1	2
0.154	213	358 -	1	3
0.156	207	354 -	3	6
0.159	222	363 -	1	7
0.170	47	65 -	2	9
0.178	107	220 -	1	10
0.180	62	89 -	1	11
0.185	210	355 -	2	13
0.186	65	103 -	1	14
0.186	104	217 -	1	15
0.188	56	74 -	1	16
0.189	201	344 -	1	17
0.193	50	68 -	2	19
0.195	44	61 -	2	21
0.197	72	121 -	1	22
0.197	216	360 -	8	30
0.199	76	139 -	2	32

CASE 4

- PILE TENSION - 5% DAMPING

"6" LEVEL	ELEM NO	NODE NO.	NB. OF PILES	TOTAL PILES
0.100	107	220	1	1
0.106	104	217	1	2
0.107	204	352	1	3
0.116	113	226	2	5
0.120	47	65	2	7
0.124	62	89	1	8
0.124	207	354	3	11
0.125	110	223	4	15
0.126	65	103	1	16
0.127	44	61	2	18
0.129	72	121	1	19
0.129	76	139	2	21
0.131	137	250	4	25
0.131	200	339	1	26
0.134	213	358	1	27
0.136	157	296	3	30
0.138	210	355	2	32
0.141	41	57	3	35
0.142	32	45	2	37
0.146	119	232	2	39
0.146	222	363	1	40
0.148	160	297	4	44
0.151	50	68	2	46
0.152	38	53	3	49
0.161	29	41	3	52
0.162	20	29	3	55
0.162	116	229	9	64
0.163	216	360	8	72
0.168	35	49	7	79
0.170	79	142	3	82
0.175	26	37	1	83
0.175	82	157	1	84
0.178	56	74	1	85
0.178	125	238	3	88
0.180	53	71	4	92
0.180	140	257	8	100
0.182	10	13	2	102
0.182	100	207	9	111
0.184	234	370	4	115
0.186	225	364	4	119
0.187	17	25	4	123
0.188	201	344	1	124
0.189	59	86	1	125
0.195	163	298	5	130
0.195	219	361	17	147

10%

15%

CASE 4
- PILE TENSION - 7% DAMPING

"G" LEVEL	ELEM NO	NODE NO.	NO. OF PILES	TOTAL PILES
0.110	107	- 220 -	1	1
0.118	104	- 217 -	1	2
0.119	204	- 352 -	1	3
0.128	113	- 226 -	2	5
0.133	47	- 65 -	2	7
0.137	62	- 89 -	1	8
0.138	110	- 223 -	4	12
0.138	207	- 354 -	3	15
0.139	65	- 103 -	1	16
0.141	44	- 61 -	2	18
0.142	72	- 121 -	1	19
0.143	76	- 133 -	2	21
0.145	200	- 339 -	1	22
0.146	137	- 250 -	4	26
0.148	213	- 358 -	1	27
0.151	157	- 296 -	3	30
0.153	210	- 355 -	2	32
0.156	41	- 57 -	3	35
0.158	32	- 45 -	2	37
0.160	119	- 232 -	2	39
0.161	222	- 363 -	1	40
0.164	160	- 297 -	4	44
0.166	50	- 68 -	2	46
0.169	38	- 53 -	3	49
0.178	29	- 41 -	3	52
0.178	116	- 229 -	9	61
0.179	20	- 29 -	3	64
0.181	216	- 360 -	8	72
0.186	35	- 49 -	7	79
0.188	79	- 142 -	3	82
0.193	82	- 157 -	1	83
0.194	26	- 37 -	1	84
0.194	125	- 238 -	3	87
0.195	56	- 74 -	1	88
0.197	53	- 71 -	4	92
0.199	140	- 257 -	8	100

10%

15%

[illegible][illegible]

CASE 1
VERTICAL PILE

[illegible]

1
SPRING FOR CASE 1 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
3							
4							
5							
6							
7							
8	1	.0E+00	1.086900E+03	1.086900E+03	-1.086900E+03	-.0	.0
9	2	.0E+00	3.399200E+00	3.399200E+00	-3.399200E+00	-.0	.0
10	3	.0E+00	1.783400E+01	1.783400E+01	-1.783400E+01	-.0	.0
11	4	2.299790E+02	1.714200E+02	4.013990E+02	5.855900E+01	-.268	.268
12	5	.0E+00	2.005900E+01	2.005900E+01	-2.005900E+01	-.0	.0
13	6	.0E+00	8.653200E+01	8.653200E+01	-8.653200E+01	-.0	.0
14	7	1.167780E+03	9.555900E+02	2.123370E+03	2.121900E+02	-.244	.244
15	8	.0E+00	5.440800E+00	5.440800E+00	-5.440800E+00	-.0	.0
16	9	.0E+00	1.362800E+01	1.362800E+01	-1.362800E+01	-.0	.0
17	10	2.368210E+02	2.182000E+02	4.550210E+02	1.862100E+01	-.217	.217
18	11	.0E+00	4.662400E+02	4.662400E+02	-4.662400E+02	-.0	.0
19	12	.0E+00	9.312200E+00	9.312200E+00	-9.312200E+00	-.0	.0
20	13	.0E+00	1.671700E+01	1.671700E+01	-1.671700E+01	-.0	.0
21	14	3.519280E+02	3.113200E+02	6.632480E+02	4.060800E+01	-.226	.226
22	15	.0E+00	1.008900E+01	1.008900E+01	-1.008900E+01	-.0	.0
23	16	.0E+00	3.168200E+01	3.168200E+01	-3.168200E+01	-.0	.0
24	17	4.724520E+02	4.505500E+02	9.230020E+02	2.190200E+01	-.210	.210
25	18	.0E+00	9.313200E+00	9.313200E+00	-9.313200E+00	-.0	.0
26	19	.0E+00	2.043800E+01	2.043800E+01	-2.043800E+01	-.0	.0
27	20	3.577720E+02	3.761400E+02	7.339120E+02	-1.836800E+01	-.190	.190
28	21	.0E+00	9.987100E+00	9.987100E+00	-9.987100E+00	-.0	.0
29	22	.0E+00	1.485300E+01	1.485300E+01	-1.485300E+01	-.0	.0
30	23	3.494520E+02	3.852500E+02	6.547820E+02	4.420200E+01	-.229	.229
31	24	.0E+00	3.621600E+00	3.621600E+00	-3.621600E+00	-.0	.0
32	25	.0E+00	5.572000E+00	5.572000E+00	-5.572000E+00	-.0	.0
33	26	1.197210E+02	1.243900E+02	2.441110E+02	-4.669000E+00	-.192	.192
34	27	.0E+00	1.086600E+01	1.086600E+01	-1.086600E+01	-.0	.0
35	28	.0E+00	1.827600E+01	1.827600E+01	-1.827600E+01	-.0	.0
36	29	3.585190E+02	3.970100E+02	7.555290E+02	-3.849100E+01	-.181	.181
37	30	.0E+00	7.244600E+00	7.244600E+00	-7.244600E+00	-.0	.0
38	31	.0E+00	1.362400E+01	1.362400E+01	-1.362400E+01	-.0	.0
39	32	2.403490E+02	2.886200E+02	5.289690E+02	-4.827100E+01	-.167	.167
40	33	.0E+00	2.734100E+01	2.734100E+01	-2.734100E+01	-.0	.0
41	34	.0E+00	3.763200E+01	3.763200E+01	-3.763200E+01	-.0	.0
42	35	8.425660E+02	9.213000E+02	1.763866E+03	-7.873400E+01	-.183	.183
43	36	.0E+00	7.745800E+00	7.745800E+00	-7.745800E+00	-.0	.0
44	37	.0E+00	2.674700E+01	2.674700E+01	-2.674700E+01	-.0	.0
45	38	3.653820E+02	4.305700E+02	7.959520E+02	-6.518800E+01	-.170	.170
46	39	.0E+00	7.748400E+00	7.748400E+00	-7.748400E+00	-.0	.0
47	40	.0E+00	2.924200E+01	2.924200E+01	-2.924200E+01	-.0	.0
48	41	3.632060E+02	4.538000E+02	8.162060E+02	-8.979400E+01	-.160	.160
49	42	.0E+00	6.716000E+00	6.716000E+00	-6.716000E+00	-.0	.0
50	43	.0E+00	1.771100E+01	1.771100E+01	-1.771100E+01	-.0	.0
51	44	2.430490E+02	3.251100E+02	5.681590E+02	-8.206100E+01	-.150	.150
52	45	.0E+00	9.494700E+00	9.494700E+00	-9.494700E+00	-.0	.0
53	46	.0E+00	6.366200E+00	6.366200E+00	-6.366200E+00	-.0	.0
54	47	1.947520E+02	2.644700E+02	4.592220E+02	-6.971800E+01	-.147	.147
55	48	.0E+00	9.883700E+00	9.883700E+00	-9.883700E+00	-.0	.0
56	49	.0E+00	4.896300E+00	4.896300E+00	-4.896300E+00	-.0	.0
57	50	1.843990E+02	2.129400E+02	3.973390E+02	-2.854100E+01	-.173	.173

NG FOR CASE 1 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
60							
61							
62							
63							
64							
65	51	.0E+00	1.182400E+01	1.182400E+01	-1.182400E+01	-.0	.0
66	52	.0E+00	1.419500E+01	1.419500E+01	-1.419500E+01	-.0	.0
67	53	3.480010E+02	3.614000E+02	7.094010E+02	-1.339900E+01	-.193	.193
68	54	.0E+00	3.326000E+00	3.326000E+00	-3.326000E+00	-.0	.0
69	55	.0E+00	2.447100E+00	2.447100E+00	-2.447100E+00	-.0	.0
70	56	8.156520E+01	8.699600E+01	1.685612E+02	-5.430800E+00	-.188	.188
71	57	.0E+00	2.078800E+00	2.078800E+00	-2.078800E+00	-.0	.0
72	58	.0E+00	3.676400E+00	3.676400E+00	-3.676400E+00	-.0	.0
73	59	8.202990E+01	8.181200E+01	1.638419E+02	2.179000E-01	-.201	.201
74	60	.0E+00	3.651800E+00	3.651800E+00	-3.651800E+00	-.0	.0
75	61	.0E+00	3.503900E+00	3.503900E+00	-3.503900E+00	-.0	.0
76	62	9.915600E+01	1.311400E+02	2.302960E+02	-3.198400E+01	-.151	.151
77	63	.0E+00	3.651800E+00	3.651800E+00	-3.651800E+00	-.0	.0
78	64	.0E+00	3.267400E+00	3.267400E+00	-3.267400E+00	-.0	.0
79	65	1.002820E+02	1.307500E+02	2.310320E+02	-3.046800E+01	-.153	.153
80	66	.0E+00	6.236600E+00	6.236600E+00	-6.236600E+00	-.0	.0
81	67	.0E+00	9.788300E+00	9.788300E+00	-9.788300E+00	-.0	.0
82	68	2.485750E+02	2.162000E+02	4.647750E+02	3.237500E+01	-.230	.230
83	69	.0E+00	8.971000E+02	8.971000E+02	-8.971000E+02	-.0	.0
84	70	.0E+00	3.651900E+00	3.651900E+00	-3.651900E+00	-.0	.0
85	71	.0E+00	2.931900E+00	2.931900E+00	-2.931900E+00	-.0	.0
86	72	1.025000E+02	1.310400E+02	2.335400E+02	-2.854000E+01	-.156	.156
87	73	.0E+00	1.706100E+03	1.706100E+03	-1.706100E+03	-.0	.0
88	74	.0E+00	9.495000E+00	9.495000E+00	-9.495000E+00	-.0	.0
89	75	.0E+00	4.712600E+00	4.712600E+00	-4.712600E+00	-.0	.0
90	76	2.058450E+02	2.624700E+02	4.683150E+02	-5.662500E+01	-.157	.157
91	77	.0E+00	9.263800E+00	9.263800E+00	-9.263800E+00	-.0	.0
92	78	.0E+00	8.699700E+00	8.699700E+00	-8.699700E+00	-.0	.0
93	79	2.900530E+02	2.987600E+02	5.888130E+02	-8.707000E+00	-.194	.194
94	80	.0E+00	3.087800E+00	3.087800E+00	-3.087800E+00	-.0	.0
95	81	.0E+00	2.924300E+00	2.924300E+00	-2.924300E+00	-.0	.0
96	82	9.891150E+01	1.002400E+02	1.991515E+02	-1.328500E+00	-.197	.197
97	83	.0E+00	1.703400E+03	1.703400E+03	-1.703400E+03	-.0	.0
98	84	.0E+00	1.274800E+03	1.274800E+03	-1.274800E+03	-.0	.0
99	85	.0E+00	8.938700E+02	8.938700E+02	-8.938700E+02	-.0	.0
100	86	.0E+00	1.779700E+03	1.779700E+03	-1.779700E+03	-.0	.0
101	87	.0E+00	1.843200E+03	1.843200E+03	-1.843200E+03	-.0	.0
102	88	.0E+00	4.940200E+01	4.940200E+01	-4.940200E+01	-.0	.0
103	89	.0E+00	3.448900E+01	3.448900E+01	-3.448900E+01	-.0	.0
104	90	1.260920E+03	1.073300E+03	2.334220E+03	1.876200E+02	-.235	.235
105	91	.0E+00	3.445800E+01	3.445800E+01	-3.445800E+01	-.0	.0
106	92	.0E+00	3.448900E+01	3.448900E+01	-3.448900E+01	-.0	.0
107	93	1.172600E+03	5.513500E+02	1.723950E+03	6.212500E+02	-.425	.425
108	94	.0E+00	5.355400E+01	5.355400E+01	-5.355400E+01	-.0	.0
109	95	.0E+00	4.242900E+01	4.242900E+01	-4.242900E+01	-.0	.0
110	96	1.409130E+03	1.260000E+03	2.669130E+03	1.491300E+02	-.224	.224
111	97	.0E+00	1.133100E+03	1.133100E+03	-1.133100E+03	-.0	.0
112	98	.0E+00	3.712100E+01	3.712100E+01	-3.712100E+01	-.0	.0
113	99	.0E+00	3.944900E+01	3.944900E+01	-3.944900E+01	-.0	.0
114	100	1.050720E+03	1.077600E+03	2.128320E+03	-2.688000E+01	-.195	.195

101 L
117 SPRING FOR CASE 1 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
122	101	.0E+00	2.454400E+03	2.454400E+03	-2.454400E+03	-.0	.0
123	102	.0E+00	5.804200E+00	5.804200E+00	-5.804200E+00	-.0	.0
124	103	.0E+00	6.095400E+00	6.095400E+00	-6.095400E+00	-.0	.0
125	104	1.042100E+02	1.726700E+02	2.768800E+02	-6.846000E+01	-.121	.121
126	105	.0E+00	5.804200E+00	5.804200E+00	-5.804200E+00	-.0	.0
127	106	.0E+00	6.819200E+00	6.819200E+00	-6.819200E+00	-.0	.0
128	107	1.062210E+02	1.722900E+02	2.785110E+02	-6.606900E+01	-.123	.123
129	108	.0E+00	1.455300E+01	1.455300E+01	-1.455300E+01	-.0	.0
130	109	.0E+00	3.535300E+01	3.535300E+01	-3.535300E+01	-.0	.0
131	110	4.225840E+02	5.878000E+02	1.010394E+03	-1.652160E+02	-.144	.144
132	111	.0E+00	1.012400E+01	1.012400E+01	-1.012400E+01	-.0	.0
133	112	.0E+00	1.363800E+01	1.363800E+01	-1.363800E+01	-.0	.0
134	113	2.154370E+02	2.956300E+02	5.110670E+02	-8.019300E+01	-.146	.146
135	114	.0E+00	3.016100E+01	3.016100E+01	-3.016100E+01	-.0	.0
136	115	.0E+00	6.948600E+01	6.948600E+01	-6.948600E+01	-.0	.0
137	116	9.664350E+02	1.008000E+03	1.974435E+03	-4.156500E+01	-.192	.192
138	117	.0E+00	8.043000E+00	8.043000E+00	-8.043000E+00	-.0	.0
139	118	.0E+00	1.363800E+01	1.363800E+01	-1.363800E+01	-.0	.0
140	119	2.190550E+02	2.313000E+02	4.503550E+02	-1.224500E+01	-.109	.109
141	120	.0E+00	1.568500E+01	1.568500E+01	-1.568500E+01	-.0	.0
142	121	.0E+00	4.754200E+01	4.754200E+01	-4.754200E+01	-.0	.0
143	122	6.559300E+02	5.254700E+02	1.181400E+03	1.304600E+02	-.250	.250
144	123	.0E+00	9.652200E+00	9.652200E+00	-9.652200E+00	-.0	.0
145	124	.0E+00	2.045500E+01	2.045500E+01	-2.045500E+01	-.0	.0
146	125	3.338830E+02	2.851400E+02	6.190230E+02	4.874300E+01	-.234	.234
147	126	.0E+00	2.027100E+01	2.027100E+01	-2.027100E+01	-.0	.0
148	127	.0E+00	9.629300E+01	9.629300E+01	-9.629300E+01	-.0	.0
149	128	1.251080E+03	8.679200E+02	2.119000E+03	3.831600E+02	-.288	.288
150	129	.0E+00	7.602600E+00	7.602600E+00	-7.602600E+00	-.0	.0
151	130	.0E+00	2.044900E+01	2.044900E+01	-2.044900E+01	-.0	.0
152	131	3.468740E+02	2.767300E+02	6.236040E+02	7.014400E+01	-.251	.251
153	132	.0E+00	2.064800E+01	2.064800E+01	-2.064800E+01	-.0	.0
154	133	.0E+00	7.313900E+01	7.313900E+01	-7.313900E+01	-.0	.0
155	134	9.946420E+02	7.184900E+02	1.713132E+03	2.761520E+02	-.277	.277
156	135	.0E+00	1.455400E+01	1.455400E+01	-1.455400E+01	-.0	.0
157	136	.0E+00	2.962100E+01	2.962100E+01	-2.962100E+01	-.0	.0
158	137	4.048610E+02	5.805800E+02	9.934410E+02	-1.837190E+02	-.138	.138
159	138	.0E+00	2.614200E+01	2.614200E+01	-2.614200E+01	-.0	.0
160	139	.0E+00	5.311300E+01	5.311300E+01	-5.311300E+01	-.0	.0
161	140	8.238150E+02	8.725700E+02	1.696385E+03	-4.875500E+01	-.189	.189
162	141	.0E+00	1.769600E+01	1.769600E+01	-1.769600E+01	-.0	.0
163	142	.0E+00	4.800400E+01	4.800400E+01	-4.800400E+01	-.0	.0
164	143	7.353260E+02	5.595000E+02	1.294826E+03	1.758260E+02	-.263	.263
165	144	.0E+00	1.157500E+03	1.157500E+03	-1.157500E+03	-.0	.0
166	145	.0E+00	4.713400E+01	4.713400E+01	-4.713400E+01	-.0	.0
167	146	1.014030E+03	6.643400E+02	1.678370E+03	3.496900E+02	-.305	.305
168	147	.0E+00	4.064100E+02	4.064100E+02	-4.064100E+02	-.0	.0
169	148	.0E+00	2.061800E+03	2.061800E+03	-2.061800E+03	-.0	.0
170	149	.0E+00	6.945000E+01	6.945000E+01	-6.945000E+01	-.0	.0
171	150	1.372310E+03	7.670500E+02	2.139360E+03	6.052600E+02	-.358	.358

NG FOR CASE 1 WITH 7% DAMPING

ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
151	.0E+00	7.664400E+02	7.664400E+02	-7.664400E+02	-.0	.0
152	.0E+00	1.580600E+01	1.580600E+01	-1.580600E+01	-.0	.0
153	.0E+00	2.895200E+03	2.895200E+03	-2.895200E+03	-.0	.0
154	1.061710E+03	7.259900E+02	1.787700E+03	3.357200E+02	-.292	.292
155	.0E+00	1.139000E+01	1.139000E+01	-1.139000E+01	-.0	.0
156	.0E+00	1.954700E+01	1.954700E+01	-1.954700E+01	-.0	.0
157	2.953510E+02	4.362600E+02	7.316110E+02	-1.409090E+02	-.135	.135
158	.0E+00	2.025200E+01	2.025200E+01	-2.025200E+01	-.0	.0
159	.0E+00	1.298900E+01	1.298900E+01	-1.298900E+01	-.0	.0
160	3.460150E+02	5.400500E+02	8.860650E+02	-1.940350E+02	-.128	.128
161	.0E+00	2.011500E+01	2.011500E+01	-2.011500E+01	-.0	.0
162	.0E+00	2.327100E+01	2.327100E+01	-2.327100E+01	-.0	.0
163	4.993640E+02	5.270100E+02	1.026374E+03	-2.764600E+01	-.190	.190
164	.0E+00	1.207100E+01	1.207100E+01	-1.207100E+01	-.0	.0
165	.0E+00	9.742100E+00	9.742100E+00	-9.742100E+00	-.0	.0
166	2.636340E+02	2.880700E+02	5.517040E+02	-2.443600E+01	-.183	.183
167	.0E+00	4.431100E+00	4.431100E+00	-4.431100E+00	-.0	.0
168	.0E+00	1.489300E+01	1.489300E+01	-1.489300E+01	-.0	.0
169	2.013240E+02	1.712300E+02	3.725540E+02	3.009400E+01	-.235	.235
170	.0E+00	7.976900E+00	7.976900E+00	-7.976900E+00	-.0	.0
171	.0E+00	1.363900E+01	1.363900E+01	-1.363900E+01	-.0	.0
172	2.660910E+02	2.359700E+02	5.020610E+02	3.012100E+01	-.226	.226
173	.0E+00	3.571900E+01	3.571900E+01	-3.571900E+01	-.0	.0
174	.0E+00	2.495000E+03	2.495000E+03	-2.495000E+03	-.0	.0
175	1.546330E+03	7.926700E+02	2.339000E+03	7.536600E+02	-.390	.390
176	.0E+00	2.675500E+01	2.675500E+01	-2.675500E+01	-.0	.0
177	.0E+00	6.161100E+01	6.161100E+01	-6.161100E+01	-.0	.0
178	1.836510E+03	8.066100E+02	2.643120E+03	1.029900E+03	-.455	.455
179	.0E+00	2.296400E+01	2.296400E+01	-2.296400E+01	-.0	.0
180	.0E+00	6.136100E+03	6.136100E+03	-6.136100E+03	-.0	.0
181	1.097620E+03	7.152000E+02	1.812820E+03	3.824200E+02	-.307	.307
182	.0E+00	1.799600E+01	1.799600E+01	-1.799600E+01	-.0	.0
183	.0E+00	3.040100E+01	3.040100E+01	-3.040100E+01	-.0	.0
184	7.394500E+02	3.557700E+02	1.095220E+03	3.836800E+02	-.416	.416
185	.0E+00	1.151900E+01	1.151900E+01	-1.151900E+01	-.0	.0
186	.0E+00	1.689200E+01	1.689200E+01	-1.689200E+01	-.0	.0
187	5.928070E+02	3.918400E+02	9.846470E+02	2.009670E+02	-.303	.303
188	.0E+00	1.408400E+03	1.408400E+03	-1.408400E+03	-.0	.0
189	.0E+00	2.778500E+01	2.778500E+01	-2.778500E+01	-.0	.0
190	8.429000E+02	6.140900E+02	1.456990E+03	2.288100E+02	-.275	.275
191	.0E+00	2.303700E+00	2.303700E+00	-2.303700E+00	-.0	.0
192	.0E+00	3.633900E+00	3.633900E+00	-3.633900E+00	-.0	.0
193	1.205220E+02	7.885200E+01	1.993740E+02	4.167800E+01	-.306	.306
194	.0E+00	8.061300E+02	8.061300E+02	-8.061300E+02	-.0	.0
195	.0E+00	1.673600E+03	1.673600E+03	-1.673600E+03	-.0	.0
196	.0E+00	2.194700E+01	2.194700E+01	-2.194700E+01	-.0	.0
197	.0E+00	6.750200E+01	6.750200E+01	-6.750200E+01	-.0	.0
198	1.188340E+03	8.389700E+02	2.027310E+03	3.493700E+02	-.283	.283
199	.0E+00	1.912500E+03	1.912500E+03	-1.912500E+03	-.0	.0
200	1.194720E+02	1.932800E+02	3.127520E+02	-7.380800E+01	-.124	.124

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ELEMENT

STATIC FORCE DYNAMIC FORCE

ST+DYN FORCE

ST-DYN FORCE

ST+DYN G

ST-DYN G

201	1.286610E+02	1.432200E+02	2.718810E+02	-1.455900E+01	-.130	.180
202	.0E+00	1.415300E+00	1.415300E+00	-1.415300E+00	-.0	.0
203	.0E+00	8.881800E-01	8.881800E-01	-8.881800E-01	-.0	.0
204	1.214720E+02	2.189600E+02	3.404320E+02	-9.748800E+01	-.111	.111
205	.0E+00	2.653000E+00	2.653000E+00	-2.653000E+00	-.0	.0
206	.0E+00	3.772100E+00	3.772100E+00	-3.772100E+00	-.0	.0
207	3.732680E+02	5.763000E+02	9.495680E+02	-2.030320E+02	-.130	.130
208	.0E+00	9.776200E+02	9.776200E+02	-9.776200E+02	-.0	.0
209	.0E+00	2.598000E+00	2.598000E+00	-2.598000E+00	-.0	.0
210	2.517940E+02	3.417600E+02	5.935540E+02	-8.996600E+01	-.147	.147
211	.0E+00	1.035600E+00	1.035600E+00	-1.035600E+00	-.0	.0
212	.0E+00	8.880600E-01	8.880600E-01	-8.880600E-01	-.0	.0
213	1.266740E+02	1.810000E+02	3.076740E+02	-5.432600E+01	-.140	.140
214	.0E+00	5.177800E+00	5.177800E+00	-5.177800E+00	-.0	.0
215	.0E+00	1.005800E+01	1.005800E+01	-1.005800E+01	-.0	.0
216	1.835400E+03	1.229800E+03	2.265200E+03	-1.944000E+02	-.158	.158
217	.0E+00	1.734500E+03	1.734500E+03	-1.734500E+03	-.0	.0
218	.0E+00	2.232500E+01	2.232500E+01	-2.232500E+01	-.0	.0
219	2.218100E+03	2.203400E+03	4.421500E+03	1.470000E+01	-.231	.231
220	.0E+00	6.659300E-01	6.659300E-01	-6.659300E-01	-.0	.0
221	.0E+00	1.071800E+00	1.071800E+00	-1.071800E+00	-.0	.0
222	1.298150E+02	1.607300E+02	2.905450E+02	-3.091500E+01	-.152	.152
223	.0E+00	2.663200E+00	2.663200E+00	-2.663200E+00	-.0	.0
224	.0E+00	3.549900E+00	3.549900E+00	-3.549900E+00	-.0	.0
225	5.349650E+02	5.412900E+02	1.076255E+03	-6.325000E+00	-.138	.138
226	.0E+00	4.159700E+00	4.159700E+00	-4.159700E+00	-.0	.0
227	.0E+00	1.257000E+01	1.257000E+01	-1.257000E+01	-.0	.0
228	1.367410E+03	1.083400E+03	2.450810E+03	2.840100E+02	-.252	.252
229	.0E+00	1.403200E+03	1.403200E+03	-1.403200E+03	-.0	.0
230	.0E+00	2.494900E+01	2.494900E+01	-2.494900E+01	-.0	.0
231	2.515380E+03	1.628300E+03	4.241680E+03	9.850800E+02	-.321	.321
232	.0E+00	2.398200E+00	2.398200E+00	-2.398200E+00	-.0	.0
233	.0E+00	1.107500E+03	1.107500E+03	-1.107500E+03	-.0	.0
234	5.495730E+02	5.128200E+02	1.062393E+03	3.675300E+01	-.214	.214
235	.0E+00	3.336100E+00	3.336100E+00	-3.336100E+00	-.0	.0
236	.0E+00	3.548600E+00	3.548600E+00	-3.548600E+00	-.0	.0
237	5.594150E+02	4.262000E+02	9.956150E+02	1.432150E+02	-.267	.267
238	.0E+00	4.689000E+00	4.689000E+00	-4.689000E+00	-.0	.0
239	.0E+00	1.130800E+01	1.130800E+01	-1.130800E+01	-.0	.0
240	1.315740E+03	7.726100E+02	2.088350E+03	5.431300E+02	-.341	.341
241	.0E+00	1.453700E+03	1.453700E+03	-1.453700E+03	-.0	.0
242	.0E+00	1.575200E+01	1.575200E+01	-1.575200E+01	-.0	.0
243	2.217000E+03	1.085600E+03	3.302600E+03	1.131400E+03	-.408	.408
244	.0E+00	3.376000E+00	3.376000E+00	-3.376000E+00	-.0	.0
245	.0E+00	1.927200E+03	1.927200E+03	-1.927200E+03	-.0	.0
246	4.406530E+02	3.246600E+02	7.653130E+02	1.159930E+02	-.271	.271
247	.0E+00	5.625400E+00	5.625400E+00	-5.625400E+00	-.0	.0
248	.0E+00	1.004800E+01	1.004800E+01	-1.004800E+01	-.0	.0
249	1.206930E+03	7.526600E+02	1.959590E+03	4.542700E+02	-.321	.321
250	.0E+00	1.629800E+03	1.629800E+03	-1.629800E+03	-.0	.0

21
26 NG FOR CASE 1 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
288							
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290							
291							
292							
293	251	.0E+00	9.186300E+00	9.186300E+00	-9.186300E+00	-.0	.0
294	252	1.070310E+03	6.135800E+02	1.683890E+03	4.567300E+02	-.349	.349
295	253	.0E+00	1.440900E+01	1.440900E+01	-1.440900E+01	-.0	.0
296	254	.0E+00	1.443400E+01	1.443400E+01	-1.443400E+01	-.0	.0
297	255	1.043080E+03	8.701800E+02	1.913260E+03	1.729000E+02	-.240	.240
298	256	.0E+00	6.003100E+00	6.003100E+00	-6.003100E+00	-.0	.0
299	257	.0E+00	1.711400E+03	1.711400E+03	-1.711400E+03	-.0	.0
300	258	9.355600E+02	7.374700E+02	1.673030E+03	1.980900E+02	-.254	.254
301	259	.0E+00	1.363900E+03	1.363900E+03	-1.363900E+03	-.0	.0
302	260	.0E+00	8.584500E+02	8.584500E+02	-8.584500E+02	-.0	.0
303	261	2.354160E+03	1.825500E+03	4.179660E+03	5.286600E+02	-.258	.258

SPRING FOR CASE 2 WITH 7% DAMPING

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ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
1	.0E+00	7.064200E+02	7.064200E+02	-7.064200E+02	-.0	.0
2	.0E+00	5.178900E+01	5.178900E+01	-5.178900E+01	-.0	.0
3	.0E+00	7.355900E+01	7.355900E+01	-7.355900E+01	-.0	.0
4	2.337080E+02	1.235100E+02	3.572180E+02	1.101980E+02	-.378	.378
5	.0E+00	2.890800E+02	2.890800E+02	-2.890800E+02	-.0	.0
6	.0E+00	3.608300E+02	3.608300E+02	-3.608300E+02	-.0	.0
7	1.163360E+03	7.199700E+02	1.883330E+03	4.433900E+02	-.323	.323
8	.0E+00	7.187500E+01	7.187500E+01	-7.187500E+01	-.0	.0
9	.0E+00	6.346400E+01	6.346400E+01	-6.346400E+01	-.0	.0
10	2.282430E+02	1.717300E+02	3.999730E+02	5.651300E+01	-.266	.266
11	.0E+00	8.201200E+02	8.201200E+02	-8.201200E+02	-.0	.0
12	.0E+00	1.106000E+02	1.106000E+02	-1.106000E+02	-.0	.0
13	.0E+00	7.950800E+01	7.950800E+01	-7.950800E+01	-.0	.0
14	3.562380E+02	2.319600E+02	5.881980E+02	1.242700E+02	-.307	.307
15	.0E+00	1.268600E+02	1.268600E+02	-1.268600E+02	-.0	.0
16	.0E+00	1.355300E+02	1.355300E+02	-1.355300E+02	-.0	.0
17	4.653980E+02	3.404900E+02	8.058880E+02	1.249000E+02	-.273	.273
18	.0E+00	1.106000E+02	1.106000E+02	-1.106000E+02	-.0	.0
19	.0E+00	9.519400E+01	9.519400E+01	-9.519400E+01	-.0	.0
20	3.398110E+02	2.920200E+02	6.318310E+02	4.779100E+01	-.233	.233
21	.0E+00	1.126500E+02	1.126500E+02	-1.126500E+02	-.0	.0
22	.0E+00	7.511500E+01	7.511500E+01	-7.511500E+01	-.0	.0
23	3.619070E+02	2.299800E+02	5.918870E+02	1.319270E+02	-.315	.315
24	.0E+00	3.854200E+01	3.854200E+01	-3.854200E+01	-.0	.0
25	.0E+00	2.650200E+01	2.650200E+01	-2.650200E+01	-.0	.0
26	1.206460E+02	9.502000E+01	2.164660E+02	2.482600E+01	-.252	.252
27	.0E+00	1.156200E+02	1.156200E+02	-1.156200E+02	-.0	.0
28	.0E+00	8.513700E+01	8.513700E+01	-8.513700E+01	-.0	.0
29	3.490210E+02	3.038700E+02	6.528910E+02	4.515100E+01	-.230	.230
30	.0E+00	7.708000E+01	7.708000E+01	-7.708000E+01	-.0	.0
31	.0E+00	6.346200E+01	6.346200E+01	-6.346200E+01	-.0	.0
32	2.249690E+02	2.232200E+02	4.481890E+02	1.745000E+00	-.202	.202
33	.0E+00	2.721400E+02	2.721400E+02	-2.721400E+02	-.0	.0
34	.0E+00	1.849800E+02	1.849800E+02	-1.849800E+02	-.0	.0
35	8.691220E+02	7.258800E+02	1.595002E+03	1.432420E+02	-.239	.239
36	.0E+00	8.752700E+01	8.752700E+01	-8.752700E+01	-.0	.0
37	.0E+00	1.103400E+02	1.103400E+02	-1.103400E+02	-.0	.0
38	3.669070E+02	3.405900E+02	7.074970E+02	2.631700E+01	-.215	.215
39	.0E+00	8.752200E+01	8.752200E+01	-8.752200E+01	-.0	.0
40	.0E+00	1.181500E+02	1.181500E+02	-1.181500E+02	-.0	.0
41	3.512320E+02	3.527000E+02	7.039320E+02	1.468000E+00	-.199	.199
42	.0E+00	6.965900E+01	6.965900E+01	-6.965900E+01	-.0	.0
43	.0E+00	7.576600E+01	7.576600E+01	-7.576600E+01	-.0	.0
44	2.258190E+02	2.535100E+02	4.793290E+02	-2.769100E+01	-.178	.178
45	.0E+00	8.417200E+01	8.417200E+01	-8.417200E+01	-.0	.0
46	.0E+00	1.258800E+02	1.258800E+02	-1.258800E+02	-.0	.0
47	2.328170E+02	2.734000E+02	5.062170E+02	-4.050300E+01	-.170	.170
48	.0E+00	8.057000E+01	8.057000E+01	-8.057000E+01	-.0	.0
49	.0E+00	1.054300E+02	1.054300E+02	-1.054300E+02	-.0	.0
50	2.214450E+02	2.033100E+02	4.247550E+02	1.813500E+01	-.218	.218

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SPRING FOR CASE 2 WITH 7% DAMPING

ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
51	.0E+00	1.280700E+02	1.280700E+02	-1.280700E+02	-.0	.0
52	.0E+00	2.721800E+02	2.721800E+02	-2.721800E+02	-.0	.0
53	4.192680E+02	3.351300E+02	7.543980E+02	8.413800E+01	-.250	.250
54	.0E+00	3.754500E+01	3.754500E+01	-3.754500E+01	-.0	.0
55	.0E+00	5.271400E+01	5.271400E+01	-5.271400E+01	-.0	.0
56	9.894990E+01	8.831700E+01	1.872669E+02	1.063290E+01	-.224	.224
57	.0E+00	2.705500E+01	2.705500E+01	-2.705500E+01	-.0	.0
58	.0E+00	7.084900E+01	7.084900E+01	-7.084900E+01	-.0	.0
59	9.832940E+01	8.211200E+01	1.804414E+02	1.621740E+01	-.240	.240
60	.0E+00	3.525200E+01	3.525200E+01	-3.525200E+01	-.0	.0
61	.0E+00	6.901700E+01	6.901700E+01	-6.901700E+01	-.0	.0
62	1.171650E+02	1.336400E+02	2.508050E+02	-1.647500E+01	-.175	.175
63	.0E+00	3.525200E+01	3.525200E+01	-3.525200E+01	-.0	.0
64	.0E+00	6.622600E+01	6.622600E+01	-6.622600E+01	-.0	.0
65	1.174690E+02	1.319800E+02	2.494490E+02	-1.451100E+01	-.178	.178
66	.0E+00	8.116500E+01	8.116500E+01	-8.116500E+01	-.0	.0
67	.0E+00	1.986500E+02	1.986500E+02	-1.986500E+02	-.0	.0
68	2.903450E+02	2.104400E+02	5.007850E+02	7.990500E+01	-.276	.276
69	.0E+00	8.072600E+02	8.072600E+02	-8.072600E+02	-.0	.0
70	.0E+00	3.525200E+01	3.525200E+01	-3.525200E+01	-.0	.0
71	.0E+00	6.031700E+01	6.031700E+01	-6.031700E+01	-.0	.0
72	1.175760E+02	1.302100E+02	2.477860E+02	-1.263400E+01	-.181	.181
73	.0E+00	1.547700E+03	1.547700E+03	-1.547700E+03	-.0	.0
74	.0E+00	8.417300E+01	8.417300E+01	-8.417300E+01	-.0	.0
75	.0E+00	1.018000E+02	1.018000E+02	-1.018000E+02	-.0	.0
76	2.351020E+02	2.598500E+02	4.949520E+02	-2.474800E+01	-.181	.181
77	.0E+00	9.572900E+01	9.572900E+01	-9.572900E+01	-.0	.0
78	.0E+00	1.774900E+02	1.774900E+02	-1.774900E+02	-.0	.0
79	3.302740E+02	2.682700E+02	5.985440E+02	6.200400E+01	-.246	.246
80	.0E+00	3.190900E+01	3.190900E+01	-3.190900E+01	-.0	.0
81	.0E+00	5.403700E+01	5.403700E+01	-5.403700E+01	-.0	.0
82	1.105500E+02	8.771300E+01	1.982630E+02	2.283700E+01	-.252	.252
83	.0E+00	1.386700E+03	1.386700E+03	-1.386700E+03	-.0	.0
84	.0E+00	7.665700E+02	7.665700E+02	-7.665700E+02	-.0	.0
85	.0E+00	5.949600E+02	5.949600E+02	-5.949600E+02	-.0	.0
86	.0E+00	1.223000E+03	1.223000E+03	-1.223000E+03	-.0	.0
87	.0E+00	1.413000E+03	1.413000E+03	-1.413000E+03	-.0	.0
88	.0E+00	4.860000E+02	4.860000E+02	-4.860000E+02	-.0	.0
89	.0E+00	3.428100E+02	3.428100E+02	-3.428100E+02	-.0	.0
90	1.344260E+03	8.097900E+02	2.154050E+03	5.344700E+02	-.332	.332
91	.0E+00	4.350100E+02	4.350100E+02	-4.350100E+02	-.0	.0
92	.0E+00	3.428100E+02	3.428100E+02	-3.428100E+02	-.0	.0
93	1.259240E+03	3.541300E+02	1.613370E+03	9.051100E+02	-.711	.711
94	.0E+00	5.264800E+02	5.264800E+02	-5.264800E+02	-.0	.0
95	.0E+00	3.482900E+02	3.482900E+02	-3.482900E+02	-.0	.0
96	1.491740E+03	9.515800E+02	2.443320E+03	5.401600E+02	-.314	.314
97	.0E+00	1.220900E+03	1.220900E+03	-1.220900E+03	-.0	.0
98	.0E+00	3.644600E+02	3.644600E+02	-3.644600E+02	-.0	.0
99	.0E+00	2.215100E+02	2.215100E+02	-2.215100E+02	-.0	.0
100	1.094280E+03	8.362200E+02	1.930500E+03	2.500600E+02	-.262	.262

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SPRING FOR CASE 2 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
117							
118							
119							
120							
121							
122	101	.0E+00	1.808200E+03	1.808200E+03	-1.808200E+03	-.0	.0
123	102	.0E+00	5.276200E+01	5.276200E+01	-5.276200E+01	-.0	.0
124	103	.0E+00	2.838100E+01	2.838100E+01	-2.838100E+01	-.0	.0
125	104	1.096500E+02	1.272100E+02	2.368600E+02	-1.756000E+01	-.172	.172
126	105	.0E+00	5.276200E+01	5.276200E+01	-5.276200E+01	-.0	.0
127	106	.0E+00	3.173600E+01	3.173600E+01	-3.173600E+01	-.0	.0
128	107	1.084670E+02	1.340100E+02	2.432770E+02	-2.634300E+01	-.161	.161
129	108	.0E+00	1.540600E+02	1.540600E+02	-1.540600E+02	-.0	.0
130	109	.0E+00	1.465400E+02	1.465400E+02	-1.465400E+02	-.0	.0
131	110	4.401330E+02	4.288000E+02	8.690130E+02	1.125300E+01	-.205	.205
132	111	.0E+00	9.745100E+01	9.745100E+01	-9.745100E+01	-.0	.0
133	112	.0E+00	6.347200E+01	6.347200E+01	-6.347200E+01	-.0	.0
134	113	2.178170E+02	2.305200E+02	4.483370E+02	-1.270300E+01	-.189	.189
135	114	.0E+00	3.419100E+02	3.419100E+02	-3.419100E+02	-.0	.0
136	115	.0E+00	2.994500E+02	2.994500E+02	-2.994500E+02	-.0	.0
137	116	9.880250E+02	7.254500E+02	1.713475E+03	2.625750E+02	-.272	.272
138	117	.0E+00	8.675300E+01	8.675300E+01	-8.675300E+01	-.0	.0
139	118	.0E+00	6.347100E+01	6.347100E+01	-6.347100E+01	-.0	.0
140	119	2.174360E+02	1.793800E+02	3.968160E+02	3.805600E+01	-.242	.242
141	120	.0E+00	2.040000E+02	2.040000E+02	-2.040000E+02	-.0	.0
142	121	.0E+00	2.033000E+02	2.033000E+02	-2.033000E+02	-.0	.0
143	122	6.619130E+02	3.748600E+02	1.036773E+03	2.870530E+02	-.353	.353
144	123	.0E+00	1.185600E+02	1.185600E+02	-1.185600E+02	-.0	.0
145	124	.0E+00	9.520500E+01	9.520500E+01	-9.520500E+01	-.0	.0
146	125	3.265200E+02	2.221600E+02	5.486800E+02	1.043600E+02	-.294	.294
147	126	.0E+00	3.156200E+02	3.156200E+02	-3.156200E+02	-.0	.0
148	127	.0E+00	4.002200E+02	4.002200E+02	-4.002200E+02	-.0	.0
149	128	1.250050E+03	6.364200E+02	1.886470E+03	6.136300E+02	-.393	.393
150	129	.0E+00	1.080300E+02	1.080300E+02	-1.080300E+02	-.0	.0
151	130	.0E+00	9.520100E+01	9.520100E+01	-9.520100E+01	-.0	.0
152	131	3.358070E+02	2.186200E+02	5.544270E+02	1.171870E+02	-.307	.307
153	132	.0E+00	2.891000E+02	2.891000E+02	-2.891000E+02	-.0	.0
154	133	.0E+00	3.104500E+02	3.104500E+02	-3.104500E+02	-.0	.0
155	134	9.991760E+02	5.132300E+02	1.512406E+03	4.859460E+02	-.389	.389
156	135	.0E+00	1.540600E+02	1.540600E+02	-1.540600E+02	-.0	.0
157	136	.0E+00	1.307500E+02	1.307500E+02	-1.307500E+02	-.0	.0
158	137	4.336680E+02	4.104600E+02	8.441280E+02	2.320800E+01	-.211	.211
159	138	.0E+00	2.985300E+02	2.985300E+02	-2.985300E+02	-.0	.0
160	139	.0E+00	2.418600E+02	2.418600E+02	-2.418600E+02	-.0	.0
161	140	3.666000E+02	5.830100E+02	1.449610E+03	2.835900E+02	-.297	.297
162	141	.0E+00	2.324700E+02	2.324700E+02	-2.324700E+02	-.0	.0
163	142	.0E+00	2.165300E+02	2.165300E+02	-2.165300E+02	-.0	.0
164	143	7.650270E+02	3.511700E+02	1.116197E+03	4.138570E+02	-.436	.436
165	144	.0E+00	7.905300E+02	7.905300E+02	-7.905300E+02	-.0	.0
166	145	.0E+00	2.603600E+02	2.603600E+02	-2.603600E+02	-.0	.0
167	146	9.937020E+02	3.909200E+02	1.384622E+03	6.027820E+02	-.508	.508
168	147	.0E+00	7.465200E+02	7.465200E+02	-7.465200E+02	-.0	.0
169	148	.0E+00	1.364400E+03	1.364400E+03	-1.364400E+03	-.0	.0
170	149	.0E+00	3.726600E+02	3.726600E+02	-3.726600E+02	-.0	.0
171	150	1.351310E+03	4.495000E+02	1.800810E+03	9.010100E+02	-.601	.601

1
1 SPRING FOR CASE 2 WITH 7% DAMPING

ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
174						
175						
176						
177						
178						
179	151	.0E+00	1.521400E+03	1.521400E+03	-1.521400E+03	.0
180	152	.0E+00	2.586300E+02	2.586300E+02	-2.586300E+02	.0
181	153	.0E+00	6.546600E+02	6.546600E+02	-6.546600E+02	.0
182	154	1.044190E+03	4.826100E+02	1.526800E+03	5.615800E+02	-.433 .433
183	155	.0E+00	1.189500E+02	1.189500E+02	-1.189500E+02	.0
184	156	.0E+00	9.327800E+01	9.327800E+01	-9.327800E+01	.0
185	157	3.174030E+02	2.958100E+02	6.132130E+02	2.159300E+01	-.215 .215
186	158	.0E+00	1.949100E+02	1.949100E+02	-1.949100E+02	.0
187	159	.0E+00	1.068300E+02	1.068300E+02	-1.068300E+02	.0
188	160	3.596180E+02	3.375500E+02	6.971680E+02	2.206800E+01	-.213 .213
189	161	.0E+00	2.168800E+02	2.168800E+02	-2.168800E+02	.0
190	162	.0E+00	1.235300E+02	1.235300E+02	-1.235300E+02	.0
191	163	5.245440E+02	3.317300E+02	8.563740E+02	1.929140E+02	-.316 .316
192	164	.0E+00	1.301300E+02	1.301300E+02	-1.301300E+02	.0
193	165	.0E+00	8.012200E+01	8.012200E+01	-8.012200E+01	.0
194	166	2.668500E+02	1.822200E+02	4.490780E+02	8.463800E+01	-.293 .293
195	167	.0E+00	5.916500E+01	5.916500E+01	-5.916500E+01	.0
196	168	.0E+00	6.857200E+01	6.857200E+01	-6.857200E+01	.0
197	169	2.089700E+02	9.805700E+01	3.070270E+02	1.109130E+02	-.426 .426
198	170	.0E+00	1.002200E+02	1.002200E+02	-1.002200E+02	.0
199	171	.0E+00	1.008300E+02	1.008300E+02	-1.008300E+02	.0
200	172	2.661480E+02	1.643600E+02	4.305000E+02	1.017880E+02	-.324 .324
201	173	.0E+00	4.993300E+02	4.993300E+02	-4.993300E+02	.0
202	174	.0E+00	1.006900E+03	1.006900E+03	-1.006900E+03	.0
203	175	1.554210E+03	4.799900E+02	2.034200E+03	1.074220E+03	-.648 .648
204	176	.0E+00	5.228300E+02	5.228300E+02	-5.228300E+02	.0
205	177	.0E+00	6.430900E+02	6.430900E+02	-6.430900E+02	.0
206	178	1.889910E+03	5.728400E+02	2.462750E+03	1.317070E+03	-.660 .660
207	179	.0E+00	3.210000E+02	3.210000E+02	-3.210000E+02	.0
208	180	.0E+00	1.171800E+03	1.171800E+03	-1.171800E+03	.0
209	181	1.078230E+03	4.662400E+02	1.544470E+03	6.119900E+02	-.463 .463
210	182	.0E+00	3.177400E+02	3.177400E+02	-3.177400E+02	.0
211	183	.0E+00	2.140800E+02	2.140800E+02	-2.140800E+02	.0
212	184	7.122820E+02	2.017500E+02	9.140320E+02	5.105320E+02	-.706 .706
213	185	.0E+00	1.860100E+02	1.860100E+02	-1.860100E+02	.0
214	186	.0E+00	1.193800E+02	1.193800E+02	-1.193800E+02	.0
215	187	5.727310E+02	2.509500E+02	8.236810E+02	3.217810E+02	-.456 .456
216	188	.0E+00	8.009100E+02	8.009100E+02	-8.009100E+02	.0
217	189	.0E+00	1.706200E+02	1.706200E+02	-1.706200E+02	.0
218	190	8.276130E+02	4.153400E+02	1.242953E+03	4.122730E+02	-.399 .399
219	191	.0E+00	3.720200E+01	3.720200E+01	-3.720200E+01	.0
220	192	.0E+00	2.397300E+01	2.397300E+01	-2.397300E+01	.0
221	193	1.157170E+02	4.842100E+01	1.641390E+02	6.729600E+01	-.478 .478
222	194	.0E+00	6.271100E+02	6.271100E+02	-6.271100E+02	.0
223	195	.0E+00	1.423200E+03	1.423200E+03	-1.423200E+03	.0
224	196	.0E+00	3.551400E+02	3.551400E+02	-3.551400E+02	.0
225	197	.0E+00	4.833400E+02	4.833400E+02	-4.833400E+02	.0
226	198	1.279670E+03	7.718500E+02	2.051520E+03	5.078200E+02	-.332 .332
227	199	.0E+00	1.699300E+03	1.699300E+03	-1.699300E+03	.0
228	200	1.264980E+02	1.510000E+02	2.774980E+02	-2.450200E+01	-.168 .168

PRINT FOR CASE 2 WITH 7% DAMPING

ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
201	1.354140E+02	1.130900E+02	2.485040E+02	2.232400E+01	-.239	.239
202	.0E+00	3.763200E+01	3.763200E+01	-3.763200E+01	-.0	.0
203	.0E+00	4.187200E+01	4.187200E+01	-4.187200E+01	-.0	.0
204	1.294030E+02	1.999600E+02	3.293630E+02	-7.055700E+01	-.129	.129
205	.0E+00	8.135000E+01	8.135000E+01	-8.135000E+01	-.0	.0
206	.0E+00	1.561000E+02	1.561000E+02	-1.561000E+02	-.0	.0
207	3.788400E+02	4.877000E+02	8.665400E+02	-1.088600E+02	-.155	.155
208	.0E+00	5.351300E+02	5.351300E+02	-5.351300E+02	-.0	.0
209	.0E+00	9.488400E+01	9.488400E+01	-9.488400E+01	-.0	.0
210	2.441090E+02	2.714600E+02	5.155690E+02	-2.735100E+01	-.180	.180
211	.0E+00	3.482400E+01	3.482400E+01	-3.482400E+01	-.0	.0
212	.0E+00	4.187200E+01	4.187200E+01	-4.187200E+01	-.0	.0
213	1.328400E+02	1.672200E+02	3.000600E+02	-3.438000E+01	-.159	.159
214	.0E+00	2.007500E+02	2.007500E+02	-2.007500E+02	-.0	.0
215	.0E+00	4.162700E+02	4.162700E+02	-4.162700E+02	-.0	.0
216	1.035520E+03	1.032800E+03	2.068320E+03	2.720000E+00	-.201	.201
217	.0E+00	1.503100E+03	1.503100E+03	-1.503100E+03	-.0	.0
218	.0E+00	7.981900E+02	7.981900E+02	-7.981900E+02	-.0	.0
219	2.103310E+03	1.662100E+03	3.765410E+03	4.412100E+02	-.253	.253
220	.0E+00	3.238100E+01	3.238100E+01	-3.238100E+01	-.0	.0
221	.0E+00	4.598000E+01	4.598000E+01	-4.598000E+01	-.0	.0
222	1.371200E+02	1.659900E+02	3.031100E+02	-2.087000E+01	-.165	.165
223	.0E+00	1.295200E+02	1.295200E+02	-1.295200E+02	-.0	.0
224	.0E+00	1.674900E+02	1.674900E+02	-1.674900E+02	-.0	.0
225	5.485400E+02	5.089100E+02	1.057450E+03	3.963000E+01	-.216	.216
226	.0E+00	2.333300E+02	2.333300E+02	-2.333300E+02	-.0	.0
227	.0E+00	5.203400E+02	5.203400E+02	-5.203400E+02	-.0	.0
228	1.344470E+03	8.892700E+02	2.233740E+03	4.552000E+02	-.302	.302
229	.0E+00	1.703700E+03	1.703700E+03	-1.703700E+03	-.0	.0
230	.0E+00	8.921000E+02	8.921000E+02	-8.921000E+02	-.0	.0
231	2.440810E+03	1.109400E+03	3.550210E+03	1.331410E+03	-.440	.440
232	.0E+00	1.016800E+02	1.016800E+02	-1.016800E+02	-.0	.0
233	.0E+00	4.795000E+02	4.795000E+02	-4.795000E+02	-.0	.0
234	5.627810E+02	5.254700E+02	1.088251E+03	3.731100E+01	-.214	.214
235	.0E+00	1.286400E+02	1.286400E+02	-1.286400E+02	-.0	.0
236	.0E+00	1.674800E+02	1.674800E+02	-1.674800E+02	-.0	.0
237	5.714110E+02	3.882800E+02	9.596910E+02	1.831310E+02	-.294	.294
238	.0E+00	2.085600E+02	2.085600E+02	-2.085600E+02	-.0	.0
239	.0E+00	4.683000E+02	4.683000E+02	-4.683000E+02	-.0	.0
240	1.278410E+03	5.789700E+02	1.857380E+03	6.994400E+02	-.442	.442
241	.0E+00	1.451400E+03	1.451400E+03	-1.451400E+03	-.0	.0
242	.0E+00	5.993300E+02	5.993300E+02	-5.993300E+02	-.0	.0
243	2.067450E+03	6.394600E+02	2.706910E+03	1.427990E+03	-.647	.647
244	.0E+00	9.971400E+01	9.971400E+01	-9.971400E+01	-.0	.0
245	.0E+00	5.887500E+02	5.887500E+02	-5.887500E+02	-.0	.0
246	4.370840E+02	2.024300E+02	7.195140E+02	1.546540E+02	-.310	.310
247	.0E+00	1.916000E+02	1.916000E+02	-1.916000E+02	-.0	.0
248	.0E+00	4.162700E+02	4.162700E+02	-4.162700E+02	-.0	.0
249	1.162820E+03	5.385200E+02	1.701340E+03	6.243000E+02	-.432	.432
250	.0E+00	1.074300E+03	1.074300E+03	-1.074300E+03	-.0	.0

2 1.
2 SPRING FOR CASE 2 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
288							
289							
290							
291							
292							
293	(251)	.0E+00	3.286700E+02	3.286700E+02	-3.286700E+02	-.0	.0
294	(252)	9.949000E+02	3.848700E+02	1.379770E+03	6.100300E+02	-.517	.517
295	(253)	.0E+00	3.510800E+02	3.510800E+02	-3.510800E+02	-.0	.0
296	(254)	.0E+00	6.202100E+02	6.202100E+02	-6.202100E+02	-.0	.0
297	(255)	1.044030E+03	7.169800E+02	1.761010E+03	3.270500E+02	-.291	.291
298	(256)	.0E+00	1.554500E+02	1.554500E+02	-1.554500E+02	-.0	.0
299	(257)	.0E+00	7.200100E+02	7.200100E+02	-7.200100E+02	-.0	.0
300	(258)	8.836900E+02	5.290900E+02	1.412700E+03	3.546000E+02	-.334	.334
301	(259)	.0E+00	1.020400E+03	1.020400E+03	-1.020400E+03	-.0	.0
302	(260)	.0E+00	7.767700E+02	7.767700E+02	-7.767700E+02	-.0	.0
303	(261)	2.137760E+03	1.261400E+03	3.399160E+03	8.763600E+02	-.339	.339

3

1 SPRING FOR CASE 3 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
3							
4							
5							
6							
7							
8	1	.0E+00	8.983800E+02	8.983800E+02	-8.983800E+02	-.0	.0
9	2	.0E+00	3.374700E+01	3.374700E+01	-3.374700E+01	-.0	.0
10	3	.0E+00	5.613900E+01	5.613900E+01	-5.613900E+01	-.0	.0
11	4	2.299790E+02	1.333100E+02	3.632890E+02	9.666900E+01	-.345	.345
12	5	.0E+00	1.991100E+02	1.991100E+02	-1.991100E+02	-.0	.0
13	6	.0E+00	2.716800E+02	2.716800E+02	-2.716800E+02	-.0	.0
14	7	1.167780E+03	7.766300E+02	1.944410E+03	3.911500E+02	-.301	.301
15	8	.0E+00	5.399900E+01	5.399900E+01	-5.399900E+01	-.0	.0
16	9	.0E+00	4.354200E+01	4.354200E+01	-4.354200E+01	-.0	.0
17	10	2.368210E+02	1.849800E+02	4.218010E+02	5.184100E+01	-.256	.256
18	11	.0E+00	1.048300E+03	1.048300E+03	-1.048300E+03	-.0	.0
19	12	.0E+00	8.327400E+01	8.327400E+01	-8.327400E+01	-.0	.0
20	13	.0E+00	5.262900E+01	5.262900E+01	-5.262900E+01	-.0	.0
21	14	3.519280E+02	2.348000E+02	5.867280E+02	1.171280E+02	-.300	.300
22	15	.0E+00	9.021600E+01	9.021600E+01	-9.021600E+01	-.0	.0
23	16	.0E+00	9.948600E+01	9.948600E+01	-9.948600E+01	-.0	.0
24	17	4.724520E+02	3.520100E+02	8.244620E+02	1.204420E+02	-.268	.268
25	18	.0E+00	8.327700E+01	8.327700E+01	-8.327700E+01	-.0	.0
26	19	.0E+00	6.531200E+01	6.531200E+01	-6.531200E+01	-.0	.0
27	20	3.577720E+02	3.058100E+02	6.635820E+02	5.196200E+01	-.234	.234
28	21	.0E+00	8.495300E+01	8.495300E+01	-8.495300E+01	-.0	.0
29	22	.0E+00	4.837900E+01	4.837900E+01	-4.837900E+01	-.0	.0
30	23	3.494520E+02	2.200400E+02	5.694920E+02	1.294120E+02	-.318	.318
31	24	.0E+00	2.912700E+01	2.912700E+01	-2.912700E+01	-.0	.0
32	25	.0E+00	1.754300E+01	1.754300E+01	-1.754300E+01	-.0	.0
33	26	1.197210E+02	9.195900E+01	2.116800E+02	2.776200E+01	-.260	.260
34	27	.0E+00	8.738000E+01	8.738000E+01	-8.738000E+01	-.0	.0
35	28	.0E+00	5.739500E+01	5.739500E+01	-5.739500E+01	-.0	.0
36	29	3.585190E+02	3.011700E+02	6.596890E+02	5.734900E+01	-.238	.238
37	30	.0E+00	5.825300E+01	5.825300E+01	-5.825300E+01	-.0	.0
38	31	.0E+00	4.354100E+01	4.354100E+01	-4.354100E+01	-.0	.0
39	32	2.403490E+02	2.265800E+02	4.669290E+02	1.376900E+01	-.212	.212
40	33	.0E+00	2.035000E+02	2.035000E+02	-2.035000E+02	-.0	.0
41	34	.0E+00	1.225600E+02	1.225600E+02	-1.225600E+02	-.0	.0
42	35	8.425660E+02	6.593800E+02	1.501946E+03	1.831860E+02	-.256	.256
43	36	.0E+00	5.758800E+01	5.758800E+01	-5.758800E+01	-.0	.0
44	37	.0E+00	8.420600E+01	8.420600E+01	-8.420600E+01	-.0	.0
45	38	3.653820E+02	3.152200E+02	6.806020E+02	5.016200E+01	-.232	.232
46	39	.0E+03	5.758500E+01	5.758500E+01	-5.758500E+01	-.0	.0
47	40	.0E+03	9.183200E+01	9.183200E+01	-9.183200E+01	-.0	.0
48	41	3.632060E+02	3.378800E+02	7.010860E+02	2.532600E+01	-.215	.215
49	42	.0E+03	4.990600E+01	4.990600E+01	-4.990600E+01	-.0	.0
50	43	.0E+00	5.660300E+01	5.660300E+01	-5.660300E+01	-.0	.0
51	44	2.430490E+02	2.495700E+02	4.926190E+02	-6.521000E+00	-.195	.195
52	45	.0E+00	6.097000E+01	6.097000E+01	-6.097000E+01	-.0	.0
53	46	.0E+00	8.758500E+01	8.758500E+01	-8.758500E+01	-.0	.0
54	47	1.947520E+02	2.292100E+02	4.239620E+02	-3.445800E+01	-.170	.170
55	48	.0E+00	6.757200E+01	6.757200E+01	-6.757200E+01	-.0	.0
56	49	.0E+00	6.737200E+01	6.737200E+01	-6.737200E+01	-.0	.0
57	50	1.843990E+02	1.914400E+02	3.758390E+02	-7.041000E+00	-.193	.193

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LOADING FOR CASE 3 WITH 7% DAMPING

ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
51	.0E+00	8.833700E+01	8.833700E+01	-8.833700E+01	-.0	.0
52	.0E+00	1.953700E+02	1.953700E+02	-1.953700E+02	-.0	.0
53	3.480010E+02	3.437600E+02	6.917610E+02	4.241000E+00	-.202	.202
54	.0E+00	2.831400E+01	2.831400E+01	-2.831400E+01	-.0	.0
55	.0E+00	3.368500E+01	3.368500E+01	-3.368500E+01	-.0	.0
56	8.156520E+01	8.680500E+01	1.683702E+02	-5.239800E+00	-.188	.188
57	.0E+00	1.769600E+01	1.769600E+01	-1.769600E+01	-.0	.0
58	.0E+00	5.207500E+01	5.207500E+01	-5.207500E+01	-.0	.0
59	8.202990E+01	8.155300E+01	1.635829E+02	4.769000E-01	-.201	.201
60	.0E+00	2.345000E+01	2.345000E+01	-2.345000E+01	-.0	.0
61	.0E+00	5.062700E+01	5.062700E+01	-5.062700E+01	-.0	.0
62	9.915600E+01	1.104200E+02	2.095760E+02	-1.126400E+01	-.180	.180
63	.0E+00	2.345000E+01	2.345000E+01	-2.345000E+01	-.0	.0
64	.0E+00	4.842300E+01	4.842300E+01	-4.842300E+01	-.0	.0
65	1.002820E+02	1.079900E+02	2.082720E+02	-7.708000E+00	-.186	.186
66	.0E+00	5.308900E+01	5.308900E+01	-5.308900E+01	-.0	.0
67	.0E+00	1.452600E+02	1.452600E+02	-1.452600E+02	-.0	.0
68	2.485750E+02	2.131500E+02	4.617250E+02	3.542500E+01	-.233	.233
69	.0E+00	1.003500E+03	1.003500E+03	-1.003500E+03	-.0	.0
70	.0E+00	2.345000E+01	2.345000E+01	-2.345000E+01	-.0	.0
71	.0E+00	4.376300E+01	4.376300E+01	-4.376300E+01	-.0	.0
72	1.025000E+02	1.042600E+02	2.067600E+02	-1.760000E+00	-.197	.197
73	.0E+00	1.909000E+03	1.909000E+03	-1.909000E+03	-.0	.0
74	.0E+00	6.097000E+01	6.097000E+01	-6.097000E+01	-.0	.0
75	.0E+00	6.964000E+01	6.964000E+01	-6.964000E+01	-.0	.0
76	2.058450E+02	2.073900E+02	4.132350E+02	-1.545000E+00	-.199	.199
77	.0E+00	6.334600E+01	6.334600E+01	-6.334600E+01	-.0	.0
78	.0E+00	1.285700E+02	1.285700E+02	-1.285700E+02	-.0	.0
79	2.900530E+02	2.367700E+02	5.268230E+02	5.328300E+01	-.245	.245
80	.0E+00	2.111500E+01	2.111500E+01	-2.111500E+01	-.0	.0
81	.0E+00	3.882500E+01	3.882500E+01	-3.882500E+01	-.0	.0
82	9.891150E+01	7.564200E+01	1.745535E+02	2.326950E+01	-.262	.262
83	.0E+00	1.693700E+03	1.693700E+03	-1.693700E+03	-.0	.0
84	.0E+00	9.885100E+02	9.885100E+02	-9.885100E+02	-.0	.0
85	.0E+00	7.199300E+02	7.199300E+02	-7.199300E+02	-.0	.0
86	.0E+00	1.567900E+03	1.567900E+03	-1.567900E+03	-.0	.0
87	.0E+00	1.806000E+03	1.806000E+03	-1.806000E+03	-.0	.0
88	.0E+00	3.686600E+02	3.686600E+02	-3.686600E+02	-.0	.0
89	.0E+00	2.084600E+02	2.084600E+02	-2.084600E+02	-.0	.0
90	1.260920E+03	7.216900E+02	1.982610E+03	5.392300E+02	-.349	.349
91	.0E+00	3.270600E+02	3.270600E+02	-3.270600E+02	-.0	.0
92	.0E+00	2.084600E+02	2.084600E+02	-2.084600E+02	-.0	.0
93	1.172500E+03	3.502600E+02	1.522860E+03	8.223400E+02	-.670	.670
94	.0E+00	3.993700E+02	3.993700E+02	-3.993700E+02	-.0	.0
95	.0E+00	2.118500E+02	2.118500E+02	-2.118500E+02	-.0	.0
96	1.409130E+03	8.498200E+02	2.258950E+03	5.593100E+02	-.332	.332
97	.0E+00	1.455600E+03	1.455600E+03	-1.455600E+03	-.0	.0
98	.0E+00	2.764700E+02	2.764700E+02	-2.764700E+02	-.0	.0
99	.0E+00	1.389400E+02	1.389400E+02	-1.389400E+02	-.0	.0
100	1.050720E+03	7.548100E+02	1.805530E+03	2.959100E+02	-.278	.278

1 1
1 SPRING FOR CASE 3 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
122	101	.0E+00	2.223100E+03	2.223100E+03	-2.223100E+03	-.0	.0
123	102	.0E+00	4.065100E+01	4.065100E+01	-4.065100E+01	-.0	.0
124	103	.0E+00	1.913300E+01	1.913300E+01	-1.913300E+01	-.0	.0
125	104	1.042100E+02	1.121400E+02	2.163500E+02	-7.930000E+00	-.186	.186
126	105	.0E+00	4.065100E+01	4.065100E+01	-4.065100E+01	-.0	.0
127	106	.0E+00	2.177400E+01	2.177400E+01	-2.177400E+01	-.0	.0
128	107	1.062210E+02	1.194100E+02	2.256310E+02	-1.318900E+01	-.178	.178
129	108	.0E+00	1.075400E+02	1.075400E+02	-1.075400E+02	-.0	.0
130	109	.0E+00	1.109700E+02	1.109700E+02	-1.109700E+02	-.0	.0
131	110	4.225840E+02	3.086500E+02	8.112340E+02	3.393400E+01	-.217	.217
132	111	.0E+00	7.481100E+01	7.481100E+01	-7.481100E+01	-.0	.0
133	112	.0E+00	4.354700E+01	4.354700E+01	-4.354700E+01	-.0	.0
134	113	2.154370E+02	2.112400E+02	4.266770E+02	4.197000E+00	-.204	.204
135	114	.0E+00	2.481300E+02	2.481300E+02	-2.481300E+02	-.0	.0
136	115	.0E+00	2.181200E+02	2.181200E+02	-2.181200E+02	-.0	.0
137	116	9.664350E+02	7.028600E+02	1.669295E+03	2.635750E+02	-.275	.275
138	117	.0E+00	6.616700E+01	6.616700E+01	-6.616700E+01	-.0	.0
139	118	.0E+00	4.354700E+01	4.354700E+01	-4.354700E+01	-.0	.0
140	119	2.190550E+02	1.772800E+02	3.963350E+02	4.177500E+01	-.247	.247
141	120	.0E+00	1.459900E+02	1.459900E+02	-1.459900E+02	-.0	.0
142	121	.0E+00	1.492400E+02	1.492400E+02	-1.492400E+02	-.0	.0
143	122	6.559300E+02	3.998500E+02	1.055780E+03	2.560800E+02	-.328	.328
144	123	.0E+00	8.983800E+01	8.983800E+01	-8.983800E+01	-.0	.0
145	124	.0E+00	6.532000E+01	6.532000E+01	-6.532000E+01	-.0	.0
146	125	3.338830E+02	2.387500E+02	5.726330E+02	9.513300E+01	-.280	.280
147	126	.0E+00	2.165100E+02	2.165100E+02	-2.165100E+02	-.0	.0
148	127	.0E+00	3.022900E+02	3.022900E+02	-3.022900E+02	-.0	.0
149	128	1.251080E+03	7.327300E+02	1.983810E+03	5.183500E+02	-.341	.341
150	129	.0E+00	8.119400E+01	8.119400E+01	-8.119400E+01	-.0	.0
151	130	.0E+00	6.531700E+01	6.531700E+01	-6.531700E+01	-.0	.0
152	131	3.460740E+02	2.459400E+02	5.928140E+02	1.009340E+02	-.282	.282
153	132	.0E+00	2.046500E+02	2.046500E+02	-2.046500E+02	-.0	.0
154	133	.0E+00	2.295900E+02	2.295900E+02	-2.295900E+02	-.0	.0
155	134	9.946420E+02	5.751700E+02	1.569812E+03	4.194720E+02	-.346	.346
156	135	.0E+00	1.075400E+02	1.075400E+02	-1.075400E+02	-.0	.0
157	136	.0E+00	9.529500E+01	9.529500E+01	-9.529500E+01	-.0	.0
158	137	4.048610E+02	3.640700E+02	7.689310E+02	4.079100E+01	-.222	.222
159	138	.0E+00	2.150400E+02	2.150400E+02	-2.150400E+02	-.0	.0
160	139	.0E+00	1.708700E+02	1.708700E+02	-1.708700E+02	-.0	.0
161	140	8.238150E+02	5.430500E+02	1.366865E+03	2.807650E+02	-.303	.303
162	141	.0E+00	1.647000E+02	1.647000E+02	-1.647000E+02	-.0	.0
163	142	.0E+00	1.544400E+02	1.544400E+02	-1.544400E+02	-.0	.0
164	143	7.353260E+02	3.607600E+02	1.096086E+03	3.745660E+02	-.408	.408
165	144	.0E+00	8.499900E+02	8.499900E+02	-8.499900E+02	-.0	.0
166	145	.0E+00	1.825800E+02	1.825800E+02	-1.825800E+02	-.0	.0
167	146	1.014030E+03	4.489900E+02	1.463020E+03	5.650400E+02	-.452	.452
168	147	.0E+00	9.586100E+02	9.586100E+02	-9.586100E+02	-.0	.0
169	148	.0E+00	1.541400E+03	1.541400E+03	-1.541400E+03	-.0	.0
170	149	.0E+00	2.690600E+02	2.690600E+02	-2.690600E+02	-.0	.0
171	150	1.372310E+03	5.689500E+02	1.941160E+03	8.034600E+02	-.482	.482

174 SPRING FOR CASE 3 WITH 7% DAMPING

ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
151	.0E+00	1.943900E+03	1.943900E+03	-1.943900E+03	-.0	.0
152	.0E+00	1.789900E+02	1.789900E+02	-1.789900E+02	-.0	.0
153	.0E+00	6.790500E+02	6.790500E+02	-6.790500E+02	-.0	.0
154	1.061710E+03	5.357200E+02	1.597430E+03	5.259900E+02	-.396	.396
155	.0E+00	8.416400E+01	8.416400E+01	-8.416400E+01	-.0	.0
156	.0E+00	6.592500E+01	6.592500E+01	-6.592500E+01	-.0	.0
157	2.953510E+02	2.639300E+02	5.592810E+02	3.142100E+01	-.224	.224
158	.0E+00	1.496300E+02	1.496300E+02	-1.496300E+02	-.0	.0
159	.0E+00	6.499900E+01	6.499900E+01	-6.499900E+01	-.0	.0
160	3.460150E+02	3.304400E+02	6.764550E+02	1.557500E+01	-.209	.209
161	.0E+00	1.654200E+02	1.654200E+02	-1.654200E+02	-.0	.0
162	.0E+00	7.848200E+01	7.848200E+01	-7.848200E+01	-.0	.0
163	4.993640E+02	3.123400E+02	8.117040E+02	1.870240E+02	-.320	.320
164	.0E+00	9.925200E+01	9.925200E+01	-9.925200E+01	-.0	.0
165	.0E+00	4.874900E+01	4.874900E+01	-4.874900E+01	-.0	.0
166	2.636340E+02	1.756900E+02	4.393240E+02	8.794400E+01	-.300	.300
167	.0E+00	3.899500E+01	3.899500E+01	-3.899500E+01	-.0	.0
168	.0E+00	5.022900E+01	5.022900E+01	-5.022900E+01	-.0	.0
169	2.013240E+02	9.950300E+01	3.008270E+02	1.018210E+02	-.405	.405
170	.0E+00	7.019100E+01	7.019100E+01	-7.019100E+01	-.0	.0
171	.0E+00	6.824900E+01	6.824900E+01	-6.824900E+01	-.0	.0
172	2.660910E+02	1.462500E+02	4.123410E+02	1.198410E+02	-.364	.364
173	.0E+00	3.752400E+02	3.752400E+02	-3.752400E+02	-.0	.0
174	.0E+00	9.865800E+02	9.865800E+02	-9.865800E+02	-.0	.0
175	1.546330E+03	5.018900E+02	2.048220E+03	1.044440E+03	-.616	.616
176	.0E+00	3.548400E+02	3.548400E+02	-3.548400E+02	-.0	.0
177	.0E+00	4.404400E+02	4.404400E+02	-4.404400E+02	-.0	.0
178	1.036510E+03	5.550000E+02	2.391510E+03	1.281510E+03	-.662	.662
179	.0E+00	2.412200E+02	2.412200E+02	-2.412200E+02	-.0	.0
180	.0E+00	1.309600E+03	1.309600E+03	-1.309600E+03	-.0	.0
181	1.097620E+03	4.994100E+02	1.597030E+03	5.982100E+02	-.440	.440
182	.0E+00	2.387700E+02	2.387700E+02	-2.387700E+02	-.0	.0
183	.0E+00	1.346100E+02	1.346100E+02	-1.346100E+02	-.0	.0
184	7.394500E+02	2.514000E+02	9.908500E+02	4.880500E+02	-.588	.588
185	.0E+00	1.406100E+02	1.406100E+02	-1.406100E+02	-.0	.0
186	.0E+00	7.478400E+01	7.478400E+01	-7.478400E+01	-.0	.0
187	5.928070E+02	2.585900E+02	8.513970E+02	3.342170E+02	-.458	.458
188	.0E+00	8.918300E+02	8.918300E+02	-8.918300E+02	-.0	.0
189	.0E+00	1.098900E+02	1.098900E+02	-1.098900E+02	-.0	.0
190	8.429000E+02	4.446300E+02	1.287530E+03	3.982700E+02	-.379	.379
191	.0E+00	2.812200E+01	2.812200E+01	-2.812200E+01	-.0	.0
192	.0E+00	1.519400E+01	1.519400E+01	-1.519400E+01	-.0	.0
193	1.205220E+02	5.225300E+01	1.727750E+02	6.026900E+01	-.461	.461
194	.0E+00	8.088400E+02	8.088400E+02	-8.088400E+02	-.0	.0
195	.0E+00	1.826500E+03	1.826500E+03	-1.826500E+03	-.0	.0
196	.0E+00	2.325400E+02	2.325400E+02	-2.325400E+02	-.0	.0
197	.0E+00	3.390400E+02	3.390400E+02	-3.390400E+02	-.0	.0
198	1.188340E+03	6.294800E+02	1.817820E+03	5.588600E+02	-.378	.378
199	.0E+00	2.170500E+03	2.170500E+03	-2.170500E+03	-.0	.0
200	1.194720E+02	1.682600E+02	2.877320E+02	-4.878800E+01	-.142	.142

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2. RING FOR CASE 3 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
288	251	.0E+00	2.320100E+02	2.320100E+02	-2.320100E+02	-.0	.0
289	252	1.070310E+03	4.559000E+02	1.526210E+03	6.144100E+02	-.470	.470
290	253	.0E+00	2.403600E+02	2.403600E+02	-2.403600E+02	-.0	.0
291	254	.0E+00	4.315700E+02	4.315700E+02	-4.315700E+02	-.0	.0
292	255	1.043000E+03	7.517100E+02	1.794790E+03	2.913700E+02	-.278	.278
293	256	.0E+00	1.034900E+02	1.034900E+02	-1.034900E+02	-.0	.0
294	257	.0E+00	7.254600E+02	7.264600E+02	-7.264600E+02	-.0	.0
295	258	9.355600E+02	5.738600E+02	1.514420E+03	3.567000E+02	-.323	.323
296	259	.0E+00	1.071400E+03	1.071400E+03	-1.071400E+03	-.0	.0
297	260	.0E+00	6.115000E+02	6.115000E+02	-6.115000E+02	-.0	.0
298	261	2.354160E+03	1.337600E+03	3.691760E+03	1.016560E+03	-.352	.352

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VERTICAL PILE

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RING FOR CASE 4 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
3							
4							
5							
6							
7							
8	1	.0E+00	9.303300E+02	9.303300E+02	-9.303300E+02	-.0	.0
9	2	.0E+00	7.217300E+00	7.217300E+00	-7.217300E+00	-.0	.0
10	3	.0E+00	2.637000E+01	2.637000E+01	-2.637000E+01	-.0	.0
11	4	2.337000E+02	1.707000E+02	4.044000E+02	6.300800E+01	-.274	.274
12	5	.0E+00	4.029600E+01	4.029600E+01	-4.029600E+01	-.0	.0
13	6	.0E+00	1.341500E+02	1.341500E+02	-1.341500E+02	-.0	.0
14	7	1.163360E+03	9.796900E+02	2.143050E+03	1.836700E+02	-.237	.237
15	8	.0E+00	1.002300E+01	1.002300E+01	-1.002300E+01	-.0	.0
16	9	.0E+00	2.402300E+01	2.402300E+01	-2.402300E+01	-.0	.0
17	10	2.282430E+02	2.285400E+02	4.567830E+02	-2.970000E-01	-.200	.200
18	11	.0E+00	4.949600E+02	4.949600E+02	-4.949600E+02	-.0	.0
19	12	.0E+00	1.650800E+01	1.650800E+01	-1.650800E+01	-.0	.0
20	13	.0E+00	2.849800E+01	2.849800E+01	-2.849800E+01	-.0	.0
21	14	3.562380E+02	3.089100E+02	6.651480E+02	4.732800E+01	-.231	.231
22	15	.0E+00	1.893900E+01	1.893900E+01	-1.893900E+01	-.0	.0
23	16	.0E+00	5.037600E+01	5.037600E+01	-5.037600E+01	-.0	.0
24	17	4.653980E+02	4.498700E+02	9.152680E+02	1.552800E+01	-.207	.207
25	18	.0E+00	1.651200E+01	1.651200E+01	-1.651200E+01	-.0	.0
26	19	.0E+00	3.602300E+01	3.602300E+01	-3.602300E+01	-.0	.0
27	20	3.398110E+02	3.793200E+02	7.191310E+02	-3.950900E+01	-.179	.179
28	21	.0E+00	1.749100E+01	1.749100E+01	-1.749100E+01	-.0	.0
29	22	.0E+00	2.477400E+01	2.477400E+01	-2.477400E+01	-.0	.0
30	23	3.619070E+02	3.031800E+02	6.650870E+02	5.872700E+01	-.239	.239
31	24	.0E+00	6.278500E+00	6.278500E+00	-6.278500E+00	-.0	.0
32	25	.0E+00	9.499000E+00	9.499000E+00	-9.499000E+00	-.0	.0
33	26	1.206460E+02	1.242600E+02	2.449060E+02	-3.614000E+00	-.194	.194
34	27	.0E+00	1.883700E+01	1.883700E+01	-1.883700E+01	-.0	.0
35	28	.0E+00	3.164200E+01	3.164200E+01	-3.164200E+01	-.0	.0
36	29	3.490210E+02	3.924900E+02	7.415110E+02	-4.346900E+01	-.178	.178
37	30	.0E+00	1.255800E+01	1.255800E+01	-1.255800E+01	-.0	.0
38	31	.0E+00	2.401300E+01	2.401300E+01	-2.401300E+01	-.0	.0
39	32	2.249690E+02	2.851600E+02	5.101290E+02	-6.019100E+01	-.158	.158
40	33	.0E+00	4.762500E+01	4.762500E+01	-4.762500E+01	-.0	.0
41	34	.0E+00	6.101900E+01	6.101900E+01	-6.101900E+01	-.0	.0
42	35	8.691220E+02	9.330000E+02	1.802122E+03	-6.387800E+01	-.186	.186
43	36	.0E+00	1.533200E+01	1.533200E+01	-1.533200E+01	-.0	.0
44	37	.0E+00	3.954900E+01	3.954900E+01	-3.954900E+01	-.0	.0
45	38	3.669070E+02	4.348400E+02	8.017470E+02	-6.793300E+01	-.169	.169
46	39	.0E+00	1.533700E+01	1.533700E+01	-1.533700E+01	-.0	.0
47	40	.0E+00	4.391200E+01	4.391200E+01	-4.391200E+01	-.0	.0
48	41	3.512320E+02	4.495200E+02	8.007520E+02	-9.828800E+01	-.156	.156
49	42	.0E+00	1.220800E+01	1.220800E+01	-1.220800E+01	-.0	.0
50	43	.0E+00	2.866800E+01	2.866800E+01	-2.866800E+01	-.0	.0
51	44	2.258190E+02	3.204200E+02	5.462390E+02	-9.460100E+01	-.141	.141
52	45	.0E+00	1.716800E+01	1.716800E+01	-1.716800E+01	-.0	.0
53	46	.0E+00	1.507400E+01	1.507400E+01	-1.507400E+01	-.0	.0
54	47	2.328170E+02	3.508100E+02	5.836270E+02	-1.179930E+02	-.133	.133
55	48	.0E+00	1.689200E+01	1.689200E+01	-1.689200E+01	-.0	.0
56	49	.0E+00	1.262300E+01	1.262300E+01	-1.262300E+01	-.0	.0
57	50	2.214450E+02	2.664400E+02	4.878850E+02	-4.499500E+01	-.166	.166

1, SPRING FOR CASE 4 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
60							
61							
62							
63							
64							
65	51	.0E+00	2.235000E+01	2.235000E+01	-2.235000E+01	-.0	.0
66	52	.0E+00	3.257700E+01	3.257700E+01	-3.257700E+01	-.0	.0
67	53	4.192600E+02	4.257100E+02	8.449700E+02	-6.442000E+00	-.197	.197
68	54	.0E+00	5.823000E+00	5.823000E+00	-5.823000E+00	-.0	.0
69	55	.0E+00	6.308800E+00	5.308800E+00	-6.308800E+00	-.0	.0
70	56	9.894900E+01	1.016700E+02	2.006199E+02	-2.720100E+00	-.195	.195
71	57	.0E+00	4.196000E+00	4.196000E+00	-4.196000E+00	-.0	.0
72	58	.0E+00	8.219900E+00	8.219900E+00	-8.219900E+00	-.0	.0
73	59	9.832940E+01	9.514800E+01	1.934774E+02	3.181400E+00	-.207	.207
74	60	.0E+00	7.190000E+00	7.190000E+00	-7.190000E+00	-.0	.0
75	61	.0E+00	7.811000E+00	7.811000E+00	-7.811000E+00	-.0	.0
76	62	1.171650E+02	1.715200E+02	2.886850E+02	-5.435500E+01	-.137	.137
77	63	.0E+00	7.190100E+00	7.190100E+00	-7.190100E+00	-.0	.0
78	64	.0E+00	7.197400E+00	7.197400E+00	-7.197400E+00	-.0	.0
79	65	1.174690E+02	1.691800E+02	2.866490E+02	-5.171100E+01	-.139	.139
80	66	.0E+00	1.258900E+01	1.258900E+01	-1.258900E+01	-.0	.0
81	67	.0E+00	2.155900E+01	2.155900E+01	-2.155900E+01	-.0	.0
82	68	2.903450E+02	2.479900E+02	5.383350E+02	4.235500E+01	-.234	.234
83	69	.0E+00	1.162300E+03	1.162300E+03	-1.162300E+03	-.0	.0
84	70	.0E+00	7.190300E+00	7.190300E+00	-7.190300E+00	-.0	.0
85	71	.0E+00	6.014200E+00	6.014200E+00	-6.014200E+00	-.0	.0
86	72	1.175760E+02	1.655300E+02	2.831060E+02	-4.795400E+01	-.142	.142
87	73	.0E+00	2.058200E+03	2.058200E+03	-2.058200E+03	-.0	.0
88	74	.0E+00	1.716900E+01	1.716900E+01	-1.716900E+01	-.0	.0
89	75	.0E+00	9.997500E+00	9.997500E+00	-9.997500E+00	-.0	.0
90	76	2.351020E+02	3.296700E+02	5.647720E+02	-9.456800E+01	-.143	.143
91	77	.0E+00	1.825200E+01	1.825200E+01	-1.825200E+01	-.0	.0
92	78	.0E+00	1.743100E+01	1.743100E+01	-1.743100E+01	-.0	.0
93	79	3.302740E+02	3.521800E+02	6.824540E+02	-2.190600E+01	-.188	.188
94	80	.0E+00	6.083600E+00	6.083600E+00	-6.083600E+00	-.0	.0
95	81	.0E+00	5.085500E+00	5.085500E+00	-5.085500E+00	-.0	.0
96	82	1.105500E+02	1.143400E+02	2.248900E+02	-3.790000E+00	-.193	.193
97	83	.0E+00	1.742600E+03	1.742600E+03	-1.742600E+03	-.0	.0
98	84	.0E+00	1.288500E+03	1.288500E+03	-1.288500E+03	-.0	.0
99	85	.0E+00	7.768800E+02	7.768800E+02	-7.768800E+02	-.0	.0
100	86	.0E+00	1.832900E+03	1.832900E+03	-1.832900E+03	-.0	.0
101	87	.0E+03	1.951900E+03	1.951900E+03	-1.951900E+03	-.0	.0
102	88	.0E+03	8.486800E+01	8.486800E+01	-8.486800E+01	-.0	.0
103	89	.0E+03	5.248700E+01	5.248700E+01	-5.248700E+01	-.0	.0
104	90	1.344260E+03	1.050900E+03	2.403160E+03	2.853600E+02	-.254	.254
105	91	.0E+02	6.207400E+01	6.207400E+01	-6.207400E+01	-.0	.0
106	92	.0E+00	5.248600E+01	5.248600E+01	-5.248600E+01	-.0	.0
107	93	1.259240E+03	4.741200E+02	1.733360E+03	7.851200E+02	-.531	.531
108	94	.0E+03	9.198800E+01	9.198800E+01	-9.198800E+01	-.0	.0
109	95	.0E+00	6.542800E+01	6.542800E+01	-6.542800E+01	-.0	.0
110	96	1.491740E+03	1.242100E+03	2.733840E+03	2.496400E+02	-.240	.240
111	97	.0E+00	8.914600E+02	8.914600E+02	-8.914600E+02	-.0	.0
112	98	.0E+00	6.374800E+01	6.374800E+01	-6.374800E+01	-.0	.0
113	99	.0E+00	6.425900E+01	6.425900E+01	-6.425900E+01	-.0	.0
114	100	1.094280E+03	1.081100E+03	2.175380E+03	1.310000E+01	-.202	.202

SPRING FOR CASE 4 WITH 7% DAMPING

ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
101	.0E+00	2.039800E+03	2.039800E+03	-2.039800E+03	-.0	.0
102	.0E+00	1.112300E+01	1.112300E+01	-1.112300E+01	-.0	.0
103	.0E+00	1.055500E+01	1.055500E+01	-1.055500E+01	-.0	.0
104	1.096500E+02	1.865200E+02	2.961700E+02	-7.687000E+01	-.118	.118
105	.0E+00	1.112300E+01	1.112300E+01	-1.112300E+01	-.0	.0
106	.0E+00	1.202600E+01	1.202600E+01	-1.202600E+01	-.0	.0
107	1.084670E+02	1.967100E+02	3.051770E+02	-8.824300E+01	-.110	.110
108	.0E+00	3.098200E+01	3.098200E+01	-3.098200E+01	-.0	.0
109	.0E+00	5.450000E+01	5.450000E+01	-5.450000E+01	-.0	.0
110	4.401330E+02	6.387900E+02	1.078923E+03	-1.986570E+02	-.138	.138
111	.0E+00	1.959800E+01	1.959800E+01	-1.959800E+01	-.0	.0
112	.0E+00	2.405100E+01	2.405100E+01	-2.405100E+01	-.0	.0
113	2.178170E+02	3.412600E+02	5.590770E+02	-1.234430E+02	-.128	.128
114	.0E+00	6.251700E+01	6.251700E+01	-6.251700E+01	-.0	.0
115	.0E+00	1.113700E+02	1.113700E+02	-1.113700E+02	-.0	.0
116	9.880250E+02	1.109600E+03	2.097625E+03	-1.215750E+02	-.178	.178
117	.0E+00	1.586200E+01	1.586200E+01	-1.586200E+01	-.0	.0
118	.0E+00	2.404900E+01	2.404900E+01	-2.404900E+01	-.0	.0
119	2.174360E+02	2.711800E+02	4.886160E+02	-5.374400E+01	-.160	.160
120	.0E+00	3.331000E+01	3.331000E+01	-3.331000E+01	-.0	.0
121	.0E+00	7.560600E+01	7.560600E+01	-7.560600E+01	-.0	.0
122	6.619130E+02	5.845600E+02	1.246473E+03	7.735300E+01	-.226	.226
123	.0E+00	1.935900E+01	1.935900E+01	-1.935900E+01	-.0	.0
124	.0E+00	3.606900E+01	3.606900E+01	-3.606900E+01	-.0	.0
125	3.265200E+02	3.364800E+02	6.630000E+02	-9.960000E+00	-.194	.194
126	.0E+00	4.353500E+01	4.353500E+01	-4.353500E+01	-.0	.0
127	.0E+00	1.488200E+02	1.488200E+02	-1.488200E+02	-.0	.0
128	1.250050E+03	9.258400E+02	2.175890E+03	3.242100E+02	-.270	.270
129	.0E+00	1.490400E+01	1.490400E+01	-1.490400E+01	-.0	.0
130	.0E+00	3.605200E+01	3.605200E+01	-3.605200E+01	-.0	.0
131	3.358070E+02	3.071200E+02	6.429270E+02	2.868700E+01	-.219	.219
132	.0E+00	4.436400E+01	4.436400E+01	-4.436400E+01	-.0	.0
133	.0E+00	1.154500E+02	1.154500E+02	-1.154500E+02	-.0	.0
134	9.991760E+02	7.975800E+02	1.796756E+03	2.015960E+02	-.251	.251
135	.0E+00	3.098300E+01	3.098300E+01	-3.098300E+01	-.0	.0
136	.0E+00	4.422700E+01	4.422700E+01	-4.422700E+01	-.0	.0
137	4.336680E+02	5.951400E+02	1.028808E+03	-1.614720E+02	-.146	.146
138	.0E+00	5.458900E+01	5.458900E+01	-5.458900E+01	-.0	.0
139	.0E+00	8.181100E+01	8.181100E+01	-8.181100E+01	-.0	.0
140	8.666000E+02	8.711400E+02	1.737740E+03	-4.540000E+00	-.199	.199
141	.0E+00	3.796100E+01	3.796100E+01	-3.796100E+01	-.0	.0
142	.0E+00	7.324600E+01	7.324600E+01	-7.324600E+01	-.0	.0
143	7.650270E+02	5.497200E+02	1.314747E+03	2.153070E+02	-.278	.278
144	.0E+00	1.419400E+03	1.419400E+03	-1.419400E+03	-.0	.0
145	.0E+00	7.665100E+01	7.665100E+01	-7.665100E+01	-.0	.0
146	9.937020E+02	6.217100E+02	1.615412E+03	3.719920E+02	-.320	.320
147	.0E+00	4.813800E+02	4.813800E+02	-4.813800E+02	-.0	.0
148	.0E+00	2.488800E+03	2.488800E+03	-2.488800E+03	-.0	.0
149	.0E+00	1.097000E+02	1.097000E+02	-1.097000E+02	-.0	.0
150	1.351310E+03	6.939800E+02	2.045290E+03	6.573300E+02	-.389	.389

1 SPRING FOR CASE 4 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
174							
175							
176							
177							
178							
179	151	.0E+00	8.838100E+02	8.838100E+02	-8.838100E+02	-.0	.0
180	152	.0E+00	3.206700E+01	3.206700E+01	-3.206700E+01	-.0	.0
181	153	.0E+00	2.631000E+03	2.631000E+03	-2.631000E+03	-.0	.0
182	154	1.044150E+03	6.728800E+02	1.717070E+03	3.713100E+02	-.310	.310
183	155	.0E+00	2.392400E+01	2.392400E+01	-2.392400E+01	-.0	.0
184	156	.0E+00	2.894300E+01	2.894300E+01	-2.894300E+01	-.0	.0
185	157	3.174030E+02	4.214200E+02	7.388230E+02	-1.040170E+02	-.151	.151
186	158	.0E+00	3.920600E+01	3.920600E+01	-3.920600E+01	-.0	.0
187	159	.0E+00	2.005100E+01	2.005100E+01	-2.005100E+01	-.0	.0
188	160	3.596180E+02	4.379800E+02	7.975980E+02	-7.836200E+01	-.164	.164
189	161	.0E+00	3.966600E+01	3.966600E+01	-3.966600E+01	-.0	.0
190	162	.0E+00	3.833100E+01	3.833100E+01	-3.833100E+01	-.0	.0
191	163	5.246440E+02	4.874600E+02	1.012104E+03	3.718400E+01	-.215	.215
192	164	.0E+00	2.380300E+01	2.380300E+01	-2.380300E+01	-.0	.0
193	165	.0E+00	1.503900E+01	1.503900E+01	-1.503900E+01	-.0	.0
194	166	2.668580E+02	2.232100E+02	4.900680E+02	4.364800E+01	-.239	.239
195	167	.0E+00	1.017600E+01	1.017600E+01	-1.017600E+01	-.0	.0
196	168	.0E+00	2.127800E+01	2.127800E+01	-2.127800E+01	-.0	.0
197	169	2.089730E+02	1.499600E+02	3.589300E+02	5.901000E+01	-.279	.279
198	170	.0E+00	1.723900E+01	1.723900E+01	-1.723900E+01	-.0	.0
199	171	.0E+00	1.892700E+01	1.892700E+01	-1.892700E+01	-.0	.0
200	172	2.661480E+02	1.902800E+02	4.564280E+02	7.586800E+01	-.280	.280
201	173	.0E+00	6.508400E+01	6.508400E+01	-6.508400E+01	-.0	.0
202	174	.0E+00	2.112700E+03	2.112700E+03	-2.112700E+03	-.0	.0
203	175	1.554210E+03	6.659200E+02	2.220130E+03	8.882900E+02	-.467	.467
204	176	.0E+00	6.034100E+01	6.034100E+01	-6.034100E+01	-.0	.0
205	177	.0E+00	8.956400E+01	8.956400E+01	-8.956400E+01	-.0	.0
206	178	1.889910E+03	7.364600E+02	2.626370E+03	1.153450E+03	-.513	.513
207	179	.0E+00	4.184000E+01	4.184000E+01	-4.184000E+01	-.0	.0
208	180	.0E+00	5.401100E+03	5.401100E+03	-5.401100E+03	-.0	.0
209	181	1.078230E+03	6.428800E+02	1.721110E+03	4.353500E+02	-.335	.335
210	182	.0E+00	3.665800E+01	3.665800E+01	-3.665800E+01	-.0	.0
211	183	.0E+00	5.220100E+01	5.220100E+01	-5.220100E+01	-.0	.0
212	184	7.122820E+02	3.054600E+02	1.017742E+03	4.068220E+02	-.466	.466
213	185	.0E+00	2.373400E+01	2.373400E+01	-2.373400E+01	-.0	.0
214	186	.0E+00	2.900400E+01	2.900400E+01	-2.900400E+01	-.0	.0
215	187	5.727310E+02	3.650300E+02	9.377610E+02	2.077010E+02	-.314	.314
216	188	.0E+00	1.522700E+03	1.522700E+03	-1.522700E+03	-.0	.0
217	189	.0E+00	4.860500E+01	4.860500E+01	-4.860500E+01	-.0	.0
218	190	8.276130E+02	5.696600E+02	1.397273E+03	2.579530E+02	-.291	.291
219	191	.0E+00	4.746800E+00	4.746800E+00	-4.746800E+00	-.0	.0
220	192	.0E+00	6.293200E+00	6.293200E+00	-6.293200E+00	-.0	.0
221	193	1.157170E+02	7.269500E+01	1.884120E+02	4.302200E+01	-.318	.318
222	194	.0E+00	9.397500E+02	9.397500E+02	-9.397500E+02	-.0	.0
223	195	.0E+00	1.966700E+03	1.966700E+03	-1.966700E+03	-.0	.0
224	196	.0E+00	5.054200E+01	5.054200E+01	-5.054200E+01	-.0	.0
225	197	.0E+00	9.008100E+01	9.008100E+01	-9.008100E+01	-.0	.0
226	198	1.279670E+03	9.493900E+02	2.229060E+03	3.302000E+02	-.270	.270
227	199	.0E+00	2.183700E+03	2.183700E+03	-2.183700E+03	-.0	.0
228	200	1.264980E+02	1.741000E+02	3.005900E+02	-4.760200E+01	-.145	.145

SPRING FOR CASE 4 WITH 7% DAMPING

ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
201	1.354140E+02	1.310700E+02	2.664840E+02	4.344000E+00	-.207	.207
202	.0E+00	2.805300E+00	2.805300E+00	-2.805300E+00	-.0	.0
203	.0E+00	2.363500E+00	2.363500E+00	-2.363500E+00	-.0	.0
204	1.294030E+02	2.170500E+02	3.464530E+02	-8.764700E+01	-.119	.119
205	.0E+00	6.062900E+00	6.062900E+00	-6.062900E+00	-.0	.0
206	.0E+00	8.580900E+00	8.580900E+00	-8.580900E+00	-.0	.0
207	3.788400E+02	5.497400E+02	9.285800E+02	-1.709000E+02	-.138	.138
208	.0E+00	1.141800E+03	1.141800E+03	-1.141800E+03	-.0	.0
209	.0E+00	5.450100E+00	5.450100E+00	-5.450100E+00	-.0	.0
210	2.441090E+02	3.197200E+02	5.638290E+02	-7.561100E+01	-.153	.153
211	.0E+00	2.168800E+00	2.168800E+00	-2.168800E+00	-.0	.0
212	.0E+00	2.363200E+00	2.363200E+00	-2.363200E+00	-.0	.0
213	1.328400E+02	1.789700E+02	3.118100E+02	-4.613000E+01	-.148	.148
214	.0E+00	1.250300E+01	1.250300E+01	-1.250300E+01	-.0	.0
215	.0E+00	2.288100E+01	2.288100E+01	-2.288100E+01	-.0	.0
216	1.035520E+03	1.146100E+03	2.181620E+03	-1.105000E+02	-.181	.181
217	.0E+00	2.064000E+03	2.064000E+03	-2.064000E+03	-.0	.0
218	.0E+00	4.629000E+01	4.629000E+01	-4.629000E+01	-.0	.0
219	2.103310E+03	1.953200E+03	4.056510E+03	1.501100E+02	-.215	.215
220	.0E+00	1.486800E+00	1.486800E+00	-1.486800E+00	-.0	.0
221	.0E+00	2.749800E+00	2.749800E+00	-2.749800E+00	-.0	.0
222	1.371200E+02	1.707100E+02	3.078300E+02	-3.359000E+01	-.161	.161
223	.0E+00	5.946300E+00	5.946300E+00	-5.946300E+00	-.0	.0
224	.0E+00	9.446100E+00	9.446100E+00	-9.446100E+00	-.0	.0
225	5.485400E+02	5.362400E+02	1.084780E+03	1.230000E+01	-.205	.205
226	.0E+00	1.070800E+01	1.070800E+01	-1.070800E+01	-.0	.0
227	.0E+00	2.859500E+01	2.859500E+01	-2.859500E+01	-.0	.0
228	1.344470E+03	9.685300E+02	2.313000E+03	3.759400E+02	-.278	.278
229	.0E+00	1.852900E+03	1.852900E+03	-1.852900E+03	-.0	.0
230	.0E+00	5.173100E+01	5.173100E+01	-5.173100E+01	-.0	.0
231	2.440810E+03	1.272900E+03	3.713710E+03	1.167910E+03	-.384	.384
232	.0E+00	4.627800E+00	4.627800E+00	-4.627800E+00	-.0	.0
233	.0E+00	1.455700E+03	1.455700E+03	-1.455700E+03	-.0	.0
234	5.627810E+02	5.572000E+02	1.119981E+03	5.581000E+00	-.202	.202
235	.0E+00	5.853500E+00	5.853500E+00	-5.853500E+00	-.0	.0
236	.0E+00	9.442300E+00	9.442300E+00	-9.442300E+00	-.0	.0
237	5.714110E+02	4.275200E+02	9.989310E+02	1.430910E+02	-.267	.267
238	.0E+00	9.485300E+00	9.485300E+00	-9.485300E+00	-.0	.0
239	.0E+00	2.572300E+01	2.572300E+01	-2.572300E+01	-.0	.0
240	1.278410E+03	6.790300E+02	1.957440E+03	5.993800E+02	-.377	.377
241	.0E+00	1.508800E+03	1.508800E+03	-1.508800E+03	-.0	.0
242	.0E+00	3.474000E+01	3.474000E+01	-3.474000E+01	-.0	.0
243	2.067450E+03	8.090500E+02	2.876500E+03	1.250400E+03	-.511	.511
244	.0E+00	5.492400E+00	5.492400E+00	-5.492400E+00	-.0	.0
245	.0E+00	2.619600E+03	2.619600E+03	-2.619600E+03	-.0	.0
246	4.370040E+02	3.293500E+02	7.664340E+02	1.077340E+02	-.265	.265
247	.0E+00	1.055200E+01	1.055200E+01	-1.055200E+01	-.0	.0
248	.0E+00	2.285800E+01	2.285800E+01	-2.285800E+01	-.0	.0
249	1.162820E+03	6.809600E+02	1.843780E+03	4.618600E+02	-.342	.342
250	.0E+00	1.564300E+03	1.564300E+03	-1.564300E+03	-.0	.0

2 1
2 SPRING FOR CASE 4 WITH 7% DAMPING

	ELEMENT	STATIC FORCE	DYNAMIC FORCE	ST+DYN FORCE	ST-DYN FORCE	ST+DYN G	ST-DYN G
288							
289							
290							
291							
292							
293	251	.0E+00	1.904300E+01	1.904300E+01	-1.904300E+01	-.0	.0
294	252	9.949083E+02	5.044500E+02	1.493358E+03	4.904580E+02	-.394	.394
295	253	.0E+00	2.485300E+01	2.485300E+01	-2.485300E+01	-.0	.0
296	254	.0E+00	3.464600E+01	3.464600E+01	-3.464600E+01	-.0	.0
297	255	1.044030E+03	9.008500E+02	1.944800E+03	1.431800E+02	-.232	.232
298	256	.0E+00	1.100300E+01	1.100300E+01	-1.100300E+01	-.0	.0
299	257	.0E+00	2.297200E+03	2.297200E+03	-2.297200E+03	-.0	.0
300	258	8.836900E+02	6.905400E+02	1.574230E+03	1.931500E+02	-.256	.256
301	259	.0E+00	1.508600E+03	1.508600E+03	-1.508600E+03	-.0	.0
302	260	.0E+00	1.374400E+03	1.374400E+03	-1.374400E+03	-.0	.0
303	261	2.137760E+03	1.617900E+03	3.755660E+03	5.198600E+02	-.264	.264

PMC to GPC
Connect. Eval.

PMC TO GPC
CONNECTION EVALUATION

ENGINEERING NOTE

FILE NO.

PAGE

1

SUBJECT

NFS

NAME

TAN

PMC to GPC Connection

DATE

Load Resisting Mechanisms

1. Dowel Action
2. Shear Friction
3. Bar tension

*Applied Load**CASE 1 Element Mid-Side Shear Stresses**Resolve two directional response into resultant*

a) Forces

b) Assumed Pressure Distribution on bar

c) Moments

For Equilibrium:

$$V_{dowel} = \frac{f'_c d l}{2}$$

d = bar dia

or $l = \frac{2V_d}{f'_c d}$ check to see if $l \leq L_{bar}$

Hence, M_{max} in bar: assuming

$$M_{max} = 0.064 f'_c d l^2$$

$$= \frac{0.256 V_d^2}{f'_c d}$$

up to yield: $M = S \cdot f_y$

$$\frac{0.256 V_d^2}{f'_c d} = \frac{\pi d^3}{32} f_y$$

giving $V_d = 0.62 d^2 \sqrt{f_y f'_c}$ load to initiate crushing @ shear plane

$$f_y = 60 \text{ ksi}$$

$$f'_c = 3 \text{ ksi}$$

$$V_d = 8.32 d^2 \text{ kips}$$

$$\#9 \quad d = 1.128" \quad V_d = 10.6 \text{ K/dowel}$$

$$\#10 \quad d = 1.270" \quad V_d = 13.4 \text{ K/dowel}$$

$$\text{check } \ell = \frac{2 \times 10.56}{3 \times 1.270} = 5.55 \text{ in} \quad \text{ok}$$

$$\#10 \quad \frac{13.4 \text{ K}}{1.27 \text{ in}} = 10.6 \text{ ksi in shear (avg)}$$

$$\#9 \quad \frac{10.6}{1.0} = 10.6 \text{ ksi in shear (avg)}$$

Embedment to develop #10 $\ell_d = 0.04 A_b f_y / \sqrt{f'_c}$

$$= \frac{0.04 (1.27) 60000}{54.77} = 55.6" = \underline{\underline{4.6'}}$$

< 50' 0"

NFS

4

SHEAR FRICTION

$$\text{Max. } v_u \leq .2 f'_c = 600 \text{ psi}$$

$$\text{ACI } 11.15 \text{ (2800 OK)}$$

$$A_{vf} = \frac{V_u}{\phi f_u \mu}$$

$$\mu = 1.0 \text{ for constn. joint}$$

Bar Layout over Effective Area

5

1/8" = 1'-0"

SECTION LOOKING SOUTH

15A-Q-6 sect 1

15A-Q-11 sect 5

SECTION LOOKING WEST
(ISA-Q-5)

1/8" = 1'-0"
2'

$$26 + 33 = 59 \text{ ea}$$
$$59 \times 13.4^{\circ} \text{K} = 791^{\circ} \text{K}$$
$$13 + 12 + 4 = 29 \text{ ea}$$
$$29 \times 10.6^{\circ} \text{K} = \frac{307^{\circ} \text{K}}{1098^{\circ} \text{K}}$$

$\frac{1}{2}$ diag $\nearrow$

Total Dowel force $\approx \underline{1100 \text{ kips}}$

ACI 11-15

$$V_u = 600 \text{ psi} \times A_g = \quad A_g = -16 + 5.5'(18.5 + 12 + 17.5) = 248 \text{ ft}^2$$

$$V_u = 600 \times 248 (144) \approx 21,400 \text{ KIPS} \leftarrow \text{potential on conc. section}$$

$$A_{vf} = 59 \times 1.27 \text{ in}^2 + 29 \times 1.00 \text{ in}^2 = 104 \text{ in}^2$$

N-S walls

$$+ 33 \times 1.00 \text{ in}^2 = 33 \text{ in}^2$$

E-W wall

137 in.²

$$V_u (\text{steel}) = A_{vf} \phi f_y \mu$$

 $\mu = 1.0$

say $\phi = 1.0$

$$= 137 \text{ in}^2 \cdot 60 = \underline{8220 \text{ kips}}$$

$$47 \times 1.00 \text{ in}^2 \times 60 \text{ ksi} = 2820 \text{ Kips}$$

TOTAL CAPACITY = 12,140 KIPS

E-W directionDowel Action E-W wall only

$$\#9 \quad 33 \times 10.6 \text{ K} = \underline{350 \text{ K}}$$

Shear Frictionwalls - 8220 Kips

slab/slab interface

$$V_u(\text{con}) = 600 \times 3.5' \times 23' \times 144 = 6,950 \text{ Kips}$$

$$V_u(\text{steel}) = A_v f \phi f_y \mu = 47 \text{ in}^2 \times 60 \text{ Ksi} = \underline{2,820 \text{ Kips}}$$

$$\text{TOTAL} = \underline{11,390 \text{ Kips}} \quad \leftarrow \text{critical Direction}$$

APPLIED STRESSES

CASE 1

10

(Min Pile - Max Soil)

Worst case

$$t = 5.5' \quad A = 82.5 \text{ ft}^2$$

$$L = 15'$$

Node 3 V-stress = 12.916 KSF =

UV stress = 8.6307 KSF

U-stress = 2.2135 KSF

$$A = 82.5 \text{ ft}^2$$

$$V-S3 = 7.0817 \text{ KSF}$$

$$UV-S3 = \underline{7.8729 \text{ KSF}}$$

$$U-S3 = 1.2105 \text{ KSF}$$

TYPE 6

$$170 \quad XX-S/R = 8.8525 \text{ KSF}$$

$$172 \quad XX-S/R = \underline{29.988 \text{ KSF}}$$

$$XY-S/R = \underline{19.462 \text{ KSF}}$$

$$t = 3.5'$$

$$L = 18.67' \quad A = 65.33 \text{ ft}^2$$

TYPE 3

$$t = 5.5 \quad A = 102.67 \text{ ft}^2$$

$$L = 18.67$$

$$UV-S3 = 13.924 \text{ KSF}$$

$$U-S3 = 1.0793$$

APPLIED LOAD

CASE 1

N-S Direction

Element 248	$8.6307 \text{ KSF} \times 82.5 \text{ ft}^2 = 712 \text{ K}$	shear
Element 252	$7.8729 \text{ KSF} \times 82.5 \text{ ft}^2 = 650 \text{ K}$	shear
Element 172	$29.988 \text{ KSF} \times 65.33 \text{ ft}^2 = \underline{1959 \text{ K}}$	tension

$$\underline{\underline{\text{TOTAL} = 3321 \text{ K}}}$$

E-W Direction

Element 247	$13.924 \times 102.67 \text{ ft}^2 = 1430$	shear
Element 172	$19.462 \text{ KSF} \times 65.33 \text{ ft}^2 = \underline{1271}$	shear

$$\underline{\underline{\text{TOTAL} = 2701 \text{ K}}}$$

Vertical (tension)

247	$1.0793 \text{ KSF} \times 102.67 \text{ ft}^2 = 111 \text{ K}$
248	$2.2135 \text{ KSF} \times 82.5 \text{ ft}^2 = 183 \text{ K}$
252	$1.2105 \text{ KSF} \times 82.5 \text{ ft}^2 = \underline{100 \text{ K}}$

$$\underline{\underline{\text{TOTAL} = 393 \text{ K}}}$$

$$\div 137 \text{ in}^2 = 2.9 \text{ ksi}$$

$$\text{Leaves } 57 \text{ ksi} \times 137 \text{ in}^2 = 7827 \text{ K}$$

COMPARISON OF CAPACITY TO LOAD

Tension reduces shear friction capacity

$$\text{walls} \quad 8220^{\text{K}} - 393^{\text{K}} = 7827^{\text{K}}$$

$$\text{slab} \quad 2820^{\text{K}} - 1959 = 861^{\text{K}}$$

$$\text{Total} \quad \underline{\underline{8688^{\text{K}} - \text{E-W direction}}}$$

Resultant applied force

$$= ((3321)^2 + (2701)^2)^{1/2} = \underline{\underline{4281^{\text{K}}}}$$

∴ Capacity in weakest direction is adequate
to withstand resultant load.

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