LAMPIRAN

UNIVERSITAS ISLAM INDONESIA
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
JURUSAN TEKNIK SIPIL
Jl. Kaliurang Km. 14,4 Telp. 95330 Yogyakarta

KARTU PESERTA TUGAS AKHIR

No.	Nama	No. Mhs.	N.I.R.M.	Bidang Studi
1.	ASRI NUR RACHMAWATI	94 310 083		STRUKTUR
2.	LENNI DEWITA WIDIAWATI	94 310 143		STRUKTUR

UDUL TUGAS AKHIR : ANALISA DAN DESAIN TINGGI DINDING GESER TERHADAP BEBAN
LATERAL.

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....
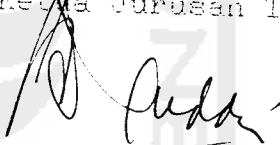
)osen Pembimbing I : IR. H. SUHARTRAWAN JR
)osen Pembimbing II : IR. H. ILMAN NOOR MHSC

1	2

Yogyakarta, 18 PEB 1999
An. Dekan,
Ketua Jurusan Teknik Sipil.

IR.H.TADJUDDIN BM ARIS. MS

CATATAN - KONSULTASI

No.	Tanggal	Konsultasi ke :	KETERANGAN	Paraf
	$22/3$		*perbaiki pembebanan*	
	$29/3$		*u*	
	$1/4$		*lanjutkan*	
	$7/4$		*-"-*	
	$4/5$		*lanjutkan pembahasan pert. kesimpulan & saran*	
	$17/5$		*Acc, lanjutkan ke bab. 5*	
	$20/5$			
	$26/5$			
	$2/6$ 99		*Acc*	
	$9/8-99$		*Acc perbaikan*	

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

J O I N T   D I S P L A C E M E N T S

LOAD COMBINATION 1 -   DISPLACEMENTS "U" AND ROTATIONS "R"

JOINT	U(X)	U(Z)	R(Y)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.8170E-03	-.4258E-04	.4522E-03
6	.8170E-03	.9060E-03	.3950E-03
7	.000817	-.001162	.000402
8	.8170E-03	-.5586E-03	.2893E-03
9	.002678	-.000066	.000660
10	.002678	.001653	.000661
11	.002678	-.002145	.000664
12	.002678	-.001083	.000538
13	.005362	-.000076	.000856
14	.005362	.002244	.000897
15	.005362	-.002949	.000903
16	.005362	-.001567	.000731
17	.008707	-.000078	.001004
18	.008707	.002694	.001073
19	.008707	-.003591	.001078
20	.008707	-.002008	.000885
21	.012548	-.000074	.001113
22	.012548	.003017	.001206
23	.012548	-.004084	.001212
24	.012548	-.002401	.000997
25	.016744	-.000067	.001188
26	.016744	.003228	.001296
27	.016744	-.004444	.001304
28	.016744	-.002746	.001075
29	.021167	-.000060	.001233
30	.021167	.003346	.001354
31	.021167	-.004688	.001359
32	.021167	-.003040	.001123
33	.025711	-.000053	.001252
34	.025711	.003387	.001378
35	.025711	-.004834	.001388
36	.025711	-.003284	.001144
37	.030290	-.000046	.001254
38	.030290	.003374	.001387
39	.030290	-.004904	.001388
40	.030290	-.003476	.001149
41	.034839	-.000041	.001231
42	.034839	.003328	.001367
43	.034839	-.004919	.001384
44	.034839	-.003617	.001124
45	.039325	-.000035	.001264
46	.039325	.003273	.001367
47	.039325	-.004902	.001359
48	.039325	-.003707	.001168
49	.043720	-.000030	.000973
50	.043720	.003243	.001315
51	.043720	-.004888	.001347
52	.043720	-.003747	.000839

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	MOMENT	AXIAL TORQ
1								
	1	-14.14						
			.0	-1.11	7.93			
			1.6	-1.11	6.13			
			3.3	-1.11	4.34			
2								
	1	300.91						
			.0	-2.36	9.19			
			1.6	-2.36	5.36			
			3.3	-2.36	1.52			
3								
	1	-386.07						
			.0	-2.20	9.03			
			1.6	-2.20	5.46			
			3.3	-2.20	1.89			
4								
	1	-185.53						
			.0	-4.67	11.51			
			1.6	-4.67	3.92			
			3.3	-4.67	-3.66			
5								
	1	-7.83						
			.0	-.72	3.98			
			1.6	-.72	2.82			
			3.3	-.72	1.66			
6								
	1	248.21						
			.0	-1.95	6.78			
			1.6	-1.95	3.61			
			3.3	-1.95	.44			
7								
	1	-326.27						
			.0	-1.71	6.34			
			1.6	-1.71	3.55			
			3.3	-1.71	.77			
8								
	1	-174.04						
			.0	-6.95	14.67			
			1.6	-6.95	3.37			
			3.3	-6.95	-7.93			
9								
	1	-3.34						
			.0	-2.97	7.48			
			1.6	-2.97	2.66			
			3.3	-2.97	-2.17			
10								
	1	196.04						
			.0	-2.06	6.55			
			1.6	-2.06	3.20			
			3.3	-2.06	-.15			
11								
	1	-266.97						

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	MOMENT	AXIAL TORQ
			.0	-1.85	6.24			
			1.6	-1.85	3.24			
			3.3	-1.85	.23			
12								
	1	-160.86						
			.0	-8.38	16.23			
			1.6	-8.38	2.62			
			3.3	-8.38	-11.00			
13								
	1	-.43						
			.0	-4.34	9.05			
			1.6	-4.34	2.01			
			3.3	-4.34	-5.04			
14								
	1	149.49						
			.0	-1.95	5.55			
			1.6	-1.95	2.39			
			3.3	-1.95	-.78			
15								
	1	-213.25						
			.0	-1.68	5.11			
			1.6	-1.68	2.38			
			3.3	-1.68	-.36			
16								
	1	-146.32						
			.0	-9.68	17.82			
			1.6	-9.68	2.09			
			3.3	-9.68	-13.64			
17								
	1	1.30						
			.0	-5.39	10.24			
			1.6	-5.39	1.48			
			3.3	-5.39	-7.28			
18								
	1	107.23						
			.0	-1.86	4.84			
			1.6	-1.86	1.81			
			3.3	-1.86	-1.22			
19								
	1	-163.78						
			.0	-1.61	4.43			
			1.6	-1.61	1.81			
			3.3	-1.61	-.81			
20								
	1	-130.76						
			.0	-10.53	18.64			
			1.6	-10.53	1.53			
			3.3	-10.53	-15.59			
21								
	1	2.15						
			.0	-6.13	10.98			
			1.6	-6.13	1.02			

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE		1-3 PLANE		AXIAL
				SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			3.2	-6.13	-8.95			
22								
	1	70.31						
			.0	-1.74	4.05			
			1.6	-1.74	1.22			
			3.2	-1.74	-1.61			
23								
	1	-119.63						
			.0	-1.45	3.60			
			1.6	-1.45	1.25			
			3.2	-1.45	-1.10			
24								
	1	-114.49						
			.0	-11.13	19.15			
			1.6	-11.13	1.06			
			3.2	-11.13	-17.03			
25								
	1	2.42						
			.0	-6.59	11.31			
			1.6	-6.59	.60			
			3.3	-6.59	-10.11			
26								
	1	38.98						
			.0	-1.57	3.34			
			1.6	-1.57	.79			
			3.3	-1.57	-1.76			
27								
	1	-81.03						
			.0	-1.30	2.85			
			1.6	-1.30	.74			
			3.3	-1.30	-1.37			
28								
	1	-97.76						
			.0	-11.45	19.26			
			1.6	-11.45	.64			
			3.3	-11.45	-17.97			
29								
	1	2.34						
			.0	-6.82	11.34			
			1.6	-6.82	.26			
			3.3	-6.82	-10.81			
30								
	1	13.88						
			.0	-1.41	2.61			
			1.6	-1.41	.32			
			3.3	-1.41	-1.98			
31								
	1	-48.64						
			.0	-1.08	2.15			
			1.6	-1.08	.40			
			3.3	-1.08	-1.35			

ANALISA PORTAL SHEAR WALL

(LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	MOMENT	AXIAL TORQ
32								
	1	-80.80						
			.0	-11.58	19.10			
			1.6	-11.58	.29			
			3.3	-11.58	-18.53			
33								
	1	2.12						
			.0	-6.82	11.11			
			1.6	-6.82	.02			
			3.3	-6.82	-11.06			
34								
	1	-4.48						
			.0	-1.15	2.00			
			1.6	-1.15	.13			
			3.3	-1.15	-1.74			
35								
	1	-22.99						
			.0	-.89	1.45			
			1.6	-.89	.00			
			3.3	-.89	-1.45			
36								
	1	-63.78						
			.0	-11.48	18.72			
			1.6	-11.48	.06			
			3.3	-11.48	-18.60			
37								
	1	1.89						
			.0	-6.89	10.88			
			1.6	-6.89	-.31			
			3.3	-6.89	-11.50			
38								
	1	-15.21						
			.0	-.98	1.32			
			1.6	-.98	-.28			
			3.3	-.98	-1.87			
39								
	1	-4.93						
			.0	-.59	.89			
			1.6	-.59	-.06			
			3.3	-.59	-1.01			
40								
	1	-46.84						
			.0	-11.52	18.39			
			1.6	-11.52	-.33			
			3.3	-11.52	-19.06			
41								
	1	1.80						
			.0	-5.81	9.90			
			1.6	-5.81	.45			
			3.3	-5.81	-9.00			
42								
	1	-18.22						

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

| ELT | LOAD | AXIAL | DIST | 1-2 PLANE | | 1-3 PLANE | | AXIAL |
ID	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			.0	-.58	.94			
			1.6	-.58	.00			
			3.3	-.58	-.95			
43								
	1	5.40						
			.0	-.38	.29			
			1.6	-.38	-.34			
			3.3	-.38	-.96			
44								
	1	-30.07						
			.0	-10.26	17.27			
			1.6	-10.26	.59			
			3.3	-10.26	-16.08			
45								
	1	1.68						
			.0	-10.22	12.67			
			1.6	-10.22	-3.95			
			3.3	-10.22	-20.56			
46								
	1	-10.17						
			.0	-.48	.09			
			1.6	-.48	-.70			
			3.3	-.48	-1.49			
47								
	1	4.69						
			.0	.03	-.21			
			1.6	.03	-.17			
			3.3	.03	-.12			
48								
	1	-13.33						
			.0	-15.27	20.36			
			1.6	-15.27	-4.46			
			3.3	-15.27	-29.28			
53								
	1	.00						
			.0	-6.31	.35			
			3.5	2.93	-5.57			
			7.0	12.16	20.83			
54								
	1	.00						
			.0	-7.54	6.80			
			3.0	.38	-3.93			
			6.0	8.30	9.08			
55								
	1	.00						
			.0	-6.97	2.50			
			3.5	2.26	-5.74			
			7.0	11.50	18.33			
56								
	1	.00						
			.0	-4.49	-5.82			
			3.5	4.74	-5.38			

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	MOMENT	AXIAL TORQ
			7.0	13.98	27.38			
57								
	1	.00						
			.0	-7.71	7.30			
			3.0	.21	-3.95			
			6.0	8.12	8.55			
58								
	1	.00						
			.0	-5.29	-3.42			
			3.5	3.94	-5.78			
			7.0	13.17	24.17			
59								
	1	.00						
			.0	-2.91	-11.22			
			3.5	6.32	-5.26			
			7.0	15.56	33.02			
60								
	1	.00						
			.0	-7.67	7.21			
			3.0	.24	-3.93			
			6.0	8.16	8.67			
61								
	1	.00						
			.0	-3.93	-8.35			
			3.5	5.31	-5.93			
			7.0	14.54	28.81			
62								
	1	.00						
			.0	-1.73	-15.28			
			3.5	7.51	-5.17			
			7.0	16.74	37.26			
63								
	1	.00						
			.0	-7.72	7.34			
			3.0	.20	-3.94			
			6.0	8.11	8.53			
64								
	1	.00						
			.0	-2.91	-11.96			
			3.5	6.32	-6.00			
			7.0	15.56	32.29			
65								
	1	.00						
			.0	-.85	-18.27			
			3.5	8.38	-5.09			
			7.0	17.61	40.40			
66								
	1	.00						
			.0	-7.73	7.39			
			3.0	.18	-3.94			
			6.0	8.10	8.48			

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	MOMENT	AXIAL TORQ
67								
	1	.00						
			.0	-2.19	-14.54			
			3.5	7.04	-6.06			
			7.0	16.27	34.74			
68								
	1	.00						
			.0	-.27	-20.26			
			3.5	8.97	-5.05			
			7.0	18.20	42.49			
69								
	1	.00						
			.0	-7.76	7.49			
			3.0	.15	-3.93			
			6.0	8.07	8.39			
70								
	1	.00						
			.0	-1.74	-16.18			
			3.5	7.50	-6.11			
			7.0	16.73	36.29			
71								
	1	.00						
			.0	.08	-21.45			
			3.5	9.32	-5.00			
			7.0	18.55	43.76			
72								
	1	.00						
			.0	-7.79	7.56			
			3.0	.12	-3.94			
			6.0	8.04	8.30			
73								
	1	.00						
			.0	-1.51	-17.01			
			3.5	7.73	-6.13			
			7.0	16.96	37.07			
74								
	1	.00						
			.0	.22	-21.92			
			3.5	9.45	-4.99			
			7.0	18.69	44.26			
75								
	1	.00						
			.0	-7.83	7.69			
			3.0	.09	-3.92			
			6.0	8.00	8.22			
76								
	1	.00						
			.0	-1.45	-17.25			
			3.5	7.79	-6.16			
			7.0	17.02	37.25			
77								
	1	.00						

ANALISA PORTAL SHEAR WALL

F R A M E   E L E M E N T   F O R C E S

R C E	1-2		ELT	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
	HEAR		ID	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
	5.62					.0	.23	-21.95			
						3.5	9.47	-4.97			
						7.0	18.70	44.33			
	.18		78								
	5.57			1	.00						
	8.33					.0	-7.86	7.74			
						3.0	.06	-3.95			
						6.0	7.97	8.09			
			79								
				1	.00						
						.0	-1.53	-16.96			
						3.5	7.71	-6.14			
						7.0	16.94	36.99			
			80								
				1	.00						
						.0	.08	-21.41			
						3.5	9.32	-4.96			
						7.0	18.55	43.81			
			81								
				1	.00						
						.0	-7.91	7.95			
						3.0	.01	-3.90			
						6.0	7.92	8.00			
			82								
				1	.00						
						.0	-1.70	-16.42			
						3.5	7.54	-6.21			
						7.0	16.77	36.33			
			83								
				1	.00						
						.0	.13	-21.66			
						3.5	9.36	-5.06			
						7.0	18.59	43.86			
			84								
				1	.00						
						.0	-7.91	7.87			
						3.0	.00	-3.99			
						6.0	7.92	7.90			
			85								
				1	.00						
						.0	-1.73	-16.10			
						3.5	7.51	-5.99			
						7.0	16.74	36.44			
			86								
				1	.00						
						.0	1.68	-20.56			
						3.5	8.44	-2.86			
						7.0	15.19	38.49			
			87								
				1	.00						
						.0	-5.96	6.41			
						3.0	-.17	-2.78			

dg1
UNDEFORMED
SHAPE

OPTIONS
JOINT IDS
ELEMENT IDS
WIRE FRAME

SAP90

ISLAM INDONESIA
UNIVERSITAS

Z

X

dg1
UNDEFORMED
SHAPE

OPTIONS
HIDDEN LINES

SAP90

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
ID	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			6.0	5.62	5.40			
88								
	1	.00						
			.0	-.18	-16.72			
			3.5	6.57	-5.54			
			7.0	13.33	29.28			

Z
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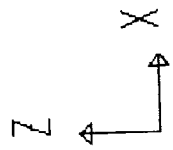
dgl

JOINT
LOADS

LOAD   3

MINIMA
P .3699E+01
MAXIMA
P .4069E+02

SAP90

dg1
DEFORMED
SHAPE
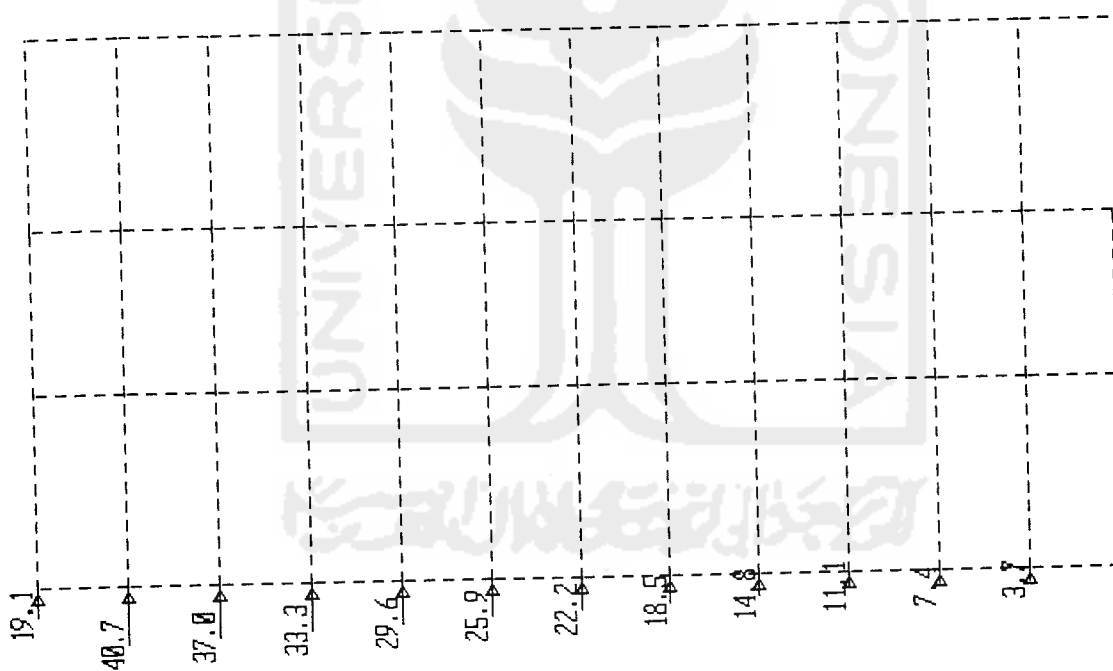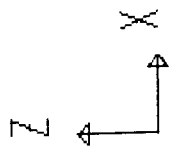
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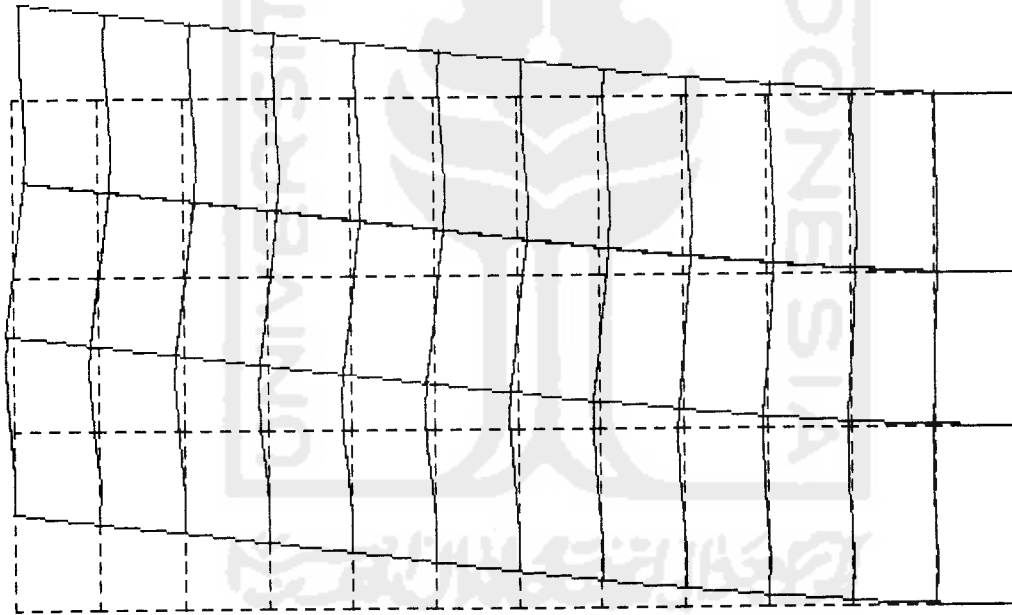
MINIMA
X .0000E+00
Y .0000E+00
Z -.4919E-02
MAXIMA
X .4372E-01
Y .0000E+00
Z .3387E-02

SAP90

Z
X

Z
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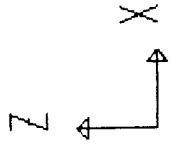
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FRAME
OUTPUT M33
LOAD   1

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AT   7.00

SAP90
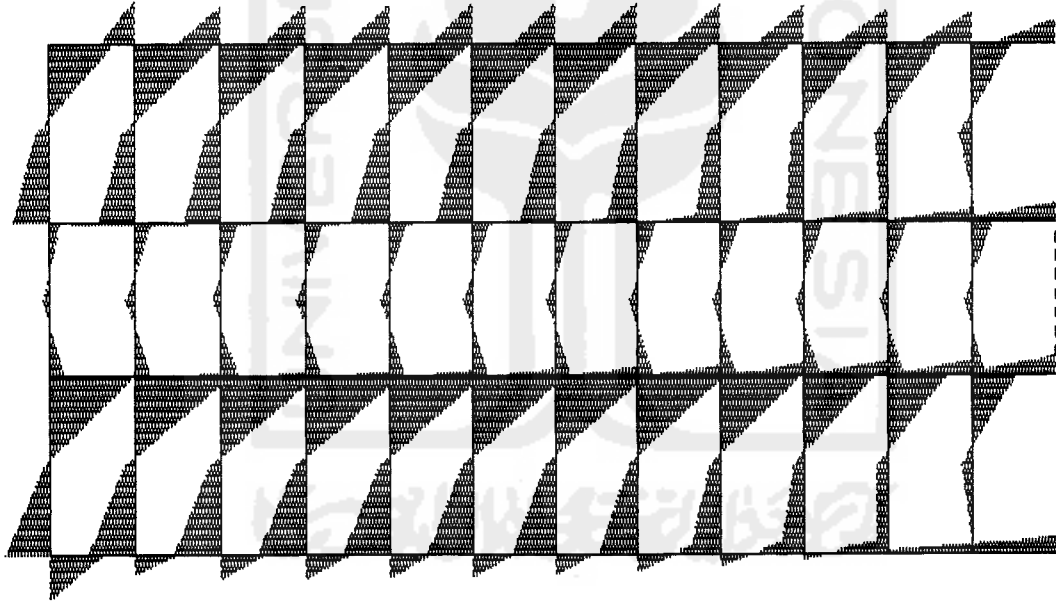
ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

J O I N T   D I S P L A C E M E N T S

LOAD COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

JOINT	U(X)	U(Z)	R(Y)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.6761E-03	-.8355E-04	.3879E-03
6	.6761E-03	.7237E-03	.3251E-03
7	.6761E-03	-.9794E-03	.3329E-03
8	.6761E-03	-.5209E-03	.2250E-03
9	.002211	-.000147	.000555
10	.002211	.001316	.000544
11	.002211	-.001806	.000547
12	.002211	-.001009	.000433
13	.004419	-.000194	.000715
14	.004419	.001779	.000735
15	.004419	-.002482	.000743
16	.004419	-.001459	.000590
17	.007165	-.000229	.000834
18	.007165	.002126	.000879
19	.007165	-.003021	.000883
20	.007165	-.001869	.000716
21	.010311	-.000256	.000922
22	.010311	.002369	.000984
23	.010311	-.003433	.000994
24	.010311	-.002236	.000806
25	.013737	-.000275	.000977
26	.013737	.002520	.001057
27	.013737	-.003732	.001060
28	.013737	-.002558	.000866
29	.017341	-.000289	.001027
30	.017341	.002594	.001100
31	.017341	-.003932	.001113
32	.017341	-.002834	.000917
33	.021022	-.000299	.000953
34	.021022	.002610	.001110
35	.021022	-.004051	.001107
36	.021022	-.003064	.000847
37	.024748	-.000303	.001391
38	.024748	.002572	.001143
39	.024748	-.004095	.001165
40	.024748	-.003249	.001287
41	.030914	-.000306	.001732
42	.030914	.002364	.001574
43	.030914	-.004183	.001655
44	.030914	-.003385	.001618
45	.036399	-.000314	.001234
46	.036399	.002228	.001125
47	.036399	-.004234	.001180
48	.036399	-.003465	.001133
49	.039708	-.000318	.000692
50	.039708	.002167	.000686
51	.039708	-.004253	.000809
52	.039708	-.003498	.000533

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT LOAD	AXIAL DIST	1-2 PLANE		1-3 PLANE		AXIAL
ID COMB	FORCE ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
1 -------						
1 -27.75						
	.0	-.62	6.26			
	1.6	-.62	5.26			
	3.3	-.62	4.26			
2 -------						
1 240.35						
	.0	-1.99	7.64			
	1.6	-1.99	4.41			
	3.3	-1.99	1.18			
3 -------						
1 -325.28						
	.0	-1.82	7.47			
	1.6	-1.82	4.51			
	3.3	-1.82	1.56			
4 -------						
1 -173.02						
	.0	-4.18	9.84			
	1.6	-4.18	3.05			
	3.3	-4.18	-3.74			
5 -------						
1 -20.98						
	.0	-.04	2.32			
	1.6	-.04	2.26			
	3.3	-.04	2.20			
6 -------						
1 196.83						
	.0	-1.65	5.64			
	1.6	-1.65	2.97			
	3.3	-1.65	.29			
7 -------						
1 -274.66						
	.0	-1.42	5.20			
	1.6	-1.42	2.90			
	3.3	-1.42	.59			
8 -------						
1 -161.98						
	.0	-6.27	13.01			
	1.6	-6.27	2.81			
	3.3	-6.27	-7.38			
9 -------						
1 -15.72						
	.0	-1.95	5.35			
	1.6	-1.95	2.17			
	3.3	-1.95	-1.00			
10 -------						
1 153.72						
	.0	-1.74	5.43			
	1.6	-1.74	2.60			
	3.3	-1.74	-.24			
11 -------						
1 -224.43						

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE		1-3 PLANE		AXIAL
				SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			.0	-1.52	5.13			
			1.6	-1.52	2.66			
			3.3	-1.52	.20			
12	1	-149.59						
			.0	-7.36	14.09			
			1.6	-7.36	2.14			
			3.3	-7.36	-9.82			
13	1	-11.75						
			.0	-3.07	6.61			
			1.6	-3.07	1.62			
			3.3	-3.07	-3.37			
14	1	115.35						
			.0	-1.64	4.62			
			1.6	-1.64	1.95			
			3.3	-1.64	-.71			
15	1	-178.88						
			.0	-1.39	4.16			
			1.6	-1.39	1.90			
			3.3	-1.39	-.36			
16	1	-136.10						
			.0	-8.40	15.35			
			1.6	-8.40	1.70			
			3.3	-8.40	-11.95			
17	1	-8.76						
			.0	-3.93	7.57			
			1.6	-3.93	1.19			
			3.3	-3.93	-5.19			
18	1	80.53						
			.0	-1.58	3.99			
			1.6	-1.58	1.42			
			3.3	-1.58	-1.15			
19	1	-136.85						
			.0	-1.30	3.61			
			1.6	-1.30	1.50			
			3.3	-1.30	-.61			
20	1	-121.82						
			.0	-9.06	15.95			
			1.6	-9.06	1.23			
			3.3	-9.06	-13.49			
21	1	-6.48						
			.0	-4.57	8.17			
			1.6	-4.57	.75			

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	MOMENT	AXIAL TORQ
			3.2	-4.57	-6.67			
22								
	1	50.34						
			.0	-1.46	3.36			
			1.6	-1.46	.99			
			3.2	-1.46	-1.39			
23								
	1	-99.43						
			.0	-1.21	2.86			
			1.6	-1.21	.90			
			3.2	-1.21	-1.07			
24								
	1	-106.98						
			.0	-9.55	16.32			
			1.6	-9.55	.80			
			3.2	-9.55	-14.71			
25								
	1	-4.66						
			.0	-4.66	8.25			
			1.6	-4.66	.67			
			3.3	-4.66	-6.90			
26								
	1	24.51						
			.0	-1.33	2.73			
			1.6	-1.33	.58			
			3.3	-1.33	-1.58			
27								
	1	-66.33						
			.0	-.99	2.33			
			1.6	-.99	.72			
			3.3	-.99	-.88			
28								
	1	-91.83						
			.0	-9.51	16.16			
			1.6	-9.51	.70			
			3.3	-9.51	-14.76			
29								
	1	-3.15						
			.0	-6.23	9.12			
			1.6	-6.23	-1.00			
			3.3	-6.23	-11.12			
30								
	1	5.17						
			.0	-1.21	2.10			
			1.6	-1.21	.14			
			3.3	-1.21	-1.82			
31								
	1	-39.70						
			.0	-.98	1.52			
			1.6	-.98	-.08			
			3.3	-.98	-1.67			

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
32								
	1	-76.46						
			.0	-10.97	16.86			
			1.6	-10.97	-.96			
			3.3	-10.97	-18.78			
33								
	1	-1.49						
			.0	1.12	4.12			
			1.6	1.12	5.93			
			3.3	1.12	7.75			
34								
	1	-12.62						
			.0	-.88	1.87			
			1.6	-.88	.44			
			3.3	-.88	-.98			
35								
	1	-14.60						
			.0	-.44	1.51			
			1.6	-.44	.79			
			3.3	-.44	.07			
36								
	1	-61.38						
			.0	-3.50	11.65			
			1.6	-3.50	5.97			
			3.3	-3.50	.28			
37								
	1	-1.04						
			.0	-14.68	28.49			
			1.6	-14.68	4.63			
			3.3	-14.68	-19.22			
38								
	1	-69.08						
			.0	-23.57	44.14			
			1.6	-23.57	5.85			
			3.3	-23.57	-32.45			
39								
	1	-28.93						
			.0	-21.29	41.24			
			1.6	-21.29	6.65			
			3.3	-21.29	-27.95			
40								
	1	-45.09						
			.0	-19.45	36.11			
			1.6	-19.45	4.50			
			3.3	-19.45	-27.12			
41								
	1	-2.45						
			.0	-8.94	7.77			
			1.6	-8.94	-6.75			
			3.3	-8.94	-21.28			
42								
	1	-44.98						

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

| ELT | LOAD | AXIAL | DIST | 1-2 PLANE | | 1-3 PLANE | | AXIAL |
ID	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			.0	-14.79	17.95			
			1.6	-14.79	-6.09			
			3.3	-14.79	-30.13			
43								
	1	-17.25						
			.0	-11.81	12.75			
			1.6	-11.81	-6.45			
			3.3	-11.81	-25.64			
44								
	1	-26.70						
			.0	-13.66	15.61			
			1.6	-13.66	-6.59			
			3.3	-13.66	-28.79			
45								
	1	-1.29						
			.0	-2.40	-3.45			
			1.6	-2.40	-7.36			
			3.3	-2.40	-11.26			
46								
	1	-20.28						
			.0	-4.92	2.04			
			1.6	-4.92	-5.95			
			3.3	-4.92	-13.94			
47								
	1	-6.20						
			.0	-1.02	-3.36			
			1.6	-1.02	-5.03			
			3.3	-1.02	-6.69			
48								
	1	-10.83						
			.0	-8.10	5.03			
			1.6	-8.10	-8.13			
			3.3	-8.10	-21.29			
53								
	1	.00						
			.0	-6.76	1.93			
			3.5	2.47	-5.58			
			7.0	11.70	19.22			
54								
	1	.00						
			.0	-7.60	6.99			
			3.0	.32	-3.93			
			6.0	8.23	8.90			
55								
	1	.00						
			.0	-7.43	4.12			
			3.5	1.80	-5.73			
			7.0	11.04	16.74			
56								
	1	.00						
			.0	-5.27	-3.15			
			3.5	3.97	-5.42			

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			7.0	13.20	24.63			
57								
	1	.00						
			.0	-7.74	7.40			
			3.0	.17	-3.95			
			6.0	8.09	8.45			
58								
	1	.00						
			.0	-6.08	-.64			
			3.5	3.16	-5.75			
			7.0	12.39	21.47			
59								
	1	.00						
			.0	-3.96	-7.61			
			3.5	5.27	-5.32			
			7.0	14.50	29.28			
60								
	1	.00						
			.0	-7.71	7.33			
			3.0	.20	-3.93			
			6.0	8.12	8.56			
61								
	1	.00						
			.0	-4.98	-4.60			
			3.5	4.25	-5.87			
			7.0	13.49	25.18			
62								
	1	.00						
			.0	-2.99	-10.95			
			3.5	6.25	-5.24			
			7.0	15.48	32.78			
63								
	1	.00						
			.0	-7.75	7.44			
			3.0	.16	-3.94			
			6.0	8.08	8.42			
64								
	1	.00						
			.0	-4.19	-7.41			
			3.5	5.04	-5.91			
			7.0	14.28	27.90			
65								
	1	.00						
			.0	-2.28	-13.36			
			3.5	6.95	-5.19			
			7.0	16.19	35.30			
66								
	1	.00						
			.0	-7.76	7.48			
			3.0	.16	-3.92			
			6.0	8.07	8.41			

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	MOMENT	AXIAL TORQ
67								
	1	.00						
			.0	-3.63	-9.44			
			3.5	5.61	-5.98			
			7.0	14.84	29.80			
68								
	1	.00						
			.0	-1.82	-14.93			
			3.5	7.41	-5.14			
			7.0	16.65	36.98			
69								
	1	.00						
			.0	-7.80	7.58			
			3.0	.12	-3.95			
			6.0	8.03	8.27			
70								
	1	.00						
			.0	-3.32	-10.54			
			3.5	5.92	-6.00			
			7.0	15.15	30.87			
71								
	1	.00						
			.0	-1.51	-16.02			
			3.5	7.72	-5.16			
			7.0	16.96	38.03			
72								
	1	.00						
			.0	-7.78	7.57			
			3.0	.13	-3.91			
			6.0	8.05	8.36			
73								
	1	.00						
			.0	-3.10	-11.31			
			3.5	6.13	-6.00			
			7.0	15.37	31.62			
74								
	1	.00						
			.0	-1.66	-15.24			
			3.5	7.57	-4.89			
			7.0	16.81	37.78			
75								
	1	.00						
			.0	-7.93	7.93			
			3.0	-.01	-3.97			
			6.0	7.91	7.87			
76								
	1	.00						
			.0	-3.38	-10.53			
			3.5	5.85	-6.21			
			7.0	15.09	30.43			
77								
	1	.00						

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT	LOAD	AXIAL	DIST	1-2 PLANE			1-3 PLANE		AXIAL
ID	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			.0	-.45	-20.74			
			3.5	8.78	-6.17			
			7.0	18.01	40.72			
78								
	1	.00						
			.0	-7.61	7.09			
			3.0	.30	-3.87			
			6.0	8.22	8.91			
79								
	1	.00						
			.0	-2.18	-13.52			
			3.5	7.05	-5.01			
			7.0	16.28	35.83			
80								
	1	.00						
			.0	1.41	-27.00			
			3.5	10.65	-5.89			
			7.0	19.88	47.55			
81								
	1	.00						
			.0	-4.22	-2.86			
			3.0	3.69	-3.66			
			6.0	11.61	19.28			
82								
	1	.00						
			.0	-.07	-21.41			
			3.5	9.16	-5.50			
			7.0	18.40	42.73			
83								
	1	.00						
			.0	-1.16	-17.83			
			3.5	8.07	-5.73			
			7.0	17.31	38.69			
84								
	1	.00						
			.0	-7.38	6.52			
			3.0	.53	-3.76			
			6.0	8.45	9.71			
85								
	1	.00						
			.0	-2.61	-12.57			
			3.5	6.63	-5.54			
			7.0	15.86	33.82			
86								
	1	.00						
			.0	-1.29	-11.26			
			3.5	5.46	-3.96			
			7.0	12.22	26.99			
87								
	1	.00						
			.0	-8.06	13.06			
			3.0	-2.27	-2.44			

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
ID	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			6.0	3.52	-.57			
88	------	------	-----	-------	-------			
	1	.00						
			.0	-2.68	-7.26			
			3.5	4.08	-4.81			
			7.0	10.83	21.29			
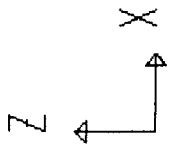
SAP90

Z
X

DG2
UNDEFORMED
SHAPE

OPTIONS
JOINT IDS
ELEMENT IDS
WIRE FRAME

Z

X

DG2
UNDEFORMED
SHAPE

OPTIONS
HIDDEN LINES

SAP90

Z
X

DG2

JOINT
LOADS

LOAD   3

MINIMA
P .3176E+01
MAXIMA
P .3276E+02

16.4
32.8
29.8
26.8
25.4
22.2
19.1
15.9
12.7
9.5
6.4
3.2
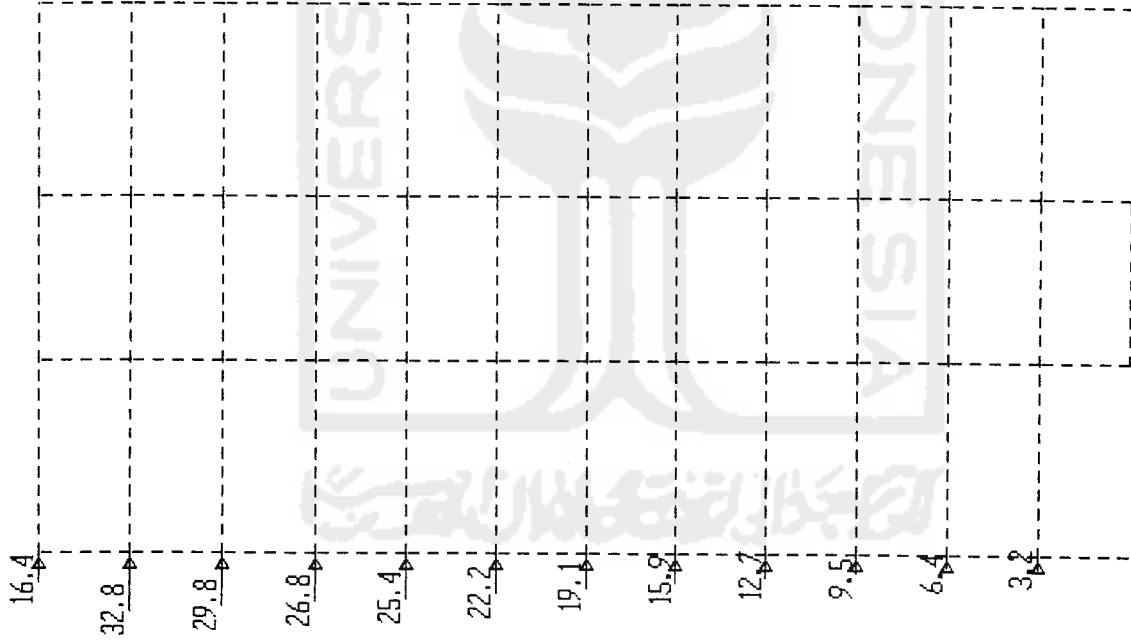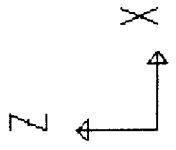
SAP90

DG2
DEFORMED
SHAPE
LOAD   1

MINIMA
X . 0000E+00
Y . 0000E+00
Z - .4253E-02
MAXIMA
X . 3971E-01
Y . 0000E+00
Z . 2610E-02

SAP90

Z
↑
└─→ X
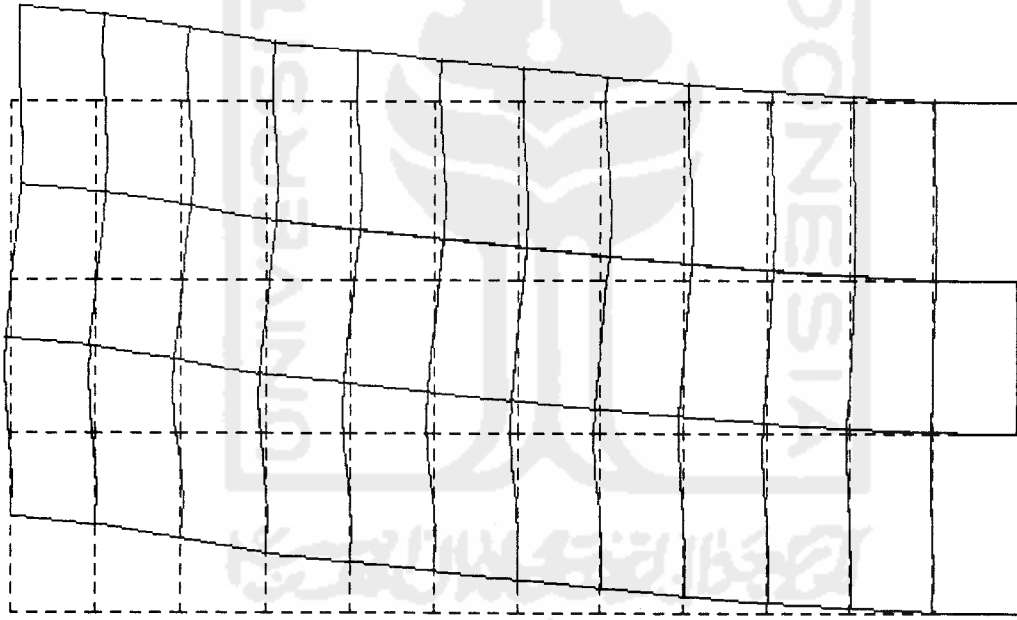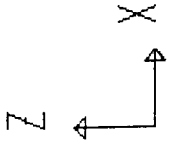
DG2
FRAME
OUTPUT M33
LOAD   1

ENVELOPES
MIN <   38>
    -.3245E+02
AT   3.25
MAX <   80>
     .4755E+02
AT   7.00

SAP90
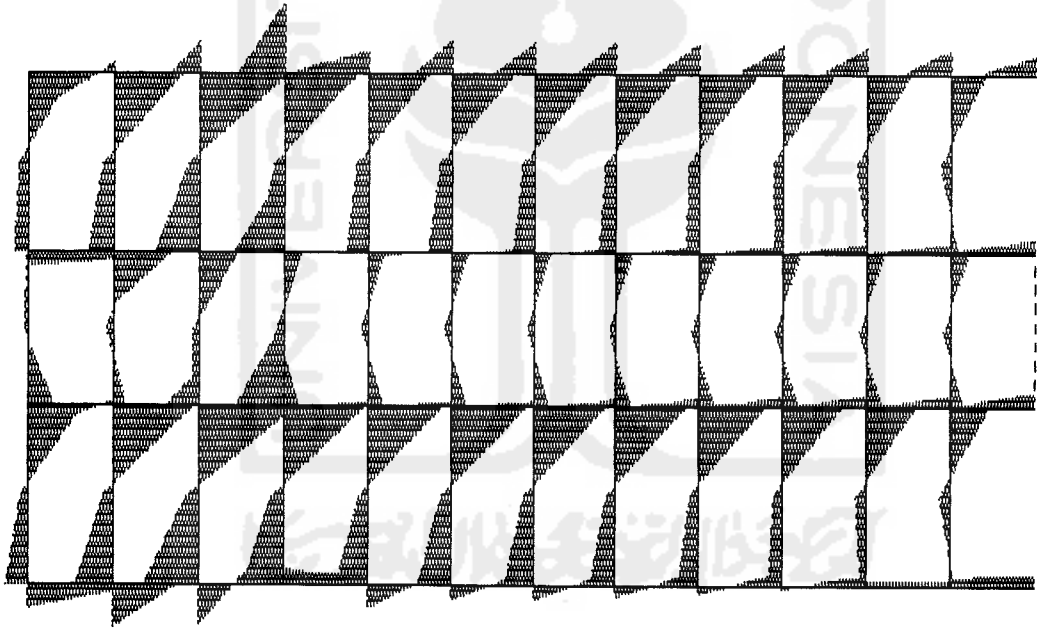
ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

J O I N T   D I S P L A C E M E N T S

LOAD COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

JOINT	U(X)	U(Z)	R(Y)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.6060E-03	-.1720E-04	.3538E-03
6	.6060E-03	.6018E-03	.2837E-03
7	.6060E-03	-.8552E-03	.2903E-03
8	.6060E-03	-.5987E-03	.1913E-03
9	.001939	-.000013	.000490
10	.001939	.001073	.000463
11	.001939	-.001559	.000468
12	.001939	-.001165	.000368
13	.003813	.000009	.000610
14	.003813	.001415	.000611
15	.003813	-.002111	.000614
16	.003813	-.001696	.000486
17	.006099	.000046	.000740
18	.006099	.001639	.000726
19	.006099	-.002523	.000737
20	.006099	-.002190	.000622
21	.008624	.000096	.000558
22	.008624	.001760	.000748
23	.008624	-.002812	.000746
24	.008624	-.002645	.000444
25	.011383	.000159	.001800
26	.011383	.001757	.000908
27	.011383	-.002955	.000929
28	.011383	-.003062	.001691
29	.021742	.000226	.003497
30	.021742	.001418	.003165
31	.021742	-.003224	.003236
32	.021742	-.003431	.003378
33	.035016	.000265	.003616
34	.035016	.001134	.003146
35	.035016	-.003441	.003203
36	.035016	-.003720	.003494
37	.047043	.000276	.003023
38	.047043	.000906	.002660
39	.047043	-.003608	.002715
40	.047043	-.003929	.002898
41	.056496	.000269	.002244
42	.056496	.000734	.001970
43	.056496	-.003725	.002025
44	.056496	-.004068	.002113
45	.062937	.000256	.001407
46	.062937	.000622	.001253
47	.062937	-.003797	.001296
48	.062937	-.004146	.001291
49	.066606	.000249	.000847
50	.066606	.000572	.000722
51	.066606	-.003824	.000811
52	.066606	-.004177	.000652

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

| ELT | LOAD | AXIAL | DIST | 1-2 PLANE | | 1-3 PLANE | | AXIAL |
ID	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
1								
	1	-5.71						
			.0	-.42	5.48			
			1.6	-.42	4.80			
			3.3	-.42	4.12			
2								
	1	199.86						
			.0	-1.95	7.02			
			1.6	-1.95	3.85			
			3.3	-1.95	.68			
3								
	1	-284.02						
			.0	-1.81	6.87			
			1.6	-1.81	3.94			
			3.3	-1.81	1.00			
4								
	1	-198.84						
			.0	-3.97	9.05			
			1.6	-3.97	2.59			
			3.3	-3.97	-3.86			
5								
	1	1.39						
			.0	.50	1.03			
			1.6	.50	1.84			
			3.3	.50	2.65			
6								
	1	156.58						
			.0	-1.62	5.06			
			1.6	-1.62	2.43			
			3.3	-1.62	-.20			
7								
	1	-233.64						
			.0	-1.36	4.62			
			1.6	-1.36	2.41			
			3.3	-1.36	.21			
8								
	1	-188.15						
			.0	-5.72	11.69			
			1.6	-5.72	2.39			
			3.3	-5.72	-6.90			
9								
	1	7.32						
			.0	-1.17	3.53			
			1.6	-1.17	1.63			
			3.3	-1.17	-.28			
10								
	1	113.67						
			.0	-1.73	4.81			
			1.6	-1.73	2.00			
			3.3	-1.73	-.81			
11								
	1	-183.60						

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	AXIAL MOMENT	TORQ
			.0	-1.54	4.49			
			1.6	-1.54	1.98			
			3.3	-1.54	-.53			
12								
	1	-176.44						
			.0	-6.55	12.24			
			1.6	-6.55	1.60			
			3.3	-6.55	-9.04			
13								
	1	12.31						
			.0	-1.25	3.80			
			1.6	-1.25	1.77			
			3.3	-1.25	-.26			
14								
	1	73.77						
			.0	-1.54	4.06			
			1.6	-1.54	1.56			
			3.3	-1.54	-.94			
15								
	1	-136.52						
			.0	-1.23	3.66			
			1.6	-1.23	1.67			
			3.3	-1.23	-.33			
16								
	1	-164.01						
			.0	-6.55	12.49			
			1.6	-6.55	1.85			
			3.3	-6.55	-8.80			
17								
	1	16.52						
			.0	-5.59	6.61			
			1.6	-5.59	-2.47			
			3.3	-5.59	-11.55			
18								
	1	40.69						
			.0	-1.74	3.13			
			1.6	-1.74	.30			
			3.3	-1.74	-2.53			
19								
	1	-96.24						
			.0	-1.55	2.64			
			1.6	-1.55	.12			
			3.3	-1.55	-2.40			
20								
	1	-150.97						
			.0	-10.67	14.93			
			1.6	-10.67	-2.42			
			3.3	-10.67	-19.76			
21								
	1	21.09						
			.0	14.43	-6.61			
			1.6	14.43	16.85			

ANALISA PORTAL SHEAR WALL

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	MOMENT	AXIAL TORQ
			3.2	14.43	40.30			
22								
	1	-1.04						
			.0	-.91	3.65			
			1.6	-.91	2.17			
			3.2	-.91	.69			
23								
	1	-47.25						
			.0	-.50	3.30			
			1.6	-.50	2.49			
			3.2	-.50	1.67			
24								
	1	-138.50						
			.0	9.55	1.39			
			1.6	9.55	16.91			
			3.2	9.55	32.43			
25								
	1	22.04						
			.0	-23.57	61.32			
			1.6	-23.57	23.02			
			3.3	-23.57	-15.29			
26								
	1	-112.66						
			.0	-50.35	112.42			
			1.6	-50.35	30.60			
			3.3	-50.35	-51.21			
27								
	1	-89.33						
			.0	-48.33	109.82			
			1.6	-48.33	31.28			
			3.3	-48.33	-47.25			
28								
	1	-122.49						
			.0	-28.58	69.31			
			1.6	-28.58	22.88			
			3.3	-28.58	-23.56			
29								
	1	12.95						
			.0	-23.08	39.12			
			1.6	-23.08	1.61			
			3.3	-23.08	-35.90			
30								
	1	-94.29						
			.0	-40.63	65.78			
			1.6	-40.63	-.25			
			3.3	-40.63	-66.28			
31								
	1	-72.23						
			.0	-37.84	61.04			
			1.6	-37.84	-.45			
			3.3	-37.84	-61.93			

ANALISA PORTAL SHEAR WALL

F R A M E   E L E M E N T   F O R C E S

| ELT | LOAD | AXIAL | DIST | 1-2 PLANE | | 1-3 PLANE | | AXIAL |
ID	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
32								
	1	-96.11						
			.0	-28.37	47.69			
			1.6	-28.37	1.58			
			3.3	-28.37	-44.52			
33								
	1	3.84						
			.0	-16.65	19.02			
			1.6	-16.65	-8.04			
			3.3	-16.65	-35.10			
34								
	1	-75.79						
			.0	-34.89	50.09			
			1.6	-34.89	-6.60			
			3.3	-34.89	-63.29			
35								
	1	-55.40						
			.0	-32.44	46.10			
			1.6	-32.44	-6.62			
			3.3	-32.44	-59.33			
36								
	1	-69.56						
			.0	-22.06	27.77			
			1.6	-22.06	-8.08			
			3.3	-22.06	-43.93			
37								
	1	-2.27						
			.0	-12.03	8.97			
			1.6	-12.03	-10.58			
			3.3	-12.03	-30.12			
38								
	1	-56.93						
			.0	-25.96	32.83			
			1.6	-25.96	-9.35			
			3.3	-25.96	-51.54			
39								
	1	-39.07						
			.0	-23.56	28.92			
			1.6	-23.56	-9.36			
			3.3	-23.56	-47.64			
40								
	1	-45.87						
			.0	-17.63	17.99			
			1.6	-17.63	-10.66			
			3.3	-17.63	-39.30			
41								
	1	-4.41						
			.0	-6.85	-.22			
			1.6	-6.85	-11.35			
			3.3	-6.85	-22.47			
42								
	1	-37.25						

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			.0	-16.19	16.58			
			1.6	-16.19	-9.73			
			3.3	-16.19	-36.03			
43								
	1	-23.65						
			.0	-14.05	12.94			
			1.6	-14.05	-9.88			
			3.3	-14.05	-32.70			
44								
	1	-26.07						
			.0	-12.24	8.75			
			1.6	-12.24	-11.14			
			3.3	-12.24	-31.02			
45								
	1	-2.41						
			.0	-.09	-7.44			
			1.6	-.09	-7.59			
			3.3	-.09	-7.73			
46								
	1	-16.66						
			.0	-6.21	2.88			
			1.6	-6.21	-7.21			
			3.3	-6.21	-17.29			
47								
	1	-9.22						
			.0	-3.30	-1.22			
			1.6	-3.30	-6.58			
			3.3	-3.30	-11.93			
48								
	1	-10.32						
			.0	-6.89	2.52			
			1.6	-6.89	-8.67			
			3.3	-6.89	-19.86			
53								
	1	.00						
			.0	-7.10	3.09			
			3.5	2.13	-5.61			
			7.0	11.37	18.01			
54								
	1	.00						
			.0	-7.60	7.01			
			3.0	.31	-3.93			
			6.0	8.23	8.87			
55								
	1	.00						
			.0	-7.78	5.38			
			3.5	1.45	-5.70			
			7.0	10.69	15.54			
56								
	1	.00						
			.0	-5.93	-.88			
			3.5	3.30	-5.47			

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	MOMENT	AXIAL TORQ
			7.0	12.54	22.26			
57								
	1	.00						
			.0	-7.73	7.36			
			3.0	.19	-3.94			
			6.0	8.10	8.50			
58								
	1	.00						
			.0	-6.75	1.77			
			3.5	2.48	-5.70			
			7.0	11.72	19.14			
59								
	1	.00						
			.0	-4.99	-4.08			
			3.5	4.24	-5.38			
			7.0	13.48	25.63			
60								
	1	.00						
			.0	-7.74	7.41			
			3.0	.17	-3.95			
			6.0	8.09	8.45			
61								
	1	.00						
			.0	-6.05	-.79			
			3.5	3.19	-5.79			
			7.0	12.42	21.53			
62								
	1	.00						
			.0	-4.21	-6.87			
			3.5	5.03	-5.43			
			7.0	14.26	28.32			
63								
	1	.00						
			.0	-7.65	7.15			
			3.0	.27	-3.92			
			6.0	8.18	8.76			
64								
	1	.00						
			.0	-5.43	-2.90			
			3.5	3.80	-5.75			
			7.0	13.04	23.73			
65								
	1	.00						
			.0	-4.57	-4.94			
			3.5	4.66	-4.79			
			7.0	13.90	27.69			
66								
	1	.00						
			.0	-8.02	8.23			
			3.0	-.11	-3.97			
			6.0	7.81	7.59			

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
67								
	1	.00						
			.0	-6.00	-1.51			
			3.5	3.24	-6.34			
			7.0	12.47	21.15			
68								
	1	.00						
			.0	-.95	-21.02			
			3.5	8.28	-8.19			
			7.0	17.52	36.95			
69								
	1	.00						
			.0	-6.97	5.17			
			3.0	.94	-3.88			
			6.0	8.86	10.81			
70								
	1	.00						
			.0	-2.46	-10.54			
			3.5	6.78	-2.99			
			7.0	16.01	36.89			
71								
	1	.00						
			.0	9.09	-54.41			
			3.5	18.32	-6.43			
			7.0	27.56	73.86			
72								
	1	.00						
			.0	9.19	-43.13			
			3.0	17.10	-3.70			
			6.0	25.02	59.48			
73								
	1	.00						
			.0	7.92	-48.81			
			3.5	17.15	-4.94			
			7.0	26.39	71.25			
74								
	1	.00						
			.0	9.11	-54.92			
			3.5	18.35	-6.87			
			7.0	27.58	73.51			
75								
	1	.00						
			.0	9.08	-42.87			
			3.0	17.00	-3.75			
			6.0	24.91	59.12			
76								
	1	.00						
			.0	8.08	-48.92			
			3.5	17.32	-4.47			
			7.0	26.55	72.30			
77								
	1	.00						

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	MOMENT	AXIAL TORQ
			.0	6.11	-44.07			
			3.5	15.34	-6.53			
			7.0	24.58	63.33			
78								
	1	.00						
			.0	5.72	-32.79			
			3.0	13.64	-3.75			
			6.0	21.55	49.03			
79								
	1	.00						
			.0	5.21	-39.22			
			3.5	14.45	-4.81			
			7.0	23.68	61.92			
80								
	1	.00						
			.0	2.14	-29.90			
			3.5	11.37	-6.25			
			7.0	20.61	49.72			
81								
	1	.00						
			.0	.92	-18.40			
			3.0	8.84	-3.76			
			6.0	16.75	34.63			
82								
	1	.00						
			.0	1.34	-25.95			
			3.5	10.57	-5.11			
			7.0	19.81	48.05			
83								
	1	.00						
			.0	-2.00	-15.03			
			3.5	7.23	-5.87			
			7.0	16.47	35.61			
84								
	1	.00						
			.0	-4.12	-3.30			
			3.0	3.79	-3.80			
			6.0	11.71	19.45			
85								
	1	.00						
			.0	-2.72	-12.03			
			3.5	6.51	-5.40			
			7.0	15.74	33.54			
86								
	1	.00						
			.0	-2.41	-7.73			
			3.5	4.35	-4.34			
			7.0	11.10	22.70			
87								
	1	.00						
			.0	-5.55	5.41			
			3.0	.24	-2.57			

ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE		1-3 PLANE		AXIAL
				SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			6.0	6.03	6.83			
88	------	------	------	------	------	------		
	1	.00						
			.0	-3.19	-5.10			
			3.5	3.57	-4.44			
			7.0	10.32	19.86			
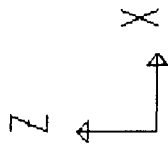
Z	X		
DG3	UNDEFORMED SHAPE		
OPTIONS	JOINT IDS	ELEMENT IDS	WIRE FRAME
SAP90			

Z

X

DG3
UNDEFORMED
SHAPE

OPTIONS
HIDDEN LINES

SAP90

DG3

JOINT
LOADS
LOAD   3

MINIMA
P .3183E+01
MAXIMA
P .3284E+02

SAP90

Z
X

16.5
32.8
29.9
26.9
23.9
20.9
17.9
15.9
12.7
9.5
6.4
3.2
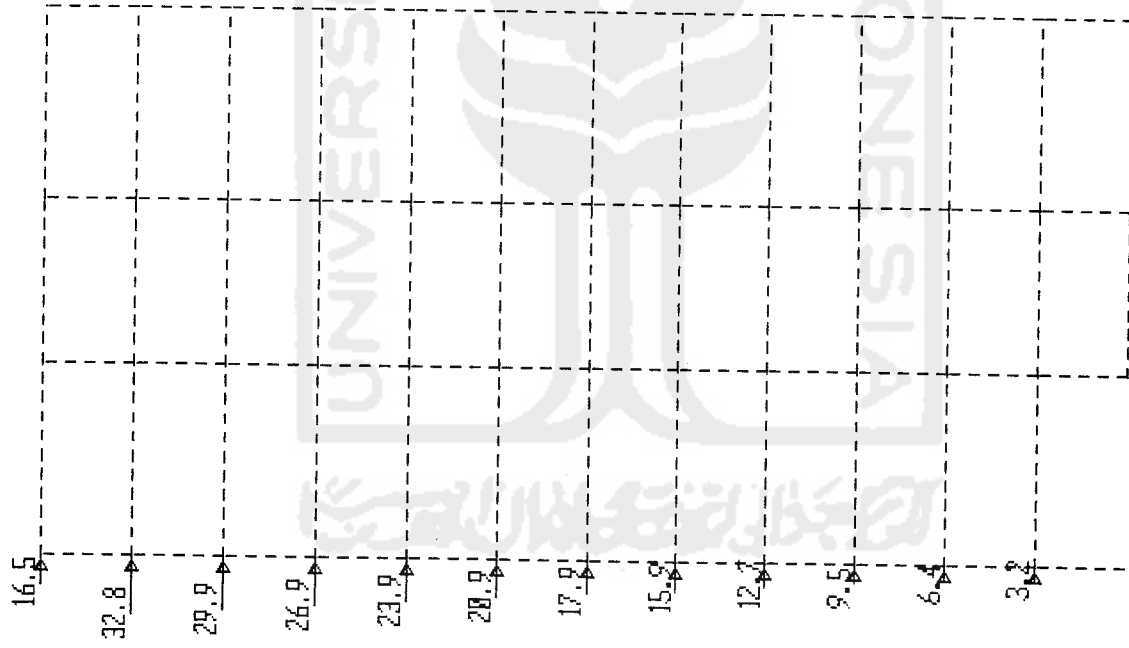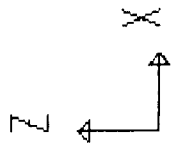
DG3
DEFORMED
SHAPE
LOAD   1
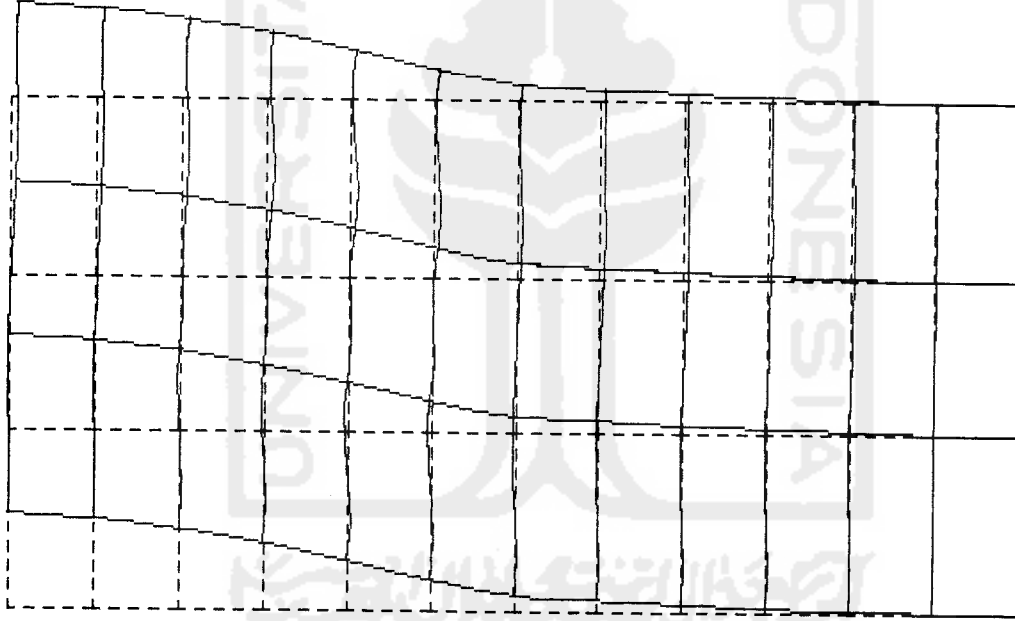
MINIMA
X .0000E+00
Y .0000E+00
Z -.4177E-02
MAXIMA
X .6661E-01
Y .0000E+00
Z .1760E-02

SAP90

Z
X

Z
X
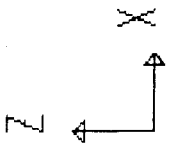
DG3
FRAME
OUTPUT M33
LOAD I

ENVELOPES
MIN (30)
- .6628E+02
AT 3.25
MAX (26)
.1124E+03
AT .00

SAP90
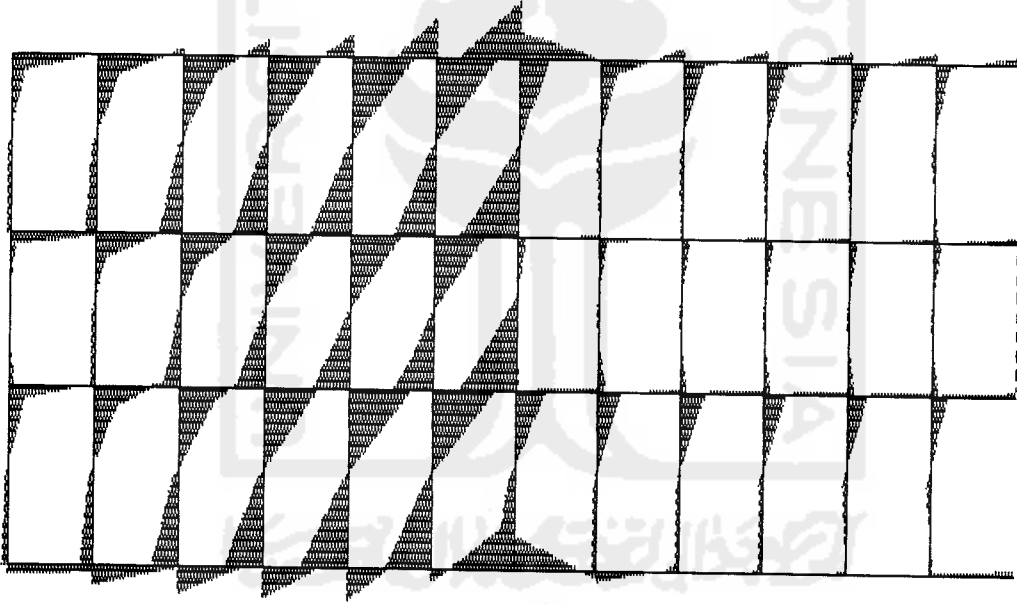
ANALISA PORTAL SHEAR WALL   (LENNI-RINI)

J O I N T   D I S P L A C E M E N T S

LOAD COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

JOINT	U(X)	U(Z)	R(Y)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.011051	.000328	.004846
6	.011051	-.000406	.004071
7	.011051	-.000766	.004114
8	.011051	-.001019	.004667
9	.030991	.000614	.005939
10	.030991	-.000778	.005130
11	.030991	-.001463	.005154
12	.030991	-.001942	.005790
13	.052807	.000845	.006095
14	.052807	-.001121	.005267
15	.052807	-.002088	.005288
16	.052807	-.002752	.005931
17	.074414	.001018	.005909
18	.074414	-.001435	.005115
19	.074414	-.002638	.005130
20	.074414	-.003447	.005741
21	.095004	.001138	.005567
22	.095004	-.001721	.004820
23	.095004	-.003117	.004830
24	.095004	-.004030	.005394
25	.114108	.001210	.005112
26	.114108	-.001977	.004424
27	.114108	-.003525	.004431
28	.114108	-.004507	.004934
29	.131347	.001242	.004556
30	.131347	-.002202	.003941
31	.131347	-.003865	.003943
32	.131347	-.004885	.004375
33	.146368	.001242	.003905
34	.146368	-.002394	.003373
35	.146368	-.004138	.003373
36	.146368	-.005172	.003721
37	.158837	.001221	.003164
38	.158837	-.002551	.002727
39	.158837	-.004348	.002725
40	.158837	-.005377	.002979
41	.168457	.001190	.002358
42	.168457	-.002670	.002017
43	.168457	-.004498	.002013
44	.168457	-.005512	.002165
45	.175056	.001161	.001515
46	.175056	-.002747	.001312
47	.175056	-.004590	.001309
48	.175056	-.005589	.001353
49	.178949	.001147	.001063
50	.178949	-.002781	.000785
51	.178949	-.004628	.000763
52	.178949	-.005619	.000741

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1								
	1	108.79						
			.0	-42.76	135.20			
			1.6	-42.76	65.71			
			3.3	-42.76	-3.77			
2								
	1	-134.95						
			.0	-59.70	152.22			
			1.6	-59.70	55.21			
			3.3	-59.70	-41.80			
3								
	1	-254.39						
			.0	-58.77	151.29			
			1.6	-58.77	55.79			
			3.3	-58.77	-39.71			
4								
	1	-338.49						
			.0	-46.67	139.13			
			1.6	-46.67	63.29			
			3.3	-46.67	-12.56			
5								
	1	95.24						
			.0	-32.49	67.64			
			1.6	-32.49	14.84			
			3.3	-32.49	-37.97			
6								
	1	-123.43						
			.0	-67.14	123.46			
			1.6	-67.14	14.36			
			3.3	-67.14	-94.75			
7								
	1	-231.61						
			.0	-65.69	120.85			
			1.6	-65.69	14.11			
			3.3	-65.69	-92.63			
8								
	1	-306.47						
			.0	-39.68	79.71			
			1.6	-39.68	15.23			
			3.3	-39.68	-49.25			
9								
	1	76.55						
			.0	-30.43	51.55			
			1.6	-30.43	2.11			
			3.3	-30.43	-47.34			
10								
	1	-113.79						
			.0	-66.23	109.49			
			1.6	-66.23	1.87			
			3.3	-66.23	-105.76			
11								
	1	-207.31						

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			.0	-65.25	107.86			
			1.6	-65.25	1.82			
			3.3	-65.25	-104.22			
12								
	1	-268.96						
			.0	-37.28	62.50			
			1.6	-37.28	1.92			
			3.3	-37.28	-58.67			
13								
	1	57.52						
			.0	-28.27	43.42			
			1.6	-28.27	-2.52			
			3.3	-28.27	-48.45			
14								
	1	-104.43						
			.0	-63.74	101.50			
			1.6	-63.74	-2.07			
			3.3	-63.74	-105.64			
15								
	1	-182.97						
			.0	-62.96	100.16			
			1.6	-62.96	-2.15			
			3.3	-62.96	-104.46			
16								
	1	-230.86						
			.0	-35.52	55.15			
			1.6	-35.52	-2.57			
			3.3	-35.52	-60.29			
17								
	1	39.74						
			.0	-26.13	37.82			
			1.6	-26.13	-4.64			
			3.3	-26.13	-47.10			
18								
	1	-94.95						
			.0	-59.85	93.25			
			1.6	-59.85	-4.00			
			3.3	-59.85	-101.26			
19								
	1	-158.99						
			.0	-59.30	92.30			
			1.6	-59.30	-4.06			
			3.3	-59.30	-100.43			
20								
	1	-193.78						
			.0	-33.58	49.86			
			1.6	-33.58	-4.71			
			3.3	-33.58	-59.28			
21								
	1	23.93						
			.0	-23.57	32.13			
			1.6	-23.57	-6.18			

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			3.2	-23.57	-44.48			
22								
	1	-85.11						
			.0	-54.95	83.93			
			1.6	-54.95	-5.36			
			3.2	-54.95	-94.65			
23								
	1	-135.55						
			.0	-54.59	83.30			
			1.6	-54.59	-5.41			
			3.2	-54.59	-94.12			
24								
	1	-158.48						
			.0	-31.23	44.52			
			1.6	-31.23	-6.23			
			3.2	-31.23	-56.99			
25								
	1	10.59						
			.0	-20.58	25.91			
			1.6	-20.58	-7.54			
			3.3	-20.58	-40.98			
26								
	1	-74.77						
			.0	-49.06	73.17			
			1.6	-49.06	-6.56			
			3.3	-49.06	-86.29			
27								
	1	-112.79						
			.0	-48.87	72.80			
			1.6	-48.87	-6.61			
			3.3	-48.87	-86.02			
28								
	1	-125.47						
			.0	-28.41	38.58			
			1.6	-28.41	-7.58			
			3.3	-28.41	-53.75			
29								
	1	.16						
			.0	-17.12	18.99			
			1.6	-17.12	-8.82			
			3.3	-17.12	-36.64			
30								
	1	-63.79						
			.0	-42.22	60.91			
			1.6	-42.22	-7.70			
			3.3	-42.22	-76.31			
31								
	1	-90.82						
			.0	-42.16	60.77			
			1.6	-42.16	-7.74			
			3.3	-42.16	-76.25			

F R A M E   E L E M E N T   F O R C E S

| ELT | LOAD | AXIAL | DIST | 1-2 PLANE | | 1-3 PLANE | | AXIAL |
ID	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
32								
	1	-95.23						
			.0	-25.09	31.91			
			1.6	-25.09	-8.87			
			3.3	-25.09	-49.64			
33								
	1	-6.93						
			.0	-13.20	11.41			
			1.6	-13.20	-10.05			
			3.3	-13.20	-31.51			
34								
	1	-52.03						
			.0	-34.42	47.17			
			1.6	-34.42	-8.76			
			3.3	-34.42	-64.69			
35								
	1	-69.75						
			.0	-34.47	47.22			
			1.6	-34.47	-8.79			
			3.3	-34.47	-64.80			
36								
	1	-68.21						
			.0	-21.27	24.50			
			1.6	-21.27	-10.06			
			3.3	-21.27	-44.62			
37								
	1	-10.29						
			.0	-8.68	3.18			
			1.6	-8.68	-10.93			
			3.3	-8.68	-25.04			
38								
	1	-39.38						
			.0	-25.73	32.17			
			1.6	-25.73	-9.63			
			3.3	-25.73	-51.44			
39								
	1	-49.66						
			.0	-25.86	32.37			
			1.6	-25.86	-9.65			
			3.3	-25.86	-51.67			
40								
	1	-44.81						
			.0	-16.95	16.50			
			1.6	-16.95	-11.04			
			3.3	-16.95	-38.59			
41								
	1	-9.62						
			.0	-4.11	-4.76			
			1.6	-4.11	-11.44			
			3.3	-4.11	-18.12			
42								
	1	-25.72						

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			.0	-16.03	16.48			
			1.6	-16.03	-9.56			
			3.3	-16.03	-35.60			
43	1	-30.63						
			.0	-16.18	16.74			
			1.6	-16.18	-9.55			
			3.3	-16.18	-35.84			
44	1	-25.41						
			.0	-11.86	8.27			
			1.6	-11.86	-11.01			
			3.3	-11.86	-30.29			
45	1	-4.86						
			.0	3.99	-12.60			
			1.6	3.99	-6.12			
			3.3	3.99	.36			
46	1	-11.17						
			.0	-6.55	3.49			
			1.6	-6.55	-7.15			
			3.3	-6.55	-17.79			
47	1	-12.64						
			.0	-7.09	4.12			
			1.6	-7.09	-7.40			
			3.3	-7.09	-18.92			
48	1	-9.95						
			.0	-6.58	2.39			
			1.6	-6.58	-8.30			
			3.3	-6.58	-19.00			
53	1	.00						
			.0	13.55	-71.41			
			3.5	22.79	-7.82			
			7.0	32.02	88.08			
54	1	.00						
			.0	20.50	-77.18			
			3.0	28.42	-3.80			
			6.0	36.33	93.32			
55	1	.00						
			.0	13.55	-67.24			
			3.5	22.79	-3.65			
			7.0	32.02	92.27			
56	1	.00						
			.0	18.69	-89.52			
			3.5	27.93	-7.94			

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	MOMENT	AXIAL TORQ
			7.0	37.16	105.96			
57								
	1	.00						
			.0	27.51	-98.28			
			3.0	35.43	-3.87			
			6.0	43.34	114.29			
58								
	1	.00						
			.0	19.05	-86.20			
			3.5	28.28	-3.38			
			7.0	37.51	111.75			
59								
	1	.00						
			.0	19.03	-90.75			
			3.5	28.26	-7.99			
			7.0	37.50	107.09			
60								
	1	.00						
			.0	28.14	-100.17			
			3.0	36.05	-3.88			
			6.0	43.97	116.16			
61								
	1	.00						
			.0	19.63	-88.22			
			3.5	28.86	-3.36			
			7.0	38.10	113.81			
62								
	1	.00						
			.0	17.78	-86.28			
			3.5	27.01	-7.89			
			7.0	36.25	102.82			
63								
	1	.00						
			.0	26.77	-96.07			
			3.0	34.68	-3.90			
			6.0	42.60	112.01			
64								
	1	.00						
			.0	18.61	-84.75			
			3.5	27.84	-3.46			
			7.0	37.08	110.15			
65								
	1	.00						
			.0	15.81	-79.23			
			3.5	25.04	-7.74			
			7.0	34.28	96.07			
66								
	1	.00						
			.0	24.44	-89.12			
			3.0	32.36	-3.92			
			6.0	40.27	105.03			

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
67								
	1	.00						
			.0	16.84	-78.70			
			3.5	26.07	-3.61			
			7.0	35.31	103.80			
68								
	1	.00						
			.0	13.34	-70.39			
			3.5	22.57	-7.55			
			7.0	31.81	87.61			
69								
	1	.00						
			.0	21.47	-80.21			
			3.0	29.38	-3.93			
			6.0	37.30	96.08			
70								
	1	.00						
			.0	14.54	-70.84			
			3.5	23.77	-3.80			
			7.0	33.01	95.56			
71								
	1	.00						
			.0	10.43	-59.97			
			3.5	19.66	-7.32			
			7.0	28.89	77.64			
72								
	1	.00						
			.0	17.91	-69.55			
			3.0	25.83	-3.95			
			6.0	33.74	85.40			
73								
	1	.00						
			.0	11.77	-61.39			
			3.5	21.01	-4.03			
			7.0	30.24	85.65			
74								
	1	.00						
			.0	7.09	-48.05			
			3.5	16.33	-7.06			
			7.0	25.56	66.24			
75								
	1	.00						
			.0	13.80	-57.24			
			3.0	21.72	-3.96			
			6.0	29.63	73.07			
76								
	1	.00						
			.0	8.56	-50.40			
			3.5	17.79	-4.29			
			7.0	27.03	74.14			
77								
	1	.00						

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	MOMENT	1-3 PLANE SHEAR	MOMENT	AXIAL TORQ
			.0	3.36	-34.69			
			3.5	12.60	-6.76			
			7.0	21.83	53.48			
78								
	1	.00						
			.0	9.18	-43.38			
			3.0	17.10	-3.97			
			6.0	25.01	59.20			
79								
	1	.00						
			.0	4.92	-37.97			
			3.5	14.16	-4.58			
			7.0	23.39	61.13			
80								
	1	.00						
			.0	-.67	-20.27			
			3.5	8.56	-6.46			
			7.0	17.80	39.67			
81								
	1	.00						
			.0	4.13	-28.25			
			3.0	12.05	-3.97			
			6.0	19.96	44.05			
82								
	1	.00						
			.0	.94	-24.36			
			3.5	10.17	-4.91			
			7.0	19.41	46.86			
83								
	1	.00						
			.0	-4.76	-5.52			
			3.5	4.47	-6.03			
			7.0	13.71	25.79			
84								
	1	.00						
			.0	-.85	-13.30			
			3.0	7.07	-3.97			
			6.0	14.98	29.11			
85								
	1	.00						
			.0	-3.01	-10.85			
			3.5	6.22	-5.25			
			7.0	15.45	32.68			
86								
	1	.00						
			.0	-4.86	.36			
			3.5	1.90	-4.82			
			7.0	8.66	13.65			
87								
	1	.00						
			.0	-2.51	-4.13			
			3.0	3.28	-2.98			

F R A M E   E L E M E N T   F O R C E S

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			6.0	9.07	15.56			
88								
	1	.00						
			.0	-3.56	-3.37			
			3.5	3.20	-4.01			
			7.0	9.95	19.00			
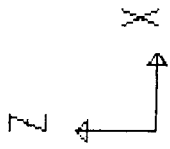
Z X

DG0
UNDEFORMED
SHAPE

OPTIONS
JOINT IDS
ELEMENT IDS
WIRE FRAME

SAP90

Z
↳ X

DG0
UNDEFORMED
SHAPE

OPTIONS
WIRE FRAME

SAP90

Z
X
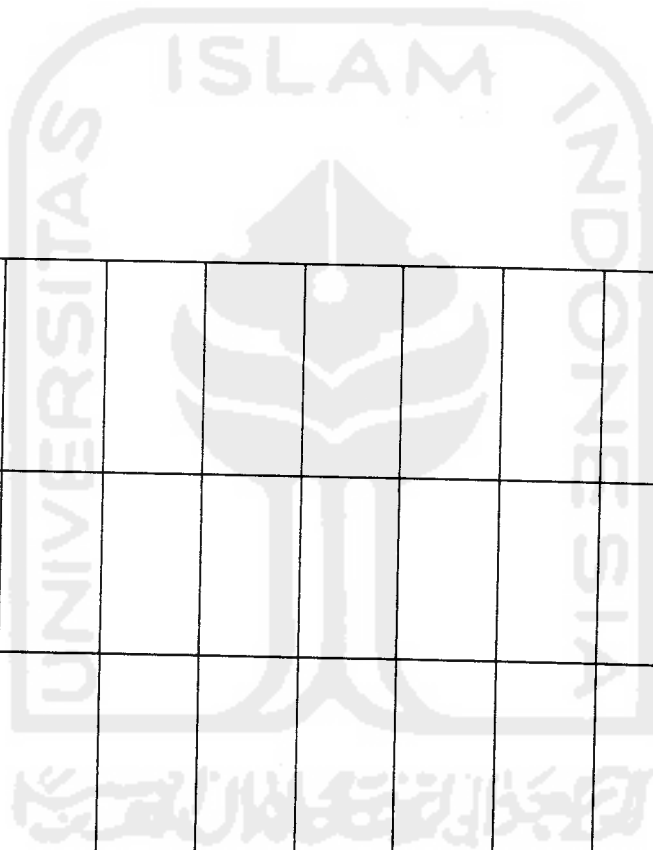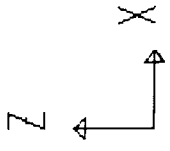
DG0

JOINT
LOADS

LOAD   3

MINIMA
P .2904E+01
MAXIMA
P .3195E+02

16.2
31.9
29.0
26.1
23.2
20.3
17.4
14.5
11.6
8.7
5.8
2.9

SAP90

Z

X
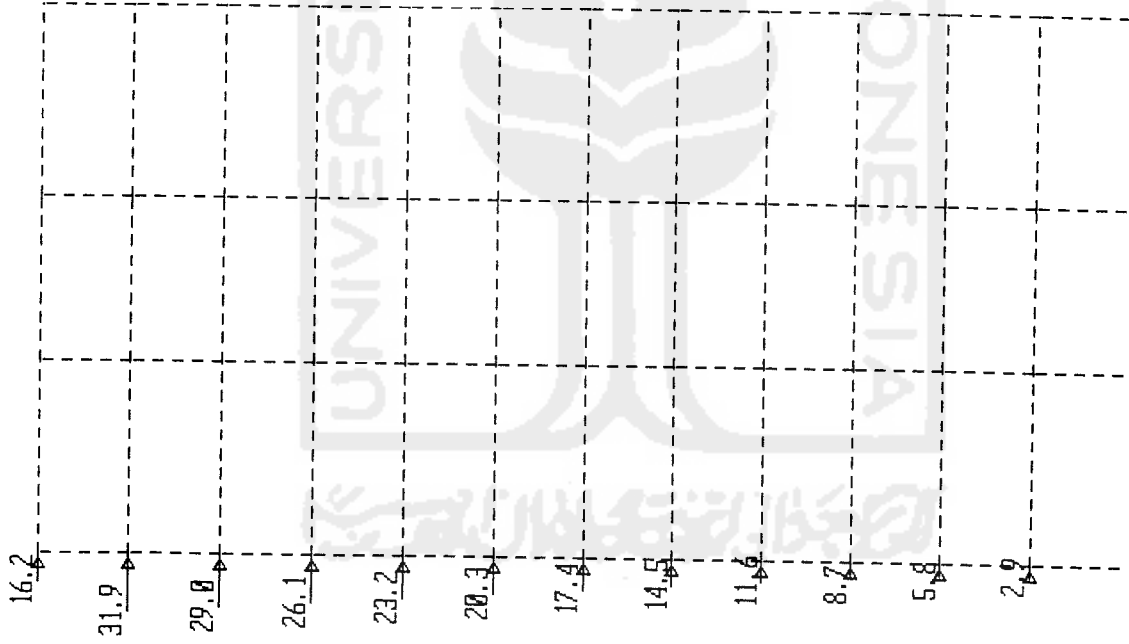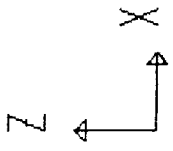
DG0

DEFORMED
SHAPE

LOAD   1

MINIMA
X .0000E+00
Y .0000E+00
Z -.5619E-02
MAXIMA
X .1789E+00
Y .0000E+00
Z .1242E-02

SAP90

Z
X
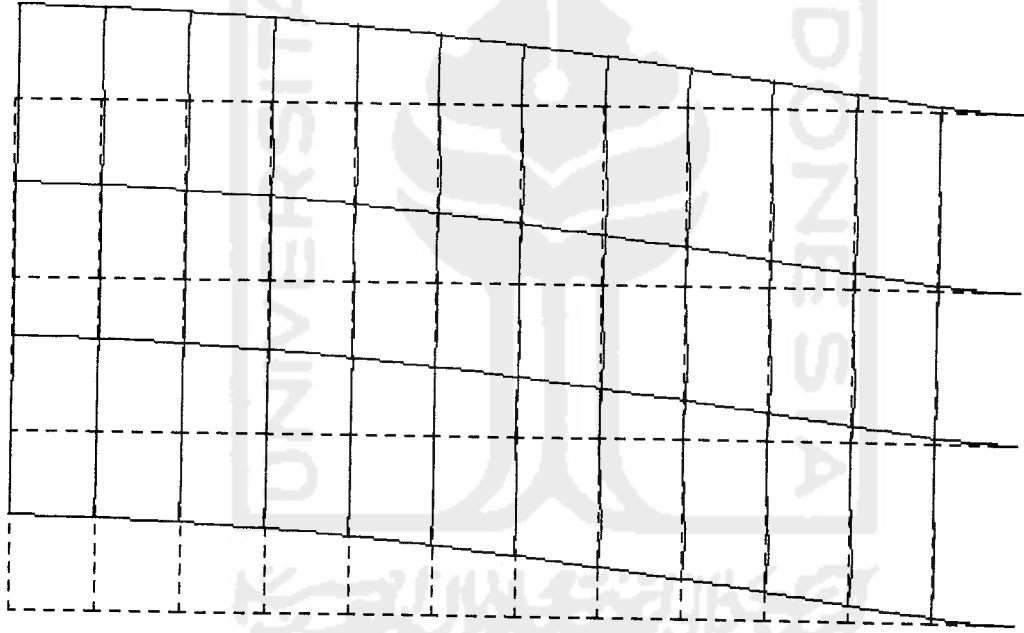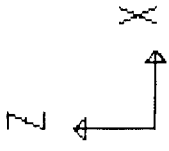
DG0
FRAME
OUTPUT M33
LOAD 1

ENVELOPES
MIN < 10>
-.1058E+03
AT 3.25
MAX < 2>
.1522E+03
AT .00

SAP90