

รายการอ้างอิง

ภาษาไทย

ปณิธาน ลักคุณะประสิทธิ์ และ นพดล คูหาทัสณะติกุล. 2536. เขตแผ่นดินไหวและสัมประสิทธิ์แผ่นดินไหวสำหรับประเทศไทย. เอกสารการประชุมใหญ่วิชาการทางวิศวกรรมประจำปี 2536. วิศวกรรมสถานแห่งประเทศไทยฯ: 288-287.

ภาษาอังกฤษ

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สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย



ภาคผนวก

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

ตัวอย่างแฟ้มข้อมูล (Data file)

ตัวอย่างแฟ้มข้อมูล (Data file) สำหรับอาคารตัวอย่างกรณีไม่ได้ติดตั้งมวลทรวงปรับค่า ภายใต้การวิเคราะห์ด้วยคลื่นแผ่นดินไหว SCT-85

หมายเหตุ:

*** ในการวิเคราะห์ด้วยโปรแกรมต้องเขียนต่อกัน แต่เนื่องจากข้อจำกัดในการพิมพ์จึงต้องแบ่งเขียนเป็น 2 บรรทัด



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

input filename: idarc.dat
 data filename: noTMD_sct001.dat

file: idarc.dat

noTMD_sct001.dat
 noTMD_sct001.out

file: noTMD_sct001.dat

20-s R/C FRAME

General Informations

20, 3, 1, 1, 0, 1, 1

Element Types

60, 56, 40, 0, 0, 0, 0, 0, 0, 0

Element Datas

160, 280, 40, 0, 0, 0, 0, 0, 0

System of Unit: mm, kN

2

Floor Elevations

3200, 6400, 9600, 12800, 16000, 19200, 22400, 25600, 28800, 32000, 35200, 38400, 41600, 44800, 48000,

51200, 54400, 57600, 60800, 64000

Description of Identical Frames

2, 8, 2

Plan Configurations

5, 7, 5

Nodal Weights

1	1	218.9279	0.0	686.8572	0.0	218.9279	
	2	338.8453	0.0	547.6649	0.0	547.6649	0.0 338.8453
	3	338.8453	0.0	1077.3736	0.0	338.8453	
2	1	218.9279	0.0	686.8572	0.0	218.9279	
	2	338.8453	0.0	547.6649	0.0	547.6649	0.0 338.8453
	3	338.8453	0.0	1077.3736	0.0	338.8453	
3	1	218.9279	0.0	686.8572	0.0	218.9279	
	2	338.8453	0.0	547.6649	0.0	547.6649	0.0 338.8453
	3	338.8453	0.0	1077.3736	0.0	338.8453	
4	1	218.9279	0.0	686.8572	0.0	218.9279	
	2	338.8453	0.0	547.6649	0.0	547.6649	0.0 338.8453
	3	338.8453	0.0	1077.3736	0.0	338.8453	
5	1	212.9007	0.0	686.8572	0.0	212.9007	
	2	332.8181	0.0	537.7764	0.0	537.7764	0.0 332.8181
	3	332.8181	0.0	1077.3736	0.0	332.8181	
6	1	206.8734	0.0	686.8572	0.0	206.8734	
	2	326.7908	0.0	527.8879	0.0	527.8879	0.0 326.7908
	3	326.7908	0.0	1077.3736	0.0	326.7908	
7	1	206.8734	0.0	686.8572	0.0	206.8734	
	2	326.7908	0.0	527.8879	0.0	527.8879	0.0 326.7908
	3	326.7908	0.0	1077.3736	0.0	326.7908	
8	1	206.8734	0.0	686.8572	0.0	206.8734	
	2	326.7908	0.0	527.8879	0.0	527.8879	0.0 326.7908
	3	326.7908	0.0	1077.3736	0.0	326.7908	
9	1	206.8734	0.0	686.8572	0.0	206.8734	
	2	326.7908	0.0	527.8879	0.0	527.8879	0.0 326.7908
	3	326.7908	0.0	1077.3736	0.0	326.7908	
10	1	199.2451	0.0	686.8572	0.0	199.2451	
	2	319.1625	0.0	519.6946	0.0	519.6946	0.0 319.1625
	3	319.1625	0.0	1077.3736	0.0	319.1625	
11	1	191.6169	0.0	686.8572	0.0	191.6169	
	2	311.5343	0.0	511.5013	0.0	511.5013	0.0 311.5343
	3	311.5343	0.0	1077.3736	0.0	311.5343	
12	1	191.6169	0.0	686.8572	0.0	191.6169	
	2	311.5343	0.0	511.5013	0.0	511.5013	0.0 311.5343
	3	311.5343	0.0	1077.3736	0.0	311.5343	
13	1	191.6169	0.0	686.8572	0.0	191.6169	
	2	311.5343	0.0	511.5013	0.0	511.5013	0.0 311.5343
	3	311.5343	0.0	1077.3736	0.0	311.5343	
14	1	191.6169	0.0	686.8572	0.0	191.6169	
	2	311.5343	0.0	511.5013	0.0	511.5013	0.0 311.5343
	3	311.5343	0.0	1077.3736	0.0	311.5343	
15	1	187.4731	0.0	686.8572	0.0	187.4731	
	2	307.3905	0.0	503.2138	0.0	503.2138	0.0 307.3905
	3	307.3905	0.0	1077.3736	0.0	307.3905	
16	1	183.3294	0.0	686.8572	0.0	183.3294	
	2	303.2468	0.0	494.9263	0.0	494.9263	0.0 303.2468
	3	303.2468	0.0	1077.3736	0.0	303.2468	
17	1	183.3294	0.0	686.8572	0.0	183.3294	

2	303.2468	0.0	494.9263	0.0	494.9263	0.0	303.2468
3	303.2468	0.0	1077.3736	0.0	303.2468		
18	1	183.3294	0.0	686.8572	0.0	183.3294	
	2	303.2468	0.0	494.9263	0.0	494.9263	0.0 303.2468
	3	303.2468	0.0	1077.3736	0.0	303.2468	
19	1	183.3294	0.0	686.8572	0.0	183.3294	
	2	303.2468	0.0	494.9263	0.0	494.9263	0.0 303.2468
	3	303.2468	0.0	1077.3736	0.0	303.2468	
20	1	146.2868	0.0	528.0136	0.0	146.2868	
	2	252.3917	0.0	431.6881	0.0	431.6881	0.0 252.3917
	3	252.3917	0.0	890.9051	0.0	252.3917	

Material Properties Sets

0
Concrete Properties Sets
1, 0.02943, 26.976, 0.2, 0.00348, 0, 0

Reinforcement Properties Sets
1, 0.3924, 0.55917, 200.124, 0, 3.137

Hysteretic Modeling Rules
13

- 1, 0.5, 0.0, 0.040, 0.7
- 2, 1.5, 0.0, 0.150, 0.3
- 3, 1.5, 0.0, 0.150, 0.5
- 4, 2.0, 0.0, 0.100, 1.0
- 5, 2.0, 0.0, 0.100, 1.0
- 6, 0.0, 0.0, 0.000, 1.0
- 7, 200, 0.0, 0.001, 1.0
- 8, 200, 0.0, 0.001, 1.0
- 9, 200, 0.0, 0.001, 1.0
- 10, 200, 0.0, 0.001, 1.0
- 11, 200, 0.0, 0.001, 1.0
- 12, 200, 0.0, 0.001, 1.0
- 13, 200, 0.0, 0.001, 1.0

Column Properties Sets

1

Input Moment-curvature of Sections

- 1, 3200, 0, 300, 1
-1, 1.53E+12, 7.37E+03, 5.95E+06, 1.56E+06, 4.67E+06, 5.22E-06, 2.26E-05, 24635349000
1.56E+06, 4.67E+06, 5.22E-06, 2.26E-05, 24635349000
- 2, 3200, 300, 300, 1
-1, 1.54E+12, 7.37E+03, 5.95E+06, 1.50E+06, 4.60E+06, 5.14E-06, 2.32E-05, 28900834200
1.50E+06, 4.60E+06, 5.14E-06, 2.32E-05, 28900834200
- 3, 3200, 300, 300, 1
-1, 1.54E+12, 7.37E+03, 5.95E+06, 1.45E+06, 4.52E+06, 5.06E-06, 2.39E-05, 32941014300
1.45E+06, 4.52E+06, 5.06E-06, 2.39E-05, 32941014300
- 4, 3200, 300, 300, 1
-1, 1.55E+12, 7.37E+03, 5.95E+06, 1.39E+06, 4.44E+06, 4.99E-06, 2.46E-05, 36571897500
1.39E+06, 4.44E+06, 4.99E-06, 2.46E-05, 36571897500
- 5, 3200, 300, 300, 1
-1, 1.56E+12, 7.37E+03, 5.95E+06, 1.34E+06, 4.36E+06, 4.92E-06, 2.54E-05, 39053895900
1.34E+06, 4.36E+06, 4.92E-06, 2.54E-05, 39053895900
- 6, 3200, 300, 300, 1
-1, 8.75E+11, 5.56E+03, 4.63E+06, 9.92E+05, 2.85E+06, 5.91E-06, 2.44E-05, 9412177970
9.92E+05, 2.85E+06, 5.91E-06, 2.44E-05, 9412177970
- 7, 3200, 300, 300, 1
-1, 8.82E+11, 5.56E+03, 4.63E+06, 9.46E+05, 2.78E+06, 5.78E-06, 2.54E-05, 12756842100
9.46E+05, 2.78E+06, 5.78E-06, 2.54E-05, 12756842100
- 8, 3200, 300, 300, 1
-1, 8.88E+11, 5.56E+03, 4.63E+06, 9.00E+05, 2.72E+06, 5.67E-06, 2.63E-05, 15814403000
9.00E+05, 2.72E+06, 5.67E-06, 2.63E-05, 15814403000
- 9, 3200, 300, 300, 1
-1, 8.94E+11, 5.56E+03, 4.63E+06, 8.54E+05, 2.65E+06, 5.56E-06, 2.73E-05, 18552797280
8.54E+05, 2.65E+06, 5.56E-06, 2.73E-05, 18552797280
- 10, 3200, 300, 300, 1
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8.08E+05, 2.58E+06, 5.45E-06, 2.82E-05, 20957912490
- 11, 3200, 300, 300, 1
-1, 3.84E+11, 3.76E+03, 2.97E+06, 5.20E+05, 1.67E+06, 7.73E-06, 2.88E-05, 699656814
5.20E+05, 1.67E+06, 7.73E-06, 2.88E-05, 699656814
- 12, 3200, 300, 300, 1
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4.86E+05, 1.63E+06, 7.52E-06, 2.99E-05, 4086860310
- 13, 3200, 300, 300, 1
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4.51E+05, 1.58E+06, 7.31E-06, 3.12E-05, 6921318240
- 14, 3200, 300, 300, 1
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- 15, 3200, 300, 300, 1

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 3.81E+05, 1.47E+06, 6.93E-06, 3.53E-05, 9949409700
 16, 3200, 300, 300, 1
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 17, 3200, 300, 300, 1
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 18, 3200, 300, 300, 1
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 19, 3200, 300, 300, 1
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 25, 3200, 300, 300, 1
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 1.42E+06, 2.61E+06, 4.71E-06, 1.75E-05, 24620785640
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 30, 3200, 300, 300, 1
 -1, 8.55E+11, 5.56E+03, 4.63E+06, 1.13E+06, 2.91E+06, 5.89E-06, 2.15E-05, 8088770616
 1.13E+06, 2.91E+06, 5.89E-06, 2.15E-05, 8088770616
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 7.51E+05, 1.52E+06, 6.31E-06, 2.16E-05, 1662204214
 32, 3200, 300, 300, 1
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 6.95E+05, 1.59E+06, 6.84E-06, 2.29E-05, 2814808380
 33, 3200, 300, 300, 1
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 6.39E+05, 1.66E+06, 7.36E-06, 2.42E-05, 1687394444
 34, 3200, 300, 300, 1
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 35, 3200, 300, 300, 1
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 5.25E+05, 1.68E+06, 7.77E-06, 2.86E-05, 29099845.65
 36, 3200, 300, 300, 1
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 37, 3200, 300, 300, 1
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 38, 3200, 300, 300, 1
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 39, 3200, 300, 300, 1
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 1.97E+05, 8.89E+05, 8.45E-06, 4.65E-05, 4346861040
 40, 3200, 300, 300, 1
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 1.49E+05, 8.14E+05, 7.92E-06, 5.58E-05, 4747292420
 41, 3200, 0, 300, 1


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42, 3200, 300, 300, 1
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3.51E+06, 5.20E+06, 3.06E-06, 1.45E-05, 1.41E+11
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47, 3200, 300, 300, 1
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2.34E+06, 3.00E+06, 3.31E-06, 1.65E-05, 36353402550
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51, 3200, 300, 300, 1
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52, 3200, 300, 300, 1
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1.19E+06, 1.65E+06, 4.42E-06, 1.95E-05, 43.138
53, 3200, 300, 300, 1
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56, 3200, 300, 300, 1
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2.83E+05, 6.78E+05, 9.96E-06, 3.71E-05, 11.192
59, 3200, 300, 300, 1
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2.14E+05, 7.14E+05, 1.11E-05, 4.37E-05, 12.001
60, 3200, 300, 300, 1
-1, 1.25E+11, 2.15E+03, 1.67E+06, 1.42E+05, 6.12E+05, 9.60E-06, 5.91E-05, 1390849560
1.42E+05, 6.12E+05, 9.60E-06, 5.91E-05, 1390849560

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Beam Properties Sets

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0
Input Dimension of Sections
1 1 1 4000.0 425.0 0.0
2 600 300.0 1000.0 200.0 100.0 1722.38 5518.99 12.0 150.0
3 600 300.0 1000.0 200.0 100.0 1722.38 2023.19 12.0 150.0
2 1 1 8000.0 0.0 4250.0
3 600 300.0 1000.0 200.0 100.0 1722.38 2023.19 12.0 150.0
3 600 300.0 1000.0 200.0 100.0 1722.38 5518.99 12.0 150.0
3 600 300.0 1000.0 200.0 100.0 1722.38 2023.19 12.0 150.0
3 1 1 8000.0 4250.0 0.0
3 600 300.0 1000.0 200.0 100.0 1722.38 5518.99 12.0 150.0
3 600 300.0 1000.0 200.0 100.0 1722.38 2023.19 12.0 150.0
4 1 1 4000.0 0.0 425.0
3 600 300.0 1000.0 200.0 100.0 1722.38 2023.19 12.0 150.0
2 600 300.0 1000.0 200.0 100.0 1722.38 5518.99 12.0 150.0
5 1 1 4000.0 375.0 0.0
2 600 300.0 1000.0 200.0 100.0 1722.38 5518.99 12.0 150.0
3 600 300.0 1000.0 200.0 100.0 1722.38 2023.19 12.0 150.0
6 1 1 8000.0 0.0 4250.0

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	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
2	1	4	5 6	22972.8	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
3	1	4	5 6	21744.4	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
4	1	4	5 6	20515.9	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
5	1	4	5 6	19287.5	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
6	1	4	5 6	18059.1	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
7	1	4	5 6	16830.6	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
8	1	4	5 6	15602.2	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
9	1	4	5 6	14373.8	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
10	1	4	5 6	13145.3	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
11	1	4	5 6	11916.9	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
12	1	4	5 6	10688.5	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
13	1	4	5 6	9460.0	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
14	1	4	5 6	8231.6	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
15	1	4	5 6	7003.2	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
16	1	4	5 6	5774.7	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
17	1	4	5 6	4546.3	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
18	1	4	5 6	3317.9	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
19	1	4	5 6	2089.4	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770
	3	1	500.0	500.0	4.5038	0.1508
20	1	4	5 6	861.02	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508
	2	1	7500.0	300.0	0.3750	0.3770

21	3	1	500.0	500.0	4.5038	0.1508	
	1	4	5	6	43360.6	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
22	1	4	5	6	41186.8	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
23	1	4	5	6	39013.0	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
24	1	4	5	6	36839.1	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
25	1	4	5	6	34665.3	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
26	1	4	5	6	32491.5	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
27	1	4	5	6	30317.6	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
28	1	4	5	6	28143.8	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
29	1	4	5	6	25970.0	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
30	1	4	5	6	23796.1	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
31	1	4	5	6	21622.3	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
32	1	4	5	6	19448.5	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
33	1	4	5	6	17274.6	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
34	1	4	5	6	15100.8	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
35	1	4	5	6	12927.0	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
36	1	4	5	6	10753.1	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
37	1	4	5	6	8579.3	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
38	1	4	5	6	6405.5	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
39	1	4	5	6	4231.6	3200.0	3
	1	1	500.0	500.0	4.5038	0.1508	
	2	1	7500.0	300.0	0.3750	0.3770	
	3	1	500.0	500.0	4.5038	0.1508	
40	1	4	5	6	2057.8	3200.0	3

บริการ
มหาวิทยาลัย

1	1	500.0	500.0	4.5038	0.1508
2	1	7500.0	300.0	0.3750	0.3770
3	1	500.0	500.0	4.5038	0.1508

Columns	Connectivity				
1	1	1	1	0	1
2	1	1	5	0	1
3	2	1	1	1	2
4	2	1	5	1	2
5	3	1	1	2	3
6	3	1	5	2	3
7	4	1	1	3	4
8	4	1	5	3	4
9	5	1	1	4	5
10	5	1	5	4	5
11	6	1	1	5	6
12	6	1	5	5	6
13	7	1	1	6	7
14	7	1	5	6	7
15	8	1	1	7	8
16	8	1	5	7	8
17	9	1	1	8	9
18	9	1	5	8	9
19	10	1	1	9	10
20	10	1	5	9	10
21	11	1	1	10	11
22	11	1	5	10	11
23	12	1	1	11	12
24	12	1	5	11	12
25	13	1	1	12	13
26	13	1	5	12	13
27	14	1	1	13	14
28	14	1	5	13	14
29	15	1	1	14	15
30	15	1	5	14	15
31	16	1	1	15	16
32	16	1	5	15	16
33	17	1	1	16	17
34	17	1	5	16	17
35	18	1	1	17	18
36	18	1	5	17	18
37	19	1	1	18	19
38	19	1	5	18	19
39	20	1	1	19	20
40	20	1	5	19	20
41	21	2	1	0	1
42	41	2	3	0	1
43	41	2	5	0	1
44	21	2	7	0	1
45	22	2	1	1	2
46	42	2	3	1	2
47	42	2	5	1	2
48	22	2	7	1	2
49	23	2	1	2	3
50	43	2	3	2	3
51	43	2	5	2	3
52	23	2	7	2	3
53	24	2	1	3	4
54	44	2	3	3	4
55	44	2	5	3	4
56	24	2	7	3	4
57	25	2	1	4	5
58	45	2	3	4	5
59	45	2	5	4	5
60	25	2	7	4	5
61	26	2	1	5	6
62	46	2	3	5	6
63	46	2	5	5	6
64	26	2	7	5	6
65	27	2	1	6	7
66	47	2	3	6	7
67	47	2	5	6	7
68	27	2	7	6	7
69	28	2	1	7	8
70	48	2	3	7	8
71	48	2	5	7	8
72	28	2	7	7	8
73	29	2	1	8	9
74	49	2	3	8	9



สถาบันวิทยบริการ
 มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าธนบุรี

75	49	2	5	8	9
76	29	2	7	8	9
77	30	2	1	9	10
78	50	2	3	9	10
79	50	2	5	9	10
80	30	2	7	9	10
81	31	2	1	10	11
82	51	2	3	10	11
83	51	2	5	10	11
84	31	2	7	10	11
85	32	2	1	11	12
86	52	2	3	11	12
87	52	2	5	11	12
88	32	2	7	11	12
89	33	2	1	12	13
90	53	2	3	12	13
91	53	2	5	12	13
92	33	2	7	12	13
93	34	2	1	13	14
94	54	2	3	13	14
95	54	2	5	13	14
96	34	2	7	13	14
97	35	2	1	14	15
98	55	2	3	14	15
99	55	2	5	14	15
100	35	2	7	14	15
101	36	2	1	15	16
102	56	2	3	15	16
103	56	2	5	15	16
104	36	2	7	15	16
105	37	2	1	16	17
106	57	2	3	16	17
107	57	2	5	16	17
108	37	2	7	16	17
109	38	2	1	17	18
110	58	2	3	17	18
111	58	2	5	17	18
112	38	2	7	17	18
113	39	2	1	18	19
114	59	2	3	18	19
115	59	2	5	18	19
116	39	2	7	18	19
117	40	2	1	19	20
118	60	2	3	19	20
119	60	2	5	19	20
120	40	2	7	19	20
121	21	3	1	0	1
122	21	3	5	0	1
123	22	3	1	1	2
124	22	3	5	1	2
125	23	3	1	2	3
126	23	3	5	2	3
127	24	3	1	3	4
128	24	3	5	3	4
129	25	3	1	4	5
130	25	3	5	4	5
131	26	3	1	5	6
132	26	3	5	5	6
133	27	3	1	6	7
134	27	3	5	6	7
135	28	3	1	7	8
136	28	3	5	7	8
137	29	3	1	8	9
138	29	3	5	8	9
139	30	3	1	9	10
140	30	3	5	9	10
141	31	3	1	10	11
142	31	3	5	10	11
143	32	3	1	11	12
144	32	3	5	11	12
145	33	3	1	12	13
146	33	3	5	12	13
147	34	3	1	13	14
148	34	3	5	13	14
149	35	3	1	14	15
150	35	3	5	14	15
151	36	3	1	15	16
152	36	3	5	15	16



สถาบันวิทยบริการ

กองกรรมมหาวิทยาลัย

153	37	3	1	16	17
154	37	3	5	16	17
155	38	3	1	17	18
156	38	3	5	17	18
157	39	3	1	18	19
158	39	3	5	18	19
159	40	3	1	19	20
160	40	3	5	19	20

Beams Connectivity

1	1	1	1	1	2
2	2	1	1	2	3
3	3	1	1	3	4
4	4	1	1	4	5
5	1	2	1	1	2
6	2	2	1	2	3
7	3	2	1	3	4
8	4	2	1	4	5
9	1	3	1	1	2
10	2	3	1	2	3
11	3	3	1	3	4
12	4	3	1	4	5
13	1	4	1	1	2
14	2	4	1	2	3
15	3	4	1	3	4
16	4	4	1	4	5
17	5	5	1	1	2
18	6	5	1	2	3
19	7	5	1	3	4
20	8	5	1	4	5
21	5	6	1	1	2
22	6	6	1	2	3
23	7	6	1	3	4
24	8	6	1	4	5
25	5	7	1	1	2
26	6	7	1	2	3
27	7	7	1	3	4
28	8	7	1	4	5
29	5	8	1	1	2
30	6	8	1	2	3
31	7	8	1	3	4
32	8	8	1	4	5
33	5	9	1	1	2
34	6	9	1	2	3
35	7	9	1	3	4
36	8	9	1	4	5
37	9	10	1	1	2
38	10	10	1	2	3
39	11	10	1	3	4
40	12	10	1	4	5
41	9	11	1	1	2
42	10	11	1	2	3
43	11	11	1	3	4
44	12	11	1	4	5
45	9	12	1	1	2
46	10	12	1	2	3
47	11	12	1	3	4
48	12	12	1	4	5
49	9	13	1	1	2
50	10	13	1	2	3
51	11	13	1	3	4
52	12	13	1	4	5
53	9	14	1	1	2
54	10	14	1	2	3
55	11	14	1	3	4
56	12	14	1	4	5
57	13	15	1	1	2
58	14	15	1	2	3
59	15	15	1	3	4
60	16	15	1	4	5
61	13	16	1	1	2
62	14	16	1	2	3
63	15	16	1	3	4
64	16	16	1	4	5
65	13	17	1	1	2
66	14	17	1	2	3
67	15	17	1	3	4
68	16	17	1	4	5
69	13	18	1	1	2



สถาบันวิทยบริการ
 มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าธนบุรี

70	14	18	1	2	3
71	15	18	1	3	4
72	16	18	1	4	5
73	13	19	1	1	2
74	14	19	1	2	3
75	15	19	1	3	4
76	16	19	1	4	5
77	13	20	1	1	2
78	14	20	1	2	3
79	15	20	1	3	4
80	16	20	1	4	5
81	17	1	2	1	2
82	18	1	2	2	3
83	19	1	2	3	4
84	20	1	2	4	5
85	21	1	2	5	6
86	22	1	2	6	7
87	17	2	2	1	2
88	18	2	2	2	3
89	19	2	2	3	4
90	20	2	2	4	5
91	21	2	2	5	6
92	22	2	2	6	7
93	17	3	2	1	2
94	18	3	2	2	3
95	19	3	2	3	4
96	20	3	2	4	5
97	21	3	2	5	6
98	22	3	2	6	7
99	17	4	2	1	2
100	18	4	2	2	3
101	19	4	2	3	4
102	20	4	2	4	5
103	21	4	2	5	6
104	22	4	2	6	7
105	23	5	2	1	2
106	24	5	2	2	3
107	25	5	2	3	4
108	26	5	2	4	5
109	27	5	2	5	6
110	28	5	2	6	7
111	23	6	2	1	2
112	24	6	2	2	3
113	25	6	2	3	4
114	26	6	2	4	5
115	27	6	2	5	6
116	28	6	2	6	7
117	23	7	2	1	2
118	24	7	2	2	3
119	25	7	2	3	4
120	26	7	2	4	5
121	27	7	2	5	6
122	28	7	2	6	7
123	23	8	2	1	2
124	24	8	2	2	3
125	25	8	2	3	4
126	26	8	2	4	5
127	27	8	2	5	6
128	28	8	2	6	7
129	23	9	2	1	2
130	24	9	2	2	3
131	25	9	2	3	4
132	26	9	2	4	5
133	27	9	2	5	6
134	28	9	2	6	7
135	29	10	2	1	2
136	30	10	2	2	3
137	31	10	2	3	4
138	32	10	2	4	5
139	33	10	2	5	6
140	34	10	2	6	7
141	29	11	2	1	2
142	30	11	2	2	3
143	31	11	2	3	4
144	32	11	2	4	5
145	33	11	2	5	6
146	34	11	2	6	7
147	29	12	2	1	2



สถาบันวิทยบริการ
 กรุงเทพมหานครมหาวิทยาลัย

148	30	12	2	2	3
149	31	12	2	3	4
150	32	12	2	4	5
151	33	12	2	5	6
152	34	12	2	6	7
153	29	13	2	1	2
154	30	13	2	2	3
155	31	13	2	3	4
156	32	13	2	4	5
157	33	13	2	5	6
158	34	13	2	6	7
159	29	14	2	1	2
160	30	14	2	2	3
161	31	14	2	3	4
162	32	14	2	4	5
163	33	14	2	5	6
164	34	14	2	6	7
165	35	15	2	1	2
166	36	15	2	2	3
167	37	15	2	3	4
168	38	15	2	4	5
169	39	15	2	5	6
170	40	15	2	6	7
171	35	16	2	1	2
172	36	16	2	2	3
173	37	16	2	3	4
174	38	16	2	4	5
175	39	16	2	5	6
176	40	16	2	6	7
177	35	17	2	1	2
178	36	17	2	2	3
179	37	17	2	3	4
180	38	17	2	4	5
181	39	17	2	5	6
182	40	17	2	6	7
183	35	18	2	1	2
184	36	18	2	2	3
185	37	18	2	3	4
186	38	18	2	4	5
187	39	18	2	5	6
188	40	18	2	6	7
189	35	19	2	1	2
190	36	19	2	2	3
191	37	19	2	3	4
192	38	19	2	4	5
193	39	19	2	5	6
194	40	19	2	6	7
195	35	20	2	1	2
196	36	20	2	2	3
197	37	20	2	3	4
198	38	20	2	4	5
199	39	20	2	5	6
200	40	20	2	6	7
201	41	1	3	1	2
202	42	1	3	2	3
203	43	1	3	3	4
204	44	1	3	4	5
205	41	2	3	1	2
206	42	2	3	2	3
207	43	2	3	3	4
208	44	2	3	4	5
209	41	3	3	1	2
210	42	3	3	2	3
211	43	3	3	3	4
212	44	3	3	4	5
213	41	4	3	1	2
214	42	4	3	2	3
215	43	4	3	3	4
216	44	4	3	4	5
217	45	5	3	1	2
218	46	5	3	2	3
219	47	5	3	3	4
220	48	5	3	4	5
221	45	6	3	1	2
222	46	6	3	2	3
223	47	6	3	3	4
224	48	6	3	4	5
225	45	7	3	1	2



สถาบันวิทยบริการ
 ภาควิชาการมัธยมศึกษา

226	46	7	3	2	3
227	47	7	3	3	4
228	48	7	3	4	5
229	45	8	3	1	2
230	46	8	3	2	3
231	47	8	3	3	4
232	48	8	3	4	5
233	45	9	3	1	2
234	46	9	3	2	3
235	47	9	3	3	4
236	48	9	3	4	5
237	49	10	3	1	2
238	50	10	3	2	3
239	51	10	3	3	4
240	52	10	3	4	5
241	49	11	3	1	2
242	50	11	3	2	3
243	51	11	3	3	4
244	52	11	3	4	5
245	49	12	3	1	2
246	50	12	3	2	3
247	51	12	3	3	4
248	52	12	3	4	5
249	49	13	3	1	2
250	50	13	3	2	3
251	51	13	3	3	4
252	52	13	3	4	5
253	49	14	3	1	2
254	50	14	3	2	3
255	51	14	3	3	4
256	52	14	3	4	5
257	53	15	3	1	2
258	54	15	3	2	3
259	55	15	3	3	4
260	56	15	3	4	5
261	53	16	3	1	2
262	54	16	3	2	3
263	55	16	3	3	4
264	56	16	3	4	5
265	53	17	3	1	2
266	54	17	3	2	3
267	55	17	3	3	4
268	56	17	3	4	5
269	53	18	3	1	2
270	54	18	3	2	3
271	55	18	3	3	4
272	56	18	3	4	5
273	53	19	3	1	2
274	54	19	3	2	3
275	55	19	3	3	4
276	56	19	3	4	5
277	53	20	3	1	2
278	54	20	3	2	3
279	55	20	3	3	4
280	56	20	3	4	5
Shear Walls Connectivity					
1	1	1	3	0	1
2	2	1	3	1	2
3	3	1	3	2	3
4	4	1	3	3	4
5	5	1	3	4	5
6	6	1	3	5	6
7	7	1	3	6	7
8	8	1	3	7	8
9	9	1	3	8	9
10	10	1	3	9	10
11	11	1	3	10	11
12	12	1	3	11	12
13	13	1	3	12	13
14	14	1	3	13	14
15	15	1	3	14	15
16	16	1	3	15	16
17	17	1	3	16	17
18	18	1	3	17	18
19	19	1	3	18	19
20	20	1	3	19	20
21	21	3	3	0	1
22	22	3	3	1	2

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

Analysis Option: Nonlinear Dynamic Analysis

3

Long-term Loading (Static Loads)

280, 0, 0, 200

10, 0

Uniformly Loaded Beam Data

1	1	0.021
2	2	0.021
3	3	0.021
4	4	0.021
5	5	0.021
6	6	0.021
7	7	0.021
8	8	0.021
9	9	0.021
10	10	0.021
11	11	0.021
12	12	0.021
13	13	0.021
14	14	0.021
15	15	0.021
16	16	0.021
17	17	0.021
18	18	0.021
19	19	0.021
20	20	0.021
21	21	0.021
22	22	0.021
23	23	0.021
24	24	0.021
25	25	0.021
26	26	0.021
27	27	0.021
28	28	0.021
29	29	0.021
30	30	0.021
31	31	0.021
32	32	0.021
33	33	0.021
34	34	0.021
35	35	0.021
36	36	0.021
37	37	0.021
38	38	0.021
39	39	0.021
40	40	0.021
41	41	0.021
42	42	0.021
43	43	0.021
44	44	0.021
45	45	0.021
46	46	0.021
47	47	0.021
48	48	0.021
49	49	0.021
50	50	0.021
51	51	0.021
52	52	0.021
53	53	0.021
54	54	0.021

สถาบันวิทยบริการ
ศาลงกรณ์มหาวิทยาลัย

55 55 0.021
56 56 0.021
57 57 0.021
58 58 0.021
59 59 0.021
60 60 0.021
61 61 0.021
62 62 0.021
63 63 0.021
64 64 0.021
65 65 0.021
66 66 0.021
67 67 0.021
68 68 0.021
69 69 0.021
70 70 0.021
71 71 0.021
72 72 0.021
73 73 0.021
74 74 0.021
75 75 0.021
76 76 0.021
77 77 0.014
78 78 0.014
79 79 0.014
80 80 0.014
81 81 0.031
82 82 0.031
83 83 0.031
84 84 0.031
85 85 0.031
86 86 0.031
87 87 0.031
88 88 0.031
89 89 0.031
90 90 0.031
91 91 0.031
92 92 0.031
93 93 0.031
94 94 0.031
95 95 0.031
96 96 0.031
97 97 0.031
98 98 0.031
99 99 0.031
100 100 0.031
101 101 0.031
102 102 0.031
103 103 0.031
104 104 0.031
105 105 0.031
106 106 0.031
107 107 0.031
108 108 0.031
109 109 0.031
110 110 0.031
111 111 0.031
112 112 0.031
113 113 0.031
114 114 0.031
115 115 0.031
116 116 0.031
117 117 0.031
118 118 0.031
119 119 0.031
120 120 0.031
121 121 0.031
122 122 0.031
123 123 0.031
124 124 0.031
125 125 0.031
126 126 0.031
127 127 0.031
128 128 0.031
129 129 0.031
130 130 0.031
131 131 0.031
132 132 0.031



สถาบันวิทยบริการ
ศาลงกรณ์มหาวิทยาลัย

133 133 0.031
134 134 0.031
135 135 0.031
136 136 0.031
137 137 0.031
138 138 0.031
139 139 0.031
140 140 0.031
141 141 0.031
142 142 0.031
143 143 0.031
144 144 0.031
145 145 0.031
146 146 0.031
147 147 0.031
148 148 0.031
149 149 0.031
150 150 0.031
151 151 0.031
152 152 0.031
153 153 0.031
154 154 0.031
155 155 0.031
156 156 0.031
157 157 0.031
158 158 0.031
159 159 0.031
160 160 0.031
161 161 0.031
162 162 0.031
163 163 0.031
164 164 0.031
165 165 0.031
166 166 0.031
167 167 0.031
168 168 0.031
169 169 0.031
170 170 0.031
171 171 0.031
172 172 0.031
173 173 0.031
174 174 0.031
175 175 0.031
176 176 0.031
177 177 0.031
178 178 0.031
179 179 0.031
180 180 0.031
181 181 0.031
182 182 0.031
183 183 0.031
184 184 0.031
185 185 0.031
186 186 0.031
187 187 0.031
188 188 0.031
189 189 0.031
190 190 0.031
191 191 0.031
192 192 0.031
193 193 0.031
194 194 0.031
195 195 0.024
196 196 0.024
197 197 0.024
198 198 0.024
199 199 0.024
200 200 0.024
201 201 0.031
202 202 0.031
203 203 0.031
204 204 0.031
205 205 0.031
206 206 0.031
207 207 0.031
208 208 0.031
209 209 0.031
210 210 0.031



สถาบันวิทยบริการ
ศาลงกรณ์มหาวิทยาลัย

211 211 0.031
 212 212 0.031
 213 213 0.031
 214 214 0.031
 215 215 0.031
 216 216 0.031
 217 217 0.031
 218 218 0.031
 219 219 0.031
 220 220 0.031
 221 221 0.031
 222 222 0.031
 223 223 0.031
 224 224 0.031
 225 225 0.031
 226 226 0.031
 227 227 0.031
 228 228 0.031
 229 229 0.031
 230 230 0.031
 231 231 0.031
 232 232 0.031
 233 233 0.031
 234 234 0.031
 235 235 0.031
 236 236 0.031
 237 237 0.031
 238 238 0.031
 239 239 0.031
 240 240 0.031
 241 241 0.031
 242 242 0.031
 243 243 0.031
 244 244 0.031
 245 245 0.031
 246 246 0.031
 247 247 0.031
 248 248 0.031
 249 249 0.031
 250 250 0.031
 251 251 0.031
 252 252 0.031
 253 253 0.031
 254 254 0.031
 255 255 0.031
 256 256 0.031
 257 257 0.031
 258 258 0.031
 259 259 0.031
 260 260 0.031
 261 261 0.031
 262 262 0.031
 263 263 0.031
 264 264 0.031
 265 265 0.031
 266 266 0.031
 267 267 0.031
 268 268 0.031
 269 269 0.031
 270 270 0.031
 271 271 0.031
 272 272 0.031
 273 273 0.031
 274 274 0.031
 275 275 0.031
 276 276 0.031
 277 277 0.024
 278 278 0.024
 279 279 0.024
 280 280 0.024

Concentrated Vertical Load

1	1	1	1	2.308
2	1	2	1	2.170
3	1	3	1	2.032
4	1	4	1	1.893
5	1	5	1	1.755
6	1	6	1	1.629
7	1	7	1	1.503



สถาบันวิทยบริการ
 ภาลงกรณ์มหาวิทยาลัย

8	1	8	1	1.377
9	1	9	1	1.250
10	1	10	1	1.124
11	1	11	1	1.013
12	1	12	1	0.902
13	1	13	1	0.791
14	1	14	1	0.680
15	1	15	1	0.569
16	1	16	1	0.467
17	1	17	1	0.364
18	1	18	1	0.261
19	1	19	1	0.159
20	1	20	1	0.056
21	1	1	3	8.804
22	1	2	3	8.350
23	1	3	3	7.897
24	1	4	3	7.444
25	1	5	3	6.990
26	1	6	3	6.537
27	1	7	3	6.084
28	1	8	3	5.630
29	1	9	3	5.177
30	1	10	3	4.724
31	1	11	3	4.271
32	1	12	3	3.817
33	1	13	3	3.364
34	1	14	3	2.911
35	1	15	3	2.457
36	1	16	3	2.004
37	1	17	3	1.551
38	1	18	3	1.097
39	1	19	3	0.644
40	1	20	3	0.191
41	1	1	5	2.308
42	1	2	5	2.170
43	1	3	5	2.032
44	1	4	5	1.893
45	1	5	5	1.755
46	1	6	5	1.629
47	1	7	5	1.503
48	1	8	5	1.377
49	1	9	5	1.250
50	1	10	5	1.124
51	1	11	5	1.013
52	1	12	5	0.902
53	1	13	5	0.791
54	1	14	5	0.680
55	1	15	5	0.569
56	1	16	5	0.467
57	1	17	5	0.364
58	1	18	5	0.261
59	1	19	5	0.159
60	1	20	5	0.056
61	2	1	1	3.957
62	2	2	1	3.735
63	2	3	1	3.513
64	2	4	1	3.291
65	2	5	1	3.069
66	2	6	1	2.859
67	2	7	1	2.649
68	2	8	1	2.439
69	2	9	1	2.229
70	2	10	1	2.019
71	2	11	1	1.824
72	2	12	1	1.629
73	2	13	1	1.434
74	2	14	1	1.239
75	2	15	1	1.045
76	2	16	1	0.858
77	2	17	1	0.672
78	2	18	1	0.485
79	2	19	1	0.299
80	2	20	1	0.112
81	2	1	3	5.616
82	2	2	3	5.301
83	2	3	3	4.987
84	2	4	3	4.673
85	2	5	3	4.359



สถาบันวิทยบริการ
 ภาควิชาการศึกษามหาวิทยาลัย

86	2	6	3	4.065
87	2	7	3	3.770
88	2	8	3	3.476
89	2	9	3	3.182
90	2	10	3	2.887
91	2	11	3	2.609
92	2	12	3	2.332
93	2	13	3	2.054
94	2	14	3	1.776
95	2	15	3	1.498
96	2	16	3	1.236
97	2	17	3	0.975
98	2	18	3	0.714
99	2	19	3	0.452
100	2	20	3	0.191
101	2	1	5	5.616
102	2	2	5	5.301
103	2	3	5	4.987
104	2	4	5	4.673
105	2	5	5	4.359
106	2	6	5	4.065
107	2	7	5	3.770
108	2	8	5	3.476
109	2	9	5	3.182
110	2	10	5	2.887
111	2	11	5	2.609
112	2	12	5	2.332
113	2	13	5	2.054
114	2	14	5	1.776
115	2	15	5	1.498
116	2	16	5	1.236
117	2	17	5	0.975
118	2	18	5	0.714
119	2	19	5	0.452
120	2	20	5	0.191
121	2	1	7	3.957
122	2	2	7	3.735
123	2	3	7	3.513
124	2	4	7	3.291
125	2	5	7	3.069
126	2	6	7	2.859
127	2	7	7	2.649
128	2	8	7	2.439
129	2	9	7	2.229
130	2	10	7	2.019
131	2	11	7	1.824
132	2	12	7	1.629
133	2	13	7	1.434
134	2	14	7	1.239
135	2	15	7	1.045
136	2	16	7	0.858
137	2	17	7	0.672
138	2	18	7	0.485
139	2	19	7	0.299
140	2	20	7	0.112
141	3	1	1	3.957
142	3	2	1	3.735
143	3	3	1	3.513
144	3	4	1	3.291
145	3	5	1	3.069
146	3	6	1	2.859
147	3	7	1	2.649
148	3	8	1	2.439
149	3	9	1	2.229
150	3	10	1	2.019
151	3	11	1	1.824
152	3	12	1	1.629
153	3	13	1	1.434
154	3	14	1	1.239
155	3	15	1	1.045
156	3	16	1	0.858
157	3	17	1	0.672
158	3	18	1	0.485
159	3	19	1	0.299
160	3	20	1	0.112
161	3	1	3	13.671
162	3	2	3	12.971
163	3	3	3	12.272



สถาบันวิทยบริการ
 กรุงเทพมหานครมหาวิทยาลัย

164	3	4	3	11.572
165	3	5	3	10.873
166	3	6	3	10.174
167	3	7	3	9.474
168	3	8	3	8.775
169	3	9	3	8.075
170	3	10	3	7.376
171	3	11	3	6.676
172	3	12	3	5.977
173	3	13	3	5.278
174	3	14	3	4.578
175	3	15	3	3.879
176	3	16	3	3.179
177	3	17	3	2.480
178	3	18	3	1.781
179	3	19	3	1.081
180	3	20	3	0.382
181	3	1	5	3.957
182	3	2	5	3.735
183	3	3	5	3.513
184	3	4	5	3.291
185	3	5	5	3.069
186	3	6	5	2.859
187	3	7	5	2.649
188	3	8	5	2.439
189	3	9	5	2.229
190	3	10	5	2.019
191	3	11	5	1.824
192	3	12	5	1.629
193	3	13	5	1.434
194	3	14	5	1.239
195	3	15	5	1.045
196	3	16	5	0.858
197	3	17	5	0.672
198	3	18	5	0.485
199	3	19	5	0.299
200	3	20	5	0.112

Dynamic Analysis

0.001, 0.0, 0.001, 80.0, 2.0, 1

Input Wave

0, 4001, 0.02

Ground Motion: SCT N00E: Mexico 1985 from 20s to 100s: pga = 0.097965g

sct_20s_100s.txt

Dynamic Analysis Snapshot Control

1

5, 0, 0

1, 1, 1, 1, 1

1, 1, 1, 1, 1

Story Output Control

10, 0.02, 1, 5, 6, 10, 11, 12, 15, 16, 17, 20

story1.out

story5.out

story6.out

story10.out

story11.out

story12.out

story15.out

story16.out

story17.out

story20.out

Element Hysteresis Output

8, 9, 4, 0, 0, 0

Column Output

1, 31, 39, 101, 102, 103, 119, 120

Beam Output

33, 80, 168, 169, 259, 262, 263, 264, 280

Wall Output

1, 2, 21, 22

ประวัติผู้วิจัย

นายภัทรายุส ไวจรรยา เกิดวันที่ 21 มิถุนายน พ.ศ.2518 ที่อำเภอเมือง จังหวัดเชียงใหม่ สำเร็จการศึกษา
ปริญญาตรีวิศวกรรมศาสตรบัณฑิต สาขาวิศวกรรมโยธา ภาควิชาวิศวกรรมโยธา คณะวิศวกรรมศาสตร์
มหาวิทยาลัยเชียงใหม่ ในปีการศึกษา 2539 และเข้าศึกษาต่อในหลักสูตรวิศวกรรมศาสตรมหาบัณฑิต
ที่จุฬาลงกรณ์มหาวิทยาลัย ปีการศึกษา 2540



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย