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I N P U T D A T A
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CODE: 2006 IBC Building Code

A)Building:
Footprint Dim. Parallel to X Axis = 140.00 ft Occupancy Category = II
Footprint Dim. Parallel to Y Axis = 100.00 ft
Ecc. for Seismic Force in X-dir = 5.00 ft(-), 5.00 ft(+)
Ecc. for Seismic Force in Y-dir = 7.00 ft(-), 7.00 ft(+)
Vertical Irregularities : None
Horizontal Irregularities: None

B)Wind:
Basic Wind Speed = 115.00 mph Enclosure = Enclosed
Avg. Air Density = 0.07650 lbm/ft-3 Exposure = C
Assigned G = 0.850 Structure is deemed RIGID
Dir. Factor, Kd = 0.850 Parapet is not a Cantilever

Roof Type = NO SLOPE
Overhangs: X1 = 0.00 ft X2 = 0.00 ft
Y1 = 0.00 ft Y2 = 0.00 ft

Topographical Effects are Excluded
Note: Kd is to be used with Load Combinations in Sec. 2.3 and 2.4.

C)Seismic:
Site Class = D Drift Ratio = 0.020
Spectral Response at Short Periods = 42.30 %g
Spectral Response at 1-sec. Period = 9.40 %g
Long-Period Transition Period = 6.000 sec
Fa = 1.462 Fv = 2.400
Method of Period Calculation: Rayleigh, Eq. 12.8-7 or 12.8-9 limit requested
Note: User assumes lateral system is substantially symmetrical for
Rayleigh's method of period calculation.
Structural System: Bearing Wall Intermediate Precast
For Force in X-Dir: R = 4.00, C = 4.00 Y-Dir: R = 4.00, C = 4.00
Effects of Soil-Structure interaction have not been incorporated

Story Heights:

Beginning Story	Ending Story	Story Ht. (ft)
1	1	16.000
2	5	14.000

Parapet Height = 3.000 ft Building Height = 72.000 ft (calculated)

Floor Masses

Beginning Floor	Ending Floor	Mass (k)	C. G. of Masses in X-dir (ft)	in Y-dir (ft)
2	5	2100.00	70.000	50.000
6	6	1400.00	70.000	50.000

Wall Geometry

Stiffness Adjustment

Wall Label	Length (ft)	Thickness (in)	Wind (for opngs,jts,etc.)	Seismic
1	20.000	10.000	1.000	0.500
2	20.000	10.000	0.800	0.400
3	30.000	10.000	0.800	0.400
4	20.000	10.000	1.000	0.500
5	20.000	10.000	1.000	0.500
6	30.000	10.000	1.000	0.500

F'c= 5.000 ksi Ec= 4287. ksi Poisson's Ratio= 0.20

Walls with Constant Section

Beginning Story	Ending Story	Wall No.	Wall Label	X (ft)	Y (ft)	Angle (deg)
1	5	1	1	0.000	10.000	90.000
		2	2	130.000	100.000	0.000
		4	4	130.000	0.000	0.000
		5	5	0.000	90.000	90.000
		6	6	70.000	50.000	0.000

Walls with Variable Section

Wall #	X (ft)	Y (ft)	Angle (deg)	Wall Label	Up to Floor #	Wall Label	Up to Floor #	Top Label #
3	140.000	50.000	90.000	3	5	2	6	0

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L A T E R A L A N A L Y S I S F O R W I N D L O A D S
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CODE: 2006 International Building Code
Note: All wind loads are unfactored and based on eq. in ASCE 7-05, Table 6-3.
Wind Forces are for the MWFRS only (Main Wind-Force Resisting System).
Lateral analysis is by Analytical Procedure, ASCE 7-05, Sec 6.5.
Note: If the building is in a wind-borne debris region within a
hurricane-prone region, the glazing must be impact-resistant or
adequately protected as per ASCE 7-05 Section 6.5.9.3.
Note: User has determined structure meets scope of Sec 6.5.1. for use of
Analytical Procedure, and none of its limitations apply.

Floor Loads Due to Wind in X Direction

Mean Roof Ht. = 72.000 Iw = 1.000
Parapet Load = 256.634 plf, each (already included in floor loads)

Floor Level	Elev. (ft)	----Floor Loads---- Force (k)	Y-Location (ft)	Accum. Shear (k)	O. T. Moment (k-ft)
6	72.00	50.1	50.00	50.12	0.0
5	58.00	47.8	50.00	97.92	701.7
4	44.00	46.1	50.00	143.97	2072.6
3	30.00	43.8	50.00	187.75	4088.2
2	16.00	43.7	50.00	231.45	6716.7
1	0.00	0.0	0.00	231.45	10419.9

Horizontal Distance from Windward Edge (ft)	Uplift Pressure on Roof (psf) External + Internal = Total		
0.00 to 36.00	26.07	6.11	32.17

36.00 to 72.00	25.79	6.11	31.89
72.00 to 140.00	14.58	6.11	20.69

Floor Loads Due to Wind in Y Direction

Mean Roof Ht. = 72.000 Iw = 1.000
Parapet Load = 256.634 plf, each (already included in floor loads)

Floor Level	Elev. (ft)	----Floor Loads---- Force (k)	X-Location (ft)	Accum. Shear (k)	O. T. Moment (k-ft)
6	72.00	72.4	70.00	72.43	0.0
5	58.00	71.4	70.00	143.87	1014.0
4	44.00	69.0	70.00	212.87	3028.2
3	30.00	65.8	70.00	278.67	6008.4
2	16.00	66.0	70.00	344.70	9909.8
1	0.00	0.0	0.00	344.70	15424.9

Horizontal Distance from Windward Edge (ft)	Uplift Pressure on Roof (psf) External + Internal = Total		
0.00 to 36.00	27.73	6.11	33.84
36.00 to 72.00	23.42	6.11	29.52
72.00 to 100.00	16.96	6.11	23.06

Wall Forces Due to Wind in X Direction

Load Case 1 : Wind parallel to X axis.
Load Case 2a: 0.750 * wind parallel to X axis at 65.00 ft.
Load Case 2b: 0.750 * wind parallel to X axis at 35.00 ft.

Wall #	Story	Load Case 1 Shear (k)	Load Case 1 O.T. Mom. (k-ft)	Load Case 2a Shear (k)	Load Case 2a O.T. Mom. (k-ft)	Load Case 2b Shear (k)	Load Case 2b O.T. Mom. (k-ft)
1	5	-0.2	-3.	-1.8	-25.	1.5	21.
	4	-0.6	-11.	-3.8	-78.	2.9	62.
	3	-0.9	-23.	-5.5	-155.	4.2	120.
	2	-1.2	-39.	-7.1	-254.	5.3	195.
	1	-1.7	-67.	-8.7	-393.	6.2	294.
2	5	-5.8	-82.	-5.4	-75.	-3.4	-48.
	4	-15.1	-293.	-12.8	-254.	-9.9	-186.
	3	-23.4	-622.	-20.1	-535.	-15.1	-397.
	2	-32.6	-1078.	-27.9	-925.	-21.0	-691.
	1	-48.8	-1858.	-41.5	-1590.	-31.6	-1198.
3	5	0.4	6.	3.6	50.	-3.0	-41.
	4	1.1	22.	7.6	156.	-5.9	-124.
	3	1.7	46.	10.9	309.	-8.4	-241.
	2	2.4	79.	14.2	509.	-10.7	-391.
	1	3.4	133.	17.4	787.	-12.3	-587.
4	5	-7.0	-98.	-4.1	-58.	-6.4	-90.
	4	-18.3	-354.	-12.0	-226.	-15.4	-306.
	3	-28.3	-750.	-18.3	-482.	-24.1	-643.
	2	-39.2	-1299.	-25.5	-839.	-33.3	-1109.
	1	-58.3	-2231.	-38.1	-1449.	-49.3	-1898.
5	5	-0.2	-3.	-1.8	-25.	1.5	21.
	4	-0.6	-11.	-3.8	-78.	2.9	62.
	3	-0.9	-23.	-5.5	-155.	4.2	120.

	2	-1.2	-39.	-7.1	-254.	5.3	195.
	1	-1.7	-67.	-8.7	-393.	6.2	294.
6	5	-37.2	-521.	-28.1	-393.	-27.8	-389.
	4	-64.5	-1425.	-48.6	-1074.	-48.1	-1063.
	3	-92.3	-2717.	-69.6	-2049.	-68.8	-2026.
	2	-116.0	-4340.	-87.5	-3273.	-86.5	-3237.
	1	-124.4	-6331.	-93.9	-4776.	-92.7	-4720.

Wall Displacements and Story Drifts Due to Wind in X Direction

Wall #	Floor	Load Case 1 Disp. (in)	Load Case 1 Drift (in)	Load Case 2a Disp. (in)	Load Case 2a Drift (in)	Load Case 2b Disp. (in)	Load Case 2b Drift (in)
1	6	0.003	0.001	0.021	0.005	-0.016	-0.004
	5	0.002	0.001	0.015	0.005	-0.012	-0.004
	4	0.002	0.001	0.010	0.005	-0.008	-0.004
	3	0.001	0.001	0.006	0.004	-0.004	-0.003
	2	0.000	0.000	0.002	0.002	-0.001	-0.001
2	6	0.113	0.028	0.097	0.024	0.072	0.018
	5	0.085	0.027	0.073	0.024	0.055	0.018
	4	0.058	0.025	0.049	0.022	0.037	0.016
	3	0.032	0.020	0.028	0.017	0.021	0.013
	2	0.012	0.012	0.010	0.010	0.008	0.008
3	6	-0.003	-0.001	-0.017	-0.004	0.013	0.003
	5	-0.002	-0.001	-0.013	-0.004	0.010	0.003
	4	-0.001	-0.001	-0.009	-0.004	0.006	0.003
	3	-0.001	0.000	-0.005	-0.003	0.004	0.002
	2	0.000	0.000	-0.002	-0.002	0.001	0.001
4	6	0.109	0.027	0.070	0.017	0.093	0.023
	5	0.082	0.026	0.053	0.017	0.070	0.023
	4	0.056	0.024	0.036	0.016	0.047	0.021
	3	0.031	0.020	0.020	0.013	0.027	0.017
	2	0.012	0.012	0.008	0.008	0.010	0.010
5	6	0.003	0.001	0.021	0.005	-0.016	-0.004
	5	0.002	0.001	0.015	0.005	-0.012	-0.004
	4	0.002	0.001	0.010	0.005	-0.008	-0.004
	3	0.001	0.001	0.006	0.004	-0.004	-0.003
	2	0.000	0.000	0.002	0.002	-0.001	-0.001
6	6	0.111	0.027	0.084	0.021	0.083	0.020
	5	0.084	0.027	0.063	0.020	0.062	0.020
	4	0.057	0.025	0.043	0.019	0.042	0.018
	3	0.032	0.020	0.024	0.015	0.024	0.015
	2	0.012	0.012	0.009	0.009	0.009	0.009

Wall Forces Due to Wind in Y Direction

Load Case 1 : Wind parallel to Y axis.
Load Case 2c: 0.750 * wind parallel to Y axis at 91.00 ft.
Load Case 2d: 0.750 * wind parallel to Y axis at 49.00 ft.

Wall #	Story	Load Case 1 Shear (k)	Load Case 1 O.T. Mom. (k-ft)	Load Case 2c Shear (k)	Load Case 2c O.T. Mom. (k-ft)	Load Case 2d Shear (k)	Load Case 2d O.T. Mom. (k-ft)
1	5	-18.1	-253.	-10.3	-144.	-16.9	-236.

	4	-34.2	-732.	-18.7	-406.	-32.6	-692.
	3	-51.9	-1458.	-28.9	-811.	-48.9	-1377.
	2	-68.6	-2419.	-38.5	-1350.	-64.4	-2279.
	1	-87.9	-3825.	-50.4	-2157.	-81.4	-3581.
2	5	0.0	0.	2.0	27.	-1.9	-27.
	4	-4.7	-65.	-0.4	21.	-6.5	-119.
	3	-3.5	-114.	2.5	57.	-7.8	-228.
	2	-2.7	-152.	5.0	128.	-9.2	-356.
	1	4.5	-81.	13.7	346.	-7.0	-467.
3	5	-36.2	-507.	-33.8	-473.	-20.5	-288.
	4	-75.5	-1564.	-70.4	-1459.	-42.8	-887.
	3	-109.1	-3092.	-101.8	-2885.	-61.9	-1753.
	2	-141.4	-5071.	-132.0	-4732.	-80.2	-2875.
	1	-169.0	-7775.	-157.7	-7255.	-95.8	-4407.
4	5	0.1	1.	-2.2	-31.	2.3	33.
	4	5.3	75.	0.4	-26.	7.5	138.
	3	4.0	131.	-2.9	-67.	9.0	263.
	2	3.1	174.	-5.8	-149.	10.5	410.
	1	-5.0	95.	-15.3	-394.	7.9	536.
5	5	-18.1	-253.	-10.3	-144.	-16.9	-236.
	4	-34.2	-732.	-18.7	-406.	-32.6	-692.
	3	-51.9	-1458.	-28.9	-811.	-48.9	-1377.
	2	-68.6	-2419.	-38.5	-1350.	-64.4	-2279.
	1	-87.9	-3825.	-50.4	-2157.	-81.4	-3581.
6	5	-0.1	-1.	0.3	4.	-0.4	-6.
	4	-0.6	-10.	0.0	4.	-1.0	-19.
	3	-0.5	-17.	0.4	10.	-1.2	-36.
	2	-0.4	-22.	0.8	21.	-1.3	-54.
	1	0.5	-14.	1.7	48.	-0.9	-69.

Wall Displacements and Story Drifts Due to Wind in Y Direction

Wall #	Floor	Load Case 1 Disp. (in)	Load Case 1 Drift (in)	Load Case 2c Disp. (in)	Load Case 2c Drift (in)	Load Case 2d Disp. (in)	Load Case 2d Drift (in)
1	6	0.198	0.050	0.111	0.028	0.186	0.047
	5	0.148	0.049	0.083	0.027	0.139	0.046
	4	0.099	0.044	0.056	0.025	0.093	0.042
	3	0.055	0.035	0.031	0.020	0.051	0.033
	2	0.020	0.020	0.011	0.011	0.018	0.018
2	6	0.012	0.003	-0.016	-0.004	0.034	0.009
	5	0.009	0.004	-0.012	-0.004	0.025	0.009
	4	0.005	0.003	-0.009	-0.003	0.017	0.008
	3	0.002	0.002	-0.006	-0.003	0.009	0.006
	2	0.000	0.000	-0.002	-0.002	0.003	0.003
3	6	0.166	0.041	0.155	0.038	0.094	0.023
	5	0.125	0.039	0.116	0.037	0.071	0.022
	4	0.085	0.037	0.080	0.034	0.048	0.021
	3	0.049	0.030	0.046	0.028	0.028	0.017
	2	0.019	0.019	0.018	0.018	0.011	0.011
4	6	-0.011	-0.003	0.015	0.004	-0.032	-0.008
	5	-0.008	-0.003	0.011	0.003	-0.023	-0.008
	4	-0.005	-0.003	0.008	0.003	-0.015	-0.007

	3	-0.002	-0.002	0.005	0.003	-0.008	-0.005
	2	0.000	0.000	0.002	0.002	-0.003	-0.003
5	6	0.198	0.050	0.111	0.028	0.186	0.047
	5	0.148	0.049	0.083	0.027	0.139	0.046
	4	0.099	0.044	0.056	0.025	0.093	0.042
	3	0.055	0.035	0.031	0.020	0.051	0.033
	2	0.020	0.020	0.011	0.011	0.018	0.018
6	6	0.000	0.000	-0.001	0.000	0.001	0.000
	5	0.000	0.000	0.000	0.000	0.001	0.000
	4	0.000	0.000	0.000	0.000	0.001	0.000
	3	0.000	0.000	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000	0.000	0.000

Combined Wall Forces Due to Wind from both X and Y Directions

Load Case 3a: 75% of Case 1 from both X and Y axis, acting simultaneously.
Load Case 3b: 75% of Case 1 from both X and -Y axis, acting simultaneously.

Wall #	Story	Load Case 3a Shear (k)	Load Case 3a O.T. Mom. (k-ft)	Load Case 3b Shear (k)	Load Case 3b O.T. Mom. (k-ft)
1	5	-13.7	-192.	13.4	188.
	4	-26.1	-557.	25.2	541.
	3	-39.6	-1111.	38.3	1077.
	2	-52.4	-1844.	50.6	1785.
	1	-67.2	-2919.	64.6	2819.
2	5	-4.4	-61.	-4.4	-61.
	4	-14.8	-269.	-7.9	-171.
	3	-20.2	-552.	-15.0	-381.
	2	-26.5	-923.	-22.4	-694.
	1	-33.2	-1454.	-39.9	-1333.
3	5	-26.9	-376.	27.5	385.
	4	-55.8	-1157.	57.5	1189.
	3	-80.5	-2284.	83.1	2353.
	2	-104.3	-3744.	107.8	3863.
	1	-124.2	-5732.	129.3	5931.
4	5	-5.2	-73.	-5.3	-74.
	4	-9.7	-210.	-17.7	-322.
	3	-18.2	-464.	-24.2	-661.
	2	-27.1	-843.	-31.7	-1105.
	1	-47.4	-1602.	-40.0	-1744.
5	5	-13.7	-192.	13.4	188.
	4	-26.1	-557.	25.2	541.
	3	-39.6	-1111.	38.3	1077.
	2	-52.4	-1844.	50.6	1785.
	1	-67.2	-2919.	64.6	2819.
6	5	-28.0	-392.	-27.9	-390.
	4	-48.9	-1076.	-47.9	-1061.
	3	-69.6	-2050.	-68.8	-2024.
	2	-87.2	-3272.	-86.7	-3238.
	1	-92.9	-4759.	-93.7	-4737.

Load Case 4a: 75% of Case 2a and 75% of Case 2c, acting simultaneously.
Load Case 4b: 75% of Case 2a and 75% of Case 2d, acting simultaneously.

Load Case 4c: 75% of Case 2b and 75% of Case 2c, acting simultaneously.
Load Case 4d: 75% of Case 2b and 75% of Case 2d, acting simultaneously.

Wall #	Story	Load Case 4a Shear (k)	Load Case 4a O.T. Mom. (k-ft)	Load Case 4b Shear (k)	Load Case 4b O.T. Mom. (k-ft)	Load Case 4c Shear (k)	Load Case 4c O.T. Mom. (k-ft)	Load Case 4d Shear (k)	Load Case 4d O.T. Mom. (k-ft)
1	5	-9.0	-127.	-14.0	-196.	-6.6	-92.	-11.6	-162.
	4	-16.9	-363.	-27.3	-578.	-11.8	-258.	-22.2	-473.
	3	-25.8	-724.	-40.8	-1149.	-18.6	-518.	-33.5	-942.
	2	-34.2	-1203.	-53.7	-1900.	-24.9	-866.	-44.3	-1563.
	1	-44.3	-1913.	-67.5	-2981.	-33.2	-1397.	-56.4	-2465.
2	5	-2.5	-36.	-5.5	-77.	-1.1	-15.	-4.0	-56.
	4	-9.9	-175.	-14.5	-280.	-7.7	-123.	-12.3	-228.
	3	-13.2	-359.	-20.9	-572.	-9.4	-255.	-17.2	-469.
	2	-17.1	-598.	-27.8	-961.	-12.0	-423.	-22.6	-785.
	1	-20.9	-933.	-36.4	-1543.	-13.5	-639.	-28.9	-1249.
3	5	-22.7	-317.	-12.7	-178.	-27.6	-386.	-17.6	-247.
	4	-47.2	-977.	-26.4	-548.	-57.2	-1187.	-36.5	-758.
	3	-68.2	-1932.	-38.2	-1082.	-82.6	-2344.	-52.7	-1495.
	2	-88.3	-3168.	-49.4	-1775.	-107.0	-3842.	-68.1	-2449.
	1	-105.2	-4851.	-58.8	-2715.	-127.5	-5882.	-81.1	-3746.
4	5	-4.8	-67.	-1.4	-19.	-6.5	-91.	-3.1	-43.
	4	-8.7	-188.	-3.3	-66.	-11.3	-249.	-5.9	-126.
	3	-15.9	-412.	-7.0	-164.	-20.3	-532.	-11.3	-284.
	2	-23.5	-741.	-11.2	-321.	-29.4	-943.	-17.1	-524.
	1	-40.1	-1382.	-22.7	-684.	-48.4	-1719.	-31.0	-1021.
5	5	-9.0	-127.	-14.0	-196.	-6.6	-92.	-11.6	-162.
	4	-16.9	-363.	-27.3	-578.	-11.8	-258.	-22.2	-473.
	3	-25.8	-724.	-40.8	-1149.	-18.6	-518.	-33.5	-942.
	2	-34.2	-1203.	-53.7	-1900.	-24.9	-866.	-44.3	-1563.
	1	-44.3	-1913.	-67.5	-2981.	-33.2	-1397.	-56.4	-2465.
6	5	-20.9	-292.	-21.4	-299.	-20.6	-289.	-21.1	-296.
	4	-36.5	-803.	-37.2	-820.	-36.1	-794.	-36.8	-812.
	3	-51.9	-1529.	-53.1	-1563.	-51.3	-1512.	-52.5	-1547.
	2	-65.0	-2439.	-66.6	-2496.	-64.3	-2412.	-65.8	-2468.
	1	-69.2	-3546.	-71.1	-3634.	-68.2	-3504.	-70.2	-3592.

Wall Displacements and Story Drifts Due to Combined Wind Forces

Wall #	Floor	Load Case 3a Disp. (in)	Load Case 3a Drift (in)	Load Case 3b Disp. (in)	Load Case 3b Drift (in)
1	6	0.151	0.038	-0.146	-0.037
	5	0.113	0.037	-0.109	-0.036
	4	0.076	0.034	-0.073	-0.033
	3	0.042	0.027	-0.040	-0.026
	2	0.015	0.015	-0.015	-0.015
2	6	0.094	0.023	0.076	0.018
	5	0.070	0.023	0.057	0.018
	4	0.047	0.021	0.039	0.017
	3	0.026	0.017	0.023	0.014
	2	0.009	0.009	0.009	0.009
3	6	0.122	0.030	-0.126	-0.031

	5	0.092	0.029	-0.095	-0.030
	4	0.063	0.027	-0.065	-0.028
	3	0.036	0.022	-0.037	-0.023
	2	0.014	0.014	-0.014	-0.014
4	6	0.073	0.018	0.090	0.022
	5	0.056	0.017	0.067	0.022
	4	0.038	0.016	0.045	0.020
	3	0.022	0.013	0.025	0.016
	2	0.009	0.009	0.009	0.009
5	6	0.151	0.038	-0.146	-0.037
	5	0.113	0.037	-0.109	-0.036
	4	0.076	0.034	-0.073	-0.033
	3	0.042	0.027	-0.040	-0.026
	2	0.015	0.015	-0.015	-0.015
6	6	0.083	0.021	0.083	0.020
	5	0.063	0.020	0.062	0.020
	4	0.043	0.019	0.042	0.018
	3	0.024	0.015	0.024	0.015
	2	0.009	0.009	0.009	0.009

Wall #	Floor	Load Case 4a Disp. (in)	Load Case 4a Drift (in)	Load Case 4b Disp. (in)	Load Case 4b Drift (in)	Load Case 4c Disp. (in)	Load Case 4c Drift (in)	Load Case 4d Disp. (in)	Load Case 4d Drift (in)
1	6	0.099	0.025	0.155	0.039	0.071	0.018	0.128	0.032
	5	0.074	0.024	0.116	0.038	0.053	0.018	0.095	0.032
	4	0.049	0.022	0.077	0.035	0.036	0.016	0.064	0.029
	3	0.027	0.017	0.043	0.027	0.020	0.013	0.035	0.023
	2	0.010	0.010	0.015	0.015	0.007	0.007	0.013	0.013
2	6	0.060	0.015	0.098	0.025	0.042	0.010	0.080	0.020
	5	0.045	0.015	0.074	0.024	0.032	0.011	0.060	0.020
	4	0.030	0.014	0.050	0.022	0.021	0.010	0.040	0.018
	3	0.017	0.011	0.027	0.017	0.012	0.007	0.022	0.014
	2	0.006	0.006	0.010	0.010	0.004	0.004	0.008	0.008
3	6	0.104	0.026	0.058	0.014	0.126	0.031	0.080	0.020
	5	0.078	0.025	0.044	0.014	0.094	0.030	0.060	0.019
	4	0.053	0.023	0.030	0.013	0.065	0.028	0.041	0.018
	3	0.030	0.019	0.017	0.010	0.037	0.023	0.023	0.014
	2	0.012	0.012	0.007	0.007	0.014	0.014	0.009	0.009
4	6	0.064	0.016	0.029	0.007	0.081	0.020	0.046	0.011
	5	0.048	0.015	0.022	0.007	0.061	0.019	0.035	0.011
	4	0.033	0.014	0.016	0.006	0.042	0.018	0.024	0.010
	3	0.019	0.012	0.009	0.005	0.024	0.015	0.014	0.008
	2	0.007	0.007	0.004	0.004	0.009	0.009	0.005	0.005
5	6	0.099	0.025	0.155	0.039	0.071	0.018	0.128	0.032
	5	0.074	0.024	0.116	0.038	0.053	0.018	0.095	0.032
	4	0.049	0.022	0.077	0.035	0.036	0.016	0.064	0.029
	3	0.027	0.017	0.043	0.027	0.020	0.013	0.035	0.023
	2	0.010	0.010	0.015	0.015	0.007	0.007	0.013	0.013
6	6	0.062	0.015	0.064	0.016	0.062	0.015	0.063	0.015
	5	0.047	0.015	0.048	0.015	0.046	0.015	0.047	0.015
	4	0.032	0.014	0.033	0.014	0.031	0.014	0.032	0.014
	3	0.018	0.011	0.018	0.011	0.018	0.011	0.018	0.011
	2	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007

Maximum Wall Forces and Moments for All Load Cases Due to Wind

Wall #	Story	Max Shear (k)	O.T. Mom. (k-ft)	Shear (k)	Max O.T. Mom. (k-ft)
1	5	18.1	253.	18.1	253.
	4	34.2	732.	34.2	732.
	3	51.9	1458.	51.9	1458.
	2	68.6	2419.	68.6	2419.
	1	87.9	3825.	87.9	3825.
2	5	5.8	82.	5.8	82.
	4	15.1	293.	15.1	293.
	3	23.4	622.	23.4	622.
	2	32.6	1078.	32.6	1078.
	1	48.8	1858.	48.8	1858.
3	5	36.2	507.	36.2	507.
	4	75.5	1564.	75.5	1564.
	3	109.1	3092.	109.1	3092.
	2	141.4	5071.	141.4	5071.
	1	169.0	7775.	169.0	7775.
4	5	7.0	98.	7.0	98.
	4	18.3	354.	18.3	354.
	3	28.3	750.	28.3	750.
	2	39.2	1299.	39.2	1299.
	1	58.3	2231.	58.3	2231.
5	5	18.1	253.	18.1	253.
	4	34.2	732.	34.2	732.
	3	51.9	1458.	51.9	1458.
	2	68.6	2419.	68.6	2419.
	1	87.9	3825.	87.9	3825.
6	5	37.2	521.	37.2	521.
	4	64.5	1425.	64.5	1425.
	3	92.3	2717.	92.3	2717.
	2	116.0	4340.	116.0	4340.
	1	124.4	6331.	124.4	6331.

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L A T E R A L A N A L Y S I S F O R S E I S M I C L O A D S
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CODE: 2006 International Building Code. Seimic Forces to be used in conjunction with Load Combinations of ASCE 7-05 Chapter 2.
Note: For overturning effects reduction at soil-foundation interface, see Section 12.13.4 of ASCE 7.

Floor Loads Due to Seismic in X Direction

I = 1.000 W = 9800.0 k T = 0.774 sec (Rayleigh)
Ct = 0.020 V = 476.2 k SDC = C
Sms = 0.618 Sm1 = 0.226 Cs = 0.049
Sds = 0.412 Sd1 = 0.150

Floor	Elev. (ft)	Floor Loads: Force (k)	Y Location for Mass C.G.: -Min Ecc (ft)	No Ecc (ft)	+Min Ecc (ft)	Accum. Shear (k)	O. T. Moment (k-ft)

6	72.00	123.5	45.00	50.00	55.00	123.	0.
5	58.00	144.9	45.00	50.00	55.00	268.	1729.
4	44.00	105.8	45.00	50.00	55.00	374.	5486.
3	30.00	68.5	45.00	50.00	55.00	443.	10725.
2	16.00	33.5	45.00	50.00	55.00	476.	16922.
1	0.00	0.0	45.00	50.00	55.00	476.	24540.

Wall Forces Due to Seismic in X Direction

Wall #	Story	With -Min. Ecc. Shear (k)	With -Min. Ecc. O.T. Mom. (k-ft)	With Actual Ecc. Shear (k)	With Actual Ecc. O.T. Mom. (k-ft)	With +Min. Ecc. Shear (k)	With +Min. Ecc. O.T. Mom. (k-ft)
1	5	1.3	18.	-0.5	-7.	-2.3	-32.
	4	2.5	53.	-1.6	-29.	-5.7	-111.
	3	3.3	99.	-2.3	-61.	-7.8	-221.
	2	3.7	151.	-2.8	-100.	-9.3	-351.
	1	3.4	205.	-3.5	-155.	-10.3	-515.
2	5	-12.7	-177.	-13.7	-192.	-14.7	-206.
	4	-40.9	-749.	-42.7	-790.	-44.6	-831.
	3	-59.2	-1578.	-62.1	-1660.	-65.0	-1741.
	2	-73.5	-2607.	-77.1	-2739.	-80.7	-2870.
	1	-94.7	-4122.	-99.2	-4326.	-103.7	-4529.
3	5	-2.6	-36.	1.0	14.	4.6	65.
	4	-5.0	-106.	3.2	58.	11.3	223.
	3	-6.6	-198.	4.5	122.	15.6	442.
	2	-7.5	-303.	5.6	200.	18.6	703.
	1	-6.7	-410.	6.9	310.	20.5	1031.
4	5	-17.7	-248.	-16.5	-231.	-15.3	-214.
	4	-53.8	-1001.	-51.6	-954.	-49.4	-906.
	3	-78.2	-2095.	-74.8	-2001.	-71.4	-1906.
	2	-96.8	-3451.	-92.7	-3298.	-88.6	-3146.
	1	-123.6	-5428.	-118.5	-5195.	-113.5	-4962.
5	5	1.3	18.	-0.5	-7.	-2.3	-32.
	4	2.5	53.	-1.6	-29.	-5.7	-111.
	3	3.3	99.	-2.3	-61.	-7.8	-221.
	2	3.7	151.	-2.8	-100.	-9.3	-351.
	1	3.4	205.	-3.5	-155.	-10.3	-515.
6	5	-93.1	-1304.	-93.3	-1306.	-93.5	-1309.
	4	-173.7	-3736.	-174.0	-3742.	-174.3	-3749.
	3	-236.8	-7051.	-237.3	-7064.	-237.7	-7077.
	2	-272.4	-10864.	-272.9	-10885.	-273.4	-10905.
	1	-257.9	-14990.	-258.4	-15020.	-259.0	-15049.

Wall Displacements and Story Drifts Due to Seismic in X Direction

Wall #	Floor	With -Min. Ecc. Disp. (in)	With -Min. Ecc. Drift (in)	With Actual Ecc. Disp. (in)	With Actual Ecc. Drift (in)	With +Min. Ecc. Disp. (in)	With +Min. Ecc. Drift (in)
1	6	-0.024	-0.006	0.016	0.004	0.056	0.014
	5	-0.018	-0.006	0.012	0.004	0.042	0.014
	4	-0.012	-0.005	0.008	0.004	0.028	0.013
	3	-0.006	-0.004	0.004	0.003	0.015	0.010
	2	-0.002	-0.002	0.002	0.002	0.005	0.005
2	6	0.531	0.132	0.558	0.139	0.584	0.146

	5	0.398	0.131	0.418	0.138	0.438	0.145
	4	0.267	0.120	0.280	0.126	0.294	0.132
	3	0.147	0.094	0.155	0.099	0.162	0.103
	2	0.053	0.053	0.056	0.056	0.058	0.058
3	6	0.019	0.005	-0.013	-0.003	-0.045	-0.011
	5	0.014	0.005	-0.010	-0.003	-0.034	-0.011
	4	0.009	0.004	-0.007	-0.003	-0.023	-0.010
	3	0.005	0.003	-0.004	-0.002	-0.013	-0.008
	2	0.002	0.002	-0.002	-0.002	-0.005	-0.005
4	6	0.561	0.140	0.537	0.134	0.512	0.128
	5	0.421	0.139	0.403	0.133	0.384	0.127
	4	0.282	0.127	0.270	0.121	0.258	0.116
	3	0.155	0.099	0.149	0.095	0.142	0.091
	2	0.056	0.056	0.054	0.054	0.051	0.051
5	6	-0.024	-0.006	0.016	0.004	0.056	0.014
	5	-0.018	-0.006	0.012	0.004	0.042	0.014
	4	-0.012	-0.005	0.008	0.004	0.028	0.013
	3	-0.006	-0.004	0.004	0.003	0.015	0.010
	2	-0.002	-0.002	0.002	0.002	0.005	0.005
6	6	0.546	0.136	0.547	0.136	0.548	0.137
	5	0.410	0.135	0.411	0.135	0.411	0.136
	4	0.275	0.123	0.275	0.124	0.276	0.124
	3	0.151	0.097	0.152	0.097	0.152	0.097
	2	0.055	0.055	0.055	0.055	0.055	0.055

Story Drift Ratios Due to Seismic in X Direction

	With -Min. Ecc.		With Actual Ecc.		With +Min. Ecc.	
Story	Actual	Modified	Actual	Modified	Actual	Modified
5	0.000811	0.003243	0.000812	0.003249	0.000814	0.003255
4	0.000805	0.003219	0.000806	0.003225	0.000808	0.003231
3	0.000734	0.002938	0.000736	0.002943	0.000737	0.002949
2	0.000575	0.002300	0.000576	0.002305	0.000577	0.002309
1	0.000284	0.001138	0.000285	0.001140	0.000286	0.001142

Note: Displacements and drifts of each wall are based on ASCE Eq. 12.8-15 which magnifies computed elastic deflections by Cd/Ie = 4.000.
Note: Calculated story drifts are not based on floor's c.g. of mass.

Summary of Max. Story Drift Ratio Magnitudes at Building Boundaries

Story	(-X)	(+X)	Avg X	(-Y)	(+Y)	Avg Y
5	0.001338	-0.001078	0.000130	0.013366	0.013913	0.013640
4	0.000996	-0.000810	0.000093	0.010028	0.010440	0.010234
3	0.000660	-0.000549	0.000056	0.006717	0.006996	0.006856
2	0.000357	-0.000308	0.000025	0.003697	0.003853	0.003775
1	0.000109	-0.000102	0.000003	0.001167	0.001218	0.001192

Floor Loads Due to Seismic in Y Direction

I = 1.000 W = 9800.0 k T = 0.791 sec (Rayleigh)
Ct = 0.020 V = 466.1 k SDC = C
Sms = 0.618 Sm1 = 0.226 Cs = 0.048
Sds = 0.412 Sd1 = 0.150 Cu = 1.5992
Ta = 0.494 (sec)

Note: Calculated Rayleigh's period was limited by Cu * Ta
ASCE 7 Table 12.8-1, Eq. 12.8-7.

Floor	Elev. (ft)	Floor Loads: Force (k)	X Location for Mass C.G. -Min Ecc (ft)	No Ecc (ft)	+Min Ecc (ft)	Accum. Shear (k)	O. T. Moment (k-ft)
6	72.00	121.3	63.00	70.00	77.00	121.	0.
5	58.00	142.0	63.00	70.00	77.00	263.	1698.
4	44.00	103.5	63.00	70.00	77.00	367.	5385.
3	30.00	66.8	63.00	70.00	77.00	434.	10521.
2	16.00	32.5	63.00	70.00	77.00	466.	16591.
1	0.00	0.0	63.00	70.00	77.00	466.	24049.

Wall Forces Due to Seismic in Y Direction

Wall #	Story	With -Min. Ecc. Shear (k)	With -Min. Ecc. O.T. Mom. (k-ft)	With Actual Ecc. Shear (k)	With Actual Ecc. O.T. Mom. (k-ft)	With +Min. Ecc. Shear (k)	With +Min. Ecc. O.T. Mom. (k-ft)
1	5	-32.7	-458.	-30.2	-423.	-27.7	-388.
	4	-68.6	-1417.	-63.0	-1304.	-57.4	-1191.
	3	-97.3	-2779.	-89.7	-2559.	-82.0	-2340.
	2	-115.8	-4400.	-106.8	-4055.	-97.9	-3710.
	1	-127.9	-6446.	-118.5	-5952.	-109.2	-5458.
2	5	-1.7	-24.	-0.3	-4.	1.2	16.
	4	-10.1	-165.	-7.5	-109.	-4.9	-53.
	3	-9.4	-296.	-5.4	-184.	-1.4	-72.
	2	-9.0	-422.	-4.1	-241.	0.9	-60.
	1	-0.8	-434.	5.4	-155.	11.5	124.
3	5	-55.9	-783.	-60.9	-853.	-65.9	-922.
	4	-126.2	-2550.	-137.4	-2776.	-148.6	-3002.
	3	-172.3	-4962.	-187.5	-5402.	-202.8	-5841.
	2	-202.0	-7790.	-219.9	-8480.	-237.8	-9171.
	1	-210.4	-11156.	-229.0	-12145.	-247.7	-13133.
4	5	2.1	29.	0.4	6.	-1.3	-18.
	4	11.5	191.	8.5	126.	5.6	60.
	3	10.8	342.	6.2	212.	1.5	82.
	2	10.3	485.	4.6	276.	-1.0	67.
	1	1.0	501.	-6.0	181.	-12.9	-139.
5	5	-32.7	-458.	-30.2	-423.	-27.7	-388.
	4	-68.6	-1417.	-63.0	-1304.	-57.4	-1191.
	3	-97.3	-2779.	-89.7	-2559.	-82.0	-2340.
	2	-115.8	-4400.	-106.8	-4055.	-97.9	-3710.
	1	-127.9	-6446.	-118.5	-5952.	-109.2	-5458.
6	5	-0.4	-6.	-0.2	-2.	0.1	1.
	4	-1.4	-26.	-1.0	-17.	-0.6	-7.
	3	-1.4	-46.	-0.8	-28.	-0.2	-10.
	2	-1.3	-64.	-0.6	-36.	0.2	-8.
	1	-0.2	-67.	0.6	-26.	1.4	15.

Wall Displacements and Story Drifts Due to Seismic in Y Direction

Wall #	Floor	With -Min. Ecc. Disp. (in)	With -Min. Ecc. Drift (in)	With Actual Ecc. Disp. (in)	With Actual Ecc. Drift (in)	With +Min. Ecc. Disp. (in)	With +Min. Ecc. Drift (in)
1	6	0.705	0.181	0.650	0.167	0.595	0.153
	5	0.524	0.177	0.483	0.163	0.443	0.149

	4	0.347	0.159	0.320	0.147	0.293	0.134
	3	0.188	0.122	0.173	0.113	0.159	0.103
	2	0.065	0.065	0.060	0.060	0.055	0.055
2	6	0.077	0.020	0.040	0.011	0.003	0.002
	5	0.056	0.021	0.029	0.012	0.001	0.002
	4	0.035	0.018	0.017	0.010	-0.001	0.001
	3	0.018	0.013	0.008	0.006	-0.002	0.000
	2	0.005	0.005	0.001	0.001	-0.002	-0.002
3	6	0.499	0.126	0.543	0.137	0.588	0.148
	5	0.373	0.121	0.406	0.132	0.439	0.143
	4	0.252	0.111	0.274	0.121	0.296	0.131
	3	0.140	0.088	0.153	0.096	0.165	0.104
	2	0.052	0.052	0.057	0.057	0.061	0.061
4	6	-0.071	-0.019	-0.037	-0.010	-0.003	-0.002
	5	-0.052	-0.019	-0.026	-0.011	-0.001	-0.002
	4	-0.033	-0.016	-0.016	-0.009	0.001	-0.001
	3	-0.016	-0.012	-0.007	-0.006	0.002	0.000
	2	-0.005	-0.005	-0.001	-0.001	0.002	0.002
5	6	0.705	0.181	0.650	0.167	0.595	0.153
	5	0.524	0.177	0.483	0.163	0.443	0.149
	4	0.347	0.159	0.320	0.147	0.293	0.134
	3	0.188	0.122	0.173	0.113	0.159	0.103
	2	0.065	0.065	0.060	0.060	0.055	0.055
6	6	0.003	0.001	0.002	0.000	0.000	0.000
	5	0.002	0.001	0.001	0.000	0.000	0.000
	4	0.001	0.001	0.001	0.000	0.000	0.000
	3	0.001	0.001	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000	0.000	0.000

Story Drift Ratios Due to Seismic in Y Direction

Story	With -Min. Ecc. Actual	With -Min. Ecc. Modified	With Actual Ecc. Actual	With Actual Ecc. Modified	With +Min. Ecc. Actual	With +Min. Ecc. Modified
5	0.000914	0.003655	0.000905	0.003620	0.000896	0.003585
4	0.000888	0.003552	0.000879	0.003515	0.000869	0.003478
3	0.000806	0.003224	0.000798	0.003193	0.000791	0.003163
2	0.000627	0.002507	0.000622	0.002487	0.000617	0.002467
1	0.000306	0.001224	0.000305	0.001220	0.000304	0.001217

Note: Displacements and drifts of each wall are based on ASCE Eq. 12.8-15 which magnifies computed elastic deflections by Cd/Ie = 4.000.
Note: Calculated story drifts are not based on floor's c.g. of mass.

Summary of Max. Story Drift Ratio Magnitudes at Building Boundaries

Story	(-X)	(+X)	Avg X	(-Y)	(+Y)	Avg Y
5	0.016790	0.013991	0.015391	-0.001682	0.001822	0.000070
4	0.012479	0.010459	0.011469	-0.001232	0.001336	0.000052
3	0.008265	0.007058	0.007661	-0.000777	0.000843	0.000033
2	0.004471	0.003934	0.004202	-0.000387	0.000419	0.000016
1	0.001362	0.001279	0.001320	-0.000095	0.000102	0.000004

Maximum Wall Forces and Moments for All Load Cases Due to Seismic

Wall #	Story	Max Shear (k)	O.T. Mom. (k-ft)	Shear (k)	Max O.T. Mom. (k-ft)

1	5	32.7	458.	32.7	458.
	4	68.6	1417.	68.6	1417.
	3	97.3	2779.	97.3	2779.
	2	115.8	4400.	115.8	4400.
	1	127.9	6446.	127.9	6446.
2	5	14.7	206.	14.7	206.
	4	44.6	831.	44.6	831.
	3	65.0	1741.	65.0	1741.
	2	80.7	2870.	80.7	2870.
	1	103.7	4529.	103.7	4529.
3	5	65.9	922.	65.9	922.
	4	148.6	3002.	148.6	3002.
	3	202.8	5841.	202.8	5841.
	2	237.8	9171.	237.8	9171.
	1	247.7	13133.	247.7	13133.
4	5	17.7	248.	17.7	248.
	4	53.8	1001.	53.8	1001.
	3	78.2	2095.	78.2	2095.
	2	96.8	3451.	96.8	3451.
	1	123.6	5428.	123.6	5428.
5	5	32.7	458.	32.7	458.
	4	68.6	1417.	68.6	1417.
	3	97.3	2779.	97.3	2779.
	2	115.8	4400.	115.8	4400.
	1	127.9	6446.	127.9	6446.
6	5	93.5	1309.	93.5	1309.
	4	174.3	3749.	174.3	3749.
	3	237.7	7077.	237.7	7077.
	2	273.4	10905.	273.4	10905.
	1	259.0	15049.	259.0	15049.