

**TABLE 9.5(c)—MINIMUM THICKNESS OF SLABS WITHOUT INTERIOR BEAMS\***

$f_y$ , MPa <sup>†</sup>	Without drop panels <sup>‡</sup>			With drop panels <sup>‡</sup>		
	Exterior panels		Interior panels	Exterior panels		Interior panels
	Without edge beams	With edge beams <sup>§</sup>		Without edge beams	With edge beams <sup>§</sup>	
280	$\ell_n/33$	$\ell_n/36$	$\ell_n/36$	$\ell_n/36$	$\ell_n/40$	$\ell_n/40$
420	$\ell_n/30$	$\ell_n/33$	$\ell_n/33$	$\ell_n/33$	$\ell_n/36$	$\ell_n/36$
520	$\ell_n/28$	$\ell_n/31$	$\ell_n/31$	$\ell_n/31$	$\ell_n/34$	$\ell_n/34$

\*For two-way construction,  $\ell_n$  is the length of clear span in the long direction measured face-to-face of supports in slabs without beams and face-to-face of beams or other supports in other cases.

<sup>†</sup>For  $f_y$  between the values given in the table, minimum thickness shall be determined by linear interpolation.

<sup>‡</sup>Drop panels as defined in 13.2.5.

<sup>§</sup>Slabs with beams between columns along exterior edges. The value of  $\alpha_f$  for the edge beam shall not be less than 0.8.

(X-X)ه ملحق (2): يوضح حساب توزيع العزوم للبلاطة في اتجا

Joint	A	B	Column1	C	Column2	D	Column3	E	Column4	F	Column5	G	Column6	H	Column7	I	Column8	J
Membre	AB	BA	BC	CB	CD	DC	DE	ED	EF	FE	FG	GF	GH	HG	HI	IH	IJ	JI
K col	0.0084	0.0084	0.0084	0.0059	0.0059	0.0059	0.0059	0.0059	0.0059	0.0084	0.0084	0.0084	0.0084	0.0084	0.0084	0.0036	0.0036	0.0029
Kslab	0.0009	0.0009	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0009	0.0009	0.0009	0.0009	0.0032	0.0032
D F	0.0522	0.0502	0.0389	0.0535	0.0550	0.0549	0.0556	0.0556	0.0557	0.0405	0.0399	0.0395	0.0499	0.0500	0.0491	0.0808	0.2364	0.3591
W max	108.4702	108.4702	84.9507	84.9507	84.9507	84.9507	86.2314	86.2314	86.2314	86.2314	84.9507	84.9507	109.3240	109.3240	109.3240	109.3240	84.3612	84.3612
L	7.5560	7.5560	7.7290	7.7290	7.5110	7.5110	7.5200	7.5200	7.5110	7.5110	7.5110	7.5110	7.5560	7.5560	7.7000	7.7000	1.6870	1.6870
FEM	(516.0753)	516.0753	(422.8948)	422.8948	(399.3754)	399.3754	(406.3683)	406.3683	(405.3961)	405.3961	(399.3754)	399.3754	(520.1375)	520.1375	(540.1517)	540.1517	(20.0074)	20.0074
balance	26.9246	(4.6747)	(3.6215)	(1.2581)	(1.2926)	0.3840	0.3890	(0.0541)	(0.0541)	(0.2437)	(0.2403)	4.7658	6.0301	1.0003	0.9825	(42.0162)	(122.9392)	(7.1847)
C O	(2.3373)	13.4623	(0.6290)	(1.8108)	0.1920	(0.6463)	(0.0270)	0.1945	(0.1219)	(0.0271)	2.3829	(0.1201)	0.5002	3.0151	(21.0081)	0.4913	(3.5924)	(61.4696)
balance	0.1219	(0.6438)	(0.4988)	0.0866	0.0890	0.0370	0.0375	(0.0040)	(0.0040)	(0.0954)	(0.0940)	(0.0150)	(0.0190)	0.8993	0.8833	0.2505	0.7330	22.0739
C O	(0.3219)	0.0610	0.0433	(0.2494)	0.0185	0.0445	(0.0020)	0.0187	(0.0477)	(0.0020)	(0.0075)	(0.0470)	0.4497	(0.0095)	0.1253	0.4417	11.0369	0.3665
balance	0.0168	(0.0052)	(0.0041)	0.0124	0.0127	(0.0023)	(0.0024)	0.0016	0.0016	0.0004	0.0004	(0.0159)	(0.0201)	(0.0058)	(0.0057)	(0.9272)	(2.7130)	(0.1316)
C O	(0.0026)	0.0084	0.0062	(0.0020)	(0.0012)	0.0063	0.0008	(0.0012)	0.0002	0.0008	(0.0079)	0.0002	(0.0029)	(0.0101)	(0.4636)	(0.0028)	(0.0658)	(1.3565)
balance	0.0001	(0.0007)	(0.0006)	0.0002	0.0002	(0.0004)	(0.0004)	0.0001	0.0001	0.0003	0.0003	0.0001	0.0001	0.0237	0.0233	0.0055	0.0162	0.4871
C O	(0.0004)	0.0001	0.0001	(0.0003)	(0.0002)	0.0001	0.0000	(0.0002)	0.0001	0.0000	0.0001	0.0001	0.0118	0.0001	0.0028	0.0116	0.2436	0.0081
balance	0.0000	(0.0000)	(0.0000)	0.0000	0.0000	(0.0000)	(0.0000)	0.0000	0.0000	(0.0000)	(0.0000)	(0.0005)	(0.0006)	(0.0001)	(0.0001)	(0.0206)	(0.0603)	(0.0029)
FINAL FEM	(491.674)	524.283	(427.599)	419.673	(400.357)	399.198	(405.973)	406.524	(405.622)	405.029	(397.341)	403.943	(513.188)	525.050	(559.612)	498.385	(137.349)	(27.202)

ملحق(3): نتائج العزوم والقوة المحورية للاعمدة

Floor	d	b	N(t.s)	N(u.s)	M.DOWN	M.up
17th	650	500	0	330.2875	64.041	0.000
16ht	650	500	364.233	694.520	47.553	47.553
15th	650	500	728.4658	1058.753	47.553	47.553
14th	650	500	1092.699	1422.986	47.553	47.553
13rd	650	500	1456.932	1787.219	47.553	47.553
12nd	650	500	1821.165	2151.452	47.553	47.553
11st	650	500	2185.398	2515.685	47.553	47.553
10th	650	500	2549.63	2879.918	47.553	47.553
9th	650	500	2913.863	3244.151	47.553	47.553
8th	650	500	3278.096	3608.384	-21.172	-21.172
7th	650	500	3642.329	3972.617	-21.172	-21.172
6th	650	500	4006.562	4336.85	-21.172	-21.172
5th	800	550	4370.795	4701.083	-28.1749	-28.175
4th	800	550	4745.114	5075.401	-28.1749	-28.175
3rd	800	550	5483.665	5813.952	-28.1749	-28.175
2nd	800	550	5857.983	6188.271	-28.1749	-28.175
1st	800	550	6232.302	6692.227	-59.9518	-59.952

Floor	d	b	N(t.s)	N(u.s)	M.UP	M.DOWN
17th	650	500	0	358.0262	0.000	69.419
16ht	650	500	394.822	752.849	51.547	51.547
15th	650	500	789.6449	1147.671	51.547	51.547
14th	650	500	1184.467	1542.493	51.547	51.547
13rd	650	500	1579.29	1937.316	51.547	51.547
12nd	650	500	1974.112	2332.138	51.547	51.547
11st	650	500	2368.935	2726.961	51.547	51.547
10th	650	500	2763.757	3121.783	51.547	51.547
9th	650	500	3158.579	3516.606	51.547	51.547
8th	650	500	3553.402	3911.428	51.547	51.547
7th	650	500	3948.224	4306.250	51.547	51.547
6th	650	500	4343.047	4701.073	51.547	51.547
5th	800	550	4737.869	5095.895	68.59641	68.596
4th	800	550	5143.624	5501.650	68.59641	68.596
3rd	800	550	5944.202	6302.228	68.59641	68.596
2nd	800	550	6349.957	6707.983	68.59641	68.596
1st	800	550	6755.711	7254.263	145.9626	145.963

Floor	d	b	N(t.s)	N(u.s)	M.UP	M.DOWN
17th	650	500	0	522.6357	0.000	187.905
16ht	650	500	561.258	1083.894	132.136	132.136
15th	650	500	1122.516	1645.152	132.136	132.136
14th	650	500	1683.774	2206.410	132.136	132.136
13rd	650	500	2245.032	2767.667	132.136	132.136
12nd	650	500	2806.29	3328.925	132.136	132.136
11st	650	500	3367.548	3890.183	132.136	132.136
10th	650	500	3928.806	4451.441	132.136	132.136
9th	650	500	4490.064	5012.699	132.136	132.136
8th	650	500	5051.322	5573.957	132.136	132.136
7th	650	500	5612.579	6135.215	132.136	132.136
6th	650	500	6173.837	6696.473	132.136	132.136
5th	800	550	6735.095	7257.731	166.8895	166.890
4th	800	550	7307.286	7829.922	166.8895	166.890
3rd	800	550	8440.734	8963.370	166.8895	166.890
2nd	800	550	9012.925	9535.561	166.8895	166.890
1st	800	550	9585.115	10107.751	166.8895	166.890

### 13.6.4 — Factored moments in column strips

**13.6.4.1** — Column strips shall be proportioned to resist the following portions in percent of interior negative factored moments:

$l_2/l_1$	0.5	1.0	2.0
$(\alpha_f l_2/l_1) = 0$	75	75	75
$(\alpha_f l_2/l_1) \geq 1.0$	90	75	45

Linear interpolations shall be made between values shown.

**13.6.4.2** — Column strips shall be proportioned to resist the following portions in percent of exterior negative factored moments:

$l_2/l_1$		0.5	1.0	2.0
$(\alpha_f l_2/l_1) = 0$	$\beta_t = 0$	100	100	100
	$\beta_t \geq 2.5$	75	75	75
$(\alpha_f l_2/l_1) \geq 1.0$	$\beta_t = 0$	100	100	100
	$\beta_t \geq 2.5$	90	75	45

Linear interpolations shall be made between values shown, where  $\beta_t$  is calculated in Eq. (13-5) and  $C$  is calculated in Eq. (13-6).

$$\beta_t = \frac{E_{cb}C}{2E_{cs}I_s} \quad (13-5)$$

$$C = \sum \left(1 - 0.63 \frac{x}{y}\right) \frac{x^3 y}{3} \quad (13-6)$$

The constant  $C$  for T- or L-sections shall be permitted to be evaluated by dividing the section into separate rectangular parts, as defined in 13.2.4, and summing the values of  $C$  for each part.

**TABLE: Column Forces**

Story	Column	Unique Name	Load Case/Combo	P	M
Story17	C36	146	ULS	-312.6347	61.0427
Story16	C36	692	ULS	-574.6455	-29.0525
Story15	C36	731	ULS	-848.2862	31.3683
Story14	C36	770	ULS	-1125.3145	29.486
Story13	C36	809	ULS	-1409.3694	28.9496
Story12	C36	848	ULS	-1701.7201	27.9853
Story11	C36	887	ULS	-2004.4088	26.9202
Story10	C36	926	ULS	-2319.7746	25.6859
Story9	C36	965	ULS	-2650.7495	24.2422
Story8	C36	1004	ULS	-3001.0973	-19.7281
Story7	C36	1043	ULS	-3375.4493	20.3435
Story6	C36	1082	ULS	-3779.4916	17.7013
Story5	C36	616	ULS	-4231.0473	23.9267
Story4	C36	655	ULS	-4698.1593	11.8743
Story2	C36	56	ULS	-5717.7983	-13.003
Story1	C36	8693	ULS	-6312.3768	58.4676

**TABLE: Column Forces**

Story	Column	Unique Name	Load Case/Combo	P	M
Story17	C37	143	ULS	-280.2731	60.2606
Story16	C37	689	ULS	-509.6001	15.6227
Story15	C37	728	ULS	-755.4002	16.1934
Story14	C37	767	ULS	-1003.5648	15.8109
Story13	C37	806	ULS	-1260.47	15.4661
Story12	C37	845	ULS	-1527.1598	14.8836
Story11	C37	884	ULS	-1806.9738	14.1135
Story10	C37	923	ULS	-2103.1273	13.0719
Story9	C37	962	ULS	-2419.6424	11.9258
Story8	C37	1001	ULS	-2761.4847	9.9574
Story7	C37	1040	ULS	-3133.1784	9.5541
Story6	C37	1079	ULS	-3545.6924	13.9841
Story5	C37	618	ULS	-3977.833	14.2691
Story4	C37	657	ULS	-4449.2058	2.2025
Story3	C37	101	ULS	-4947.3963	6.1592
Story2	C37	58	ULS	-5478.517	-13.7444
Story1	C37	8695	ULS	-6070.8123	-31.0404

**TABLE: Column Forces**

Story	Column	Unique Name	Load Case/Combo	P	M2	M3
Story17	C48	141	ULS	-306.031	7.142	52.326
Story16	C48	687	ULS	-566.340	-10.494	-10.494
Story15	C48	726	ULS	-837.782	2.849	7.496
Story14	C48	765	ULS	-1111.905	7.075	7.075
Story13	C48	804	ULS	-1391.896	6.638	6.638
Story12	C48	843	ULS	-1678.634	6.015	6.015
Story11	C48	882	ULS	-1973.837	5.061	5.061
Story10	C48	921	ULS	-2279.431	4.592	4.592
Story9	C48	960	ULS	-2597.825	1.549	1.549
Story8	C48	999	ULS	-2932.140	5.392	14.056
Story7	C48	1038	ULS	-3285.843	22.956	-21.150
Story6	C48	1077	ULS	-3667.107	26.500	26.500
Story5	C39	620	ULS	-4155.418	20.699	20.699
Story4	C39	659	ULS	-4667.493	30.695	-26.211
Story3	C39	103	ULS	-5195.612	6.061	-12.654
Story2	C39	60	ULS	-5747.909	9.423	-13.156
Story1	C39	8697	ULS	-6360.899	16.516	56.727

**Table 1.5-1 Risk Category of Buildings and Other Structures for Flood, Wind, Snow, Earthquake, and Ice Loads**

Use or Occupancy of Buildings and Structures	Risk Category
Buildings and other structures that represent a low risk to human life in the event of failure	I
All buildings and other structures except those listed in Risk Categories I, III, and IV	II
Buildings and other structures, the failure of which could pose a substantial risk to human life.	III
Buildings and other structures, not included in Risk Category IV, with potential to cause a substantial economic impact and/or mass disruption of day-to-day civilian life in the event of failure.	
Buildings and other structures not included in Risk Category IV (including, but not limited to, facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, hazardous waste, or explosives) containing toxic or explosive substances where their quantity exceeds a threshold quantity established by the authority having jurisdiction and is sufficient to pose a threat to the public if released.	
Buildings and other structures designated as essential facilities.	IV
Buildings and other structures, the failure of which could pose a substantial hazard to the community.	
Buildings and other structures (including, but not limited to, facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, or hazardous waste) containing sufficient quantities of highly toxic substances where the quantity exceeds a threshold quantity established by the authority having jurisdiction to be dangerous to the public if released and is sufficient to pose a threat to the public if released. <sup>a</sup>	
Buildings and other structures required to maintain the functionality of other Risk Category IV structures.	

<sup>a</sup>Buildings and other structures containing toxic, highly toxic, or explosive substances shall be eligible for classification to a lower Risk Category if it can be demonstrated to the satisfaction of the authority having jurisdiction by a hazard assessment as described in Section 1.5.2 that a release of the substances is commensurate with the risk associated with that Risk Category.



ملحق (5): سرعة الرياح في المنطقة.

Ministry of Science and Technology – Meteorological Authority – Khartoum

LAT: 15 36 N LONG: - 32 33 ALT: - 380M ABOVE M.S.L

TYPE OF DATE: - ANNUL HIGEST WIND SPEED (GUST) M.P.H

<b>Year</b>	<b>HST WIND SPEED (M.P.H)</b>
1987	<b>43</b>
1988	<b>52</b>
1989	<b>44</b>
1990	<b>29</b>
1991	<b>66</b>
1992	<b>61</b>
1993	<b>36</b>
1994	<b>35</b>
1995	<b>26</b>
1996	<b>21</b>
1997	<b>18</b>
1998	<b>49</b>
1999	<b>58</b>
2000	<b>31</b>
2001	<b>54</b>
2002	<b>69</b>
2003	<b>46</b>
2004	<b>57</b>
2005	<b>40</b>
2006	<b>39</b>

Structure Type	Directionality Factor $K_d^*$
<b>Buildings</b>	
Main Wind Force Resisting System	0.85
Components and Cladding	0.85
<b>Arched Roofs</b>	0.85
<b>Chimneys, Tanks, and Similar Structures</b>	
Square	0.90
Hexagonal	0.95
Round	0.95
<b>Solid Freestanding Walls and Solid Freestanding and Attached Signs</b>	0.85
<b>Open Signs and Lattice Framework</b>	0.85
<b>Trussed Towers</b>	
Triangular, square, rectangular	0.85
All other cross sections	0.95

\*Directionality Factor  $K_d$  has been calibrated with combinations of loads specified in Chapter 2. This factor shall only be applied when used in conjunction with load combinations specified in Sections 2.3 and 2.4.

Table 12.8-2 Values of Approximate Period Parameters  $C_t$  and  $x$ 

Structure Type	$C_t$	$x$
Moment-resisting frame systems in which the frames resist 100% of the required seismic force and are not enclosed or adjoined by components that are more rigid and will prevent the frames from deflecting where subjected to seismic forces:		
Steel moment-resisting frames	0.028 (0.0724) <sup>a</sup>	0.8
Concrete moment-resisting frames	0.016 (0.0466) <sup>a</sup>	0.9
Steel eccentrically braced frames in accordance with Table 12.2-1 lines B1 or D1	0.03 (0.0731) <sup>a</sup>	0.75
Steel buckling-restrained braced frames	0.03 (0.0731) <sup>a</sup>	0.75
All other structural systems	0.02 (0.0488) <sup>a</sup>	0.75

<sup>a</sup>Metric equivalents are shown in parentheses.

4.  $H/L_h \geq 0.2$ .
5.  $H$  is greater than or equal to 15 ft (4.5 m) for Exposure C and D and 60 ft (18 m) for Exposure B.

### 26.8.2 Topographic Factor

The wind speed-up effect shall be included in the calculation of design wind loads by using the factor  $K_{zt}$ :

$$K_{zt} = (1 + K_1 K_2 K_3)^2 \quad (26.8-1)$$

where  $K_1$ ,  $K_2$ , and  $K_3$  are given in Fig. 26.8-1.

If site conditions and locations of structures do not meet all the conditions specified in Section 26.8.1 then  $K_{zt} = 1.0$ .

## 26.9 GUST-EFFECTS

**26.9.1 Gust-Effect Factor:** The gust-effect factor for a rigid building or other structure is permitted to be taken as 0.85.

### 26.9.2 Frequency Determination

To determine whether a building or structure is rigid or flexible as defined in Section 26.2, the fundamental natural frequency,  $n_1$ , shall be established using the structural properties and deformational characteristics of the resisting elements in a properly substantiated analysis. Low-Rise Buildings, as defined in 26.2, are permitted to be considered rigid.

#### 26.9.2.1 Limitations for Approximate Natural Frequency

As an alternative to performing an analysis to determine  $n_1$ , the approximate building natural frequency,  $n_a$ , shall be permitted to be calculated in accordance with Section 26.9.3 for structural steel, concrete, or masonry buildings meeting the following requirements:

1. The building height is less than or equal to 300 ft (91 m), and
2. The building height is less than 4 times its effective length,  $L_{eff}$ .

The effective length,  $L_{eff}$ , in the direction under consideration shall be determined from the following equation:

$$L_{eff} = \frac{\sum_{i=1}^n h_i L_i}{\sum_{i=1}^n h_i} \quad (26.9-1)$$

The summations are over the height of the building where

$h_i$  is the height above grade of level  $i$

$L_i$  is the building length at level  $i$  parallel to the wind direction

### 26.9.3 Approximate Natural Frequency

The approximate lower-bound natural frequency ( $n_a$ ), in Hertz, of concrete or structural steel buildings meeting the conditions of Section 26.9.2.1, is permitted to be determined from one of the following equations:

For structural steel moment-resisting-frame buildings:

$$n_a = 22.2/h^{0.8} \quad (26.9-2)$$

For concrete moment-resisting frame buildings:

$$n_a = 43.5/h^{0.9} \quad (26.9-3)$$

For structural steel and concrete buildings with other lateral-force-resisting systems:

$$n_a = 75/h \quad (26.9-4)$$

For concrete or masonry shear wall buildings, it is also permitted to use

$$n_a = 385(C_w)^{0.5}/h \quad (26.9-5)$$

where

$$C_w = \frac{100}{A_B} \sum_{i=1}^n \left( \frac{h}{h_i} \right)^2 \left[ \frac{A_i}{1 + 0.83 \left( \frac{h_i}{D_i} \right)^2} \right]$$

where

$h$  = mean roof height (ft)

$n$  = number of shear walls in the building effective in resisting lateral forces in the direction under consideration

$A_B$  = base area of the structure (ft<sup>2</sup>)

$A_i$  = horizontal cross-section area of shear wall "i" (ft<sup>2</sup>)

$D_i$  = length of shear wall "i" (ft)

$h_i$  = height of shear wall "i" (ft)

### 26.9.4 Rigid Buildings or Other Structures

For rigid buildings or other structures as defined in Section 26.2, the gust-effect factor shall be taken as 0.85 or calculated by the formula:

$$G = 0.925 \left( \frac{1 + 1.7 g_Q I_z Q}{1 + 1.7 g_v I_z} \right) \quad (26.9-6)$$

$$I_z = c \left( \frac{33}{z} \right)^{1/6} \quad (26.9-7)$$

In SI:  $I_z = c \left( \frac{10}{z} \right)^{1/6}$

where  $I_z$  is the intensity of turbulence at height  $z$   
where  $z$  is the equivalent height of the structure  
defined as  $0.6h$ , but not less than  $z_{\min}$  for all building  
heights  $h$ .  $z_{\min}$  and  $c$  are listed for each exposure in  
Table 26.9-1;  $g_Q$  and  $g_v$  shall be taken as 3.4. The  
background response  $Q$  is given by

$$Q = \frac{1}{\sqrt{1 + 0.63 \left( \frac{B+h}{L_z} \right)^{0.63}}} \quad (26.9-8)$$

where  $B$  and  $h$  are defined in Section 26.3 and  $L_z$  is  
the integral length scale of turbulence at the equivalent  
height given by

$$L_z = \ell \left( \frac{z}{33} \right)^{\Xi} \quad (26.9-9)$$

In SI:  $L_z = \ell \left( \frac{z}{10} \right)^{\Xi}$

in which  $\ell$  and  $\Xi$  are constants listed in Table 26.9-1.

### 26.9.5 Flexible or Dynamically Sensitive Buildings or Other Structures

For flexible or dynamically sensitive buildings or  
other structures as defined in Section 26.2, the  
gust-effect factor shall be calculated by

$$G_f = 0.925 \left( \frac{1 + 1.7 I_z \sqrt{g_Q^2 Q^2 + g_R^2 R^2}}{1 + 1.7 g_v I_z} \right) \quad (26.9-10)$$

$g_Q$  and  $g_v$  shall be taken as 3.4 and  $g_R$  is given by

$$g_R = \sqrt{2 \ln(3,600 n_1)} + \frac{0.577}{\sqrt{2 \ln(3,600 n_1)}} \quad (26.9-11)$$

$R$ , the resonant response factor, is given by

$$R = \sqrt{\frac{1}{\beta} R_n R_h R_B (0.53 + 0.47 R_L)} \quad (26.9-12)$$

$$R_n = \frac{7.47 N_1}{(1 + 10.3 N_1)^{5/3}} \quad (26.9-13)$$

$$N_1 = \frac{n_1 L_z}{\bar{V}_z} \quad (26.9-14)$$

$$R_\ell = \frac{1}{\eta} - \frac{1}{2\eta^2} (1 - e^{-2\eta}) \quad \text{for } \eta > 0 \quad (26.9-15a)$$

$$R_\ell = 1 \quad \text{for } \eta = 0 \quad (26.9-15b)$$

where the subscript  $\ell$  in Eqs. 26.9-15 shall be taken as  
 $h$ ,  $B$ , and  $L$ , respectively, where  $h$ ,  $B$ , and  $L$  are  
defined in Section 26.3.

$n_1$  = fundamental natural frequency

$R_\ell = R_h$  setting  $\eta = 4.6 n_1 h / \bar{V}_z$

$R_\ell = R_B$  setting  $\eta = 4.6 n_1 B / \bar{V}_z$

$R_\ell = R_L$  setting  $\eta = 15.4 n_1 L / \bar{V}_z$

$\beta$  = damping ratio, percent of critical (i.e. for 2% use  
0.02 in the equation)

$\bar{V}_z$  = mean hourly wind speed (ft/s) at height  $z$   
determined from Eq. 26.9-16:

$$\bar{V}_z = \bar{b} \left( \frac{z}{33} \right)^{\bar{\alpha}} \left( \frac{88}{60} \right) V \quad (26.9-16)$$

In SI:  $\bar{V}_z = \bar{b} \left( \frac{z}{10} \right)^{\bar{\alpha}} V$

where  $\bar{b}$  and  $\bar{\alpha}$  are constants listed in Table 26.9-1 and  
 $V$  is the basic wind speed in mi/h.

### 26.9.6 Rational Analysis

In lieu of the procedure defined in Sections 26.9.3  
and 26.9.4, determination of the gust-effect factor by  
any rational analysis defined in the recognized  
literature is permitted.

### 26.9.7 Limitations

Where combined gust-effect factors and pressure  
coefficients ( $GC_p$ ), ( $GC_{pi}$ ), and ( $GC_{pf}$ ) are given in  
figures and tables, the gust-effect factor shall not be  
determined separately.

## 26.10 ENCLOSURE CLASSIFICATION

### 26.10.1 General

For the purpose of determining internal pressure  
coefficients, all buildings shall be classified as  
enclosed, partially enclosed, or open as defined in  
Section 26.2.

### 26.10.2 Openings

A determination shall be made of the amount of  
openings in the building envelope for use in determin-  
ing the enclosure classification.

### 26.10.3 Protection of Glazed Openings

Glazed openings in Risk Category II, III or IV  
buildings located in hurricane-prone regions shall be  
protected as specified in this Section.

#### 26.10.3.1 Wind-borne Debris Regions

Glazed openings shall be protected in  
accordance with Section 26.10.3.2 in the following  
locations:

Main Wind Force Resisting System and Components and Cladding		All Heights
Table 26.11-1	Internal Pressure Coefficient, ( $GC_{pi}$ )	Walls & Roofs
Enclosed, Partially Enclosed, and Open Buildings		

ملحق (10): معامل الضغط الخارجي

Main Wind Force Resisting System – Part 1			All Heights	
Figure 27.4-1 (cont.)	External Pressure Coefficients, $C_p$		Walls & Roofs	
Enclosed, Partially Enclosed Buildings				
	Wall Pressure Coefficients, $C_p$			
	Surface	L/B	$C_p$	Use With
	Windward Wall	All values	0.8	$q_z$
	Leeward Wall	0-1	-0.5	$q_h$
		2	-0.3	
		$\geq 4$	-0.2	
	Side Wall	All values	-0.7	$q_h$

ملحق (11): نتائج الـ Cantilever Method

Story14:-

L	M@c	FW4	P	N4	F4	H4	MB	MC
M	kN.m	KN	KN	KN	KN	KN	kN.m	KN.m
2747.14	9841.88	3.58	32.68	32.68	3.76	39.26	122.75	78.52
2747.14	9841.88	3.58	25.95	58.63	3.76	109.68	220.18	219.37
2747.14	9841.88	3.58	19.21	77.84	3.78	164.48	294.06	328.95
2747.14	9841.88	3.58	12.43	90.26	3.85	205.20	347.51	410.40
2747.14	9841.88	3.58	5.52	95.78	2.05	173.95	196.35	347.90
2747.14	9841.88	3.58	1.84	97.62	2.05	126.81	200.12	253.62
2747.14	9841.88	3.58	5.52	95.78	2.05	173.95	196.35	347.90
2747.14	9841.88	3.58	12.43	90.26	3.85	205.20	347.51	410.40
2747.14	9841.88	3.58	19.21	77.84	3.78	164.48	294.06	328.95
2747.14	9841.88	3.58	25.95	58.63	3.76	109.68	220.18	219.37
2747.14	9841.88	3.58	32.68	32.68	3.76	39.26	122.75	78.52

Story13:-

<b>L</b>	<b><u>M@c</u></b>	<b>FW5</b>	<b>P</b>	<b>N5</b>	<b>F5</b>	<b>H5</b>	<b>MB</b>	<b>MC</b>
<b>M</b>	kN.m	KN	KN	KN	KN	KN	kN.m	KN.m
<b>7.51</b>	2747.14	16049.96	5.84	44.63	44.63	52.95	167.61	105.89
<b>7.51</b>	2747.14	16049.96	5.84	35.43	80.06	147.92	300.66	295.84
<b>7.56</b>	2747.14	16049.96	5.84	26.23	106.28	221.82	401.54	443.64
<b>7.70</b>	2747.14	16049.96	5.84	16.97	123.25	276.74	474.52	553.48
<b>4.10</b>	2747.14	16049.96	5.84	7.53	130.79	234.59	268.12	469.18
<b>4.10</b>	2747.14	16049.96	5.84	2.51	133.30	171.02	273.26	342.03
<b>4.10</b>	2747.14	16049.96	5.84	7.53	130.79	234.59	268.12	469.18
<b>7.70</b>	2747.14	16049.96	5.84	16.97	123.25	276.74	474.52	553.48
<b>7.56</b>	2747.14	16049.96	5.84	26.23	106.28	221.82	401.54	443.64
<b>7.51</b>	2747.14	16049.96	5.84	35.43	80.06	147.92	300.66	295.84
<b>7.51</b>	2747.14	16049.96	5.84	44.63	44.63	52.95	167.61	105.89

Story12:-

<b>L</b>	<b><u>M@c</u></b>	<b>FW6</b>	<b>P</b>	<b>N6</b>	<b>F6</b>	<b>H6</b>	<b>MB</b>	<b>MC</b>
<b>M</b>	kN.m	KN	KN	KN	KN	KN	kN.m	KN.m
<b>7.51</b>	2747.14	19557.12	8.70	57.97	57.97	69.40	217.71	138.80
<b>7.51</b>	2747.14	19557.12	8.70	46.02	103.99	193.89	390.54	387.79
<b>7.56</b>	2747.14	19557.12	8.70	34.07	138.06	290.76	521.57	581.51
<b>7.70</b>	2747.14	19557.12	8.70	22.04	160.10	362.75	616.37	725.49
<b>4.10</b>	2747.14	19557.12	8.70	9.79	169.88	307.50	348.26	615.00
<b>4.10</b>	2747.14	19557.12	8.70	3.26	173.15	224.17	354.95	448.33
<b>4.10</b>	2747.14	19557.12	8.70	9.79	169.88	307.50	348.26	615.00
<b>7.70</b>	2747.14	19557.12	8.70	22.04	160.10	362.75	616.37	725.49
<b>7.56</b>	2747.14	19557.12	8.70	34.07	138.06	290.76	521.57	581.51
<b>7.51</b>	2747.14	19557.12	8.70	46.02	103.99	193.89	390.54	387.79
<b>7.1</b>	2747.14	19557.12	8.70	57.97	57.97	69.40	217.71	138.80



Story11:-

L	<u>M@c</u>	FW7	P	N7	F7	H7	MB	MC
M	kN.m	KN	KN	KN	KN	KN	kN.m	KN.m
7.51	2747.14	33219.60	12.09	71.72	71.72	86.77	269.35	173.55
7.51	2747.14	33219.60	12.09	56.93	128.66	242.43	483.17	484.86
7.56	2747.14	33219.60	12.09	42.15	170.80	363.54	645.29	727.08
7.70	2747.14	33219.60	12.09	27.27	198.07	453.55	762.58	907.11
4.10	2747.14	33219.60	12.09	12.11	210.18	384.48	430.87	768.95
4.10	2747.14	33219.60	12.09	4.04	214.22	280.28	439.15	560.56
4.10	2747.14	33219.60	12.09	12.11	210.18	384.48	430.87	768.95
7.70	2747.14	33219.60	12.09	27.27	198.07	453.55	762.58	907.11
7.56	2747.14	33219.60	12.09	42.15	170.80	363.54	645.29	727.08
7.51	2747.14	33219.60	12.09	56.93	128.66	242.43	483.17	484.86
7.51	2747.14	33219.60	12.09	71.72	71.72	86.77	269.35	173.55

Story10:-

L	<u>M@c</u>	FW8	P	N8	F8	H8	MB	MC
M	kN.m	KN	KN	KN	KN	KN	kN.m	KN.m
7.51	2747.14	44041.48	16.03	86.29	86.29	105.85	324.07	211.70
7.51	2747.14	44041.48	16.03	68.50	154.79	295.73	581.32	591.46
7.56	2747.14	44041.48	16.03	50.71	205.50	443.47	776.38	886.93
7.70	2747.14	44041.48	16.03	32.81	238.31	553.27	917.48	1106.53
4.10	2747.14	44041.48	16.03	14.57	252.88	469.00	518.40	938.01
4.10	2747.14	44041.48	16.03	4.86	257.73	341.90	528.35	683.80
4.10	2747.14	44041.48	16.03	14.57	252.88	469.00	518.40	938.01
7.70	2747.14	44041.48	16.03	32.81	238.31	553.27	917.48	1106.53
7.56	2747.14	44041.48	16.03	50.71	205.50	443.47	776.38	886.93
7.51	2747.14	44041.48	16.03	68.50	154.79	295.73	581.32	591.46
7.51	2747.14	44041.48	16.03	86.29	86.29	105.85	324.07	211.70

TABLE:  
Beam  
Forces

Story	Beam	Unique Name	Load Case/Combo	Station	P	V2	V3	T	M2	M3
Story17	B4	1548	WindY	0.2777	0.1786	-0.0574	0.0024	2.9612	0.0426	-4.4338
Story17	B4	1548	WindY	0.31	0.1786	-0.0574	0.0024	2.9612	0.0425	-4.432
Story17	B4	1548	WindY	0.31	0.1786	-1.8424	0.0753	2.9612	0.025	-3.9574
Story17	B4	1548	WindY	0.5352	0.1786	-1.8424	0.0753	2.9612	0.008	-3.5424
Story17	B4	1548	WindY	0.8912	0.107	-0.8881	0.0141	1.8242	-0.001	-2.4839
Story17	B4	1548	WindY	1.2324	0.107	-0.8881	0.0141	1.8242	-0.0059	-2.1809
Story17	B4	1548	WindY	0.8912	0.107	-0.9149	0.0144	1.8242	0.0008	-2.6985
Story17	B4	1548	WindY	0.8885	0.107	-0.9149	0.0144	1.8242	0.0008	-2.701
Story17	B4	1548	WindY	0.5352	0.107	-0.9244	0.0145	1.8242	0.0078	-3.2422
Story17	B4	1548	WindY	0.8885	0.107	-0.9244	0.0145	1.8242	0.0026	-2.9156
Story17	B4	1548	WindY	7.2933	0.085	-0.6263	-0.027	-1.8336	0.019	2.486
Story17	B4	1548	WindY	6.7975	0.085	-0.6263	-0.027	-1.8336	0.0056	2.1755
Story17	B4	1548	WindY	6.3016	0.085	-0.6263	-0.027	-1.8336	-0.0078	1.8649
Story17	B4	1548	WindY	1.2324	0.0599	-0.7738	0.0037	1.2043	-0.0054	-1.9982
Story17	B4	1548	WindY	1.4782	0.0599	-0.7738	0.0037	1.2043	-0.0063	-1.8081
Story17	B4	1548	WindY	1.4782	0.0318	-0.8608	0.0076	0.8992	-0.0016	-1.5725
Story17	B4	1548	WindY	1.9296	0.0318	-0.8608	0.0076	0.8992	-0.005	-1.1839
Story17	B4	1548	WindY	0.2777	0	-4.4723	0	4.7996	0	-4.7008
Story17	B4	1548	WindY	0.2529	0	-4.4723	0	4.7996	0	-4.8117
Story17	B4	1548	WindY	7.4584	0	-0.8898	0	-3.6772	0	3.0178
Story17	B4	1548	WindY	7.2933	0	-0.8898	0	-3.6772	0	2.8709
Story17	B4	1548	WindY	7.5264	0	-0.1986	0	-3.6772	0	3.307
Story17	B4	1548	WindY	7.4584	0	-0.1986	0	-3.6772	0	3.2935
Story17	B4	1548	WindY	7.5284	0	-0.0481	0	-4.5576	0	3.1113
Story17	B4	1548	WindY	7.5264	0	-0.0481	0	-4.5576	0	3.1112
Story17	B4	1548	WindY	5.0322	-0.0225	-0.4715	0.0008	-1.0384	-0.0022	1.1963
Story17	B4	1548	WindY	5.4554	-0.0225	-0.4715	0.0008	-1.0384	-0.0025	1.3958

Story17	B4	1548	WindY	5.8785	-0.0225	-0.4715	0.0008	-1.0384	-0.0029	1.5953
Story17	B4	1548	WindY	6.3016	-0.0225	-0.4715	0.0008	-1.0384	-0.0032	1.7948
Story17	B4	1548	WindY	2.4429	-0.0329	-0.4945	0.0014	0.3798	-0.0015	-0.6027
Story17	B4	1548	WindY	2.4334	-0.0329	-0.4945	0.0014	0.3798	-0.0015	-0.6073
Story17	B4	1548	WindY	2.4429	-0.0329	-0.467	0.0014	0.3798	-0.0019	-0.4574
Story17	B4	1548	WindY	2.913	-0.0329	-0.467	0.0014	0.3798	-0.0025	-0.2379
Story17	B4	1548	WindY	1.9296	-0.0329	-0.5038	0.0015	0.3798	-0.0004	-1.0065
Story17	B4	1548	WindY	2.1815	-0.0329	-0.5038	0.0015	0.3798	-0.0008	-0.8796
Story17	B4	1548	WindY	2.4334	-0.0329	-0.5038	0.0015	0.3798	-0.0012	-0.7527
Story17	B4	1548	WindY	5.0322	-0.0719	-0.1861	-0.0029	-0.6774	-0.0007	1.155
Story17	B4	1548	WindY	4.701	-0.0719	-0.1861	-0.0029	-0.6774	-0.0016	1.0934
Story17	B4	1548	WindY	4.6606	-0.0719	-0.0366	-0.0006	-0.6774	-0.0036	0.9598
Story17	B4	1548	WindY	4.5246	-0.0719	-0.0366	-0.0006	-0.6774	-0.0037	0.9548
Story17	B4	1548	WindY	4.701	-0.0719	-0.1231	-0.0004	-0.6774	-0.0029	1.0215
Story17	B4	1548	WindY	4.6606	-0.0719	-0.1231	-0.0004	-0.6774	-0.0029	1.0165
Story17	B4	1548	WindY	3.3652	-0.0783	-0.4906	0.0014	-0.1008	-0.0018	0.2383
Story17	B4	1548	WindY	3.7602	-0.0783	-0.4906	0.0014	-0.1008	-0.0024	0.432
Story17	B4	1548	WindY	2.913	-0.0804	-0.4873	0.001	-0.1024	-0.0012	-0.0945
Story17	B4	1548	WindY	3.3652	-0.0804	-0.4873	0.001	-0.1024	-0.0016	0.1259
Story17	B4	1548	WindY	4.3679	-0.0904	-0.426	-0.0002	-0.4286	-0.0013	0.776
Story17	B4	1548	WindY	4.064	-0.0904	-0.426	-0.0002	-0.4286	-0.0014	0.6466
Story17	B4	1548	WindY	3.7602	-0.0904	-0.426	-0.0002	-0.4286	-0.0015	0.5171
Story17	B4	1548	WindY	4.3874	-0.0904	-0.2067	-0.0001	-0.4286	-0.0013	0.8498
Story17	B4	1548	WindY	4.3679	-0.0904	-0.2067	-0.0001	-0.4286	-0.0013	0.8457
Story17	B4	1548	WindY	4.5246	-0.0904	-0.0473	-0.000026	-0.4286	-0.0013	0.9155
Story17	B4	1548	WindY	4.3874	-0.0904	-0.0473	-0.000026	-0.4286	-0.0013	0.909

**TABLE:  
Column  
Forces**

Story	Column	Unique Name	Load Case/Com bo	Station	P	V2	V3	T	M2	M3
Story17	C1	1528	WindY	0	1.921	1.1111	8.3893	0.5633	14.8681	2.6545
Story17	C14	1611	WindY	0	-3.9282	4.8611	4.6741	0.5633	8.2251	7.1727
Story17	C2	1529	WindY	0	2.1017	-2.2894	7.4367	0.5633	12.9872	-3.1306
Story17	C27	1541	WindY	0	-8.3576	0.4257	-0.4167	0.4513	-1.3205	0.5435
Story17	C3	1530	WindY	0	3.9864	-4.2252	3.31	0.5633	5.5722	-6.0544
Story17	C30	1620	WindY	0	-0.9045	1.3158	-8.4465	0.5633	-15.0282	2.7758
Story17	C31	1608	WindY	0	-4.8307	5.858	3.8833	0.5633	6.7777	8.843
Story17	C37	1583	WindY	0	-6.1683	-2.5963	3.0786	0.4513	5.5168	-4.5816
Story17	C38	1619	WindY	0	-1.0249	-0.7052	6.9783	0.4513	13.3975	-1.0134
Story17	C39	1584	WindY	0	20.4254	-0.4294	4.7195	0.4513	9.0307	-0.0951
Story17	C4	1531	WindY	0	5.2619	-6.3889	3.705	0.5633	6.4221	-9.7041

ملحق(12) نتائج حوائط القص

الطابق السادس في إتجاه (X-X)

Wall	Kx	Ky	r	Kr	Kr^2	Pd@y	Pr@y	Pi@y
P58	0.00	0.09	4.73	0.43	2.05	0.01	5.59E-06	0.0105
P59	0.00	0.11	4.73	0.50	2.36	0.01	6.44E-06	0.0121
P61	11.71	0.00	23.12	270.85	6262.90	0.00	3.49E-03	0.0035
P60	11.71	0.00	25.42	297.79	7570.78	0.00	3.84E-03	0.0038
P64	0.00	0.04	6.58	0.27	1.78	0.00	3.48E-06	0.0047
P62	0.00	0.04	6.58	0.27	1.78	0.00	3.48E-06	0.0047
P45	12.52	0.00	2.78	34.78	96.58	0.00	-4.49E-04	-0.0004
P39	0.00	225.38	9.19	2071.20	19034.37	25.86	-2.67E-02	25.8324
P38	0.00	0.47	7.72	3.64	28.08	0.05	-4.69E-05	0.0540
P2	0.03	0.00	2.78	0.07	0.20	0.00	-9.17E-07	0.0000
P1	0.00	915.06	6.27	5735.61	35950.81	104.99	7.40E-02	105.0663
P3	11.71	0.00	2.78	32.53	90.33	0.00	-4.20E-04	-0.0004
P36	1681.29	0.00	2.92	4914.41	14364.82	0.00	-6.34E-02	-0.0634
P12	2741.54	0.00	2.92	8013.51	23423.50	0.00	1.03E-01	0.1034
P41	1.46	0.00	2.78	4.07	11.29	0.00	-5.25E-05	-0.0001
P15	42.28	0.00	2.78	117.42	326.07	0.00	-1.51E-03	-0.0015
P17	0.00	33.18	1.18	39.22	46.35	3.81	5.06E-04	3.8072
P16	0.00	70.73	1.18	83.60	98.82	8.12	1.08E-03	8.1163
P19	2.86	0.00	2.78	7.93	22.03	0.00	1.02E-04	0.0001
P18	0.00	33.18	3.88	128.80	499.98	3.81	1.66E-03	3.8084
P22	23.93	0.00	2.78	66.45	184.53	0.00	8.57E-04	0.0009
P21	0.00	33.18	6.62	219.74	1455.31	3.81	2.83E-03	3.8096
P24	0.27	0.00	2.78	0.75	2.07	0.00	9.61E-06	0.0000
P23	3.46	0.00	0.18	0.61	0.11	0.00	7.91E-06	0.0000
P25	0.00	1037.20	9.27	9610.72	89052.90	119.01	1.24E-01	119.1304

<b>P14</b>	1055.60	0.00	0.18	186.84	33.07	0.00	2.41E-03	0.0024
<b>P47</b>	0.00	48.42	8.72	422.04	3678.47	5.56	-5.44E-03	5.5503
<b>P46</b>	0.29	0.00	6.18	1.77	10.93	0.00	-2.28E-05	0.0000
<b>P43</b>	0.00	117.28	7.55	885.08	6679.66	13.46	-1.14E-02	13.4445
<b>P9</b>	0.00	45.70	6.27	286.62	1797.65	5.24	-3.70E-03	5.2395
<b>P44</b>	1.00	0.00	8.98	8.98	80.59	0.00	-1.16E-04	-0.0001
<b>P10</b>	0.00	45.70	4.67	213.50	997.47	5.24	-2.75E-03	5.2405
<b>P7</b>	731.16	0.00	8.98	6563.64	58921.78	0.00	-8.47E-02	-0.0847
<b>P57</b>	0.00	0.13	1.77	0.23	0.41	0.01	-2.96E-06	0.0149
<b>P11</b>	0.00	0.13	1.77	0.23	0.41	0.01	-2.96E-06	0.0149
<b>P6</b>	1730.45	0.00	6.18	10688.97	66025.74	0.00	1.38E-01	0.1379
<b>P34</b>	0.00	33.18	3.91	129.82	508.00	3.81	1.67E-03	3.8084
<b>P27</b>	5.06	0.00	6.18	31.28	193.21	0.00	4.04E-04	0.0004
<b>P33</b>	0.00	33.97	0.60	20.31	12.15	3.90	2.62E-04	3.8979
<b>P26</b>	1453.94	0.00	8.98	13052.06	117168.35	0.00	1.68E-01	0.1684
<b>P28</b>	2.86	0.00	6.18	17.64	108.94	0.00	2.28E-04	0.0002
<b>P35</b>	0.00	33.18	6.61	219.40	1450.92	3.81	2.83E-03	3.8096
<b>P29</b>	1.75	0.00	6.18	10.81	66.76	0.00	1.39E-04	0.0001
<b>P30</b>	40.65	0.00	8.38	340.51	2852.48	0.00	4.39E-03	0.0044
<b>P32</b>	8.98	0.00	6.18	55.48	342.72	0.00	7.16E-04	0.0007
<b>P37</b>	0.00	155.19	9.00	1396.67	12570.07	17.81	1.80E-02	17.8237
<b>P8</b>	0.00	92.35	1.77	163.65	289.98	10.60	-3.40E-02	10.5623
<b>P5</b>	1481.45	0.00	12.28	18187.77	223291.23	0.00	-1.11E+00	-1.1117
<b>P31</b>	0.00	118.59	0.60	70.92	42.41	13.61	9.15E-04	13.6079
<b>P50</b>	0.00	1.54	8.05	12.40	99.82	0.18	1.60E-04	0.1770
<b>P13</b>	4309.78	0.00	12.28	52911.12	649589.85	0.00	6.83E-01	0.6826
<b>SUM</b>	15367.74	3074.00			1345342.86	352.70		352.69

الطابق الثالث في إتجاه (X-X)

Wall	Kx	Ky	r@x	Kr@x	Kr^2@x	Pd@x	Pr@x	Pi@x
P58	0.00	0.09	4.73	0.43	2.04	0.00	0.00010	0.00010
P59	0.00	0.11	4.73	0.50	2.36	0.00	0.00011	0.00011
P61	11.71	0.00	24.43	286.14	6989.77	0.08	0.06577	0.14179
P60	11.71	0.00	26.73	313.08	8367.96	0.08	0.07196	0.14798
P64	0.00	0.04	6.58	0.27	1.77	0.00	0.00006	0.00006
P62	0.00	0.04	6.58	0.27	1.77	0.00	0.00006	0.00006
P45	12.52	0.00	1.47	18.44	27.14	0.08	0.00424	0.08552
P39	0.00	225.38	9.20	2072.33	19055.09	0.00	0.47632	0.47632
P38	0.00	0.47	7.73	3.64	28.12	0.00	0.00084	0.00084
P2	0.03	0.00	1.47	0.04	0.06	0.00	0.00001	0.00017
P1	0.00	915.06	6.27	5740.19	36008.19	0.00	1.31936	1.31936
P3	11.71	0.00	1.47	17.24	25.38	0.08	0.00396	0.07998
P36	1681.29	0.00	4.23	7108.49	30054.71	10.91	1.63385	12.54535
P12	2741.54	0.00	4.23	11591.22	49007.69	17.79	2.66419	20.45665
P41	1.46	0.00	1.47	2.16	3.17	0.01	0.00050	0.01000
P15	42.28	0.00	1.47	62.24	91.62	0.27	0.01431	0.28872
P17	0.00	33.18	1.18	39.05	45.96	0.00	0.00898	0.00898
P16	0.00	70.73	1.18	83.25	97.98	0.00	0.01913	0.01913
P19	2.86	0.00	1.47	4.20	6.19	0.02	0.00097	0.01950
P18	0.00	33.18	3.88	128.63	498.70	0.00	0.02956	0.02956
P22	23.93	0.00	1.47	35.22	51.85	0.16	0.00810	0.16339
P21	0.00	33.18	6.62	219.57	1453.11	0.00	0.05047	0.05047
P24	0.27	0.00	1.47	0.39	0.58	0.00	0.00009	0.00183
P23	3.46	0.00	1.13	3.91	4.41	0.02	0.00090	0.02338

<b>P25</b>	0.00	1037.20	9.26	9605.53	88956.82	0.00	2.20779	2.20779
<b>P14</b>	1055.60	0.00	1.13	1190.72	1343.13	6.85	0.27368	7.12448
<b>P47</b>	0.00	48.42	8.72	422.28	3682.70	0.00	0.09706	0.09706
<b>P46</b>	0.29	0.00	4.87	1.40	6.80	0.00	-0.00032	0.00154
<b>P43</b>	0.00	117.28	7.55	885.66	6688.52	0.00	0.20357	0.20357
<b>P9</b>	0.00	45.70	6.28	286.84	1800.52	0.00	0.06593	0.06593
<b>P44</b>	1.00	0.00	7.67	7.67	58.86	0.01	-0.00176	0.00473
<b>P10</b>	0.00	45.70	4.68	213.73	999.60	0.00	0.04912	0.04912
<b>P7</b>	731.16	0.00	7.67	5609.47	43035.87	4.75	-1.28931	3.45590
<b>P57</b>	0.00	0.13	1.78	0.23	0.41	0.00	-0.00005	-0.00005
<b>P11</b>	0.00	0.13	1.78	0.23	0.41	0.00	-0.00005	-0.00005
<b>P6</b>	1730.45	0.00	4.87	8430.73	41074.53	11.23	1.93777	13.16829
<b>P34</b>	0.00	33.18	3.91	129.66	506.70	0.00	0.02980	0.02980
<b>P27</b>	5.06	0.00	4.87	24.67	120.20	0.03	-0.00567	0.02719
<b>P33</b>	0.00	33.97	0.59	20.14	11.95	0.00	-0.00463	-0.00463
<b>P26</b>	1453.94	0.00	7.67	11154.66	85578.57	9.44	-2.56385	6.87219
<b>P28</b>	2.86	0.00	4.87	13.91	67.77	0.02	-0.00320	0.01533
<b>P35</b>	0.00	33.18	6.61	219.24	1448.72	0.00	-0.05039	-0.05039
<b>P29</b>	1.75	0.00	4.87	8.52	41.53	0.01	-0.00196	0.00940
<b>P30</b>	40.65	0.00	7.07	287.47	2032.97	0.26	0.06607	0.32988
<b>P32</b>	8.98	0.00	4.87	43.76	213.21	0.06	0.01006	0.06835
<b>P37</b>	0.00	155.19	9.00	1395.90	12556.11	0.00	-0.32084	-0.32084
<b>P8</b>	0.00	92.35	1.78	164.11	291.62	0.00	0.03772	0.03772
<b>P5</b>	1481.45	0.00	10.97	16254.48	178344.10	9.61	3.73602	13.35057
<b>P31</b>	0.00	118.59	0.59	70.33	41.70	0.00	0.01616	0.01616
<b>P50</b>	0.00	1.54	8.04	12.40	99.70	0.00	-0.00285	-0.00285
<b>P13</b>	4309.78	0.00	10.97	47286.86	518831.48	27.97	-10.86867	17.10159
<b>SUM</b>	15367.74	3074.00			1139660.10	99.74	-0.01	99.73



الطابق الثالث في إتجاه (Y-Y)

Wall	Kx	Ky	r@x	Kr@x	Kr^2@x	Pd@y	Pr@y	Pi@y
P58	0.00	0.09	4.73	0.43	2.04	0.010	0.000007	0.00972
P59	0.00	0.11	4.73	0.50	2.36	0.011	0.000008	0.01121
P61	11.71	0.00	24.43	286.14	6989.77	0.000	0.004441	0.00444
P60	11.71	0.00	26.73	313.08	8367.96	0.000	0.004859	0.00486
P64	0.00	0.04	6.58	0.27	1.77	0.004	0.000004	0.00436
P62	0.00	0.04	6.58	0.27	1.77	0.004	0.000004	0.00436
P45	12.52	0.00	1.47	18.44	27.14	0.000	-0.000286	-0.00029
P39	0.00	225.38	9.20	2072.33	19055.09	23.924	0.032165	23.95575
P38	0.00	0.47	7.73	3.64	28.12	0.050	-0.000056	0.04991
P2	0.03	0.00	1.47	0.04	0.06	0.000	-0.000001	0.00000
P1	0.00	915.06	6.27	5740.19	36008.19	97.134	-0.089095	97.04452
P3	11.71	0.00	1.47	17.24	25.38	0.000	-0.000268	-0.00027
P36	1681.29	0.00	4.23	7108.49	30054.71	0.000	0.110333	0.11033
P12	2741.54	0.00	4.23	11591.22	49007.69	0.000	0.179910	0.17991
P41	1.46	0.00	1.47	2.16	3.17	0.000	0.000033	0.00003
P15	42.28	0.00	1.47	62.24	91.62	0.000	0.000966	0.00097
P17	0.00	33.18	1.18	39.05	45.96	3.522	0.000606	3.52240
P16	0.00	70.73	1.18	83.25	97.98	7.508	0.001292	7.50906
P19	2.86	0.00	1.47	4.20	6.19	0.000	0.000065	0.00007
P18	0.00	33.18	3.88	128.63	498.70	3.522	0.001996	3.52379
P22	23.93	0.00	1.47	35.22	51.85	0.000	0.000547	0.00055
P21	0.00	33.18	6.62	219.57	1453.11	3.522	0.003408	3.52520
P24	0.27	0.00	1.47	0.39	0.58	0.000	0.000006	0.00001
P23	3.46	0.00	1.13	3.91	4.41	0.000	0.000061	0.00006
P25	0.00	1037.20	9.26	9605.53	88956.82	110.099	0.149090	110.24780
P14	1055.60	0.00	1.13	1190.72	1343.13	0.000	0.018481	0.01848

<b>P47</b>	0.00	48.42	8.72	422.28	3682.70	5.140	0.006554	5.14642
<b>P46</b>	0.29	0.00	4.87	1.40	6.80	0.000	0.000022	0.00002
<b>P43</b>	0.00	117.28	7.55	885.66	6688.52	12.449	0.013747	12.46247
<b>P9</b>	0.00	45.70	6.28	286.84	1800.52	4.851	0.004452	4.85524
<b>P44</b>	1.00	0.00	7.67	7.67	58.86	0.000	-0.000119	-0.00012
<b>P10</b>	0.00	45.70	4.68	213.73	999.60	4.851	-0.003317	4.84747
<b>P7</b>	731.16	0.00	7.67	5609.47	43035.87	0.000	-0.087066	-0.08707
<b>P57</b>	0.00	0.13	1.78	0.23	0.41	0.014	-0.000004	0.01375
<b>P11</b>	0.00	0.13	1.78	0.23	0.41	0.014	0.000004	0.01376
<b>P6</b>	1730.45	0.00	4.87	8430.73	41074.53	0.000	-0.130855	-0.13086
<b>P34</b>	0.00	33.18	3.91	129.66	506.70	3.522	-0.002012	3.51978
<b>P27</b>	5.06	0.00	4.87	24.67	120.20	0.000	-0.000383	-0.00038
<b>P33</b>	0.00	33.97	0.59	20.14	11.95	3.606	0.000313	3.60620
<b>P26</b>	1453.94	0.00	7.67	11154.66	85578.57	0.000	0.173134	0.17313
<b>P28</b>	2.86	0.00	4.87	13.91	67.77	0.000	0.000216	0.00022
<b>P35</b>	0.00	33.18	6.61	219.24	1448.72	3.522	0.003403	3.52520
<b>P29</b>	1.75	0.00	4.87	8.52	41.53	0.000	0.000132	0.00013
<b>P30</b>	40.65	0.00	7.07	287.47	2032.97	0.000	0.004462	0.00446
<b>P32</b>	8.98	0.00	4.87	43.76	213.21	0.000	0.000679	0.00068
<b>P37</b>	0.00	155.19	9.00	1395.90	12556.11	16.473	0.021666	16.49462
<b>P8</b>	0.00	92.35	1.78	164.11	291.62	9.803	-0.033988	9.76916
<b>P5</b>	1481.45	0.00	10.97	16254.48	178344.10	0.000	-1.111709	-1.11171
<b>P31</b>	0.00	118.59	0.59	70.33	41.70	12.589	-0.001092	12.58742
<b>P50</b>	0.00	1.54	8.04	12.40	99.70	0.164	-0.000192	0.16340
<b>P13</b>	4309.78	0.00	10.97	47286.86	518831.48	0.000	0.733951	0.73395
<b>SUM</b>	15367.74	3074.00			1139660.10	326.30		326.31

الطابق الثالث عشر في إتجاه (X-X)

Wall	Kx	Ky	r	Kr@x	Kr^2@x	Pd@x	Pr@x	Pi@x
P58	0.00	0.09	4.73	0.433	2.049	0.000	0.000152	0.000152
P59	0.00	0.11	4.73	0.500	2.364	0.000	0.000175	0.000175
P61	11.71	0.00	23.28	272.667	6347.142	0.093	0.095538	0.18876
P60	11.71	0.00	25.58	299.608	7663.375	0.093	0.104978	0.1982
P64	0.00	0.04	6.58	0.270	1.777	0.000	9.46E-05	9.46E-05
P62	0.00	0.04	6.58	0.270	1.777	0.000	9.46E-05	9.46E-05
P45	12.52	0.00	-2.62	-32.838	86.100	0.100	0.011506	0.111177
P39	0.00	225.38	-9.19	-2071.205	19034.371	0.000	-0.72572	-0.72572
P38	0.00	0.47	-7.72	-3.636	28.082	0.000	-0.00127	-0.00127
P2	0.03	0.00	-2.62	-0.067	0.176	0.000	-2.4E-05	0.00018
P1	0.00	915.06	-6.27	-5735.612	35950.814	0.000	-2.00967	-2.00967
P3	11.71	0.00	-2.62	-30.713	80.529	0.093	-0.01076	0.082461
P36	1681.29	0.00	3.08	5175.009	15928.679	13.381	-1.81324	11.56728
P12	2741.54	0.00	3.08	8438.453	25973.559	21.818	-2.9567	18.8618
P41	1.46	0.00	-2.62	-3.839	10.066	0.012	0.001345	0.012997
P15	42.28	0.00	-2.62	-110.865	290.687	0.337	0.038845	0.37535
P17	0.00	33.18	1.18	39.216	46.353	0.000	0.013741	0.013741
P16	0.00	70.73	1.18	83.601	98.816	0.000	0.029292	0.029292
P19	2.86	0.00	-2.62	-7.489	19.635	0.023	0.002624	0.025354
P18	0.00	33.18	3.88	128.795	499.984	0.000	0.045128	0.045128
P22	23.93	0.00	-2.62	-62.739	164.502	0.190	0.021983	0.212413
P21	0.00	33.18	6.62	219.735	1455.307	0.000	0.076992	0.076992
P24	0.27	0.00	-2.62	-0.703	1.844	0.002	-0.00025	0.001889
P23	3.46	0.00	-0.02	-0.076	0.002	0.028	-2.7E-05	0.027537
P25	0.00	1037.20	9.27	9610.716	89052.898	0.000	-3.36744	-3.36744
P14	1055.60	0.00	-0.02	-23.223	0.511	8.401	0.008137	8.409117

P47	0.00	48.42	-8.72	-422.037	3678.475	0.000	0.147875	0.147875
P46	0.29	0.00	-6.02	-1.725	10.389	0.002	0.000604	0.002884
P43	0.00	117.28	-7.55	-885.075	6679.665	0.000	0.310116	0.310116
P9	0.00	45.70	-6.27	-286.615	1797.651	0.000	0.100425	0.100425
P44	1.00	0.00	-8.82	-8.822	77.828	0.008	0.003091	0.01105
P10	0.00	45.70	-4.67	-213.499	997.468	0.000	0.074807	0.074807
P7	731.16	0.00	-8.82	-6450.308	56904.614	5.819	-2.26008	3.558857
P57	0.00	0.13	-1.77	-0.230	0.407	0.000	8.05E-05	8.05E-05
P11	0.00	0.13	-1.77	-0.230	0.407	0.000	8.05E-05	8.05E-05
P6	1730.45	0.00	-6.02	-10420.746	62753.732	13.772	3.65126	17.42299
P34	0.00	33.18	3.91	129.824	508.001	0.000	0.045488	0.045488
P27	5.06	0.00	-6.02	-30.495	183.638	0.040	0.010685	0.050985
P33	0.00	33.97	0.60	20.314	12.148	0.000	0.007118	0.007118
P26	1453.94	0.00	-8.82	-12826.699	113157.138	11.571	-4.49427	7.076932
P28	2.86	0.00	-6.02	-17.194	103.543	0.023	0.006025	0.028748
P35	0.00	33.18	6.61	219.403	1450.915	0.000	0.076875	0.076875
P29	1.75	0.00	-6.02	-10.536	63.449	0.014	0.003692	0.017616
P30	40.65	0.00	-8.22	-334.213	2747.897	0.324	0.117103	0.440604
P32	8.98	0.00	-6.02	-54.092	325.740	0.071	0.018953	0.090439
P37	0.00	155.19	9.00	1396.675	12570.072	0.000	0.489372	0.489372
P8	0.00	92.35	-1.77	-163.648	289.984	0.000	0.05734	0.05734
P5	1481.45	0.00	-12.12	-17958.143	217688.615	11.790	-6.29224	5.497863
P31	0.00	118.59	0.60	70.918	42.409	0.000	0.024849	0.024849
P50	0.00	1.54	8.05	12.403	99.823	0.000	0.004346	0.004346
P13	4309.78	0.00	-12.12	-52243.107	633290.944	34.299	18.30514	52.60444
SUM	15367.74	3074.00			1318176.35	122.30		122.28

الثالث عشرفي إتجاه (Y-Y)

Wall	Kx	Ky	r	Kr@x	Kr^2@x	Pd@y	Pr@y	Pi@y
P58	0.00	0.09	4.73	0.43	2.05	0.01	6.23E-06	0.01148
P59	0.00	0.11	4.73	0.50	2.36	0.01	7.19E-06	0.013243
P61	11.71	0.00	23.28	272.67	6347.14	0.00	0.003923	0.003923
P60	11.71	0.00	25.58	299.61	7663.38	0.00	0.004311	0.004311
P64	0.00	0.04	6.58	0.27	1.78	0.01	3.88E-06	0.005146
P62	0.00	0.04	6.58	0.27	1.78	0.01	3.88E-06	0.005146
P45	12.52	0.00	-2.62	-32.84	86.10	0.00	0.000473	0.000473
P39	0.00	225.38	-9.19	-2071.20	19034.37	28.26	0.029803	28.28905
P38	0.00	0.47	-7.72	-3.64	28.08	0.06	5.23E-05	0.059073
P2	0.03	0.00	-2.62	-0.07	0.18	0.00	9.66E-07	9.66E-07
P1	0.00	915.06	-6.27	-5735.61	35950.81	114.74	0.082531	114.8196
P3	11.71	0.00	-2.62	-30.71	80.53	0.00	0.000442	0.000442
P36	1681.29	0.00	3.08	5175.01	15928.68	0.00	-0.07446	-0.07446
P12	2741.54	0.00	3.08	8438.45	25973.56	0.00	-0.12142	-0.12142
P41	1.46	0.00	-2.62	-3.84	10.07	0.00	5.52E-05	5.52E-05
P15	42.28	0.00	-2.62	-110.86	290.69	0.00	0.001595	0.001595
P17	0.00	33.18	1.18	39.22	46.35	4.16	0.000564	4.16061
P16	0.00	70.73	1.18	83.60	98.82	8.87	0.001203	8.8696
P19	2.86	0.00	-2.62	-7.49	19.64	0.00	-0.00011	-0.00011
P18	0.00	33.18	3.88	128.80	499.98	4.16	0.001853	4.161899
P22	23.93	0.00	-2.62	-62.74	164.50	0.00	-0.0009	-0.0009
P21	0.00	33.18	6.62	219.74	1455.31	4.16	0.003162	4.163208
P24	0.27	0.00	-2.62	-0.70	1.84	0.00	-1E-05	-1E-05
P23	3.46	0.00	-0.02	-0.08	0.00	0.00	-1.1E-06	-1.1E-06
P25	0.00	1037.20	9.27	9610.72	89052.90	130.05	0.138291	130.1902
P14	1055.60	0.00	-0.02	-23.22	0.51	0.00	-0.00033	-0.00033

<b>P47</b>	0.00	48.42	-8.72	-422.04	3678.47	6.07	0.006073	6.07744
<b>P46</b>	0.29	0.00	-6.02	-1.73	10.39	0.00	2.48E-05	2.48E-05
<b>P43</b>	0.00	117.28	-7.55	-885.08	6679.66	14.70	0.012736	14.71754
<b>P9</b>	0.00	45.70	-6.27	-286.62	1797.65	5.73	0.004124	5.734018
<b>P44</b>	1.00	0.00	-8.82	-8.82	77.83	0.00	0.000127	0.000127
<b>P10</b>	0.00	45.70	-4.67	-213.50	997.47	5.73	0.003072	5.732966
<b>P7</b>	731.16	0.00	-8.82	-6450.31	56904.61	0.00	-0.09281	-0.09281
<b>P57</b>	0.00	0.13	-1.77	-0.23	0.41	0.02	3.3E-06	0.016253
<b>P11</b>	0.00	0.13	-1.77	-0.23	0.41	0.02	3.3E-06	0.016253
<b>P6</b>	1730.45	0.00	-6.02	-10420.75	62753.73	0.00	-0.14995	-0.14995
<b>P34</b>	0.00	33.18	3.91	129.82	508.00	4.16	0.001868	4.161914
<b>P27</b>	5.06	0.00	-6.02	-30.49	183.64	0.00	-0.00044	-0.00044
<b>P33</b>	0.00	33.97	0.60	20.31	12.15	4.26	0.000292	4.25967
<b>P26</b>	1453.94	0.00	-8.82	-12826.70	113157.14	0.00	-0.18457	-0.18457
<b>P28</b>	2.86	0.00	-6.02	-17.19	103.54	0.00	-0.00025	-0.00025
<b>P35</b>	0.00	33.18	6.61	219.40	1450.92	4.16	0.003157	4.163203
<b>P29</b>	1.75	0.00	-6.02	-10.54	63.45	0.00	-0.00015	-0.00015
<b>P30</b>	40.65	0.00	-8.22	-334.21	2747.90	0.00	-0.00481	-0.00481
<b>P32</b>	8.98	0.00	-6.02	-54.09	325.74	0.00	0	0
<b>P37</b>	0.00	155.19	9.00	1396.67	12570.07	19.46	-0.0201	19.43825
<b>P8</b>	0.00	92.35	-1.77	-163.65	289.98	11.58	-0.03399	11.54578
<b>P5</b>	1481.45	0.00	-12.12	-17958.14	217688.61	0.00	1.111709	1.111709
<b>P31</b>	0.00	118.59	0.60	70.92	42.41	14.87	0.00102	14.87095
<b>P50</b>	0.00	1.54	8.05	12.40	99.82	0.19	0.000178	0.193422
<b>P13</b>	4309.78	0.00	-12.12	-52243.11	633290.94	0.00	-0.75174	-0.75174
<b>SUM</b>	15367.74	3074.00			1318176.35	385.44		385.42

الطابق الرابع عشرفي إتجاه (X-X)

Wall	Kx	Ky	r@x	Kr@x	Kr^2@x	Pd@x	Pr@x	Pi@x
P58	0.00	0.09	4.73	0.43	2.05	0	0.0003	0.0003
P59	0.00	0.11	4.73	0.50	2.36	0	0.000347	0.000347
P61	11.71	0.00	23.47	274.95	6453.93	0.189773	0.190785	0.380558
P60	11.71	0.00	25.77	301.89	7780.67	0.189773	0.20948	0.399252
P64	0.00	0.04	6.58	0.27	1.78	0	0.000187	0.000187
P62	0.00	0.04	6.58	0.27	1.78	0	0.000187	0.000187
P45	12.52	0.00	-2.43	-30.40	73.77	0.202902	-0.02109	0.181811
P39	0.00	225.38	-9.19	-2071.20	19034.37	0	-1.43719	-1.43719
P38	0.00	0.47	-7.72	-3.64	28.08	0	-0.00252	-0.00252
P2	0.03	0.00	-2.43	-0.06	0.15	0.000415	-4.3E-05	0.000372
P1	0.00	915.06	-6.27	-5735.61	35950.81	0	-3.97988	-3.97988
P3	11.71	0.00	-2.43	-28.43	69.00	0.189773	-0.01973	0.170047
P36	1681.29	0.00	3.27	5502.86	18010.86	27.23892	3.818372	31.05729
P12	2741.54	0.00	3.27	8973.05	29368.80	44.41622	6.226299	50.64252
P41	1.46	0.00	-2.43	-3.55	8.62	0.02372	-0.00247	0.021255
P15	42.28	0.00	-2.43	-102.62	249.06	0.685028	-0.07121	0.613821
P17	0.00	33.18	1.18	39.22	46.35	0	0.027211	0.027211
P16	0.00	70.73	1.18	83.60	98.82	0	0.05801	0.05801
P19	2.86	0.00	-2.43	-6.93	16.82	0.046272	-0.00481	0.041462
P18	0.00	33.18	3.88	128.80	499.98	0	0.08937	0.08937
P22	23.93	0.00	-2.43	-58.07	140.94	0.387661	-0.0403	0.347365
P21	0.00	33.18	6.62	219.74	1455.31	0	0.152472	0.152472
P24	0.27	0.00	-2.43	-0.65	1.58	0.004347	-0.00045	0.003895
P23	3.46	0.00	0.17	0.60	0.10	0.056112	0.000416	0.056528

P25	0.00	1037.20	9.27	9610.72	89052.90	0	-6.66877	-6.66877
P14	1055.60	0.00	0.17	182.62	31.59	17.10199	0.126717	17.22871
P47	0.00	48.42	-8.72	-422.04	3678.47	0	0.292847	0.292847
P46	0.29	0.00	-5.83	-1.67	9.73	0.004641	0.001158	0.0058
P43	0.00	117.28	-7.55	-885.08	6679.66	0	-0.61414	-0.61414
P9	0.00	45.70	-6.27	-286.62	1797.65	0	-0.19888	-0.19888
P44	1.00	0.00	-8.63	-8.63	74.43	0.016201	0.005986	0.022187
P10	0.00	45.70	-4.67	-213.50	997.47	0	-0.14814	-0.14814
P7	731.16	0.00	-8.63	-6307.73	54416.80	11.8457	-4.37686	7.468837
P57	0.00	0.13	-1.77	-0.23	0.41	0	0.000159	0.000159
P11	0.00	0.13	-1.77	-0.23	0.41	0	0.000159	0.000159
P6	1730.45	0.00	-5.83	-10083.31	58755.44	28.03531	-6.99669	21.03862
P34	0.00	33.18	3.91	129.82	508.00	0	-0.09008	-0.09008
P27	5.06	0.00	-5.83	-29.51	171.94	0.08204	-0.02047	0.061566
P33	0.00	33.97	0.60	20.31	12.15	0	-0.0141	-0.0141
P26	1453.94	0.00	-8.63	-12543.18	108210.01	23.55566	-8.70357	14.85209
P28	2.86	0.00	-5.83	-16.64	96.95	0.046258	0.011544	0.057803
P35	0.00	33.18	6.61	219.40	1450.92	0	-0.15224	-0.15224
P29	1.75	0.00	-5.83	-10.20	59.41	0.028346	0.007074	0.03542
P30	40.65	0.00	-8.03	-326.29	2619.10	0.658556	-0.22641	0.43215
P32	8.98	0.00	-5.83	-52.34	304.99	0.145525	-0.03632	0.109206
P37	0.00	155.19	9.00	1396.67	12570.07	0	-0.96914	-0.96914
P8	0.00	92.35	-1.77	-163.65	289.98	0	0.113553	0.113553
P5	1481.45	0.00	-11.93	-17669.26	210741.27	24.00129	-12.2605	11.74079
P31	0.00	118.59	0.60	70.92	42.41	0	0.049209	0.049209
P50	0.00	1.54	8.05	12.40	99.82	0	-0.00861	-0.00861
P13	4309.78	0.00	-11.93	-51402.70	613080.01	69.82357	35.66775	105.4913
SUM	15367.74	3074.00			1285047.98	248.98		248.96



الرابع عشرفي إتجاه (Y-Y)

Wall	Kx	Ky	r@x	Kr@x	Kr^2@x	Pd@y	Pr@y	Pi@y
P58	0.00	0.09	4.73	0.43	2.05	0.012	6.44E-06	0.011574
P59	0.00	0.11	4.73	0.50	2.36	0.013	7.43E-06	0.013352
P61	11.71	0.00	23.47	274.95	6453.93	0.000	0.004092	0.004092
P60	11.71	0.00	25.77	301.89	7780.67	0.000	0.004493	0.004493
P64	0.00	0.04	6.58	0.27	1.78	0.005	4.02E-06	0.005188
P62	0.00	0.04	6.58	0.27	1.78	0.005	4.02E-06	0.005188
P45	12.52	0.00	-2.43	-30.40	73.77	0.000	0.000452	0.000452
P39	0.00	225.38	-9.19	-2071.20	19034.37	28.492	-0.03082	28.460697
P38	0.00	0.47	-7.72	-3.64	28.08	0.060	5.41E-05	0.059560
P2	0.03	0.00	-2.43	-0.06	0.15	0.000	9.25E-07	0.000001
P1	0.00	915.06	-6.27	-5735.61	35950.81	115.680	0.085354	115.765511
P3	11.71	0.00	-2.43	-28.43	69.00	0.000	0.000423	0.000423
P36	1681.29	0.00	3.27	5502.86	18010.86	0.000	-0.08189	-0.081891
P12	2741.54	0.00	3.27	8973.05	29368.80	0.000	-0.13353	-0.133532
P41	1.46	0.00	-2.43	-3.55	8.62	0.000	5.29E-05	0.000053
P15	42.28	0.00	-2.43	-102.62	249.06	0.000	0.001527	0.001527
P17	0.00	33.18	1.18	39.22	46.35	4.194	0.000584	4.194822
P16	0.00	70.73	1.18	83.60	98.82	8.941	0.001244	8.942532
P19	2.86	0.00	-2.43	-6.93	16.82	0.000	-0.0001	-0.000103
P18	0.00	33.18	3.88	128.80	499.98	4.194	0.001917	4.196155
P22	23.93	0.00	-2.43	-58.07	140.94	0.000	-0.00086	-0.000864
P21	0.00	33.18	6.62	219.74	1455.31	4.194	0.00327	4.197508
P24	0.27	0.00	-2.43	-0.65	1.58	0.000	-9.7E-06	-0.000010
P23	3.46	0.00	0.17	0.60	0.10	0.000	8.92E-06	0.000009
P25	0.00	1037.20	9.27	9610.72	89052.90	131.121	0.143022	131.263817
P14	1055.60	0.00	0.17	182.62	31.59	0.000	-0.00272	-0.002718

P47	0.00	48.42	-8.72	-422.04	3678.47	6.121	-0.00628	6.114988
P46	0.29	0.00	-5.83	-1.67	9.73	0.000	2.48E-05	0.000025
P43	0.00	117.28	-7.55	-885.08	6679.66	14.826	0.013171	14.838832
P9	0.00	45.70	-6.27	-286.62	1797.65	5.777	0.004265	5.781254
P44	1.00	0.00	-8.63	-8.63	74.43	0.000	0.000128	0.000128
P10	0.00	45.70	-4.67	-213.50	997.47	5.777	0.003177	5.780166
P7	731.16	0.00	-8.63	-6307.73	54416.80	0.000	-0.09387	-0.093868
P57	0.00	0.13	-1.77	-0.23	0.41	0.016	3.42E-06	0.016387
P11	0.00	0.13	-1.77	-0.23	0.41	0.016	3.42E-06	0.016387
P6	1730.45	0.00	-5.83	-10083.31	58755.44	0.000	-0.15005	-0.150054
P34	0.00	33.18	3.91	129.82	508.00	4.194	0.001932	4.196170
P27	5.06	0.00	-5.83	-29.51	171.94	0.000	-0.00044	-0.000439
P33	0.00	33.97	0.60	20.31	12.15	4.294	0.000302	4.294688
P26	1453.94	0.00	-8.63	-12543.18	108210.01	0.000	-0.18666	-0.186661
P28	2.86	0.00	-5.83	-16.64	96.95	0.000	-0.00025	-0.000248
P35	0.00	33.18	6.61	219.40	1450.92	4.194	0.003265	4.197503
P29	1.75	0.00	-5.83	-10.20	59.41	0.000	-0.00015	-0.000152
P30	40.65	0.00	-8.03	-326.29	2619.10	0.000	0.004856	0.004856
P32	8.98	0.00	-5.83	-52.34	304.99	0.000	0	0.000000
P37	0.00	155.19	9.00	1396.67	12570.07	19.618	0.020785	19.639061
P8	0.00	92.35	-1.77	-163.65	289.98	11.675	0.033988	11.708934
P5	1481.45	0.00	-11.93	-17669.26	210741.27	0.000	1.111709	1.111709
P31	0.00	118.59	0.60	70.92	42.41	14.992	0.001055	14.993204
P50	0.00	1.54	8.05	12.40	99.82	0.195	0.000185	0.195017
P13	4309.78	0.00	-11.93	-51402.70	613080.01	0.000	-0.76495	-0.764948
SUM	15367.74	3074.00			1285047.98	388.61		388.60

الطابق الخامس عشر في إتجاه (X-X)

Wall	Kx	Ky	r	Kr@x	Kr^2@x	Pd@x	Pr@x	Pi@x
P58	0.00	0.09	4.73	0.43	2.05	0.0000	0.000145	0.000145
P59	0.00	0.11	4.73	0.50	2.36	0.0000	0.000167	0.000167
P61	11.71	0.00	23.71	277.70	6583.80	0.0949	0.092797	0.187683
P60	11.71	0.00	26.01	304.64	7923.20	0.0949	0.101799	0.196686
P64	0.00	0.04	6.58	0.27	1.78	0.0000	9.02E-05	9.02E-05
P62	0.00	0.04	6.58	0.27	1.78	0.0000	9.02E-05	9.02E-05
P45	12.52	0.00	-2.19	-27.45	60.18	0.1015	-0.00917	0.092278
P39	0.00	225.38	-9.19	-2071.20	19034.37	0.0000	-0.69211	-0.69211
P38	0.00	0.47	-7.72	-3.64	28.08	0.0000	-0.00121	-0.00121
P2	0.03	0.00	-2.19	-0.06	0.12	0.0002	-1.9E-05	0.000189
P1	0.00	915.06	-6.27	-5735.61	35950.81	0.0000	-1.91659	-1.91659
P3	11.71	0.00	-2.19	-25.68	56.28	0.0949	-0.00858	0.086307
P36	1681.29	0.00	3.51	5897.96	20690.06	13.6195	1.970844	15.5903
P12	2741.54	0.00	3.51	9617.31	33737.54	22.2081	3.21369	25.4218
P41	1.46	0.00	-2.19	-3.21	7.03	0.0119	-0.00107	0.010788
P15	42.28	0.00	-2.19	-92.68	203.16	0.3425	-0.03097	0.311543
P17	0.00	33.18	1.18	39.22	46.35	0.0000	0.013104	0.013104
P16	0.00	70.73	1.18	83.60	98.82	0.0000	0.027936	0.027936
P19	2.86	0.00	-2.19	-6.26	13.72	0.0231	-0.00209	0.021044
P18	0.00	33.18	3.88	128.80	499.98	0.0000	0.043038	0.043038
P22	23.93	0.00	-2.19	-52.45	114.97	0.1938	-0.01753	0.176304
P21	0.00	33.18	6.62	219.74	1455.31	0.0000	0.073426	0.073426
P24	0.27	0.00	-2.19	-0.59	1.29	0.0022	-0.0002	0.001977
P23	3.46	0.00	0.41	1.41	0.58	0.0281	0.000472	0.028528
P25	0.00	1037.20	9.27	9610.72	89052.90	0.0000	3.211485	3.211485
P14	1055.60	0.00	0.41	430.68	175.72	8.5510	0.143916	8.694914

P47	0.00	48.42	-8.72	-422.04	3678.47	0.0000	0.141026	0.141026
P46	0.29	0.00	-5.59	-1.60	8.96	0.0023	0.000535	0.002856
P43	0.00	117.28	-7.55	-885.08	6679.66	0.0000	0.295754	0.295754
P9	0.00	45.70	-6.27	-286.62	1797.65	0.0000	0.095774	0.095774
P44	1.00	0.00	-8.39	-8.39	70.43	0.0081	0.002804	0.010905
P10	0.00	45.70	-4.67	-213.50	997.47	0.0000	0.071342	0.071342
P7	731.16	0.00	-8.39	-6135.91	51492.54	5.9228	2.050355	7.973204
P57	0.00	0.13	-1.77	-0.23	0.41	0.0000	7.67E-05	7.67E-05
P11	0.00	0.13	-1.77	-0.23	0.41	0.0000	7.67E-05	7.67E-05
P6	1730.45	0.00	-5.59	-9676.65	54111.85	14.0177	3.233518	17.25117
P34	0.00	33.18	3.91	129.82	508.00	0.0000	-0.04338	-0.04338
P27	5.06	0.00	-5.59	-28.32	158.35	0.0410	0.009462	0.050483
P33	0.00	33.97	0.60	20.31	12.15	0.0000	-0.00679	-0.00679
P26	1453.94	0.00	-8.39	-12201.50	102395.01	11.7778	4.077213	15.85504
P28	2.86	0.00	-5.59	-15.97	89.28	0.0231	0.005335	0.028464
P35	0.00	33.18	6.61	219.40	1450.92	0.0000	-0.07332	-0.07332
P29	1.75	0.00	-5.59	-9.78	54.71	0.0142	0.003269	0.017442
P30	40.65	0.00	-7.79	-316.73	2467.99	0.3293	0.105839	0.435117
P32	8.98	0.00	-5.59	-50.23	280.88	0.0728	0.016784	0.089547
P37	0.00	155.19	9.00	1396.67	12570.07	0.0000	-0.46671	-0.46671
P8	0.00	92.35	-1.77	-163.65	289.98	0.0000	0.054684	0.054684
P5	1481.45	0.00	-11.69	-17321.12	202518.53	12.0006	5.787967	17.78861
P31	0.00	118.59	0.60	70.92	42.41	0.0000	-0.0237	-0.0237
P50	0.00	1.54	8.05	12.40	99.82	0.0000	-0.00414	-0.00414
P13	4309.78	0.00	-11.69	-50389.90	589158.75	34.9118	16.83812	51.74991
SUM	15367.74	3074.00			1246676.96	124.49		162.87

الطابق الخامس عشري اتجاه (Y-Y)

Kx	Ky	r	Kr@x	Kr^2@x	Pd@y	Pr@y	Pi@y
0.00	0.09	4.73	0.43	2.05	0.012	6.7E-06	0.011669
0.00	0.11	4.73	0.50	2.36	0.013	7.72E-06	0.013461
11.71	0.00	23.71	277.70	6583.80	0.000	0.004295	0.004295
11.71	0.00	26.01	304.64	7923.20	0.000	0.004711	0.004711
0.00	0.04	6.58	0.27	1.78	0.005	4.17E-06	0.00523
0.00	0.04	6.58	0.27	1.78	0.005	4.17E-06	0.00523
12.52	0.00	-2.19	-27.45	60.18	0.000	0.000425	0.000425
0.00	225.38	-9.19	-2071.20	19034.37	28.724	0.03203	28.75582
0.00	0.47	-7.72	-3.64	28.08	0.060	5.62E-05	0.060047
0.03	0.00	-2.19	-0.06	0.12	0.000	8.68E-07	8.68E-07
0.00	915.06	-6.27	-5735.61	35950.81	116.623	0.088699	116.7119
11.71	0.00	-2.19	-25.68	56.28	0.000	0.000397	0.000397
1681.29	0.00	3.51	5897.96	20690.06	0.000	0.091209	0.091209
2741.54	0.00	3.51	9617.31	33737.54	0.000	-0.14873	-0.14873
1.46	0.00	-2.19	-3.21	7.03	0.000	4.96E-05	4.96E-05
42.28	0.00	-2.19	-92.68	203.16	0.000	0.001433	0.001433
0.00	33.18	1.18	39.22	46.35	4.228	0.000606	4.229037
0.00	70.73	1.18	83.60	98.82	9.014	0.001293	9.015472
2.86	0.00	-2.19	-6.26	13.72	0.000	-9.7E-05	-9.7E-05
0.00	33.18	3.88	128.80	499.98	4.228	0.001992	4.230422
23.93	0.00	-2.19	-52.45	114.97	0.000	-0.00081	-0.00081
0.00	33.18	6.62	219.74	1455.31	4.228	0.003398	4.231828
0.27	0.00	-2.19	-0.59	1.29	0.000	-9.1E-06	-9.1E-06
3.46	0.00	0.41	1.41	0.58	0.000	2.19E-05	2.19E-05

0.00	1037.20	9.27	9610.72	89052.90	132.190	0.148625	132.3383
1055.60	0.00	0.41	430.68	175.72	0.000	0.00666	0.00666
0.00	48.42	-8.72	-422.04	3678.47	6.171	0.006527	6.177697
0.29	0.00	-5.59	-1.60	8.96	0.000	2.48E-05	2.48E-05
0.00	117.28	-7.55	-885.08	6679.66	14.947	0.013687	14.96021
0.00	45.70	-6.27	-286.62	1797.65	5.824	0.004432	5.828516
1.00	0.00	-8.39	-8.39	70.43	0.000	0.00013	0.00013
0.00	45.70	-4.67	-213.50	997.47	5.824	0.003302	5.827385
731.16	0.00	-8.39	-6135.91	51492.54	0.000	0.094889	0.094889
0.00	0.13	-1.77	-0.23	0.41	0.017	3.55E-06	0.016521
0.00	0.13	-1.77	-0.23	0.41	0.017	3.55E-06	0.016521
1730.45	0.00	-5.59	-9676.65	54111.85	0.000	0.149645	0.149645
0.00	33.18	3.91	129.82	508.00	4.228	0.002008	4.230438
5.06	0.00	-5.59	-28.32	158.35	0.000	-0.00044	-0.00044
0.00	33.97	0.60	20.31	12.15	4.329	0.000314	4.329709
1453.94	0.00	-8.39	-12201.50	102395.01	0.000	-0.18869	-0.18869
2.86	0.00	-5.59	-15.97	89.28	0.000	-0.00025	-0.00025
0.00	33.18	6.61	219.40	1450.92	4.228	0.003393	4.231823
1.75	0.00	-5.59	-9.78	54.71	0.000	-0.00015	-0.00015
40.65	0.00	-7.79	-316.73	2467.99	0.000	-0.0049	-0.0049
8.98	0.00	-5.59	-50.23	280.88	0.000	0	0
0.00	155.19	9.00	1396.67	12570.07	19.778	0.021599	19.79981
0.00	92.35	-1.77	-163.65	289.98	11.770	-0.03399	11.73613
1481.45	0.00	-11.69	-17321.12	202518.53	0.000	-1.11171	-1.11171
0.00	118.59	0.60	70.92	42.41	15.114	0.001097	15.11546
0.00	1.54	8.05	12.40	99.82	0.196	0.000192	0.196612
4309.78	0.00	-11.69	-50389.90	589158.75	0	0.779257	0.779257
15367.74	3074.00			1246676.96	391.78		391.75

الطابق السادس عشر في إتجاه (X-X)

Wall	Kx	Ky	r@x	Kr@x	Kr^2@x	Pd@x	Pr@x	Pi@x
P58	0.00	0.09	4.732	0.433008	2.0489918	0	0.0003	0.0003
P59	0.00	0.11	4.73	0.50	2.36	0.00	0.0003	0.0003
P61	11.71	0.00	24.02	281.33	6757.10	0.19	0.1805	0.3737
P60	11.71	0.00	26.32	308.28	8113.21	0.19	0.1978	0.3909
P64	0.00	0.04	6.58	0.27	1.78	0.00	0.0002	0.0002
P62	0.00	0.04	6.58	0.27	1.78	0.00	0.0002	0.0002
P45	12.52	0.00	-1.88	-23.57	44.36	0.21	0.0151	0.2216
P39	0.00	225.38	-9.19	-2071.20	19034.37	0.00	1.3292	1.3292
P38	0.00	0.47	-7.72	-3.64	28.08	0.00	-0.0023	-0.0023
P2	0.03	0.00	-1.88	-0.05	0.09	0.00	0.0000	0.0004
P1	0.00	915.06	-6.27	-5735.61	35950.81	0.00	-3.6809	-3.6809
P3	11.71	0.00	-1.88	-22.04	41.49	0.19	-0.0141	0.1790
P36	1681.29	0.00	3.82	6419.16	24508.37	27.72	-4.1196	23.5972
P12	2741.54	0.00	3.82	10467.19	39963.74	45.20	6.7174	51.9129
P41	1.46	0.00	-1.88	-2.76	5.19	0.02	0.0018	0.0259
P15	42.28	0.00	-1.88	-79.58	149.76	0.70	-0.0511	0.6460
P17	0.00	33.18	1.18	39.22	46.35	0.00	-0.0252	-0.0252
P16	0.00	70.73	1.18	83.60	98.82	0.00	0.0537	0.0537
P19	2.86	0.00	-1.88	-5.38	10.12	0.05	0.0034	0.0505
P18	0.00	33.18	3.88	128.80	499.98	0.00	0.0827	0.0827
P22	23.93	0.00	-1.88	-45.03	84.75	0.39	0.0289	0.4234
P21	0.00	33.18	6.62	219.74	1455.31	0.00	0.1410	0.1410
P24	0.27	0.00	-1.88	-0.50	0.95	0.00	0.0003	0.0047
P23	3.46	0.00	0.72	2.49	1.79	0.06	0.0016	0.0587
P25	0.00	1037.20	9.27	9610.72	89052.90	0.00	-6.1678	-6.1678
P14	1055.60	0.00	0.72	757.92	544.19	17.40	0.4864	17.8884

<b>P47</b>	0.00	48.42	-8.72	-422.04	3678.47	0.00	0.2708	0.2708
<b>P46</b>	0.29	0.00	-5.28	-1.51	7.99	0.00	-0.0010	0.0038
<b>P43</b>	0.00	117.28	-7.55	-885.08	6679.66	0.00	0.5680	0.5680
<b>P9</b>	0.00	45.70	-6.27	-286.62	1797.65	0.00	0.1839	0.1839
<b>P44</b>	1.00	0.00	-8.08	-8.08	65.32	0.02	-0.0052	0.0113
<b>P10</b>	0.00	45.70	-4.67	-213.50	997.47	0.00	0.1370	0.1370
<b>P7</b>	731.16	0.00	-8.08	-5909.25	47758.54	12.05	-3.7923	8.2612
<b>P57</b>	0.00	0.13	-1.77	-0.23	0.41	0.00	0.0001	0.0001
<b>P11</b>	0.00	0.13	-1.77	-0.23	0.41	0.00	0.0001	0.0001
<b>P6</b>	1730.45	0.00	-5.28	-9140.22	48278.62	28.53	-5.8658	22.6613
<b>P34</b>	0.00	33.18	3.91	129.82	508.00	0.00	-0.0833	-0.0833
<b>P27</b>	5.06	0.00	-5.28	-26.75	141.28	0.08	-0.0172	0.0663
<b>P33</b>	0.00	33.97	0.60	20.31	12.15	0.00	-0.0130	-0.0130
<b>P26</b>	1453.94	0.00	-8.08	-11750.78	94969.80	23.97	-7.5412	16.4277
<b>P28</b>	2.86	0.00	-5.28	-15.08	79.66	0.05	-0.0097	0.0374
<b>P35</b>	0.00	33.18	6.61	219.40	1450.92	0.00	-0.1408	-0.1408
<b>P29</b>	1.75	0.00	-5.28	-9.24	48.81	0.03	0.0059	0.0348
<b>P30</b>	40.65	0.00	-7.48	-304.13	2275.52	0.67	-0.1952	0.4749
<b>P32</b>	8.98	0.00	-5.28	-47.44	250.60	0.15	-0.0304	0.1176
<b>P37</b>	0.00	155.19	9.00	1396.67	12570.07	0.00	0.8963	0.8963
<b>P8</b>	0.00	92.35	-1.77	-163.65	289.98	0.00	-0.1050	-0.1050
<b>P5</b>	1481.45	0.00	-11.38	-16861.87	191921.80	24.42	-10.8213	13.6011
<b>P31</b>	0.00	118.59	0.60	70.92	42.41	0.00	-0.0455	-0.0455
<b>P50</b>	0.00	1.54	8.05	12.40	99.82	0.00	-0.0080	-0.0080
<b>P13</b>	4309.78	0.00	-11.38	-49053.87	558331.18	71.05	31.4809	102.5294
<b>SUM</b>	15367.74	3074.00			1198656.24	253.34		253.39



الطابق السادس عشرفي إتجاه (Y-Y)

Wall	Kx	Ky	r@x	Kr@x	Kr^2@x	Pd@y	Pr@y	Pi@y
P58	0.00	0.09	4.732	0.43	2.05	0.01	7.02E-06	0.011764
P59	0.00	0.11	4.73	0.50	2.36	0.01	8.1E-06	0.01357
P61	11.71	0.00	24.02	281.33	6757.10	0.00	0.004562	0.004562
P60	11.71	0.00	26.32	308.28	8113.21	0.00	0.004998	0.004998
P64	0.00	0.04	6.58	0.27	1.78	0.01	4.38E-06	0.005273
P62	0.00	0.04	6.58	0.27	1.78	0.01	4.38E-06	0.005273
P45	12.52	0.00	-1.88	-23.57	44.36	0.00	0.000382	0.000382
P39	0.00	225.38	-9.19	-2071.20	19034.37	28.96	0.033583	28.98964
P38	0.00	0.47	-7.72	-3.64	28.08	0.06	5.9E-05	0.060535
P2	0.03	0.00	-1.88	-0.05	0.09	0.00	7.81E-07	7.81E-07
P1	0.00	915.06	-6.27	-5735.61	35950.81	117.57	0.092998	117.6592
P3	11.71	0.00	-1.88	-22.04	41.49	0.00	0.000357	0.000357
P36	1681.29	0.00	3.82	6419.16	24508.37	0.00	-0.10408	-0.10408
P12	2741.54	0.00	3.82	10467.19	39963.74	0.00	0.169717	0.169717
P41	1.46	0.00	-1.88	-2.76	5.19	0.00	4.47E-05	4.47E-05
P15	42.28	0.00	-1.88	-79.58	149.76	0.00	0.00129	0.00129
P17	0.00	33.18	1.18	39.22	46.35	4.26	0.000636	4.263258
P16	0.00	70.73	1.18	83.60	98.82	9.09	0.001356	9.088426
P19	2.86	0.00	-1.88	-5.38	10.12	0.00	-8.7E-05	-8.7E-05
P18	0.00	33.18	3.88	128.80	499.98	4.26	0.002088	4.264711
P22	23.93	0.00	-1.88	-45.03	84.75	0.00	-0.00073	-0.00073
P21	0.00	33.18	6.62	219.74	1455.31	4.26	0.003563	4.266185
P24	0.27	0.00	-1.88	-0.50	0.95	0.00	-8.2E-06	-8.2E-06
P23	3.46	0.00	0.72	2.49	1.79	0.00	4.03E-05	4.03E-05
P25	0.00	1037.20	9.27	9610.72	89052.90	133.26	0.15583	133.4145
P14	1055.60	0.00	0.72	757.92	544.19	0.00	0.012289	0.012289

<b>P47</b>	0.00	48.42	-8.72	-422.04	3678.47	6.22	0.006843	6.227915
<b>P46</b>	0.29	0.00	-5.28	-1.51	7.99	0.00	2.45E-05	2.45E-05
<b>P43</b>	0.00	117.28	-7.55	-885.08	6679.66	15.07	0.014351	15.08173
<b>P9</b>	0.00	45.70	-6.27	-286.62	1797.65	5.87	0.004647	5.875826
<b>P44</b>	1.00	0.00	-8.08	-8.08	65.32	0.00	0.000131	0.000131
<b>P10</b>	0.00	45.70	-4.67	-213.50	997.47	5.87	0.003462	5.87464
<b>P7</b>	731.16	0.00	-8.08	-5909.25	47758.54	0.00	-0.09581	-0.09581
<b>P57</b>	0.00	0.13	-1.77	-0.23	0.41	0.02	3.72E-06	0.016655
<b>P11</b>	0.00	0.13	-1.77	-0.23	0.41	0.02	3.72E-06	0.016655
<b>P6</b>	1730.45	0.00	-5.28	-9140.22	48278.62	0.00	0.148201	0.148201
<b>P34</b>	0.00	33.18	3.91	129.82	508.00	4.26	0.002105	4.264727
<b>P27</b>	5.06	0.00	-5.28	-26.75	141.28	0.00	-0.00043	-0.00043
<b>P33</b>	0.00	33.97	0.60	20.31	12.15	4.36	0.000329	4.364733
<b>P26</b>	1453.94	0.00	-8.08	-11750.78	94969.80	0.00	-0.19053	-0.19053
<b>P28</b>	2.86	0.00	-5.28	-15.08	79.66	0.00	-0.00024	-0.00024
<b>P35</b>	0.00	33.18	6.61	219.40	1450.92	4.26	0.003557	4.26618
<b>P29</b>	1.75	0.00	-5.28	-9.24	48.81	0.00	-0.00015	-0.00015
<b>P30</b>	40.65	0.00	-7.48	-304.13	2275.52	0.00	0.004931	0.004931
<b>P32</b>	8.98	0.00	-5.28	-47.44	250.60	0.00	0	0
<b>P37</b>	0.00	155.19	9.00	1396.67	12570.07	19.94	0.022646	19.96079
<b>P8</b>	0.00	92.35	-1.77	-163.65	289.98	11.87	-0.03399	11.83131
<b>P5</b>	1481.45	0.00	-11.38	-16861.87	191921.80	0.00	-1.11171	-1.11171
<b>P31</b>	0.00	118.59	0.60	70.92	42.41	15.24	0.00115	15.23774
<b>P50</b>	0.00	1.54	8.05	12.40	99.82	0.20	0.000201	0.19821
<b>P13</b>	4309.78	0.00	-11.38	-49053.87	558331.18	0.00	0.795367	0.795367
<b>SUM</b>	15367.74	3074.00			1198656.24	394.94		394.90

TABLE: Pier Forces									
Story	Pier	Load Case/Combo	Location	P	V2	V3	T	M2	M3
Story17	P3	WindX	Top	-67.040	-4.221	-12.589	16.258	20.309	27.606
Story17	P3	WindX	Bottom	-51.580	-2.120	-8.289	-0.061	-12.618	80.321
Story17	P6	WindX	Top	-4.249	-2.636	0.150	0.067	-0.301	5.437
Story17	P6	WindX	Bottom	-4.249	-2.636	0.150	0.067	0.299	-5.107
Story17	P13	WindX	Top	-4.241	-4.077	-0.461	0.012	0.925	8.171
Story17	P13	WindX	Bottom	-4.241	-4.077	-0.461	0.012	-0.921	-8.135
Story16	P3	WindX	Top	-125.591	-11.727	-9.948	10.123	15.692	99.653
Story16	P3	WindX	Bottom	-97.004	-11.123	-8.464	4.491	-13.396	169.089
Story16	P6	WindX	Top	-11.431	-3.418	0.064	0.062	-0.093	6.366
Story16	P6	WindX	Bottom	-11.431	-3.418	0.064	0.062	0.162	-7.305
Story16	P13	WindX	Top	-7.947	-3.139	-0.489	0.015	0.971	6.274
Story16	P13	WindX	Bottom	-7.947	-3.139	-0.489	0.015	-0.985	-6.283
Story15	P3	WindX	Top	-163.983	-17.193	-11.372	9.585	18.614	125.741
Story15	P3	WindX	Bottom	-119.221	-16.638	-10.003	4.426	-15.861	235.610
Story15	P6	WindX	Top	-18.217	-5.406	0.011	0.072	0.023	10.344
Story15	P6	WindX	Bottom	-18.217	-5.406	0.011	0.072	0.068	-11.280
Story15	P13	WindX	Top	-10.434	-3.033	-0.536	0.018	1.063	6.066
Story15	P13	WindX	Bottom	-10.434	-3.033	-0.536	0.018	-1.079	-6.068
Story14	P3	WindX	Top	-177.461	-18.439	-12.864	9.830	21.273	117.350
Story14	P3	WindX	Bottom	-115.264	-17.887	-11.496	4.685	-18.402	289.588
Story14	P6	WindX	Top	-23.631	-7.339	-0.040	0.085	0.133	14.149
Story14	P6	WindX	Bottom	-23.631	-7.339	-0.040	0.085	-0.029	-15.208
Story14	P13	WindX	Top	-12.179	-2.834	-0.590	0.021	1.170	5.665
Story14	P13	WindX	Bottom	-12.179	-2.834	-0.590	0.021	-1.188	-5.671

Story13	P3	WindX	Top	-166.132	-17.577	-14.387	9.914	23.985	92.333
Story13	P3	WindX	Bottom	-86.222	-17.072	-13.085	5.003	-21.147	336.364
Story13	P6	WindX	Top	-27.846	-9.440	-0.089	0.098	0.232	18.339
Story13	P6	WindX	Bottom	-27.846	-9.440	-0.089	0.098	-0.124	-19.422
Story13	P13	WindX	Top	-13.234	-2.720	-0.648	0.025	1.285	5.437
Story13	P13	WindX	Bottom	-13.234	-2.720	-0.648	0.025	-1.307	-5.442
Story9	P3	WindX	Top	130.785	-8.687	-19.732	8.470	33.389	-84.524
Story9	P3	WindX	Bottom	279.935	-8.759	-19.339	6.771	-32.384	461.203
Story9	P6	WindX	Top	-35.032	-17.799	-0.279	0.150	0.578	35.114
Story9	P6	WindX	Bottom	-35.032	-17.799	-0.279	0.150	-0.538	-36.081
Story9	P13	WindX	Top	-10.657	-2.096	-0.866	0.041	1.717	4.191
Story9	P13	WindX	Bottom	-10.657	-2.096	-0.866	0.041	-1.745	-4.194
Story5	P3	WindX	Top	877.949	-8.589	-22.182	4.486	37.099	-375.559
Story5	P3	WindX	Bottom	1099.874	-10.029	-24.064	10.837	-41.519	447.426
Story5	P6	WindX	Top	-20.251	-24.464	-0.516	0.175	0.942	48.963
Story5	P6	WindX	Bottom	-20.251	-24.464	-0.516	0.175	-1.123	-48.893
Story5	P13	WindX	Top	4.927	-0.139	-0.899	0.051	1.784	0.285
Story5	P13	WindX	Bottom	4.927	-0.139	-0.899	0.051	-1.810	-0.269
Story1	P3	WindX	Top	2174.642	-179.102	-2.820	-18.936	7.743	-1164.251
Story1	P3	WindX	Bottom	2408.102	-185.039	-19.312	44.941	-37.489	-1274.598
Story1	P6	WindX	Top	25.314	-7.119	-0.358	0.081	0.605	23.863
Story1	P6	WindX	Bottom	25.314	-7.119	-0.358	0.081	-1.389	-15.792
Story1	P13	WindX	Top	58.835	1.976	-0.166	0.025	0.484	-5.496
Story1	P13	WindX	Bottom	58.835	1.976	-0.166	0.025	-0.442	5.513

Story	Pier	Load Case/Comb o	Location	P	V2	V3	T	M2	M3
Story17	P1	WindY	Top	-68.9606	11.1924	-4.0685	0.6639	8.7052	-185.3855
Story17	P1	WindY	Bottom	-68.9606	11.1924	-4.0685	0.6639	-7.5689	-140.616
Story17	P6	WindY	Top	-8.7844	-16.3579	-0.0404	0.0918	0.0852	33.1422
Story17	P6	WindY	Bottom	-8.7844	-16.3579	-0.0404	0.0918	-0.0765	-32.2893
Story16	P1	WindY	Top	-144.4467	57.6139	-3.1507	1.2452	6.0628	-385.0276
Story16	P1	WindY	Bottom	-144.4467	57.6139	-3.1507	1.2452	-6.5402	-154.5721
Story16	P6	WindY	Top	-20.6925	-9.4132	-0.0728	0.1165	0.1663	16.716
Story16	P6	WindY	Bottom	-20.6925	-9.4132	-0.0728	0.1165	-0.1248	-20.9367
Story15	P1	WindY	Top	-204.0375	100.0814	-3.1702	2.2664	6.164	-522.5776
Story15	P1	WindY	Bottom	-204.0375	100.0814	-3.1702	2.2664	-6.5168	-122.2522
Story15	P6	WindY	Top	-28.4858	-9.0376	-0.1083	0.1372	0.2418	16.2064
Story15	P6	WindY	Bottom	-28.4858	-9.0376	-0.1083	0.1372	-0.1916	-19.9441
Story14	P1	WindY	Top	-252.1969	140.711	-3.1366	3.3358	6.0407	-626.7278
Story14	P1	WindY	Bottom	-252.1969	140.711	-3.1366	3.3358	-6.5057	-63.8839
Story14	P6	WindY	Top	-31.3635	-7.493	-0.1439	0.163	0.318	12.8734
Story14	P6	WindY	Bottom	-31.3635	-7.493	-0.1439	0.163	-0.2578	-17.0984
Story13	P1	WindY	Top	-294.086	180.3026	-3.1872	4.426	6.1254	-707.7695
Story13	P1	WindY	Bottom	-294.086	180.3026	-3.1872	4.426	-6.6232	13.4408
Story13	P6	WindY	Top	-29.7398	-6.6078	-0.1765	0.1905	0.3853	11.1374
Story13	P6	WindY	Bottom	-29.7398	-6.6078	-0.1765	0.1905	-0.3205	-15.2939
Story9	P1	WindY	Top	-437.4289	333.9348	-3.3877	8.7422	6.6017	-864.1989
Story9	P1	WindY	Bottom	-437.4289	333.9348	-3.3877	8.7422	-6.9492	471.5404
Story9	P6	WindY	Top	17.3058	-2.7921	-0.2932	0.2992	0.6156	4.4657

Story9	P6	WindY	Bottom	17.3058	-2.7921	-0.2932	0.2992	-0.5573	-6.7029
Story5	P1	WindY	Top	-456.6666	475.7553	-2.0985	12.3385	4.4354	-659.4949
Story5	P1	WindY	Bottom	-456.6666	475.7553	-2.0985	12.3385	-3.9587	1243.5263
Story5	P6	WindY	Top	140.8048	7.5608	-0.4067	0.3565	0.8095	-13.1603
Story5	P6	WindY	Bottom	140.8048	7.5608	-0.4067	0.3565	-0.8172	17.083
Story1	P1	WindY	Top	296.2854	775.8948	1.9942	6.5934	-4.7334	734.1859
Story1	P1	WindY	Bottom	296.2854	775.8948	1.9942	6.5934	6.3746	5055.9197
Story1	P6	WindY	Top	381.8976	48.6207	-0.2421	0.1928	0.4815	-114.4687
Story1	P6	WindY	Bottom	381.8976	48.6207	-0.2421	0.1928	-0.8669	156.3487