



**ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΑΤΡΩΝ**  
**ΓΕΝΙΚΗ ΔΙΕΥΘΥΝΣΗ ΤΕΧΝΙΚΩΝ ΥΠΗΡΕΣΙΩΝ,**  
**ΤΕΧΝΟΛΟΓΙΩΝ ΠΛΗΡΟΦΟΡΙΚΗΣ ΚΑΙ ΕΠΙΚΟΙΝΩΝΙΩΝ**  
**ΔΙΕΥΘΥΝΣΗ ΜΕΛΕΤΩΝ ΚΑΙ ΕΚΤΕΛΕΣΗΣ ΕΡΓΩΝ**  
**ΤΜΗΜΑ ΜΕΛΕΤΩΝ**

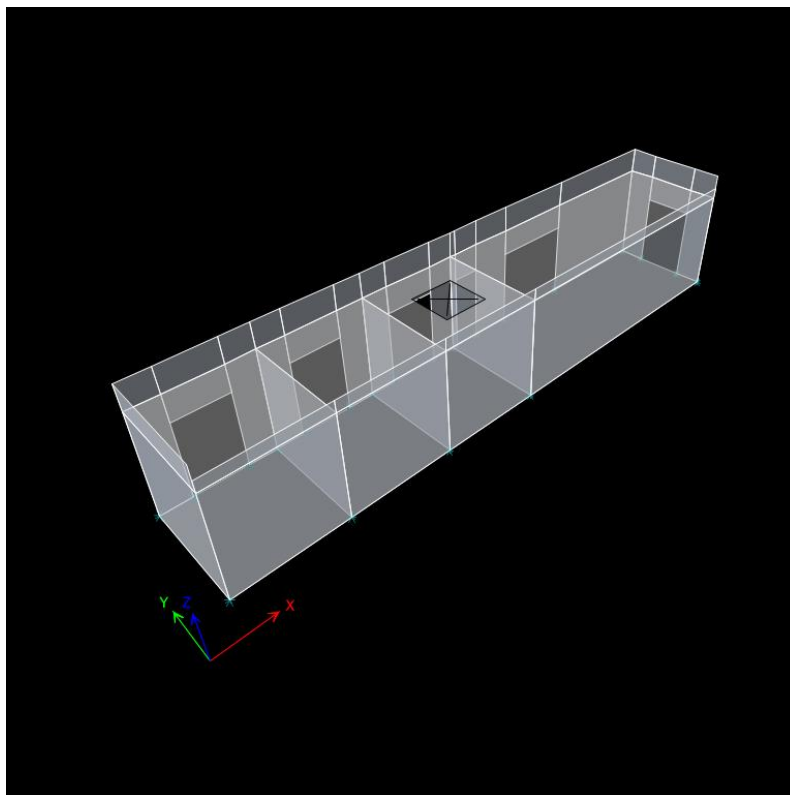
**ΕΡΓΟΛΑΒΙΑ :** ΚΑΤΑΣΚΕΥΗ ΝΕΟΥ ΚΤΙΡΙΟΥ ΕΣΤΙΑΤΟΡΙΟΥ-ΜΑΓΕΙΡΕΙΟΥ  
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ΤΗΣ ΦΟΙΤΗΤΙΚΗΣ ΕΣΤΙΑΣ ΤΟΥ ΠΑΝΕΠΙΣΤΗΜΙΟΥ ΠΑΤΡΩΝ

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**ΥΠΟΣΤΑΘΜΟΣ ΔΕΔΔΗΕ**  
**ΤΕΥΧΟΣ ΥΠΟΛΟΓΙΣΜΩΝ**

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## 1 Structure Data

This chapter provides model geometry information, including items such as story levels, point coordinates, and element connectivity.

### 1.1 Story Data

Table 1.1 - Story Definitions

Tower	Name	Height m	Master Story	Similar To	Splice Story	Splice Height m	Color
T1	Story2	0.9	No	None	No		Blue
T1	Story1	3.8	No	None	No		Cyan

### 1.2 Mass

Table 1.2 - Mass Source Definition (Part 1 of 2)

Name	Is Default	Include Lateral Mass?	Include Vertical Mass?	Lump Mass?	Source Self Mass?	Source Added Mass?	Source Load Patterns?	Move Mass Centroid?
0 Mass (check combination factors)	Yes	Yes	No	Yes	Yes	Yes	Yes	No
0 Mass (check combination factors)								
0 Mass (check combination factors)								
0 Mass (check combination factors)								
0 Mass (check combination factors)								
0 Mass (check combination factors)								

Table 1.2 - Mass Source Definition (Part 2 of 2)

Name	Move Ratio X	Move Ratio Y	Load Pattern	Multiplier
0 Mass (check combination factors)			gcladding	1
0 Mass (check combination factors)			gwalls	1
0 Mass (check combination factors)			gequipment	1
0 Mass (check combination factors)			qcategoryAB <sub>G</sub>	0.3
0 Mass (check combination factors)			qcategoryCD <sub>F</sub>	0.6
0 Mass (check combination factors)			qcategoryE	0.8

Table 1.3 - Mass Summary by Story

Story	UX ton	UY ton	UZ ton
Story2	11.48	11.48	0
Story1	176.48	176.48	0
Base	91.12	91.12	0

Table 1.4 - Mass Summary by Group

Group	Self Mass ton	Self Weight kN	Mass X ton	Mass Y ton	Mass Z ton
All	212.19	0	279.07	279.07	0
DXFIN1	0	0	0	0	0

## 2 Properties

This chapter provides property information for materials, frame sections, shell sections, and links.

### 2.1 Materials

**Table 2.1 - Material Properties - General**

Material	Type	SymType	Grade	Color	Notes
B500c	Rebar	Uniaxial	B500c	DarkRed	
C25/30	Concrete	Isotropic	C25/30	Gray4	
C30/37	Concrete	Isotropic	C30/37	Gray8Dark	
TendonA416Gr270	Tendon	Uniaxial	Grade 270	Green	

### 2.2 Shell Sections

**Table 2.2 - Area Section Property Definitions - Summary**

Name	Type	Element Type	Material	Total Thickness cm	Deck Material	Deck Depth cm
Radier <sub>35</sub>	Slab	Shell-Thin	C30/37	35		
Slab <sub>20</sub>	Slab	Shell-Thin	C30/37	20		
SP <sub>30</sub>	Wall	Shell-Thin	C25/30	30		
Wall <sub>20</sub>	Wall	Shell-Thin	C25/30	20		
Wall <sub>30</sub>	Wall	Shell-Thin	C25/30	30		

### 2.3 Reinforcement Sizes

**Table 2.3 - Reinforcing Bar Sizes**

Name	Diameter cm	Area cm2
10	1	0.8
18	1.8	2.5
20	2	3.1

### 2.4 Spring Properties

**Table 2.4 - Spring Property Definitions - Area Springs (Part 1 of 2)**

Name	Stiffness Option	Stiffnes U1 kN/m/m2	Stiffnes U2 kN/m/m2	Stiffnes U3 kN/m/m2	Nonlinear Option for U3	Link Property	Soil Profile	End Length Ratio	First Period sec
SoilSpring <sub>45000</sub>	User	0	0	45000	None				

**Table 2.4 - Spring Property Definitions - Area Springs (Part 2 of 2)**

Name	Color	Notes
SoilSpring <sub>45000</sub>	Orange	

### 3 Assignments

This chapter provides a listing of the assignments applied to the model.

#### 3.1 Shell Assignments

Table 3.1 - Area Assignments - Summary (Part 1 of 2)

UniqueName	Story	Label	Section Property	Property Type	Diaphragm	Axis Angle deg	Added Mass kN-s2/m3	Pier	Spandrel
37	Story2	W1	Wall <sub>30</sub>	Wall				P01	
38	Story2	W2	Wall <sub>30</sub>	Wall				P02	
39	Story2	W3	Wall <sub>30</sub>	Wall				P02	
40	Story2	W4	Wall <sub>30</sub>	Wall				P03	
41	Story2	W5	Wall <sub>30</sub>	Wall				P03	
42	Story2	W6	Wall <sub>30</sub>	Wall				P04	
43	Story2	W7	Wall <sub>30</sub>	Wall				P04	
44	Story2	W8	Wall <sub>30</sub>	Wall				P05	
45	Story2	W9	Wall <sub>30</sub>	Wall				P06	
46	Story2	W10	Wall <sub>30</sub>	Wall				P07	
53	Story2	W11	Wall <sub>30</sub>	Wall				P08	
54	Story2	W16	Wall <sub>30</sub>	Wall				P10	
25	Story2	W20	SP <sub>30</sub>	Wall					S05
27	Story2	W21	SP <sub>30</sub>	Wall					S04
29	Story2	W22	SP <sub>30</sub>	Wall					S03
31	Story2	W23	SP <sub>30</sub>	Wall					S02
33	Story2	W24	SP <sub>30</sub>	Wall					S01
35	Story2	W30	SP <sub>30</sub>	Wall					S06
49	Story2	W32	Wall <sub>30</sub>	Wall				P09	
50	Story2	W33	Wall <sub>30</sub>	Wall				P09	
51	Story2	W34	Wall <sub>30</sub>	Wall				P09	
52	Story2	W35	Wall <sub>30</sub>	Wall				P09	
56	Story1	F1	Slab <sub>20</sub>	Slab					
57	Story1	F2	Slab <sub>20</sub>	Slab					
58	Story1	F3	Slab <sub>20</sub>	Slab					
59	Story1	F4	Slab <sub>20</sub>	Slab					
1	Story1	W1	Wall <sub>30</sub>	Wall				P01	
2	Story1	W2	Wall <sub>30</sub>	Wall				P02	
3	Story1	W3	Wall <sub>30</sub>	Wall				P02	
4	Story1	W4	Wall <sub>30</sub>	Wall				P03	
5	Story1	W5	Wall <sub>30</sub>	Wall				P03	
6	Story1	W6	Wall <sub>30</sub>	Wall				P04	
7	Story1	W7	Wall <sub>30</sub>	Wall				P04	
8	Story1	W8	Wall <sub>30</sub>	Wall				P05	
9	Story1	W9	Wall <sub>30</sub>	Wall				P06	
10	Story1	W10	Wall <sub>30</sub>	Wall				P07	
11	Story1	W11	Wall <sub>30</sub>	Wall				P08	
12	Story1	W12	Wall <sub>30</sub>	Wall				P09	
13	Story1	W13	Wall <sub>30</sub>	Wall				P09	
14	Story1	W14	Wall <sub>30</sub>	Wall				P09	
15	Story1	W15	Wall <sub>30</sub>	Wall				P09	
16	Story1	W16	Wall <sub>30</sub>	Wall				P10	
17	Story1	W17	Wall <sub>20</sub>	Wall				P11	
18	Story1	W18	Wall <sub>20</sub>	Wall				P12	
19	Story1	W19	Wall <sub>20</sub>	Wall				P13	
26	Story1	W25	SP <sub>30</sub>	Wall					S05
28	Story1	W26	SP <sub>30</sub>	Wall					S04
30	Story1	W27	SP <sub>30</sub>	Wall					S03
32	Story1	W28	SP <sub>30</sub>	Wall					S02
34	Story1	W29	SP <sub>30</sub>	Wall					S01
36	Story1	W31	SP <sub>30</sub>	Wall					S06
55	Story1	A1	None	Opening					

UniqueName	Story	Label	Section Property	Property Type	Diaphragm	Axis Angle deg	Added Mass kN-s2/m3	Pier	Spandrel
60	Base	F5	Radier <sub>35</sub>	Slab					

Table 3.1 - Area Assignments - Summary (Part 2 of 2)

UniqueName	Spandrel Story	Spring	Modifiers
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
53			
54			
25	Story2		
27	Story2		
29	Story2		
31	Story2		
33	Story2		
35	Story2		
49			
50			
51			
52			
56			
57			
58			
59			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
26	Story2		
28	Story2		
30	Story2		
32	Story2		
34	Story2		
36	Story2		
55			
60		SoilSpring <sub>45000</sub>	Yes



## 4 Loads

This chapter provides loading information as applied to the model.

### 4.1 Applied Loads

#### 4.1.1 Area Loads

Table 4.1 - Area Load Assignments - Uniform

Story	Label	UniqueName	Load Pattern	Direction	Load kN/m2
Story1	F1	56	gcladding	Gravity	5
Story1	F2	57	gcladding	Gravity	5
Story1	F3	58	gcladding	Gravity	5
Story1	F4	59	gcladding	Gravity	5
Base	F5	60	gcladding	Gravity	2
Story1	F1	56	qcategoryAB <sub>G</sub>	Gravity	2
Story1	F2	57	qcategoryAB <sub>G</sub>	Gravity	2
Story1	F3	58	qcategoryAB <sub>G</sub>	Gravity	2
Story1	F4	59	qcategoryAB <sub>G</sub>	Gravity	2
Base	F5	60	qcategoryAB <sub>G</sub>	Gravity	2

### 4.2 Functions

#### 4.2.1 Response Spectrum Functions

Table 4.2 - Functions - Response Spectrum - Eurocode8-2004 (Part 1 of 3)

Name	Period sec	Value	Country	Direction	Ag	Spectrum Type
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	0	0.192	CEN Default	Horizontal	0.24	1
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	0.05	0.248				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	0.1	0.304				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	0.15	0.36				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	0.5	0.36				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	0.75	0.24				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	1	0.18				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	1.25	0.144				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	1.5	0.12				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	1.75	0.102857				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	2	0.09				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	3.333	0.048				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	4.667	0.048				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	6	0.048				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	7.333	0.048				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	8.667	0.048				
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2	10	0.048				

Table 4.2 - Functions - Response Spectrum - Eurocode8-2004 (Part 2 of 3)

Name	Territories/States	Ground Type	Singapore Ground Type	S	Avg Over Ag	Tb sec
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2		B		1.2		0.15
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2						
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2						
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2						
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2						
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2						
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2						
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2						
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2						
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2						
EC8HorZone II <sub>Soil</sub> B <sub>Importance</sub> II <sub>q</sub> 2						



Name	Territories/States	Ground Type	Singapore Ground Type	S	Avg Over Ag	Tb sec
EC8HorZone II Soil B Importance II q 2						
EC8HorZone II Soil B Importance II q 2						
EC8HorZone II Soil B Importance II q 2						
EC8HorZone II Soil B Importance II q 2						
EC8HorZone II Soil B Importance II q 2						
EC8HorZone II Soil B Importance II q 2						

Table 4.2 - Functions - Response Spectrum - Eurocode8-2004 (Part 3 of 3)

Name	Tc sec	Td sec	Beta	q	Damping Ratio
EC8HorZone II Soil B Importance II q 2	0.5	2	0.2	2	0.05
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					
EC8HorZone II Soil B Importance II q 2					

## 5 Analysis Results

This chapter provides analysis results.

### 5.1 Modal Results

**Table 5.1 - Modal Periods And Frequencies**

Case	Mode	Period sec	Frequency cyc/sec	CircFreq rad/sec	Eigenvalue rad2/sec2
0Modal	1	0.172	5.825	36.5977	1339.3923
0Modal	2	0.076	13.234	83.1529	6914.3992
0Modal	3	0.041	24.426	153.4713	23553.4378
0Modal	4	0.031	32.138	201.9269	40774.4695
0Modal	5	0.021	46.775	293.8989	86376.5744
0Modal	6	0.019	51.895	326.063	106317.0773
0Modal	7	0.019	53.463	335.9175	112840.5525
0Modal	8	0.016	63.911	401.5654	161254.7483
0Modal	9	0.014	69.273	435.2537	189445.8162
0Modal	10	0.014	70.845	445.1351	198145.2567
0Modal	11	0.013	76.376	479.8836	230288.265
0Modal	12	0.013	78.964	496.1464	246161.2419

**Table 5.2 - Modal Participating Mass Ratios (Part 1 of 2)**

Case	Mode	Period sec	UX	UY	UZ	SumUX	SumUY	SumUZ	RX	RY	RZ
0Modal	1	0.172	0.0001	0.9072	0	0.0001	0.9072	0	0.7015	3.737E-05	0.0018
0Modal	2	0.076	0.1694	0.0005	0	0.1695	0.9077	0	0.0004	0.1324	0.752
0Modal	3	0.041	0.7316	0.0004	0	0.901	0.908	0	0.0003	0.564	0.152
0Modal	4	0.031	1.277E-05	0	0	0.901	0.908	0	2.703E-05	9.079E-07	0.0002
0Modal	5	0.021	0.0038	0.0002	0	0.9048	0.9082	0	0.0002	0.0027	0.0123
0Modal	6	0.019	2.757E-05	4.848E-05	0	0.9048	0.9082	0	0.0002	9.927E-06	0.0001
0Modal	7	0.019	0.001	0.0007	0	0.9059	0.9089	0	0.0022	0.0008	0.0004
0Modal	8	0.016	1.246E-05	0.0001	0	0.9059	0.909	0	0.0009	2.675E-05	4.547E-05
0Modal	9	0.014	4.026E-05	0.0008	0	0.9059	0.9098	0	0.0018	4.564E-05	2.379E-05
0Modal	10	0.014	5.554E-07	1.02E-06	0	0.9059	0.9098	0	0.0001	9.143E-06	0.0006
0Modal	11	0.013	9.646E-06	0.0001	0	0.9059	0.9099	0	0.0006	0.0001	0.0001
0Modal	12	0.013	0.0017	0	0	0.9076	0.9099	0	3.132E-06	0.0005	2.161E-05

**Table 5.2 - Modal Participating Mass Ratios (Part 2 of 2)**

Case	Mode	SumRX	SumRY	SumRZ
0Modal	1	0.7015	3.737E-05	0.0018
0Modal	2	0.7019	0.1324	0.7538
0Modal	3	0.7022	0.6965	0.9058
0Modal	4	0.7023	0.6965	0.906
0Modal	5	0.7025	0.6992	0.9184
0Modal	6	0.7027	0.6992	0.9184
0Modal	7	0.7049	0.6999	0.9189
0Modal	8	0.7058	0.7	0.9189
0Modal	9	0.7076	0.7	0.9189
0Modal	10	0.7077	0.7	0.9195
0Modal	11	0.7083	0.7001	0.9196
0Modal	12	0.7083	0.7006	0.9196

## 6 Design Data

This chapter provides design data and results.

### 6.1 Shear Wall Design

**Table 6.1 - Shear Wall Design Preferences - Eurocode 2-2004**

Item	Value
Multi-Response Design	Step-by-Step - All
Rebar Material	B500c
Rebar Shear Material	B500c
Country	CEN Default
Combination Equation	Eq. 6.10
Reliability Class	Class 2
Second Order Method	Nominal Stiffness
Consider Minimum Eccentricity?	Yes
Theta0 Ratio	0.005
Force Modification Factor	2
Ductility Factor	2
Gamma (Steel)	1.15
Gamma (Concrete)	1.5
AlphaCC	1
AlphaLCC	0.85
# Interaction Curves	24
# Interaction Points	11
Edge Design PT-Max	0.06
Edge Design PC-Max	0.04
Section Design IP-Max	0.04
Section Design IP-Min	0.0025
Utilization Factor Limit	0.95

**Table 6.2 - Shear Wall Pier Design Overwrites - Eurocode 2-2004 (Part 1 of 3)**

Story	Pier	Design?	LLRF	Seismic?	Pier Section Type	Pier Sec. Bottom	Pier Sec. Top	End/Corner Bar Size
Story2	P01	Yes	0	Program Determined	Program Determined			16
Story2	P02	Yes	0	Program Determined	Program Determined			16
Story2	P03	Yes	0	Program Determined	Program Determined			16
Story2	P04	Yes	0	Program Determined	Program Determined			16
Story2	P05	Yes	0	Program Determined	Program Determined			16
Story2	P06	Yes	0	Program Determined	Program Determined			16
Story2	P07	Yes	0	Program Determined	Program Determined			16
Story2	P08	Yes	0	Program Determined	Program Determined			16
Story2	P09	Yes	0	Program Determined	Program Determined			16
Story2	P10	Yes	0	Program Determined	Program Determined			16
Story1	P01	Yes	0	Program Determined	Program Determined			16
Story1	P02	Yes	0	Program Determined	Program Determined			16
Story1	P03	Yes	0	Program Determined	Program Determined			16
Story1	P04	Yes	0	Program Determined	Program Determined			16
Story1	P05	Yes	0	Program Determined	Program Determined			16
Story1	P06	Yes	0	Program Determined	Program Determined			16
Story1	P07	Yes	0	Program Determined	Program Determined			16
Story1	P08	Yes	0	Program Determined	Program Determined			16
Story1	P09	Yes	0	Program Determined	Program Determined			16
Story1	P10	Yes	0	Program Determined	Program Determined			16
Story1	P11	Yes	0	Program Determined	Program Determined			16
Story1	P12	Yes	0	Program Determined	Program Determined			16
Story1	P13	Yes	0	Program Determined	Program Determined			16

**Table 6.2 - Shear Wall Pier Design Overwrites - Eurocode 2-2004 (Part 2 of 3)**

**Table 6.2 - Shear Wall Pier Design Overwrites - Eurocode 2-2004 (Part 3 of 3)**

**Table 6.3 - Shear Wall Spandrel Design Overwrites - Eurocode 2-2004 (Part 1 of 2)**

Story	Spandrel	Design?	LLRF	Seismic?	Seismic Design Grade	Length Bottom cm	Thickness Left cm	Depth Left cm	Cover Bottom Left cm	Cover Top Left cm
Story2	S01	Yes	0	Yes	DC Medium	0	0	0	3.5	3.5
Story2	S02	Yes	0	Yes	DC Medium	0	0	0	3.5	3.5
Story2	S03	Yes	0	Yes	DC Medium	0	0	0	3.5	3.5
Story2	S04	Yes	0	Yes	DC Medium	0	0	0	3.5	3.5
Story2	S05	Yes	0	Yes	DC Medium	0	0	0	3.5	3.5
Story2	S06	Yes	0	Yes	DC Medium	0	0	0	3.5	3.5

Table 6.3 - Shear Wall Spandrel Design Overwrites - Eurocode 2-2004 (Part 2 of 2)

Slab Width Left cm	Slab Depth Left cm	Thickness Right cm	Depth Right cm	Cover Bottom Right cm	Cover Top Right cm	Slab Width Right cm	Slab Depth Right cm	Concrete Material
0	0	0	0	3.5	3.5	0	0	Program Determined
0	0	0	0	3.5	3.5	0	0	Program Determined
0	0	0	0	3.5	3.5	0	0	Program Determined
0	0	0	0	3.5	3.5	0	0	Program Determined
0	0	0	0	3.5	3.5	0	0	Program Determined
0	0	0	0	3.5	3.5	0	0	Program Determined

Table 6.4 - Shear Wall Pier Design Summary - Eurocode 2-2004 (Part 1 of 5)

Story	Pier Label	Station	Design Type	Pier Section	Edge Rebar	End Rebar	Rebar Spacing cm	Required Reinf. Percentage %	Current Reinf. Percentage %	D/C Ratio
Story2	P01	Top	Uniform		12	16	15	0.25	0.72	
Story2	P01	Bottom	Uniform		12	16	15	0.25	0.72	
Story1	P01	Top	Uniform		12	16	15	0.25	0.72	
Story1	P01	Bottom	Uniform		12	16	15	0.25	0.72	
Story2	P02	Top	Uniform		12	16	15	0.25	0.62	
Story2	P02	Bottom	Uniform		12	16	15	0.25	0.62	
Story1	P02	Top	Uniform		12	16	15	0.25	0.62	
Story1	P02	Bottom	Uniform		12	16	15	0.25	0.62	
Story2	P03	Top	Uniform		12	16	15	0.25	0.62	
Story2	P03	Bottom	Uniform		12	16	15	0.25	0.62	
Story1	P03	Top	Uniform		12	16	15	0.25	0.62	
Story1	P03	Bottom	Uniform		12	16	15	0.25	0.62	
Story2	P04	Top	Uniform		12	16	15	0.25	0.69	
Story2	P04	Bottom	Uniform		12	16	15	0.25	0.69	
Story1	P04	Top	Uniform		12	16	15	0.25	0.69	
Story1	P04	Bottom	Uniform		12	16	15	0.25	0.69	
Story2	P05	Top	Uniform		12	16	15	0.25	0.68	
Story2	P05	Bottom	Uniform		12	16	15	0.25	0.68	
Story1	P05	Top	Uniform		12	16	15	0.25	0.68	
Story1	P05	Bottom	Uniform		12	16	15	0.25	0.68	
Story2	P06	Top	Uniform		12	16	15	0.25	0.56	
Story2	P06	Bottom	Uniform		12	16	15	0.25	0.56	
Story1	P06	Top	Uniform		12	16	15	0.25	0.56	
Story1	P06	Bottom	Uniform		12	16	15	0.25	0.56	
Story2	P07	Top	Uniform		12	16	15	0.25	0.72	
Story2	P07	Bottom	Uniform		12	16	15	0.25	0.72	
Story1	P07	Top	Uniform		12	16	15	0.25	0.72	
Story1	P07	Bottom	Uniform		12	16	15	0.25	0.72	
Story2	P08	Top	Uniform		12	16	15	0.25	0.72	
Story2	P08	Bottom	Uniform		12	16	15	0.25	0.72	
Story1	P08	Top	Uniform		12	16	15	0.25	0.72	
Story1	P08	Bottom	Uniform		12	16	15	0.25	0.72	
Story2	P09	Top	Uniform		12	16	15	0.25	0.51	

Story	Pier Label	Station	Design Type	Pier Section	Edge Rebar	End Rebar	Rebar Spacing cm	Required Reinf. Percentage %	Current Reinf. Percentage %	D/C Ratio
Story2	P09	Bottom	Uniform		12	16	15	0.25	0.51	
Story1	P09	Top	Uniform		12	16	15	0.25	0.51	
Story1	P09	Bottom	Uniform		12	16	15	0.25	0.51	
Story2	P10	Top	Uniform		12	16	15	0.25	0.57	
Story2	P10	Bottom	Uniform		12	16	15	0.25	0.57	
Story1	P10	Top	Uniform		12	16	15	0.25	0.57	
Story1	P10	Bottom	Uniform		12	16	15	0.25	0.57	
Story1	P11	Top	Uniform		12	16	15	0.25	0.82	
Story1	P11	Bottom	Uniform		12	16	15	0.25	0.82	
Story1	P12	Top	Uniform		12	16	15	0.25	0.82	
Story1	P12	Bottom	Uniform		12	16	15	0.25	0.82	
Story1	P13	Top	Uniform		12	16	15	0.25	0.82	
Story1	P13	Bottom	Uniform		12	16	15	0.25	0.82	

Table 6.4 - Shear Wall Pier Design Summary - Eurocode 2-2004 (Part 2 of 5)

Story	Pier Label	Station	Pier Leg	Leg X1 cm	Leg Y1 cm	Leg X2 cm	Leg Y2 cm	Length cm	Thickness cm	Edge Member Left cm
Story2	P01	Top	Top Leg 1	115	495	215	495	100	30	
Story2	P01	Bottom	Bottom Leg 1	115	495	215	495	100	30	
Story1	P01	Top	Top Leg 1	115	495	215	495	100	30	
Story1	P01	Bottom	Bottom Leg 1	115	495	215	495	100	30	
Story2	P02	Top	Top Leg 1	395	495	585	495	190	30	
Story2	P02	Bottom	Bottom Leg 1	395	495	585	495	190	30	
Story1	P02	Top	Top Leg 1	395	495	585	495	190	30	
Story1	P02	Bottom	Bottom Leg 1	395	495	585	495	190	30	
Story2	P03	Top	Top Leg 1	765	495	955	495	190	30	
Story2	P03	Bottom	Bottom Leg 1	765	495	955	495	190	30	
Story1	P03	Top	Top Leg 1	765	495	955	495	190	30	
Story1	P03	Bottom	Bottom Leg 1	765	495	955	495	190	30	
Story2	P04	Top	Top Leg 1	1135	495	1250	495	115	30	
Story2	P04	Bottom	Bottom Leg 1	1135	495	1250	495	115	30	
Story1	P04	Top	Top Leg 1	1135	495	1250	495	115	30	
Story1	P04	Bottom	Bottom Leg 1	1135	495	1250	495	115	30	
Story2	P05	Top	Top Leg 1	1350	495	1500	495	150	30	
Story2	P05	Bottom	Bottom Leg 1	1350	495	1500	495	150	30	
Story1	P05	Top	Top Leg 1	1350	495	1500	495	150	30	
Story1	P05	Bottom	Bottom Leg 1	1350	495	1500	495	150	30	
Story2	P06	Top	Top Leg 1	1800	495	2265	495	465	30	
Story2	P06	Bottom	Bottom Leg 1	1800	495	2265	495	465	30	
Story1	P06	Top	Top Leg 1	1800	495	2265	495	465	30	
Story1	P06	Bottom	Bottom Leg 1	1800	495	2265	495	465	30	
Story2	P07	Top	Top Leg 1	2265	395	2265	495	100	30	
Story2	P07	Bottom	Bottom Leg 1	2265	395	2265	495	100	30	
Story1	P07	Top	Top Leg 1	2265	395	2265	495	100	30	
Story1	P07	Bottom	Bottom Leg 1	2265	395	2265	495	100	30	
Story2	P08	Top	Top Leg 1	2266.7	115	2266.7	215	100	30	
Story2	P08	Bottom	Bottom Leg 1	2266.7	115	2266.7	215	100	30	
Story1	P08	Top	Top Leg 1	2266.7	115	2266.7	215	100	30	
Story1	P08	Bottom	Bottom Leg 1	2266.7	115	2266.7	215	100	30	
Story2	P09	Top	Top Leg 1	115	115	2266.7	115	2151.7	30	
Story2	P09	Bottom	Bottom Leg 1	115	115	2266.7	115	2151.7	30	
Story1	P09	Top	Top Leg 1	115	115	2266.7	115	2151.7	30	
Story1	P09	Bottom	Bottom Leg 1	115	115	2266.7	115	2151.7	30	
Story2	P10	Top	Top Leg 1	115	115	115	495	380	30	
Story2	P10	Bottom	Bottom Leg 1	115	115	115	495	380	30	

Story	Pier Label	Station	Pier Leg	Leg X1 cm	Leg Y1 cm	Leg X2 cm	Leg Y2 cm	Length cm	Thickness cm	Edge Member Left cm
Story1	P10	Top	Top Leg 1	115	115	115	495	380	30	
Story1	P10	Bottom	Bottom Leg 1	115	115	115	495	380	30	
Story1	P11	Top	Top Leg 1	490	115	490	495	380	20	
Story1	P11	Bottom	Bottom Leg 1	490	115	490	495	380	20	
Story1	P12	Top	Top Leg 1	860	115	860	495	380	20	
Story1	P12	Bottom	Bottom Leg 1	860	115	860	495	380	20	
Story1	P13	Top	Top Leg 1	1230	115	1230	495	380	20	
Story1	P13	Bottom	Bottom Leg 1	1230	115	1230	495	380	20	

Table 6.4 - Shear Wall Pier Design Summary - Eurocode 2-2004 (Part 3 of 5)

Story	Pier Label	Station	Edge Member Right cm	As Left cm2	As Right cm2	Shear Rebar cm2/m	Compressive Stress Left MPa	Compressive Stress Right MPa	Compressive Stress Limit Left MPa
Story2	P01	Top				3			
Story2	P01	Bottom				3			
Story1	P01	Top				3			
Story1	P01	Bottom				3			
Story2	P02	Top				3			
Story2	P02	Bottom				3			
Story1	P02	Top				3			
Story1	P02	Bottom				3			
Story2	P03	Top				3			
Story2	P03	Bottom				3			
Story1	P03	Top				3			
Story1	P03	Bottom				3			
Story2	P04	Top				3			
Story2	P04	Bottom				3			
Story1	P04	Top				3			
Story1	P04	Bottom				3			
Story2	P05	Top				3			
Story2	P05	Bottom				3			
Story1	P05	Top				3			
Story1	P05	Bottom				3			
Story2	P06	Top				3			
Story2	P06	Bottom				3			
Story1	P06	Top				3			
Story1	P06	Bottom				3			
Story2	P07	Top				3			
Story2	P07	Bottom				3			
Story1	P07	Top				3			
Story1	P07	Bottom				4.14			
Story2	P08	Top				3			
Story2	P08	Bottom				3			
Story1	P08	Top				3			
Story1	P08	Bottom				3.99			
Story2	P09	Top				3			
Story2	P09	Bottom				3			
Story1	P09	Top				3			
Story1	P09	Bottom				3			
Story2	P10	Top				3			
Story2	P10	Bottom				3			
Story1	P10	Top				3			
Story1	P10	Bottom				3			
Story1	P11	Top				2			
Story1	P11	Bottom				2.01			

Story	Pier Label	Station	Edge Member Right cm	As Left cm2	As Right cm2	Shear Rebar cm2/m	Compressive Stress Left MPa	Compressive Stress Right MPa	Compressive Stress Limit Left MPa
Story1	P12	Top				2.05			
Story1	P12	Bottom				2.22			
Story1	P13	Top				3.58			
Story1	P13	Bottom				3.85			

Table 6.4 - Shear Wall Pier Design Summary - Eurocode 2-2004 (Part 4 of 5)

Story	Pier Label	Station	Compressive Stress Limit Right MPa	C Depth Left cm	C Limit Left cm	C Depth Right cm	C Limit Right cm	Inelastic Rotational Demand	Inelastic Rotational Capacity
Story2	P01	Top							
Story2	P01	Bottom							
Story1	P01	Top							
Story1	P01	Bottom							
Story2	P02	Top							
Story2	P02	Bottom							
Story1	P02	Top							
Story1	P02	Bottom							
Story2	P03	Top							
Story2	P03	Bottom							
Story1	P03	Top							
Story1	P03	Bottom							
Story2	P04	Top							
Story2	P04	Bottom							
Story1	P04	Top							
Story1	P04	Bottom							
Story2	P05	Top							
Story2	P05	Bottom							
Story1	P05	Top							
Story1	P05	Bottom							
Story2	P06	Top							
Story2	P06	Bottom							
Story1	P06	Top							
Story1	P06	Bottom							
Story2	P07	Top							
Story2	P07	Bottom							
Story1	P07	Top							
Story1	P07	Bottom							
Story2	P08	Top							
Story2	P08	Bottom							
Story1	P08	Top							
Story1	P08	Bottom							
Story2	P09	Top							
Story2	P09	Bottom							
Story1	P09	Top							
Story1	P09	Bottom							
Story2	P10	Top							
Story2	P10	Bottom							
Story1	P10	Top							
Story1	P10	Bottom							
Story1	P11	Top							
Story1	P11	Bottom							
Story1	P12	Top							
Story1	P12	Bottom							
Story1	P13	Top							
Story1	P13	Bottom							



Table 6.4 - Shear Wall Pier Design Summary - Eurocode 2-2004 (Part 5 of 5)

Story	Pier Label	Station	Normalized Compressive Stress MPa	Normalized Compressive Limit MPa	C Depth cm	Boundary Zone Left cm	Boundary Zone Right cm	Boundary Zone Length cm	Warnings
Story2	P01	Top	0	0					No Message
Story2	P01	Bottom	0.004276	0.15					No Message
Story1	P01	Top	0.01	0.15					No Message
Story1	P01	Bottom	0	0					No Message
Story2	P02	Top	0.0001805	0.15					No Message
Story2	P02	Bottom	0.01	0.15					No Message
Story1	P02	Top	0.01	0.15					No Message
Story1	P02	Bottom	0.02	0.15					No Message
Story2	P03	Top	0.0003729	0.15					No Message
Story2	P03	Bottom	0.01	0.15					No Message
Story1	P03	Top	0.01	0.15					No Message
Story1	P03	Bottom	0.03	0.15					No Message
Story2	P04	Top	0.001295	0.15					No Message
Story2	P04	Bottom	0.01	0.15					No Message
Story1	P04	Top	0.01	0.15					No Message
Story1	P04	Bottom	0.02	0.15					No Message
Story2	P05	Top	0.0003118	0.15					No Message
Story2	P05	Bottom	0.01	0.15					No Message
Story1	P05	Top	0.01	0.15					No Message
Story1	P05	Bottom	0.05	0.15					No Message
Story2	P06	Top	0.0002671	0.15					No Message
Story2	P06	Bottom	0.01	0.15					No Message
Story1	P06	Top	0.01	0.15					No Message
Story1	P06	Bottom	0.03	0.15					No Message
Story2	P07	Top	0.0002758	0.15					No Message
Story2	P07	Bottom	0.01	0.15					No Message
Story1	P07	Top	0.02	0.15					No Message
Story1	P07	Bottom	0.02	0.15					No Message
Story2	P08	Top	0	0					No Message
Story2	P08	Bottom	0.02	0.15					No Message
Story1	P08	Top	0.01	0.15					No Message
Story1	P08	Bottom	0.02	0.15					No Message
Story2	P09	Top	0.0001749	0.15					No Message
Story2	P09	Bottom	0.0009807	0.15					No Message
Story1	P09	Top	0	0					No Message
Story1	P09	Bottom	0	0					No Message
Story2	P10	Top	0	0.15					No Message
Story2	P10	Bottom	0	0					No Message
Story1	P10	Top	0	0					No Message
Story1	P10	Bottom	0.01	0.15					No Message
Story1	P11	Top	0.01	0.15					No Message
Story1	P11	Bottom	0.04	0.15					No Message
Story1	P12	Top	0.01	0.15					No Message
Story1	P12	Bottom	0.04	0.15					No Message
Story1	P13	Top	0.02	0.15					No Message
Story1	P13	Bottom	0.05	0.15					No Message

Table 6.4 - Shear Wall Pier Design Summary - Eurocode 2-2004 (Part 6 of 5)

Story	Pier Label	Station	Errors
Story2	P01	Top	No Message
Story2	P01	Bottom	No Message
Story1	P01	Top	No Message
Story1	P01	Bottom	No Message
Story2	P02	Top	No Message

Story	Pier Label	Station	Errors
Story2	P02	Bottom	No Message
Story1	P02	Top	No Message
Story1	P02	Bottom	No Message
Story2	P03	Top	No Message
Story2	P03	Bottom	No Message
Story1	P03	Top	No Message
Story1	P03	Bottom	No Message
Story2	P04	Top	No Message
Story2	P04	Bottom	No Message
Story1	P04	Top	No Message
Story1	P04	Bottom	No Message
Story2	P05	Top	No Message
Story2	P05	Bottom	No Message
Story1	P05	Top	No Message
Story1	P05	Bottom	No Message
Story2	P06	Top	No Message
Story2	P06	Bottom	No Message
Story1	P06	Top	No Message
Story1	P06	Bottom	No Message
Story2	P07	Top	No Message
Story2	P07	Bottom	No Message
Story1	P07	Top	No Message
Story1	P07	Bottom	No Message
Story2	P08	Top	No Message
Story2	P08	Bottom	No Message
Story1	P08	Top	No Message
Story1	P08	Bottom	No Message
Story2	P09	Top	No Message
Story2	P09	Bottom	No Message
Story1	P09	Top	No Message
Story1	P09	Bottom	No Message
Story2	P10	Top	No Message
Story2	P10	Bottom	No Message
Story1	P10	Top	No Message
Story1	P10	Bottom	No Message
Story1	P11	Top	No Message
Story1	P11	Bottom	No Message
Story1	P12	Top	No Message
Story1	P12	Bottom	No Message
Story1	P13	Top	No Message
Story1	P13	Bottom	No Message

Table 6.5 - Shear Wall Spandrel Design Summary - Eurocode 2-2004 (Part 1 of 3)

Story	Spandrel	Station	Top Rebar cm2	Top Rebar Ratio	Top Rebar Combo	Top Design Moment kN-m	Bottom Rebar cm2	Bottom Rebar Ratio
Story2	S01	Left	14.35	0.002518	15 G + psi2 Q - RSEQ	0	14.35	0.002518
Story2	S01	Right	14.35	0.002518	15 G + psi2 Q - RSEQ	-35.4051	14.35	0.002518
Story2	S02	Left	14.35	0.002518	15 G + psi2 Q - RSEQ	-42.3688	14.35	0.002518
Story2	S02	Right	14.35	0.002518	15 G + psi2 Q - RSEQ	-48.0665	14.35	0.002518
Story2	S03	Left	14.35	0.002518	15 G + psi2 Q - RSEQ	-63.6855	14.35	0.002518
Story2	S03	Right	14.35	0.002518	15 G + psi2 Q - RSEQ	-82.7326	14.35	0.002518
Story2	S04	Left	14.35	0.002518	15 G + psi2 Q - RSEQ	-112.2463	14.35	0.002518
Story2	S04	Right	14.35	0.002518	15 G + psi2 Q - RSEQ	-61.4792	14.35	0.002518
Story2	S05	Left	14.35	0.002518	15 G + psi2 Q - RSEQ	-47.432	14.35	0.002518
Story2	S05	Right	14.35	0.002518	15 G + psi2 Q - RSEQ	-46.4979	14.35	0.002518
Story2	S06	Left	14.35	0.002518	15 G + psi2 Q - RSEQ	-39.4454	14.35	0.002518
Story2	S06	Right	14.35	0.002518	15 G + psi2 Q - RSEQ	-54.1568	14.35	0.002518

Table 6.5 - Shear Wall Spandrel Design Summary - Eurocode 2-2004 (Part 2 of 3)

Story	Spandrel	Station	Bottom Rebar Combo	Bottom Design Moment kN-m	Av Vert cm <sup>2</sup> /m	Av Horz cm <sup>2</sup> /m	Shear Combo	Design Shear kN
Story2	S01	Left	15 G + psi2 Q - RSE <sub>Q</sub>	54.9885	2.4	0	14 G + psi2 Q + RSE <sub>Q</sub>	47.6961
Story2	S01	Right	15 G + psi2 Q - RSE <sub>Q</sub>	0.5557	2.4	0	14 G + psi2 Q + RSE <sub>Q</sub>	97.4194
Story2	S02	Left	15 G + psi2 Q - RSE <sub>Q</sub>	25.8581	2.4	0	14 G + psi2 Q + RSE <sub>Q</sub>	80.1345
Story2	S02	Right	15 G + psi2 Q - RSE <sub>Q</sub>	0	2.4	0	14 G + psi2 Q + RSE <sub>Q</sub>	98.793
Story2	S03	Left	15 G + psi2 Q - RSE <sub>Q</sub>	15.0765	2.4	0	14 G + psi2 Q + RSE <sub>Q</sub>	100.7283
Story2	S03	Right	15 G + psi2 Q - RSE <sub>Q</sub>	32.1105	2.4	0	14 G + psi2 Q + RSE <sub>Q</sub>	101.172
Story2	S04	Left	15 G + psi2 Q - RSE <sub>Q</sub>	3.0258	2.74	0	14 G + psi2 Q + RSE <sub>Q</sub>	199.9606
Story2	S04	Right	15 G + psi2 Q - RSE <sub>Q</sub>	0.3099	2.6	0	14 G + psi2 Q + RSE <sub>Q</sub>	189.6727
Story2	S05	Left	15 G + psi2 Q - RSE <sub>Q</sub>	7.8306	2.4	0	14 G + psi2 Q + RSE <sub>Q</sub>	126.6413
Story2	S05	Right	15 G + psi2 Q - RSE <sub>Q</sub>	101.2931	2.4	0	14 G + psi2 Q + RSE <sub>Q</sub>	97.3449
Story2	S06	Left	15 G + psi2 Q - RSE <sub>Q</sub>	164.4837	3.47	0	14 G + psi2 Q + RSE <sub>Q</sub>	252.9
Story2	S06	Right	15 G + psi2 Q - RSE <sub>Q</sub>	150.7151	3.68	0	14 G + psi2 Q + RSE <sub>Q</sub>	268.8476

Table 6.5 - Shear Wall Spandrel Design Summary - Eurocode 2-2004 (Part 3 of 3)

Story	Spandrel	Station	Av Diag cm <sup>2</sup>	Mandatory	Diag Shear Combo	Design Shear Diag. kN	Warnings	Errors
Story2	S01	Left			14 G + psi2 Q + RSE <sub>Q</sub>	47.6961	No Message	No Message
Story2	S01	Right			14 G + psi2 Q + RSE <sub>Q</sub>	97.4194	No Message	No Message
Story2	S02	Left			14 G + psi2 Q + RSE <sub>Q</sub>	80.1345	No Message	No Message
Story2	S02	Right			14 G + psi2 Q + RSE <sub>Q</sub>	98.793	No Message	No Message
Story2	S03	Left			14 G + psi2 Q + RSE <sub>Q</sub>	100.7283	No Message	No Message
Story2	S03	Right			14 G + psi2 Q + RSE <sub>Q</sub>	101.172	No Message	No Message
Story2	S04	Left			14 G + psi2 Q + RSE <sub>Q</sub>	199.9606	No Message	No Message
Story2	S04	Right			14 G + psi2 Q + RSE <sub>Q</sub>	189.6727	No Message	No Message
Story2	S05	Left			14 G + psi2 Q + RSE <sub>Q</sub>	126.6413	No Message	No Message
Story2	S05	Right			14 G + psi2 Q + RSE <sub>Q</sub>	97.3449	No Message	No Message
Story2	S06	Left			14 G + psi2 Q + RSE <sub>Q</sub>	252.9	No Message	No Message
Story2	S06	Right			14 G + psi2 Q + RSE <sub>Q</sub>	268.8476	No Message	No Message

## 6.2 Concrete Slab Design

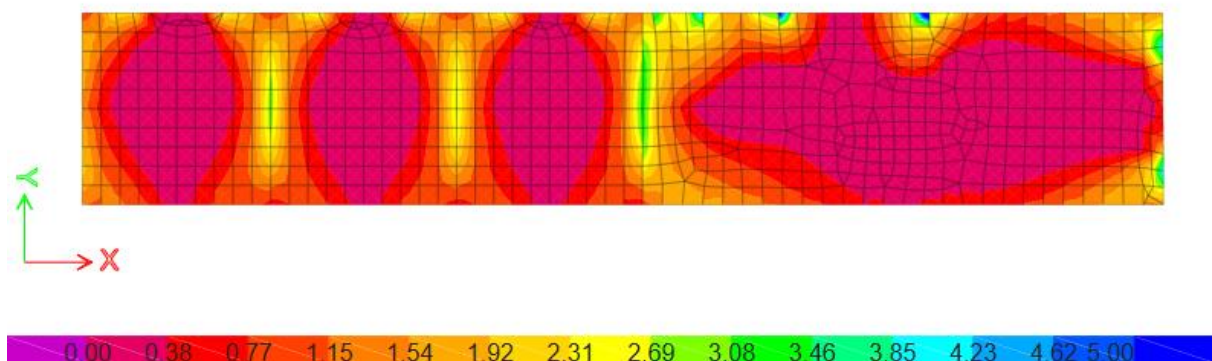
Table 6.6 - Concrete Slab Design Preferences - Eurocode 2-2004

Item	Value
Country	CEN Default
ComboSet	Eq. 6.10
ReliabilityClass	Class 2
Theta	0.005
GammaSteel	1.15
GammaConc	1.5
AlphaCC	1
AlphaCT	1
AlphaCCLW	0.85
AlphaCTLW	0.85
Ignore Pu?	No
Pattern Live Load Factor	0.75
CoverTop cm	1.5
CoverBot cm	1.5
BarSize	10
InnerLayer	Layer B
PTCGSTop cm	2.5
PTCGSBotExt cm	4
PTCGSBotInt cm	2.5

Item	Value
SlabType	Two Way
UserStress	No
InitConcRat	0.8
InitTopTen	
InitBotTen	
InitExComp	
FinTopTen	
FinBotTen	
FinExComp	
SusExComp	
LLFraction	0.5

Table 6.7 - Concrete Slab Design Overwrites - Finite Element Based

Story	Label	Unique Name	Rebar Material	Cover Specification Type	Dir 1 Top Cover cm	Dir 1 Bottom Cover cm	Dir 2 Top Cover cm	Dir 2 Bottom Cover cm	LLRF	Design?	Ignore PT?
Story1	F1	56	B500c	User Specified	3.6	3.6	4.8	4.8	1	Yes	No
Story1	F2	57	B500c	User Specified	3.6	3.6	4.8	4.8	1	Yes	No
Story1	F3	58	B500c	User Specified	3.6	3.6	4.8	4.8	1	Yes	No
Story1	F4	59	B500c	User Specified	3.6	3.6	4.8	4.8	1	Yes	No
Base	F5	60	B500c	User Specified	5.8	5.8	7.4	7.4	1	Yes	No

Figure 6.1 – Foundation: Direction 1 Bottom Rebar Intensity (cm<sup>2</sup>/m)

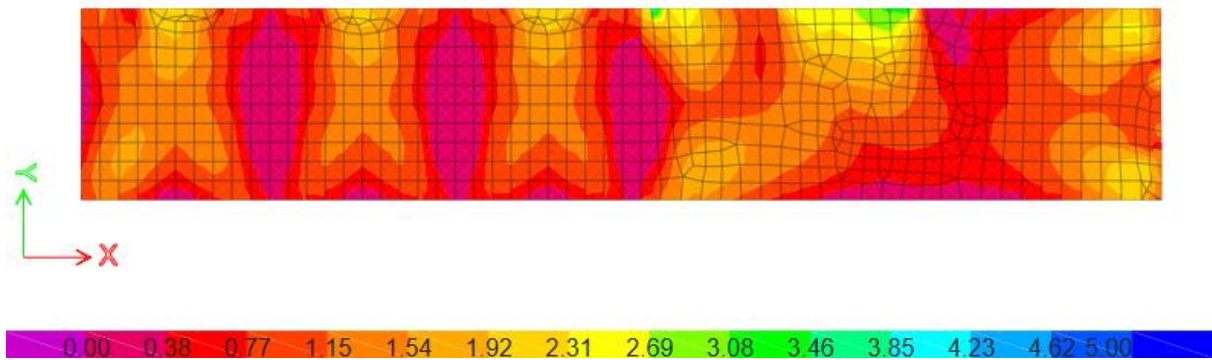


Figure 6.2 – Foundation: Direction 1 Top Rebar Intensity (cm²/m)

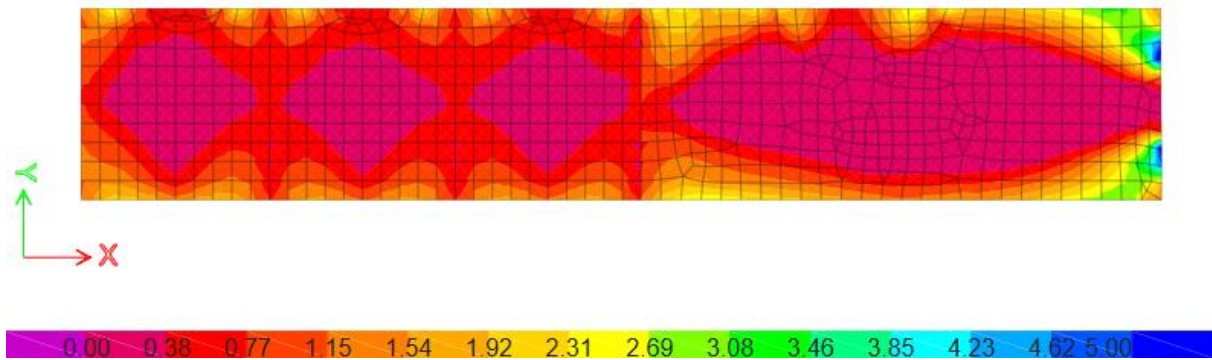


Figure 6.3 – Foundation: Direction 2 Bottom Rebar Intensity (cm²/m)

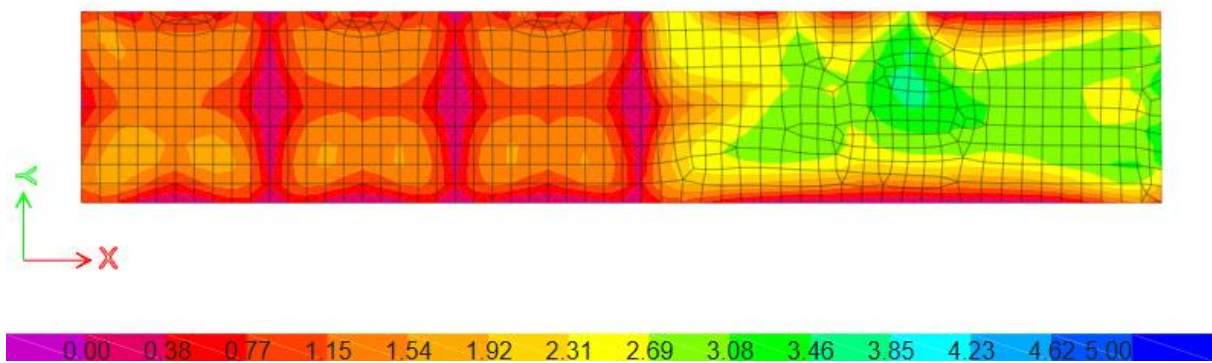


Figure 6.4 – Foundation: Direction 2 Top Rebar Intensity (cm<sup>2</sup>/m)

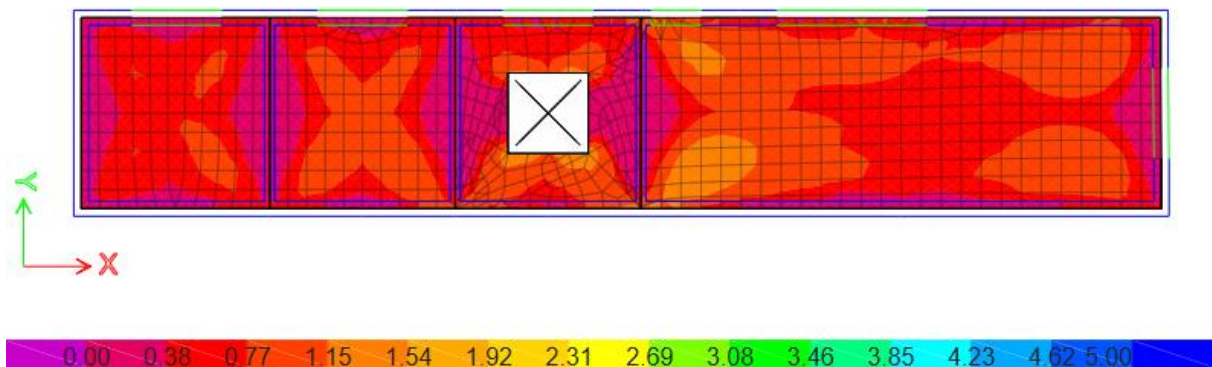


Figure 6.5 – Top Slab: Direction 1 Bottom Rebar Intensity (cm<sup>2</sup>/m)



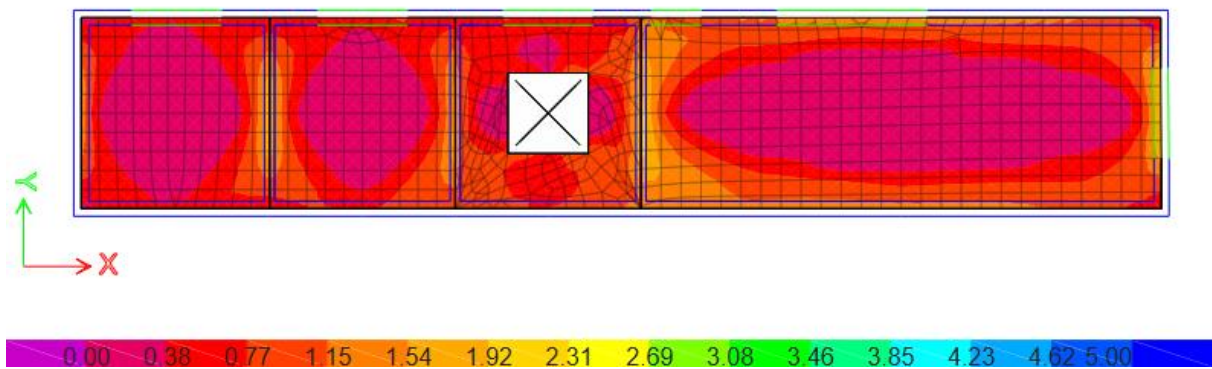


Figure 6.6 – Top Slab: Direction 1 Top Rebar Intensity (cm<sup>2</sup>/m)

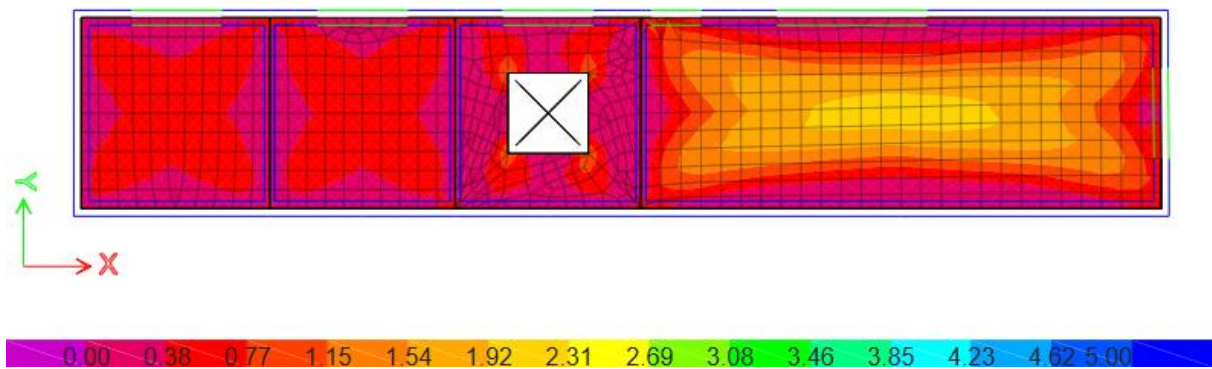


Figure 6.7 – Top Slab: Direction 2 Bottom Rebar Intensity (cm<sup>2</sup>/m)

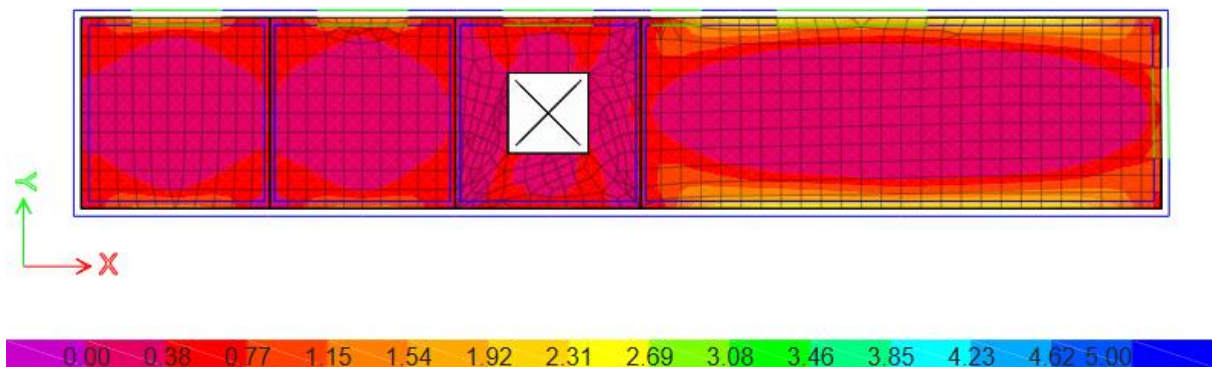


Figure 6.8 – Top Slab: Direction 2 Top Rebar Intensity (cm²/m)