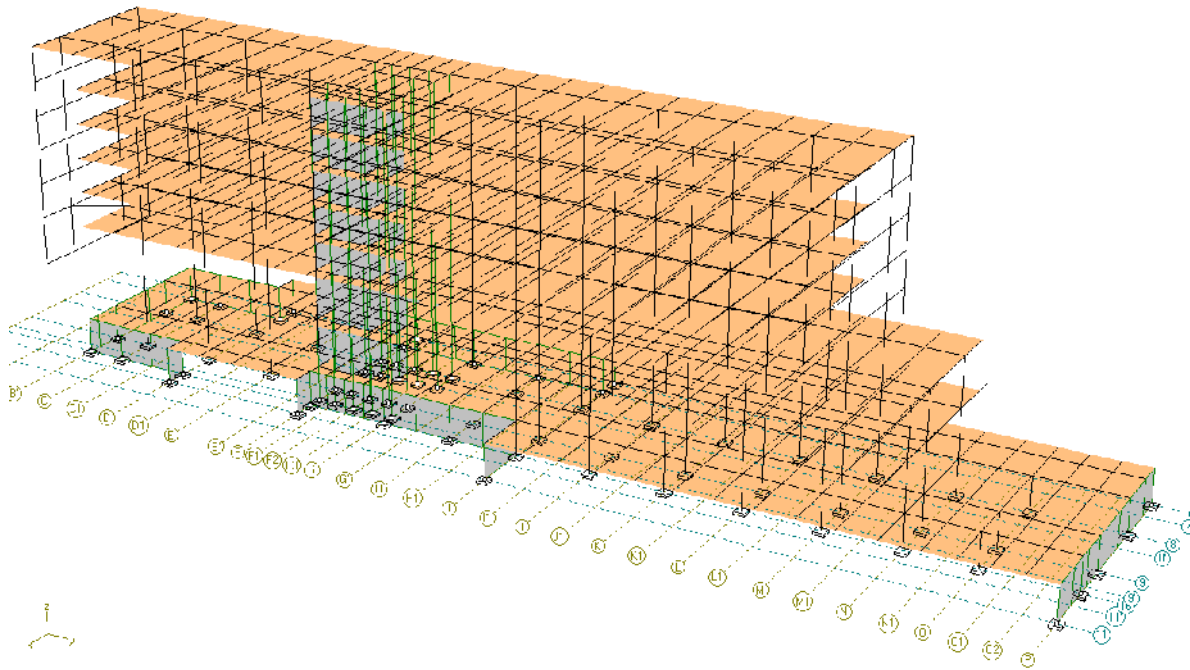
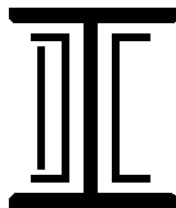


# NUEVO HOSPITAL DE ZIPAQUIRÁ.

HOSPITAL ZIPAQUIRA



## MEMORIAS DE CÁLCULOS ESTRUCTURALES



**INTERDICO LTDA.**  
DISEÑO Y CONSTRUCCIÓN DE ESTRUCTURAS

AGOSTO -2010



**PROYECTO:  
NUEVO HOSPITAL DE ZIPAQUIRÁ.**

## **NUEVO HOSPITAL DE ZIPAQUIRA.**

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**ING. CARLOS ARTURO CASTRO S.**

MATRÍCULA PROFESIONAL No 2520207023 CND.

# **NUEVO HOSPITAL DE ZIPAQUIRÁ.**

**MEMORIAS DE CALCULO**

**DESCRIPCION DEL PROYECTO.**

## **NUEVO HOSPITAL DE ZIPAQUIRA.**

### **DESCRIPCIÓN DEL PROYECTO**

<b>ESTUDIO DE SUELOS:</b>	INGENIERIA Y GEORIESGOS IGR Ltda.		
<b>CIMENTACIÓN:</b>	Pilotes, Dados y Vigas de Amarre.		
<b>SUPERESTRUCTURA:</b>	Altura de la edificación:	8 Niveles y Cubierta.	
	Sistema estructural:	Pórticos de Concreto.	
<b>METODO DE DISEÑO SISMICO:</b>	(FHE) Fuerza Horizontal equivalente.		
<b>PROGRAMA DE CALCULO:</b>	RCB		
<b>NORMA DE DISEÑO:</b>	Normas Colombianas de Diseño y Construcción Sismo-resistente (Decreto 33 de 1998)		
<b>MATERIAL:</b>	Concreto Cimentación: f'c = 280 kgf/cm <sup>2</sup>		
	Concreto Columnas: f'c = 280 kgf/cm <sup>2</sup>		
	Acero: fy = 2400 kgf/cm <sup>2</sup> (ø = ¼") fy = 4200 kgf/cm <sup>2</sup> (ø > ¼")		
<b>AVALÚO DE CARGAS</b>	Operaciones.	Carga Viva:	0.20 Ton/m <sup>2</sup>
	Cuartos	Carga Viva:	0.40 Ton/m <sup>2</sup>
	Cubierta	Carga Viva:	0.5 Ton/m <sup>2</sup>
<b>GRADO DE DISIPACIÓN DE ENERGÍA</b>	DMO	<i>Moderada</i>	
<b>GRUPO DE USO</b>	IV		

# **NUEVO HOSPITAL DE ZIPAQUIRÁ.**

**MEMORIAS DE CALCULO**

**EVALUACION DE CARGA.**



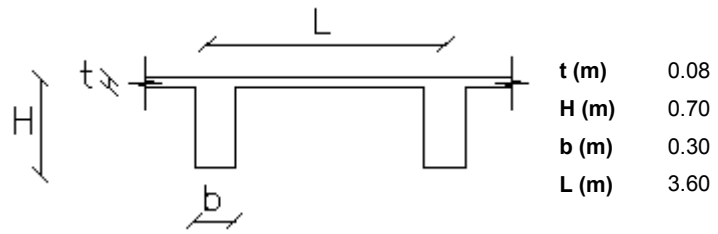
**INTERDICO Ltda.**

**Proyecto: HOSPITAL ZIPAQUIRA**

**Ingeniero: RODRIGO CASTRO S**

**AVALUO DE CARGAS PLACA NERVADA**

ITEM	Peso (t/m <sup>2</sup> )
Placa	0.08 * 2.4
Viguetas	0.3 * 0.62 * 2.4 / 3.6
Riostras	
Acabados	0.10
Tabiques	0.20
Cielo Raso	0.04
Otros	0.00
Carga muerta	0.66
Carga viva	0.40
Carga total	1.06
Carga mayorada	1.60
Factor de carga	1.51



**GEOMETRIA PLACA NERVADA**



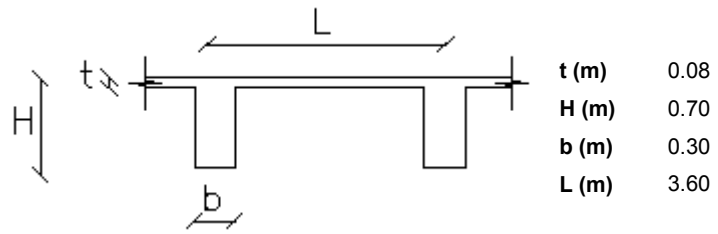
**INTERDICO Ltda.**

**Proyecto: HOSPITAL ZIPAQUIRA**

**Ingeniero: RODRIGO CASTRO S**

**AVALUO DE CARGAS PLACA NERVADA**

ITEM	Peso (t/m <sup>2</sup> )
Placa	0.08 * 2.4
Viguetas	0.3 * 0.62 * 2.4 / 3.6
Riostras	
Acabados	0.10
Tabiques	0.20
Cielo Raso	0.04
Otros	0.00
Carga muerta	0.66
Carga viva	0.20
Carga total	0.86
Carga mayorada	1.26
Factor de carga	1.47



**GEOMETRIA PLACA NERVADA**

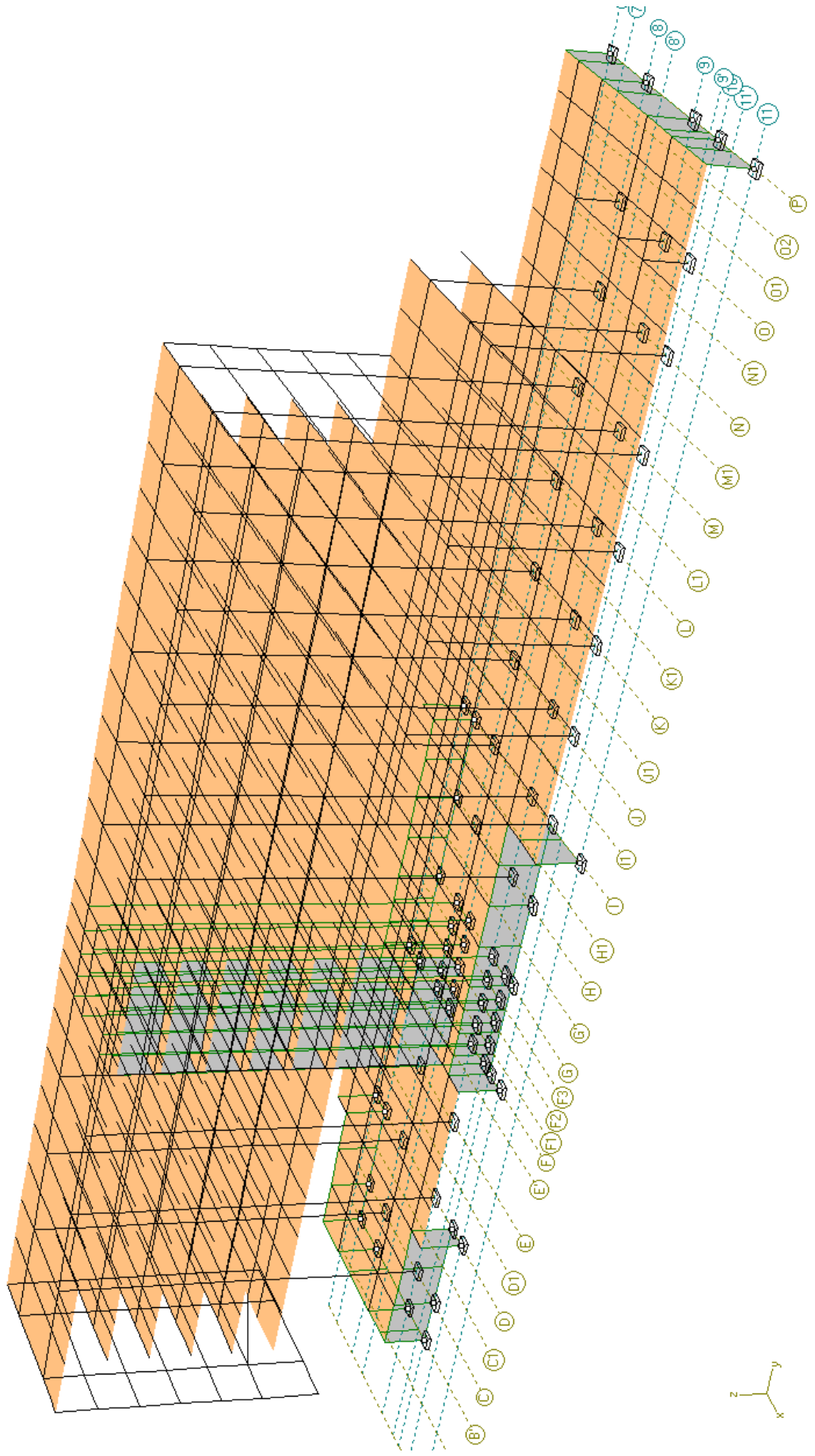
# **NUEVO HOSPITAL DE ZIQAQUIRÁ.**

**MEMORIAS DE CALCULO**

**ISOMETRICO DEL MODELO.**



### HOSPITAL ZIPAQUIRA



# **NUEVO HOSPITAL DE ZIPAQUIRÁ.**

**MEMORIAS DE CALCULO**

**ANALISIS SISMICO.**

EQUIVALENT STATIC EARTHQUAKE FORCES COL NSR-98

Base Shear

$$V = S_a W$$

$$S_a = 1.2 A_a S I / T, \quad S_a = A_a I / 2 \text{ for } T > 2.4 \text{ S}$$

$$S_a = 2.5 A_a I \text{ for } T < T_c, \text{ where } T_c = 0.48 \text{ S}$$

S E I S M I C P A R A M E T E R S

Peak acceleration,  $A_a$  ..... = .20

Region:	10	9	8	7	6	5	4	3	2	1
$A_a$ :	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10	0.075	0.05
LOCATION										$A_a$
Mocoa										0.35
Cucuta, Neiva, Pasto, Quibdo, Villavicencio										0.30
Armenia, B/manga, Cali, Manizales, Pereira, Popayan										0.25
Bogota, Ibague, Medellin, Tunja										0.20
Monteria, Santa Marta										0.15
Barranquilla, Cartagena, San Andres										0.10

Importance coefficient,  $I$  ..... = 1.3

GROUP	COEFFICIENT
IV - Essential facilities	1.30
III- Public assistance facilities	1.20
II - Especial occupancy buildings	1.10
I - Normal occupancy buildings	1.00

Site profile coefficient,  $S$  ..... = 1.2

PROFILE TYPE	S1	S2	S3	S4
FACTOR $S$	1.0	1.2	1.5	2.0

	X-direction	Y-direction
	-----	-----
Energy Dissipation Coefficient, $R_o$ =	5	5
$T = 0.08 h^{3/4}$ ..... =	1.05	1.05
$T = 0.05 h^{3/4}$ ..... =	.66	.66
$T_{max}: 1.2 T_a$ ..... =	.79	.79

Fundamental period,  $T$  ..... = 1.05                  1.05

Reduction in R for Irregular Buildings:

PLAN IRREGULARITIES			ELEVATION IRREGULARITIES		
Type	Description	$\phi_p$	Type	Description	$\phi_a$
1P	Torsional	0.9	1A	Stiffness	0.9
2P	Reentrant corners	0.9	2A	Mass	0.9
3P	Diaph. discontin.	0.9	3A	Geometrical	0.9
4P	Plane shifting	0.8	4A	Plane shifting	0.8
5P	Unparallel grid	0.9	5A	Resistance	0.8

NOTE: EngSolutions RCB assumes irregular building.

For regular buildings make  $(\phi_p \cdot \phi_a) = 1.0$

Reduction factor,  $(\phi_p \cdot \phi_a)$  : 0.81

$$R = (\phi_p \cdot \phi_a) R_o$$

T O T A L B A S E S H E A R

Building Weight,  $W$ , (ton) = 11767.69

Acceleration, $A_a$ . . . . .	= .2
Transition period, $T_c$ . . . . .	= .58
Site coefficient, $S$ . . . . .	= 1.2
Importance factor, $I$ . . . . .	= 1.3
Reduct.for Irregularity, $\phi_a \cdot \phi_p$ =	.81

	X-direction	Y-direction
	-----	-----
Reduced energy coef, $R$ =	4.05	4.05

Period, T, (sec) . . . = 1.05 1.05  
 1.2 Aa S I / T = .357 .357  
 2.5 Aa I = .65 .65  
 Sa = .357 .357

Total Base Shear, V, (ton) = 4196.02 4196.02  
 A C C I D E N T A L T O R S I O N

X-direction Y-direction  
 -----  
 Accidental eccentricity as a  
 percentage of building dimension, (%) = 5 5

A C C I D E N T A L E C C E N T R I C I T Y:

Level	X - D I R E C T I O N (EQY)			Y - D I R E C T I O N (EQX)		
	dexo (m)	Ax	dex (m)	deyo (m)	Ax	dex (m)
8	0.82	1.00	0.82	4.19	1.00	4.19
7	0.82	1.00	0.82	4.19	1.00	4.19
6	0.82	1.00	0.82	4.19	1.00	4.19
5	0.82	1.00	0.82	4.19	1.00	4.19
4	0.82	1.00	0.82	4.19	1.00	4.19
3	0.93	1.00	0.93	4.56	1.00	4.56
2	1.23	1.00	1.23	4.56	1.00	4.56
1	1.23	1.00	1.23	5.09	1.00	5.09

Ax: Amplification factor for accidental eccentricity

EQY: Envelope (1) Ex = ex EQX: Envelope (1) Ey = ey  
 (2) Ex = ex + dex (2) Ey = ey + dey  
 (3) Ex = ex - dex (3) Ey = ey - dey

D E S I G N E C C E N T R I C I T Y : E = e + de

Level	X - D I R E C T I O N (EQY)				Y - D I R E C T I O N (EQX)			
	Center Mass CMx	Static Eccent. ex*	Accident Eccent. dex	Design Eccent. Ex	Center Mass CMy	Static Eccent. ey*	Accident Eccent. dey	Design Eccent. Ey
8	8.45	-0.86	0.82	-1.688	35.74	2.92	4.19	7.1111
7	8.06	-1.24	0.82	-2.066	37.13	4.31	4.19	8.5050
6	8.06	-1.24	0.82	-2.066	37.13	4.31	4.19	8.5050
5	8.06	-1.24	0.82	-2.066	37.13	4.31	4.19	8.5050
4	8.06	-1.24	0.82	-2.066	37.21	4.38	4.19	8.5757
3	8.66	-0.65	0.93	-1.588	44.58	11.44	4.56	16.000
2	8.85	-0.46	1.23	-1.699	53.07	19.67	4.56	24.233
1	8.98	-0.11	1.23	-1.344	52.19	16.98	5.09	22.077

Note: \* Static eccentricity: ex = CMx - CRx and ey = CMy - CRy  
 All values are in meters

D E S I G N E C C E N T R I C I T Y : E = e - de

Level	X - D I R E C T I O N (EQY)				Y - D I R E C T I O N (EQX)			
	Center Mass CMx	Static Eccent. ex*	Accident Eccent. dex	Design Eccent. Ex	Center Mass CMy	Static Eccent. ey*	Accident Eccent. dey	Design Eccent. Ey
8	8.45	-0.86	0.82	-0.044	35.74	2.92	4.19	-1.277
7	8.06	-1.24	0.82	-0.422	37.13	4.31	4.19	0.1212
6	8.06	-1.24	0.82	-0.422	37.13	4.31	4.19	0.1212
5	8.06	-1.24	0.82	-0.422	37.13	4.31	4.19	0.1212
4	8.06	-1.24	0.82	-0.422	37.21	4.38	4.19	0.1919

3	8.66	-0.65	0.93	0.2828	44.58	11.44	4.56	6.8888
2	8.85	-0.46	1.23	0.7777	53.07	19.67	4.56	15.111
1	8.98	-0.11	1.23	1.1212	52.19	16.98	5.09	11.899

Note: \* Static eccentricity:  $e_x = CM_x - CR_x$  and  $e_y = CM_y - CR_y$   
All values are in meters

Equivalent Forces

$$F_i = (W_i H_i^n / \sum W_j H_j^n) V$$

$$V = S F_i$$

$$V = S_a W$$

E Q U I V A L E N T F O R C E S : X - D I R E C T I O N (EQUAKE X)

Floor i	Height H <sub>i</sub> (m)	Weight W <sub>i</sub> (ton)	W <sub>i</sub> H <sub>i</sub> <sup>n</sup> ----- Σ W <sub>j</sub> H <sub>j</sub> <sup>n</sup>	Force F <sub>i</sub> (ton)	Shear V <sub>i</sub> (ton)	Torsion T <sub>i</sub> =F <sub>i</sub> (E <sub>y</sub> -e <sub>y</sub> ) (ton-m)
8	30.79	318.8	0.063	264.34	264.34	1107.9
7	27.29	1399	0.238	998.65	1263.0	4184.4
6	23.79	1399	0.199	835.00	2098.0	3498.7
5	20.29	1399	0.163	683.95	2781.9	2865.7
4	16.79	1395	0.128	537.09	3319.0	2252.7
3	13.30	1811	0.123	516.10	3835.1	2354.4
2	8.39	1439	0.054	226.58	4061.7	1034.0
1	3.50	2608	0.032	134.27	4196.0	684.11
-----		-----	-----	-----	-----	-----
S		11767.69		4196.0		

n = 1.275

E Q U I V A L E N T F O R C E S : Y - D I R E C T I O N (EQUAKE Y)

Floor i	Height H <sub>i</sub> (m)	Weight W <sub>i</sub> (ton)	W <sub>i</sub> H <sub>i</sub> <sup>n</sup> ----- Σ W <sub>j</sub> H <sub>j</sub> <sup>n</sup>	Force F <sub>i</sub> (ton)	Shear V <sub>i</sub> (ton)	Torsion T <sub>i</sub> =F <sub>i</sub> (E <sub>x</sub> -e <sub>x</sub> ) (ton-m)
8	30.79	318.8	0.063	264.34	264.34	217.94
7	27.29	1399	0.238	998.65	1263.0	822.35
6	23.79	1399	0.199	835.00	2098.0	687.59
5	20.29	1399	0.163	683.95	2781.9	563.20
4	16.79	1395	0.128	537.09	3319.0	442.65
3	13.30	1811	0.123	516.10	3835.1	480.94
2	8.39	1439	0.054	226.58	4061.7	279.26
1	3.50	2608	0.032	134.27	4196.0	165.79
-----		-----	-----	-----	-----	-----
S		11767.69		4196.0		

n = 1.275

# **NUEVO HOSPITAL DE ZIPAQUIRÁ.**

**MEMORIAS DE CALCULO**

**EVALUACION DE IRREGULARIDAD.**

Company: INTERDICO LTDA  
 Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
 09:27:31 a.m. 05/08/2010

**PLAN TORSIONAL IRREGULARITY CHECK**

Level	EARTHQUAKE - X				EARTHQUAKE - Y			
	$\delta_{\text{max}}$	$\delta_{\text{min}}$	$\delta_{\text{max}}$	$\delta_{\text{min}}$	$\delta_{\text{max}}$	$\delta_{\text{min}}$	$\delta_{\text{max}}$	$\delta_{\text{min}}$
8	0.0069	0.0052	0.0062	YES	0.0098	0.0031	0.0038	NO
7	0.0073	0.0055	0.0066	YES	0.0037	0.0037	0.0044	NO
6	0.0080	0.0060	0.0072	YES	0.0044	0.0044	0.0053	NO
5	0.0086	0.0064	0.0077	YES	0.0050	0.0050	0.0060	NO
4	0.0091	0.0065	0.0079	YES	0.0053	0.0053	0.0063	NO
3	0.0092	0.0054	0.0065	YES	0.0060	0.0056	0.0067	NO
2	0.0045	0.0032	0.0038	YES	0.0045	0.0045	0.0054	NO
1	0.0011	0.0007	0.0009	YES	0.0005	0.0005	0.0006	NO

Torsional irregularity is considered to exist if  $\delta_{\text{max}} / \delta_{\text{min}} \geq 1.2$

**TORSIONAL IREGULARITIES EXIST !!!**

Notes:

- The determination of torsional irregularities (plan structural irregularity type 1) and computation of amplification factors for accidental torsion  $A_x$ , is conducted according to FEMA's NEHRP Recommended Provisions for Seismic Regulations for New Buildings and other Structures, Provisions and Commentary ed. 1994, 1997, 2000, 2003, which is applicable to the following building codes derived from the above documents: (USA) IBC-2003/6, ASCE 7-05, UBC-97, CBC-2001, (COLOMBIA) NSR-98, and (PANAMA) REP-2004.
- The top 2 stories are not considered in the evaluation (NEHRP Section 5.2.3.3 Exception 1)

**AMPLIFICATION FACTORS ACCIDENTAL TORSION,  $A_x$**

Level	EARTHQUAKE - X			EARTHQUAKE - Y		
	$\delta_{\text{max}}$	$\delta_{\text{min}}$	$\delta_{\text{max}}$	$\delta_{\text{max}}$	$\delta_{\text{min}}$	$\delta_{\text{max}}$
8	23.198	15.610	18.732	1.534	12.923	12.648
7	19.100	13.794	16.552	1.331	11.648	11.553
6	16.539	11.864	14.237	1.350	10.349	10.269
5	13.752	9.765	11.718	1.377	8.798	8.735
4	10.740	7.525	9.030	1.415	7.040	6.994
3	7.564	4.687	5.625	1.808	5.181	5.129
2	2.507	1.818	2.182	1.321	2.405	2.384
1	0.390	0.262	0.314	1.544	0.182	0.181

Displacement units: cm

$A_x = \delta_{\text{max}} / \delta_{\text{min}}$

# **NUEVO HOSPITAL DE ZIPAQUIRÁ.**

**MEMORIAS DE CALCULO**

**DATOS DE ENTRADA MODELO RCB.**



Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:42 a.m. 05/08/2010

GENERAL INPUT DATA

Structure type: Three-Dimensional Frame/Wall Structure  
Architectural grid: Rectangular

AXES INFORMATION

Number of longitudinal axes = 0  
Number of transverse axes = 33  
Number of stories = 8  
Building total length = 112.95 (m)  
Building total width = 26.84 (m)  
Building total height = 30.80 (m)



- 11-A ..... 6'
- 11-B ..... 6'
- 11-C ..... 6'
- 11-D ..... 6'
- 11-E ..... 6'
- 11-F ..... 6'
- 11-G ..... 6'
- 11-H ..... 6'
- 11-I ..... 6'
- 11-J ..... 6'
- 11-K ..... 6'
- 11-L ..... 6'
- 11-M ..... 6'
- 11-N ..... 6'
- 11-O ..... 6'
- 11-P ..... 6'
- 11-Q ..... 6'
- 11-R ..... 6'
- 11-S ..... 6'
- 11-T ..... 6'
- 11-U ..... 6'
- 11-V ..... 6'
- 11-W ..... 6'
- 11-X ..... 6'
- 11-Y ..... 6'
- 11-Z ..... 6'

A B B'Y C D D' E E' F F' F'F'F'G G' H H' I J J' K K' L L' M N N' O O' O'2P

VERTICAL AXES COORDINATES

Table with columns: Axis (m), X (m), Y (m), Z (m), Story, Height (m)

STORY HEIGHTS

Table with columns: Story, Height (m)

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:42 a.m. 05/08/2010

Axis X Y Story Height

Main table with columns: Axis, X, Y, Story, Height. Lists axes from 10-C1 to 9-C-F3 with their respective coordinates and story heights.

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:42 a.m. 05/08/2010

Axis	X	Y	Story	Height
8*-F3	6.70	32.25		
7*-F3	-0.31	32.25		
6*-F3	-2.74	32.25		
11*-G	21.90	34.45		
11*-G	18.38	34.45		
10*-G	16.18	34.45		
9*-G	14.77	34.45		
8*-G	11.97	34.45		
7*-G	6.70	34.45		
6*-G	3.90	34.45		
6*-G	-2.74	34.45		
11*-G*	21.90	38.05		
11*-G*	18.38	38.05		
10*-G*	16.18	38.05		
9*-G*	14.77	38.05		
8*-G*	11.97	38.05		
7*-G*	6.70	38.05		
6*-G*	3.90	38.05		
6*-G*	-2.74	38.05		
6*-G*	-2.74	38.05		
11*-H	21.90	41.65		
11*-H	18.38	41.65		
10*-H	16.18	41.65		
9*-H	14.77	41.65		
8*-H	11.97	41.65		
7*-H	6.70	41.65		
6*-H	3.90	41.65		
6*-H	-0.31	41.65		
6*-H	-2.74	41.65		
11*-H1	21.90	45.20		
11*-H1	18.38	45.20		
10*-H1	16.18	45.20		
9*-H1	14.77	45.20		
8*-H1	11.97	45.20		
7*-H1	6.70	45.20		
6*-H1	3.90	45.20		
6*-H1	-0.31	45.20		
6*-H1	-2.74	45.20		
11*-I	21.90	48.75		
11*-I	18.38	48.75		
10*-I	16.18	48.75		
9*-I	14.77	48.75		
8*-I	11.97	48.75		
7*-I	6.70	48.75		
6*-I	3.90	48.75		
6*-I	-0.31	48.75		
6*-I	-2.74	48.75		
11*-I1	21.90	52.70		
11*-I1	18.38	52.70		
10*-I1	16.18	52.70		
9*-I1	14.77	52.70		
8*-I1	11.97	52.70		
7*-I1	6.70	52.70		
6*-I1	3.90	52.70		
6*-I1	-0.31	52.70		
6*-I1	-2.74	52.70		
11*-J	21.90	56.25		
11*-J	18.38	56.25		
10*-J	16.18	56.25		
9*-J	14.77	56.25		
8*-J	11.97	56.25		
7*-J	6.70	56.25		
6*-J	3.90	56.25		
6*-J	-0.31	56.25		
6*-J	-2.74	56.25		
11*-J1	21.90	60.00		
11*-J1	18.38	60.00		
10*-J1	16.18	60.00		
9*-J1	14.77	60.00		
8*-J1	11.97	60.00		
7*-J1	6.70	60.00		
6*-J1	3.90	60.00		
6*-J1	-0.31	60.00		

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
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Axis	X	Y	Story	Height
6*-J1	-2.74	60.00		
21*-K	18.38	63.75		
10*-K	16.18	63.75		
9*-K	14.77	63.75		
9*-K	11.97	63.75		
8*-K	6.70	63.75		
8*-K	3.90	63.75		
7*-K	-0.31	63.75		
6*-K	-2.74	63.75		
11*-K1	21.90	67.50		
10*-K1	18.38	67.50		
9*-K1	14.77	67.50		
9*-K1	11.97	67.50		
8*-K1	6.70	67.50		
8*-K1	3.90	67.50		
7*-K1	-0.31	67.50		
6*-K1	-2.74	67.50		
11*-L	21.90	71.25		
10*-L	18.38	71.25		
9*-L	14.77	71.25		
9*-L	11.97	71.25		
8*-L	6.70	71.25		
8*-L	3.90	71.25		
7*-L	-0.31	71.25		
6*-L	-2.74	71.25		
11*-L1	21.90	75.00		
10*-L1	18.38	75.00		
9*-L1	14.77	75.00		
9*-L1	11.97	75.00		
8*-L1	6.70	75.00		
8*-L1	3.90	75.00		
7*-L1	-0.31	75.00		
6*-L1	-2.74	75.00		
11*-M	21.90	78.75		
10*-M	18.38	78.75		
9*-M	14.77	78.75		
9*-M	11.97	78.75		
8*-M	6.70	78.75		
8*-M	3.90	78.75		
7*-M	-0.31	78.75		
6*-M	-2.74	78.75		
11*-M1	21.90	82.50		
10*-M1	18.38	82.50		
9*-M1	14.77	82.50		
9*-M1	11.97	82.50		
8*-M1	6.70	82.50		
8*-M1	3.90	82.50		
7*-M1	-0.31	82.50		
6*-M1	-2.74	82.50		
11*-N	21.90	86.25		
10*-N	18.38	86.25		
9*-N	14.77	86.25		
9*-N	11.97	86.25		
8*-N	6.70	86.25		
8*-N	3.90	86.25		
7*-N	-0.31	86.25		
6*-N	-2.74	86.25		
11*-N1	21.90	89.98		
10*-N1	18.38	89.98		
9*-N1	14.77	89.98		
9*-N1	11.97	89.98		
8*-N1	6.70	89.98		
8*-N1	3.90	89.98		
7*-N1	-0.31	89.98		
6*-N1	-2.74	89.98		
11*-O	21.90	93.01		
11*-O	18.38	93.01		

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
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Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
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Axis	X	Y	Story	Height
10-O	16.18	93.01		
9-O	11.97	93.01		
8-O	16.70	93.01		
7-O	3.90	93.01		
6-O	-0.31	93.01		
5-O	-2.74	93.01		
4-O	21.90	95.90		
3-O	18.38	95.90		
2-O	16.18	95.90		
1-O	14.77	95.90		
0-O	16.70	95.90		
8-O1	3.90	95.90		
7-O1	-0.31	95.90		
6-O1	-2.74	95.90		
5-O1	21.90	98.80		
4-O1	18.38	98.80		
3-O1	16.18	98.80		
2-O1	14.77	98.80		
1-O1	11.97	98.80		
0-O1	3.90	101.70		
8-O2	16.70	98.80		
7-O2	3.90	98.80		
6-O2	-0.31	98.80		
5-O2	-2.74	98.80		
4-O2	21.90	101.70		
3-O2	18.38	101.70		
2-O2	16.18	101.70		
1-O2	14.77	101.70		
0-O2	11.97	101.70		
8-P	3.90	101.70		
7-P	-0.31	101.70		
6-P	-2.74	101.70		

**MATERIALS**

Number of materials = 4

STRUCTURAL STEEL

Mat	Name	Fy	Ftmaxj	Ftminj	E	G	w
		Kg/cm2	Kg/cm2	Kg/cm2	Kg/cm2	Kg/cm2	Kg/m3
4	ASTM A50	3500	2310	2310	2030000	805000	7840.0

REINFORCED CONCRETE

Mat	Name	f'c	fy	Fys1	Fys2	E	G	w
		Kg/cm2	Kg/cm2	Kg/cm2	Kg/cm2	Kg/cm2	Kg/cm2	Kg/m3
1	RConcrete1	210	4200	4200	4200	188370	75320	2400.0
2	RConcrete2	280	4200	4200	4200	217560	87010	2400.0
3	fe5000	350	4200	4200	4200	243200	97000	2400.0

**MEMBER DATA**

Total number of members..... = 1797  
Number of columns..... = 205  
Number of beams..... = 1592  
Number of braces..... = 0

**COLUMN SECTIONS**

Number of prismatic sections = 6

Sec	Name	Shape	b	h	a	Lu	L	Lu	a	c	Theta	Sec	Mat	System	A	I2	I3	J
			(cm)	(cm)	(cm)	(m)	(m)	(m)	(m)	(m)	(o)				(cm2)	(cm4)	(cm4)	(cm4)
1	R180X50	Rectang	180.00	50.00	-	-	-	-	-	-	-	-	-	-	9000.0	1875000	24300000	6187500
2	d90	Oval	90.00	90.00	-	-	-	-	-	-	-	-	-	-	6382.0	3220621	3220621	6441241
3	d50X45	Oval	50.00	50.00	-	-	-	-	-	-	-	-	-	-	2963.0	306796	306796	615392
4	R180X45	Rectang	180.00	45.00	-	-	-	-	-	-	-	-	-	-	1111.7	34117	34117	505774
5	R180X40	Rectang	180.00	40.00	-	-	-	-	-	-	-	-	-	-	46207	46207	46207	2137
6	R360X40	Rectang	360.00	40.00	-	-	-	-	-	-	-	-	-	-	14400.0	1920000	15552000	7142400

**COLUMNS**

Column	Story	L	Lu	a	c	Theta	Sec	Mat	System
		(m)	(m)	(m)	(m)	(o)			
8-O	S	3.50	2.88	0.00	0.63	0.0	4	2	G&L
9-O	S	3.50	2.88	0.00	0.63	0.0	4	2	G&L
10-O	S	3.50	3.15	0.00	0.35	0.0	3	2	G&L
8-N	2	4.90	4.20	0.08	0.63	0.0	1	2	G&L
8-N	1	4.90	4.20	0.08	0.63	0.0	1	2	G&L
8-N	S	3.50	2.88	0.00	0.63	0.0	1	2	G&L
9-N	2	4.90	4.20	0.08	0.63	0.0	6	2	G&L
9-N	1	4.90	4.20	0.08	0.63	0.0	6	2	G&L
9-N	S	3.50	2.88	0.00	0.63	0.0	6	2	G&L
10-N	2	4.90	4.20	0.08	0.63	0.0	3	2	G&L
10-N	1	4.90	3.93	0.35	0.63	0.0	3	2	G&L
10-N	S	3.50	3.15	0.00	0.35	0.0	3	2	G&L
7-M	7	3.50	2.83	0.25	0.43	0.0	5	4	G&L
7-M	6	3.50	3.00	0.25	0.43	0.0	5	4	G&L
7-M	5	3.50	3.00	0.25	0.43	0.0	5	4	G&L
7-M	4	3.50	3.00	0.25	0.43	0.0	5	4	G&L
7-M	3	3.50	3.18	0.08	0.25	0.0	5	4	G&L
8-M	7	3.50	2.83	0.25	0.43	0.0	5	4	G&L
8-M	6	3.50	3.00	0.25	0.43	0.0	5	4	G&L
8-M	5	3.50	3.00	0.25	0.43	0.0	5	4	G&L
8-M	4	3.50	3.00	0.25	0.43	0.0	5	4	G&L
8-M	3	3.50	3.18	0.08	0.25	0.0	5	4	G&L
8-M	2	4.90	4.20	0.08	0.63	0.0	1	2	G&L
8-M	1	4.90	4.20	0.08	0.63	0.0	1	2	G&L
8-M	S	3.50	2.88	0.00	0.63	0.0	1	2	G&L
9-M	7	3.50	2.83	0.25	0.43	0.0	5	4	G&L
9-M	6	3.50	3.00	0.25	0.43	0.0	5	4	G&L
9-M	5	3.50	3.00	0.25	0.43	0.0	5	4	G&L
9-M	4	3.50	3.00	0.25	0.43	0.0	5	4	G&L
9-M	3	3.50	3.18	0.08	0.25	0.0	5	4	G&L
9-M	2	4.90	4.20	0.08	0.63	0.0	1	2	G&L
9-M	1	4.90	4.20	0.08	0.63	0.0	1	2	G&L
9-M	S	3.50	2.88	0.00	0.63	0.0	1	2	G&L
10-M	7	3.50	2.83	0.25	0.43	0.0	5	4	G&L
10-M	6	3.50	3.00	0.25	0.43	0.0	5	4	G&L
10-M	5	3.50	3.00	0.25	0.43	0.0	5	4	G&L

Company: INTERDICO LTDA
Project: HOSPITAL ZIAPAQUIRA

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Project: HOSPITAL ZIAPAQUIRA

Table with columns: Column, Story, L, Lu, a, c, Theta, Sec, Mat, System. Contains rows for columns 10-M, 8-K, 9-L, 9-M, 9-N, 9-O, 9-P, 9-Q, 9-R, 9-S, 9-T, 9-U, 9-V, 9-W, 9-X, 9-Y, 9-Z, 10-A, 10-B, 10-C, 10-D, 10-E, 10-F, 10-G, 10-H, 10-I, 10-J, 10-K, 10-L, 10-M, 10-N, 10-O, 10-P, 10-Q, 10-R, 10-S, 10-T, 10-U, 10-V, 10-W, 10-X, 10-Y, 10-Z.

Table with columns: Column, Story, L, Lu, a, c, Theta, Sec, Mat, System. Contains rows for columns 8-I, 8-J, 8-K, 8-L, 8-M, 8-N, 8-O, 8-P, 8-Q, 8-R, 8-S, 8-T, 8-U, 8-V, 8-W, 8-X, 8-Y, 8-Z, 9-A, 9-B, 9-C, 9-D, 9-E, 9-F, 9-G, 9-H, 9-I, 9-J, 9-K, 9-L, 9-M, 9-N, 9-O, 9-P, 9-Q, 9-R, 9-S, 9-T, 9-U, 9-V, 9-W, 9-X, 9-Y, 9-Z, 10-A, 10-B, 10-C, 10-D, 10-E, 10-F, 10-G, 10-H, 10-I, 10-J, 10-K, 10-L, 10-M, 10-N, 10-O, 10-P, 10-Q, 10-R, 10-S, 10-T, 10-U, 10-V, 10-W, 10-X, 10-Y, 10-Z.





Company: INTERDICO LTDA  
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Beam	Floor	L	Lu	a	c	Sec	Mat	System
8(I1-J)	3	3.55	3.30	0.00	0.25	2	2	G&L
8(J1-K)	3	3.75	3.50	0.00	0.25	2	2	G&L
8(K1-L)	3	3.75	3.50	0.00	0.25	2	2	G&L
8(L1-M)	3	3.75	3.50	0.00	0.25	2	2	G&L
8(M1-N)	3	3.75	3.50	0.00	0.25	2	2	G&L
9*(F-F1)	4	1.80	1.80	0.00	0.00	4	2	G&L
9*(F1-F2)	4	2.10	2.10	0.00	0.00	4	2	G&L
9*(F2-F3)	4	2.20	2.20	0.00	0.00	4	2	G&L
9*(F3-G)	4	3.80	3.60	0.00	0.20	2	2	G&L
9(B1-C)	4	3.75	3.55	0.20	0.00	2	2	G&L
9(C1-D)	4	3.75	3.55	0.20	0.00	2	2	G&L
9(D1-E)	4	3.75	3.50	0.25	0.00	2	2	G&L
9(E1-F)	4	3.75	3.50	0.25	0.00	2	2	G&L
9(F1-F2)	4	1.80	1.80	0.00	0.00	2	2	G&L
9(F2-F3)	4	2.10	2.10	0.00	0.00	2	2	G&L
9(G1-H)	4	3.60	3.35	0.25	0.00	2	2	G&L
9(H1-I)	4	3.55	3.30	0.25	0.00	2	2	G&L
9(I1-J)	4	3.55	3.30	0.25	0.00	2	2	G&L
9(J1-K)	4	3.75	3.50	0.25	0.00	2	2	G&L
9(K1-L)	4	3.75	3.50	0.25	0.00	2	2	G&L
9(L1-M)	4	3.75	3.50	0.25	0.00	2	2	G&L
8*(F-F1)	4	1.80	1.80	0.00	0.00	2	2	G&L
8*(F1-F2)	4	2.20	2.20	0.00	0.00	2	2	G&L
8*(F2-F3)	4	2.10	2.10	0.00	0.00	2	2	G&L
8*(F3-G)	4	3.80	3.55	0.25	0.00	2	2	G&L
8(B1-C)	4	3.75	3.55	0.20	0.00	2	2	G&L
8(C1-D)	4	3.75	3.55	0.20	0.00	2	2	G&L
8(D1-E)	4	3.75	3.50	0.25	0.00	2	2	G&L
8(E1-F)	4	3.75	3.50	0.25	0.00	2	2	G&L
8(F1-F2)	4	1.80	1.80	0.00	0.00	2	2	G&L
8(F2-F3)	4	2.10	2.10	0.00	0.00	2	2	G&L
8(G1-H)	4	3.60	3.35	0.25	0.00	2	2	G&L
8(H1-I)	4	3.55	3.30	0.25	0.00	2	2	G&L
8(I1-J)	4	3.55	3.30	0.25	0.00	2	2	G&L
8(J1-K)	4	3.75	3.50	0.25	0.00	2	2	G&L
8(K1-L)	4	3.75	3.50	0.25	0.00	2	2	G&L
8(L1-M)	4	3.75	3.50	0.25	0.00	2	2	G&L
9*(F-F1)	5	1.80	1.80	0.00	0.00	4	2	G&L
9*(F1-F2)	5	2.10	2.10	0.00	0.00	4	2	G&L
9*(F2-F3)	5	2.20	2.20	0.00	0.00	4	2	G&L
9*(F3-G)	5	3.75	3.55	0.20	0.00	2	2	G&L
9(C1-D)	5	3.75	3.50	0.25	0.00	2	2	G&L
9(D1-E)	5	3.75	3.50	0.25	0.00	2	2	G&L
9(E1-F)	5	3.75	3.50	0.25	0.00	2	2	G&L
9(F1-F2)	5	1.80	1.80	0.00	0.00	2	2	G&L
9(F2-F3)	5	2.10	2.10	0.00	0.00	2	2	G&L
9(G1-H)	5	3.60	3.35	0.25	0.00	2	2	G&L
9(H1-I)	5	3.55	3.30	0.25	0.00	2	2	G&L
9(I1-J)	5	3.55	3.30	0.25	0.00	2	2	G&L
9(J1-K)	5	3.75	3.50	0.25	0.00	2	2	G&L
9(K1-L)	5	3.75	3.50	0.25	0.00	2	2	G&L
9(L1-M)	5	3.75	3.50	0.25	0.00	2	2	G&L

Beam	Floor	L	Lu	a	c	Sec	Mat	System
9(F1-F2)	5	2.10	2.10	0.00	0.00	2	2	G&L
9(F2-F3)	5	2.20	2.20	0.00	0.00	2	2	G&L
9(G1-H)	5	3.60	3.35	0.25	0.00	2	2	G&L
9(H1-I)	5	3.55	3.30	0.25	0.00	2	2	G&L
9(I1-J)	5	3.55	3.30	0.25	0.00	2	2	G&L
9(J1-K)	5	3.75	3.50	0.25	0.00	2	2	G&L
9(K1-L)	5	3.75	3.55	0.20	0.00	2	2	G&L
9(L1-M)	5	3.75	3.55	0.20	0.00	2	2	G&L
8*(F-F1)	5	1.80	1.80	0.00	0.00	3	2	G&L
8*(F1-F2)	5	2.10	2.10	0.00	0.00	3	2	G&L
8*(F2-F3)	5	2.20	2.20	0.00	0.00	3	2	G&L
8*(F3-G)	5	3.80	3.55	0.25	0.00	2	2	G&L
8(B1-C)	5	3.75	3.50	0.25	0.00	2	2	G&L
8(C1-D)	5	3.75	3.50	0.25	0.00	2	2	G&L
8(D1-E)	5	3.75	3.50	0.25	0.00	2	2	G&L
8(E1-F)	5	3.75	3.50	0.25	0.00	2	2	G&L
8(F1-F2)	5	1.80	1.80	0.00	0.00	2	2	G&L
8(F2-F3)	5	2.10	2.10	0.00	0.00	2	2	G&L
8(G1-H)	5	3.60	3.35	0.25	0.00	2	2	G&L
8(H1-I)	5	3.55	3.30	0.25	0.00	2	2	G&L
8(I1-J)	5	3.55	3.30	0.25	0.00	2	2	G&L
8(J1-K)	5	3.75	3.50	0.25	0.00	2	2	G&L
8(K1-L)	5	3.75	3.50	0.25	0.00	2	2	G&L
8(L1-M)	5	3.75	3.50	0.25	0.00	2	2	G&L
9*(F-F1)	6	1.80	1.80	0.00	0.00	4	2	G&L
9*(F1-F2)	6	2.10	2.10	0.00	0.00	4	2	G&L
9*(F2-F3)	6	2.20	2.20	0.00	0.00	4	2	G&L
9*(F3-G)	6	3.80	3.55	0.20	0.00	2	2	G&L
9(C1-D)	6	3.75	3.50	0.25	0.00	2	2	G&L
9(D1-E)	6	3.75	3.50	0.25	0.00	2	2	G&L
9(E1-F)	6	3.75	3.50	0.25	0.00	2	2	G&L
9(F1-F2)	6	1.80	1.80	0.00	0.00	2	2	G&L
9(F2-F3)	6	2.10	2.10	0.00	0.00	2	2	G&L
9(F3-G)	6	2.20	2.20	0.00	0.00	2	2	G&L
9(G1-H)	6	3.60	3.35	0.25	0.00	2	2	G&L
9(H1-I)	6	3.55	3.30	0.25	0.00	2	2	G&L
9(I1-J)	6	3.55	3.30	0.25	0.00	2	2	G&L
9(J1-K)	6	3.75	3.50	0.25	0.00	2	2	G&L
9(K1-L)	6	3.75	3.55	0.20	0.00	2	2	G&L
9(L1-M)	6	3.75	3.55	0.20	0.00	2	2	G&L

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Table with columns: Beam, Floor, L, Lu, a, c, Sec, Mat, System. Rows include beams 8(DI-E) through 9\*(F-F3).

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Table with columns: Beam, Floor, L, Lu, a, c, Sec, Mat, System. Rows include beams 9\*(F3-G) through 9\*(F-F3).



Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Company: RODRIGO CASTRO S  
Project: HOSPITAL ZIPAQUIRA

Beam	Floor	L	Lu	a	c	Sec	Mat	System
D1(9-8)	1	5.27	5.02	0.25	0.00	7	2	G
D1(9-8)	1	4.21	3.96	0.25	0.00	7	2	G
D1(7-6)	1	2.43	2.43	0.00	0.00	7	2	G
E(11-10)	1	2.20	1.95	0.00	0.25	2	2	G&L
E(10-9)	1	1.41	1.16	0.25	0.00	2	2	G&L
E(9-8)	1	2.80	1.90	0.00	0.90	2	2	G&L
E(8-7)	1	2.80	2.80	0.00	0.00	2	2	G&L
E(7-6)	1	4.21	3.31	0.90	0.00	2	2	G&L
E(11-10)	1	2.43	2.43	0.00	0.00	2	2	G&L
E*(10-9)	1	1.41	1.16	0.25	0.00	7	2	G
E*(9-8)	1	2.80	2.55	0.00	0.25	7	2	G
E*(8-7)	1	5.27	5.02	0.25	0.00	7	2	G
E*(7-6)	1	4.21	3.96	0.25	0.00	7	2	G
F(11-10)	1	2.43	2.43	0.00	0.00	7	2	G&L
F(10-9)	1	1.41	1.16	0.25	0.00	2	2	G&L
F(9-8)	1	2.80	2.40	0.00	0.40	2	2	G&L
F(8-7)	1	5.27	4.87	0.00	0.40	2	2	G&L
F(7-6)	1	4.21	3.96	0.00	0.25	2	2	G&L
F1(10-9)	1	1.41	1.16	0.00	0.25	4	2	G&L
F1(9-8)	1	2.80	2.55	0.00	0.25	4	2	G&L
F1(8-7)	1	5.27	5.02	0.00	0.25	4	2	G&L
F1(7-6)	1	4.21	2.55	0.00	0.25	4	2	G&L
F2(10-9)	1	1.41	1.16	0.00	0.25	4	2	G&L
F2(9-8)	1	2.80	2.55	0.00	0.25	4	2	G&L
F2(8-7)	1	5.27	5.02	0.00	0.25	4	2	G&L
F2(7-6)	1	4.21	3.96	0.00	0.25	4	2	G&L
F3(10-9)	1	1.41	1.16	0.00	0.25	4	2	G&L
F3(9-8)	1	2.80	2.55	0.00	0.25	4	2	G&L
F3(8-7)	1	5.27	5.02	0.00	0.25	4	2	G&L
F3(7-6)	1	4.21	3.96	0.00	0.25	4	2	G&L
G(10-9)	1	1.41	1.01	0.00	0.40	2	2	G&L
G(9-8)	1	2.80	2.40	0.00	0.40	2	2	G&L
G(8-7)	1	5.27	4.87	0.00	0.40	2	2	G&L
G(7-6)	1	4.21	3.96	0.00	0.25	2	2	G&L
G*(10-9)	1	1.41	1.41	0.00	0.00	7	2	G
G*(9-8)	1	2.80	2.55	0.00	0.25	7	2	G
G*(8-7)	1	5.27	5.02	0.00	0.25	7	2	G
G*(7-6)	1	4.21	3.71	0.25	0.25	7	2	G
H(10-9)	1	1.41	1.41	0.00	0.00	2	2	G&L
H(9-8)	1	2.80	1.00	0.00	1.80	2	2	G&L
H(8-7)	1	5.27	5.27	0.00	0.00	2	2	G&L
H(7-6)	1	4.21	2.16	1.80	0.25	2	2	G
H1(10-9)	1	1.41	1.41	0.00	0.00	7	2	G
H1(9-8)	1	2.80	2.55	0.00	0.25	7	2	G
H1(8-7)	1	5.27	5.02	0.00	0.25	7	2	G
H1(7-6)	1	4.21	3.71	0.25	0.25	7	2	G
I(11-11)	1	3.52	3.27	0.00	0.25	2	2	G&L
I(11-10)	1	2.20	1.97	0.00	0.23	2	2	G&L
I(10-9)	1	1.41	1.19	0.23	0.00	2	2	G&L
I(9-8)	1	2.80	1.00	0.00	1.80	2	2	G&L
I(8-7)	1	5.27	5.27	0.00	0.00	2	2	G&L
I(7-6)	1	4.21	2.80	0.00	0.00	2	2	G&L
I(11-11)	1	2.43	2.16	0.00	0.25	2	2	G&L
I1(11-10)	1	3.52	3.52	0.00	0.00	7	2	G
I1(11-10)	1	2.20	1.95	0.00	0.25	7	2	G
I1(10-9)	1	1.41	1.16	0.25	0.00	7	2	G
I1(9-8)	1	2.80	2.55	0.00	0.25	7	2	G
I1(8-7)	1	5.27	5.02	0.25	0.00	7	2	G
I1(7-6)	1	4.21	3.96	0.25	0.00	7	2	G

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Beam	Floor	L	Lu	a	c	Sec	Mat	System
I1(9-8)	1	5.27	5.02	0.25	0.00	7	2	G
I1(8-7)	1	4.21	3.96	0.25	0.00	7	2	G
I1(7-6)	1	2.43	2.43	0.00	0.00	7	2	G
J(11-11)	1	3.52	3.52	0.00	0.00	2	2	G&L
J(11-10)	1	2.20	1.95	0.00	0.25	2	2	G&L
J(10-9)	1	1.41	1.16	0.25	0.00	2	2	G&L
J(9-8)	1	2.80	1.00	0.00	1.80	2	2	G&L
J(8-7)	1	5.27	5.27	0.00	0.00	2	2	G&L
J(7-6)	1	4.21	2.41	1.80	0.00	2	2	G&L
J1(11-11)	1	3.52	3.52	0.00	0.00	7	2	G
J1(11-10)	1	2.20	1.95	0.00	0.25	7	2	G
J1(10-9)	1	1.41	1.16	0.25	0.00	7	2	G
J1(9-8)	1	2.80	2.55	0.00	0.25	7	2	G
J1(8-7)	1	5.27	5.02	0.25	0.00	7	2	G
J1(7-6)	1	4.21	3.96	0.25	0.00	7	2	G
K(11-11)	1	3.52	3.52	0.00	0.00	2	2	G&L
K(11-10)	1	2.20	1.95	0.00	0.25	2	2	G&L
K(10-9)	1	1.41	1.16	0.25	0.00	2	2	G&L
K(9-8)	1	2.80	1.00	0.00	1.80	2	2	G&L
K(8-7)	1	5.27	5.27	0.00	0.00	2	2	G&L
K(7-6)	1	4.21	2.41	1.80	0.00	2	2	G&L
K1(11-11)	1	3.52	3.52	0.00	0.00	7	2	G
K1(11-10)	1	2.20	1.95	0.00	0.25	7	2	G
K1(10-9)	1	1.41	1.16	0.25	0.00	7	2	G
K1(9-8)	1	2.80	2.55	0.00	0.25	7	2	G
K1(8-7)	1	5.27	5.02	0.25	0.00	7	2	G
K1(7-6)	1	4.21	3.96	0.25	0.00	7	2	G
L(11-11)	1	3.52	3.52	0.00	0.00	2	2	G&L
L(11-10)	1	2.20	1.95	0.00	0.25	2	2	G&L
L(10-9)	1	1.41	1.16	0.25	0.00	2	2	G&L
L(9-8)	1	2.80	1.00	0.00	1.80	2	2	G&L
L(8-7)	1	5.27	3.47	1.80	0.00	2	2	G&L
L(7-6)	1	4.21	2.80	0.00	0.00	2	2	G&L
L1(11-11)	1	3.52	3.52	0.00	0.00	7	2	G
L1(11-10)	1	2.20	1.95	0.00	0.25	7	2	G
L1(10-9)	1	1.41	1.16	0.25	0.00	7	2	G
L1(9-8)	1	2.80	2.55	0.00	0.25	7	2	G
L1(8-7)	1	5.27	5.02	0.25	0.00	7	2	G
L1(7-6)	1	4.21	3.96	0.25	0.00	7	2	G
M(11-11)	1	3.52	3.52	0.00	0.00	2	2	G&L
M(11-10)	1	2.20	1.95	0.00	0.25	2	2	G&L
M(10-9)	1	1.41	1.16	0.25	0.00	2	2	G&L
M(9-8)	1	2.80	1.00	0.00	1.80	2	2	G&L
M(8-7)	1	5.27	5.27	0.00	0.00	2	2	G&L
M(7-6)	1	4.21	2.41	1.80	0.00	2	2	G&L
M1(11-11)	1	3.52	3.52	0.00	0.00	7	2	G
M1(11-10)	1	2.20	1.95	0.00	0.25	7	2	G
M1(10-9)	1	1.41	1.16	0.25	0.00	7	2	G
M1(9-8)	1	2.80	2.55	0.00	0.25	7	2	G
M1(8-7)	1	5.27	5.02	0.25	0.00	7	2	G
M1(7-6)	1	4.21	3.96	0.25	0.00	7	2	G











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Beam	Floor	L	Lu	a	c	Sec	Mat	System
F1(10-9')	7	1.41	1.16	0.00	0.25	4	2	G&L
F1(9-9)	7	5.27	5.05	0.00	0.25	4	2	G&L
F1(8-8)	7	2.80	2.55	0.00	0.25	4	2	G&L
F1(8-7)	7	4.21	4.21	0.00	0.00	4	2	G&L
F2(10-9')	7	1.41	1.16	0.00	0.25	4	2	G&L
F2(9-9)	7	2.80	2.55	0.00	0.25	4	2	G&L
F2(8-8)	7	2.80	2.55	0.00	0.25	4	2	G&L
F2(8-7)	7	4.21	4.21	0.00	0.00	4	2	G&L
F3(10-9')	7	1.41	1.16	0.00	0.25	4	2	G&L
F3(9-9)	7	5.27	5.05	0.00	0.25	4	2	G&L
F3(8-8)	7	2.80	2.55	0.00	0.25	4	2	G&L
F3(8-7)	7	4.21	4.21	0.00	0.00	4	2	G&L
G(10-9')	7	1.41	1.01	0.00	0.40	2	2	G&L
G(9-9)	7	2.80	2.40	0.00	0.40	2	2	G&L
G(8-8)	7	2.80	2.40	0.00	0.40	2	2	G&L
G(8-7)	7	4.21	4.21	0.00	0.00	2	2	G
G*(9-8)	7	2.80	2.55	0.00	0.25	7	2	G
G*(9-7)	7	5.27	5.05	0.00	0.25	7	2	G
G*(8-8)	7	2.80	2.55	0.00	0.25	7	2	G
G*(8-7)	7	4.21	3.96	0.25	0.00	7	2	G
H(10-9')	7	1.41	1.41	0.00	0.00	2	2	G&L
H(9-9)	7	2.80	1.00	0.00	1.80	2	2	G&L
H(8-8)	7	2.80	2.80	0.00	0.00	2	2	G&L
H(8-7)	7	4.21	2.41	1.80	0.00	2	2	G&L
I(10-9')	7	1.41	1.41	0.00	0.00	7	2	G
I(9-9)	7	2.80	2.55	0.00	0.25	7	2	G
I(8-8)	7	2.80	2.55	0.00	0.25	7	2	G
I(8-7)	7	4.21	3.96	0.25	0.00	7	2	G
J(10-9')	7	1.41	1.41	0.00	0.00	2	2	G&L
J(9-9)	7	2.80	1.00	0.00	1.80	2	2	G&L
J(8-8)	7	2.80	2.80	0.00	0.00	2	2	G&L
J(8-7)	7	4.21	2.41	1.80	0.00	2	2	G&L
K(10-9')	7	1.41	1.41	0.00	0.00	7	2	G
K(9-9)	7	2.80	2.55	0.00	0.25	7	2	G
K(8-8)	7	2.80	2.55	0.00	0.25	7	2	G
K(8-7)	7	4.21	3.96	0.25	0.00	7	2	G
L(10-9')	7	1.41	1.41	0.00	0.00	2	2	G&L
L(9-9)	7	2.80	1.00	0.00	1.80	2	2	G&L
L(8-8)	7	2.80	2.80	0.00	0.00	2	2	G&L
L(8-7)	7	4.21	2.41	1.80	0.00	2	2	G&L
M(10-9')	7	1.41	1.41	0.00	0.00	7	2	G
M(9-9)	7	2.80	2.55	0.00	0.25	7	2	G
M(8-8)	7	2.80	2.55	0.00	0.25	7	2	G
M(8-7)	7	4.21	3.96	0.25	0.00	7	2	G

Beam	Floor	L	Lu	a	c	Sec	Mat	System
M(10-9')	7	1.41	1.31	0.10	0.00	6	4	G&L
M(9-9)	7	5.27	5.27	0.00	0.00	6	4	G&L
M(8-8)	7	2.80	2.80	0.00	0.00	6	4	G&L
M(8-7)	7	4.21	3.91	0.20	0.10	6	4	G&L
B(10-9')	8	1.41	1.31	0.10	0.00	6	4	G&L
B(9-9)	8	2.80	2.70	0.10	0.00	6	4	G&L
B(8-8)	8	2.80	5.17	0.10	0.00	6	4	G&L
B(8-7)	8	4.21	4.01	0.10	0.10	6	4	G&L
B*(10-9')	8	1.41	1.41	0.00	0.00	6	4	G
B*(9-9)	8	2.80	2.70	0.00	0.10	6	4	G
B*(8-8)	8	2.80	5.17	0.10	0.00	6	4	G
B*(8-7)	8	4.21	4.11	0.10	0.00	6	4	G
C(10-9')	8	1.41	1.41	0.00	0.00	6	4	G&L
C(9-9)	8	2.80	3.47	1.80	0.00	6	4	G&L
C(8-8)	8	2.80	2.80	0.00	0.00	6	4	G&L
C(8-7)	8	4.21	2.41	1.80	0.00	6	4	G&L
C*(10-9')	8	1.41	1.41	0.00	0.00	6	4	G
C*(9-9)	8	2.80	2.70	0.00	0.10	6	4	G
C*(8-8)	8	2.80	5.17	0.10	0.00	6	4	G
C*(8-7)	8	4.21	4.11	0.10	0.00	6	4	G
D(10-9')	8	1.41	1.41	0.00	0.00	6	4	G&L
D(9-9)	8	2.80	1.00	0.00	1.80	6	4	G&L
D(8-8)	8	2.80	2.80	0.00	0.00	6	4	G&L
D(8-7)	8	4.21	2.41	1.80	0.00	6	4	G&L
D*(10-9')	8	1.41	1.41	0.00	0.00	6	4	G
D*(9-9)	8	2.80	2.70	0.00	0.10	6	4	G
D*(8-8)	8	2.80	5.17	0.10	0.00	6	4	G
D*(8-7)	8	4.21	4.11	0.10	0.00	6	4	G
E(10-9')	8	1.41	1.41	0.00	0.00	6	4	G&L
E(9-9)	8	2.80	1.00	0.00	1.80	6	4	G&L
E(8-8)	8	2.80	2.80	0.00	0.00	6	4	G&L
E(8-7)	8	4.21	2.41	1.80	0.00	6	4	G&L
E*(10-9')	8	1.41	1.41	0.00	0.00	6	4	G
E*(9-9)	8	2.80	2.70	0.00	0.10	6	4	G
E*(8-8)	8	2.80	5.17	0.10	0.00	6	4	G
E*(8-7)	8	4.21	4.11	0.10	0.00	6	4	G
F(10-9')	8	1.41	1.01	0.00	0.40	6	4	G&L
F(9-9)	8	2.80	2.40	0.00	0.40	6	4	G&L
F(8-8)	8	2.80	2.40	0.00	0.40	6	4	G&L
F(8-7)	8	4.21	4.21	0.00	0.00	6	4	G&L
F1(10-9')	8	1.41	1.16	0.00	0.25	6	4	G&L
F1(9-9)	8	2.80	2.55	0.00	0.25	6	4	G&L
F1(8-8)	8	2.80	5.02	0.00	0.25	6	4	G&L
F1(8-7)	8	4.21	4.21	0.00	0.00	6	4	G&L
F2(10-9')	8	1.41	1.16	0.00	0.25	6	4	G&L
F2(9-9)	8	2.80	2.55	0.00	0.25	6	4	G&L
F2(8-8)	8	2.80	2.55	0.00	0.25	6	4	G&L
F2(8-7)	8	4.21	4.21	0.00	0.00	6	4	G&L
F3(10-9')	8	1.41	1.16	0.00	0.25	6	4	G&L
F3(9-9)	8	2.80	2.55	0.00	0.25	6	4	G&L
F3(8-8)	8	2.80	5.02	0.00	0.25	6	4	G&L
F3(8-7)	8	4.21	4.21	0.00	0.00	6	4	G&L
G(10-9')	8	1.41	1.01	0.00	0.40	6	4	G&L
G(9-9)	8	2.80	2.40	0.00	0.40	6	4	G&L
G(8-8)	8	2.80	2.40	0.00	0.40	6	4	G&L
G(8-7)	8	4.21	2.40	0.00	0.40	6	4	G&L
G*(10-9')	8	1.41	1.41	0.00	0.00	6	4	G
G*(9-9)	8	2.80	2.70	0.00	0.10	6	4	G
G*(8-8)	8	2.80	5.17	0.10	0.00	6	4	G
G*(8-7)	8	4.21	4.11	0.10	0.00	6	4	G





Wall	Story	B	H	t	Material	System
F1(8'-8)	2	2.80	4.90	40.0	2	G&L
F1(8'-8)	2	2.80	4.90	25.0	2	G&L
F1(8'-8)	2	2.80	4.90	25.0	2	G&L
F2(9'-9)	2	2.80	4.90	25.0	2	G&L
F2(8'-8)	2	2.80	4.90	25.0	2	G&L
F3(9'-9)	2	2.80	4.90	25.0	2	G&L
F3(8'-8)	2	2.80	4.90	25.0	2	G&L
G(9'-9)	2	2.80	4.90	40.0	2	G&L
G(8'-8)	2	2.80	4.90	40.0	2	G&L
9*(F1-F2)	3	2.10	3.50	25.0	1	G&L
9*(F2-F3)	3	2.10	3.50	25.0	1	G&L
8(F2-F3)	3	2.10	3.50	25.0	1	G&L
F(9'-9)	3	2.10	3.50	40.0	2	G&L
F(8'-8)	3	2.80	3.50	40.0	2	G&L
F1(9'-9)	3	2.80	3.50	25.0	2	G&L
F1(8'-8)	3	2.80	3.50	25.0	2	G&L
F2(9'-9)	3	2.80	3.50	25.0	2	G&L
F2(8'-8)	3	2.80	3.50	25.0	2	G&L
F3(8'-8)	3	2.80	3.50	25.0	2	G&L
G(9'-9)	3	2.80	3.50	40.0	2	G&L
G(8'-8)	3	2.80	3.50	40.0	2	G&L
9*(F1-F2)	4	2.10	3.50	25.0	1	G&L
9*(F2-F3)	4	2.10	3.50	25.0	1	G&L
8(F2-F3)	4	2.10	3.50	25.0	1	G&L
F(9'-9)	4	2.80	3.50	40.0	2	G&L
F(8'-8)	4	2.80	3.50	40.0	2	G&L
F1(9'-9)	4	2.80	3.50	25.0	2	G&L
F1(8'-8)	4	2.80	3.50	25.0	2	G&L
F2(9'-9)	4	2.80	3.50	25.0	2	G&L
F2(8'-8)	4	2.80	3.50	25.0	2	G&L
F3(9'-9)	4	2.80	3.50	25.0	2	G&L
F3(8'-8)	4	2.80	3.50	25.0	2	G&L
G(9'-9)	4	2.80	3.50	40.0	2	G&L
G(8'-8)	4	2.80	3.50	40.0	2	G&L
9*(F1-F2)	5	2.10	3.50	25.0	1	G&L
9*(F2-F3)	5	2.10	3.50	25.0	1	G&L
8(F2-F3)	5	2.10	3.50	25.0	1	G&L
F(9'-9)	5	2.80	3.50	40.0	2	G&L
F(8'-8)	5	2.80	3.50	40.0	2	G&L
F1(9'-9)	5	2.80	3.50	25.0	2	G&L
F1(8'-8)	5	2.80	3.50	25.0	2	G&L
F2(8'-8)	5	2.80	3.50	25.0	2	G&L
F3(9'-9)	5	2.80	3.50	25.0	2	G&L
F3(8'-8)	5	2.80	3.50	25.0	2	G&L
G(9'-9)	5	2.80	3.50	40.0	2	G&L
G(8'-8)	5	2.80	3.50	40.0	2	G&L
9*(F1-F2)	6	2.10	3.50	25.0	1	G&L
9*(F2-F3)	6	2.10	3.50	25.0	1	G&L
8(F1-F2)	6	2.10	3.50	25.0	1	G&L
F(9'-9)	6	2.80	3.50	40.0	2	G&L
F(8'-8)	6	2.80	3.50	40.0	2	G&L
F1(9'-9)	6	2.80	3.50	25.0	2	G&L
F1(8'-8)	6	2.80	3.50	25.0	2	G&L
F2(9'-9)	6	2.80	3.50	25.0	2	G&L
F2(8'-8)	6	2.80	3.50	25.0	2	G&L
F3(9'-9)	6	2.80	3.50	25.0	2	G&L
F3(8'-8)	6	2.80	3.50	25.0	2	G&L
G(9'-9)	6	2.80	3.50	40.0	2	G&L
G(8'-8)	6	2.80	3.50	40.0	2	G&L
9*(F1-F2)	7	2.10	3.50	25.0	1	G&L
9*(F2-F3)	7	2.10	3.50	25.0	1	G&L
8(F1-F2)	7	2.10	3.50	25.0	1	G&L
F(9'-9)	7	2.80	3.50	40.0	2	G&L

Wall	Story	B	H	t	Material	System
F1(8'-8)	7	2.80	3.50	40.0	2	G&L
F1(8'-8)	7	2.80	3.50	25.0	2	G&L
F2(9'-9)	7	2.80	3.50	25.0	2	G&L
F2(8'-8)	7	2.80	3.50	25.0	2	G&L
F3(9'-9)	7	2.80	3.50	25.0	2	G&L
F3(8'-8)	7	2.80	3.50	25.0	2	G&L
G(9'-9)	7	2.80	3.50	40.0	2	G&L
G(8'-8)	7	2.80	3.50	40.0	2	G&L

**SLAB PROPERTIES AND FLOOR LOAD DATA**

Number of slab sections = 2

Floor Type:

- 1: One-way joist slab
- 2: One-way flat slab
- 3: Two-way joist slab
- 4: Two-way flat slab
- 5: One-way deck on secondary beams

No	Name	Type	tv (cm)	γ (Kg/m3)	γ <sub>u</sub> (Kg/m2)	γ <sub>d</sub> (Kg/m2)	γ <sub>u</sub> (cm)	γ <sub>d</sub> (cm)	γ <sub>u</sub> (cm)	γ <sub>d</sub> (cm)
1	Slab type 2	2	11.00	2400.0	400.00	250.00	0.00	-	-	-
2	Slab type 3	2	2.00	2400.0	0.00	50.00	0.00	-	-	-

**GROUND SUPPORT DATA**

Total number of ground supports = 75

K = Spring constant (ton/cm)

Characteristics for All Degrees of Freedom  
 Value = K Dash = free C = constrained

Support	Floor	Type	Ux	Uy	Uz	TetX	TetY	TetZ
10-B*	S	Hinge	C	C	C	-	-	C
9-B*	S	Hinge	C	C	C	-	-	C
8-B*	S	Hinge	C	C	C	-	-	C
7-B*	S	Hinge	C	C	C	-	-	C
10-C	S	Hinge	C	C	C	-	-	C
9-C	S	Fixed	C	C	C	-	-	C
8-C	S	Fixed	C	C	C	-	-	C
7-C	S	Hinge	C	C	C	-	-	C
11**D	S	Hinge	C	C	C	-	-	C
10-D	S	Fixed	C	C	C	-	-	C
9-D	S	Fixed	C	C	C	-	-	C
8-D	S	Fixed	C	C	C	-	-	C
7-D	S	Hinge	C	C	C	-	-	C
6*-D	S	Hinge	C	C	C	-	-	C
9-E	S	Fixed	C	C	C	-	-	C
8-E	S	Fixed	C	C	C	-	-	C
11**F	S	Hinge	C	C	C	-	-	C
10-F	S	Hinge	C	C	C	-	-	C
9*-F	S	Hinge	C	C	C	-	-	C
9-F	S	Hinge	C	C	C	-	-	C
8*-F	S	Hinge	C	C	C	-	-	C
8-F	S	Hinge	C	C	C	-	-	C
7-F	S	Hinge	C	C	C	-	-	C
6*-F	S	Hinge	C	C	C	-	-	C

Floor	Px	Fy	Pz	Mx	My	Mz
8	0.00	0.00	249.13	0.0	0.0	0.0
7	0.00	0.00	577.36	0.0	0.0	0.0
6	0.00	0.00	577.36	0.0	0.0	0.0
5	0.00	0.00	577.36	0.0	0.0	0.0
4	0.00	0.00	573.43	0.0	0.0	0.0
3	0.00	0.00	808.08	0.0	0.0	0.0
2	0.00	0.00	700.70	0.0	0.0	0.0
1	0.00	0.00	1150.49	0.0	0.0	0.0
5	0.00	0.00	0.00	0.0	0.0	0.0
Total	0.00	0.00	5213.90	0.0	0.0	0.0

**LOAD CASE 2 : DEAD (DL)**

Floor	Px	Fy	Pz	Mx	My	Mz
8	0.00	0.00	56.29	0.0	0.0	0.0
7	0.00	0.00	806.13	0.0	0.0	0.0
6	0.00	0.00	806.13	0.0	0.0	0.0
5	0.00	0.00	806.13	0.0	0.0	0.0
4	0.00	0.00	806.13	0.0	0.0	0.0
3	0.00	0.00	984.10	0.0	0.0	0.0
2	0.00	0.00	724.06	0.0	0.0	0.0
1	0.00	0.00	1430.91	0.0	0.0	0.0
5	0.00	0.00	0.00	0.0	0.0	0.0
Total	0.00	0.00	6429.90	0.0	0.0	0.0

**LOAD CASE 3 : LIVE (LL)**

Floor	Px	Fy	Pz	Mx	My	Mz
8	0.00	0.00	59.05	0.0	0.0	0.0
7	0.00	0.00	303.52	0.0	0.0	0.0
6	0.00	0.00	303.52	0.0	0.0	0.0
5	0.00	0.00	303.52	0.0	0.0	0.0
4	0.00	0.00	303.52	0.0	0.0	0.0
3	0.00	0.00	370.53	0.0	0.0	0.0
2	0.00	0.00	272.61	0.0	0.0	0.0
1	0.00	0.00	538.71	0.0	0.0	0.0
5	0.00	0.00	0.00	0.0	0.0	0.0
Total	0.00	0.00	2464.96	0.0	0.0	0.0

**LOAD CASE 4 : EQUAKE X (EQX) - TYPE : EQUIVALENT STATIC**

Floor	Px	Fy	Pz	Acc. Tors. Mom.	Mx	My	Mz
8	264.34	0.00	0.00	0.0	0.0	0.0	1108.0
7	835.00	0.00	0.00	0.0	0.0	0.0	3499.0
6	683.95	0.00	0.00	0.0	0.0	0.0	2866.0
5	537.09	0.00	0.00	0.0	0.0	0.0	2253.0
4	516.10	0.00	0.00	0.0	0.0	0.0	2354.0
3	226.58	0.00	0.00	0.0	0.0	0.0	1034.0
2	134.27	0.00	0.00	0.0	0.0	0.0	684.1
1							

Support	Floor	Type	Ux	Uy	Uz	TetX	TetY	TetZ
9*-F1	S	Hinge	C	C	C	-	-	C
9*-F1	S	Hinge	C	C	C	-	-	C
8*-F1	S	Hinge	C	C	C	-	-	C
8*-F1	S	Hinge	C	C	C	-	-	C
9*-F2	S	Hinge	C	C	C	-	-	C
9*-F2	S	Hinge	C	C	C	-	-	C
8*-F2	S	Hinge	C	C	C	-	-	C
8*-F2	S	Hinge	C	C	C	-	-	C
9*-F3	S	Hinge	C	C	C	-	-	C
9*-F3	S	Hinge	C	C	C	-	-	C
8*-F3	S	Hinge	C	C	C	-	-	C
8*-F3	S	Hinge	C	C	C	-	-	C
10-G	S	Hinge	C	C	C	-	-	C
9*-G	S	Hinge	C	C	C	-	-	C
9*-G	S	Hinge	C	C	C	-	-	C
8*-G	S	Hinge	C	C	C	-	-	C
8*-G	S	Hinge	C	C	C	-	-	C
7-G	S	Hinge	C	C	C	-	-	C
10-H	S	Hinge	C	C	C	-	-	C
9-H	S	Fixed	C	C	C	C	C	C
9-H	S	Fixed	C	C	C	C	C	C
7-H	S	Hinge	C	C	C	-	-	C
11-I	S	Hinge	C	C	C	-	-	C
10-I	S	Fixed	C	C	C	C	C	C
10-I	S	Fixed	C	C	C	C	C	C
8-I	S	Fixed	C	C	C	C	C	C
7-I	S	Hinge	C	C	C	-	-	C
7-I	S	Hinge	C	C	C	-	-	C
6-I	S	Hinge	C	C	C	-	-	C
10-J	S	Fixed	C	C	C	C	C	C
9-J	S	Fixed	C	C	C	C	C	C
8-J	S	Fixed	C	C	C	C	C	C
10-K	S	Fixed	C	C	C	C	C	C
9-K	S	Fixed	C	C	C	C	C	C
8-K	S	Fixed	C	C	C	C	C	C
10-L	S	Fixed	C	C	C	C	C	C
9-L	S	Fixed	C	C	C	C	C	C
8-L	S	Fixed	C	C	C	C	C	C
10-M	S	Fixed	C	C	C	C	C	C
9-M	S	Fixed	C	C	C	C	C	C
8-M	S	Fixed	C	C	C	C	C	C
10-N	S	Fixed	C	C	C	C	C	C
9-N	S	Fixed	C	C	C	C	C	C
8-N	S	Fixed	C	C	C	C	C	C
10-O	S	Fixed	C	C	C	C	C	C
9-O	S	Fixed	C	C	C	C	C	C
8-O	S	Fixed	C	C	C	C	C	C
11-P	S	Hinge	C	C	C	-	-	C
10-P	S	Hinge	C	C	C	-	-	C
9-P	S	Hinge	C	C	C	-	-	C
8-P	S	Hinge	C	C	C	-	-	C
6*-P	S	Hinge	C	C	C	-	-	C

**SUMMARY OF TOTAL FLOOR LOADS**

**LOAD CASE 1 : SELFW (D0)**

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:44 a.m. 05/08/2010

Floor	Px	Py	Pz	Mx	My	Mz
S	0.00	0.00	0.00	0.0	0.0	0.0
Total	4195.98	0.00	0.00	0.0	0.0	17982.1

LOAD CASE 5 : EQUAKE Y (EQY) - TYPE : EQUIVALENT STATIC

Floor	Force (ton)			Acc., Tors. Mom. (ton-m)		
	Px	Py	Pz	Mx	My	Mz
8	0.00	264.34	0.00	0.0	0.0	217.9
7	0.00	864.20	0.00	0.0	0.0	822.2
6	0.00	835.00	0.00	0.0	0.0	687.2
5	0.00	683.95	0.00	0.0	0.0	563.2
4	0.00	537.09	0.00	0.0	0.0	442.6
3	0.00	516.10	0.00	0.0	0.0	480.9
2	0.00	226.58	0.00	0.0	0.0	279.3
1	0.00	134.27	0.00	0.0	0.0	165.8
S	0.00	0.00	0.00	0.0	0.0	0.0
Total	0.00	4195.98	0.00	0.0	0.0	3659.6

ANALYSIS - MAXIMUM STORY DRIFT RATIO, 8.0000

Story	ColAxis	Drift Ratio
7	10-B	0.0098
	9-B	0.0008
	8-B	0.0008
	7-B	0.0008
	6-B	0.0008
	5-B	0.0008
	4-B	0.0008
	3-B	0.0008
	2-B	0.0008
	1-B	0.0008
	10-M	0.0008
	9-M	0.0008
	8-M	0.0008
	7-M	0.0008
	6-M	0.0008
	5-M	0.0008
	4-M	0.0008
	3-M	0.0008
	2-M	0.0008
	1-M	0.0008

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:44 a.m. 05/08/2010

Story	ColAxis	Drift Ratio
6	10-B	0.0046
	9-B	0.0009
	8-B	0.0009
	7-B	0.0009
	6-B	0.0009
	5-B	0.0009
	4-B	0.0009
	3-B	0.0009
	2-B	0.0009
	1-B	0.0009
	10-M	0.0009
	9-M	0.0009
	8-M	0.0009
	7-M	0.0009
	6-M	0.0009
	5-M	0.0009
	4-M	0.0009
	3-M	0.0009
	2-M	0.0009
	1-M	0.0009

Story	ColAxis	Force (ton)			Acc., Tors. Mom. (ton-m)		
		Px	Py	Pz	Mx	My	Mz
8-M	10-B	0.0046	0.0012	0.0046	0.0036	0.0046	
7-M	9-B	0.0046	0.0036	0.0046	0.0036	0.0046	
	8-B	0.0009	0.0093	0.0009	0.0038	0.0093	
	7-B	0.0009	0.0038	0.0009	0.0039	0.0038	
	6-B	0.0009	0.0058	0.0009	0.0058	0.0058	
	5-B	0.0009	0.0036	0.0009	0.0073	0.0036	
	4-B	0.0009	0.0037	0.0009	0.0073	0.0037	
	3-B	0.0009	0.0069	0.0009	0.0069	0.0069	
	2-B	0.0009	0.0064	0.0009	0.0064	0.0064	
	1-B	0.0009	0.0060	0.0009	0.0060	0.0060	
	10-M	0.0060	0.0037	0.0060	0.0037	0.0060	
	9-M	0.0059	0.0036	0.0059	0.0036	0.0059	
	8-M	0.0059	0.0036	0.0059	0.0036	0.0059	
	7-M	0.0059	0.0037	0.0059	0.0037	0.0059	
	6-M	0.0059	0.0037	0.0059	0.0037	0.0059	
	5-M	0.0058	0.0036	0.0058	0.0036	0.0058	
	4-M	0.0058	0.0036	0.0058	0.0036	0.0058	
	3-M	0.0058	0.0037	0.0058	0.0037	0.0058	
	2-M	0.0058	0.0036	0.0058	0.0036	0.0058	
	1-M	0.0058	0.0036	0.0058	0.0036	0.0058	
	10-M	0.0059	0.0037	0.0059	0.0037	0.0059	
	9-M	0.0059	0.0036	0.0059	0.0036	0.0059	
	8-M	0.0059	0.0036	0.0059	0.0036	0.0059	
	7-M	0.0059	0.0036	0.0059	0.0036	0.0059	
	6-M	0.0059	0.0036	0.0059	0.0036	0.0059	
	5-M	0.0059	0.0036	0.0059	0.0036	0.0059	
	4-M	0.0059	0.0036	0.0059	0.0036	0.0059	
	3-M	0.0059	0.0036	0.0059	0.0036	0.0059	
	2-M	0.0059	0.0036	0.0059	0.0036	0.0059	
	1-M	0.0059	0.0036	0.0059	0.0036	0.0059	

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAUQUIRA

Engineer: RODRIGO CASTRO S  
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9-G	0.0060	0.0044	0.0060
8*-E1	0.0060	0.0044	0.0060
8-G	0.0060	0.0044	0.0060
9-H	0.0058	0.0044	0.0058
9-I	0.0058	0.0044	0.0058
9-J	0.0061	0.0044	0.0061
8*-E2	0.0063	0.0044	0.0063
8*-E3	0.0063	0.0044	0.0063
9-K	0.0065	0.0044	0.0065
8-K	0.0065	0.0044	0.0065
9-L	0.0068	0.0044	0.0068
8-L	0.0068	0.0044	0.0068
10-M	0.0067	0.0049	0.0067
9-M	0.0067	0.0049	0.0067
8-M	0.0067	0.0049	0.0067
7-M	0.0067	0.0049	0.0067
10-B	0.0019	0.0081	0.0019
9-B	0.0019	0.0081	0.0019
8-B	0.0019	0.0081	0.0019
7-B	0.0019	0.0081	0.0019
9-C	0.0086	0.0049	0.0086
8-C	0.0086	0.0049	0.0086
9-D	0.0081	0.0049	0.0081
8-D	0.0081	0.0049	0.0081
9-E	0.0075	0.0049	0.0075
8-E	0.0075	0.0049	0.0075
9*-F	0.0070	0.0049	0.0070
9-F	0.0070	0.0049	0.0070
8*-F	0.0070	0.0049	0.0070
8-F	0.0070	0.0049	0.0070
9*-E1	0.0069	0.0049	0.0069
9-E1	0.0069	0.0049	0.0069
8*-E1	0.0069	0.0049	0.0069
8-E1	0.0069	0.0049	0.0069
9*-E2	0.0067	0.0049	0.0067
9-E2	0.0067	0.0049	0.0067
8*-E2	0.0067	0.0049	0.0067
8-E2	0.0067	0.0049	0.0067
9*-E3	0.0066	0.0049	0.0066
9-E3	0.0066	0.0049	0.0066
8*-E3	0.0066	0.0049	0.0066
8-E3	0.0066	0.0049	0.0066
9*-G	0.0064	0.0049	0.0064
9-G	0.0064	0.0049	0.0064
8*-G	0.0064	0.0049	0.0064
8-G	0.0064	0.0049	0.0064
9-H	0.0061	0.0049	0.0061
8-H	0.0061	0.0049	0.0061
9-I	0.0063	0.0049	0.0063
8-I	0.0063	0.0049	0.0063
9-J	0.0065	0.0049	0.0065
8-J	0.0065	0.0049	0.0065
9-K	0.0067	0.0049	0.0067
8-K	0.0067	0.0049	0.0067
9-L	0.0069	0.0049	0.0069
8-L	0.0069	0.0049	0.0069
10-M	0.0073	0.0043	0.0073
9-M	0.0073	0.0043	0.0073
8-M	0.0073	0.0043	0.0073
7-M	0.0073	0.0043	0.0073
10-B	0.0023	0.0075	0.0023
9-B	0.0023	0.0075	0.0023
8-B	0.0023	0.0075	0.0023
7-B	0.0023	0.0075	0.0023
9-C	0.0091	0.0052	0.0091
8-C	0.0091	0.0052	0.0091
9-D	0.0085	0.0052	0.0085
8-D	0.0085	0.0052	0.0085
9-E	0.0078	0.0052	0.0078
8-E	0.0078	0.0052	0.0078
9*-F	0.0072	0.0052	0.0072
9-F	0.0072	0.0052	0.0072
8*-F	0.0072	0.0052	0.0072
8-F	0.0072	0.0052	0.0072
9*-E1	0.0071	0.0052	0.0071
9-E1	0.0071	0.0052	0.0071
8*-E1	0.0071	0.0052	0.0071
8-E1	0.0071	0.0052	0.0071

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAUQUIRA

Engineer: RODRIGO CASTRO S  
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9-E1	0.0071	0.0052	0.0071
8*-E1	0.0071	0.0052	0.0071
8-E1	0.0071	0.0052	0.0071
9-E2	0.0069	0.0052	0.0069
8*-E2	0.0069	0.0052	0.0069
8-E2	0.0069	0.0052	0.0069
9-E3	0.0067	0.0052	0.0067
8*-E3	0.0067	0.0052	0.0067
8-E3	0.0067	0.0052	0.0067
9-G	0.0065	0.0052	0.0065
8-G	0.0065	0.0052	0.0065
9-H	0.0065	0.0052	0.0065
8-H	0.0065	0.0052	0.0065
9-I	0.0061	0.0052	0.0061
8*-I	0.0061	0.0052	0.0061
8-I	0.0061	0.0052	0.0061
9-J	0.0062	0.0052	0.0062
8*-J	0.0062	0.0052	0.0062
8-J	0.0062	0.0052	0.0062
9-K	0.0062	0.0052	0.0062
8-K	0.0062	0.0052	0.0062
9-L	0.0063	0.0052	0.0063
8*-L	0.0063	0.0052	0.0063
8-L	0.0063	0.0052	0.0063
10-M	0.0086	0.0046	0.0086
9-M	0.0086	0.0046	0.0086
8-M	0.0086	0.0046	0.0086
7-M	0.0086	0.0046	0.0086
10-B	0.0011	0.0069	0.0011
9-B	0.0011	0.0069	0.0011
8-B	0.0011	0.0069	0.0011
7-B	0.0011	0.0069	0.0011
9-C	0.0032	0.0060	0.0032
8-C	0.0032	0.0060	0.0032
9-D	0.0085	0.0057	0.0085
8*-D	0.0085	0.0057	0.0085
8-D	0.0085	0.0057	0.0085
9-E	0.0077	0.0057	0.0077
8*-E	0.0077	0.0057	0.0077
8-E	0.0077	0.0057	0.0077
9*-F	0.0068	0.0056	0.0068
9-F	0.0068	0.0056	0.0068
8*-F	0.0068	0.0056	0.0068
8-F	0.0068	0.0056	0.0068
9*-E1	0.0067	0.0056	0.0067
9-E1	0.0067	0.0056	0.0067
8*-E1	0.0067	0.0056	0.0067
8-E1	0.0067	0.0056	0.0067
9*-E2	0.0065	0.0056	0.0065
9-E2	0.0065	0.0056	0.0065
8*-E2	0.0065	0.0056	0.0065
8-E2	0.0065	0.0056	0.0065
9*-E3	0.0063	0.0056	0.0063
9-E3	0.0063	0.0056	0.0063
8*-E3	0.0063	0.0056	0.0063
8-E3	0.0063	0.0056	0.0063
9*-G	0.0061	0.0056	0.0061
9-G	0.0061	0.0056	0.0061
8*-G	0.0061	0.0056	0.0061
8-G	0.0061	0.0056	0.0061
9-H	0.0064	0.0056	0.0064
8*-H	0.0064	0.0056	0.0064
8-H	0.0064	0.0056	0.0064
9-I	0.0051	0.0056	0.0051
8*-I	0.0051	0.0056	0.0051
8-I	0.0051	0.0056	0.0051
10-J	0.0049	0.0056	0.0049
9-J	0.0049	0.0056	0.0049
8*-J	0.0049	0.0056	0.0049
8-J	0.0049	0.0056	0.0049
10-K	0.0047	0.0056	0.0047
9-K	0.0047	0.0056	0.0047
8*-K	0.0047	0.0056	0.0047
8-K	0.0047	0.0056	0.0047
10-L	0.0045	0.0056	0.0045
9-L	0.0045	0.0056	0.0045
8*-L	0.0045	0.0056	0.0045
8-L	0.0045	0.0056	0.0045
9*-M	0.0044	0.0056	0.0044
9-M	0.0044	0.0056	0.0044
8*-M	0.0044	0.0056	0.0044
8-M	0.0044	0.0056	0.0044
9*-E1	0.0042	0.0056	0.0042
9-E1	0.0042	0.0056	0.0042
8*-E1	0.0042	0.0056	0.0042
8-E1	0.0042	0.0056	0.0042

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9-N	0.0042	0.0056	0.0056	0.0056
8-N	0.0042	0.0057	0.0057	0.0057
9-C	0.0058	0.0043	0.0058	0.0058
9-C	0.0058	0.0043	0.0058	0.0058
9-C	0.0058	0.0043	0.0058	0.0058
8-D	0.0050	0.0045	0.0050	0.0050
9-B	0.0047	0.0045	0.0047	0.0047
8-E	0.0047	0.0045	0.0047	0.0047
9-F	0.0045	0.0045	0.0045	0.0045
9-F	0.0045	0.0045	0.0045	0.0045
8-F	0.0045	0.0045	0.0045	0.0045
9-F1	0.0044	0.0045	0.0044	0.0044
9-F1	0.0044	0.0045	0.0044	0.0044
8-F1	0.0044	0.0045	0.0044	0.0044
9-F2	0.0042	0.0045	0.0042	0.0042
9-F2	0.0042	0.0045	0.0042	0.0042
8-F2	0.0042	0.0045	0.0042	0.0042
9-F3	0.0041	0.0045	0.0041	0.0041
9-F3	0.0041	0.0045	0.0041	0.0041
8-F3	0.0041	0.0045	0.0041	0.0041
9-G	0.0040	0.0045	0.0040	0.0040
9-G	0.0040	0.0045	0.0040	0.0040
8-G	0.0040	0.0045	0.0040	0.0040
9-H	0.0036	0.0045	0.0036	0.0036
8-H	0.0036	0.0045	0.0036	0.0036
10-I	0.0033	0.0045	0.0033	0.0033
8-I	0.0033	0.0045	0.0033	0.0033
8-I	0.0033	0.0045	0.0033	0.0033
10-L	0.0032	0.0045	0.0032	0.0032
9-J	0.0032	0.0045	0.0032	0.0032
8-J	0.0032	0.0045	0.0032	0.0032
10-K	0.0031	0.0045	0.0031	0.0031
9-K	0.0031	0.0045	0.0031	0.0031
8-K	0.0031	0.0045	0.0031	0.0031
10-L	0.0030	0.0045	0.0030	0.0030
9-L	0.0030	0.0045	0.0030	0.0030
8-L	0.0030	0.0045	0.0030	0.0030
10-M	0.0029	0.0045	0.0029	0.0029
9-M	0.0029	0.0045	0.0029	0.0029
8-M	0.0029	0.0045	0.0029	0.0029
10-N	0.0028	0.0045	0.0028	0.0028
9-N	0.0028	0.0045	0.0028	0.0028
8-N	0.0028	0.0045	0.0028	0.0028
10-B*	0.0011	0.0005	0.0011	0.0011
9-B*	0.0015	0.0005	0.0015	0.0015
8-B*	0.0014	0.0005	0.0014	0.0014
7-B*	0.0011	0.0005	0.0011	0.0011
10-C	0.0011	0.0005	0.0011	0.0011
9-C	0.0011	0.0005	0.0011	0.0011
8-C	0.0011	0.0005	0.0011	0.0011
7-C	0.0011	0.0005	0.0011	0.0011
10-D	0.0006	0.0002	0.0006	0.0006
9-D	0.0006	0.0002	0.0006	0.0006
8-D	0.0006	0.0002	0.0006	0.0006
10-E	0.0010	0.0005	0.0010	0.0010
9-E	0.0010	0.0005	0.0010	0.0010
8-E	0.0010	0.0005	0.0010	0.0010
10-F	0.0009	0.0005	0.0009	0.0009
9-F	0.0009	0.0005	0.0009	0.0009
8-F	0.0009	0.0005	0.0009	0.0009
7-F	0.0009	0.0005	0.0009	0.0009
6-F	0.0009	0.0005	0.0009	0.0009

S

Note: Drift amplification factor, D: 1 in X; 1 in Y  
MAXIMA DRIFT: 18mm

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10-F1	0.0005	0.0003	0.0005	0.0005
9-F1	0.0009	0.0005	0.0009	0.0009
8-F1	0.0009	0.0005	0.0009	0.0009
7-F1	0.0006	0.0003	0.0006	0.0006
10-F2	0.0004	0.0003	0.0004	0.0004
9-F2	0.0009	0.0005	0.0009	0.0009
8-F2	0.0009	0.0005	0.0009	0.0009
7-F2	0.0001	0.0002	0.0001	0.0001
10-F3	0.0009	0.0005	0.0009	0.0009
9-F3	0.0009	0.0005	0.0009	0.0009
8-F3	0.0009	0.0005	0.0009	0.0009
7-F3	0.0009	0.0005	0.0009	0.0009
10-G	0.0009	0.0005	0.0009	0.0009
9-G	0.0009	0.0005	0.0009	0.0009
8-G	0.0009	0.0005	0.0009	0.0009
7-G	0.0002	0.0002	0.0002	0.0002
10-H	0.0008	0.0005	0.0008	0.0008
9-H	0.0008	0.0005	0.0008	0.0008
8-H	0.0008	0.0005	0.0008	0.0008
7-H	0.0008	0.0005	0.0008	0.0008
10-H1	0.0005	0.0003	0.0005	0.0005
9-H1	0.0007	0.0005	0.0007	0.0007
8-H1	0.0007	0.0005	0.0007	0.0007
10-I	0.0007	0.0005	0.0007	0.0007
9-I	0.0007	0.0005	0.0007	0.0007
8-I	0.0007	0.0005	0.0007	0.0007
7-I	0.0007	0.0005	0.0007	0.0007
6-I	0.0007	0.0005	0.0007	0.0007
10-J	0.0007	0.0005	0.0007	0.0007
9-J	0.0007	0.0005	0.0007	0.0007
8-J	0.0007	0.0005	0.0007	0.0007
7-J	0.0007	0.0005	0.0007	0.0007
10-K	0.0007	0.0005	0.0007	0.0007
9-K	0.0007	0.0005	0.0007	0.0007
8-K	0.0007	0.0005	0.0007	0.0007
7-K	0.0007	0.0005	0.0007	0.0007
10-L	0.0007	0.0005	0.0007	0.0007
9-L	0.0007	0.0005	0.0007	0.0007
8-L	0.0007	0.0005	0.0007	0.0007
7-L	0.0007	0.0005	0.0007	0.0007
10-M	0.0006	0.0005	0.0006	0.0006
9-M	0.0006	0.0005	0.0006	0.0006
8-M	0.0006	0.0005	0.0006	0.0006
7-M	0.0006	0.0005	0.0006	0.0006
10-N	0.0006	0.0005	0.0006	0.0006
9-N	0.0006	0.0005	0.0006	0.0006
8-N	0.0006	0.0005	0.0006	0.0006
10-O	0.0006	0.0005	0.0006	0.0006
9-O	0.0006	0.0005	0.0006	0.0006
8-O	0.0006	0.0005	0.0006	0.0006
11-P	0.0006	0.0005	0.0006	0.0006
10-P	0.0004	0.0003	0.0004	0.0004
9-P	0.0004	0.0003	0.0004	0.0004
8-P	0.0002	0.0002	0.0002	0.0002
7-P	0.0006	0.0005	0.0006	0.0006
6-P	0.0006	0.0005	0.0006	0.0006

MAXIMA DRIFT: 18mm









Table with columns: Axis, Floor, LdCmb, Lu, Sec, btxh, Fx, Fy, Fz, Mx, My, Mz. Contains structural load data for various axes (10-P, 9-P, 8-P, 6+-P).

LOAD COMBINATIONS

No Load combination

Table with columns: No, Load combination, D0+DL+LL+71EGY, D0+DL+LL+71EGY, D0+DL+LL+71EGY, D0+DL+LL+71EGY, D0+DL+LL+71EGY. Lists load combination details.

Design Results - Columns

Table with columns: Column, Story, L, Lu, Sec, btxh, Transverse Reinforcement, Longitudinal Reinforcement. Shows reinforcement details for columns 8-0 to 10-N.

Table with columns: Column, Story, L, Lu, Sec, btxh, TIES, XTIES, Sec, LdCmb, Pu, Mu2, Mu3, RHO, As. Contains detailed design results for columns 10-N, 10-M, 8-L, 9-L.

Table with columns: Column, Story, L, Lu, Sec, btxh, TIES, XTIES, Sec, LdCmb, Pu, Mu2, Mu3, RHO, As. Continuation of design results for columns 9-L, 8-N, 9-N, 10-N.

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Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
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Table with columns: Column, Story, L, Lu, Sec, bxx, TIES, XTIES, Sec, LdCmb, Pu, Mu2, Mu3, RHO, As. Contains structural analysis data for multiple levels and elements.

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Engineer: RODRIGO CASTRO S  
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Table with columns: Column, Story, L, Lu, Sec, bxx, TIES, XTIES, Sec, LdCmb, Pu, Mu2, Mu3, RHO, As. Contains structural analysis data for multiple levels and elements.

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Project: HOSPITAL ZIPAQUIRA

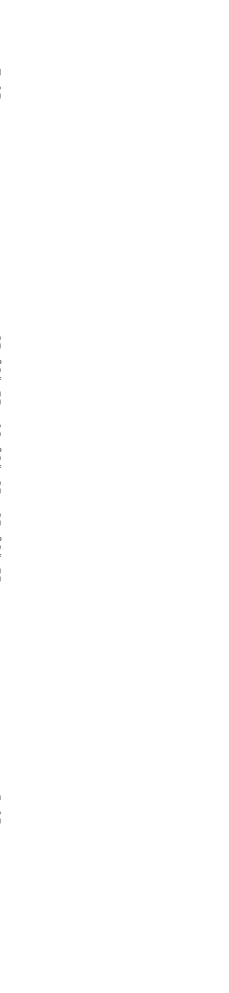
Engineer: RODRIGO CASTRO S
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Table with columns: Column, Story, L, Lu, Sec, bxh, TIES, XTIES, Sec, LdCmb, Pu, Mu2, Mu3, RHO, As. Contains structural data for columns 9-H through 9-D.

Table with columns: Column, Story, L, Lu, Sec, bxh, TIES, XTIES, Sec, LdCmb, Pu, Mu2, Mu3, RHO, As. Contains structural data for columns 8-C through 9-C.

Design Results - Beams

Summary table for beam design results including floor level (10(D-E)), length, section dimensions (a=0.00m, b=50.0cm), material (S50X70), and various load and moment values (X, Mu, As, Vu, Tu, Spacing).



BEAM: 10(E-F) FLOOR: 1

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.25 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.70	2.43	3.15	3.88	4.60	5.33	6.05	6.78	7.50
Mu(-), ton-m:	-8.89	-8.89	-8.89	-8.89	-8.89	-8.89	-8.89	-8.89	-18.25	-30.97	-44.47
Mu(+), ton-m:	16.30	17.86	18.66	18.67	17.30	15.05	8.89	8.89	8.89	8.89	14.82
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	13.29	19.42	10.71
Vu, Kg/cm2:	1.90	1.88	1.64	1.46	1.70	3.67	4.78	5.04	5.32	5.66	5.70
Tu, ton-m:	1.01	1.01	1.01	1.01	1.01	0.84	0.76	0.76	0.76	0.76	0.76
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 10(I-J) FLOOR: 1

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.03 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.23	0.93	1.63	2.33	3.04	3.74	4.44	5.14	5.84	6.55	7.25
Mu(-), ton-m:	-41.65	-24.80	-9.58	-8.79	-8.79	-8.79	-8.79	-8.79	-8.79	-25.21	-43.96
Mu(+), ton-m:	13.88	8.79	8.79	8.79	21.43	35.35	28.26	13.22	8.79	8.79	14.65
As(+), cm2:	18.12	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	8.18	8.16	7.92	7.69	7.46	7.23	8.09	8.32	8.55	8.78	8.60
Tu, ton-m:	1.63	1.63	1.63	1.63	1.63	1.63	1.32	1.32	1.32	1.32	1.32
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 10(J-K) FLOOR: 1

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-45.71	-27.44	-10.82	-9.14	-9.14	-9.14	-9.14	-9.14	-10.70	-27.28	-45.54
Mu(+), ton-m:	15.24	9.14	9.14	10.33	24.79	38.52	24.68	10.22	9.14	9.14	15.18
As(+), cm2:	20.00	11.72	10.71	10.71	10.71	10.71	10.71	10.71	10.71	11.65	19.92
Vu, Kg/cm2:	8.69	8.67	8.44	8.22	7.99	7.76	7.99	8.21	8.44	8.67	8.69
Tu, ton-m:	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 10(K-L) FLOOR: 1

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-45.46	-27.24	-10.69	-9.09	-9.09	-9.09	-9.09	-9.09	-10.53	-27.00	-45.15
Mu(+), ton-m:	15.15	9.09	9.09	10.10	24.61	38.42	24.68	10.24	9.09	9.09	15.05
As(+), cm2:	19.88	11.63	10.71	10.71	10.71	10.71	10.71	10.71	10.71	11.53	19.74
Vu, Kg/cm2:	8.67	8.65	8.43	8.20	7.97	7.74	7.95	8.17	8.40	8.63	8.65
Tu, ton-m:	1.27	1.27	1.27	1.27	1.27	1.27	1.26	1.26	1.26	1.26	1.26
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 10(L-M) FLOOR: 1

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-45.18	-27.08	-10.63	-9.28	-9.28	-9.28	-9.28	-9.28	-11.28	-28.07	-46.40
Mu(+), ton-m:	15.06	9.28	9.28	10.15	24.46	38.11	24.30	9.77	9.28	9.28	15.47
As(+), cm2:	19.75	11.56	10.71	10.71	10.71	10.71	10.71	10.71	10.71	12.00	20.32
Vu, Kg/cm2:	8.67	8.65	8.42	8.19	7.96	7.73	8.04	8.27	8.50	8.73	8.75
Tu, ton-m:	1.27	1.27	1.27	1.27	1.27	1.27	1.24	1.24	1.24	1.24	1.24
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 10(M-N) FLOOR: 1

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-47.17	-28.29	-11.11	-9.43	-9.43	-9.43	-9.43	-9.43	-11.83	-28.07	-46.40
Mu(+), ton-m:	15.72	9.43	9.43	10.51	25.69	40.17	27.16	13.57	9.43	9.43	13.04
As(+), cm2:	20.68	12.10	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	16.97
Vu, Kg/cm2:	10.71	10.71	10.71	10.71	10.95	17.44	11.60	10.71	10.71	10.71	10.71
Tu, ton-m:	8.88	8.86	8.64	8.41	8.18	7.95	7.64	7.87	8.10	8.33	8.35
Stirrup, cm:	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN





Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
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BEAM: 9 (F2-F3) FLOOR: 1

Length:		L = 2.10 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70		
Lu = 2.10 m		c = 0.00 m	h = 70.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68
Mu(-), ton-m:	-1.63	-2.06	-2.69	-3.36	-4.07	-4.81	-5.59	-6.41	-7.27
Mu(+), ton-m:	1.63	2.07	2.76	3.42	4.03	4.61	5.16	5.66	6.13
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F3-G) FLOOR: 1

Length:		L = 2.20 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70		
Lu = 2.20 m		c = 0.00 m	h = 70.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76
Mu(-), ton-m:	-15.62	-12.84	-10.11	-7.43	-4.81	-2.55	-11.27	-15.04	-18.87
Mu(+), ton-m:	13.62	10.23	6.78	4.55	4.55	4.55	4.55	4.55	4.55
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	6.20	6.20	6.20	6.21	6.27	6.32	6.38	6.44	6.44
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (G-H) FLOOR: 1

Length:		L = 7.20 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70		
Lu = 6.95 m		c = 0.25 m	h = 70.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.70	1.39	2.09	2.78	3.48	4.17	4.87	5.56
Mu(-), ton-m:	-29.34	-17.56	-6.92	-6.92	-6.92	-6.92	-6.92	-6.92	-6.92
Mu(+), ton-m:	9.78	6.92	6.92	8.92	16.35	24.22	18.67	9.71	6.92
As(+), cm2:	12.56	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	5.66	5.65	5.46	5.27	5.08	4.89	5.58	5.76	5.93
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:45 a.m. 05/08/2010

BEAM: 9 (H-I) FLOOR: 1

Length:		L = 7.10 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70		
Lu = 6.60 m		c = 0.25 m	h = 70.0 cm	Mat:	RConcrete2				
X, m:	0.25	0.91	1.57	2.23	2.89	3.55	4.21	4.87	5.53
Mu(-), ton-m:	-32.47	-20.41	-8.98	-6.49	-6.49	-6.49	-6.49	-6.49	-6.49
Mu(+), ton-m:	10.82	6.49	6.49	7.75	15.54	22.85	16.00	8.64	6.49
As(+), cm2:	13.96	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	5.90	5.89	5.72	5.56	5.39	5.22	5.24	5.40	5.57
Tu, ton-m:	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 9 (I-J) FLOOR: 1

Length:		L = 7.50 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70		
Lu = 7.00 m		c = 0.25 m	h = 70.0 cm	Mat:	RConcrete2				
X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85
Mu(-), ton-m:	-21.13	-13.84	-7.10	-4.23	-4.23	-4.23	-4.23	-4.23	-4.23
Mu(+), ton-m:	7.04	4.23	4.23	4.39	7.36	10.11	9.13	6.17	4.23
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	3.24	3.23	3.05	2.87	2.69	2.51	2.73	2.91	3.09
Tu, ton-m:	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 9 (J-K) FLOOR: 1

Length:		L = 7.60 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70		
Lu = 7.00 m		c = 0.25 m	h = 70.0 cm	Mat:	RConcrete2				
X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85
Mu(-), ton-m:	-19.16	-12.23	-5.85	-3.83	-3.83	-3.83	-3.83	-3.83	-3.83
Mu(+), ton-m:	6.39	3.83	3.83	5.31	7.89	9.91	7.93	5.39	3.83
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	3.01	2.99	2.82	2.64	2.46	2.28	2.45	2.62	2.80
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN







Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:46 a.m. 05/08/2010

BEAM: 8 (E-F) FLOOR: 1

Length: L = 7.50 m a = 0.45 m Section: b = 50.0 cm Sec: S50X70  
Lu = 7.05 m c = 0.00 m Mat: RConcrete2

X, m:	0.45	1.16	1.86	2.57	3.27	3.98	4.68	5.39	6.09	6.80	7.50
Mu(-), ton-m:	-35.62	-21.70	-8.36	-7.12	-7.12	-7.12	-7.12	-7.12	-7.12	-16.81	-28.24
Mu(+), ton-m:	11.87	7.12	7.12	10.05	19.83	23.62	15.67	8.39	7.12	7.12	9.41
As(+), cm2:	15.38	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	12.08
vu, Kg/cm2:	6.28	6.26	6.10	5.93	5.76	4.76	4.95	5.14	5.33	5.52	5.54
Tu, ton-m:	0.15	0.15	0.15	0.15	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (F-F1) FLOOR: 1

Length: L = 1.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 1.80 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-24.81	-19.94	-15.11	-10.31	-5.56	-5.69	-9.33	-13.00	-16.71	-20.46	-24.25
Mu(+), ton-m:	11.94	8.49	5.00	4.96	4.96	4.96	4.96	4.96	4.96	17.66	22.19
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	9.84	9.84	9.84	9.84	9.82	9.77	9.72	9.70	9.70	9.70	9.70
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (F1-F2) FLOOR: 1

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.10 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-5.06	-4.14	-3.26	-2.42	-1.62	-1.01	-1.01	-1.01	-1.17	-1.79	-2.44
Mu(+), ton-m:	2.41	2.09	1.73	1.34	1.01	1.01	1.01	1.01	1.23	1.85	2.43
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	1.47	1.47	1.47	1.47	1.43	1.39	1.35	1.31	1.31	1.31	1.31
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:46 a.m. 05/08/2010

BEAM: 8 (E2-F3) FLOOR: 1

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.10 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-2.97	-2.22	-1.51	-0.90	-0.90	-0.90	-1.45	-2.15	-2.90	-3.68	-4.50
Mu(+), ton-m:	2.03	1.54	1.02	0.90	0.90	0.90	0.98	1.50	2.00	2.45	2.87
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	1.12	1.12	1.12	1.12	1.12	1.12	1.16	1.20	1.20	1.20	1.20
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (E3-G) FLOOR: 1

Length: L = 2.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.20 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98	2.20
Mu(-), ton-m:	-23.55	-19.65	-15.79	-12.00	-8.25	-5.03	-5.65	-10.45	-15.30	-20.21	-25.17
Mu(+), ton-m:	22.02	17.55	13.01	8.43	5.03	5.03	5.03	5.03	6.20	9.67	13.10
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	7.89	7.89	7.89	7.90	7.95	8.01	8.07	8.12	8.13	8.13	8.13
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (G-H) FLOOR: 1

Length: L = 7.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 6.95 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.70	1.39	2.09	2.78	3.48	4.17	4.87	5.56	6.26	6.95
Mu(-), ton-m:	-28.30	-16.76	-6.99	-6.99	-6.99	-6.99	-6.99	-6.99	-9.01	-21.66	-34.94
Mu(+), ton-m:	9.43	6.99	6.99	8.94	16.17	24.04	18.48	9.50	6.99	6.99	11.65
As(+), cm2:	12.10	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	5.59	5.57	5.58	5.20	5.01	4.82	5.88	5.76	5.93	6.11	6.12
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Company: RODRIGO CASTRO S  
Project: HOSPITAL ZIAPAQUIRA

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Company: RODRIGO CASTRO S  
Project: HOSPITAL ZIAPAQUIRA

BEAM: 8 (H-I) FLOOR: 1

Length:	L = 7.10 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:	RConcrete2
Lu = 7.00 m	c = 0.25 m			h = 70.0 cm				
X, m:	0.25	0.95	2.23	2.89	3.55	4.21	4.87	5.53
Mu(-), ton-m:	-31.89	-20.05	-6.38	-6.38	-6.38	-6.38	-6.38	-6.38
Mu(+), ton-m:	13.70	6.38	7.73	15.29	22.41	15.36	7.85	6.38
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	5.81	5.80	5.64	5.47	5.30	5.14	5.29	5.45
Tu, ton-m:	0.47	0.47	0.47	0.47	0.47	0.45	0.45	0.45
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (I-U) FLOOR: 1

Length:	L = 7.50 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:	RConcrete2
Lu = 7.00 m	c = 0.25 m			h = 70.0 cm				
X, m:	0.25	0.95	2.35	3.05	3.75	4.45	5.15	5.85
Mu(-), ton-m:	-33.33	-20.76	-9.24	-7.21	-7.21	-7.21	-7.21	-7.21
Mu(+), ton-m:	11.11	7.21	7.73	15.61	23.16	18.75	9.50	7.21
As(+), cm2:	14.34	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	5.94	5.92	5.71	5.49	5.28	5.06	5.89	6.06
Tu, ton-m:	0.30	0.30	0.30	0.30	0.30	0.39	0.39	0.39
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (J-K) FLOOR: 1

Length:	L = 7.50 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:	RConcrete2
Lu = 7.00 m	c = 0.25 m			h = 70.0 cm				
X, m:	0.25	0.95	2.35	3.05	3.75	4.45	5.15	5.85
Mu(-), ton-m:	-36.15	-22.37	-9.50	-7.27	-7.27	-7.27	-7.27	-7.27
Mu(+), ton-m:	12.05	7.27	8.89	18.31	27.17	18.28	8.82	7.27
As(+), cm2:	15.62	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	6.44	6.42	6.24	6.07	5.89	5.71	5.90	6.26
Tu, ton-m:	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (K-L) FLOOR: 1

Length:	L = 7.50 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:	RConcrete2
Lu = 7.00 m	c = 0.25 m			h = 70.0 cm				
X, m:	0.25	0.95	2.35	3.05	3.75	4.45	5.15	5.85
Mu(-), ton-m:	-35.85	-22.19	-9.44	-7.18	-7.18	-7.18	-7.18	-7.18
Mu(+), ton-m:	11.95	7.18	7.18	8.75	18.08	26.86	18.07	7.18
As(+), cm2:	15.48	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	6.37	6.36	6.18	6.00	5.82	5.63	6.00	6.18
Tu, ton-m:	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (L-M) FLOOR: 1

Length:	L = 7.50 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:	RConcrete2
Lu = 7.00 m	c = 0.25 m			h = 70.0 cm				
X, m:	0.25	0.95	2.35	3.05	3.75	4.45	5.15	5.85
Mu(-), ton-m:	-34.74	-21.31	-8.87	-7.44	-7.44	-7.44	-7.44	-7.44
Mu(+), ton-m:	11.58	7.44	7.44	9.31	18.37	26.86	17.85	7.44
As(+), cm2:	14.98	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	6.34	6.32	6.14	5.97	5.79	5.61	6.13	6.31
Tu, ton-m:	0.14	0.14	0.14	0.14	0.14	0.12	0.12	0.12
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (M-N) FLOOR: 1

Length:	L = 7.50 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:	RConcrete2
Lu = 7.00 m	c = 0.25 m			h = 70.0 cm				
X, m:	0.25	0.95	2.35	3.05	3.75	4.45	5.15	5.85
Mu(-), ton-m:	-34.71	-21.45	-9.09	-7.02	-7.02	-7.02	-7.02	-7.02
Mu(+), ton-m:	11.57	7.02	7.02	8.62	17.65	26.13	17.44	7.02
As(+), cm2:	14.97	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	6.20	6.18	6.01	5.83	5.65	5.47	5.86	6.04
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.41	0.41	0.41
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN



Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

09:32:46 a.m. 05/08/2010

09:32:46 a.m. 05/08/2010

BEAM: 7 (K-L) FLOOR: 1

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-14.03	-8.68	-3.58	0.00	0.00	0.00	0.00	0.00	-2.88	-7.60	-12.68
Mu(+), ton-m:	0.00	0.00	0.26	2.04	7.38	12.72	7.65	2.59	0.37	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	2.39	2.39	2.39	2.39	2.39	2.39	2.27	2.27	2.27	2.27	2.27
Vu, Kg/cm2:	0.55	0.55	0.55	0.55	0.55	0.55	0.50	0.50	0.50	0.50	0.50
Tu, ton-m:	0.51	0.51	0.51	0.51	0.51	0.51	0.41	0.41	0.41	0.41	0.41
Tu, Kg/cm2:	0.63	0.63	0.63	0.63	0.63	0.63	0.50	0.50	0.50	0.50	0.50
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

Spacing, cm: 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00

DESIGN

BEAM: 7 (L-M) FLOOR: 1

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-12.58	-7.24	-2.44	0.00	0.00	0.00	0.00	0.00	-1.78	-6.21	-11.29
Mu(+), ton-m:	0.00	0.00	0.54	3.46	8.78	14.10	9.04	3.97	0.65	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	2.38	2.38	2.38	2.38	2.38	2.38	2.27	2.27	2.27	2.27	2.27
Vu, Kg/cm2:	0.51	0.51	0.51	0.51	0.51	0.51	0.41	0.41	0.41	0.41	0.41
Tu, ton-m:	0.51	0.51	0.51	0.51	0.51	0.51	0.41	0.41	0.41	0.41	0.41
Tu, Kg/cm2:	0.63	0.63	0.63	0.63	0.63	0.63	0.50	0.50	0.50	0.50	0.50
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

Spacing, cm: 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00

DESIGN

BEAM: 7 (M-N) FLOOR: 1

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-11.69	-8.13	-4.56	-1.31	0.00	0.00	-1.52	-8.34	-15.57	-22.80	-30.02
Mu(+), ton-m:	0.00	0.00	0.00	0.31	2.57	6.12	0.41	0.00	0.00	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	1.59	1.59	1.59	1.59	1.59	1.59	1.42	1.42	1.42	1.42	1.42
Tu, ton-m:	0.42	0.42	0.42	0.42	0.42	0.42	0.34	0.34	0.34	0.34	0.34
Tu, Kg/cm2:	0.52	0.52	0.52	0.52	0.52	0.52	0.42	0.42	0.42	0.42	0.42
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

Spacing, cm: 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00

DESIGN

BEAM: 7 (N-O) FLOOR: 1

Length: L = 6.76 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
Lu = 6.26 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.98	1.50	2.13	2.75	3.38	4.01	4.63	5.26	5.88	6.51
Mu(-), ton-m:	-30.25	-22.38	-14.50	-6.78	-0.38	0.00	0.00	0.00	0.00	0.00	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.15	1.64	9.14	13.79	15.71	17.40	19.08	20.77
As(-), cm2:	12.97	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	3.93	3.93	3.93	3.93	3.93	3.93	3.84	3.84	3.84	3.84	3.84
Vu, Kg/cm2:	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Tu, ton-m:	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Tu, Kg/cm2:	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

Spacing, cm: 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00

DESIGN

BEAM: 7 (O-P) FLOOR: 1

Length: L = 8.69 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
Lu = 8.44 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.09	1.94	2.78	3.63	4.47	5.31	6.16	7.00	7.85	8.69
Mu(-), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.20	-3.20	-18.17	-33.15
Mu(+), ton-m:	22.41	25.73	29.04	31.35	29.31	24.92	20.15	11.99	0.00	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.97	12.43	13.46	12.55	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Tu, ton-m:	1.06	1.06	1.06	1.06	1.06	1.27	1.27	1.14	1.14	1.14	1.14
Tu, Kg/cm2:	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.14	1.14	1.14	1.14
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

Spacing, cm: 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00

DESIGN

BEAM: 10 (I-J) FLOOR: 2

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
Lu = 7.03 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.23	0.93	1.63	2.33	3.04	3.74	4.44	5.14	5.84	6.55	7.25
Mu(-), ton-m:	-25.02	-15.74	-7.31	-5.49	-5.49	-5.49	-5.49	-5.49	-6.70	-16.54	-27.47
Mu(+), ton-m:	8.34	5.49	8.82	12.32	15.10	17.12	13.25	8.79	5.49	5.49	9.16
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	4.00	3.97	3.73	3.50	3.27	3.04	3.83	4.06	4.37	4.70	4.73
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Tu, Kg/cm2:	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
Stirrup, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

Spacing, cm: 15.00 15.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 15.00 15.00

DESIGN

BEAM: 10(J-K) FLOOR: 2

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-25.54	-16.00	-7.17	-5.11	-5.11	-5.11	-7.22	-5.11	-7.22	-15.84	-25.18
Mu(+), ton-m:	8.51	5.11	5.11	6.20	10.65	14.96	11.49	7.30	5.11	5.11	8.39
As(+), cm2:	10.88	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	4.21	4.19	3.96	3.74	3.51	3.28	3.44	3.67	3.90	4.12	4.14
Vu, Kg/cm2:	0.06	0.06	0.06	0.06	0.06	0.08	0.08	0.08	0.08	0.08	0.08
Tu, ton-m:	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 10(K-L) FLOOR: 2

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-6.35	-16.70	-7.78	-5.27	-5.27	-5.27	-5.27	-5.27	-7.35	-16.16	-25.67
Mu(+), ton-m:	8.78	5.27	5.27	7.09	11.26	14.74	11.34	7.30	5.27	5.27	8.56
As(+), cm2:	11.24	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	4.24	4.22	3.99	3.76	3.53	3.30	3.49	3.72	3.95	4.18	4.19
Vu, Kg/cm2:	0.11	0.11	0.11	0.11	0.11	0.11	0.09	0.09	0.09	0.09	0.09
Tu, ton-m:	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 10(L-M) FLOOR: 2

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-25.51	-16.13	-7.47	-5.14	-5.14	-5.14	-7.43	-5.14	-7.43	-16.22	-25.72
Mu(+), ton-m:	8.50	5.14	5.14	7.08	11.20	14.58	10.65	6.38	5.14	5.14	8.57
As(+), cm2:	10.87	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	4.15	4.13	3.90	3.67	3.44	3.21	3.49	3.72	3.95	4.18	4.19
Vu, Kg/cm2:	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Tu, ton-m:	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 10(M-N) FLOOR: 2

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-29.07	-18.24	-8.12	-5.81	-5.81	-5.81	-8.12	-5.81	-8.12	-17.91	-27.33
Mu(+), ton-m:	9.69	5.81	5.81	7.21	11.82	17.89	15.95	13.29	9.30	5.81	7.58
As(+), cm2:	12.44	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	4.70	4.68	4.35	4.09	3.86	3.63	3.27	3.50	3.73	3.96	3.98
Vu, Kg/cm2:	0.09	0.09	0.09	0.09	0.09	0.09	0.17	0.17	0.17	0.17	0.17
Tu, ton-m:	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 9'(E'-E) FLOOR: 2

Length: L = 2.55 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.55 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.25	0.51	0.76	1.02	1.28	1.53	1.78	2.04	2.29	2.55
Mu(-), ton-m:	0.00	-0.75	-1.58	-2.44	-3.34	-4.27	-5.24	-6.25	-7.30	-8.38	-9.50
Mu(+), ton-m:	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(-), cm2:	1.88	1.97	2.06	2.16	2.25	2.34	2.43	2.52	2.56	2.56	2.56
Vu, Kg/cm2:	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: 9'(F-FI) FLOOR: 2

Length: L = 1.80 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 1.80 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-31.28	-25.46	-19.65	-13.85	-8.07	-6.26	-6.26	-6.26	-11.80	-17.91	-24.04
Mu(+), ton-m:	30.63	24.61	18.58	12.53	6.47	6.26	6.26	6.26	9.19	14.92	20.63
As(+), cm2:	14.01	11.22	8.52	5.92	5.36	5.36	5.36	5.36	5.36	7.73	10.55
As(-), cm2:	13.70	10.82	8.03	5.36	5.36	5.36	5.36	5.36	5.36	6.39	8.97
Vu, Kg/cm2:	23.83	23.83	23.83	23.83	23.83	23.83	23.83	23.83	23.83	23.83	23.83
Tu, ton-m:	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
Stirrup, cm:	12.50	12.50	12.50	12.50	12.48	12.46	12.43	12.42	12.42	12.42	12.42

DESIGN

BEAM: 9\*(F1-F2) FLOOR: 2

Length:	L = 2.10 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70					
	Lu = 2.10 m	c = 0.00 m		h = 70.0 cm	Mat:	Rconcrete2					
X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-6.89	-5.52	-4.17	-2.83	-1.52	-1.38	-1.38	-2.50	-3.95	-5.42	-6.90
Mu(+), ton-m:	7.13	5.81	4.47	3.11	1.74	1.38	1.38	2.31	3.55	4.78	5.98
As(-), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	4.69	4.69	4.69	4.69	4.73	4.77	4.81	4.85	4.85	4.85	4.85
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

9\*-F1 14 #3@ 15 9\*-F2

BEAM: 9\*(F2-F3) FLOOR: 2

Length:	L = 2.10 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70					
	Lu = 2.10 m	c = 0.00 m		h = 70.0 cm	Mat:	Rconcrete2					
X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-6.48	-5.08	-3.71	-2.35	-1.52	-1.52	-1.67	-3.12	-4.59	-6.08	-7.59
Mu(+), ton-m:	6.65	5.31	3.95	2.57	1.52	1.52	1.60	2.88	4.14	5.39	6.61
As(-), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	4.76	4.76	4.76	4.76	4.79	4.84	4.88	4.92	4.92	4.92	4.92
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

9\*-F2 14 #3@ 15 9\*-F3

BEAM: 9\*(F3-G) FLOOR: 2

Length:	L = 2.20 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70					
	Lu = 2.20 m	c = 0.00 m		h = 70.0 cm	Mat:	Rconcrete2					
X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98	2.20
Mu(-), ton-m:	-31.55	-25.04	-18.56	-12.09	-6.31	-6.31	-6.31	-10.56	-15.30	-20.06	-24.84
Mu(+), ton-m:	22.07	17.47	12.85	8.21	6.31	6.31	7.18	13.57	19.93	26.28	32.60
As(-), cm2:	14.15	11.02	8.03	5.36	5.36	5.36	5.36	5.36	5.36	8.71	10.93
As(+), cm2:	9.64	7.53	5.48	5.36	5.36	5.36	5.36	5.79	8.65	11.60	14.66
Vu, Kg/cm2:	22.18	22.18	22.18	22.17	22.13	22.09	22.04	22.00	22.00	22.00	22.00
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	13.91	13.91	13.91	13.91	13.99	14.04	14.08	14.08	14.08	14.08	14.08

DESIGN

9\*-F3 18 #3@ 12.5 9\*-G

BEAM: 9\*(E-F) FLOOR: 2

Length:	L = 2.55 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70					
	Lu = 2.55 m	c = 0.00 m		h = 70.0 cm	Mat:	Rconcrete2					
X, m:	0.00	0.25	0.51	0.75	1.02	1.28	1.53	1.78	2.04	2.29	2.55
Mu(-), ton-m:	-0.00	-1.14	-2.31	-3.55	-4.84	-6.21	-7.63	-9.12	-10.68	-12.30	-13.99
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	1.31	1.39	1.47	1.55	1.63	1.71	1.79	1.87	1.91	1.91	1.91
Tu, ton-m:	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9\*-E' 9 #3@ 30 9\*-F

BEAM: 9\*(F-F1) FLOOR: 2

Length:	L = 1.80 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70					
	Lu = 1.80 m	c = 0.00 m		h = 70.0 cm	Mat:	Rconcrete2					
X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-40.83	-34.02	-27.25	-20.51	-13.81	-8.17	-8.17	-8.77	-15.62	-22.51	-29.43
Mu(+), ton-m:	38.13	31.55	24.92	18.26	11.56	8.17	8.17	8.17	12.60	19.11	25.59
As(-), cm2:	17.75	14.65	11.64	10.71	10.71	10.71	10.71	10.71	10.71	10.71	12.60
As(+), cm2:	16.52	13.55	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.90
Vu, Kg/cm2:	13.04	13.04	13.04	13.04	13.06	13.11	13.16	13.18	13.18	13.18	13.18
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

9\*-F 12 #3@ 15 9\*-F1

BEAM: 9\*(F1-F2) FLOOR: 2

Length:	L = 2.10 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70					
	Lu = 2.10 m	c = 0.00 m		h = 70.0 cm	Mat:	Rconcrete2					
X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-13.14	-11.95	-10.79	-9.66	-8.58	-7.53	-6.52	-5.55	-4.61	-3.71	-2.85
Mu(+), ton-m:	10.59	9.96	9.29	8.58	7.84	7.06	6.24	5.39	4.50	3.57	2.63
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	2.81	2.81	2.81	2.81	2.77	2.73	2.69	2.65	2.65	2.65	2.65
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

9\*-F1 14 #3@ 15 9\*-F2

Company: INTERDICO LTDA  
 Project: HOSPITAL ZIAPAQUIRA

Company: INTERDICO LTDA  
 Project: HOSPITAL CASTRO S

Company: INTERDICO LTDA  
 Project: HOSPITAL CASTRO S

BEAM: 9 (F2-F3) FLOOR: 2

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.10 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-2.92	-3.16	-4.28	-5.44	-6.63	-7.87	-9.14	-10.44	-11.79	-13.17	-14.59
Mu(+), ton-m:	2.92	3.00	3.95	4.85	5.73	6.56	7.36	8.12	8.84	9.53	10.18
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	2.91	2.91	2.91	2.91	2.99	3.03	3.07	3.07	3.07	3.07	3.07
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F3-G) FLOOR: 2

Length: L = 2.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.20 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98	2.20
Mu(-), ton-m:	-31.41	-25.07	-18.79	-12.56	-7.38	-7.38	-11.63	-17.87	-24.16	-30.51	-36.91
Mu(+), ton-m:	24.68	18.76	12.79	7.38	7.38	7.38	7.38	11.84	17.80	23.71	29.57
As(+), cm2:	13.49	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	13.08	15.96
vu, Kg/cm2:	9.81	9.81	9.81	9.80	9.75	9.75	9.81	9.87	9.87	9.87	9.87
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (G-H) FLOOR: 2

Length: L = 7.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.95 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.70	1.39	2.09	2.78	3.48	4.17	4.87	5.56	6.26	6.95
Mu(-), ton-m:	-45.02	-29.13	-13.81	-9.68	-9.68	-9.68	-9.68	-9.68	-15.38	-31.61	-48.39
Mu(+), ton-m:	15.01	9.68	9.68	12.36	19.58	29.40	24.94	16.80	9.68	16.13	16.13
As(+), cm2:	19.68	12.47	10.71	10.71	10.71	10.71	10.71	10.71	10.71	13.58	21.25
vu, Kg/cm2:	7.27	7.26	7.07	6.88	6.88	6.50	6.98	7.16	7.33	7.51	7.52
Tu, ton-m:	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

Company: INTERDICO LTDA  
 Project: HOSPITAL ZIAPAQUIRA

Company: INTERDICO LTDA  
 Project: HOSPITAL CASTRO S

Company: INTERDICO LTDA  
 Project: HOSPITAL CASTRO S

BEAM: 9 (H-I) FLOOR: 2

Length: L = 7.10 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.60 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.91	1.57	2.23	2.89	3.55	4.21	4.87	5.53	6.19	6.85
Mu(-), ton-m:	-49.10	-33.01	-17.41	-9.82	-9.82	-9.82	-9.82	-9.82	-16.37	-31.63	-47.39
Mu(+), ton-m:	21.57	9.82	9.82	13.54	20.23	26.46	20.54	14.18	9.82	13.58	15.80
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	7.59	7.58	7.42	7.25	7.08	6.92	6.96	7.13	7.30	7.46	7.47
Tu, ton-m:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.91	0.91	0.91	0.91
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 9 (I-J) FLOOR: 2

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-42.56	-29.14	-16.27	-8.51	-8.51	-8.51	-8.51	-8.51	-14.50	-28.10	-42.34
Mu(+), ton-m:	14.19	8.51	8.51	11.04	15.34	20.03	18.61	13.80	8.51	8.51	14.11
As(+), cm2:	18.54	12.47	10.71	10.71	10.71	10.71	10.71	10.71	10.71	12.01	18.44
vu, Kg/cm2:	5.92	5.90	5.73	5.55	5.37	5.19	5.64	5.82	6.00	6.23	6.25
Tu, ton-m:	0.24	0.24	0.24	0.24	0.24	0.24	0.27	0.27	0.27	0.27	0.27
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 9 (J-K) FLOOR: 2

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-42.96	-29.06	-15.71	-8.59	-8.59	-8.59	-8.59	-8.59	-14.84	-27.90	-41.51
Mu(+), ton-m:	14.32	8.59	8.59	12.16	16.84	20.99	17.14	12.76	8.59	8.59	13.84
As(+), cm2:	18.73	12.44	10.71	10.71	10.71	10.71	10.71	10.71	10.71	11.92	18.06
vu, Kg/cm2:	6.10	6.08	5.89	5.71	5.53	5.35	5.43	5.61	5.79	5.97	5.98
Tu, ton-m:	0.49	0.49	0.49	0.46	0.46	0.46	0.46	0.45	0.45	0.45	0.45
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN







BEAM: 8 (F3-G) FLOOR: 2

Length: L = 2.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.20 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98	2.20
Mu(-), ton-m:	-48.99	-40.10	-31.27	-22.49	-13.77	-9.80	-9.80	-17.87	-26.03	-34.24	-42.50
Mu(+), ton-m:	37.72	29.94	22.10	14.22	9.80	9.80	12.08	20.59	29.05	37.45	45.81
As(+), cm2:	21.53	17.41	13.42	10.71	10.71	10.71	10.71	11.40	14.75	18.51	22.58
As(-), cm2:	16.33	12.83	10.71	10.71	10.71	10.71	10.71	13.85	17.83	22.15	26.85
Vu, Kg/cm2:	14.09	14.09	14.09	14.09	14.03	13.97	13.86	13.85	13.85	13.85	13.85
Tu, ton-m:	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (G-H) FLOOR: 2

Length: L = 7.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.93 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.70	1.39	2.09	2.78	3.48	4.17	4.87	5.56	6.26	6.95
Mu(-), ton-m:	-43.05	-27.34	-12.19	-10.24	-10.24	-10.24	-10.24	-16.90	-23.78	-30.78	-37.88
Mu(+), ton-m:	14.35	10.24	10.24	12.90	20.13	30.37	25.40	16.52	10.24	10.24	17.07
As(+), cm2:	18.77	11.68	10.71	10.71	10.71	10.71	10.71	10.71	14.55	22.58	30.78
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	13.02	10.82	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.33	7.32	7.13	6.94	6.75	6.56	7.32	7.50	7.68	7.85	8.02
Tu, ton-m:	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.95	0.95	0.95	0.95
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (H-I) FLOOR: 2

Length: L = 7.10 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.60 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.91	1.57	2.23	2.89	3.55	4.21	4.87	5.53	6.19	6.85
Mu(-), ton-m:	-49.55	-33.31	-17.56	-9.91	-9.91	-9.91	-9.91	-17.40	-24.90	-32.40	-39.90
Mu(+), ton-m:	16.52	9.91	9.91	13.74	20.51	26.95	20.50	13.76	9.91	9.91	16.44
As(+), cm2:	21.79	14.33	10.71	10.71	10.71	10.71	10.71	10.71	14.25	21.69	29.13
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	11.51	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.69	7.68	7.51	7.35	7.18	7.01	7.17	7.33	7.50	7.67	7.84
Tu, ton-m:	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (I-J) FLOOR: 2

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-52.39	-34.79	-17.86	-10.88	-10.88	-10.88	-10.88	-17.98	-25.31	-32.64	-39.97
Mu(+), ton-m:	17.46	10.88	10.88	13.55	21.59	29.91	25.96	16.52	10.88	10.88	18.14
As(+), cm2:	23.13	15.00	10.71	10.71	10.71	10.71	10.71	10.71	15.24	24.09	32.94
As(-), cm2:	10.71	10.71	10.71	10.71	12.82	11.07	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	8.03	8.01	7.79	7.58	7.36	7.15	8.01	8.19	8.37	8.54	8.72
Tu, ton-m:	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Stirrup, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (J-K) FLOOR: 2

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-84.11	-35.74	-17.92	-10.82	-10.82	-10.82	-10.82	-17.52	-24.85	-32.18	-39.51
Mu(+), ton-m:	18.04	10.82	10.82	14.62	23.68	32.18	23.81	14.89	10.82	10.82	18.14
As(+), cm2:	23.95	15.43	10.71	10.71	10.71	10.71	10.71	10.71	15.19	23.63	32.07
As(-), cm2:	10.71	10.71	10.71	10.71	13.83	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	8.31	8.30	8.12	7.94	7.76	7.58	7.72	7.90	8.07	8.25	8.43
Tu, ton-m:	0.50	0.50	0.50	0.50	0.50	0.50	0.49	0.49	0.49	0.49	0.49
Stirrup, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (K-L) FLOOR: 2

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-53.49	-35.24	-17.53	-10.70	-10.70	-10.70	-10.70	-17.52	-24.85	-32.18	-39.51
Mu(+), ton-m:	17.83	10.70	10.70	14.70	23.72	32.23	23.76	14.75	10.70	10.70	18.14
As(+), cm2:	23.65	15.20	10.71	10.71	10.71	10.71	10.71	10.71	15.19	23.63	32.07
As(-), cm2:	10.71	10.71	10.71	10.71	13.85	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	8.25	8.24	8.06	7.88	7.71	7.53	7.70	7.88	8.06	8.23	8.41
Tu, ton-m:	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Stirrup, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:46 a.m. 05/08/2010

BEAM: 8 (L-M) FLOOR: 2

Length:		L = 7.50 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70				
Lu = 7.00 m		c = 0.25 m	h = 70.0 cm	Mat:	Rconcrete2						
X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-50.65	-32.95	-15.81	-11.55	-11.55	-11.55	-11.55	-11.55	-20.36	-38.68	-57.76
Mu(+), ton-m:	16.88	11.55	11.55	16.31	24.36	32.24	23.28	13.75	11.55	11.55	19.25
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	8.18	8.18	7.99	7.81	7.63	7.45	8.09	8.27	8.45	8.63	8.64
Tu, ton-m:	0.51	0.51	0.51	0.51	0.51	0.53	0.53	0.53	0.53	0.53	0.53
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (M-N) FLOOR: 2

Length:		L = 7.50 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70				
Lu = 7.00 m		c = 0.25 m	h = 70.0 cm	Mat:	Rconcrete2						
X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-57.14	-37.84	-19.10	-11.43	-11.43	-11.43	-11.43	-11.43	-17.50	-35.24	-53.53
Mu(+), ton-m:	19.05	11.43	11.43	15.14	24.71	33.75	26.44	18.56	11.43	11.43	17.84
As(+), cm2:	25.40	16.38	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	8.59	8.57	8.40	8.22	8.04	7.86	7.70	7.88	8.06	8.24	8.25
Tu, ton-m:	0.54	0.54	0.54	0.54	0.54	0.54	0.53	0.53	0.53	0.53	0.53
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 10 (I-J) FLOOR: 3

Length:		L = 7.50 m	a = 0.23 m	Section:	b = 50.0 cm	Sec:	S50X70				
Lu = 7.03 m		c = 0.25 m	h = 70.0 cm	Mat:	Rconcrete2						
X, m:	0.23	0.93	1.63	2.33	3.03	3.74	4.44	5.14	5.84	6.55	7.25
Mu(-), ton-m:	-16.03	-8.14	-4.97	-4.97	-4.97	-4.97	-4.97	-4.97	-5.07	-14.23	-24.84
Mu(+), ton-m:	5.34	4.97	8.79	12.64	15.75	18.11	13.82	8.04	4.97	4.97	8.28
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	3.53	3.51	3.28	3.05	2.81	2.58	3.73	3.96	4.23	4.56	4.59
Tu, ton-m:	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:46 a.m. 05/08/2010

BEAM: 10 (J-K) FLOOR: 3

Length:		L = 7.50 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70				
Lu = 7.00 m		c = 0.25 m	h = 70.0 cm	Mat:	Rconcrete2						
X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-23.81	-14.66	-6.32	-4.76	-4.76	-4.76	-4.76	-4.76	-5.72	-13.59	-22.32
Mu(+), ton-m:	7.94	4.76	4.76	4.76	9.77	14.71	10.71	6.03	4.76	4.76	7.44
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	4.13	4.11	3.89	3.66	3.43	3.20	3.29	3.52	3.75	3.98	3.99
Tu, ton-m:	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 10 (K-L) FLOOR: 3

Length:		L = 7.50 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70				
Lu = 7.00 m		c = 0.25 m	h = 70.0 cm	Mat:	Rconcrete2						
X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-23.19	-14.12	-5.95	-4.64	-4.64	-4.64	-4.64	-4.64	-5.43	-13.36	-22.27
Mu(+), ton-m:	7.73	4.64	4.64	6.11	10.71	10.96	10.95	6.25	4.64	4.64	7.42
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	4.04	4.02	3.79	3.56	3.33	3.11	3.28	3.51	3.74	3.97	3.99
Tu, ton-m:	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 10 (L-M) FLOOR: 3

Length:		L = 7.50 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70				
Lu = 7.00 m		c = 0.25 m	h = 70.0 cm	Mat:	Rconcrete2						
X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-22.60	-13.83	-5.90	-4.94	-4.94	-4.94	-4.94	-4.94	-7.08	-15.52	-24.68
Mu(+), ton-m:	7.53	4.94	4.94	5.68	10.17	14.08	9.88	5.01	4.94	4.94	8.23
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	4.01	3.99	3.76	3.53	3.30	3.07	3.43	3.66	3.89	4.12	4.14
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN











BEAM: 8\*(F2-F3) FLOOR: 3

Length: L = 2.10 m a = 0.00 m Section: b = 40.0 cm Sec: S40X70  
 Lu = 2.10 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	ton-m:	cm:	kg/cm2:	vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47
-2.80	-2.80	-3.70	-4.88	-6.10	-7.34	-8.62	-9.92
2.80	2.80	3.70	4.88	6.10	7.34	8.62	9.92
8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57
3.37	3.37	3.37	3.37	3.37	3.41	3.54	3.54
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
#3	#3	#3	#3	#3	#3	#3	#3
15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8\*(F3-G) FLOOR: 3

Length: L = 2.20 m a = 0.00 m Section: b = 40.0 cm Sec: S40X70  
 Lu = 2.20 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	ton-m:	cm:	kg/cm2:	vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54
-31.09	-24.02	-17.00	-10.02	-6.22	-6.22	-6.37	-11.62
19.99	15.61	11.18	6.71	6.22	10.64	17.44	24.19
13.48	10.29	8.57	8.57	8.57	8.57	8.57	8.57
8.57	8.57	8.57	8.57	8.57	15.00	14.94	14.93
15.19	15.19	15.19	15.12	15.06	15.06	15.06	15.06
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
#3	#3	#3	#3	#3	#3	#3	#3
15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8(C-D) FLOOR: 3

Length: L = 7.50 m a = 0.45 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.60 m c = 0.45 m h = 70.0 cm Mat: RConcrete2

X, m:	ton-m:	cm:	kg/cm2:	vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.45	1.11	1.77	2.43	3.09	3.75	4.41	5.07
-58.32	-40.31	-22.79	-11.66	-11.66	-11.66	-18.06	-34.46
19.44	11.66	11.66	14.00	21.33	28.18	21.26	14.88
25.97	17.51	10.71	10.71	10.71	10.71	10.71	10.71
10.71	10.71	10.71	10.71	10.71	12.05	10.71	10.71
8.57	8.56	8.40	8.24	8.09	7.93	7.69	7.85
1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93
#3	#3	#3	#3	#3	#3	#3	#3
15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: 8\*(F2-F3) FLOOR: 3

Length: L = 2.10 m a = 0.00 m Section: b = 40.0 cm Sec: S40X70  
 Lu = 2.10 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	ton-m:	cm:	kg/cm2:	vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47
-2.80	-2.80	-3.70	-4.88	-6.10	-7.34	-8.62	-9.92
2.80	2.80	3.70	4.88	6.10	7.34	8.62	9.92
8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57
3.37	3.37	3.37	3.37	3.41	3.54	3.54	3.54
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
#3	#3	#3	#3	#3	#3	#3	#3
15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8(D-E) FLOOR: 3

Length: L = 7.50 m a = 0.45 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.60 m c = 0.45 m h = 70.0 cm Mat: RConcrete2

X, m:	ton-m:	cm:	kg/cm2:	vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.45	1.11	1.77	2.43	3.09	3.75	4.41	5.07
-52.53	-35.27	-18.50	-10.57	-10.57	-10.57	-18.75	-35.54
17.51	10.57	10.57	15.05	22.15	29.00	15.16	10.57
23.20	15.22	10.71	10.71	10.71	10.71	10.71	10.71
10.71	10.71	10.71	10.71	12.41	10.71	10.71	10.71
8.11	8.11	7.95	7.79	7.63	7.48	7.64	7.80
0.88	0.88	0.88	0.88	0.88	0.88	0.86	0.86
#3	#3	#3	#3	#3	#3	#3	#3
15.00	15.00	15.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 8(E-F) FLOOR: 3

Length: L = 7.05 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.05 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	ton-m:	cm:	kg/cm2:	vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.45	1.16	1.86	2.57	3.27	3.98	4.68	5.39
-33.29	-34.73	-16.75	-10.66	-10.66	-10.66	-15.11	-31.27
17.76	10.66	10.66	19.52	28.57	30.68	20.03	12.84
23.56	14.98	10.71	10.71	10.71	10.71	10.71	10.71
10.71	10.71	10.71	12.22	13.16	10.71	10.71	10.71
8.13	8.11	7.94	7.77	7.60	7.01	7.20	7.39
0.94	0.94	0.94	0.94	0.94	0.79	0.79	0.79
#3	#3	#3	#3	#3	#3	#3	#3
15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 8(F-F1) FLOOR: 3

Length: L = 1.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 1.80 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	ton-m:	cm:	kg/cm2:	vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26
-36.33	-29.48	-22.68	-15.91	-10.14	-10.14	-16.52	-25.02
33.65	25.38	17.07	10.14	10.14	10.14	10.77	17.35
15.69	12.63	10.71	10.71	10.71	10.71	10.71	10.71
14.49	10.81	10.71	10.71	10.71	10.71	10.71	10.71
17.35	17.35	17.35	17.35	17.42	17.42	17.50	17.50
0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
#3	#3	#3	#3	#3	#3	#3	#3
10.37	10.37	10.37	10.37	10.35	10.30	10.25	10.23

DESIGN

BEAM: 8(E-F) FLOOR: 3

Length: L = 7.05 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.05 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	ton-m:	cm:	kg/cm2:	vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.45	1.16	1.86	2.57	3.27	3.98	4.68	5.39
-33.29	-34.73	-16.75	-10.66	-10.66	-10.66	-15.11	-31.27
17.76	10.66	10.66	19.52	28.57	30.68	20.03	12.84
23.56	14.98	10.71	10.71	10.71	10.71	10.71	10.71
10.71	10.71	10.71	12.22	13.16	10.71	10.71	10.71
8.13	8.11	7.94	7.77	7.60	7.01	7.20	7.39
0.94	0.94	0.94	0.94	0.94	0.79	0.79	0.79
#3	#3	#3	#3	#3	#3	#3	#3
15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN







BEAM: 9 (F-F1) FLOOR: 4

Length: L = 1.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 1.80 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-31.54	-26.11	-20.72	-15.36	-10.04	-6.31	-4.44	-3.14	-2.26	-1.62	-1.10
Mu(+), ton-m:	18.95	14.48	9.97	6.31	4.44	3.14	2.26	1.62	1.10	0.72	0.48
As(+), cm2:	13.54	11.13	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	10.62	10.62	10.62	10.62	10.62	10.55	10.48	10.48	10.48	10.48	10.48
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F1-F2) FLOOR: 4

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.10 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-14.34	-12.89	-11.47	-10.09	-8.75	-7.45	-6.18	-4.95	-3.75	-2.87	-2.10
Mu(+), ton-m:	10.53	9.77	8.98	8.15	7.28	6.38	5.44	4.46	3.44	2.87	2.87
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	2.87	2.87	2.87	2.87	2.83	2.79	2.75	2.71	2.71	2.71	2.71
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F2-F3) FLOOR: 4

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.10 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-3.62	-3.62	-3.74	-4.20	-5.23	-6.22	-7.17	-8.08	-8.96	-9.80	-10.61
Mu(+), ton-m:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	3.50	3.50	3.50	3.50	3.54	3.58	3.62	3.66	3.66	3.66	3.66
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (E3-G) FLOOR: 4

Length: L = 2.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.20 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98	2.20
Mu(-), ton-m:	-32.69	-26.59	-20.54	-14.54	-8.60	-6.54	-6.54	-6.54	-6.54	-6.54	-6.54
Mu(+), ton-m:	21.48	16.54	11.55	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54
As(+), cm2:	14.06	11.34	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	9.73	9.73	9.73	9.73	9.73	9.61	9.56	9.50	9.49	9.49	9.49
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (G-H) FLOOR: 4

Length: L = 7.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.95 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.70	1.39	2.09	2.78	3.48	4.17	4.87	5.56	6.26	6.95
Mu(-), ton-m:	-48.09	-31.46	-15.40	-9.85	-9.85	-9.85	-9.85	-9.85	-9.85	-9.85	-9.85
Mu(+), ton-m:	16.03	9.85	9.85	12.50	19.58	30.03	26.31	18.92	10.97	9.85	16.42
As(+), cm2:	21.11	13.51	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	7.47	7.45	7.26	7.07	6.88	6.70	6.97	7.15	7.32	7.50	7.51
Tu, ton-m:	0.82	0.82	0.82	0.82	0.82	0.82	1.02	1.02	1.02	1.02	1.02
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 9 (H-I) FLOOR: 4

Length: L = 7.10 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.60 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.91	1.57	2.23	2.89	3.55	4.21	4.87	5.53	6.19	6.85
Mu(-), ton-m:	-49.99	-33.75	-18.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00
Mu(+), ton-m:	16.66	10.00	10.00	14.31	20.51	26.27	20.54	14.34	10.00	10.00	16.66
As(+), cm2:	22.00	14.53	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	7.62	7.62	7.45	7.28	7.12	6.95	7.11	7.28	7.45	7.61	7.62
Tu, ton-m:	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN



BEAM: 8\*(F2-F3) FLOOR: 4

Length: L = 2.10 m a = 0.00 m Section: b = 40.0 cm Sec: S40X70  
 Lu = 2.10 m c = 0.00 m Mat: RConcrete2

X, m:	ton-m:	cm2:	kg/cm2:	Tu, ton-m:	cm2:	kg/cm2:	Stirrup:	Spacing, cm:
0.00	0.21	-2.77	4.49	0.42	0.63	0.84	1.47	1.68
-2.77	2.77	2.77	2.92	-3.27	-4.49	-5.74	-7.01	-8.32
8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57
3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8\*(F3-G) FLOOR: 4

Length: L = 2.20 m a = 0.00 m Section: b = 40.0 cm Sec: S40X70  
 Lu = 2.20 m c = 0.00 m Mat: RConcrete2

X, m:	ton-m:	cm2:	kg/cm2:	Tu, ton-m:	cm2:	kg/cm2:	Stirrup:	Spacing, cm:
0.00	0.22	-2.77	4.49	0.42	0.63	0.84	1.47	1.68
-2.77	2.77	2.77	2.92	-3.27	-4.49	-5.74	-7.01	-8.32
8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57
3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8(B-C) FLOOR: 4

Length: L = 3.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 3.85 m c = 0.25 m Mat: RConcrete2

X, m:	ton-m:	cm2:	kg/cm2:	Tu, ton-m:	cm2:	kg/cm2:	Stirrup:	Spacing, cm:
0.00	0.36	0.71	1.07	1.42	1.78	2.13	2.49	2.84
-0.01	-6.53	-13.19	-20.00	-26.96	-34.06	-41.30	-48.69	-56.22
10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
5.67	5.79	5.92	6.05	6.18	6.31	6.44	6.57	6.70
0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: 8(C-D) FLOOR: 4

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m Mat: RConcrete2

X, m:	ton-m:	cm2:	kg/cm2:	Tu, ton-m:	cm2:	kg/cm2:	Stirrup:	Spacing, cm:
0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85
-56.29	-38.04	-20.34	-11.26	-11.26	-11.26	-11.26	-11.26	-11.26
18.76	11.26	11.26	14.83	22.63	29.87	36.75	43.63	50.51
10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
8.19	8.17	8.00	7.82	7.64	7.48	7.32	7.16	7.00
0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 8(D-E) FLOOR: 4

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m Mat: RConcrete2

X, m:	ton-m:	cm2:	kg/cm2:	Tu, ton-m:	cm2:	kg/cm2:	Stirrup:	Spacing, cm:
0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85
-4.25	-36.75	-19.20	-10.97	-10.97	-10.97	-10.97	-10.97	-10.97
18.28	10.97	10.97	15.39	23.03	30.12	37.21	44.30	51.39
10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
8.08	8.06	7.88	7.70	7.53	7.35	7.18	7.00	6.82
0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 8(E-F) FLOOR: 4

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.25 m c = 0.00 m Mat: RConcrete2

X, m:	ton-m:	cm2:	kg/cm2:	Tu, ton-m:	cm2:	kg/cm2:	Stirrup:	Spacing, cm:
0.25	0.98	1.70	2.43	3.15	3.88	4.60	5.33	6.05
-54.14	-35.51	-17.48	-10.83	-10.83	-10.83	-10.83	-10.83	-10.83
18.05	10.83	10.83	19.85	28.51	33.19	37.83	42.47	47.11
10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
7.99	7.96	7.78	7.60	7.41	7.20	7.00	6.80	6.60
1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN







BEAM: 9 (F2-F3) FLOOR: 5

Length: L = 2.10 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.10 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-5.53	-4.35	-3.19	-2.05	-1.35	-1.35	-1.57	-2.85	-4.34	-5.44	-6.77
Mu(+), ton-m:	5.66	4.50	3.32	2.13	1.35	1.35	1.57	2.33	3.38	4.41	5.42
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(-), cm2:	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20
Vu, Kg/cm2:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F3-G) FLOOR: 5

Length: L = 2.20 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.20 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98	2.20
Mu(-), ton-m:	-27.29	-21.71	-16.15	-10.61	-5.46	-5.46	-6.05	-8.77	-11.51	-14.27	-17.03
Mu(+), ton-m:	12.41	9.83	7.24	5.46	5.46	5.88	11.34	16.78	22.19	27.59	33.00
As(+), cm2:	12.08	9.47	6.94	5.36	5.36	5.36	5.36	5.36	5.36	5.36	6.10
As(-), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	20.42	20.42	20.42	20.42	20.42	20.42	20.24	20.24	20.24	20.24	20.24
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (B-C) FLOOR: 5

Length: L = 3.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 3.80 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.36	0.72	1.08	1.44	1.80	2.16	2.52	2.88	3.24	3.60
Mu(-), ton-m:	0.00	-6.45	-13.06	-19.81	-26.71	-33.76	-40.96	-48.31	-55.81	-63.46	-71.25
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	5.53	5.66	5.79	5.92	6.05	6.18	6.31	6.44	6.57	6.60	6.60
Vu, Kg/cm2:	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: 9 (C-D) FLOOR: 5

Length: L = 7.50 m a = 0.20 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.05 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.20	0.91	1.61	2.32	3.02	3.73	4.43	5.14	5.84	6.55	7.25
Mu(-), ton-m:	-58.82	-40.25	-22.23	-11.76	-11.76	-11.76	-11.76	-11.76	-12.34	-27.54	-43.31
Mu(+), ton-m:	19.61	11.76	11.76	11.76	20.28	29.10	23.13	16.48	11.76	11.76	14.44
As(+), cm2:	26.21	17.48	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	8.42	8.41	8.23	8.05	7.86	7.68	7.51	7.33	7.11	7.29	7.48
Vu, Kg/cm2:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Tu, ton-m:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 9 (D-E) FLOOR: 5

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-50.87	-33.71	-17.09	-10.17	-10.17	-10.17	-10.17	-10.17	-15.75	-31.94	-48.69
Mu(+), ton-m:	16.96	10.17	10.17	13.56	21.79	29.48	22.15	14.34	10.17	10.17	16.23
As(+), cm2:	22.42	14.51	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	13.72
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.73	7.72	7.54	7.36	7.18	7.04	6.87	6.70	6.52	6.35	6.18
Tu, ton-m:	1.02	1.02	1.02	1.02	1.02	1.02	0.98	0.98	0.98	0.98	0.98
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 9 (E-F) FLOOR: 5

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.25 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.98	1.70	2.43	3.15	3.88	4.60	5.33	6.05	6.78	7.50
Mu(-), ton-m:	-49.92	-32.21	-15.09	-10.21	-10.21	-10.21	-10.21	-10.21	-16.37	-33.39	-51.03
Mu(+), ton-m:	16.64	10.21	10.21	18.80	27.15	31.75	21.15	12.90	10.21	10.21	17.01
As(+), cm2:	21.97	13.84	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	14.37
As(-), cm2:	10.71	10.71	10.71	10.71	11.59	13.64	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.62	7.60	7.41	7.23	7.05	6.87	6.70	6.53	6.35	6.18	6.01
Tu, ton-m:	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48
Stirrup, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 9 (F-F1) FLOOR: 5

Length:	L = 1.80 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	h = 70.0 cm	Mat:	RConcrete2
X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44
Mu(-), ton-m:	-25.05	-20.79	-16.57	-12.38	-8.24	-5.01	-1.83	-11.94	-15.78
Mu(+), ton-m:	13.90	10.32	6.70	5.01	5.01	5.01	10.71	10.71	11.94
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	8.19	8.19	8.19	8.19	8.17	8.12	8.07	8.05	8.05
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F1-F2) FLOOR: 5

Length:	L = 2.10 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	h = 70.0 cm	Mat:	RConcrete2
X, m:	0.00	0.21	0.63	0.84	1.05	1.26	1.47	1.68	1.89
Mu(-), ton-m:	-12.61	-11.29	-10.01	-8.77	-7.57	-6.40	-5.27	-4.18	-3.12
Mu(+), ton-m:	8.08	7.52	6.93	6.31	5.64	4.94	4.21	3.43	2.62
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	2.55	2.55	2.55	2.55	2.51	2.47	2.43	2.39	2.39
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F2-F3) FLOOR: 5

Length:	L = 2.10 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	h = 70.0 cm	Mat:	RConcrete2
X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68
Mu(-), ton-m:	-3.30	-3.30	-3.30	-4.72	-6.30	-7.91	-9.56	-11.24	-12.96
Mu(+), ton-m:	3.30	3.30	3.30	3.35	4.20	5.00	5.77	6.50	7.20
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	3.25	3.25	3.25	3.25	3.29	3.33	3.38	3.42	3.42
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (E3-G) FLOOR: 5

Length:	L = 2.20 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	h = 70.0 cm	Mat:	RConcrete2
X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76
Mu(-), ton-m:	-29.07	-23.79	-18.56	-13.38	-8.25	-5.81	-7.53	-11.80	-16.12
Mu(+), ton-m:	16.94	12.99	9.00	5.81	5.81	5.81	5.81	6.80	11.71
As(+), cm2:	12.44	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	8.54	8.54	8.54	8.53	8.47	8.42	8.36	8.30	8.30
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (G-H) FLOOR: 5

Length:	L = 7.20 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70	h = 70.0 cm	Mat:	RConcrete2
X, m:	0.00	0.70	1.39	2.09	2.78	3.48	4.17	4.87	5.56
Mu(-), ton-m:	-48.09	-31.52	-15.50	-9.62	-6.22	-4.17	-2.78	-1.87	-1.11
Mu(+), ton-m:	16.03	9.62	6.22	4.17	2.78	1.87	1.11	0.62	0.35
As(+), cm2:	21.11	13.53	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.43	7.42	7.23	7.04	6.85	6.66	6.88	7.06	7.41
Tu, ton-m:	0.82	0.82	0.82	0.82	0.82	0.82	1.01	1.01	1.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 9 (H-I) FLOOR: 5

Length:	L = 7.10 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70	h = 70.0 cm	Mat:	RConcrete2
X, m:	0.25	0.91	1.57	2.23	2.89	3.55	4.21	4.87	5.53
Mu(-), ton-m:	-47.99	-32.13	-16.76	-9.60	-6.22	-4.17	-2.78	-1.87	-1.11
Mu(+), ton-m:	16.00	9.60	6.22	4.17	2.78	1.87	1.11	0.62	0.35
As(+), cm2:	21.06	13.81	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.49	7.48	7.32	7.15	6.98	6.82	6.95	7.12	7.45
Tu, ton-m:	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN





BEAM: 8 (F-F1) FLOOR: 5

Length: L = 1.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 1.80 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.52	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-22.68	-18.65	-14.67	-10.72	-7.39	-4.37	-1.92	1.26	4.37	7.39	10.72
Mu(+), ton-m:	19.50	14.02	8.51	7.39	7.39	7.39	7.39	7.39	7.39	7.39	7.39
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	11.98	11.98	11.98	11.98	12.05	12.12	12.12	12.12	12.12	12.12	12.12
Vu, Kg/cm2:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (F1-F2) FLOOR: 5

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.10 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-12.46	-10.08	-7.74	-5.43	-3.17	-2.49	-2.49	-3.89	-6.04	-8.24	-10.47
Mu(+), ton-m:	10.18	8.28	6.34	4.37	2.49	2.49	2.49	3.41	5.53	7.62	9.66
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	3.82	3.82	3.82	3.82	3.78	3.74	3.70	3.66	3.66	3.66	3.66
Vu, Kg/cm2:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (F2-F3) FLOOR: 5

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.10 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-11.03	-8.65	-6.30	-4.00	-2.50	-2.50	-3.29	-5.54	-7.83	-10.16	-12.52
Mu(+), ton-m:	9.43	7.41	5.34	3.24	2.50	2.50	2.70	4.86	6.98	9.06	11.11
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	3.75	3.75	3.75	3.71	3.67	3.69	3.73	3.73	3.73	3.73	3.73
Vu, Kg/cm2:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (E3-G) FLOOR: 5

Length: L = 2.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.20 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98	2.20
Mu(-), ton-m:	-39.56	-32.89	-26.27	-19.70	-13.19	-7.91	-7.91	-10.65	-15.34	-20.09	-24.90
Mu(+), ton-m:	20.74	16.41	12.04	12.04	12.04	12.04	12.04	12.04	12.34	18.58	24.78
As(-), cm2:	17.17	14.15	11.20	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	11.27	11.27	11.27	11.27	11.27	11.27	11.27	11.27	11.03	11.03	11.03
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (G-H) FLOOR: 5

Length: L = 7.20 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.95 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.70	1.39	2.09	2.78	3.48	4.17	4.87	5.56	6.26	6.95
Mu(-), ton-m:	-46.11	-29.78	-14.01	-10.51	-10.51	-10.51	-10.51	-10.51	-17.56	-34.78	-52.56
Mu(+), ton-m:	15.37	10.51	10.51	13.92	20.72	30.60	26.08	17.82	10.51	10.51	17.52
As(-), cm2:	20.18	12.76	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	15.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	13.12	11.12	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.50	7.49	7.30	7.11	6.92	6.73	7.39	7.57	7.75	7.92	7.94
Tu, ton-m:	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.98	0.98	0.98	0.98
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (H-I) FLOOR: 5

Length: L = 7.10 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.60 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.91	1.57	2.23	2.89	3.55	4.21	4.87	5.53	6.19	6.85
Mu(-), ton-m:	-48.90	-32.74	-17.07	-9.78	-9.78	-9.78	-9.78	-9.78	-17.07	-32.74	-48.88
Mu(+), ton-m:	16.30	9.78	9.78	13.69	20.54	27.03	20.64	13.83	9.78	9.78	16.29
As(-), cm2:	21.49	14.08	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	14.08
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	11.54	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.64	7.64	7.47	7.30	7.14	6.97	7.13	7.30	7.46	7.63	7.63
Tu, ton-m:	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN



BEAM: 9 (F2-F3) FLOOR: 6

Length: L = 2.10 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.10 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-4.27	-3.35	-2.45	-1.57	-1.11	-1.11	-1.33	-2.36	-3.40	-4.46	-5.53
Mu(+), ton-m:	4.42	3.50	2.57	1.62	1.11	1.11	1.33	2.36	3.40	4.46	5.53
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	3.39	3.39	3.39	3.39	3.39	3.47	3.51	3.55	3.55	3.55	3.55
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F3-G) FLOOR: 6

Length: L = 2.20 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.20 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98	2.20
Mu(-), ton-m:	-23.37	-18.63	-13.90	-9.19	-4.67	-4.67	-4.67	-4.67	-5.58	-7.35	-9.15
Mu(+), ton-m:	7.89	6.28	4.67	4.67	4.67	4.67	4.81	9.43	14.04	18.62	23.18
As(+), cm2:	10.24	8.06	5.94	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	17.93	17.93	17.93	17.93	17.88	17.80	17.75	17.75	17.75	17.75	17.75
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (B-C) FLOOR: 6

Length: L = 3.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 3.80 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.36	0.72	1.08	1.44	1.80	2.16	2.52	2.88	3.24	3.60
Mu(-), ton-m:	0.00	-6.45	-13.05	-19.80	-26.70	-33.75	-40.94	-48.29	-55.79	-63.44	-71.22
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	5.53	5.66	5.79	5.92	6.05	6.18	6.31	6.44	6.57	6.60	6.60
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: 9 (C-D) FLOOR: 6

Length: L = 7.50 m a = 0.20 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.05 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.20	0.91	1.61	2.32	3.02	3.73	4.43	5.14	5.84	6.55	7.25
Mu(-), ton-m:	-57.90	-39.57	-21.80	-11.58	-11.58	-11.58	-11.58	-11.58	-11.58	-25.13	-40.16
Mu(+), ton-m:	19.30	11.58	11.58	11.58	19.02	28.57	22.54	15.65	11.58	11.58	13.39
As(+), cm2:	25.76	17.17	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	8.41	8.39	8.21	8.03	7.85	7.67	7.51	7.35	7.11	7.29	7.30
Tu, ton-m:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.95	0.95	0.95	0.95
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 9 (D-E) FLOOR: 6

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.05 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-48.58	-31.86	-15.69	-9.72	-9.72	-9.72	-9.72	-9.72	-14.38	-30.15	-46.47
Mu(+), ton-m:	16.19	9.72	9.72	12.79	21.45	21.77	13.52	9.72	13.52	9.72	15.49
As(+), cm2:	21.34	13.68	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	7.58	7.56	7.38	7.21	7.03	6.85	6.89	7.07	7.25	7.43	7.44
Tu, ton-m:	1.02	1.02	1.02	1.02	1.02	1.02	0.97	0.97	0.97	0.97	0.97
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 9 (E-F) FLOOR: 6

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.25 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.98	1.70	2.43	3.15	3.88	4.60	5.33	6.05	6.78	7.50
Mu(-), ton-m:	-48.18	-30.77	-13.97	-10.07	-10.07	-10.07	-10.07	-10.07	-16.05	-32.88	-50.33
Mu(+), ton-m:	16.06	10.07	10.07	18.20	26.73	31.51	21.03	12.48	10.07	10.07	16.78
As(+), cm2:	21.15	13.20	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	7.54	7.52	7.33	7.15	6.97	6.81	6.99	7.19	7.38	7.58	7.61
Tu, ton-m:	1.03	1.03	1.03	1.03	1.03	0.93	0.93	0.93	0.93	0.93	0.93
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN



BEAM: 9 (F-F1) FLOOR: 6

Length: L = 1.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 1.80 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.18	-11.93	-8.97	-6.05	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-17.96	-14.93	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84
Mu(+), ton-m:	8.09	5.53	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	5.69	5.69	5.69	5.69	5.69	5.69	5.69	5.69	5.69	5.69	5.69	5.69
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F1-F2) FLOOR: 6

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.10 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.21	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-11.00	-9.78	-8.60	-7.45	-6.34	-5.27	-4.24	-3.24	-2.28	-2.20
Mu(+), ton-m:	6.05	5.63	5.18	4.69	4.16	3.60	3.00	2.36	2.20	2.20
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	2.23	2.23	2.23	2.19	2.14	2.10	2.06	2.06	2.06	2.06
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F2-F3) FLOOR: 6

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.10 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-3.02	-3.02	-3.02	-3.02	-3.02	-3.02	-3.02	-3.02	-3.02	-3.02	-3.02
Mu(+), ton-m:	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (E3-G) FLOOR: 6

Length: L = 2.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.20 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98	2.20
Mu(-), ton-m:	-24.97	-20.62	-16.32	-12.08	-7.90	-4.99	-3.72	-3.07	-2.53	-2.07	-1.64
Mu(+), ton-m:	12.07	9.24	6.35	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.15	7.15	7.15	7.15	7.09	6.98	6.92	6.91	6.91	6.91	6.91
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (G-H) FLOOR: 6

Length: L = 7.20 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.95 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.70	1.39	2.09	2.78	3.48	4.17	4.87	5.56	6.26	6.95
Mu(-), ton-m:	-47.23	-30.88	-15.09	-9.45	-5.45	-3.48	-2.47	-1.87	-1.32	-0.87	-0.45
Mu(+), ton-m:	15.74	9.45	5.45	3.48	2.47	1.87	1.32	0.87	0.45	0.00	0.00
As(+), cm2:	20.71	13.25	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.38	7.36	7.18	6.99	6.80	6.61	6.48	6.36	6.26	6.16	6.06
Tu, ton-m:	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 9 (H-I) FLOOR: 6

Length: L = 7.10 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.60 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.91	1.57	2.23	2.89	3.55	4.21	4.87	5.53	6.19	6.85
Mu(-), ton-m:	-45.26	-29.94	-15.12	-9.05	-5.05	-3.05	-2.05	-1.50	-1.00	-0.50	-0.00
Mu(+), ton-m:	15.09	9.05	5.05	3.05	2.05	1.50	1.00	0.50	0.00	0.00	0.00
As(+), cm2:	19.79	12.83	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.29	7.29	7.12	6.96	6.79	6.62	6.48	6.34	6.20	6.06	5.92
Tu, ton-m:	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN



BEAM: 8\*(F2-F3) FLOOR: 6

Length: L = 2.10 m a = 0.00 m Section: b = 40.0 cm Sec: S40X70  
 Lu = 2.10 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-2.34	-2.34	-3.13	-4.27	-5.44	-6.63	-7.85	-9.12	-10.40	-11.72	-13.08
Mu(+), ton-m:	2.34	2.34	2.34	2.34	2.35	2.82	3.27	3.68	4.06	4.41	4.72
As(+), cm2:	8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57
Vu, Kg/cm2:	2.91	2.91	2.91	2.91	2.99	3.03	3.07	3.07	3.07	3.07	3.07
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8\*(F3-G) FLOOR: 6

Length: L = 2.20 m a = 0.00 m Section: b = 40.0 cm Sec: S40X70  
 Lu = 2.20 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98	2.20
Mu(-), ton-m:	-22.09	-17.07	-12.10	-7.17	-4.42	-4.42	-6.14	-4.42	-6.14	-8.15	-10.20
Mu(+), ton-m:	8.27	6.63	4.94	4.42	4.42	7.34	12.09	16.79	21.44	26.05	30.65
As(+), cm2:	9.44	8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57
Vu, Kg/cm2:	11.60	11.60	11.60	11.60	11.54	11.47	11.35	11.35	11.35	11.20	11.20
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8(B-C) FLOOR: 6

Length: L = 3.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 3.85 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.36	0.71	1.07	1.42	1.78	2.13	2.49	2.84	3.20	3.55
Mu(-), ton-m:	-6.52	-13.18	-19.98	-26.93	-34.02	-41.26	-48.64	-56.17	-63.84	-71.65	-79.60
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	5.66	5.79	5.92	6.05	6.18	6.30	6.43	6.56	6.69	6.72	6.72
Tu, ton-m:	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: 8(C-D) FLOOR: 6

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-51.92	-34.61	-17.85	-10.38	-10.38	-10.38	-10.38	-10.38	-14.89	-30.86	-47.38
Mu(+), ton-m:	17.31	14.92	10.38	12.07	21.13	29.62	21.39	13.08	10.38	10.38	15.79
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.92	7.91	7.73	7.55	7.38	7.16	6.98	7.10	7.28	7.46	7.65
Tu, ton-m:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Stirrup, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8(D-E) FLOOR: 6

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.00 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-49.29	-32.30	-15.86	-9.86	-9.86	-9.86	-9.86	-9.86	-15.24	-31.51	-48.33
Mu(+), ton-m:	16.43	9.86	9.86	13.19	21.96	30.20	22.04	13.43	9.86	9.86	16.11
As(+), cm2:	21.67	13.88	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	13.53
Vu, Kg/cm2:	10.71	10.71	10.71	10.71	10.71	12.95	10.71	10.71	10.71	10.71	10.71
Tu, ton-m:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.87	0.87	0.87	0.87
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8(E-F) FLOOR: 6

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.25 m c = 0.00 m Mat: RConcrete2

X, m:	0.25	0.98	1.70	2.43	3.15	3.88	4.60	5.33	6.05	6.78	7.50
Mu(-), ton-m:	-50.67	-32.51	-15.02	-10.12	-10.12	-10.12	-10.12	-10.12	-15.59	-32.59	-50.20
Mu(+), ton-m:	16.87	10.12	10.12	18.32	27.32	32.48	21.98	13.48	10.12	10.12	16.73
As(+), cm2:	22.29	13.98	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	14.01
Vu, Kg/cm2:	10.71	10.71	10.71	10.71	11.67	13.97	10.71	10.71	10.71	10.71	10.71
Tu, ton-m:	7.77	7.75	7.57	7.38	7.20	6.93	7.05	7.25	7.45	7.64	7.81
Stirrup, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 8 (F-F1) FLOOR: 6

Length: L = 1.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 1.80 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-14.24	-11.89	-9.57	-7.29	-6.11	-8.19	-12.28	-16.41	-20.58	-24.78	-29.02
Mu(+), ton-m:	11.69	7.79	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80	9.67
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	12.42
As(+), cm2:	9.01	9.01	9.01	9.01	9.03	9.08	9.13	9.15	9.15	9.15	9.15
Vu, Kg/cm2:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (F1-F2) FLOOR: 6

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.10 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-9.67	-7.83	-6.02	-4.25	-2.52	-1.93	-1.93	-3.00	-4.62	-6.28	-7.97
Mu(+), ton-m:	7.30	5.94	4.54	3.10	1.93	1.93	1.93	2.45	4.03	5.58	7.09
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	2.93	2.93	2.93	2.93	2.90	2.85	2.81	2.77	2.77	2.77	2.77
Vu, Kg/cm2:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (F2-F3) FLOOR: 6

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.10 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-8.35	-6.53	-4.76	-3.01	-1.98	-1.98	-2.73	-4.47	-6.25	-8.06	-9.91
Mu(+), ton-m:	6.91	5.40	3.84	2.25	1.98	1.98	1.99	3.58	5.14	6.66	8.14
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	2.84	2.84	2.84	2.84	2.80	2.80	2.84	2.88	2.88	2.88	2.88
Vu, Kg/cm2:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (E3-G) FLOOR: 6

Length: L = 2.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.20 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98	2.20
Mu(-), ton-m:	-33.00	-27.69	-22.37	-17.11	-11.90	-6.74	-6.61	-7.48	-10.63	-13.84	-17.10
Mu(+), ton-m:	13.10	10.32	7.48	6.61	6.61	6.61	6.61	6.61	6.61	6.61	13.35
As(-), cm2:	14.22	11.83	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	9.34	9.34	9.34	9.34	9.28	9.22	9.16	9.11	9.10	9.10	9.10
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (G-H) FLOOR: 6

Length: L = 7.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.95 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.70	1.39	2.09	2.78	3.48	4.17	4.87	5.56	6.26	6.95
Mu(-), ton-m:	-45.39	-29.27	-13.71	-10.14	-10.14	-10.14	-10.14	-16.31	-33.22	-50.69	-68.16
Mu(+), ton-m:	15.13	10.14	10.14	13.59	20.71	30.30	25.53	10.14	10.14	14.30	16.90
As(-), cm2:	19.85	12.53	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	12.99	10.88	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.41	7.40	7.21	7.02	6.83	6.64	7.27	7.45	7.62	7.80	7.81
Tu, ton-m:	0.75	0.75	0.75	0.75	0.75	0.75	0.97	0.97	0.97	0.97	0.97
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 8 (H-I) FLOOR: 6

Length: L = 7.10 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.60 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.91	1.57	2.23	2.89	3.55	4.21	4.87	5.53	6.19	6.85
Mu(-), ton-m:	-46.18	-30.55	-15.42	-9.24	-9.24	-9.24	-9.24	-15.47	-30.58	-46.19	-61.80
Mu(+), ton-m:	15.39	9.24	9.24	12.65	20.02	27.04	20.15	12.80	9.24	9.24	15.40
As(-), cm2:	20.21	13.10	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	11.55	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.45	7.45	7.28	7.11	6.95	6.78	6.94	7.11	7.27	7.44	7.45
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN



BEAM: 9 (F2-F3) FLOOR: 7

Length: L = 2.10 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.10 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68
3.15	-2.45	-1.78	-1.13	-0.90	-0.90	-1.13	-1.95	-2.79
3.41	2.70	1.97	1.23	0.90	0.90	1.31	1.87	2.41
5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
7.25	2.75	2.75	2.75	2.79	2.83	2.87	2.91	2.91
10.71	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F3-G) FLOOR: 7

Length: L = 2.20 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.20 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76
19.73	-15.81	-11.92	-8.05	-4.20	-3.95	-3.95	-3.95	-3.95
6.58	3.95	3.95	3.95	3.95	3.95	7.24	11.01	14.76
8.56	6.79	5.36	5.36	5.36	5.36	5.36	5.36	5.36
5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
15.27	15.27	15.27	15.27	15.22	15.18	15.14	15.09	15.09
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (B-C) FLOOR: 7

Length: L = 3.60 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 3.60 m c = 0.20 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.00	0.36	0.72	1.08	1.44	1.80	2.16	2.52	2.88
6.45	-13.05	-19.81	-26.71	-33.76	-40.95	-48.30	-55.80	-63.45
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.71	10.71	10.71	10.71	11.40	14.54	17.80	21.21	24.76
10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
5.53	5.66	5.79	5.92	6.05	6.18	6.31	6.44	6.57
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: 9 (C-D) FLOOR: 7

Length: L = 7.50 m a = 0.20 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.05 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.20	0.91	1.61	2.32	3.02	3.73	4.43	5.14	5.84
52.30	-34.96	-18.18	-10.46	-10.46	-10.46	-10.46	-10.46	-10.46
17.43	10.46	10.46	10.46	19.21	29.15	22.22	14.35	10.46
23.09	15.08	10.71	10.71	10.71	10.71	10.71	10.71	10.71
10.71	10.71	10.71	10.71	12.48	10.71	10.71	10.71	10.71
7.99	7.97	7.79	7.61	7.43	7.25	6.54	6.71	6.89
0.95	0.95	0.95	0.95	0.95	0.95	0.94	0.94	0.94
15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 9 (D-E) FLOOR: 7

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.05 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85
45.44	-29.36	-13.84	-9.09	-9.09	-9.09	-9.09	-9.09	-9.09
15.15	9.09	9.09	11.35	20.71	29.52	21.04	12.13	9.09
19.87	12.57	10.71	10.71	10.71	10.71	10.71	10.71	10.71
10.71	10.71	10.71	10.71	12.64	10.71	10.71	10.71	10.71
7.37	7.36	7.18	7.00	6.83	6.65	6.67	6.85	7.02
1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97
15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 9 (E-F) FLOOR: 7

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 7.25 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.25	0.98	1.70	2.43	3.15	3.88	4.60	5.33	6.05
45.76	-28.73	-12.30	-9.59	-9.59	-9.59	-9.59	-9.59	-9.59
15.25	9.59	9.59	17.04	26.07	31.35	21.18	12.25	9.59
20.02	12.29	10.71	10.71	10.71	10.71	10.71	10.71	10.71
10.71	10.71	10.71	10.71	11.12	13.46	10.71	10.71	10.71
7.41	7.39	7.20	7.02	6.83	6.65	6.82	7.02	7.41
1.03	1.03	1.03	1.03	1.03	0.99	0.92	0.92	0.92
15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 9 (F-F1) FLOOR: 7

Length: L = 1.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 1.80 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62	1.80
Mu(-), ton-m:	-13.93	-11.67	-9.44	-7.25	-5.30	-3.00	-1.26	-0.84	-0.54	-0.30	-0.15
Mu(+), ton-m:	4.64	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.12	3.08	3.01
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.32	4.32	4.32
Vu, Kg/cm2:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F1-F2) FLOOR: 7

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.10 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-9.66	-8.49	-7.36	-6.26	-5.21	-4.19	-3.20	-2.26	-1.93	-1.93	-1.93
Mu(+), ton-m:	4.91	4.53	4.12	3.67	3.19	2.66	2.10	1.93	1.93	1.93	1.93
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	2.02	2.02	2.02	2.02	1.98	1.93	1.89	1.85	1.85	1.85	1.85
Vu, Kg/cm2:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (F2-F3) FLOOR: 7

Length: L = 2.10 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.10 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68	1.89	2.10
Mu(-), ton-m:	-2.74	-2.74	-2.74	-3.05	-4.46	-5.91	-7.40	-8.92	-10.48	-12.08	-13.72
Mu(+), ton-m:	2.74	2.74	2.74	2.74	2.74	2.84	3.44	4.01	4.53	5.02	5.47
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	2.82	2.82	2.82	2.82	2.86	2.90	2.94	2.98	2.98	2.98	2.98
Vu, Kg/cm2:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (E3-G) FLOOR: 7

Length: L = 2.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.20 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98	2.20
Mu(-), ton-m:	-21.16	-17.86	-14.61	-11.41	-8.27	-5.19	-4.66	-4.23	-4.23	-4.23	-4.32
Mu(+), ton-m:	8.22	6.21	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	5.38	5.38	5.38	5.38	5.32	5.26	5.20	5.15	5.14	5.14	5.14
Vu, Kg/cm2:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 9 (G-H) FLOOR: 7

Length: L = 7.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.95 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.70	1.39	2.09	2.78	3.48	4.17	4.87	5.56	6.26	6.95
Mu(-), ton-m:	-44.94	-29.07	-13.76	-8.99	-8.99	-8.99	-8.99	-8.99	-11.79	-27.12	-43.00
Mu(+), ton-m:	14.98	8.99	8.99	11.49	19.61	29.44	24.95	16.80	8.99	8.99	14.33
As(-), cm2:	19.64	12.44	10.71	10.71	10.71	10.71	10.71	10.71	10.71	11.58	18.74
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	12.61	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.21	7.20	7.01	6.82	6.63	6.44	6.26	6.80	6.98	7.15	7.17
Tu, ton-m:	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.99	0.99	0.99	0.99
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: 9 (H-I) FLOOR: 7

Length: L = 7.10 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.60 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.91	1.57	2.23	2.89	3.55	4.21	4.87	5.53	6.19	6.85
Mu(-), ton-m:	-41.94	-27.29	-13.13	-8.39	-8.39	-8.39	-8.39	-8.39	-12.90	-26.93	-41.46
Mu(+), ton-m:	13.98	8.39	8.39	10.88	18.80	26.34	19.06	11.28	8.39	8.39	13.82
As(-), cm2:	18.25	11.65	10.71	10.71	10.71	10.71	10.71	10.71	10.71	11.50	18.03
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	11.24	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.07	7.06	6.90	6.73	6.56	6.40	6.52	6.69	6.85	7.02	7.02
Tu, ton-m:	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN







BEAM: 8 (F-F1) FLOOR: 7

Length:	L = 1.80 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	h = 70.0 cm	Mat:	Rconcrete2
X, m:	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44
Mu(-), ton-m:	-9.20	-7.98	-7.18	-6.88	-6.88	-7.18	-7.98	-9.20	-11.45
Mu(+), ton-m:	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	5.37	5.37	5.37	5.37	5.37	5.37	5.37	5.37	5.37
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (F1-F2) FLOOR: 7

Length:	L = 2.10 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	h = 70.0 cm	Mat:	Rconcrete2
X, m:	0.00	0.21	0.63	0.84	1.05	1.26	1.47	1.68	1.89
Mu(-), ton-m:	-7.22	-5.84	-4.50	-3.19	-1.93	-1.44	-2.27	-3.47	-4.71
Mu(+), ton-m:	5.12	4.17	3.19	2.18	1.44	1.44	1.65	2.77	3.85
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	2.14	2.14	2.14	2.14	2.14	2.06	2.02	2.03	2.03
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (F2-F3) FLOOR: 7

Length:	L = 2.10 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	h = 70.0 cm	Mat:	Rconcrete2
X, m:	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.68
Mu(-), ton-m:	-5.98	-4.65	-3.32	-2.11	-1.56	-1.56	-2.24	-3.57	-4.94
Mu(+), ton-m:	4.98	3.87	2.72	1.56	1.56	1.56	2.53	3.60	4.63
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	2.13	2.13	2.13	2.13	2.13	2.18	2.22	2.26	2.26
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (E3-G) FLOOR: 7

Length:	L = 2.20 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	h = 70.0 cm	Mat:	Rconcrete2
X, m:	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76
Mu(-), ton-m:	-26.80	-22.86	-18.99	-15.16	-11.39	-7.67	-5.36	-5.36	-7.27
Mu(+), ton-m:	8.93	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	11.44	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	6.95	6.95	6.95	6.95	6.88	6.88	6.77	6.71	6.71
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (G-H) FLOOR: 7

Length:	L = 7.20 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	h = 70.0 cm	Mat:	Rconcrete2
X, m:	0.00	0.70	1.39	2.09	2.78	3.48	4.17	4.87	5.56
Mu(-), ton-m:	-43.20	-27.54	-12.44	-9.59	-9.59	-9.59	-9.59	-14.43	-30.92
Mu(+), ton-m:	14.40	9.59	9.59	13.35	20.89	30.17	24.95	16.02	9.59
As(+), cm2:	18.84	11.77	10.71	10.71	10.71	10.71	10.71	10.71	13.27
vu, Kg/cm2:	7.23	7.22	7.03	6.84	6.65	6.46	7.11	7.28	7.46
Tu, ton-m:	0.75	0.75	0.75	0.75	0.75	0.75	0.96	0.96	0.96
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: 8 (H-I) FLOOR: 7

Length:	L = 7.10 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70	h = 70.0 cm	Mat:	Rconcrete2
X, m:	0.25	0.91	1.57	2.23	2.89	3.55	4.21	4.87	5.53
Mu(-), ton-m:	-42.89	-27.93	-13.46	-8.58	-8.58	-8.58	-8.58	-13.29	-27.64
Mu(+), ton-m:	14.30	8.58	8.58	11.02	19.16	27.00	19.45	11.44	8.58
As(+), cm2:	18.69	11.94	10.71	10.71	10.71	10.71	10.71	10.71	11.81
vu, Kg/cm2:	7.23	7.23	7.06	6.89	6.73	6.56	6.68	6.85	7.02
Tu, ton-m:	0.81	0.81	0.81	0.81	0.81	0.81	0.82	0.82	0.82
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:51 a.m. 05/08/2010

BEAM: 8 (I-U) FLOOR: 7

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-45.03	-29.31	-14.33	-9.18	-9.18	-9.18	-9.18	-9.18	-13.05	-28.98	-45.89
Mu(+), ton-m:	15.01	9.18	9.18	10.60	19.11	27.59	23.29	13.67	9.18	9.18	15.30
As(+), cm2:	19.68	12.55	10.71	10.71	10.71	10.71	10.71	10.71	12.41	20.08	10.71
vu, Kg/cm2:	7.25	7.23	7.02	6.80	6.59	6.37	7.13	7.31	7.49	7.66	7.68
Tu, ton-m:	0.82	0.82	0.82	0.82	0.82	0.82	0.94	0.94	0.94	0.94	0.94
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (J-K) FLOOR: 7

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-45.92	-29.60	-13.83	-9.18	-9.18	-9.18	-9.18	-13.32	-28.91	-45.06	-45.06
Mu(+), ton-m:	15.31	9.18	11.81	21.23	30.10	21.40	12.15	9.18	9.18	15.02	15.02
As(+), cm2:	20.10	12.68	10.71	10.71	10.71	10.71	10.71	10.71	12.37	19.69	10.71
vu, Kg/cm2:	7.48	7.47	7.29	7.11	6.94	6.76	6.88	7.06	7.23	7.41	7.43
Tu, ton-m:	0.93	0.93	0.93	0.93	0.93	0.93	0.95	0.95	0.95	0.95	0.95
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00	15.00

DESIGN

BEAM: 8 (K-L) FLOOR: 7

Length: L = 7.50 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
Lu = 7.00 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.95	1.65	2.35	3.05	3.75	4.45	5.15	5.85	6.55	7.25
Mu(-), ton-m:	-43.70	-27.97	-12.78	-9.99	-9.99	-9.99	-9.99	-16.78	-33.08	-49.94	-49.94
Mu(+), ton-m:	14.57	9.99	9.99	11.92	20.66	29.39	20.12	10.30	9.99	9.99	16.65
As(+), cm2:	19.07	11.95	10.71	10.71	10.71	10.71	10.71	10.71	14.23	21.97	10.71
vu, Kg/cm2:	7.44	7.43	7.25	7.07	6.89	6.72	7.27	7.45	7.62	7.80	7.82
Tu, ton-m:	0.85	0.85	0.85	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00	15.00

DESIGN

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:51 a.m. 05/08/2010

BEAM: 8 (L-L1) FLOOR: 7

Length: L = 3.75 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
Lu = 3.50 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.60	0.95	1.30	1.65	2.00	2.35	2.70	3.05	3.40	3.75
Mu(-), ton-m:	-69.82	-62.21	-64.74	-47.40	-40.21	-33.15	-26.24	-19.47	-12.84	-6.35	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	31.62	27.86	24.25	20.78	17.46	14.27	11.19	10.71	10.71	10.71	10.71
vu, Kg/cm2:	6.63	6.63	6.61	6.49	6.36	6.23	6.10	5.98	5.85	5.72	5.60
Tu, ton-m:	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: C (10-9) FLOOR: 1

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.41 m c = 1.80 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.21	1.45	1.69	1.93	2.17	2.41
Mu(-), ton-m:	-8.52	-6.45	-6.45	-6.45	-6.45	-6.68	-10.28	-14.20	-18.22	-22.66	-27.25
Mu(+), ton-m:	6.45	6.45	6.45	6.53	11.02	15.33	19.32	23.20	26.67	29.99	32.90
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	11.64	13.86
vu, Kg/cm2:	6.73	6.73	6.73	6.65	6.41	6.16	6.00	6.07	6.09	6.09	6.09
Tu, ton-m:	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: C (9-8) FLOOR: 1

Length: L = 8.07 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
Lu = 6.27 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.43	3.05	3.68	4.31	4.93	5.56	6.19	6.81	7.44	8.07
Mu(-), ton-m:	-30.33	-19.08	-10.32	-6.07	-6.07	-6.07	-6.07	-6.07	-6.07	-6.07	-6.07
Mu(+), ton-m:	10.11	6.07	8.37	9.86	9.87	8.94	8.97	8.97	8.27	6.07	7.95
As(+), cm2:	13.00	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	4.84	4.84	4.02	3.18	2.50	2.18	2.64	3.21	3.78	4.35	4.35
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00	15.00

DESIGN

















BEAM: F3(8-7) FLOOR: 1

Length: L = 4.21 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.40	0.79	1.19	1.58	1.98	2.38	2.77	3.17	3.56	3.96
Mu(-), ton-m:	-8.56	-5.95	-3.71	-1.85	-1.71	-1.71	-1.71	-1.71	-1.71	-1.71	-2.47
Mu(+), ton-m:	5.33	6.22	6.73	6.88	6.66	6.06	5.09	3.75	2.62	1.75	1.71
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	3.50	3.50	3.27	2.72	2.30	1.89	1.83	2.40	2.99	3.22	3.22
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: G(10-9\*) FLOOR: 1

Length: L = 1.41 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 1.01 m c = 0.40 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.10	0.20	0.30	0.40	0.50	0.61	0.71	0.81	0.91	1.01
Mu(-), ton-m:	-7.97	-7.97	-7.97	-9.80	-13.99	-18.21	-22.47	-26.75	-31.09	-35.45	-39.86
Mu(+), ton-m:	7.97	7.97	7.97	13.49	19.73	25.92	32.08	38.22	44.30	50.35	56.37
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	11.05	13.79	16.55	19.34	22.17	25.03
vu, Kg/cm2:	23.61	23.61	23.61	23.61	23.61	23.61	23.61	23.61	23.61	23.61	23.61
Tu, ton-m:	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Stirrup, cm:	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4
Spacing, cm:	11.26	11.26	11.26	11.26	11.26	11.26	11.26	11.26	11.26	11.26	11.26

DESIGN

BEAM: G(9\*-9) FLOOR: 1

Length: L = 2.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.40 m c = 0.40 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.20	1.44	1.68	1.92	2.16	2.40
Mu(-), ton-m:	-2.59	-1.97	-1.75	-1.75	-1.75	-1.75	-1.75	-1.75	-1.75	-1.75	-2.91
Mu(+), ton-m:	8.27	6.78	5.25	3.67	2.04	1.75	1.75	1.75	1.75	1.75	2.91
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	2.96	2.96	2.96	2.97	3.06	3.10	3.14	3.15	3.15	3.15	3.15
Tu, ton-m:	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: G(9-8\*) FLOOR: 1

Length: L = 5.27 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 4.87 m c = 0.40 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.49	0.97	1.46	1.95	2.44	2.92	3.41	3.90	4.38	4.87
Mu(-), ton-m:	-20.75	-14.22	-8.51	-6.01	-6.01	-6.01	-6.01	-7.87	-14.45	-21.84	-30.04
Mu(+), ton-m:	15.28	14.42	12.75	10.26	6.96	6.01	6.15	7.77	8.58	8.57	10.01
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	4.34	4.34	4.09	3.72	3.35	3.48	3.85	4.21	4.58	4.86	4.86
Tu, ton-m:	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00	15.00

DESIGN

BEAM: G(8\*-8) FLOOR: 1

Length: L = 2.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.40 m c = 0.40 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.20	1.44	1.68	1.92	2.16	2.40
Mu(-), ton-m:	-1.41	-1.41	-1.41	-1.41	-1.41	-1.41	-1.41	-1.41	-1.41	-1.41	-2.58
Mu(+), ton-m:	6.14	5.04	3.88	2.68	1.43	1.41	1.41	1.41	1.41	1.41	2.58
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	2.72	2.72	2.72	2.73	2.77	2.81	2.86	2.90	2.91	2.91	2.91
Tu, ton-m:	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: G(8-7) FLOOR: 1

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.40	0.79	1.19	1.58	1.98	2.38	2.77	3.17	3.56	3.96
Mu(-), ton-m:	-13.17	-9.27	-5.92	-3.11	-2.63	-2.63	-2.63	-2.63	-2.63	-2.63	-7.07
Mu(+), ton-m:	12.03	13.00	13.42	13.29	12.62	11.41	9.66	7.36	4.52	2.63	2.63
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	2.62	2.62	2.45	2.02	1.70	1.39	1.59	2.02	2.45	2.62	2.62
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	30.00	30.00	30.00	15.00	15.00	15.00	15.00

DESIGN







BEAM: I1(8-6') FLOOR: 1

Length: L = 6.64 m a = 0.25 m Section: b = 30.0 cm Sec: S50X70  
 Lu = 6.39 m c = 0.00 m Mat: RConcrete2

X, m:	0.25	0.89	1.53	2.17	2.80	3.44	4.08	4.72	5.36	6.00	6.64
Mu(-), ton-m:	-17.80	-12.91	-9.48	-7.63	-7.30	-8.52	-10.25	-7.32	-3.29	-0.85	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	7.62	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(+), cm2:	3.41	3.41	2.14	0.87	0.40	1.67	2.94	3.92	2.61	1.31	0.00
Vu, Kg/cm2:	0.11	0.11	0.11	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: J(11-10) FLOOR: 1

Length: L = 5.72 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 5.47 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.55	1.09	1.64	2.19	2.74	3.28	3.83	4.38	4.92	5.47
Mu(-), ton-m:	0.00	-0.71	-2.60	-5.73	-10.15	-15.77	-22.67	-30.75	-39.95	-50.23	-61.58
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	13.19	17.34	22.11	27.55
As(+), cm2:	0.00	0.71	1.43	2.14	2.86	3.57	4.28	4.94	5.56	6.08	6.08
Vu, Kg/cm2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: J(10-9) FLOOR: 1

Length: L = 4.21 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.16 m c = 1.80 m Mat: RConcrete2

X, m:	0.25	0.47	0.68	0.90	1.11	1.33	1.55	1.76	1.98	2.20	2.41
Mu(-), ton-m:	-45.97	-39.25	-32.76	-26.91	-22.88	-19.27	-16.62	-14.10	-11.80	-9.71	-9.19
Mu(+), ton-m:	15.32	9.19	9.19	9.19	9.19	9.19	9.19	9.19	9.19	9.19	13.37
As(-), cm2:	20.12	17.02	14.09	11.49	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	14.55	14.55	14.55	14.54	14.40	14.26	14.17	14.10	14.10	14.10	14.10
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	14.53	14.53	14.53	14.54	14.84	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

10-J 17 #3@ 12.5 9-J

BEAM: J(9-8) FLOOR: 1

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 8.07 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65	6.46	7.26	8.07
Mu(-), ton-m:	-27.57	-14.51	-6.09	-6.09	-6.09	-6.09	-6.09	-6.09	-6.35	-17.18	-30.45
Mu(+), ton-m:	9.19	6.09	6.09	9.35	11.64	11.54	10.80	7.78	6.09	6.09	10.15
As(-), cm2:	11.78	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	13.06
As(+), cm2:	4.90	4.73	3.94	3.16	2.37	1.84	2.63	3.38	4.09	4.80	4.95
Vu, Kg/cm2:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

BEAM: J(8-6') FLOOR: 1

Length: L = 6.64 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 4.84 m c = 0.00 m Mat: RConcrete2

X, m:	1.80	2.28	2.77	3.25	3.73	4.22	4.70	5.18	5.67	6.15	6.64
Mu(-), ton-m:	-76.47	-61.23	-47.13	-34.12	-22.29	-13.47	-7.91	-4.56	-2.21	-0.69	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	34.99	27.38	20.66	14.70	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	9.11	9.11	8.69	8.06	7.42	5.26	2.52	1.89	1.26	0.63	0.00
Tu, ton-m:	0.42	0.42	0.42	0.42	0.42	0.42	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: J1(11-10) FLOOR: 1

Length: L = 5.72 m a = 0.00 m Section: b = 30.0 cm Sec: S50X70  
 Lu = 5.47 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.55	1.09	1.64	2.19	2.74	3.28	3.83	4.38	4.92	5.47
Mu(-), ton-m:	0.00	-0.67	-2.45	-5.40	-9.56	-14.85	-21.34	-28.94	-37.59	-47.24	-57.88
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(+), cm2:	0.00	1.12	2.24	3.36	4.48	5.60	6.72	7.75	8.71	9.50	9.50
Vu, Kg/cm2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

11-J1 19 #3@ 30 6-J

BEAM: J1(10-9) FLOOR: 1

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.71 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.62	0.99	1.36	1.73	2.11	2.48	2.85	3.22	3.59	3.96
Mu(-), ton-m:	-55.81	-49.20	-43.00	-37.22	-31.89	-27.05	-22.69	-18.86	-15.46	-12.55	-10.11
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
vu, Kg/cm2:	8.56	8.56	8.40	7.81	7.14	6.46	5.78	5.11	4.43	4.24	4.24
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-J1 13 #3@ 30 9-J1

BEAM: J1(9-8) FLOOR: 1

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 7.57 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-7.25	-1.15	0.00	0.00	0.00	0.00	0.00	0.00	-2.66	-10.93	-22.04
Mu(+), ton-m:	0.39	2.69	7.89	11.84	13.69	13.19	10.39	5.37	0.87	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	9.53
vu, Kg/cm2:	5.30	5.06	3.51	1.96	0.41	1.15	2.70	4.19	5.57	6.95	7.17
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-J1 26 #3@ 30 8-J1

BEAM: J1(8-6') FLOOR: 1

Length: L = 6.64 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 6.39 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.89	1.53	2.17	2.80	3.44	4.08	4.72	5.36	6.00	6.64
Mu(-), ton-m:	-23.20	-17.40	-13.10	-10.43	-9.33	-9.82	-10.86	-7.32	-3.29	-0.85	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.05	7.45	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
vu, Kg/cm2:	4.13	4.13	2.83	1.52	0.21	1.10	2.40	3.92	2.61	1.31	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-J1 22 #3@ 30 6'-J1

BEAM: K(11-10) FLOOR: 1

Length: L = 5.72 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 5.47 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.55	1.09	1.66	2.19	2.74	3.28	3.83	4.38	4.92	5.47
Mu(-), ton-m:	0.00	-0.73	-2.66	-5.86	-10.38	-16.12	-23.16	-31.42	-40.82	-51.32	-62.92
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	13.49	17.74	22.63	28.20
vu, Kg/cm2:	0.00	0.73	1.46	2.19	2.92	3.65	4.38	5.05	5.68	6.21	6.21
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

11-K 19 #3@ 30 10-K

BEAM: K(10-9) FLOOR: 1

Length: L = 4.21 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 4.21 m c = 1.60 m Mat: RConcrete2

X, m:	0.25	0.47	0.68	0.90	1.11	1.33	1.55	1.76	1.98	2.20	2.41
Mu(-), ton-m:	-46.81	-39.98	-33.39	-27.36	-22.93	-19.03	-16.31	-13.71	-11.35	-9.36	-9.36
Mu(+), ton-m:	15.60	9.36	9.36	9.36	9.36	9.36	9.36	9.36	9.36	9.36	13.43
As(+), cm2:	20.51	17.36	14.37	11.69	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	14.79	14.79	14.79	14.78	14.64	14.50	14.40	14.33	14.33	14.33	14.33
Tu, ton-m:	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	14.03	14.03	14.03	14.06	14.34	14.63	14.84	14.99	15.00	15.00	15.00

DESIGN

10-K 17 #3@ 12.5 9-K

BEAM: K(9-8) FLOOR: 1

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 8.07 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65	6.46	7.26	8.07
Mu(-), ton-m:	-27.78	-14.52	-6.16	-6.16	-6.16	-6.16	-6.16	-6.16	-6.34	-17.33	-30.81
Mu(+), ton-m:	9.26	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	6.16	10.27
As(+), cm2:	11.87	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	13.22
vu, Kg/cm2:	4.98	4.82	4.01	3.20	2.40	1.86	2.67	3.44	4.16	4.89	5.04
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

9-K 11 #3@ 15 15 #3@ 30 11 #3@ 15 8-K





BEAM: L(10-9) FLOOR: 1

Length: L = 4.21 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.11 m c = 1.80 m Mat: RConcrete2

X, m:	ton-m:	ton-m:	cm2:	cm2:	kg/cm2:	kg/cm2:	cm:	cm:	cm:	cm:
0.25	0.47	0.68	0.90	1.11	1.33	1.55	1.76	1.98	2.19	2.41
-47.24	-40.05	-33.11	-26.94	-23.02	-19.66	-17.51	-15.50	-13.72	-12.14	-10.87
15.75	9.45	9.45	9.45	9.45	9.45	9.45	9.45	9.45	11.13	16.58
10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
15.25	15.25	15.25	15.25	15.10	14.96	14.87	14.80	14.79	14.79	14.79
0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
13.20	13.20	13.20	13.21	13.46	13.72	13.90	14.03	14.04	14.04	14.04

Spacing, cm: DESIGN

BEAM: L(9-8) FLOOR: 1

Length: L = 8.07 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.21 m c = 0.00 m Mat: RConcrete2

X, m:	ton-m:	ton-m:	cm2:	cm2:	kg/cm2:	kg/cm2:	cm:	cm:	cm:	cm:
1.80	2.43	3.05	3.68	4.31	4.93	5.56	6.19	6.81	7.44	8.07
-23.69	-13.82	-6.42	-4.78	-4.78	-4.78	-4.78	-4.78	-4.78	-4.78	-4.78
7.90	4.78	5.38	7.18	7.59	7.11	7.27	6.34	4.78	4.78	7.97
10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
4.16	4.16	3.34	2.51	1.98	2.46	3.03	3.59	4.16	4.16	4.16
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00	15.00

Spacing, cm: DESIGN

BEAM: L(8-6') FLOOR: 1

Length: L = 6.64 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 4.84 m c = 0.00 m Mat: RConcrete2

X, m:	ton-m:	ton-m:	cm2:	cm2:	kg/cm2:	kg/cm2:	cm:	cm:	cm:	cm:
1.80	2.28	2.77	3.25	3.73	4.22	4.70	5.18	5.67	6.15	6.64
-85.46	-68.45	-52.61	-37.88	-24.36	-14.31	-8.08	-4.66	-2.26	-0.70	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39.67	30.93	23.24	16.40	10.71	10.71	10.71	10.71	10.71	10.71	10.71
10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
10.24	10.24	9.80	9.16	8.51	5.91	2.58	1.93	1.29	0.64	0.00
0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

Spacing, cm: DESIGN

BEAM: L(11-10) FLOOR: 1

Length: L = 5.72 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 5.47 m c = 0.25 m Mat: RConcrete2

X, m:	ton-m:	ton-m:	cm2:	cm2:	kg/cm2:	kg/cm2:	cm:	cm:	cm:	cm:
0.00	0.55	1.09	1.64	2.19	2.74	3.28	3.83	4.38	4.92	5.47
-0.67	-2.45	-5.40	-9.56	-14.85	-21.34	-28.94	-37.59	-47.24	-57.88	-68.52
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
0.00	1.12	2.24	3.36	4.48	5.60	6.72	7.85	8.97	10.10	11.22
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

Spacing, cm: DESIGN

BEAM: L(10-9) FLOOR: 1

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.71 m c = 0.25 m Mat: RConcrete2

X, m:	ton-m:	ton-m:	cm2:	cm2:	kg/cm2:	kg/cm2:	cm:	cm:	cm:	cm:
0.25	0.62	0.99	1.36	1.73	2.11	2.48	2.85	3.22	3.59	3.96
-85.85	-49.28	-43.12	-37.38	-32.09	-27.29	-22.98	-19.18	-15.83	-12.96	-10.55
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26.94	23.02	19.59	16.74	14.19	11.93	9.95	8.24	6.75	5.43	4.33
6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
8.51	8.51	8.34	7.75	7.08	6.41	5.73	5.05	4.38	3.71	3.04
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

Spacing, cm: DESIGN

BEAM: L(9-8) FLOOR: 1

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 7.57 m c = 0.25 m Mat: RConcrete2

X, m:	ton-m:	ton-m:	cm2:	cm2:	kg/cm2:	kg/cm2:	cm:	cm:	cm:	cm:
0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
-7.63	-1.29	0.00	0.00	0.00	0.00	0.00	0.00	-2.27	-10.35	-21.35
0.33	2.50	7.67	11.74	13.70	13.31	10.63	5.72	0.94	0.00	0.00
6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
5.38	5.14	3.59	2.04	0.49	1.07	2.62	4.11	5.49	6.87	7.09
0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

Spacing, cm: DESIGN



BEAM: M1(10-9) FLOOR: 1

Length:		L = 4.21 m	a = 0.25 m	Section:	b = 30.0 cm	Sec:	S30X70				
Lu = 3.71 m		c = 0.25 m	h = 70.0 cm	Mat:	Rconcrete2						
X, m:	0.25	0.62	0.99	1.36	1.73	2.11	2.48	2.85	3.22	3.59	3.96
Mu(-), ton-m:	-55.81	-49.33	-43.26	-37.61	-32.41	-27.70	-23.48	-19.78	-16.51	-13.73	-11.42
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	26.92	23.05	19.66	16.85	14.34	12.13	10.18	8.51	7.05	6.43	6.43
Vu, Kg/cm2:	8.38	8.38	8.22	7.62	6.96	6.28	5.60	4.93	4.32	4.06	4.06
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: M1(9-8) FLOOR: 1

Length:		L = 8.07 m	a = 0.25 m	Section:	b = 30.0 cm	Sec:	S30X70				
Lu = 7.57 m		c = 0.25 m	h = 70.0 cm	Mat:	Rconcrete2						
X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-8.36	-1.55	0.00	0.00	0.00	0.00	0.00	0.00	-1.39	-9.09	-19.86
Mu(+), ton-m:	0.24	2.17	7.31	11.61	13.64	11.19	6.51	1.09	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	5.54	5.30	3.75	2.20	0.65	0.91	2.46	3.95	5.33	6.71	6.93
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: M1(8-6') FLOOR: 1

Length:		L = 6.64 m	a = 0.25 m	Section:	b = 30.0 cm	Sec:	S30X70				
Lu = 6.39 m		c = 0.25 m	h = 70.0 cm	Mat:	Rconcrete2						
X, m:	0.25	0.89	1.53	2.17	2.80	3.44	4.08	4.72	5.36	6.00	6.64
Mu(-), ton-m:	-20.91	-15.59	-11.76	-9.56	-8.93	-9.89	-11.26	-7.32	-3.29	-0.85	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	9.02	6.65	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	3.75	2.44	1.13	0.20	1.48	2.79	3.92	2.61	1.31	0.00	0.00
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: N(11-10) FLOOR: 1

Length:		L = 5.72 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70				
Lu = 5.47 m		c = 0.25 m	h = 70.0 cm	Mat:	Rconcrete2						
X, m:	0.00	0.55	1.09	1.64	2.19	2.74	3.28	3.83	4.38	4.92	5.47
Mu(-), ton-m:	0.00	-0.73	-2.65	-5.84	-10.35	-16.08	-23.11	-31.35	-40.73	-51.21	-62.78
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.73	1.46	2.18	2.91	3.64	4.37	5.04	5.67	6.19	6.19
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: N(10-9) FLOOR: 1

Length:		L = 4.21 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70				
Lu = 2.16 m		c = 1.80 m	h = 70.0 cm	Mat:	Rconcrete2						
X, m:	0.25	0.47	0.68	0.90	1.11	1.33	1.55	1.76	1.98	2.19	2.41
Mu(-), ton-m:	-46.69	-39.62	-32.79	-26.70	-22.68	-19.19	-16.89	-14.71	-12.77	-11.03	-9.59
Mu(+), ton-m:	15.56	9.34	9.34	9.34	9.34	9.34	9.34	9.34	9.34	10.60	15.93
As(+), cm2:	20.45	17.19	14.10	11.39	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	15.08	15.08	15.08	15.08	14.93	14.79	14.70	14.63	14.62	14.62	14.62
Tu, ton-m:	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	13.50	13.50	13.50	13.50	13.77	14.04	14.25	14.37	14.37	14.37	14.37

DESIGN

BEAM: N(9-8) FLOOR: 1

Length:		L = 8.07 m	a = 1.80 m	Section:	b = 50.0 cm	Sec:	S50X70				
Lu = 6.27 m		c = 0.00 m	h = 70.0 cm	Mat:	Rconcrete2						
X, m:	1.80	2.43	3.05	3.68	4.31	4.93	5.56	6.19	6.81	7.44	8.07
Mu(-), ton-m:	-22.67	-13.05	-5.90	-4.92	-4.92	-4.92	-4.92	-4.92	-8.00	-15.60	-24.60
Mu(+), ton-m:	7.56	4.92	5.59	7.30	7.58	6.95	6.87	5.72	4.92	4.92	8.20
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	4.04	4.04	3.22	2.40	1.91	2.07	2.55	3.11	3.67	4.22	4.22
Tu, ton-m:	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00	15.00

DESIGN







BEAM: E\*(9'-9) FLOOR: 2

Length: L = 2.80 m a = 0.13 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 2.43 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.13	0.37	0.61	0.85	1.10	1.34	1.58	1.82	2.07	2.31	2.55
Mu(-), ton-m:	-1.05	-0.78	-0.57	-0.44	-0.39	-0.41	-0.48	-0.61	-0.80	-1.05	-1.35
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(+), cm2:	0.31	0.31	0.31	0.26	0.13	0.09	0.22	0.34	0.39	0.39	0.39
Vu, Kg/cm2:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9'-E' 8 #3@ 30 9'-E'

BEAM: E\*(9-8) FLOOR: 2

Length: L = 5.27 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 4.82 m c = 0.20 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.73	1.21	1.70	2.18	2.66	3.14	3.62	4.11	4.59	5.07
Mu(-), ton-m:	-1.23	-0.38	0.00	0.00	0.00	0.00	-0.47	-1.49	-2.81	-4.38	-5.07
Mu(+), ton-m:	0.00	0.22	0.70	1.02	1.08	0.87	0.47	0.06	0.00	0.00	0.00
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(+), cm2:	0.79	0.79	0.59	0.30	0.10	0.40	0.69	0.98	1.27	1.47	1.47
Vu, Kg/cm2:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9'-E' 16 #3@ 30 8'-E'

BEAM: E\*(8'-8) FLOOR: 2

Length: L = 2.80 m a = 0.20 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 2.35 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.20	0.44	0.67	0.90	1.14	1.38	1.61	1.85	2.08	2.32	2.55
Mu(-), ton-m:	-5.09	-5.24	-5.43	-5.68	-5.98	-6.35	-6.78	-7.31	-7.91	-8.56	-9.27
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(+), cm2:	0.73	0.73	0.73	0.77	0.89	1.01	1.14	1.26	1.30	1.30	1.30
Vu, Kg/cm2:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8'-E' 8 #3@ 30 8'-E'

BEAM: E\*(8-7) FLOOR: 2

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-9.18	-7.45	-5.90	-4.52	-3.33	-2.32	-1.50	-0.85	-0.39	-0.10	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(+), cm2:	2.02	2.02	1.92	1.68	1.44	1.20	0.96	0.72	0.48	0.24	0.00
Vu, Kg/cm2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8'-E' 14 #3@ 30 7'-E'

BEAM: F(10-9) FLOOR: 2

Length: L = 1.41 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 1.01 m c = 0.40 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.10	0.20	0.30	0.40	0.50	0.61	0.71	0.81	0.91	1.01
Mu(-), ton-m:	0.00	-0.02	-0.07	-0.14	-0.24	-0.37	-0.53	-0.71	-0.93	-1.18	-1.46
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.73	0.83	0.93
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-F 4 #3@ 30 9'-F

BEAM: F(9'-9) FLOOR: 2

Length: L = 2.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.40 m c = 0.40 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.20	1.44	1.68	1.92	2.16	2.40
Mu(-), ton-m:	-30.33	-24.10	-17.91	-11.77	-6.07	-6.07	-6.07	-6.07	-6.07	-6.07	-6.07
Mu(+), ton-m:	29.61	23.83	18.00	12.13	6.21	6.07	6.38	6.38	6.38	6.38	6.38
As(-), cm2:	13.00	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	12.68	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	8.86	8.86	8.86	8.84	8.80	8.76	8.72	8.74	8.76	8.76	8.76
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

9'-F 16 #3@ 15 9'-F



BEAM: F (9-8\*) FLOOR: 2

Length: L = 5.27 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 4.87 m c = 0.40 m Mat: RConcrete2

X, m:	0.00	0.49	0.97	1.46	1.95	2.44	2.92	3.41	3.90	4.38	4.87
Mu(-), ton-m:	-45.60	-34.65	-24.37	-14.74	-11.77	-11.77	-11.77	-20.17	-32.41	-45.30	-58.85
Mu(+), ton-m:	46.93	39.33	31.07	22.15	12.56	11.77	11.77	17.13	23.45	29.10	34.10
As(+), cm2:	19.95	14.94	10.71	10.71	10.71	10.71	10.71	13.93	19.81	26.22	32.41
As(-), cm2:	20.57	17.06	13.33	10.71	10.71	10.71	10.71	10.71	12.46	14.69	17.13
Vu, Kg/cm2:	8.14	8.14	7.94	7.64	7.04	8.04	8.34	8.64	8.94	9.14	9.14
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00	15.00

BEAM: F (8\*-8) FLOOR: 2

Length: L = 2.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.40 m c = 0.40 m Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.20	1.44	1.68	1.92	2.16	2.40
Mu(-), ton-m:	-25.63	-20.50	-15.41	-10.36	-5.74	-5.74	-5.74	-11.07	-16.89	-22.76	-28.68
Mu(+), ton-m:	28.30	22.81	17.28	11.70	6.08	5.74	5.74	9.35	14.15	18.90	23.60
As(+), cm2:	10.92	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	12.27
As(-), cm2:	12.10	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	8.49	8.49	8.49	8.50	8.55	8.59	8.63	8.67	8.68	8.68	8.68
Tu, ton-m:	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

BEAM: F (8-7) FLOOR: 2

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 4.21 m c = 0.40 m Mat: RConcrete2

X, m:	0.00	0.42	0.84	1.26	1.68	2.11	2.53	2.95	3.37	3.79	4.21
Mu(-), ton-m:	-25.06	-20.30	-16.04	-12.28	-9.02	-6.27	-4.01	-2.26	-1.00	-0.25	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	3.15	3.15	2.98	2.60	2.23	1.86	1.49	1.12	0.74	0.37	0.00
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

BEAM: F1(10-9\*) FLOOR: 2

Length: L = 1.41 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 1.16 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.12	0.23	0.35	0.46	0.58	0.70	0.81	0.93	1.04	1.16
Mu(-), ton-m:	0.00	-0.02	-0.07	-0.14	-0.24	-0.37	-0.54	-0.73	-0.96	-1.21	-1.49
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(-), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	0.00	0.16	0.32	0.48	0.64	0.80	0.72	0.72	0.72	0.72	0.72
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

BEAM: F1(9\*-9) FLOOR: 2

Length: L = 2.80 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.35 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.26	0.51	0.77	1.02	1.28	1.53	1.79	2.04	2.30	2.55
Mu(-), ton-m:	-10.86	-8.60	-6.36	-4.15	-2.20	-2.20	-2.20	-4.27	-6.49	-8.74	-11.01
Mu(+), ton-m:	10.52	8.49	6.43	4.35	2.23	2.20	2.31	4.41	6.48	8.53	10.55
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(-), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	5.99	5.99	5.99	5.97	5.92	5.88	5.90	5.95	5.97	5.97	5.97
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

BEAM: F1(9-8\*) FLOOR: 2

Length: L = 5.07 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 5.07 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.50	1.00	1.51	2.01	2.51	3.01	3.51	4.02	4.52	5.02
Mu(-), ton-m:	-24.41	-18.01	-12.15	-6.85	-2.01	-6.36	-6.36	-9.87	-16.64	-23.96	-31.80
Mu(+), ton-m:	22.03	19.13	15.68	11.67	7.11	6.36	6.36	8.83	11.37	13.55	14.82
As(+), cm2:	10.73	7.78	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(-), cm2:	9.62	8.29	6.73	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	8.74	8.74	8.38	7.89	7.50	7.99	8.49	8.98	9.47	9.83	9.83
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00	15.00







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Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:53 a.m. 05/08/2010

BEAM: G\*(9-8) FLOOR: 2

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-27.19	-17.80	-10.37	-5.22	-2.11	-1.27	-2.69	-6.26	-11.56	-19.38	-28.82
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	11.89	7.62	6.43	6.43	6.43	6.43	6.43	6.43	6.43	8.33	12.65
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.02	5.79	4.29	2.80	1.30	0.22	1.72	3.16	4.49	5.82	6.03
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-G\* 26 #3@ 30 8-G\*

BEAM: G\*(8-7) FLOOR: 2

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-29.88	-24.26	-19.20	-14.73	-10.86	-7.57	-4.87	-2.77	-1.26	-0.33	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	13.14	10.54	8.25	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(+), cm2:	6.56	6.56	6.26	5.48	4.70	3.91	3.13	2.35	1.57	0.78	0.00
Vu, Kg/cm2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-G\* 14 #3@ 30 7-G\*

BEAM: H(10-9) FLOOR: 2

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.41 m c = 1.80 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.21	1.45	1.69	1.93	2.17	2.41
Mu(-), ton-m:	0.00	-0.21	-0.52	-1.15	-1.99	-3.03	-4.39	-5.85	-7.69	-9.69	-12.08
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.31	0.62	0.93	1.24	1.55	1.85	2.13	2.23	2.23	2.23
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-H 8 #3@ 30 9-H

BEAM: H(9-8) FLOOR: 2

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 8.07 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65	6.46	7.26	8.07
Mu(-), ton-m:	-40.72	-25.13	-11.95	-8.92	-8.92	-8.92	-8.92	-8.92	-14.94	-28.57	-44.61
Mu(+), ton-m:	13.70	8.96	13.62	15.39	14.66	12.37	13.53	13.31	10.60	8.92	14.87
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	5.79	5.58	4.67	3.90	3.12	2.66	3.44	4.18	4.88	5.75	5.94
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

9-H 11 #3@ 15 15 #3@ 30 11 #3@ 15 8-H

BEAM: H(8-7) FLOOR: 2

Length: L = 4.21 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.41 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.04	2.28	2.52	2.76	3.00	3.25	3.49	3.73	3.97	4.21
Mu(-), ton-m:	-12.31	-9.80	-7.75	-5.86	-4.40	-3.05	-2.01	-1.18	-0.55	-0.22	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	2.27	2.27	2.27	2.17	1.86	1.55	1.24	0.93	0.62	0.31	0.00
Vu, Kg/cm2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-H 8 #3@ 30 7-H

BEAM: H(10-9) FLOOR: 2

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.40	0.79	1.19	1.58	1.98	2.38	2.77	3.17	3.56	3.96
Mu(-), ton-m:	0.00	-0.31	-1.21	-2.70	-4.76	-7.38	-10.50	-14.14	-18.30	-22.98	-28.17
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	0.00	0.77	1.55	2.32	3.06	3.75	4.43	5.12	5.81	6.08	6.08
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-H 14 #3@ 30 9-H

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:53 a.m. 05/08/2010

BEAM: H1(9-8) FLOOR: 2

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-26.79	-17.50	-10.16	-5.07	-1.99	-1.16	-2.56	-6.09	-11.62	-19.06	-28.39
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(+), cm2:	5.95	5.72	4.24	2.76	1.29	0.22	1.70	3.12	4.44	5.76	5.96
Vu, Kg/cm2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-H1 26 #3@ 30 8-H1

BEAM: H1(8-7) FLOOR: 2

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-29.52	-23.96	-18.97	-14.55	-10.72	-7.48	-4.82	-2.74	-1.24	-0.33	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	12.97	10.40	8.15	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(+), cm2:	6.48	6.48	6.19	5.41	4.64	3.87	3.09	2.32	1.55	0.77	0.00
Vu, Kg/cm2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-H1 14 #3@ 30 7-H1

BEAM: I(11'-10) FLOOR: 2

Length: L = 2.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 1.97 m c = 0.23 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.20	0.39	0.59	0.79	0.99	1.18	1.38	1.58	1.78	1.97
Mu(-), ton-m:	-0.00	-0.06	-0.20	-0.43	-0.76	-1.17	-1.67	-2.26	-2.94	-3.71	-4.57
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.14	0.29	0.43	0.58	0.72	0.87	0.98	0.98	0.98	0.98
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

11'-1 7 #3@ 30 10-I

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:53 a.m. 05/08/2010

BEAM: I(10-9) FLOOR: 2

Length: L = 4.21 m a = 0.23 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.19 m c = 1.80 m h = 70.0 cm Mat: RConcrete2

X, m:	0.23	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.97	2.19	2.41
Mu(-), ton-m:	-24.06	-16.62	-9.49	-5.70	-3.22	-1.76	-1.44	-1.33	-1.48	-2.83	-28.48
Mu(+), ton-m:	8.23	5.70	5.70	5.70	5.78	11.04	17.46	23.77	29.82	35.67	41.21
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	12.25	12.25	12.25	12.24	12.08	11.80	11.73	11.73	11.73	11.73	11.73
Tu, ton-m:	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

10-I 15 #3@ 15 9-I

BEAM: I(9-8) FLOOR: 2

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 8.07 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65	6.46	7.26	8.07
Mu(-), ton-m:	-39.87	-24.10	-10.84	-8.64	-8.64	-8.64	-8.64	-8.64	-13.70	-27.21	-43.21
Mu(+), ton-m:	13.29	8.64	12.06	14.55	14.45	12.84	13.92	13.26	10.02	8.64	14.40
As(-), cm2:	17.31	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	5.85	5.63	4.72	3.91	3.10	2.57	3.37	4.14	4.87	5.72	5.92
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

9-I 11 #3@ 15 15 #3@ 30 11 #3@ 15 8-I

BEAM: I(8-7) FLOOR: 2

Length: L = 4.21 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.41 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.04	2.28	2.52	2.76	3.00	3.25	3.49	3.73	3.97	4.21
Mu(-), ton-m:	-12.45	-9.92	-7.84	-5.93	-4.45	-3.09	-2.04	-1.19	-0.55	-0.22	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	2.30	2.30	2.30	2.19	1.88	1.57	1.25	0.94	0.63	0.31	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-I 8 #3@ 30 7-I



Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:54 a.m. 05/08/2010

BEAM: J(8-6\*) FLOOR: 2

Length: L = 6.64 m a = 1.80 m Section: b = 50.0 cm Sec: S30X70  
Lu = 4.84 m c = 0.00 m Mat: ASTM A50

X, m:	1.80	2.28	-4.77	3.25	3.73	4.22	4.70	5.18	5.67	6.15	6.64
Mu(-), ton-m:	-13.21	-8.45	-4.83	-2.30	-0.95	-0.26	-0.08	-0.04	-0.02	-0.01	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	2.34	2.34	1.92	1.28	0.65	0.08	0.02	0.01	0.01	0.01	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-J 16 #3@ 30 6'-J

BEAM: JI(11-10) FLOOR: 2

Length: L = 2.20 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
Lu = 1.93 m c = 0.25 m Mat: Rconcrete2

X, m:	0.00	0.19	0.39	0.58	0.78	0.97	1.17	1.36	1.56	1.75	1.95
Mu(-), ton-m:	0.00	-0.08	-0.28	-0.61	-1.06	-1.63	-2.33	-3.15	-4.10	-5.18	-6.41
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	0.00	0.34	0.68	1.02	1.37	1.71	2.05	2.29	2.29	2.29	2.29
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

11'-J1 7 #3@ 30 10'-J1

BEAM: JI(10-9) FLOOR: 2

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.71 m c = 0.25 m Mat: Rconcrete2

X, m:	0.25	0.62	0.99	1.36	1.73	2.11	2.48	2.85	3.22	3.59	3.96
Mu(-), ton-m:	-6.73	-5.03	-3.75	-2.90	-2.48	-2.17	-3.14	-4.22	-5.75	-7.76	-10.24
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	1.65	1.65	1.49	0.90	0.23	0.45	1.13	1.80	2.48	2.67	2.67
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-J1 13 #3@ 30 9'-J1

BEAM: JI(9-8) FLOOR: 2

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 7.57 m c = 0.25 m Mat: Rconcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-9.78	-2.70	0.00	0.00	0.00	0.00	0.00	-1.63	-8.77	-18.42	-30.05
Mu(+), ton-m:	0.00	0.82	4.06	7.49	8.81	7.79	4.50	0.53	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	4.96	4.72	3.17	1.62	0.19	1.51	3.06	4.55	5.93	7.31	7.53
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-J1 26 #3@ 30 8'-J1

BEAM: JI(8-7) FLOOR: 2

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.96 m c = 0.00 m Mat: Rconcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-30.96	-25.13	-19.89	-15.26	-11.25	-7.84	-5.05	-2.87	-1.30	0.00	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	13.65	10.94	8.56	6.50	4.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.80	6.80	6.49	5.68	4.87	4.05	3.24	2.43	1.62	0.81	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-J1 14 #3@ 30 7'-J1

BEAM: K(10-9) FLOOR: 2

Length: L = 4.21 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.16 m c = 1.80 m Mat: Rconcrete2

X, m:	0.25	0.47	0.68	0.90	1.11	1.33	1.55	1.76	1.98	2.20	2.41
Mu(-), ton-m:	-11.47	-7.80	-7.80	-7.80	-7.80	-7.80	-7.80	-7.80	-7.80	-7.80	-7.80
Mu(+), ton-m:	12.90	8.52	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	9.24	9.24	9.24	9.25	9.59	9.53	9.53	9.53	9.53	9.53	9.53
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

10-K 15 #3@ 15 9'-K



Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:54 a.m. 05/08/2010

BEAM: K (9-8) FLOOR: 2

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Sec: S30X70  
Lu = 8.07 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65	6.46	7.26	8.07
Mu(-), ton-m:	-40.31	-24.46	-11.13	-8.06	-8.06	-8.06	-8.06	-8.06	-11.28	-24.01	-39.22
Mu(+), ton-m:	13.44	8.06	9.77	13.05	13.73	12.71	13.92	13.34	10.17	8.06	13.07
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	5.88	5.66	4.71	3.90	3.09	2.36	3.11	3.88	4.61	5.42	5.62
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

BEAM: K (8-6) FLOOR: 2

Length: L = 8.07 m a = 1.80 m Section: b = 50.0 cm Sec: S30X70  
Lu = 4.84 m c = 0.00 m Mat: ASH R30

X, m:	1.80	2.28	2.77	3.25	3.73	4.22	4.70	5.18	5.67	6.15	6.64
Mu(-), ton-m:	-13.49	-8.62	-4.93	-2.34	-0.96	-0.26	-0.08	-0.04	-0.02	-0.01	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	2.39	2.39	1.96	1.31	0.67	0.08	0.02	0.02	0.01	0.01	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

BEAM: K1 (11-10) FLOOR: 2

Length: L = 2.20 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
Lu = 1.95 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.19	0.39	0.58	0.78	0.97	1.17	1.36	1.56	1.75	1.95
Mu(-), ton-m:	0.00	-0.08	-0.28	-0.61	-1.06	-1.63	-2.33	-3.15	-4.10	-5.18	-6.41
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	0.00	0.34	0.68	1.02	1.37	1.71	2.05	2.29	2.29	2.29	2.29
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:54 a.m. 05/08/2010

BEAM: K1 (10-9) FLOOR: 2

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.71 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.62	0.99	1.36	1.73	2.11	2.48	2.85	3.22	3.59	3.96
Mu(-), ton-m:	-6.73	-5.07	-3.83	-3.01	-2.63	-2.74	-3.34	-4.47	-6.02	-8.07	-10.58
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	1.61	1.61	1.44	0.85	0.18	0.49	1.17	1.85	2.53	2.71	2.71
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

BEAM: K1 (9-8) FLOOR: 2

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 7.57 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-10.12	-2.94	0.00	0.00	0.00	0.00	0.00	-1.69	-8.80	-18.42	-30.01
Mu(+), ton-m:	0.00	0.75	3.77	7.25	8.61	7.63	4.37	0.52	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	4.98	4.74	3.19	1.64	0.21	1.48	3.03	4.52	5.90	7.28	7.50
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

BEAM: K1 (8-7) FLOOR: 2

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.96 m c = 0.00 m Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-30.96	-25.13	-19.89	-15.26	-11.25	-7.84	-5.05	-2.87	-1.30	-0.34	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	13.65	10.94	8.56	6.50	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.80	6.80	6.49	5.68	4.87	4.05	3.24	2.43	1.62	0.81	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN







BEAM: C(9-8) FLOOR: 3

Length: L = 8.07 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.27 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.43	3.05	3.68	4.31	4.93	5.56	6.19	6.81	7.44	8.07
Mu(-), ton-m:	-16.98	-48.85	-23.68	-17.42	-17.42	-17.42	-17.42	-23.60	-42.79	-64.04	-87.12
Mu(+), ton-m:	36.62	41.99	38.41	30.81	20.53	17.42	17.42	22.04	25.59	27.08	29.04
As(+), cm2:	17.19	23.40	12.72	10.71	10.71	10.71	10.71	10.71	18.65	28.75	40.54
As(-), cm2:	13.17	13.17	13.17	13.17	13.17	13.17	13.17	13.17	13.17	13.17	13.17
Vu, Kg/cm2:	2.98	2.98	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	12.32	12.32	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00	15.00

DESIGN

9-C 13 #3@ 12.5 9 #3@ 30 11 #3@ 15 8-C

BEAM: C(8-7) FLOOR: 3

Length: L = 4.21 m a = 0.90 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 3.31 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.90	1.23	1.56	1.89	2.22	2.55	2.88	3.22	3.55	3.88	4.21
Mu(-), ton-m:	-33.29	-26.90	-21.36	-16.43	-12.09	-8.33	-5.41	-3.17	-1.53	-0.47	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	14.33	11.48	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	5.04	5.04	4.99	4.37	3.75	3.12	2.50	1.87	1.25	0.62	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-C 11 #3@ 30 7-C

BEAM: C(10-9) FLOOR: 3

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.40	0.79	1.19	1.58	1.98	2.38	2.77	3.17	3.56	3.96
Mu(-), ton-m:	0.00	-0.33	-1.27	-2.83	-4.99	-7.74	-11.01	-14.83	-19.19	-24.09	-29.54
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	0.00	0.81	1.62	2.43	3.20	3.93	4.65	5.37	6.09	6.37	6.37
Vu, Kg/cm2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-C 14 #3@ 30 9-C

BEAM: C1(9-8) FLOOR: 3

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.59	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-28.45	-21.11	-15.15	-10.79	-7.86	-6.54	-6.83	-8.80	-13.21	-20.21	-29.82
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	12.47	9.11	6.45	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	4.74	4.57	3.52	2.48	1.43	0.38	0.73	2.06	3.88	5.70	5.98
Vu, Kg/cm2:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-C1 26 #3@ 30 8-C1

BEAM: C1(8-7) FLOOR: 3

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-30.96	-25.13	-19.89	-15.26	-11.25	-7.84	-5.05	-2.87	-1.30	-0.34	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	13.65	10.94	8.56	6.50	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.80	6.80	6.49	5.68	4.87	4.05	3.24	2.43	1.62	0.81	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-C1 14 #3@ 30 7-C1

BEAM: D(10-9) FLOOR: 3

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 3.31 m c = 0.90 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.33	0.66	0.99	1.33	1.66	1.99	2.32	2.65	2.98	3.31
Mu(-), ton-m:	0.00	-0.30	-1.03	-2.20	-3.80	-5.89	-8.48	-11.42	-14.77	-18.54	-22.79
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	0.00	0.44	0.88	1.33	1.77	2.18	2.57	2.97	3.37	3.40	3.40
Vu, Kg/cm2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-D 11 #3@ 30 9-D









BEAM: F1(9-8\*) FLOOR: 3

Length: L = 5.27 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 5.02 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.50	1.00	1.50	2.01	2.53	3.01	3.51	4.02	4.52	5.02
Mu(-), ton-m:	-27.65	-20.61	-14.13	-8.20	-7.29	-7.29	-7.29	-11.75	-19.45	-27.69	-36.45
Mu(+), ton-m:	26.63	22.80	18.42	13.49	8.01	7.29	7.29	10.01	13.48	15.79	17.89
As(+), cm2:	12.26	8.96	6.04	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	9.88	9.88	9.52	9.03	8.92	9.41	9.30	10.40	10.89	11.25	11.25
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: F1(8\*-8) FLOOR: 3

Length: L = 2.80 m a = 0.25 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.35 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.26	0.51	0.76	1.02	1.28	1.53	1.79	2.04	2.30	2.55
Mu(-), ton-m:	-12.14	-9.67	-7.23	-4.81	-2.96	-2.96	-2.96	-5.70	-8.70	-11.72	-14.78
Mu(+), ton-m:	14.54	11.72	8.89	6.02	3.13	2.96	2.96	4.58	6.87	9.12	11.35
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	8.38	8.38	8.38	8.40	8.45	8.49	8.54	8.59	8.61	8.61	8.61
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: F1(8\*-7) FLOOR: 3

Length: L = 4.21 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 4.21 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.42	0.84	1.26	1.68	2.11	2.53	2.95	3.37	3.79	4.21
Mu(-), ton-m:	-19.52	-15.81	-12.49	-9.56	-7.03	-4.88	-3.12	-1.76	-0.78	-0.20	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	8.46	6.79	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	4.91	4.91	4.64	4.06	3.48	2.90	2.32	1.74	1.16	0.58	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9\*-F1 11 #3@ 15 5 #3@ 30 11 #3@ 15 8\*-F1

BEAM: E2(10-9\*) FLOOR: 3

Length: L = 1.41 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 1.16 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.12	0.23	0.35	0.46	0.58	0.70	0.81	0.93	1.04	1.16
Mu(-), ton-m:	0.00	-0.02	-0.07	-0.15	-0.26	-0.40	-0.57	-0.78	-1.02	-1.28	-1.58
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	0.00	0.17	0.34	0.51	0.68	0.85	0.76	0.76	0.76	0.76	0.76
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: E2(9\*-9) FLOOR: 3

Length: L = 2.80 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.35 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.26	0.51	0.77	1.02	1.28	1.53	1.79	2.04	2.30	2.55
Mu(-), ton-m:	-12.66	-10.02	-7.40	-4.81	-2.53	-2.53	-2.53	-4.49	-6.81	-9.15	-11.53
Mu(+), ton-m:	10.99	8.86	6.70	4.52	2.53	2.53	2.80	5.29	7.74	10.17	12.58
As(+), cm2:	5.40	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	7.26	7.26	7.26	7.24	7.19	7.15	7.10	7.06	7.03	7.03	7.03
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: E2(9\*-8\*) FLOOR: 3

Length: L = 5.02 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 5.02 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.50	1.00	1.51	2.01	2.51	3.01	3.51	4.02	4.52	5.02
Mu(-), ton-m:	-27.84	-20.68	-14.09	-8.10	-7.22	-7.22	-7.22	-11.42	-19.07	-27.30	-36.09
Mu(+), ton-m:	25.70	22.16	18.03	13.31	8.01	7.22	7.22	10.01	13.07	15.55	17.47
As(+), cm2:	12.35	8.99	6.03	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	9.87	9.87	9.49	8.97	8.65	9.17	9.70	10.22	10.75	11.13	11.13
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00	15.00

DESIGN

9\*-F2 17 #3@ 15 11 #3@ 15 5 #3@ 30 11 #3@ 15 8\*-F2

BEAM: F2(8'-8) FLOOR: 3

Length: L = 2.80 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.155 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.26	0.51	0.76	1.02	1.28	1.53	1.79	2.04	2.30	2.55
Mu(-), ton-m:	-10.83	-8.63	-6.46	-4.31	-2.60	-1.28	-0.60	-0.33	-0.16	-0.08	-0.04
Mu(+), ton-m:	12.80	10.34	7.85	5.34	2.80	1.28	0.60	0.33	0.16	0.08	0.04
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	7.35	7.35	7.35	7.35	7.42	7.47	7.51	7.56	7.58	7.58	7.58
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: F2(8'-7) FLOOR: 3

Length: L = 4.21 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 4.21 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.42	0.84	1.26	1.68	2.11	2.53	2.95	3.37	3.79	4.21
Mu(-), ton-m:	-20.73	-16.79	-13.27	-10.16	-7.46	-5.18	-3.32	-1.87	-0.83	-0.21	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	9.02	7.23	5.66	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	5.22	5.22	4.92	4.31	3.69	3.08	2.46	1.85	1.23	0.62	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: F3(10'-9) FLOOR: 3

Length: L = 1.41 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 1.16 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.12	0.23	0.35	0.46	0.58	0.70	0.81	0.93	1.04	1.16
Mu(-), ton-m:	0.00	-0.02	-0.07	-0.15	-0.26	-0.41	-0.58	-0.79	-1.04	-1.31	-1.62
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	0.00	0.17	0.35	0.52	0.69	0.86	0.78	0.78	0.78	0.78	0.78
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8'-F2 17 #3@ 15 8'-F2

BEAM: F3(9'-9) FLOOR: 3

Length: L = 2.80 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.155 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.26	0.51	0.77	1.02	1.28	1.53	1.79	2.04	2.30	2.55
Mu(-), ton-m:	-13.35	-10.57	-7.82	-5.09	-2.67	-1.28	-0.67	-0.33	-0.16	-0.08	-0.04
Mu(+), ton-m:	11.80	9.52	7.20	4.87	2.67	1.28	0.67	0.33	0.16	0.08	0.04
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	7.61	7.61	7.61	7.59	7.55	7.50	7.45	7.41	7.39	7.39	7.39
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: F3(9'-8) FLOOR: 3

Length: L = 5.27 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 5.02 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.50	1.00	1.51	2.01	2.51	3.01	3.51	4.02	4.52	5.02
Mu(-), ton-m:	-25.78	-18.99	-12.79	-7.20	-6.66	-6.66	-6.66	-6.66	-10.27	-17.36	-33.32
Mu(+), ton-m:	22.68	19.77	16.26	12.15	7.44	6.66	6.66	6.66	9.21	11.81	13.82
As(+), cm2:	11.37	8.22	5.45	5.36	5.36	5.36	5.36	5.36	5.36	7.49	11.03
vu, Kg/cm2:	9.18	8.58	6.99	5.36	5.36	5.36	5.36	5.36	5.36	5.36	6.55
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: F3(8'-8) FLOOR: 3

Length: L = 2.80 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.155 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.26	0.51	0.76	1.02	1.28	1.53	1.79	2.04	2.30	2.55
Mu(-), ton-m:	-10.50	-8.37	-6.25	-4.17	-2.86	-1.86	-1.16	-0.66	-0.33	-0.16	-0.08
Mu(+), ton-m:	14.06	11.35	8.60	5.84	3.04	2.86	2.86	2.86	3.91	5.86	7.79
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	6.01	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

9'-F3 11 #3@ 15 5 #3@ 30 11 #3@ 15 8'-F3











BEAM: J1(8-7) FLOOR: 3

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Section: c = 0.00 m Mat: S50X70  
 Lu = 3.95 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-30.96	-25.13	-19.89	-15.26	-11.25	-7.84	-5.05	-2.87	-1.30	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	13.65	10.94	8.56	6.50	4.43	2.43	0.43	0.43	0.43	0.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.80	6.43	6.49	5.68	4.47	3.24	2.43	1.62	0.81	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-J1 14 #3@ 30 7-J1

BEAM: K(11'-10) FLOOR: 3

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Section: c = 0.25 m Mat: S50X70  
 Lu = 1.95 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.19	0.39	0.58	0.78	0.97	1.17	1.36	1.56	1.75	1.95
Mu(-), ton-m:	0.00	-0.09	-0.31	-0.67	-1.16	-1.80	-2.56	-3.47	-4.51	-5.70	-7.05
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.23	0.45	0.68	0.90	1.13	1.35	1.51	1.51	1.51	1.51
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

11'-K 7 #3@ 30 10-K

BEAM: K(10-9) FLOOR: 3

Length: L = 4.21 m a = 0.25 m Section: b = 50.0 cm Section: c = 0.25 m Mat: S50X70  
 Lu = 2.16 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.47	0.68	0.90	1.11	1.33	1.55	1.76	1.98	2.20	2.41
Mu(-), ton-m:	-13.19	-8.58	-8.11	-8.77	-12.59	-16.51	-20.66	-24.93	-29.44	-34.16	-39.17
Mu(+), ton-m:	7.83	7.83	7.83	7.83	7.83	7.83	7.83	7.83	7.83	7.83	7.83
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	8.51	8.51	8.51	8.50	8.36	8.22	8.12	8.05	8.05	8.05	8.05
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

10-K 15 #3@ 15 9-K

BEAM: K(9-8) FLOOR: 3

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Section: c = 0.00 m Mat: S50X70  
 Lu = 8.07 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65	6.46	7.26	8.07
Mu(-), ton-m:	-46.70	-29.56	-14.95	-9.36	-4.36	-0.36	0.00	0.00	0.00	0.00	0.00
Mu(+), ton-m:	15.57	9.46	14.23	16.00	15.17	13.13	15.25	15.95	14.07	9.70	15.61
As(+), cm2:	20.46	12.66	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	6.38	6.16	5.08	4.26	3.45	2.76	3.53	4.30	5.03	6.00	6.20
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

9-K 11 #3@ 15 15 #3@ 30 11 #3@ 15 8-K

BEAM: K(8-7) FLOOR: 3

Length: L = 4.21 m a = 1.80 m Section: b = 50.0 cm Section: c = 0.00 m Mat: S50X70  
 Lu = 2.41 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.04	2.28	2.52	2.76	3.00	3.25	3.49	3.73	3.97	4.21
Mu(-), ton-m:	-12.79	-10.19	-8.05	-6.09	-4.57	-3.17	-2.09	-1.22	-0.57	-0.23	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	2.36	2.36	2.36	2.25	1.93	1.61	1.29	0.96	0.64	0.32	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-K 8 #3@ 30 7-K

BEAM: K(11'-10) FLOOR: 3

Length: L = 2.20 m a = 0.00 m Section: b = 30.0 cm Section: c = 0.25 m Mat: S50X70  
 Lu = 1.95 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.19	0.39	0.58	0.78	0.97	1.17	1.36	1.56	1.75	1.95
Mu(-), ton-m:	0.00	-0.08	-0.28	-0.61	-1.06	-1.63	-2.33	-3.15	-4.10	-5.18	-6.41
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	0.00	0.34	0.68	1.02	1.37	1.71	2.05	2.29	2.29	2.29	2.29
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

11'-K1 7 #3@ 30 10-K1



BEAM: K1(10-9) FLOOR: 3

Length:		L = 4.21 m	a = 0.25 m	Section:	b = 30.0 cm	Sec:	S30X70	Mat:	
Lu = 3.71 m		c = 0.25 m	h = 70.0 cm	h = 70.0 cm	h = 70.0 cm	Mat:	RConcrete2		
X, m:	0.25	0.69	1.36	2.11	2.48	2.85	3.22	3.59	3.96
Mu(-), ton-m:	-6.79	-5.09	-3.80	-2.93	-2.58	-2.34	-2.21	-2.14	-2.09
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	1.67	1.67	1.51	0.91	0.25	1.80	2.48	2.66	2.66
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-K1 13 #3@ 30 9-K1

BEAM: K1(9-8) FLOOR: 3

Length:		L = 8.07 m	a = 0.25 m	Section:	b = 30.0 cm	Sec:	S30X70	Mat:	
Lu = 7.57 m		c = 0.25 m	h = 70.0 cm	h = 70.0 cm	h = 70.0 cm	Mat:	RConcrete2		
X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31
Mu(-), ton-m:	-9.80	-2.71	0.00	0.00	0.00	0.00	-1.63	-8.76	-18.42
Mu(+), ton-m:	0.00	0.83	4.08	7.51	8.83	7.81	4.52	0.53	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	7.90
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	4.96	4.72	3.17	1.62	0.20	1.51	3.06	4.55	5.93
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-K1 26 #3@ 30 8-K1

BEAM: K1(8-7) FLOOR: 3

Length:		L = 4.21 m	a = 0.25 m	Section:	b = 30.0 cm	Sec:	S30X70	Mat:	
Lu = 3.96 m		c = 0.00 m	h = 70.0 cm	h = 70.0 cm	h = 70.0 cm	Mat:	RConcrete2		
X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42
Mu(-), ton-m:	-30.96	-25.13	-19.89	-15.26	-11.25	-7.84	-5.05	-2.87	-1.30
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	13.65	10.94	8.56	6.50	4.43	2.43	0.43	0.43	0.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.80	6.80	6.49	5.68	4.87	4.05	3.24	2.43	1.62
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-K1 14 #3@ 30 7-K1

BEAM: L(11'-10) FLOOR: 3

Length:		L = 2.20 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:	
Lu = 1.95 m		c = 0.25 m	h = 70.0 cm	h = 70.0 cm	h = 70.0 cm	Mat:	RConcrete2		
X, m:	0.00	0.19	0.39	0.58	0.78	0.97	1.17	1.36	1.56
Mu(-), ton-m:	0.00	-0.09	-0.31	-0.67	-1.16	-1.80	-2.56	-3.47	-4.51
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.23	0.45	0.68	0.90	1.13	1.35	1.51	1.51
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

11'-L 7 #3@ 30 10-L

BEAM: L(10-9) FLOOR: 3

Length:		L = 4.21 m	a = 0.25 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:	
Lu = 2.16 m		c = 1.80 m	h = 70.0 cm	h = 70.0 cm	h = 70.0 cm	Mat:	RConcrete2		
X, m:	0.25	0.47	0.68	0.90	1.11	1.33	1.55	1.76	1.98
Mu(-), ton-m:	-13.78	-11.22	-11.22	-11.52	-17.37	-23.32	-29.50	-35.80	-42.33
Mu(+), ton-m:	11.22	11.22	11.22	11.22	11.22	11.22	11.22	11.22	11.22
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	9.86	9.86	9.86	9.86	9.86	9.86	9.86	9.86	9.86
Tu, ton-m:	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

10-L 15 #3@ 15 9-L

BEAM: L(9-8) FLOOR: 3

Length:		L = 8.07 m	a = 1.80 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:	
Lu = 6.27 m		c = 0.00 m	h = 70.0 cm	h = 70.0 cm	h = 70.0 cm	Mat:	RConcrete2		
X, m:	1.80	2.43	3.05	3.68	4.31	4.93	5.56	6.19	6.81
Mu(-), ton-m:	-53.83	-37.84	-24.32	-12.46	-10.77	-10.77	-10.77	-10.77	-19.57
Mu(+), ton-m:	17.94	18.73	18.09	15.79	12.43	10.77	14.13	19.07	22.97
As(+), cm2:	23.81	16.38	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	7.21	7.21	6.39	5.56	5.02	4.61	4.79	5.35	5.92
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

9-L 11 #3@ 15 9 #3@ 30 11 #3@ 15 8-L



BEAM: M(10-9) FLOOR: 3

Length: L = 4.21 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.16 m c = 1.80 m Mat: RConcrete2

X, m:	0.25	0.47	0.68	0.90	1.11	1.33	1.55	1.76	1.98	2.20	2.41
Mu(-), ton-m:	-9.92	-9.92	-9.92	-9.92	-14.30	-19.67	-25.26	-30.99	-36.95	-43.12	-49.58
Mu(+), ton-m:	9.92	9.92	9.92	9.92	9.92	9.92	9.92	9.92	9.92	9.92	16.53
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	10.89	10.89	10.89	10.90	11.04	11.18	11.35	11.55	11.71	11.88	12.05
Tu, ton-m:	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

10-M 15 #3@ 15 9-M

BEAM: M(9-8) FLOOR: 3

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 8.07 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65	6.46	7.26	8.07
Mu(-), ton-m:	-43.44	-26.89	-12.86	-8.69	-6.69	-6.69	-8.69	-8.69	-11.82	-24.79	-40.27
Mu(+), ton-m:	14.48	8.69	10.79	13.80	14.23	13.18	15.00	15.12	12.65	8.69	13.42
As(+), cm2:	18.94	11.48	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	17.49
vu, Kg/cm2:	6.15	5.93	4.92	4.12	3.31	2.50	3.20	3.97	4.69	5.52	5.72
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

9-M 11 #3@ 15 15 #3@ 30 11 #3@ 15 8-M

BEAM: M(8-7) FLOOR: 3

Length: L = 4.21 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.41 m c = 0.00 m Mat: RConcrete2

X, m:	1.80	2.04	2.28	2.52	2.76	3.00	3.25	3.49	3.73	3.97	4.21
Mu(-), ton-m:	-20.14	-16.71	-13.75	-10.96	-8.62	-6.39	-4.49	-2.88	-1.57	-0.91	-0.47
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.91
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	3.43	3.43	3.43	3.32	3.00	2.68	2.36	2.03	1.71	1.39	1.07
Tu, ton-m:	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-M 8 #3@ 30 7-M

BEAM: M(11-10) FLOOR: 3

Length: L = 2.20 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 1.95 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.19	0.39	0.58	0.78	0.97	1.17	1.36	1.56	1.75	1.95
Mu(-), ton-m:	0.00	-0.08	-0.28	-0.61	-1.06	-1.63	-2.33	-3.15	-4.10	-5.18	-6.41
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
vu, Kg/cm2:	0.00	0.34	0.68	1.02	1.37	1.71	2.05	2.29	2.29	2.29	2.29
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

11-M 7 #3@ 30 10-M

BEAM: M(10-9) FLOOR: 3

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.71 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.62	0.99	1.36	1.73	2.11	2.48	2.85	3.22	3.59	3.96
Mu(-), ton-m:	-6.86	-5.31	-4.18	-3.46	-3.19	-3.42	-4.13	-5.37	-7.03	-9.19	-11.81
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
vu, Kg/cm2:	1.45	1.45	1.29	0.69	0.10	0.66	1.33	2.01	2.69	2.87	2.87
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-M 13 #3@ 30 9-M

BEAM: M(9-8) FLOOR: 3

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 7.57 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-11.31	-3.76	0.00	0.00	0.00	0.00	0.00	-1.96	-9.00	-18.49	-29.96
Mu(+), ton-m:	0.00	0.52	2.86	6.45	7.94	7.08	3.94	0.46	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
vu, Kg/cm2:	5.07	4.83	3.28	1.73	0.25	1.40	2.95	4.44	5.82	7.20	7.41
Tu, ton-m:	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-M 26 #3@ 30 8-M

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:55 a.m. 05/08/2010

BEAM: M1(8-7) FLOOR: 3

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S50X70  
Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-30.96	-25.13	-19.89	-15.26	-11.25	-7.84	-5.05	-2.87	-1.30	-0.34
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	13.65	10.94	8.56	6.50	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.80	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.80	6.49	5.68	4.87	4.05	3.24	2.43	1.62	0.81	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:										

DESIGN

BEAM: N(11-10) FLOOR: 3

Length: L = 2.20 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 1.93 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.19	0.39	0.58	0.78	0.97	1.17	1.36	1.56	1.75	1.95
Mu(-), ton-m:	0.00	-0.05	-0.19	-0.41	-0.71	-1.10	-1.57	-2.13	-2.77	-3.50	-4.33
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.14	0.28	0.41	0.55	0.69	0.83	0.93	0.93	0.93	0.93
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:											

DESIGN

BEAM: N(10-9) FLOOR: 3

Length: L = 4.21 m a = 0.25 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.16 m c = 1.80 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.47	0.68	0.90	1.11	1.33	1.55	1.76	1.98	2.19	2.41
Mu(-), ton-m:	-9.40	-9.22	-9.22	-9.22	-13.18	-18.36	-23.68	-29.07	-34.61	-40.27	-46.12
Mu(+), ton-m:	9.22	9.22	9.22	9.22	9.22	11.30	14.40	17.36	20.19	22.84	25.40
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	12.44	14.92	17.49	20.19
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	9.38	9.38	9.38	9.39	9.47	9.56	9.62	9.66	9.67	9.67	9.67
Tu, ton-m:	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:											

DESIGN

BEAM: N(9-8) FLOOR: 3

Length: L = 8.07 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
Lu = 6.27 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.43	3.05	3.68	4.31	4.93	5.56	6.19	6.81	7.44	8.07
Mu(-), ton-m:	-41.17	-29.78	-19.87	-10.95	-8.23	-8.23	-8.23	-8.23	-8.23	-8.23	-8.23
Mu(+), ton-m:	16.27	16.14	14.54	11.94	8.82	8.23	10.49	15.17	19.30	22.59	25.03
As(+), cm2:	17.90	12.76	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	5.22	5.22	4.73	4.36	4.12	3.87	3.76	4.10	4.44	4.78	4.78
Tu, ton-m:	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:											

DESIGN

BEAM: N(8-7) FLOOR: 3

Length: L = 4.21 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.41 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.04	2.28	2.52	2.76	3.00	3.25	3.49	3.73	3.97	4.21
Mu(-), ton-m:	-7.65	-6.09	-4.82	-3.64	-2.74	-1.90	-1.25	-0.73	-0.34	-0.14	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	1.41	1.41	1.41	1.35	1.15	0.96	0.77	0.58	0.38	0.19	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:											

DESIGN

BEAM: B'(10-9) FLOOR: 4

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.40	0.79	1.19	1.58	1.98	2.38	2.77	3.17	3.56	3.96
Mu(-), ton-m:	0.00	-0.19	-0.72	-1.61	-2.85	-4.42	-6.29	-8.48	-10.98	-13.79	-16.92
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	0.00	0.46	0.92	1.39	1.83	2.25	2.66	3.08	3.50	3.66	3.66
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:											

DESIGN

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:55 a.m. 05/08/2010

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:55 a.m. 05/08/2010

BEAM: B\*(9-8) FLOOR: 4

Length:		L = 8.07 m	a = 0.25 m	Section:	b = 30.0 cm	Sec:	S50X70	Mat:			
Lu = 7.57 m		c = 0.25 m	h = 70.0 cm				RConcrete2				
X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-16.68	-11.10	-6.67	-3.60	-1.73	-1.21	-2.04	-4.16	-7.49	-11.97	-17.59
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	7.13	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	7.53
vu, Kg/cm2:	3.58	3.44	2.56	1.67	0.79	0.14	1.02	1.87	2.67	3.47	3.59
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-B\* 26 #3@ 30

BEAM: B\*(8-7) FLOOR: 4

Length:		L = 4.21 m	a = 0.25 m	Section:	b = 30.0 cm	Sec:	S50X70	Mat:			
Lu = 3.96 m		c = 0.00 m	h = 70.0 cm				RConcrete2				
X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-17.64	-14.32	-11.34	-8.70	-6.41	-4.47	-2.88	-1.64	-0.74	-0.20	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	7.55	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
vu, Kg/cm2:	3.87	3.87	3.70	3.23	2.77	2.31	1.85	1.39	0.92	0.46	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-B\* 14 #3@ 30

BEAM: C(10-9) FLOOR: 4

Length:		L = 4.21 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:			
Lu = 2.41 m		c = 1.80 m	h = 70.0 cm				RConcrete2				
X, m:	0.00	0.24	0.48	0.72	1.21	1.45	1.69	1.93	2.17	2.41	
Mu(-), ton-m:	0.00	-0.22	-0.55	-1.20	-2.07	-3.16	-4.58	-6.10	-8.03	-10.11	-12.60
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	
vu, Kg/cm2:	0.00	0.32	0.65	0.97	1.29	1.62	1.93	2.22	2.32	2.32	
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	

DESIGN

10-C 8 #3@ 30

9-C

BEAM: C(9-8) FLOOR: 4

Length:		L = 8.07 m	a = 1.80 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:		
Lu = 6.27 m		c = 0.00 m	h = 70.0 cm				RConcrete2			
X, m:	1.80	2.43	3.05	3.68	4.31	4.93	5.56	6.19	6.81	7.44
Mu(-), ton-m:	-66.37	-47.81	-31.73	-17.31	-13.86	-13.86	-13.86	-19.13	-34.46	-51.18
Mu(+), ton-m:	42.41	39.23	33.56	26.22	18.07	13.86	17.11	24.34	30.76	35.80
As(+), cm2:	29.90	20.97	13.63	10.71	10.71	10.71	10.71	14.85	22.56	31.36
vu, Kg/cm2:	18.47	17.01	14.45	11.18	10.71	10.71	10.71	13.20	15.45	17.11
Tu, ton-m:	8.49	8.49	7.67	6.83	6.29	6.51	6.99	7.56	8.13	8.75
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

9-C 11 #3@ 15 9 #3@ 30 11 #3@ 15

BEAM: C(8-7) FLOOR: 4

Length:		L = 4.21 m	a = 1.80 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:		
Lu = 2.41 m		c = 0.00 m	h = 70.0 cm				RConcrete2			
X, m:	1.80	2.04	2.28	2.52	2.76	3.00	3.25	3.49	3.73	3.97
Mu(-), ton-m:	-12.86	-10.24	-8.09	-6.12	-4.60	-3.19	-2.10	-1.23	-0.57	-0.23
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	2.38	2.38	2.38	2.26	1.94	1.62	1.29	0.97	0.65	0.32
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-C 8 #3@ 30

BEAM: C(10-9) FLOOR: 4

Length:		L = 4.21 m	a = 0.00 m	Section:	b = 30.0 cm	Sec:	S50X70	Mat:		
Lu = 3.96 m		c = 0.25 m	h = 70.0 cm				RConcrete2			
X, m:	0.00	0.40	0.79	1.19	1.58	1.98	2.38	2.77	3.17	3.56
Mu(-), ton-m:	0.00	-0.33	-1.27	-2.83	-4.99	-7.74	-11.01	-14.83	-19.19	-24.09
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
vu, Kg/cm2:	0.00	0.81	1.62	2.43	3.20	3.93	4.65	5.37	6.09	6.37
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-C 14 #3@ 30

9-C











Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:56 a.m. 05/08/2010

BEAM: E2(10-9') FLOOR: 4

Length:		L = 1.41 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70		
Lu = 1.16 m		c = 0.25 m	h = 70.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.12	0.23	0.35	0.46	0.58	0.70	0.81	0.93
Mu(-), ton-m:	0.00	-0.02	-0.07	-0.15	-0.26	-0.40	-0.57	-0.78	-1.02
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	0.00	0.17	0.34	0.51	0.68	0.85	0.76	0.76	0.76
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-F2 5 #3@ 30 9'-F2

BEAM: E2(9'-9') FLOOR: 4

Length:		L = 2.80 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70		
Lu = 2.55 m		c = 0.25 m	h = 70.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.26	0.51	0.77	1.02	1.28	1.53	1.79	2.04
Mu(-), ton-m:	-11.65	-9.20	-6.79	-4.40	-2.33	-2.33	-2.33	-4.23	-6.32
Mu(+), ton-m:	9.65	7.75	5.82	3.86	2.33	2.33	2.61	4.89	7.15
As(-), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	6.74	6.74	6.74	6.72	6.67	6.62	6.58	6.53	6.51
Vu, Kg/cm2:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Tu, ton-m:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9'-F2 17 #3@ 15 9'-F2

BEAM: E2(9-8') FLOOR: 4

Length:		L = 5.07 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70		
Lu = 5.02 m		c = 0.25 m	h = 70.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.50	1.00	1.51	2.01	2.51	3.01	3.51	4.02
Mu(-), ton-m:	-27.24	-20.19	-13.73	-7.85	-7.12	-7.12	-7.12	-11.18	-18.74
Mu(+), ton-m:	25.35	21.89	17.84	13.21	8.00	7.12	7.12	9.78	12.72
As(-), cm2:	12.06	8.77	5.86	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	9.74	9.74	9.36	8.83	8.55	9.07	9.60	10.12	10.65
Vu, Kg/cm2:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Tu, ton-m:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9'-F2 11 #3@ 15 5 #3@ 30 11 #3@ 15 8'-F2

Company: INTERDICO LTDA  
Project: HOSPITAL ZIPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:56 a.m. 05/08/2010

BEAM: E2(8'-8') FLOOR: 4

Length:		L = 2.80 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70		
Lu = 2.55 m		c = 0.25 m	h = 70.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.26	0.51	0.75	1.02	1.28	1.53	1.79	2.04
Mu(-), ton-m:	-10.04	-8.05	-6.08	-4.15	-2.51	-2.51	-2.51	-4.84	-7.39
Mu(+), ton-m:	12.24	9.88	7.49	5.08	2.64	2.51	2.51	3.33	5.13
As(-), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	7.18	7.18	7.18	7.20	7.25	7.30	7.34	7.39	7.41
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

8'-F2 17 #3@ 15 8'-F2

BEAM: E2(8-7) FLOOR: 4

Length:		L = 4.21 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70		
Lu = 4.21 m		c = 0.00 m	h = 70.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.42	0.84	1.26	1.68	2.11	2.53	2.95	3.37
Mu(-), ton-m:	-20.73	-16.79	-13.27	-10.16	-7.46	-5.18	-3.32	-1.87	-0.83
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	9.02	7.23	5.66	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	5.22	5.22	4.92	4.31	3.69	3.08	2.46	1.85	1.23
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8'-F2 14 #3@ 30 7'-F2

BEAM: F3(10-9') FLOOR: 4

Length:		L = 1.41 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70		
Lu = 1.16 m		c = 0.25 m	h = 70.0 cm	Mat:	RConcrete2				
X, m:	0.00	0.12	0.23	0.35	0.46	0.58	0.70	0.81	0.93
Mu(-), ton-m:	0.00	-0.02	-0.07	-0.15	-0.26	-0.41	-0.58	-0.79	-1.04
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	0.00	0.17	0.35	0.52	0.69	0.86	0.78	0.78	0.78
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-F3 5 #3@ 30 9'-F3





BEAM: H(10-9) FLOOR: 4

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.41 m c = 1.80 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	1.21	1.45	1.69	1.93	2.17	2.41
Mu(-), ton-m:	0.00	-0.21	-0.52	-1.15	-1.99	-4.39	-5.85	-7.69	-9.69	-12.08
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.31	0.62	0.93	1.24	1.55	2.13	2.23	2.23	2.23
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-H 8 #3@ 30 9-H

BEAM: H(9-8) FLOOR: 4

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 8.07 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65	6.46	7.26	8.07
Mu(-), ton-m:	-45.72	-29.14	-14.97	-10.43	-10.43	-10.43	-10.43	-10.43	-19.49	-34.62	-52.16
Mu(+), ton-m:	15.24	14.92	18.08	18.35	16.12	12.70	14.48	15.25	13.53	10.43	17.39
As(+), cm2:	20.00	12.47	10.71	10.71	10.71	10.71	10.71	10.71	10.71	14.93	23.02
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	6.18	5.96	5.00	4.22	3.44	3.13	3.91	4.65	5.40	6.33	6.52
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

9-H 11 #3@ 15 15 #3@ 30 11 #3@ 15 8-H

BEAM: H(8-7) FLOOR: 4

Length: L = 4.21 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.41 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.04	2.28	2.52	2.76	3.00	3.25	3.49	3.73	3.97	4.21
Mu(-), ton-m:	-12.31	-9.80	-7.75	-5.86	-4.40	-3.05	-2.01	-1.18	-0.55	-0.22	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	2.27	2.27	2.27	2.17	1.86	1.55	1.24	0.93	0.62	0.31	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-H 8 #3@ 30 7-H

BEAM: H(10-9) FLOOR: 4

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.40	0.79	1.19	1.58	1.98	2.38	2.77	3.17	3.56
Mu(-), ton-m:	0.00	-0.31	-1.21	-2.70	-4.76	-7.38	-10.50	-14.14	-18.30	-22.98
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	0.00	0.77	1.55	2.32	3.06	3.75	4.43	5.12	5.81	6.08
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-H 14 #3@ 30 9-H

BEAM: H(9-8) FLOOR: 4

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-26.82	-17.53	-10.18	-5.09	-2.00	-1.17	-2.58	-6.13	-11.68	-19.13	-28.47
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	11.72	7.51	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	8.22
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	5.95	5.72	4.25	2.77	1.29	0.23	1.71	3.13	4.45	5.77	5.97
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-H 26 #3@ 30 8-H

BEAM: H(8-7) FLOOR: 4

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-29.52	-23.96	-18.97	-14.55	-10.72	-7.48	-4.82	-2.74	-1.24	-0.33	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	12.97	10.40	8.15	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.48	6.19	5.41	4.64	3.87	3.09	2.32	1.55	0.77	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-H 14 #3@ 30 7-H









Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:56 a.m. 05/08/2010

BEAM: L(10-9) FLOOR: 4

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.41 m c = 1.80 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	1.21	1.45	1.69	1.93	2.17	2.41
Mu(-), ton-m:	0.00	-0.22	-0.54	-1.19	-2.06	-3.14	-4.55	-6.06	-7.98	-10.54
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.32	0.64	0.96	1.29	1.61	1.92	2.21	2.31	2.31
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-L 8 #3@ 30 9-L

BEAM: L(9-8) FLOOR: 4

Length: L = 8.07 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
Lu = 6.27 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.43	3.05	3.68	4.31	4.93	5.56	6.19	6.81	7.44
Mu(-), ton-m:	-61.77	-44.18	-29.08	-15.63	-12.35	-12.35	-12.35	-12.61	-24.47	-37.71
Mu(+), ton-m:	24.85	25.08	22.83	18.92	14.07	12.35	15.81	22.25	27.75	31.86
As(+), cm2:	27.64	19.29	12.45	10.71	10.71	10.71	10.71	10.71	10.71	16.32
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	11.86	13.69
Vu, Kg/cm2:	8.00	8.00	7.19	6.37	5.90	5.49	5.67	6.23	6.80	7.35
Tu, ton-m:	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

9-L 11 #3@ 15 9 #3@ 30 11 #3@ 15 8-L

BEAM: L(8-7) FLOOR: 4

Length: L = 4.21 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.41 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.28	2.52	2.76	3.00	3.25	3.49	3.73	3.97	4.21
Mu(-), ton-m:	-12.79	-10.19	-8.05	-6.09	-4.57	-3.17	-2.09	-1.22	-0.57	-0.23
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	2.36	2.36	2.25	1.93	1.61	1.29	0.96	0.64	0.32	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-L 8 #3@ 30 7-L

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:56 a.m. 05/08/2010

BEAM: L(10-9) FLOOR: 4

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.10	0.79	1.19	1.58	1.98	2.77	3.17	3.56	3.96
Mu(-), ton-m:	0.00	-0.49	-0.72	-1.59	-2.82	-4.37	-6.22	-8.39	-10.87	-13.65
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	0.00	0.46	0.91	1.37	1.81	2.22	2.64	3.05	3.46	3.62
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-L 14 #3@ 30 9-L

BEAM: L(9-8) FLOOR: 4

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06
Mu(-), ton-m:	-16.57	-11.04	-6.65	-3.59	-1.72	-1.19	-2.00	-4.07	-7.33	-11.74
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	7.08	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	3.55	3.42	2.54	1.67	0.79	0.12	0.99	1.84	2.63	3.42
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-L 26 #3@ 30 8-L

BEAM: L(8-7) FLOOR: 4

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	4.21
Mu(-), ton-m:	-17.46	-14.18	-11.22	-8.61	-6.34	-4.42	-2.85	-1.62	-0.73	-0.19
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	7.47	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	3.83	3.83	3.66	3.20	2.74	2.29	1.83	1.37	0.91	0.46
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-L 14 #3@ 30 7-L



Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:56 a.m. 05/08/2010

BEAM: C1(10-9) FLOOR: 5

Length:	L = 4.21 m	a = 0.00 m	Section:	b = 30.0 cm	Sec:	S30X70	Mat:	RConcrete2
Lu = 3.96 m	c = 0.25 m			h = 70.0 cm				
X, m:	0.00	0.40	1.19	1.98	2.38	2.77	3.17	3.56
Mu(-), ton-m:	0.00	-0.33	-1.27	-2.83	-4.99	-7.74	-11.01	-14.83
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
vu, Kg/cm2:	0.00	0.81	1.62	2.43	3.20	3.93	4.65	5.37
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:								

DESIGN

BEAM: C1(9-8) FLOOR: 5

Length:	L = 8.07 m	a = 0.25 m	Section:	b = 30.0 cm	Sec:	S30X70	Mat:	RConcrete2
Lu = 7.57 m	c = 0.25 m			h = 70.0 cm				
X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55
Mu(-), ton-m:	-28.21	-18.48	-10.77	-5.43	-2.20	-1.33	-0.82	-0.54
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	12.36	7.93	6.43	6.43	6.43	6.43	6.43	6.43
vu, Kg/cm2:	6.24	6.00	4.45	2.90	1.35	0.25	1.80	3.29
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:								

DESIGN

BEAM: C1(8-7) FLOOR: 5

Length:	L = 4.21 m	a = 0.25 m	Section:	b = 30.0 cm	Sec:	S30X70	Mat:	RConcrete2
Lu = 3.96 m	c = 0.00 m			h = 70.0 cm				
X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02
Mu(-), ton-m:	-30.96	-25.13	-19.89	-15.26	-11.25	-7.84	-5.05	-2.87
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	13.65	10.94	8.56	6.50	6.43	6.43	6.43	6.43
vu, Kg/cm2:	6.80	6.80	6.49	5.68	4.87	4.05	3.24	2.43
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:								

DESIGN

BEAM: D(10-9) FLOOR: 5

Length:	L = 4.21 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:	RConcrete2
Lu = 2.41 m	c = 1.80 m			h = 70.0 cm				
X, m:	0.00	0.24	0.48	0.72	0.96	1.21	1.45	1.69
Mu(-), ton-m:	0.00	-0.22	-0.54	-1.19	-2.06	-3.15	-4.56	-6.07
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	0.00	0.32	0.64	0.96	1.29	1.61	1.92	2.21
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:								

DESIGN

BEAM: D(9-8) FLOOR: 5

Length:	L = 8.07 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:	RConcrete2
Lu = 8.07 m	c = 0.00 m			h = 70.0 cm				
X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65
Mu(-), ton-m:	-48.32	-30.94	-16.07	-11.79	-11.79	-11.79	-11.79	-11.79
Mu(+), ton-m:	16.11	19.17	21.51	20.86	17.61	13.28	15.13	16.08
As(+), cm2:	21.22	13.28	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	6.48	6.25	5.29	4.49	3.68	3.59	4.39	5.16
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:								

DESIGN

BEAM: D(8-7) FLOOR: 5

Length:	L = 4.21 m	a = 1.80 m	Section:	b = 50.0 cm	Sec:	S50X70	Mat:	RConcrete2
Lu = 2.41 m	c = 0.00 m			h = 70.0 cm				
X, m:	1.80	2.04	2.28	2.52	2.76	3.00	3.25	3.49
Mu(-), ton-m:	-12.79	-10.19	-8.05	-6.09	-4.57	-3.17	-2.09	-1.22
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	2.36	2.36	2.36	2.25	1.93	1.61	1.29	0.96
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:								

DESIGN

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

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Project: HOSPITAL ZIAPAQUIRA

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:56 a.m. 05/08/2010



BEAM: E\*(10-9) FLOOR: 5

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.43	1.19	1.98	2.38	2.77	3.17	3.56	3.96
Mu(-), ton-m:	0.00	-0.33	-1.27	-2.83	-4.99	-7.74	-11.01	-14.83	-19.19
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-29.54
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	10.46
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	12.98
Vu, Kg/cm2:	0.00	0.81	1.62	2.43	3.20	3.93	4.65	5.37	6.09
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.37
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: E\*(9-8) FLOOR: 5

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-28.21	-18.49	-10.79	-5.46	-2.25	-1.39	-2.87	-6.59	-12.41	-20.22	-30.01
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	12.36	7.93	6.43	6.43	6.43	6.43	6.43	6.43	6.43	8.71	13.21
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.23	5.99	4.44	2.89	1.34	0.24	1.79	3.28	4.66	6.04	6.26
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: E\*(8-7) FLOOR: 5

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-30.96	-25.13	-19.89	-15.26	-11.25	-7.84	-5.05	-2.87	-1.30	-0.34	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	13.65	10.94	8.56	6.50	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.80	6.80	6.49	5.68	4.87	4.05	3.24	2.43	1.62	0.81	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: F(10-9\*) FLOOR: 5

Length: L = 1.41 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 1.01 m c = 0.40 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.10	0.20	0.30	0.40	0.50	0.61	0.71	0.81	0.91	1.01
Mu(-), ton-m:	0.00	-0.03	-0.08	-0.16	-0.28	-0.44	-0.63	-0.84	-1.11	-1.41	-1.74
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.11	0.21	0.32	0.43	0.53	0.64	0.74	0.84	0.94	1.04
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: F(9\*-9) FLOOR: 5

Length: L = 2.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.40 m c = 0.40 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.20	1.44	1.68	1.92	2.16	2.40
Mu(-), ton-m:	-29.58	-23.47	-17.41	-11.39	-5.92	-5.92	-5.92	-9.79	-14.64	-19.52	-24.46
Mu(+), ton-m:	22.70	18.20	13.65	9.05	5.92	6.40	6.40	12.23	18.00	23.73	29.41
As(+), cm2:	12.67	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	9.24	9.24	9.24	9.23	9.19	9.15	9.11	9.07	9.05	9.05	9.05
Tu, ton-m:	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: F(9-8\*) FLOOR: 5

Length: L = 5.27 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 4.87 m c = 0.40 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.49	0.97	1.46	1.95	2.44	2.92	3.41	3.90	4.38	4.87
Mu(-), ton-m:	-48.54	-36.73	-25.70	-15.46	-13.19	-13.19	-13.19	-22.19	-35.99	-50.58	-65.95
Mu(+), ton-m:	52.26	44.00	34.94	25.10	14.46	13.19	13.19	17.57	23.86	29.35	34.06
As(+), cm2:	21.32	15.88	10.95	10.71	10.71	10.71	10.71	10.71	15.54	22.28	29.69
As(-), cm2:	23.07	19.20	15.07	10.71	10.71	10.71	10.71	10.71	10.71	12.57	14.67
Vu, Kg/cm2:	9.04	9.04	8.79	8.45	8.78	9.13	9.49	9.84	10.20	10.44	10.44
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN





BEAM: F3(10-9) FLOOR: 5

Length:		L = 1.41 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70		
Lu = 1.16 m		c = 0.25 m		h = 70.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.12	0.23	0.35	0.46	0.58	0.70	0.81	1.04
Mu(-), ton-m:	0.00	-0.02	-0.07	-0.15	-0.26	-0.41	-0.58	-0.79	-1.04
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	0.00	0.17	0.35	0.52	0.69	0.86	1.03	1.20	1.47
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

10-F3 5 #3@ 30 9'-E3

BEAM: F3(9-8) FLOOR: 5

Length:		L = 2.80 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70		
Lu = 2.55 m		c = 0.25 m		h = 70.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.26	0.51	0.77	1.02	1.28	1.53	1.79	2.04
Mu(-), ton-m:	-0.87	-6.34	-4.11	-2.17	-2.17	-2.17	-2.17	-3.99	-5.97
Mu(+), ton-m:	9.09	7.30	5.49	3.64	2.17	2.17	2.41	4.53	6.62
As(-), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	6.25	6.25	6.25	6.23	6.18	6.13	6.09	6.04	6.02
Vu, Kg/cm2:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

9'-F3 17 #3@ 15 9'-E3

BEAM: F3(9-8) FLOOR: 5

Length:		L = 5.27 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70		
Lu = 5.02 m		c = 0.25 m		h = 70.0 cm	Mat:	RConcrete2			
X, m:	0.00	1.00	1.51	2.01	2.51	3.01	3.51	4.02	4.52
Mu(-), ton-m:	-24.16	-17.70	-11.83	-6.56	-6.28	-6.28	-9.45	-16.18	-23.52
Mu(+), ton-m:	20.97	18.42	15.27	11.52	7.18	6.28	6.28	10.80	12.48
As(-), cm2:	10.61	7.64	5.36	5.36	5.36	5.36	5.36	6.36	10.31
As(+), cm2:	9.13	7.96	6.55	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	8.70	8.70	8.31	7.78	7.30	7.78	8.32	8.85	9.39
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

9'-F3 11 #3@ 15 5 #3@ 30 11 #3@ 15 9'-E3

BEAM: F3(8-7) FLOOR: 5

Length:		L = 2.80 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70		
Lu = 2.55 m		c = 0.25 m		h = 70.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.26	0.51	0.76	1.02	1.28	1.53	1.79	2.04
Mu(-), ton-m:	-8.40	-6.74	-5.10	-3.50	-2.62	-2.62	-2.62	-5.11	-7.75
Mu(+), ton-m:	12.64	10.18	7.70	5.20	2.66	2.62	2.62	2.65	4.13
As(-), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	5.38	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	7.83	7.83	7.83	7.85	7.90	7.94	7.99	8.03	8.06
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Spacing, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

8'-F3 17 #3@ 15 8'-E3

BEAM: F3(8-7) FLOOR: 5

Length:		L = 4.21 m	a = 0.00 m	Section:	b = 25.0 cm	Sec:	S25X70		
Lu = 4.21 m		c = 0.00 m		h = 70.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.42	0.84	1.26	1.68	2.11	2.53	2.95	3.37
Mu(-), ton-m:	-21.14	-17.12	-13.53	-10.36	-7.61	-5.28	-3.38	-1.90	-0.85
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	9.20	7.38	5.78	5.36	5.36	5.36	5.36	5.36	5.36
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Vu, Kg/cm2:	5.32	5.32	5.02	4.39	3.77	3.14	2.51	1.88	1.26
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8'-F3 14 #3@ 30 7'-E3

BEAM: G(10-9) FLOOR: 5

Length:		L = 1.41 m	a = 0.00 m	Section:	b = 50.0 cm	Sec:	S50X70		
Lu = 1.01 m		c = 0.40 m		h = 70.0 cm	Mat:	RConcrete2			
X, m:	0.00	0.10	0.20	0.30	0.40	0.50	0.61	0.71	0.81
Mu(-), ton-m:	0.00	-0.03	-0.08	-0.17	-0.29	-0.46	-0.65	-0.87	-1.15
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.11	0.22	0.33	0.44	0.55	0.66	0.77	0.88
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-G 4 #3@ 30 9'-G





BEAM: G\*(8-7) FLOOR: 5

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S50X70  
 Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.25	-29.88	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
0.65	-24.26	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
1.04	-19.20	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
1.43	-14.73	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
1.83	-10.86	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
2.23	-7.57	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
2.63	-4.87	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.02	-2.77	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.42	-1.26	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.81	0.00	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
4.21	0.00	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00

DESIGN

BEAM: H(10-9) FLOOR: 5

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 3.96 m c = 1.80 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.00	0.00	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
0.24	-0.52	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
0.62	-1.15	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
1.01	-1.99	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
1.41	-3.03	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
1.82	-4.39	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
2.23	-6.09	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
2.63	-8.15	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.03	-10.58	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.43	-13.38	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.83	-16.54	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
4.21	-20.07	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00

DESIGN

BEAM: H(9-8) FLOOR: 5

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 8.07 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.00	0.00	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
0.81	-1.61	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
1.62	-3.22	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
2.43	-4.83	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.24	-6.44	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
4.05	-8.05	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
4.86	-9.66	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
5.67	-11.27	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
6.48	-12.88	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
7.29	-14.49	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
8.07	-16.10	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00

DESIGN

BEAM: H(8-7) FLOOR: 5

Length: L = 4.21 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.41 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
1.80	0.00	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
2.04	-2.28	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
2.52	-5.86	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
2.76	-4.40	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.05	-2.01	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.25	0.00	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.49	0.00	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.73	0.00	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.97	0.00	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
4.21	0.00	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00

DESIGN

BEAM: H(10-9) FLOOR: 5

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S50X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.00	0.00	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
0.31	-1.21	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
0.70	-2.70	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
1.19	-4.76	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
1.58	-7.38	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
2.00	-10.50	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
2.38	-14.14	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
2.77	-18.30	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.17	-22.98	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.56	-28.17	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.96	-33.96	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00

DESIGN

BEAM: H(9-8) FLOOR: 5

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S50X70  
 Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Stirrup, cm:	Spacing, cm:
0.25	0.00	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
1.01	-1.76	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
1.76	-3.28	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
2.52	-5.08	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
3.28	-7.13	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
4.04	-9.43	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
4.79	-11.98	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
5.55	-14.77	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
6.31	-17.81	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
7.06	-21.11	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
7.82	-24.77	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00
8.07	-28.77	0.00	6.43	6.43	0.00	0.00	#3 #3	30.00

DESIGN



BEAM: I1(8-7) FLOOR: 5

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S50X70  
 Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-30.07	-24.41	-19.32	-14.83	-10.92	-7.62	-4.91	-2.79	-1.26	-0.33
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	13.23	10.61	8.30	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.60	6.30	5.51	4.73	3.94	3.15	2.36	1.58	0.79	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-I1 14 #3@ 30 7-11

BEAM: J1(10-9) FLOOR: 5

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.41 m c = 1.80 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	1.21	1.45	1.69	1.93	2.17	2.41
Mu(-), ton-m:	0.00	-0.21	-0.53	-1.17	-2.02	-3.08	-4.46	-5.94	-7.82	-9.85
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.31	0.63	0.94	1.26	1.57	1.88	2.17	2.26	2.26
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-J 8 #3@ 30 9-J

BEAM: J(9-8) FLOOR: 5

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 8.07 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65	6.46	7.26	8.07
Mu(-), ton-m:	-49.90	-32.35	-17.26	-10.55	-10.55	-10.55	-10.55	-10.55	-19.64	-34.96	-52.73
Mu(+), ton-m:	16.63	14.95	18.22	18.55	16.34	13.02	15.44	16.92	15.86	12.36	17.58
As(+), cm2:	21.96	13.90	10.71	10.71	10.71	10.71	10.71	10.71	10.71	15.08	23.29
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	6.55	6.33	5.28	4.43	3.65	3.12	3.90	4.66	5.47	6.41	6.61
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

9-J 11 #3@ 15 15 #3@ 30 11 #3@ 15 8-J

BEAM: J(8-7) FLOOR: 5

Length: L = 4.21 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.41 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.04	2.28	2.52	2.76	3.00	3.25	3.49	3.73	3.97	4.21
Mu(-), ton-m:	-12.52	-9.97	-7.88	-5.96	-4.48	-3.10	-2.05	-1.20	-0.56	-0.23	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	2.31	2.31	2.31	2.20	1.89	1.57	1.26	0.94	0.63	0.31	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-J 8 #3@ 30 7-J

BEAM: J1(10-9) FLOOR: 5

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S50X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.40	0.79	1.19	1.58	1.98	2.38	2.77	3.17	3.56
Mu(-), ton-m:	0.00	-0.33	-1.27	-2.83	-4.99	-7.74	-11.01	-14.83	-19.19	-24.09
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	0.00	0.81	1.62	2.43	3.20	3.93	4.65	5.37	6.09	6.37
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-J1 14 #3@ 30 9-J1

BEAM: J1(9-8) FLOOR: 5

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S50X70  
 Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06
Mu(-), ton-m:	-28.26	-18.51	-10.79	-5.44	-2.19	-1.32	-2.79	-6.49	-12.30	-20.11
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	12.39	7.94	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.25	6.01	4.46	2.91	1.56	0.24	1.79	3.28	4.66	6.04
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-J1 26 #3@ 30 8-J1





BEAM: L1(8-7) FLOOR: 5

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-17.46	-14.18	-11.22	-8.61	-6.34	-4.42	-2.85	-1.62	-0.73	-0.19	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	7.47	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	3.83	3.83	3.66	3.20	2.74	2.29	1.83	1.37	0.91	0.46	0.00
Vu, Kg/cm2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: B\*(10-9) FLOOR: 6

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.40	0.79	1.19	1.58	1.98	2.38	2.77	3.17	3.56	3.96
Mu(-), ton-m:	0.00	-0.19	-0.72	-1.61	-2.85	-4.42	-6.29	-8.48	-10.98	-13.79	-16.92
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	0.00	0.46	0.92	1.39	1.83	2.25	2.66	3.08	3.50	3.66	3.66
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: B\*(9-8) FLOOR: 6

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 7.57 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-16.68	-11.11	-6.68	-3.61	-1.74	-1.21	-2.04	-4.15	-7.46	-11.93	-17.54
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	7.13	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	7.51
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	3.58	3.44	2.56	1.67	0.79	0.13	1.01	1.87	2.66	3.46	3.58
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: B\*(8-7) FLOOR: 6

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-17.64	-14.32	-11.34	-8.70	-6.41	-4.47	-2.88	-1.64	-0.74	-0.20	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	7.55	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	3.87	3.87	3.70	3.23	2.77	2.31	1.85	1.39	0.92	0.46	0.00
Vu, Kg/cm2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: C(10-9) FLOOR: 6

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.41 m c = 1.80 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.21	1.45	1.69	1.93	2.17	2.41
Mu(-), ton-m:	0.00	-0.22	-0.55	-1.20	-2.07	-3.16	-4.58	-6.10	-8.03	-10.11	-12.60
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.32	0.65	0.97	1.29	1.62	1.93	2.22	2.32	2.32	2.32
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: C(9-8) FLOOR: 6

Length: L = 8.07 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 6.27 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.43	3.05	3.68	4.31	4.93	5.56	6.19	6.81	7.44	8.07
Mu(-), ton-m:	-58.02	-41.19	-26.84	-14.16	-11.95	-11.95	-11.95	-15.46	-28.84	-43.61	-59.77
Mu(+), ton-m:	32.42	31.19	27.47	22.09	15.75	11.95	14.97	20.56	25.25	28.55	30.46
As(+), cm2:	25.82	17.91	11.46	10.71	10.71	10.71	10.71	10.71	12.34	19.02	26.67
As(-), cm2:	13.94	13.39	11.74	10.71	10.71	10.71	10.71	10.71	10.76	12.21	13.06
Vu, Kg/cm2:	7.63	7.63	6.81	5.97	5.24	5.39	5.87	6.44	7.04	7.78	7.78
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00	15.00

DESIGN

BEAM: C(8-7) FLOOR: 6

Length: L = 4.21 m a = 1.80 m Section: b = 50.0 cm Sec: S30X70  
 Lu = 2.41 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.04	2.28	2.52	2.76	3.00	3.25	3.49	3.73	3.97	4.21
Mu(-), ton-m:	-12.86	-10.24	-6.12	-4.60	-3.19	-2.10	-1.23	-0.57	-0.23	0.00	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	2.38	2.38	2.38	2.26	1.94	1.62	1.29	0.97	0.65	0.32	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-C

14 #3@ 30

7-C

BEAM: C1(10-9) FLOOR: 6

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.40	0.79	1.19	1.58	2.38	2.77	3.17	3.56	3.96
Mu(-), ton-m:	0.00	-0.33	-1.27	-2.83	-4.99	-7.74	-11.01	-14.83	-19.19	-24.09
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
vu, Kg/cm2:	0.00	0.81	1.62	2.43	3.20	3.93	4.65	5.37	6.09	6.83
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-C1

14 #3@ 30

9-C1

BEAM: C1(9-8) FLOOR: 6

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-28.21	-18.47	-10.76	-5.42	-2.19	-1.33	-2.81	-6.52	-12.34	-20.15	-29.94
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	12.36	7.92	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
vu, Kg/cm2:	6.24	6.00	4.45	2.90	1.35	0.24	1.79	3.28	4.66	6.04	6.26
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-C1

26 #3@ 30

8-C1

BEAM: C1(8-7) FLOOR: 6

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-30.96	-25.13	-19.89	-15.26	-11.25	-7.84	-5.05	-2.87	-1.30	0.00	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	13.65	10.94	8.56	6.50	6.43	6.43	6.43	6.43	6.43	6.43	6.43
vu, Kg/cm2:	6.80	6.80	6.49	5.68	4.87	4.05	3.24	2.43	1.62	0.81	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-C1

14 #3@ 30

7-C1

BEAM: D(10-9) FLOOR: 6

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S30X70  
 Lu = 2.41 m c = 1.80 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.21	1.45	1.69	1.93	2.17	2.41
Mu(-), ton-m:	0.00	-0.22	-0.54	-1.19	-2.06	-3.15	-4.56	-6.07	-7.99	-10.07	-12.55
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	0.00	0.32	0.64	0.96	1.29	1.61	1.92	2.21	2.31	2.31	2.31
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-D

8 #3@ 30

9-D

BEAM: D(9-8) FLOOR: 6

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Sec: S30X70  
 Lu = 8.07 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65	6.46	7.26	8.07
Mu(-), ton-m:	-45.36	-28.55	-14.26	-11.13	-11.13	-11.13	-11.13	-11.13	-11.13	-11.13	-11.13
Mu(+), ton-m:	15.12	16.70	19.68	19.66	17.05	13.18	14.63	15.01	12.80	11.13	18.55
As(+), cm2:	19.84	12.21	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	6.25	6.03	5.12	4.31	3.50	3.40	4.20	4.97	5.72	6.59	6.89
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

9-D

11 #3@ 15 15 #3@ 30 11 #3@ 15

8-D







BEAM: F (9-8') FLOOR: 6

Length: L = 5.27 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 4.87 m c = 0.40 m Mat: RConcrete2

X, m:	0.00	0.49	0.97	1.46	1.95	2.44	2.92	3.41	3.90	4.38	4.87
Mu(-), ton-m:	-45.13	-34.01	-23.68	-14.14	-12.44	-12.44	-12.44	-20.68	-33.73	-47.57	-62.19
Mu(+), ton-m:	48.53	41.01	32.71	23.61	13.72	12.44	12.44	16.12	21.71	26.50	30.52
As(+), cm2:	19.73	14.65	10.71	10.71	10.71	10.71	10.71	14.53	20.87	27.85	33.09
vu, Kg/cm2:	8.52	8.27	7.93	8.23	8.58	8.94	9.30	9.65	9.90	9.90	9.90
Tu, ton-m:	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: F (8'-8') FLOOR: 6

Length: L = 2.80 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.40 m c = 0.40 m Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.20	1.44	1.68	1.92	2.16	2.40
Mu(-), ton-m:	-23.00	-18.50	-14.04	-9.63	-5.38	-5.38	-5.38	-10.47	-15.89	-21.36	-26.89
Mu(+), ton-m:	26.11	21.02	15.89	10.71	5.49	5.38	5.38	7.54	11.71	15.82	19.89
As(+), cm2:	11.13	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	11.48
vu, Kg/cm2:	8.03	8.03	8.03	8.04	8.08	8.13	8.17	8.21	8.22	8.22	8.22
Tu, ton-m:	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: F (8-7') FLOOR: 6

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 4.21 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.42	0.84	1.26	1.68	2.11	2.53	2.95	3.37	3.79	4.21
Mu(-), ton-m:	-29.92	-24.24	-19.15	-14.66	-10.77	-7.48	-4.79	-2.69	-1.20	-0.30	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	12.82	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
vu, Kg/cm2:	3.77	3.77	3.55	3.11	2.67	2.22	1.78	1.33	0.89	0.44	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: F1(10-9') FLOOR: 6

Length: L = 1.41 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 1.16 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.12	0.23	0.35	0.46	0.58	0.70	0.81	0.93	1.04	1.16
Mu(-), ton-m:	0.00	-0.02	-0.07	-0.14	-0.24	-0.37	-0.54	-0.73	-0.96	-1.21	-1.49
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	0.00	0.16	0.32	0.48	0.64	0.80	0.72	0.72	0.72	0.72	0.72
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

BEAM: F1(9'-9') FLOOR: 6

Length: L = 2.80 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.35 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.26	0.51	0.77	1.02	1.28	1.53	1.79	2.04	2.30	2.55
Mu(-), ton-m:	-10.26	-8.09	-5.95	-3.84	-2.05	-2.05	-2.05	-3.58	-5.34	-7.13	-8.94
Mu(+), ton-m:	7.98	6.41	4.81	3.18	2.05	2.05	2.33	4.33	6.31	8.26	10.18
As(+), cm2:	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	6.03	6.03	6.03	6.00	5.96	5.91	5.87	5.82	5.80	5.80	5.80
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00

DESIGN

BEAM: F1(9-8') FLOOR: 6

Length: L = 5.02 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 5.02 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.50	1.00	1.51	2.01	2.51	3.01	3.51	4.02	4.52	5.02
Mu(-), ton-m:	-23.84	-17.57	-11.85	-6.69	-6.42	-6.42	-6.42	-9.95	-16.79	-24.19	-32.10
Mu(+), ton-m:	22.49	19.52	15.99	11.90	7.27	6.42	6.42	6.42	8.44	10.85	12.70
As(+), cm2:	10.46	7.58	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
vu, Kg/cm2:	8.74	8.74	8.39	7.89	7.71	8.20	8.69	9.19	9.68	10.04	10.04
Tu, ton-m:	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Stirrup, cm:	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00	15.00

DESIGN

BEAM: F1(10-9') FLOOR: 6

Length: L = 1.41 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 1.16 m c = 0.25 m Mat: RConcrete2

10-F1

5 #3@ 30

9'-F1

BEAM: F1(9'-9') FLOOR: 6

Length: L = 2.80 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 2.35 m c = 0.25 m Mat: RConcrete2

9'-F1

17 #3@ 15

9'-F1

BEAM: F1(9-8') FLOOR: 6

Length: L = 5.02 m a = 0.00 m Section: b = 25.0 cm Sec: S25X70  
 Lu = 5.02 m c = 0.25 m Mat: RConcrete2

9'-F1

11 #3@ 15 5 #3@ 30 11 #3@ 15

8'-F1



















Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:58 a.m. 05/08/2010

BEAM: L1(9-8) FLOOR: 6

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-16.56	-11.03	-6.64	-3.59	-1.72	-1.19	-2.00	-4.07	-7.34	-11.75	-17.29
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	7.08	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	7.40
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	3.55	3.41	2.54	1.67	0.79	0.12	0.99	1.84	2.63	3.42	3.54
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-L1 26 #3@ 30 8-L1

BEAM: L1(8-7) FLOOR: 6

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-17.46	-14.18	-11.22	-8.61	-6.34	-4.42	-2.85	-1.62	-0.73	-0.19	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	7.47	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	3.83	3.83	3.66	3.20	2.74	2.29	1.83	1.37	0.91	0.46	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-L1 14 #3@ 30 7-L1

BEAM: B\*(10-9) FLOOR: 7

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.40	0.79	1.19	1.58	1.98	2.38	2.77	3.17	3.56	3.96
Mu(-), ton-m:	0.00	-0.19	-0.72	-1.61	-2.85	-4.42	-6.29	-8.48	-10.98	-13.79	-16.92
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	7.24
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	0.00	0.46	0.92	1.39	1.83	2.25	2.66	3.08	3.50	3.66	3.66
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-B\* 14 #3@ 30 9-B\*

Company: INTERDICO LTDA  
Project: HOSPITAL ZIAPAQUIRA

Engineer: RODRIGO CASTRO S  
09:32:58 a.m. 05/08/2010

BEAM: B\*(9-8) FLOOR: 7

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-16.69	-11.11	-6.69	-3.61	-1.74	-1.21	-2.03	-4.13	-7.44	-11.91	-17.51
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	7.13	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	7.50
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	3.58	3.44	2.56	1.68	0.79	0.13	1.01	1.86	2.66	3.46	3.58
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-B\* 26 #3@ 30 8-B\*

BEAM: B\*(8-7) FLOOR: 7

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-17.64	-14.32	-11.34	-8.70	-6.41	-4.47	-2.88	-1.64	-0.74	-0.20	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	7.55	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	3.87	3.87	3.70	3.23	2.77	2.31	1.85	1.39	0.92	0.46	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-B\* 14 #3@ 30 7-B\*

BEAM: C(10-9) FLOOR: 7

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
Lu = 2.41 m c = 1.80 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.21	1.45	1.69	1.93	2.17	2.41
Mu(-), ton-m:	0.00	-0.22	-0.55	-1.20	-2.07	-3.16	-4.58	-6.10	-8.03	-10.11	-12.60
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.32	0.65	0.97	1.29	1.62	1.93	2.22	2.32	2.32	2.32
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3	#3
Spacing, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-C 8 #3@ 30 9-C

















BEAM: G\*(10-9) FLOOR: 7

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.25 m Mat: RConcrete2

X, m:	0.00	0.40	0.79	1.19	1.58	2.38	3.17	3.56	3.96
Mu(-), ton-m:	0.00	-0.32	-1.23	-2.73	-4.82	-7.47	-10.62	-14.32	-18.52
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	0.00	0.78	1.57	2.35	3.09	3.79	4.49	5.19	5.88
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-G\* 9-G\*

14 #3@ 30

BEAM: G\*(9-8) FLOOR: 7

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 7.57 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-27.17	-17.78	-10.36	-5.21	-2.11	-1.28	-2.70	-6.28	-11.88	-19.41	-28.86
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	11.88	7.62	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.01	5.78	4.29	2.79	1.30	0.23	1.72	3.16	4.49	5.83	6.03
Tu, ton-m:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-G\* 8-G\*

26 #3@ 30

BEAM: G\*(8-7) FLOOR: 7

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.25 m Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-29.88	-24.26	-19.20	-14.73	-10.86	-7.57	-4.87	-2.77	-1.26	-0.33	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	13.14	10.54	8.25	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.56	6.56	6.26	5.48	4.70	3.91	3.13	2.35	1.57	0.78	0.00
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-G\* 7-G\*

14 #3@ 30

BEAM: H(10-9) FLOOR: 7

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.41 m c = 1.80 m Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.21	1.45	1.69	1.93	2.17	2.41
Mu(-), ton-m:	0.00	-0.21	-0.52	-1.15	-1.99	-3.03	-4.39	-5.85	-7.69	-9.69	-12.08
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.31	0.62	0.93	1.24	1.55	1.85	2.13	2.23	2.23	2.23
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-H 9-H

8 #3@ 30

BEAM: H(9-8) FLOOR: 7

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 8.07 m c = 0.00 m Mat: RConcrete2

X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65	6.46	7.26	8.07
Mu(-), ton-m:	-40.88	-25.25	-12.05	-9.52	-9.52	-9.52	-9.52	-9.52	-16.72	-30.95	-47.58
Mu(+), ton-m:	13.63	11.35	15.41	16.58	15.27	12.47	13.57	13.39	10.71	9.52	15.86
As(+), cm2:	17.77	10.76	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	5.81	5.59	4.72	3.95	3.17	2.88	3.65	4.39	5.09	5.98	6.17
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

9-H 8-H

11 #3@ 15 #3@ 30 11 #3@ 15

BEAM: H(8-7) FLOOR: 7

Length: L = 4.21 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.41 m c = 0.00 m Mat: RConcrete2

X, m:	1.80	2.04	2.28	2.52	2.76	3.00	3.25	3.49	3.73	3.97	4.21
Mu(-), ton-m:	-12.31	-9.80	-7.75	-5.86	-4.40	-3.05	-2.01	-1.18	-0.55	-0.22	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	2.27	2.27	2.27	2.17	1.86	1.55	1.24	0.93	0.62	0.31	0.00
Tu, ton-m:	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-H 7-H

8 #3@ 30





BEAM: J1(10-9) FLOOR: 7

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.40	1.19	1.98	2.38	2.77	3.17	3.56	3.96
Mu(-), ton-m:	0.00	-0.33	-1.27	-2.83	-4.99	-7.74	-11.01	-14.83	-19.19
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	0.00	0.81	1.62	2.43	3.20	3.93	4.65	5.37	6.09
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-J1 14 #3@ 30 9-J1

BEAM: J1(9-8) FLOOR: 7

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31	7.06	7.82
Mu(-), ton-m:	-28.22	-18.48	-10.77	-5.42	-2.18	-1.31	-2.78	-6.48	-12.29	-20.09	-29.87
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	12.37	7.93	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.24	6.01	4.45	2.90	1.35	0.24	1.79	3.27	4.66	6.04	6.25
Vu, Kg/cm2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-J1 26 #3@ 30 8-J1

BEAM: J1(8-7) FLOOR: 7

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42	3.81	4.21
Mu(-), ton-m:	-30.96	-25.13	-19.89	-15.26	-11.25	-7.84	-5.05	-2.87	-1.30	-0.34	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	13.65	10.94	8.56	6.50	6.43	6.43	6.43	6.43	6.43	6.43	6.43
As(-), cm2:	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
Vu, Kg/cm2:	6.80	6.80	6.49	5.68	4.87	4.05	3.24	2.43	1.62	0.81	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-J1 14 #3@ 30 7-J1

BEAM: K(10-9) FLOOR: 7

Length: L = 4.21 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.41 m c = 1.80 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.24	0.48	0.72	0.96	1.21	1.45	1.69	1.93	2.17	2.41
Mu(-), ton-m:	0.00	-0.22	-0.54	-1.19	-2.06	-3.15	-4.56	-6.07	-7.99	-10.07	-12.55
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	0.00	0.32	0.64	0.96	1.29	1.61	1.92	2.21	2.31	2.31	2.31
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-K 8 #3@ 30 9-K

BEAM: K(9-8) FLOOR: 7

Length: L = 8.07 m a = 0.00 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 8.07 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	0.00	0.81	1.61	2.42	3.23	4.04	4.84	5.65	6.46	7.26	8.07
Mu(-), ton-m:	-47.70	-30.41	-15.65	-9.91	-9.91	-9.91	-9.91	-9.91	-17.47	-32.28	-49.57
Mu(+), ton-m:	15.90	11.88	16.07	17.27	15.87	13.11	15.14	15.99	14.26	10.03	16.52
As(+), cm2:	20.92	13.04	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	6.44	6.21	5.14	4.33	3.52	2.92	3.73	4.50	5.25	6.22	6.42
Tu, ton-m:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Stirrup, cm:	15.00	15.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	15.00

DESIGN

9-K 11 #3@ 15 15 #3@ 30 11 #3@ 15 8-K

BEAM: K(8-7) FLOOR: 7

Length: L = 4.21 m a = 1.80 m Section: b = 50.0 cm Sec: S50X70  
 Lu = 2.41 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	1.80	2.04	2.28	2.52	2.76	3.00	3.25	3.49	3.73	3.97	4.21
Mu(-), ton-m:	-12.79	-10.19	-8.05	-6.09	-4.57	-3.17	-2.09	-1.22	-0.57	-0.23	0.00
Mu(+), ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
As(+), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
As(-), cm2:	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71	10.71
Vu, Kg/cm2:	2.36	2.36	2.36	2.25	1.93	1.61	1.29	0.96	0.64	0.32	0.00
Tu, ton-m:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stirrup, cm:	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-K 8 #3@ 30 7-K





BEAM: L1(10-9) FLOOR: 7

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Strrup, cm:	Spacing, cm:
0.00	0.40	0.79	1.19	1.58	1.98	2.38	2.77	3.17
0.00	-0.19	-0.72	-1.19	-2.82	-4.37	-6.22	-8.39	-10.87
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
0.00	0.46	0.91	1.37	1.81	2.22	2.64	3.05	3.46
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
#3	#3	#3	#3	#3	#3	#3	#3	#3
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-L1  
14 #3@ 30

BEAM: L1(9-8) FLOOR: 7

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Strrup, cm:	Spacing, cm:
0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31
-16.55	-11.02	-6.64	-3.58	-1.72	-1.19	-2.00	-4.06	-7.33
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7.07	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
3.55	3.41	2.54	1.66	0.79	0.12	0.99	1.84	2.63
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
#3	#3	#3	#3	#3	#3	#3	#3	#3
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-L1  
26 #3@ 30

BEAM: L1(8-7) FLOOR: 7

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Strrup, cm:	Spacing, cm:
0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42
-17.46	-14.18	-11.22	-8.61	-6.34	-4.42	-2.85	-1.62	-0.73
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7.47	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
3.83	3.83	3.66	3.20	2.74	2.29	1.83	1.37	0.91
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
#3	#3	#3	#3	#3	#3	#3	#3	#3
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-L1  
14 #3@ 30

BEAM: L1(10-9) FLOOR: 7

Length: L = 4.21 m a = 0.00 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Strrup, cm:	Spacing, cm:
0.00	0.40	0.79	1.19	1.58	1.98	2.38	2.77	3.17
0.00	-0.19	-0.72	-1.19	-2.82	-4.37	-6.22	-8.39	-10.87
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
0.00	0.46	0.91	1.37	1.81	2.22	2.64	3.05	3.46
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
#3	#3	#3	#3	#3	#3	#3	#3	#3
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

10-L1  
14 #3@ 30

BEAM: L1(9-8) FLOOR: 7

Length: L = 8.07 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 7.57 m c = 0.25 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Strrup, cm:	Spacing, cm:
0.25	1.01	1.76	2.52	3.28	4.04	4.79	5.55	6.31
-16.55	-11.02	-6.64	-3.58	-1.72	-1.19	-2.00	-4.06	-7.33
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7.07	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
3.55	3.41	2.54	1.66	0.79	0.12	0.99	1.84	2.63
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
#3	#3	#3	#3	#3	#3	#3	#3	#3
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

9-L1  
26 #3@ 30

BEAM: L1(8-7) FLOOR: 7

Length: L = 4.21 m a = 0.25 m Section: b = 30.0 cm Sec: S30X70  
 Lu = 3.96 m c = 0.00 m h = 70.0 cm Mat: RConcrete2

X, m:	Mu(-), ton-m:	Mu(+), ton-m:	As(-), cm2:	As(+), cm2:	Vu, Kg/cm2:	Tu, ton-m:	Strrup, cm:	Spacing, cm:
0.25	0.65	1.04	1.44	1.83	2.23	2.63	3.02	3.42
-17.46	-14.18	-11.22	-8.61	-6.34	-4.42	-2.85	-1.62	-0.73
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7.47	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43
3.83	3.83	3.66	3.20	2.74	2.29	1.83	1.37	0.91
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
#3	#3	#3	#3	#3	#3	#3	#3	#3
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00

DESIGN

8-L1  
14 #3@ 30

**Design Results - Walls**

Wall	Story	B (m)	H (m)	t (cm)	Mat	Lcmb	Vu	Reinforcement	Lcmb	Pu	Mu2	As tot	As ctr	As end	Ends
										VERTICAL REINFORCEMENT					
										Lcmb	crit	(ton-m)	(cm2)	(cm2)	(cm2)
10(B*-D)	S	11.30	3.50	25.0	2	4	165.72	2Ly#3822.7 .0025	4	35.49	403.69	70.62	-	-	-
10(F-I)	S	22.73	3.50	25.0	2	4	296.41	2Ly#3822.7 .0025	1	159.16	712.95	176.91	136.41	20.25	45x45
9*(F1-F3)	S	4.20	3.50	25.0	1	4	57.20	2Ly#3822.7 .0025	3	449.64	94.41	73.77	18.37	27.70	25x63*
8(F1-F3)	S	4.20	3.50	25.0	1	4	57.97	2Ly#3822.7 .0025	2	624.45	131.13	149.67	18.37	65.65	25x63*





Beam	Floor	Sec	lBTop	lBBot	rMn	rMp	rV3
B*(9-8*)	6	IPES500	807	807	0.149	0.047	0.010
M*(10-9*)	6	IPES500	421	421	0.032	0.006	0.006
M*(10-9*)	6	IPES500	421	421	0.034	0.004	0.004
M*(9-8*)	6	IPES500	807	807	0.153	0.124	0.012
M*(9-8*)	6	IPES500	807	807	0.153	0.124	0.012
M*(8-7)	6	IPES500	421	421	0.036	0.023	0.005
M*(10-9*)	7	IPES500	421	421	0.037	0.048	0.013
B*(9-8*)	7	IPES500	807	807	0.149	0.048	0.013
B*(9-8*)	7	IPES500	807	807	0.149	0.048	0.013
M*(10-9*)	7	IPES500	421	421	0.033	0.028	0.007
M*(10-9*)	7	IPES500	421	421	0.033	0.028	0.007
M*(9-8*)	7	IPES500	807	807	0.148	0.119	0.012
M*(9-8*)	7	IPES500	807	807	0.148	0.119	0.012
M*(8-7)	7	IPES500	421	421	0.039	0.027	0.007
B*(10-9*)	8	IPES500	421	421	0.041	0.025	0.016
B*(9-8*)	8	IPES500	807	807	0.183	0.029	0.019
B*(8-7)	8	IPES500	421	421	0.062	0.037	0.019
B*(10-9*)	8	IPES500	421	421	0.066	0.063	0.017
B*(10-9*)	8	IPES500	421	421	0.085	0.000	0.023
B*(9-8*)	8	IPES500	807	807	0.085	0.000	0.023
B*(9-8*)	8	IPES500	807	807	0.195	0.000	0.022
B*(8-7)	8	IPES500	421	421	0.085	0.000	0.022
C*(10-9*)	8	IPES500	421	421	0.057	0.000	0.012
C*(9-8*)	8	IPES500	807	807	0.596	0.464	0.056
C*(8-7)	8	IPES500	421	421	0.027	0.000	0.012
C*(10-9*)	8	IPES500	421	421	0.075	0.000	0.020
D*(9-8*)	8	IPES500	807	807	0.171	0.000	0.019
D*(9-8*)	8	IPES500	807	807	0.171	0.000	0.019
D*(8-7)	8	IPES500	421	421	0.075	0.000	0.020
D*(10-9*)	8	IPES500	421	421	0.026	0.000	0.012
D*(9-8*)	8	IPES500	807	807	0.501	0.284	0.043
D*(8-7)	8	IPES500	421	421	0.026	0.000	0.012
D*(10-9*)	8	IPES500	421	421	0.075	0.000	0.020
D*(9-8*)	8	IPES500	807	807	0.171	0.000	0.019
D*(8-7)	8	IPES500	421	421	0.026	0.000	0.012
D*(10-9*)	8	IPES500	421	421	0.026	0.000	0.012
D*(9-8*)	8	IPES500	807	807	0.474	0.257	0.042
D*(8-7)	8	IPES500	421	421	0.026	0.000	0.012
D*(10-9*)	8	IPES500	421	421	0.075	0.000	0.020
E*(9-8*)	8	IPES500	807	807	0.171	0.000	0.019
E*(8-7)	8	IPES500	421	421	0.026	0.000	0.012
E*(10-9*)	8	IPES500	421	421	0.026	0.000	0.012
E*(9-8*)	8	IPES500	807	807	0.474	0.257	0.042
E*(8-7)	8	IPES500	421	421	0.026	0.000	0.012
E*(10-9*)	8	IPES500	421	421	0.075	0.000	0.020
E*(9-8*)	8	IPES500	807	807	0.171	0.000	0.019
E*(8-7)	8	IPES500	421	421	0.026	0.000	0.012
E*(10-9*)	8	IPES500	421	421	0.075	0.000	0.020
F*(9-8*)	8	IPES500	807	807	0.171	0.000	0.019
F*(8-7)	8	IPES500	421	421	0.075	0.000	0.020
F*(10-9*)	8	IPES500	421	421	0.003	0.000	0.004
F*(9-8*)	8	IPES500	807	807	0.086	0.048	0.048
F*(8-7)	8	IPES500	421	421	0.039	0.019	0.019
F*(10-9*)	8	IPES500	421	421	0.062	0.000	0.016
F*(9-8*)	8	IPES500	807	807	0.069	0.072	0.033
F*(8-7)	8	IPES500	421	421	0.345	0.314	0.068
F*(10-9*)	8	IPES500	421	421	0.083	0.084	0.043

Beam	Floor	Sec	lBTop	lBBot	rMn	rMp	rV3
F*(8-7)	8	IPES500	421	421	0.048	0.000	0.013
F*(10-9*)	8	IPES500	421	421	0.003	0.000	0.004
F*(9-8*)	8	IPES500	807	807	0.054	0.058	0.030
F*(9-8*)	8	IPES500	807	807	0.336	0.303	0.066
F*(8-7)	8	IPES500	421	421	0.050	0.000	0.013
F*(10-9*)	8	IPES500	421	421	0.003	0.000	0.004
F*(9-8*)	8	IPES500	807	807	0.273	0.273	0.061
F*(8-7)	8	IPES500	421	421	0.051	0.000	0.013
G*(10-9*)	8	IPES500	421	421	0.003	0.000	0.004
G*(9-8*)	8	IPES500	807	807	0.072	0.072	0.039
G*(8-7)	8	IPES500	421	421	0.298	0.260	0.062
G*(10-9*)	8	IPES500	421	421	0.064	0.000	0.017
G*(10-9*)	8	IPES500	421	421	0.072	0.000	0.019
G*(9-8*)	8	IPES500	807	807	0.166	0.000	0.019
G*(8-7)	8	IPES500	421	421	0.072	0.000	0.011
H*(10-9*)	8	IPES500	421	421	0.025	0.000	0.011
H*(9-8*)	8	IPES500	807	807	0.444	0.235	0.039
H*(8-7)	8	IPES500	421	421	0.025	0.000	0.011
H*(10-9*)	8	IPES500	421	421	0.072	0.000	0.019
H*(9-8*)	8	IPES500	807	807	0.164	0.000	0.018
H*(8-7)	8	IPES500	421	421	0.072	0.000	0.019
I*(10-9*)	8	IPES500	421	421	0.026	0.000	0.012
I*(9-8*)	8	IPES500	807	807	0.459	0.242	0.041
I*(8-7)	8	IPES500	421	421	0.026	0.000	0.012
I*(10-9*)	8	IPES500	421	421	0.075	0.000	0.020
I*(9-8*)	8	IPES500	807	807	0.171	0.000	0.019
I*(8-7)	8	IPES500	421	421	0.026	0.000	0.012
J*(10-9*)	8	IPES500	421	421	0.026	0.000	0.012
J*(9-8*)	8	IPES500	807	807	0.458	0.246	0.040
J*(8-7)	8	IPES500	421	421	0.026	0.000	0.012
J*(10-9*)	8	IPES500	421	421	0.075	0.000	0.020
J*(9-8*)	8	IPES500	807	807	0.171	0.000	0.019
J*(8-7)	8	IPES500	421	421	0.075	0.000	0.020
K*(10-9*)	8	IPES500	421	421	0.026	0.000	0.012
K*(9-8*)	8	IPES500	807	807	0.462	0.245	0.041
K*(8-7)	8	IPES500	421	421	0.026	0.000	0.012
K*(10-9*)	8	IPES500	421	421	0.075	0.000	0.020
K*(9-8*)	8	IPES500	807	807	0.171	0.000	0.019
K*(8-7)	8	IPES500	421	421	0.075	0.000	0.020
L*(10-9*)	8	IPES500	421	421	0.026	0.000	0.012
L*(9-8*)	8	IPES500	807	807	0.171	0.000	0.019
L*(8-7)	8	IPES500	421	421	0.026	0.000	0.012

Company: INTERDICO LTDA  
 Project: HOSPITAL ZIPAQUIRA  
 Engineer: RODRIGO CASTRO S  
 09:33:00 a.m. 05/08/2010

Beam	Floor	Sec	IbTop	IbBot	rMn	rMp	rV3
L1(9-8')	8	IPES500	807	807	0.605	0.467	0.057
L1(8-7)	8	IPES500	421	421	0.605	0.467	0.057
L1(10-9')	8	IPES500	421	421	0.026	0.000	0.012
L1(10-9')	8	IPES500	421	421	0.075	0.000	0.020
L1(9-8')	8	IPES500	421	421	0.075	0.000	0.020
L1(9-8')	8	IPES500	807	807	0.171	0.000	0.019
L1(8-7)	8	IPES500	807	807	0.171	0.000	0.019
L1(8-7)	8	IPES500	421	421	0.075	0.000	0.020
M(10-9')	8	IPES500	421	421	0.060	0.015	0.014
M(9-8')	8	IPES500	407	407	0.168	0.086	0.019
M(9-8')	8	IPES500	807	807	0.168	0.086	0.019
M(8-7)	8	IPES500	807	807	0.168	0.086	0.019
M(8-7)	8	IPES500	421	421	0.063	0.019	0.015
9B-8'B'	3	IPES500	566	566	0.057	0.538	0.056

# **NUEVO HOSPITAL DE ZIPAQUIRÁ.**

**MEMORIAS DE CALCULO**

**DERIVAS UMBRAL DE DANO.**

EQUIVALENT STATIC EARTHQUAKE FORCES COL NSR-98

Base Shear  
V = Sa W  
Sa = 1.2 Aa S I / T, Sa = Aa I/2 For T > 2.4 S  
Sa = 2.5 Aa I For T < Tc, where Tc = 0.48 S

SEISMIC PARAMETERS  
Peak acceleration, Aa ..... = 0.04

Region:	10	9	8	7	6	5	4	3	2	1
Aa:	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10	0.075	0.05

LOCATION  
Cucuta, Neiva, Pasto, Quibdo, Villavicencio  
Armenia, B/manga, Cali, Manizales, Pereira, Popayan  
Bogota, Ibaque, Medellin, Tunja  
Monteria, Santa Marta  
Barranquilla, Cartagena, San Andres

Importance coefficient, I ..... = 1.3  
GROUP  
IV - Essential facilities  
III - Public assistance facilities  
II - Special occupancy buildings  
I - Normal occupancy buildings

Site profile coefficient, S ..... = 1.5  
PROFILE TYPE S1 S2 S3 S4  
FACTOR S 1.0 1.2 1.5 2.0

Energy Dissipation Coefficient, Ro = 5 5  
T = 0.08 h^0.4 ..... = 1.05  
T = 0.05 h^0.4 ..... = .66  
Tmax: 1.2 Ta ..... = 1.79  
Fundamental period, T ..... = 1.05

Reduction in R for Irregular Buildings:  
PLAN IRREGULARITIES ELEVATION IRREGULARITIES  
Type Description  
1P Torsional 0p Type Description 0a  
1A Stiffness 0.9  
2P Reentrant corners 0.9 2A Mass 0.9  
3P Diaph. discont. 0.9 3A Geometrical 0.9  
4P Plane shifting 0.8 4A Plane shifting 0.8  
5P Unparallel grid 0.9 5A Resistance 0.8

NOTE: EngSolutions RCB assumes irregular building.  
For regular buildings make (0p . 0a) = 1.0  
Reduction factor, (0p . 0a) : 0.81  
R = (0p . 0a)Ro

TOTAL BASE SHEAR

Building Weight, W, (ton) = 11644.44  
Acceleration, Aa ..... = .04  
Transition period, Tc ..... = .72  
Site coefficient, S ..... = 1.5  
Importance factor, I ..... = 1.3  
Reduct.for Irregularity, 0a .0p = .81

Reduced energy coef, R =	4.05	X-direction	Y-direction
1.2 Aa S I / T	1.05		
2.5 Aa I	.089		
Sa	.13		
	.089		

Total Base Shear, V, (ton) = 1038.02 1038.02

ACCIDENTAL TORSION

Accidental eccentricity as a  
Percentage of building dimension, (%) = 5 5

ACCIDENTAL ECCENTRICITY:

Level	X-direction (EQY) (m)	Y-direction (EQX) (m)	X-direction (EQY) (m)	Y-direction (EQX) (m)
8	0.82	1.00	0.82	4.19
7	0.82	1.00	0.82	4.19
6	0.82	1.00	0.82	4.19
5	0.82	1.00	0.82	4.19
4	0.93	1.00	0.93	4.56
3	0.93	1.00	0.93	4.56
2	1.23	1.00	1.23	4.56
1	1.23	1.00	1.23	5.09

Ak: Amplification factor for accidental eccentricity

EQY: Envelope (1) (2) (3)

Equivalent Forces  $F_i = (W_i H_i^n) / \sum F_i^n$   $F_i = \sum W_i^n K$   
 $V = \sum W_i W$

EQUIVALENT FORCES: X - DIRECTION (EQUAKE X)

Floor	Height Hi (m)	Weight Wi (ton)	Wi Hi^n	Force Fi	Shear Vi	Torsion Ti=Fi(Hi^n)
8	30.79	315.4	0.063	65.39	65.394	274.24
7	27.29	1383	0.37	246.51	511.90	8231.9
6	23.79	1383	0.199	206.56	411.97	5679.7
5	20.29	1383	0.163	169.19	332.16	4097.1
4	16.79	1380	0.128	132.86	260.03	3056.72
3	13.30	1793	0.123	127.67	247.71	2282.23
2	8.39	1425	0.054	56.053	1003.7	255.67
1	3.50	2581	0.032	33.216	1036.9	169.18
<b>Σ</b>						

n = 1.275

EQUIVALENT FORCES: Y - DIRECTION (EQUAKE Y)

Floor	Height Hi (m)	Weight Wi (ton)	Wi Hi^n	Force Fi	Shear Vi	Torsion Ti=Fi(Hi^n)
8	30.79	315.4	0.063	65.39	65.394	274.24
7	27.29	1383	0.37	246.51	511.90	8231.9
6	23.79	1383	0.199	206.56	411.97	5679.7
5	20.29	1383	0.163	169.19	332.16	4097.1
4	16.79	1380	0.128	132.86	260.03	3056.72
3	13.30	1793	0.123	127.67	247.71	2282.23
2	8.39	1425	0.054	56.053	1003.7	255.67
1	3.50	2581	0.032	33.216	1036.9	169.18
<b>Σ</b>						

n = 1.275

DESIGN ECCENTRICITY:  $E = e / h$

X - DIRECTION (EQX)

Level	Center Mass	Static Eccent.	Accident Eccent.	Design Eccent.	Center Mass	Static Eccent.	Accident Eccent.	Design Eccent.
8	8.46	-0.85	0.82	-1.677	35.73	2.91	4.19	7.1010
7	8.06	-1.24	0.82	-2.066	37.13	4.30	4.19	8.4949
6	8.06	-1.24	0.82	-2.066	37.13	4.30	4.19	8.4949
5	8.06	-1.24	0.82	-2.066	37.13	4.30	4.19	8.4949
4	8.06	-1.24	0.82	-2.066	37.20	4.38	4.19	8.5757
3	8.85	-0.46	1.23	-1.695	53.04	19.64	4.56	21.200
2	8.98	-0.11	1.23	-1.344	52.16	16.95	5.09	22.044
1	8.98	-0.11	1.23	-1.344	52.16	16.95	5.09	22.044

Note: \* Static eccentricity: All values are in meters

Y - DIRECTION (EQY)

Level	Center Mass	Static Eccent.	Accident Eccent.	Design Eccent.	Center Mass	Static Eccent.	Accident Eccent.	Design Eccent.
8	8.46	-0.85	0.82	-0.033	35.73	2.91	4.19	-1.288
7	8.06	-1.24	0.82	-0.422	37.13	4.30	4.19	0.1111
6	8.06	-1.24	0.82	-0.422	37.13	4.30	4.19	0.1111
5	8.06	-1.24	0.82	-0.422	37.13	4.30	4.19	0.1111
4	8.06	-1.24	0.82	-0.422	37.20	4.38	4.19	0.1919
3	8.85	-0.65	0.93	0.2828	44.58	11.44	4.56	6.8888
2	8.85	-0.46	1.23	0.7777	53.04	19.64	4.56	15.088
1	8.98	-0.11	1.23	1.1212	52.16	16.95	5.09	11.866

Note: \* Static eccentricity: All values are in meters



Company: INTERDICO LTDA Engineer: RODRIGO CASTRO S 11:13:34 a.m. 05/08/2010

ANALYSIS - MAXIMUM STORY DRIFT RATIO, δ<sub>max</sub>

Story Col:Axis

Table with 3 columns: Story, Col:Axis, and numerical values. Rows include 9-C, 9-D, 9-E, 9-F, 9-G, 9-H, 9-I, 9-J, 9-K, 9-L, 9-M, 9-N, 9-O, 9-P, 9-Q, 9-R, 9-S, 9-T, 9-U, 9-V, 9-W, 9-X, 9-Y, 9-Z.

Company: INTERDICO LTDA Engineer: RODRIGO CASTRO S 11:13:34 a.m. 05/08/2010

ANALYSIS - MAXIMUM STORY DRIFT RATIO, δ<sub>max</sub>

Story Col:Axis

Table with 3 columns: Story, Col:Axis, and numerical values. Rows include 8-J, 8-K, 8-L, 8-M, 8-N, 8-O, 8-P, 8-Q, 8-R, 8-S, 8-T, 8-U, 8-V, 8-W, 8-X, 8-Y, 8-Z, 9-A, 9-B, 9-C, 9-D, 9-E, 9-F, 9-G, 9-H, 9-I, 9-J, 9-K, 9-L, 9-M, 9-N, 9-O, 9-P, 9-Q, 9-R, 9-S, 9-T, 9-U, 9-V, 9-W, 9-X, 9-Y, 9-Z.

9-G	0.0015	0.0014	0.0015	0.0014	0.0015
8*-G	0.0015	0.0014	0.0015	0.0014	0.0015
9-H	0.0015	0.0014	0.0015	0.0014	0.0015
8*-H	0.0015	0.0014	0.0015	0.0014	0.0015
10-H	0.0013	0.0014	0.0013	0.0014	0.0013
9-I	0.0013	0.0014	0.0013	0.0014	0.0013
8*-I	0.0013	0.0014	0.0013	0.0014	0.0013
10-I	0.0012	0.0014	0.0012	0.0014	0.0012
9-J	0.0012	0.0014	0.0012	0.0014	0.0012
8*-J	0.0012	0.0014	0.0012	0.0014	0.0012
10-K	0.0012	0.0014	0.0012	0.0014	0.0012
9-K	0.0012	0.0014	0.0012	0.0014	0.0012
8*-K	0.0012	0.0014	0.0012	0.0014	0.0012
10-L	0.0011	0.0014	0.0011	0.0014	0.0011
9-L	0.0011	0.0014	0.0011	0.0014	0.0011
8*-L	0.0011	0.0014	0.0011	0.0014	0.0011
10-M	0.0011	0.0014	0.0011	0.0014	0.0011
9-M	0.0011	0.0014	0.0011	0.0014	0.0011
8*-M	0.0011	0.0014	0.0011	0.0014	0.0011
10-N	0.0010	0.0014	0.0010	0.0014	0.0010
9-N	0.0010	0.0014	0.0010	0.0014	0.0010
8*-N	0.0010	0.0014	0.0010	0.0014	0.0010
9-C	0.0014	0.0011	0.0014	0.0011	0.0014
8*-C	0.0013	0.0010	0.0013	0.0010	0.0013
9-D	0.0012	0.0011	0.0012	0.0011	0.0012
8*-D	0.0012	0.0011	0.0012	0.0011	0.0012
9-E	0.0011	0.0011	0.0011	0.0011	0.0011
8*-E	0.0012	0.0011	0.0012	0.0011	0.0012
9*-F	0.0011	0.0011	0.0011	0.0011	0.0011
8*-F	0.0011	0.0011	0.0011	0.0011	0.0011
9*-G	0.0011	0.0011	0.0011	0.0011	0.0011
8*-G	0.0011	0.0011	0.0011	0.0011	0.0011
9*-H	0.0011	0.0011	0.0011	0.0011	0.0011
8*-H	0.0009	0.0011	0.0009	0.0011	0.0009
10-I	0.0008	0.0011	0.0008	0.0011	0.0008
9-I	0.0008	0.0011	0.0008	0.0011	0.0008
8*-I	0.0008	0.0011	0.0008	0.0011	0.0008
10-J	0.0008	0.0011	0.0008	0.0011	0.0008
9-J	0.0008	0.0011	0.0008	0.0011	0.0008
8*-J	0.0008	0.0011	0.0008	0.0011	0.0008
10-K	0.0008	0.0011	0.0008	0.0011	0.0008
9-K	0.0008	0.0011	0.0008	0.0011	0.0008
8*-K	0.0008	0.0011	0.0008	0.0011	0.0008
10-L	0.0007	0.0011	0.0007	0.0011	0.0007
9-L	0.0007	0.0011	0.0007	0.0011	0.0007
8*-L	0.0007	0.0011	0.0007	0.0011	0.0007
10-M	0.0007	0.0011	0.0007	0.0011	0.0007
9-M	0.0007	0.0011	0.0007	0.0011	0.0007
8*-M	0.0007	0.0011	0.0007	0.0011	0.0007
10-N	0.0007	0.0011	0.0007	0.0011	0.0007
9-N	0.0007	0.0011	0.0007	0.0011	0.0007
8*-N	0.0007	0.0011	0.0007	0.0011	0.0007
10-B*	0.0003	0.0001	0.0003	0.0001	0.0003
9*-B*	0.0002	0.0001	0.0002	0.0001	0.0002
8*-B*	0.0003	0.0001	0.0003	0.0001	0.0003
7*-B*	0.0003	0.0001	0.0003	0.0001	0.0003
10-C	0.0003	0.0001	0.0003	0.0001	0.0003

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S

8-H	0.0015	0.0012	0.0015	0.0012	0.0022
9-I	0.0016	0.0012	0.0016	0.0012	0.0022
8*-I	0.0016	0.0012	0.0016	0.0012	0.0022
9-J	0.0016	0.0012	0.0016	0.0012	0.0022
8*-J	0.0016	0.0012	0.0016	0.0012	0.0022
10-K	0.0016	0.0012	0.0016	0.0012	0.0022
9-K	0.0016	0.0012	0.0016	0.0012	0.0022
8*-K	0.0016	0.0012	0.0016	0.0012	0.0022
10-L	0.0017	0.0012	0.0017	0.0012	0.0022
9-L	0.0017	0.0012	0.0017	0.0012	0.0022
8*-L	0.0017	0.0012	0.0017	0.0012	0.0022
10-M	0.0018	0.0011	0.0018	0.0011	0.0022
9-M	0.0018	0.0011	0.0018	0.0011	0.0022
8*-M	0.0018	0.0011	0.0018	0.0011	0.0022
7*-M	0.0018	0.0011	0.0018	0.0011	0.0022
9-C	0.0022	0.0013	0.0022	0.0013	0.0022
8*-C	0.0021	0.0013	0.0021	0.0013	0.0021
9-D	0.0021	0.0013	0.0021	0.0013	0.0021
8*-D	0.0021	0.0013	0.0021	0.0013	0.0021
9-E	0.0019	0.0013	0.0019	0.0013	0.0021
8*-E	0.0019	0.0013	0.0019	0.0013	0.0021
9*-F	0.0018	0.0013	0.0018	0.0013	0.0021
8*-F	0.0018	0.0013	0.0018	0.0013	0.0021
9*-G	0.0017	0.0013	0.0017	0.0013	0.0021
8*-G	0.0017	0.0013	0.0017	0.0013	0.0021
9*-H	0.0017	0.0013	0.0017	0.0013	0.0021
8*-H	0.0017	0.0013	0.0017	0.0013	0.0021
9*-I	0.0017	0.0013	0.0017	0.0013	0.0021
8*-I	0.0017	0.0013	0.0017	0.0013	0.0021
9*-J	0.0017	0.0013	0.0017	0.0013	0.0021
8*-J	0.0017	0.0013	0.0017	0.0013	0.0021
9*-K	0.0016	0.0013	0.0016	0.0013	0.0021
8*-K	0.0016	0.0013	0.0016	0.0013	0.0021
9*-L	0.0016	0.0013	0.0016	0.0013	0.0021
8*-L	0.0016	0.0013	0.0016	0.0013	0.0021
9-H	0.0015	0.0013	0.0015	0.0013	0.0021
8*-H	0.0015	0.0013	0.0015	0.0013	0.0021
9-I	0.0015	0.0013	0.0015	0.0013	0.0021
8*-I	0.0015	0.0013	0.0015	0.0013	0.0021
9-J	0.0015	0.0013	0.0015	0.0013	0.0021
8*-J	0.0015	0.0013	0.0015	0.0013	0.0021
9-K	0.0015	0.0013	0.0015	0.0013	0.0021
8*-K	0.0015	0.0013	0.0015	0.0013	0.0021
9-L	0.0015	0.0013	0.0015	0.0013	0.0021
8*-L	0.0015	0.0013	0.0015	0.0013	0.0021
9-M	0.0021	0.0016	0.0021	0.0016	0.0021
8*-M	0.0021	0.0016	0.0021	0.0016	0.0021
9-N	0.0021	0.0016	0.0021	0.0016	0.0021
8*-N	0.0021	0.0016	0.0021	0.0016	0.0021
9-C	0.0022	0.0014	0.0022	0.0014	0.0022
8*-C	0.0022	0.0014	0.0022	0.0014	0.0022
9-D	0.0021	0.0014	0.0021	0.0014	0.0021
8*-D	0.0021	0.0014	0.0021	0.0014	0.0021
9-E	0.0019	0.0014	0.0019	0.0014	0.0021
8*-E	0.0019	0.0014	0.0019	0.0014	0.0021
9*-F	0.0017	0.0014	0.0017	0.0014	0.0021
8*-F	0.0017	0.0014	0.0017	0.0014	0.0021
9*-G	0.0017	0.0014	0.0017	0.0014	0.0021
8*-G	0.0017	0.0014	0.0017	0.0014	0.0021
9*-H	0.0016	0.0014	0.0016	0.0014	0.0021
8*-H	0.0016	0.0014	0.0016	0.0014	0.0021
9*-I	0.0016	0.0014	0.0016	0.0014	0.0021
8*-I	0.0016	0.0014	0.0016	0.0014	0.0021
9*-J	0.0016	0.0014	0.0016	0.0014	0.0021
8*-J	0.0016	0.0014	0.0016	0.0014	0.0021
9*-K	0.0016	0.0014	0.0016	0.0014	0.0021
8*-K	0.0016	0.0014	0.0016	0.0014	0.0021
9*-L	0.0016	0.0014	0.0016	0.0014	0.0021
8*-L	0.0016	0.0014	0.0016	0.0014	0.0021
9-F1	0.0016	0.0014	0.0016	0.0014	0.0021
8*-F1	0.0016	0.0014	0.0016	0.0014	0.0021
9-F2	0.0016	0.0014	0.0016	0.0014	0.0021
8*-F2	0.0016	0.0014	0.0016	0.0014	0.0021
9-F3	0.0016	0.0014	0.0016	0.0014	0.0021
8*-F3	0.0016	0.0014	0.0016	0.0014	0.0021
9*-G	0.0015	0.0014	0.0015	0.0014	0.0021
8*-G	0.0015	0.0014	0.0015	0.0014	0.0021

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Company: INTERDICO LTDA  
Project: DERIVAS UMBRAL DE DAÑO

Engineer: RODRIGO CASTRO S  
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9-C	0.0003	0.0001	0.0003
8-C	0.0001	0.0001	0.0003
7-C	0.0003	0.0001	0.0003
10-CI	0.0001	0.0001	0.0001
11-CI	0.0002	0.0001	0.0002
11-D	0.0003	0.0001	0.0003
10-D	0.0003	0.0001	0.0003
9-D	0.0003	0.0001	0.0003
8-D	0.0003	0.0001	0.0003
7-D	0.0003	0.0001	0.0003
6-D	0.0003	0.0001	0.0003
9-E	0.0002	0.0001	0.0002
8-E	0.0002	0.0001	0.0002
11-E	0.0002	0.0001	0.0002
10-E	0.0002	0.0001	0.0002
9-E	0.0002	0.0001	0.0002
8-E	0.0002	0.0001	0.0002
7-E	0.0002	0.0001	0.0002
6-E	0.0002	0.0001	0.0002
10-FI	0.0001	0.0001	0.0001
9-FI	0.0002	0.0001	0.0002
8-FI	0.0002	0.0001	0.0002
7-FI	0.0002	0.0001	0.0002
6-FI	0.0002	0.0001	0.0002
10-FE2	0.0001	0.0001	0.0001
9-FE2	0.0002	0.0001	0.0002
8-FE2	0.0002	0.0001	0.0002
7-FE2	0.0001	0.0000	0.0001
6-FE2	0.0001	0.0000	0.0001
10-FE3	0.0002	0.0001	0.0002
9-FE3	0.0002	0.0001	0.0002
8-FE3	0.0002	0.0001	0.0002
7-FE3	0.0001	0.0001	0.0001
6-FE3	0.0001	0.0001	0.0001
10-G	0.0002	0.0001	0.0002
9-G	0.0002	0.0001	0.0002
8-G	0.0002	0.0001	0.0002
7-G	0.0002	0.0001	0.0002
6-G	0.0001	0.0000	0.0001
10-G*	0.0001	0.0001	0.0001
9-G*	0.0002	0.0001	0.0002
8-H	0.0002	0.0001	0.0002
7-H	0.0002	0.0001	0.0002
6-H	0.0001	0.0001	0.0001
11-I	0.0002	0.0001	0.0002
10-I	0.0001	0.0001	0.0001
9-I	0.0002	0.0001	0.0002
8-I	0.0002	0.0001	0.0002
7-I	0.0002	0.0001	0.0002
6-I	0.0002	0.0001	0.0002
10-J	0.0002	0.0001	0.0002
9-J	0.0002	0.0001	0.0002
8-J	0.0002	0.0001	0.0002
7-J	0.0002	0.0001	0.0002
6-J	0.0002	0.0001	0.0002
10-K	0.0002	0.0001	0.0002
9-K	0.0002	0.0001	0.0002
8-K	0.0002	0.0001	0.0002
7-K	0.0002	0.0001	0.0002
6-K	0.0002	0.0001	0.0002
10-L	0.0002	0.0001	0.0002
9-L	0.0002	0.0001	0.0002
8-L	0.0002	0.0001	0.0002
7-L	0.0002	0.0001	0.0002
6-L	0.0002	0.0001	0.0002
10-M	0.0002	0.0001	0.0002
9-M	0.0002	0.0001	0.0002
8-M	0.0002	0.0001	0.0002
7-M	0.0002	0.0001	0.0002
6-M	0.0002	0.0001	0.0002
10-N	0.0002	0.0001	0.0002
9-N	0.0002	0.0001	0.0002
8-N	0.0002	0.0001	0.0002
7-N	0.0001	0.0001	0.0001
6-N	0.0001	0.0001	0.0001
10-O	0.0001	0.0001	0.0001
9-O	0.0001	0.0001	0.0001
8-O	0.0001	0.0001	0.0001

Company: INTERDICO LTDA  
Project: DERIVAS UMBRAL DE DAÑO

Engineer: RODRIGO CASTRO S  
11:13:34 a.m. 05/08/2010

11-P	0.0001	0.0001	0.0001
11*-P	0.0001	0.0002	0.0002
10-P	0.0001	0.0001	0.0001
9*-P	0.0001	0.0002	0.0002
8*-P	0.0001	0.0001	0.0001
7*-P	0.0001	0.0003	0.0003
6*-P	0.0001	0.0002	0.0002

Note: Drift amplification factor, D: 1 in X; 1 in Y  
MAXIMA DRIFT: 0.0001

