MEMÓRIA DE CÁLCULO DE ESTRUTURA DE CONCRETO ARMADO – CEPI PARANOÁ PARQUE PRÉDIO PRINCIPAL

Autor do Projeto: Eng. Civil Dalmo Blanco Cinnanti

CREA: 7962/D-DF

R00	30/10/2022	VERSÃO INICIAL	DALMO B.CINNANTI
REVISÃO	DATA	DESCRIÇÃO	RESPONSÁVEL
Nome do projeto		MEMÓRIA DE CÁLCULO – ESTRUTURA DE CONCRETO ARMADO – CEPI PARANOÁ PARQUE	
Número do projeto		**314-SEEDF-CEPI PARANOÁ PARQUE-MEM-EST-R00**	
Local		***QUADRA 01 CONJUNTO 01 AE 02 – PARANOÁ PARQUE / PARANOÁ-DF***	

SUMÁRIO

Resumo de resultados

Cargas verticais:

Peso próprio = 369.79 tf

Adicional = 600.91 tf

Total = 970.69 tf

Deslocamento horizontal:

X+ = 0.04 cm (limite 0.35)

X- = 0.04 cm (limite 0.35)

Y+ = 0.01 cm (limite 0.35)

Y- = 0.01 cm (limite 0.35)

Aceleração horizontal:

X+ = 0.195 m/s² (limite 0.147)

X- = 0.195 m/s² (limite 0.147)

Y+ = 0.030 m/s² (limite 0.147)

Y- = 0.030 m/s² (limite 0.147)

AVISO: Acelerações excessivas

Verificação de estabilidade (Gama-Z):

X+ = 1.01 (limite 1.10)

X+ = 1.01 (limite 1.10)

X- = 1.01 (limite 1.10)

X- = 1.01 (limite 1.10)

Y+ = 1.01 (limite 1.10)

Y+ = 1.01 (limite 1.10)

Y- = 1.01 (limite 1.10)

Y- = 1.01 (limite 1.10)

Análise de 2ª ordem:

Processo P-Delta

Deslocamentos no topo da edificação:

Vento X+ (Transv+): 0.22 »» 0.23 (+1.16%)

Vento X+ (Transv-): 0.22 »» 0.22 (+1.16%)

Vento X- (Transv+): 0.22 »» 0.23 (+1.16%)

Vento X- (Transv-): 0.22 »» 0.22 (+1.16%)

Vento Y+ (Transv+): 0.03 »» 0.03 (+0.87%)

Vento Y+ (Transv-): 0.03 »» 0.03 (+0.86%)

Vento Y- (Transv+): 0.03 »» 0.03 (+0.87%)

Vento Y- (Transv-): 0.03 »» 0.03 (+0.86%)

Desaprumo X+: 0.01 »» 0.01 (+1.28%)

Desaprumo X-: 0.01 »» 0.01 (+1.28%)

Análise dinâmica:

Frequência natural: 1.88 Hz

AVISO: Participação modal da massa do pórtico menor que 90%

Verificação da Estabilidade Global da Estrutura

Maior coeficiente Gama-Z

Combinação: 1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V2b+0.84D2							
Pavimento	**Altura relativa (cm)**	**Carga vertical (tf)**	**Carga horizontal (tf)**	**Deslocamento horizontal (cm)**	**Momento 2a. ordem (kgf.m)**	**Momento tombamento (kgf.m)**	**Gama-Z**
NIVEL 501	592.00	7.33	0.85	0.19	13.70	5005.07	1.01 (lim=1.10)
NIVEL 448	539.00	78.07	4.57	0.16	127.37	24613.23	
NIVEL 330 VIGAS 100	421.00	547.89	15.19	0.12	633.65	63938.16	
NIVEL 00 (BALDRAMES)	100.00	688.71	0.51	0.00	2.98	509.76	
TOTAL					**777.69**	**94066.23**	

Limitações

Em estruturas com Gama-Z maior que 1.10 é necessário fazer a verificação dos efeitos de 2ª ordem com a análise P-Delta.

O Gama-Z é um parâmetro de estabilidade para avaliação de estruturas simétricas (tanto geometria quanto carregamento) e edificações com mais de 4 pavimentos. Nos demais casos, recomenda-se a verificação dos efeitos de 2ª ordem com a análise P-Delta.

Coeficiente Gama-Z por combinação

Combinação	Momento 2a. ordem (kgf.m)	Momento tombamento (kgf.m)	Gama-Z
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V1a+0.84D1	763.96	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V1a+1.4D1	763.96	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V1b+0.84D1	754.11	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V1b+1.4D1	754.11	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V2a+0.84D2	769.99	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V2a+1.4D2	769.99	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V2b+0.84D2	**777.69**	**94066.23**	**1.01**
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V2b+1.4D2	777.69	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V3a+0.84D3	153.38	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V3a+1.4D3	153.38	20998.20	1.01

1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V3b+0.84D3	158.62	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V3b+1.4D3	158.62	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V4a+0.84D4	124.60	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V4a+1.4D4	124.60	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V4b+0.84D4	116.75	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+0.84V4b+1.4D4	116.75	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+1.4V1a+0.84D1	1274.47	156777.05	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+1.4V1b+0.84D1	1264.02	156777.05	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+1.4V2a+0.84D2	1280.52	156777.05	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+1.4V2b+0.84D2	1287.60	156777.05	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+1.4V3a+0.84D3	242.31	34996.99	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+1.4V3b+0.84D3	248.08	34996.99	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+1.4V4a+0.84D4	214.79	34996.99	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T1+1.4V4b+0.84D4	207.45	34996.99	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V1a+0.84D1	763.96	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V1a+1.4D1	763.96	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V1b+0.84D1	754.11	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V1b+1.4D1	754.11	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V2a+0.84D2	769.99	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V2a+1.4D2	769.99	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V2b+0.84D2	777.69	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V2b+1.4D2	777.69	94066.23	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V3a+0.84D3	153.38	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V3a+1.4D3	153.38	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V3b+0.84D3	158.62	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V3b+1.4D3	158.62	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V4a+0.84D4	124.60	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V4a+1.4D4	124.60	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V4b+0.84D4	116.75	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+0.84V4b+1.4D4	116.75	20998.20	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+1.4V1a+0.84D1	1274.47	156777.05	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+1.4V1b+0.84D1	1264.02	156777.05	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+1.4V2a+0.84D2	1280.52	156777.05	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+1.4V2b+0.84D2	1287.60	156777.05	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+1.4V3a+0.84D3	242.31	34996.99	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+1.4V3b+0.84D3	248.08	34996.99	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+1.4V4a+0.84D4	214.79	34996.99	1.01
1.3G1+1.4G2+1.4S+0.98Q+1.2A+1.1AS+0.72T2+1.4V4b+0.84D4	207.45	34996.99	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V1a+0.84D1	763.96	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V1a+1.4D1	763.96	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V1b+0.84D1	754.11	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V1b+1.4D1	754.11	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V2a+0.84D2	769.99	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V2a+1.4D2	769.99	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V2b+0.84D2	777.69	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V2b+1.4D2	777.69	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V3a+0.84D3	153.38	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V3a+1.4D3	153.38	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V3b+0.84D3	158.62	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V3b+1.4D3	158.62	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V4a+0.84D4	124.60	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V4a+1.4D4	124.60	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V4b+0.84D4	116.75	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V4b+1.4D4	116.75	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V1a+0.84D1	1274.47	156777.05	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V1b+0.84D1	1264.02	156777.05	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V2a+0.84D2	1280.52	156777.05	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V2b+0.84D2	1287.60	156777.05	1.01

1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V3a+0.84D3	242.31	34996.99	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V3b+0.84D3	248.08	34996.99	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V4a+0.84D4	214.79	34996.99	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V4b+0.84D4	207.45	34996.99	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V1a+0.84D1	763.96	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V1a+1.4D1	763.96	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V1b+0.84D1	754.11	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V1b+1.4D1	754.11	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V2a+0.84D2	769.99	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V2a+1.4D2	769.99	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V2b+0.84D2	777.69	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V2b+1.4D2	777.69	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V3a+0.84D3	153.38	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V3a+1.4D3	153.38	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V3b+0.84D3	158.62	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V3b+1.4D3	158.62	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V4a+0.84D4	124.60	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V4a+1.4D4	124.60	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V4b+0.84D4	116.75	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V4b+1.4D4	116.75	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V1a+0.84D1	1274.47	156777.05	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V1b+0.84D1	1264.02	156777.05	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V2a+0.84D2	1280.52	156777.05	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V2b+0.84D2	1287.60	156777.05	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V3a+0.84D3	242.31	34996.99	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V3b+0.84D3	248.08	34996.99	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V4a+0.84D4	214.79	34996.99	1.01
1.3G1+1.4G2+1.4S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V4b+0.84D4	207.45	34996.99	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V1a+0.84D1	763.96	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V1b+0.84D1	754.11	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V2a+0.84D2	769.99	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V2b+0.84D2	777.69	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V3a+0.84D3	153.38	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V3b+0.84D3	158.62	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V4a+0.84D4	124.60	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V4b+0.84D4	116.75	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V1a+0.84D1	763.96	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V1b+0.84D1	754.11	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V2a+0.84D2	769.99	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V2b+0.84D2	777.69	94066.23	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V3a+0.84D3	153.38	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V3b+0.84D3	158.62	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V4a+0.84D4	124.60	20998.20	1.01
1.3G1+1.4G2+1.4S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V4b+0.84D4	116.75	20998.20	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T1+0.84V1a+0.84D1	763.96	94066.23	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T1+0.84V1b+0.84D1	754.11	94066.23	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T1+0.84V2a+0.84D2	769.99	94066.23	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T1+0.84V2b+0.84D2	777.69	94066.23	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T1+0.84V3a+0.84D3	153.38	20998.20	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T1+0.84V3b+0.84D3	158.62	20998.20	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T1+0.84V4a+0.84D4	124.60	20998.20	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T1+0.84V4b+0.84D4	116.75	20998.20	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T2+0.84V1a+0.84D1	763.96	94066.23	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T2+0.84V1b+0.84D1	754.11	94066.23	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T2+0.84V2a+0.84D2	769.99	94066.23	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T2+0.84V2b+0.84D2	777.69	94066.23	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T2+0.84V3a+0.84D3	153.38	20998.20	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T2+0.84V3b+0.84D3	158.62	20998.20	1.01

1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T2+0.84V4a+0.84D4	124.60	20998.20	1.01
1.3G1+1.4G2+1.4S+1.4Q+1.2A+1.1AS+0.72T2+0.84V4b+0.84D4	116.75	20998.20	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V1a+0.84D1	564.31	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V1a+1.4D1	564.31	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V1b+0.84D1	558.80	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V1b+1.4D1	558.80	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V2a+0.84D2	568.49	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V2a+1.4D2	568.49	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V2b+0.84D2	572.46	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V2b+1.4D2	572.46	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V3a+0.84D3	109.10	20998.20	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V3a+1.4D3	109.10	20998.20	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V3b+0.84D3	112.50	20998.20	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V3b+1.4D3	112.50	20998.20	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V4a+0.84D4	94.37	20998.20	1.00
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V4a+1.4D4	94.37	20998.20	1.00
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V4b+0.84D4	89.89	20998.20	1.00
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+0.84V4b+1.4D4	89.89	20998.20	1.00
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V1a+0.84D1	941.57	156777.05	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V1b+0.84D1	935.61	156777.05	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V2a+0.84D2	945.77	156777.05	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V2b+0.84D2	949.27	156777.05	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V3a+0.84D3	175.63	34996.99	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V3b+0.84D3	179.05	34996.99	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V4a+0.84D4	161.24	34996.99	1.00
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T1+1.4V4b+0.84D4	156.93	34996.99	1.00
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V1a+0.84D1	564.31	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V1a+1.4D1	564.31	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V1b+0.84D1	558.80	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V1b+1.4D1	558.80	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V2a+0.84D2	568.49	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V2a+1.4D2	568.49	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V2b+0.84D2	572.46	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V2b+1.4D2	572.46	94066.23	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V3a+0.84D3	109.10	20998.20	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V3a+1.4D3	109.10	20998.20	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V3b+0.84D3	112.50	20998.20	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V3b+1.4D3	112.50	20998.20	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V4a+0.84D4	94.37	20998.20	1.00
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V4a+1.4D4	94.37	20998.20	1.00
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V4b+0.84D4	89.89	20998.20	1.00
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+0.84V4b+1.4D4	89.89	20998.20	1.00
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V1a+0.84D1	941.57	156777.05	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V1b+0.84D1	935.61	156777.05	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V2a+0.84D2	945.77	156777.05	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V2b+0.84D2	949.27	156777.05	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V3a+0.84D3	175.63	34996.99	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V3b+0.84D3	179.05	34996.99	1.01
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V4a+0.84D4	161.24	34996.99	1.00
G1+G2+S+1.2R+0.98Q+1.2A+1.1AS+0.72T2+1.4V4b+0.84D4	156.93	34996.99	1.00
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V1a+0.84D1	564.31	94066.23	1.01
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V1b+0.84D1	558.80	94066.23	1.01
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V2a+0.84D2	568.49	94066.23	1.01
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V2b+0.84D2	572.46	94066.23	1.01
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V3a+0.84D3	109.10	20998.20	1.01
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V3b+0.84D3	112.50	20998.20	1.01
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V4a+0.84D4	94.37	20998.20	1.00
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T1+0.84V4b+0.84D4	89.89	20998.20	1.00

G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V1a+0.84D1	564.31	94066.23	1.01
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V1b+0.84D1	558.80	94066.23	1.01
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V2a+0.84D2	568.49	94066.23	1.01
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V2b+0.84D2	572.46	94066.23	1.01
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V3a+0.84D3	109.10	20998.20	1.01
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V3b+0.84D3	112.50	20998.20	1.01
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V4a+0.84D4	94.37	20998.20	1.00
G1+G2+S+1.2R+1.4Q+1.2A+1.1AS+0.72T2+0.84V4b+0.84D4	89.89	20998.20	1.00

Pavimento NIVEL 00 (BALDRAMES)

Resultado dos Blocos

NIVEL 00 (BALDRAMES)	fck = 300.00 kgf/cm²	E = 268384 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 1		cobr = 4.50 cm	

Blocos	ne Estaca	LB LH (cm)	hb (cm)	Principal (cm²)		Estribo (cm²)		Superior (cm²)		As dist. (cm²)
				X	Y	Hor.	Vert.	X	Y	
B1	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B2	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B3	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B4	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B5	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B6	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B7	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B8	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B9	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B10	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B11	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B12	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B13	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B14	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B15	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B16	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B17	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B18	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B19	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B20	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B21	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B22	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-

B23	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B24	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B25	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B26	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B27	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B28	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B29	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B30	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B31	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B32	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B33	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B34	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B35	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B36	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B37	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B38	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B39	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B40	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B41	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B42	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B43	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B44	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B45	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B46	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B47	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B48	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B49	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B50	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B51	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B52	1	70.00		-	-	2.51	2.01	-	-	-

	E40-12m	70.00				(5 ø 8.0)	2x(2 ø 8.0)			
B53	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B54	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B55	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B56	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B57	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B58	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B59	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B60	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B61	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B62	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B63	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B64	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B65	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B66	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B67	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B68	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B69	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B70	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B71	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B72	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B73	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B74	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B75	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B76	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B77	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B78	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B79	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B80	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B81	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-

B82	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B83	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B84	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B85	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B86	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B87	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B88	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B89	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B90	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B91	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B92	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B93	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B94	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B95	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B96	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B97	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B98	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B99	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B100	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B101	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B102	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B103	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B104	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B105	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B106	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B107	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B108	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B109	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B110	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B111	1	60.00		-	-	2.51	2.01	-	-	-

	E30-10m	60.00				(5 ø 8.0)	2x(2 ø 8.0)			
B112	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B113	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B114	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B115	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B116	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B117	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B118	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B119	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B120	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B121	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B122	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B123	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B124	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B125	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B126	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B127	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B128	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B129	1 E40-12m	70.00 70.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B130	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B131	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B132	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B133	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B134	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B135	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B136	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-
B137	1 E30-10m	60.00 60.00		-	-	2.51 (5 ø 8.0)	2.01 2x(2 ø 8.0)	-	-	-

Cálculo dos Pilares

NIVEL 00 (BALDRAMES)	fck = 300.00 kgf/cm²	E = 268384 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 1		cobr = 3.00 cm	

Pilar	Seção (cm)	vínc esb B vínc esb H	Nd máx Nd mín (tf)	Msd(x) Msd(y) (kgf.m)	Mrd(x) Mrd(y) (kgf.m)	Mrd/Msd	As b As h (cm²)
P1	15.00 X 50.00	RR 3.46 RR 1.04	10.08 6.86	1491 2442	1550 2540	(*) 1.04	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P2	14.00 X 50.00	RR 3.71 RR 1.04	11.91 8.03	1128 635	1696 955	(*) 1.50	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P3	14.00 X 50.00	RR 3.71 RR 1.04	11.95 8.11	1127 662	1484 871	(*) 1.32	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P4	15.00 X 50.00	RR 3.46 RR 1.04	11.16 7.33	1474 3693	1550 3883	(*) 1.05	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P5	15.00 X 50.00	RR 3.46 RR 1.04	11.11 7.29	1477 3657	1554 3847	(*) 1.05	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P6	14.00 X 50.00	RR 3.71 RR 1.04	11.92 8.09	1129 634	1487 836	(*) 1.32	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P7	14.00 X 50.00	RR 3.71 RR 1.04	11.90 8.01	1130 624	1698 938	(*) 1.50	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P8	15.00 X 50.00	RR 3.46 RR 1.04	10.18 6.92	1495 2638	1530 2699	(*) 1.02	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P9	15.00 X 50.00	RR 14.99 RR 4.50	20.89 14.11	1614 4236	1742 4571	(*) 1.08	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P10	14.00 X 40.00	RR 2.97 RR 1.04	8.78 5.93	1008 237	1351 318	(*) 1.34	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P11	14.00 X 40.00	RR 2.97 RR 1.04	9.66 6.66	1135 247	1368 298	(*) 1.21	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

P12	14.00 X 40.00	RR 15.32 RR 5.36	21.41 15.09	1569 1012	1608 1037	(*) 1.03	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P13	14.00 X 40.00	RR 15.32 RR 5.36	21.30 15.02	1581 966	1616 988	(*) 1.02	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P14	14.00 X 40.00	RR 2.97 RR 1.04	9.50 6.63	1185 222	1373 258	(*) 1.16	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P15	14.00 X 40.00	RR 2.97 RR 1.04	10.33 7.18	1075 270	1389 349	(*) 1.29	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P16	15.00 X 50.00	RR 14.99 RR 4.50	20.57 13.93	1567 3518	1817 4079	(*) 1.16	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P17	14.00 X 40.00	RR 2.97 RR 1.04	9.82 6.32	617 1618	977 2562	(*) 1.58	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P18	14.00 X 40.00	RR 15.32 RR 5.36	10.52 6.71	536 1359	1003 2540	(*) 1.87	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P19	15.00 X 40.00	RR 2.77 RR 1.04	9.25 5.95	528 1034	1144 2242	(*) 2.17	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P20	15.00 X 40.00	RR 2.77 RR 1.04	9.89 6.43	645 1125	1196 2085	(*) 1.85	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P21	15.00 X 50.00	RR 3.46 RR 1.04	20.90 14.96	1538 3326	2079 4494	(*) 1.35	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P22	14.00 X 40.00	RR 2.97 RR 1.04	16.42 11.82	1440 954	1475 978	(*) 1.02	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P23	15.00 X 40.00	RR 2.77 RR 1.04	13.00 9.44	1547 1352	1674 1463	(*) 1.08	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P24	15.00 X 40.00	RR 2.77 RR 1.04	16.07 11.68	1710 1565	1800 1647	(*) 1.05	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P25	15.00 X 40.00	RR 2.77 RR 1.04	15.83 11.48	1813 1414	1829 1427	(*) 1.01	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P26	15.00 X 40.00	RR 2.77 RR 1.04	10.78 7.81	1691 1141	1807 1219	(*) 1.07	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)

P27	14.00 X 40.00	RR 15.32 RR 5.36	14.18 10.07	1130 525	1461 679	(*) 1.29	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P28	15.00 X 50.00	RR 3.46 RR 1.04	20.72 14.83	1561 3264	2094 4378	(*) 1.34	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P29	15.00 X 50.00	RR 3.46 RR 1.04	20.88 14.94	1571 3492	2062 4584	(*) 1.31	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P30	14.00 X 40.00	RR 2.97 RR 1.04	19.75 14.18	1458 1322	1496 1356	(*) 1.03	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P31	14.00 X 40.00	RR 2.97 RR 1.04	13.38 9.67	1018 1361	1260 1684	(*) 1.24	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P32	15.00 X 40.00	RR 2.77 RR 1.04	14.03 10.22	1614 3276	1706 3465	1.06	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P33	15.00 X 40.00	RR 2.77 RR 1.04	15.38 11.18	1695 3538	1719 3589	(*) 1.01	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P34	14.00 X 40.00	RR 2.97 RR 1.04	9.53 6.87	1097 526	1260 605	(*) 1.15	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P35	14.00 X 40.00	RR 15.32 RR 5.36	12.30 8.71	1107 328	1445 428	(*) 1.31	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P36	15.00 X 50.00	RR 3.46 RR 1.04	20.18 14.44	1560 3692	1816 4299	(*) 1.16	1.57 (2 ø 10.0) 3.93 (5 ø 10.0)
P37	15.00 X 40.00	RR 2.77 RR 1.04	8.79 5.65	772 1318	1172 2000	(*) 1.52	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P38	15.00 X 40.00	RR 14.30 RR 5.36	9.36 5.96	687 1026	1223 1827	(*) 1.78	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P39	14.00 X 40.00	RR 2.97 RR 1.04	9.37 6.11	507 1061	1032 2160	(*) 2.03	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P40	14.00 X 40.00	RR 2.97 RR 1.04	10.00 6.59	615 1112	1086 1965	(*) 1.77	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P41	15.00 X 40.00	RR 14.30 RR 5.36	19.89 13.46	1557 3316	1606 3421	(*) 1.03	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)

P42	14.00 X 40.00	RR 2.97 RR 1.04	11.51 7.94	1447 304	1645 345	(*) 1.14	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P43	14.00 X 40.00	RR 2.97 RR 1.04	13.88 9.67	1350 361	1493 399	(*) 1.11	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P44	14.00 X 40.00	RR 15.32 RR 5.36	17.51 12.06	1209 2684	1308 2905	(*) 1.08	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P45	14.00 X 40.00	RR 15.32 RR 5.36	17.62 12.13	1040 2686	1132 2923	(*) 1.09	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P46	14.00 X 40.00	RR 2.97 RR 1.04	10.28 7.18	1036 266	1383 356	(*) 1.33	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P47	14.00 X 40.00	RR 2.97 RR 1.04	11.00 7.63	910 297	1405 458	(*) 1.54	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P48	15.00 X 50.00	RR 14.99 RR 4.50	20.73 13.98	1610 4286	1731 4610	(*) 1.08	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P49	15.00 X 50.00	RR 3.46 RR 1.04	10.64 7.31	1615 2970	1669 3069	(*) 1.03	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P50	14.00 X 50.00	RR 3.71 RR 1.04	12.76 8.78	1078 1109	1427 1469	(*) 1.32	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P51	14.00 X 50.00	RR 3.71 RR 1.04	12.78 8.84	1061 1152	1417 1539	(*) 1.34	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P52	15.00 X 50.00	RR 14.99 RR 4.50	16.15 10.86	1261 1769	1572 2205	(*) 1.25	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P53	15.00 X 50.00	RR 14.99 RR 4.50	16.17 10.92	1241 1828	1561 2300	(*) 1.26	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P54	15.00 X 50.00	RR 3.46 RR 1.04	12.77 8.71	1144 1065	1582 1473	(*) 1.38	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P55	15.00 X 50.00	RR 3.46 RR 1.04	12.67 8.60	1145 1022	1587 1417	(*) 1.39	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P56	15.00 X 50.00	RR 3.46 RR 1.04	10.40 7.17	1578 2902	1664 3059	(*) 1.05	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)

P57	15.00 X 50.00	RR 3.46 RR 1.04	9.25 6.13	1667 2168	1732 2253	(*) 1.04	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P58	15.00 X 50.00	RR 3.46 RR 1.04	11.84 7.96	1092 734	1598 1074	(*) 1.46	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P59	15.00 X 50.00	RR 3.46 RR 1.04	11.69 7.84	1055 720	1590 1085	(*) 1.51	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P60	15.00 X 50.00	RR 14.99 RR 4.50	16.92 11.50	683 1713	1401 3515	(*) 2.05	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P61	14.00 X 40.00	RR 2.97 RR 1.04	0.84 0.62	279 204	978 715	3.51	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P62	15.00 X 50.00	RR 14.99 RR 4.50	16.79 11.62	673 809	1645 1977	(*) 2.44	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P63	14.00 X 50.00	RR 3.71 RR 1.04	12.01 8.12	949 351	1523 564	(*) 1.61	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P64	14.00 X 50.00	RR 3.71 RR 1.04	11.69 7.84	1002 533	1476 786	(*) 1.47	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P65	15.00 X 50.00	RR 3.46 RR 1.04	9.28 6.27	1631 2124	1737 2262	(*) 1.06	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P66	15.00 X 50.00	RR 14.99 RR 4.50	19.78 13.61	1967 2425	2058 2536	(*) 1.05	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P67	15.00 X 40.00	RR 2.77 RR 1.04	7.72 4.96	145 2555	257 4542	(*) 1.78	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P68	15.00 X 40.00	RR 2.77 RR 1.04	7.84 4.94	147 2696	248 4561	1.69	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P69	14.00 X 40.00	RR 15.32 RR 5.36	14.09 9.23	270 2264	573 4798	(*) 2.12	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P70	14.00 X 40.00	RR 2.97 RR 1.04	13.36 9.56	1333 625	1441 675	(*) 1.08	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P71	14.00 X 40.00	RR 15.32 RR 5.36	13.25 9.33	250 554	1114 2469	(*) 4.45	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

P72	14.00 X 40.00	RR 2.97 RR 1.04	7.90 5.38	355 1162	873 2859	(*) 2.46	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P73	14.00 X 40.00	RR 2.97 RR 1.04	7.07 4.63	205 544	916 2434	(*) 4.47	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P74	14.00 X 40.00	RR 2.97 RR 1.04	12.93 8.98	967 1752	1173 2125	(*) 1.21	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P75	15.00 X 50.00	RR 14.99 RR 4.50	19.71 13.57	1834 2929	1958 3128	(*) 1.07	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P76	15.00 X 40.00	RR 2.77 RR 1.04	10.16 7.02	876 447	1457 744	(*) 1.66	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P77	15.00 X 40.00	RR 2.77 RR 1.04	11.10 7.78	400 562	1314 1847	(*) 3.28	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P78	15.00 X 40.00	RR 2.77 RR 1.04	8.10 5.71	342 358	1276 1336	(*) 3.73	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P79	14.00 X 50.00	RR 3.71 RR 1.04	9.89 6.92	438 510	1314 1529	(*) 3.00	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P80	15.00 X 40.00	RR 2.77 RR 1.04	9.04 6.14	511 1398	1041 2849	(*) 2.04	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P81	15.00 X 50.00	RR 3.46 RR 1.04	21.80 15.55	1334 4522	1326 4494	0.99	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P82	14.00 X 40.00	RR 2.97 RR 1.04	14.31 10.30	1822 824	2003 906	(*) 1.10	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P83	15.00 X 60.00	RR 4.15 RR 1.04	5.09 3.17	1059 1617	1254 1915	(*) 1.18	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P84	14.00 X 40.00	RR 2.97 RR 1.04	15.62 10.98	624 1897	1043 3171	(*) 1.67	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P85	14.00 X 40.00	RR 2.97 RR 1.04	8.73 6.16	89 3377	123 4666	(*) 1.38	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P86	14.00 X 40.00	RR 2.97 RR 1.04	9.52 6.70	209 936	805 3600	(*) 3.84	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

P87	14.00 X 40.00	RR 2.97 RR 1.04	6.52 4.22	113 1282	364 4152	(*) 3.24	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P88	14.00 X 40.00	RR 2.97 RR 1.04	8.09 5.41	851 966	1157 1314	(*) 1.36	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P89	15.00 X 50.00	RR 3.46 RR 1.04	19.76 14.08	1710 4973	1829 5319	1.07	1.57 (2 ø 10.0) 4.71 (6 ø 10.0)
P90	14.00 X 40.00	RR 2.97 RR 1.04	8.76 6.13	1346 3288	1405 3434	(*) 1.04	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P91	15.00 X 50.00	RR 3.46 RR 1.04	19.05 13.65	474 3972	839 7029	(*) 1.77	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P92	14.00 X 40.00	RR 2.97 RR 1.04	18.95 13.49	652 3310	875 4441	(*) 1.34	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P93	15.00 X 40.00	RR 2.77 RR 1.04	15.14 10.61	295 355	1471 1767	(*) 4.98	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P94	14.00 X 40.00	RR 2.97 RR 1.04	7.40 4.48	174 668	818 3135	(*) 4.70	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P95	14.00 X 40.00	RR 2.97 RR 1.04	7.26 4.35	367 717	1014 1978	(*) 2.76	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P96	18.00 X 40.00	RR 2.31 RR 1.04	6.89 4.54	323 813	1075 2704	(*) 3.33	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
P97	18.00 X 40.00	RR 2.31 RR 1.04	6.91 4.56	379 812	1117 2394	(*) 2.95	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
P98	14.00 X 40.00	RR 2.97 RR 1.04	6.50 4.14	424 1322	852 2656	(*) 2.01	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P99	14.00 X 40.00	RR 2.97 RR 1.04	6.75 4.45	121 1409	363 4218	(*) 2.99	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P100	14.00 X 40.00	RR 2.97 RR 1.04	5.42 3.00	205 311	1004 1524	(*) 4.89	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P101	14.00 X 40.00	RR 2.97 RR 1.04	8.84 5.77	910 696	1238 947	(*) 1.36	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

P102	14.00 X 50.00	RR 3.71 RR 1.04	20.56 14.66	1567 4884	1673 5216	(*) 1.07	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P103	15.00 X 40.00	RR 2.77 RR 1.04	8.32 5.48	391 1307	960 3207	(*) 2.45	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P104	15.00 X 40.00	RR 2.77 RR 1.04	14.17 9.92	276 921	1095 3651	(*) 3.96	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P105	15.00 X 40.00	RR 2.77 RR 1.04	11.89 7.79	419 1402	1037 3469	(*) 2.47	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P106	14.00 X 40.00	RR 2.97 RR 1.04	9.95 7.21	391 421	1221 1315	(*) 3.12	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P107	15.00 X 40.00	RR 2.77 RR 1.04	7.73 5.24	462 599	1217 1577	(*) 2.63	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P108	14.00 X 40.00	RR 2.97 RR 1.04	10.75 7.37	352 1502	841 3589	(*) 2.39	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P109	14.00 X 40.00	RR 2.97 RR 1.04	10.59 7.28	366 841	1046 2404	(*) 2.86	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P110	14.00 X 40.00	RR 2.97 RR 1.04	10.40 7.36	508 1211	1033 2461	(*) 2.03	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P111	14.00 X 30.00	RR 2.47 RR 1.15	12.17 8.83	233 948	618 2511	(*) 2.65	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
P112	14.00 X 40.00	RR 2.97 RR 1.04	8.45 5.95	524 751	1112 1594	(*) 2.12	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P113	27.00 X 30.00	RR 1.28 RR 1.15	9.58 6.33	221 864	876 3424	(*) 3.96	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P114	27.00 X 30.00	RR 1.28 RR 1.15	6.85 4.69	133 377	1026 2897	(*) 7.69	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P115	15.00 X 40.00	RR 2.77 RR 1.04	8.35 5.32	217 1074	795 3939	(*) 3.67	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P116	15.00 X 40.00	RR 14.30 RR 5.36	20.14 13.86	378 1475	1094 4269	(*) 2.90	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

P117	14.00 X 40.00	RR 2.97 RR 1.04	15.31 10.61	294 1521	832 4303	(*) 2.83	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P118	14.00 X 40.00	RR 2.97 RR 1.04	4.63 2.77	86 815	410 3886	(*) 4.77	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P119	14.00 X 40.00	RR 15.32 RR 5.36	9.61 6.00	184 974	752 3973	(*) 4.08	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P120	14.00 X 40.00	RR 2.97 RR 1.04	9.26 6.23	523 1307	996 2489	(*) 1.90	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P121	14.00 X 40.00	RR 15.32 RR 5.36	5.38 3.42	93 261	862 2407	(*) 9.23	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P122	15.00 X 40.00	RR 14.30 RR 5.36	16.33 10.90	318 1269	1143 4555	(*) 3.59	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P123	15.00 X 30.00	RR 2.31 RR 1.15	1.51 0.95	132 61	797 370	6.05	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
P124	15.00 X 30.00	RR 2.31 RR 1.15	1.45 0.73	130 148	710 811	5.47	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
P125	30.00 X 40.00	RR 7.15 RR 5.36	10.80 7.29	68 1539	238 5380	(*) 3.50	2.45 (2 ø 12.5) 2.45 (2 ø 12.5)
P126	14.00 X 40.00	RR 2.97 RR 1.04	9.14 6.09	958 1270	1136 1506	(*) 1.19	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P127	14.00 X 40.00	RR 2.97 RR 1.04	8.01 5.49	234 1254	714 3830	(*) 3.06	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P128	14.00 X 40.00	RR 2.97 RR 1.04	12.48 8.84	1029 1484	1225 1766	(*) 1.19	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P129	15.00 X 50.00	RR 14.99 RR 4.50	20.41 14.08	1819 3263	1925 3453	(*) 1.06	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P130	15.00 X 50.00	RR 3.46 RR 1.04	11.18 7.39	1687 2419	1758 2521	(*) 1.04	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P131	15.00 X 50.00	RR 3.46 RR 1.04	11.35 7.80	1134 838	1572 1161	(*) 1.39	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

P132	14.00 X 50.00	RR 3.71 RR 1.04	11.87 8.11	1019 764	1450 1088	(*) 1.42	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P133	15.00 X 50.00	RR 3.46 RR 1.04	10.11 6.08	1662 1380	1688 1402	(*) 1.02	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P134	15.00 X 50.00	RR 3.46 RR 1.04	10.49 6.87	1648 1930	1646 1928	(*) 1.00	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P135	15.00 X 50.00	RR 3.46 RR 1.04	11.31 7.65	1109 539	1621 787	(*) 1.46	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P136	15.00 X 50.00	RR 3.46 RR 1.04	11.21 7.57	1105 528	1620 775	(*) 1.47	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P137	15.00 X 50.00	RR 3.46 RR 1.04	10.42 6.99	1679 2851	1686 2862	(*) 1.00	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)

(*) Quantidade de barras alterada pelo usuário (para mais)

Vigas do pavimento NIVEL 00 (BALDRAMES)

Viga	Vãos			Nós			Avisos
	Md (kgf.m)	As	Als	Md (kgf.m)	As	Als	
VB1	1400.95	2 ø 10.0		-1388.09 -2171.16	2 ø 10.0 2 ø 10.0		Aviso 26
VB2	0.11	2 ø 10.0	2 ø 10.0	-1251.64 -1272.72	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB3	1400.73	2 ø 10.0		-2165.98 -1393.33	2 ø 10.0 2 ø 10.0		Aviso 26
VB4	1400.85	2 ø 10.0		-1392.21 -2167.54	2 ø 10.0 2 ø 10.0		Aviso 26
VB5	0.11	2 ø 10.0	2 ø 10.0	-1270.67 -1254.95	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB6	1401.69	2 ø 10.0		-2171.63 -1386.59	2 ø 10.0 2 ø 10.0		Aviso 26
VB7	27.93	2 ø 10.0		-113.71 -58.59	2 ø 10.0 2 ø 10.0		
VB8	320.65	2 ø 10.0	2 ø 10.0	-906.50 -1164.23	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB9	13.36	2 ø 10.0		-36.75	2 ø 10.0		Avisos 26, 02
VB10	12.61	2 ø 10.0		-31.55	2 ø 10.0		Avisos 26, 02
VB11	1705.72	2 ø 10.0		-3696.35 -1088.41 -1924.17	2 ø 12.5 2 ø 10.0 2 ø 10.0		Aviso 26
VB12	1985.99 2162.20 1992.45	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	-2206.76 -230.03 -815.83 -3107.66 -3116.95 -745.78 -226.65 -2197.33	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB13	382.56	2 ø 10.0	2 ø 10.0	-1109.79 -1106.65	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB14	1919.89	2 ø 10.0	2 ø 10.0	-2152.82 -437.02 -2785.15	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0	Aviso 26
VB15	6.25	2 ø 10.0		-57.88 -184.02	2 ø 10.0 2 ø 10.0		
VB16	803.43	2 ø 10.0		-706.78 -680.86	2 ø 10.0 2 ø 10.0		Aviso 26
VB17	0.11 742.71 0.11	2 ø 10.0 2 ø 10.0 2 ø 10.0		-819.95 -870.99	2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB18	1046.77	2 ø 10.0		-82.57 -220.67	2 ø 10.0 2 ø 10.0		Aviso 26
VB19	69.47	2 ø 10.0		-464.89	2 ø 10.0		Aviso 26
VB20	103.21	2 ø 10.0		-354.46	2 ø 10.0		Aviso 26
VB21	2492.46 160.18 2037.56 2171.16 2079.75	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-3312.35 -555.04 -2680.40 -2278.31 -2968.54	2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26

	0.11 2445.90	2 ø 10.0 2 ø 10.0	2 ø 10.0	-2977.59 -2280.74 -2491.49 -570.07 -3318.46	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 12.5	2 ø 10.0 2 ø 10.0	
VB22	2498.62 189.47 1700.84 385.78 1716.73 0.11 2456.75	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0	-3313.70 -554.76 -2670.04 -1777.35 -3161.38 -3163.87 -1745.79 -2478.09 -564.40 -3314.22	2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 12.5	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB23	1102.81	2 ø 10.0		-85.53 -75.12	2 ø 10.0 2 ø 10.0		Aviso 26
VB24	628.82	2 ø 10.0		-760.01 -794.42	2 ø 10.0 2 ø 10.0		Aviso 26
VB25	0.11 781.60 0.11	2 ø 10.0 2 ø 10.0 2 ø 10.0		-769.98 -808.51	2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB26	38.69	2 ø 10.0		-131.43 -47.14	2 ø 10.0 2 ø 10.0		Aviso 26
VB27	1649.60	2 ø 10.0		-3361.42 -676.35 -2530.76	2 ø 12.5 2 ø 10.0 2 ø 10.0		Aviso 26
VB28	112.38	2 ø 10.0	2 ø 10.0	-1112.85 -1275.96	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB29	1596.74	2 ø 10.0		-2463.21 -762.66 -3248.66	2 ø 10.0 2 ø 10.0 2 ø 12.5		Avisos 26, 38
VB30	0.11 175.97 0.11	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-52.13 -1332.63 -1341.39 -67.67	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB31	1738.49	2 ø 10.0		-3422.28 -873.78 -1948.66	2 ø 12.5 2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB32	467.18	2 ø 10.0	2 ø 10.0	-1021.66 -999.54	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB33	1689.55	2 ø 10.0		-1957.14 -1065.48 -3568.84	2 ø 10.0 2 ø 10.0 2 ø 12.5		Aviso 26
VB34	34.32	2 ø 10.0		-70.85 -116.44	2 ø 10.0 2 ø 10.0		Aviso 26
VB35	1553.24	2 ø 10.0		-1516.06 -1672.45	2 ø 10.0 2 ø 10.0		Aviso 26
VB36	185.93	2 ø 10.0	2 ø 10.0	-832.33 -872.64	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB37	1623.47	2 ø 10.0		-1760.07 -1458.96	2 ø 10.0 2 ø 10.0		Aviso 26
VB38	1614.04	2 ø 10.0		-1437.14 -1790.38	2 ø 10.0 2 ø 10.0		Aviso 26
VB39	204.52	2 ø 10.0	2 ø 10.0	-847.71 -811.43	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB40	1544.81	2 ø 10.0		-1703.85 -1505.95	2 ø 10.0 2 ø 10.0		Aviso 26
VB41	1297.60	2 ø 10.0		-1696.58 -2104.95	2 ø 10.0 2 ø 10.0		Aviso 26

VB42	0.11	2 ø 10.0	2 ø 10.0	-1148.95 -1110.22	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB43	1199.17 150.04 173.23	2 ø 10.0 2 ø 10.0 2 ø 10.0		-1980.08 -1970.59 -273.00 -333.18 -266.76 -1210.15	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
VB44	1191.10	2 ø 10.0		-1964.74 -1894.27	2 ø 10.0 2 ø 10.0		Aviso 26
VB45	0.11	2 ø 10.0	2 ø 10.0	-1100.19 -1150.66	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB46	1293.11	2 ø 10.0		-2029.07 -1668.57	2 ø 10.0 2 ø 10.0		Aviso 26
VB47	29.12	2 ø 10.0		-110.59 -44.72	2 ø 10.0 2 ø 10.0		
VB48	1377.51 130.45 1478.04 310.83 460.65 542.59 294.93	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	-2891.65 -839.00 -2670.45 -2841.03 -515.68 -3004.08 -1076.78 -1294.79 -1055.35 -467.73	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB49	13.53	2 ø 10.0		-73.52 -80.84	2 ø 10.0 2 ø 10.0		
VB50	63.07	2 ø 10.0		-42.92 -21.62	2 ø 10.0 2 ø 10.0		
VB51	152.15	2 ø 10.0	2 ø 10.0	-291.37 -1440.16	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB52	1470.70	2 ø 10.0		-2414.60 -925.50 -3012.28	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
VB53	27.68	2 ø 10.0		-55.57 -106.54	2 ø 10.0 2 ø 10.0		
VB54	1017.76 372.48	2 ø 10.0 2 ø 10.0		-907.08 -1394.47 -374.83	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
VB55	1223.08 387.07	2 ø 10.0 2 ø 10.0		-57.46 -1696.37 -24.45	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB56	397.56	2 ø 10.0		-22.76 -959.79	2 ø 10.0 2 ø 10.0		Aviso 26
VB57	2718.77 1.41 1036.75 135.60 310.10	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	-3722.92 -844.59 -4327.62 -1243.00 -2270.85 -470.45 -358.81	2 ø 12.5 2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB58	255.69 1487.00	2 ø 10.0 2 ø 10.0		-211.65 -2397.43 -813.25 -3387.99	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 12.5		Aviso 26
VB59	1296.23	2 ø 10.0		-1209.71 -71.04	2 ø 10.0 2 ø 10.0		Aviso 26
VB60	2873.16 39.17	2 ø 10.0 2 ø 10.0	2 ø 10.0	-3872.58 -941.71	2 ø 12.5 2 ø 10.0		Avisos 26, 38

	500.92 217.26	2 ø 10.0 2 ø 10.0		-3769.48 -785.28 -1028.75 -613.18	2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	
VB61	417.17	2 ø 10.0		-31.72 -44.28	2 ø 10.0 2 ø 10.0		Aviso 26
VB62	323.94	2 ø 10.0		-624.96 -624.42	2 ø 10.0 2 ø 10.0		Aviso 26
VB63	492.79 375.74 105.04 1492.01	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-566.98 -1005.73 -522.19 -2381.01 -813.11 -3392.65	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 12.5	2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB64	445.92	2 ø 10.0		-5.36 -7.38	2 ø 10.0 2 ø 10.0		Aviso 26
VB65	403.18 405.96	2 ø 10.0 2 ø 10.0		-495.61 -845.31 -410.95	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB66	17.76 200.55	2 ø 10.0 2 ø 10.0	2 ø 10.0	-1059.09 -418.48	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB67	781.68 403.64 132.42 351.89 26.21	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-1460.36 -903.75 -350.87 -457.26 -1221.42	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB68	200.97 158.35 254.66	2 ø 10.0 2 ø 10.0 2 ø 10.0		-1061.59 -575.14 -265.74	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB69	58.98	2 ø 10.0		-51.50 -43.41	2 ø 10.0 2 ø 10.0		
VB70	860.07 232.55 126.55 831.67 80.25 173.78 70.83 47.06 74.52 615.98 293.72	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0	-1907.86 -1661.75 -555.92 -1349.79 -1282.87 -283.07 -139.28 -167.05 -146.17 -1244.74 -1123.60 -461.74	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	Avisos 26, 02, 38
VB71	69.36	2 ø 10.0		-86.40 -18.64	2 ø 10.0 2 ø 10.0		
VB72	152.28	2 ø 10.0	2 ø 10.0	-275.66 -1462.93	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB73	1503.11	2 ø 10.0		-2460.77 -851.21 -3226.68	2 ø 10.0 2 ø 10.0 2 ø 12.5		Aviso 26
VB74	33.12	2 ø 10.0		-44.71 -108.24	2 ø 10.0 2 ø 10.0		
VB75	1300.00	2 ø 10.0		-1719.34 -2114.35	2 ø 10.0 2 ø 10.0		Aviso 26
VB76	0.11	2 ø 10.0	2 ø 10.0	-1125.49 -1190.92	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB77	1297.44	2 ø 10.0		-2036.89 -1731.90	2 ø 10.0 2 ø 10.0		Aviso 26
VB78	1285.83	2 ø 10.0		-1726.19 -2086.37	2 ø 10.0 2 ø 10.0		Aviso 26

VB79	0.11	2 ø 10.0	2 ø 10.0	-1179.66 -1151.13	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB80	1288.42	2 ø 10.0		-2108.94 -1694.24	2 ø 10.0 2 ø 10.0		Aviso 26
VB81	1.39 211.02 821.73 0.11 2048.13 0.11	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		-0.24 -138.83 -1267.31 -707.91 -2255.72 -2343.66 -13.48	2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 10.0		Avisos 26, 02, 38
VB82	0.11 2204.58 0.11 2168.17 0.11	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		-19.71 -1876.25 -2354.88 -2307.86 -1975.68 -11.35	2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 10.0		Avisos 26, 02
VB83	350.82	2 ø 10.0		-944.13 -4.17	2 ø 10.0 2 ø 10.0		Aviso 26
VB84	678.24	2 ø 10.0		-60.46 -78.61	2 ø 10.0 2 ø 10.0		Aviso 26
VB85	49.95	2 ø 10.0	2 ø 10.0	-64.54 -582.35	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB86	225.44	2 ø 10.0	2 ø 10.0	-1298.30 -47.57	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB87	744.83	2 ø 10.0					Aviso 26
VB88	393.64	2 ø 10.0	2 ø 10.0	-60.47 -729.48	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB89	0.11 271.62	2 ø 10.0 2 ø 10.0		-316.52 -255.73	2 ø 10.0 2 ø 10.0		Aviso 26
VB90	725.44	2 ø 10.0		-16.60 -23.69	2 ø 10.0 2 ø 10.0		Aviso 26
VB91	708.18	2 ø 10.0		-37.41 -37.15	2 ø 10.0 2 ø 10.0		Aviso 26
VB92	89.38	2 ø 10.0		-141.27 -13.01	2 ø 10.0 2 ø 10.0		Aviso 26
VB93	111.34	2 ø 10.0		-199.00 -173.28	2 ø 10.0 2 ø 10.0		Aviso 26
VB94	273.18 159.44 1496.39	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-410.44 -247.82 -1434.28 -1737.16	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB95	1374.78 98.01 98.11	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-1515.24 -2026.51 -190.43 -107.71	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB96	160.63 1251.07 174.46	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-55.01 -1518.69 -322.16 -1752.00 -150.30	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB97	218.48	2 ø 10.0					Aviso 26
VB98	218.51	2 ø 10.0					Aviso 26
VB99	400.70	2 ø 10.0					Aviso 26
VB100	400.70	2 ø 10.0					Aviso 26
VB101	95.03 157.02 1201.40 468.76	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		-136.22 -170.53 -1669.37 -317.19 -1197.95	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 38

				-421.10	2 ø 10.0		
VB102	112.37	2 ø 10.0		-201.06 -176.80	2 ø 10.0 2 ø 10.0		Aviso 26
VB103	275.41 146.96 1444.62	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-409.26 -248.64 -1372.53 -1693.11	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB104	1478.36 72.59 99.44	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	-1756.40 -292.83 -2062.18 -182.98 -110.93	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB105	473.91	2 ø 10.0		-12.34 -73.48	2 ø 10.0 2 ø 10.0		Aviso 26
VB106	60.36	2 ø 10.0		-135.95	2 ø 10.0		Aviso 26
VB107	93.65	2 ø 10.0		-581.89	2 ø 10.0		Aviso 26
VB108	0.11	2 ø 10.0		-2466.52 -141.10	2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB109	549.90 253.76	2 ø 10.0 2 ø 10.0		-535.41 -1044.05 -217.26	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB110	212.72	2 ø 10.0		-374.57 -480.78	2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB111	156.88	2 ø 10.0		-509.28	2 ø 10.0		Aviso 26
VB112	266.37 29.61	2 ø 10.0 2 ø 10.0		-879.31 -48.84 -44.00	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 02
VB113	241.63	2 ø 10.0	2 ø 10.0	-1820.87	2 ø 10.0	2 ø 10.0	Aviso 26
VB114	32.74	2 ø 10.0	2 ø 10.0	-107.68	2 ø 10.0	2 ø 10.0	
VB115	0.11	2 ø 10.0		-2.33 -127.73	2 ø 10.0 2 ø 12.5		Aviso 26
VB116	885.97 0.11 1072.69 0.11	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		-1238.54 -1167.24 -956.86 -651.07	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB117	141.28	2 ø 10.0		-189.50 -35.52 -4.44	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
VB118	0.11 2197.30 0.11 2276.32	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		-28.71 -1955.70 -2283.18 -2355.99 -1703.13	2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 02
VB119	128.52	2 ø 10.0		-97.10 -269.52	2 ø 10.0 2 ø 10.0		Aviso 26
VB120	188.32	2 ø 10.0		-209.53 -8.57	2 ø 10.0 2 ø 10.0		Aviso 26
VB121	1550.35	2 ø 10.0		-2816.82 -2252.34	2 ø 10.0 2 ø 10.0		Aviso 26
VB122	226.66	2 ø 10.0	2 ø 10.0	-828.89	2 ø 10.0	2 ø 10.0	Aviso 26
VB123	128.45	2 ø 10.0		-102.10 -257.07	2 ø 10.0 2 ø 10.0		Aviso 26
VB124	159.48	2 ø 10.0		-267.86 -9.28	2 ø 10.0 2 ø 10.0		Aviso 26
VB125	191.62 714.62	2 ø 10.0 2 ø 10.0	2 ø 10.0	-80.48 -1344.14 -1308.22	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB126	559.94 399.16	2 ø 10.0 2 ø 10.0		-1195.17 -996.98 -471.10	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 38

VB127	56.10	2 ø 10.0		-321.17 -137.48 -3.44	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
VB128	0.11 1981.02 0.11 2287.36	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		-18.35 -1794.91 -2904.67 -2331.15 -1706.61	2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 02, 38
VB129	335.81	2 ø 10.0		-729.49 -17.09	2 ø 10.0 2 ø 10.0		Aviso 26
VB130	181.39	2 ø 10.0		-12.01 -230.87	2 ø 10.0 2 ø 10.0		Aviso 26
VB131	254.79 34.35	2 ø 10.0 2 ø 10.0		-924.79 -37.09 -34.01	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 02
VB132	32.22	2 ø 10.0	2 ø 10.0	-100.12	2 ø 10.0	2 ø 10.0	
VB133	231.96	2 ø 10.0	2 ø 10.0	-1821.66	2 ø 10.0	2 ø 10.0	Aviso 26
VB134	489.95	2 ø 10.0		-15.26 -33.62	2 ø 10.0 2 ø 10.0		Aviso 26
VB135	965.50 95.40	2 ø 10.0 2 ø 10.0		-962.71 -1779.07 -55.44	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
VB136	102.65 445.00	2 ø 10.0 2 ø 10.0		-311.55 -810.49 -364.26	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB137	88.82	2 ø 10.0		-152.62	2 ø 10.0		Aviso 26
VB138	148.05 828.53 27.40	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	-28.10 -1519.90 -1571.05 -154.90	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	Avisos 26, 02, 38
VB139	782.89 350.59 55.77	2 ø 10.0 2 ø 10.0 2 ø 10.0		-1216.01 -1105.51 -631.17 -68.89	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB140	270.41 235.00 840.10	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-406.99 -252.17 -867.02 -909.86	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB141	650.78 138.37 99.86	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-1452.79 -449.64 -1178.98 -216.25 -97.87	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB142	614.56	2 ø 10.0					Aviso 26
VB143	604.37	2 ø 10.0					Aviso 26
VB144	162.03 939.17 8.77	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	-15.03 -1716.61 -1743.65 -119.54	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	Avisos 26, 02, 38
VB145	187.45 953.61 150.02	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	-1535.72 -1721.87	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB146	270.12 230.93 842.45	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-417.65 -241.28 -882.43 -904.69	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 38
VB147	623.30	2 ø 10.0		-1098.92 -1152.26	2 ø 10.0 2 ø 10.0		Avisos 26, 38
VB148	138.02 98.52	2 ø 10.0 2 ø 10.0		-551.09 -216.47	2 ø 10.0 2 ø 10.0		Avisos 26, 38

				-98.83	2 ø 10.0		
VB149	744.83	2 ø 10.0					Aviso 26
VB150	271.81	2 ø 10.0	2 ø 10.0	-1055.00 -63.00	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB151	716.98	2 ø 10.0	2 ø 10.0	-72.95 -70.80	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB152	57.27	2 ø 10.0	2 ø 10.0	-55.43 -635.60	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB153	268.97	2 ø 10.0	2 ø 10.0	-1168.57 -53.63	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB154	744.83	2 ø 10.0					Aviso 26
VB155	309.71	2 ø 10.0	2 ø 10.0	-43.70 -916.49	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
VB156	0.11 1862.23 0.11 1864.63 0.11	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		-12.57 -2177.46 -2743.37 -2808.60 -2170.57 -11.43	2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 10.0		Avisos 26, 02
VB157	0.11 2175.14 0.11 2176.33 0.11	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-19.13 -1981.18 -2311.45 -2312.30 -1956.80 -8.30	2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 02

Pavimento NIVEL 330 VIGAS 100

Cálculo dos Pilares

NIVEL 330 VIGAS 100	fck = 300.00 kgf/cm²	E = 268384 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 2		cobr = 3.00 cm	

Pilar	Seção (cm)	vínc esb B vínc esb H	Nd máx Nd mín (tf)	Msd(x) Msd(y) (kgf.m)	Mrd(x) Mrd(y) (kgf.m)	Mrd/Msd	As b As h (cm²)
P10	14.00 X 40.00	RR 79.33 RR 27.77	2.90 1.11	602 101	1138 191	(*) 1.89	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P11	14.00 X 40.00	RR 79.33 RR 27.77	2.97 1.21	529 244	1099 508	(*) 2.08	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P14	14.00 X 40.00	RR 79.33 RR 27.77	2.84 1.14	544 196	1111 401	(*) 2.04	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P15	14.00 X 40.00	RR 79.33 RR 27.77	3.24 1.41	584 111	1149 218	(*) 1.97	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P17	14.00 X 40.00	RR 79.33 RR 27.77	3.24 1.35	452 507	1003 1125	(*) 2.22	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P18	14.00 X 40.00	RR 79.33 RR 27.77	3.33 1.42	499 661	979 1298	(*) 1.96	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P19	15.00 X 40.00	RR 74.04 RR 27.77	3.16 1.28	511 395	1149 890	(*) 2.25	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P20	15.00 X 40.00	RR 74.04 RR 27.77	3.32 1.40	503 341	1171 795	(*) 2.33	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P22	14.00 X 40.00	RR 79.33 RR 27.77	6.53 4.03	876 472	1211 652	(*) 1.38	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P23	15.00 X 40.00	RR 74.04 RR 27.77	3.10 1.62	578 731	1299 1643	(*) 2.25	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P24	15.00 X 40.00	RR 74.04 RR 27.77	5.03 3.10	551 1115	1346 2725	(*) 2.45	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)

P25	15.00 X 40.00	RR 74.04 RR 27.77	5.05 3.10	557 1186	1329 2828	(*) 2.38	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P26	15.00 X 40.00	RR 74.04 RR 27.77	2.52 1.18	614 393	1553 994	(*) 2.53	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P27	14.00 X 40.00	RR 79.33 RR 27.77	5.90 3.54	901 113	1269 160	(*) 1.41	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P30	14.00 X 40.00	RR 79.33 RR 27.77	9.46 6.10	649 317	1320 645	(*) 2.03	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P31	14.00 X 40.00	RR 79.33 RR 27.77	4.87 2.89	350 463	1033 1364	(*) 2.95	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P32	15.00 X 40.00	RR 74.04 RR 27.77	5.69 3.56	579 1878	1177 3820	(*) 2.03	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P33	15.00 X 40.00	RR 74.04 RR 27.77	6.58 4.20	607 2424	1262 5043	(*) 2.08	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P34	14.00 X 40.00	RR 79.33 RR 27.77	2.94 1.47	438 370	1038 878	(*) 2.37	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P35	14.00 X 40.00	RR 79.33 RR 27.77	3.85 2.05	615 284	1131 523	(*) 1.84	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P37	15.00 X 40.00	RR 74.04 RR 27.77	3.11 1.22	469 475	1108 1124	(*) 2.36	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P38	15.00 X 40.00	RR 74.04 RR 27.77	3.21 1.29	565 581	1109 1141	(*) 1.96	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P39	14.00 X 40.00	RR 79.33 RR 27.77	3.24 1.41	491 364	1060 785	(*) 2.16	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P40	14.00 X 40.00	RR 79.33 RR 27.77	3.35 1.50	435 451	1020 1058	(*) 2.35	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P41	15.00 X 40.00	RR 74.04 RR 27.77	11.18 6.88	745 2336	1292 4050	(*) 1.73	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P42	14.00 X 40.00	RR 79.33 RR 27.77	4.40 2.22	595 189	1393 444	(*) 2.34	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)

P43	14.00 X 40.00	RR 79.33 RR 27.77	6.29 3.58	506 328	1165 754	(*) 2.30	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P46	14.00 X 40.00	RR 79.33 RR 27.77	2.94 1.22	487 130	1131 301	(*) 2.32	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P47	14.00 X 40.00	RR 79.33 RR 27.77	3.22 1.39	619 98	1153 182	(*) 1.86	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P67	15.00 X 40.00	RR 74.04 RR 27.77	2.59 0.95	265 1527	594 3421	(*) 2.24	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P68	15.00 X 40.00	RR 74.04 RR 27.77	2.54 0.84	267 1532	594 3401	(*) 2.22	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P72	14.00 X 40.00	RR 79.33 RR 27.77	2.71 1.14	135 1028	461 3515	(*) 3.42	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P73	14.00 X 40.00	RR 79.33 RR 27.77	2.50 0.84	232 197	1018 863	(*) 4.38	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P74	14.00 X 40.00	RR 79.33 RR 27.77	4.18 2.11	555 304	1117 612	(*) 2.01	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P76	15.00 X 40.00	RR 74.04 RR 27.77	4.13 2.22	477 896	1029 1934	(*) 2.16	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P77	15.00 X 40.00	RR 74.04 RR 27.77	3.75 1.98	349 302	1151 996	(*) 3.30	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P78	15.00 X 40.00	RR 74.04 RR 27.77	2.84 1.46	346 266	1143 879	(*) 3.30	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P79	14.00 X 50.00	RR 79.33 RR 22.21	3.54 1.72	348 409	1086 1276	(*) 3.12	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P80	15.00 X 40.00	RR 74.04 RR 27.77	2.93 1.23	181 1092	582 3514	(*) 3.22	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P82	14.00 X 40.00	RR 79.33 RR 27.77	6.09 3.65	1034 540	1813 947	(*) 1.75	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P83	15.00 X 60.00	RR 74.04 RR 18.51	1.61 0.01	559 214	1266 484	(*) 2.26	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

P84	14.00 X 40.00	RR 79.33 RR 27.77	8.88 5.66	488 1362	948 2644	(*) 1.94	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P85	14.00 X 40.00	RR 79.33 RR 27.77	3.77 1.95	372 1158	806 2512	(*) 2.17	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P86	14.00 X 40.00	RR 79.33 RR 27.77	5.68 3.41	414 1669	774 3122	(*) 1.87	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P87	14.00 X 40.00	RR 79.33 RR 27.77	2.37 0.86	328 486	935 1386	(*) 2.85	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P88	14.00 X 40.00	RR 79.33 RR 27.77	2.80 1.32	573 307	1071 574	(*) 1.87	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P90	14.00 X 40.00	RR 79.33 RR 27.77	2.68 1.21	368 912	1301 3227	(*) 3.54	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P92	14.00 X 40.00	RR 79.33 RR 27.77	7.37 4.66	310 3249	407 4260	(*) 1.31	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P93	15.00 X 40.00	RR 74.04 RR 27.77	7.12 4.30	308 1176	887 3390	(*) 2.88	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P94	14.00 X 40.00	RR 79.33 RR 27.77	2.72 0.78	125 1262	356 3611	(*) 2.86	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P95	14.00 X 40.00	RR 79.33 RR 27.77	1.80 0.09	135 1078	435 3462	(*) 3.21	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P96	18.00 X 40.00	EL 123.41 RR 27.77	5.07 2.76	886 227	1306 335	(*) 1.47	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
P97	18.00 X 40.00	EL 126.87 RR 28.54	5.07 2.76	924 227	1307 322	(*) 1.42	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
P98	14.00 X 40.00	RR 79.33 RR 27.77	2.36 0.79	431 543	963 1212	(*) 2.23	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P99	14.00 X 40.00	RR 79.33 RR 27.77	2.36 0.87	50 1792	104 3747	(*) 2.09	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P100	14.00 X 40.00	RR 79.33 RR 27.77	2.13 0.27	301 204	1014 689	(*) 3.37	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

P101	14.00 X 40.00	RR 79.33 RR 27.77	3.25 1.26	558 167	1122 335	(*) 2.01	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P103	15.00 X 40.00	RR 74.04 RR 27.77	2.92 1.24	449 566	1064 1340	(*) 2.37	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P104	15.00 X 40.00	RR 74.04 RR 27.77	7.27 4.47	492 511	1249 1300	(*) 2.54	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P105	15.00 X 40.00	RR 74.04 RR 27.77	6.75 3.82	374 654	1109 1937	(*) 2.96	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P106	14.00 X 40.00	RR 79.33 RR 27.77	3.27 1.78	273 421	952 1469	(*) 3.49	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P107	15.00 X 40.00	RR 74.04 RR 27.77	3.01 1.33	295 660	951 2132	(*) 3.23	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P108	14.00 X 40.00	RR 79.33 RR 27.77	3.97 2.07	197 819	728 3026	(*) 3.69	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P109	14.00 X 40.00	RR 79.33 RR 27.77	5.71 3.31	378 829	937 2055	(*) 2.48	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P110	14.00 X 40.00	RR 79.33 RR 27.77	3.41 1.76	205 797	735 2857	(*) 3.59	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P111	14.00 X 30.00	RR 79.33 RR 37.02	5.09 3.26	246 158	831 533	(*) 3.38	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
P112	14.00 X 40.00	RR 79.33 RR 27.77	2.91 1.44	192 746	726 2823	(*) 3.78	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P113	27.00 X 30.00	EL 12.81 RR 19.72	6.17 3.42	269 676	1178 2966	(*) 4.39	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P114	27.00 X 30.00	EL 82.27 RR 37.02	4.03 2.03	219 779	798 2841	(*) 3.65	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P115	15.00 X 40.00	RR 74.04 RR 27.77	3.50 1.53	234 408	1013 1768	(*) 4.33	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P117	14.00 X 40.00	RR 79.33 RR 27.77	9.10 5.81	713 1472	1040 2147	(*) 1.46	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

P118	14.00 X 40.00	RR 79.33 RR 27.77	1.40 0.13	48 1071	158 3540	(*) 3.30	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P119	14.00 X 40.00	RR 79.33 RR 27.77	4.29 1.96	46 1797	103 3979	(*) 2.21	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P120	14.00 X 40.00	RR 79.33 RR 27.77	4.03 2.02	225 1419	563 3547	(*) 2.50	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P126	14.00 X 40.00	RR 79.33 RR 27.77	3.03 1.18	306 1068	758 2643	(*) 2.47	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P127	14.00 X 40.00	RR 79.33 RR 27.77	2.43 0.91	212 652	778 2392	(*) 3.67	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P128	14.00 X 40.00	RR 79.33 RR 27.77	3.69 1.99	466 746	961 1538	(*) 2.06	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

(*) Quantidade de barras alterada pelo usuário (para mais)

Vigas do pavimento NIVEL 330 VIGAS 100

Viga	Vãos			Nós			Avisos
	Md (kgf.m)	As	Als	Md (kgf.m)	As	Als	
V101	944.03	2 ø 10.0	2 ø 10.0	-1245.24 -1662.81	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V102	49.44	2 ø 10.0		-894.23 -945.51	2 ø 10.0 2 ø 10.0		Aviso 26
V103	950.85	2 ø 10.0	2 ø 10.0	-1659.16 -1295.40	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V104	951.06	2 ø 10.0	2 ø 10.0	-1295.48 -1661.05	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V105	48.60	2 ø 10.0		-941.76 -897.82	2 ø 10.0 2 ø 10.0		Aviso 26
V106	943.69	2 ø 10.0	2 ø 10.0	-1660.54 -1247.15	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V107	738.43	2 ø 10.0		-1248.97 -821.21 -1047.37	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11
V108	0.11	2 ø 10.0		-583.08 -102.99 -519.99	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V109	3.28	2 ø 10.0		-17.70 -2.21	2 ø 10.0 2 ø 10.0		Avisos 26, 02
V110	0.61	2 ø 10.0		-1.93 -14.95	2 ø 10.0 2 ø 10.0		Avisos 26, 02
V111	555.68 1168.81 545.76	2 ø 10.0 2 ø 10.0 2 ø 10.0		-874.25 -902.07 -2607.86 -2631.66 -987.77 -858.65	2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 12.5 2 ø 10.0 2 ø 10.0		Avisos 26, 11
V112	0.11	2 ø 10.0		-474.10 -104.01 -629.67	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V113	734.28	2 ø 10.0		-1071.58 -803.96 -1197.44	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11
V114	394.83	2 ø 10.0		-327.34 -359.91	2 ø 10.0 2 ø 10.0		Aviso 26
V115	0.11 410.51 0.11	2 ø 10.0 2 ø 10.0 2 ø 10.0		-436.91 -434.44	2 ø 10.0 2 ø 10.0		Avisos 26, 38
V116	360.31	2 ø 10.0		-49.60 -30.62	2 ø 10.0 2 ø 10.0		Aviso 26
V117	1988.90 0.11 590.88 610.56 601.15 1787.72	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		-1662.26 -1456.95 -2280.22 -624.75 -682.12 -1395.82 -1420.83 -668.38 -2185.55	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11

				-1387.05 -1537.46	2 ø 10.0 2 ø 10.0		
V118	1750.93 1033.88 415.86 2040.11 483.23 0.11 790.24	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		-1564.66 -1280.98 -2789.61 -935.77 -2368.26 -2989.28 -627.29 -1167.99 -798.64 -1175.24	2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11
V119	409.21	2 ø 10.0		-29.20 -12.00	2 ø 10.0 2 ø 10.0		Aviso 26
V120	403.18	2 ø 10.0		-348.30 -417.02	2 ø 10.0 2 ø 10.0		Aviso 26
V121	0.11 417.02 0.11	2 ø 10.0 2 ø 10.0 2 ø 10.0		-409.37 -365.46	2 ø 10.0 2 ø 10.0		Avisos 26, 38
V122	813.27	2 ø 10.0		-1206.33 -466.76 -1472.42	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11
V123	1338.24	2 ø 10.0		-1107.01 -1286.29	2 ø 10.0 2 ø 10.0		Aviso 26
V124	589.08	2 ø 10.0		-1428.76 -614.33 -1048.01	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11
V125	660.31	2 ø 10.0		-1120.21 -802.34 -953.64	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11
V126	0.11	2 ø 10.0		-590.41 -118.21 -604.18	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V127	750.66	2 ø 10.0		-1075.33 -737.61 -1154.55	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11
V128	922.82	2 ø 10.0	2 ø 10.0	-1274.24 -1610.51	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V129	35.93	2 ø 10.0		-894.28 -915.10	2 ø 10.0 2 ø 10.0		Aviso 26
V130	911.50	2 ø 10.0	2 ø 10.0	-1598.87 -1282.23	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V131	899.51	2 ø 10.0	2 ø 10.0	-1255.65 -1621.81	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V132	64.82	2 ø 10.0		-935.92 -895.60	2 ø 10.0 2 ø 10.0		Aviso 26
V133	908.51	2 ø 10.0	2 ø 10.0	-1638.37 -1244.35	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V134	917.59	2 ø 10.0	2 ø 10.0	-1214.92 -1624.72	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V135	41.13	2 ø 10.0		-864.24 -881.43	2 ø 10.0 2 ø 10.0		Aviso 26
V136	920.49	2 ø 10.0	2 ø 10.0	-1631.16 -1199.14	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V137	914.75	2 ø 10.0	2 ø 10.0	-1183.29 -1551.39	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V138	13.66	2 ø 10.0		-850.60 -814.64	2 ø 10.0 2 ø 10.0		Aviso 26
V139	914.02	2 ø 10.0	2 ø 10.0	-1566.98 -1168.96	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26

V140	587.21 195.21 466.89 290.15 330.13 383.08 179.30	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-1076.22 -621.51 -1124.17 -986.96 -597.56 -1045.16 -967.62 -802.98 -281.84 -653.50 -140.89	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 11
V141	24.31	2 ø 10.0		-357.82	2 ø 10.0		
V142	688.36	2 ø 10.0		-779.84 -662.46 -1085.82	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11
V143	417.89 352.76	2 ø 10.0 2 ø 10.0		-347.81 -639.17 -248.33	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V144	402.04 308.14	2 ø 10.0 2 ø 10.0		-26.59 -785.80 -15.88	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V145	347.99	2 ø 10.0		-33.11 -655.76	2 ø 10.0 2 ø 10.0		Aviso 26
V146	2843.52 477.02 424.09 278.49	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		-2286.91 -1585.64 -2735.37 -474.35 -1307.44 -618.39 -267.76	2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11, 48
V147	117.87 751.41	2 ø 10.0 2 ø 10.0		-201.14 -1059.36 -516.62 -1005.08	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11
V148	576.76	2 ø 10.0		-265.12 -64.44	2 ø 10.0 2 ø 10.0		Aviso 26
V149	2448.82 264.46 255.88	2 ø 10.0 2 ø 10.0 2 ø 10.0		-2129.21 -1422.92 -3459.97 -79.55 -584.86 -599.70	2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11, 48
V150	115.95	2 ø 10.0		-56.87 -44.45	2 ø 10.0 2 ø 10.0		Aviso 26
V151	181.92	2 ø 10.0		-396.33 -396.30	2 ø 10.0 2 ø 10.0		Aviso 26
V152	341.71 180.30 12.18 743.18	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		-321.15 -810.24 -217.42 -1075.43 -515.43 -1014.15	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11
V153	154.67	2 ø 10.0		-6.76 -4.10	2 ø 10.0 2 ø 10.0		Aviso 26
V154	211.01 256.31	2 ø 10.0 2 ø 10.0		-330.22 -412.04 -208.67	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 38
V155	12.38 215.59	2 ø 10.0 2 ø 10.0		-484.67 -425.71	2 ø 10.0 2 ø 10.0		Aviso 26
V156	283.45	2 ø 10.0		-651.86	2 ø 10.0		Aviso 26

	177.90 95.24 212.92 17.49	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-566.25 -377.22 -90.51 -62.31 -637.11	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	
V157	225.62 182.50 217.58	2 ø 10.0 2 ø 10.0 2 ø 10.0		-689.16 -509.66 -161.66	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V158	30.18	2 ø 10.0	2 ø 10.0	-16.44 -33.25	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V159	1077.26 308.03 389.32 1137.33 421.03 1230.96 479.77 152.08	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	-1451.97 -1161.35 -368.94 -1341.44 -1182.04 -146.75 -2075.57 -2463.19 -378.33 -712.73 -198.25	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 12.5 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	Avisos 26, 11
V160	35.43	2 ø 10.0		-68.80 -639.07	2 ø 10.0 2 ø 10.0		Aviso 26
V161	671.75	2 ø 10.0		-980.96 -599.96 -1071.65	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 11
V162	917.08	2 ø 10.0	2 ø 10.0	-1237.36 -1665.67	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V163	67.45	2 ø 10.0		-847.61 -913.32	2 ø 10.0 2 ø 10.0		Aviso 26
V164	927.59	2 ø 10.0	2 ø 10.0	-1594.80 -1266.29	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V165	913.48	2 ø 10.0	2 ø 10.0	-1286.10 -1635.11	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V166	77.07	2 ø 10.0		-942.15 -869.39	2 ø 10.0 2 ø 10.0		Aviso 26
V167	912.57	2 ø 10.0	2 ø 10.0	-1665.41 -1220.23	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V168	27.99 0.11 557.65	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	-827.01 -650.57 -749.90	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0	Avisos 26, 02, 38
V169	1227.93	2 ø 10.0	2 ø 10.0	-1776.98 -1674.73	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V170	1420.16	2 ø 10.0	2 ø 10.0	-1419.37 -1611.63	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V171	1320.44	2 ø 10.0	2 ø 10.0	-1524.20 -1709.07	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V172	513.87	2 ø 10.0	2 ø 10.0	-758.21 -239.09	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V173	313.70	2 ø 10.0		-250.25 -267.69	2 ø 10.0 2 ø 10.0		Avisos 26, 12
V174	315.90	2 ø 10.0	2 ø 10.0	-338.59 -325.26	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V175	279.58	2 ø 10.0	2 ø 10.0	-534.02 -288.99	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V176	322.73	2 ø 10.0		-246.07 -233.36	2 ø 10.0 2 ø 10.0		Avisos 26, 12
V177	342.72	2 ø 10.0	2 ø 10.0	-379.30 -391.38	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V178	0.11	2 ø 10.0		-2599.25	2 ø 12.5		Avisos 26, 101

	235.36	2 ø 10.0					
V179	265.94	2 ø 10.0		-23.46 -3.89	2 ø 10.0 2 ø 10.0		Aviso 26
V180	267.61	2 ø 10.0		-13.13 -2.06	2 ø 10.0 2 ø 10.0		Aviso 26
V181	88.74 385.03	2 ø 10.0 2 ø 10.0		-84.26 -596.25 -853.58	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V182	427.25 134.29	2 ø 10.0 2 ø 10.0		-756.02 -628.12 -56.87	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V183	49.18 487.31 38.50	2 ø 10.0 2 ø 10.0 2 ø 10.0		-59.15 -529.76 -41.78 -532.64 -342.96	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V184	75.06	2 ø 10.0		-2.74 -16.80	2 ø 10.0 2 ø 10.0		Aviso 26
V185	81.20	2 ø 10.0		-45.89	2 ø 10.0		Aviso 26
V186	137.46	2 ø 10.0		-2.57 -22.40	2 ø 10.0 2 ø 10.0		Aviso 26
V187	138.89	2 ø 10.0		-1.05 -19.32	2 ø 10.0 2 ø 10.0		Aviso 26
V188	49.02 515.52 182.46	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0	-45.07 -644.86 -1208.60 -132.08	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V189	8.03 427.01	2 ø 10.0 2 ø 10.0		-207.71 -637.34 -696.34	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V190	443.71 79.32	2 ø 10.0 2 ø 10.0		-656.44 -643.88 -101.65	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V191	173.47	2 ø 10.0		-52.87	2 ø 10.0		Aviso 26
V192	68.05	2 ø 10.0		-162.09	2 ø 10.0		Aviso 26
V193	0.11	2 ø 10.0		-758.76 -51.84	2 ø 10.0 2 ø 10.0		Aviso 26
V194	250.58 191.99 140.72	2 ø 10.0 2 ø 10.0 2 ø 10.0		-149.93 -38.26 -491.64 -89.30	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V195	276.26	2 ø 10.0	2 ø 10.0	-298.69 -573.34	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V196	329.37	2 ø 10.0	2 ø 10.0	-311.21 -260.68	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V197	321.13	2 ø 10.0	2 ø 10.0	-357.98 -346.08	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V198	16.23	2 ø 10.0	2 ø 10.0	-91.94	2 ø 10.0	2 ø 10.0	Avisos 26, 02, 12
V199	405.54	2 ø 10.0	2 ø 10.0	-274.14 -466.47	2 ø 10.0 2 ø 10.0	2 ø 10.0	Avisos 26, 12
V200	553.66 216.01 0.11	2 ø 10.0 2 ø 10.0 2 ø 10.0		-827.66 -634.09 -219.38 -2048.24	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 38
V201	770.51 0.11 756.13	2 ø 10.0 2 ø 10.0 2 ø 10.0		-643.56 -959.97 -985.55 -693.21	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V202	729.15	2 ø 10.0		-1013.35 -570.27	2 ø 10.0 2 ø 10.0		Aviso 26

V203	428.87 279.14	2 ø 10.0 2 ø 10.0		-127.85 -593.00 -464.30	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V204	1429.41 161.49	2 ø 10.0 2 ø 10.0		-1179.26 -1144.34 -86.12	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V205	777.87 0.11 749.38	2 ø 10.0 2 ø 10.0 2 ø 10.0		-637.97 -962.33 -985.84 -702.46	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V206	241.97	2 ø 10.0	2 ø 10.0	-330.42 -320.96	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V207	246.47	2 ø 10.0		-208.53 -311.31	2 ø 10.0 2 ø 10.0		Avisos 26, 12
V208	313.57	2 ø 10.0	2 ø 10.0	-391.16 -339.34	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V209	385.18	2 ø 10.0	2 ø 10.0	-357.39 -455.22	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V210	9.10	2 ø 10.0	2 ø 10.0	-50.43 -1.50	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 02, 12
V211	188.93	2 ø 10.0		-12.85	2 ø 10.0		Aviso 26
V212	399.20 57.68	2 ø 10.0 2 ø 10.0		-232.96 -678.93 -43.96	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V213	47.20 184.35	2 ø 10.0 2 ø 10.0		-232.25 -291.45 -93.89	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V214	183.85	2 ø 10.0		-3.65 -11.50	2 ø 10.0 2 ø 10.0		Aviso 26
V215	301.52 33.16	2 ø 10.0 2 ø 10.0		-454.89 -513.91 -213.50	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V216	417.61 105.83 161.82	2 ø 10.0 2 ø 10.0 2 ø 10.0		-443.30 -516.16 -293.08 -132.20	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V217	134.08 240.75	2 ø 10.0 2 ø 10.0		-69.52 -394.31 -407.83	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V218	239.54 104.65	2 ø 10.0 2 ø 10.0		-398.24 -410.33 -80.45	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V219	211.35	2 ø 10.0		-21.70 -7.64	2 ø 10.0 2 ø 10.0		Aviso 26
V220	211.38	2 ø 10.0		-8.96 -20.56	2 ø 10.0 2 ø 10.0		Aviso 26
V221	382.08 0.11	2 ø 10.0 2 ø 10.0		-508.62 -625.64 -265.80	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 02
V222	49.83 362.27 353.92	2 ø 10.0 2 ø 10.0 2 ø 10.0		-253.00 -551.73 -592.28 -16.90	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 38
V223	123.41 232.52	2 ø 10.0 2 ø 10.0		-93.50 -391.64 -426.05	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V224	208.36	2 ø 10.0		-494.09 -365.25	2 ø 10.0 2 ø 10.0		Aviso 26
V225	137.80	2 ø 10.0		-354.53 -68.63	2 ø 10.0 2 ø 10.0		Aviso 26

V226	269.71	2 ø 10.0		-28.64	2 ø 10.0		Aviso 26
V227	313.14	2 ø 10.0	2 ø 10.0	-337.21 -338.32	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V228	307.23	2 ø 10.0		-251.63 -250.88	2 ø 10.0 2 ø 10.0		Avisos 26, 12
V229	297.21	2 ø 10.0	2 ø 10.0	-315.37 -382.19	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V230	331.68	2 ø 10.0	2 ø 10.0	-396.36 -366.89	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V231	331.89	2 ø 10.0		-245.31 -216.67	2 ø 10.0 2 ø 10.0		Avisos 26, 12
V232	345.24	2 ø 10.0	2 ø 10.0	-382.10 -388.40	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Avisos 26, 12
V233	1238.31	2 ø 10.0	2 ø 10.0	-1668.27 -1714.99	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V234	1221.65	2 ø 10.0	2 ø 10.0	-1798.96 -1682.54	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V235	1312.84	2 ø 10.0	2 ø 10.0	-1703.62 -1568.25	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V236	1311.11	2 ø 10.0	2 ø 10.0	-1537.09 -1709.26	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26

Pavimento NIVEL 448

Cálculo dos Pilares

NIVEL 448	fck = 300.00 kgf/cm²	E = 268384 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 3		cobr = 3.00 cm	

Pilar	Seção (cm)	vínc esb B vínc esb H	Nd máx Nd mín (tf)	Msd(x) Msd(y) (kgf.m)	Mrd(x) Mrd(y) (kgf.m)	Mrd/Msd	As b As h (cm²)
P1	15.00 X 50.00	RR 74.04 RR 22.21	5.78 0.71	1322 602	1669 760	(*) 1.26	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P2	14.00 X 50.00	RR 79.33 EL 60.76	6.75 0.77	1290 838	1501 975	(*) 1.16	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P3	14.00 X 50.00	RR 79.33 EL 60.76	6.78 0.80	1266 873	1271 876	(*) 1.00	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P6	14.00 X 50.00	RR 79.33 EL 60.76	6.77 0.80	1269 863	1273 866	(*) 1.00	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P7	14.00 X 50.00	RR 79.33 EL 60.76	6.75 0.77	1287 843	1500 982	(*) 1.17	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P8	15.00 X 50.00	RR 74.04 RR 22.21	5.77 0.71	1327 623	1665 782	(*) 1.25	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P9	15.00 X 50.00	RR 74.04 RR 22.21	11.80 1.09	1815 2592	1806 2578	(*) 0.99	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P12	14.00 X 40.00	EL 84.52 RR 27.77	9.52 1.46	1135 1414	1165 1451	(*) 1.03	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P13	14.00 X 40.00	EL 84.52 RR 27.77	9.43 1.30	1132 1456	1155 1486	(*) 1.02	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P16	15.00 X 50.00	RR 74.04 RR 22.21	11.83 1.14	1816 2600	1805 2585	(*) 0.99	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P21	15.00 X 50.00	RR 74.04 RR 22.21	12.09 1.37	1731 3890	1883 4230	(*) 1.09	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)

P28	15.00 X 50.00	RR 74.04 RR 22.21	11.92 1.39	1789 3713	1919 3983	(*) 1.07	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P29	15.00 X 50.00	RR 74.04 RR 22.21	12.04 1.30	1787 3604	1936 3904	(*) 1.08	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P36	15.00 X 50.00	RR 74.04 RR 22.21	11.38 1.14	1790 2627	1837 2696	(*) 1.03	1.57 (2 ø 10.0) 3.93 (5 ø 10.0)
P41	15.00 X 40.00	RR 27.22 RR 10.21	2.10 0.99	1072 712	1533 1018	(*) 1.43	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P44	14.00 X 40.00	RR 79.33 RR 27.77	6.87 1.88	908 1821	1143 2293	(*) 1.26	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P45	14.00 X 40.00	RR 79.33 RR 27.77	7.03 1.90	900 1971	972 2127	(*) 1.08	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P48	15.00 X 50.00	RR 74.04 RR 22.21	11.76 1.13	1802 2450	1820 2475	(*) 1.01	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P49	15.00 X 50.00	RR 74.04 RR 22.21	5.94 0.76	1303 763	1808 1058	(*) 1.39	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P50	14.00 X 50.00	RR 79.33 EL 60.76	6.80 0.82	1224 747	1284 783	(*) 1.05	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P51	14.00 X 50.00	RR 79.33 EL 60.76	6.78 0.79	1207 811	1273 855	(*) 1.05	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P52	15.00 X 50.00	RR 74.04 RR 22.21	11.57 0.74	1607 520	1673 541	(*) 1.04	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P53	15.00 X 50.00	RR 74.04 RR 22.21	11.56 0.73	1566 553	1666 589	(*) 1.06	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P54	15.00 X 50.00	RR 74.04 EL 60.76	6.99 0.96	1154 729	1396 881	(*) 1.21	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P55	15.00 X 50.00	RR 74.04 EL 60.76	6.93 0.93	1204 665	1407 778	(*) 1.17	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P56	15.00 X 50.00	RR 74.04 RR 22.21	5.78 0.71	1264 654	1818 941	(*) 1.44	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)

P57	15.00 X 50.00	RR 74.04 RR 22.21	5.83 0.72	1222 778	1791 1140	(*) 1.47	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P58	15.00 X 50.00	RR 74.04 EL 60.76	6.86 0.96	1169 826	1383 977	(*) 1.18	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P59	15.00 X 50.00	RR 74.04 EL 60.76	6.84 0.93	1205 828	1385 951	(*) 1.15	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P60	15.00 X 50.00	RR 74.04 RR 22.21	11.57 0.71	1494 503	1670 563	(*) 1.12	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P62	15.00 X 50.00	RR 74.04 RR 22.21	11.64 0.77	1451 625	1652 711	(*) 1.14	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P63	14.00 X 50.00	RR 79.33 RR 22.21	7.19 0.82	1204 422	1346 471	(*) 1.12	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P64	14.00 X 50.00	RR 79.33 RR 22.21	6.91 0.82	1213 357	1334 393	(*) 1.10	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P65	15.00 X 50.00	RR 74.04 RR 22.21	5.85 0.74	1163 781	1783 1198	(*) 1.53	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P66	15.00 X 50.00	RR 74.04 RR 22.21	11.57 1.18	1799 2238	1841 2290	(*) 1.02	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P69	14.00 X 40.00	RR 108.50 RR 27.77	6.77 1.44	574 1213	971 2054	(*) 1.69	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P70	14.00 X 40.00	RR 79.33 RR 27.77	5.67 0.76	902 851	1114 1050	(*) 1.23	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P71	14.00 X 40.00	RR 79.33 RR 27.77	6.00 1.00	382 798	966 2019	(*) 2.53	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P75	15.00 X 50.00	RR 74.04 RR 22.21	11.58 1.23	1831 2248	1846 2267	(*) 1.01	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P81	15.00 X 50.00	RR 74.04 RR 22.21	12.60 1.28	1931 4278	2137 4734	1.11	2.45 (2 ø 12.5) 6.14 (5 ø 12.5)
P89	15.00 X 50.00	RR 74.04 RR 22.21	11.23 1.01	1914 2087	2166 2362	1.13	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)

P91	15.00 X 50.00	RR 74.04 RR 22.21	11.58 1.22	1016 4062	1102 4408	(*) 1.09	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P102	14.00 X 50.00	RR 79.33 RR 22.21	11.58 1.04	1974 2158	1958 2141	(*) 0.99	2.45 (2 ø 12.5) 4.91 (4 ø 12.5)
P116	15.00 X 40.00	RR 74.04 RR 27.77	15.13 1.17	1219 2160	1353 2398	(*) 1.11	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P121	14.00 X 40.00	RR 79.33 RR 27.77	1.83 0.28	439 522	954 1135	(*) 2.17	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P122	15.00 X 40.00	RR 74.04 RR 27.77	12.27 0.84	1631 402	1822 449	(*) 1.12	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P125	30.00 X 40.00	EL 39.44 RR 27.77	7.62 1.22	171 1352	576 4554	(*) 3.37	2.45 (2 ø 12.5) 2.45 (2 ø 12.5)
P129	15.00 X 50.00	RR 74.04 RR 22.21	11.75 1.28	1840 2164	1863 2191	(*) 1.01	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P130	15.00 X 50.00	RR 74.04 RR 22.21	6.57 0.78	1289 1296	1733 1743	(*) 1.34	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P131	15.00 X 50.00	RR 74.04 EL 60.76	6.54 0.74	1235 901	1365 996	(*) 1.11	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P132	14.00 X 50.00	RR 79.33 EL 60.76	6.79 0.80	1255 876	1269 886	(*) 1.01	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P135	15.00 X 50.00	RR 74.04 EL 60.76	6.62 0.77	1213 869	1370 982	(*) 1.13	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P136	15.00 X 50.00	RR 74.04 EL 60.76	6.58 0.74	1229 868	1369 967	(*) 1.11	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P137	15.00 X 50.00	RR 74.04 RR 22.21	5.85 0.74	1235 767	1796 1115	(*) 1.45	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
PL1	14.00 X 30.00	RR 29.16 RR 13.61	0.48 -0.35	376 1000	502 1336	1.34	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL4	14.00 X 30.00	RR 29.16 RR 13.61	0.41 -0.50	384 947	510 1258	1.33	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)

PL5	14.00 X 30.00	RR 29.16 RR 13.61	0.00 -0.78	219 1492	230 1567	1.05	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL6	14.00 X 30.00	RR 29.16 RR 13.61	0.00 -0.94	202 1371	228 1548	1.13	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL7	14.00 X 30.00	RR 29.16 RR 13.61	0.06 -0.68	230 1366	263 1562	1.14	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL8	14.00 X 30.00	RR 29.16 RR 13.61	0.21 -0.55	241 946	385 1508	1.59	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL9	14.00 X 30.00	RR 29.16 RR 13.61	0.63 -0.07	294 790	507 1365	1.73	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL10	14.00 X 30.00	RR 29.16 RR 13.61	0.00 -0.73	366 966	494 1304	1.35	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL11	14.00 X 30.00	RR 29.16 RR 13.61	0.00 -0.88	349 1128	446 1442	1.28	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL12	14.00 X 30.00	RR 29.16 RR 13.61	0.42 -0.47	366 893	512 1251	1.40	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL13	14.00 X 30.00	RR 29.16 RR 13.61	0.36 -0.43	338 814	514 1239	1.52	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL14	14.00 X 30.00	RR 29.16 RR 13.61	0.00 -0.64	353 1016	482 1386	1.36	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL15	14.00 X 30.00	RR 29.16 RR 13.61	0.18 -0.41	243 707	485 1410	1.99	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL16	14.00 X 30.00	RR 29.16 RR 13.61	0.29 -0.48	319 835	501 1314	1.57	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL17	14.00 X 30.00	RR 29.16 RR 13.61	0.05 -0.78	231 1181	299 1530	1.30	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL18	14.00 X 30.00	RR 29.16 RR 13.61	0.37 -0.41	227 747	452 1486	1.99	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL19	14.00 X 30.00	RR 29.16 RR 13.61	0.15 -0.67	223 1070	319 1532	1.43	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)

PL20	14.00 X 30.00	RR 29.16 RR 13.61	0.39 -0.38	215 739	435 1499	2.03	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL21	14.00 X 30.00	RR 29.16 RR 13.61	0.57 -0.23	340 615	560 1012	1.65	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL23	14.00 X 30.00	RR 29.16 RR 13.61	0.41 -0.38	339 802	519 1227	1.53	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)

(*) Quantidade de barras alterada pelo usuário (para mais)

Vigas do pavimento NIVEL 448

Viga	Vãos			Nós			Avisos
	Md (kgf.m)	As	Als	Md (kgf.m)	As	Als	
V201	364.24	2 ø 10.0		-497.95 -708.96	2 ø 10.0 2 ø 10.0		
V202	26.16	2 ø 10.0	2 ø 10.0	-191.84 -223.82	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	
V203	379.10	2 ø 10.0		-720.06 -540.74	2 ø 10.0 2 ø 10.0		
V204	379.21	2 ø 10.0		-540.60 -720.51	2 ø 10.0 2 ø 10.0		
V205	25.51	2 ø 10.0	2 ø 10.0	-222.58 -193.10	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	
V206	364.33	2 ø 10.0		-708.49 -498.10	2 ø 10.0 2 ø 10.0		
V207	15.68	2 ø 10.0		-10.60	2 ø 10.0		
V208	301.45	2 ø 10.0	2 ø 10.0	-109.23	2 ø 10.0	2 ø 10.0	
V209	16.31	2 ø 10.0		-12.08	2 ø 10.0		
V210	272.43	2 ø 10.0	2 ø 10.0	-204.70	2 ø 10.0	2 ø 10.0	
V211	429.03	2 ø 10.0	2 ø 10.0	-121.53	2 ø 10.0	2 ø 10.0	
V212	383.95	2 ø 10.0	2 ø 10.0	-230.48	2 ø 10.0	2 ø 10.0	
V213	394.89	2 ø 10.0	2 ø 10.0	-113.83	2 ø 10.0	2 ø 10.0	
V214	273.41	2 ø 10.0	2 ø 10.0	-188.07	2 ø 10.0	2 ø 10.0	
V215	17.79	2 ø 10.0		-9.63	2 ø 10.0		
V216	218.57	2 ø 10.0	2 ø 10.0	-73.00	2 ø 10.0	2 ø 10.0	Aviso 02
V217	15.03	2 ø 10.0		-19.60	2 ø 10.0		
V218	348.92 437.19	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	-1055.34 -1088.77	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V219	15.56	2 ø 10.0		-18.80	2 ø 10.0		
V220	396.20	2 ø 10.0	2 ø 10.0	-467.44	2 ø 10.0	2 ø 10.0	
V221	17.17	2 ø 10.0		-11.81	2 ø 10.0		
V222	256.73	2 ø 10.0	2 ø 10.0	-197.30	2 ø 10.0	2 ø 10.0	
V223	377.09	2 ø 10.0		-437.03 -710.12	2 ø 10.0 2 ø 10.0		
V224	15.23	2 ø 10.0		-240.16 -224.77	2 ø 10.0 2 ø 10.0		
V225	353.68	2 ø 10.0		-682.19 -514.92	2 ø 10.0 2 ø 10.0		
V226	347.49	2 ø 10.0		-495.74 -707.08	2 ø 10.0 2 ø 10.0		
V227	91.14	2 ø 10.0		-355.27 -323.56	2 ø 10.0 2 ø 10.0		Aviso 26
V228	347.52	2 ø 10.0		-709.41 -496.95	2 ø 10.0 2 ø 10.0		
V229	378.35	2 ø 10.0		-419.20 -739.57	2 ø 10.0 2 ø 10.0		
V230	66.71	2 ø 10.0	2 ø 10.0	-276.61 -246.88	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	
V231	355.75	2 ø 10.0		-720.25 -489.04	2 ø 10.0 2 ø 10.0		
V232	359.04	2 ø 10.0		-495.16 -679.71	2 ø 10.0 2 ø 10.0		

V233	14.18	2 ø 10.0		-205.24 -192.43	2 ø 10.0 2 ø 10.0		
V234	359.32	2 ø 10.0		-687.79 -490.98	2 ø 10.0 2 ø 10.0		
V235	14.71	2 ø 10.0		-6.95	2 ø 10.0		
V236	242.83	2 ø 10.0	2 ø 10.0	-193.74	2 ø 10.0	2 ø 10.0	
V237	16.47	2 ø 10.0		-2.01 -11.18	2 ø 10.0 2 ø 10.0		
V238	368.22 112.51 129.63 274.34	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0 2 ø 10.0	-394.49 -371.72 -301.99	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0	
V239	14.67	2 ø 10.0	2 ø 10.0	-10.74 -6.09	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	
V240	15.76	2 ø 10.0		-8.54	2 ø 10.0		
V241	248.70	2 ø 10.0	2 ø 10.0	-199.08	2 ø 10.0	2 ø 10.0	
V242	333.74	2 ø 10.0	2 ø 10.0	-210.90	2 ø 10.0	2 ø 10.0	
V243	225.44	2 ø 10.0	2 ø 10.0	-172.71	2 ø 10.0	2 ø 10.0	
V244	297.89	2 ø 10.0	2 ø 10.0	-189.54	2 ø 10.0	2 ø 10.0	
V245	220.35	2 ø 10.0	2 ø 10.0	-162.95	2 ø 10.0	2 ø 10.0	
V246	33.76	2 ø 10.0		-11.28	2 ø 10.0		
V247	218.73	2 ø 10.0	2 ø 10.0	-183.16	2 ø 10.0	2 ø 10.0	
V248	32.95	2 ø 10.0		-9.93	2 ø 10.0		
V249	240.81	2 ø 10.0	2 ø 10.0	-201.93	2 ø 10.0	2 ø 10.0	
V250	357.66	2 ø 10.0		-507.05 -709.14	2 ø 10.0 2 ø 10.0		
V251	29.64	2 ø 10.0	2 ø 10.0	-172.32 -214.55	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	
V252	371.12	2 ø 10.0		-706.76 -530.73	2 ø 10.0 2 ø 10.0		
V253	366.31	2 ø 10.0		-536.36 -711.81	2 ø 10.0 2 ø 10.0		
V254	32.52	2 ø 10.0	2 ø 10.0	-211.92 -178.65	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	
V255	354.94	2 ø 10.0		-708.00 -500.20	2 ø 10.0 2 ø 10.0		
V256	0.11 590.51	2 ø 10.0 2 ø 10.0		-9.01 -704.64 -718.64	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 02
V257	557.75 0.11	2 ø 10.0 2 ø 10.0		-767.30 -743.68 -6.36	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V258	0.11 562.44	2 ø 10.0 2 ø 10.0		-8.10 -719.54 -780.33	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 02
V259	558.69 0.11	2 ø 10.0 2 ø 10.0		-777.31 -723.01 -8.87	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V260	84.24	2 ø 10.0		-179.02 -73.41 -182.41	2 ø 10.0 2 ø 10.0 2 ø 10.0		
V261	98.24	2 ø 10.0		-183.94 -160.27	2 ø 10.0 2 ø 10.0		
V262	110.03	2 ø 10.0		-233.95 -133.33 -66.65	2 ø 10.0 2 ø 10.0 2 ø 10.0		
V263	102.82	2 ø 10.0		-126.08 -108.63 -203.92	2 ø 10.0 2 ø 10.0 2 ø 10.0		

V264	123.21	2 ø 10.0		-138.64 -132.06	2 ø 10.0 2 ø 10.0		
V265	138.99	2 ø 10.0		-271.55 -152.97 -120.75	2 ø 10.0 2 ø 10.0 2 ø 10.0		
V266	120.70	2 ø 10.0		-236.17 -133.49 -83.45	2 ø 10.0 2 ø 10.0 2 ø 10.0		
V267	121.04	2 ø 10.0		-115.83 -140.68 -247.84	2 ø 10.0 2 ø 10.0 2 ø 10.0		
V268	0.17	2 ø 10.0		-29.31 -6.36	2 ø 10.0 2 ø 10.0		Aviso 02
V269	0.11	2 ø 10.0		-11.25 -38.49	2 ø 10.0 2 ø 10.0		Aviso 02
V270	0.11	2 ø 10.0		-28.24 -6.13	2 ø 10.0 2 ø 10.0		Aviso 02
V271	0.11	2 ø 10.0		-10.60 -38.38	2 ø 10.0 2 ø 10.0		Aviso 02
V272	91.22	2 ø 10.0		-170.27 -82.07 -105.25	2 ø 10.0 2 ø 10.0 2 ø 10.0		
V273	118.72	2 ø 10.0		-126.40 -136.97 -246.12	2 ø 10.0 2 ø 10.0 2 ø 10.0		
V274	123.21	2 ø 10.0		-108.52 -116.65 -246.65	2 ø 10.0 2 ø 10.0 2 ø 10.0		
V275	101.05	2 ø 10.0		-157.56 -161.10	2 ø 10.0 2 ø 10.0		
V276	118.88	2 ø 10.0		-226.96 -128.01 -116.27	2 ø 10.0 2 ø 10.0 2 ø 10.0		
V277	134.43	2 ø 10.0		-120.65 -155.43 -261.16	2 ø 10.0 2 ø 10.0 2 ø 10.0		
V278	128.26	2 ø 10.0		-140.75 -120.36	2 ø 10.0 2 ø 10.0		
V279	141.60	2 ø 10.0		-272.73 -157.69 -115.20	2 ø 10.0 2 ø 10.0 2 ø 10.0		
V280	0.11 477.60	2 ø 10.0 2 ø 10.0		-8.23 -816.93 -842.10	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 02
V281	478.18 0.11	2 ø 10.0 2 ø 10.0		-860.44 -820.74 -7.93	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26
V282	0.11 517.82	2 ø 10.0 2 ø 10.0		-11.94 -832.39 -767.72	2 ø 10.0 2 ø 10.0 2 ø 10.0		Avisos 26, 02
V283	517.53 0.11	2 ø 10.0 2 ø 10.0		-752.96 -835.68 -12.24	2 ø 10.0 2 ø 10.0 2 ø 10.0		Aviso 26

Pavimento NIVEL 501

Cálculo dos Pilares

NIVEL 501	fck = 300.00 kgf/cm²	E = 268384 kgf/cm²	Peso Espec = 2500.00 kgf/m³
Lance 4		cobr = 3.00 cm	

Pilar	Seção (cm)	vínc esb B vínc esb H	Nd máx Nd mín (tf)	Msd(x) Msd(y) (kgf.m)	Mrd(x) Mrd(y) (kgf.m)	Mrd/Msd	As b As h (cm²)
P4	15.00 X 50.00	RR 74.04 RR 22.21	6.17 0.07	1367 689	1836 925	(*) 1.34	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P5	15.00 X 50.00	RR 74.04 RR 22.21	6.13 0.06	1360 655	1840 887	(*) 1.35	2.45 (2 ø 12.5) 3.68 (3 ø 12.5)
P12	14.00 X 40.00	EL 84.52 RR 14.79	2.51 1.36	167 274	913 1495	(*) 5.45	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P13	14.00 X 40.00	EL 84.52 RR 14.79	2.45 1.21	42 750	210 3739	(*) 4.98	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P121	14.00 X 40.00	RR 42.26 RR 14.79	0.93 0.19	325 167	1009 518	(*) 3.11	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)
P122	15.00 X 40.00	RR 39.44 RR 14.79	1.40 0.75	1061 110	1467 152	(*) 1.38	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P125	30.00 X 40.00	EL 39.44 RR 14.79	2.21 1.06	42 1311	125 3943	(*) 3.01	2.45 (2 ø 12.5) 2.45 (2 ø 12.5)
P133	15.00 X 50.00	RR 74.04 RR 22.21	6.05 0.07	1326 503	1697 643	(*) 1.28	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
P134	15.00 X 50.00	RR 74.04 RR 22.21	6.05 0.11	1333 507	1697 646	(*) 1.27	1.57 (2 ø 10.0) 3.14 (4 ø 10.0)
PL2	14.00 X 30.00	RR 42.26 RR 19.72	0.00 -0.82	386 1131	479 1403	(*) 1.24	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)
PL3	14.00 X 40.00	RR 42.26 RR 14.79	0.00 -0.76	427 1561	673 2460	(*) 1.58	1.57 (2 ø 10.0) 2.36 (3 ø 10.0)

PL22	15.00 X 30.00	RR 39.44 RR 19.72	0.34 -0.57	354 455	654 839	(*) 1.85	1.57 (2 ø 10.0) 1.57 (2 ø 10.0)

(*) Quantidade de barras alterada pelo usuário (para mais)

Vigas do pavimento NIVEL 501

Viga	Vãos			Nós			Avisos
	Md (kgf.m)	As	Als	Md (kgf.m)	As	Als	
V301	467.87 357.01 444.96	2 ø 10.0 2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0 2 ø 10.0	-1025.48 -1036.86	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 26
V302	53.88	2 ø 10.0		-268.58 -61.17	2 ø 10.0 2 ø 10.0		
V303	720.41	2 ø 10.0		-903.14 -1458.28	2 ø 10.0 2 ø 10.0		Avisos 26, 38
V304	220.96	2 ø 10.0	2 ø 10.0	-520.15	2 ø 10.0	2 ø 10.0	
V305	87.83	2 ø 10.0		-100.78 -238.57	2 ø 10.0 2 ø 10.0		
V306	155.71	2 ø 10.0		-260.52 -121.31	2 ø 10.0 2 ø 10.0		
V307	33.07	2 ø 10.0	2 ø 10.0	-0.30 -30.60	2 ø 10.0 2 ø 10.0	2 ø 10.0 2 ø 10.0	Aviso 02
V308	75.86	2 ø 10.0		-101.15 -232.65	2 ø 10.0 2 ø 10.0		
V309	150.11	2 ø 10.0		-281.02 -122.93	2 ø 10.0 2 ø 10.0		