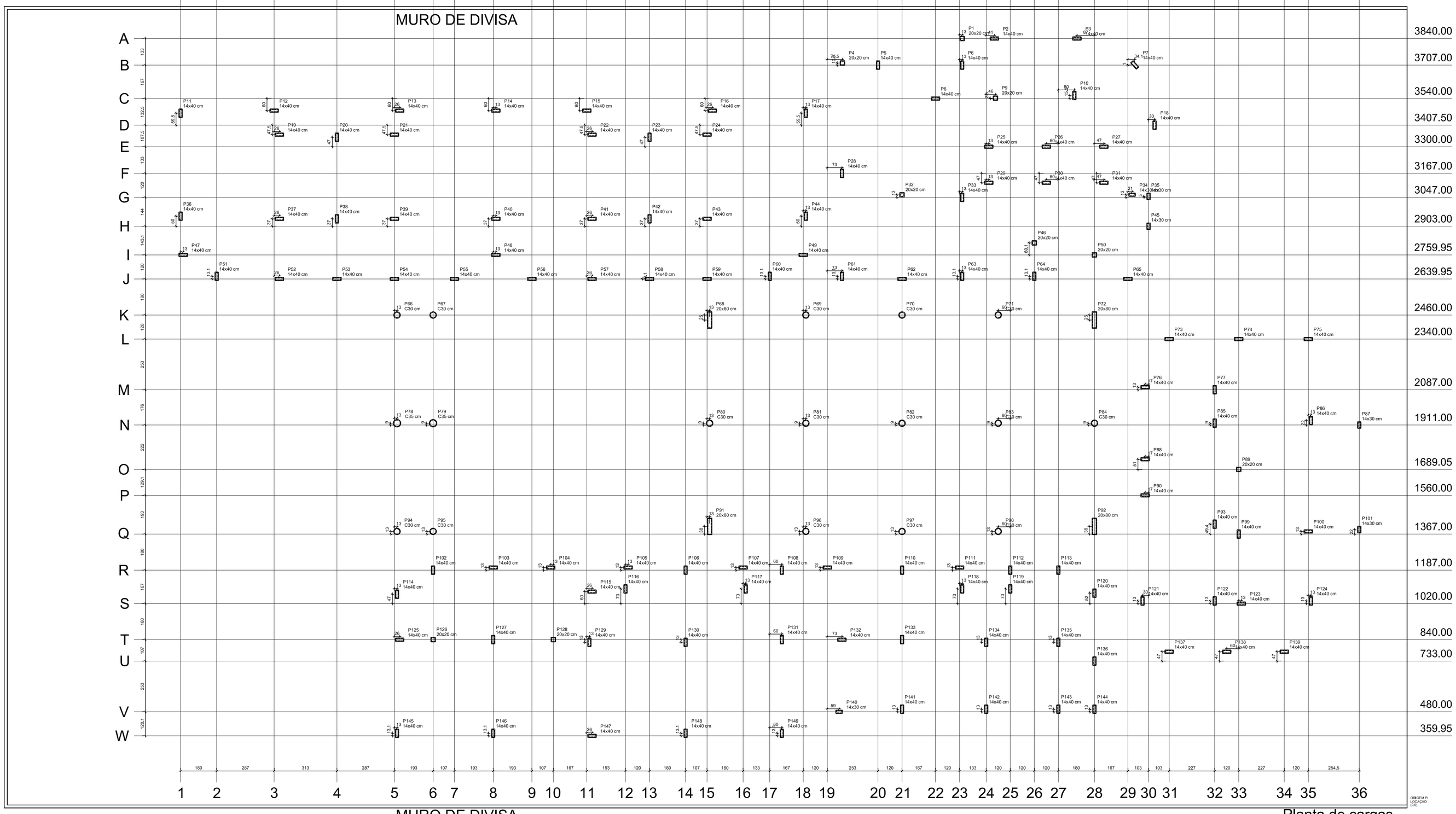


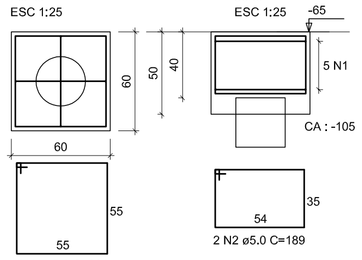
Planta de cargas
escala 1:125

Nome	Seção (cm)	Pilar X (cm)	Pilar Y (cm)	Carga Máx. (tf)	Carga Mín. (tf)
P1	20x20	-2220.00	3840.00	1.0	0.8
P2	14x40	-2059.00	3840.00	3.4	3.2
P3	14x40	-1647.00	3840.00	4.5	4.5
P4	20x20	-2817.50	3717.50	3.5	3.2
P5	14x40	-2640.00	3707.00	9.5	8.7
P6	14x40	-2220.00	3707.00	7.9	7.1
P7	14x40	-1358.92	3708.01	3.0	3.0
P8	14x40	-2353.00	3540.00	9.4	8.7
P9	20x20	-2054.00	3542.50	3.5	3.5
P10	14x40	-1660.00	3555.50	3.2	3.2
P11	14x40	-6120.00	3467.00	7.6	6.7
P12	14x40	-5653.00	3480.00	11.1	9.2
P13	14x40	-5027.00	3480.00	10.2	8.4
P14	14x40	-4547.00	3480.00	14.5	12.4
P15	14x40	-4093.00	3480.00	9.8	8.1
P16	14x40	-3467.00	3480.00	11.1	9.2
P17	14x40	-3000.00	3467.00	7.8	6.9
P18	14x40	-1260.00	3407.50	3.3	3.2
P19	14x40	-5627.00	3360.05	6.1	5.6
P20	14x40	-5340.00	3347.05	6.9	6.2
P21	14x40	-5053.00	3360.00	6.1	5.6
P22	14x40	-4067.00	3360.00	6.1	5.6
P23	14x40	-3780.00	3347.05	6.9	6.2
P24	14x40	-3493.00	3360.00	6.1	5.6
P25	14x40	-2087.00	3300.00	10.1	8.9
P26	14x40	-1800.00	3300.00	6.3	5.6
P27	14x40	-1513.00	3300.00	6.3	5.6
P28	14x40	-2820.00	3167.00	13.4	11.9
P29	14x40	-2087.00	3120.00	7.5	6.6
P30	14x40	-1800.00	3120.00	6.1	5.4
P31	14x40	-1513.00	3120.00	5.3	4.6
P32	20x20	-2520.00	3060.00	8.5	8.5
P33	14x40	-2220.00	3047.00	12.6	11.5
P34	14x40	-1372.00	3060.00	4.2	4.1
P35	14x30	-1290.00	3052.00	1.0	0.7
P36	14x40	-6120.00	2953.00	7.4	6.7
P37	14x40	-5627.00	2940.00	13.5	11.9
P38	14x40	-5340.00	2940.03	7.9	7.2
P39	14x40	-5053.00	2940.00	12.6	11.2
P40	14x40	-4547.00	2940.00	16.3	14.5
P41	14x40	-4067.00	2940.00	12.1	10.7
P42	14x40	-3780.00	2940.00	8.0	7.3
P43	14x40	-3493.00	2940.00	13.5	11.9
P44	14x40	-3000.00	2953.00	7.4	6.7
P45	14x30	-1290.00	2903.00	2.5	2.2
P46	20x20	-1860.00	2820.00	2.5	2.4
P47	14x40	-6107.00	2760.00	5.2	4.8
P48	14x40	-4547.00	2759.95	5.0	4.6
P49	14x40	-3013.00	2760.00	5.5	5.0
P50	20x20	-1560.00	2760.00	1.8	1.8
P51	14x40	-5940.00	2653.05	8.2	7.3
P52	14x40	-5627.00	2640.00	7.9	6.9
P53	14x40	-5340.00	2640.00	7.2	6.3
P54	14x40	-5053.00	2639.95	7.5	6.6
P55	14x40	-4753.00	2639.95	7.6	6.6
P56	14x40	-4367.00	2640.00	7.1	6.2
P57	14x40	-4067.00	2640.00	7.6	6.6
P58	14x40	-3780.00	2640.05	7.2	6.3
P59	14x40	-3493.00	2640.00	7.9	6.8
P60	14x40	-3180.00	2653.00	8.3	7.4
P61	14x40	-2820.00	2653.00	5.6	5.1
P62	14x40	-2520.00	2640.00	10.3	8.8
P63	14x40	-2220.00	2653.00	10.3	9.0
P64	14x40	-1860.00	2653.00	12.7	10.9
P65	14x40	-1393.00	2640.00	8.3	7.2
P66	C30	-5040.00	2460.00	4.4	4.3
P67	C30	-4860.00	2460.00	4.4	4.3
P68	20x80	-3480.00	2435.00	11.4	11.4
P69	C30	-3000.00	2460.00	10.3	10.3
P70	C30	-2520.00	2460.00	10.0	9.9
P71	C30	-2040.00	2460.00	10.4	10.3
P72	20x80	-1560.00	2435.00	11.8	11.6
P73	14x40	-1187.00	2340.00	4.6	4.1
P74	14x40	-840.00	2340.00	4.2	4.0
P75	14x40	-493.00	2340.00	6.2	5.5
P76	14x40	-1307.00	2100.00	7.2	6.3
P77	14x40	-960.00	2087.00	5.6	4.6
P78	C35	-5040.00	1920.00	7.9	7.8
P79	C35	-4860.00	1920.00	7.9	7.8

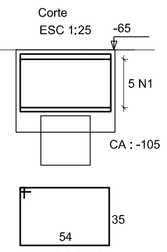
Nome	Seção (cm)	Pilar X (cm)	Pilar Y (cm)	Carga Máx. (tf)	Carga Mín. (tf)
P80	C30	-3480.00	1920.00	11.5	11.4
P81	C30	-3000.00	1920.00	17.4	17.4
P82	C30	-2520.00	1920.00	16.8	16.8
P83	C30	-2040.00	1920.00	17.4	17.4
P84	C30	-1560.00	1920.00	11.6	11.5
P85	14x40	-960.00	1920.00	12.8	11.4
P86	14x40	-480.00	1933.00	17.6	15.4
P87	14x30	-238.50	1911.00	3.9	3.6
P88	14x40	-1307.00	1740.00	8.2	7.3
P89	20x20	-840.00	1689.05	3.2	3.1
P90	14x40	-1307.00	1560.00	10.7	9.4
P91	20x80	-3480.00	1405.00	11.4	11.4
P92	20x80	-1560.00	1405.00	12.0	11.8
P93	14x40	-960.00	1416.40	11.5	10.1
P94	C30	-5040.00	1380.00	4.4	4.3
P95	C30	-4860.00	1380.00	4.4	4.3
P96	C30	-3000.00	1380.00	10.4	10.3
P97	C30	-2520.00	1380.00	10.0	9.9
P98	C30	-2040.00	1380.00	10.3	10.3
P99	14x40	-840.00	1367.00	6.3	5.8
P100	14x40	-493.00	1380.00	13.2	11.6
P101	14x30	-238.50	1389.00	4.9	4.4
P102	14x40	-4860.00	1187.00	8.1	7.1
P103	14x40	-4560.00	1200.00	8.2	7.1
P104	14x40	-4273.00	1200.00	8.1	7.0
P105	14x40	-3887.00	1200.00	6.2	5.1
P106	14x40	-3600.00	1187.00	8.1	7.1
P107	14x40	-3313.00	1200.00	5.5	4.6
P108	14x40	-3120.00	1187.00	5.6	5.0
P109	14x40	-2893.00	1200.00	11.0	9.8
P110	14x40	-2520.00	1187.00	10.1	8.9
P111	14x40	-2233.00	1200.00	5.4	4.5
P112	14x40	-1980.00	1187.00	4.9	4.0
P113	14x40	-1740.00	1187.00	7.9	6.9
P114	14x40	-5040.00	1067.00	2.7	2.5
P115	14x40	-4067.00	1080.00	5.0	4.5
P116	14x40	-3900.00	1093.00	2.5	2.0
P117	14x40	-3300.00	1093.00	2.9	2.5
P118	14x40	-2220.00	1093.00	3.3	2.9
P119	14x40	-1980.00	1093.00	3.2	2.7
P120	14x40	-1560.00	1072.00	4.5	4.1
P121	14x40	-1320.00	1033.00	9.5	8.2
P122	14x40	-960.00	1033.00	8.2	7.5
P123	14x40	-827.00	1020.00	6.9	6.4
P124	14x40	-480.00	1033.00	7.6	6.7
P125	14x40	-5027.00	840.00	7.8	6.8
P126	20x20	-4860.00	840.00	2.7	2.6
P127	14x40	-4560.00	840.00	13.2	11.5
P128	20x20	-4260.00	840.00	3.3	3.2
P129	14x40	-4080.00	827.00	11.6	9.9
P130	14x40	-3600.00	827.00	11.2	9.5
P131	14x40	-3120.00	840.00	11.6	10.1
P132	14x40	-2820.00	840.00	10.6	9.8
P133	14x40	-2520.00	840.00	9.6	8.5
P134	14x40	-2100.00	827.00	8.4	7.2
P135	14x40	-1740.00	827.00	7.6	6.8
P136	14x40	-1560.00	733.00	4.1	4.0
P137	14x40	-1187.00	780.00	4.9	4.3
P138	14x40	-900.00	780.00	4.2	4.2
P139	14x40	-613.00	780.00	5.3	4.6
P140	14x30	-2834.05	480.00	9.1	7.9
P141	14x40	-2520.00	493.00	10.1	8.8
P142	14x40	-2100.00	493.00	11.0	9.5
P143	14x40	-1740.00	493.00	8.8	7.7
P144	14x40	-1560.00	493.00	2.9	2.7
P145	14x40	-5040.00	373.00	7.5	6.7
P146	14x40	-4560.00	373.00	15.2	13.1
P147	14x40	-4067.00	359.95	13.5	11.7
P148	14x40	-3599.99	373.00	14.8	12.7
P149	14x40	-3120.00	373.00	9.3	8.2

B1=TODOS OS BLOCOS COM UMA ESTACA (X145)
1ø30

Planta
ESC 1:25



Corte
ESC 1:25



5 N1 ø5.0 C=231

2 N2 ø5.0 C=189

RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
B1	60	1	5,0	5	231	1155
	60	2	5,0	2	189	378

RESUMO DO AÇO (B1)

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA60	5,0	15,4	2,6
PESO TOTAL			
CA60	2,6		

Vol. de concreto total =0,17 m³
Área de forma total = 1,20 m²

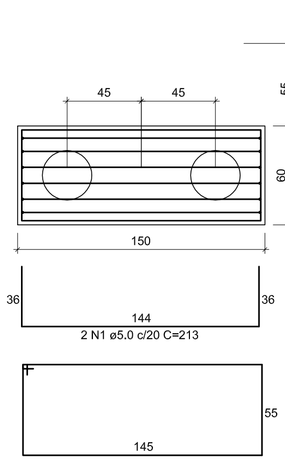
RESUMO DO AÇO (B1 x 145)

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA60	5,0	2233	377
PESO TOTAL			
CA60	377		

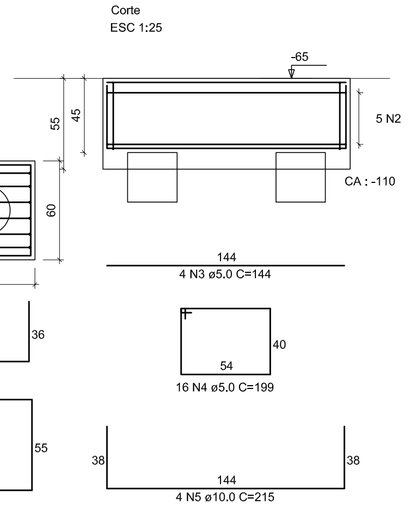
Vol. de concreto total = 24,7 m³
Área de forma total = 174 m²

B68=B72=B91=B92
2ø30

Planta
ESC 1:25



Corte
ESC 1:25



2 N2 ø5.0 C=213

5 N2 ø5.0 C=411

4 N3 ø5.0 C=144

16 N4 ø5.0 C=199

4 N5 ø10.0 C=215

RELAÇÃO DO AÇO (B68)

ELEMENTO	AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
B68	60	1	5,0	2	213	426
	60	2	5,0	5	411	2055
	60	3	5,0	4	144	576
	60	4	5,0	16	199	3184
	50	5	10,0	4	215	860

RESUMO DO AÇO (B68)

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	10,0	8,6	5,8
CA60	5,0	62,5	10,6
PESO TOTAL			
CA50	5,8		
CA60	10,6		

Vol. de concreto total =0,48 m³
Área de forma total = 2,31 m²

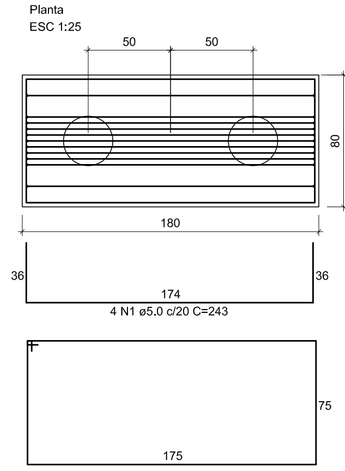
RESUMO DO AÇO (B68 x 4)

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	10,0	34,4	23,2
CA60	5,0	250	42,4
PESO TOTAL			
CA50	23,2		
CA60	42,4		

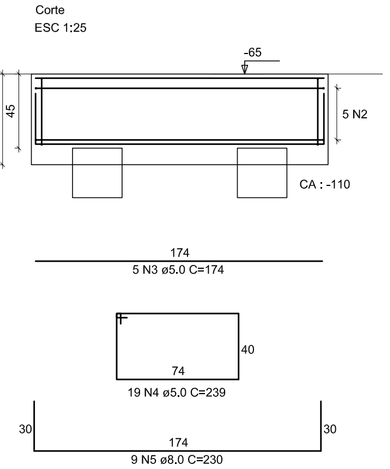
Vol. de concreto total = 1,92 m³
Área de forma total = 9,24 m²

BC1=BC2=BC3=BC4 (CASTELO D'ÁGUA)
2ø30

Planta
ESC 1:25



Corte
ESC 1:25



4 N1 ø5.0 c/20 C=243

5 N2 ø5.0 C=511

5 N3 ø5.0 C=174

19 N4 ø5.0 C=239

9 N5 ø8.0 C=230

RESUMO DO AÇO (BC)

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	8,0	20,7	9,0
CA60	5,0	89,5	15,2
PESO TOTAL			
CA50	9,0		
CA60	15,2		

Vol. de concreto total =0,78 m³
Área de forma total = 2,86 m²

RESUMO DO AÇO (BC x 4)

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	8,0	82,8	36
CA60	5,0	358	60,8
PESO TOTAL			
CA50	36		
CA60	60,8		

Vol. de concreto total = 3,12 m³
Área de forma total = 11,44 m²

RELAÇÃO DO AÇO (BC)

ELEMENTO	AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
B1	60	1	5,0	4	243	972
	60	2	5,0	5	511	2555
	60	3	5,0	5	174	870
	60	4	5,0	19	239	4541
	50	5	8,0	9	230	2070

CALA DE PLOTAGEM 1:1

CÓD/COR	PENA	ERREL
1	7	0,13
2	7	0,20
3	7	0,30
4	7	0,40
5	7	0,50
6	7	0,60
7	7	0,70
8	7	0,80
9	7	0,90
10	7	1,00
11	252	0,25
12	7	0,35
13	7	0,45
14	7	0,55
15	7	0,65
16	7	0,75
17	7	0,85
18	7	0,95
19	7	0,25
20	7	0,25

Ministério da Educação

FNDE Fundo Nacional de Desenvolvimento da Educação

PROINFÂNCIA – ESPAÇO EDUCATIVO INFANTIL

ENDEREÇO:

MUNICÍPIO – UF:

PROPRIETÁRIO: FUNDO NACIONAL DE DESENVOLVIMENTO DA EDUCAÇÃO - FNDE

AUTORES DO PROJETO : RICARDO FIUZA LIMA - CREA:12.848/D-DF
GLAUCYO DE OLIVEIRA SANTOS - CREA:81.887/D-MG

RESPONSÁVEL TÉCNICO:

PROPRIETÁRIO

AUTOR DO PROJETO CREA- AP-1-CREA-XX

AUTOR DO PROJETO CREA- AP-2-CREA-XX

RESP. TÉCNICO CREA

DLFO

CREA

RA

PROJETO TIPO B

PROJETO ESTRUTURAL

COORDENAÇÃO
CGEST - Coordenação
Geral de Infra-estrutura

PLANTA DE CARGAS E LOCAÇÃO

ES

DESENHO

REVISÃO R.01 JUL/2008

ESCALA INDICADA

DATA EMISSÃO 13/03/2008

PRANCHA 01/28