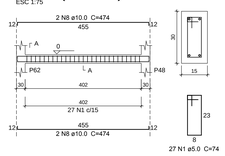
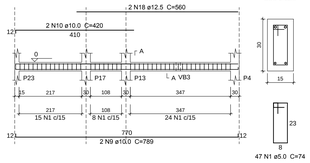
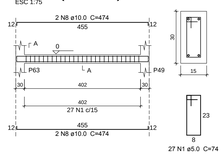
VB37 (15 x 30)
ESC 1:75



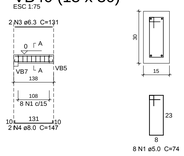
VB38 (15 x 30)
ESC 1:75



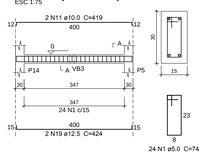
VB39 (15 x 30)
ESC 1:75



VB40 (15 x 30)
ESC 1:75



VB41 (15 x 30)
ESC 1:75



Relação do aço

VB37 VB38 VB39
VB40 VB41 VB42
VB43 VB44 VB45
VB46 VB47

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	411	74	30414
	2	5.0	82	94	7708
CA50	3	6.3	2	131	262
	4	8.0	2	147	294
	5	8.0	2	271	542
	6	8.0	2	287	574
	7	8.0	2	1149	2298
	8	10.0	16	474	7584
	9	10.0	2	789	1578
	10	10.0	2	420	840
	11	10.0	2	419	838
	12	10.0	2	795	1590
	13	10.0	1	175	175
	14	10.0	2	770	1540
	15	10.0	4	979	3916
	16	10.0	2	785	1570
	17	10.0	2	393	786
	18	12.5	2	560	1120
	19	12.5	2	424	848
	20	12.5	6	1200	7200
	21	12.5	2	603	1206
	22	12.5	1	240	240
	23	12.5	1	175	175
	24	12.5	2	226	452

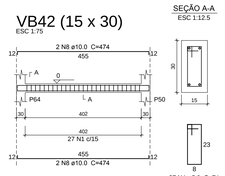
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	2.7	0.7
	8.0	37.1	16.1
	10.0	204.2	138.5
	12.5	112.5	119.1
CA60	5.0	381.3	64.6

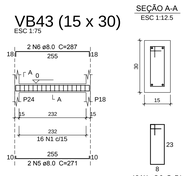
PESO TOTAL (kg)	
CA50	274.4
CA60	64.6

Volume de concreto (C-30) = 4.06 m³
Área de forma = 66.83 m²

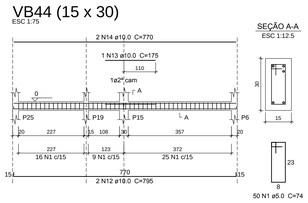
VB42 (15 x 30)
ESC 1:75



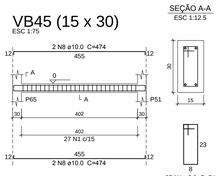
VB43 (15 x 30)
ESC 1:75



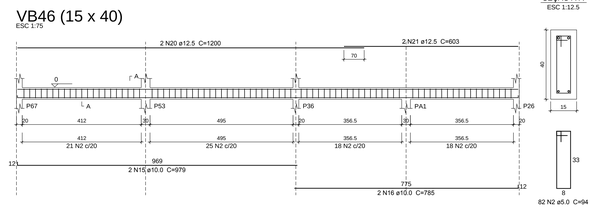
VB44 (15 x 30)
ESC 1:75



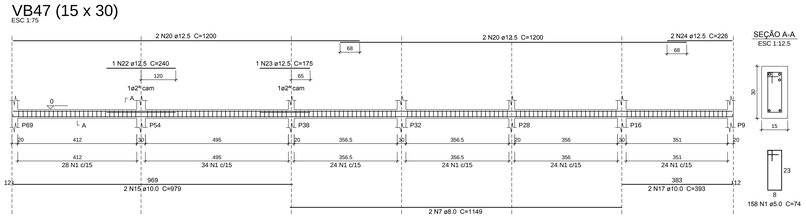
VB45 (15 x 30)
ESC 1:75



VB46 (15 x 40)
ESC 1:75



VB47 (15 x 30)
ESC 1:75



Cliente:
COMPANHIA DOCAS DO RIO DE JANEIRO
Superintendência do Porto do Rio de Janeiro

Executado por:
Tostes & Medeiros Engenharia Ltda.

Título:
PROJETO ESTRUTURAL PARA CENTRAL DE RESÍDUOS
ARMAÇÃO 03/03 VIGAS BALDRAMES

Local: Porto do Rio de Janeiro

Setor:

Data de Execução: AGOSTO 2013	Obra:	Desenho nº:	Folha: 12/17
Emissão:	Desenhista: ALVANTER	Resp. Técnico:	Verificação:

ESCALA GRÁFICA
0 10 20 40 60 80 100m