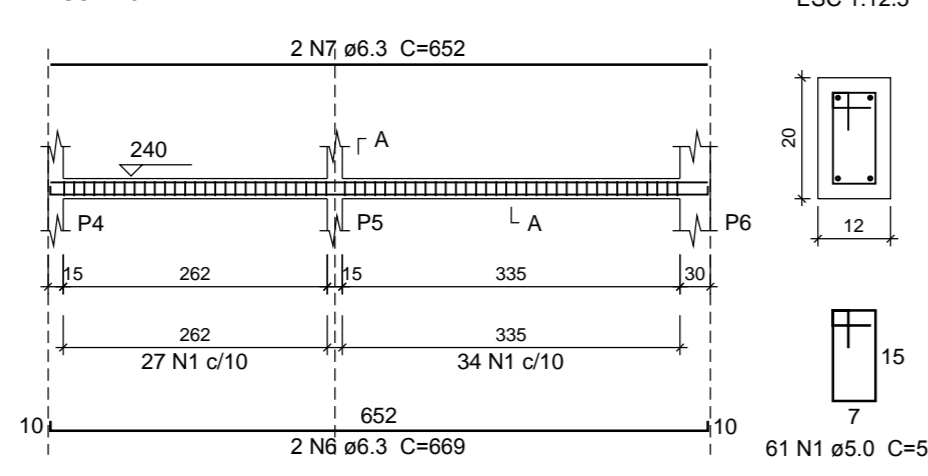
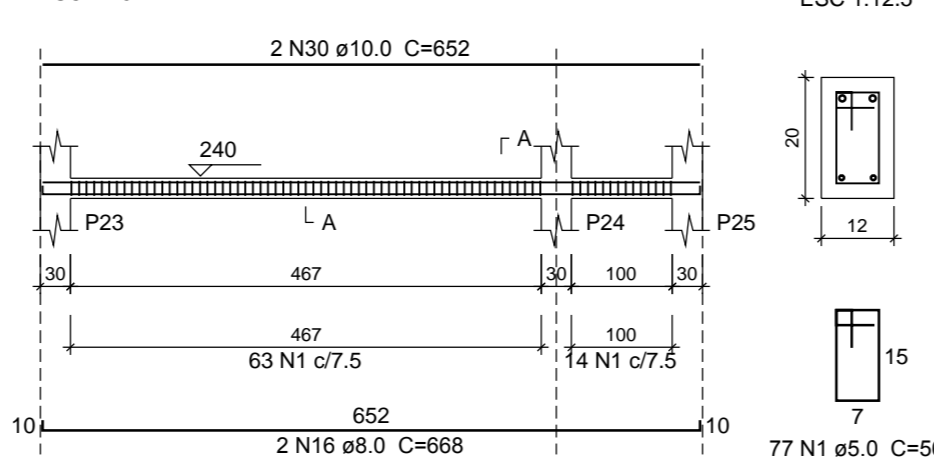


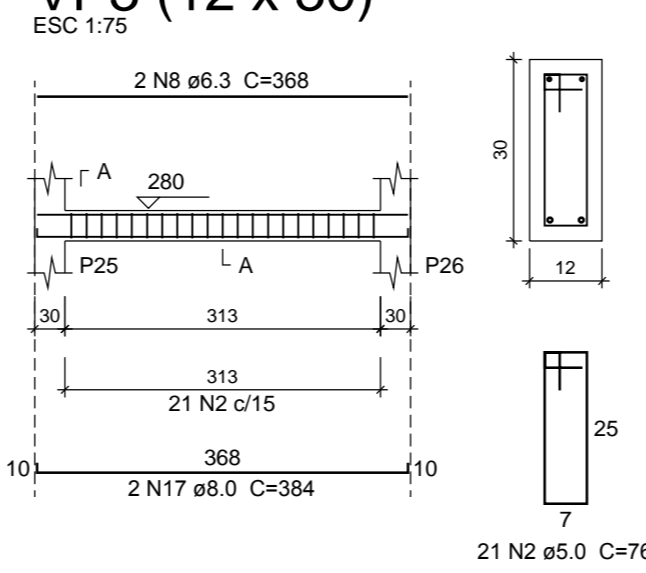
VP1 (12 x 20)
ESC 1:75



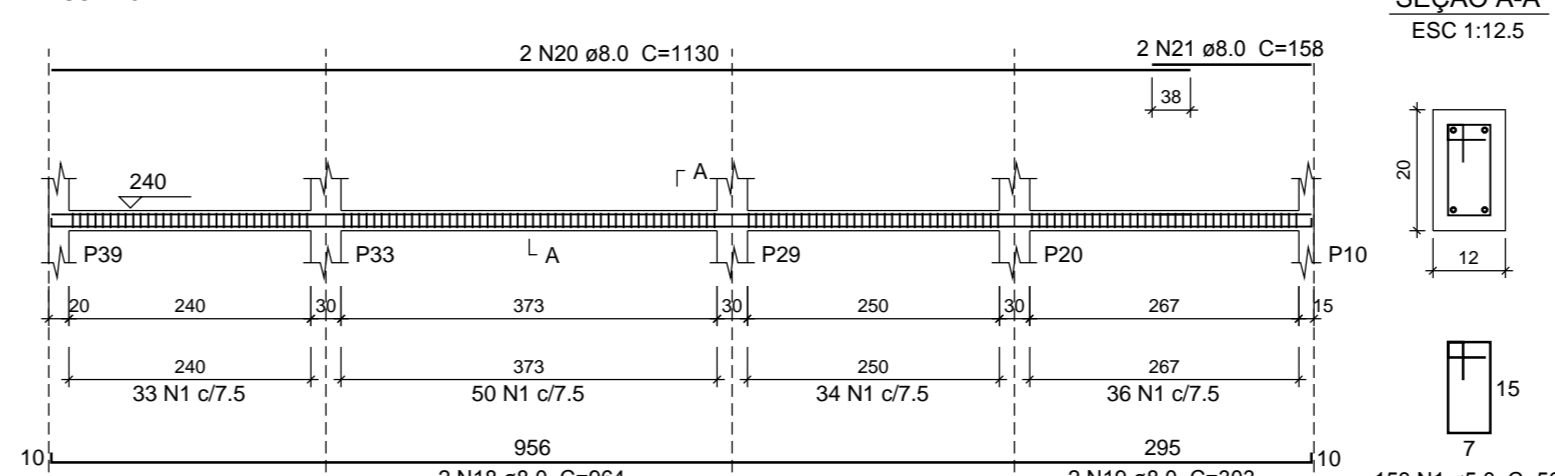
VP2 (12 x 20)
ESC 1:75



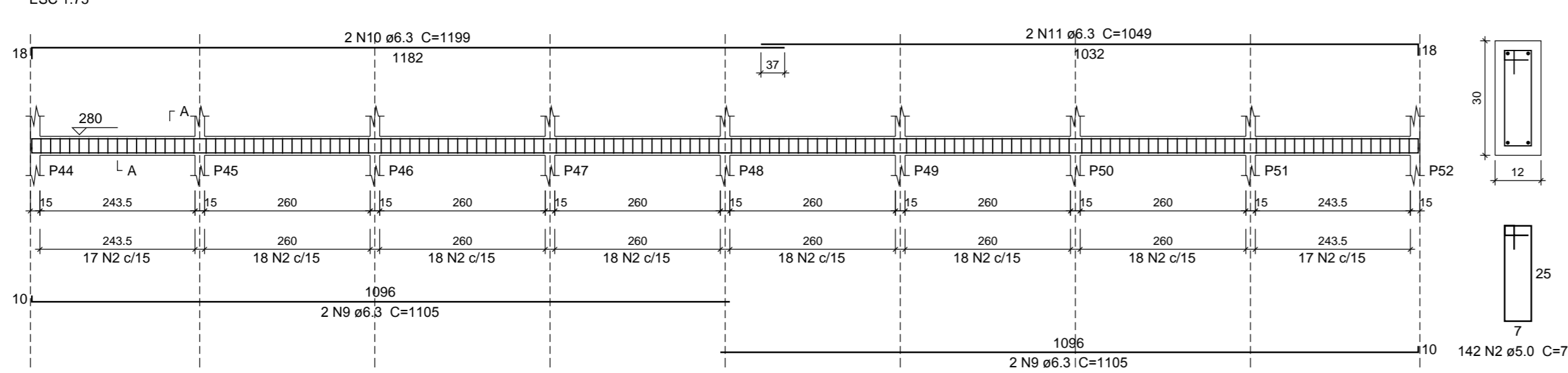
VP3 (12 x 30)
ESC 1:75



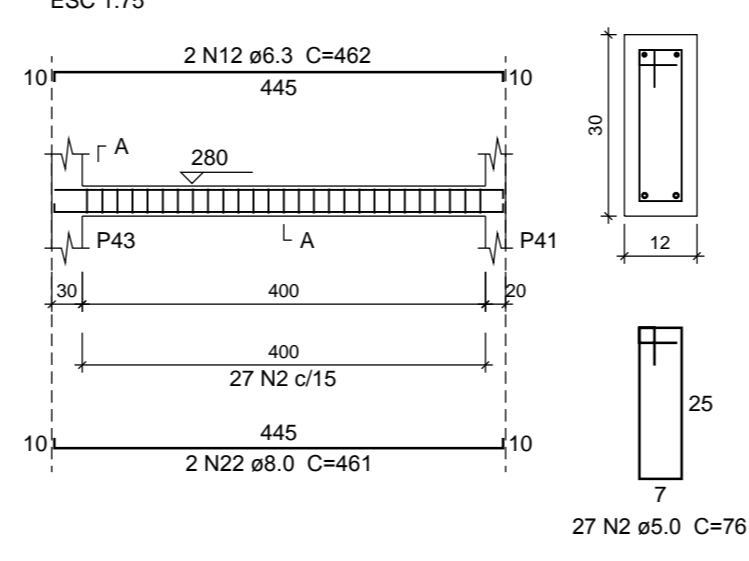
VP5 (12 x 20)
ESC 1:75



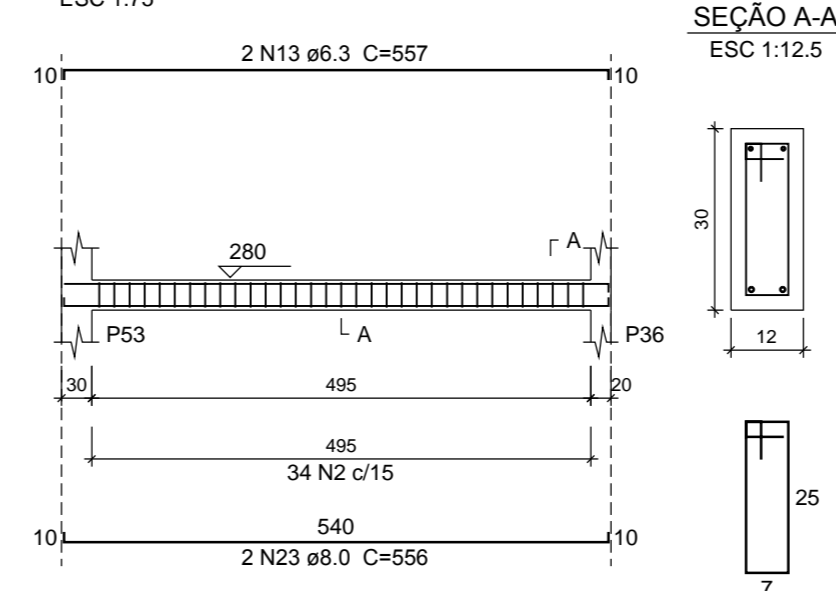
VP4 (12 x 30)
ESC 1:75



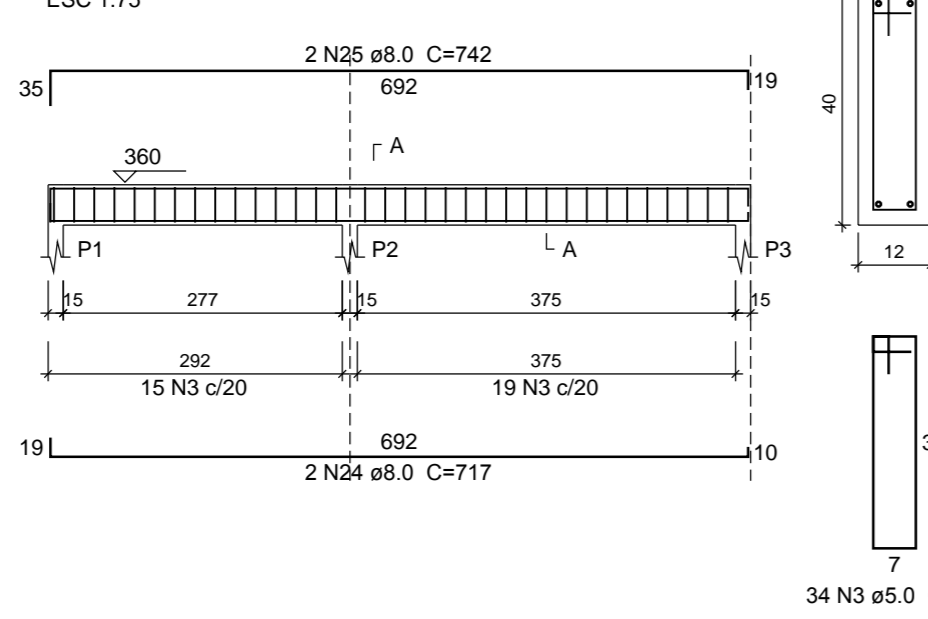
VP6 (12 x 30)
ESC 1:75



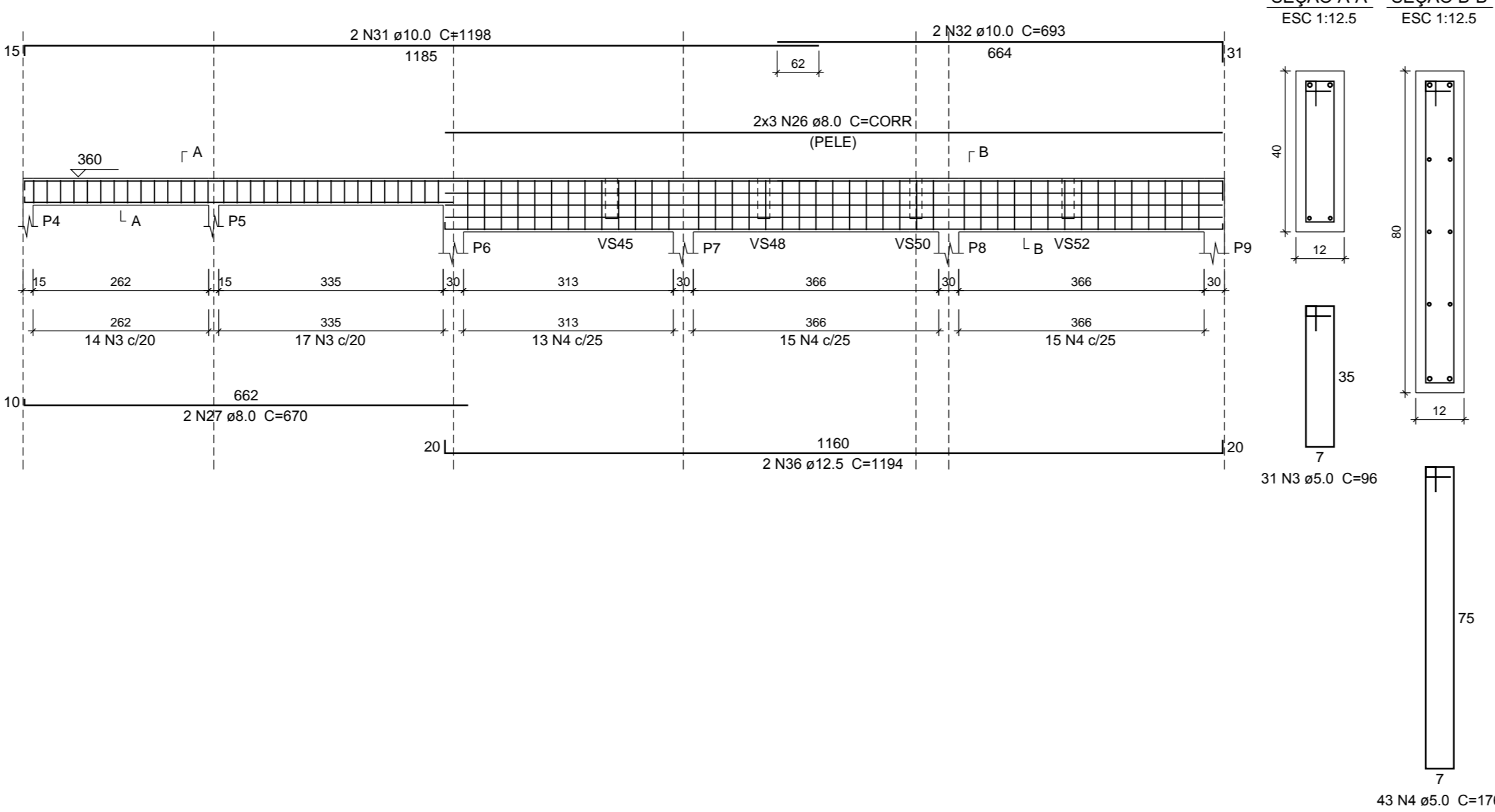
VP7 (12 x 30)
ESC 1:75



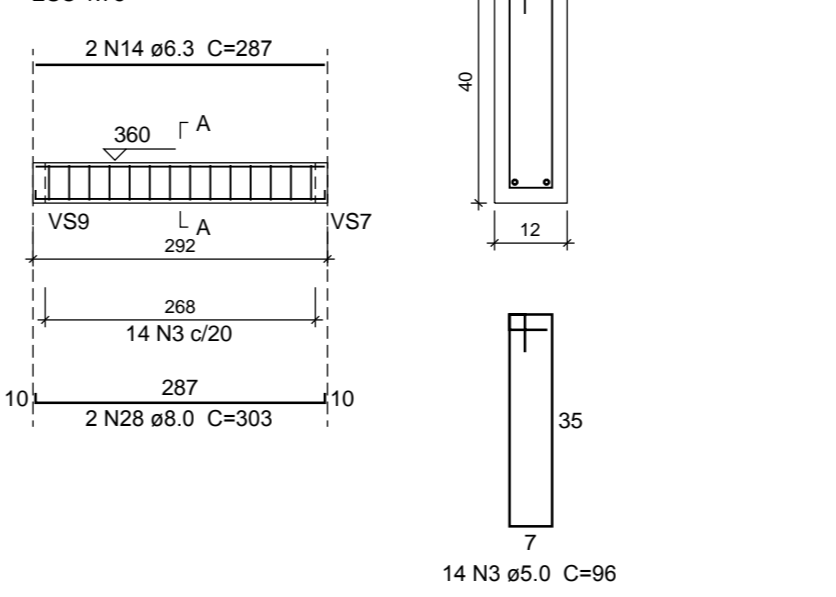
VS1 (12 x 40)
ESC 1:75



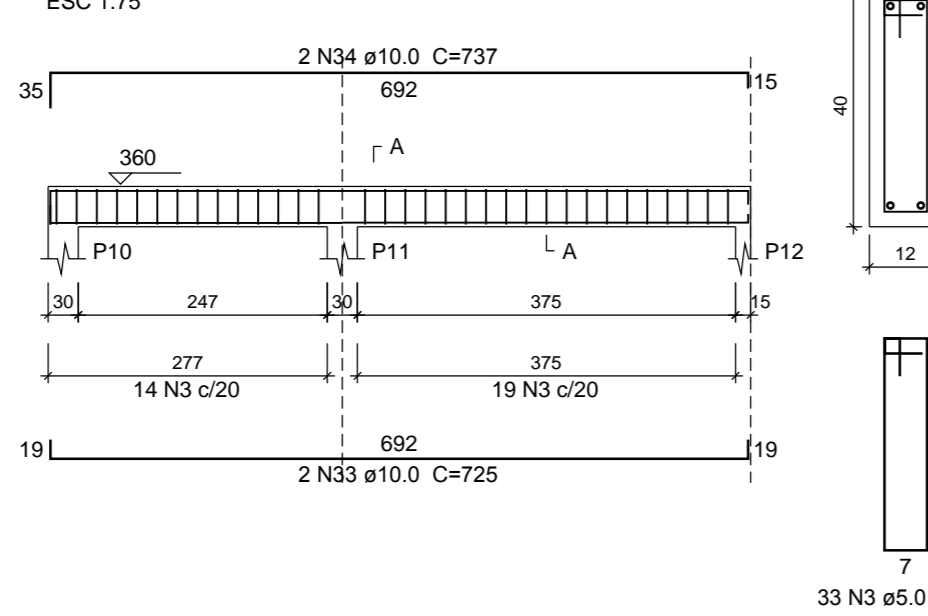
VS2 (var)
ESC 1:75



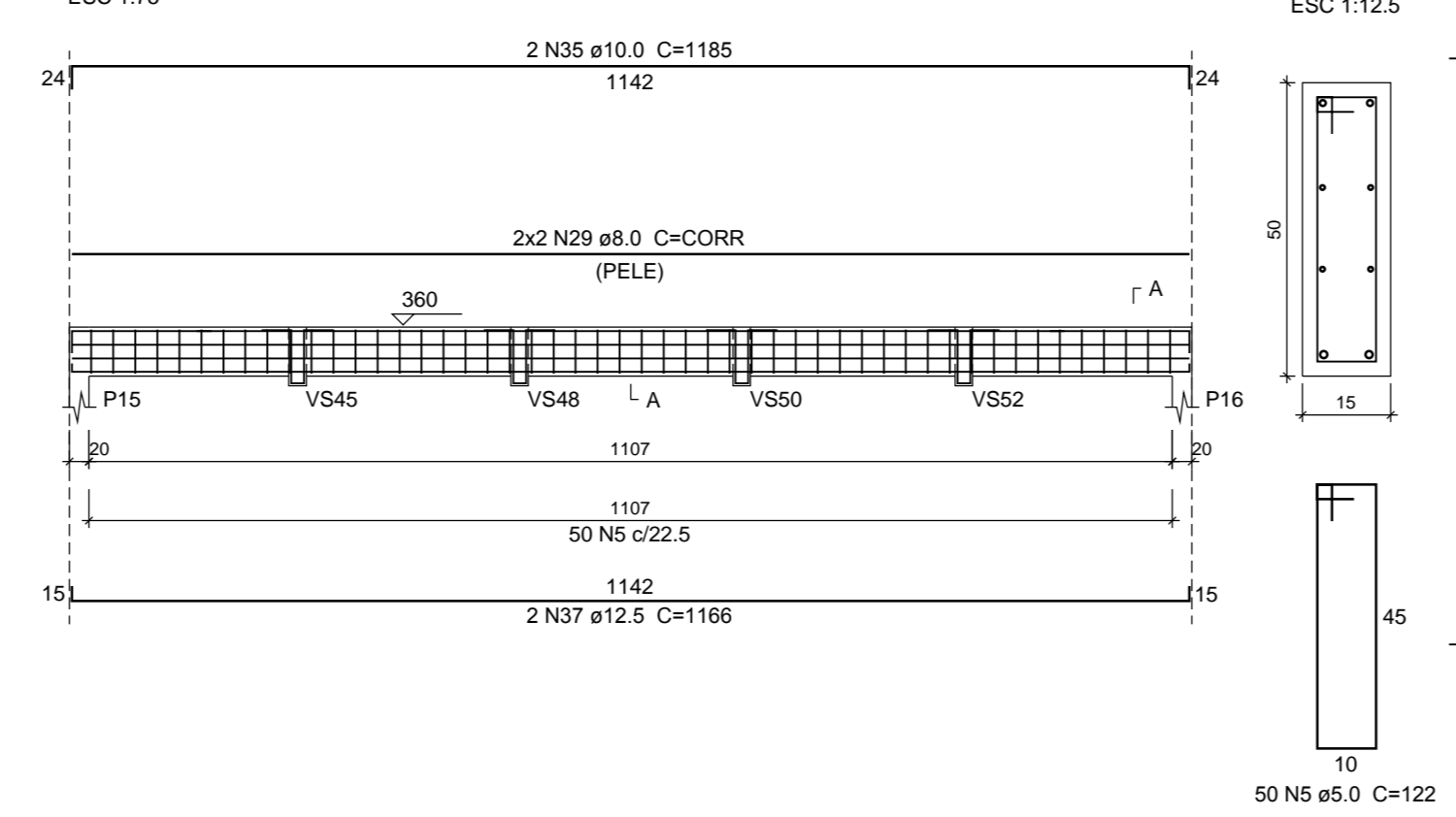
VS25 (12 x 40)
ESC 1:75



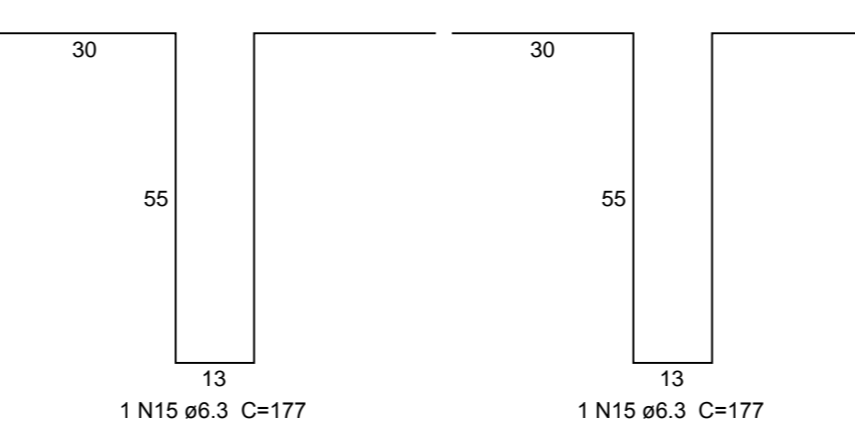
VS3 (12 x 40)
ESC 1:75



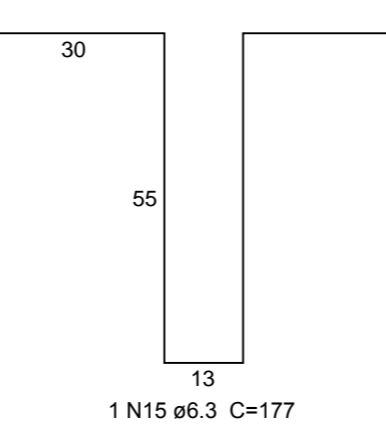
VS4 (15 x 50)
ESC 1:75



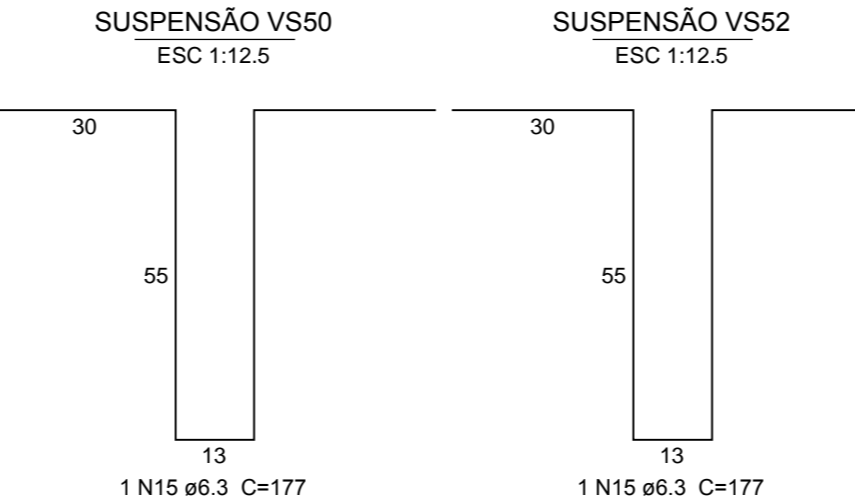
SUSPENSÃO VS45
ESC 1:12.5



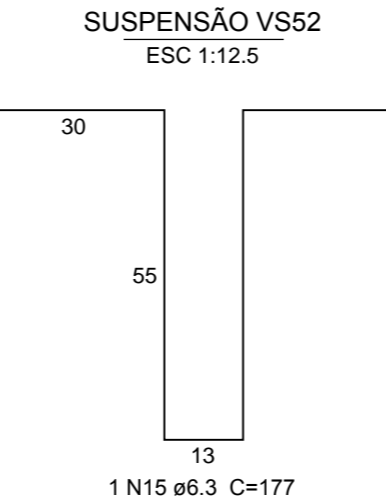
SUSPENSÃO VS48
ESC 1:12.5



SUSPENSÃO VS50
ESC 1:12.5



SUSPENSÃO VS52
ESC 1:12.5



Relação do aço

ACO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA50	1	5.0	291	56	16296
	2	5.0	224	76	17024
	3	5.0	112	96	10752
	4	5.0	43	176	7568
	5	5.0	50	122	6100
	6	6.3	2	669	1338
	7	6.3	2	662	1324
	8	6.3	2	368	736
	9	6.3	4	1105	4420
	10	6.3	2	1199	2398
	11	6.3	2	1049	2098
	12	6.3	2	462	924
	13	6.3	2	587	1174
	14	6.3	2	287	574
	15	6.3	4	177	708
	16	8.0	2	668	1336
	17	8.0	2	364	728
	18	8.0	2	964	1928
	19	8.0	2	303	606
	20	8.0	2	1130	2260
	21	8.0	2	158	316
	22	8.0	2	461	922
	23	8.0	2	556	1112
	24	8.0	2	717	1434
	25	8.0	2	742	1484
	26	8.0	6	CORR	6960
	27	8.0	2	670	1340
	28	8.0	2	303	606
	29	8.0	4	CORR	4068
	30	10.0	2	652	1304
	31	10.0	2	1188	2376
	32	10.0	2	660	1320
	33	10.0	2	725	1450
	34	10.0	2	737	1474
	35	10.0	2	1185	2370
	36	12.5	2	1194	2388
	37	12.5	2	1166	2332

Resumo do aço

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	156.2	42
	8.0	256.4	111.3
	10.0	103.3	70.4
	12.5	47.2	50
CA60	5.0	577.4	97.9

PESO TOTAL (kg): 273.7
CA50: 273.7
CA60: 97.9

Volume de concreto (C-30) = 4.98 m³
Área de forma = 93.31 m²

Ciente:  **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 01/05 VIGAS SUPERIORES

Local: Porto do Rio de Janeiro

Setor:

Data de Execução: AGOSTO 2013 Obra: Desenho nº: Folha: 13/17

Emissão: Desenhista: ALVANTER Resp. Técnico: Verificação:

ESCALA GRÁFICA
0 10 20 40 60 80 100m