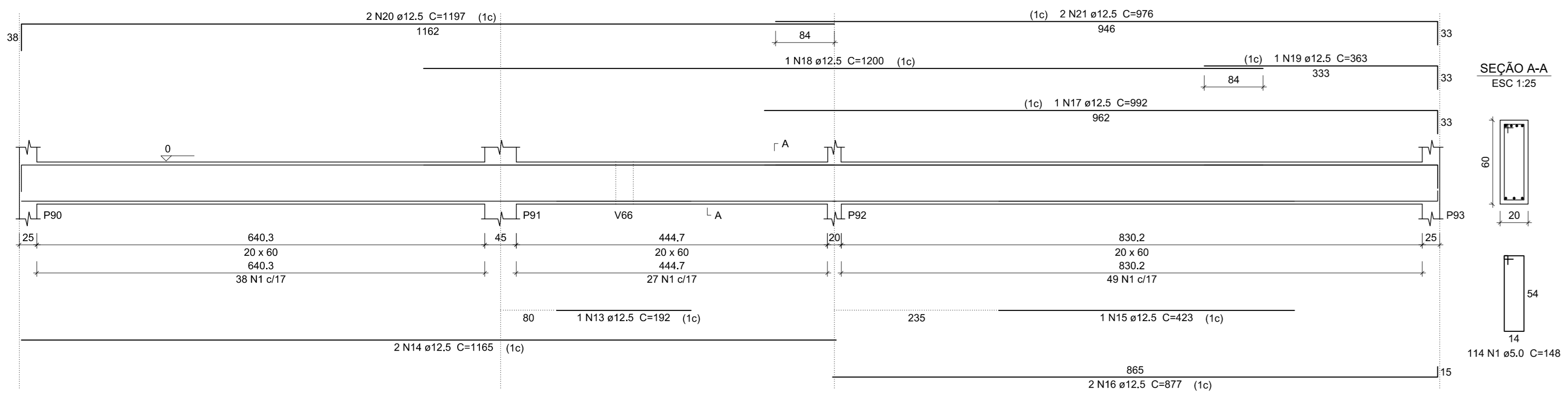
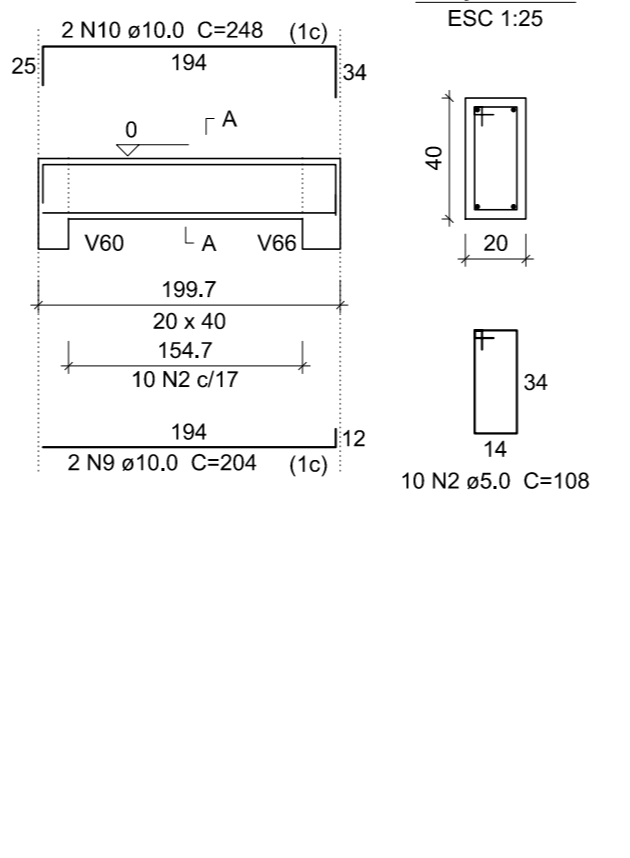


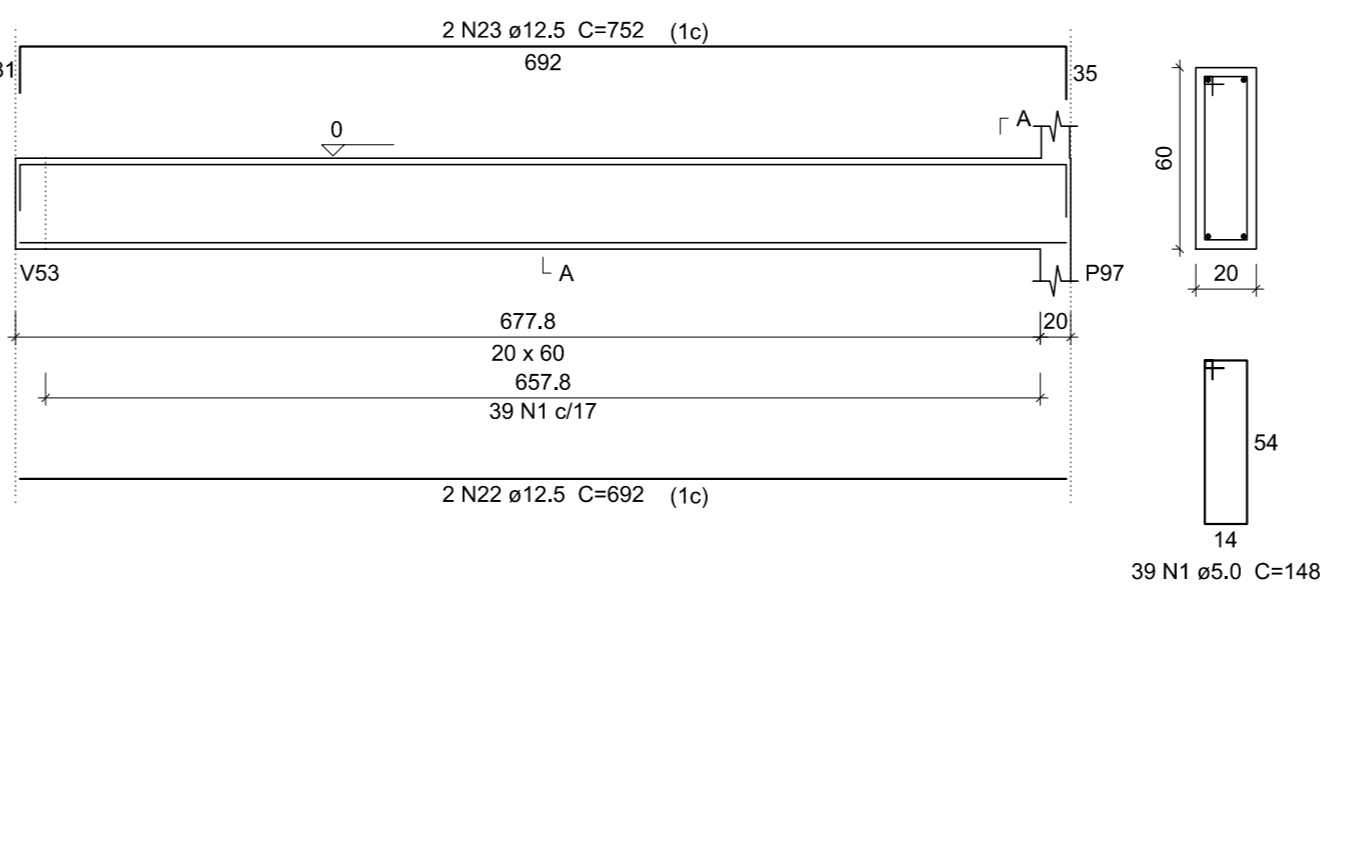
V30  
ESC 1:50



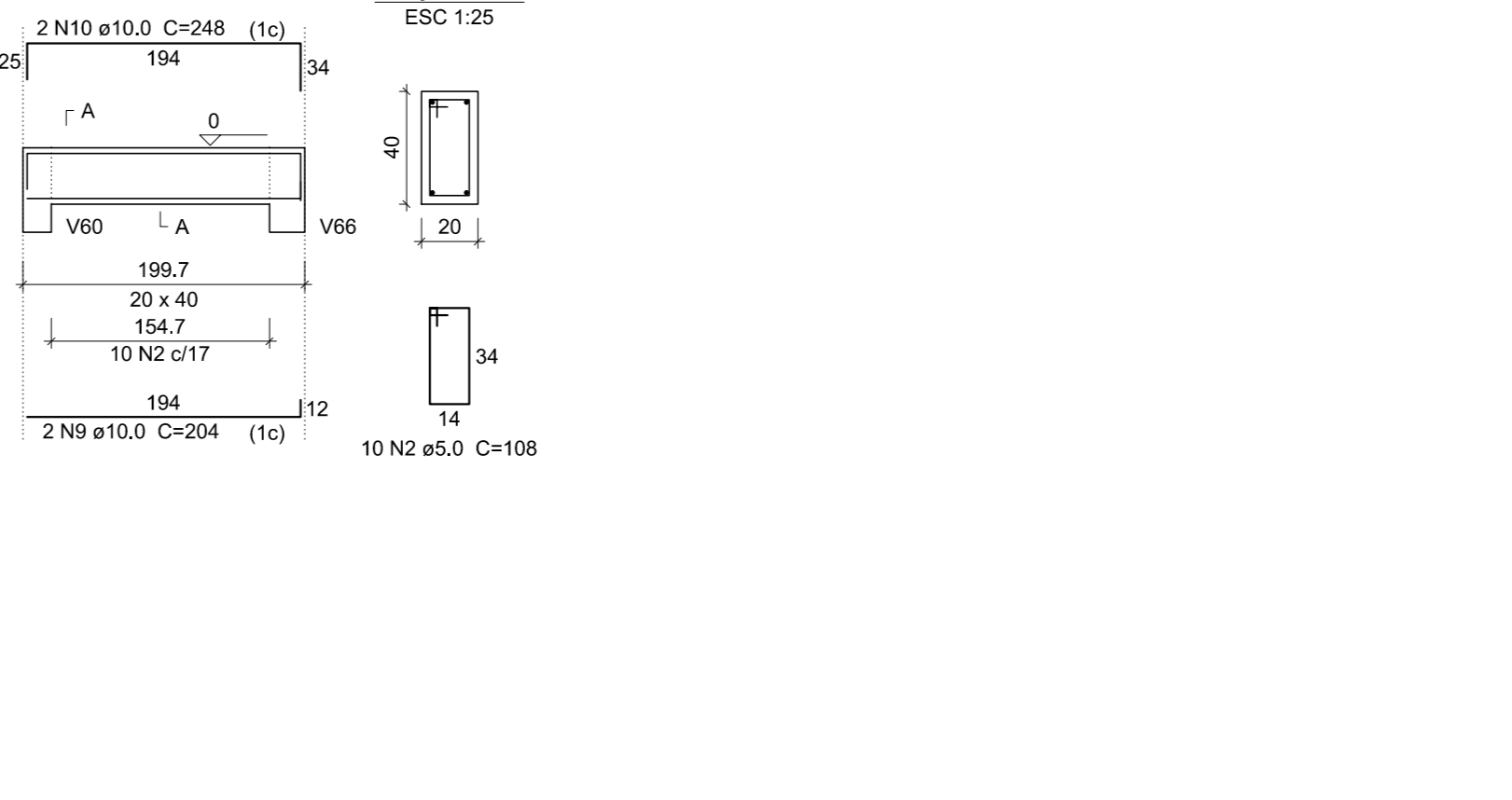
V31  
ESC 1:50



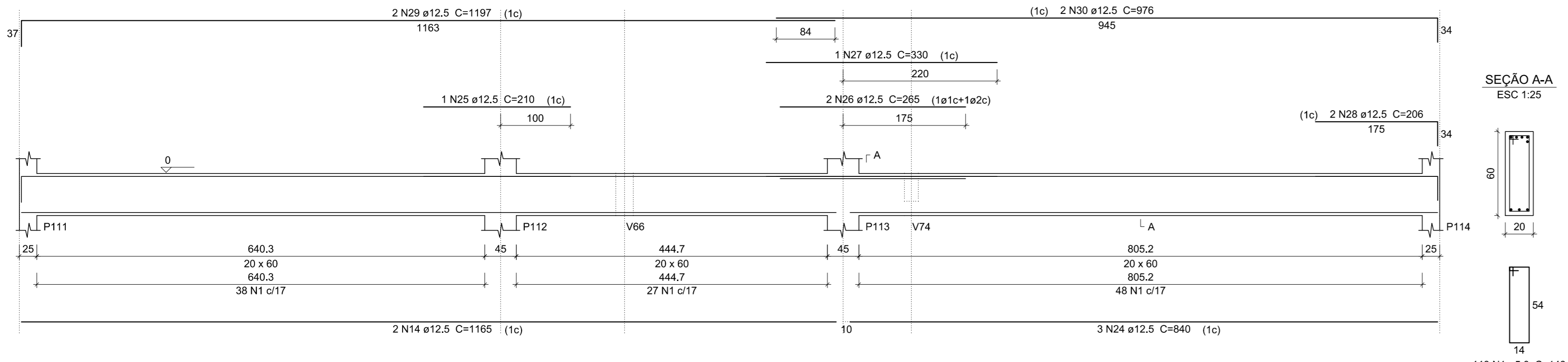
V32  
ESC 1:50



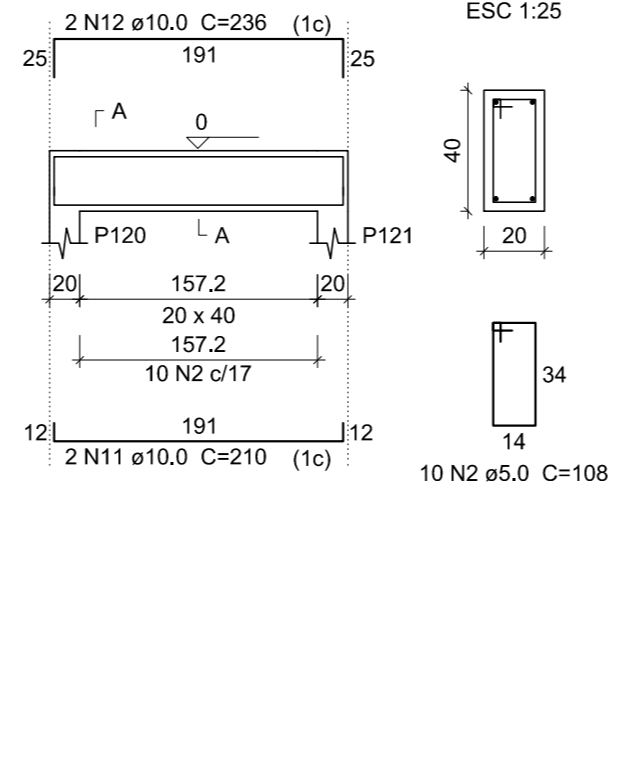
V34  
ESC 1:50



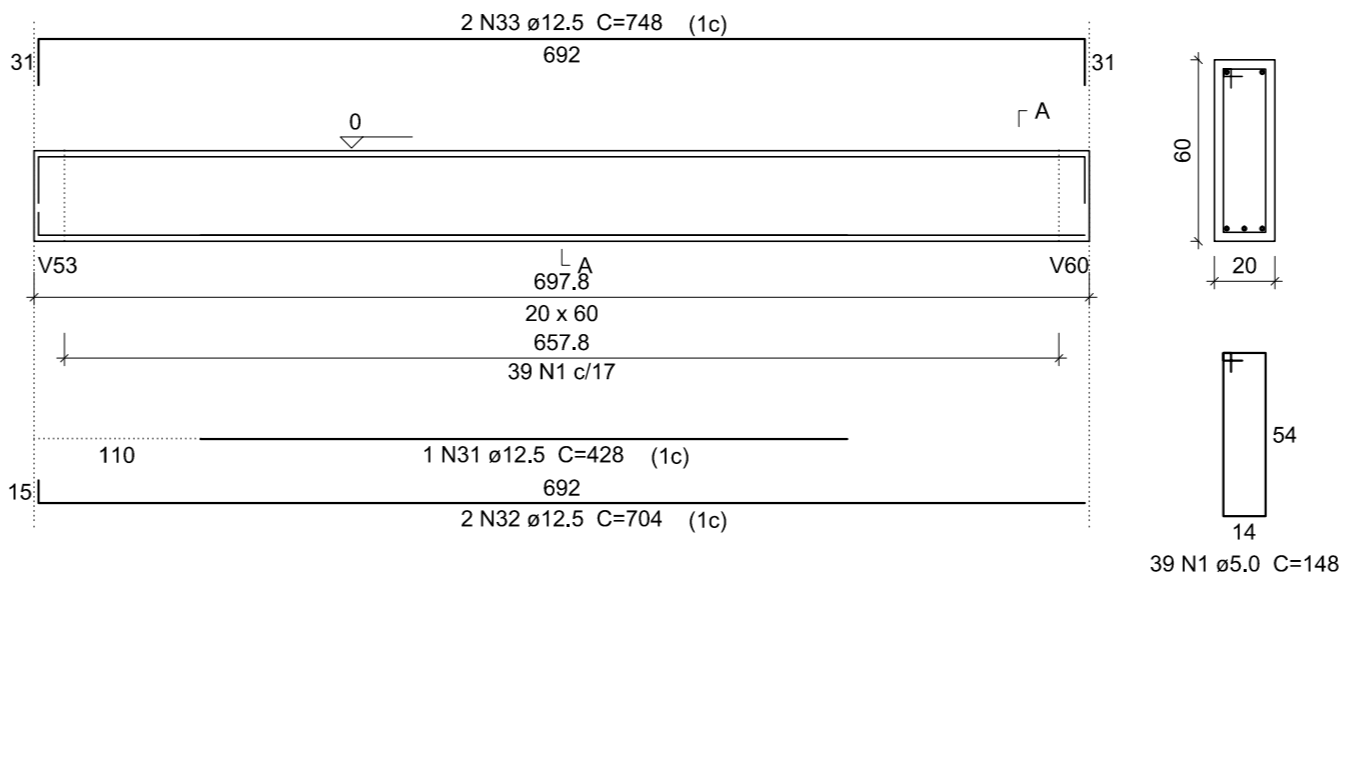
V35  
ESC 1:50



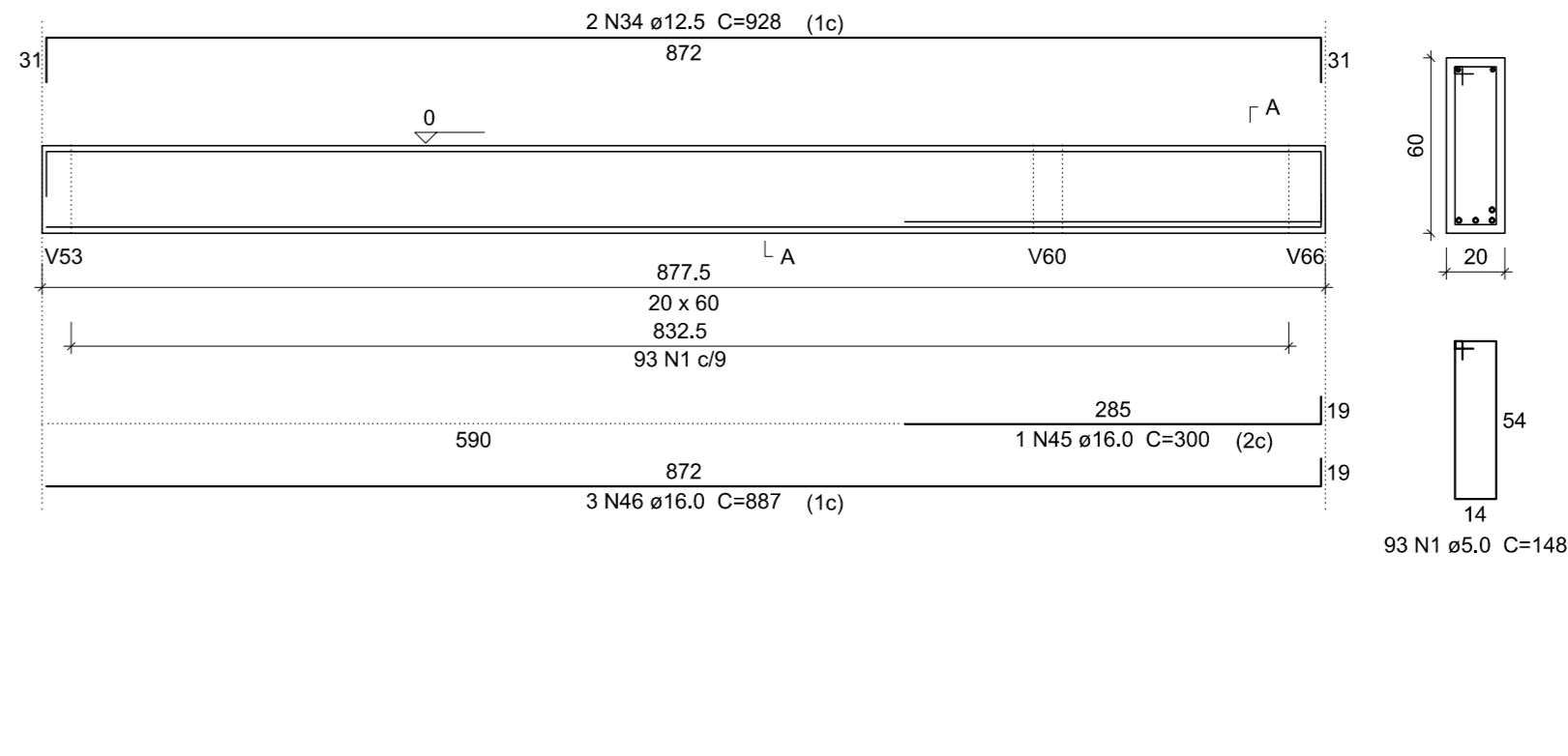
V36  
ESC 1:50



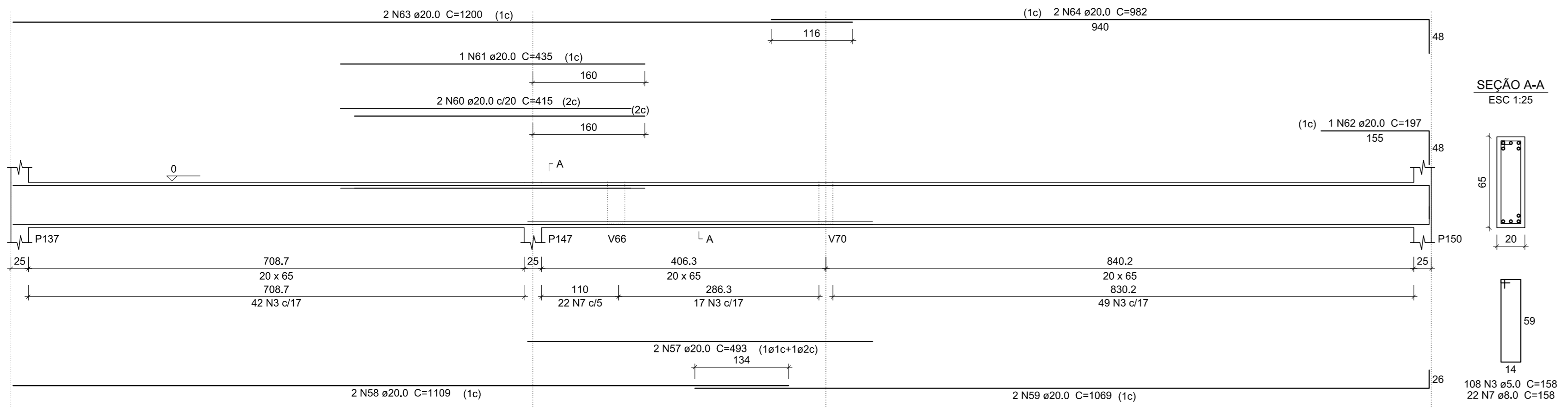
V39  
ESC 1:50



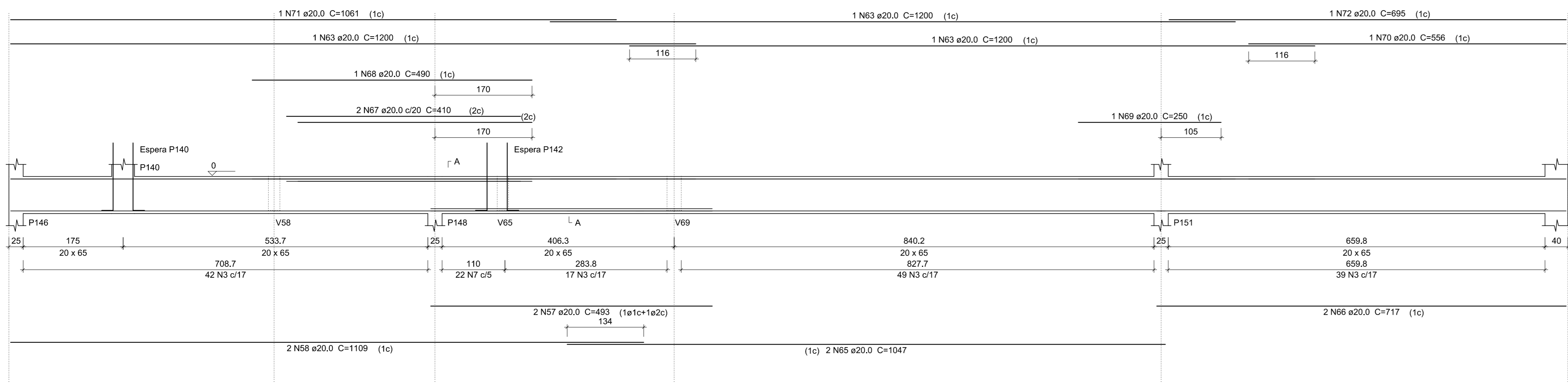
V40  
ESC 1:50



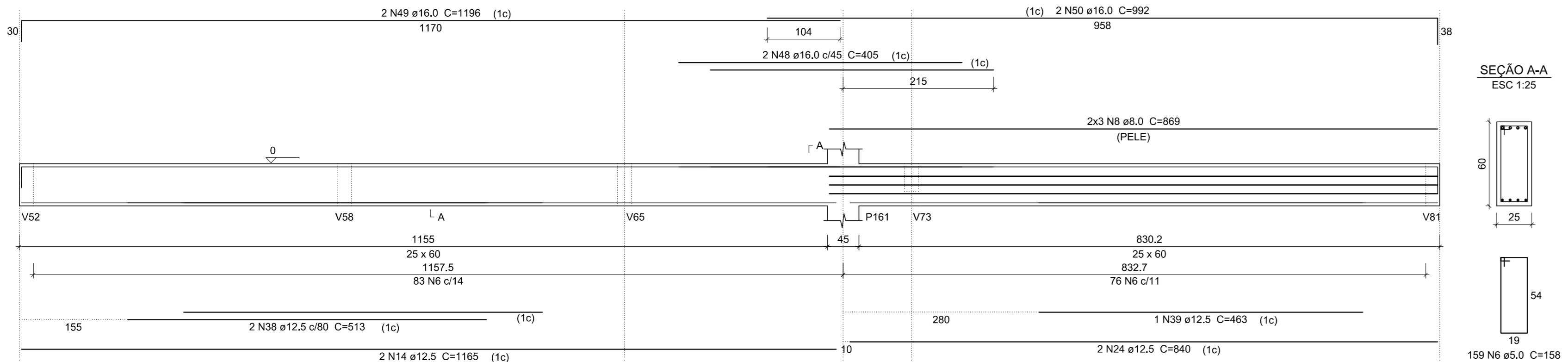
V41  
ESC 1:50



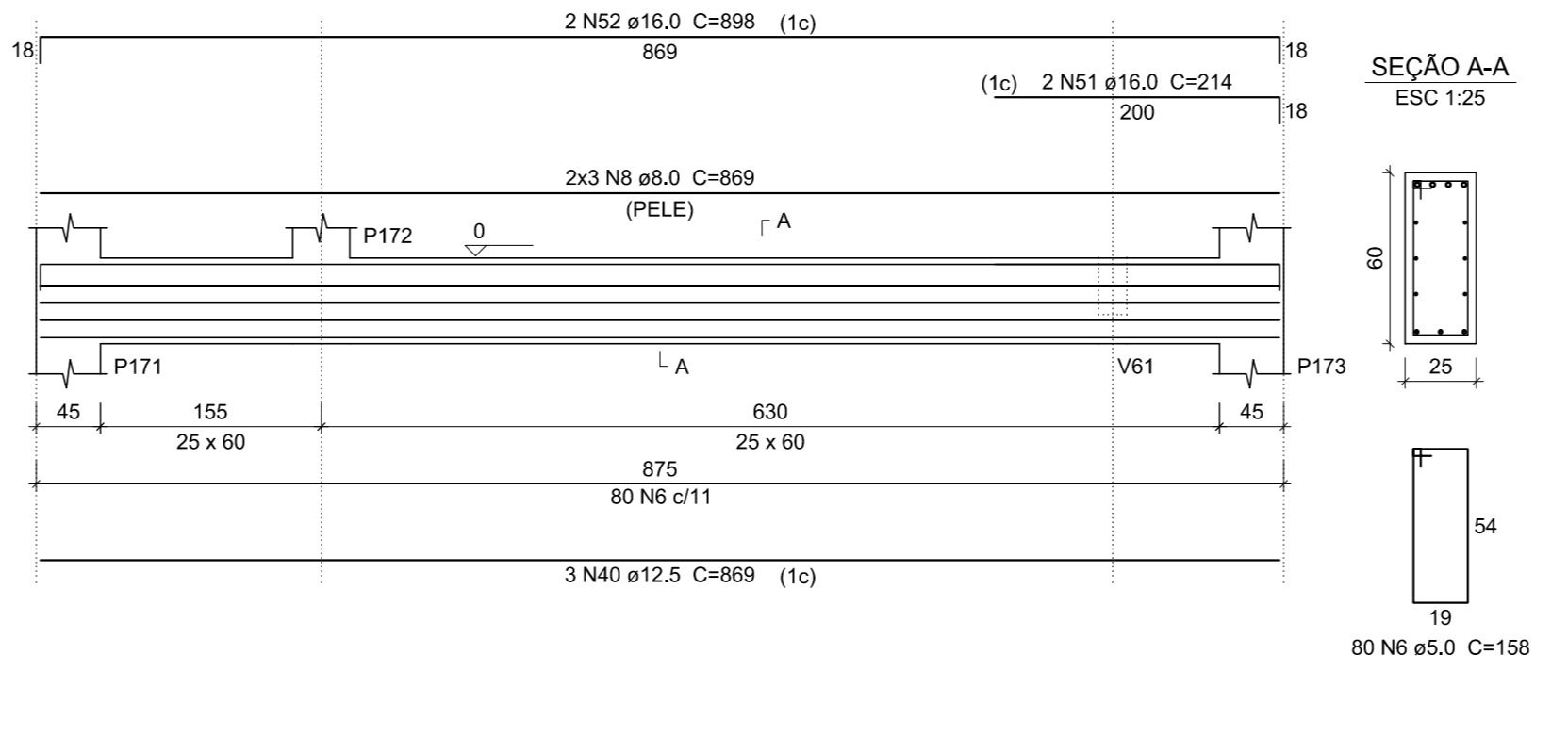
V42  
ESC 1:50



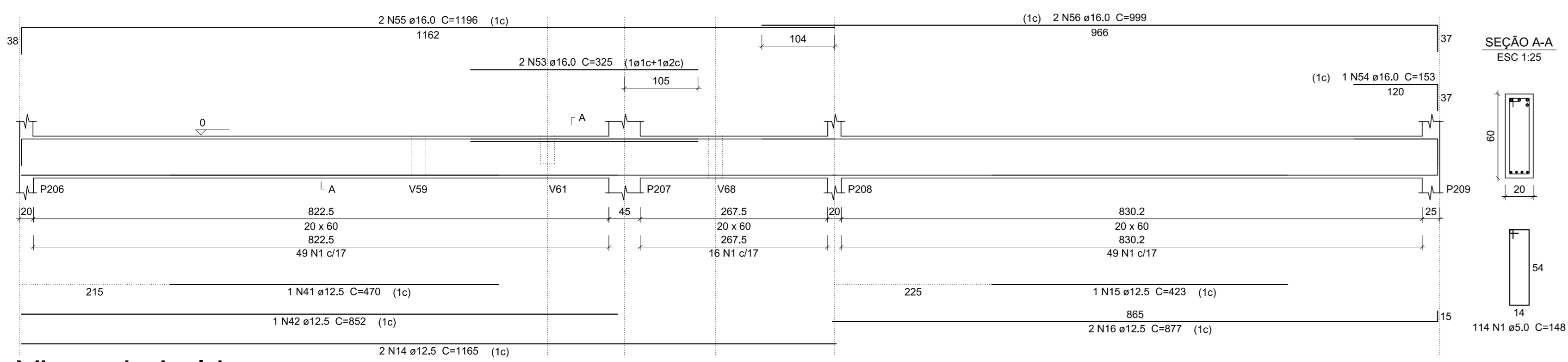
V44  
ESC 1:50



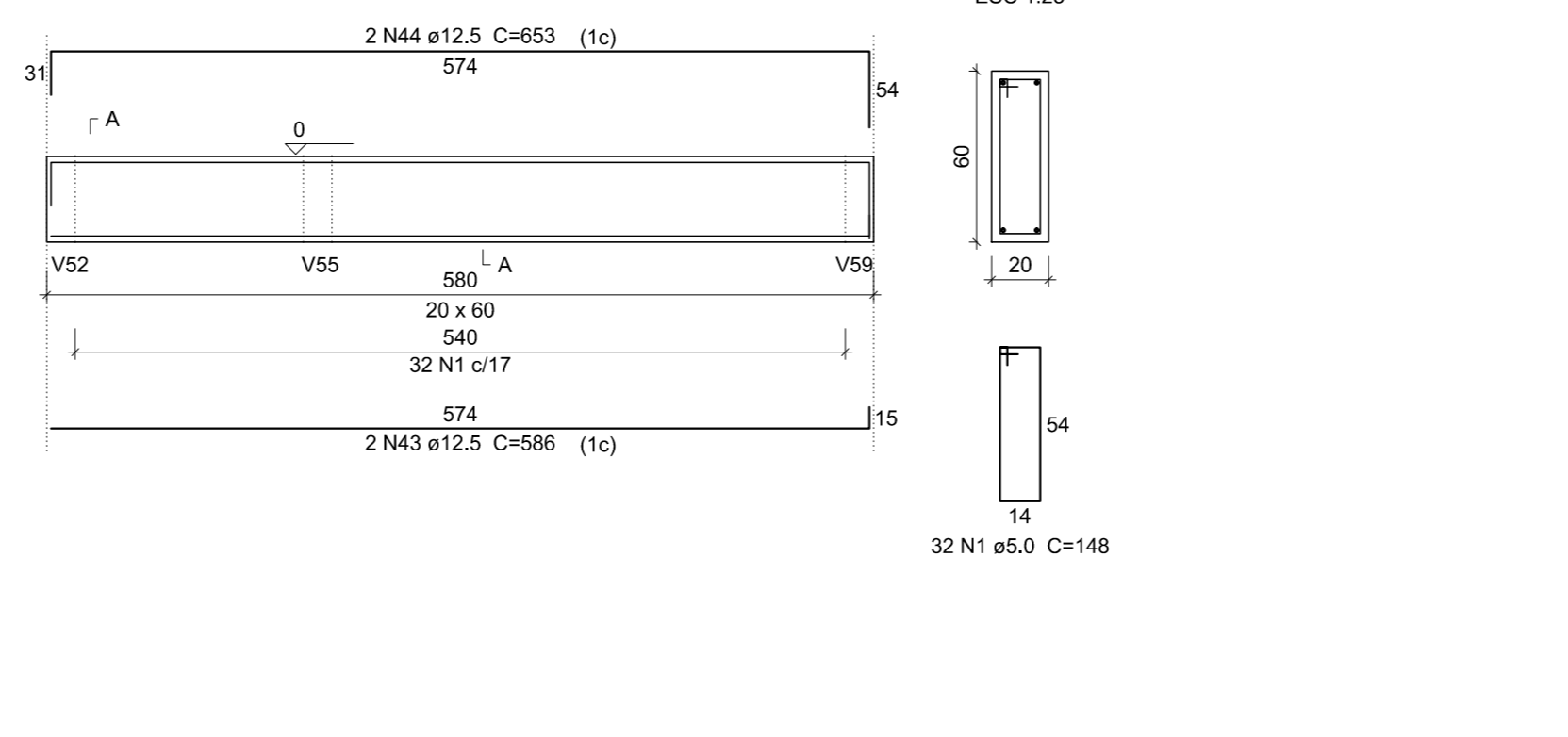
V46  
ESC 1:50



V47  
ESC 1:50



V48  
ESC 1:50



Relação do aço

ACO	N	DIAM	Q	UNIT	C.TOTAL
CASO	1	5.0	583	(cm)	86284
	2	5.0	30		3240
	3	5.0	205		40290
	4	5.0	8		232
	5	5.0	8		110
	6	5.0	238		3782
	7	8.0	44		6952
	8	8.0	12		1042
	9	10.0	4		204
	10	10.0	4		248
	11	10.0	2		120
	12	10.0	2		236
	13	12.5	1		192
	14	12.5	8		1165
	15	12.5	2		423
	16	12.5	4		877
	17	12.5	1		992
	18	12.5	1		1200
	19	12.5	1		363
	20	12.5	2		1197
	21	12.5	2		976
	22	12.5	2		692
	23	12.5	2		752
	24	12.5	5		840
	25	12.5	1		210
	26	12.5	2		205
	27	12.5	1		330
	28	12.5	2		206
	29	12.5	2		1197
	30	12.5	2		976
	31	12.5	1		428
	32	12.5	2		704
	33	12.5	2		748
	34	12.5	2		928
	35	12.5	6		135
	36	12.5	7		713
	37	12.5	2		741
	38	12.5	2		513
	39	12.5	1		463
	40	12.5	3		899
	41	12.5	1		470
	42	12.5	1		852
	43	12.5	2		596
	44	12.5	2		653
	45	16.0	1		300
	46	16.0	2		607
	47	16.0	8		134
	48	16.0	2		405
	49	16.0	2		1196
	50	16.0	2		992
	51	16.0	2		214
	52	16.0	2		898
	53	16.0	2		325
	54	16.0	1		153
	55	16.0	2		1196
	56	16.0	2		999
	57	20.0	4		493
	58	20.0	4		1109
	59	20.0	2		1069
	60	20.0	2		415
	61	20.0	1		435
	62	20.0	1		197
	63	20.0	5		1000
	64	20.0	2		982
	65	20.0	2		1047
	66	20.0	2		717
	67	20.0	2		410
	68	20.0	1		490
	69	20.0	1		250
	70	20.0	1		506
	71	20.0	1		1061
	72	20.0	1		695

Resumo do aço

ACO	DIAM	C.TOTAL	PESO + 10%
CASO	8.0	173.8	75.4
	10.0	207	18.3
	12.5	504.9	535
	16.0	166.4	288.8
	20.0	253.8	688.3
CASO	5.0	1696.9	296
CASO	1606.8		
CASO	286		

Vol. de concreto total (C-30) = 22.62 m³  
 Área de forma total = 254.17 m²

Vigas do baldrame  
escala 1:50

**HB ENGENHARIA**  
PROJETOS E EXECUÇÕES DE OBRAS

ALEX SANDRO BOLIGON  
ENGENHEIRO CIVIL  
CREASC 86741-4

ALLAN FELIPE MELCHIORETTO  
ENGENHEIRO CIVIL  
CREASC 14717-4

RUA NORBERTO SILVEIRA JUNIOR, nº 191, SL. 05  
CENTRO - GUARAMIRIM - SC  
47.3376-2317 / 19925-3246 / 98401-4518

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**ESCOLA MUNICIPAL IRMÃ FILOMENA**

**PROJETO ESTRUTURAL**

(PROPRIETÁRIO) MUNICÍPIO DE TREZE TILIAS. LOCAL: RUA DR. IVO DAQUINO Nº 220, BARRIO CENTRO, TREZE TILIAS/SC.	ESCALA: INDICADA DESIGNO: RAFAEL DATA: ABRIL 2018
RESP. TÉCNICO:	CONTRATANTE:

ALEX SANDRO BOLIGON  
ENGENHEIRO CIVIL  
CREASC 86741-4

MUNICÍPIO DE TREZE TILIAS  
ENGENHEIRO CIVIL  
CREASC 14717-4  
CPF: 480.440.650-00  
CARGO: PREFEITO

**06**

**14**