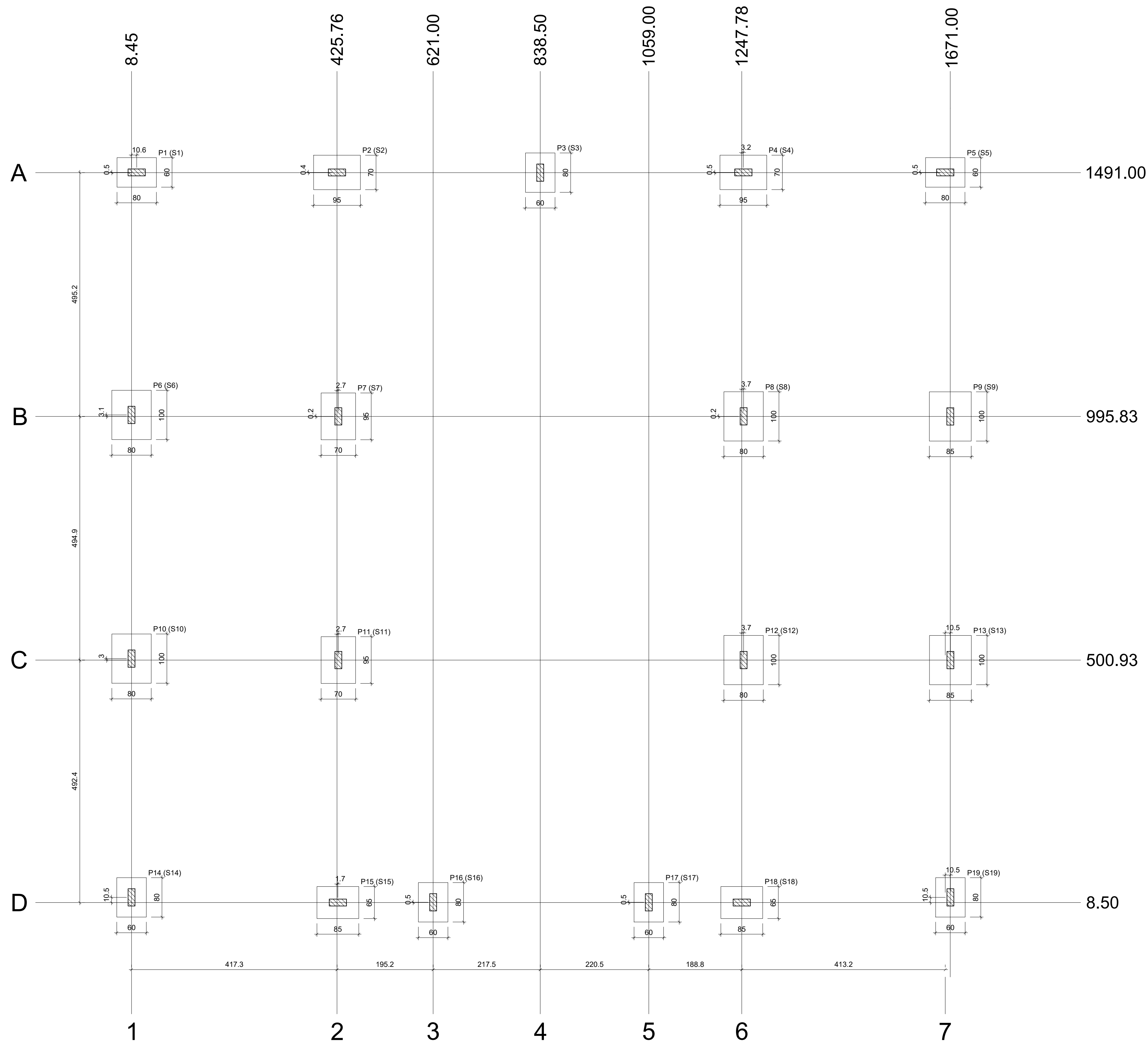




Pilar		Fundação					
Nome	Seção	Nome	Lado B	Lado H	h0 / ha	h1 / hb	df
P1	14x35	S1	60	80	25	25	100
P2	14x35	S2	70	95	25	25	100
P3	14x35	S3	60	80	25	25	100
P4	14x35	S4	70	95	25	25	100
P5	14x35	S5	60	80	25	25	100
P6	14x35	S6	80	100	25	25	100
P7	14x35	S7	70	95	25	25	100
P8	14x35	S8	80	100	25	25	100
P9	14x35	S9	85	100	25	25	100
P10	14x35	S10	80	100	25	25	100
P11	14x35	S11	70	95	25	25	100
P12	14x35	S12	80	100	25	25	100
P13	14x35	S13	85	100	25	25	100
P14	14x35	S14	60	80	25	25	100
P15	14x35	S15	65	85	25	25	120
P16	14x35	S16	60	80	25	25	100
P17	14x35	S17	60	80	25	25	100
P18	14x35	S18	65	85	25	25	100
P19	14x35	S19	60	80	25	25	100

Planta de locação
escala 1:50



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DIRETORIA DE ENGENHARIA
E INFRAESTRUTURA
Rua Aristarco Lopes, 240 | Centro
Petrolina/PE | CEP: 56.302-100

PROJETO ESTRUTURAL DO CAMPUS
ÁGUAS BELAS DO IFSertãoPE

ENDEREÇO:
Rodovia PE-300, S/N, CEP: 55340-000
Águas Belas/PE

DESCRIÇÃO
PLANTA DE LOCAÇÃO (ALMOXARIFADO)

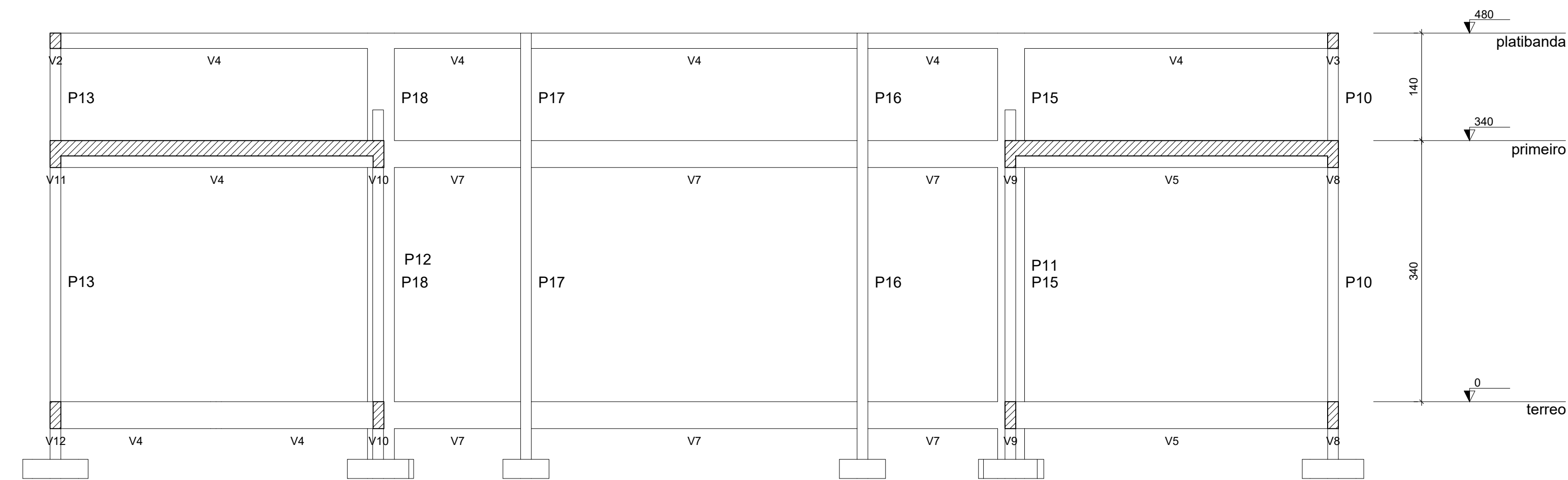
ESCALA
1/50

DATA
ABRIL/2025

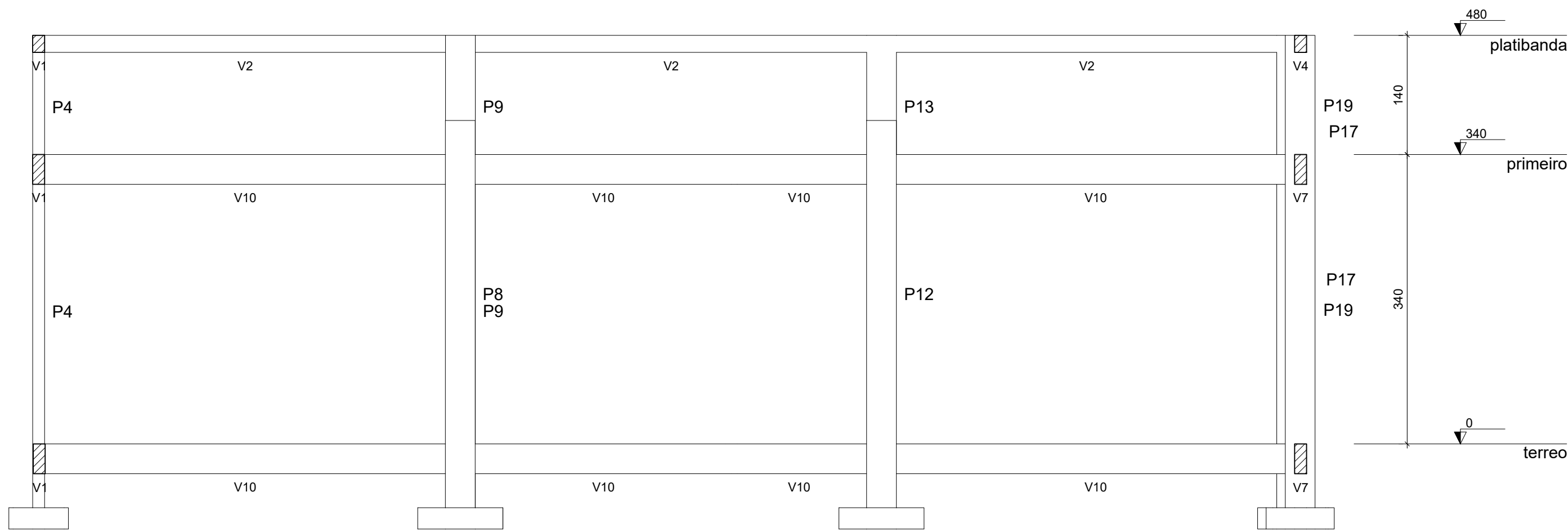
ASSINATURACARRIMBO - DIREÇÃO GERAL

ASSINATURACARRIMBO - RESPONSÁVEL TÉCNICO
Wilson Nery da Cunha - CREA BA 14748

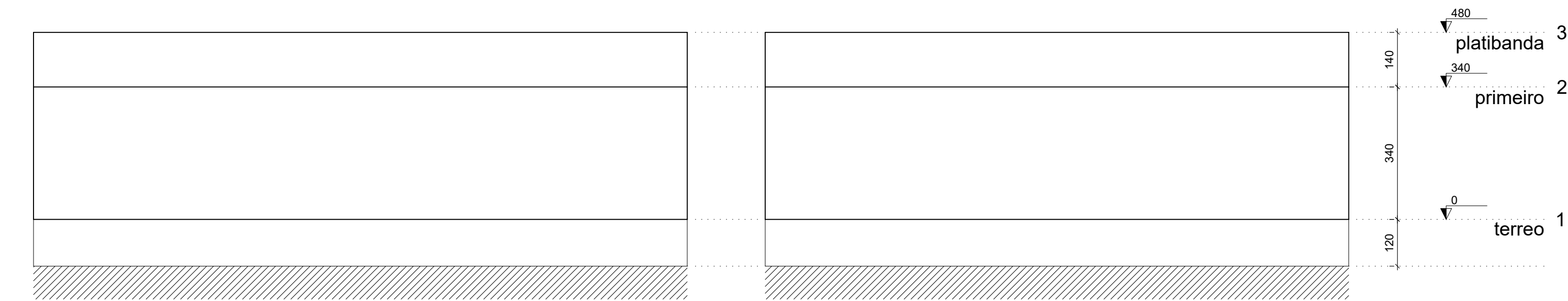
01/09



Corte A-A
escala 1:50



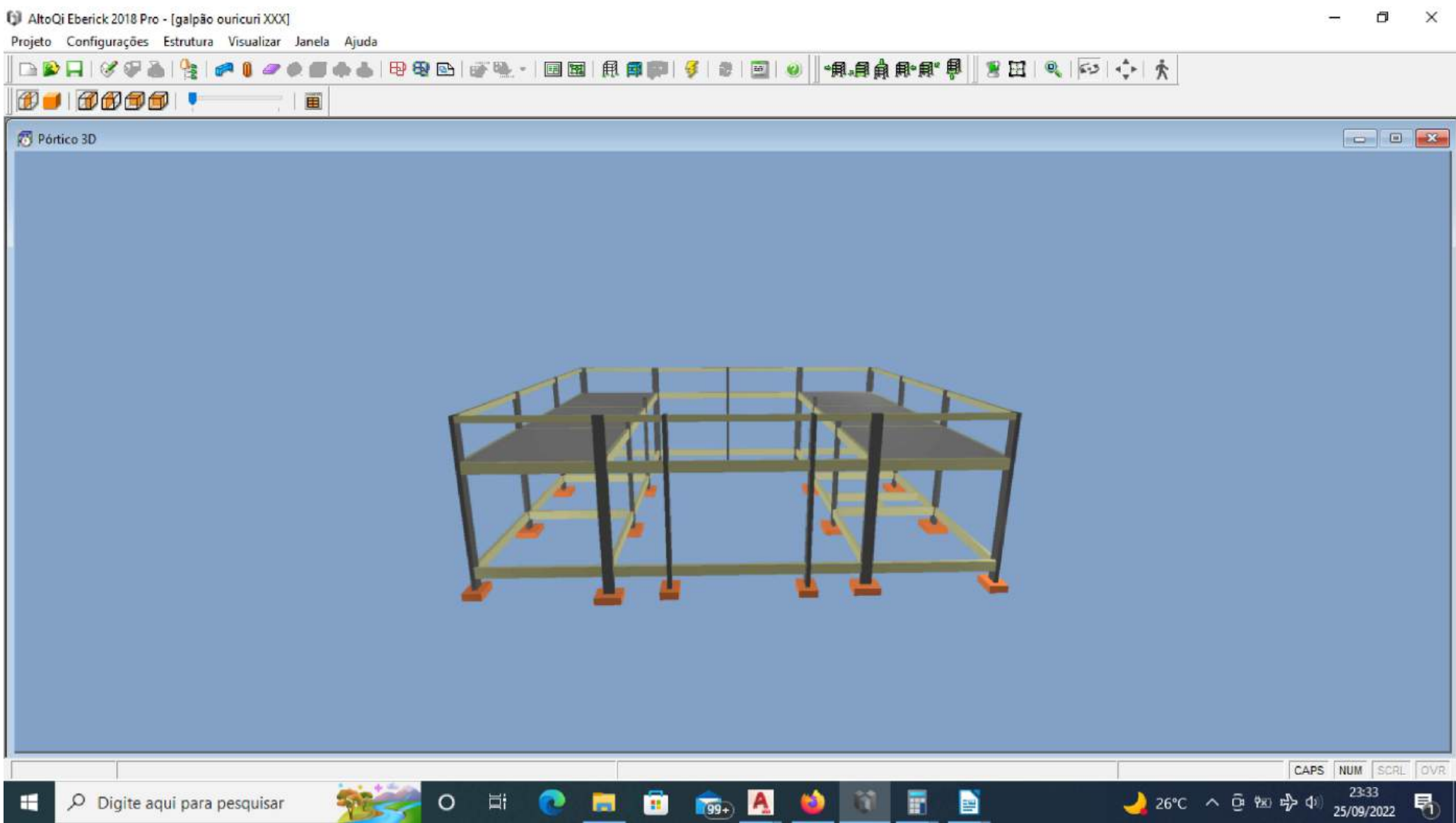
Corte B-B
escala 1:50

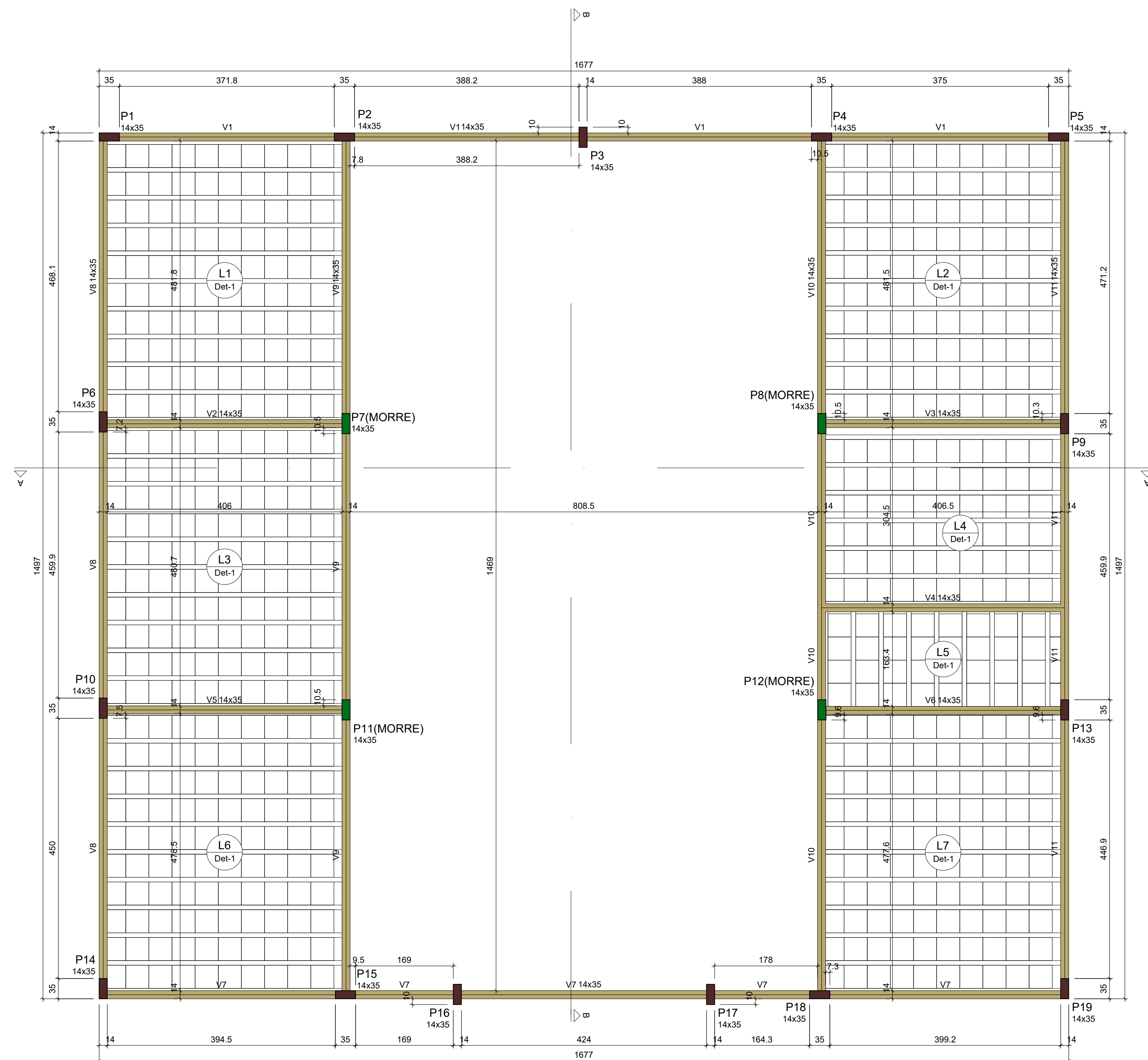


Corte X-X
escala 1:100

Corte Y-Y
escala 1:100

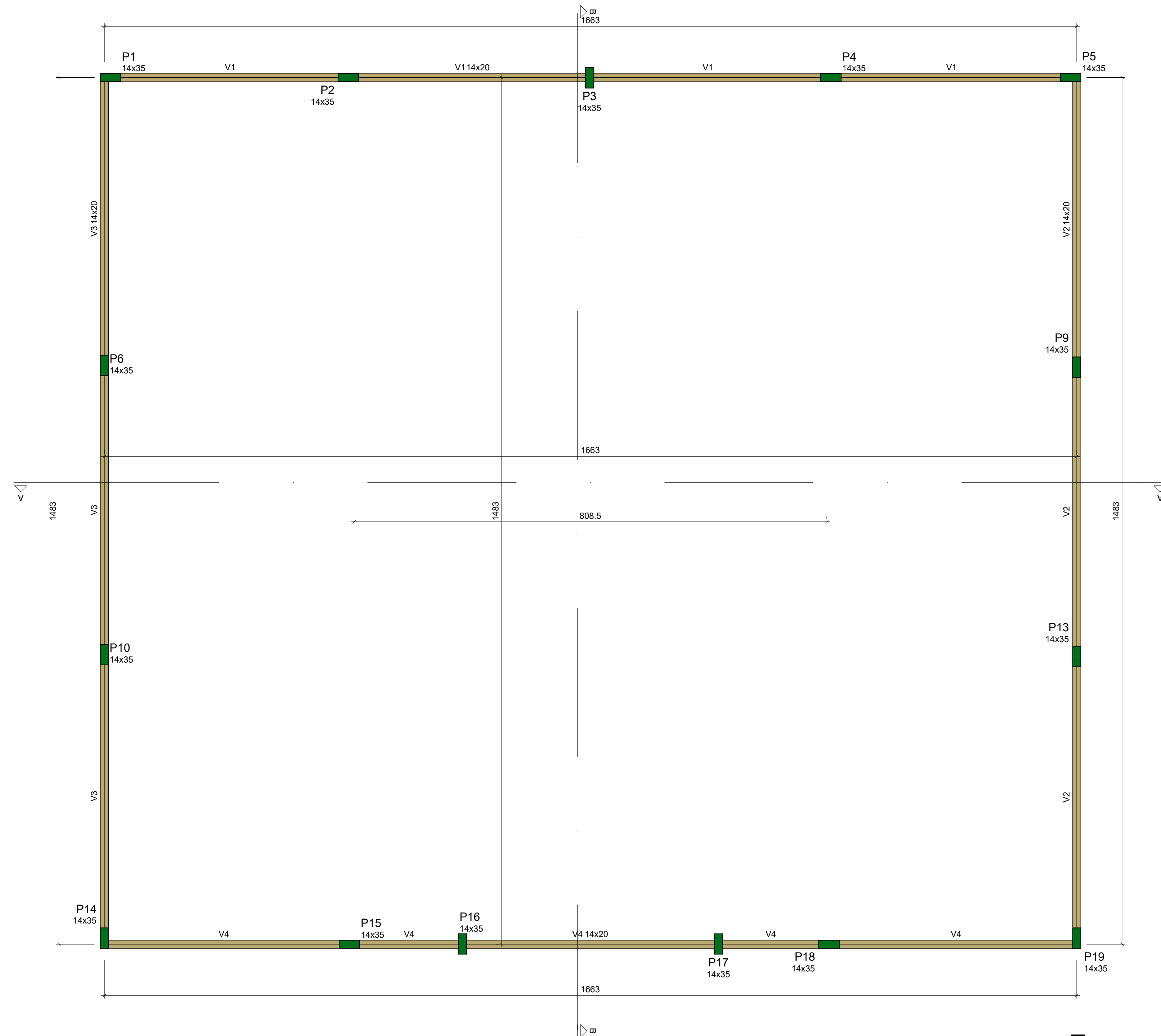
CORTE ESQUEMÁTICO





Forma do pavimento primeiro

escala 1:50



Forma do platibanda

escala 1:50

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	14x35	0	340
V2	14x35	0	340
V3	14x35	0	340
V4	14x35	0	340
V5	14x35	0	340
V6	14x35	0	340
V7	14x35	0	340
V8	14x35	0	340
V9	14x35	0	340
V10	14x35	0	340
V11	14x35	0	340

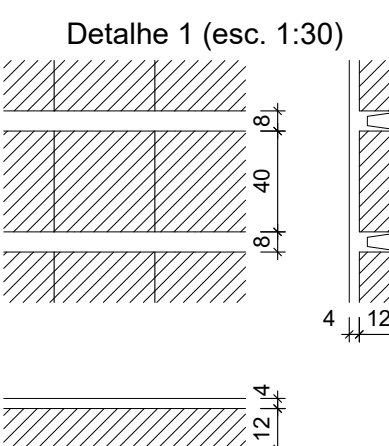
Lajes						
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Peso próprio (kgf/m²)	Sobrecarga (kgf/m²)
L1	Pré-moldada	16	0	340	169	155
L2	Pré-moldada	16	0	340	169	155
L3	Pré-moldada	16	0	340	169	155
L4	Pré-moldada	16	0	340	169	155
L5	Pré-moldada	16	0	340	169	155
L6	Pré-moldada	16	0	340	169	155
L7	Pré-moldada	16	0	340	169	155

Características dos materiais		
fck (kgf/cm²)	Ecs (kgf/cm²)	
250	241500	

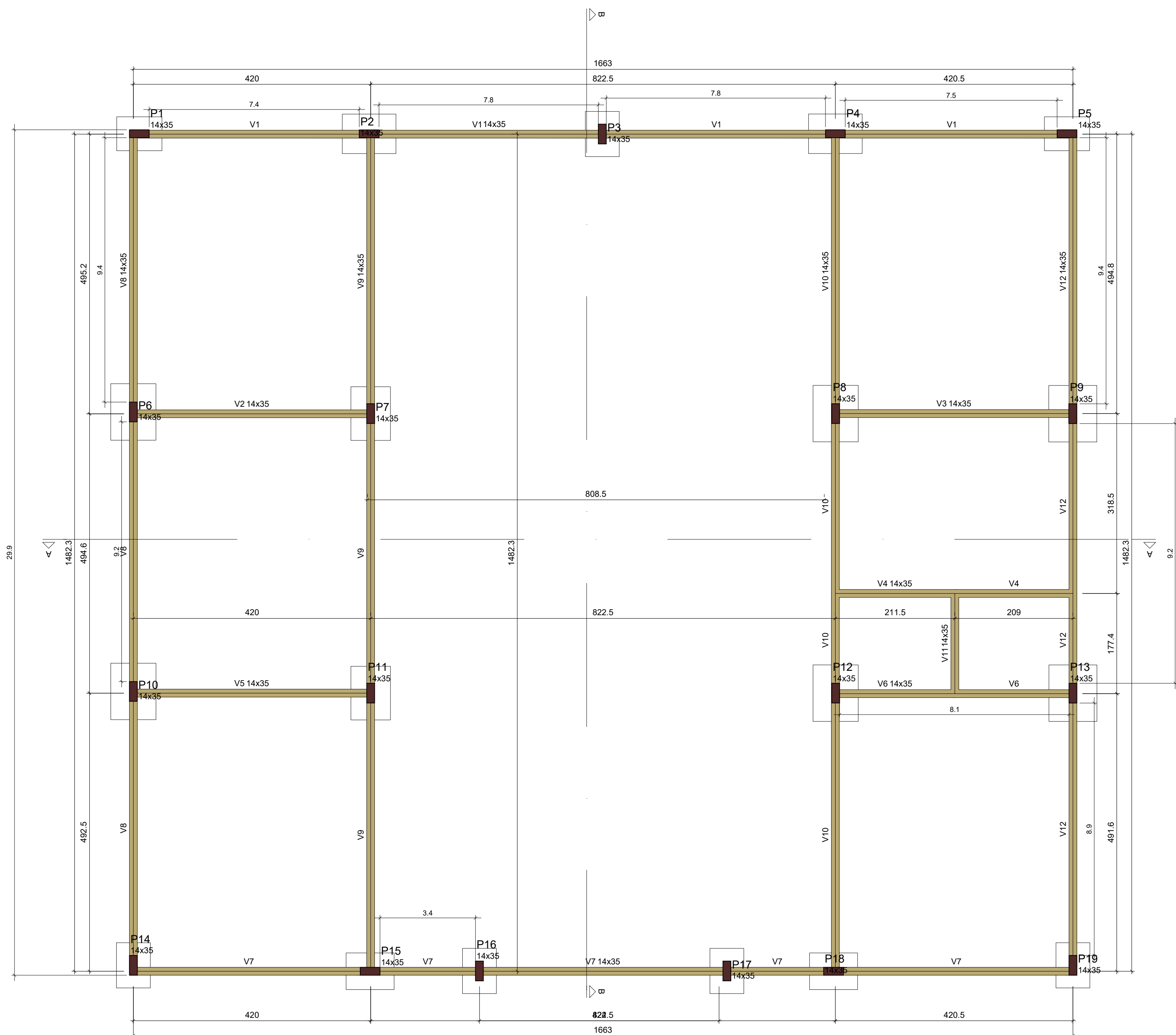
Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	14x35	0	340
P2	14x35	0	340
P3	14x35	0	340
P4	14x35	0	340
P5	14x35	0	340
P6	14x35	0	340
P7	14x35	40	380
P8	14x35	40	380
P9	14x35	0	340
P10	14x35	0	340
P11	14x35	40	380
P12	14x35	40	380
P13	14x35	0	340
P14	14x35	0	340
P15	14x35	0	340
P16	14x35	0	340
P17	14x35	0	340
P18	14x35	0	340
P19	14x35	0	340

Legenda dos pilares		Legenda das vigas e paredes	
	Pilar que morre		Viga
	Pilar que passa		



Blocos de enchimento					
Detalhe	Tipo	Nome	Dimensões (cm)	Quantidade	
1	EPS Unidirecional	B12/40/40	12 40 40	596	



Forma do pavimento terreo

escala 1:50

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	14x35	0	0
V2	14x35	0	0
V3	14x35	0	0
V4	14x35	0	0
V5	14x35	0	0
V6	14x35	0	0
V7	14x35	0	0
V8	14x35	0	0
V9	14x35	0	0
V10	14x35	0	0
V11	14x35	0	0
V12	14x35	0	0

Características dos materiais		
fck (kgf/cm²)	Ecs (kgf/cm²)	
250	241500	

Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	14x35	0	0
P2	14x35	0	0
P3	14x35	0	0
P4	14x35	0	0
P5	14x35	0	0
P6	14x35	0	0
P7	14x35	0	0
P8	14x35	0	0
P9	14x35	0	0
P10	14x35	0	0
P11	14x35	0	0
P12	14x35	0	0
P13	14x35	0	0
P14	14x35	0	0
P15	14x35	0	0
P16	14x35	0	0
P17	14x35	0	0
P18	14x35	0	0
P19	14x35	0	0

Legenda dos pilares		Legenda das vigas e paredes	
	Pilar que passa		Viga

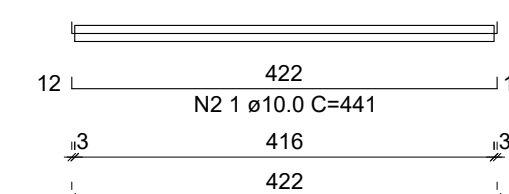


(ARMADURA DE DISTRIBUIÇÃO= MALHA POP 15X15 DIÂMETRO 3.2 3X2M 146.0kg)

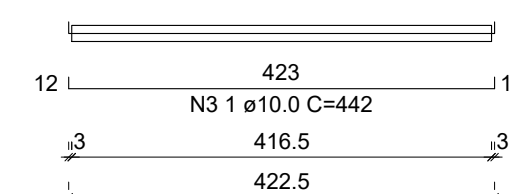
CONCRETO CAPEAMENTO 4CM - 4,70M³

VIGOTAS PRÉ-MOLDADAS

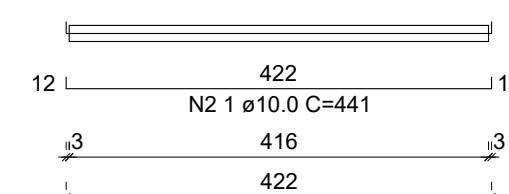
VP1a (9 unidades)
(L1)
ESC 1:75



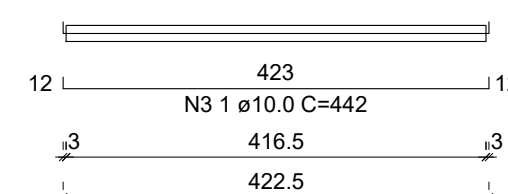
VP2a (9 unidades)
(L2)
ESC 1:75



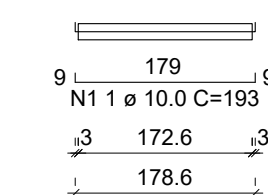
VP3a (9 unidades)
(L3)
ESC 1:75



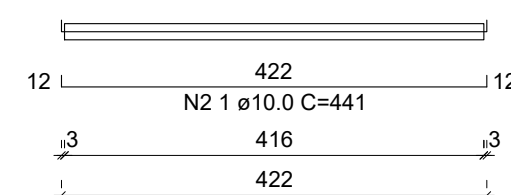
VP4a (6 unidades)
(L4)
ESC 1:75



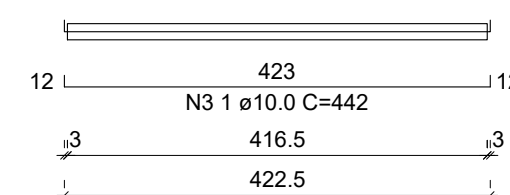
VP5a (8 unidades)
(L5)
ESC 1:75



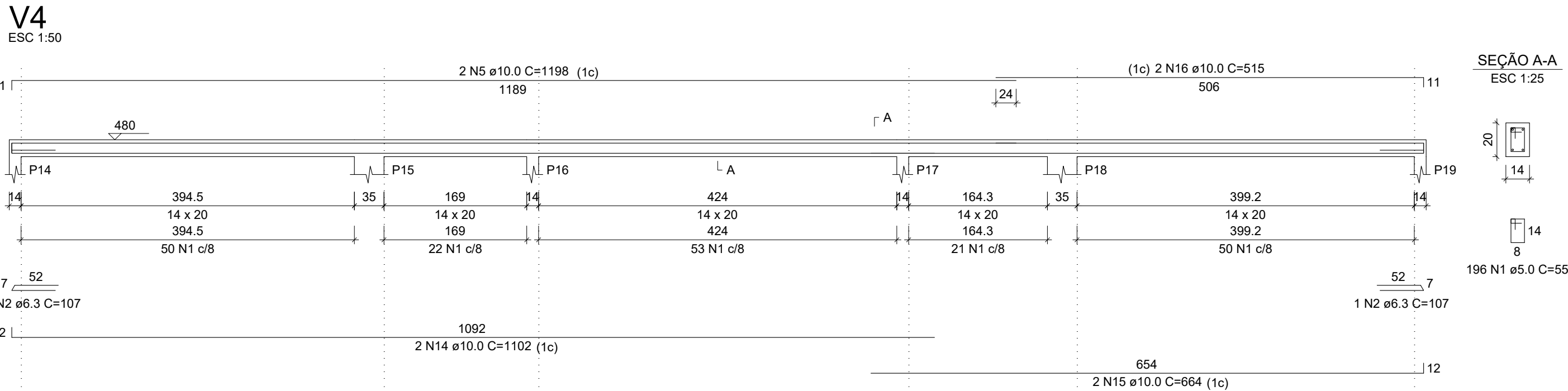
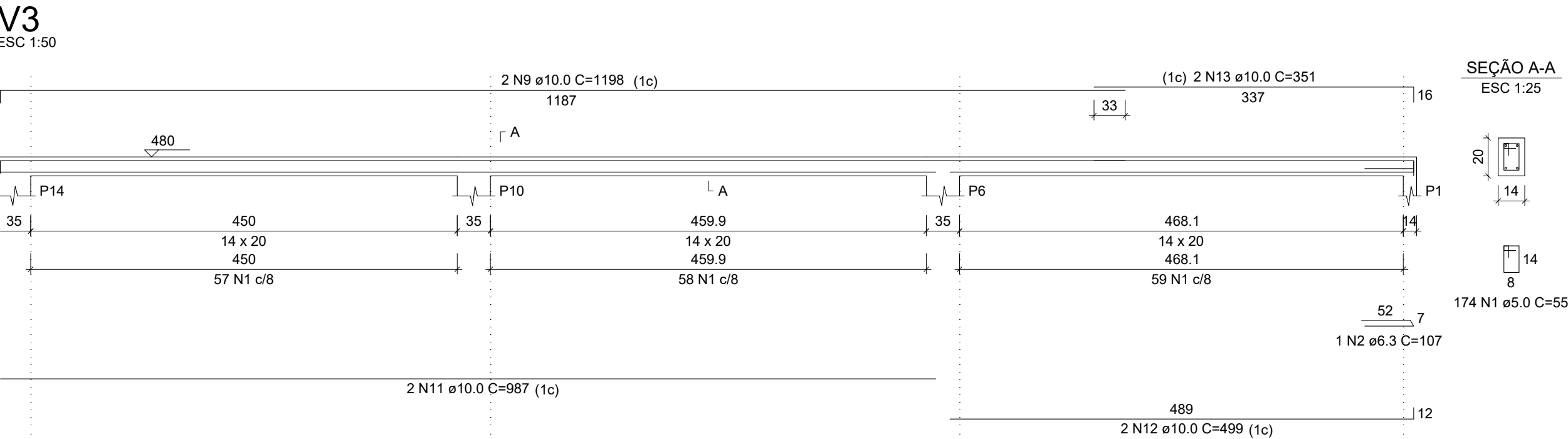
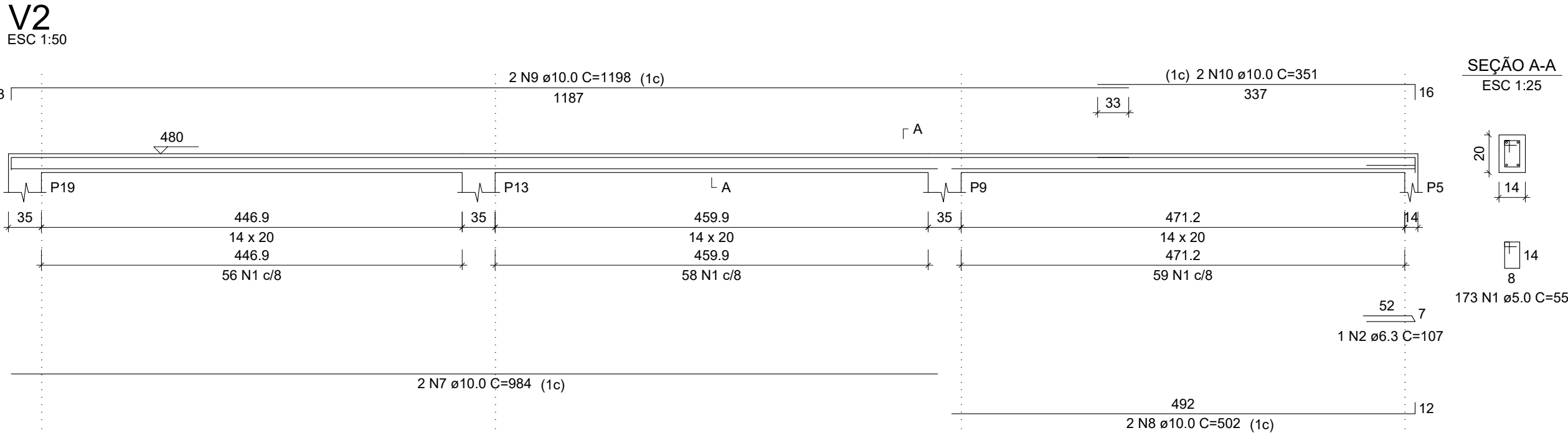
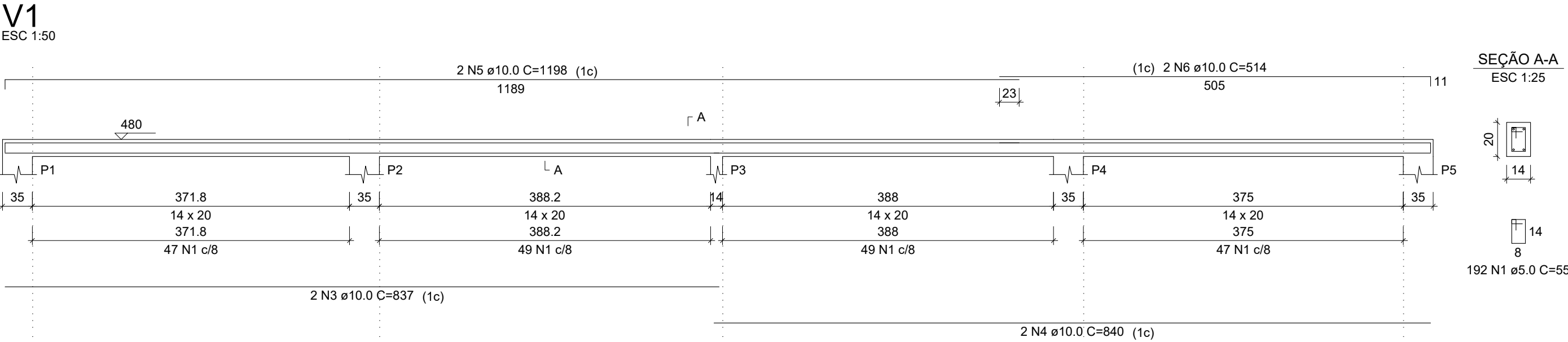
VP6a (9 unidades)
(L6)
ESC 1:75



VP7a (9 unidades)
(L7)
ESC 1:75



VIGAS DO PLATIBANDA



RELAÇÃO DO AÇO					
V1		V2		V3	
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60 CA50	1	5.0	735	55	40425
	2	6.3	4	107	428
	3	10.0	2	837	1674
	4	10.0	2	840	1680
	5	10.0	4	1198	4792
	6	10.0	2	514	1028
	7	10.0	2	984	1968
	8	10.0	2	502	1004
	9	10.0	4	1198	4792
	10	10.0	2	351	702
	11	10.0	2	987	1974
	12	10.0	2	499	998
	13	10.0	2	351	702
	14	10.0	2	1102	2204
	15	10.0	2	664	1328
	16	10.0	2	515	1030
RESUMO DO AÇO					
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	UNIT	PESO + 10% (kg)
CA50	6.3	4.3	1	12 m	1.2
CA60	10.0	258.8	24	12 m	175.5
	5.0	404.3	-	rolo (170 kg)	68.5
PESO TOTAL (kg)					
CA50	176.6				
CA60	68.5				
Volume de concreto (C-25) = 1.78 m³					
Área de forma = 34.28 m²					



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DIRETORIA DE ENGENHARIA E INFRAESTRUTURA

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PROJETO ESTRUTURAL DO CAMPUS ÁGUAS BELAS DO IFSertãoPE

ENDEREÇO: Rodovia PE-300, S/N, CEP: 55340-000 Águas Belas/PE

DESCRIÇÃO: VIGAS DO PLATIBANDA (ALMOXARIFADO)

ASSINATURACARRIMBO - DIREÇÃO GERAL

ESCALA: 1/50

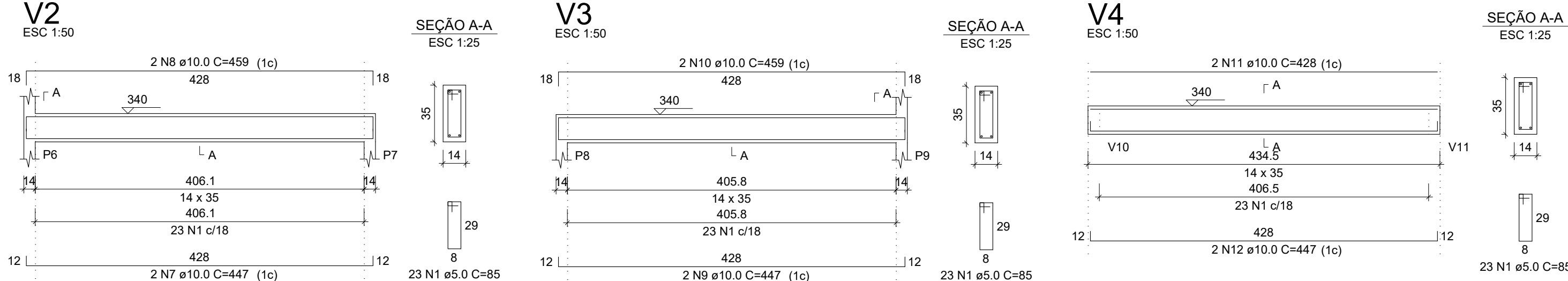
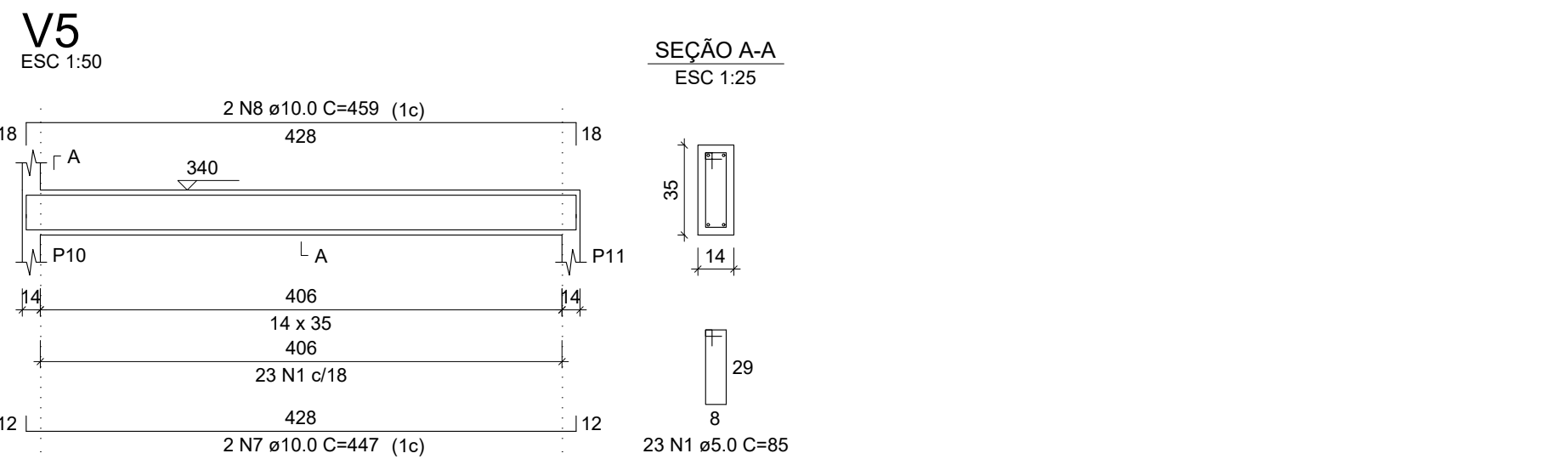
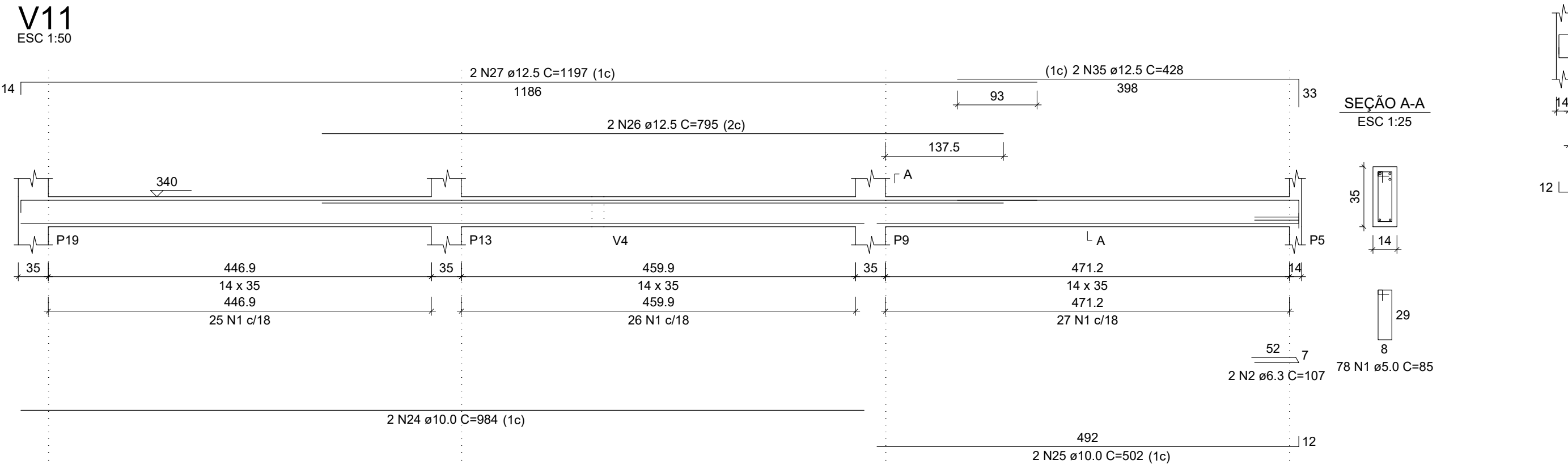
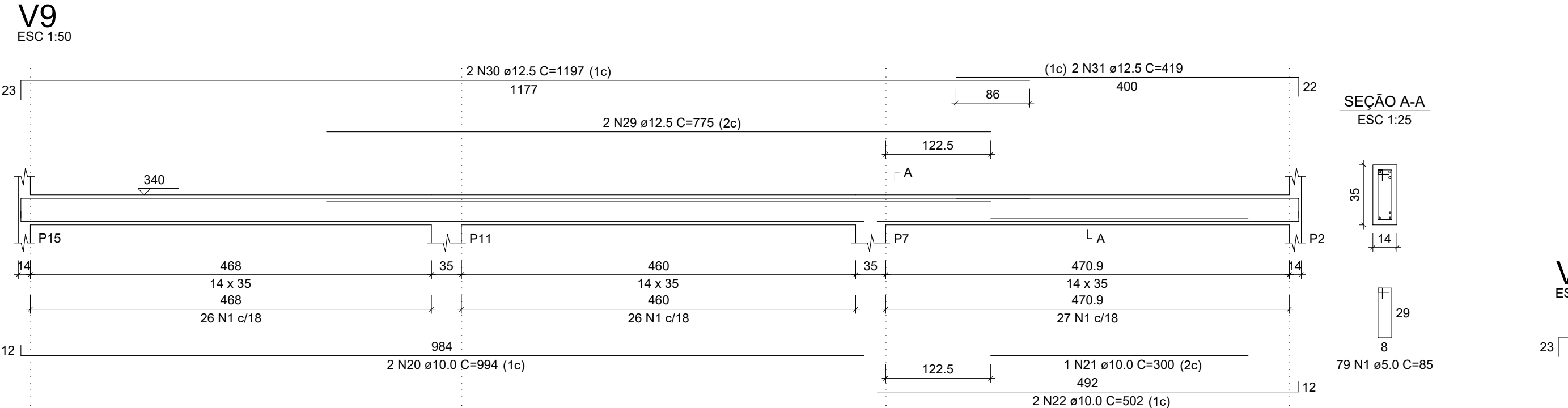
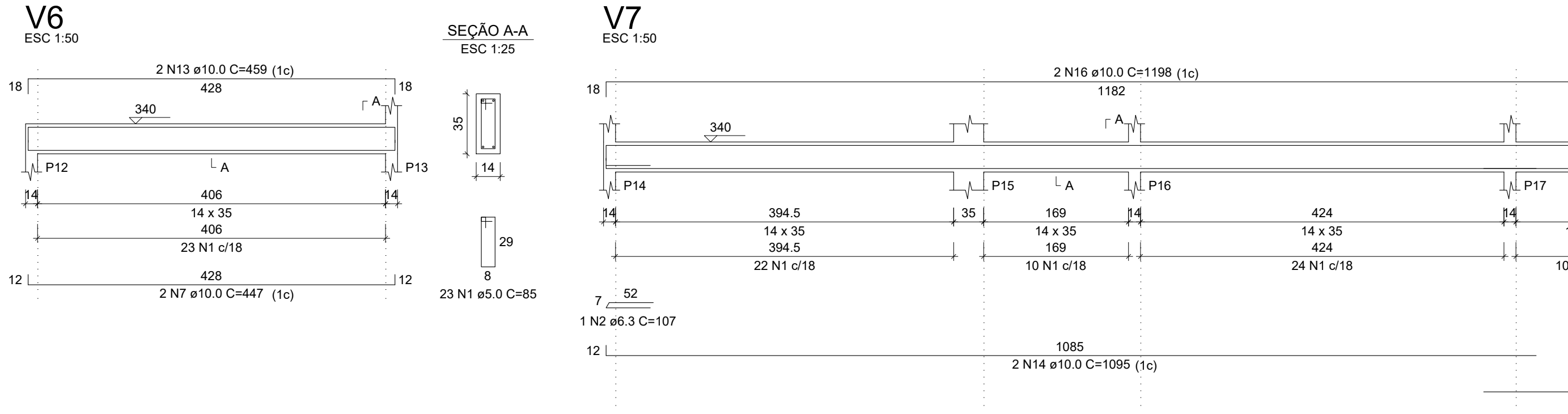
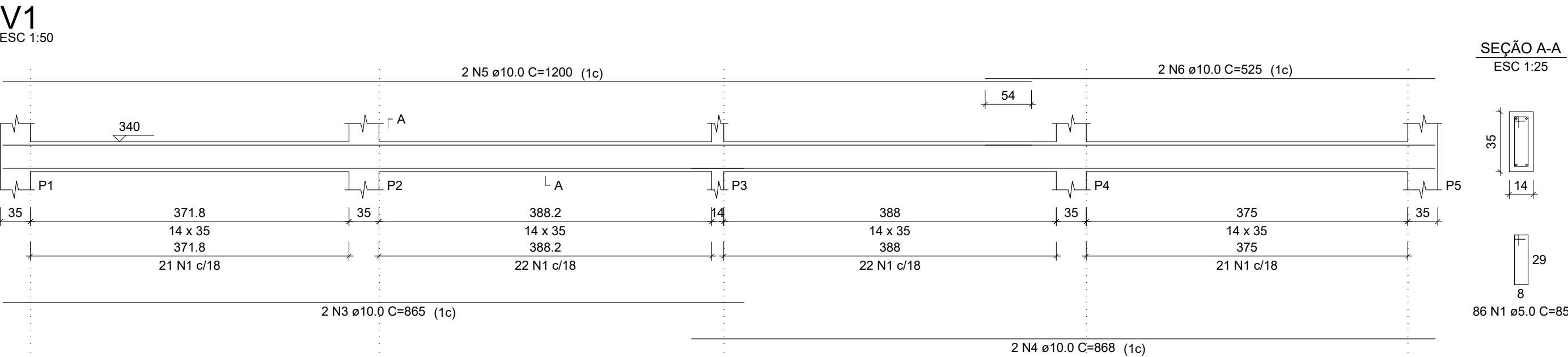
DATA: ABRIL/2025

ASSINATURACARRIMBO - RESPONSÁVEL TÉCNICO

FRANCA: 05/09

Wilson Nery da Cunha - CREA BA 14748

VIGAS DO PRIMEIRO PAVIMENTO



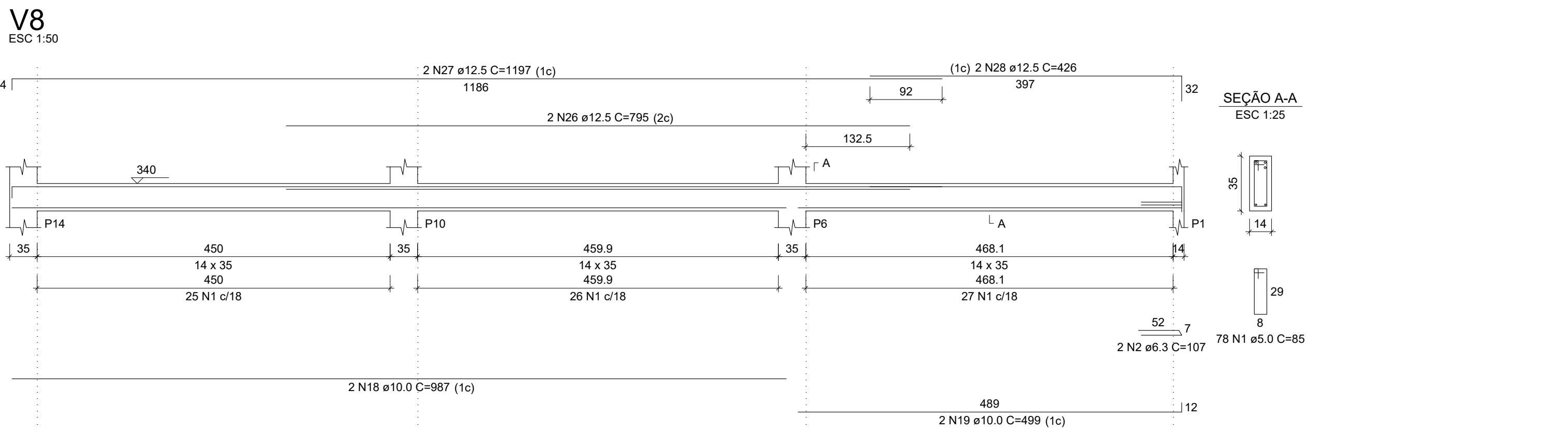
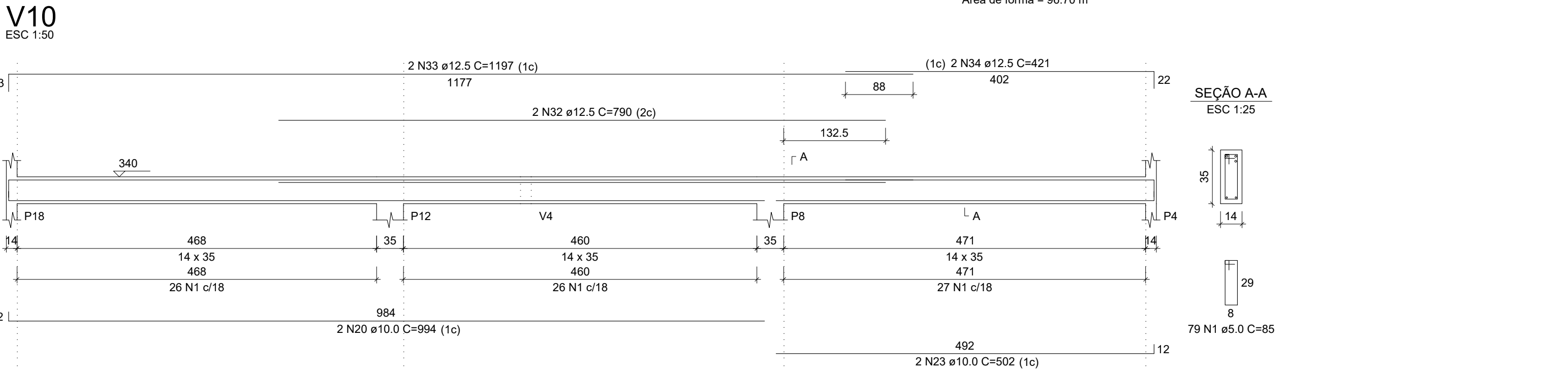
RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	604	85	51340
CA50	2	6.3	6	107	642
	3	10.0	2	865	1730
	4	10.0	2	868	1735
	5	10.0	2	1200	2400
	6	10.0	2	525	1050
	7	10.0	6	447	2682
	8	10.0	4	459	1836
	9	10.0	2	447	894
	10	10.0	2	459	918
	11	10.0	2	428	856
	12	10.0	2	447	894
	13	10.0	2	459	918
	14	10.0	2	1095	2190
	15	10.0	2	657	1314
	16	10.0	2	1198	2396
	17	10.0	2	554	1108
	18	10.0	2	987	1974
	19	10.0	2	499	998
	20	10.0	4	994	3976
	21	10.0	1	300	300
	22	10.0	2	502	1004
	23	10.0	2	502	1004
	24	10.0	2	984	1968
	25	10.0	2	502	1004
	26	12.5	4	795	3180
	27	12.5	4	1197	4788
	28	12.5	2	426	852
	29	12.5	2	775	1550
	30	12.5	2	1197	2394
	31	12.5	2	419	838
	32	12.5	2	790	1580
	33	12.5	2	1197	2394
	34	12.5	2	421	842
	35	12.5	2	428	856

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	UNIT	PESO + 10% (kg)
CA50	6.3	6.4	1	12 m	1.7
	10.0	351.5	33	12 m	238.4
	12.5	192.7	18	12 m	204.2
CA60	5.0	513.4	-	rolo (170 kg)	87
PESO TOTAL (kg)					
CA50		444.4			
CA60		87			

Volume de concreto (C-25) = 5.64 m³
Área de forma = 96.70 m²



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Rua Aristarco Lopes, 240 | Centro
Petrolina/PE | CEP: 56.302-100

PROJETO ESTRUTURAL DO CAMPUS
ÁGUAS BELAS DO IFSertãoPE

ENDEREÇO:
Rodovia PE-300, S/N, CEP: 55340-000
Águas Belas/PE

DESCRIÇÃO:
VIGAS DO PRIMEIRO PAVIMENTO (ALMOXARIFADO)

ESCALA:
1/50

DATA:
ABRIL/2025

ASSINATURACARIMBO - DIREÇÃO GERAL

ASSINATURACARIMBO - RESPONSÁVEL TÉCNICO

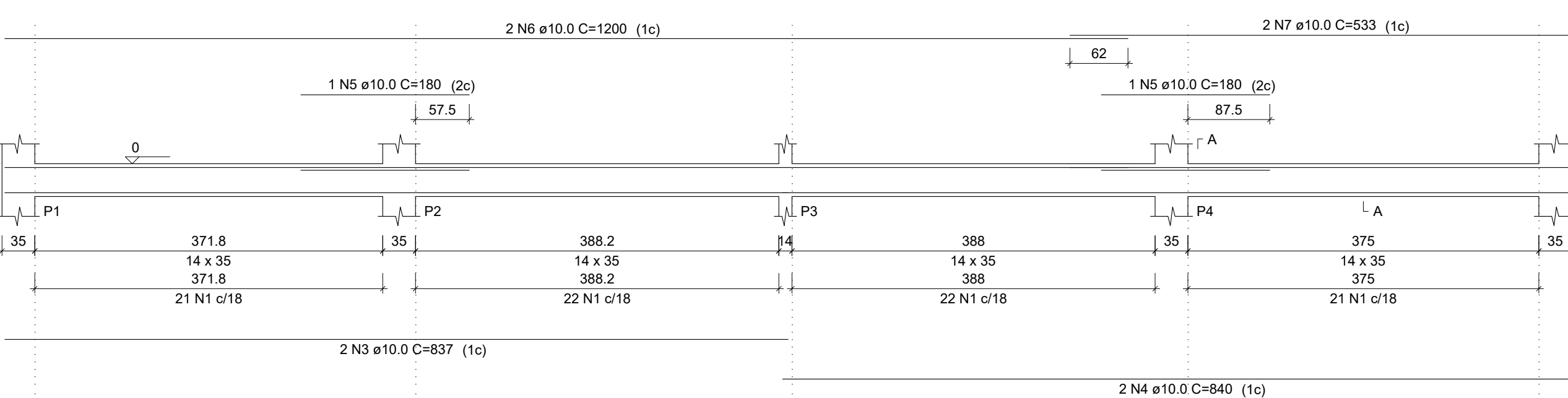
ASSINATURACARIMBO - TRANÇA

Wilson Nery da Cunha - CREA BA 14748

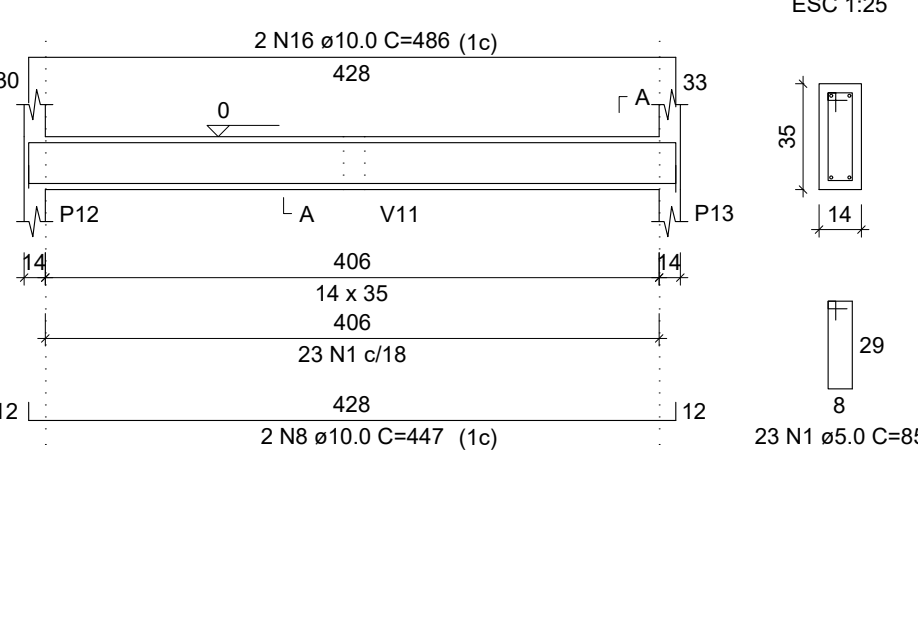
06/09

VIGAS DO PAVIMENTO TÉRREO

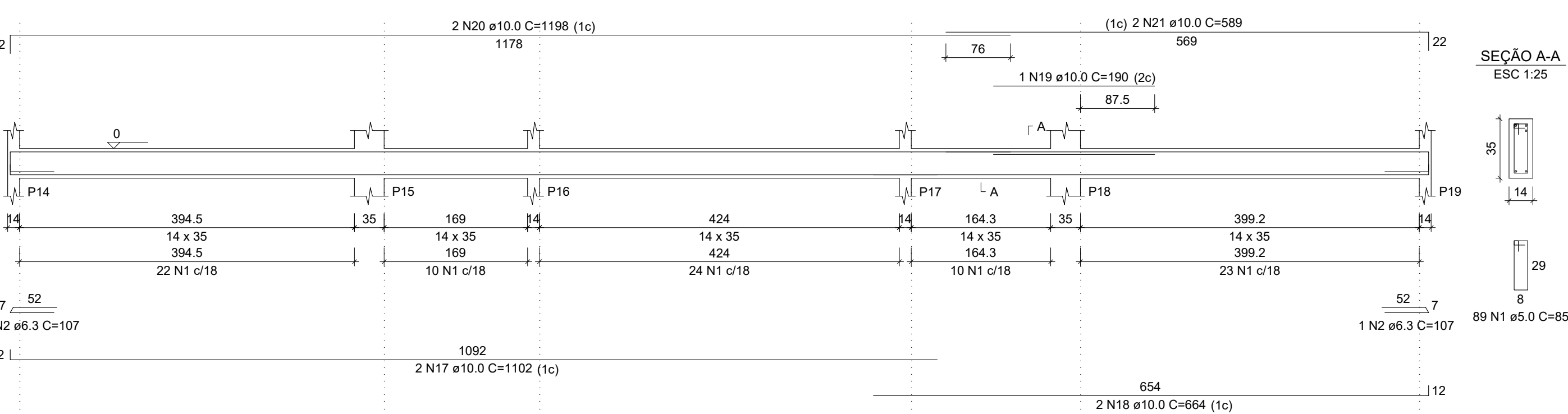
V1
ESC 1:50



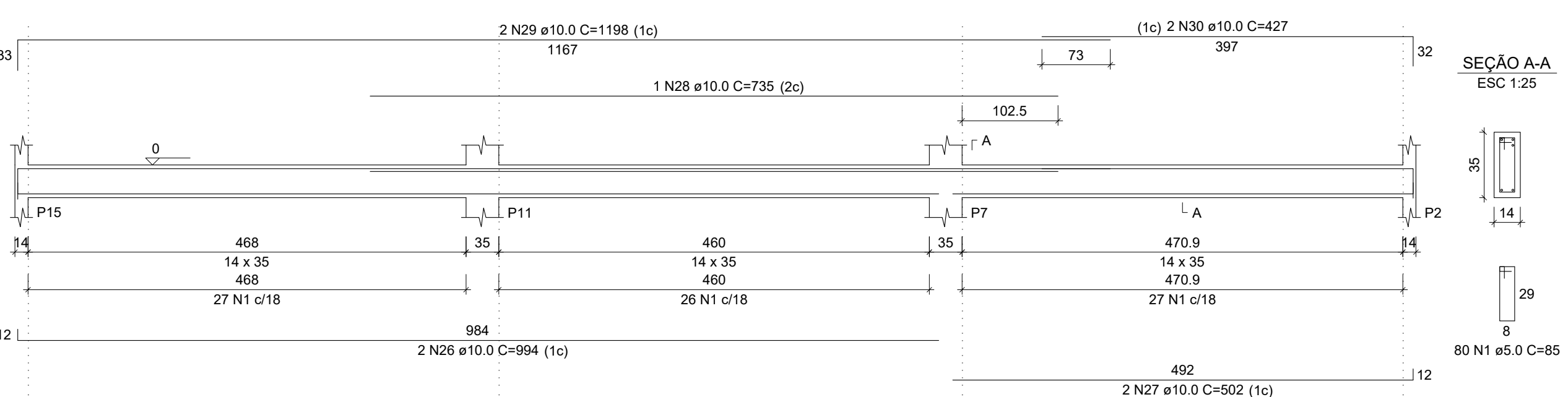
V6
ESC 1:50



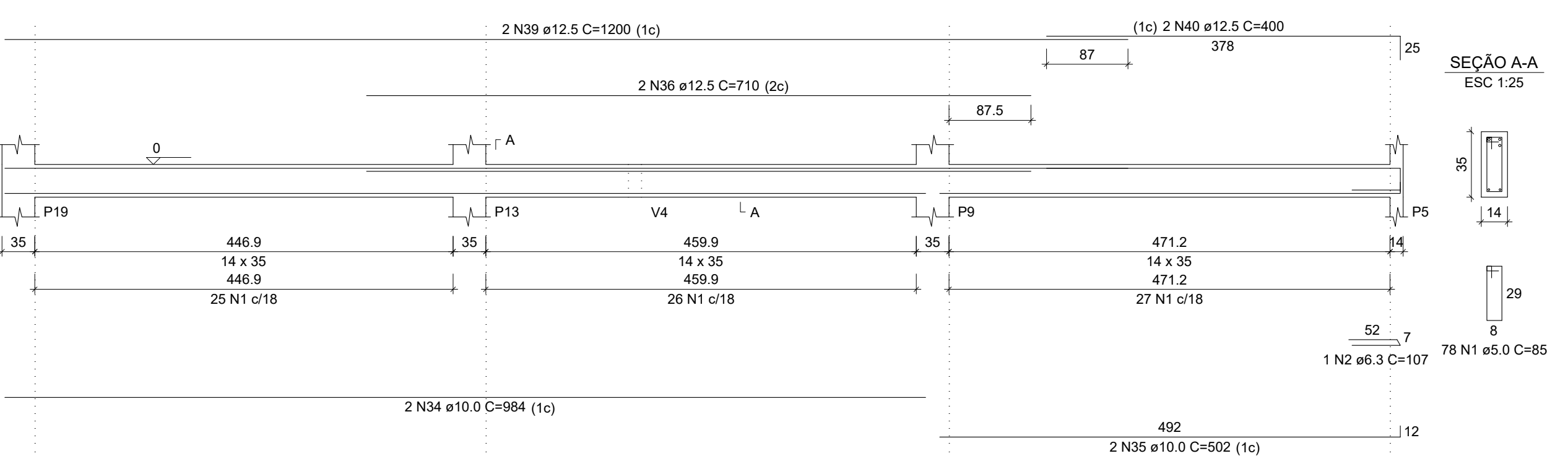
V7
ESC 1:50



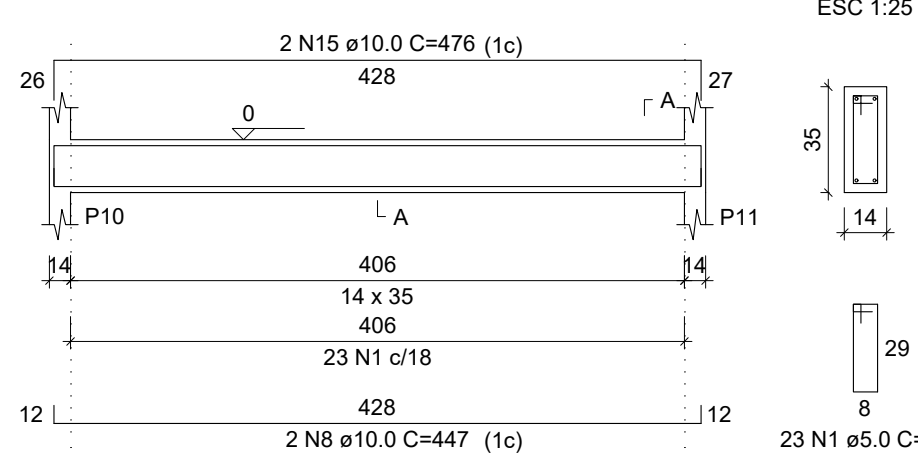
V9
ESC 1:50



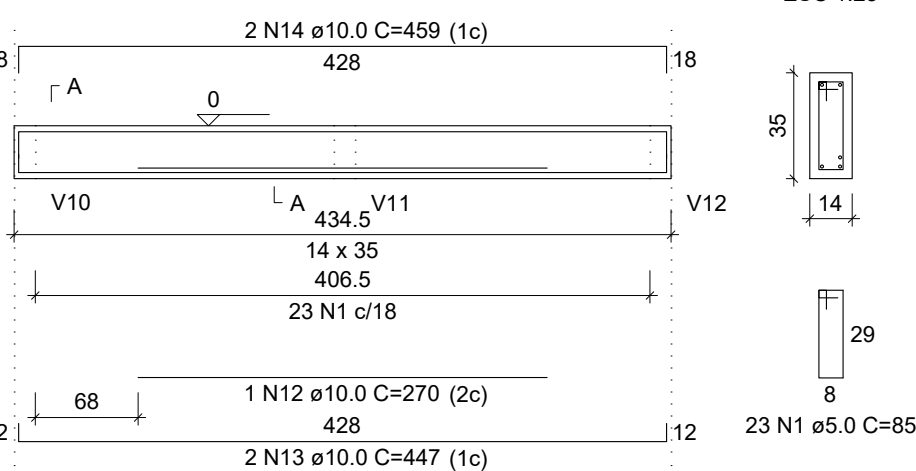
V12
ESC 1:50



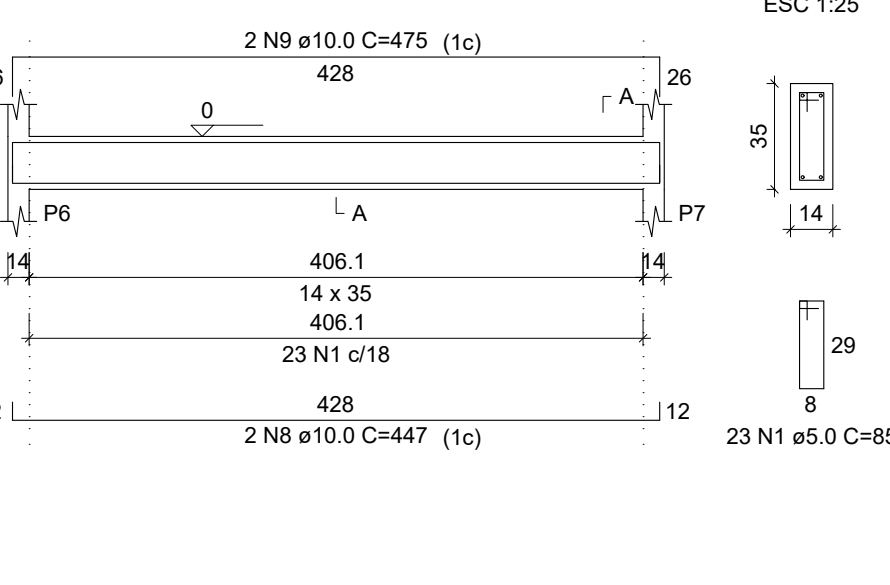
V5
ESC 1:50



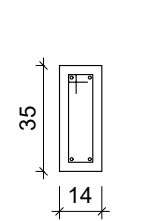
V4
ESC 1:50



V2
ESC 1:50



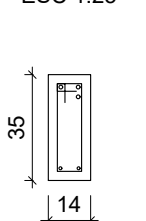
SEÇÃO A-A
ESC 1:25



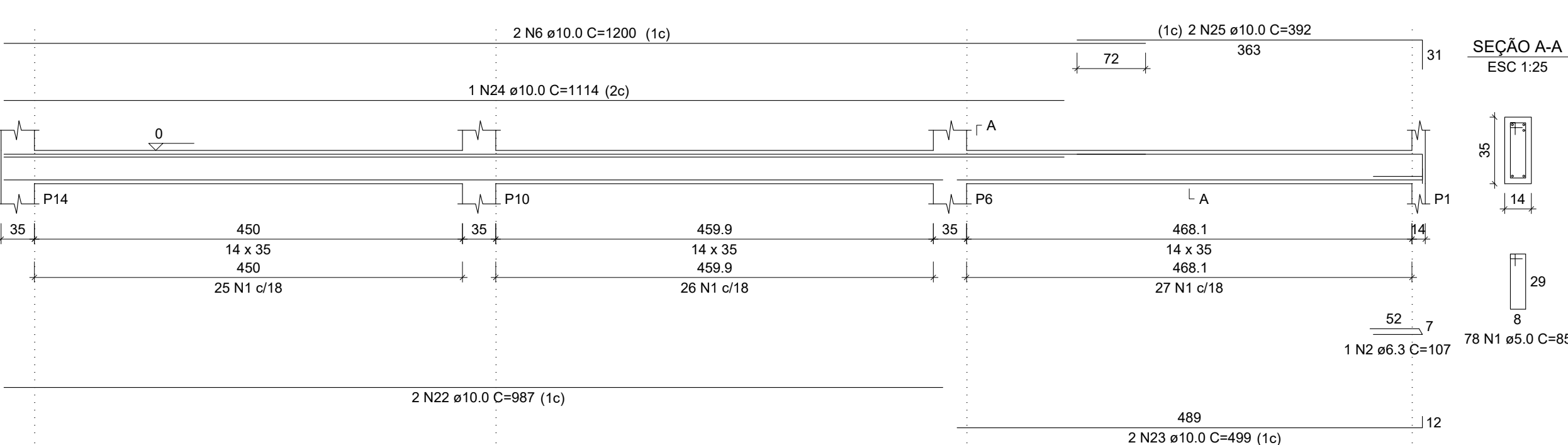
V10
ESC 1:50



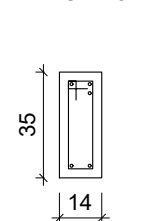
SEÇÃO A-A
ESC 1:25



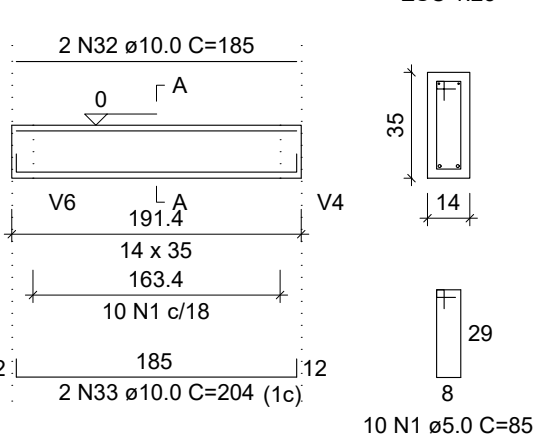
V8
ESC 1:50



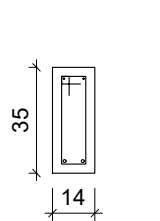
SEÇÃO A-A
ESC 1:25



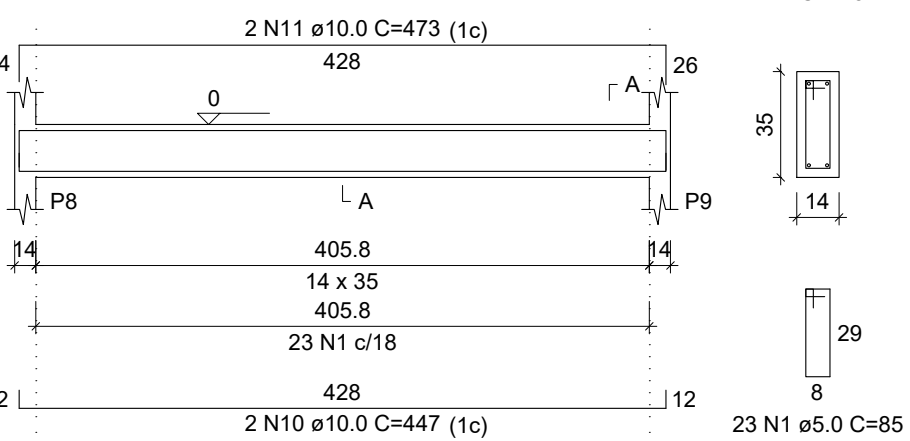
V11
ESC 1:50



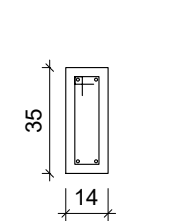
SEÇÃO A-A
ESC 1:25



V3
ESC 1:50



SEÇÃO A-A
ESC 1:25



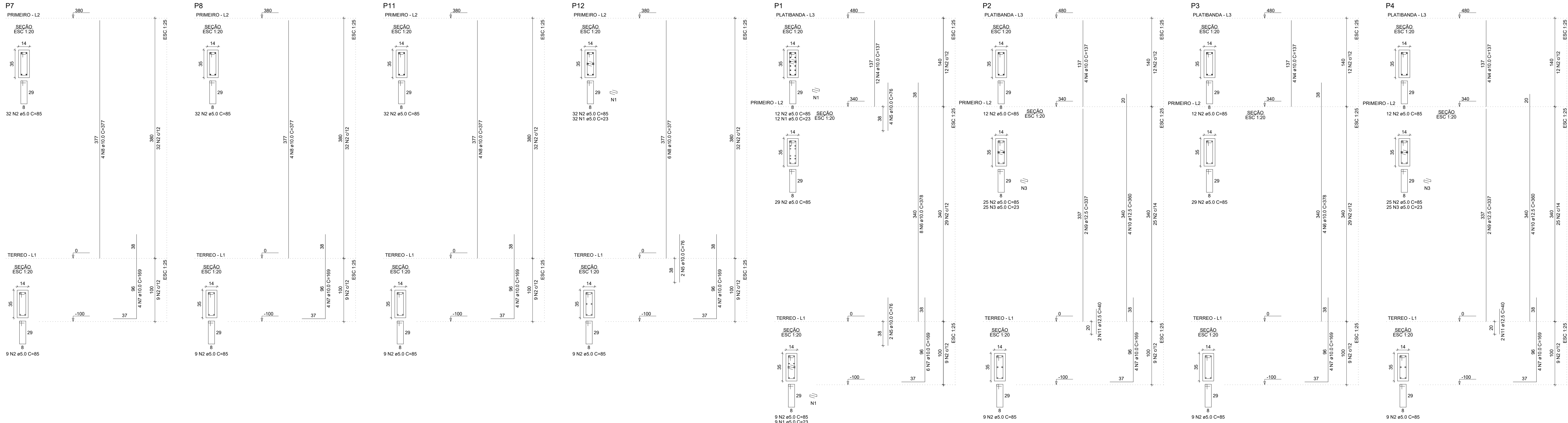
RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	5.0	615	85	52275
CA50	2	6.3	4	107	428
CA50	3	10.0	2	837	1674
CA50	4	10.0	2	840	1680
CA50	5	10.0	2	180	360
CA50	6	10.0	4	1200	4800
CA50	7	10.0	2	533	1066
CA50	8	10.0	6	447	2682
CA50	9	10.0	2	475	950
CA50	10	10.0	2	447	894
CA50	11	10.0	2	473	946
CA50	12	10.0	1	270	270
CA50	13	10.0	2	447	894
CA50	14	10.0	2	459	918
CA50	15	10.0	2	476	952
CA50	16	10.0	2	486	972
CA50	17	10.0	2	1102	2204
CA50	18	10.0	2	664	1328
CA50	19	10.0	1	190	190
CA50	20	10.0	2	1198	2396
CA50	21	10.0	2	589	1178
CA50	22	10.0	2	987	1974
CA50	23	10.0	2	499	998
CA50	24	10.0	1	1114	1114
CA50	25	10.0	2	392	784
CA50	26	10.0	4	994	3976
CA50	27	10.0	2	502	1004
CA50	28	10.0	1	735	735
CA50	29	10.0	2	1198	2396
CA50	30	10.0	2	427	854
CA50	31	10.0	2	502	1004
CA50	32	10.0	2	485	970
CA50	33	10.0	2	204	408
CA50	34	10.0	2	984	1968
CA50	35	10.0	2	502	1004
CA50	36	12.5	3	710	2130
CA50	37	12.5	2	1197	2394
CA50	38	12.5	2	424	848
CA50	39	12.5	2	1200	2400
CA50	40	12.5	2	400	800

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	UNIT	PESO + 10% (kg)
CA50	6.3	4.3	1	12 m	1.2
CA50	10.0	449.4	42	12 m	304.8
CA50	12.5	85.7	8	12 m	80.8
CA50	5.0	522.8	-	rolo (170 kg)	88.6
PESO TOTAL (kg)					
CA50		396.8			
CA60		88.6			

Volume de concreto (C-25) = 5.73 m³
Área de forma = 98.31 m²



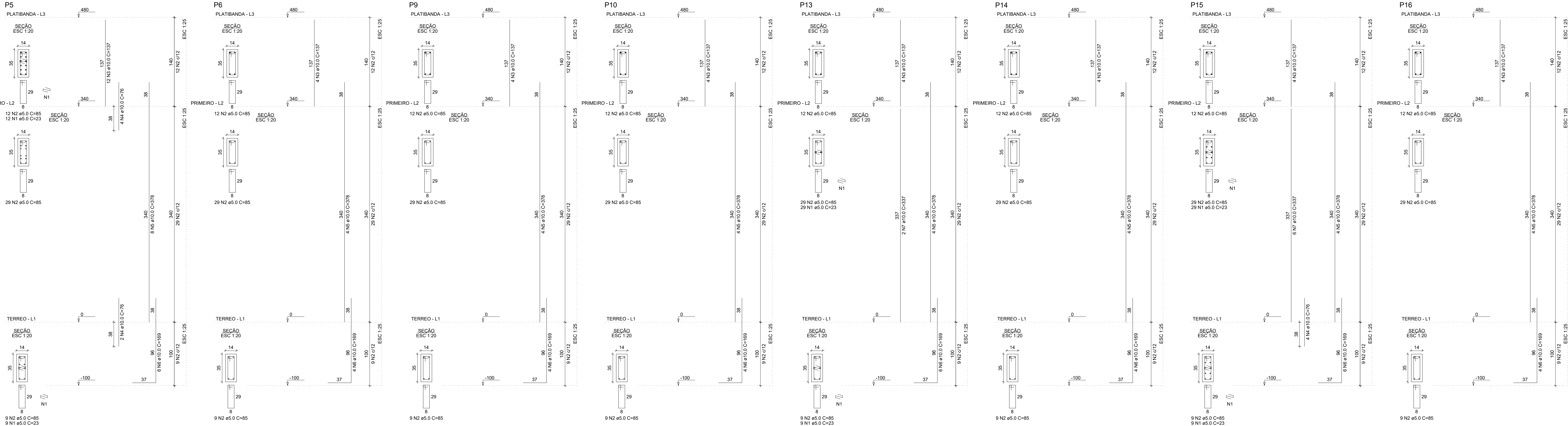
RELAÇÃO DO AÇO

P1-L3	P1-L2	P1-L1
P2-L3	P2-L2	P2-L1
P3-L3	P3-L2	P3-L1
P4-L3	P4-L2	P4-L1
P5-L3	P5-L2	P5-L1
P6-L3	P6-L2	P6-L1
P7-L3	P7-L2	P7-L1
P8-L3	P8-L2	P8-L1
P9-L3	P9-L2	P9-L1
P10-L3	P10-L2	P10-L1
P11-L3	P11-L2	P11-L1
P12-L3	P12-L2	P12-L1

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	5.0	53	23	1219
CA50	2	5.0	356	85	30280
CA50	3	5.0	50	23	1150
CA50	4	10.0	24	137	3288
CA50	6	10.0	12	378	4536
CA50	7	10.0	34	169	5746
CA50	8	10.0	18	377	6786
CA50	9	12.5	4	337	1348
CA50	10	12.5	8	360	2880
CA50	11	12.5	4	40	160

Volume de concreto (C-25) = 2.08 m³

Área de forma = 41.55 m²



RELAÇÃO DO AÇO

P5-L3	P5-L2	P5-L1
P6-L3	P6-L2	P6-L1
P9-L3	P9-L2	P9-L1
P10-L3	P10-L2	P10-L1
P13-L3	P13-L2	P13-L1
P14-L3	P14-L2	P14-L1
P15-L3	P15-L2	P15-L1
P16-L3	P16-L2	P16-L1

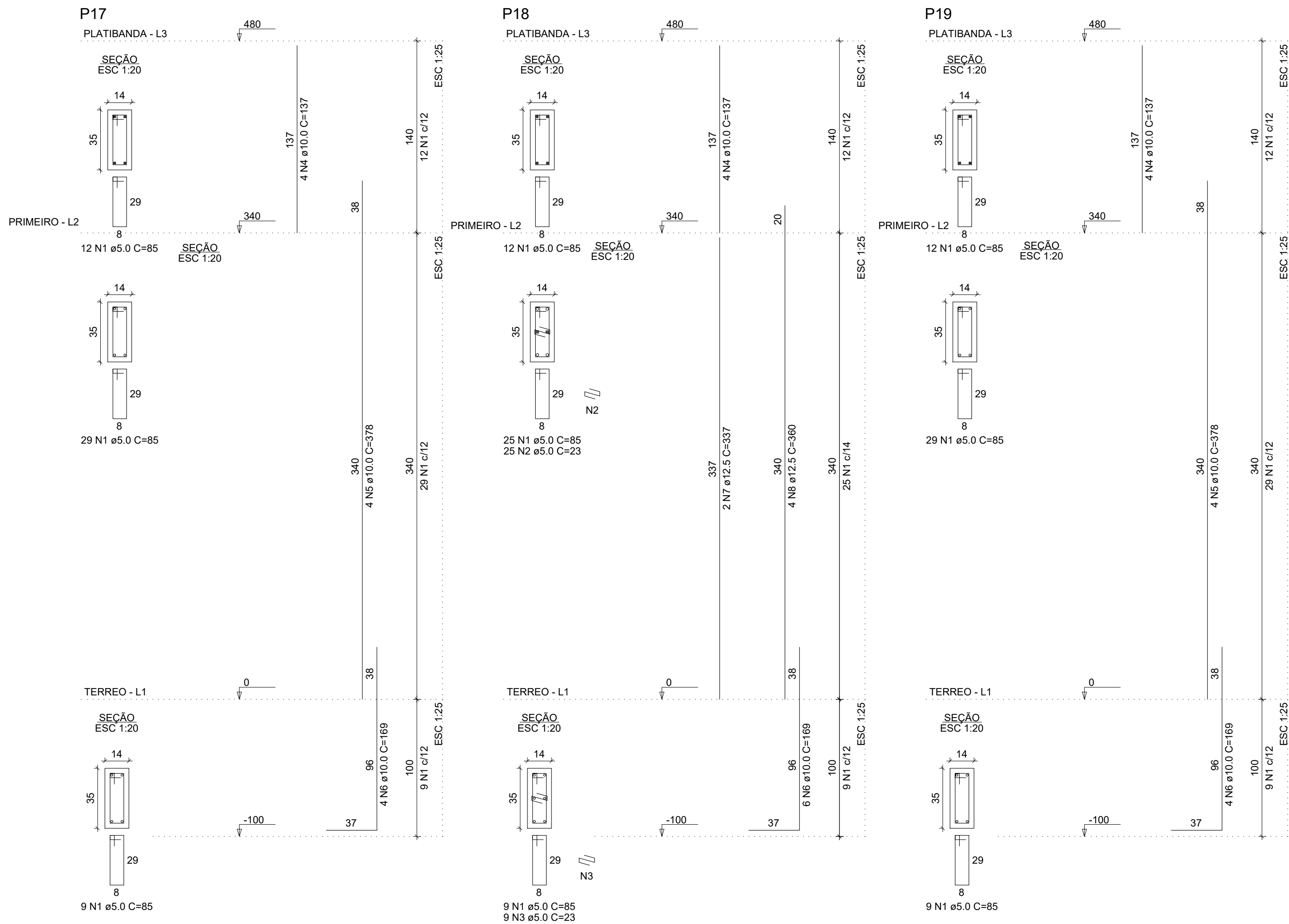
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	5.0	97	23	2231
CA50	2	5.0	400	85	34000
CA50	3	10.0	40	137	5480
CA50	4	10.0	10	76	760
CA50	6	10.0	38	378	13608
CA50	7	10.0	189	642	121338
CA50	8	10.0	337	2696	908552

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	UNIT	PESO + 10% (kg)
CA50	10.0	289.7	27	12 m	196.4
CA50	5.0	382.3	-	rolo (170 kg)	61.4
PESO TOTAL (kg)					257.8
CA50		196.4			
CA50		61.4			

Volume de concreto (C-25) = 2.27 m³

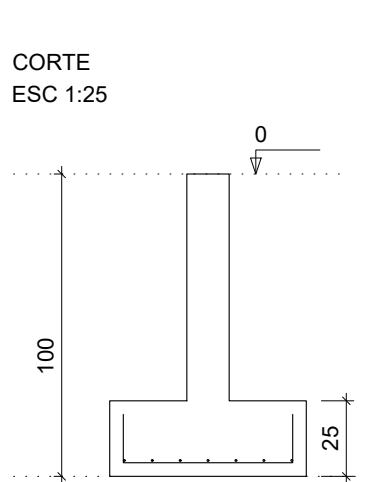
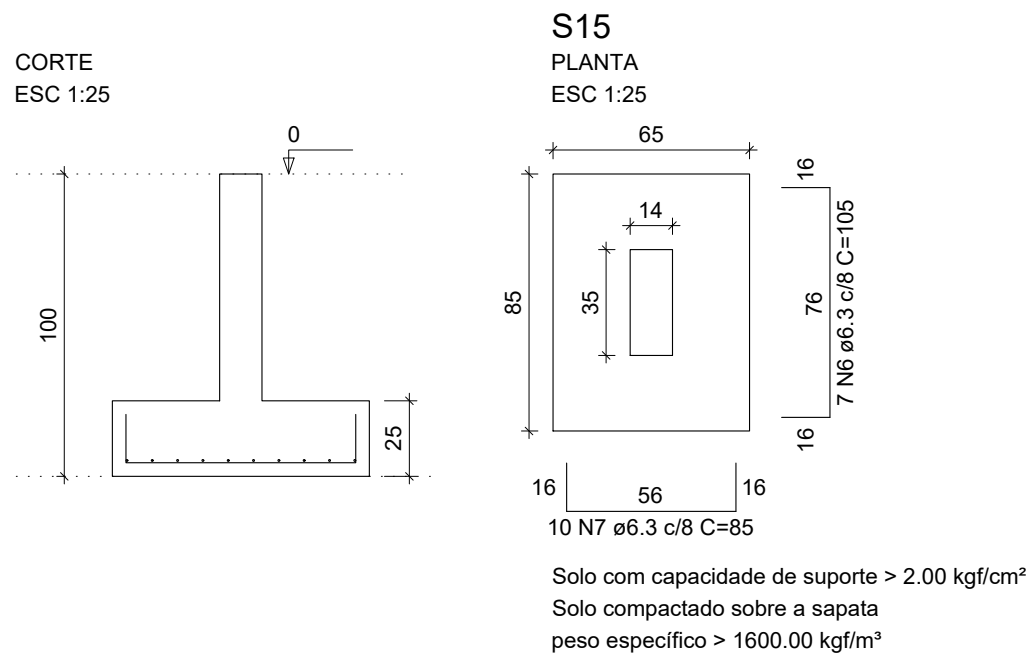
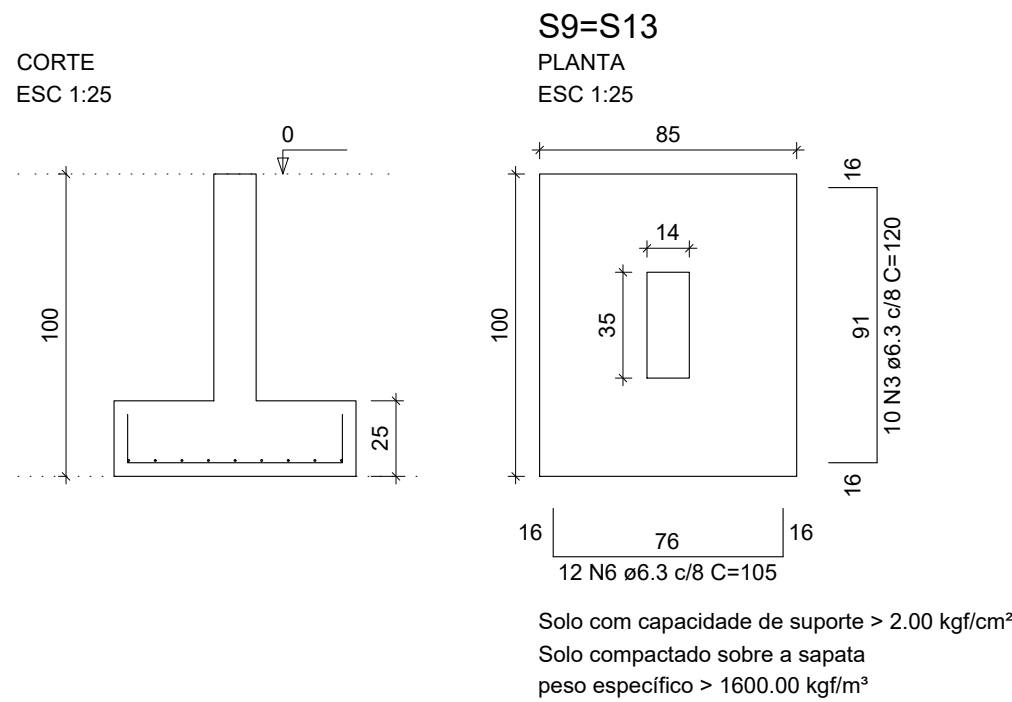
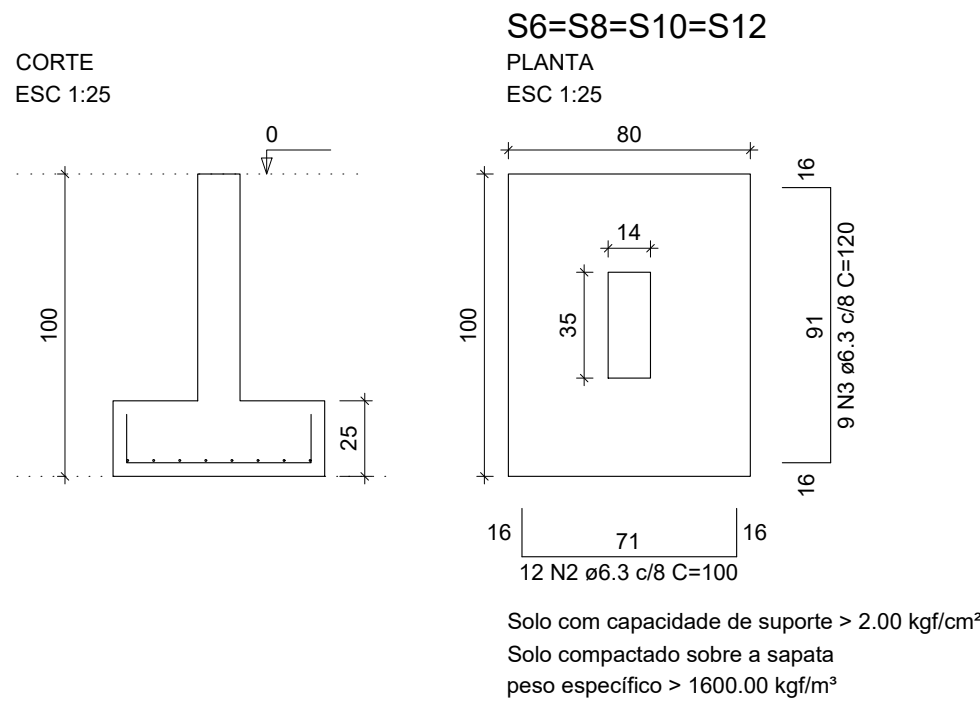
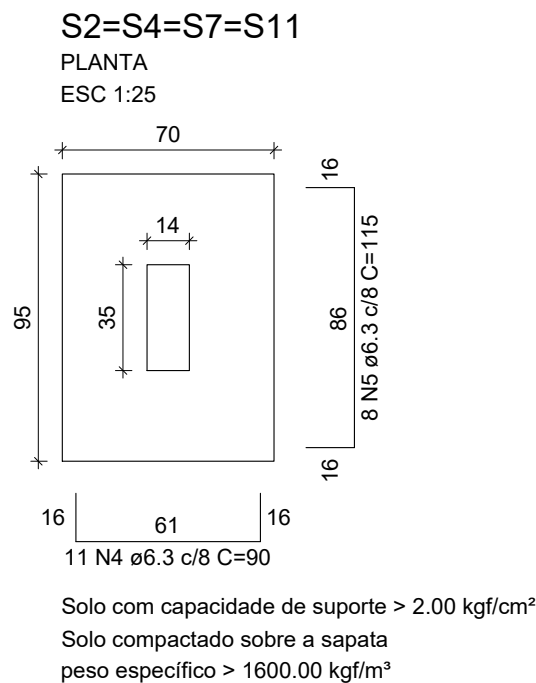
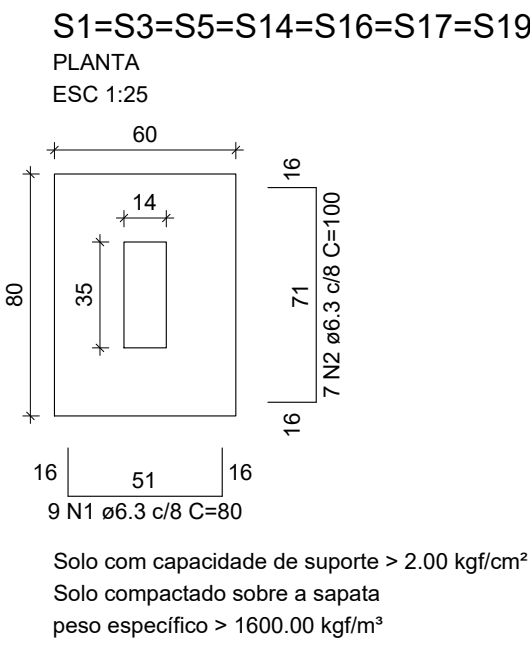
Área de forma = 45.47 m²



RELAÇÃO DO AÇO				
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)
CA60	1	5.0	146	85
	2	5.0	25	23
	3	5.0	9	23
CA50	4	10.0	12	137
	5	10.0	8	378
	6	10.0	14	169
	7	12.5	2	337
	8	12.5	4	360

RESUMO DO AÇO				
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	UNIT
CA50	10.0	70.3	7	12 m
CA60	12.5	21.1	2	12 m
	5.0	131.9	-	rolo (170 kg)
PESO TOTAL (kg)				
CA50	70.1			
CA60	22.4			

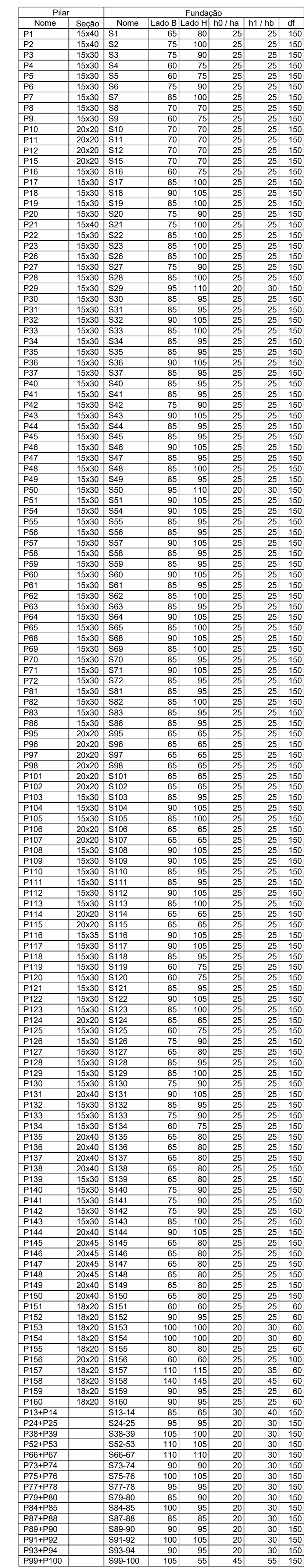
Volume de concreto (C-25) = 0.85 m³
Área de forma = 17.05 m²



RELAÇÃO DO AÇO				
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)
CA50	1	6.3	63	80
	2	6.3	97	100
	3	6.3	56	120
	4	6.3	44	90
	5	6.3	32	115
	6	6.3	38	105
	7	6.3	20	85

RESUMO DO AÇO				
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	UNIT
CA50	6.3	347.9	32	12 m
PESO TOTAL (kg)				
CA50	93.6			

Volume de concreto (C-25) = 3.01 m³
Área de forma = 15.15 m²

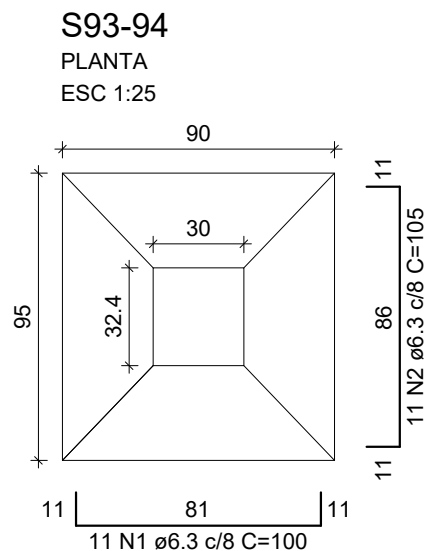




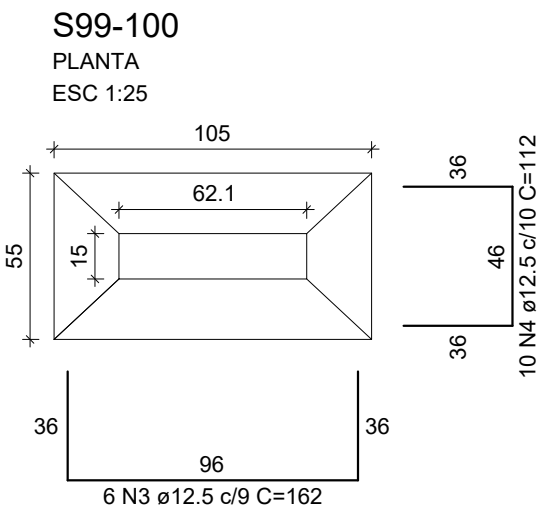
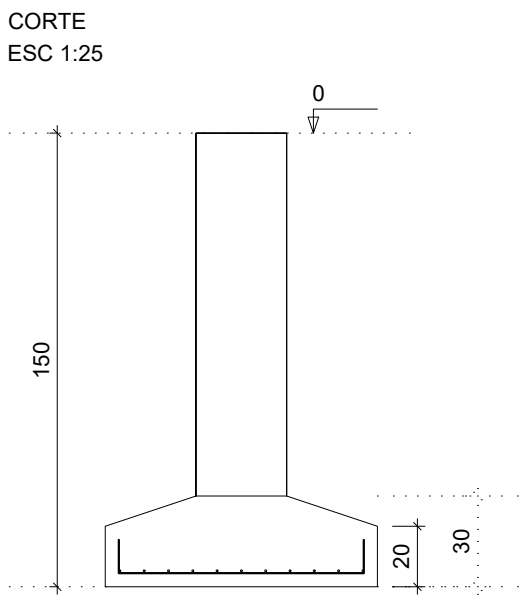
RELAÇÃO DO AÇO						
S1	46x10	25x21				
24x29	25x5	25x37				
S40	19x447	549				
S54	59	11x596				
12x513	6x5104	19x5105				
9x5105	5119	5115				
S117	5117	5120				
2x5122	2x5128	5x5127				
9x5130	2x5131	5132				
6x5134	6x5135	2x5145				
S146	5148	5151				
2x5153	5155	5159				
S157	S158	3x5159				
S15-45	S24-25	5x5159				
S82-53	S96-67	S73-74				
S76-76	S77-76	S79-80				
S84-85	S87-48	S89-90				
S91-92						

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	195	89	15660
	2	6.3	444	105	46620
	3	6.3	82	99	8100
	4	6.3	172	95	16340
	5	6.3	198	120	23760
	6	6.3	83	105	8765
	7	6.3	60	120	7200
	8	6.3	260	100	26000
	9	6.3	288	115	33120
	10	6.3	248	110	27280
	11	6.3	228	125	28500
	12	6.3	181	85	15385
	13	6.3	181	85	15385
	14	6.3	8	75	600
	15	6.3	49	110	5390
	16	6.3	43	100	4300
	17	6.3	11	85	935
	18	8.0	9	119	1071
	19	8.0	10	124	1240
	20	8.0	10	149	1490
	21	8.0	10	154	1540
22	8.0	7	114	798	
23	8.0	9	94	846	

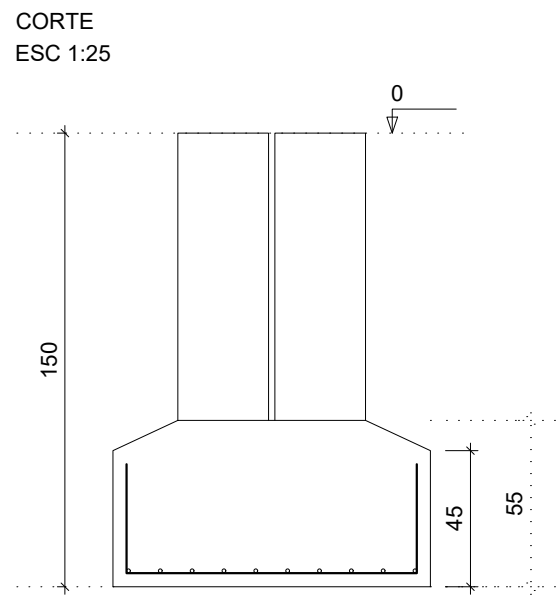
RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO = 0% (kg)
CA50	6.3	2626	716
	8.0	60.7	31.9
PESO TOTAL (kg)			
CA50	747.9		
Volume de concreto (C-25) = 26.78 m³			
Área de forma = 119.02 m²			



Solo com capacidade de suporte > 200.00 kN/m²
Solo compactado sobre a sapata
peso específico > 16.00 kN/m³



Solo com capacidade de suporte > 200.00 kN/m²
Solo compactado sobre a sapata
peso específico > 16.00 kN/m³



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	11	100	1100
	2	6.3	11	105	1155
	3	12.5	6	162	972
	4	12.5	10	112	1120

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	6.3	22.6	5.5
	12.5	20.9	20.2
PESO TOTAL (kg)			
CA50	25.7		

Volume de concreto (C-25) = 0.50 m³
Área de forma = 2.18 m²



INSTITUTO FEDERAL
Sertão Pernambucano

INSTITUTO FEDERAL DE
EDUCAÇÃO, CIÊNCIA E TECNOLOGIA
SERTÃO PERNAMBUCANO
DIRETORIA DE ENGENHARIA
E INFRAESTRUTURA
Rua Aristarco Lopes, 240 | Centro
Petrolina/PE | CEP: 56.302-100

NOME:

**PROJETO ESTRUTURAL DO CAMPUS
ÁGUAS BELAS DO IF SertãoPE**

ENDEREÇO:
Rodovia PE-300, S/N, CEP: 55340-000
Águas Belas/PE

DESCRIÇÃO:
SAPATAS II (BLOCO ADM - PARTE 2.)

ASSINATURA/CARIMBO - DIREÇÃO GERAL:

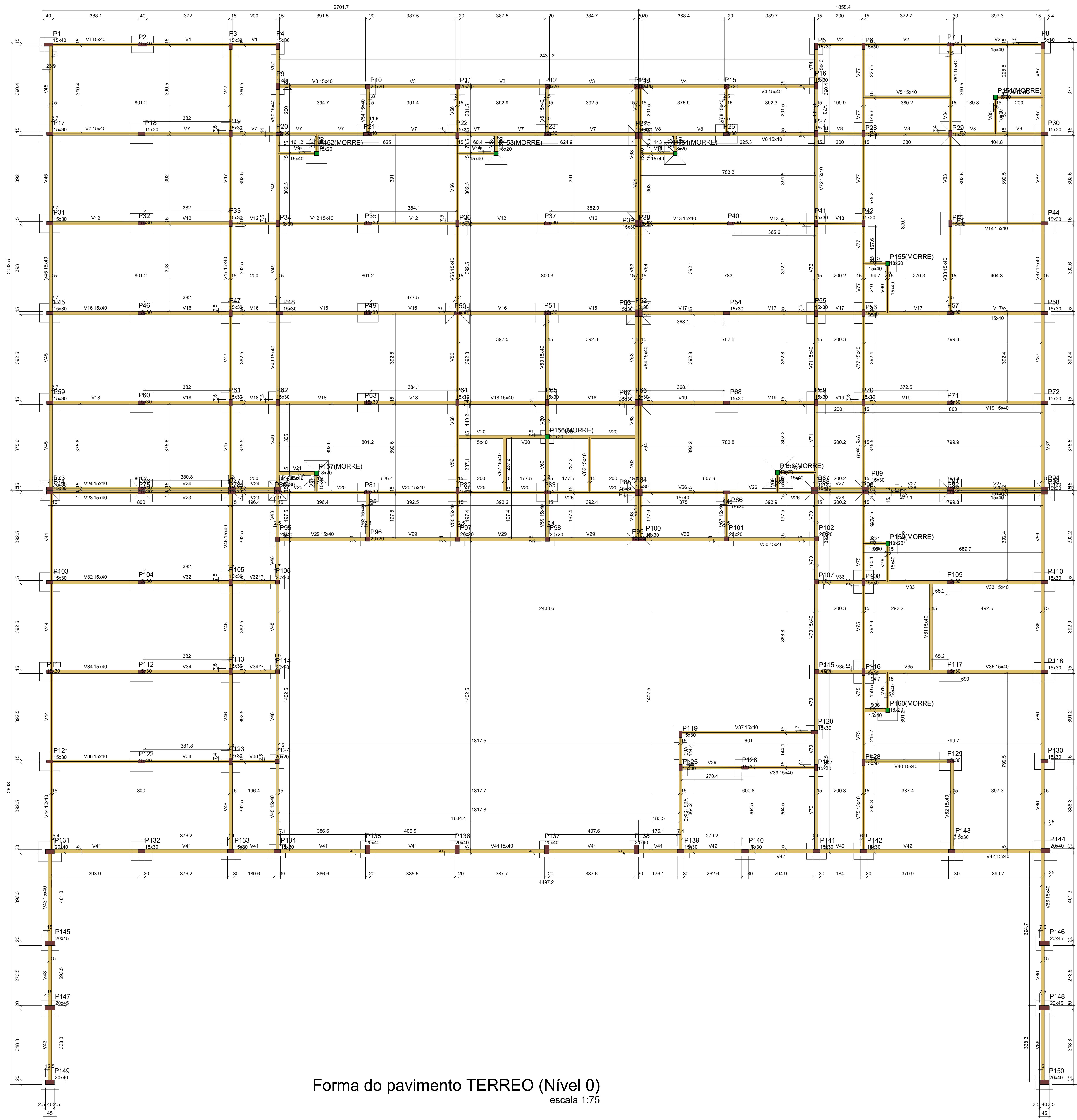
ESCALA:
1/75

ASSINATURA/CARIMBO - RESPONSÁVEL TÉCNICO:

Wilson Nery da Cunha - CREA BA 14748

DATA:
ABRIL/2025

PRANCHA
03/26



Características dos materiais	
Ra	Abastecimento
(MPa)	(cm)
25	5.00
Dimensão máxima do agregado = 19 mm	

Legenda dos pilares	
	Pilar que morre
	Pilar que passa
	Pilar com mudança de seção

Legenda das vigas e paredes	
	Viga

Forma do pavimento TERREO (Nível 0)
escala 1:75



Forma do pavimento PRIMEIRO (Nível 320)
escala 1:75

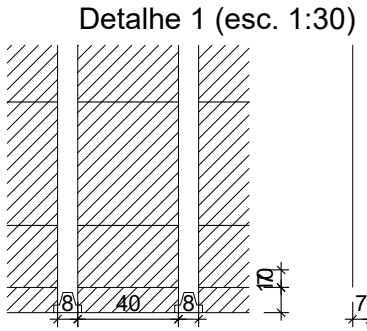
Dados		Lajes				Sobrecarga (kN/m²)		
		Altura (cm)	Nível (cm)	Peso próprio (kN/m²)	Adicional	Acidental	Localizada	
L1	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L2	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L3	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L4	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L5	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L6	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L7	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L8	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L9	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L10	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L11	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L12	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L13	Pré-moldada	17	0	320	2,18	1,82	1,00	-
L14	Pré-moldada	17	0	320	2,18	1,82	1,00	-
L15	Pré-moldada	17	0	320	2,18	1,82	1,00	-
L16	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L17	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L18	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L19	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L20	Pré-moldada	17	0	320	2,18	1,82	1,00	-
L21	Pré-moldada	17	0	320	2,18	1,82	1,00	-
L22	Pré-moldada	17	0	320	2,18	1,82	1,00	-
L23	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L24	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L25	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L26	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L27	Pré-moldada	17	0	320	2,18	1,82	1,00	-
L28	Pré-moldada	17	0	320	2,18	1,82	1,00	-
L29	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L30	Pré-moldada	17	0	320	2,18	1,82	1,00	-
L31	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L32	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L33	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L34	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L35	Pré-moldada	17	0	320	2,18	1,82	1,00	-
L36	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L37	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L38	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L39	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L40	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L41	Pré-moldada	17	-2	318	2,18	2,31	0,50	-
L42	Pré-moldada	17	-2	318	2,18	2,31	0,50	-
L43	Pré-moldada	17	-2	318	2,18	2,31	0,50	-
L44	Pré-moldada	17	-2	318	2,18	2,31	0,50	-
L45	Pré-moldada	17	-2	318	2,18	2,31	0,50	-
L46	Pré-moldada	17	-2	318	2,18	2,31	0,50	-
L47	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L48	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L49	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L50	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L51	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L52	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L53	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L54	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L55	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L56	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L57	Pré-moldada	17	0	320	2,18	1,82	1,00	-
L58	Pré-moldada	17	0	320	2,18	2,31	0,50	-
L59	Pré-moldada	17	-2	318	2,18	1,82	1,00	-
L60	Pré-moldada	17	0	320	2,18	1,82	1,00	-
L61	Pré-moldada	17	0	320	2,18	2,31	0,50	-

Características dos materiais	
k _s	Abatimento
(MPa)	(cm)
25	5,00

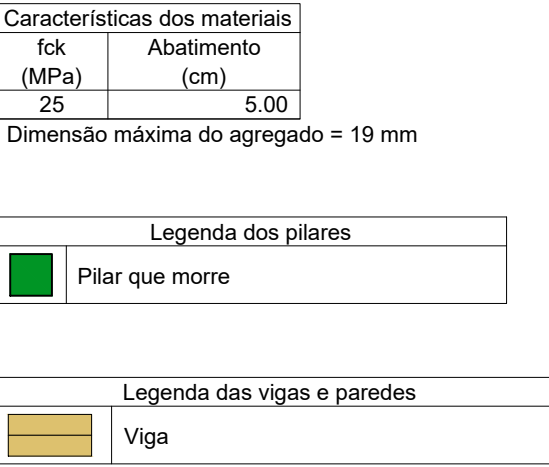
Dimensão máxima do agregado = 19 mm

Legenda dos pilares	
	Pilar que morre
	Pilar que passa

Legenda das vigas e paredes	
	Viga

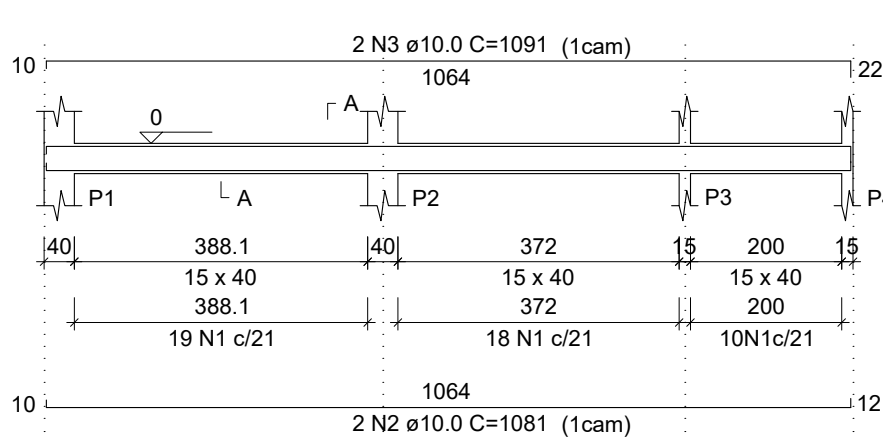


Blocos de enchimento						
Detalhe	Tipo	Nome	Dimensões(cm)			Quantidade
			hb	bx	by	
1	EPS Unidirecional	B10/40/49	10	40	49	5329



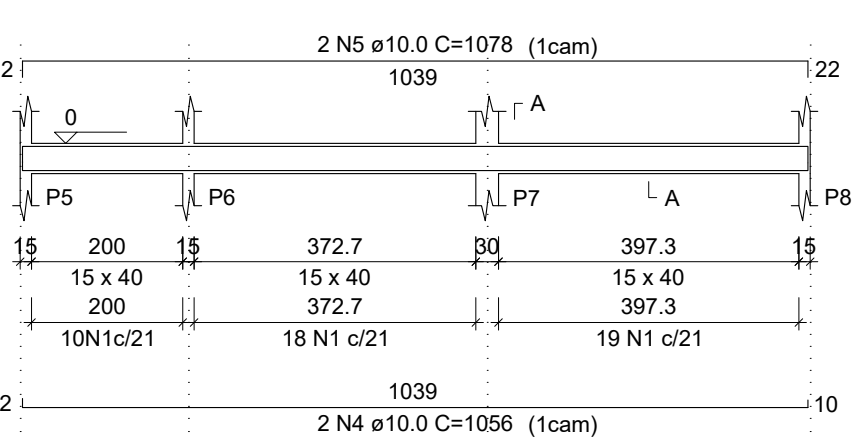
 INSTITUTO FEDERAL Rio de Janeiro	INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA SERTÃO PERNAMBUCANO DIRETORIA DE ENGENHARIA E INFRAESTRUTURA Rua Antenor Nunes, 240 Centro Petrolândia/PE CEP: 56.302-100	NOME: PROJETO ESTRUTURAL DO CAMPUS AGUAS BELAS DO IF SertãoPE ÁGUA BELAS DO IF SertãoPE RUAPE-300, S/N CEP: 55330-000 Aguias Brás/PE
	ORIENTADOR: PLANTA DE FORMA - PLANTABANDA (BLOCO ADM - PARTE 2)	ESCALA: 1/75
ESTUDANTE/ALUNO(a): DEREITO OTAL	ASSINATURA/CARIMBO - RESPONSÁVEL TÉCNICO Wilson Nery da Cunha - CREA BA 14748	

V1 (15 x 40)



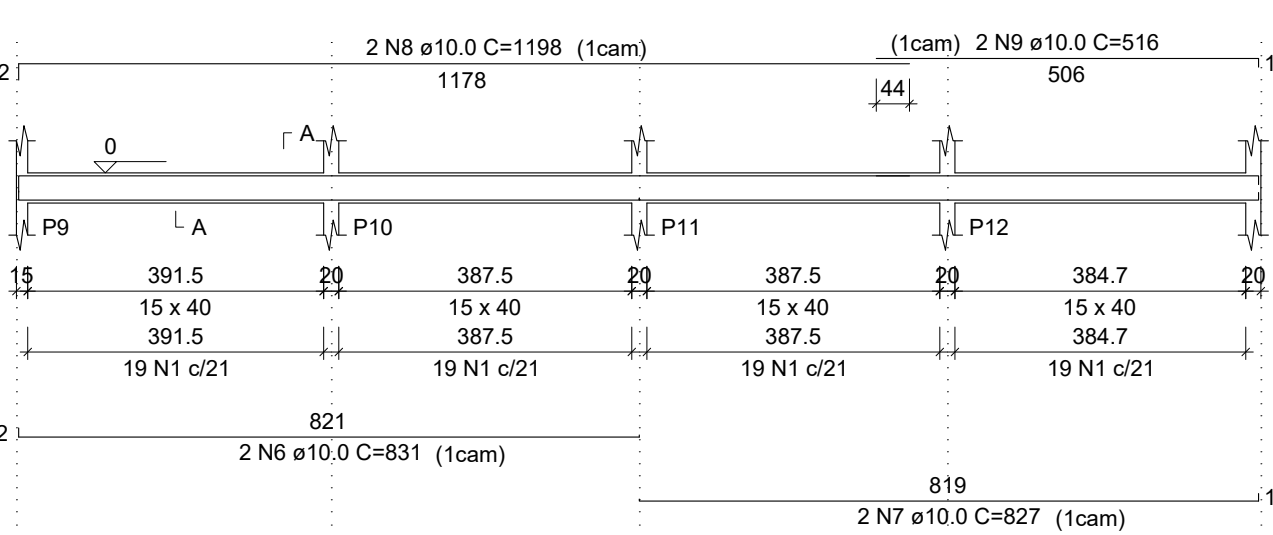
SEÇÃO A-A

V2 (15 x 40)



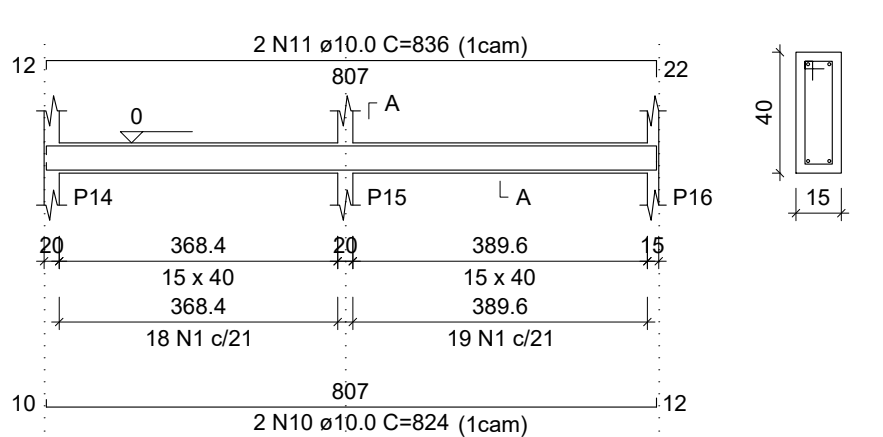
SEÇÃO A-A

V3 (15 x 40)



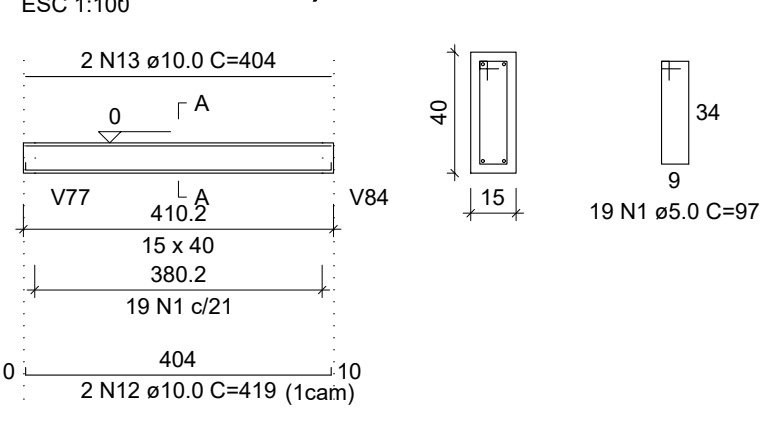
SEÇÃO A-A

V4 (15 x 40)

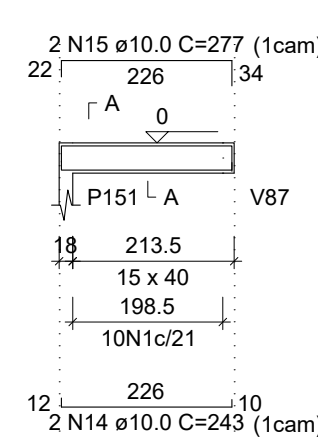


SEÇÃO A-A

V5 (15 x 40)

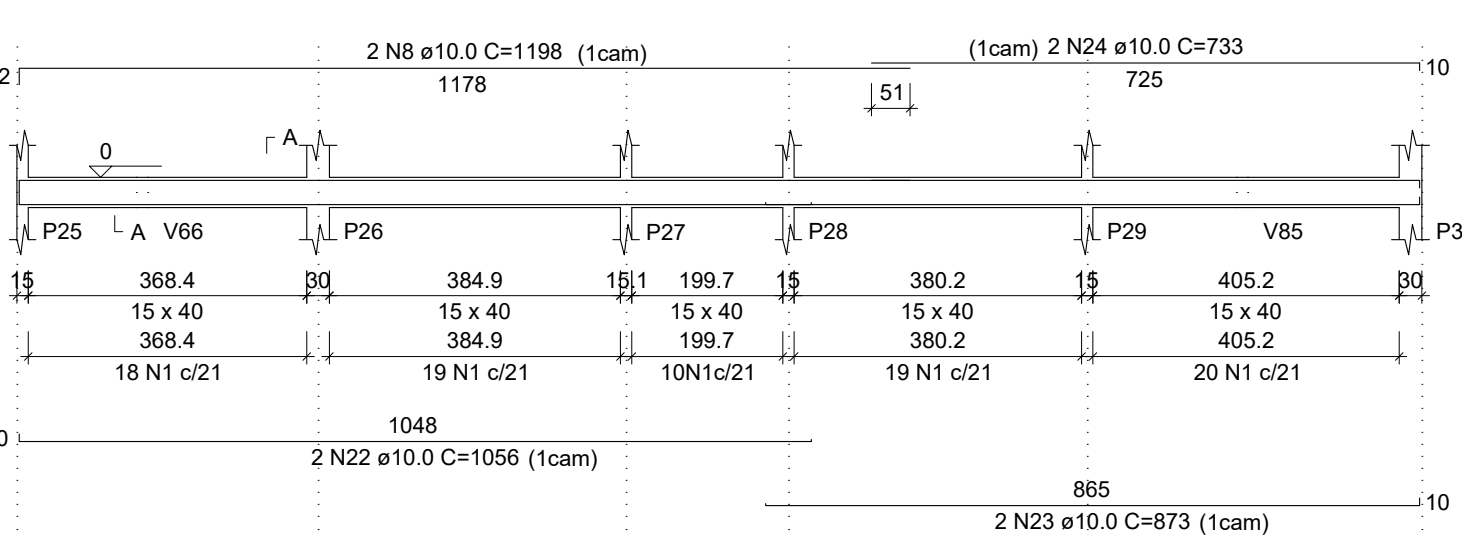


V6 (15 x 40)



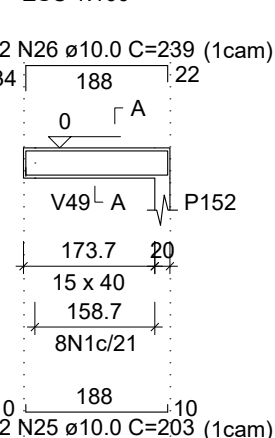
SEÇÃO A-A

V8 (15 x 40)



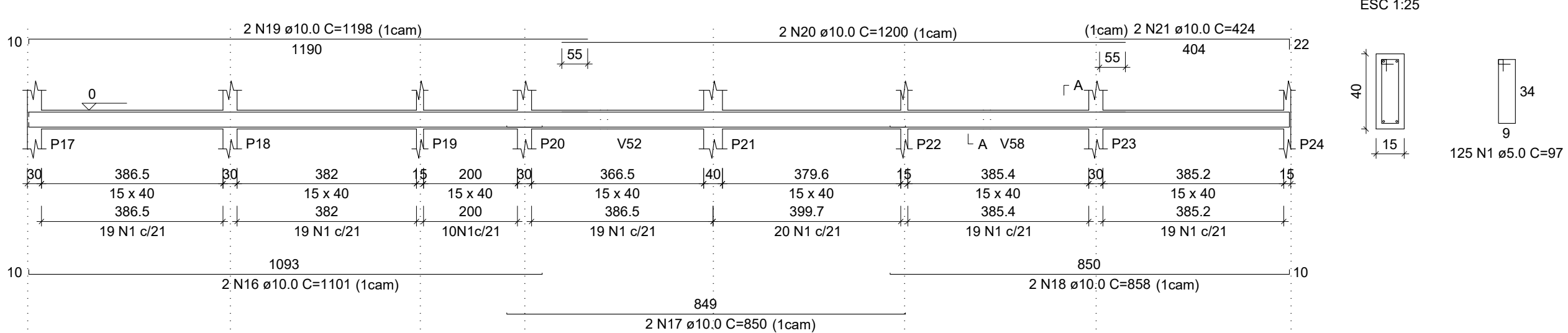
SEÇÃO A-A

V9 (15 x 40)

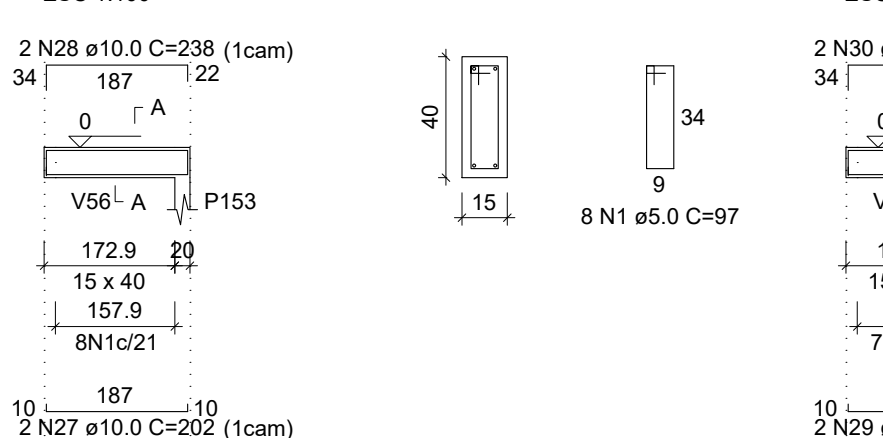


SEÇÃO A-A

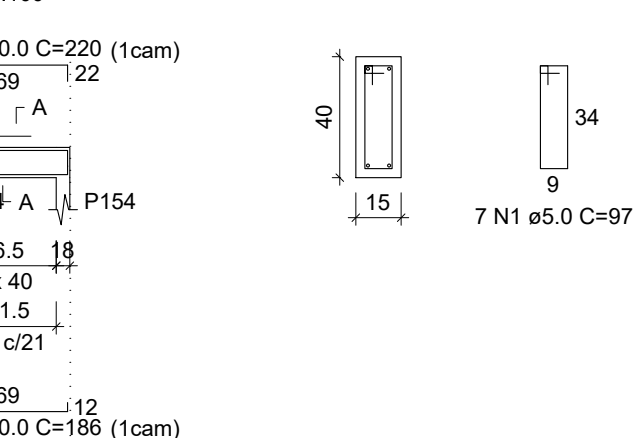
V7 (15 x 40)



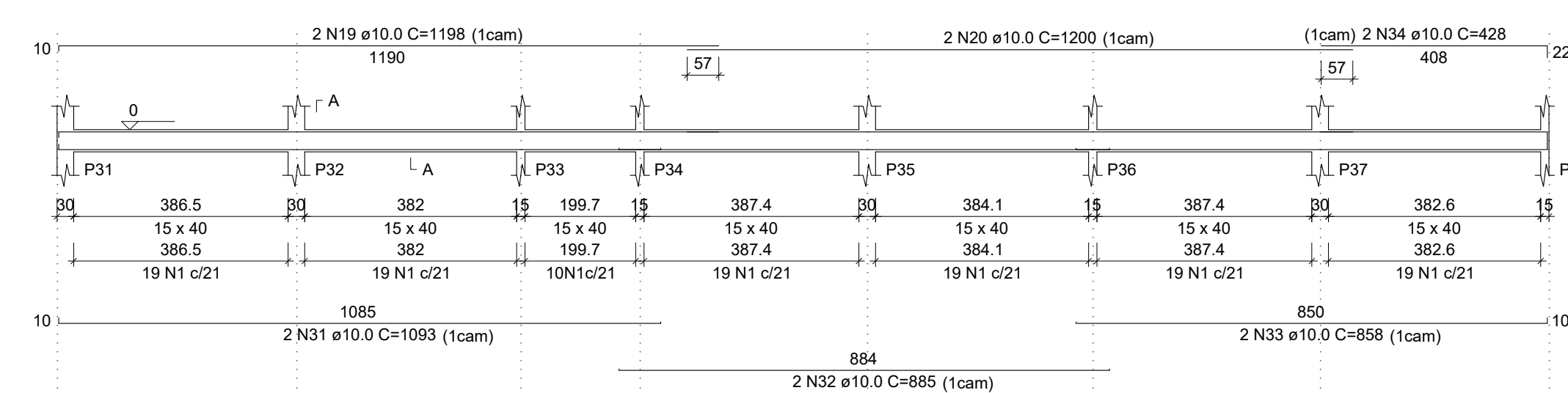
V10 (15 x 40)



V11 (15 x 40)

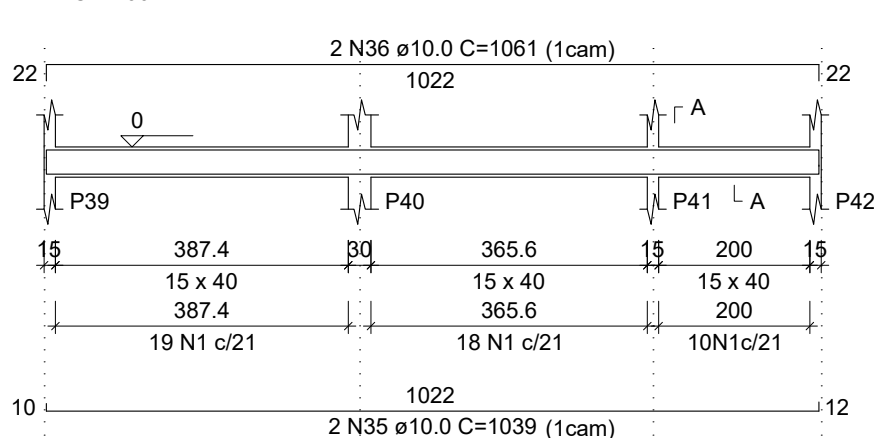


V12 (15 x 40)



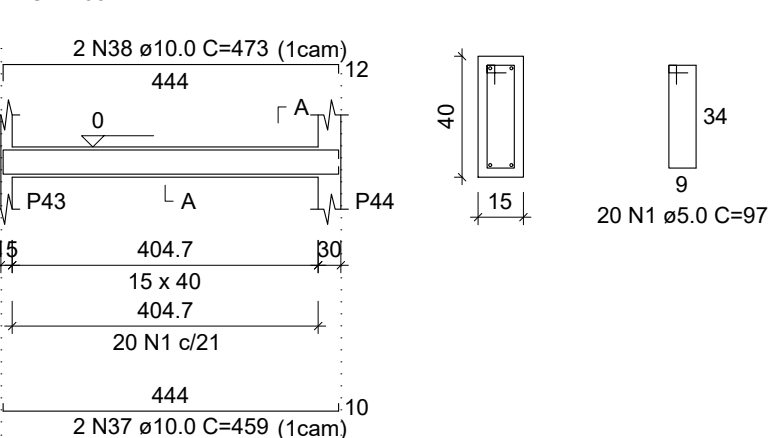
SEÇÃO A-A

V13 (15 x 40)

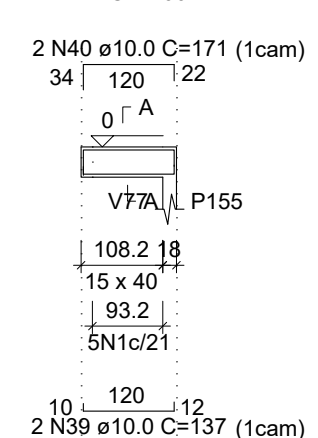


SEÇÃO A-A

V14 (15 x 40)

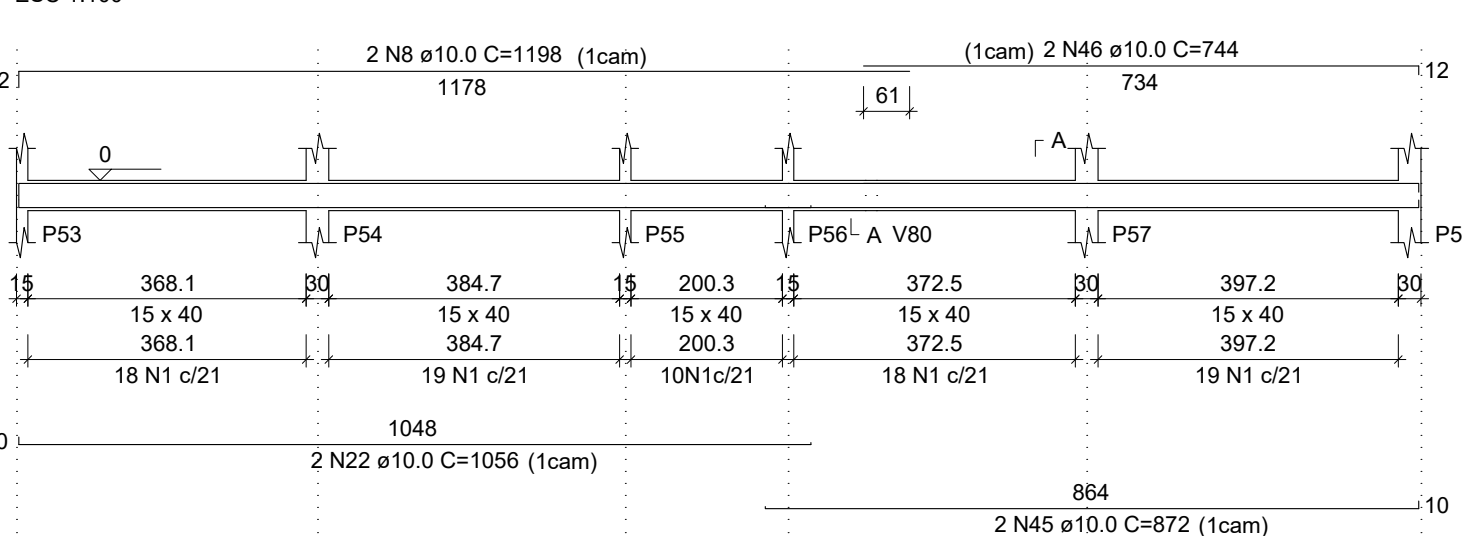


V15 (15 x 40)



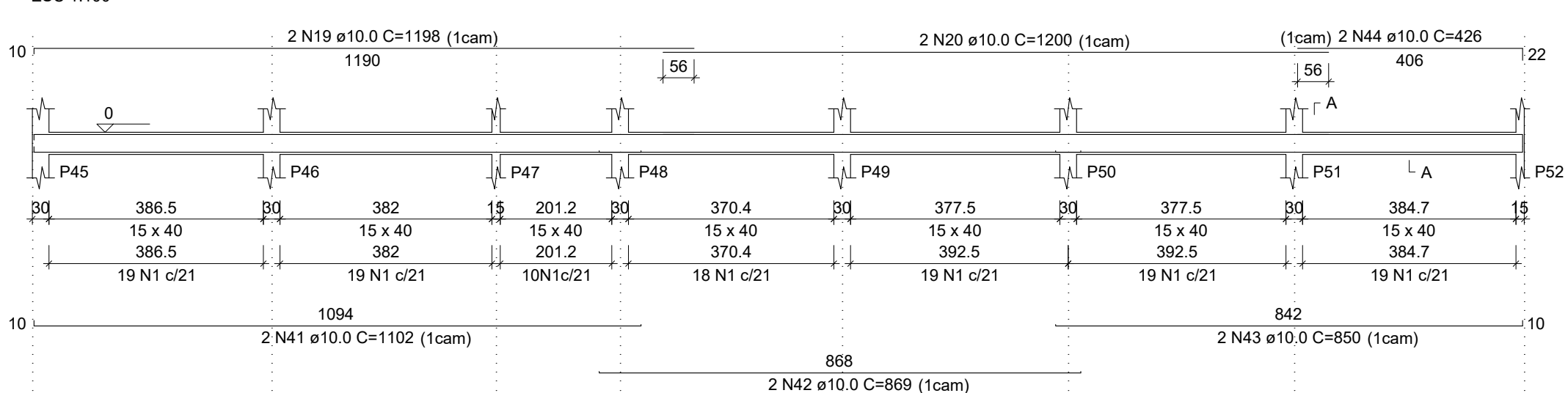
SEÇÃO A-A

V17 (15 x 40)



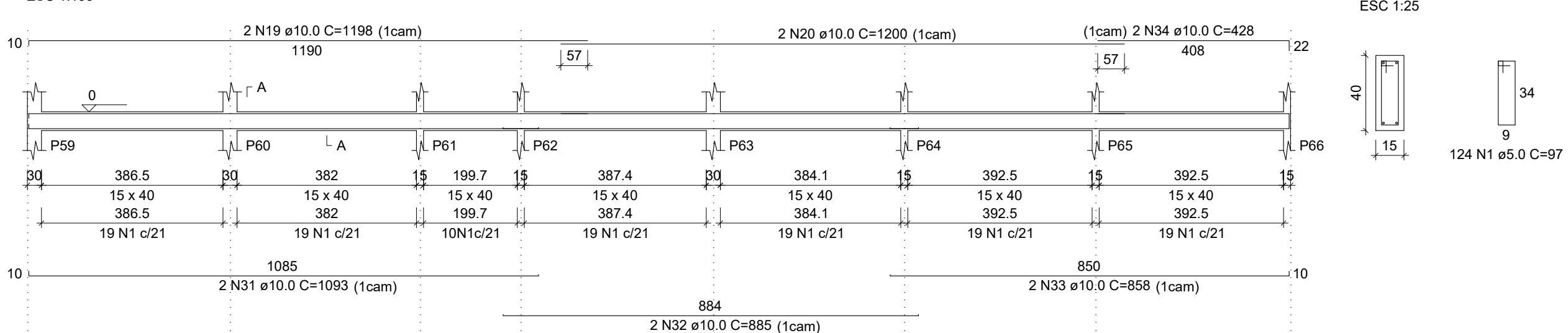
SEÇÃO A-A

V16 (15 x 40)



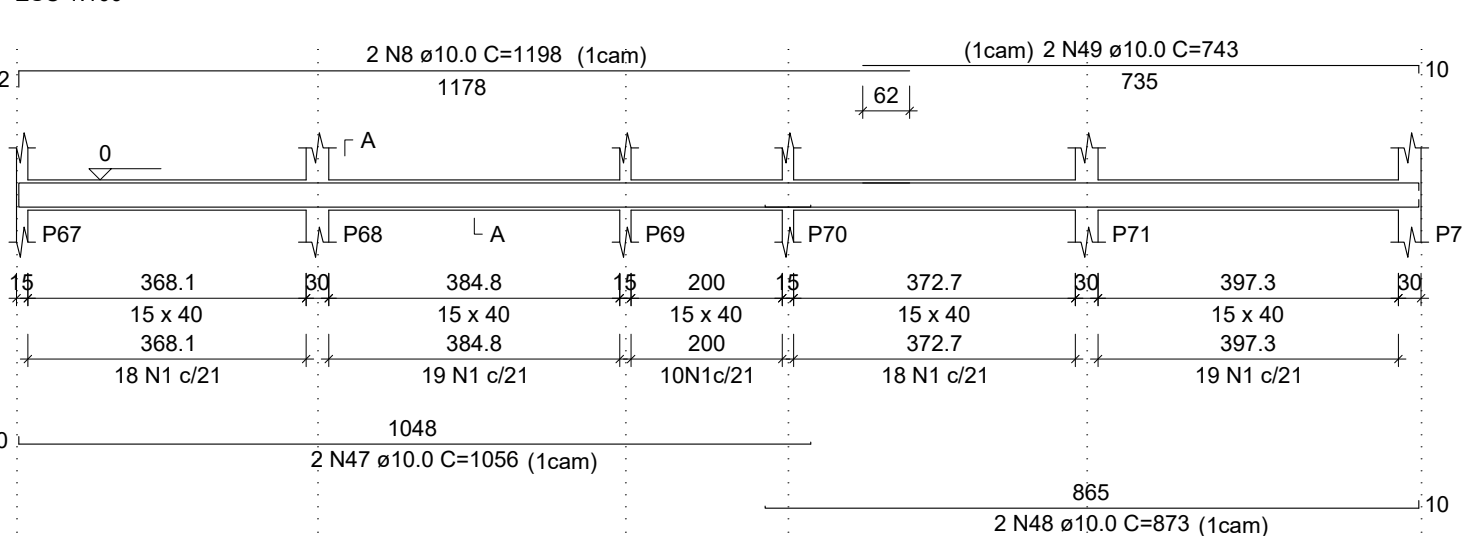
SEÇÃO A-A

V18 (15 x 40)



SEÇÃO A-A

V19 (15 x 40)



SEÇÃO A-A

RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	6.0	1081	97	104857
CA50	2	10.0	2	1081	2162
	3	10.0	2	1091	2182
	4	10.0	2	1056	2112
	5	10.0	2	1078	2156
	6	10.0	2	831	1662
	7	10.0	2	827	1654
	8	10.0	8	1198	9584
	9	10.0	2	516	1032
	10	10.0	2	824	1648
	11	10.0	2	836	1672
	12	10.0	2	419	838
	13	10.0	2	404	808
	14	10.0	2	243	486
	15	10.0	2	277	554
	16	10.0	2	1101	2202
	17	10.0	2	850	1700
	18	10.0	2	858	1716
	19	10.0	8	1198	9584
	20	10.0	8	1200	9600
	21	10.0	2	424	848
	22	10.0	4	1056	4224
	23	10.0	2	873	1746
	24	10.0	2	733	1466
	25	10.0	2	203	406
	26	10.0	2	239	478
	27	10.0	2	202	404
	28	10.0	2	238	476
	29	10.0	2	186	372
	30	10.0	2	220	440
	31	10.0	4	1093	4372
	32	10.0	4	885	3540
	33	10.0	4	858	3432
	34	10.0	4	428	1712
	35	10.0	2	1039	2078
	36	10.0	2	1061	2122
	37	10.0	2	459	918
	38	10.0	2	473	946
	39	10.0	2	137	274
	40	10.0	2	171	342
	41	10.0	2	1102	2204
	42	10.0	2	869	1738
	43	10.0	2	850	1700
	44	10.0	2	426	852
	45	10.0	2	872	1744
	46	10.0	2	744	1488
	47	10.0	2	1056	2112
	48	10.0	2	873	1746
	49	10.0	2	743	1486

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	10.0	990.2	610.5
CA60	5.0	1048.6	161.6
PESO TOTAL (kg)			
CA50	610.5		
CA60	161.6		

Volume de concreto (C-25) = 14.23 m³

Área de forma = 225.28 m²



INSTITUTO FEDERAL DE
EDUCAÇÃO, CIÊNCIA E TECNOLOGIA
SERTÃO PERNAMBUCANO
DIRETORIA DE ENGENHARIA
E INFRAESTRUTURA
Rua Aristarco Lopes, 240 | Centro
Petrolina/PE | CEP: 56.302-100

INSTITUTO FEDERAL
Sertão Pernambucano

PROJETO ESTRUTURAL DO CAMPUS
ÁGUAS BELAS DO IFSertãoPE

ENGENHEIRO:
Rodovia PE-300, S/N, CEP: 55340-000
Águas Belas/PE

DESCRIÇÃO:
VIGAS DO PAVIMENTO TERREIRO I (BLOCO ADM - PARTE 2.)

ESCALA:
1/75

DATA:
ABRIL/2025

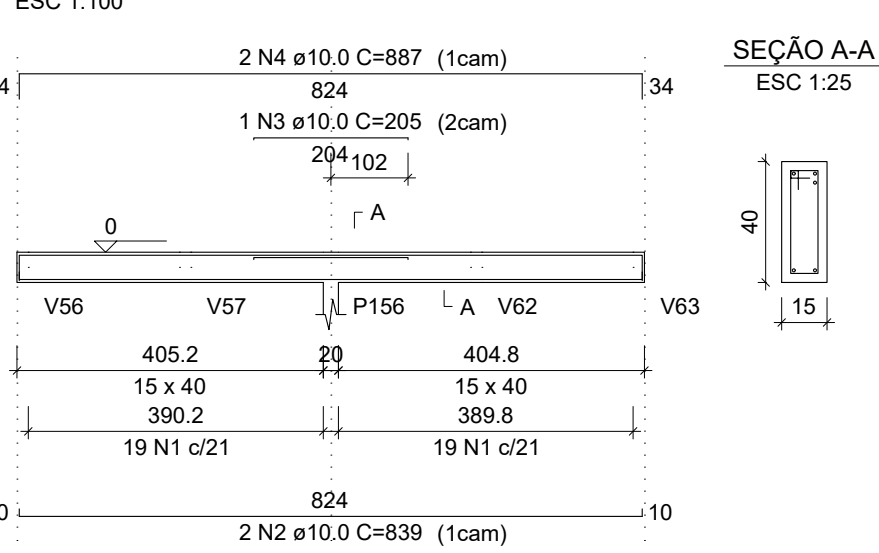
ASSINATURACARIMBO - DIREÇÃO GERAL

ASSINATURACARIMBO - RESPONSÁVEL TÉCNICO

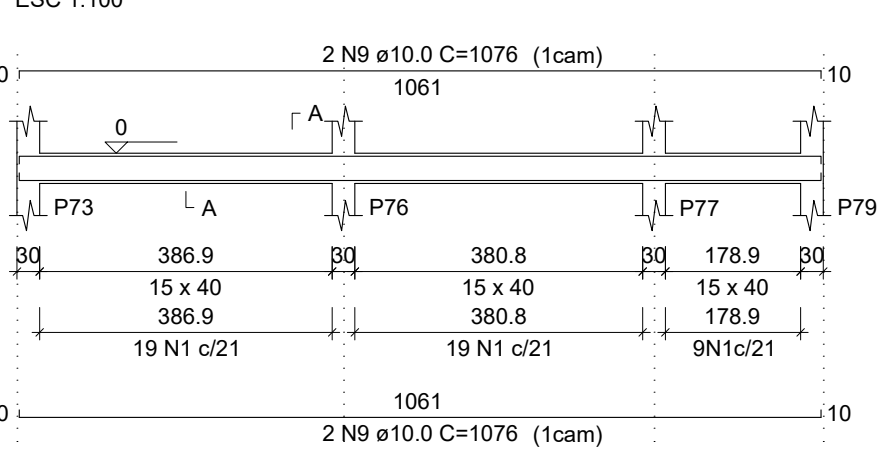
07/26

Wilson Nery da Cunha - CREA BA 14748

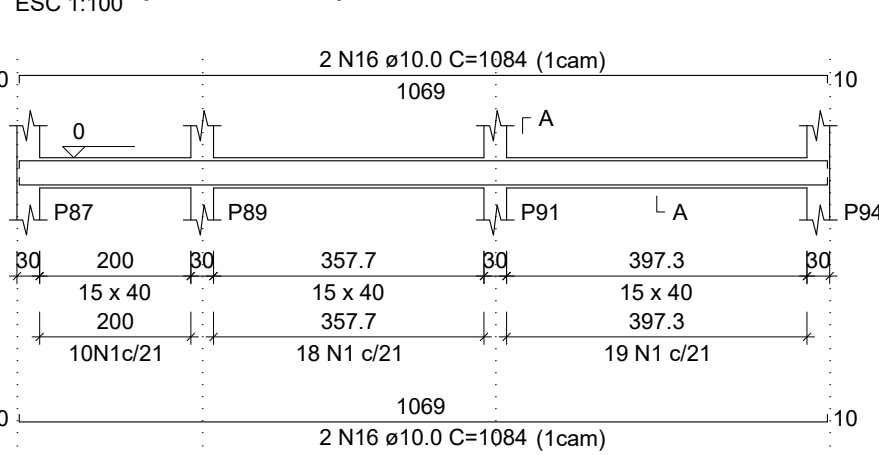
V20 (15 x 40)



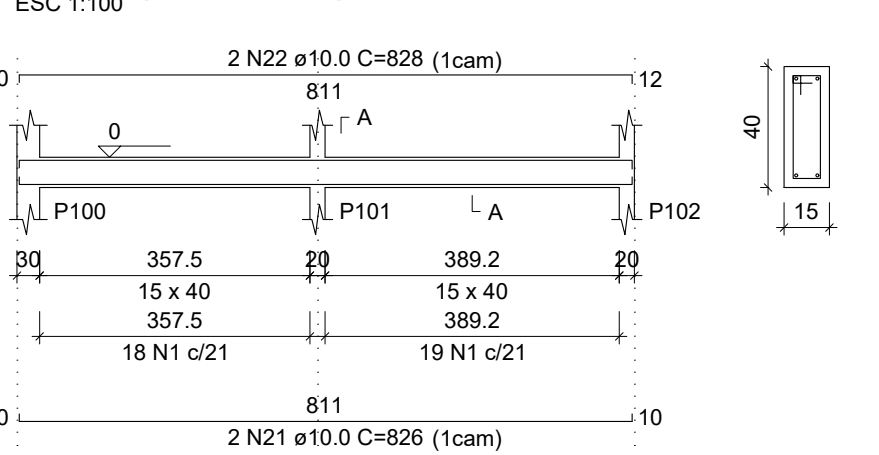
V24 (15 x 40)



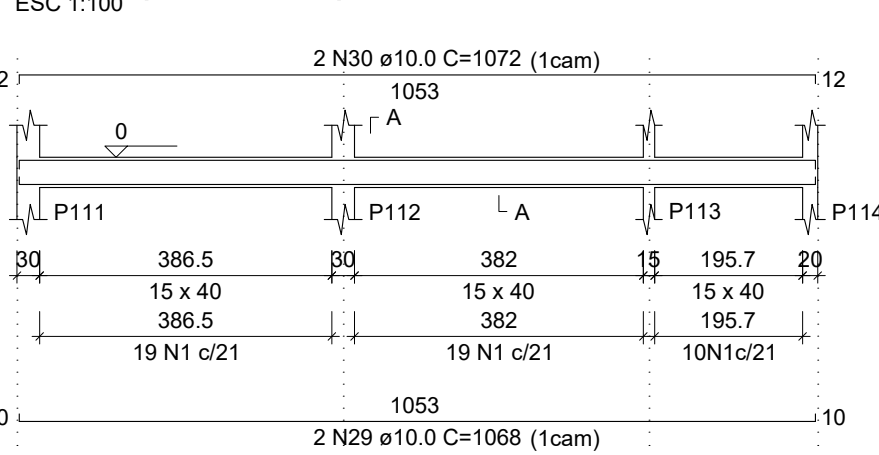
V27 (15 x 40)



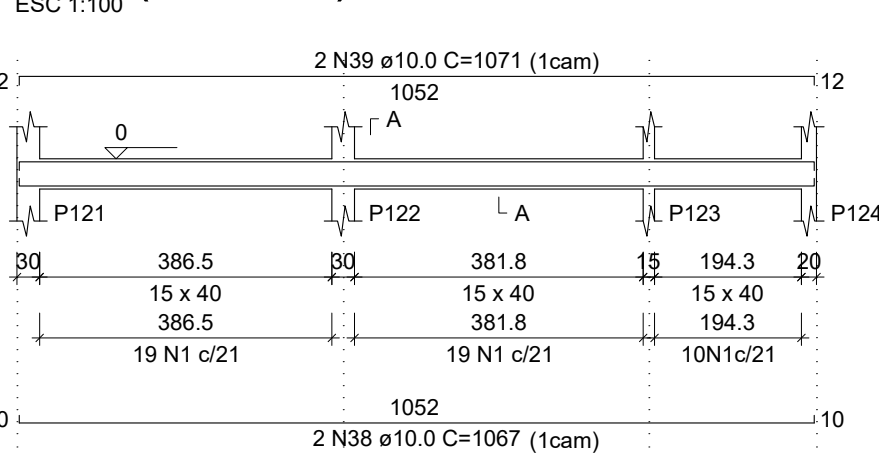
V30 (15 x 40)



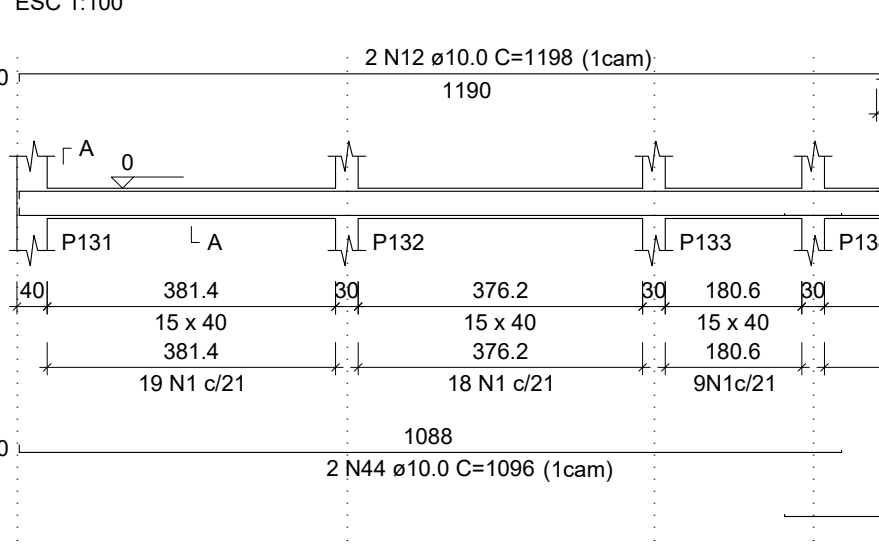
V34 (15 x 40)



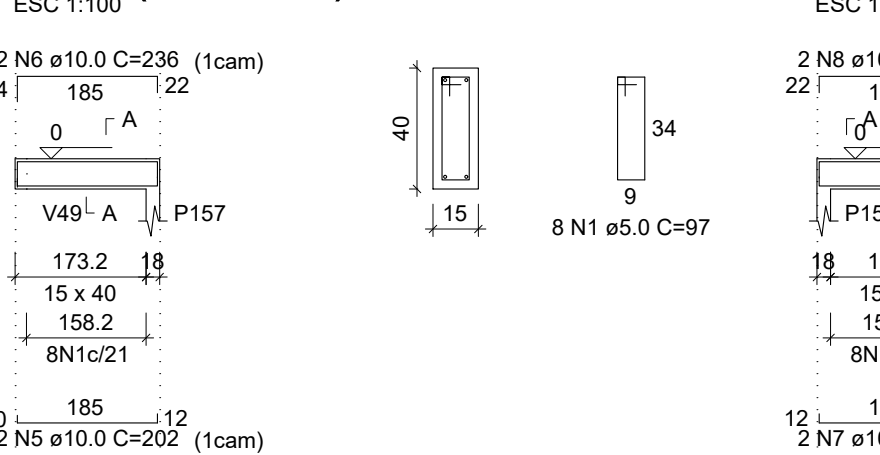
V38 (15 x 40)



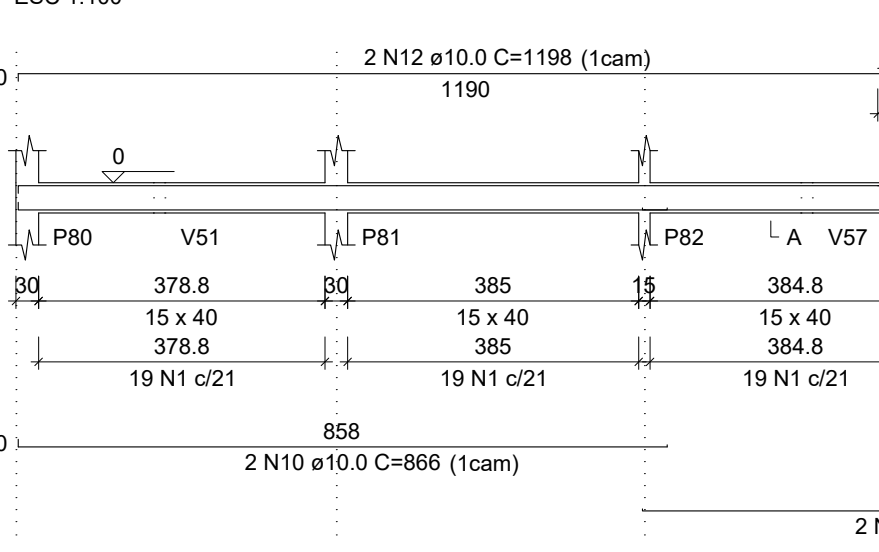
V41 (15 x 40)



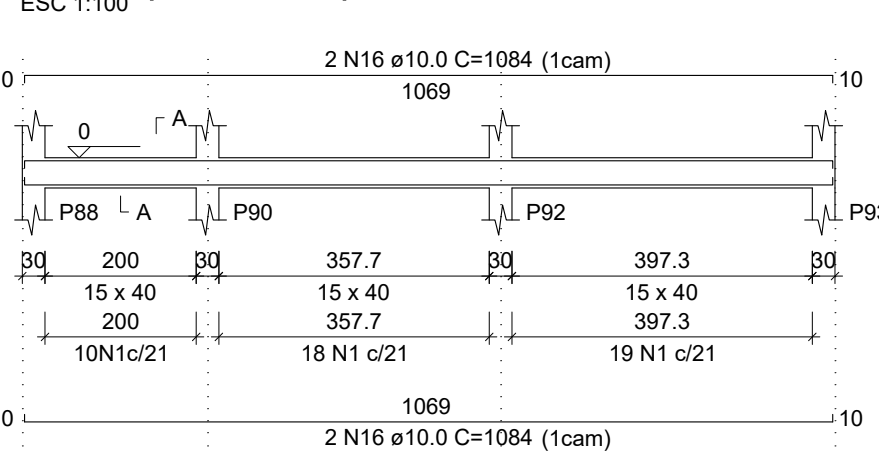
V21 (15 x 40)



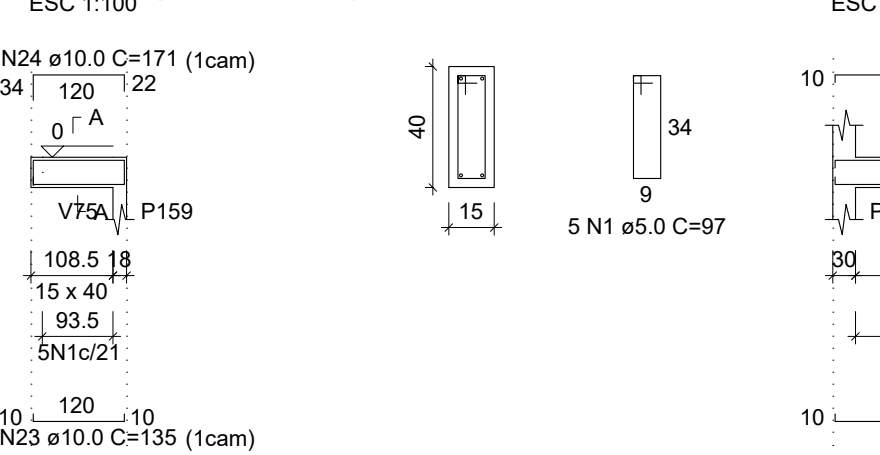
V25 (15 x 40)



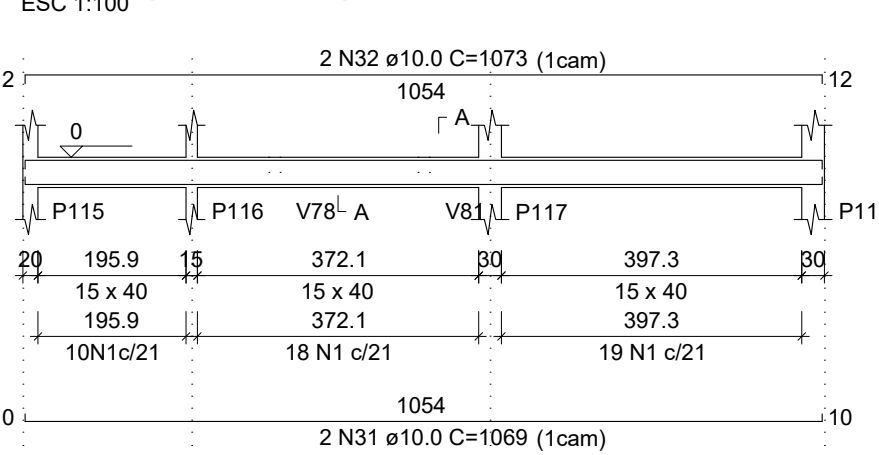
V28 (15 x 40)



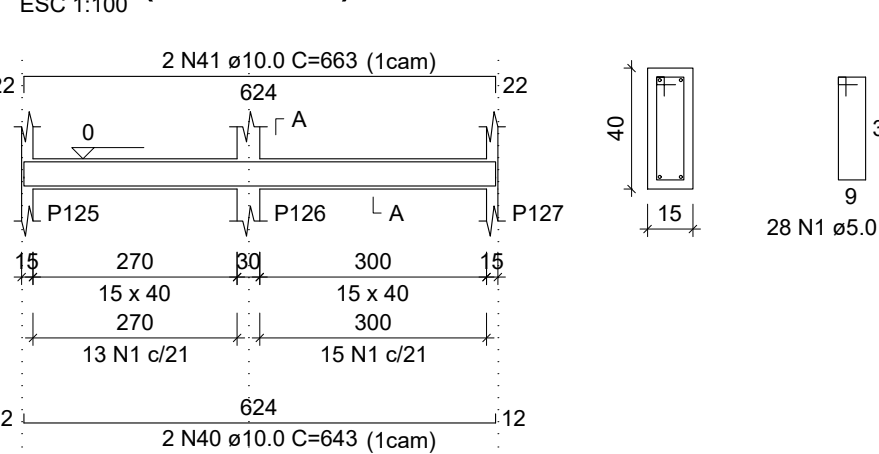
V31 (15 x 40)



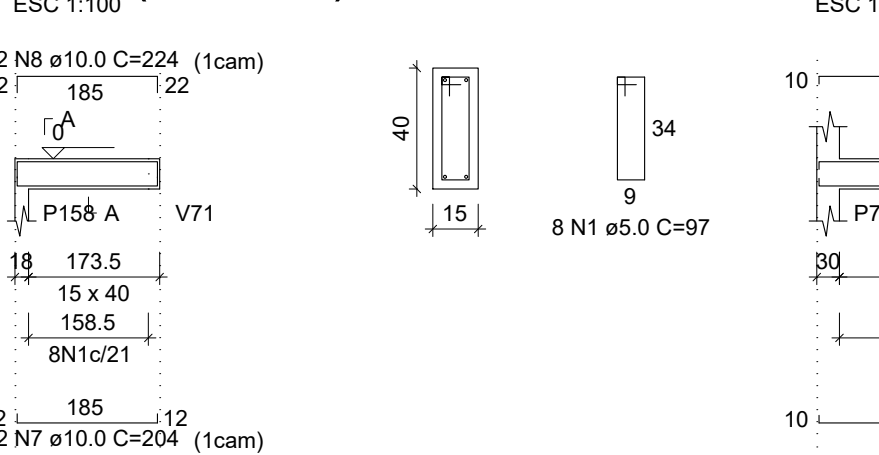
V35 (15 x 40)



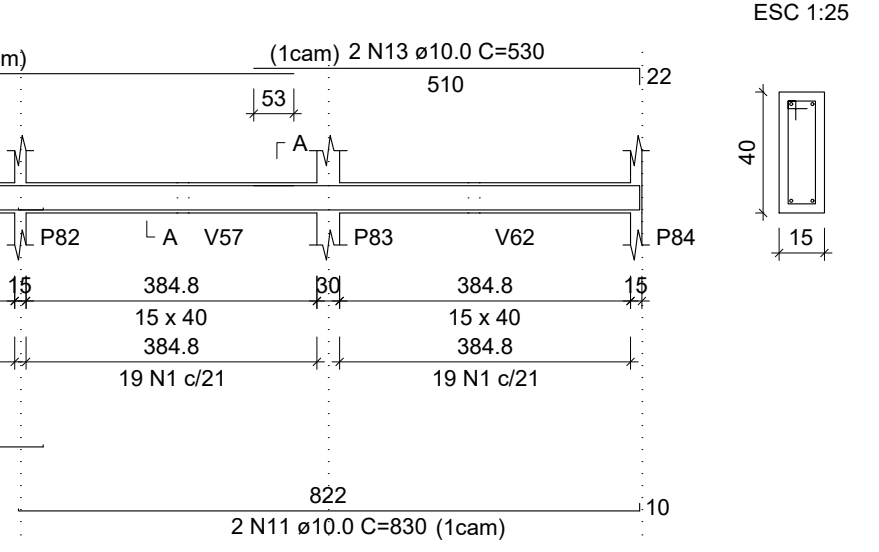
V39 (15 x 40)



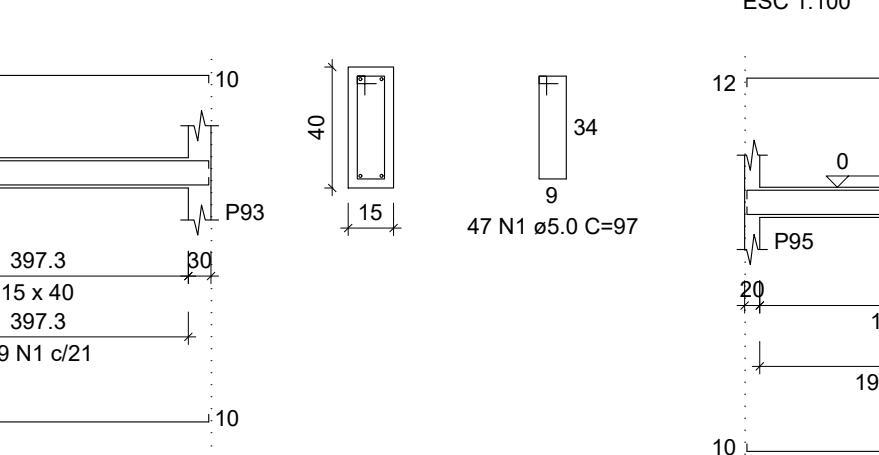
V22 (15 x 40)



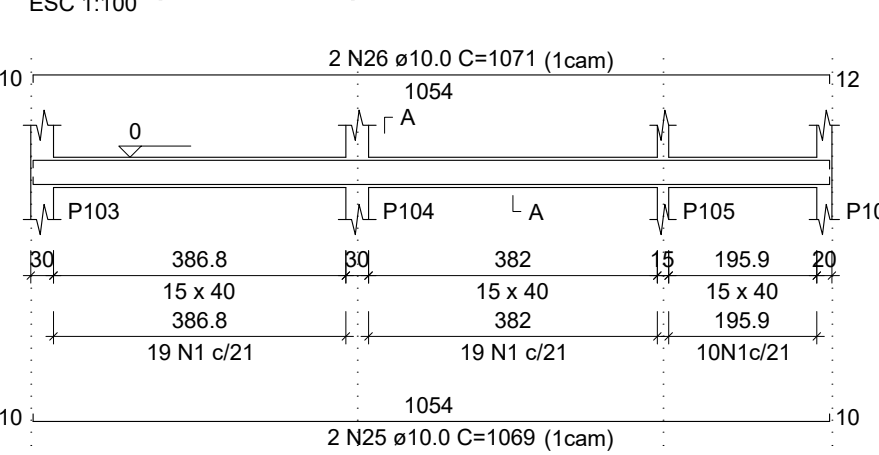
V26 (15 x 40)



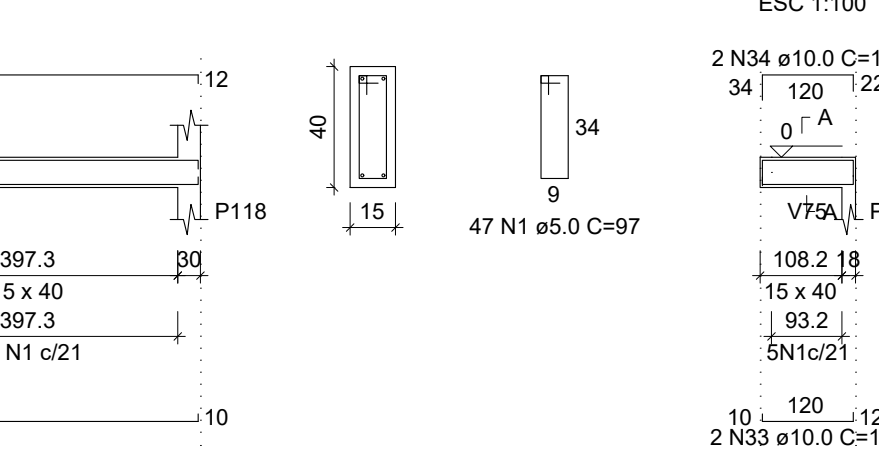
V29 (15 x 40)



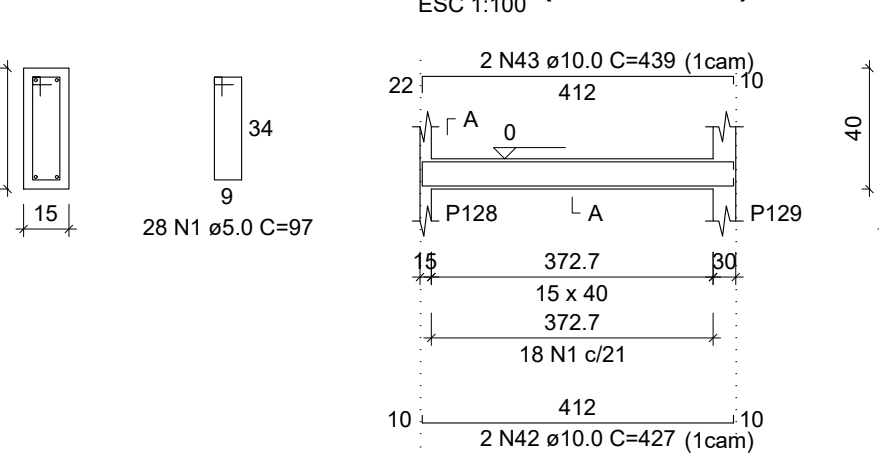
V32 (15 x 40)



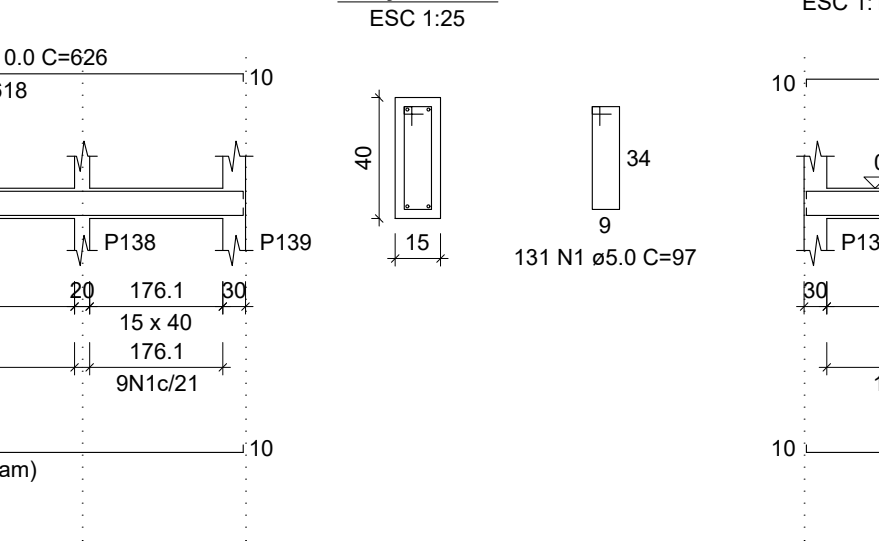
V36 (15 x 40)



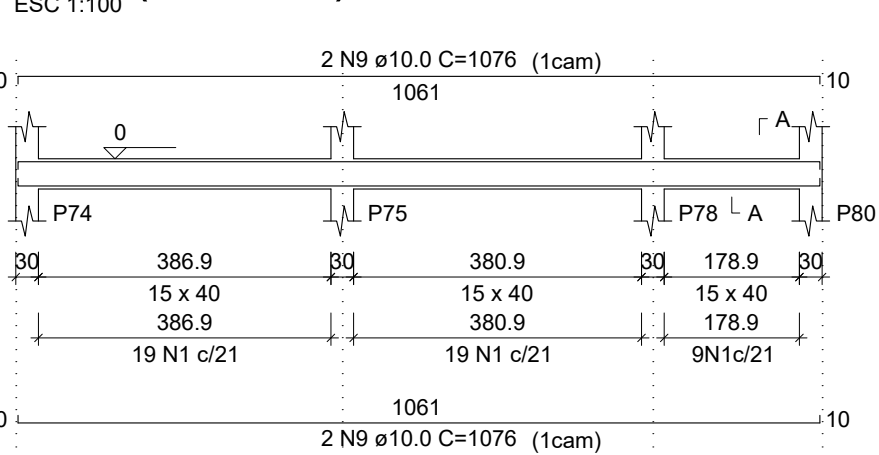
V40 (15 x 40)



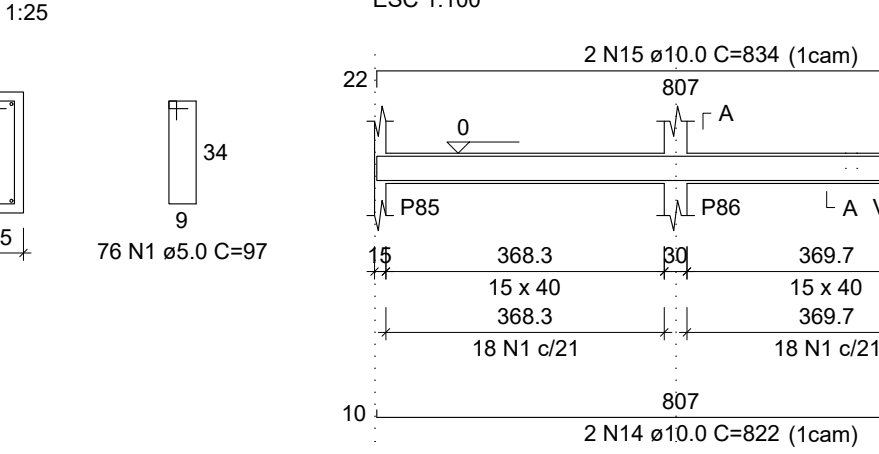
V42 (15 x 40)



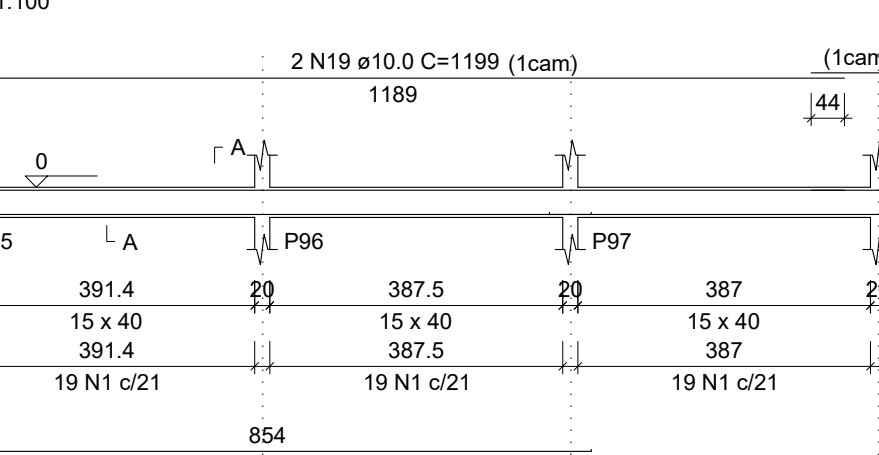
V23 (15 x 40)



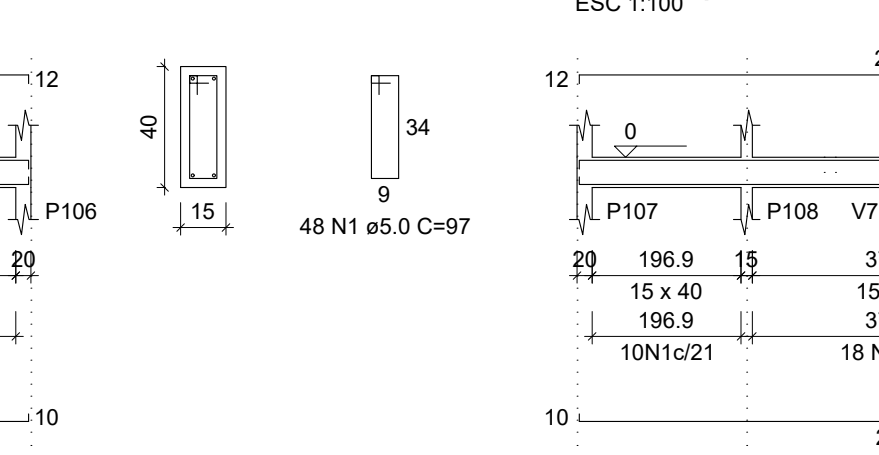
V26 (15 x 40)



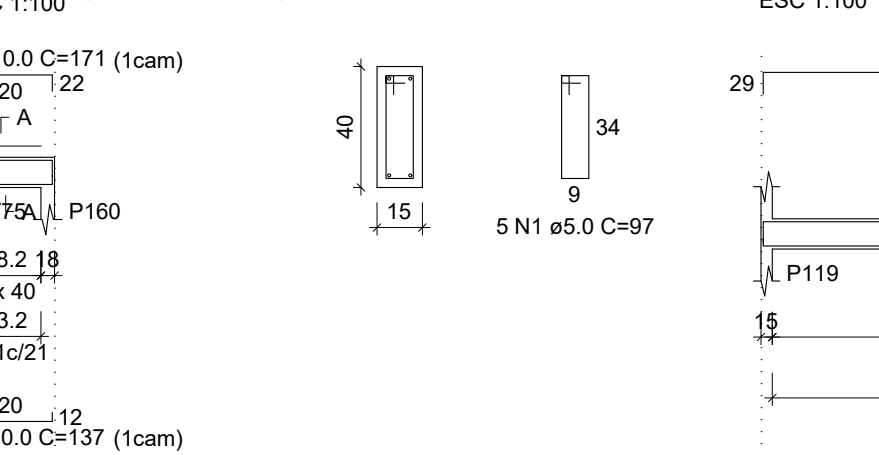
V29 (15 x 40)



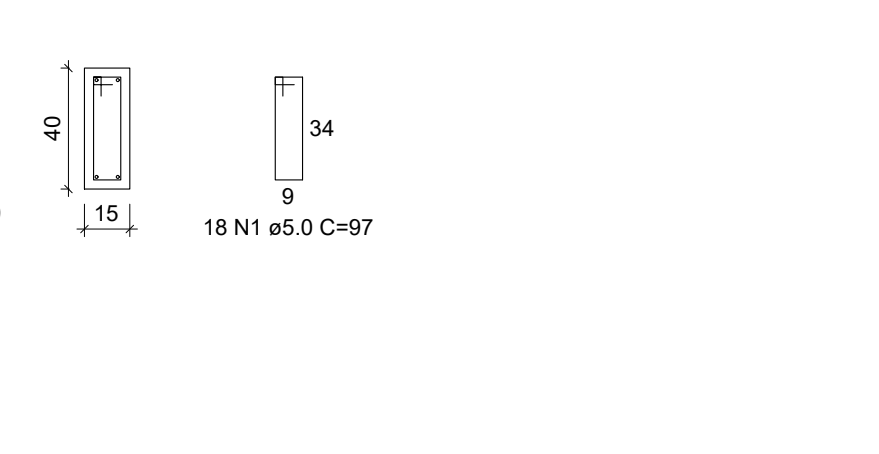
V33 (15 x 40)



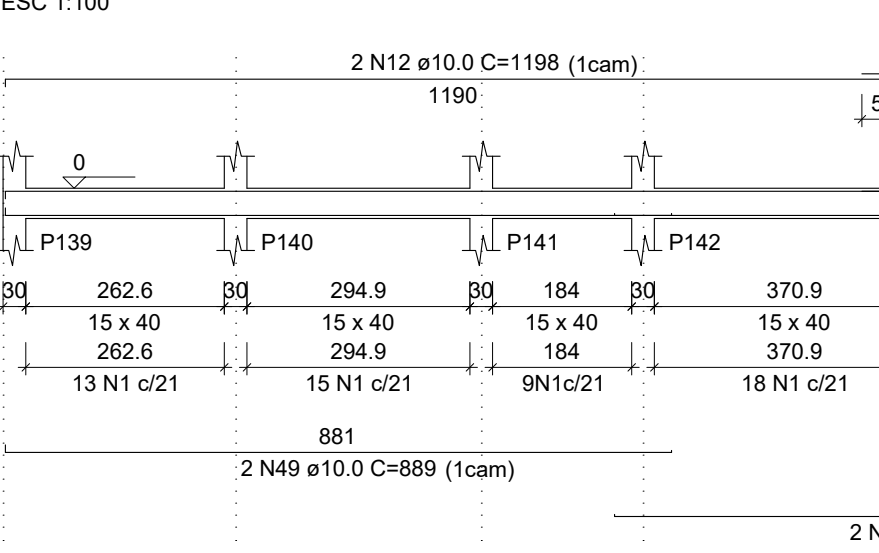
V36 (15 x 40)



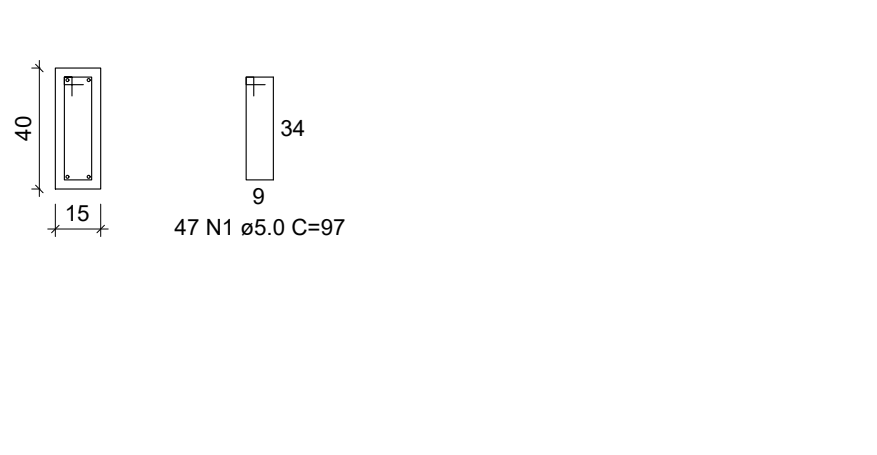
V40 (15 x 40)



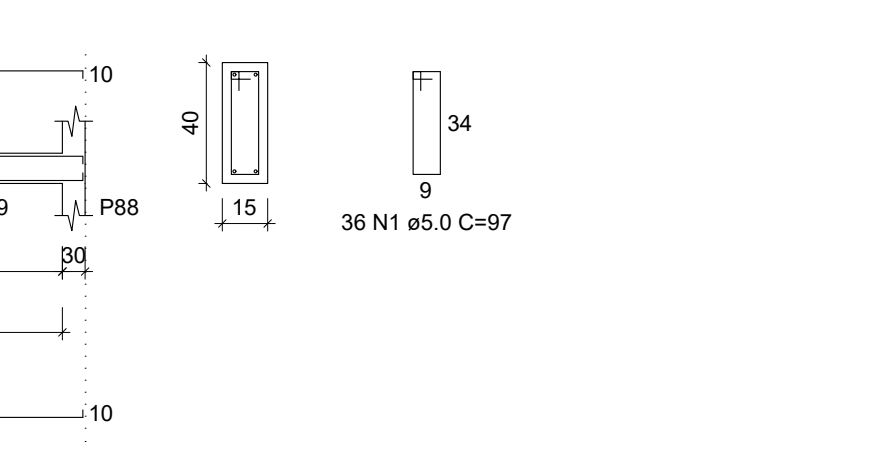
V42 (15 x 40)



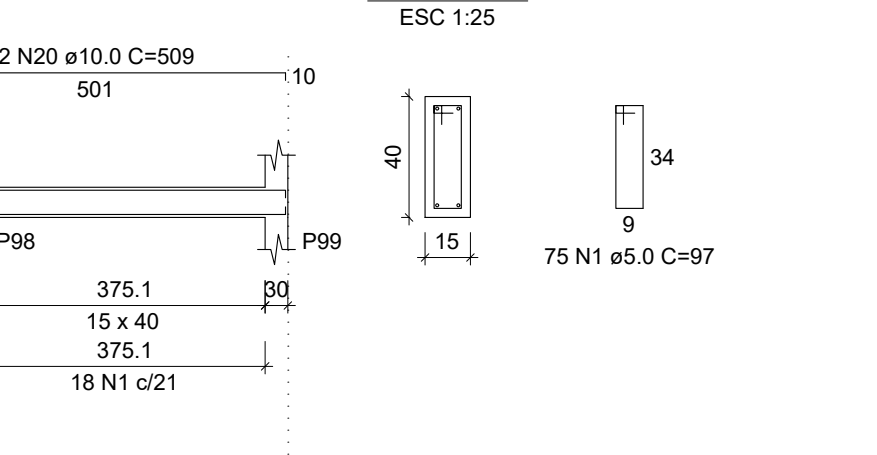
V23 (15 x 40)



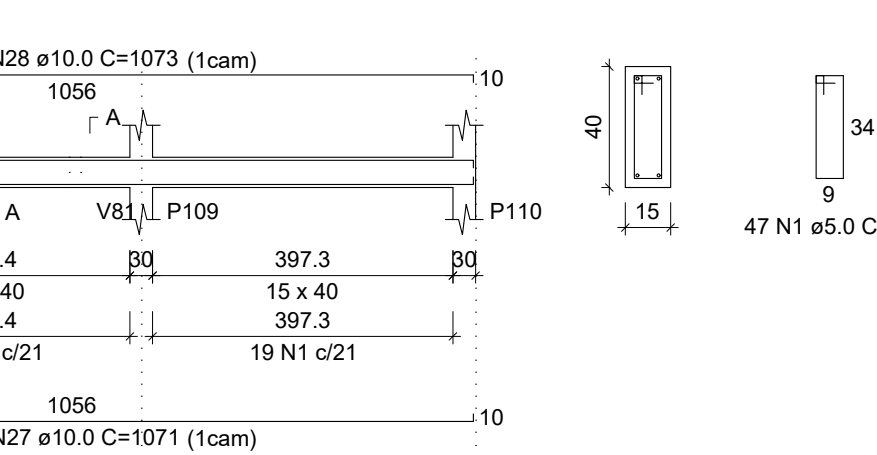
V26 (15 x 40)



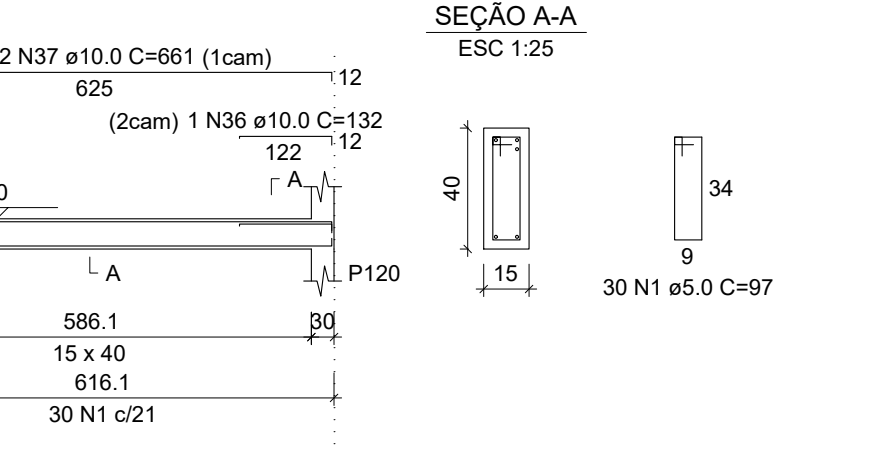
V29 (15 x 40)



V33 (15 x 40)



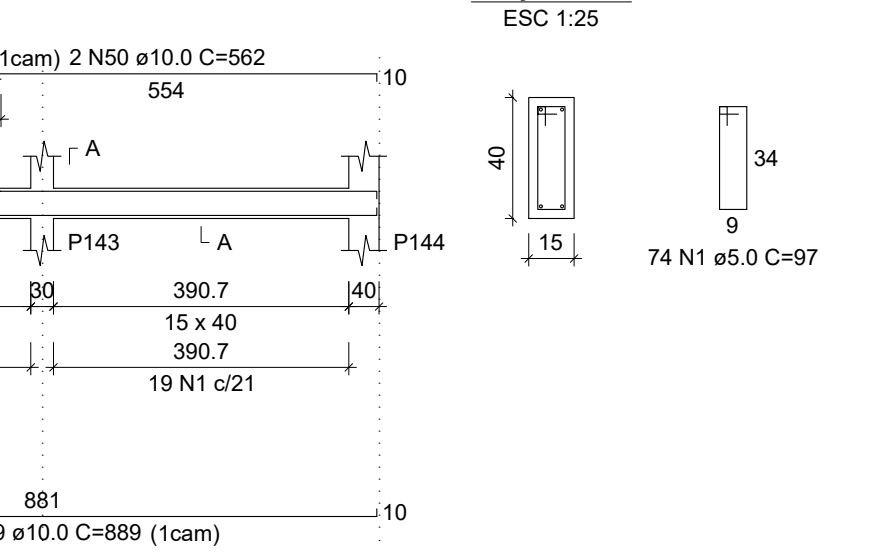
V36 (15 x 40)



V40 (15 x 40)



V42 (15 x 40)



RELAÇÃO DO AÇO

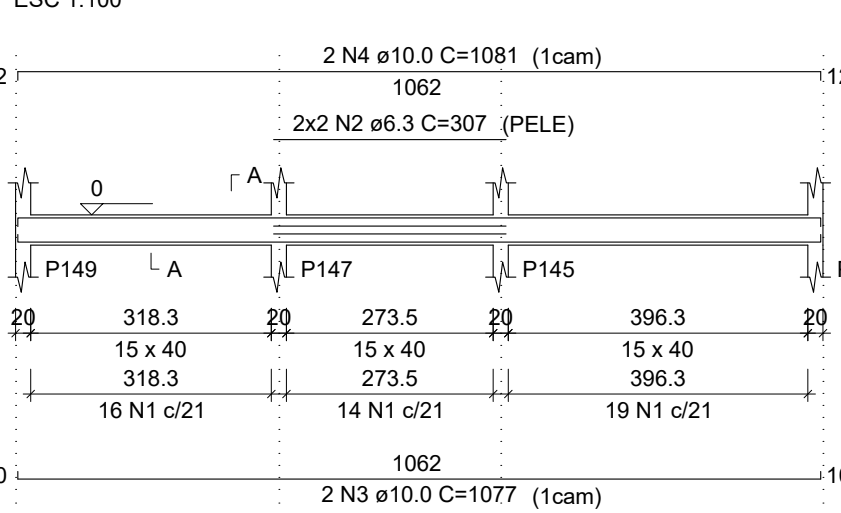
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	5.0	995	97	96515
CA60	2	10.0	2	839	1678
CA50	3	10.0	1	205	205
CA50	4	10.0	2	887	1774
CA50	5	10.0	2	202	404
CA50	6	10.0	2	236	472
CA50	7	10.0	2	204	408
CA50	8	10.0	2	224	448
CA50	9	10.0	8	1076	8608
CA50	10	10.0	2	866	1732
CA50	11	10.0	2	830	1660
CA50	12	10.0	6	1198	7188
CA50	13	10.0	2	530	1060
CA50	14	10.0	2	822	1644
CA50	15	10.0	2	834	1668
CA50	16	10.0	8	1084	8672
CA50	17	10.0	2	862	1724
CA50	18	10.0	2	855	1710
CA50	19	10.0	2	1199	2398
CA50	20	10.0	2	509	1018
CA50	21	10.0	2	826	1652
CA50	22	10.0	2	828	1656
CA50	23	10.0	2	135	270
CA50	24	10.0	2	171	342
CA50	25	10.0	2	1069	2138
CA50	26	10.0	2	1071	2142
CA50	27	10.0	2	1071	2142
CA50	28	10.0	2	1073	2146
CA50	29	10.0	2	1068	2136
CA50	30	10.0	2	1072	2144
CA50	31	10.0	2	1069	2138
CA50	32	10.0	2	1073	2146
CA50	33	10.0	2	137	274
CA50	34	10.0	2	171	342
CA50	35	10.0	2	640	1280
CA50	36	10.0	1	132	132
CA50	37	10.0	2	661	1322
CA50	38	10.0	2	1067	2134
CA50	39	10.0	2	1071	2142
CA50	40	10.0	2	643	1286
CA50	41	10.0	2	663	1326
CA50	42	10.0	2	427	854
CA50	43	10.0	2	439	878
CA50	44	10.0	2	1096	2192
CA50	45	10.0	2	856	1712
CA50	46	10.0	2	1036	2072
CA50	47	10.0	2	1200	2400
CA50	48	10.0	2	626	1252
CA50	49	10.0	4	889	3556
CA50	50	10.0	2	562	1124

RESUMO DO AÇO

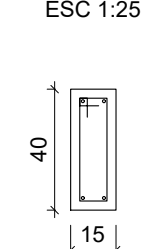
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	10.0	918	566
CA60	5.0	965.1	148.8
PESO TOTAL (kg)			
CA50			566
CA60			148.8

Volume de concreto (C-25) = 13.35 m³
Área de forma = 211.42 m²

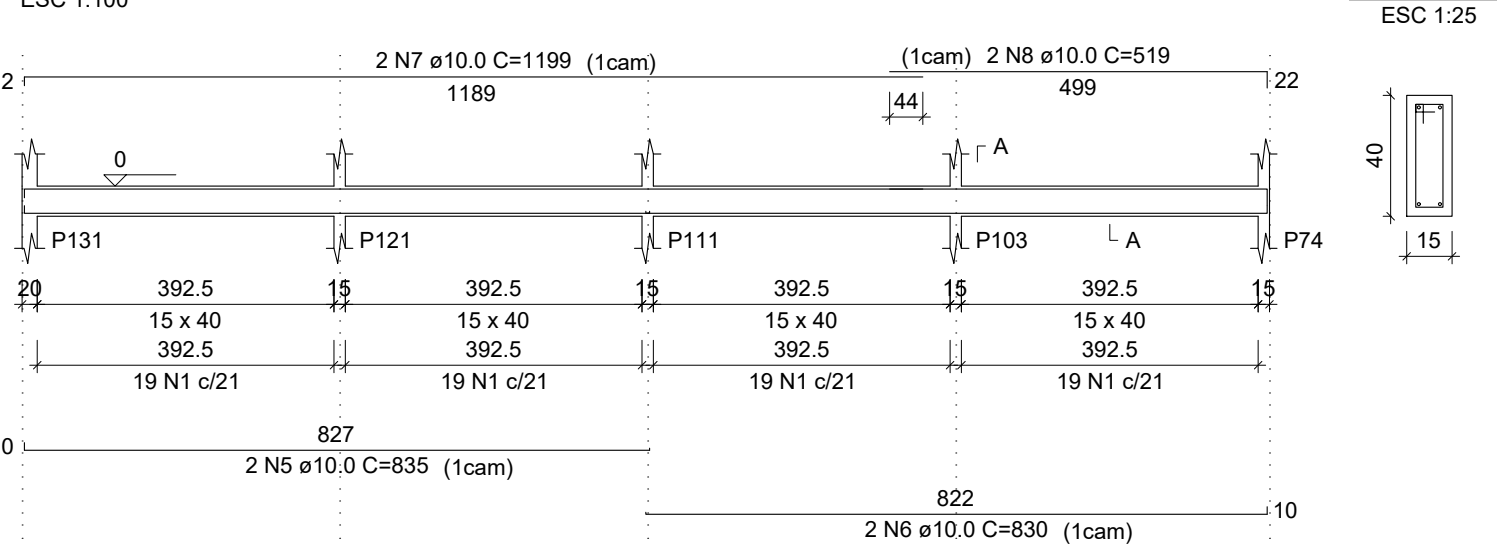
V43 (15 x 40)



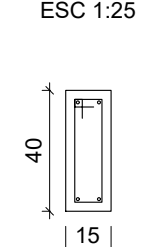
SEÇÃO A-A



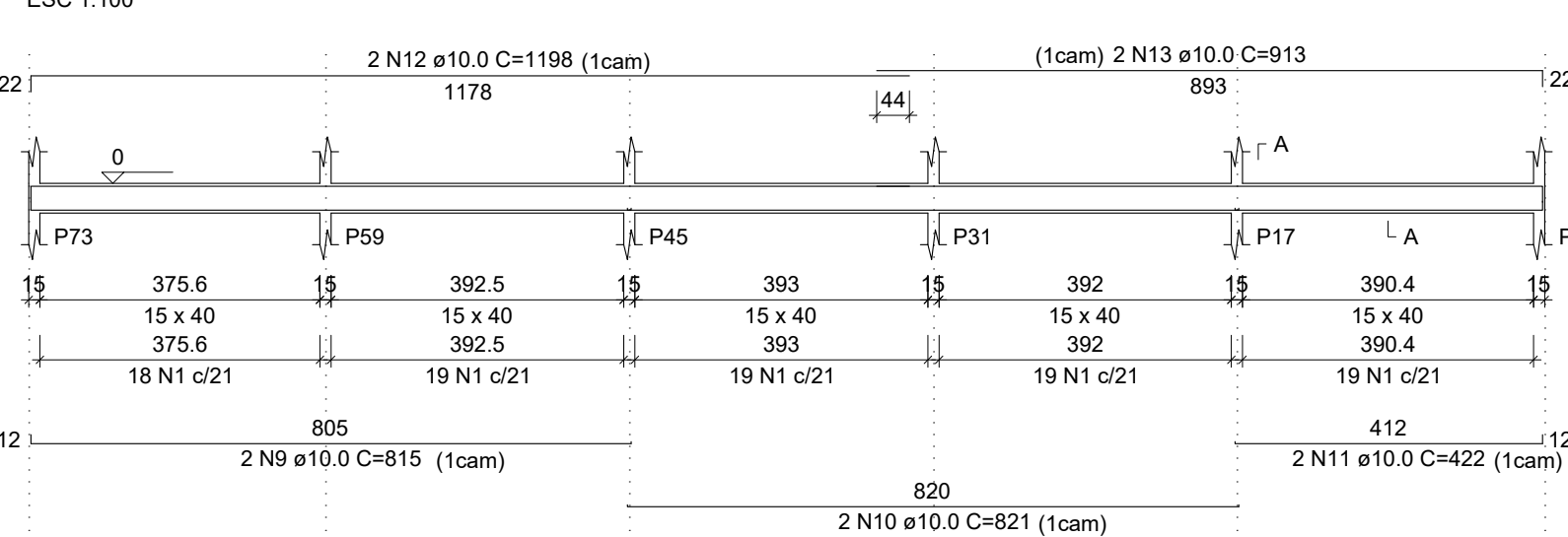
V44 (15 x 40)



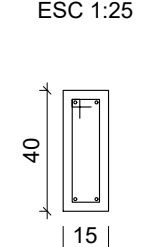
SEÇÃO A-A



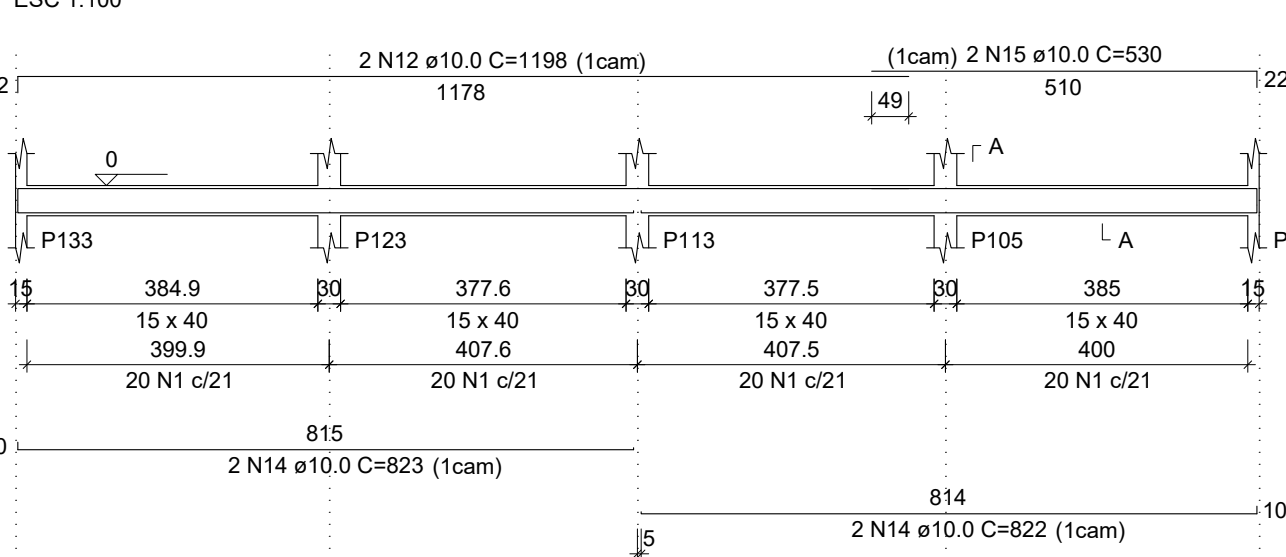
V45 (15 x 40)



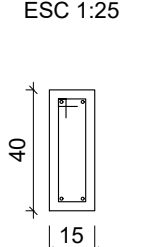
SEÇÃO A-A



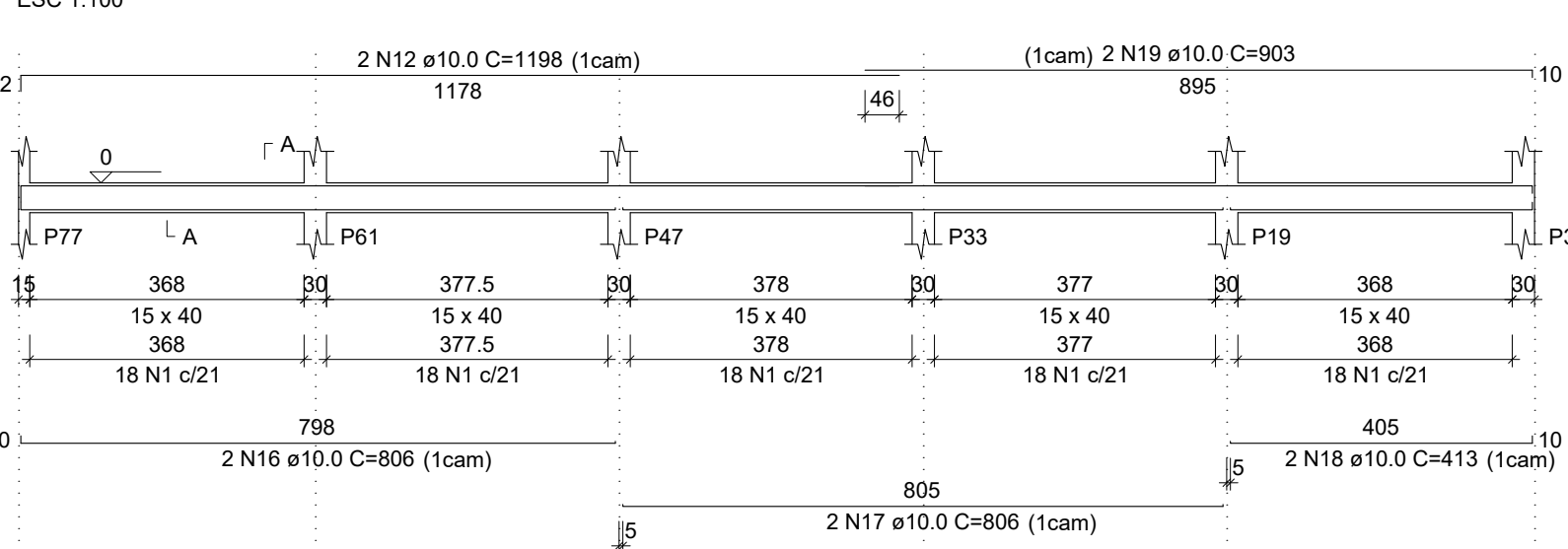
V46 (15 x 40)



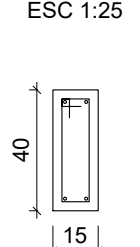
SEÇÃO A-A



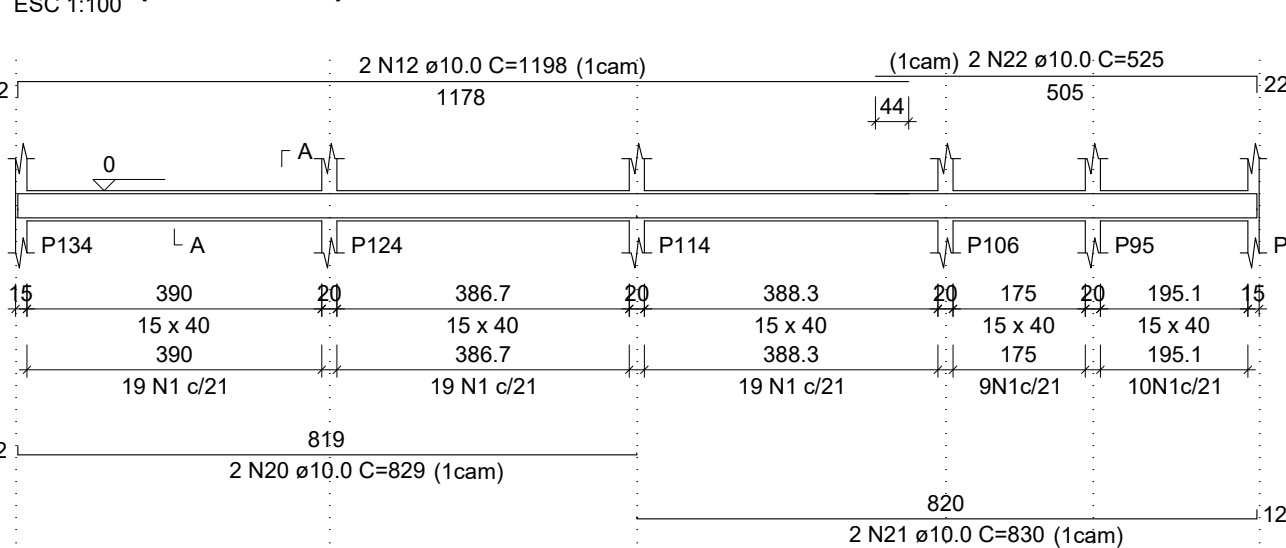
V47 (15 x 40)



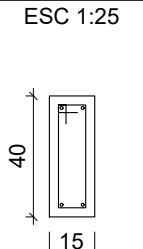
SEÇÃO A-A



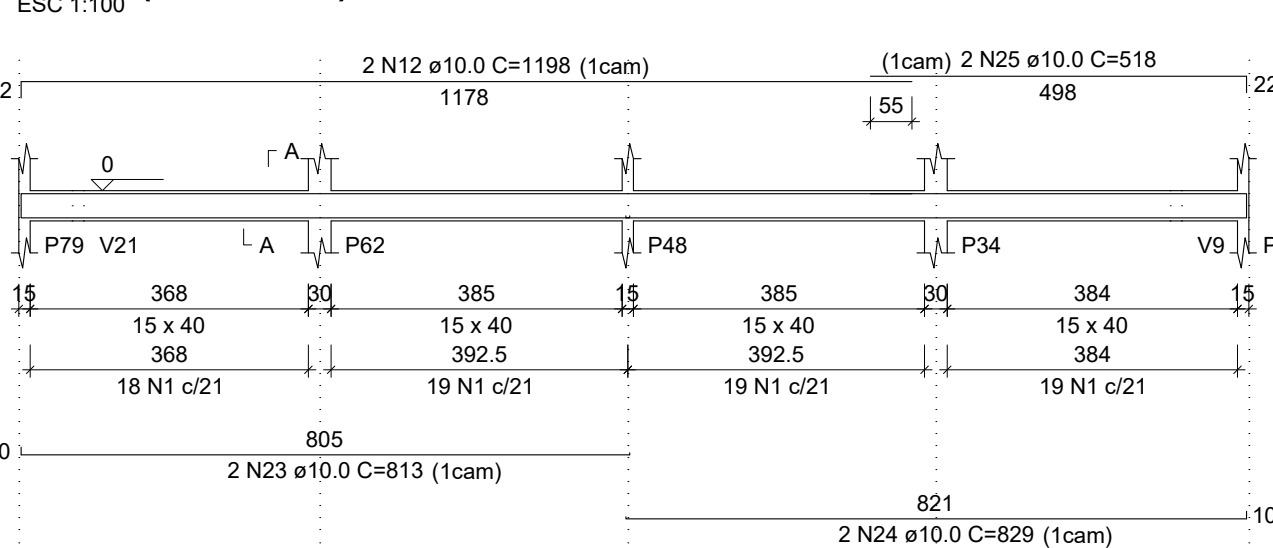
V48 (15 x 40)



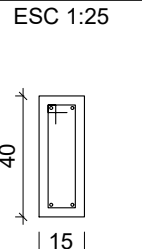
SEÇÃO A-A



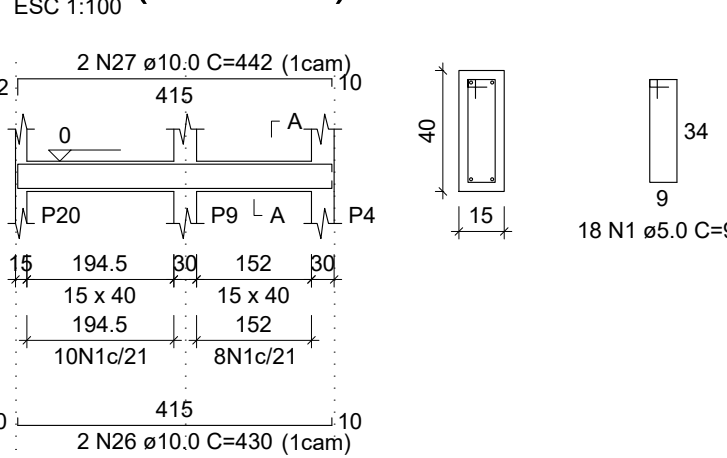
V49 (15 x 40)



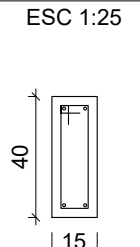
SEÇÃO A-A



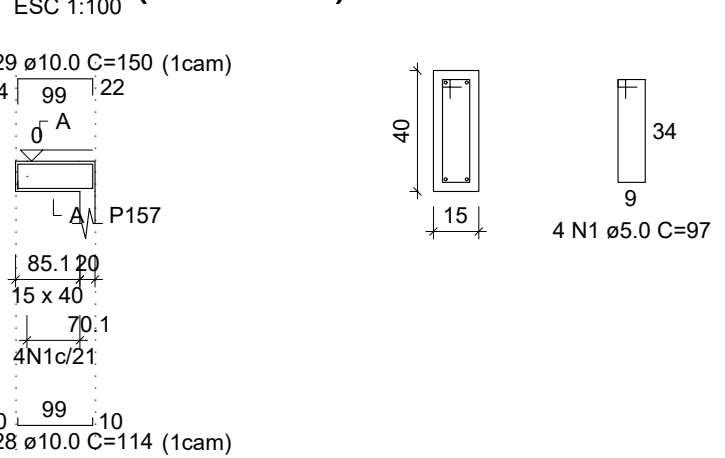
V50 (15 x 40)



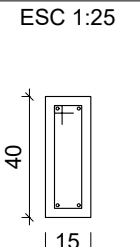
SEÇÃO A-A



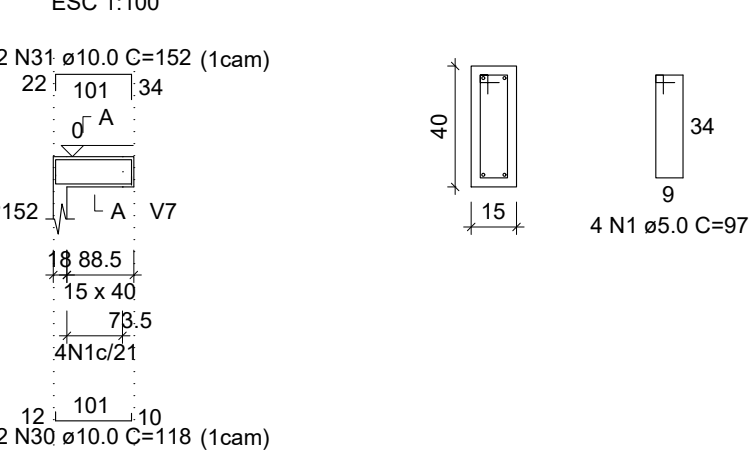
V51 (15 x 40)



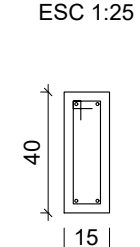
SEÇÃO A-A



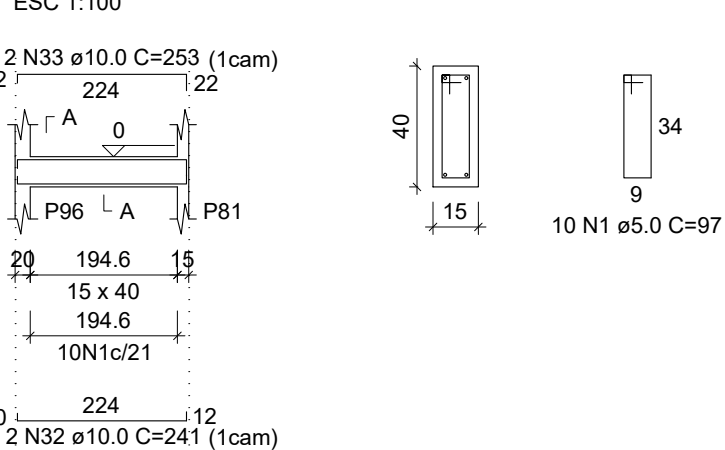
V52 (15 x 40)



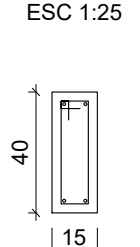
SEÇÃO A-A



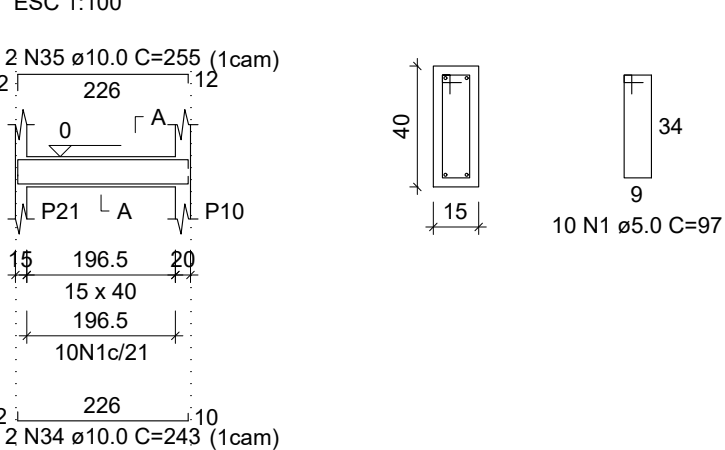
V53 (15 x 40)



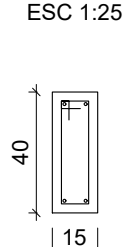
SEÇÃO A-A



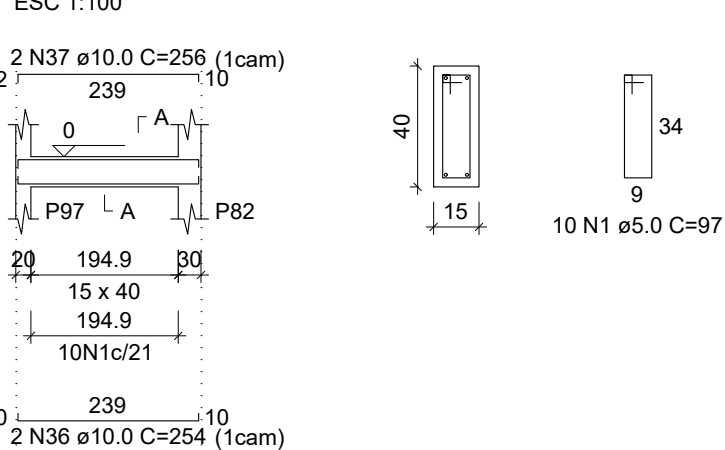
V54 (15 x 40)



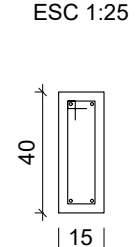
SEÇÃO A-A



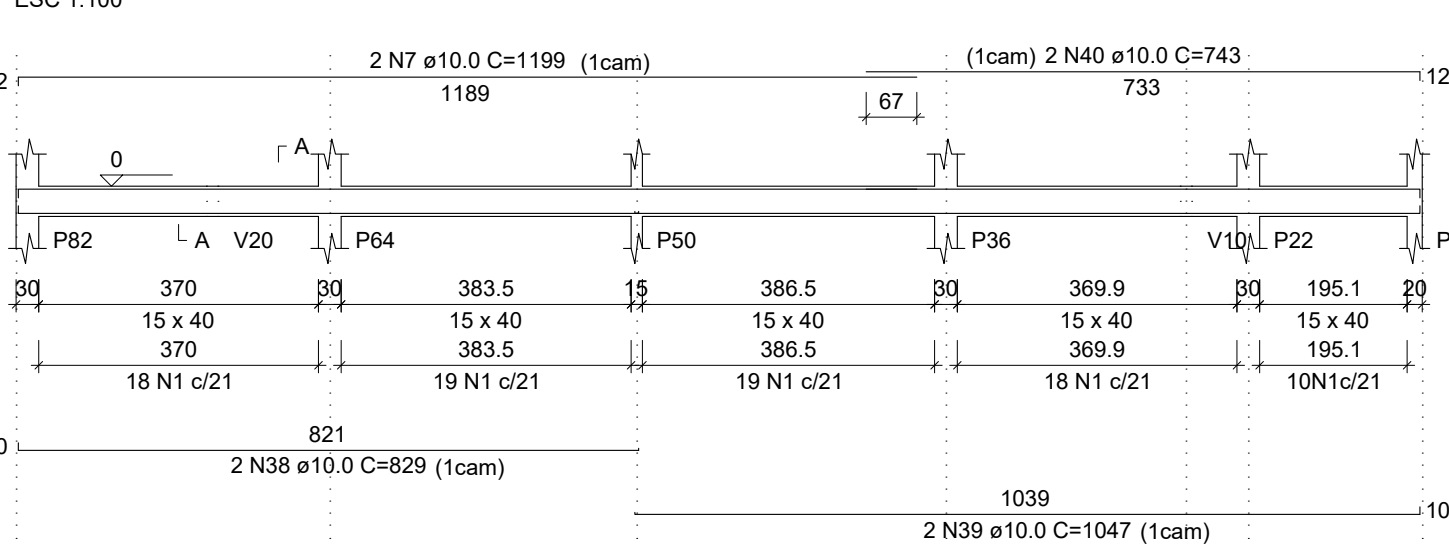
V55 (15 x 40)



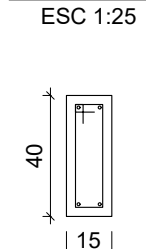
SEÇÃO A-A



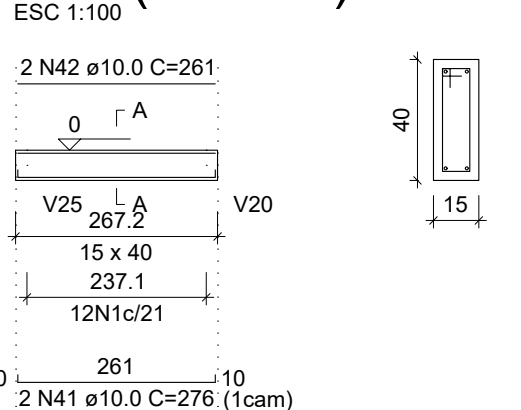
V56 (15 x 40)



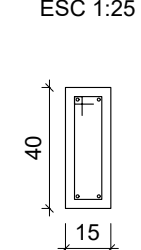
SEÇÃO A-A



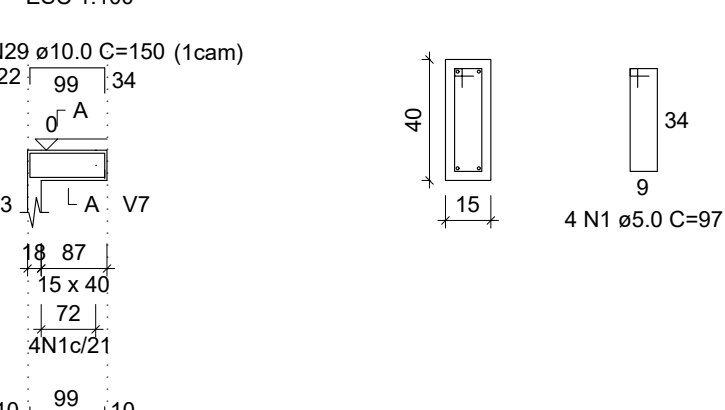
V57 (15 x 40)



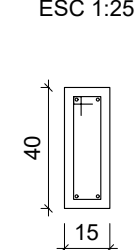
SEÇÃO A-A



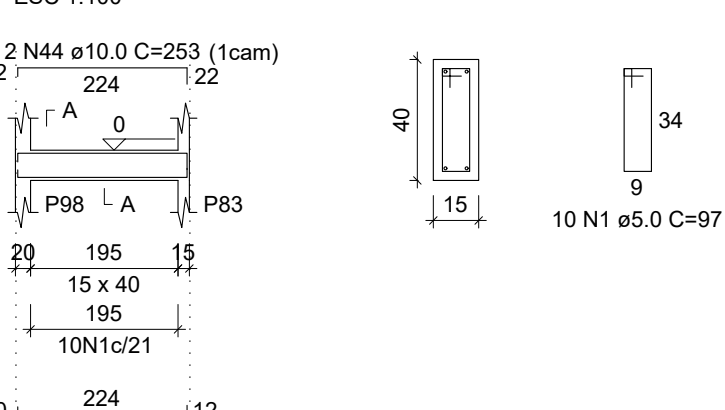
V58 (15 x 40)



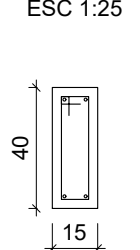
SEÇÃO A-A



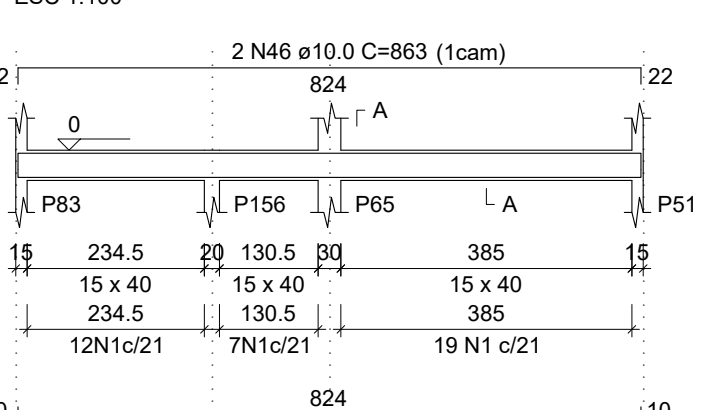
V59 (15 x 40)



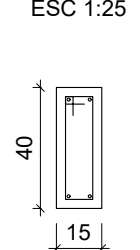
SEÇÃO A-A



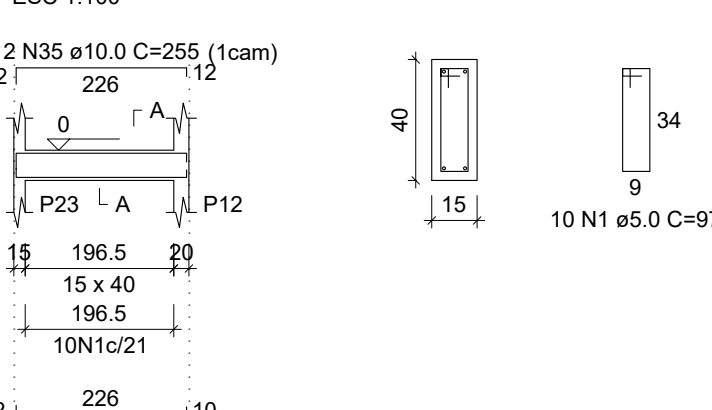
V60 (15 x 40)



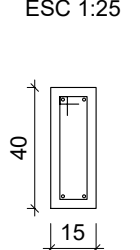
SEÇÃO A-A



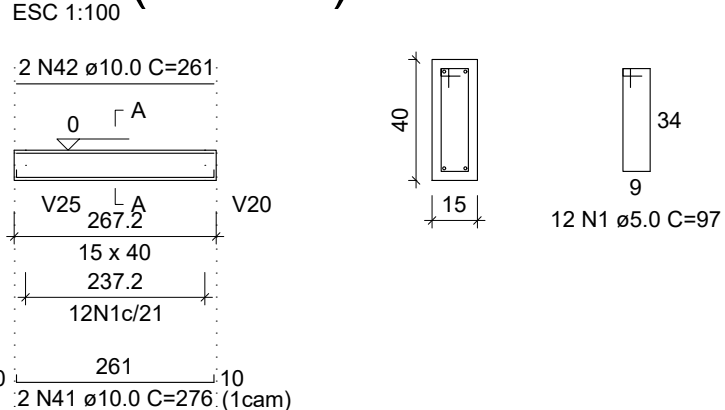
V61 (15 x 40)



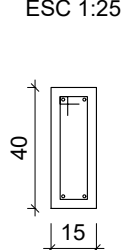
SEÇÃO A-A



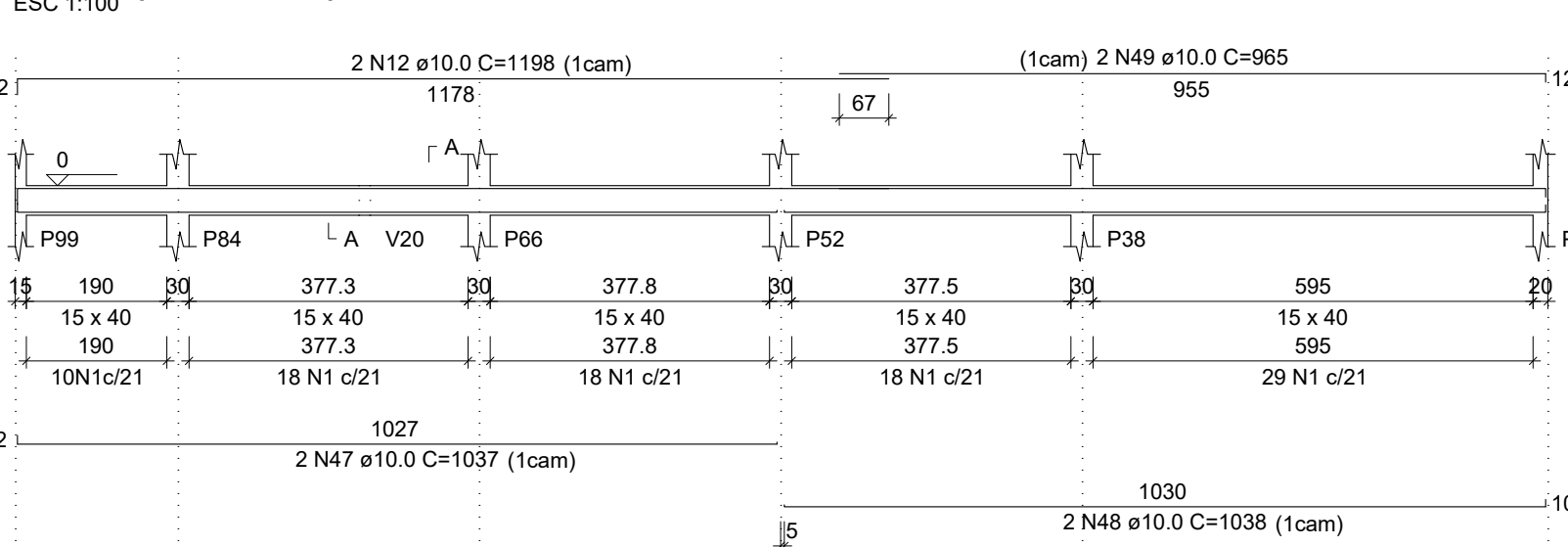
V62 (15 x 40)



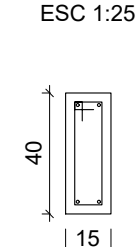
SEÇÃO A-A



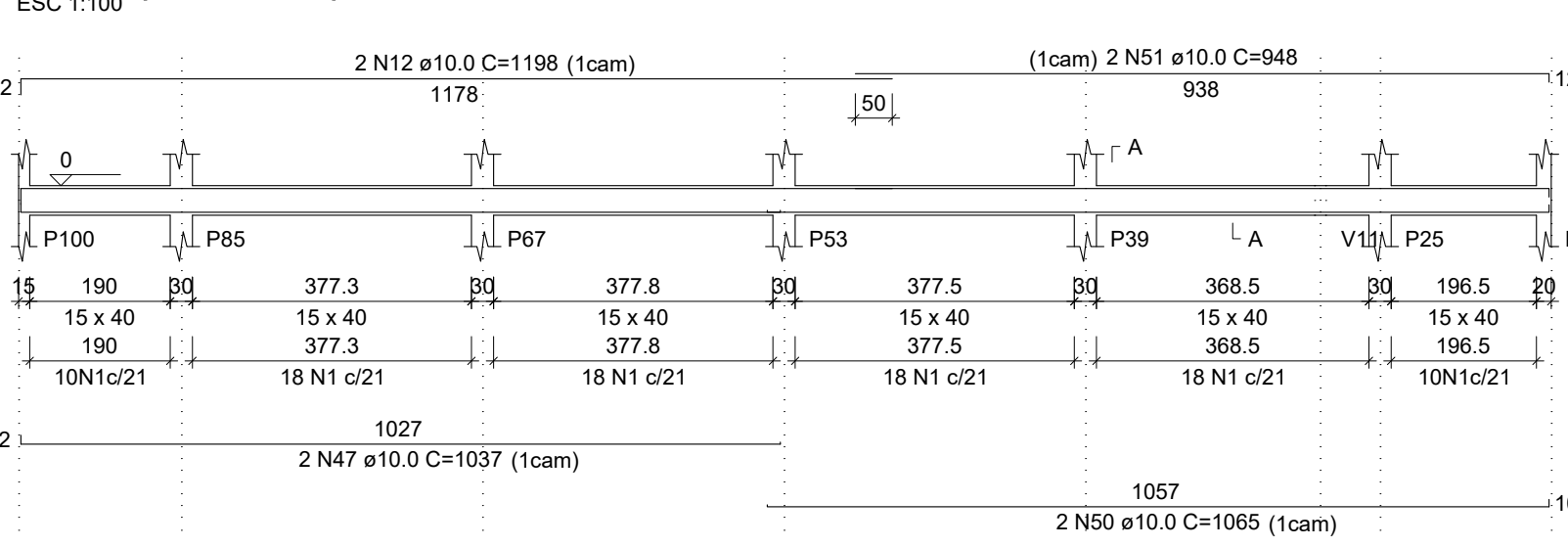
V63 (15 x 40)



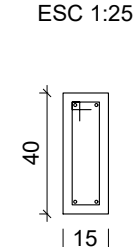
SEÇÃO A-A



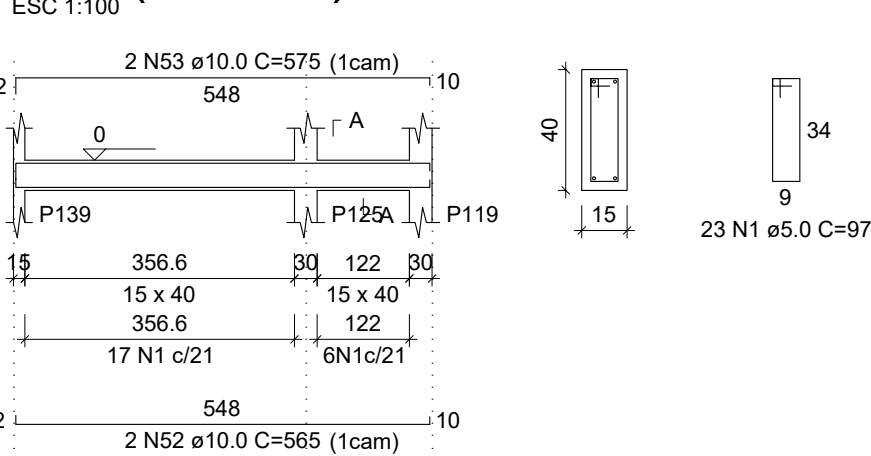
V64 (15 x 40)



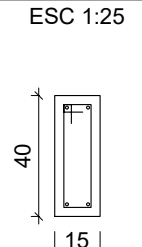
SEÇÃO A-A



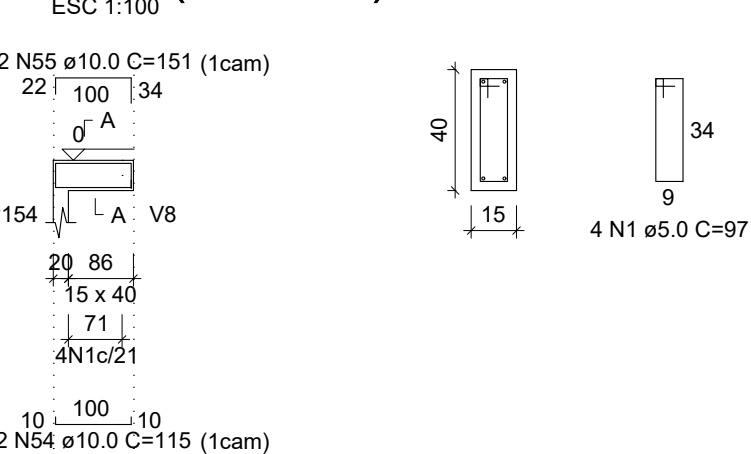
V65 (15 x 40)



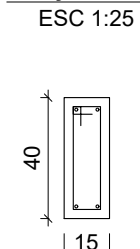
SEÇÃO A-A



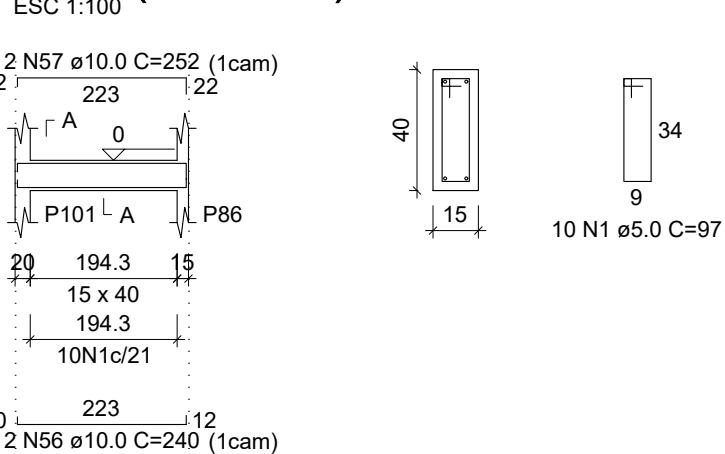
V66 (15 x 40)



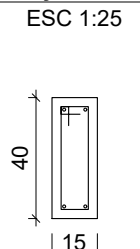
SEÇÃO A-A



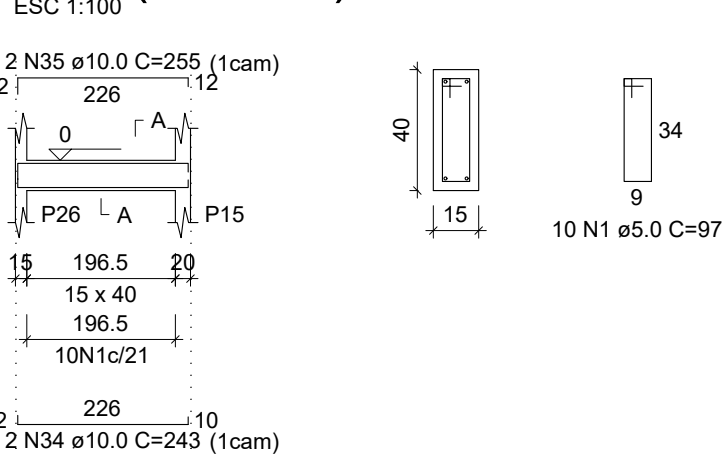
V67 (15 x 40)



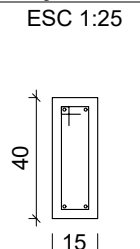
SEÇÃO A-A



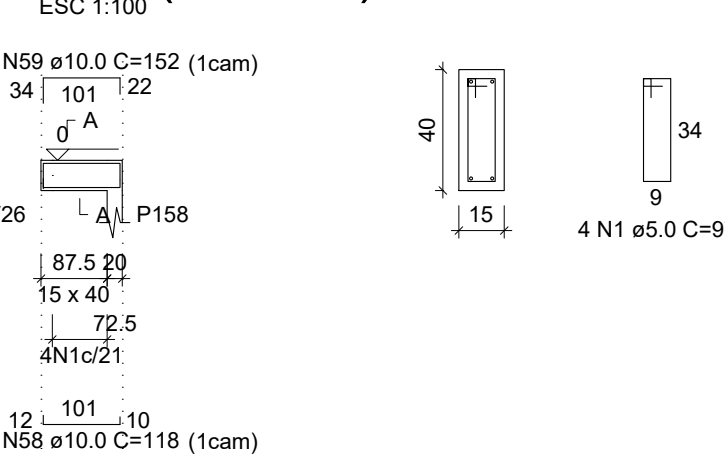
V68 (15 x 40)



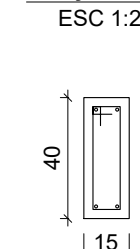
SEÇÃO A-A



V69 (15 x 40)



SEÇÃO A-A



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V43	1	5.0	1002	97	97194
V44	2	6.3	4	307	1228
V45	3	10.0	2	1077	2154
V46	4	10.0	2	1081	2162
V47	5	10.0	2	835	1670
V48	6	10.0	2	830	1660
V49	7	10.0	4	1199	4796
V50	8	10.0	2	519	1038
V51	9	10.0	2	815	1630
V52	10	10.0	2	821	1642
V53	11	10.0	2	422	844
V54	12	10.0	14	1198	16772
V55	13	10.0	2	913	1826
V56	14	10.0	4	823	3292
V57	15	10.0	2	530	1060
V58	16	10.0	2	806	1612
V59	17	10.0	2	806	1612
V60	18	10.0	2	413	826
V61	19	10.0	2	903	1806
V62	20	10.0	2	829	1658
V63	21	10.0	2	830	1660
V64	22	10.0	2	525	1050
V65	23	10.0	2	813	1626
V66	24	10.0	2	829	1658
V67	25	10.0	2	518	1036
V68	26	10.0	2	430	860
V69	27	10.0	2	442	884
	28	10.0	4	114	456
	29	10.0	4	150	600
	30	10.0	2	118	236
	31	10.0	2	152	304
	32	10.0	2	241	482
	33	10.0	2	253	506
	34	10.0	6	243	1458
	35	10.0	6	255	1530
	36	10.0	2	254	508
	37	10.0	2	256	512
	38	10.0	2	829	1658
	39	10.0	2	1047	2094
	40	10.0	2	743	1486
	41	10.0	4	276	1104
	42	10.0	4	261	1044
	43	10.0	2	241	482
	44	10.0	2	253	506
	45	10.0	2	839	1678
	46	10.0	2	863	1726
	47	10.0	4	1037	4148
	48	10.0	2	1038	2076
	49	10.0	2	965	1930
	50	10.0	2	1065	2130
	51	10.0	2	948	1896
	52	10.0	2	565	1130
	53	10.0	2	575	1150
	54	10.0	2	115	230
	55	10.0	2	151	302
	56	10.0	2	240	480
	57	10.0	2	252	504
	58	10.0	2	118	236
	59	10.0	2	152	304

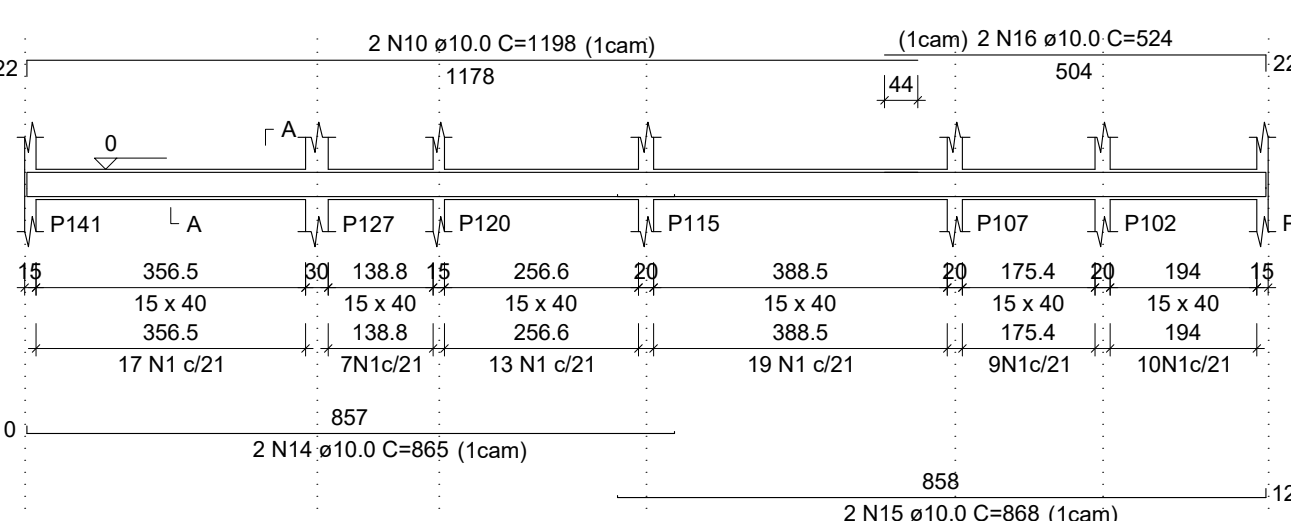
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	6.3	12.3	3
CA60	10.0	917.2	565.5
CA60	5.0	971.9	149.8

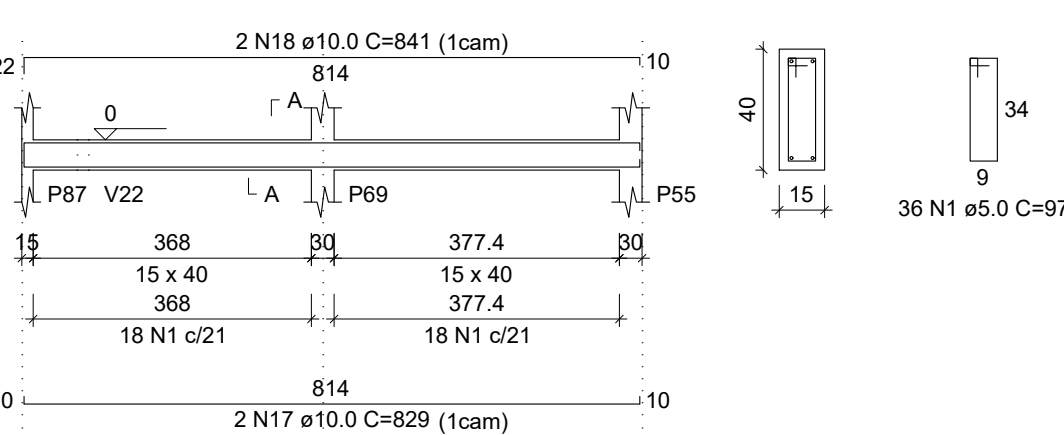
PESO TOTAL (kg)
CA50 568.5
CA60 149.8

Volume de concreto (C-25) = 13.32 m³
Área de forma = 210.95 m²

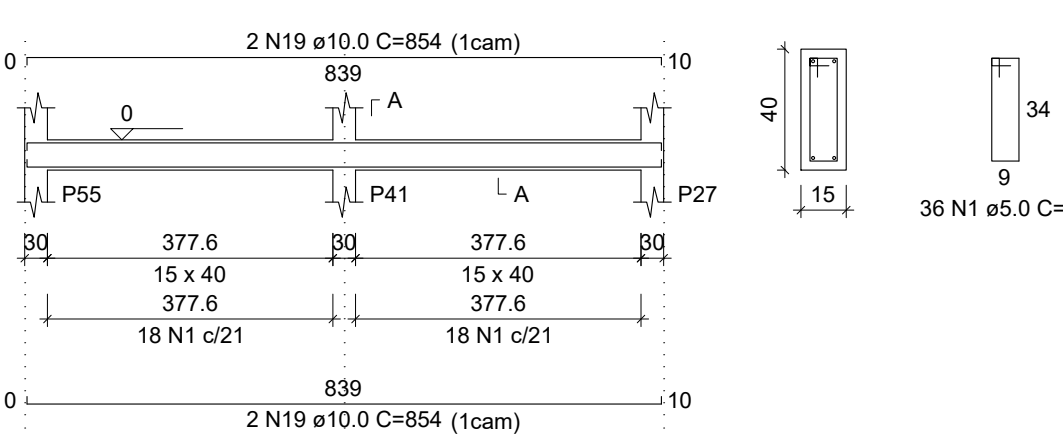
V70 (15 x 40)



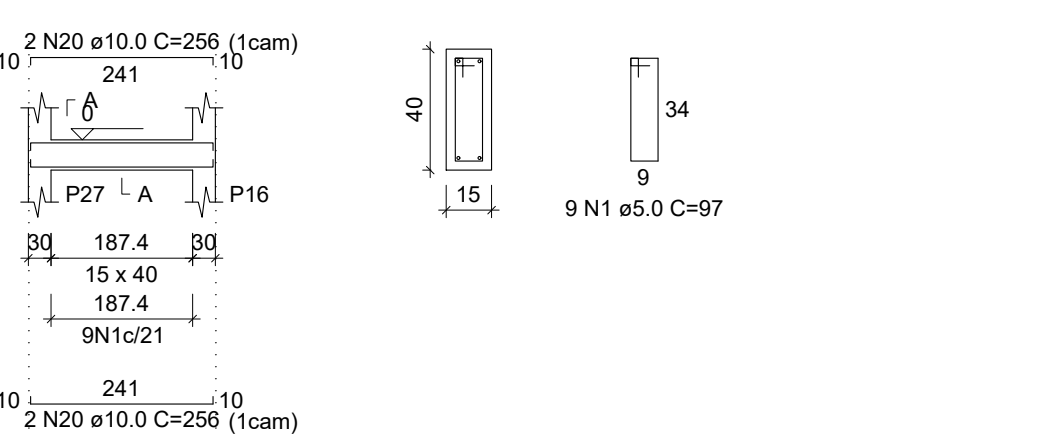
V71 (15 x 40)



V72 (15 x 40)

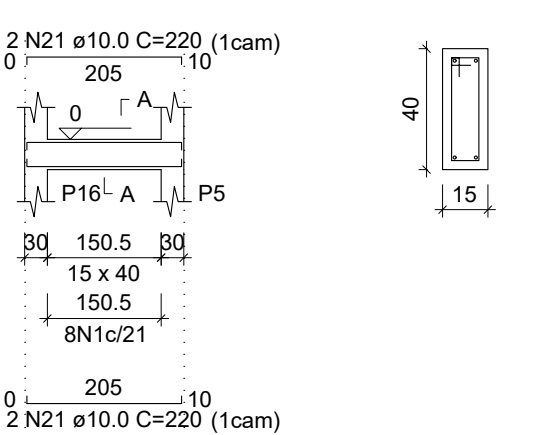


V73 (15 x 40)

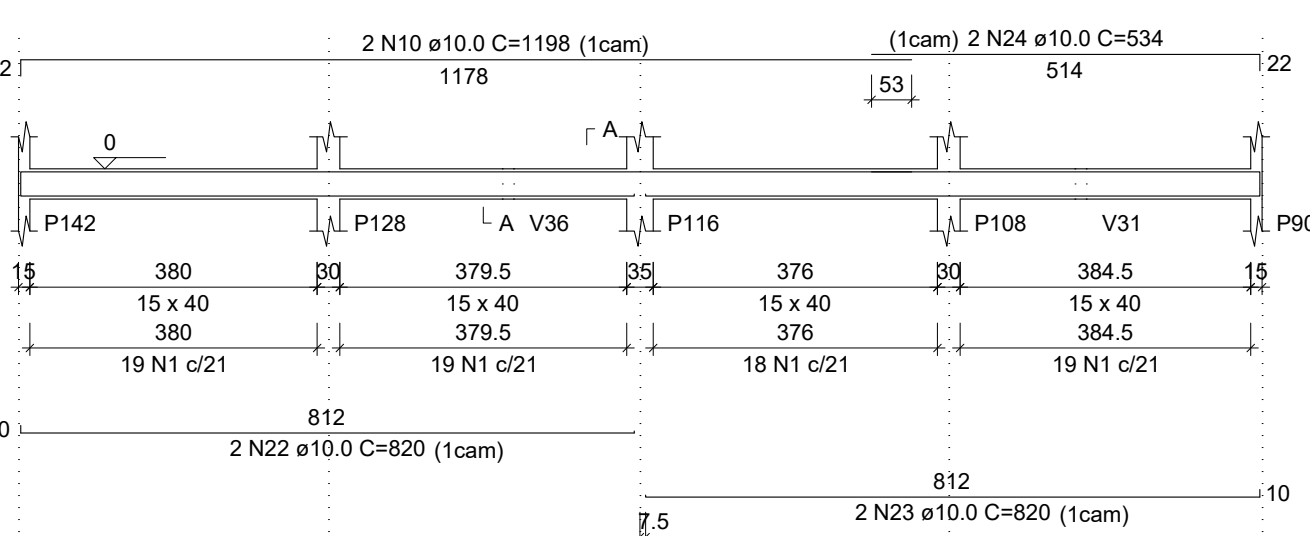


RELAÇÃO DO AÇO					
AÇO	N	DIAM (mm)	QUANT	C-UNIT (cm)	C-TOTAL (cm)
V1-L2	1	5.0	888	97	86136
V4-L2	2	5.0	4	160	640
V70-L1	3	5.3	4	729	2916
V72-L1	4	10.0	2	1107	2214
V75-L1	5	10.0	2	1099	2198
V78-L1	6	10.0	2	256	512
V81-L1	7	10.0	2	1140	2280
V84-L1	8	10.0	2	829	1658
V87-L1	9	10.0	2	827	1654
	10	10.0	8	1198	9584
	11	10.0	2	544	1088
	12	10.0	2	822	1644
	13	10.0	2	836	1672
	14	10.0	2	865	1730
	15	10.0	2	868	1736
	16	10.0	2	524	1048
	17	10.0	2	829	1658
	18	10.0	2	841	1682
	19	10.0	4	854	3416
	20	10.0	4	256	1024
	21	10.0	4	220	880
	22	10.0	2	820	1640
	23	10.0	2	820	1640
	24	10.0	2	534	1068
	25	10.0	2	424	848
	26	10.0	2	434	868
	27	10.0	2	830	1660
	28	10.0	2	848	1696
	29	10.0	2	1198	2396
	30	10.0	2	530	1060
	31	10.0	2	201	402
	32	10.0	2	237	474
	33	10.0	2	202	404
	34	10.0	2	238	476
	35	10.0	2	251	502
	36	10.0	2	287	574
	37	10.0	2	432	864
	38	10.0	2	417	834
	39	10.0	2	433	866
	40	10.0	2	457	914
	41	10.0	2	846	1692
	42	10.0	2	858	1716
	43	10.0	2	437	874
	44	10.0	2	451	902
	45	10.0	2	191	382
	46	10.0	2	227	454
	47	10.0	2	1096	2192
	48	10.0	2	816	1632
	49	10.0	2	830	1660
	50	10.0	2	1199	2398
	51	10.0	2	1200	2400
	52	10.0	2	449	898
	53	10.0	2	813	1626
	54	10.0	2	821	1642
	55	10.0	2	422	844
	56	10.0	2	905	1810
	57	12.5	2	1135	2270

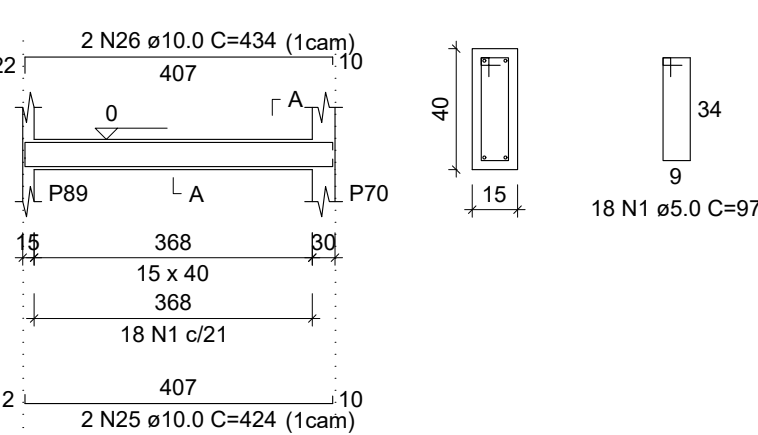
V74 (15 x 40)



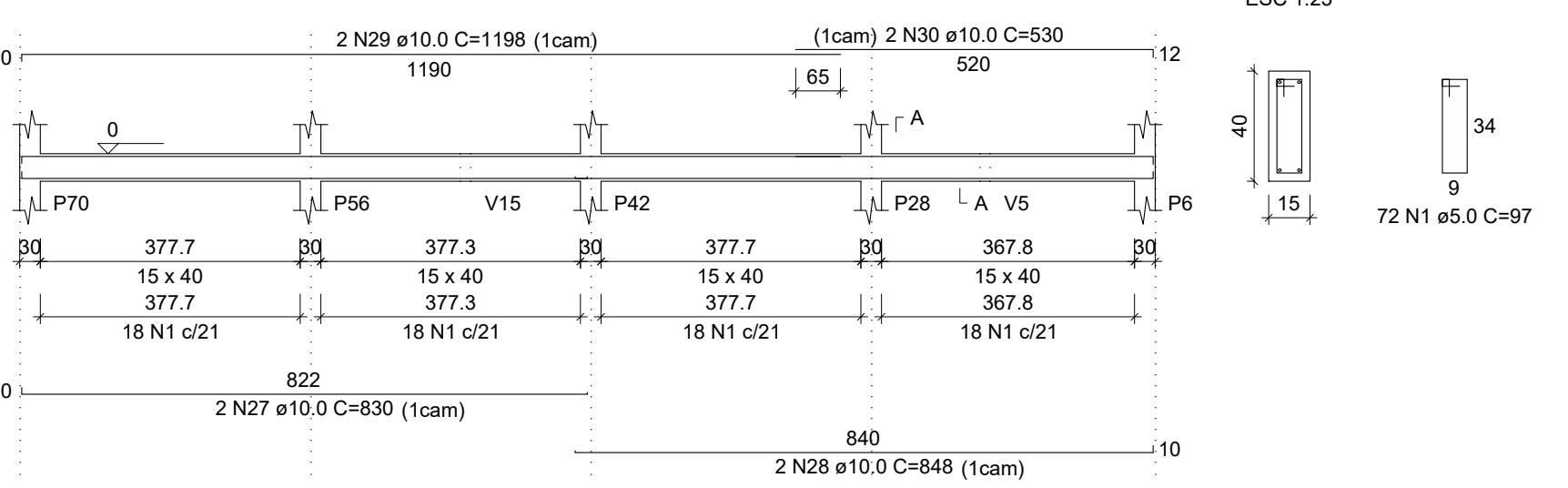
V75 (15 x 40)



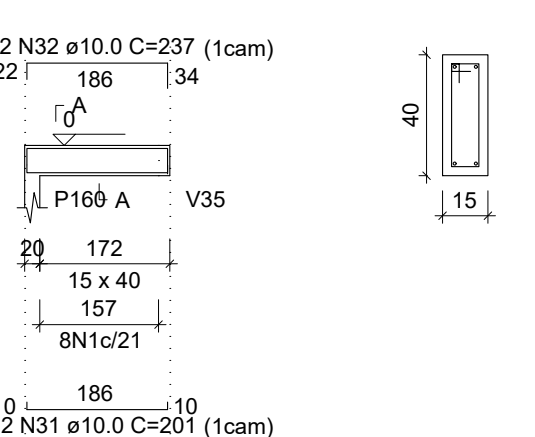
V76 (15 x 40)



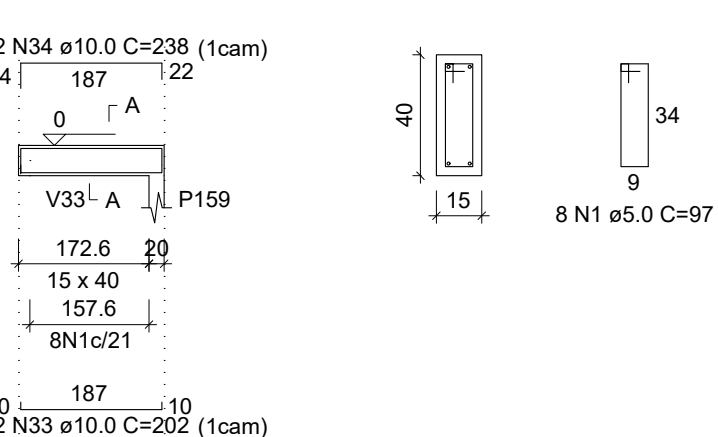
V77 (15 x 40)



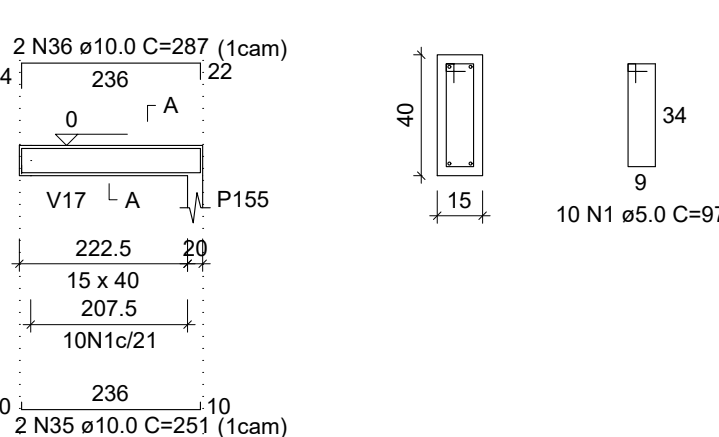
V78 (15 x 40)



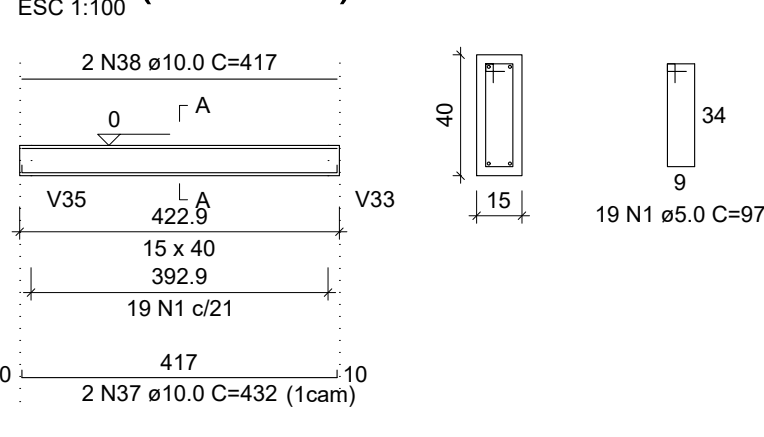
V79 (15 x 40)



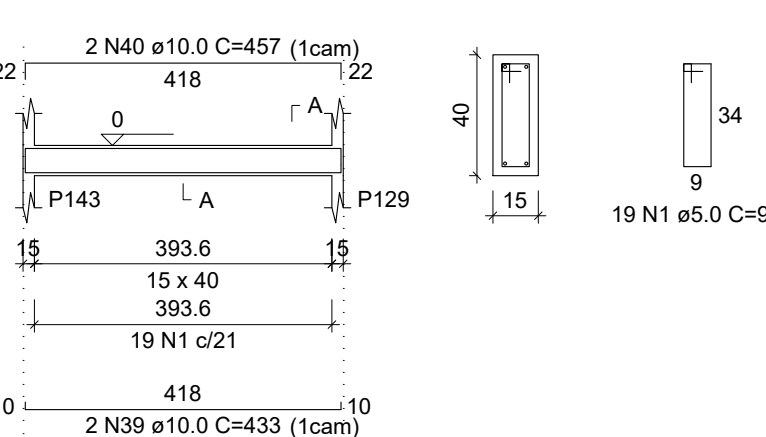
V80 (15 x 40)



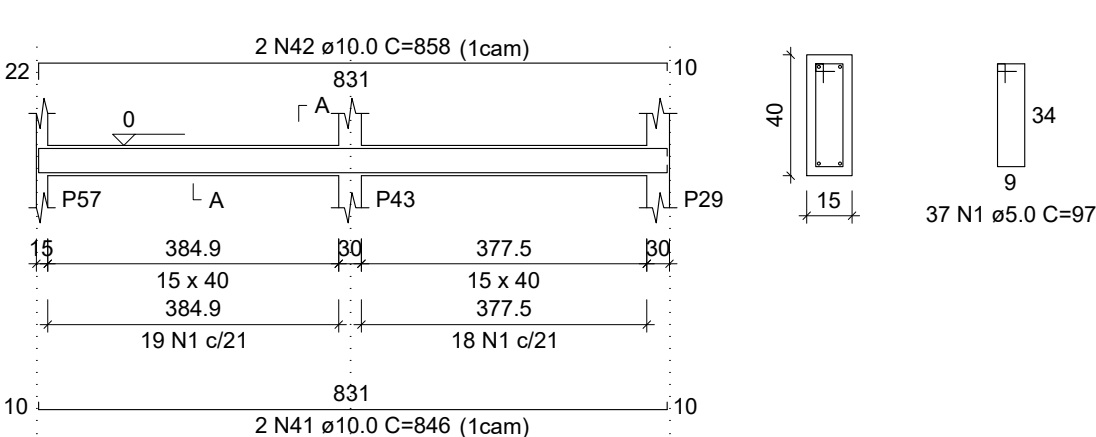
V81 (15 x 40)



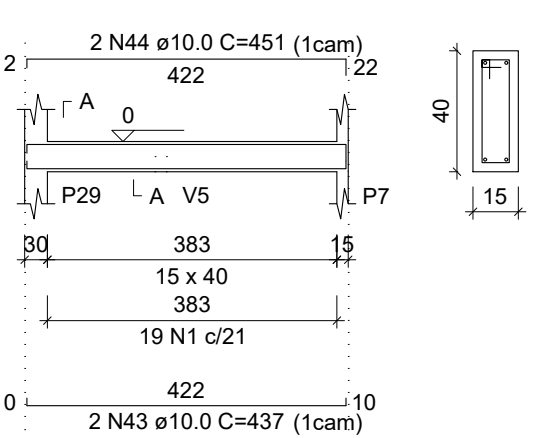
V82 (15 x 40)



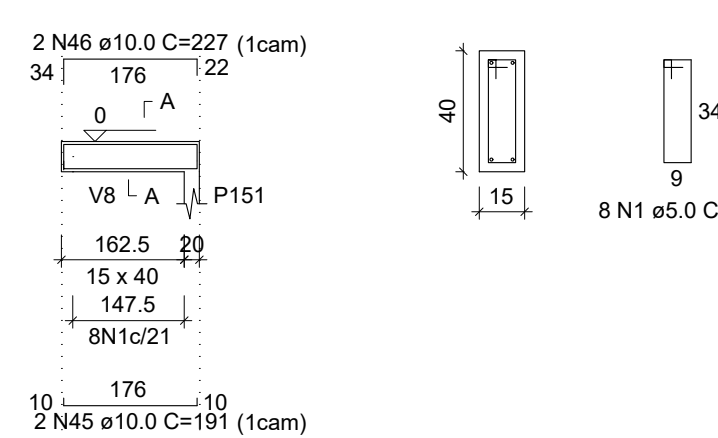
V83 (15 x 40)



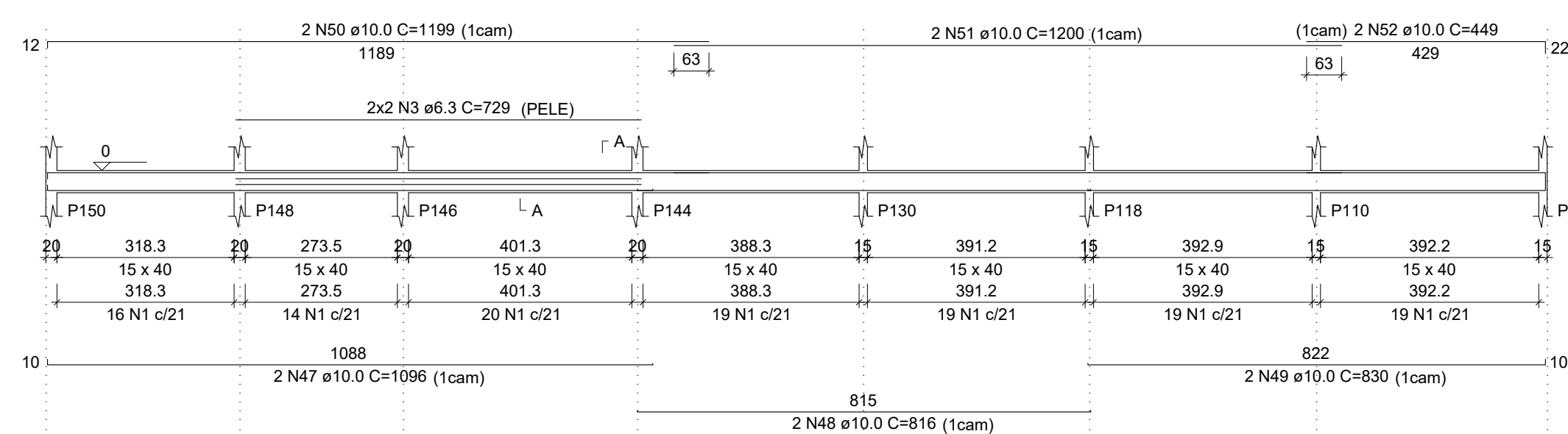
V84 (15 x 40)



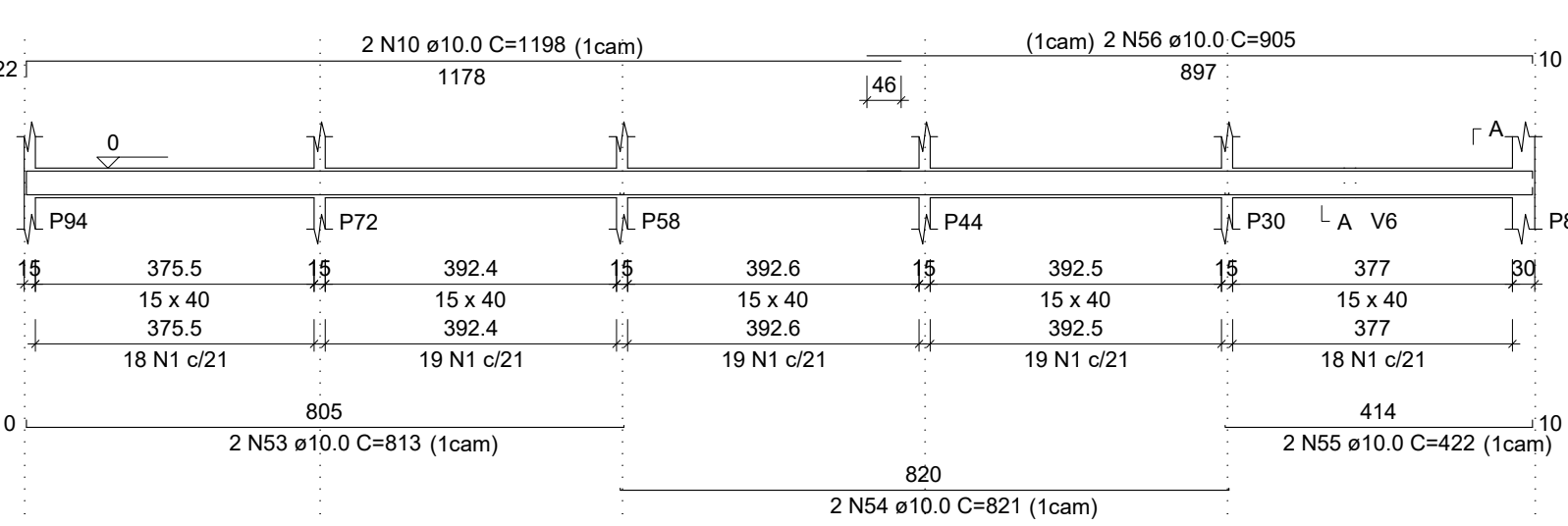
V85 (15 x 40)



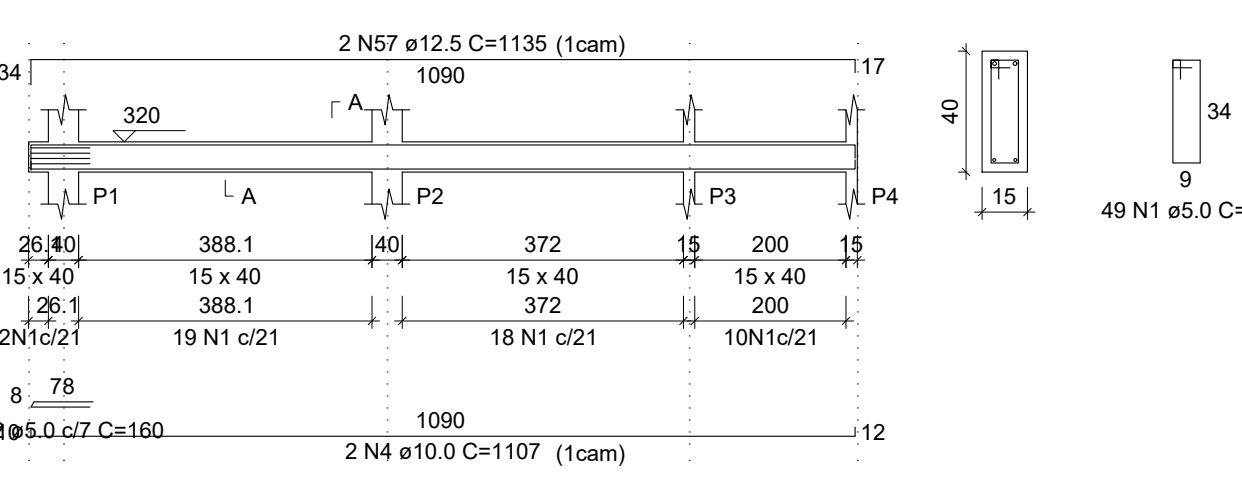
V86 (15 x 40)



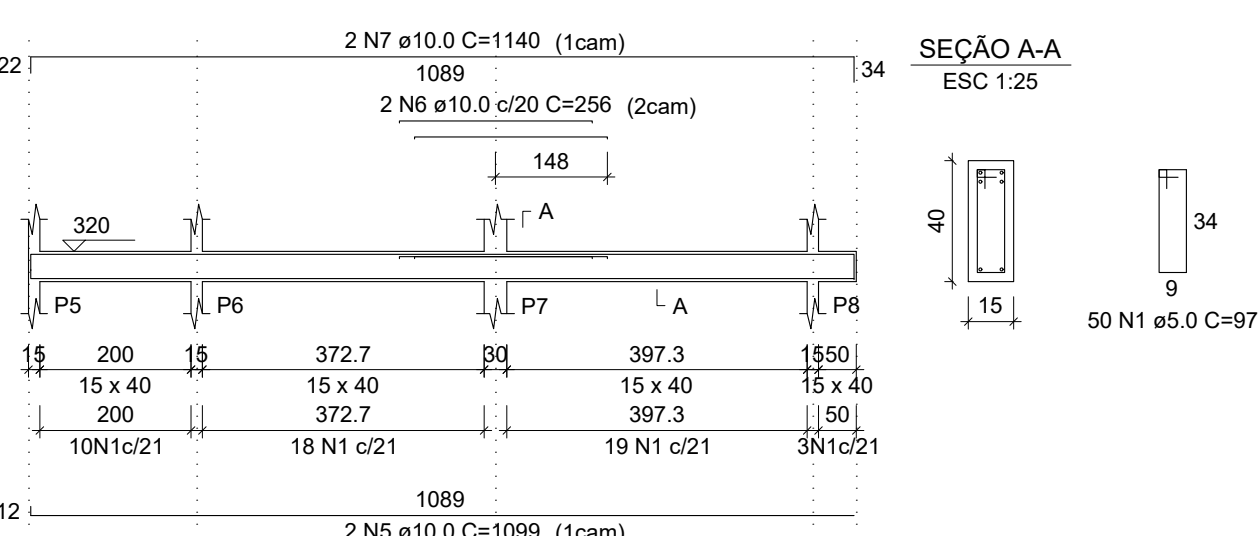
V87 (15 x 40)



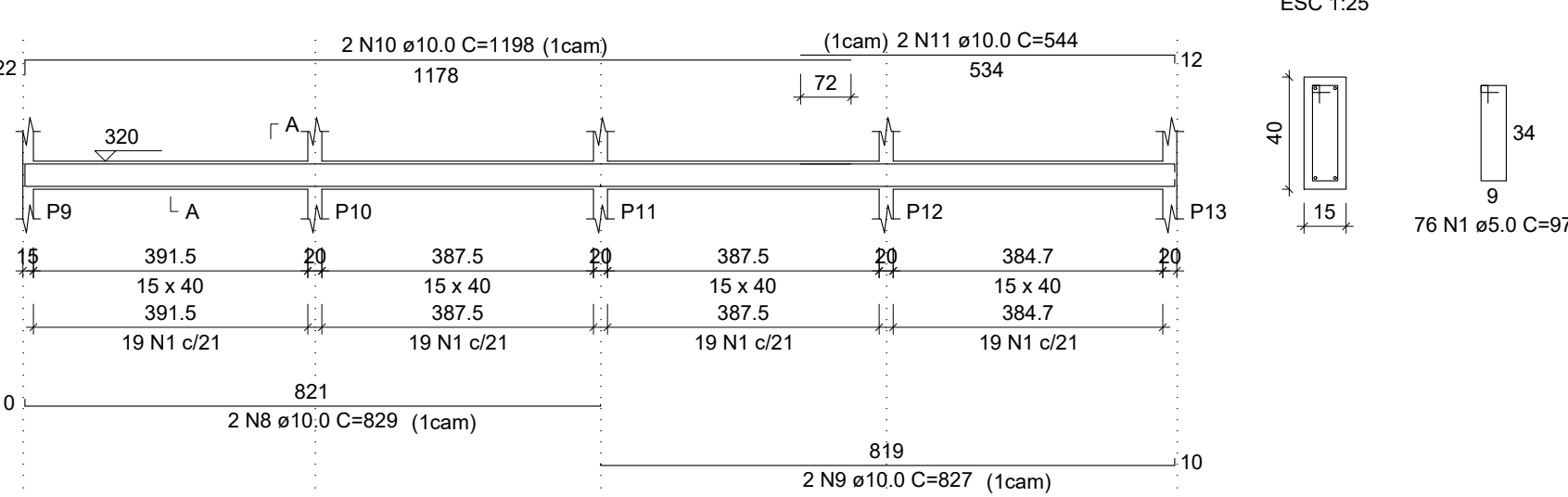
V1 (15 x 40)



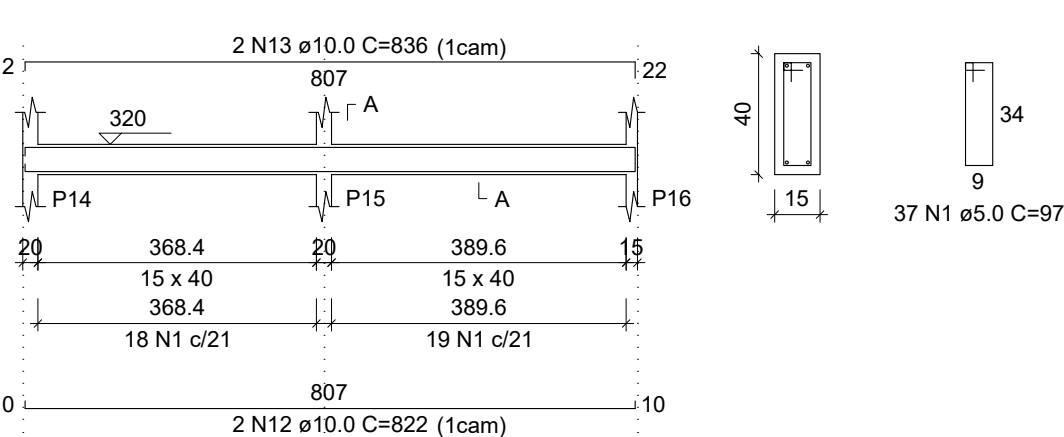
V2 (15 x 40)



V3 (15 x 40)



V4 (15 x 40)





INSTITUTO FEDERAL
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DIRETORIA DE ENGENHARIA
E INFRAESTRUTURA
Rua Aristarco Lopes, 240 | Centro
Petrolina/PE | CEP: 56.302-100

YCAR:

PROJETO ESTRUTURAL DO CAMPUS
ÁGUAS BELAS DO IFSertãoPE

ENGENHEIRO:
Rodovia PE-300, S/N, CEP: 55340-000
Águas Belas/PE

DESCRIÇÃO:
VIGAS DO PAVIMENTO TÉRREO IV (BLOCO ADM - PARTE 2.)

ESCALA:
1/75

DATA:
ABRIL/2025

ASSINATURACARIMBO - DIREÇÃO GERAL

ASSINATURACARIMBO - RESPONSÁVEL TÉCNICO

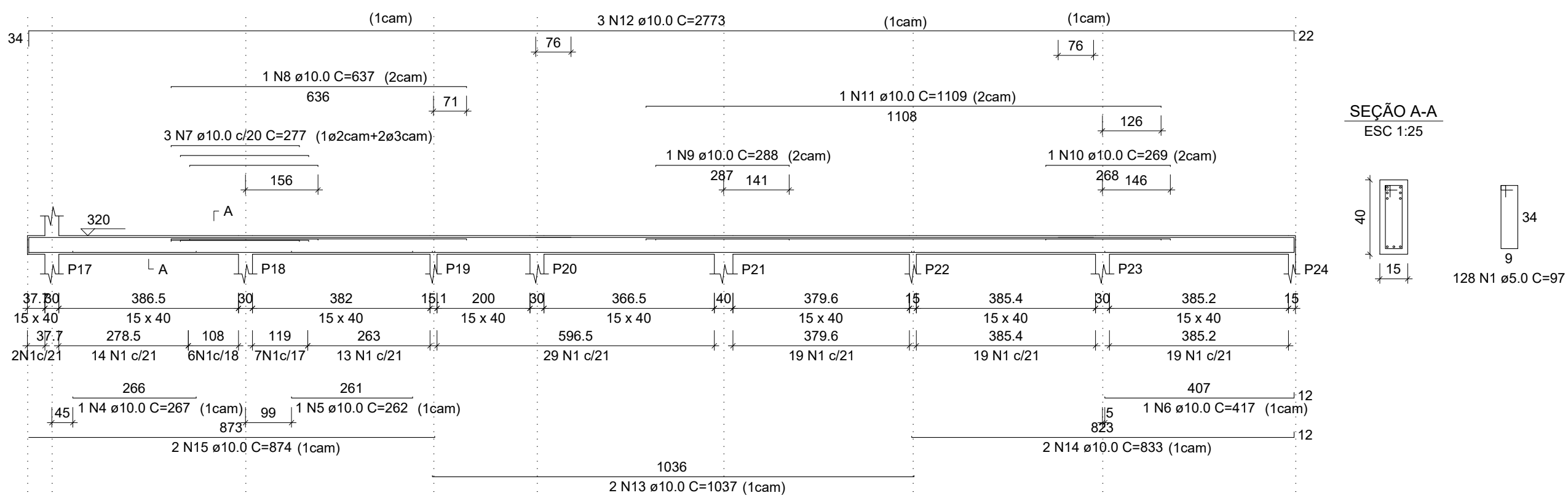
ASSINATURACARIMBO - FINANÇAS

Wilson Nery da Cunha - CREA BA 14748

10
26

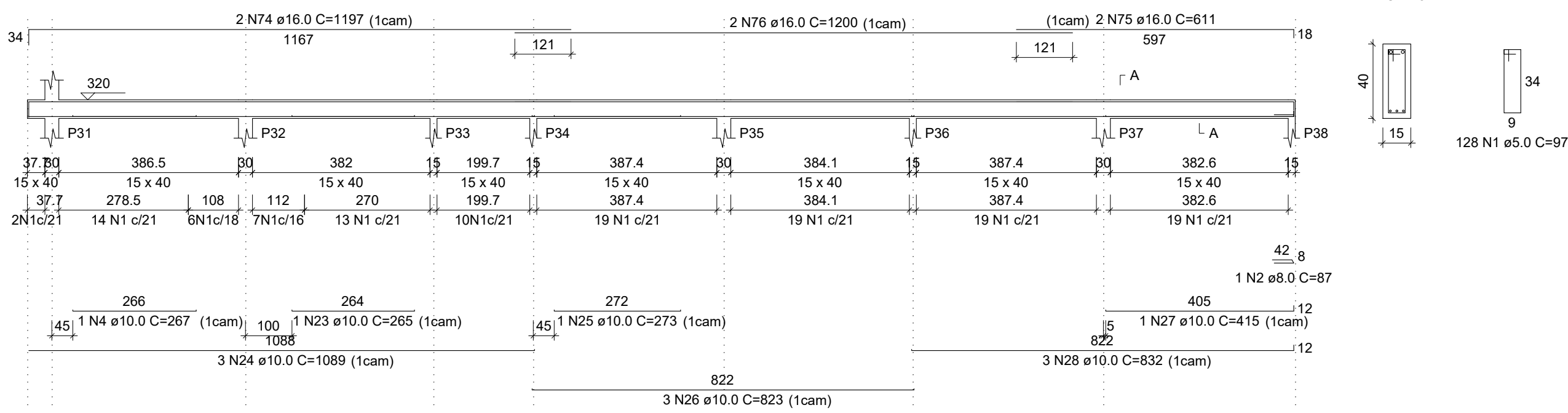
V5 (15 x 40)

ESC 1:100



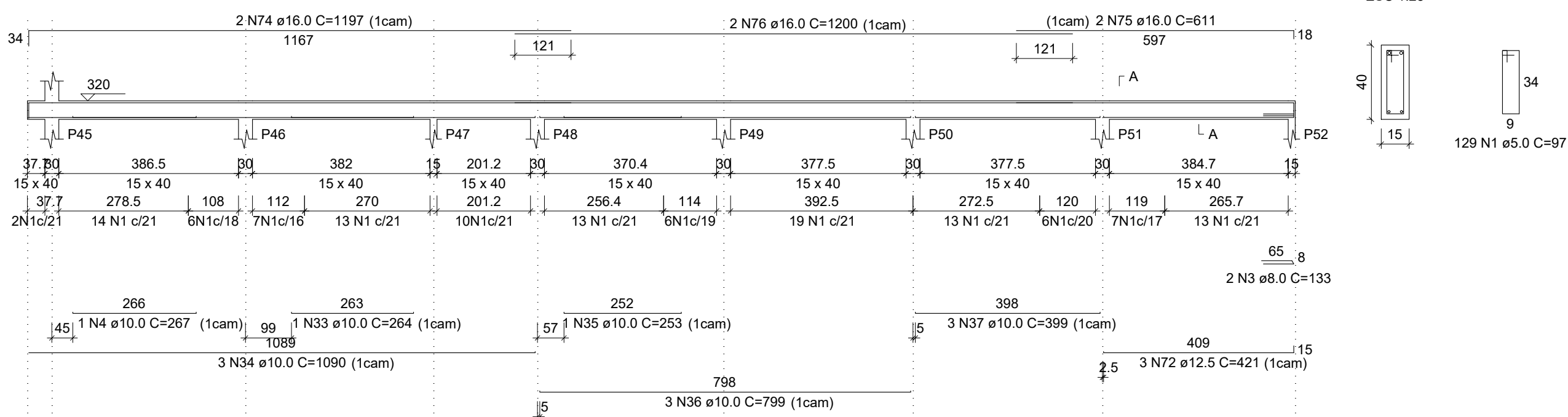
V7 (15 x 40)

ESC 1:100



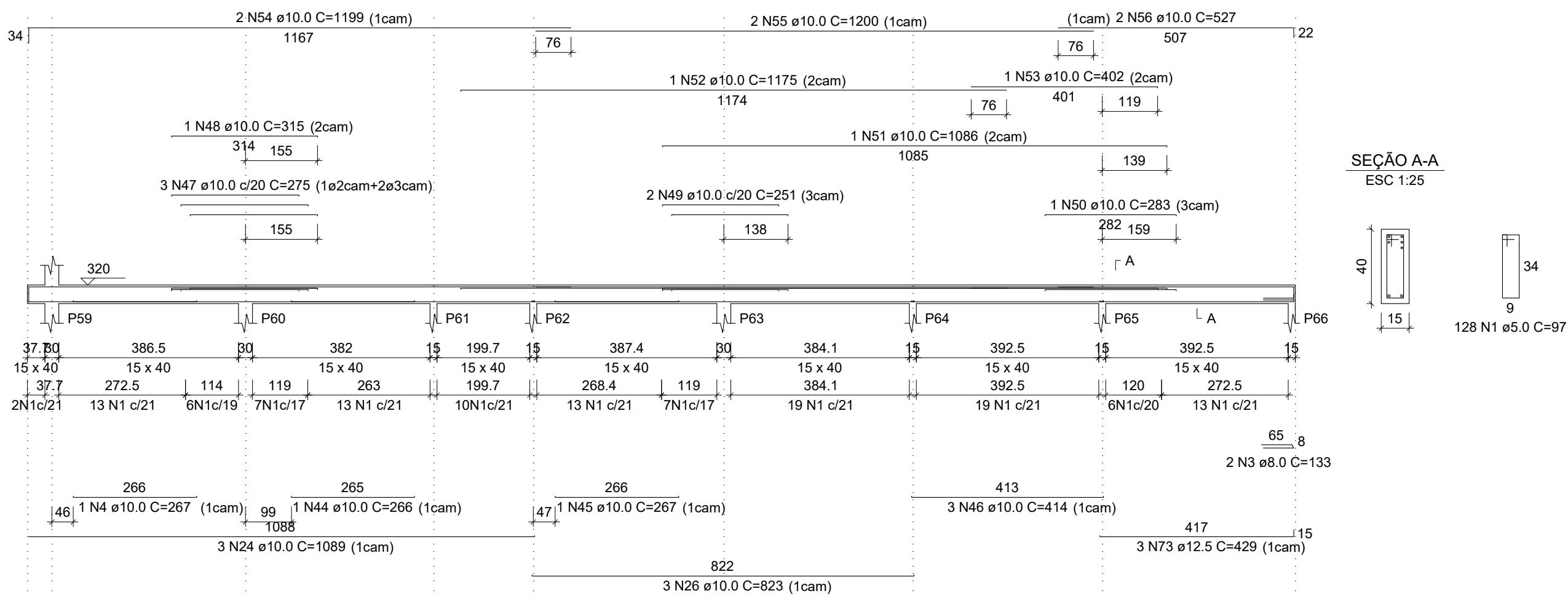
V9 (15 x 40)

ESC 1:100



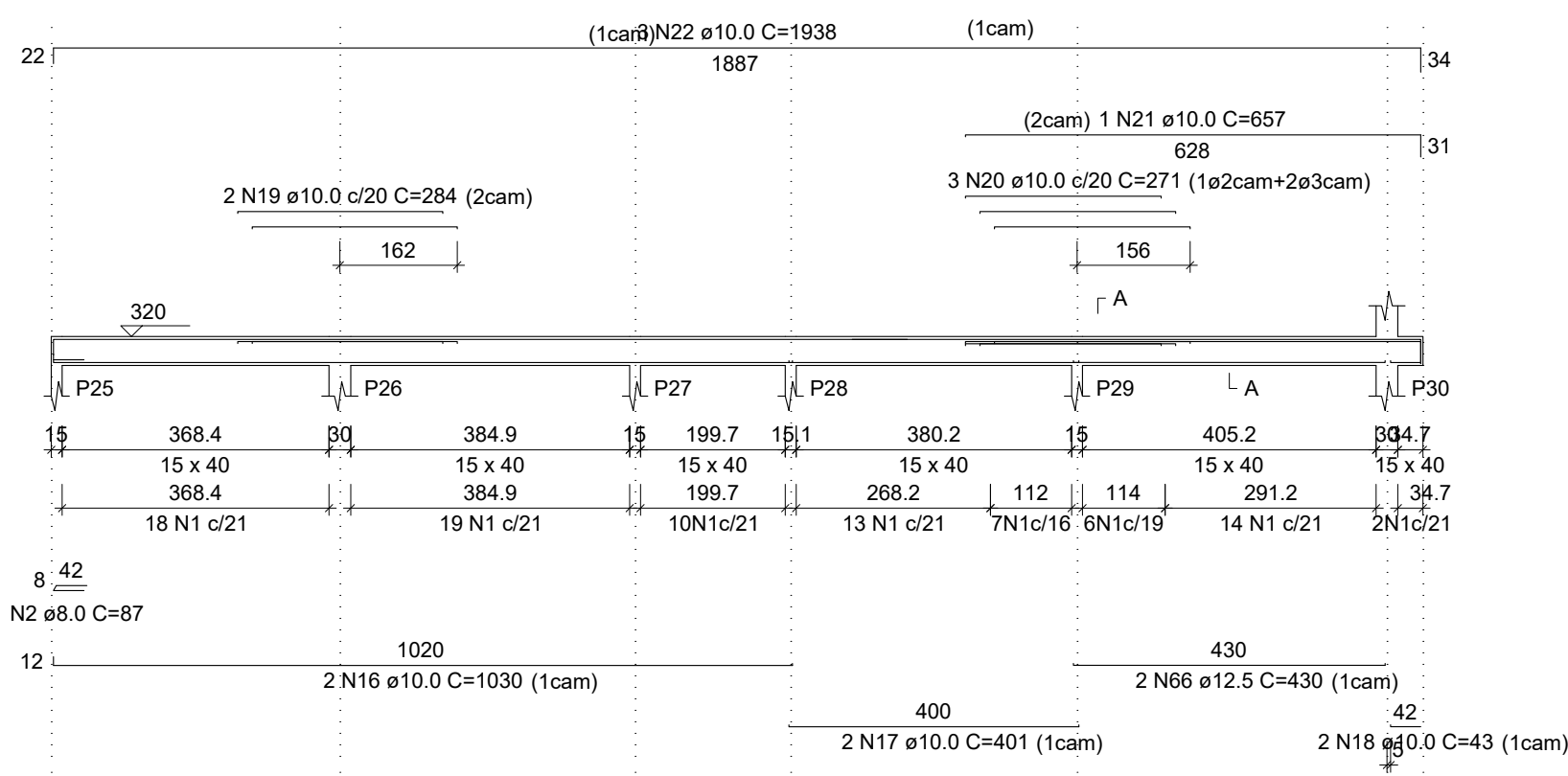
V11 (15 x 40)

ESC 1:100



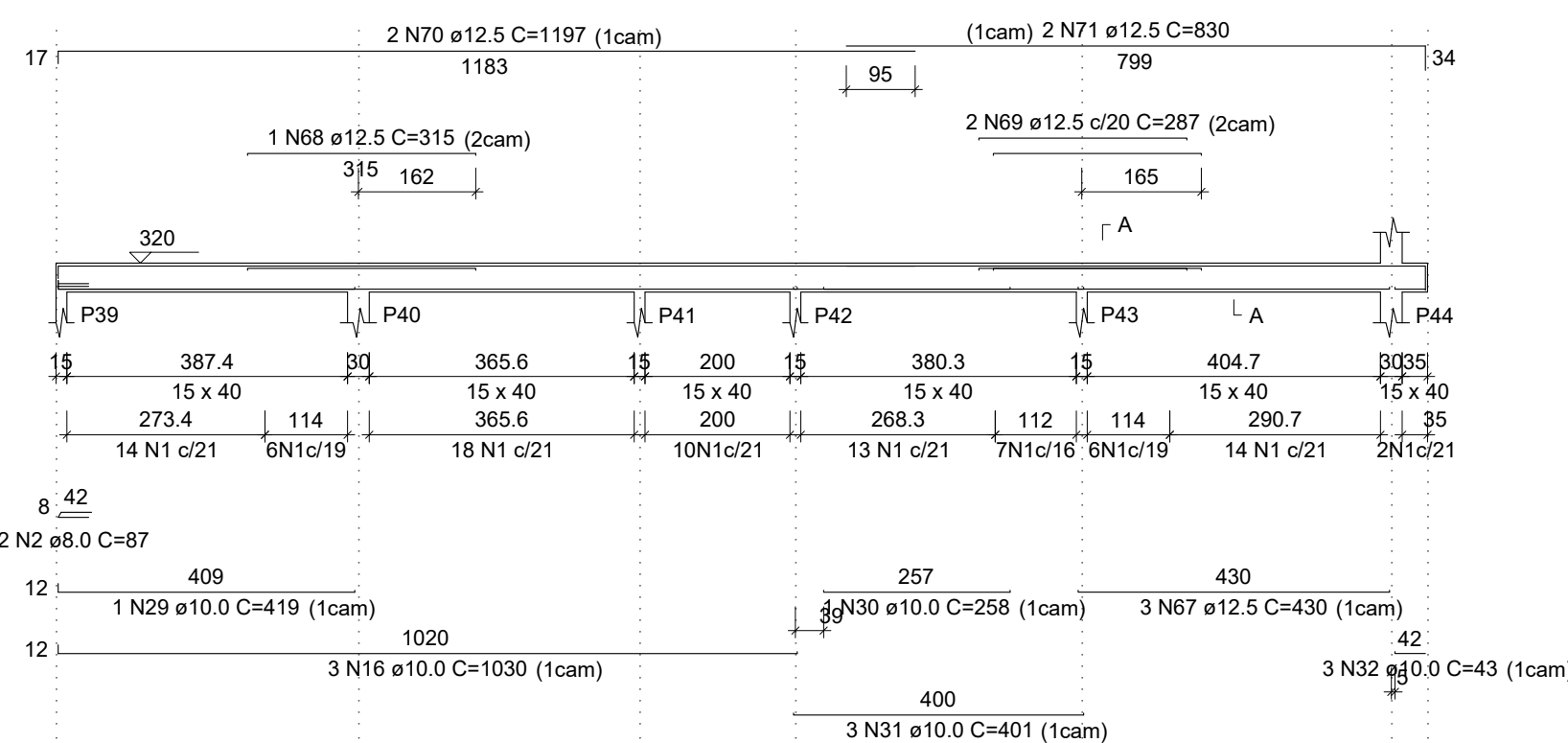
V6 (15 x 40)

ESC 1:100



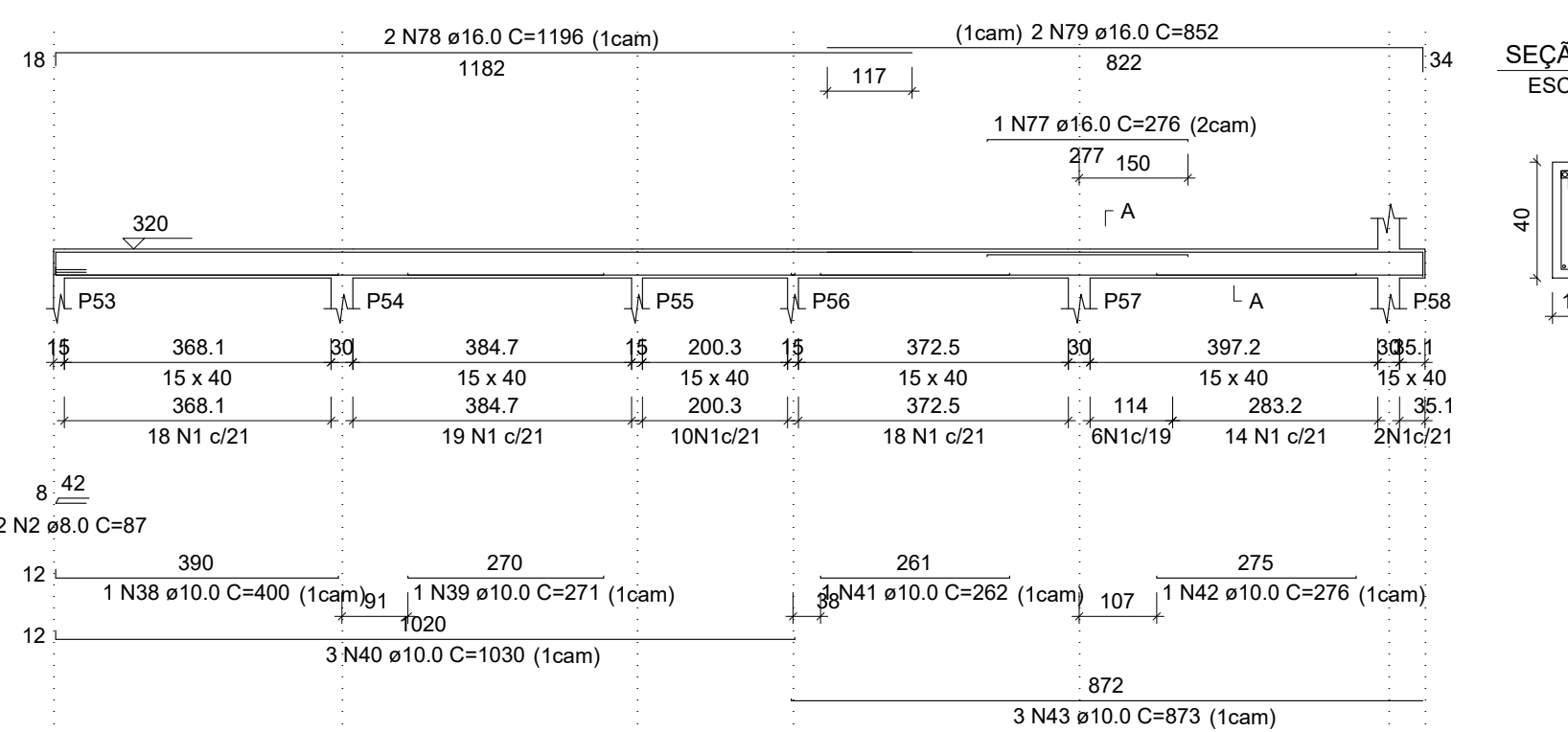
V8 (15 x 40)

ESC 1:100



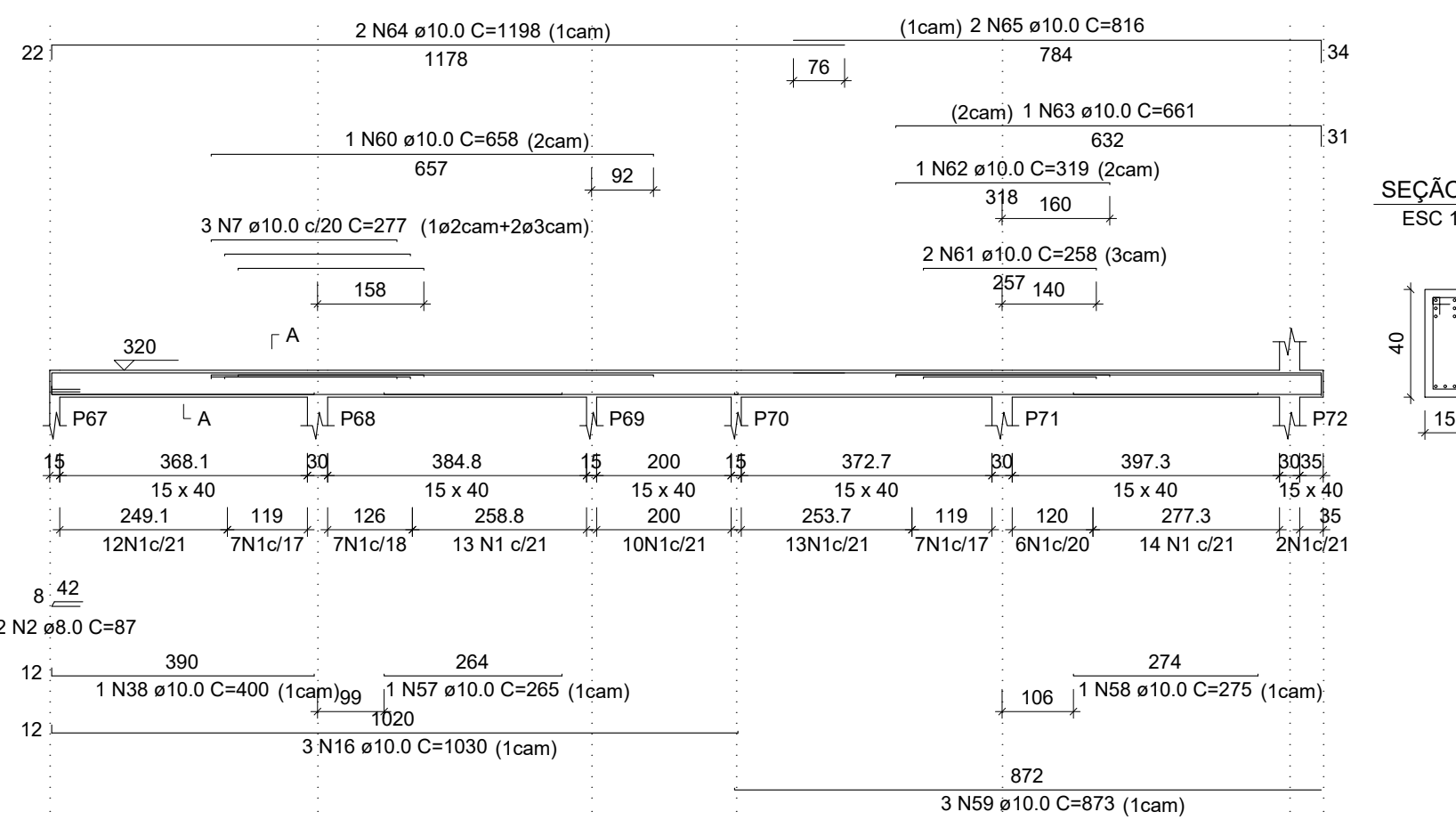
V10 (15 x 40)

ESC 1:100



V12 (15 x 40)

ESC 1:100



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V5 V8 V11	CA60	1	5.0	870	97
	CA50	2	8.0	8	87
		3	8.0	4	133
		4	10.0	4	267
		5	10.0	1	262
		6	10.0	1	417
		7	10.0	6	277
		8	10.0	1	637
		9	10.0	1	288
		10	10.0	3	289
		11	10.0	1	1109
		12	10.0	3	2773
		13	10.0	2	1037
		14	10.0	2	833
		15	10.0	2	874
		16	10.0	8	1030
		17	10.0	2	401
		18	10.0	2	43
		19	10.0	2	284
		20	10.0	3	271
		21	10.0	1	657
		22	10.0	3	1938
		23	10.0	1	265
		24	10.0	6	1089
		25	10.0	1	273
		26	10.0	6	823
		27	10.0	1	415
		28	10.0	3	832
		29	10.0	1	419
		30	10.0	1	258
		31	10.0	3	401
		32	10.0	3	43
		33	10.0	1	264
		34	10.0	3	1090
		35	10.0	1	253
		36	10.0	3	799
		37	10.0	3	399
		38	10.0	2	400
		39	10.0	1	271
		40	10.0	3	1030
		41	10.0	1	262
		42	10.0	1	276
		43	10.0	3	873
		44	10.0	1	266
		45	10.0	1	267
		46	10.0	3	414
		47	10.0	3	275
		48	10.0	1	315
		49	10.0	2	251
		50	10.0	1	283
		51	10.0	1	1086
		52	10.0	1	1175
		53	10.0	1	402
		54	10.0	2	1199
		55	10.0	2	1200
		56	10.0	2	527
		57	10.0	1	265
		58	10.0	1	275
		59	10.0	3	873
		60	10.0	1	658
		61	10.0	2	258
		62	10.0	1	319
		63	10.0	1	661
		64	10.0	2	1198
		65	10.0	2	816
		66	12.5	2	430
		67	12.5	3	430
		68	12.5	1	315
		69	12.5	2	287
		70	12.5	2	1197
		71	12.5	2	830
		72	12.5	3	421
		73	12.5	3	429
		74	16.0	4	1197
		75	16.0	4	611
		76	16.0	1	276
		77	16.0	2	1196
		78	16.0	2	852
		79	16.0	2	852

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	8.0	12.3	4.8
	10.0	896.8	552.9
	12.5	96.4	92.9
	16.0	164	258.9
CA60	5.0	843.9	130.1

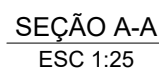
PESO TOTAL (kg)

CA50	909.6
CA60	130.1

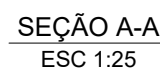
Volume de concreto (C-25) = 11.09 m³

Área de forma = 175.58 m²

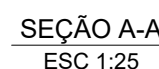
ESC 1:100



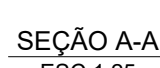
ESC 1:100



ESC 1:10



ESC 1:100



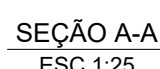
ESC 1:100



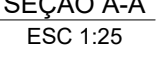
ESC 1:100



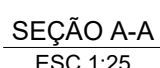
VTS
ESC 1-100



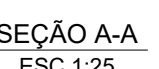
VZU
ESC 1:100



VZT
ESC 1:100



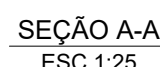
V Z Z
ESC 1:100



VZJ
ESC 1:100



VZ4
ESC 1:100



VZJ
ESC 1:100



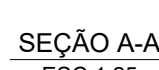
VZU
ESC 1:100



VZT
ESC 1:100



VZU
ESC 1:100

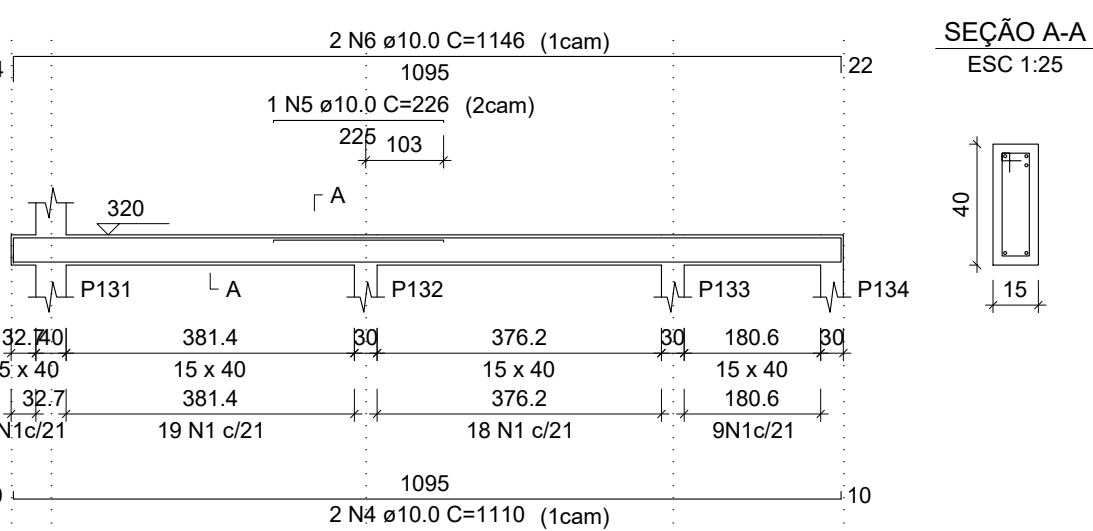


V13	V14	V15			
V16	V17	V18			
V19	V20	V21			
V22	V23	V24			
V25	V26	V27			
V28					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL
CA60 CA50	1	5.0	781	97	75757
	2	8.0	3	87	261
	3	10.0	4	1106	4424
	4	10.0	1	265	265
	6	10.0	2	1153	2306
	5	10.0	1	236	236
	7	10.0	2	1149	2298
	8	10.0	3	841	2523
	9	10.0	1	417	417
	10	10.0	3	832	2496
	11	10.0	1	257	257
	12	10.0	1	268	268
	14	10.0	1	264	264
	15	10.0	2	569	1138
	17	10.0	3	826	2478
	18	10.0	4	1152	4624
	19	10.0	3	859	2577
	20	10.0	1	243	243
	21	10.0	1	158	158
	22	10.0	1	235	235
	23	10.0	2	1155	2310
	24	10.0	2	834	1668
	25	10.0	1	827	827
	26	10.0	2	1198	2396
	27	10.0	2	545	1090
	28	10.0	2	826	1652
	29	10.0	1	260	260
	30	10.0	1	857	857
	31	10.0	2	281	562
	32	10.0	3	1099	3297
	33	10.0	3	2779	8337
	34	10.0	1	636	636
	35	10.0	2	1154	2308
	36	10.0	2	277	554
	37	10.0	3	1099	3297
	38	10.0	1	968	968
	39	10.0	2	1154	2308
	40	10.0	1	268	268
	41	10.0	1	1099	1099
	42	10.0	3	2779	8337
	43	10.0	1	318	318
	44	10.0	1	968	968
	45	10.0	4	1152	4608
	46	10.0	2	352	704
	47	10.0	3	1099	3297
	48	10.0	1	149	149
	49	10.0	1	271	271
	50	10.0	1	267	267
	51	10.0	2	680	1360
	52	10.0	2	680	1360
	53	10.0	3	1104	3312
	54	10.0	1	634	634
	55	10.0	2	639	1278
	56	10.0	1	218	218
	57	10.0	2	663	1326
	58	10.0	3	405	1215
	59	10.0	2	43	86
	60	12.5	2	844	1688
	61	12.5	3	314	942
	62	12.5	2	319	638
	63	15.0	2	812	1624

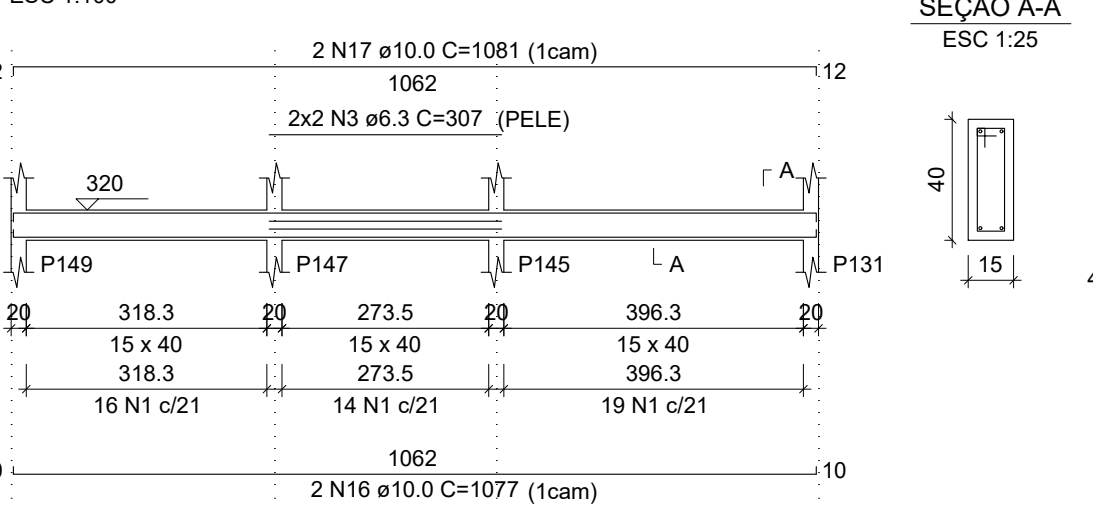
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	8.0	2.6	1
	10.0	875.2	539.6
	12.5	42.3	40.7
	16.0	23	36.4
CA60	5.0	757.6	116.8
PESO TOTAL (kg)			
CA50	617.7		
CA60	116.8		

Volume de concreto (C-25) = 10.19 m³
Área de forma = 161.35 m²

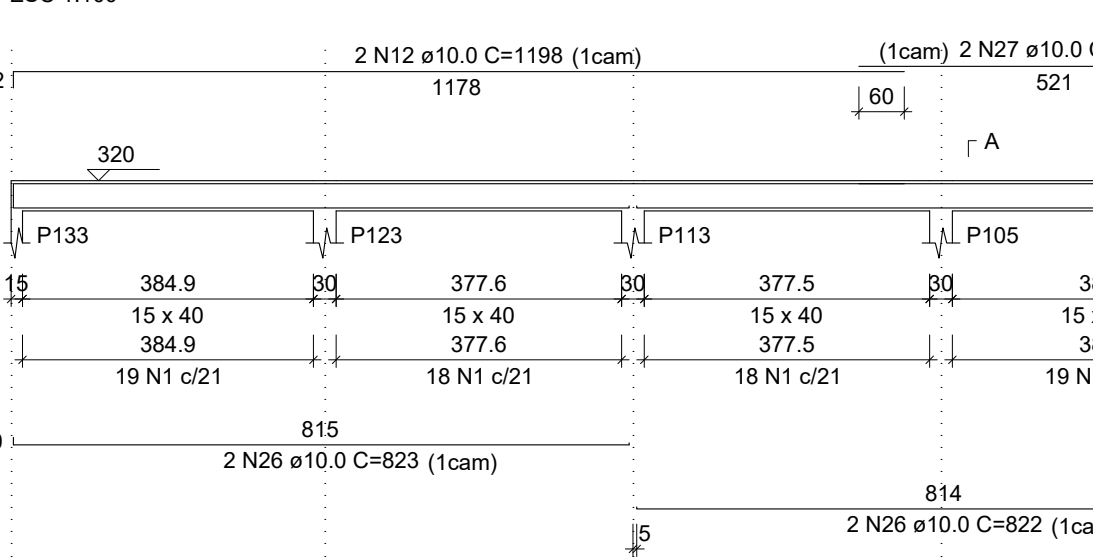
V29 (15 x 40)



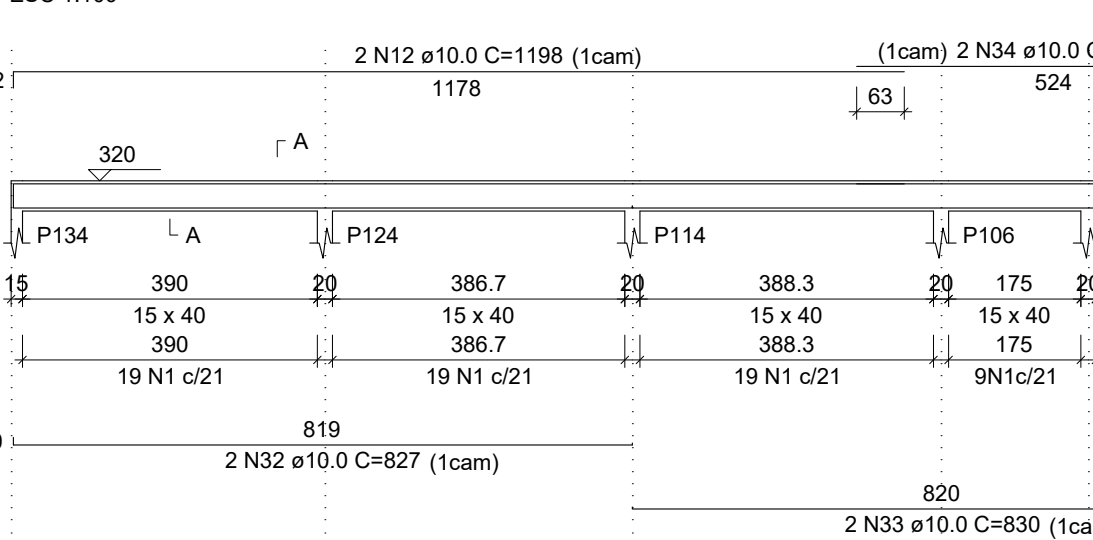
V31 (15 x 40)



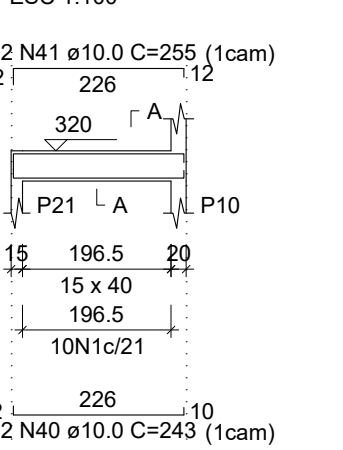
V34 (15 x 40)



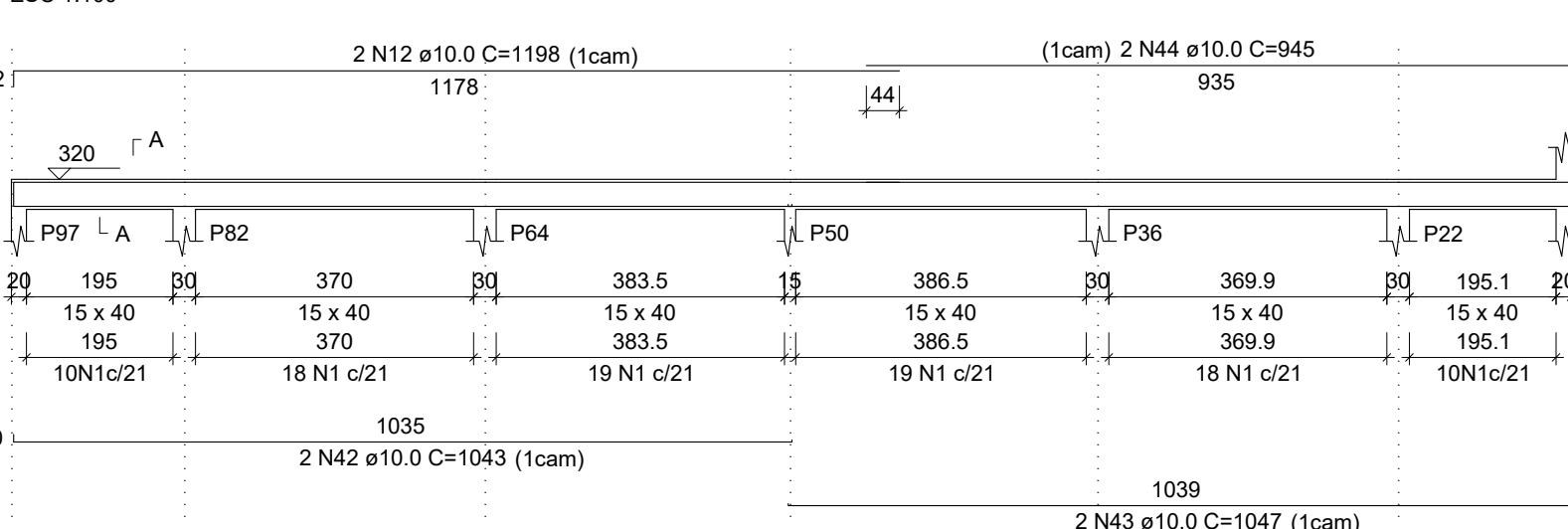
V36 (15 x 40)



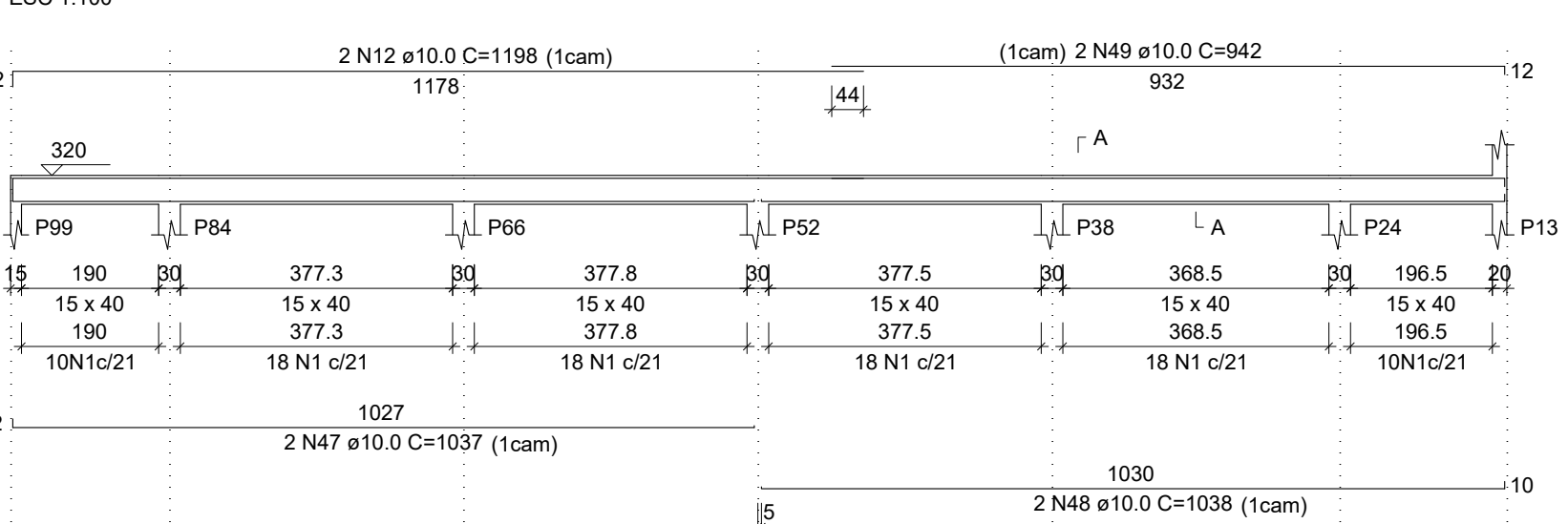
V39 (15 x 40)



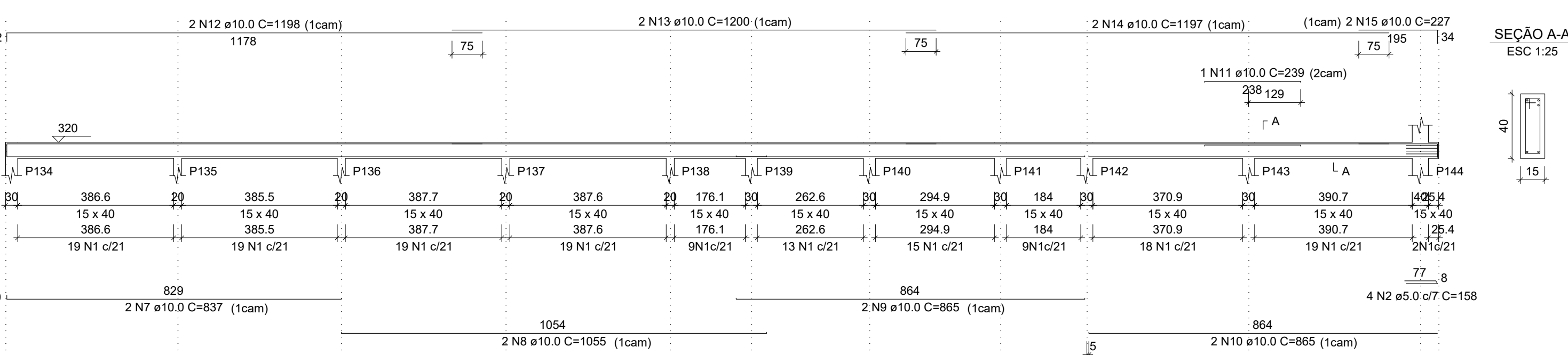
V40 (15 x 40)



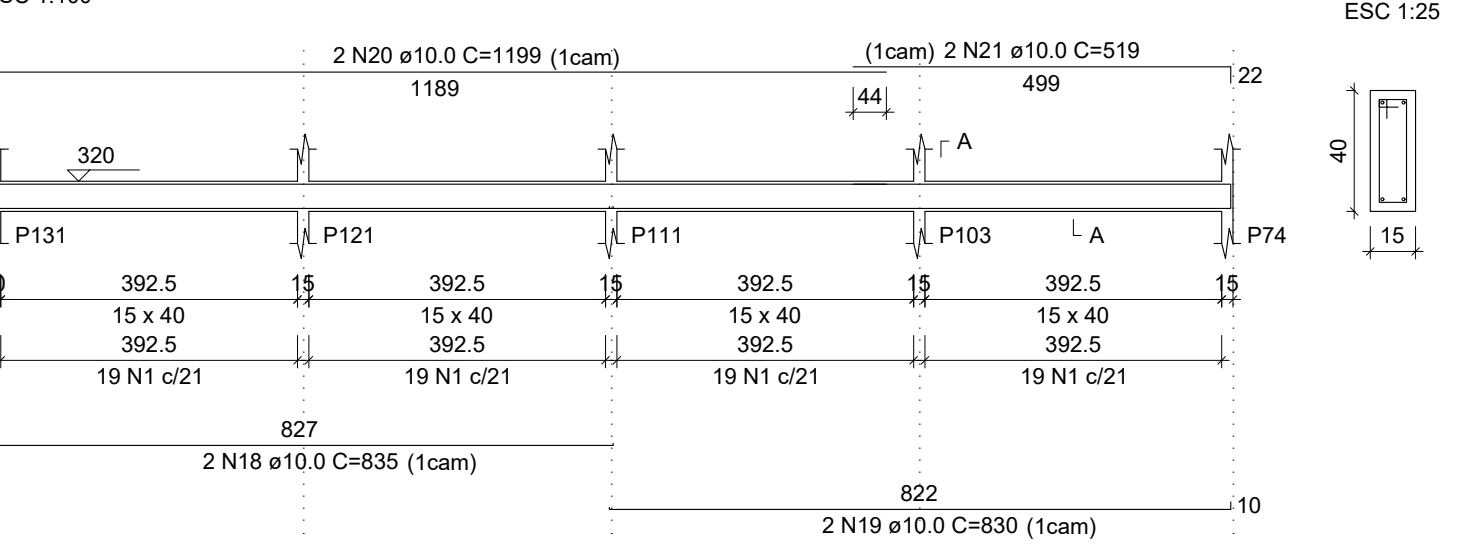
V43 (15 x 40)



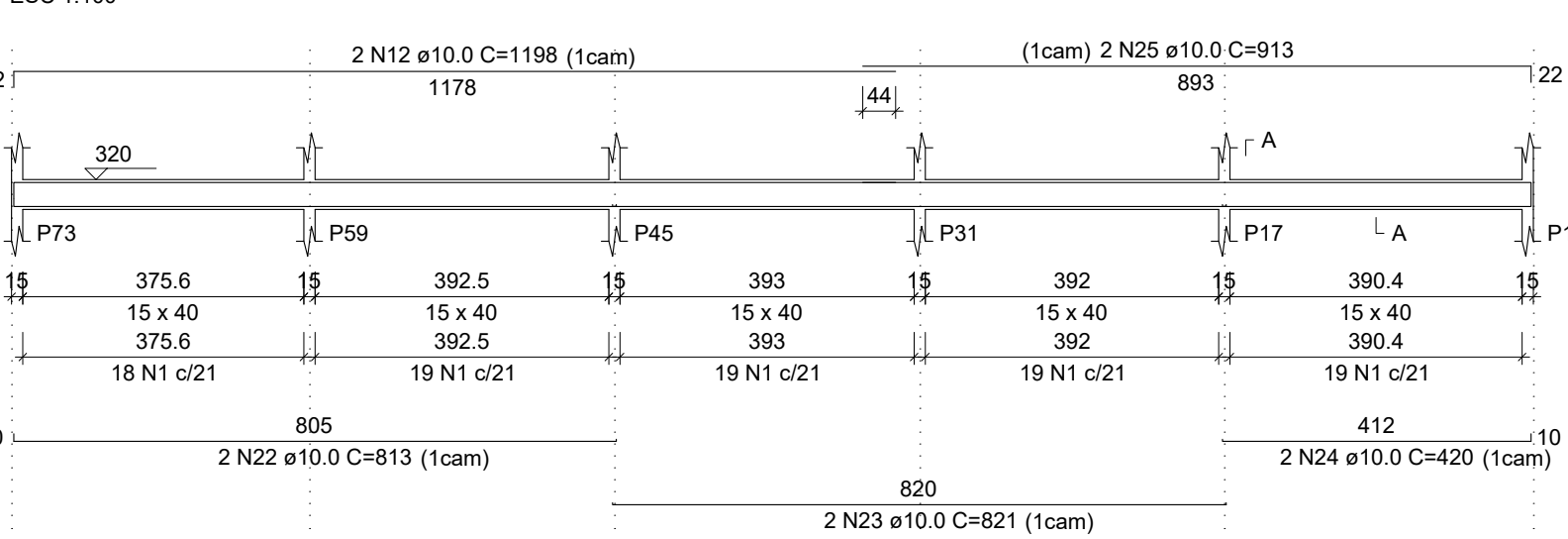
V30 (15 x 40)



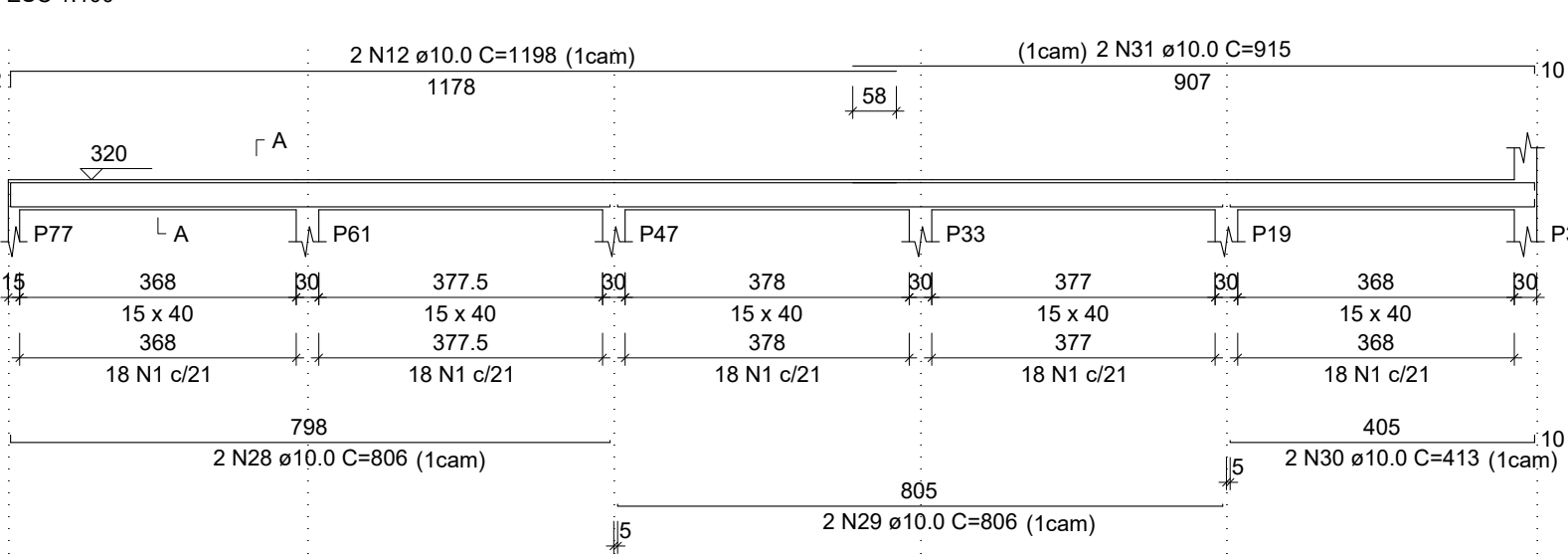
V32 (15 x 40)



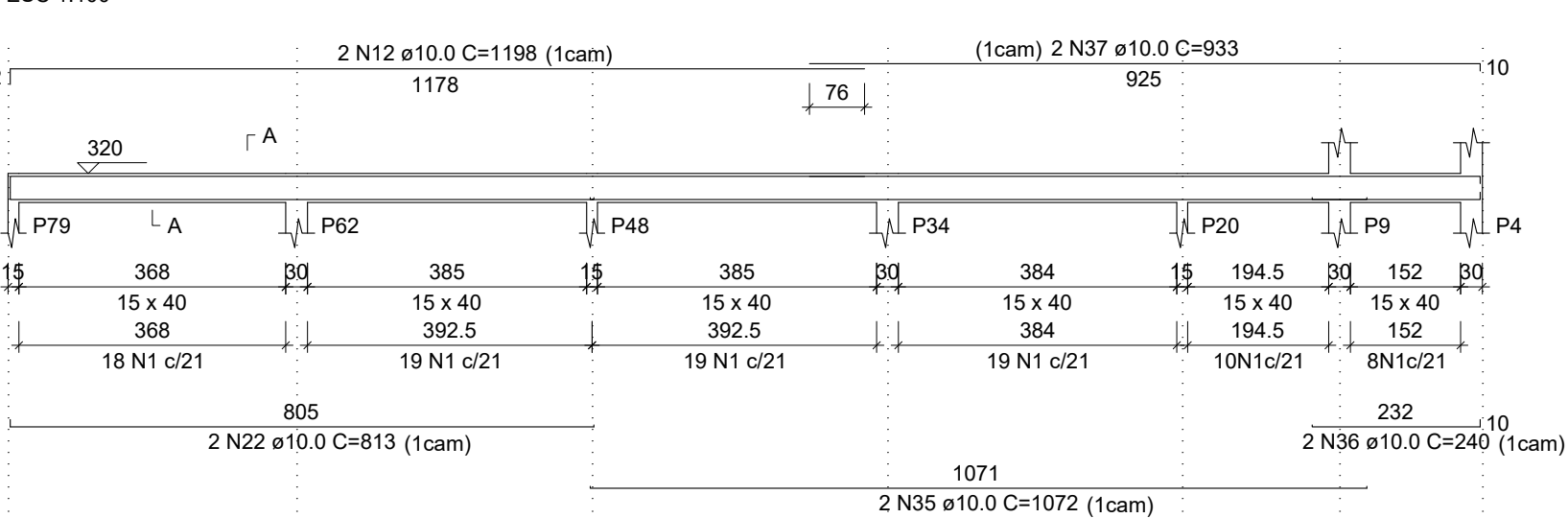
V33 (15 x 40)



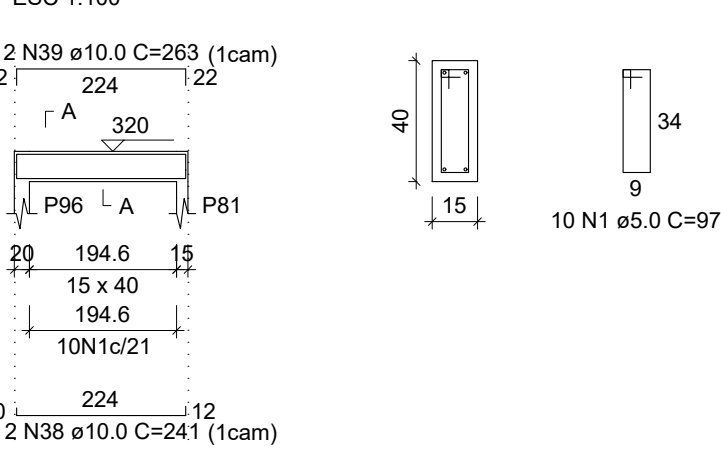
V35 (15 x 40)



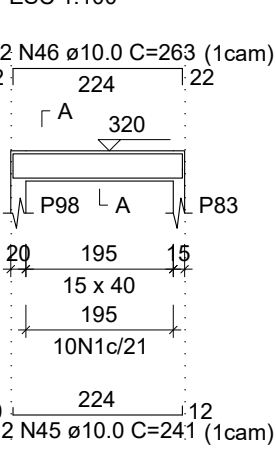
V37 (15 x 40)



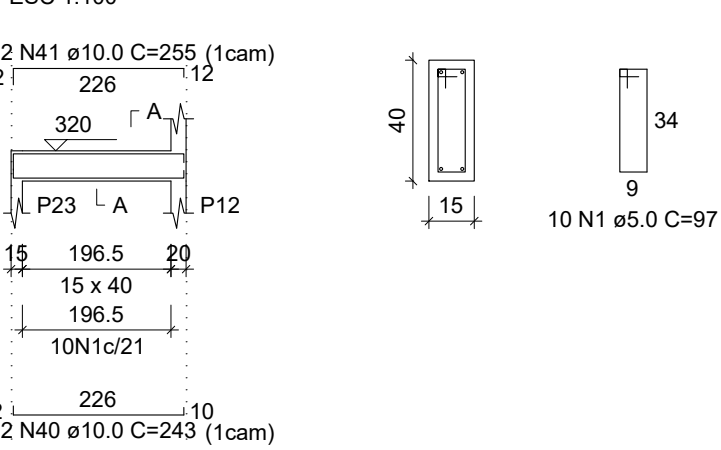
V38 (15 x 40)



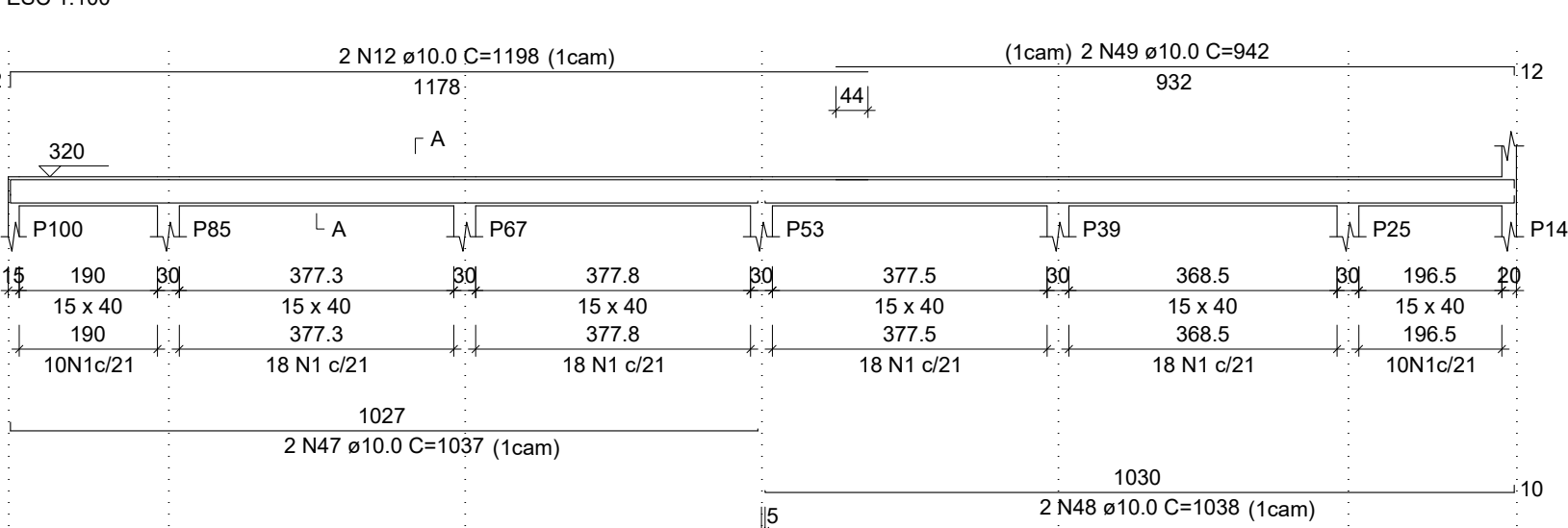
V41 (15 x 40)



V42 (15 x 40)



V44 (15 x 40)



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V29	1	5.0	1079	97	104663
V32	2	5.0	4	158	632
V35	3	6.3	4	307	1228
V38	4	10.0	2	1110	2220
V41	5	10.0	1	226	226
V44	6	10.0	2	1146	2292
	7	10.0	2	837	1674
	8	10.0	2	1055	2110
	9	10.0	2	865	1730
	10	10.0	2	865	1730
	11	10.0	1	239	239
	12	10.0	18	1198	21564
	13	10.0	2	1200	2400
	14	10.0	2	1197	2394
	15	10.0	2	227	454
	16	10.0	2	1077	2154
	17	10.0	2	1081	2162
	18	10.0	2	635	1670
	19	10.0	2	830	1660
	20	10.0	2	1199	2398
	21	10.0	2	519	1038
	22	10.0	4	813	3252
	23	10.0	2	821	1642
	24	10.0	2	420	840
	25	10.0	2	913	1826
	26	10.0	4	823	3292
	27	10.0	2	541	1082
	28	10.0	2	806	1612
	29	10.0	2	806	1612
	30	10.0	2	413	826
	31	10.0	2	915	1830
	32	10.0	2	827	1654
	33	10.0	2	830	1660
	34	10.0	2	544	1088
	35	10.0	2	1072	2144
	36	10.0	2	240	480
	37	10.0	2	933	1866
	38	10.0	2	241	482
	39	10.0	2	263	526
	40	10.0	4	243	972
	41	10.0	4	255	1020
	42	10.0	2	1043	2086
	43	10.0	2	1047	2094
	44	10.0	2	945	1890
	45	10.0	2	241	482
	46	10.0	2	263	526
	47	10.0	4	1037	4148
	48	10.0	4	1038	4152
	49	10.0	4	942	3768

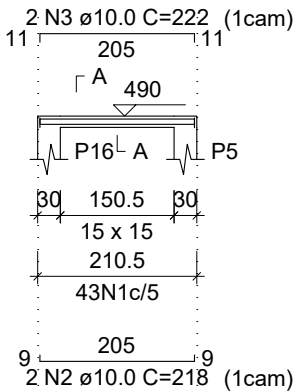
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	6.3	12.3	3
CA60	10.0	989.6	610.2
CA60	5.0	1053	162.3
PESO TOTAL (kg)			
CA50	613.2		
CA60	162.3		

Volume de concreto (C-25) = 14.34 m³
Área de forma = 227.09 m²

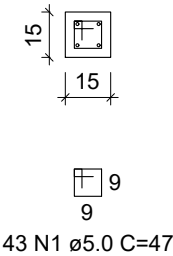
V9 (15 x 15)

ESC 1:100



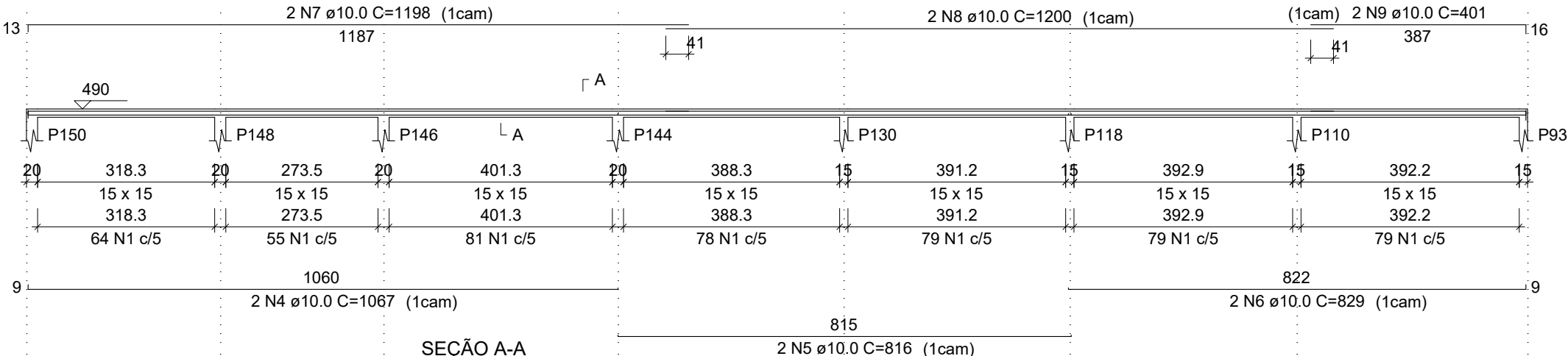
SEÇÃO A-A

ESC 1:25



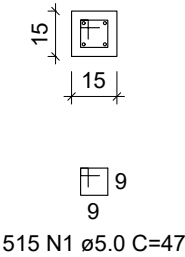
V10 (15 x 15)

ESC 1:100



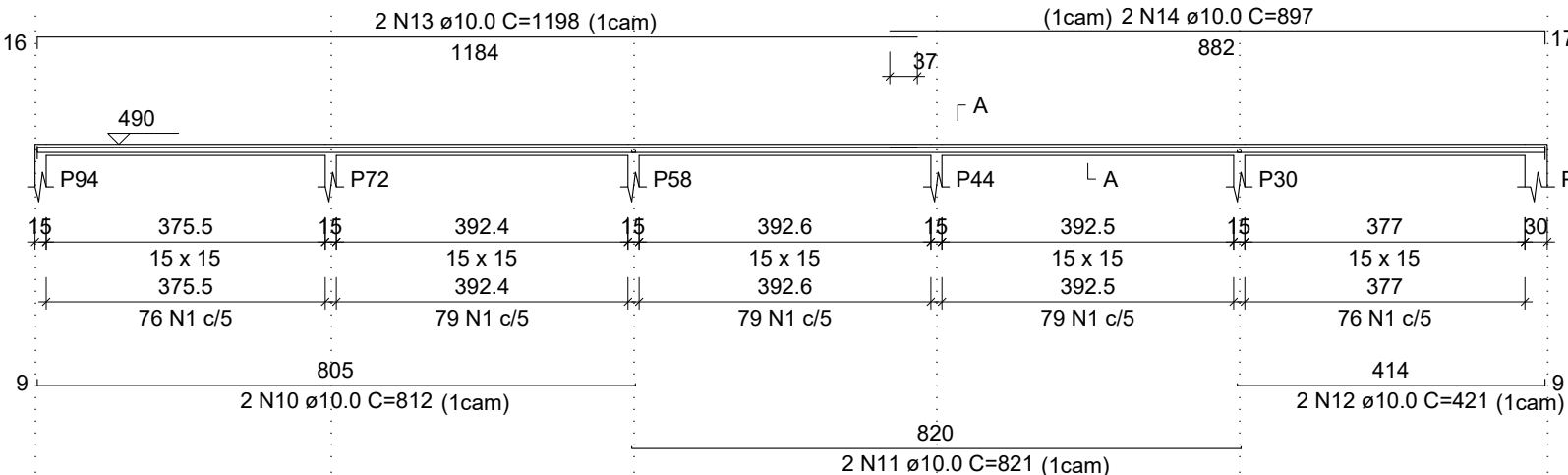
SEÇÃO A-A

ESC 1:25



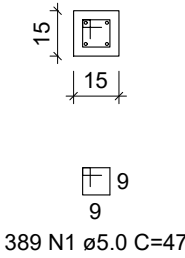
V11 (15 x 15)

ESC 1:100



SEÇÃO A-A

ESC 1:25



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	947	47	44509
CA50	2	10.0	2	218	436
	3	10.0	2	222	444
	4	10.0	2	1067	2134
	5	10.0	2	816	1632
	6	10.0	2	829	1658
	7	10.0	2	1198	2396
	8	10.0	2	1200	2400
	9	10.0	2	401	802
	10	10.0	2	812	1624
	11	10.0	2	821	1642
	12	10.0	2	421	842
	13	10.0	2	1198	2396
	14	10.0	2	897	1794

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	10.0	202	124.5
CA60	5.0	445.1	68.6
PESO TOTAL (kg)		Volume de concreto (C-25) = 1.11 m³	
CA50	124.5	Área de forma = 22.24 m²	
CA60	68.6		



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E INFRAESTRUTURA
Rua Aristarco Lopes, 240 | Centro
Petrolina/PE | CEP: 56.302-100

NOME:

PROJETO ESTRUTURAL DO CAMPUS
ÁGUAS BELAS DO IF Sertão PE

ENDEREÇO:

Rodovia PE-300, S/N, CEP: 55340-000
Águas Belas/PE

DESCRIÇÃO:

VIGAS DA PLATIBANDA II (BLOCO ADM - PARTE 2.)

ESCALA:

1/75

DATA:

ABRIL/2025

ASSINATURA/CARIMBO - DIREÇÃO GERAL:

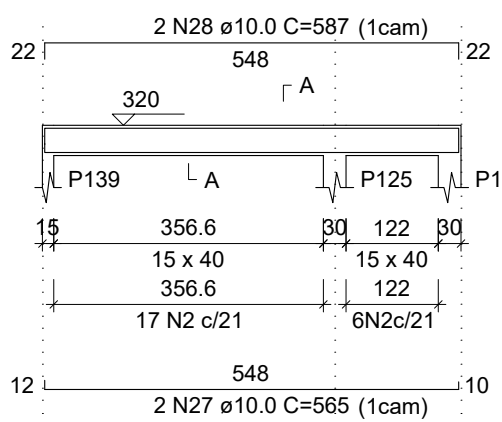
ASSINATURA/CARIMBO - RESPONSÁVEL TÉCNICO:

Wilson Nery da Cunha - CREA BA 14748

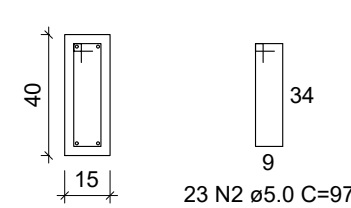
PRANCHA

14
26

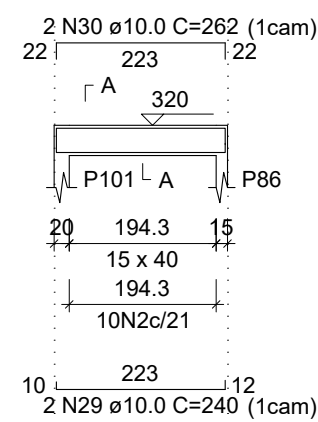
V45 (15 x 40)
ESC 1:100



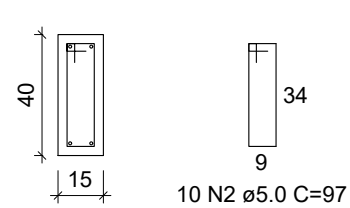
SEÇÃO A-A
ESC 1:25



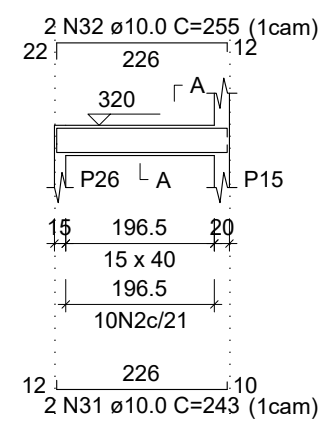
V46 (15 x 40)
ESC 1:100



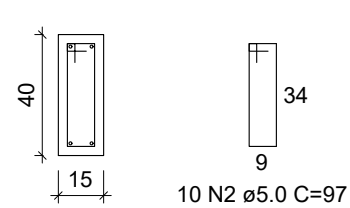
SEÇÃO A-A
ESC 1:25



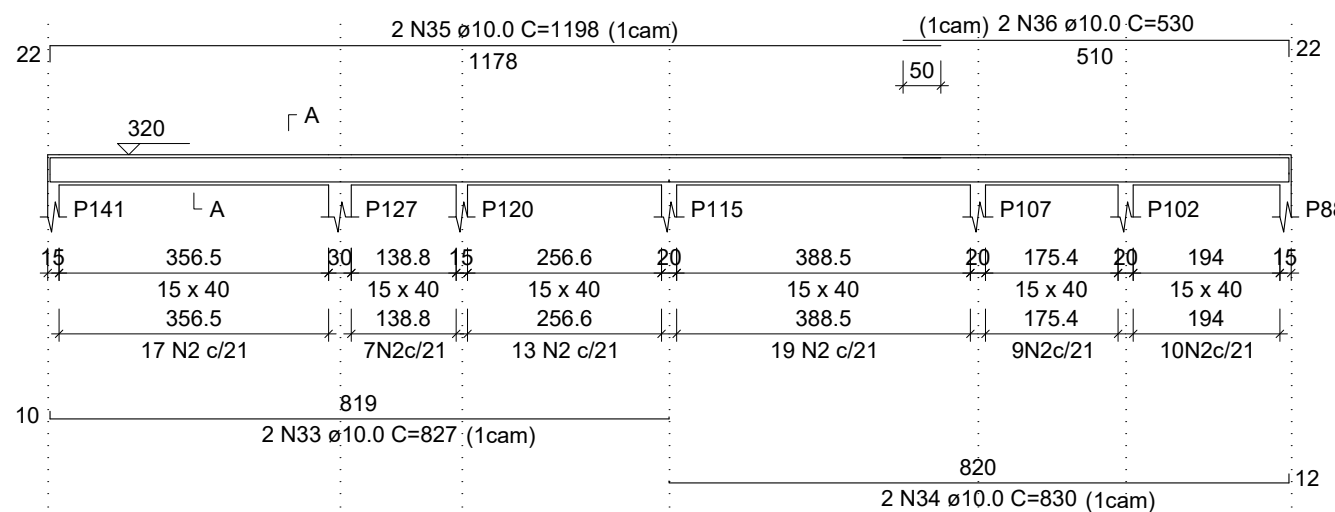
V47 (15 x 40)
ESC 1:100



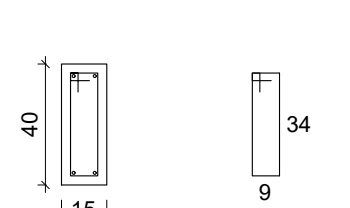
SEÇÃO A-A
ESC 1:25



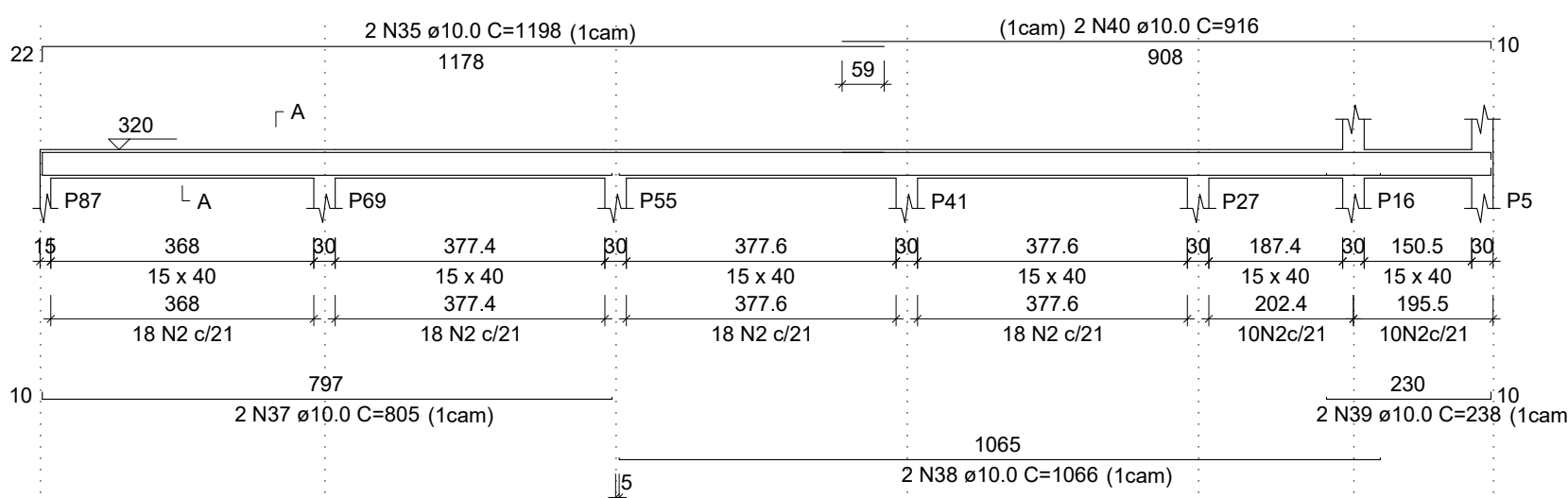
V48 (15 x 40)
ESC 1:100



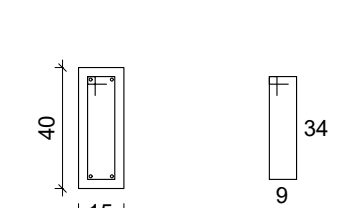
SEÇÃO A-A
ESC 1:25



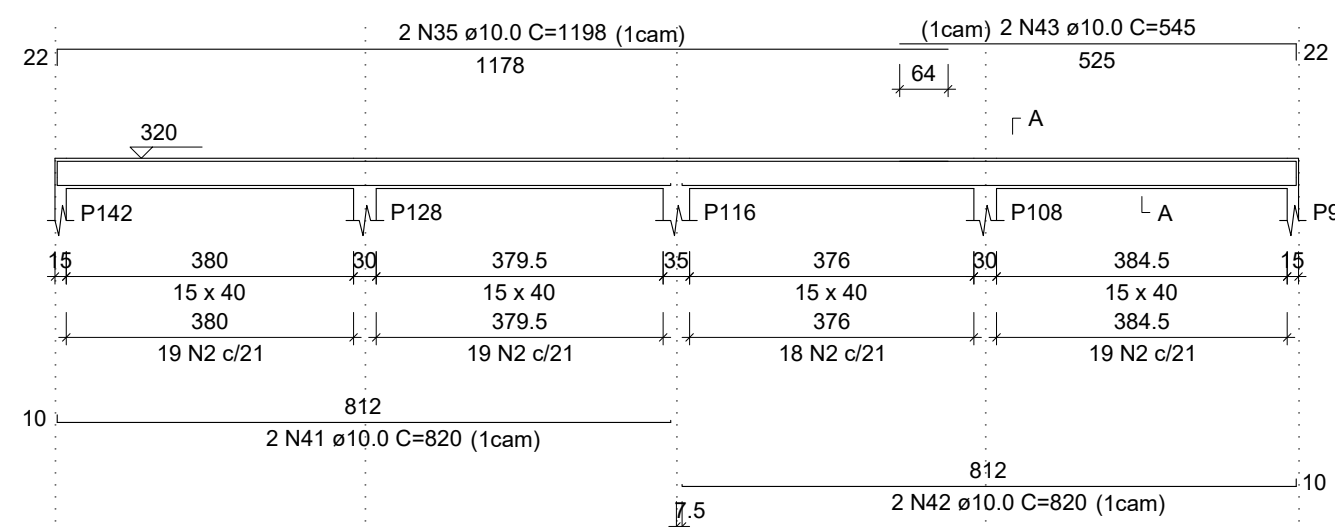
V49 (15 x 40)
ESC 1:100



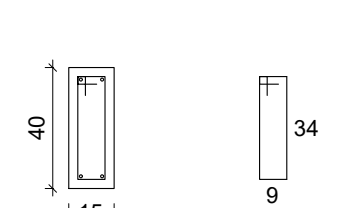
SEÇÃO A-A
ESC 1:25



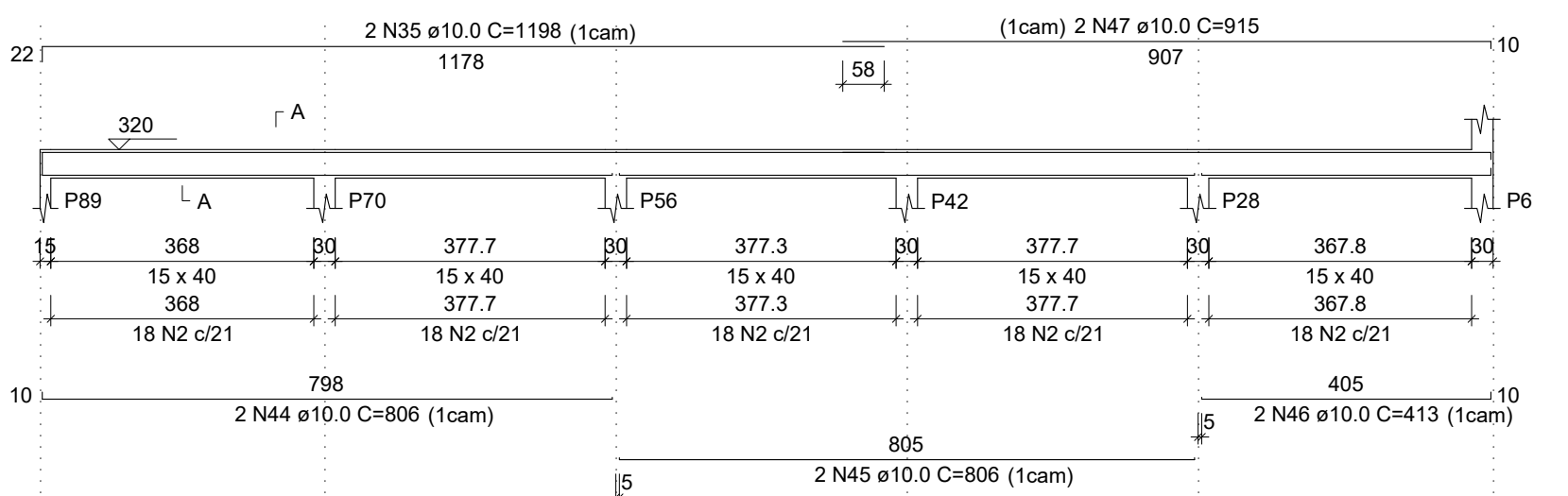
V50 (15 x 40)
ESC 1:100



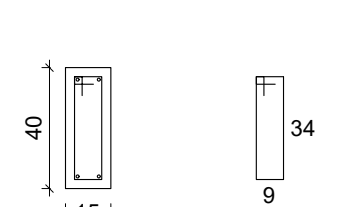
SEÇÃO A-A
ESC 1:25



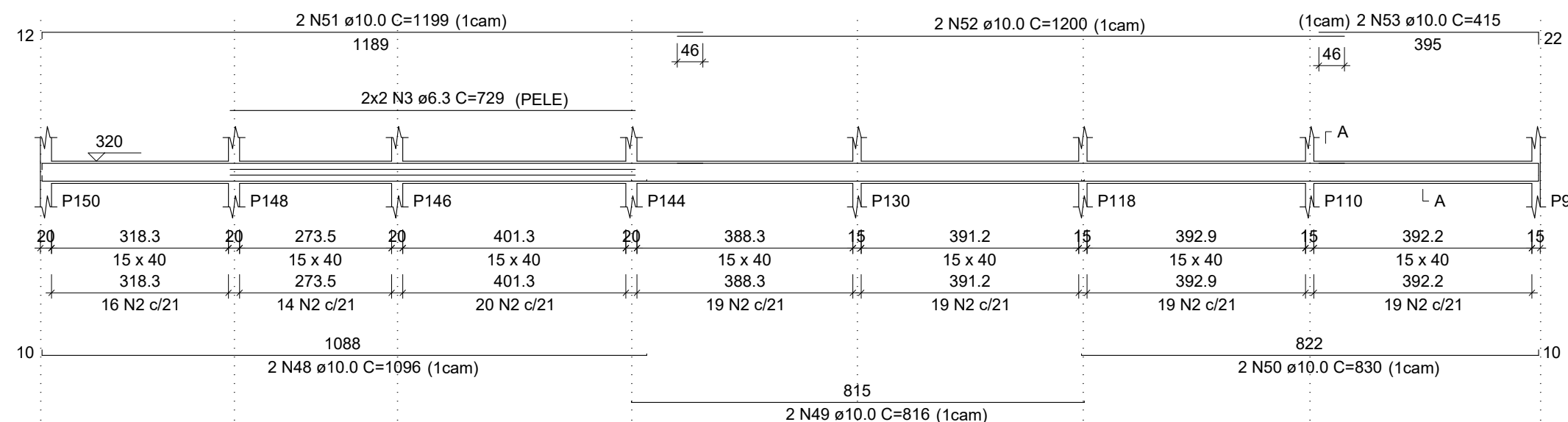
V51 (15 x 40)
ESC 1:100



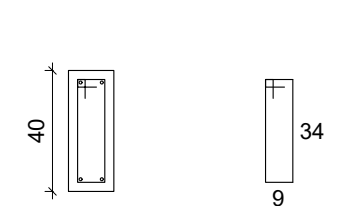
SEÇÃO A-A
ESC 1:25



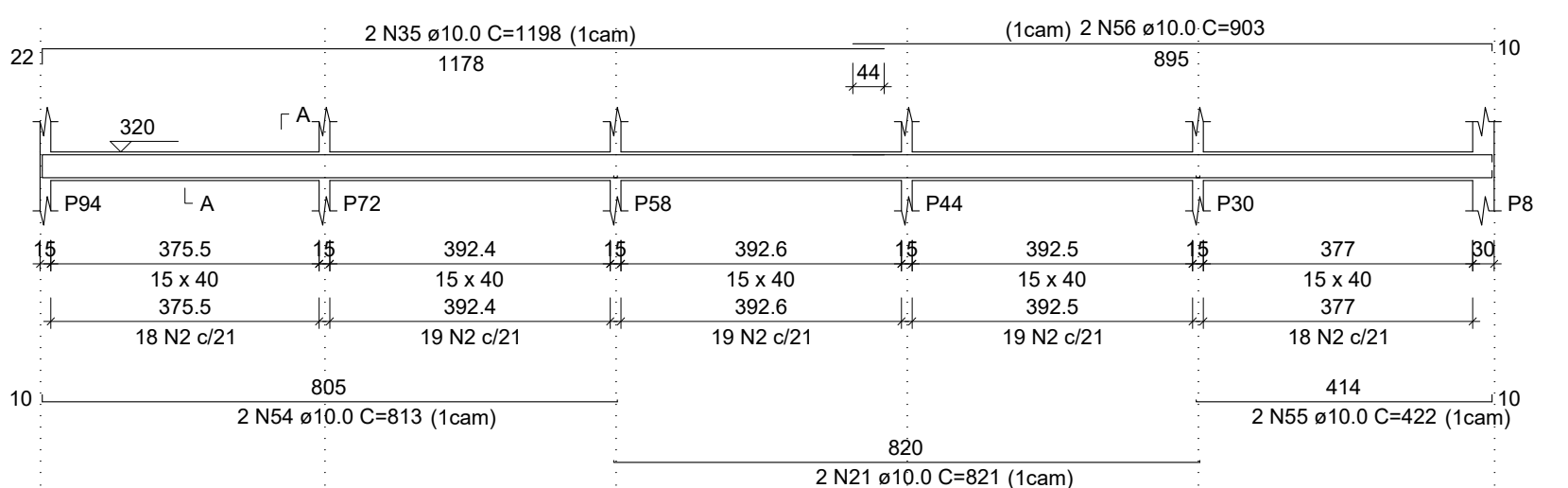
V52 (15 x 40)
ESC 1:100



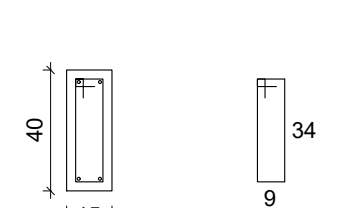
SEÇÃO A-A
ESC 1:25



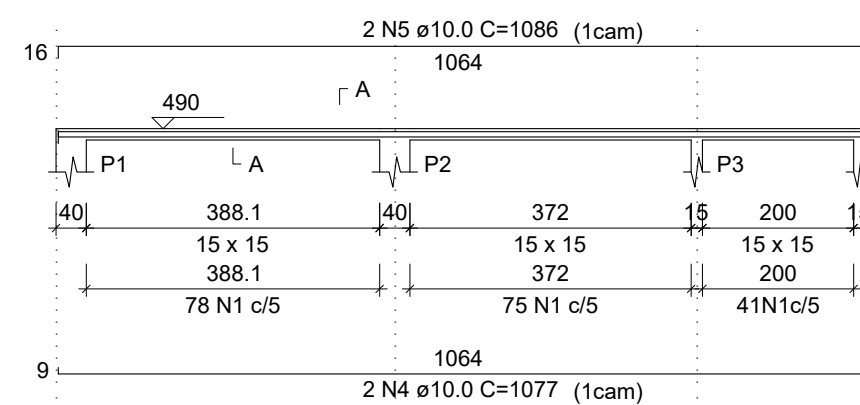
V53 (15 x 40)
ESC 1:100



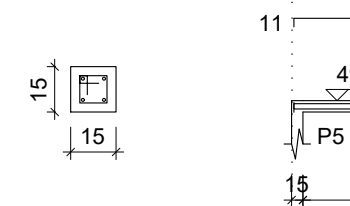
SEÇÃO A-A
ESC 1:25



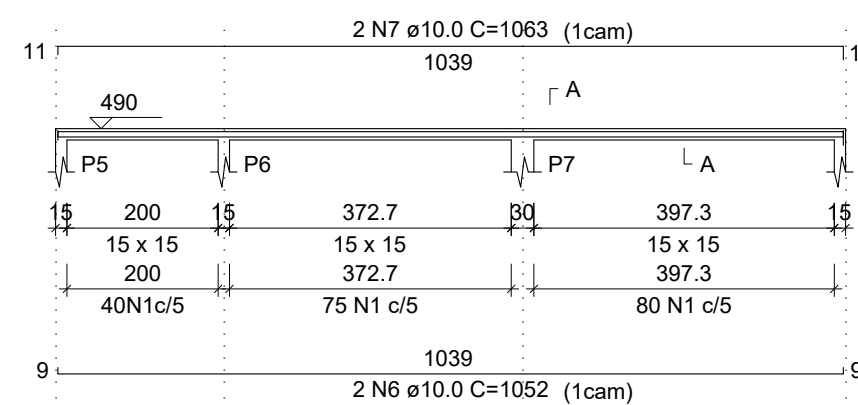
V1 (15 x 15)
ESC 1:100



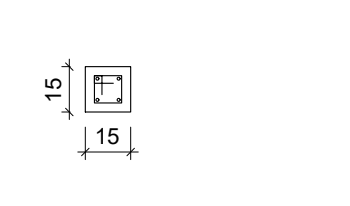
SEÇÃO A-A
ESC 1:25



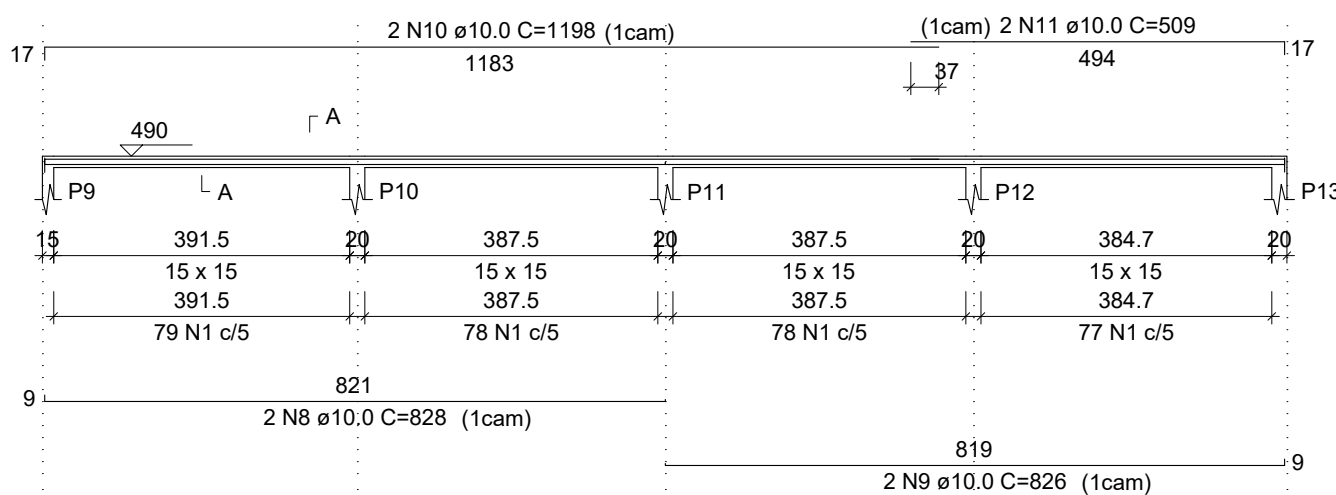
V2 (15 x 15)
ESC 1:100



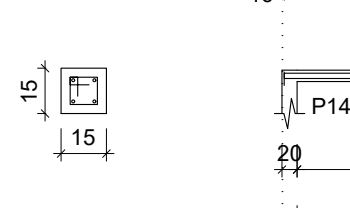
SEÇÃO A-A
ESC 1:25



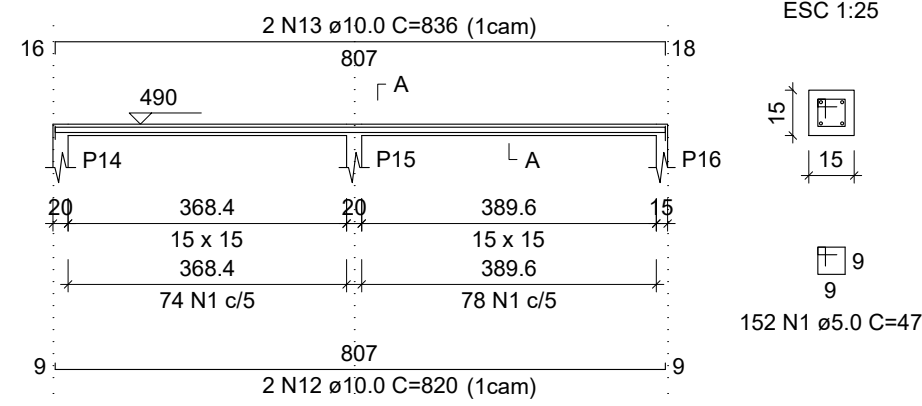
V3 (15 x 15)
ESC 1:100



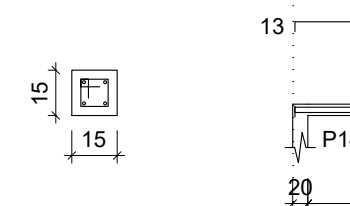
SEÇÃO A-A
ESC 1:25



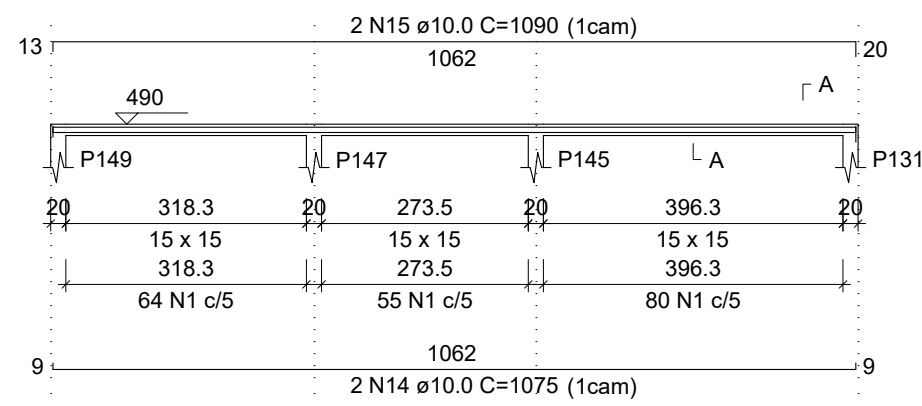
V4 (15 x 15)
ESC 1:100



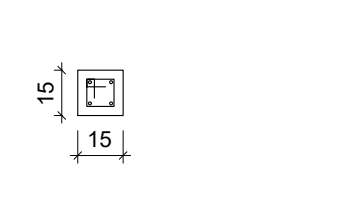
SEÇÃO A-A
ESC 1:25



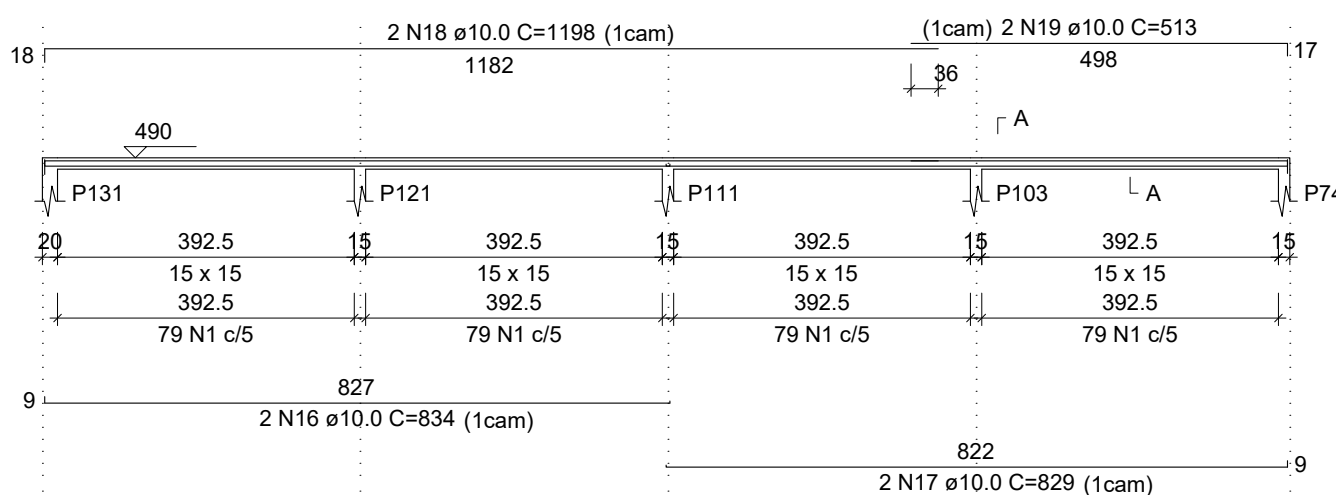
V5 (15 x 15)
ESC 1:100



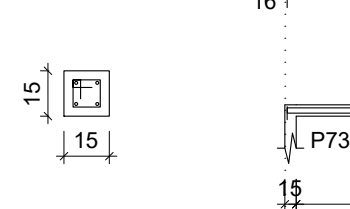
SEÇÃO A-A
ESC 1:25



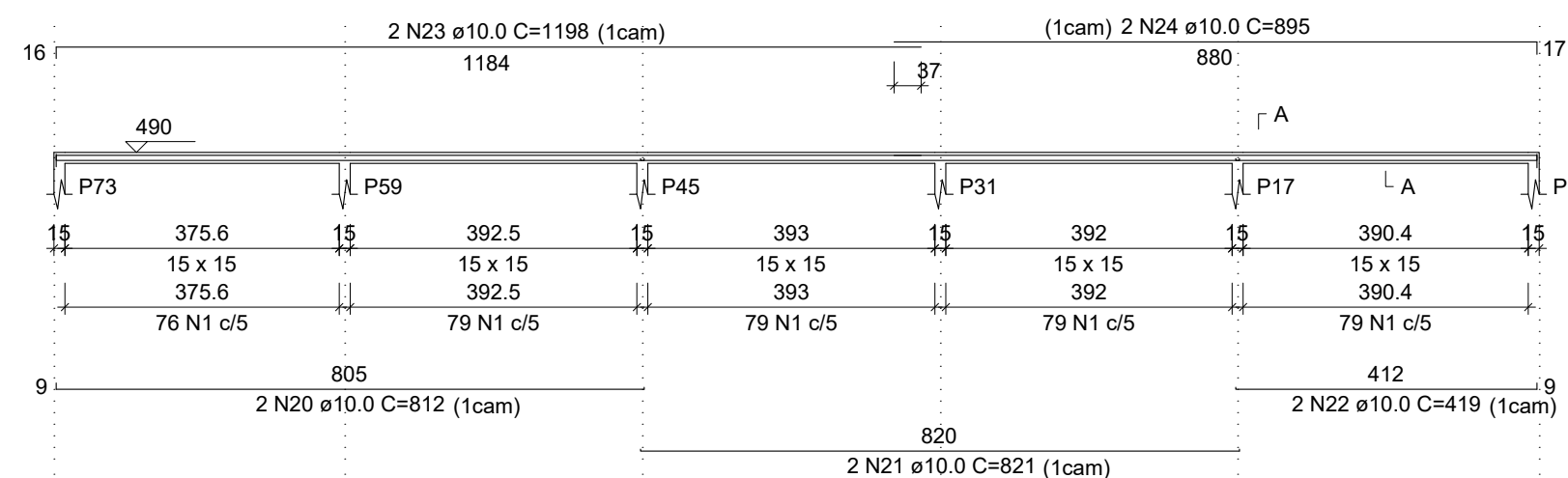
V6 (15 x 15)
ESC 1:100



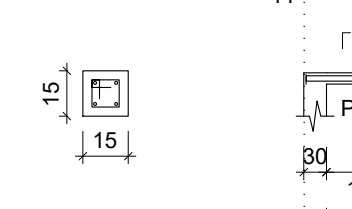
SEÇÃO A-A
ESC 1:25



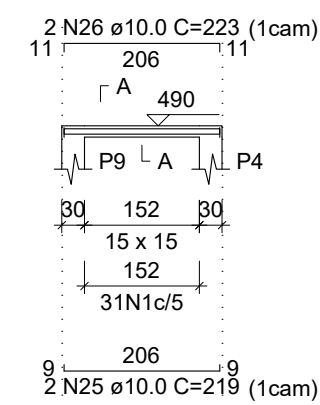
V7 (15 x 15)
ESC 1:100



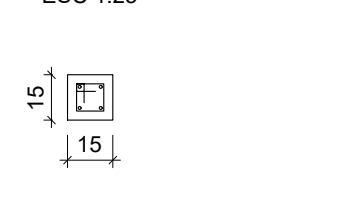
SEÇÃO A-A
ESC 1:25



V8 (15 x 15)
ESC 1:100



SEÇÃO A-A
ESC 1:25



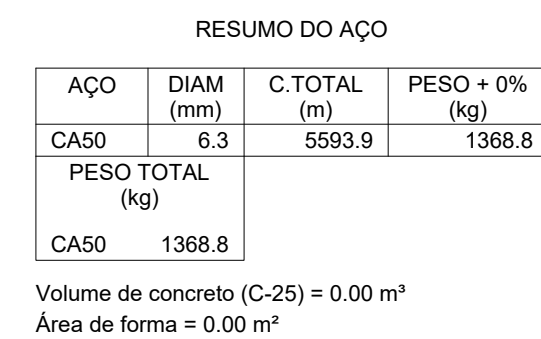
RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V1-L3	1	5.0	1791	47	84177
V4-L3	2	5.0	594	97	57618
V7-L3	3	6.3	4	729	2916
V46-L2	4	10.0	2	1077	2154
V49-L2	5	10.0	2	1086	2172
V52-L2	6	10.0	2	1052	2104
	7	10.0	2	1063	2126
	8	10.0	2	828	1656
	9	10.0	2	826	1652
	10	10.0	2	1198	2396
	11	10.0	2	509	1018
	12	10.0	2	820	1640
	13	10.0	2	836	1672
	14	10.0	2	1075	2150
	15	10.0	2	1090	2180
	16	10.0	2	834	1668
	17	10.0	2	829	1658
	18	10.0	2	1198	2396
	19	10.0	2	513	1026
	20	10.0	2	812	1624
	21	10.0	4	821	3284
	22	10.0	2	419	838
	23	10.0	2	1198	2396
	24	10.0	2	895	1790
	25	10.0	2	219	438
	26	10.0	2	223	446
	27	10.0	2	565	1130
	28	10.0	2	587	1174
	29	10.0	2	240	480
	30	10.0	2	262	524
	31	10.0	2	243	486
	32	10.0	2	255	510
	33	10.0	2	827	1654
	34	10.0	2	830	1660
	35	10.0	10	1198	11980
	36	10.0	2	530	1060
	37	10.0	2	805	1610
	38	10.0	2	1066	2132
	39	10.0	2	238	476
	40	10.0	2	916	1832
	41	10.0	2	820	1640
	42	10.0	2	820	1640
	43	10.0	2	545	1090
	44	10.0	2	806	1612
	45	10.0	2	806	1612
	46	10.0	2	413	826
	47	10.0	2	915	1830
	48	10.0	2	1096	2192
	49	10.0	2	816	1632
	50	10.0	2	830	1660
	51	10.0	2	1199	2398
	52	10.0	2	1200	2400
	53	10.0	2	415	830
	54	10.0	2	813	1626
	55	10.0	2	422	844
	56	10.0	2	903	1806

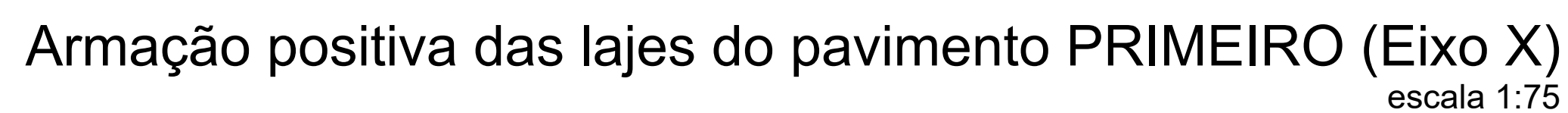
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	6.3	29.2	7.1
CA60	10.0	928.3	572.3
	5.0	1418	218.6
PESO TOTAL (kg)			
CA50	579.5		
CA60	218.6		

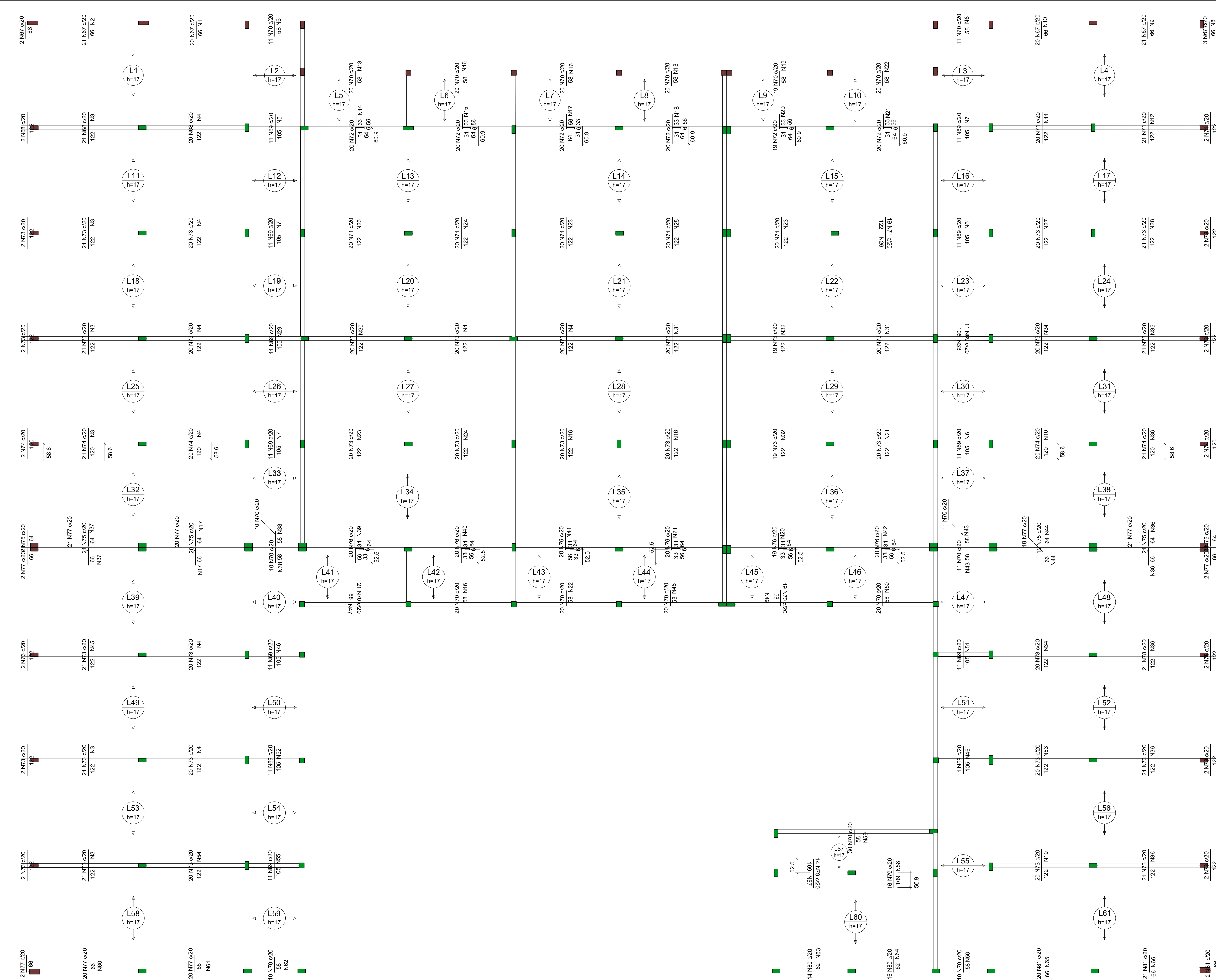
Volume de concreto (C-25) = 10.01 m³
Área de forma = 167.41 m²



 INSTITUTO FEDERAL Sertão Pernambuco	INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA SERTÃO PERNAMBUCANO DIRETORIA DE ENGENHARIA E INFRAESTRUTURA Rua Aristarco Lopes, 240 Centro Petrolina/PE CEP: 56.302-100	NOME PROJETO ESTRUTURAL DO CAMPUS ÁGUAS BELAS DO IF Sertão PE
		ENDEREÇO Rodovia PE-300, S/N, CEP: 55340-000 Águas Belas/PE
DESCRIÇÃO LAJES POSITIVAS EIXO Y (BLOCO ADM - PARTE 2)	ESCALA 1/75	DATA ABRIL/2025
ASSINATURA/CARIMBO - DIREÇÃO GERAL	ASSINATURA/CARIMBO - RESPONSÁVEL TÉCNICO Wilson Nery da Cunha - CREA BA 14748	



Volume de concreto (C-25) = 87.37 m³
Área de forma = 0.00 m²

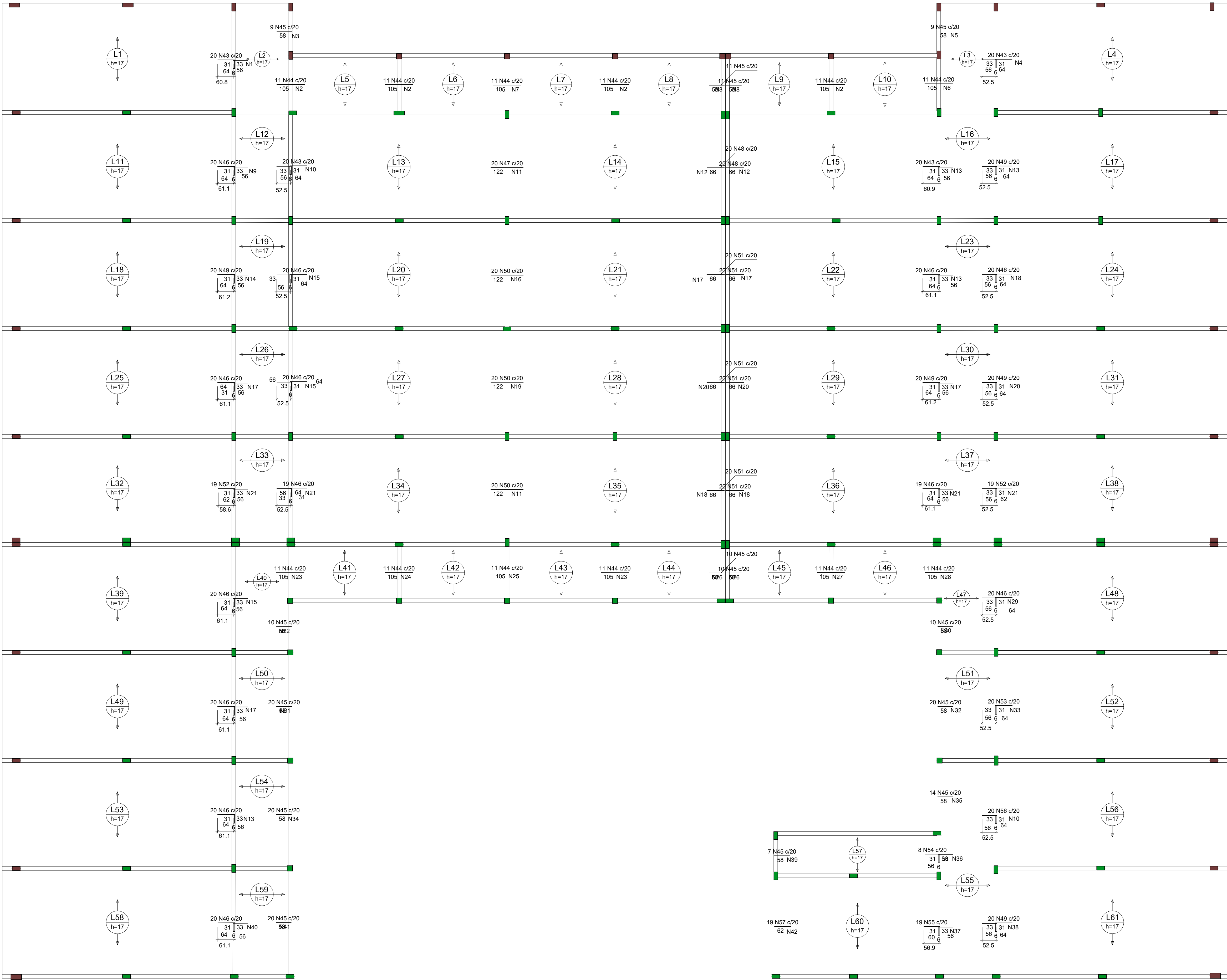


Armaduras de distribuição	
Armadura	Armadura de distribuição
N67	4 N1 e5.0 c/20 C=392
N68	6 N3 e5.0 c/20 C=411
N68	6 N4 e5.0 c/20 C=402
N69	6 N5 e5.0 c/20 C=220
N70	3 N6 e5.0 c/20 C=215
N69	6 N7 e5.0 c/20 C=215
N70	3 N8 e5.0 c/20 C=215
N67	4 N8 e5.0 c/20 C=58
N67	4 N9 e5.0 c/20 C=417
N67	4 N10 e5.0 c/20 C=392
N71	6 N11 e5.0 c/20 C=395
N71	6 N12 e5.0 c/20 C=425
N70	3 N13 e5.0 c/20 C=409
N72	6 N14 e5.0 c/20 C=391
N72	6 N15 e5.0 c/20 C=399
N70	3 N16 e5.0 c/20 C=408
N70	3 N16 e5.0 c/20 C=405
N72	6 N18 e5.0 c/20 C=405
N70	3 N18 e5.0 c/20 C=405
N70	3 N19 e5.0 c/20 C=388
N72	6 N20 e5.0 c/20 C=388
N72	6 N21 e5.0 c/20 C=404
N70	3 N22 e5.0 c/20 C=407
N73	7 N3 e5.0 c/20 C=411
N73	7 N4 e5.0 c/20 C=402
N69	6 N7 e5.0 c/20 C=215
N71	7 N23 e5.0 c/20 C=407
N71	7 N24 e5.0 c/20 C=404
N71	7 N23 e5.0 c/20 C=407
N71	7 N25 e5.0 c/20 C=402
N71	7 N23 e5.0 c/20 C=407
N71	7 N28 e5.0 c/20 C=385
N69	6 N6 e5.0 c/20 C=215
N73	7 N27 e5.0 c/20 C=395
N73	7 N28 e5.0 c/20 C=424
N73	7 N3 e5.0 c/20 C=411
N73	7 N4 e5.0 c/20 C=402
N69	6 N29 e5.0 c/20 C=221
N73	7 N30 e5.0 c/20 C=384
N73	7 N4 e5.0 c/20 C=402
N73	7 N4 e5.0 c/20 C=402
N73	7 N31 e5.0 c/20 C=404
N73	7 N32 e5.0 c/20 C=388
N73	7 N31 e5.0 c/20 C=404
N69	6 N3 e5.0 c/20 C=215
N73	7 N34 e5.0 c/20 C=392
N73	7 N35 e5.0 c/20 C=421
N74	6 N3 e5.0 c/20 C=411
N74	6 N4 e5.0 c/20 C=402
N69	6 N7 e5.0 c/20 C=215
N73	7 N23 e5.0 c/20 C=407
N73	7 N24 e5.0 c/20 C=404
N73	7 N16 e5.0 c/20 C=408
N73	7 N16 e5.0 c/20 C=408
N73	7 N32 e5.0 c/20 C=388
N73	7 N21 e5.0 c/20 C=404
N69	6 N6 e5.0 c/20 C=215
N74	6 N10 e5.0 c/20 C=392
N74	6 N36 e5.0 c/20 C=421
N75	4 N37 e5.0 c/20 C=411
N75	4 N17 e5.0 c/20 C=405
N70	3 N38 e5.0 c/20 C=203
N70	3 N47 e5.0 c/20 C=411
N70	3 N16 e5.0 c/20 C=407
N70	3 N22 e5.0 c/20 C=407
N70	3 N48 e5.0 c/20 C=397
N70	3 N49 e5.0 c/20 C=380
N70	3 N50 e5.0 c/20 C=409
N69	6 N51 e5.0 c/20 C=214
N70	3 N43 e5.0 c/20 C=224
N77	4 N36 e5.0 c/20 C=421
N78	4 N44 e5.0 c/20 C=382
N78	7 N34 e5.0 c/20 C=392
N78	7 N36 e5.0 c/20 C=421
N73	7 N3 e5.0 c/20 C=411
N73	7 N4 e5.0 c/20 C=402
N69	6 N52 e5.0 c/20 C=213
N73	6 N46 e5.0 c/20 C=213
N73	7 N53 e5.0 c/20 C=392
N73	7 N36 e5.0 c/20 C=421
N73	7 N3 e5.0 c/20 C=411
N73	7 N54 e5.0 c/20 C=401
N69	6 N55 e5.0 c/20 C=212
N70	3 N56 e5.0 c/20 C=208
N73	7 N10 e5.0 c/20 C=392
N73	7 N36 e5.0 c/20 C=421
N79	6 N57 e5.0 c/20 C=290
N79	6 N58 e5.0 c/20 C=319
N70	3 N59 e5.0 c/20 C=606
N77	4 N60 e5.0 c/20 C=405
N77	4 N61 e5.0 c/20 C=400
N70	3 N62 e5.0 c/20 C=205
N80	3 N63 e5.0 c/20 C=287
N80	3 N64 e5.0 c/20 C=319
N81	4 N65 e5.0 c/20 C=395
N81	4 N66 e5.0 c/20 C=415

RELAÇÃO DO AÇO						
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)	
CA60	1	5.0	4	392	1568	
	2	5.0	4	412	1648	
	3	5.0	40	411	16440	
	4	5.0	54	402	21708	
	5	5.0	6	220	1320	
	6	5.0	18	215	3870	
	7	5.0	18	215	3870	
	8	5.0	4	58	232	
	9	5.0	4	417	1668	
	10	5.0	17	392	6664	
	11	5.0	6	395	2370	
	12	5.0	6	425	2550	
	13	5.0	3	409	1227	
	14	5.0	6	391	2346	
	15	5.0	6	399	2394	
	16	5.0	23	408	9384	
	17	5.0	14	405	5670	
	18	5.0	9	405	3645	
	19	5.0	3	388	1164	
	20	5.0	12	388	4656	
	21	5.0	19	404	7676	
	22	5.0	6	407	2442	
	23	5.0	28	407	11396	
	24	5.0	14	404	5656	
	25	5.0	7	402	2814	
	26	5.0	7	385	2695	
	27	5.0	7	395	2765	
	28	5.0	7	424	2968	
	29	5.0	6	221	1326	
	30	5.0	7	394	2758	
	31	5.0	14	404	5656	
	32	5.0	14	388	5432	
	33	5.0	6	215	1290	
	34	5.0	14	392	5488	
	35	5.0	7	421	2947	
	36	5.0	35	421	14735	
	37	5.0	8	411	3288	
	38	5.0	3	203	609	
	39	5.0	6	403	2418	
	40	5.0	6	405	2430	
	41	5.0	6	404	2424	
	42	5.0	6	394	2364	
	43	5.0	6	224	1344	
	44	5.0	8	382	3056	
	45	5.0	12	411	4932	
	46	5.0	12	213	2556	
	47	5.0	3	411	1233	
	48	5.0	3	397	1191	
	49	5.0	3	380	1140	
	50	5.0	3	409	1227	
	51	5.0	6	214	1284	
	52	5.0	6	213	1278	
	53	5.0	7	392	2744	
	54	5.0	7	401	2807	
	55	5.0	6	212	1272	
	56	5.0	3	208	624	
	57	5.0	6	290	1740	
	58	5.0	6	319	1914	
	59	5.0	3	606	1818	
	60	5.0	4	405	1620	
	61	5.0	4	400	1600	
	62	5.0	3	205	615	
	63	5.0	3	287	861	
	64	5.0	3	319	957	
	65	5.0	4	395	1580	
	66	5.0	4	415	1660	
	67	6.3	87	66	5742	
	68	6.3	43	122	5246	
	69	6.3	143	105	15015	
	70	6.3	353	58	20474	
	71	6.3	162	122	19764	
	72	6.3	119	184	21696	
	73	6.3	625	122	76250	
	74	6.3	86	120	10320	
	75	6.3	85	64	5440	
	76	6.3	119	184	21696	
	77	6.3	127	66	8382	
	78	6.3	43	122	5246	
	79	6.3	30	109	3270	
	80	6.3	30	62	1860	
	81	6.3	43	66	2838	

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	6.3	2236.4	547.3
CA60	5.0	2255.8	347.7
PESO TOTAL (kg)			
CA50		547.3	
CA60		347.7	
Volume de concreto (C-25) = 0.00 m³			
Área de forma = 0.00 m²			

Armação negativa das lajes do pavimento PRIMEIRO (Eixo Y)
escala 1:75



RELACÃO DO AÇO				
Negativos X				
AÇO	N	DIAM (mm)	QUANT	C.TOTAL (cm)
CA80	1	5.0	6	392
	2	5.0	24	214
	3	5.0	3	176
	4	5.0	6	392
	5	5.0	3	176
	6	5.0	6	211
	7	5.0	6	217
	8	5.0	6	219
	9	5.0	6	401
	10	5.0	12	404
	11	5.0	13	394
	12	5.0	8	392
	13	5.0	24	402
	14	5.0	6	402
	15	5.0	18	405
	16	5.0	7	406
	17	5.0	26	402
	18	5.0	14	401
	19	5.0	7	403
	20	5.0	14	402
CA50	21	5.0	24	388
	22	5.0	3	195
	23	5.0	12	213
	24	5.0	6	212
	25	5.0	6	217
	26	5.0	6	210
	27	5.0	6	212
	28	5.0	6	212
	29	5.0	6	212
	30	5.0	3	195
	31	5.0	3	408
	32	5.0	3	409
	33	5.0	6	400
	34	5.0	3	407
	35	5.0	3	274
	36	5.0	6	158
	37	5.0	6	376
	38	5.0	6	400
	39	5.0	3	146
CA60	40	5.0	6	404
	41	5.0	3	408
	42	5.0	3	376
	43	6.3	80	184
	44	6.3	132	105
	45	6.3	181	58
	46	6.3	258	184
	47	6.3	20	122
	48	6.3	40	66
	49	6.3	100	184
	50	6.3	60	122
	51	6.3	120	66
	52	6.3	38	182
	53	6.3	20	184
	54	6.3	8	176
	55	6.3	19	180
	56	6.3	20	184
	57	6.3	19	62
	58	6.3	19	1178
RESUMO DO AÇO				
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)	
CA50	6.3	1455.5	356.2	
CA60	5.0	1165.3	179.6	
PESO TOTAL (kg)				
CA50			356.2	
CA60			179.6	
Volume de concreto (C-25) = 0.00 m³				
Área de forma = 0.00 m²				

Armação negativa das lajes do pavimento PRIMEIRO (Eixo X)
escala 1:75



INSTITUTO FEDERAL DE
EDUCAÇÃO, CIÊNCIA E TECNOLOGIA
SERTÃO PERNAMBUCANO
DIRETORIA DE ENGENHARIA
E INFRAESTRUTURA
Rua Aristarco Lopes, 240 | Centro
Petrolina/PE | CEP: 56.302-100

PROJETO ESTRUTURAL DO CAMPUS
ÁGUAS BELAS DO IFSertãoPE

ENDEREÇO:
Rodovia PE-300, S/N, CEP: 55340-000
Águas Belas/PE

DESCRIÇÃO
LAJES NEGATIVAS EIXO X (BLOCO ADM - PARTE 2.)

ESCALA
1/75

DATA
ABRIL/2025

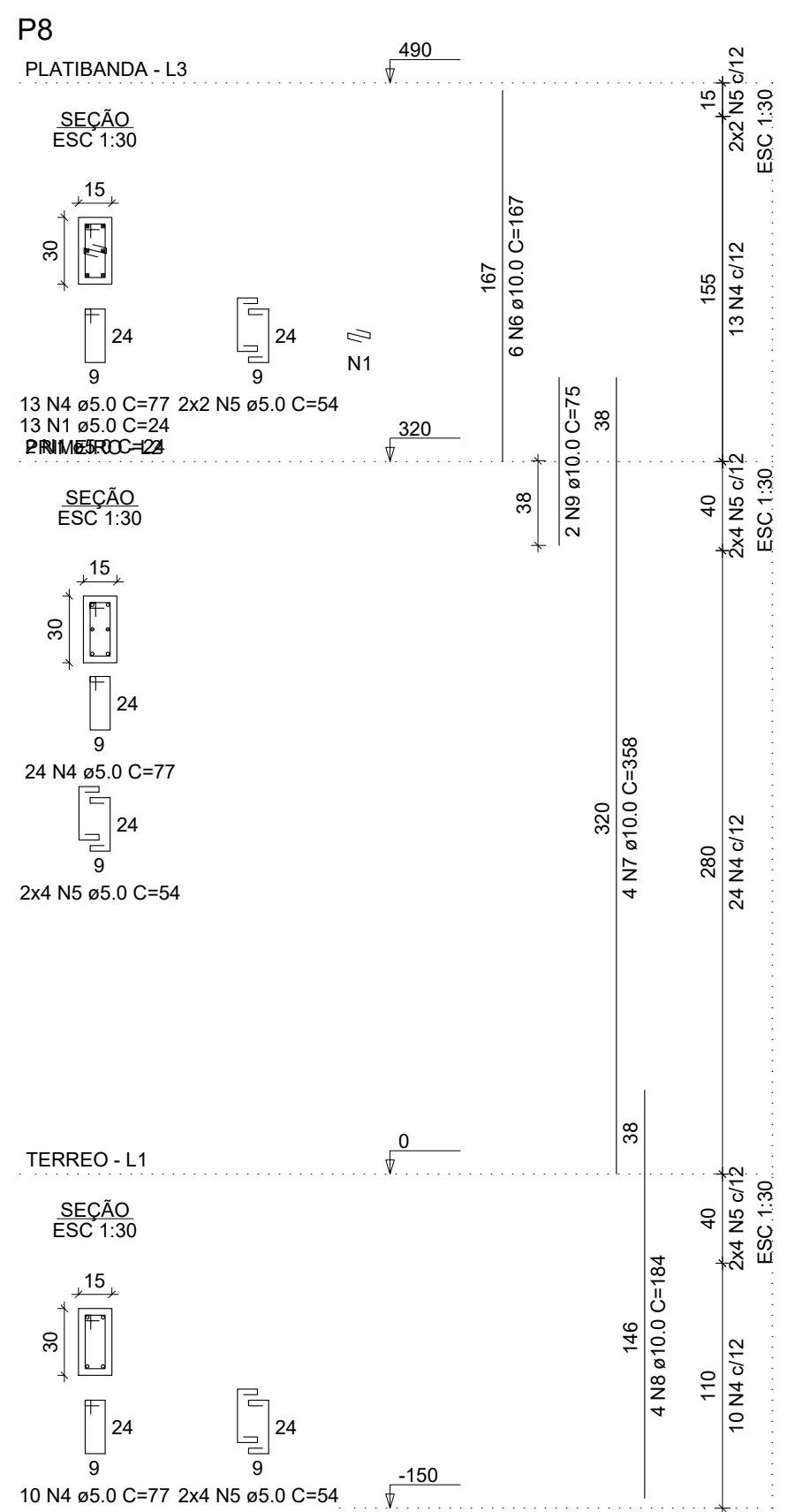
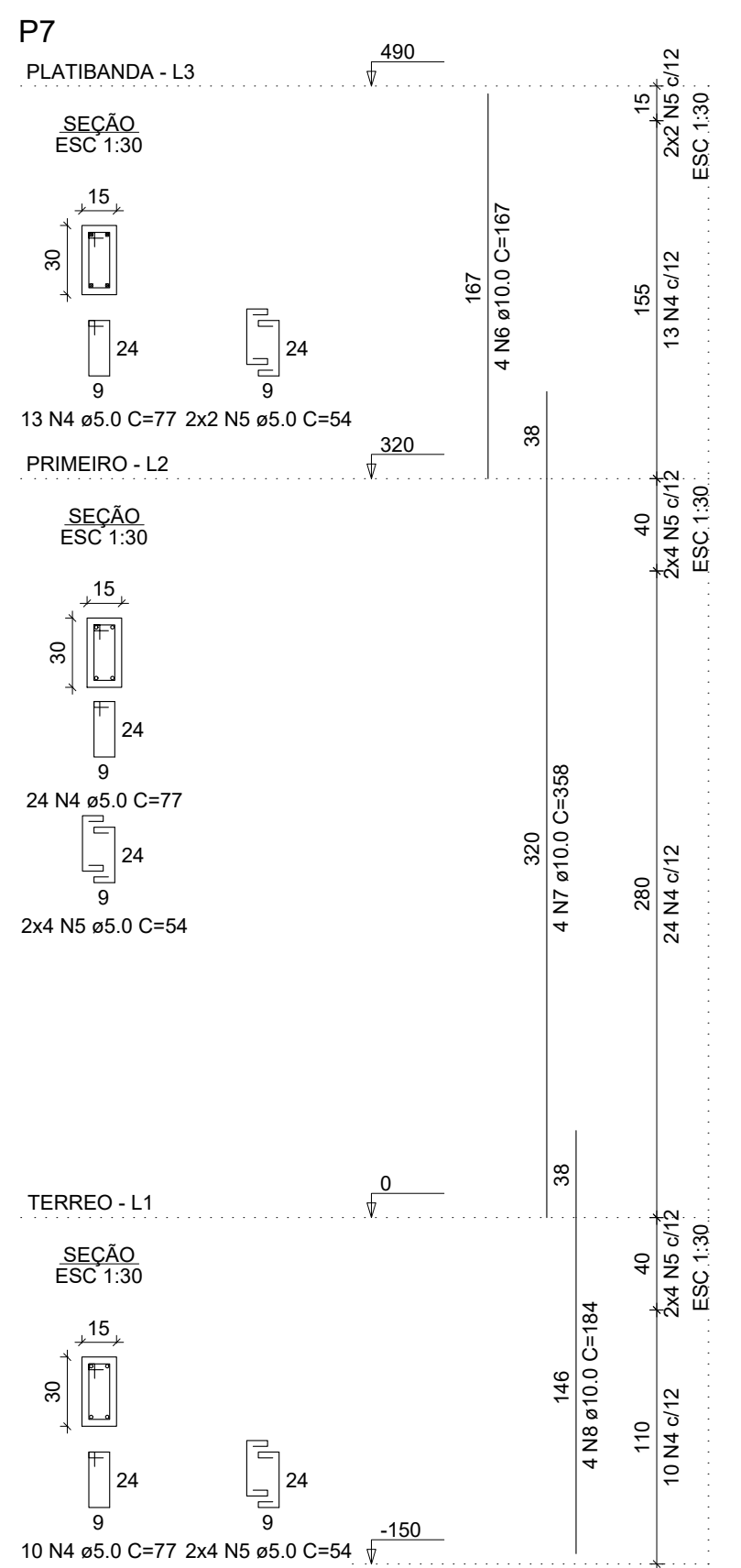
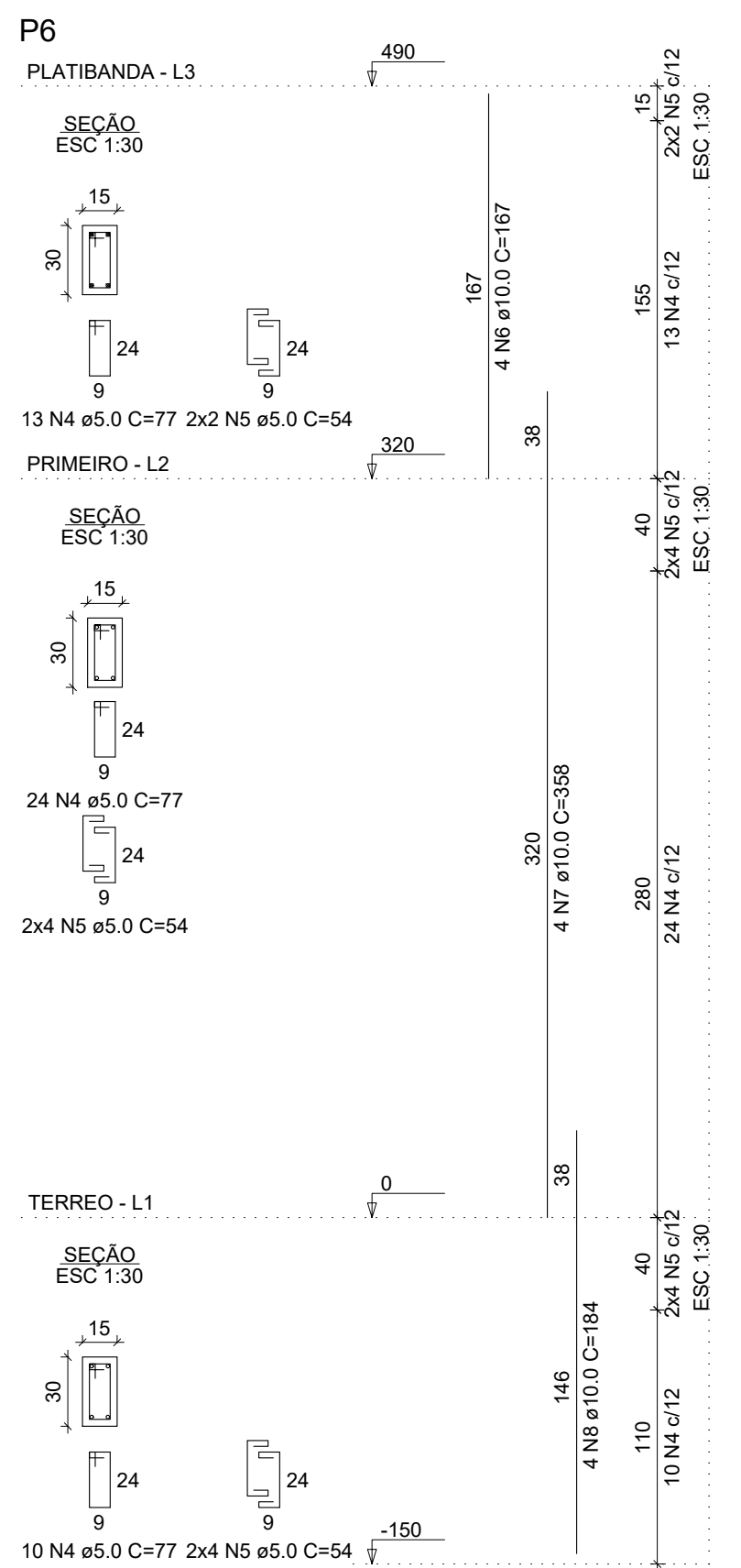
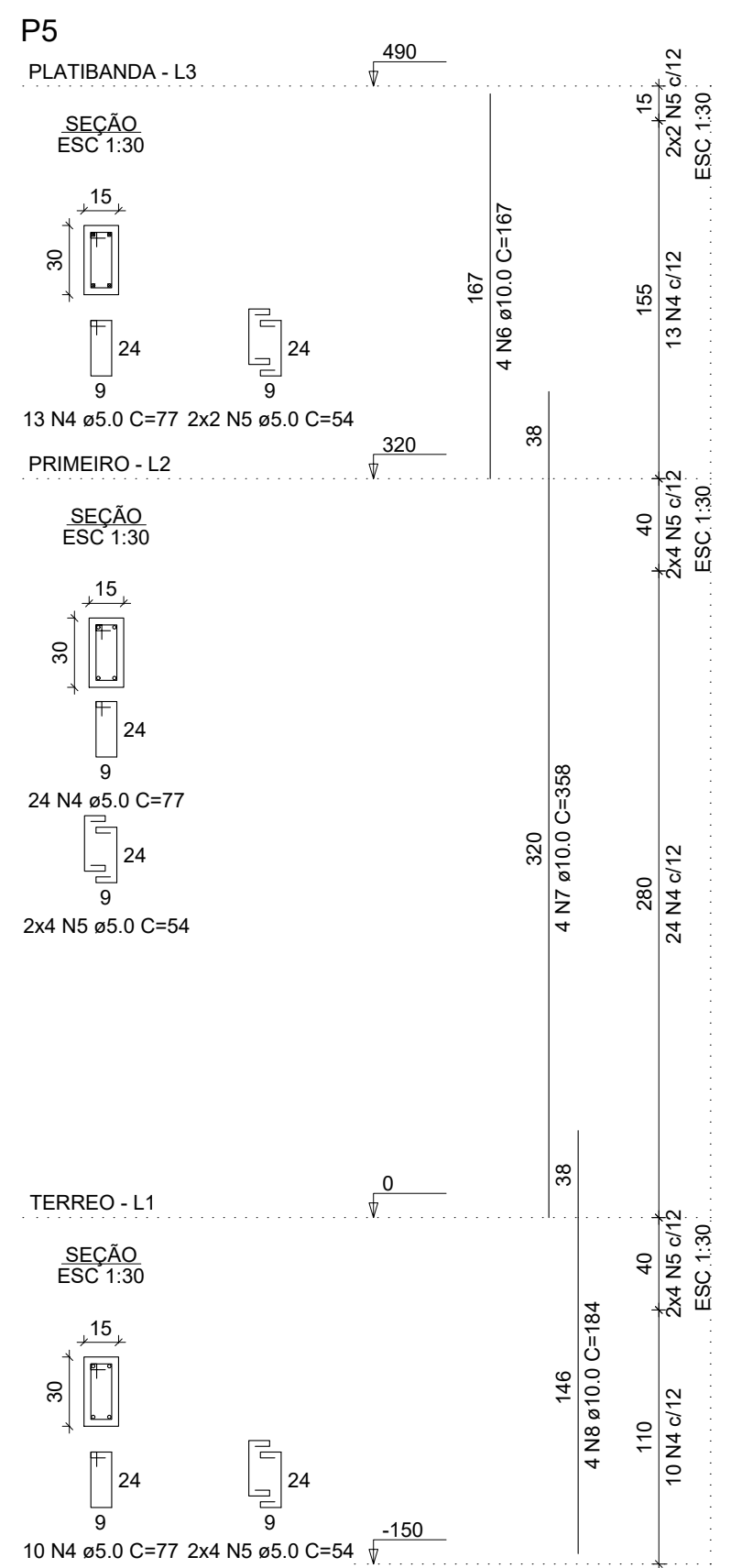
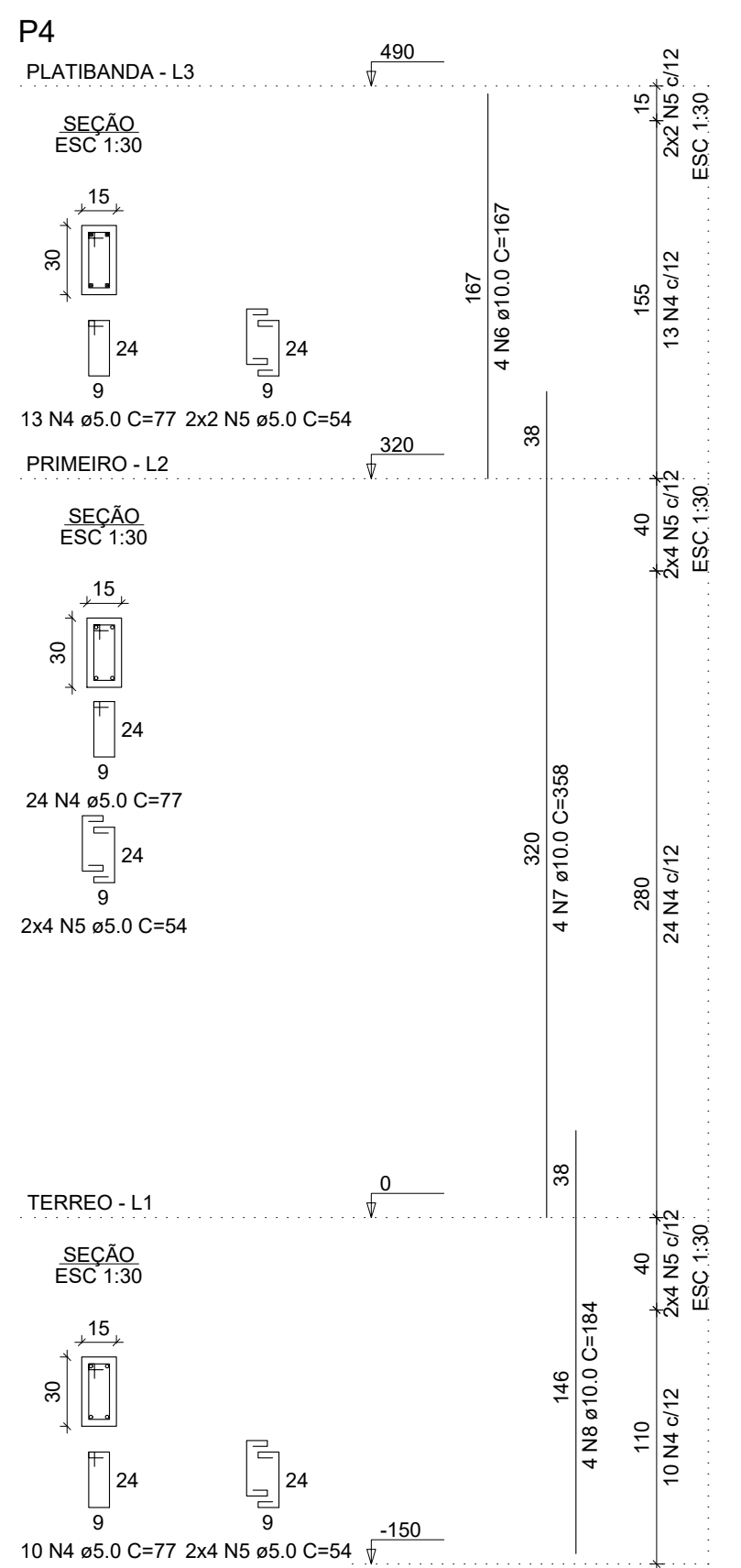
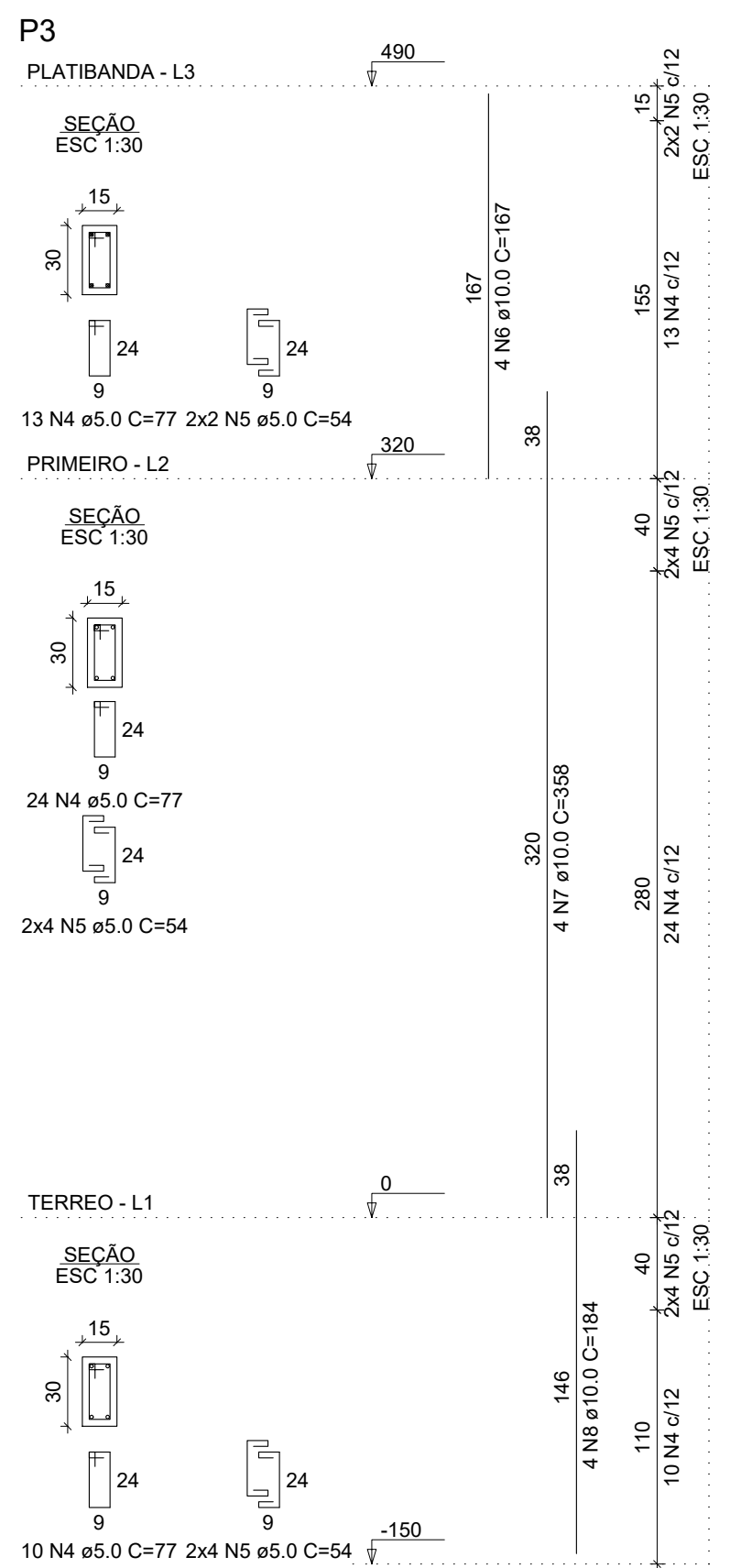
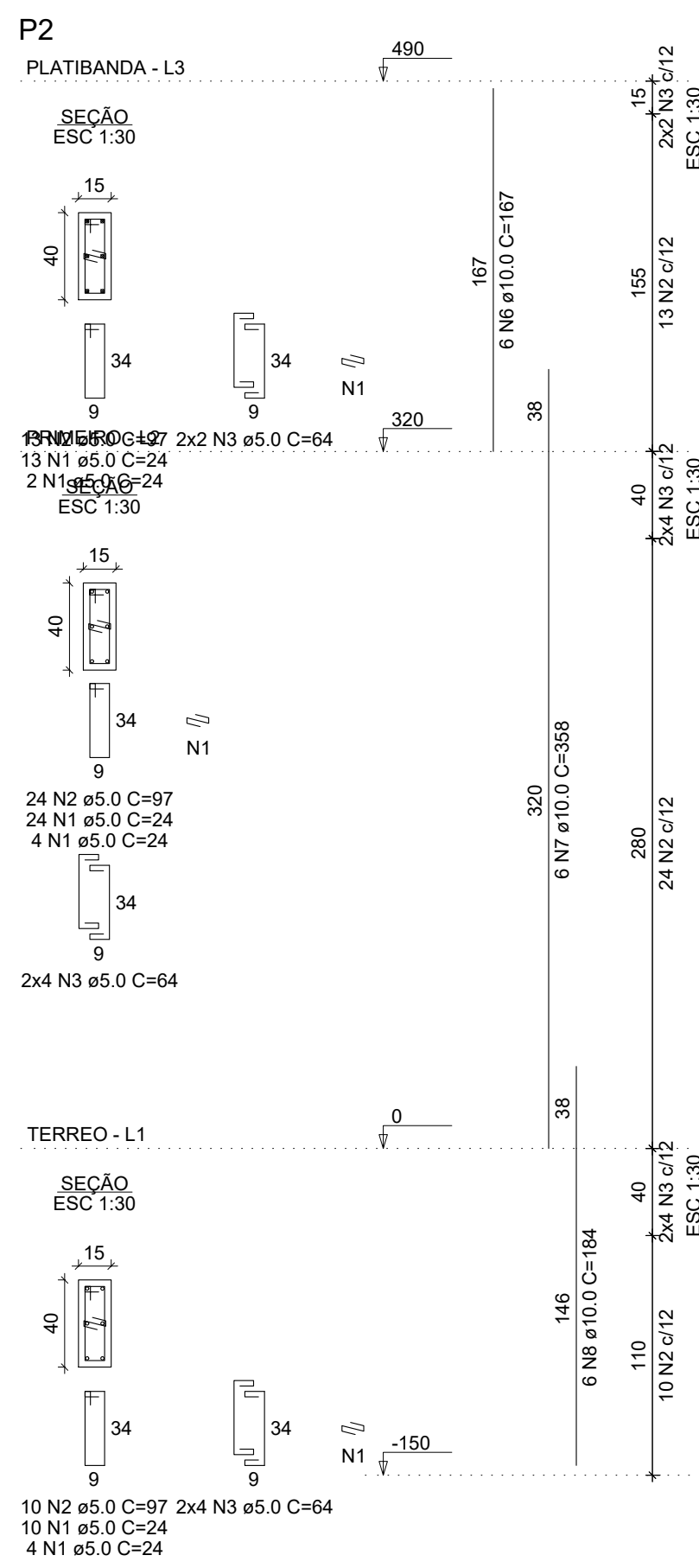
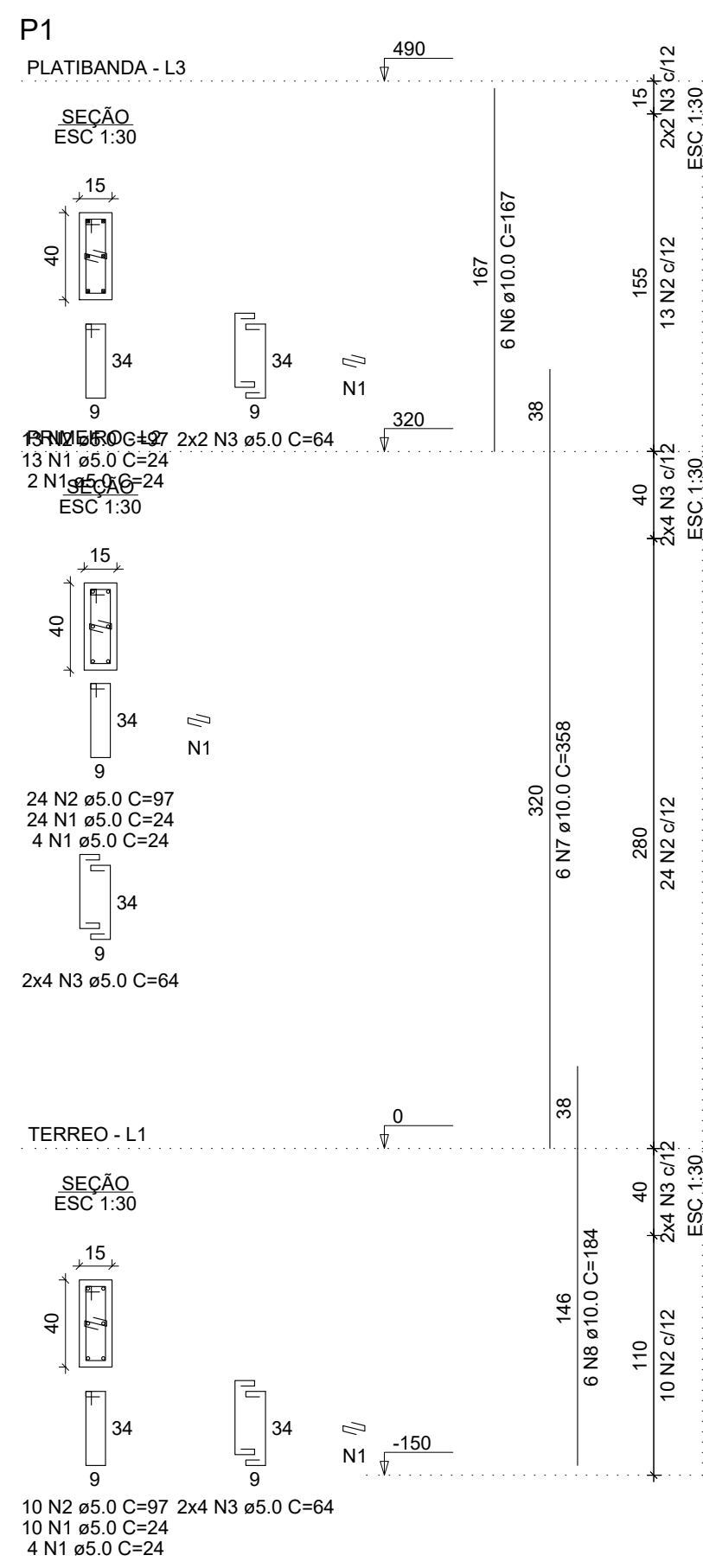
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Wilson Nery da Cunha - CREA BA 14748

19/26



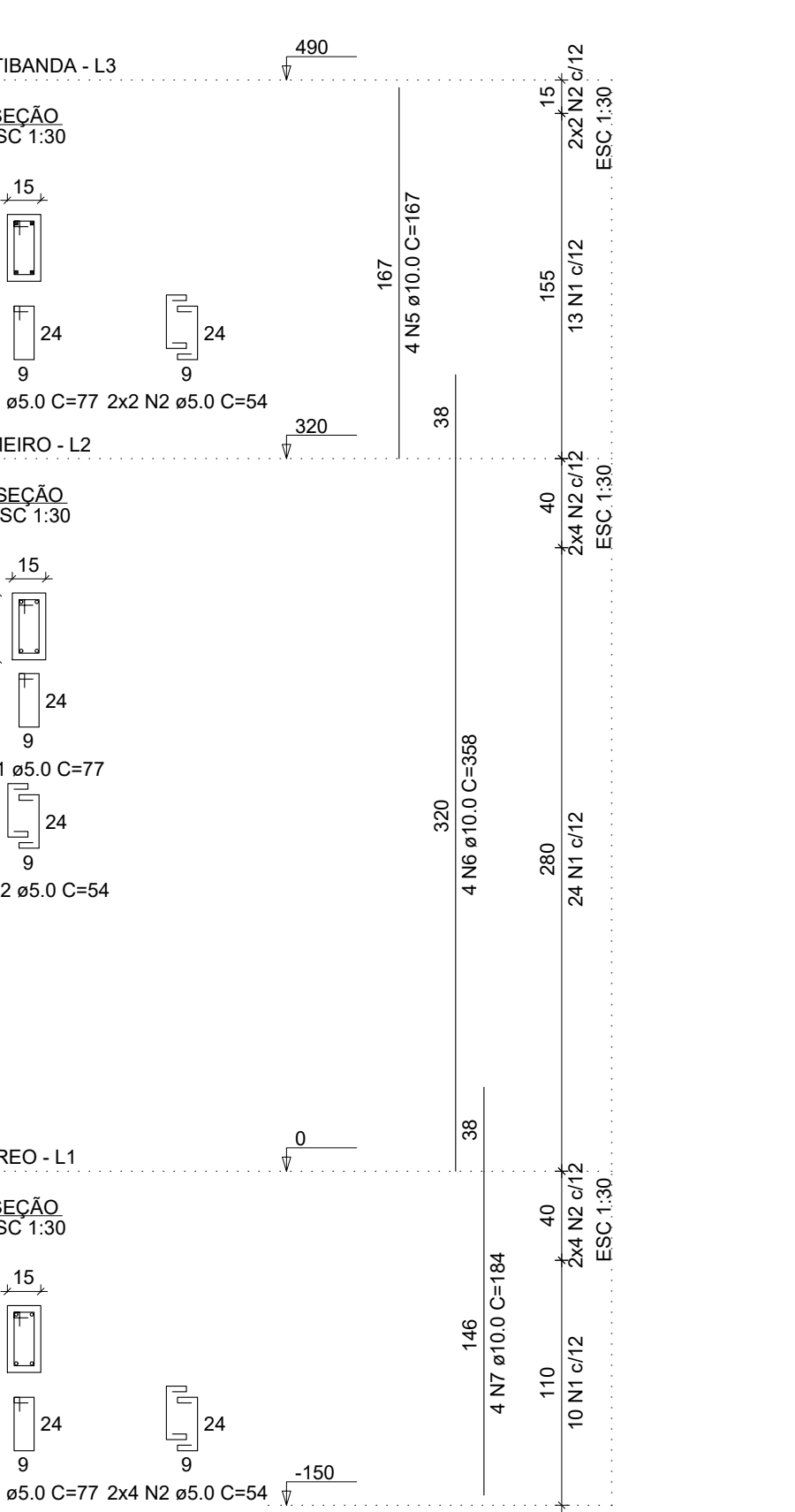
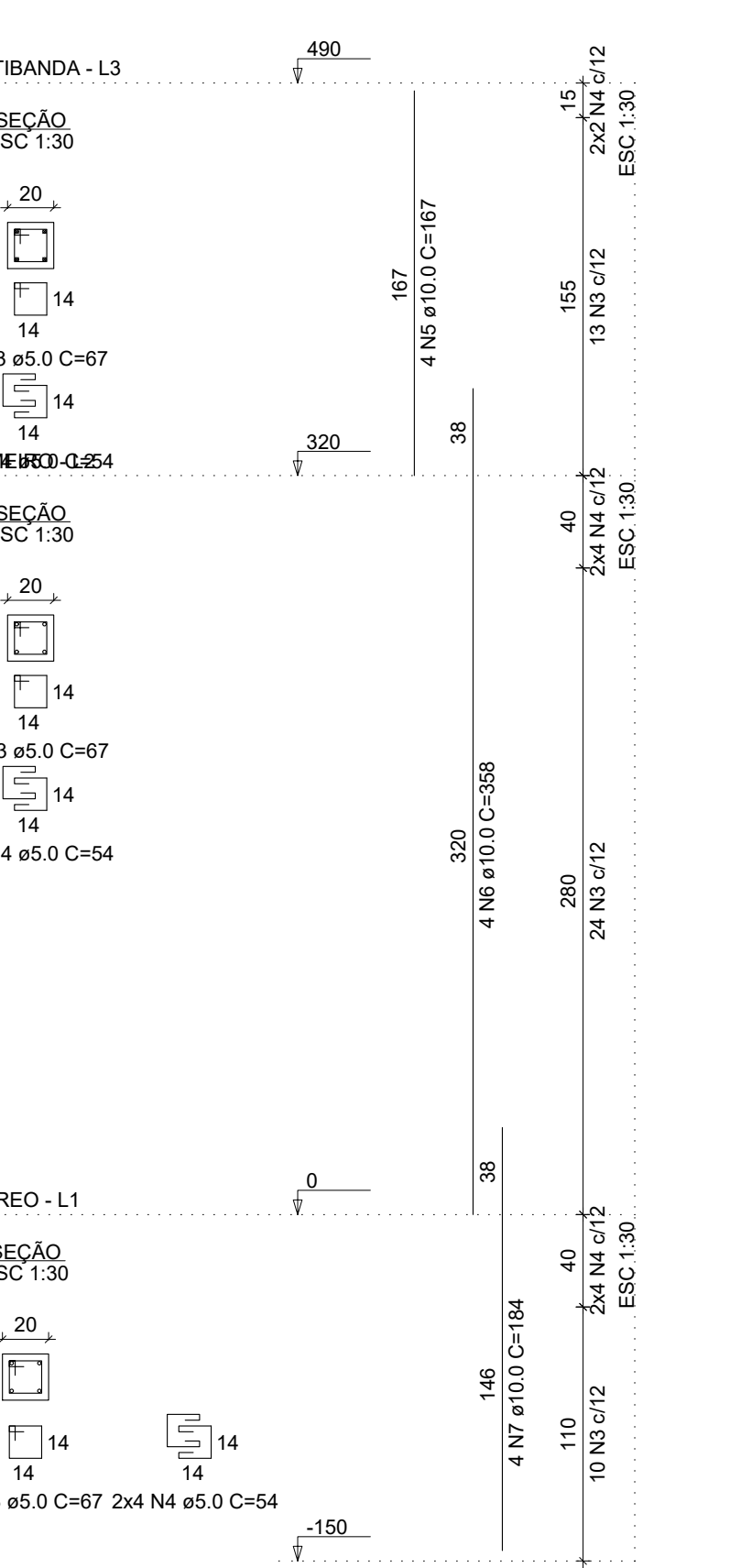
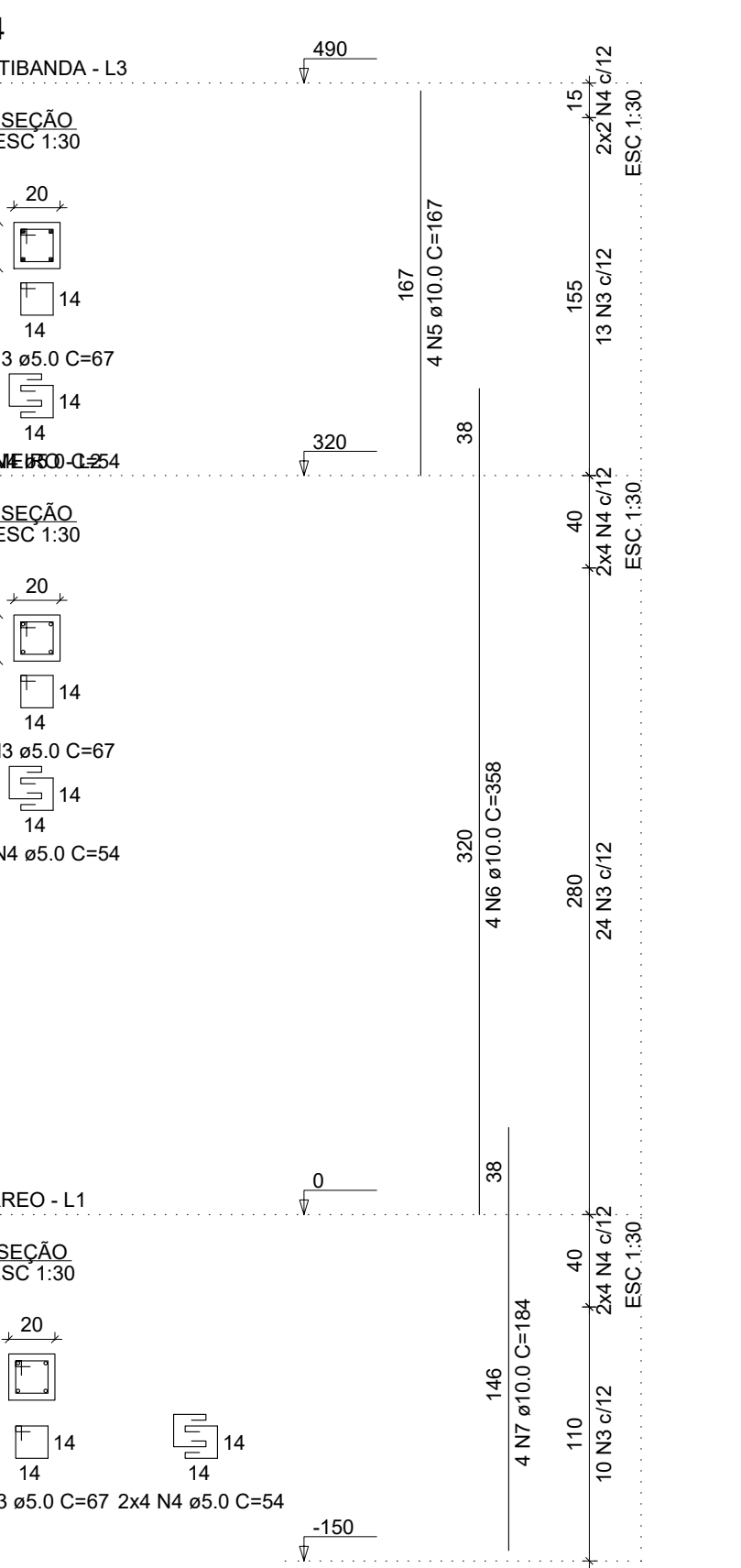
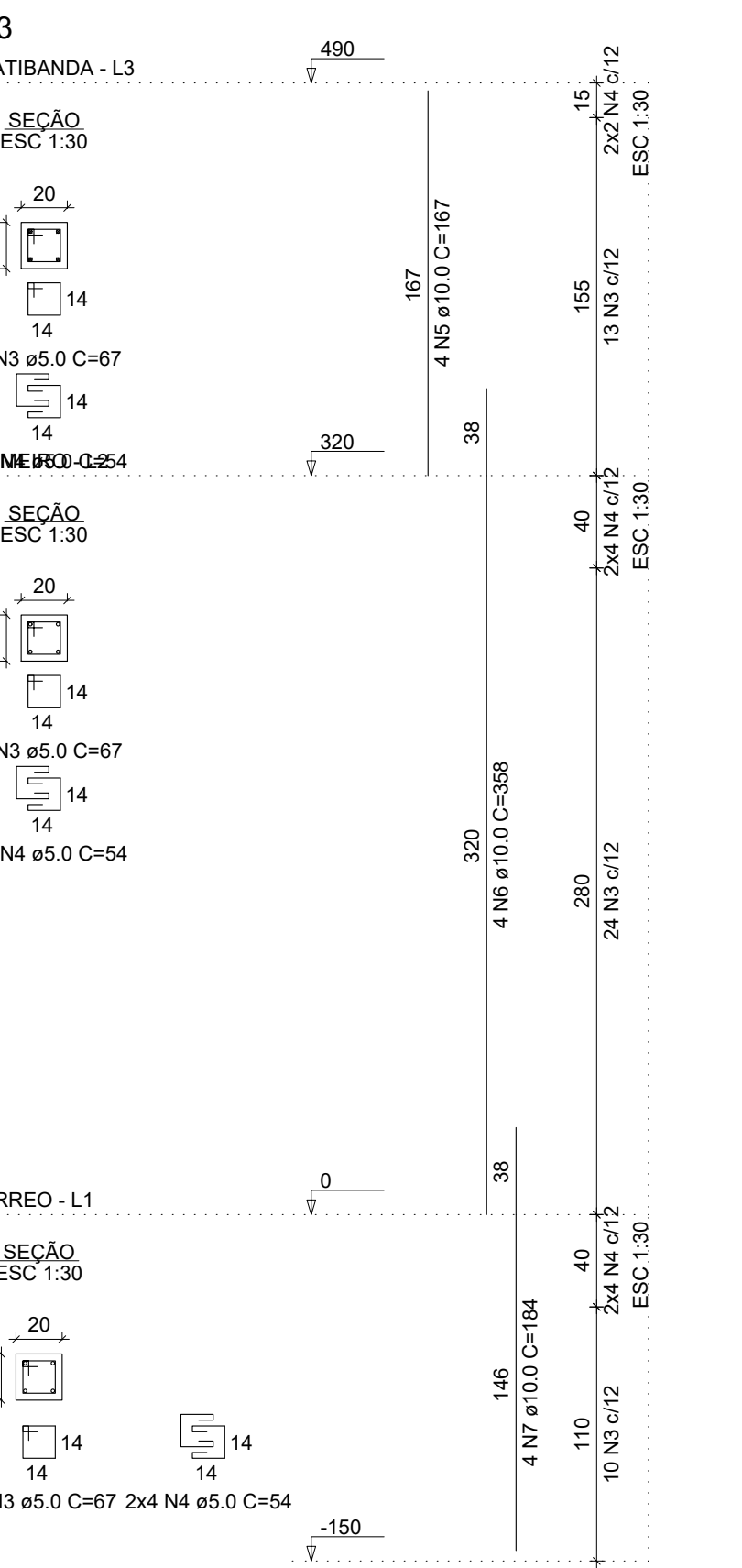
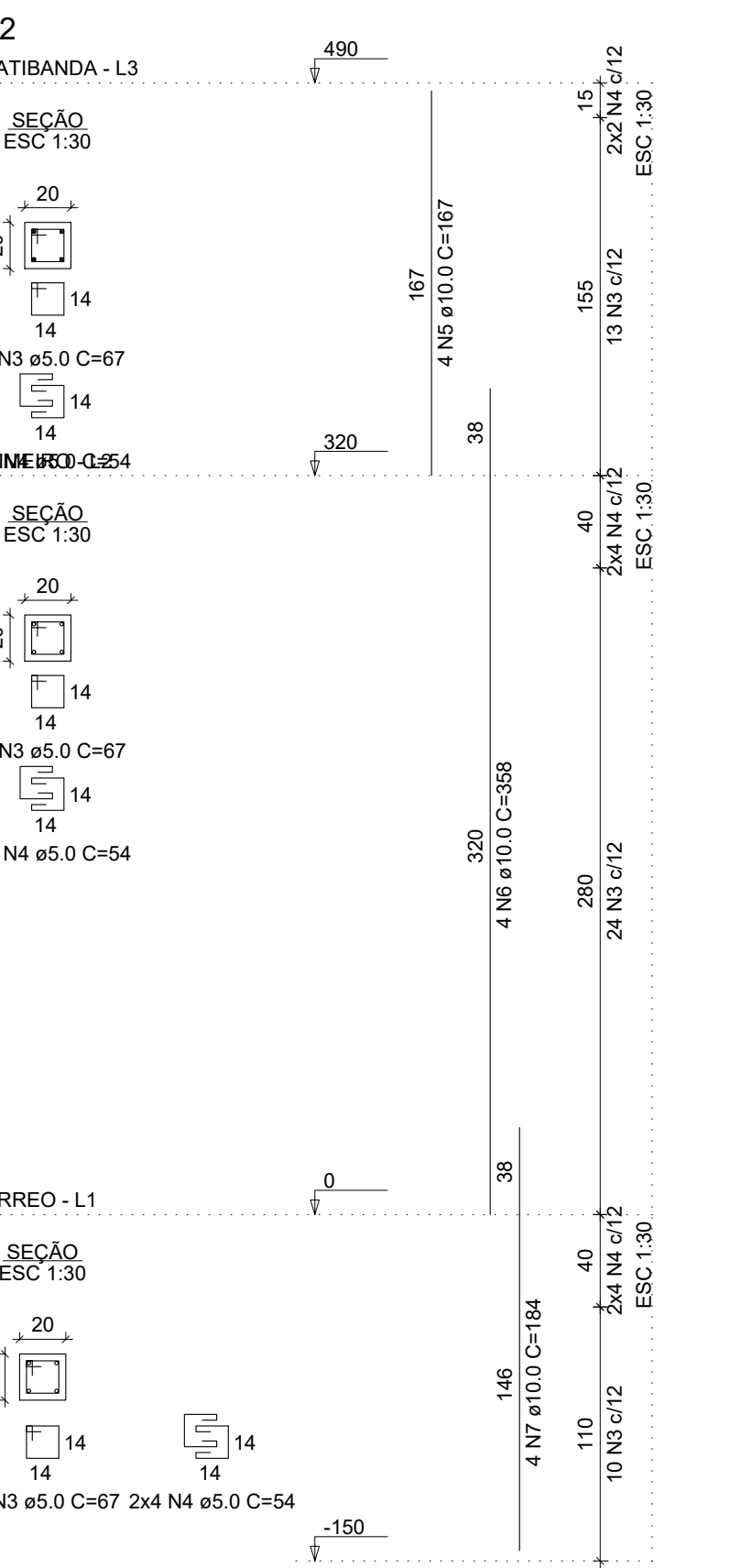
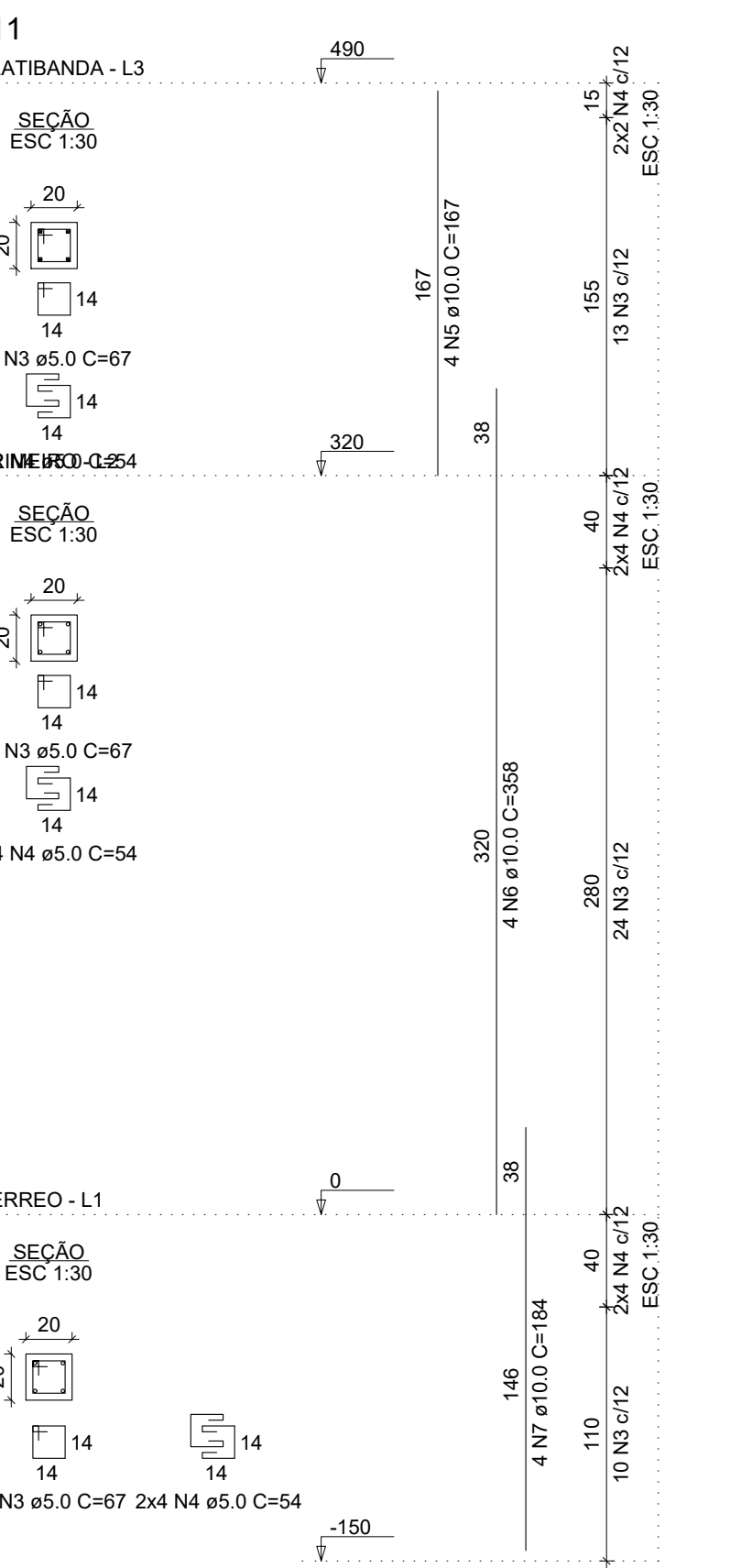
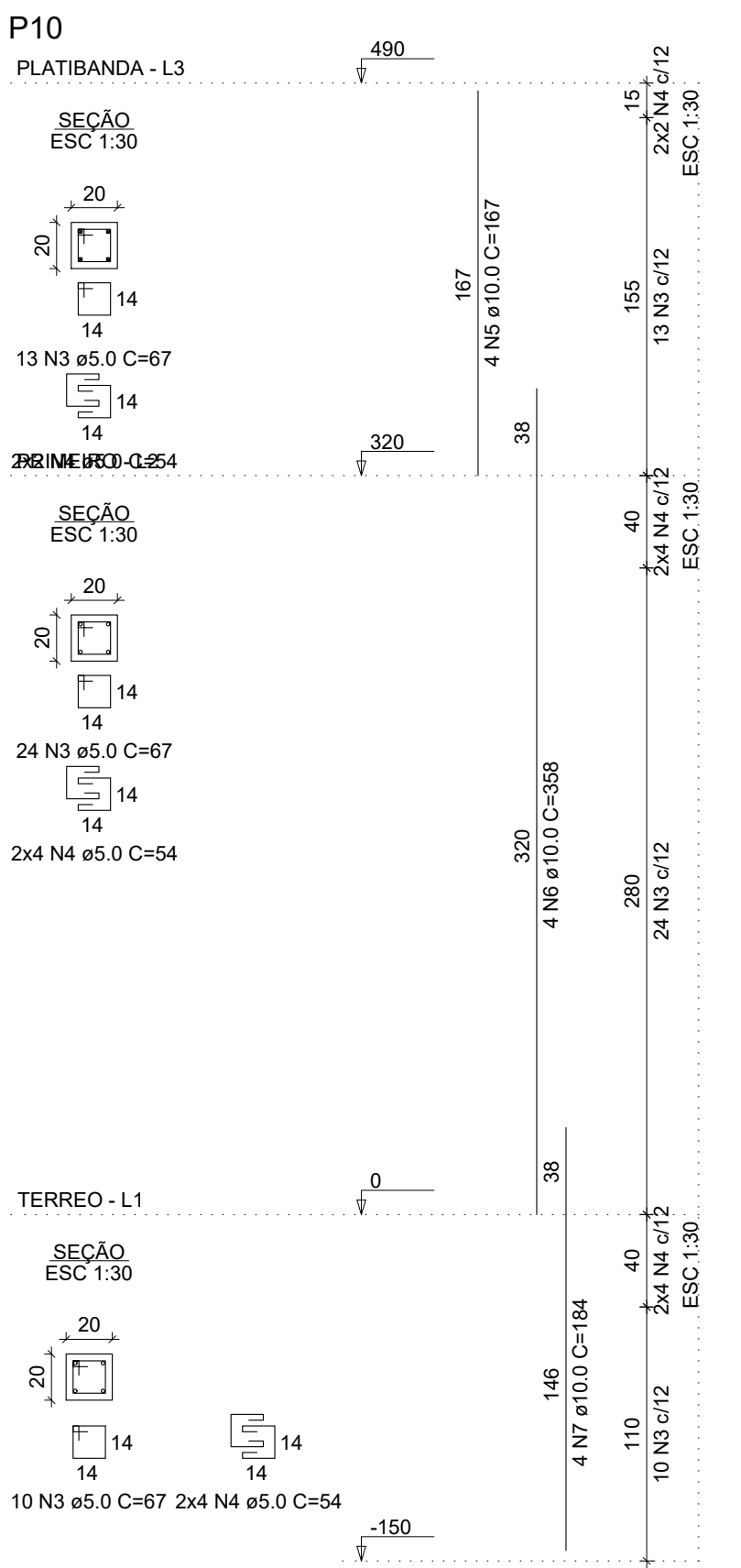
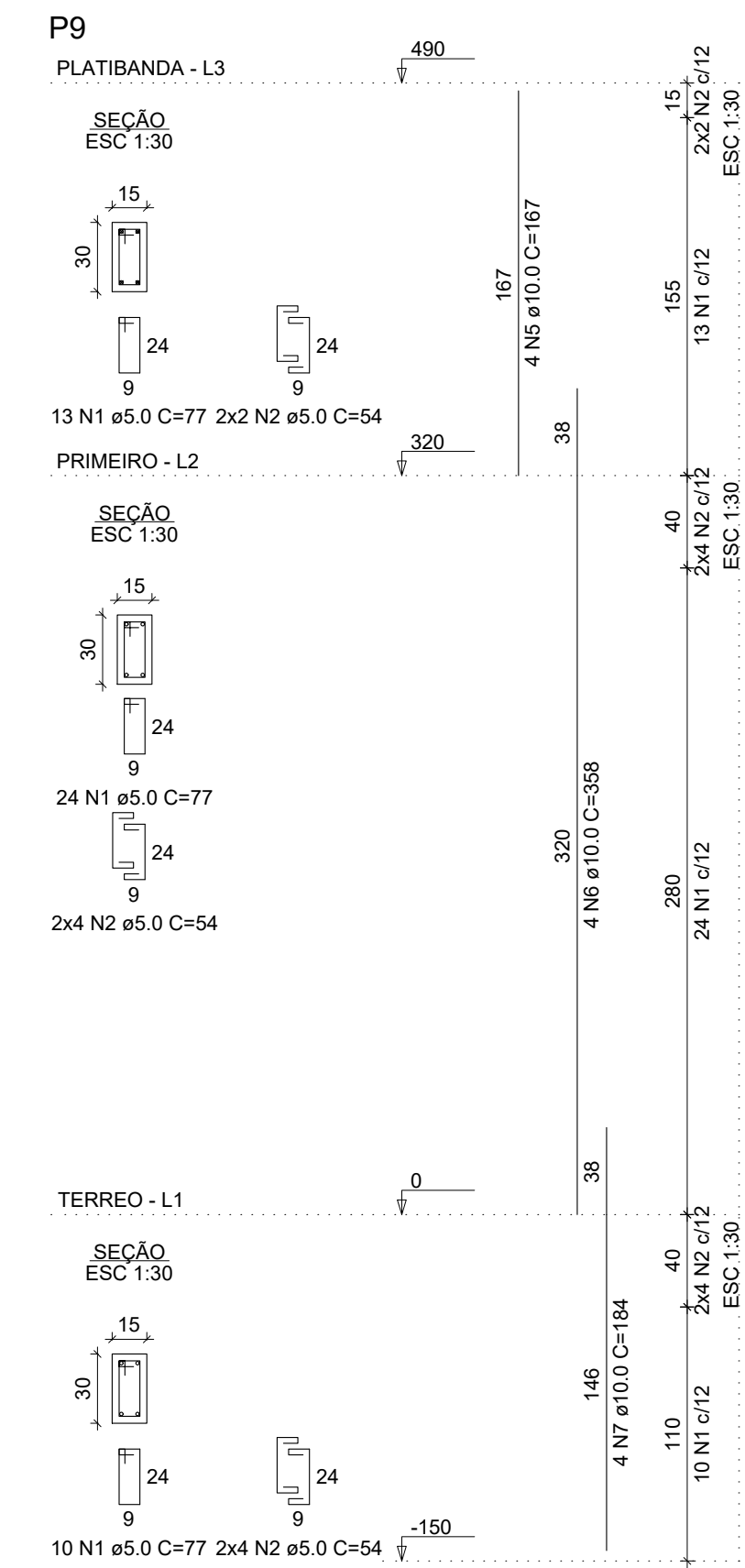
RELAÇÃO DO AÇO

CAO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
P1-L3	1	5.0	129	24	3096
P2-L3	2	5.0	94	37	3118
P3-L3	3	5.0	64	64	2590
P4-L3	4	5.0	120	54	2714
P5-L3	5	5.0	120	54	2714
P6-L3	6	10.0	38	167	6346
P7-L3	7	10.0	38	167	6346
P8-L3	8	10.0	38	167	6346
	9	10.0	2	75	150

RESUMO DO AÇO

CAO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CAO	5.0	260.1	160.3
CAO	10.0	429.7	66.2
PESO TOTAL (kg)			160.3
CAO			160.3
CAO			160.3

Volume de concreto (C-25) = 2.50 m³
Área de forma = 48.84 m²



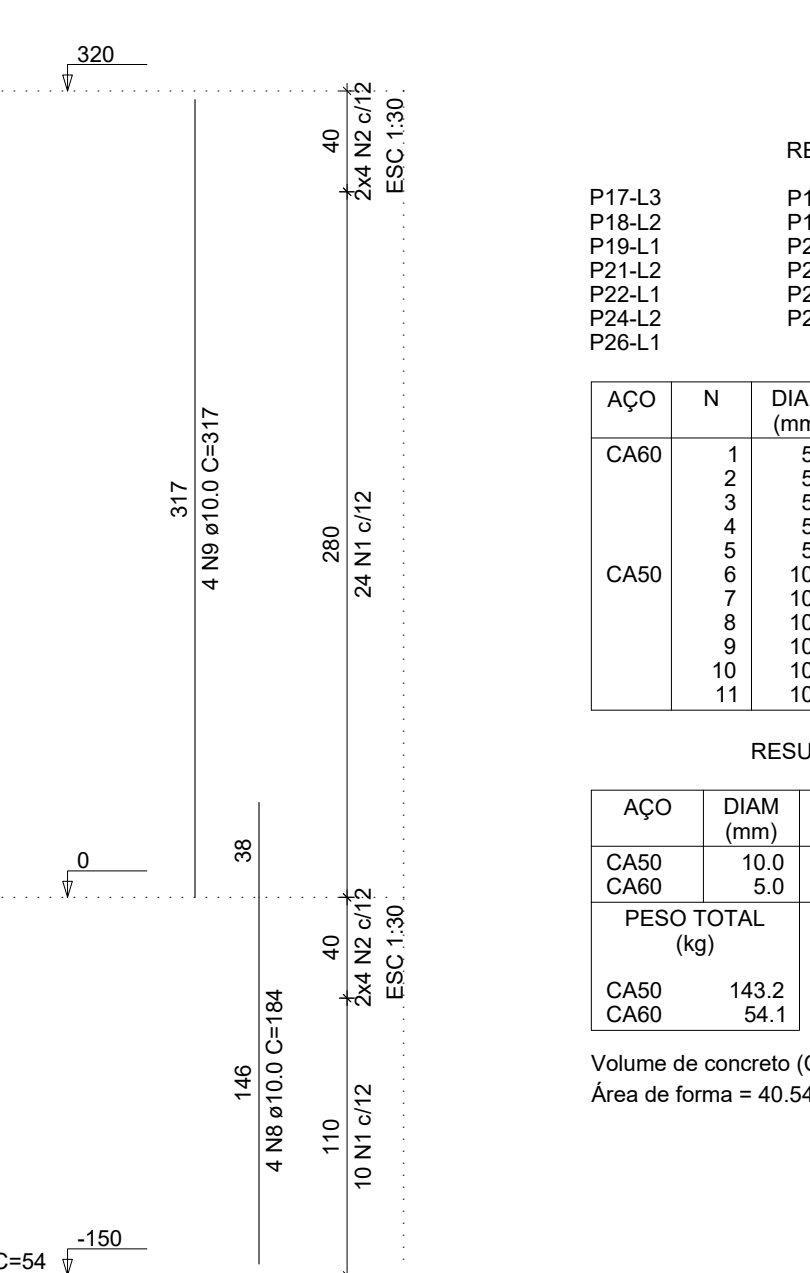
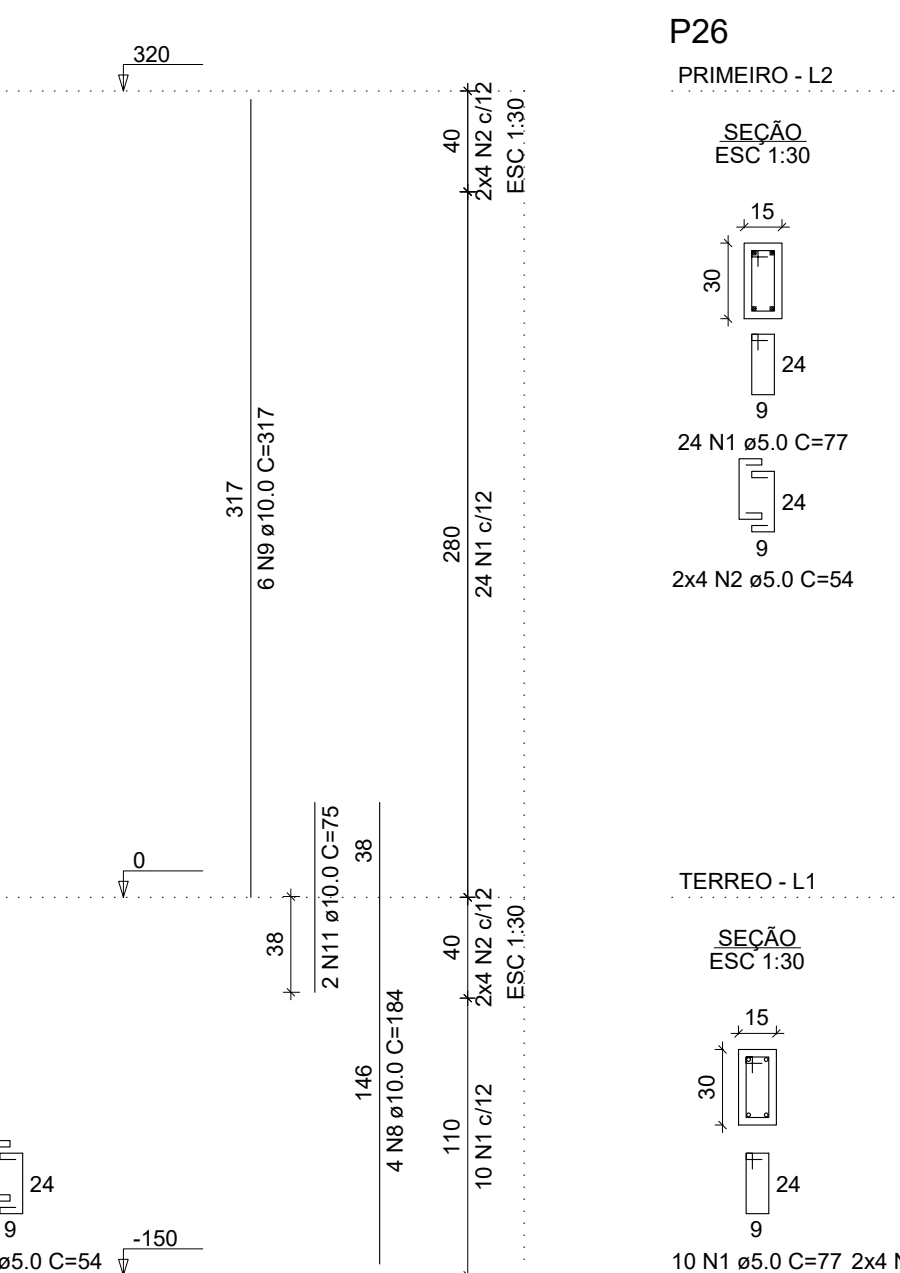
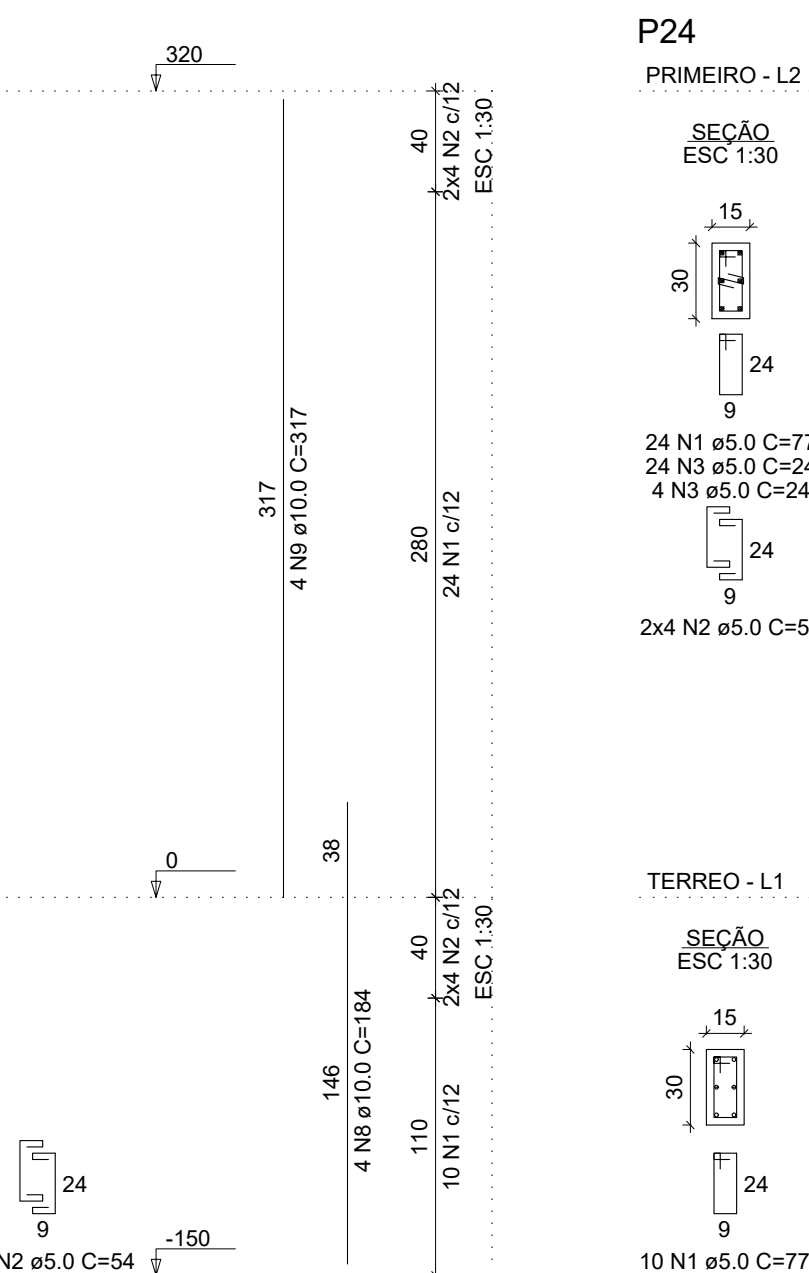
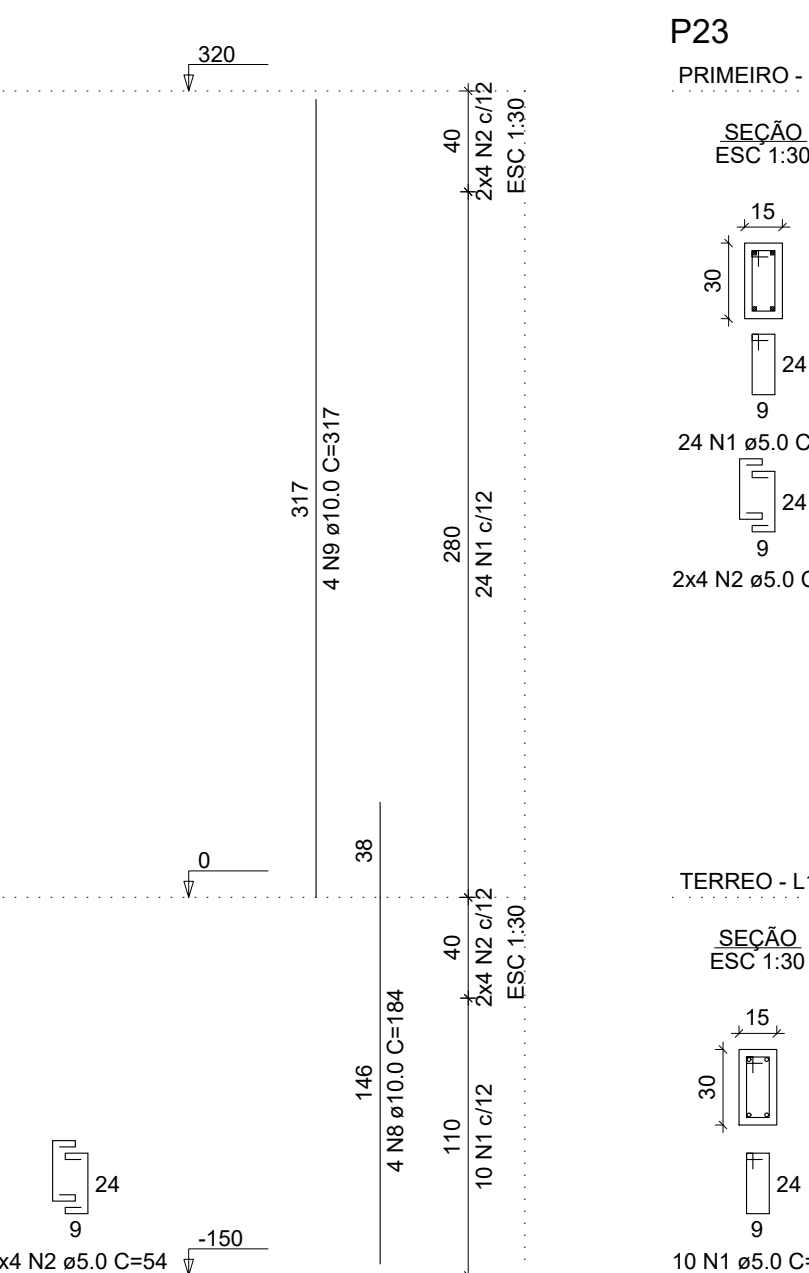
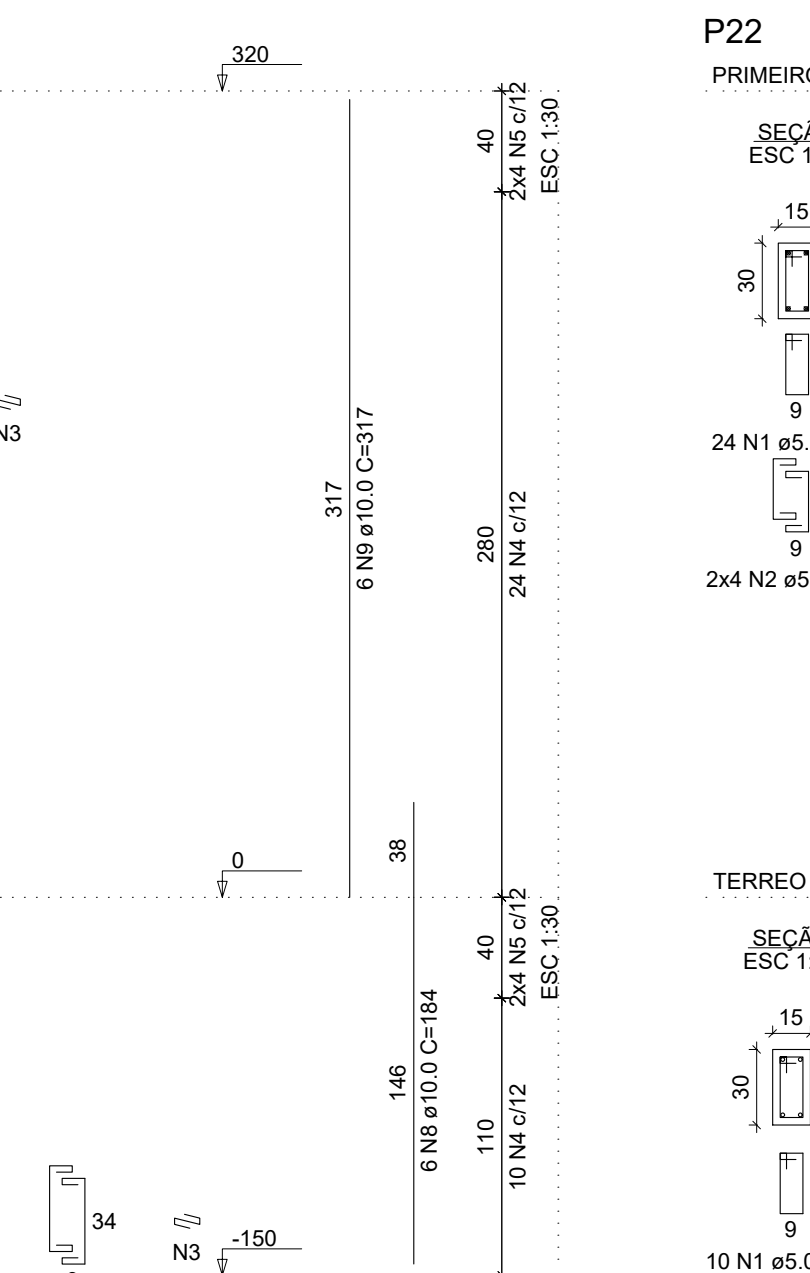
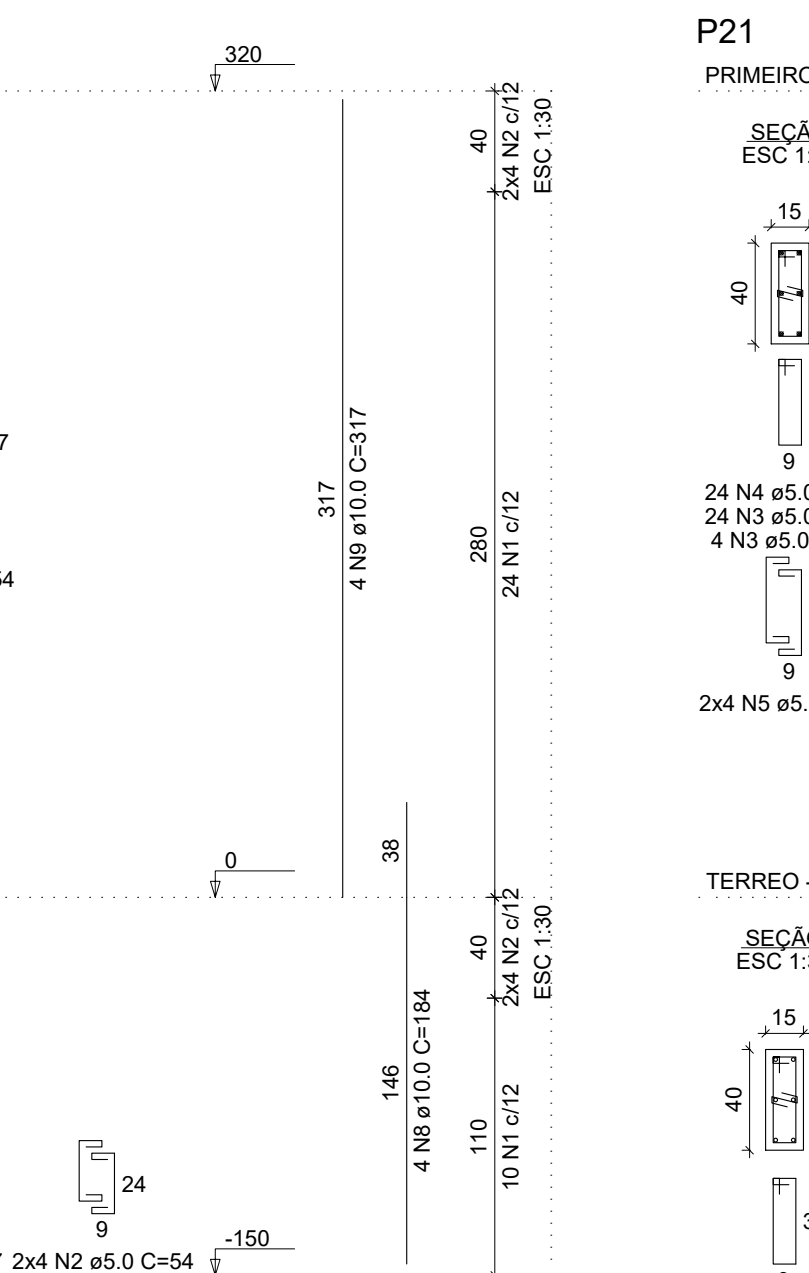
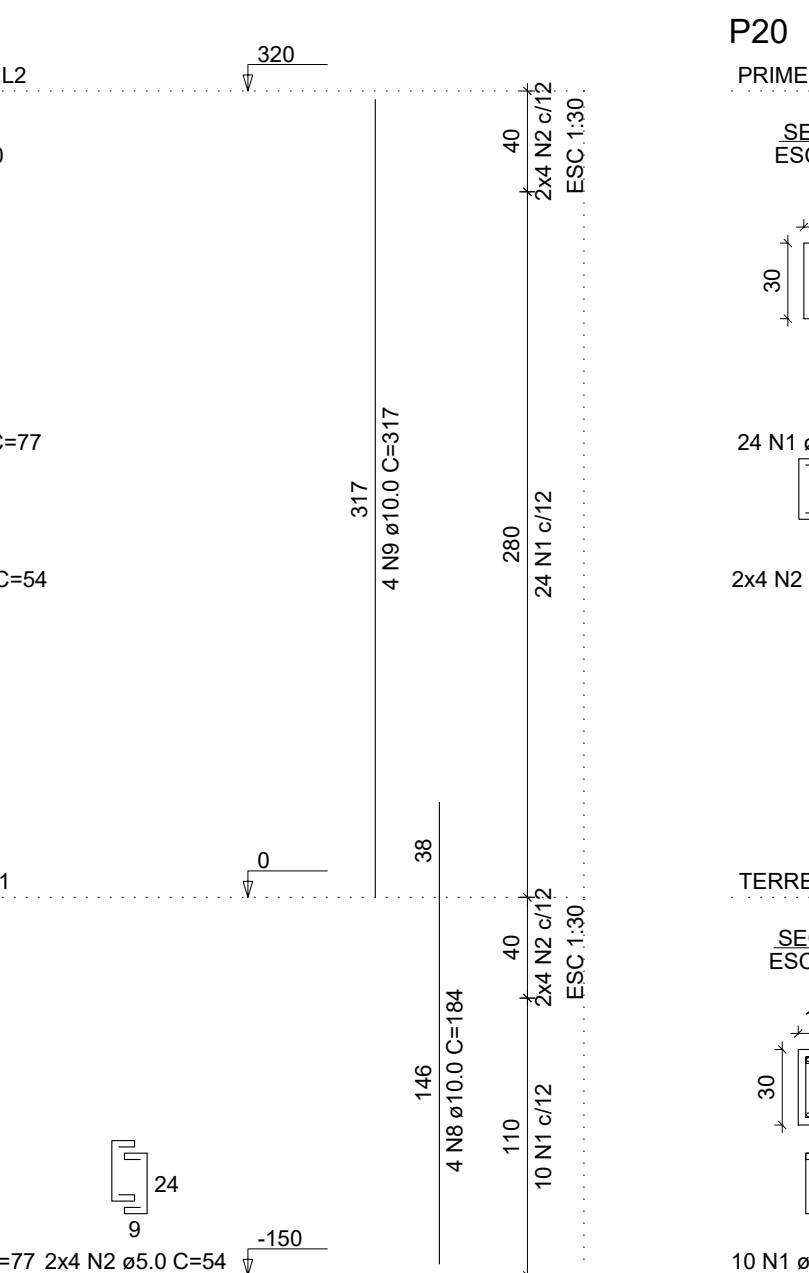
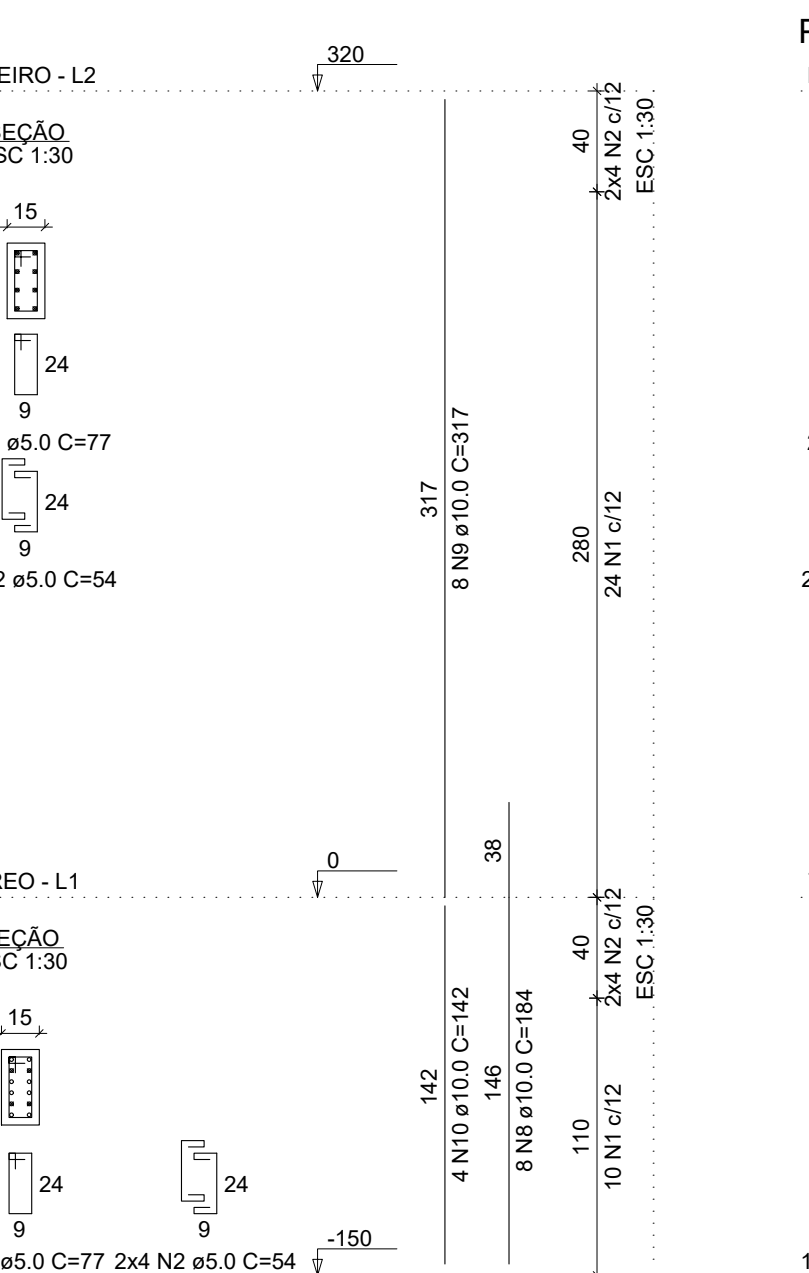
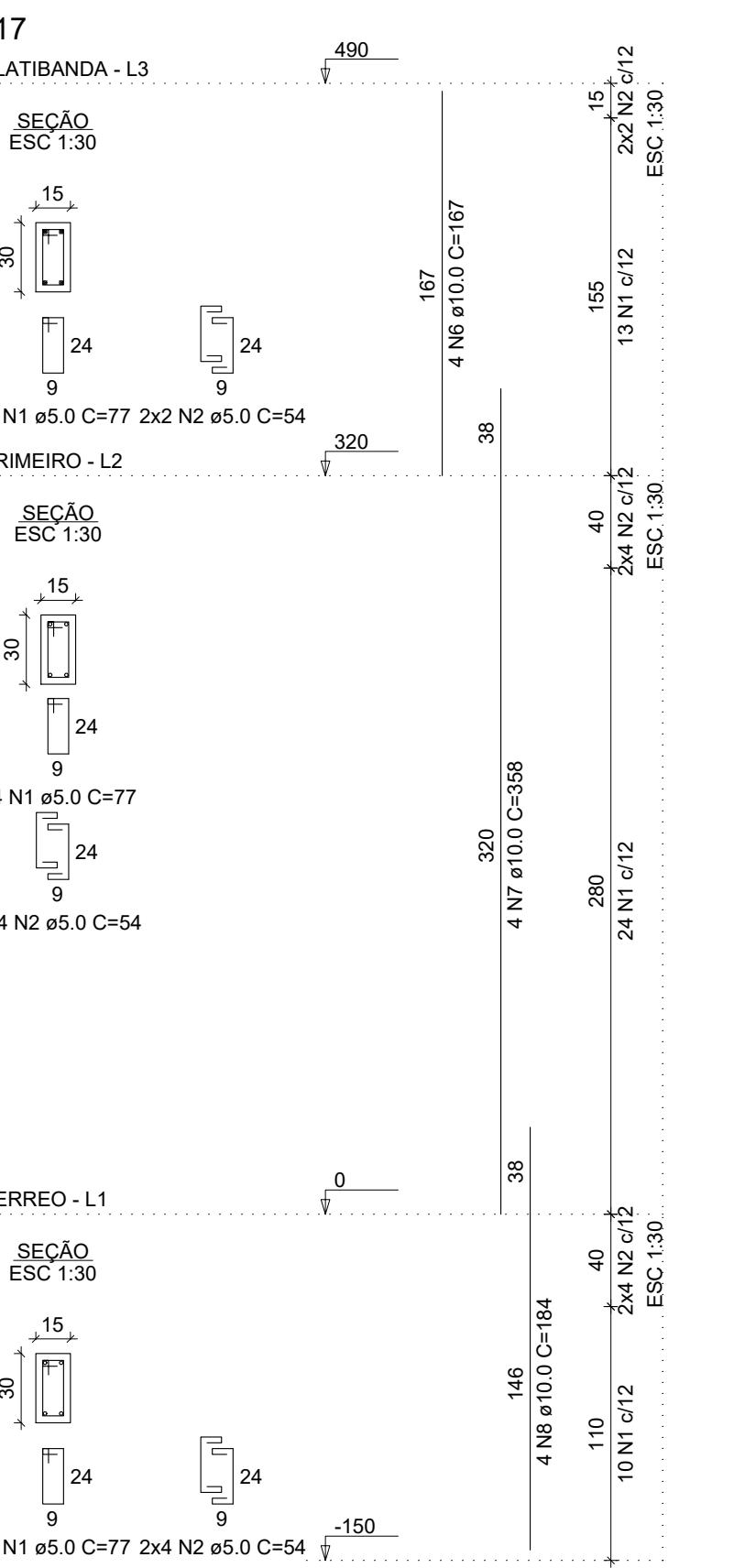
RELAÇÃO DO AÇO

CAO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
P9-L3	1	5.0	94	37	2238
P10-L3	2	5.0	40	54	2160
P11-L3	3	5.0	120	54	1884
P12-L3	4	5.0	120	54	6480
P13-L3	5	10.0	32	167	5344
P14-L3	6	10.0	32	167	11456
P15-L3	7	10.0	32	167	5888

RESUMO DO AÇO

CAO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CAO	10.0	226.9	139.9
CAO	5.0	347.7	53.6
PESO TOTAL (kg)			139.9
CAO			139.9
CAO			139.9

Volume de concreto (C-25) = 2.11 m³
Área de forma = 42.24 m²



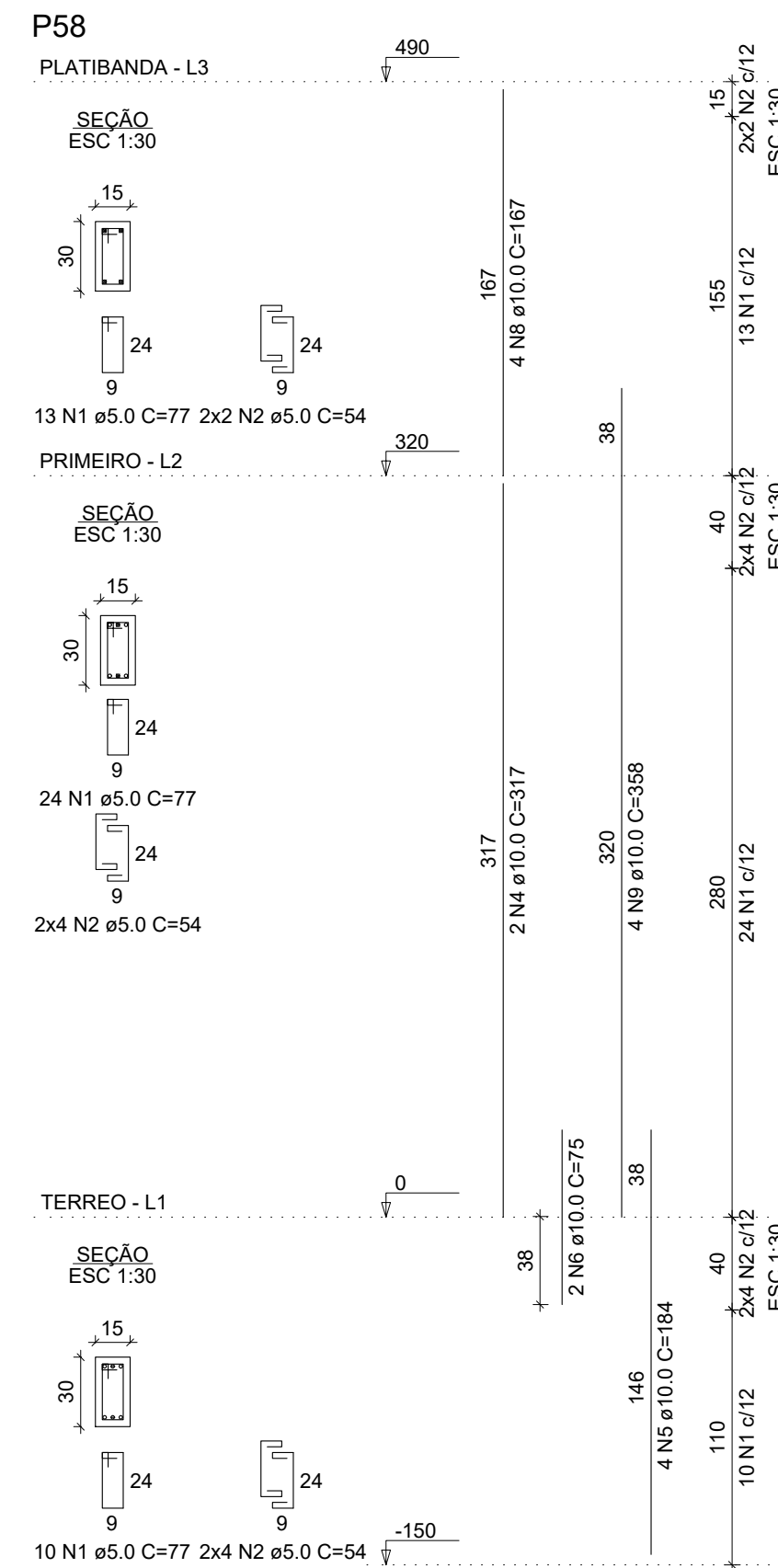
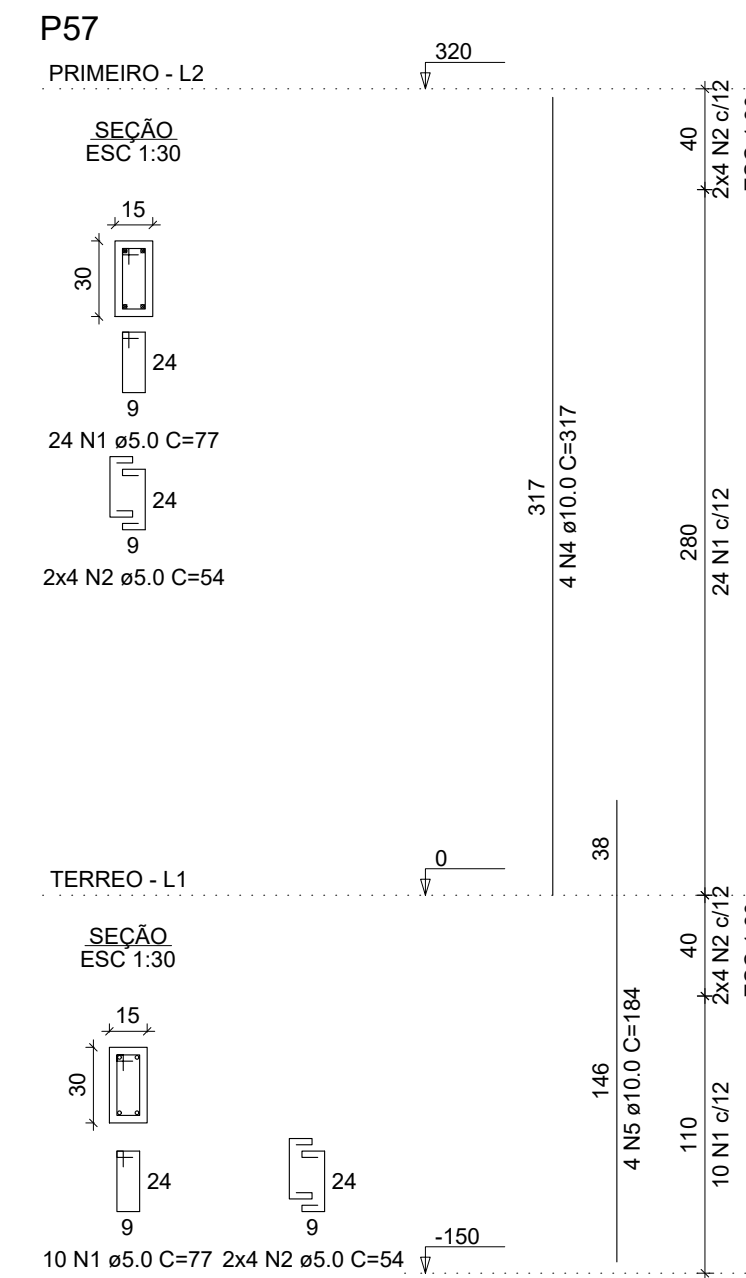
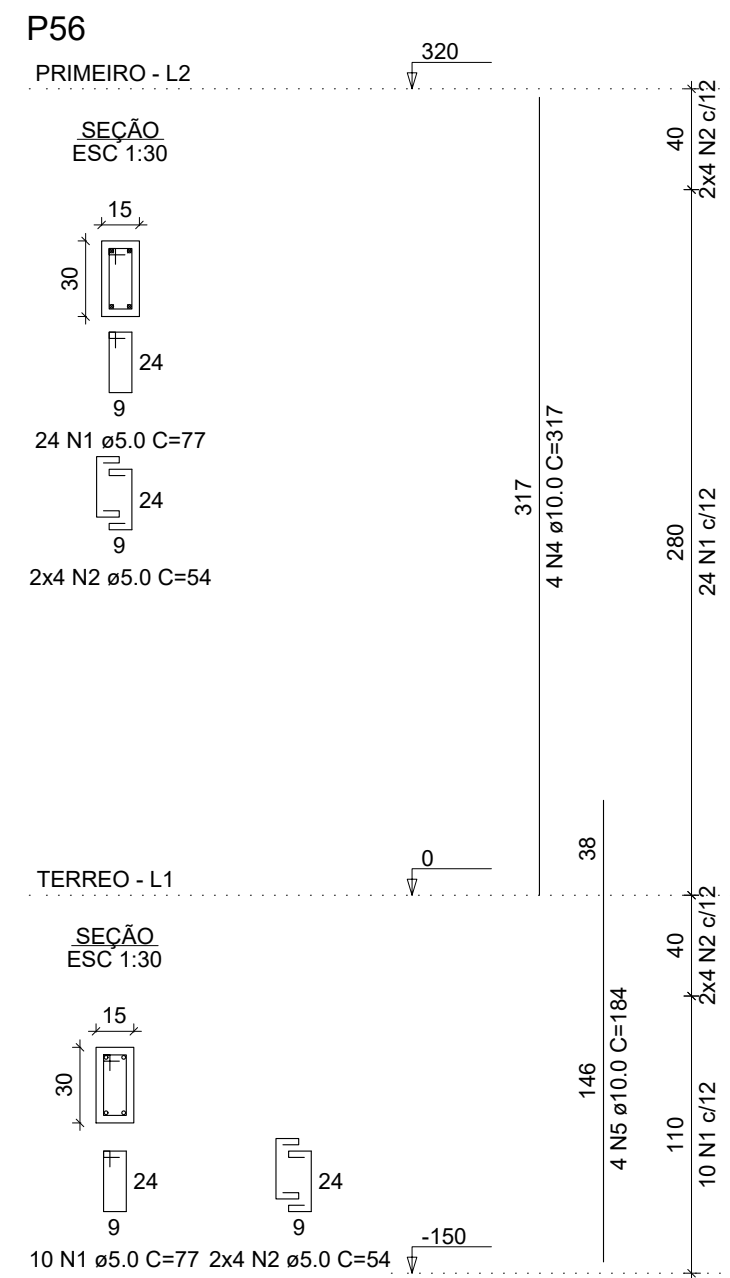
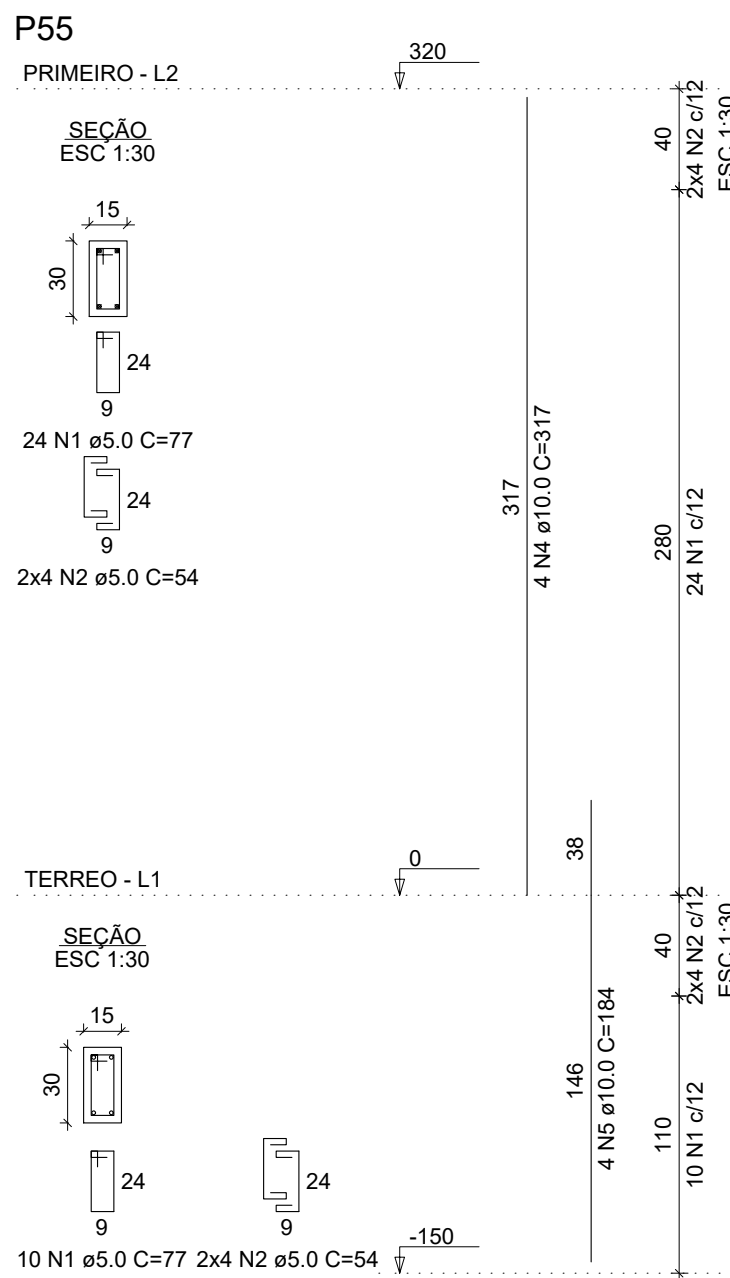
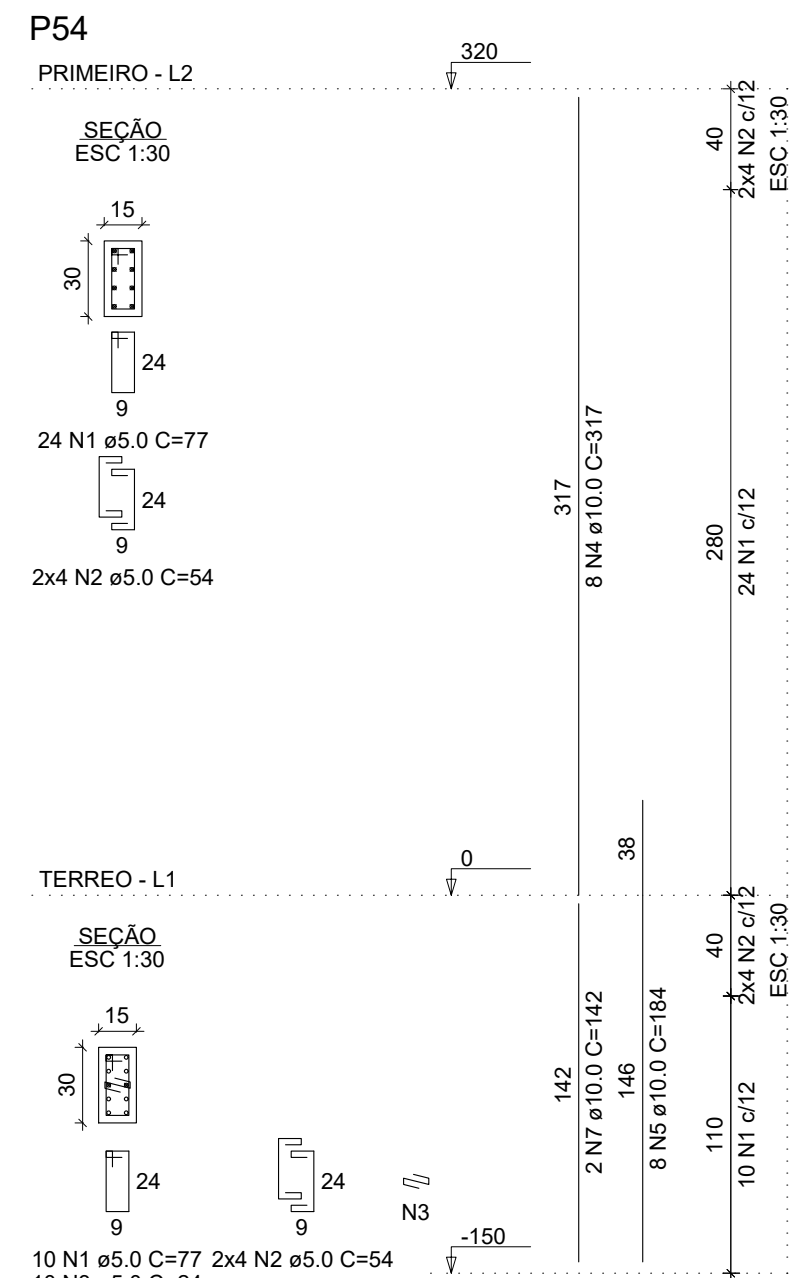
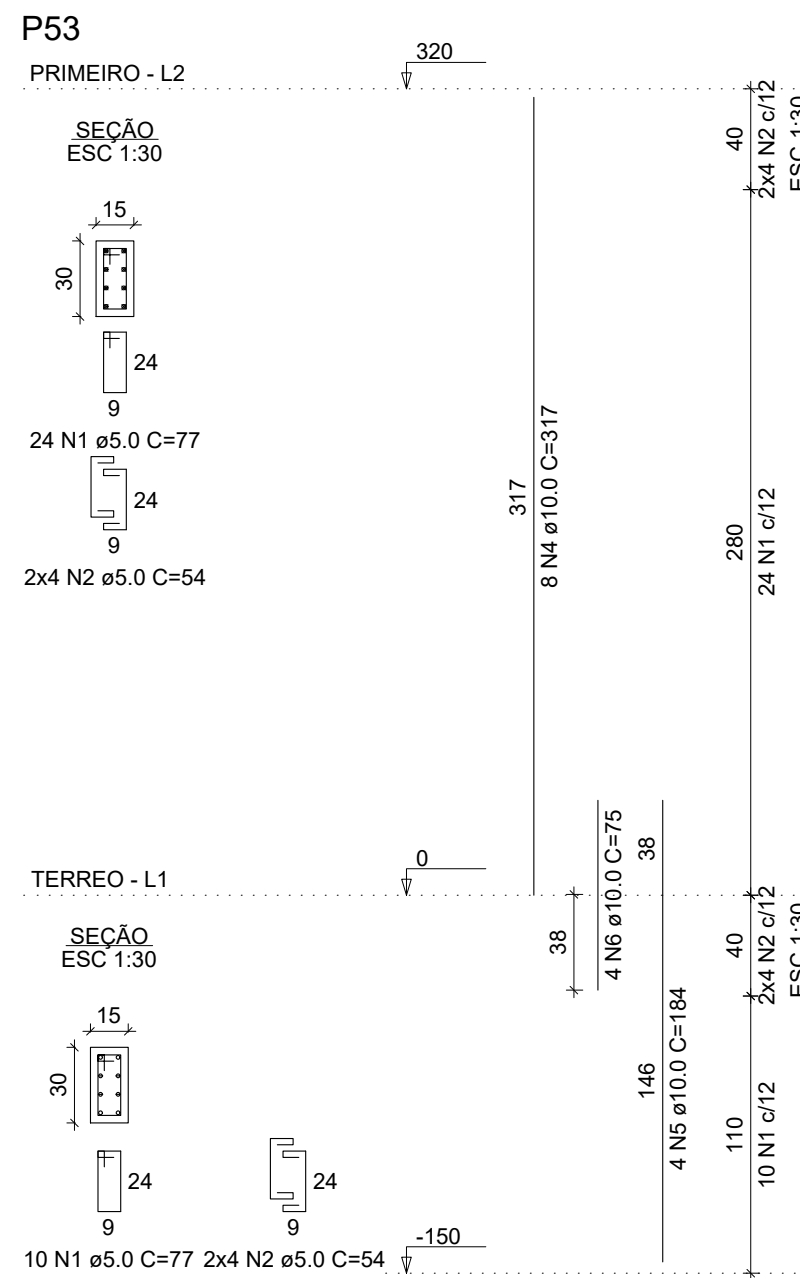
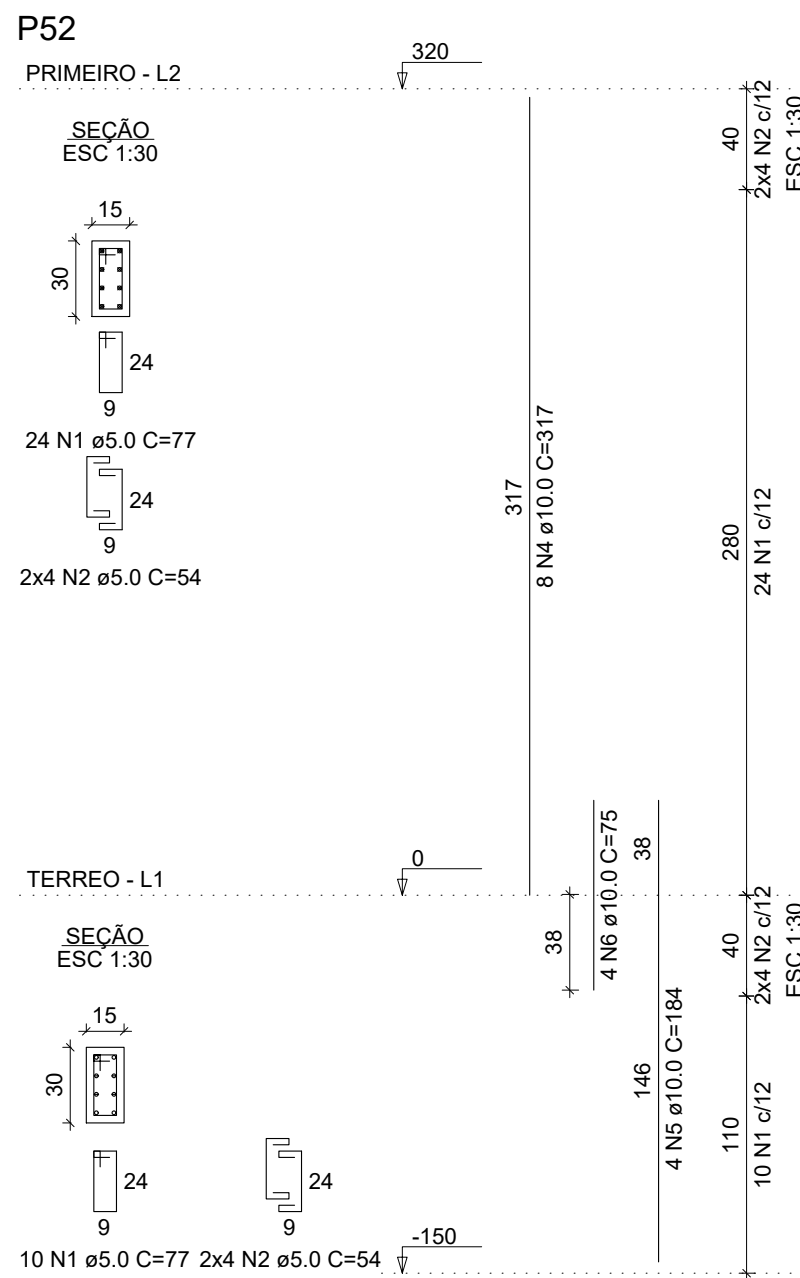
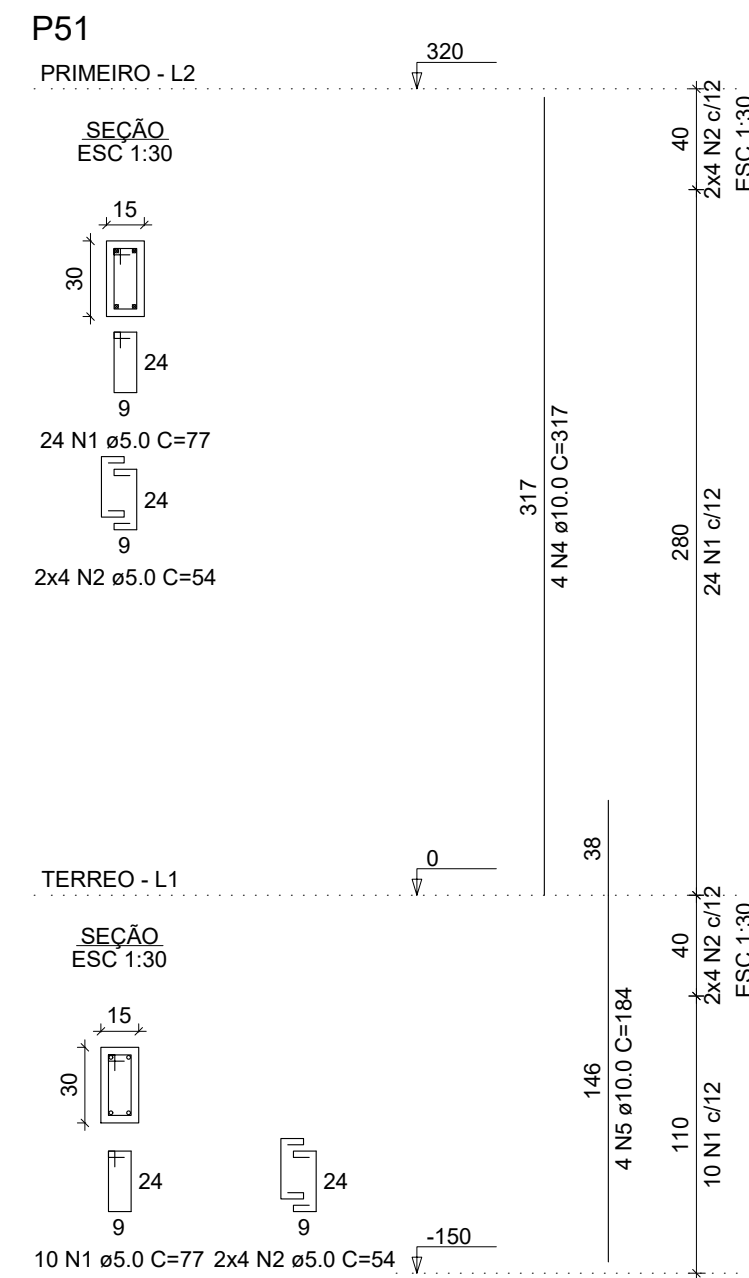
RELAÇÃO DO AÇO

CAO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
P17-L3	1	5.0	285	77	21945
P18-L3	2	5.0	132	54	7128
P19-L3	3	5.0	70	24	1680
P20-L3	4	5.0	16	64	1024
P21-L3	5	10.0	4	338	1432
P22-L3	6	10.0	4	164	772
P23-L3	7	10.0	4	317	12680
P24-L3	8	10.0	4	142	568
P26-L3	11	10.0	2	75	150

RESUMO DO AÇO

CAO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CAO	10.0	232.3	143.2
CAO	5.0	350.8	54.1
PESO TOTAL (kg)			143.2
CAO			143.2
CAO			143.2

Volume de concreto (C-25) = 2.05 m³
Área de forma = 40.54 m²



RELAÇÃO DO AÇO

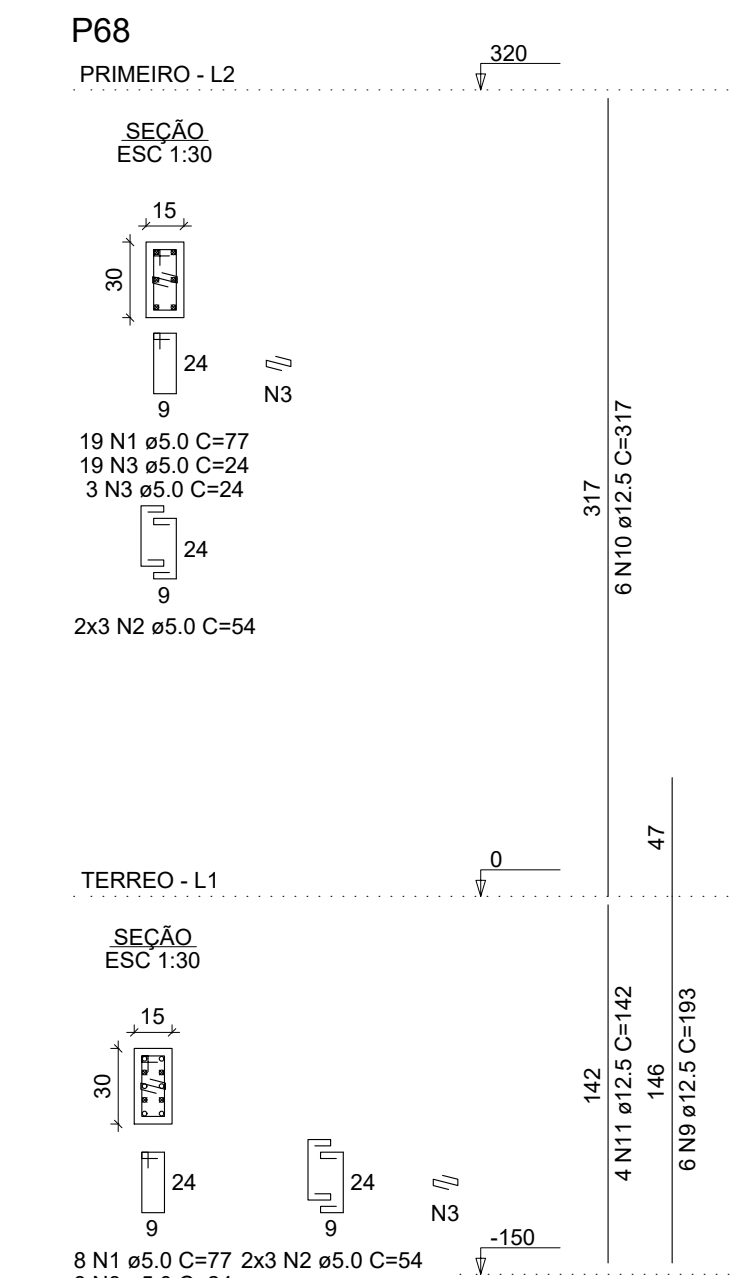
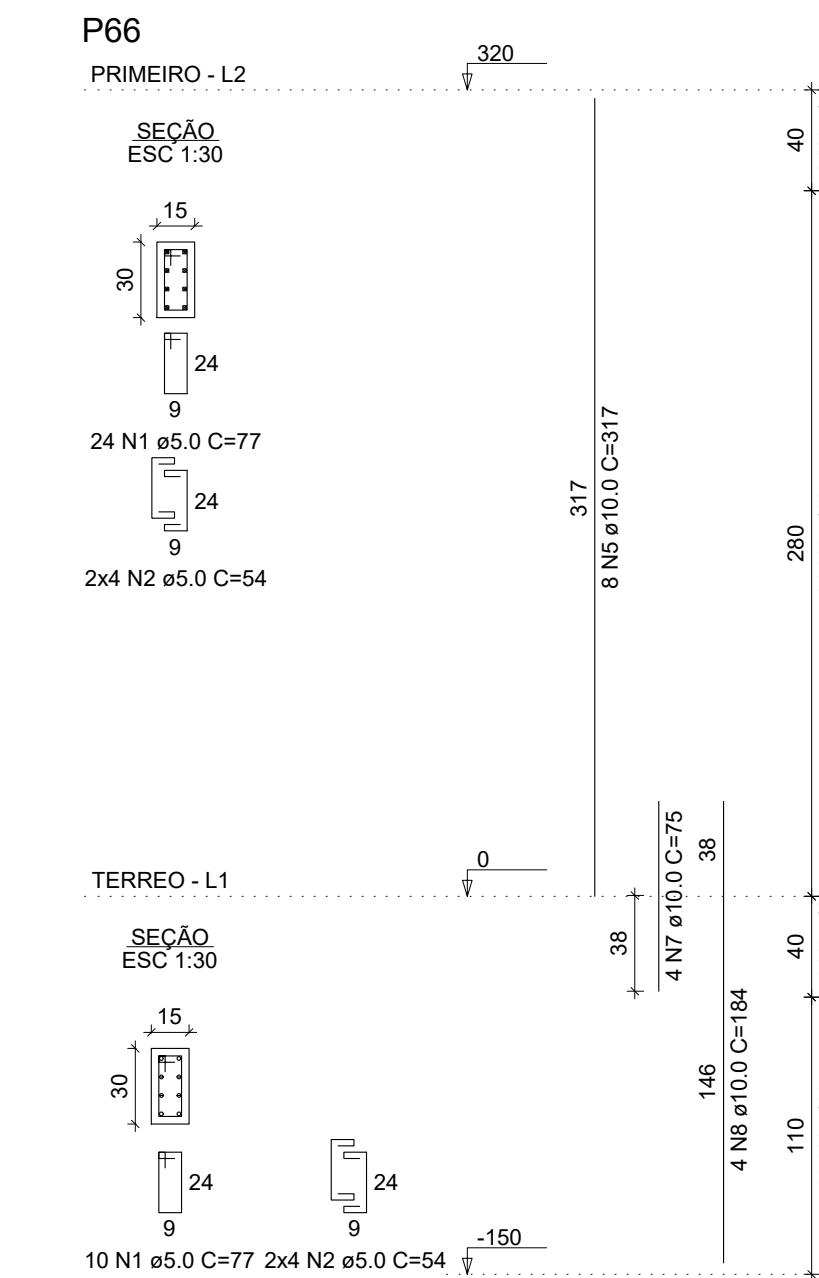
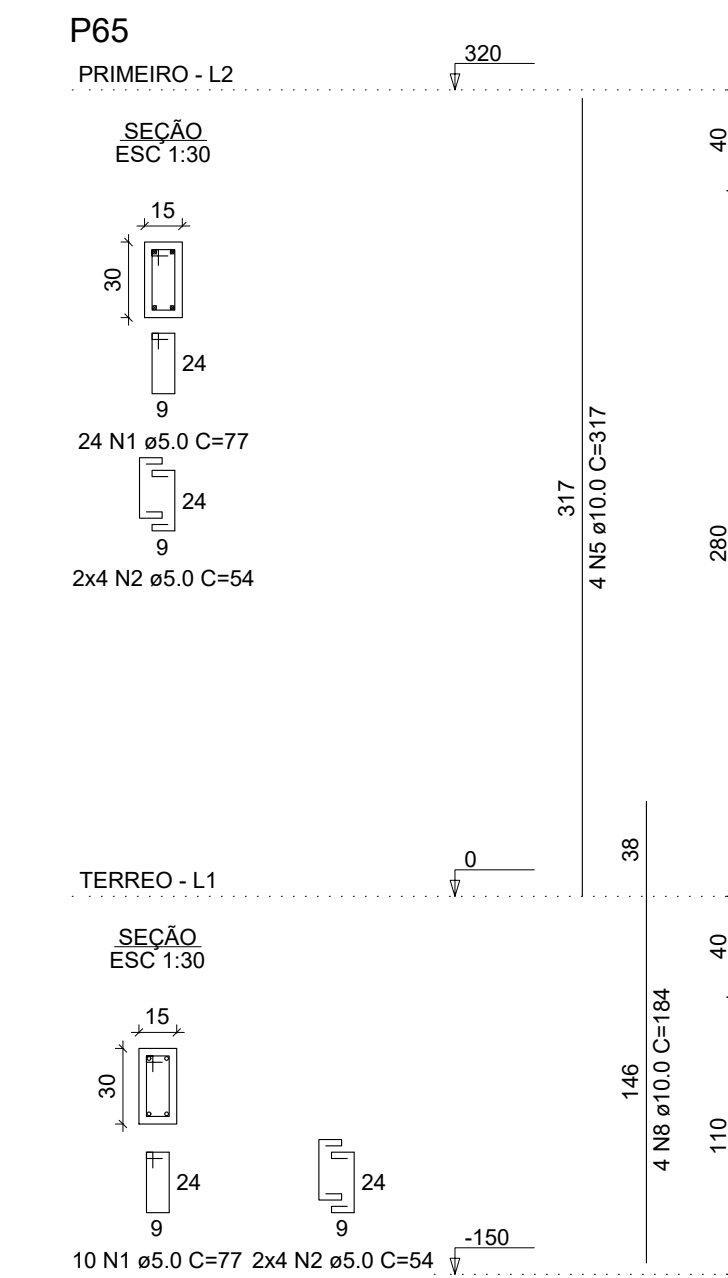
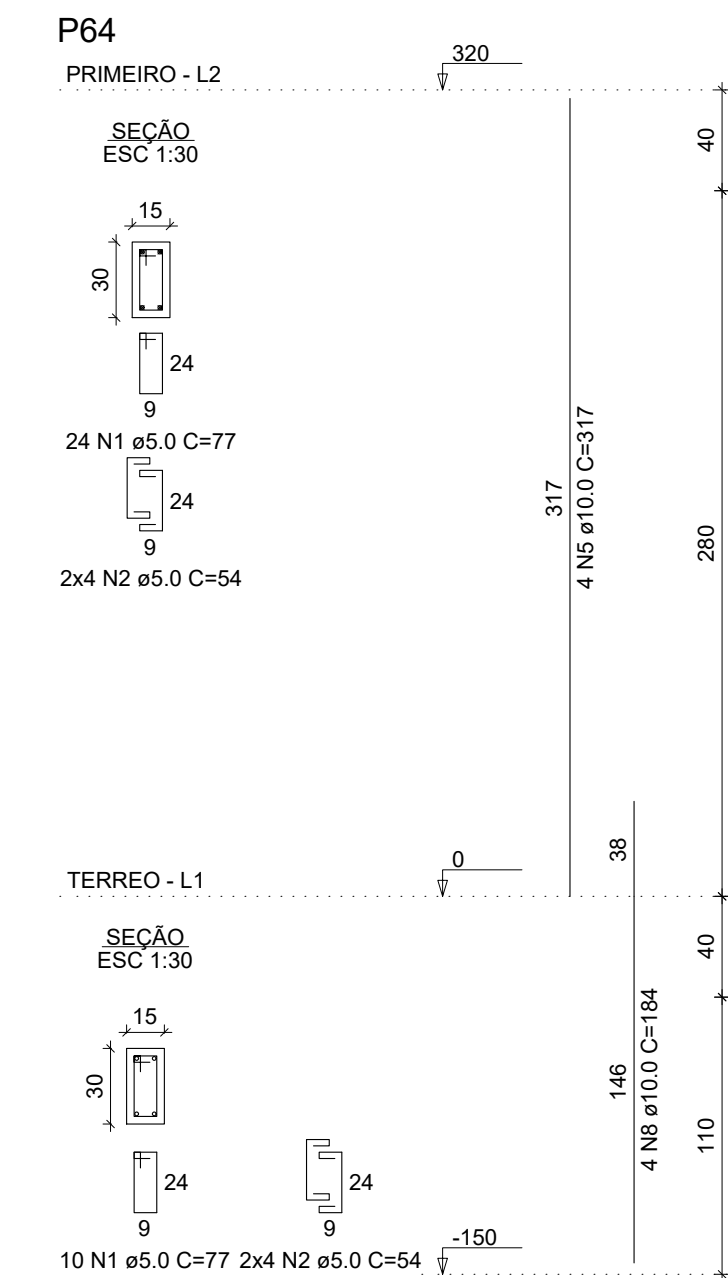
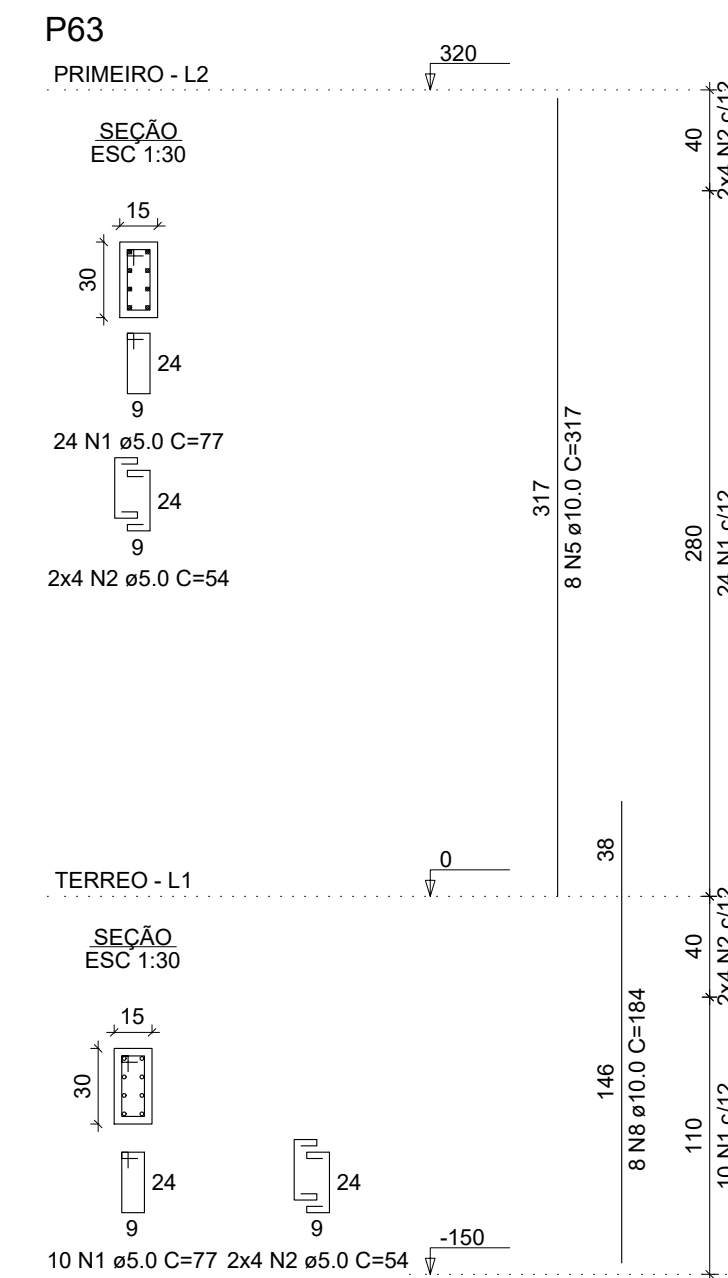
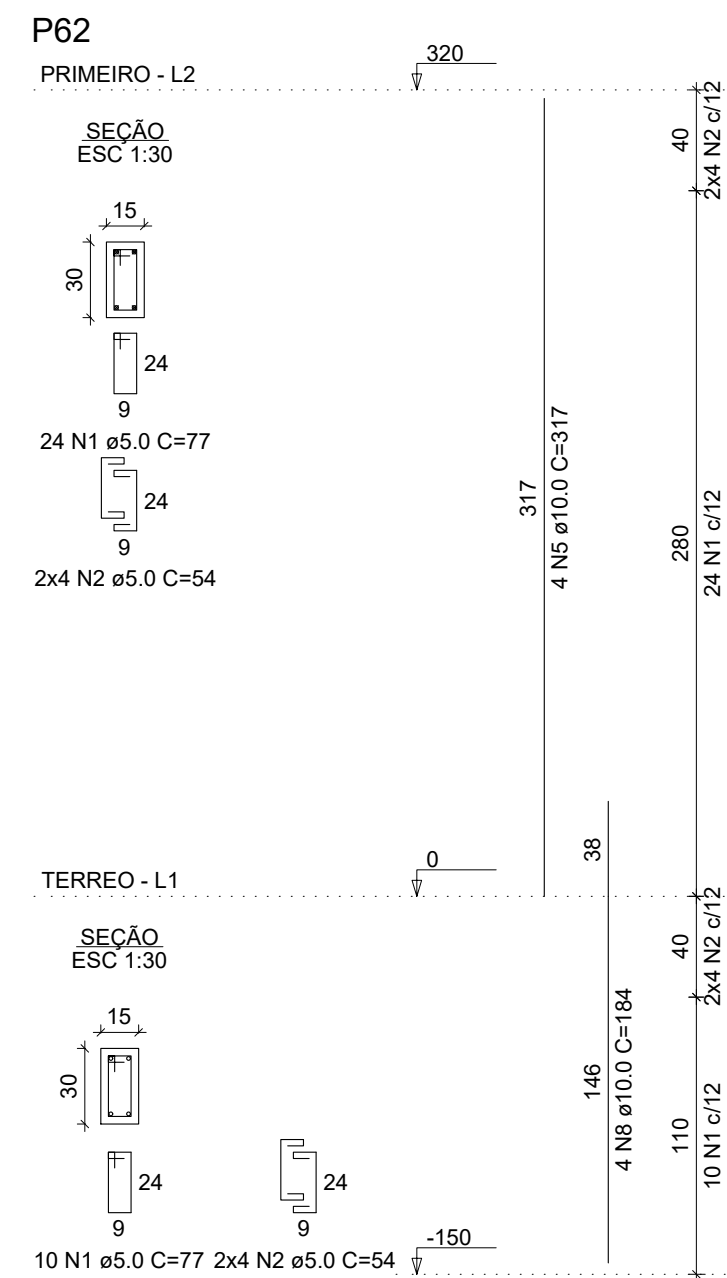
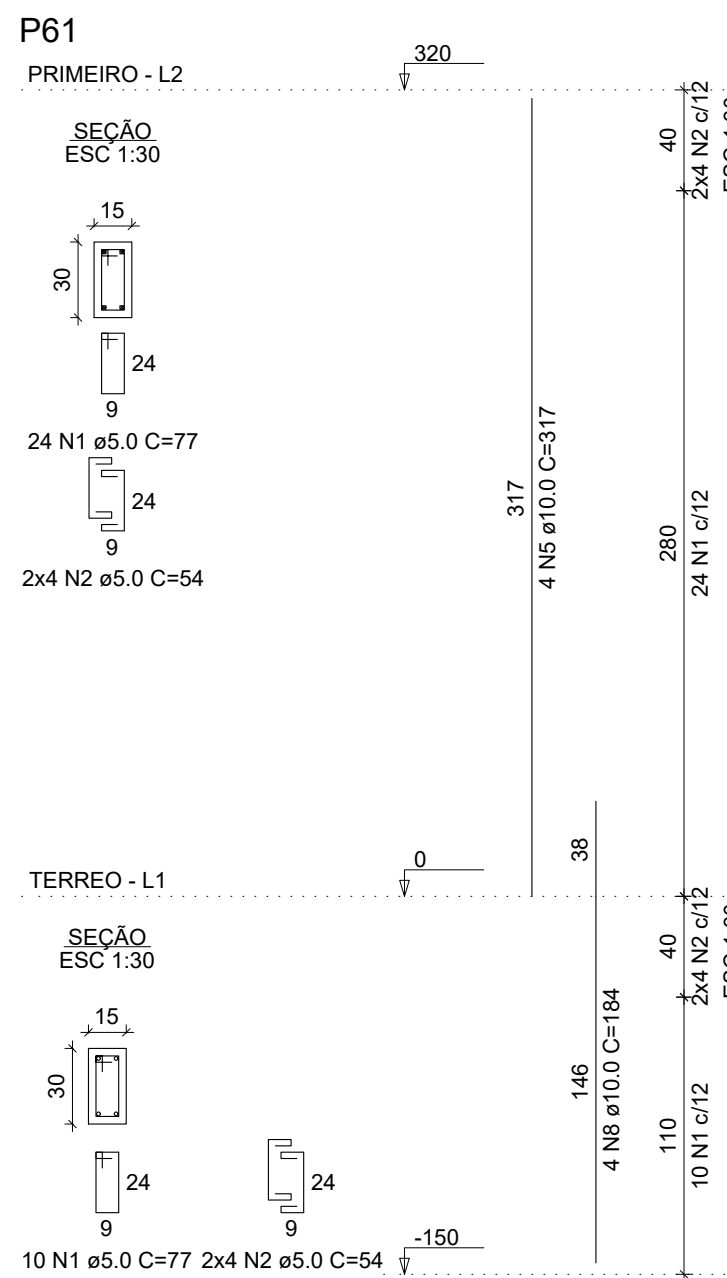
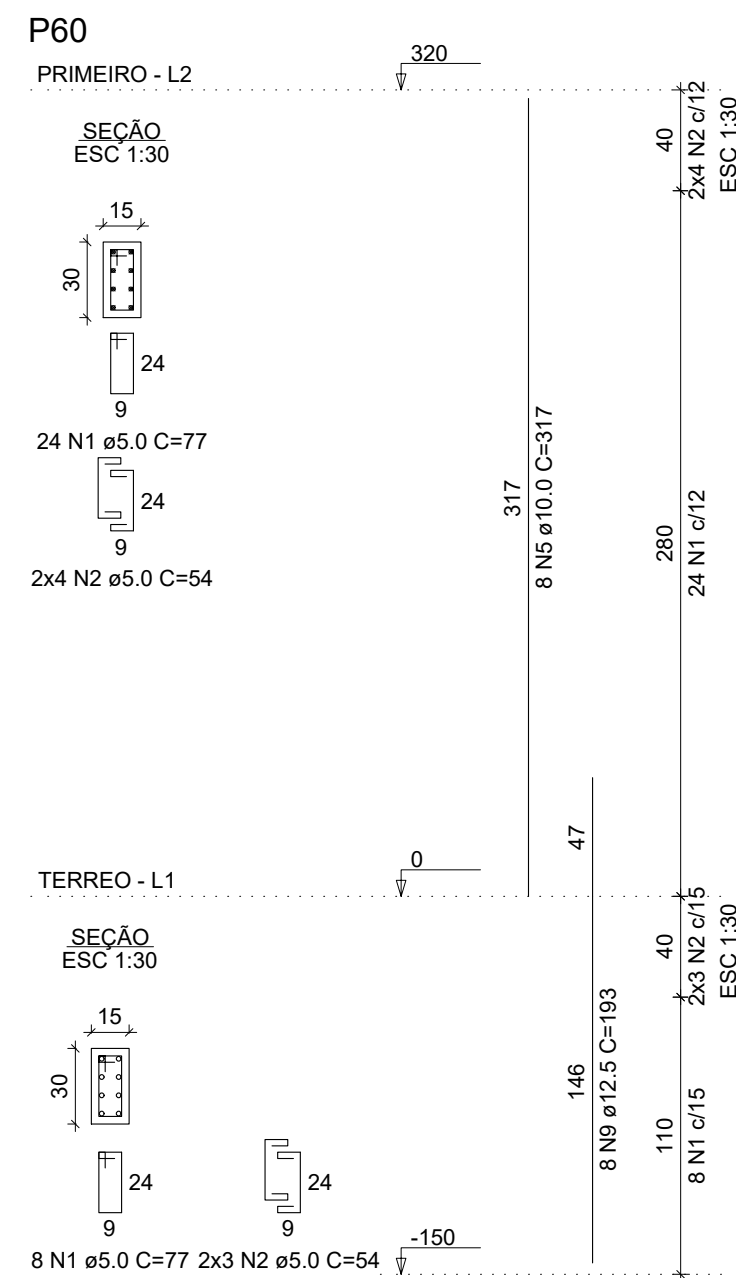
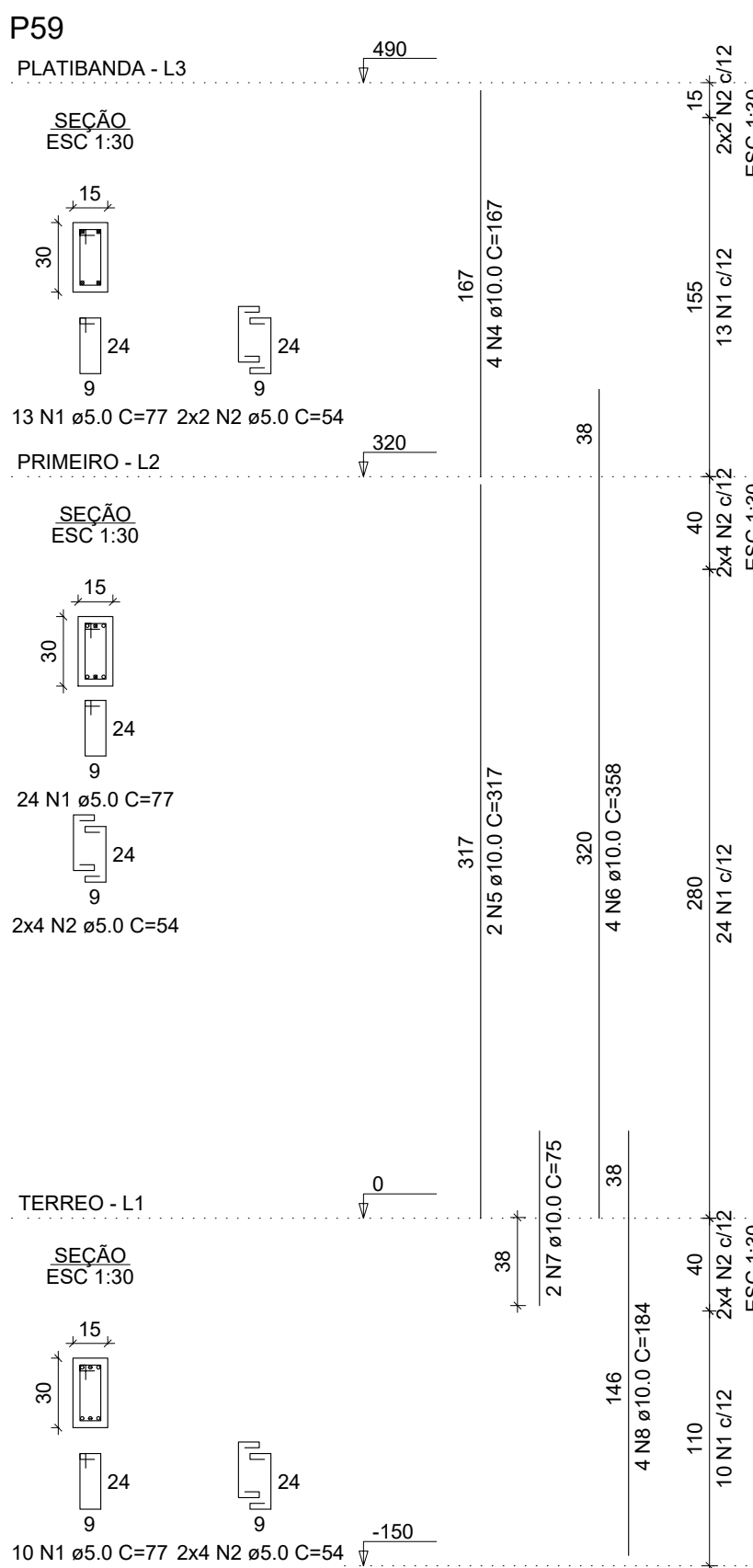
ACO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)
P51-L2	1	5.0	285	77	21945
P52-L1	2	5.0	132	54	7128
P53-L2	3	5.0	14	24	336
P54-L2	4	10.0	32	317	13314
P55-L1	5	10.0	36	184	6624
P56-L2	6	10.0	2	142	284
P57-L2	7	10.0	4	157	628
P58-L2	8	10.0	4	358	1432

RESUMO DO AÇO

ACO	DIAM (mm)	C TOTAL (m)	PESO + 0% (kg)
CA50	10.0	230.7	142.2
CA60	5.0	294.1	45.3
PESO TOTAL (kg)			142.2
CA50			45.3

Volume de concreto (C-25) = 1.77 m³

Área de forma = 35.37 m²



RELAÇÃO DO AÇO

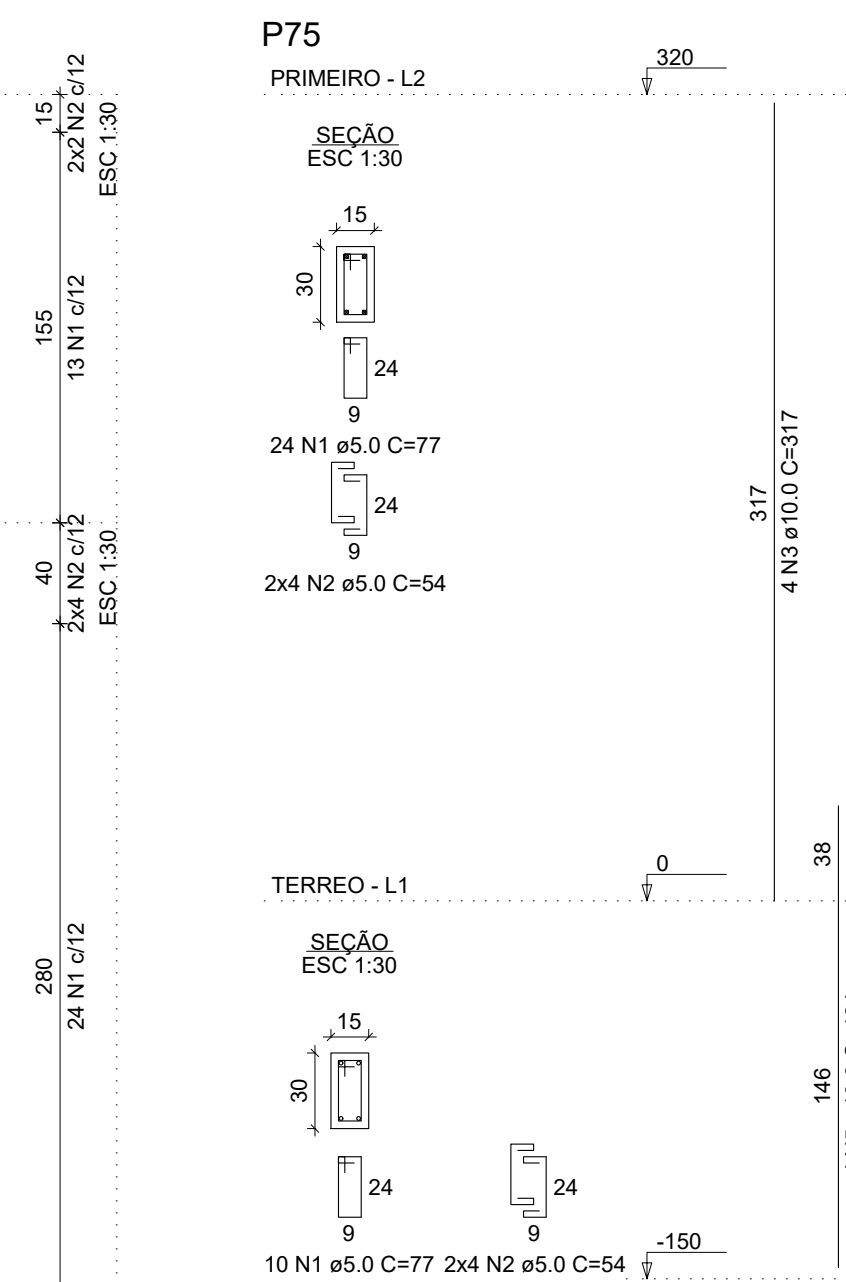
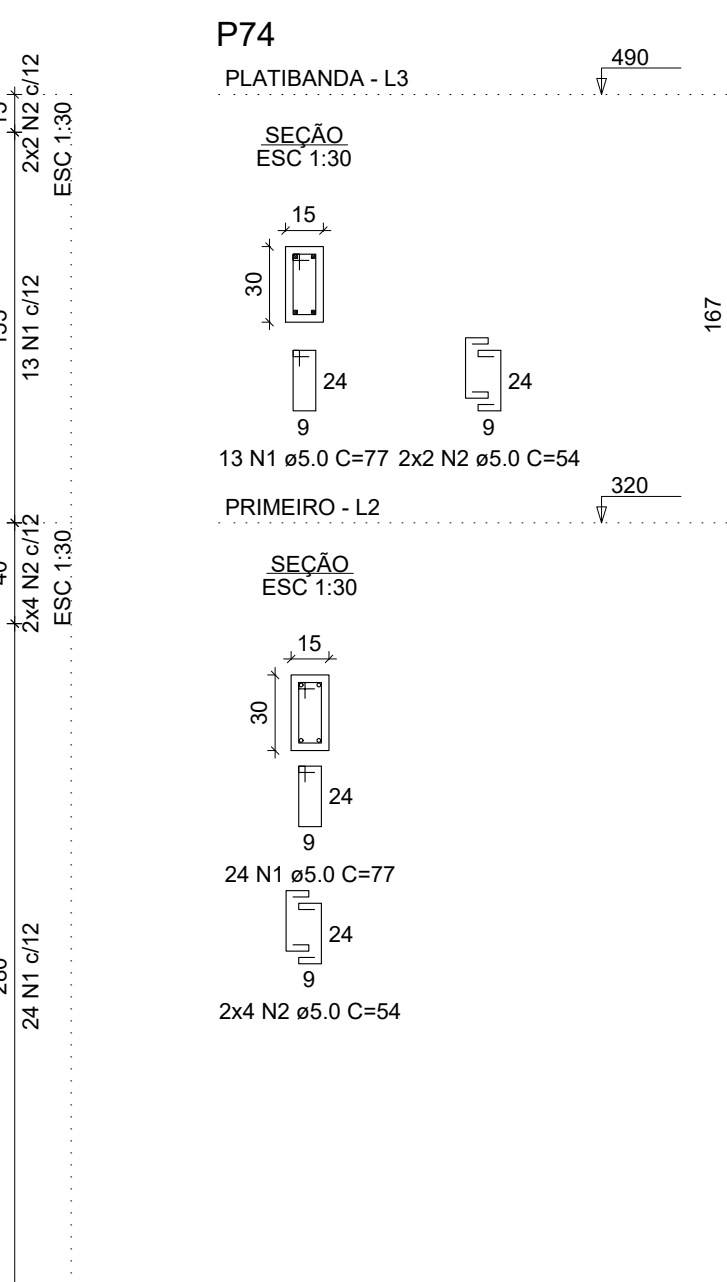
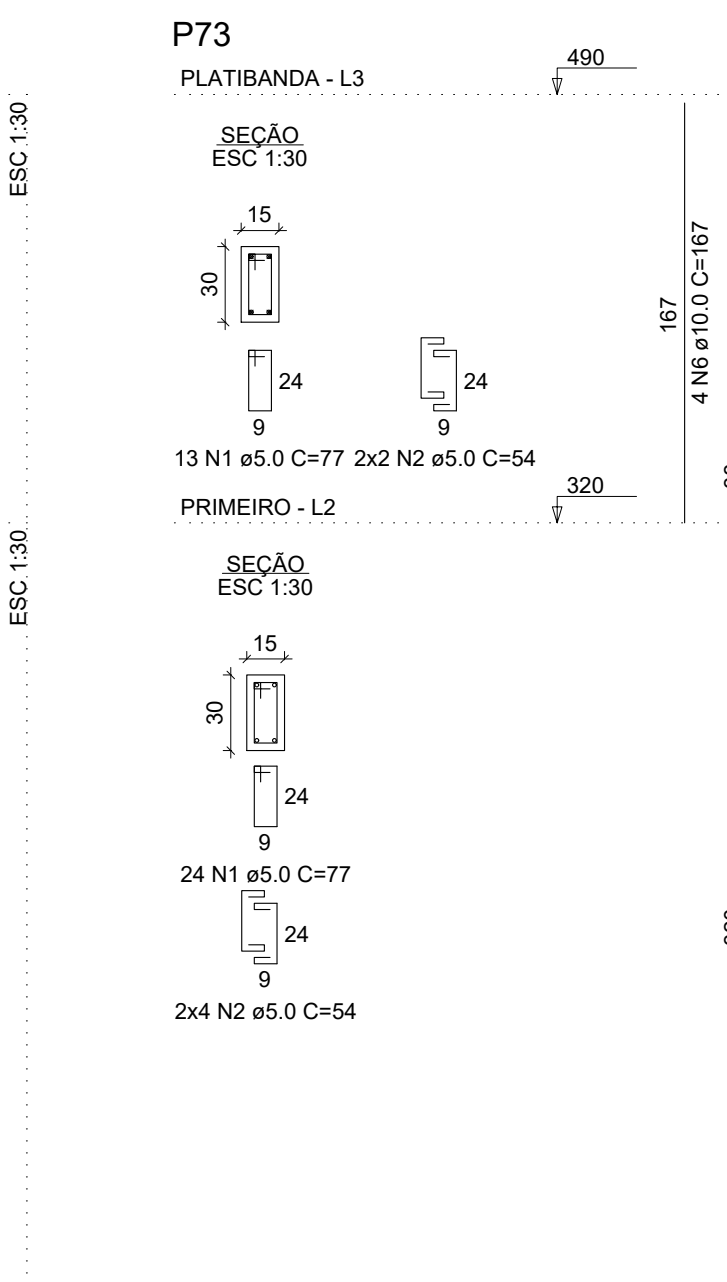
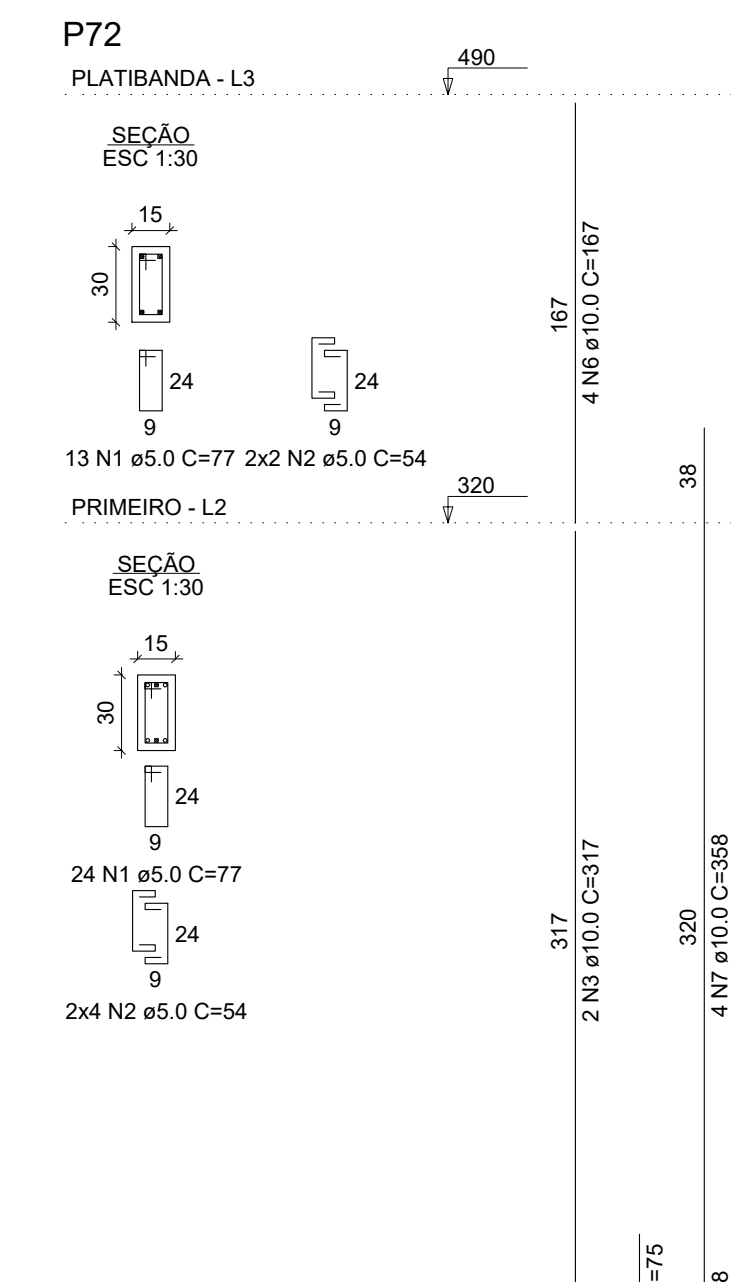
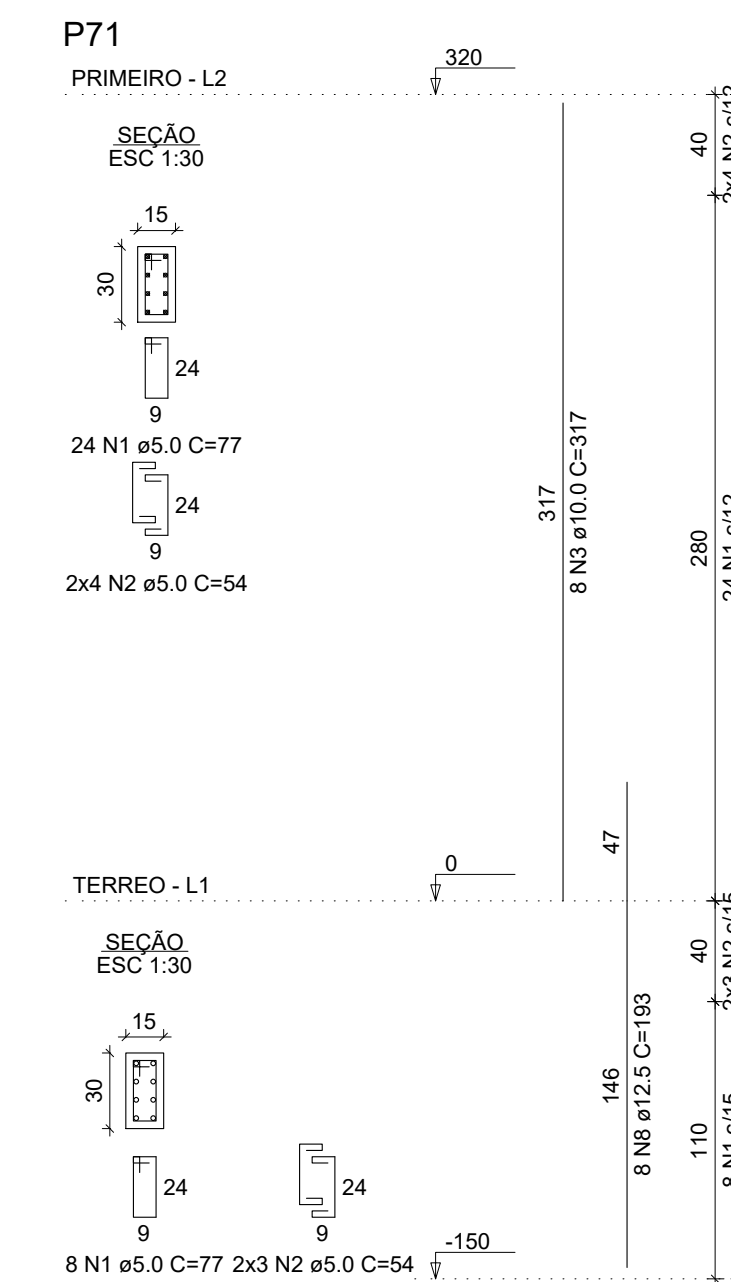
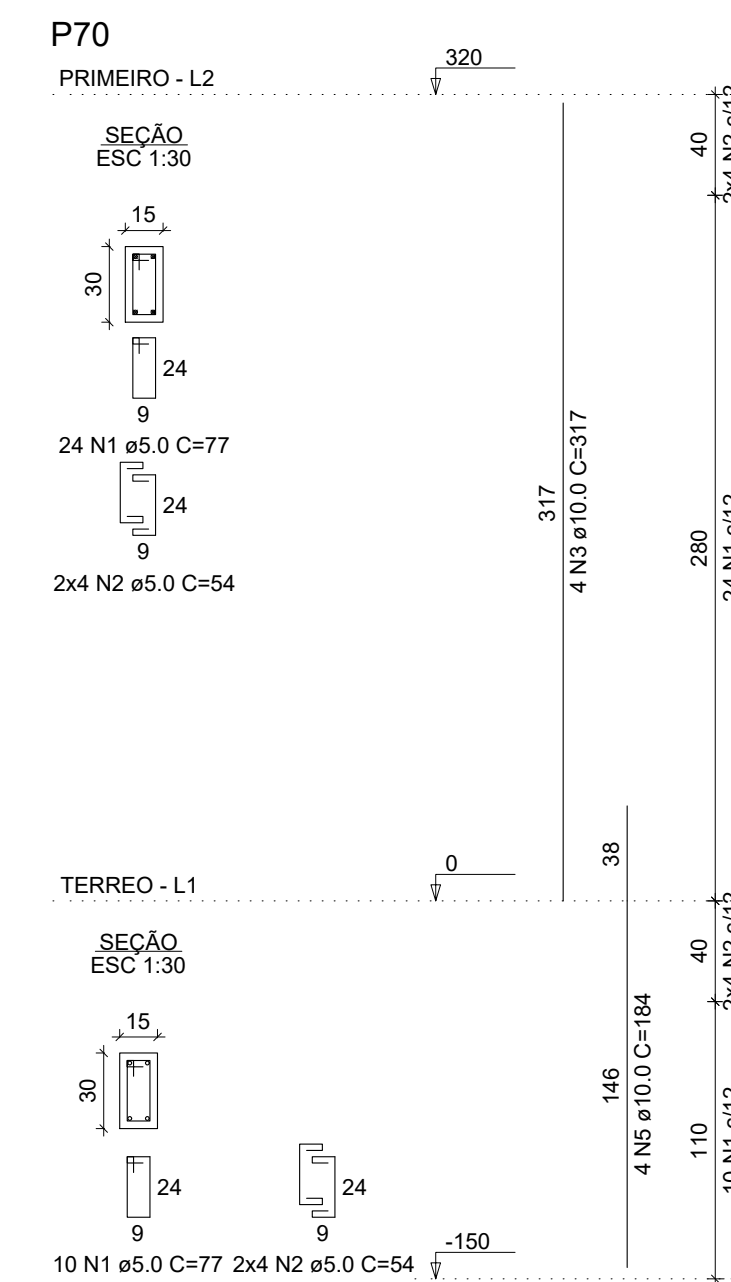
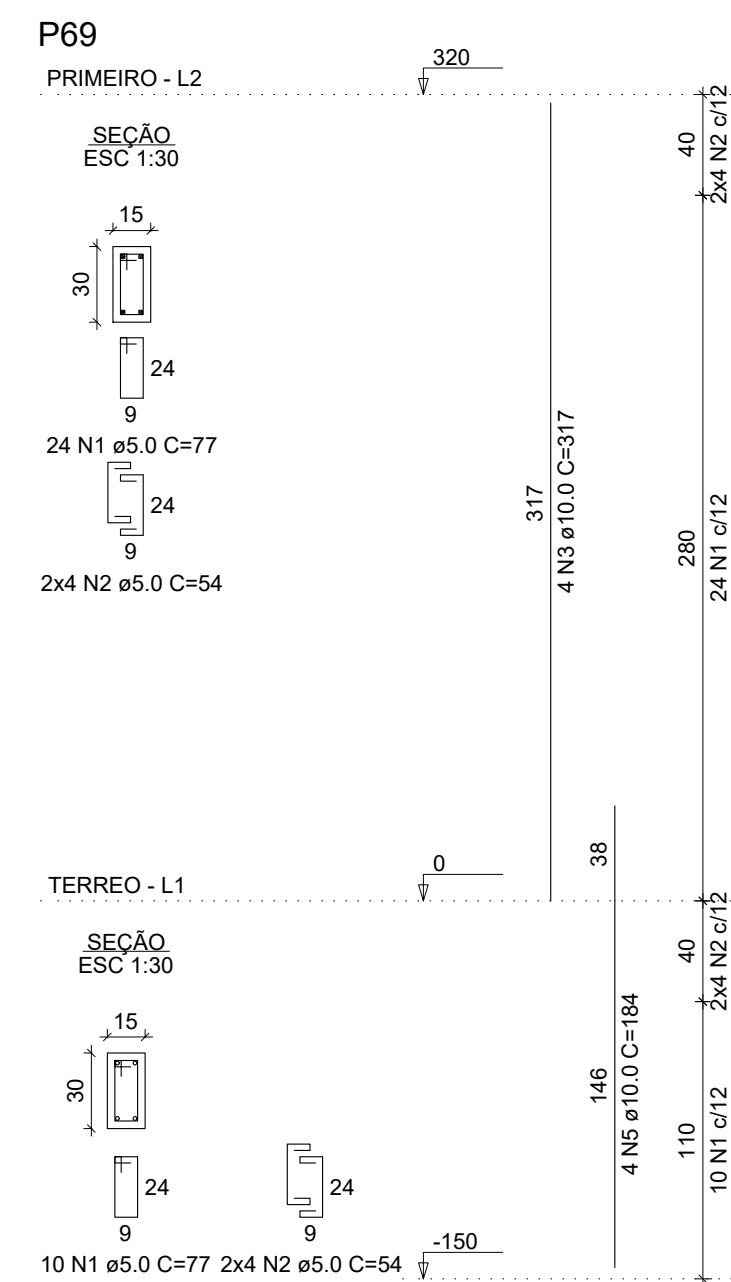
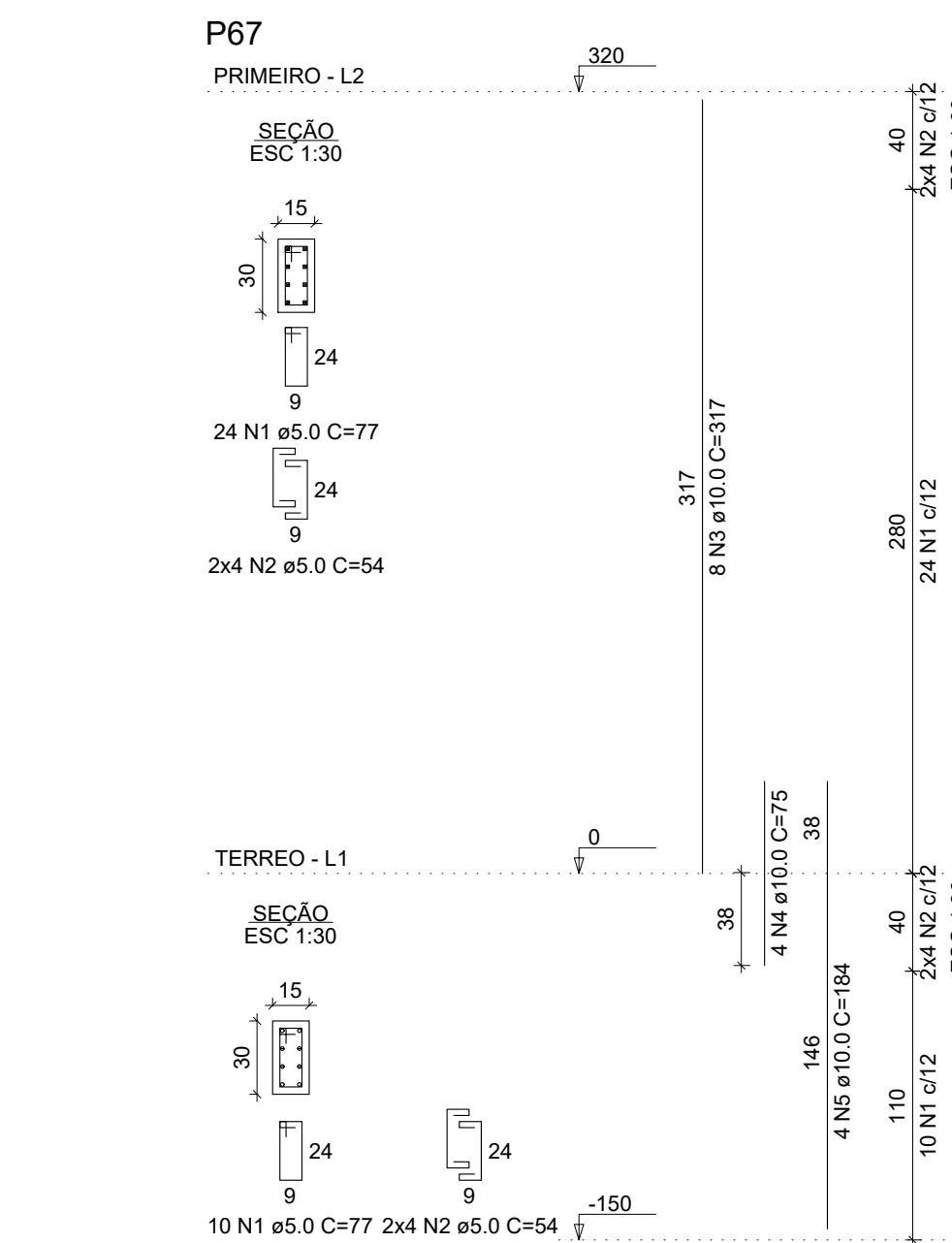
ACO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)
CA60	1	5.0	310	77	23870
CA50	2	5.0	142	54	7668
CA50	3	5.0	33	24	792
CA50	4	10.0	4	167	668
CA50	5	10.0	42	317	13314
CA50	6	10.0	32	184	5888
CA50	7	10.0	6	75	450
CA50	8	10.0	32	184	5888
CA50	9	12.5	14	193	2702
CA50	10	12.5	6	317	1902
CA50	11	12.5	4	142	568

RESUMO DO AÇO

ACO	DIAM (mm)	C TOTAL (m)	PESO + 0% (kg)
CA50	10.0	217.5	134.1
CA60	12.5	51.7	49.8
PESO TOTAL (kg)			183.9
CA50			183.9
CA60			49.8

Volume de concreto (C-25) = 1.98 m³

Área de forma = 39.60 m²



RELAÇÃO DO AÇO

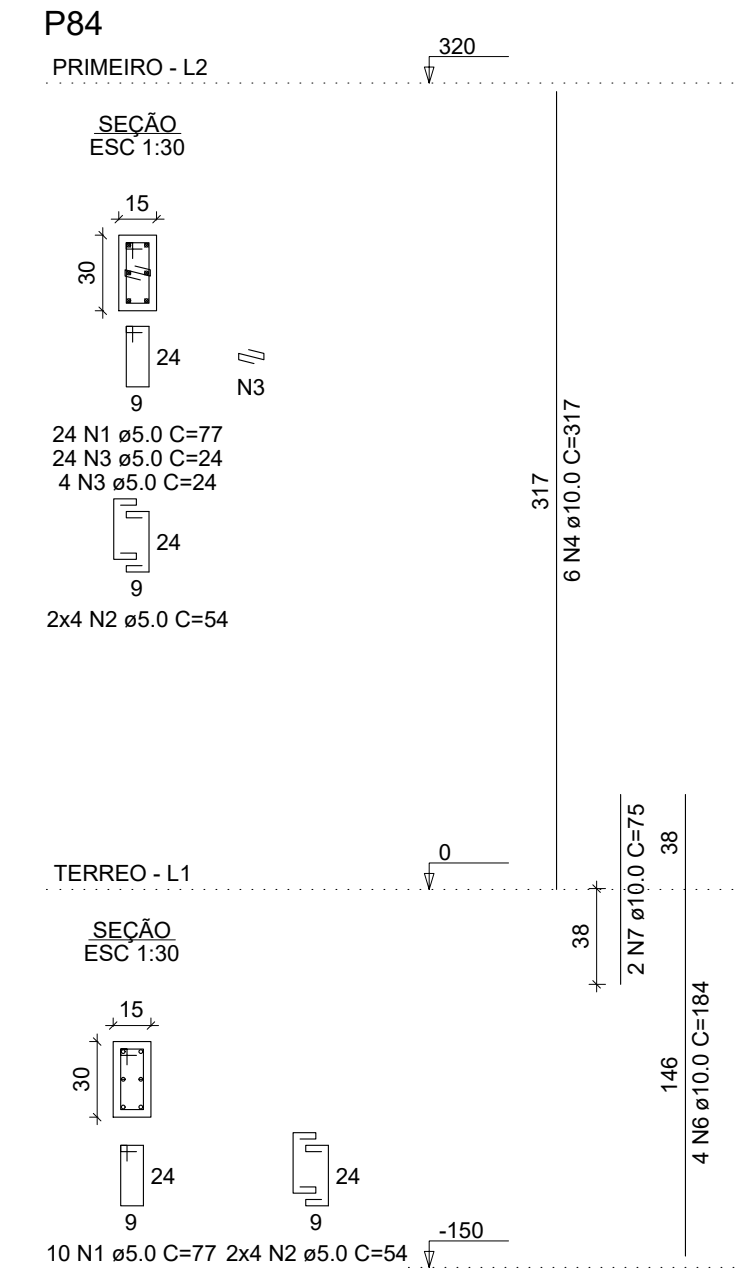
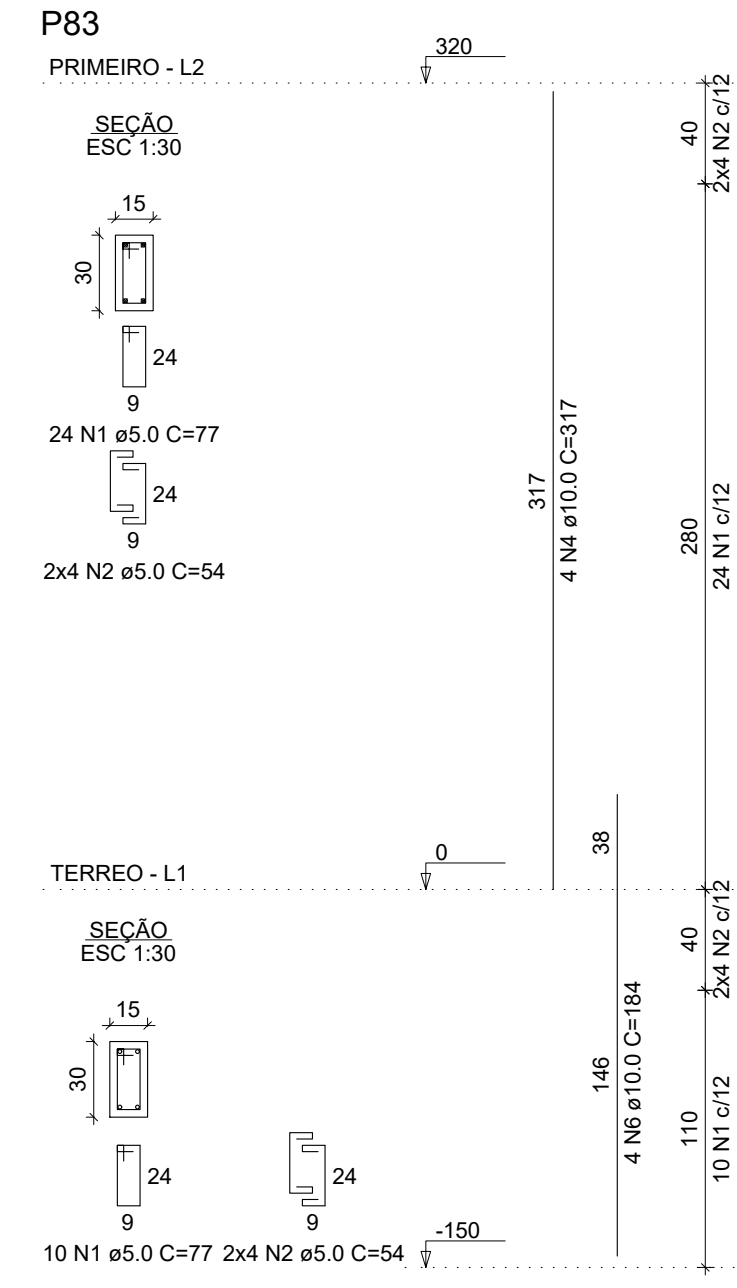
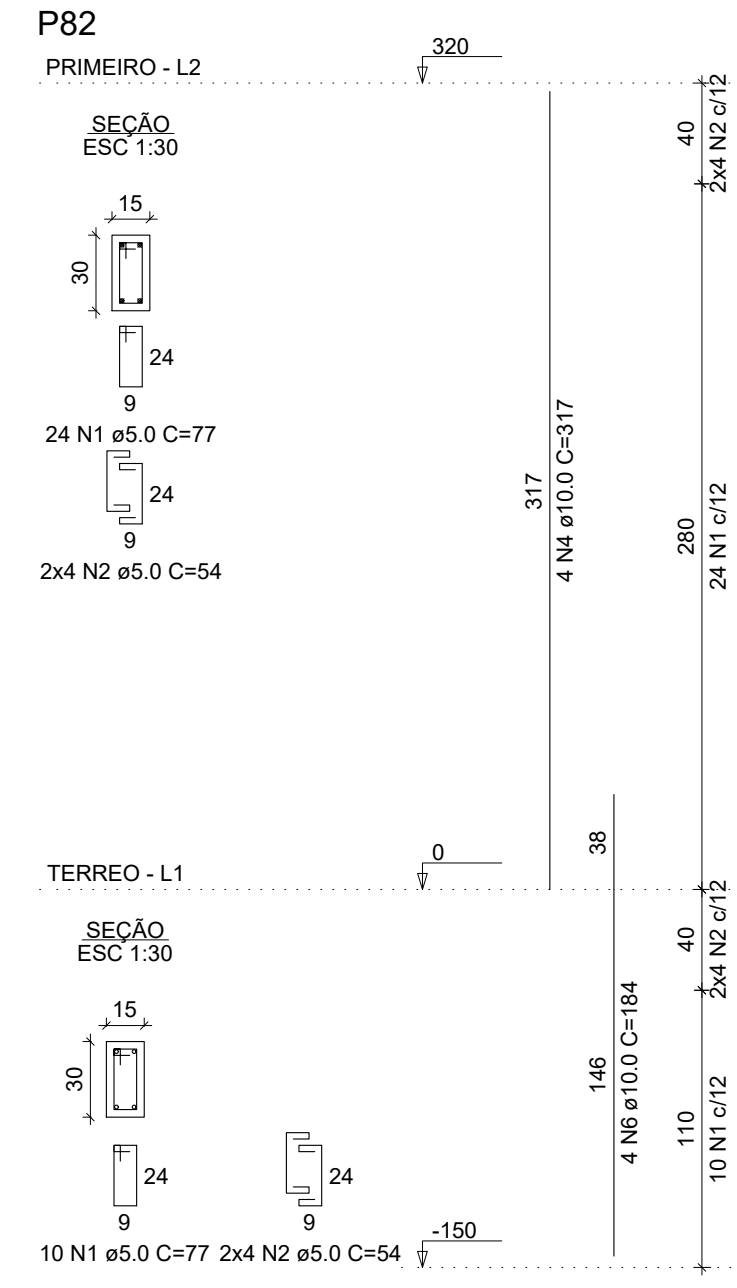
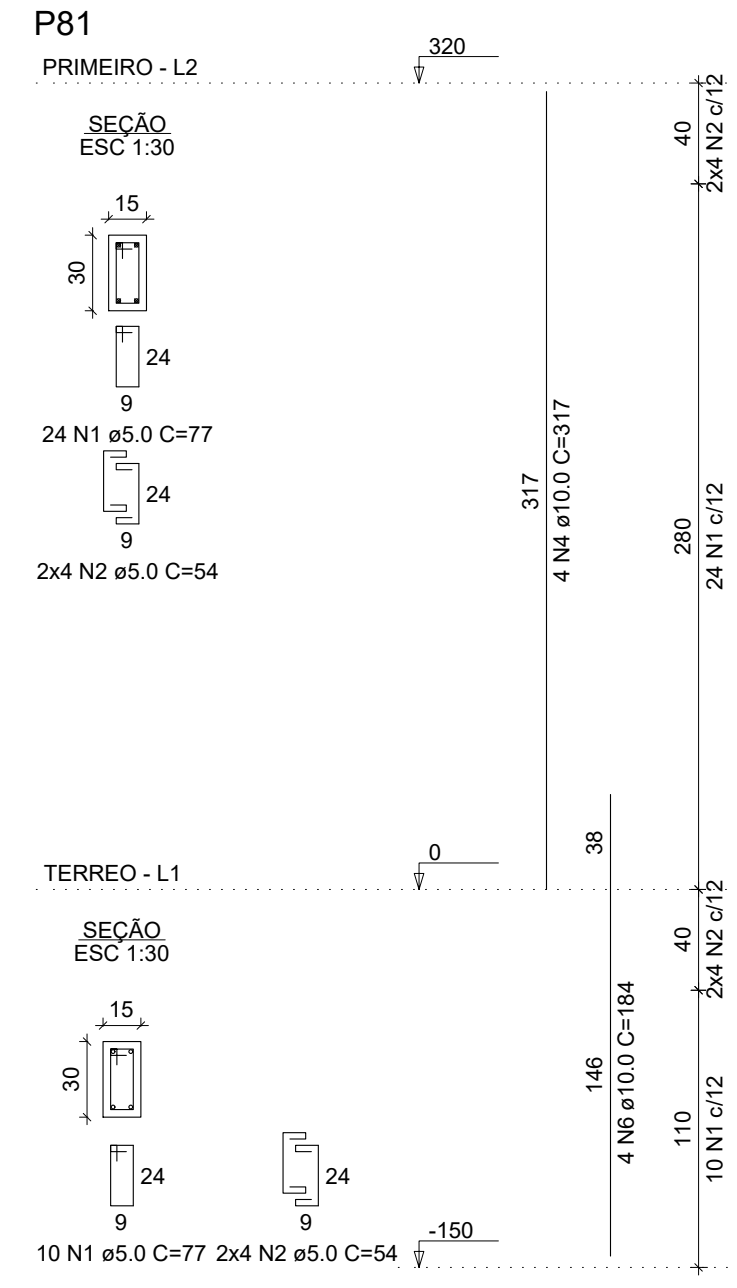
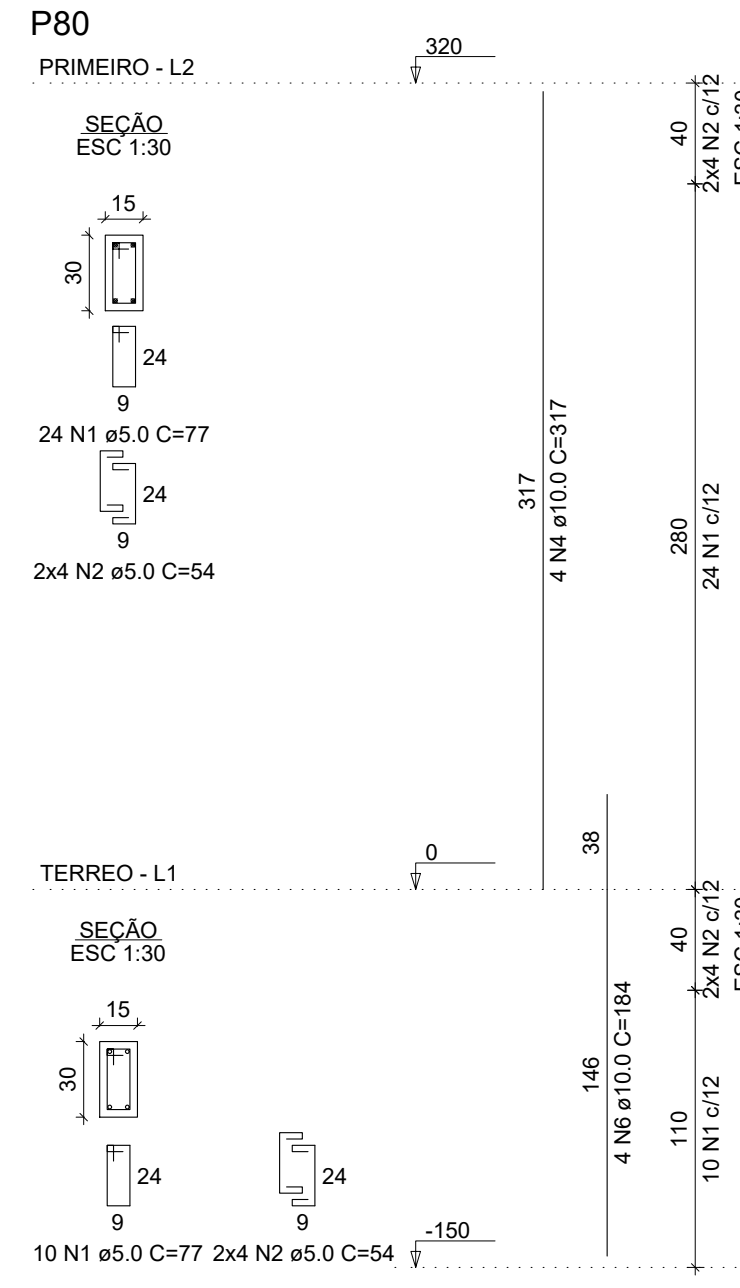
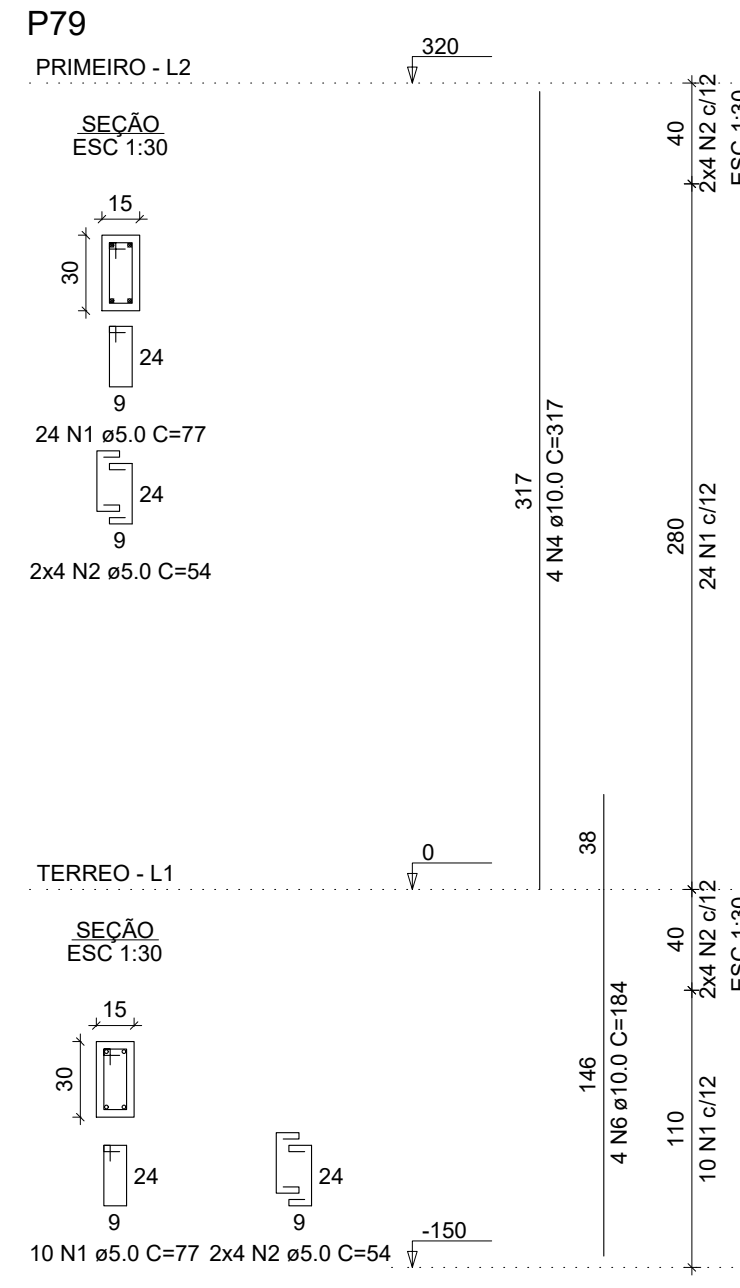
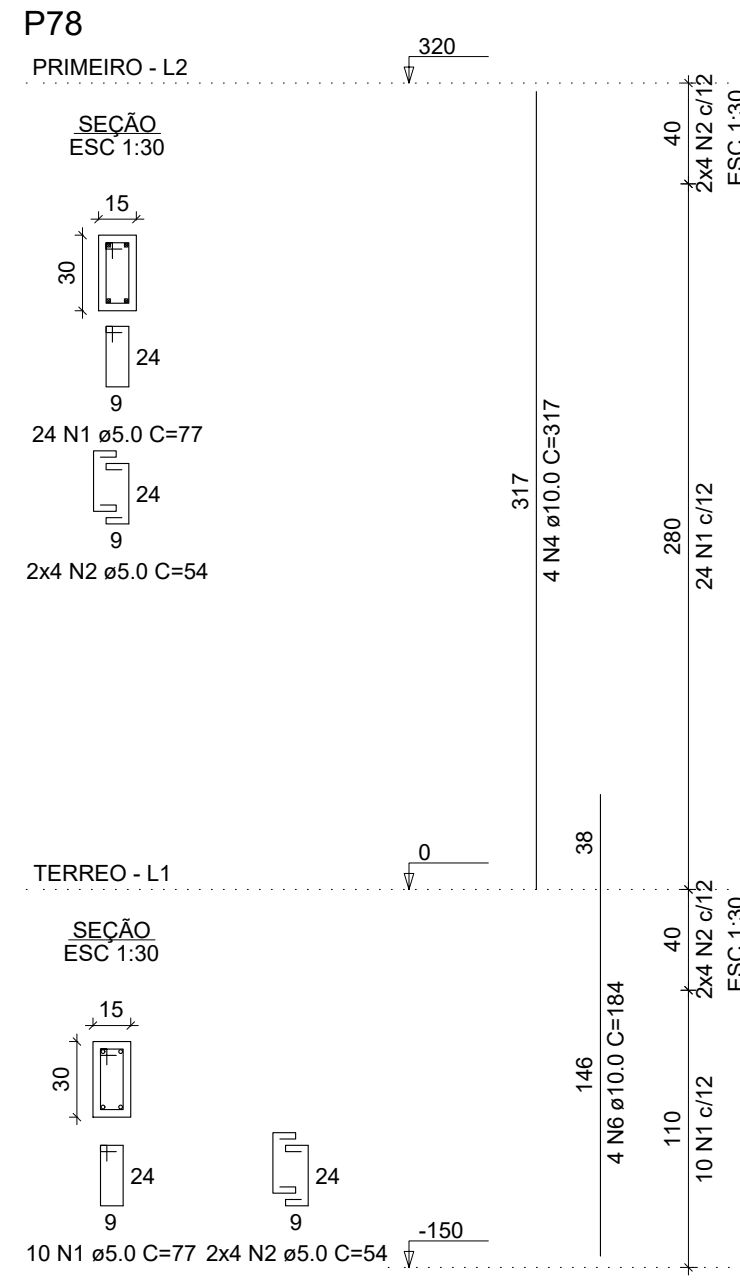
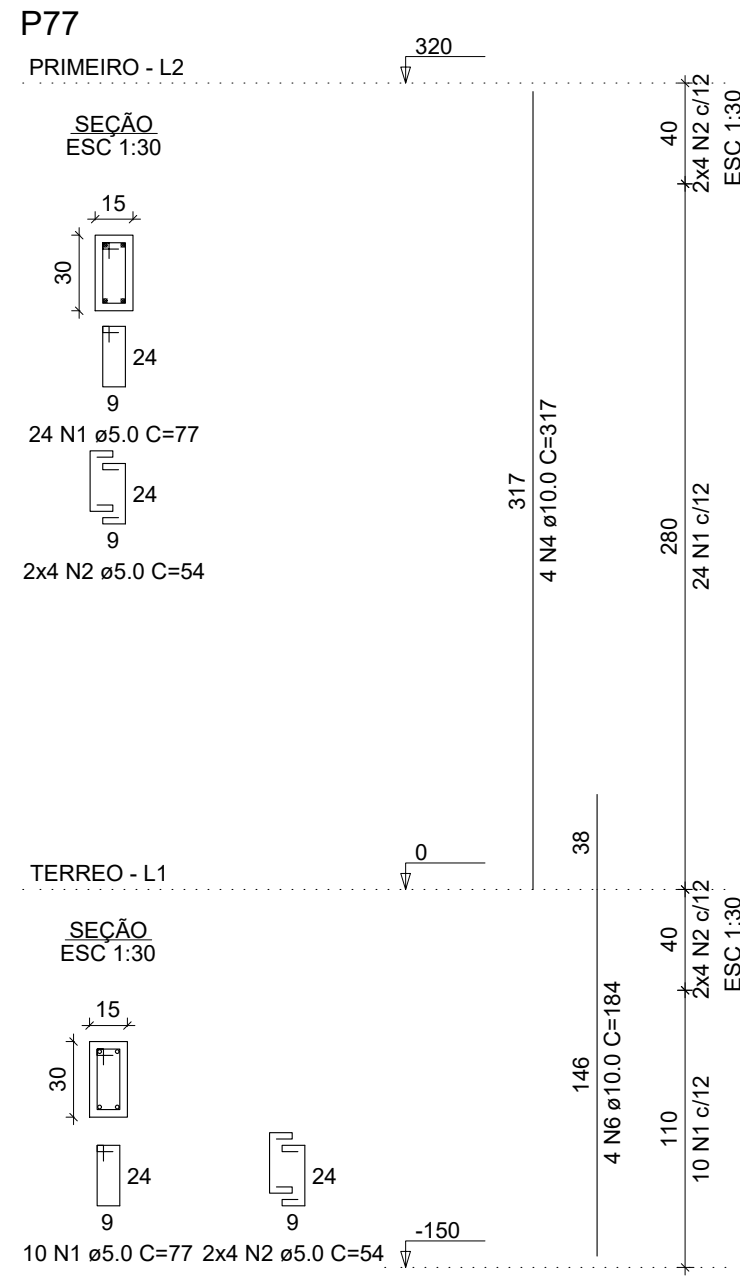
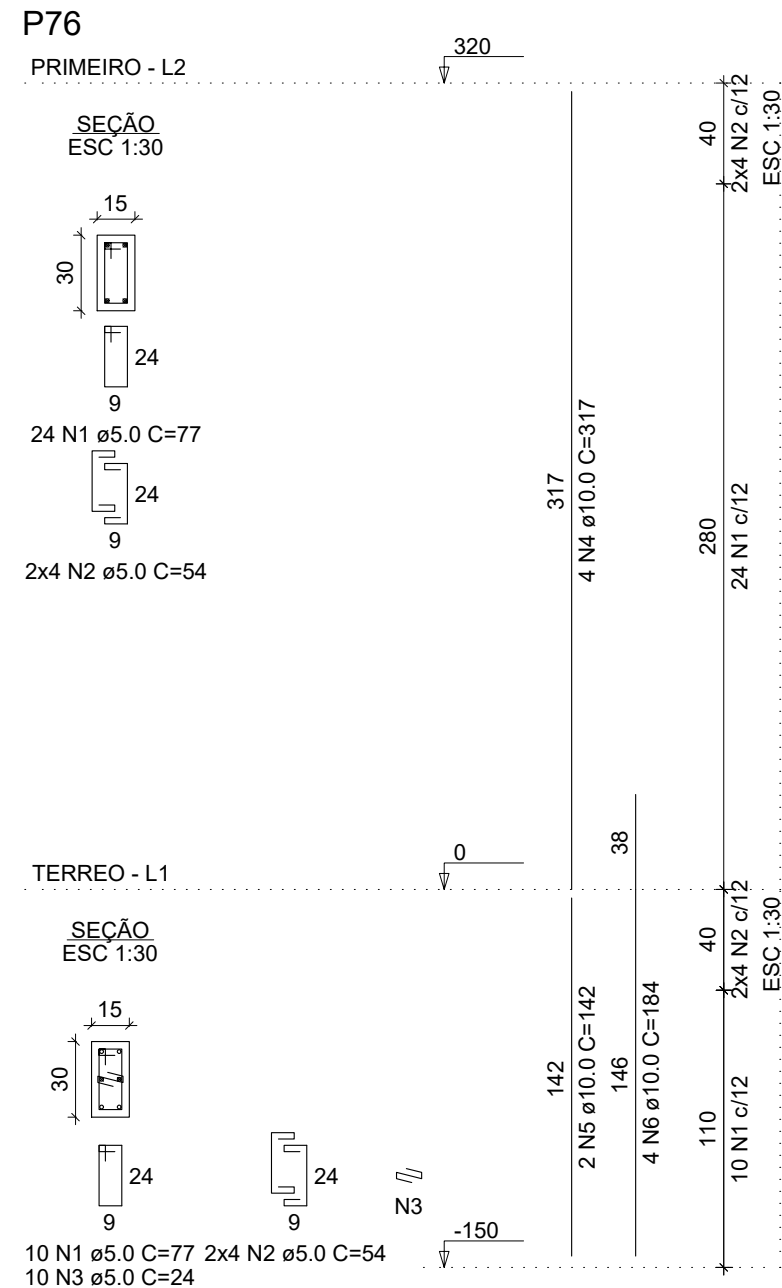
ACO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)
P67-L2	1	5.0	309	77	23793
P68-L1	2	5.0	132	54	7128
P69-L2	3	5.0	30	317	9510
P70-L2	4	10.0	28	184	5152
P71-L2	5	10.0	28	184	5152
P72-L2	6	10.0	12	358	4296
P73-L2	7	10.0	4	157	628
P74-L2	8	10.0	4	358	1432
P75-L1	9	12.5	8	193	1544

RESUMO DO AÇO

ACO	DIAM (mm)	C TOTAL (m)	PESO + 0% (kg)
CA50	10.0	214.1	132
CA60	5.0	312.4	48.2
PESO TOTAL (kg)			146.9
CA50			146.9
CA60			48.2

Volume de concreto (C-25) = 1.92 m³

Área de forma = 35.43 m²



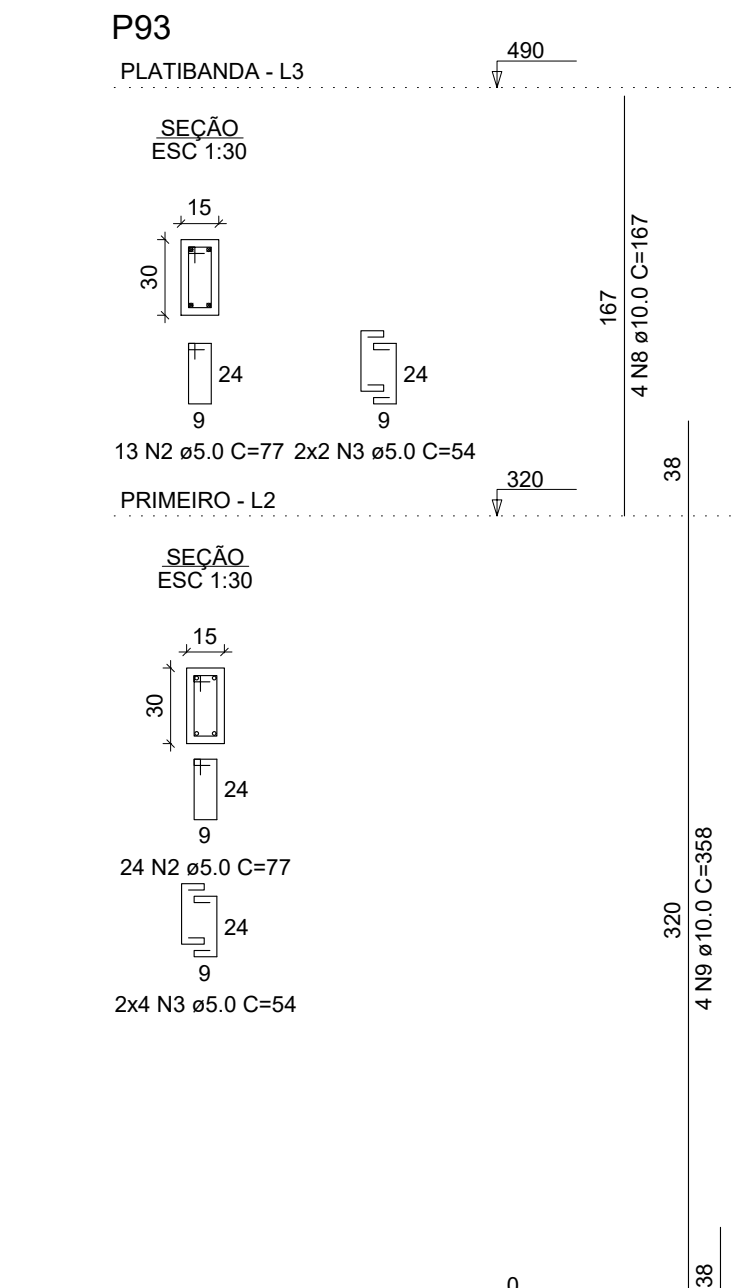
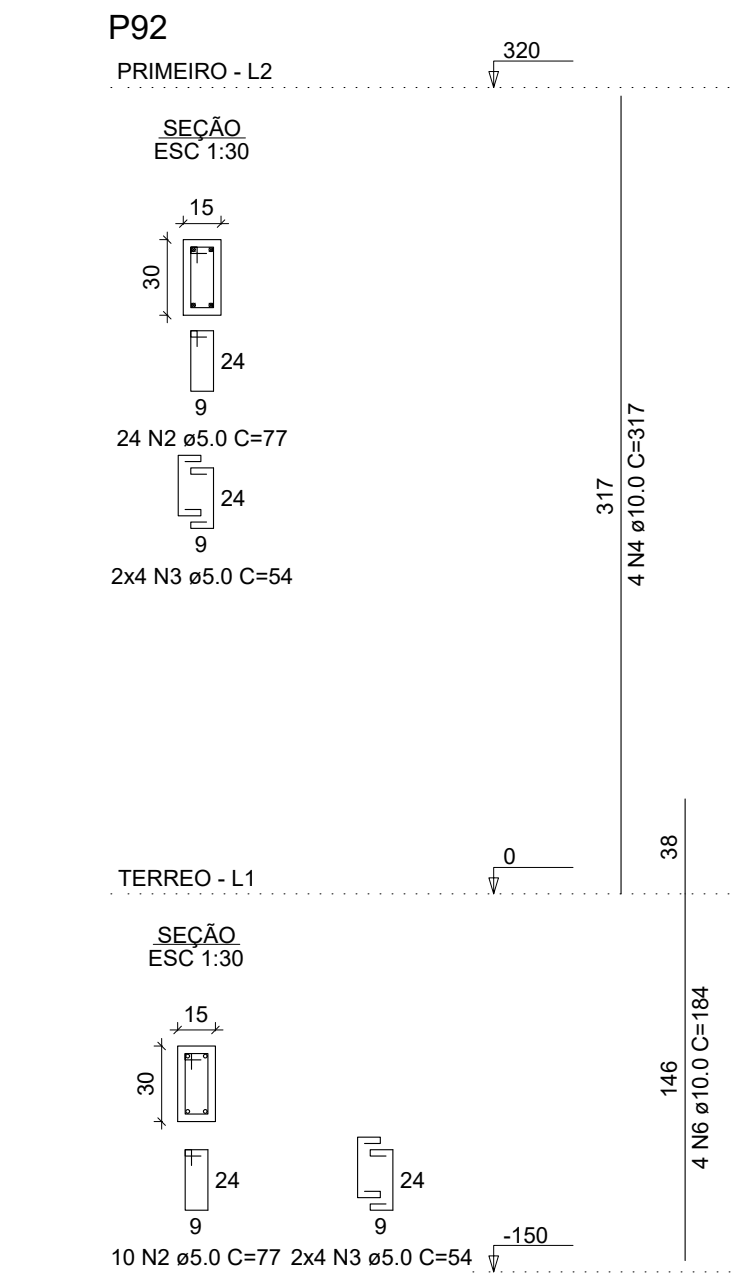
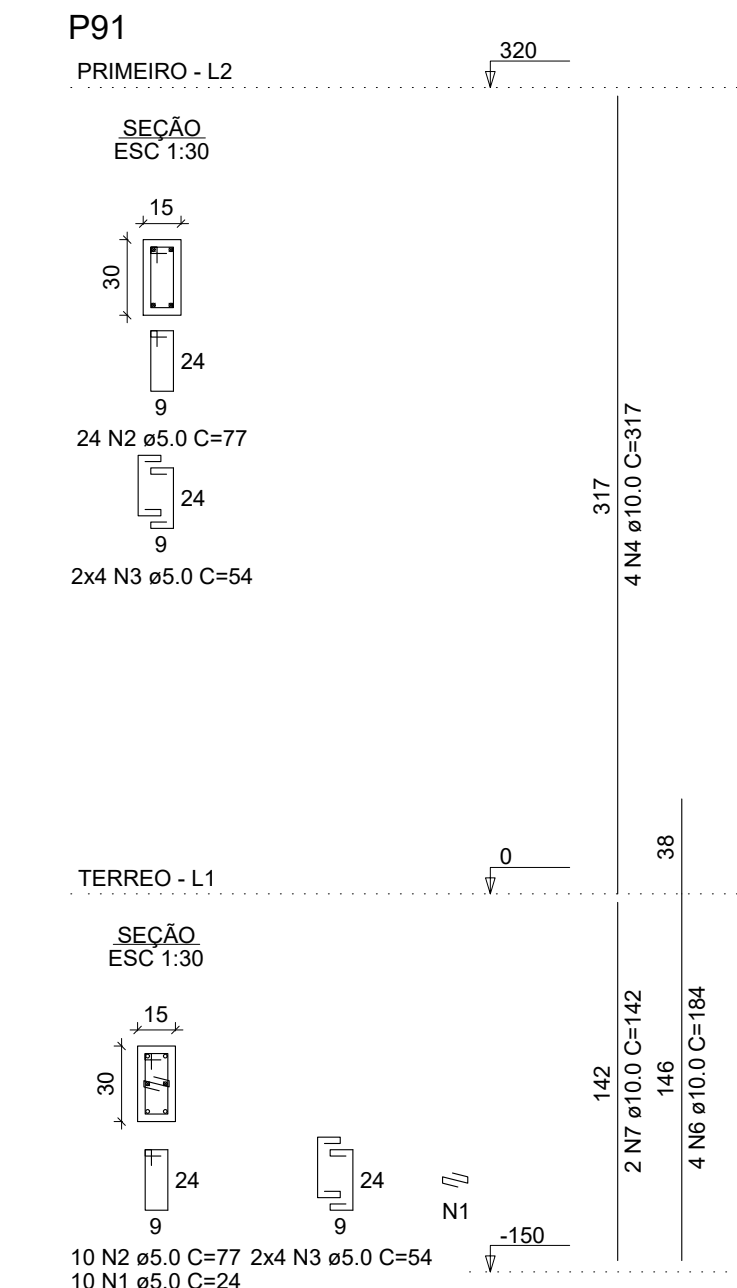
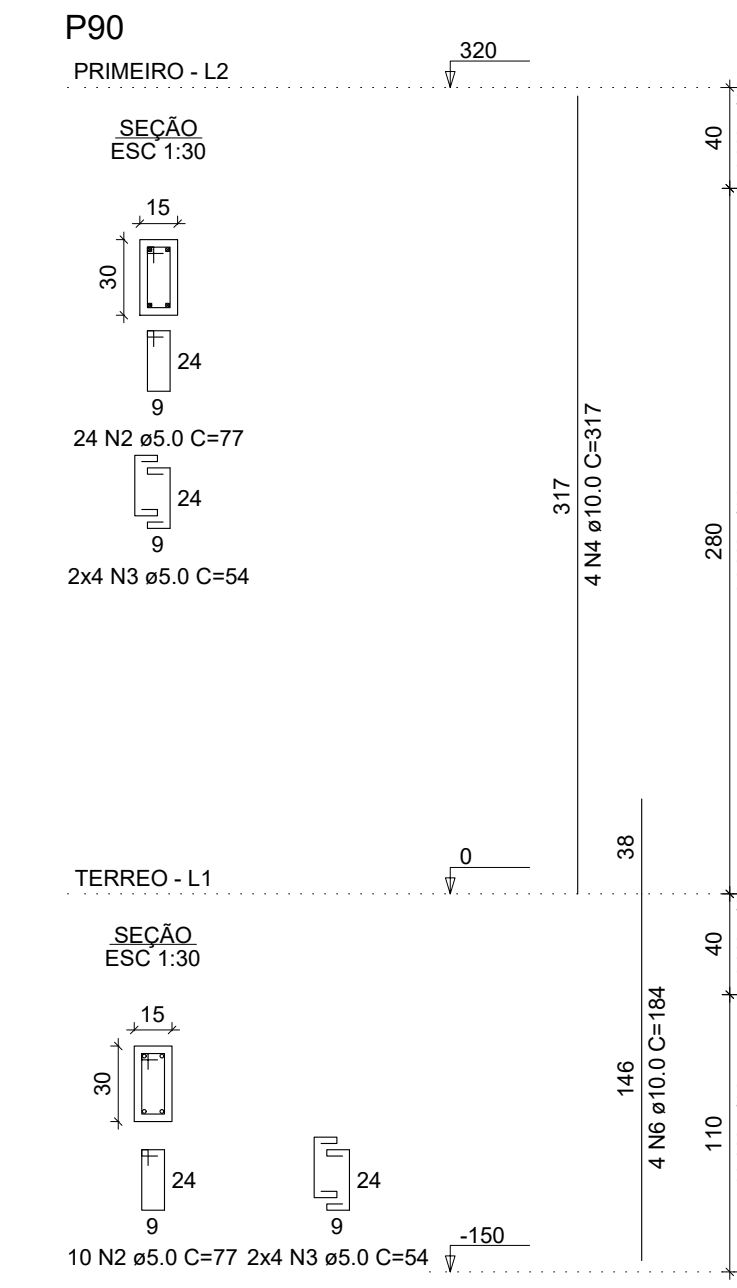
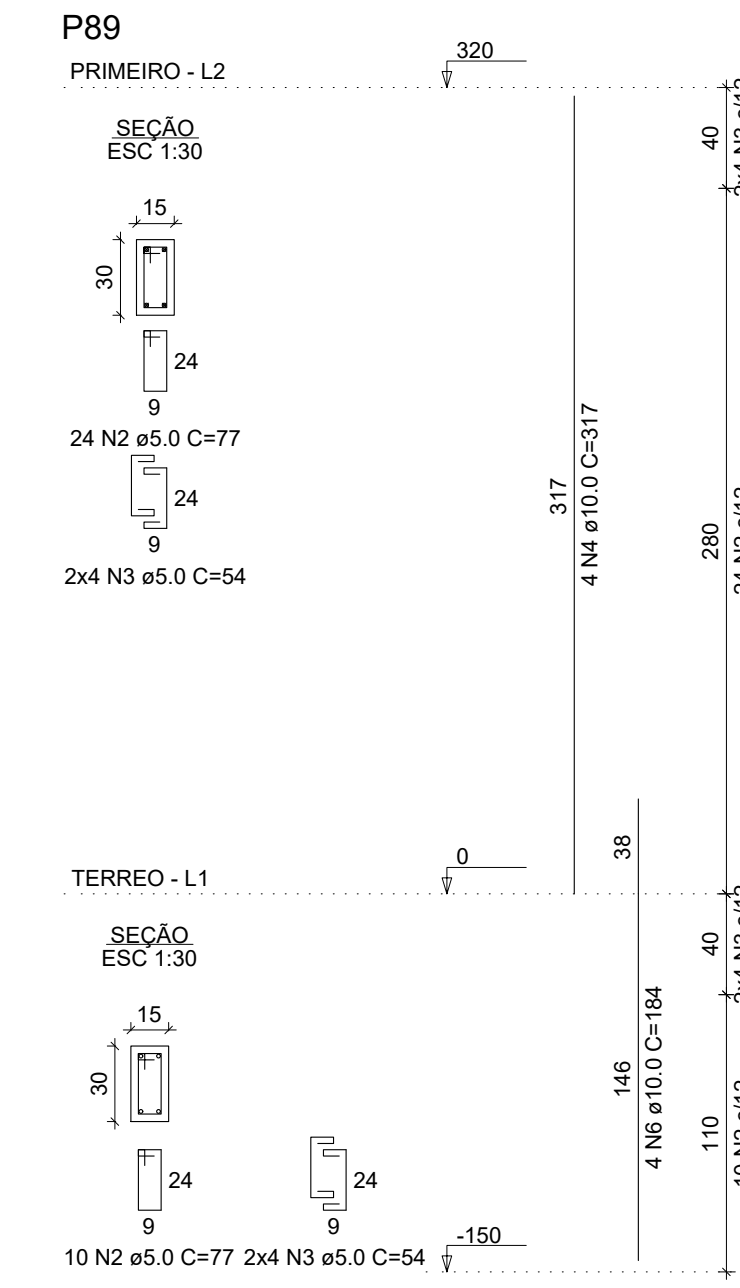
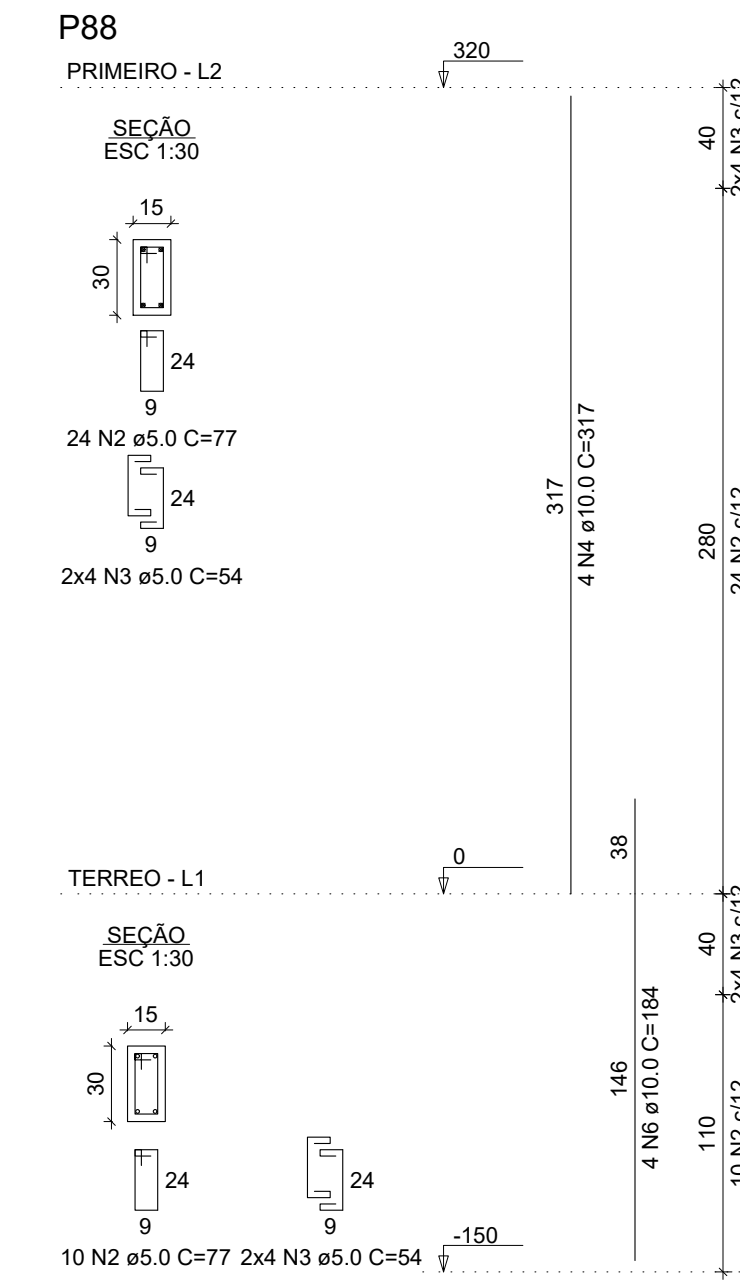
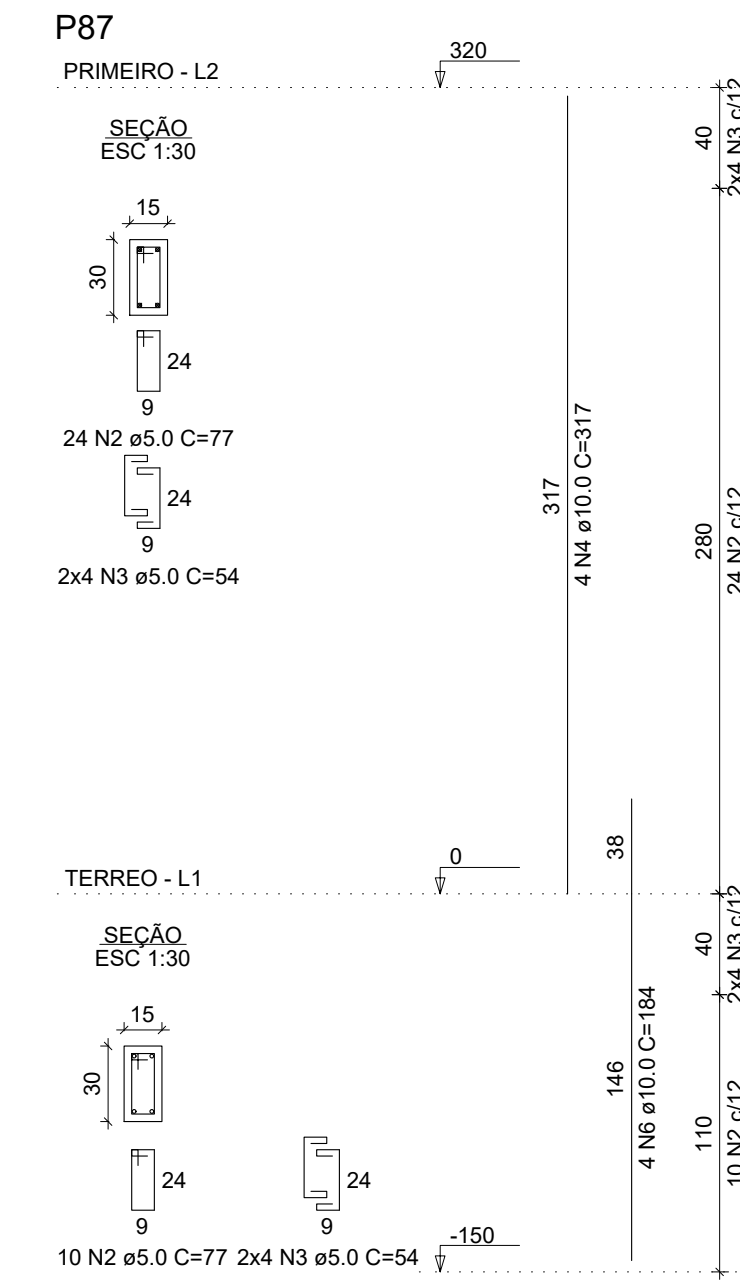
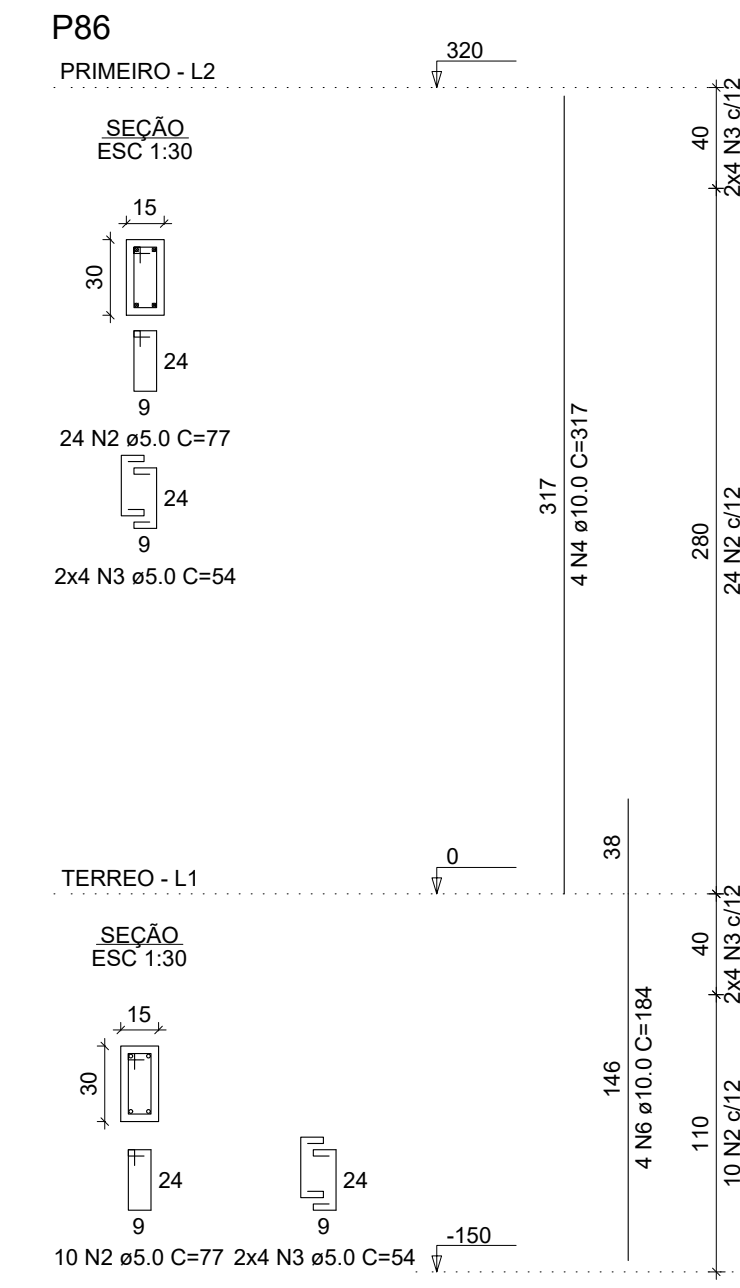
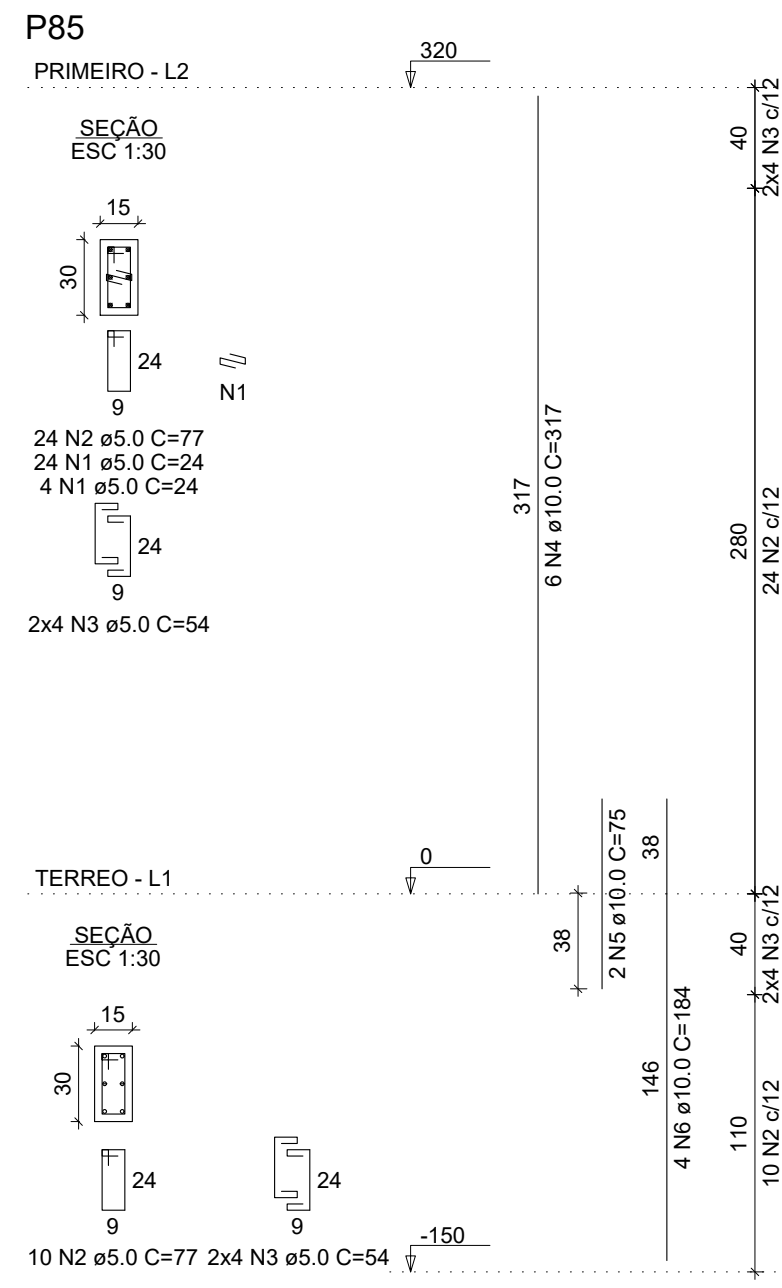
RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
P76-L2	1	5.0	306	77	23562
P77-L2	2	5.0	144	54	7776
P78-L2	3	5.0	42	24	1008
P79-L2	4	5.0	36	317	12046
P80-L2	5	10.0	2	142	284
P81-L2	6	10.0	36	184	6624
P82-L2	7	10.0	2	75	150

RESUMO DO AÇO

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	10.0	91	117.8
CA60	5.0	323.5	49.9
PESO TOTAL (kg)			117.8
CA50			117.8
CA60			49.9

Volume de concreto (C-25) = 1.90 m³
Área de forma = 38.07 m²



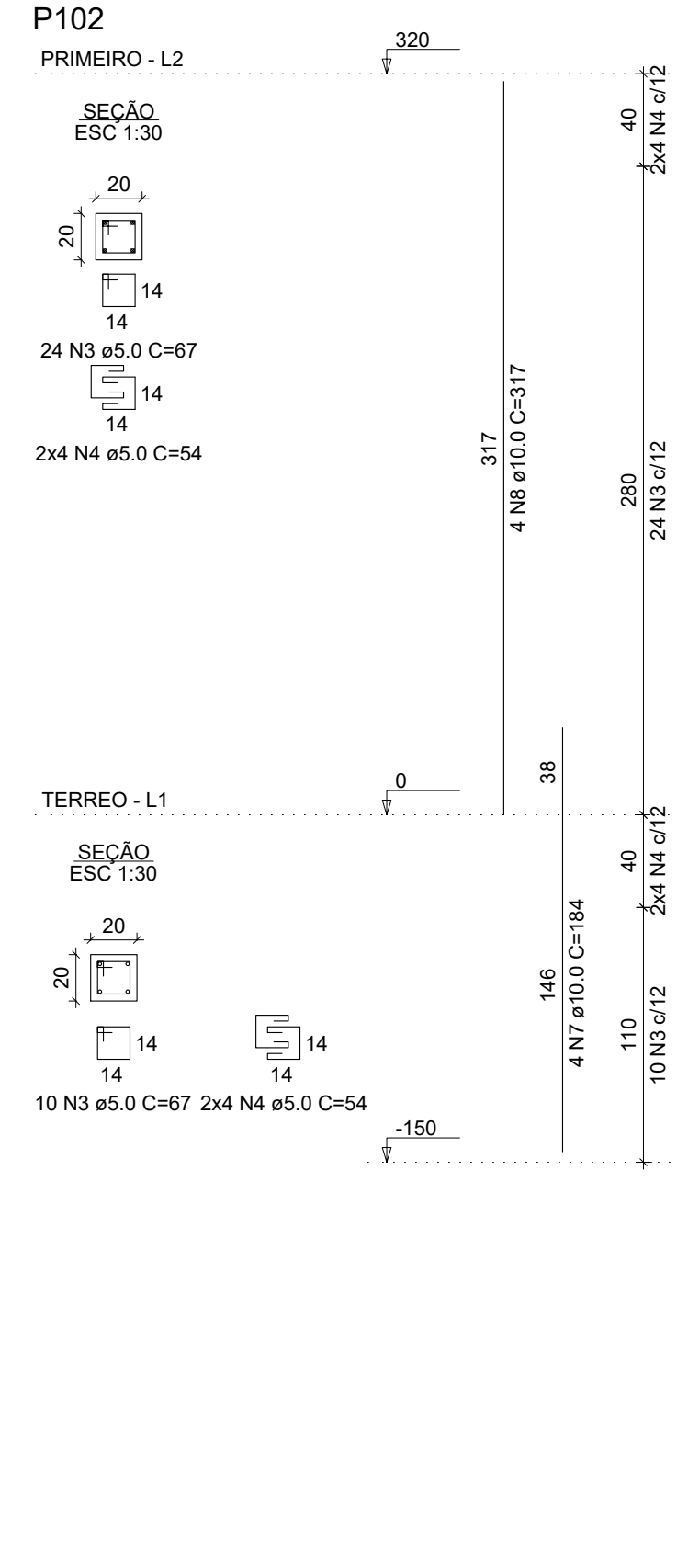
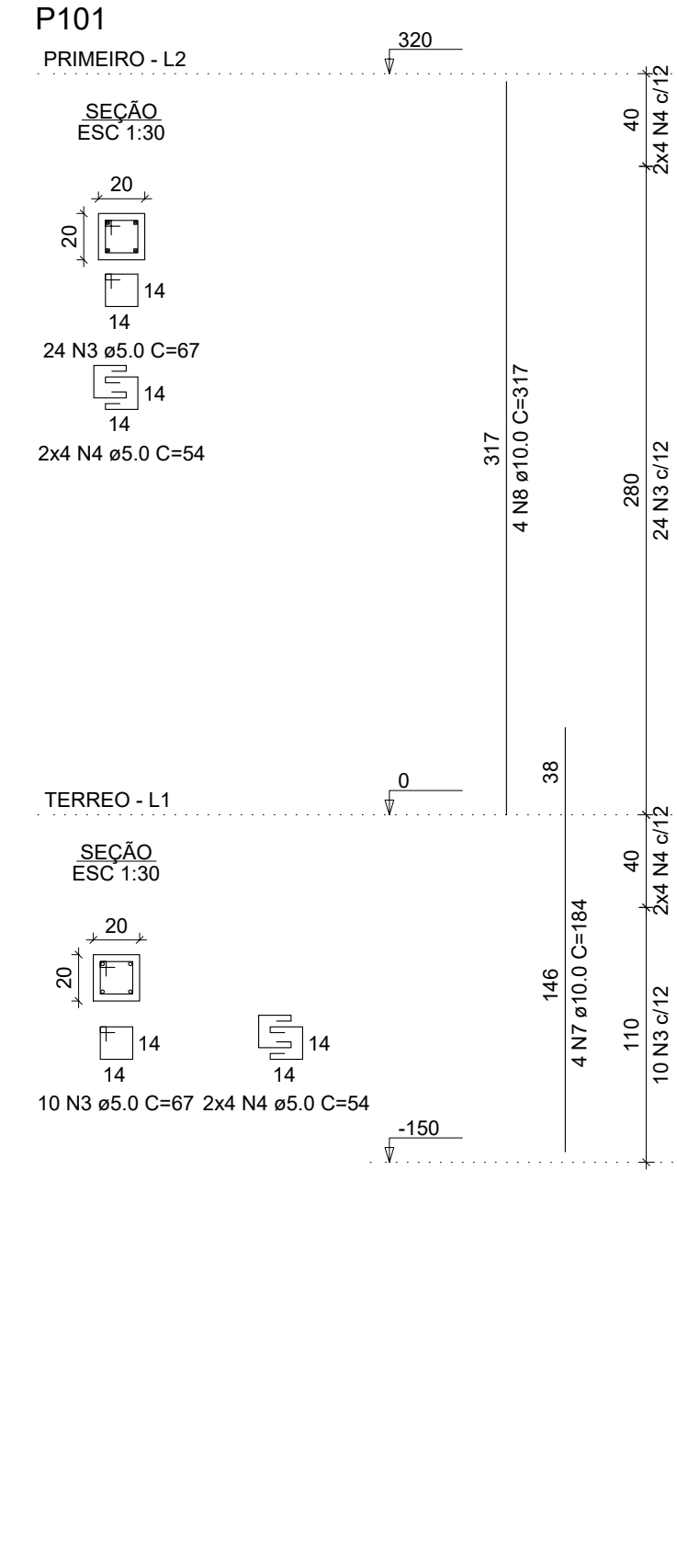
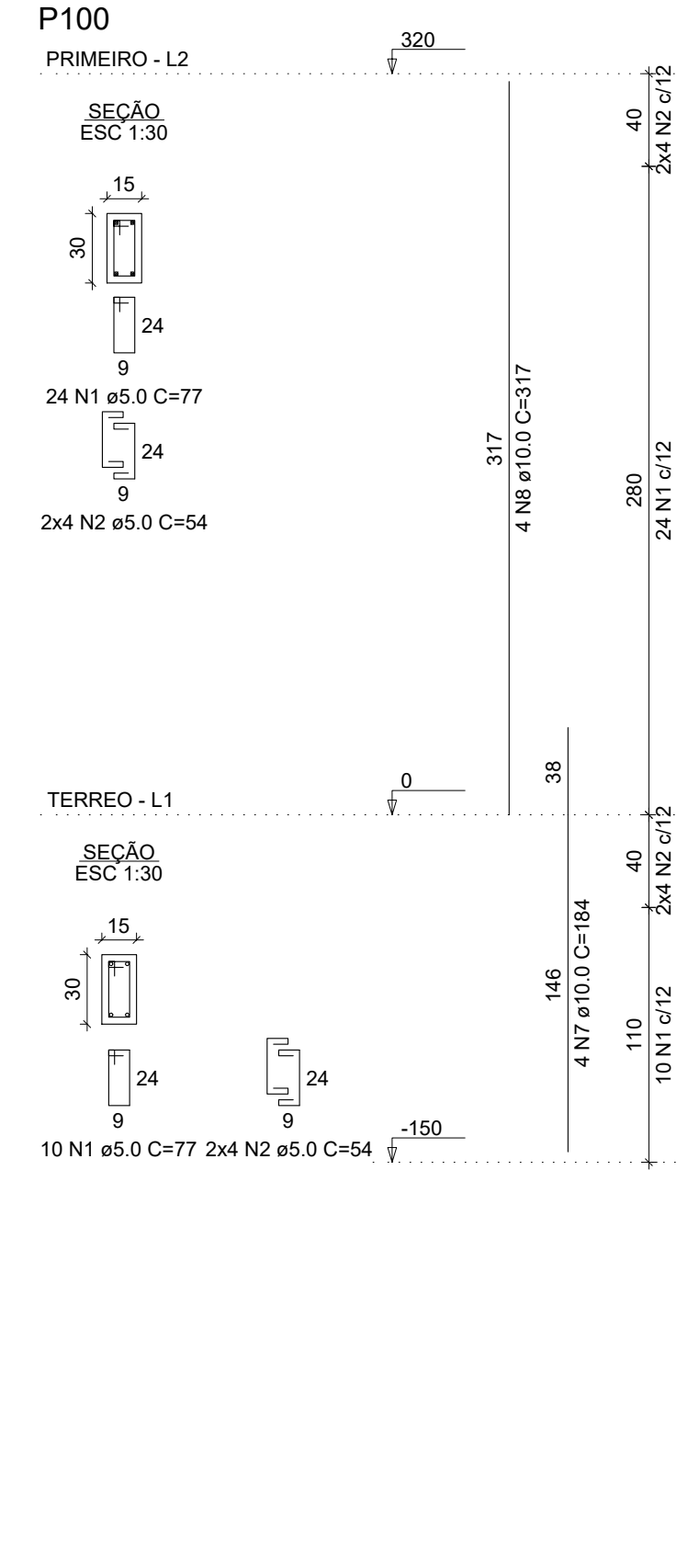
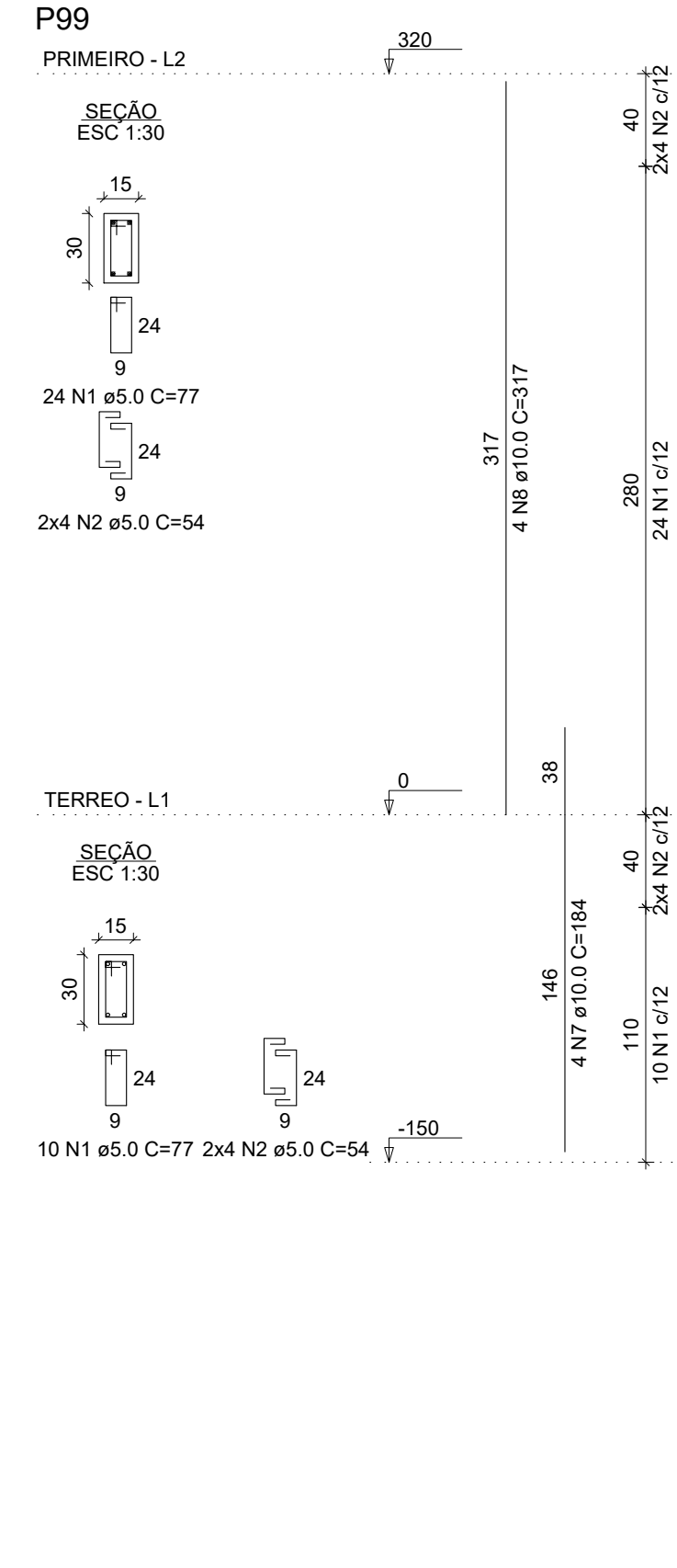
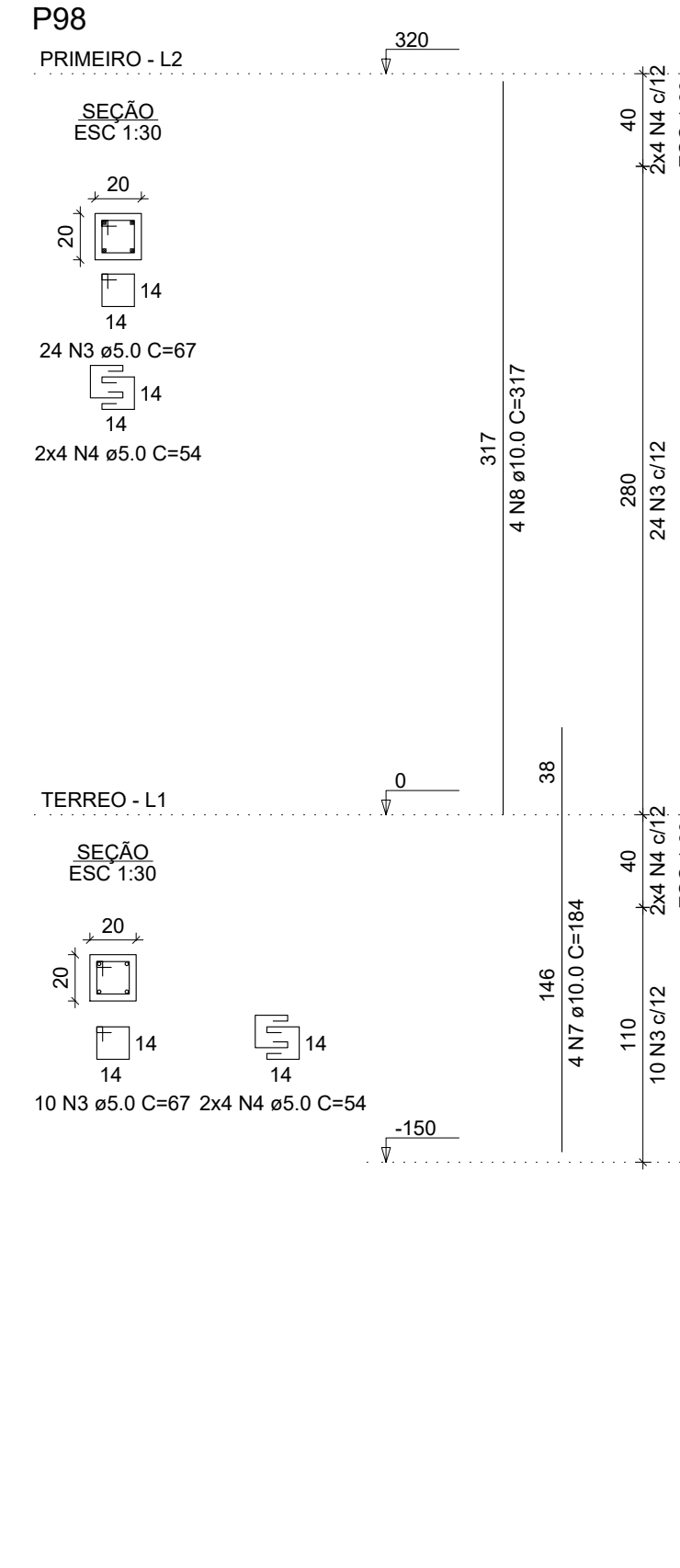
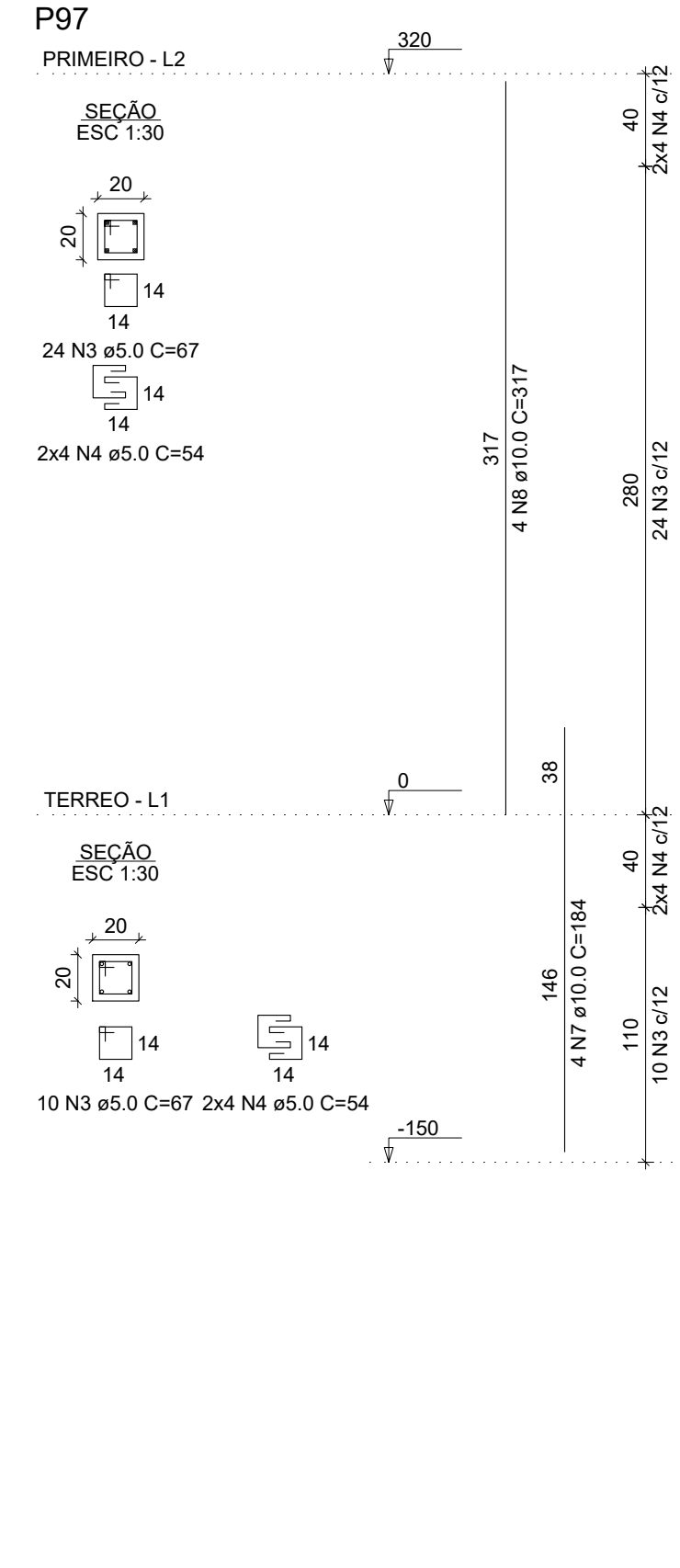
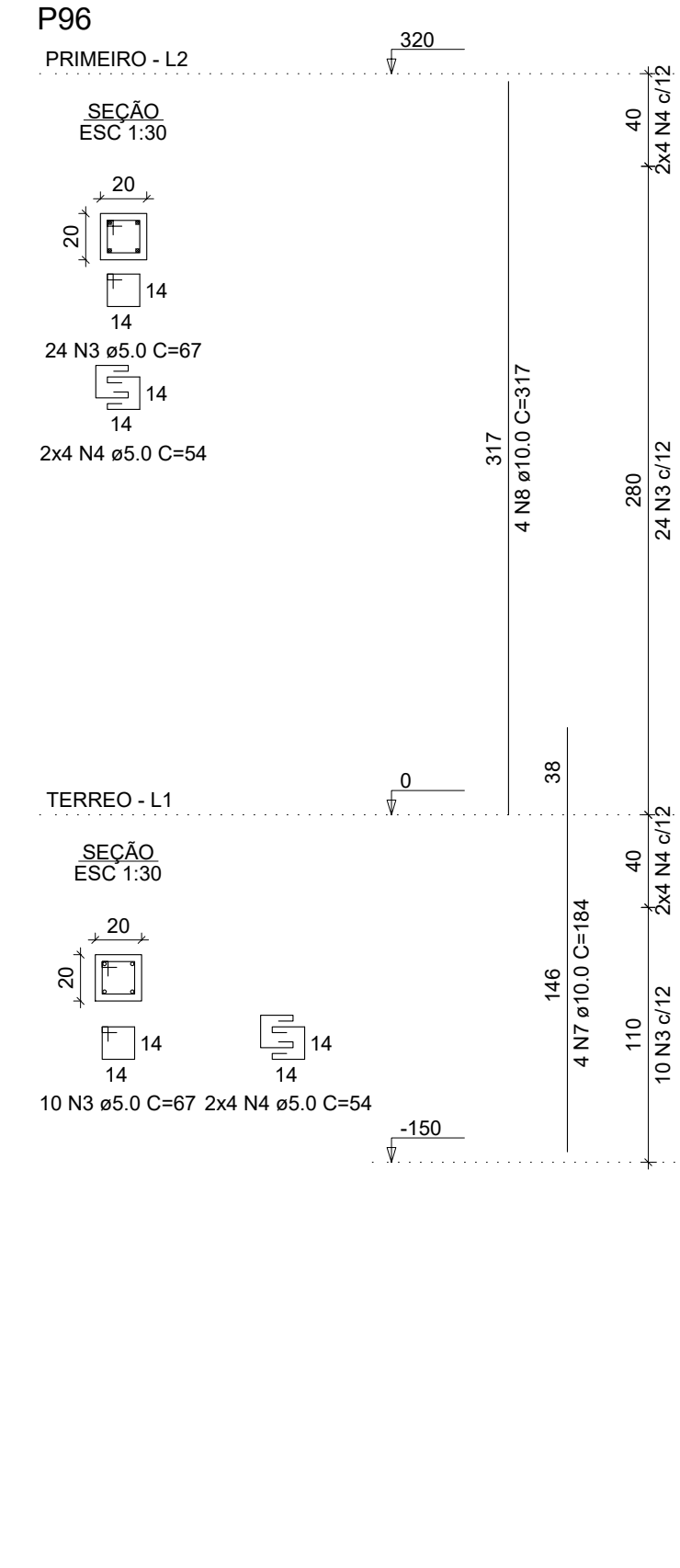
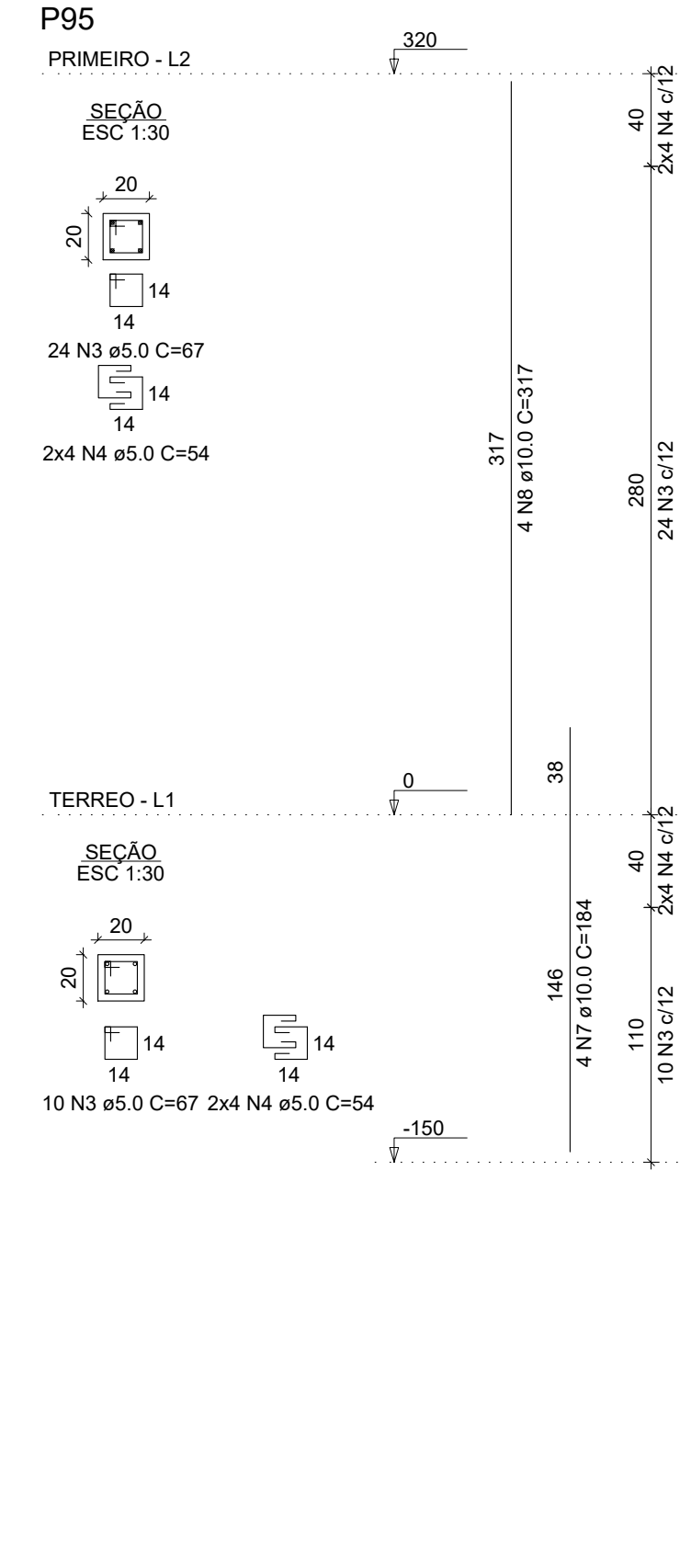
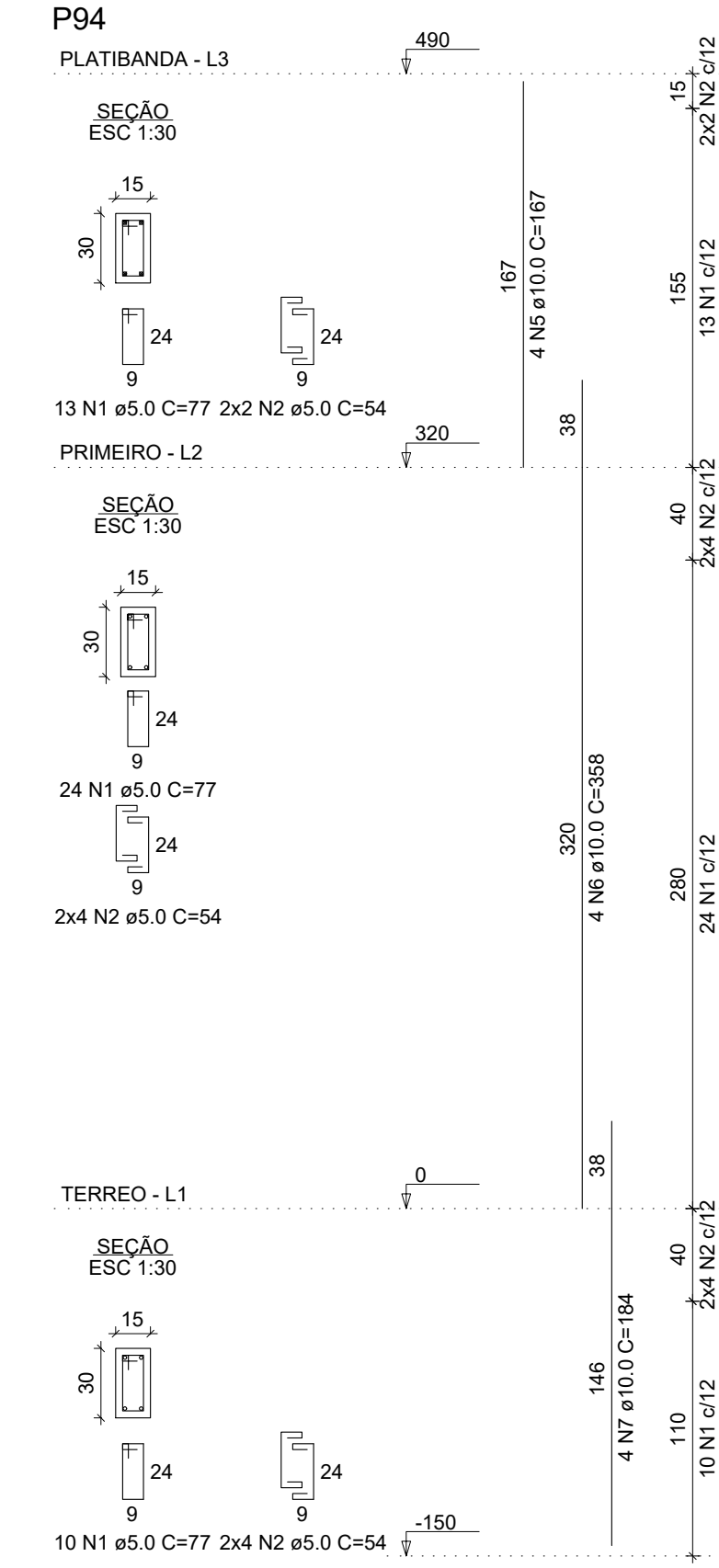
RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
P85-L2	1	5.0	42	24	1008
P86-L2	2	5.0	319	77	24563
P87-L2	3	5.0	148	54	7992
P88-L2	4	10.0	34	317	10778
P89-L2	5	10.0	36	75	270
P90-L2	6	10.0	36	184	6624
P91-L2	7	10.0	2	142	284
P92-L2	8	10.0	4	167	668
P93-L2	9	10.0	4	308	1232

RESUMO DO AÇO

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	10.0	186.4	122.9
CA60	5.0	335.6	51.7
PESO TOTAL (kg)			122.9
CA50			122.9
CA60			51.7

Volume de concreto (C-25) = 1.98 m³
Área de forma = 39.60 m²



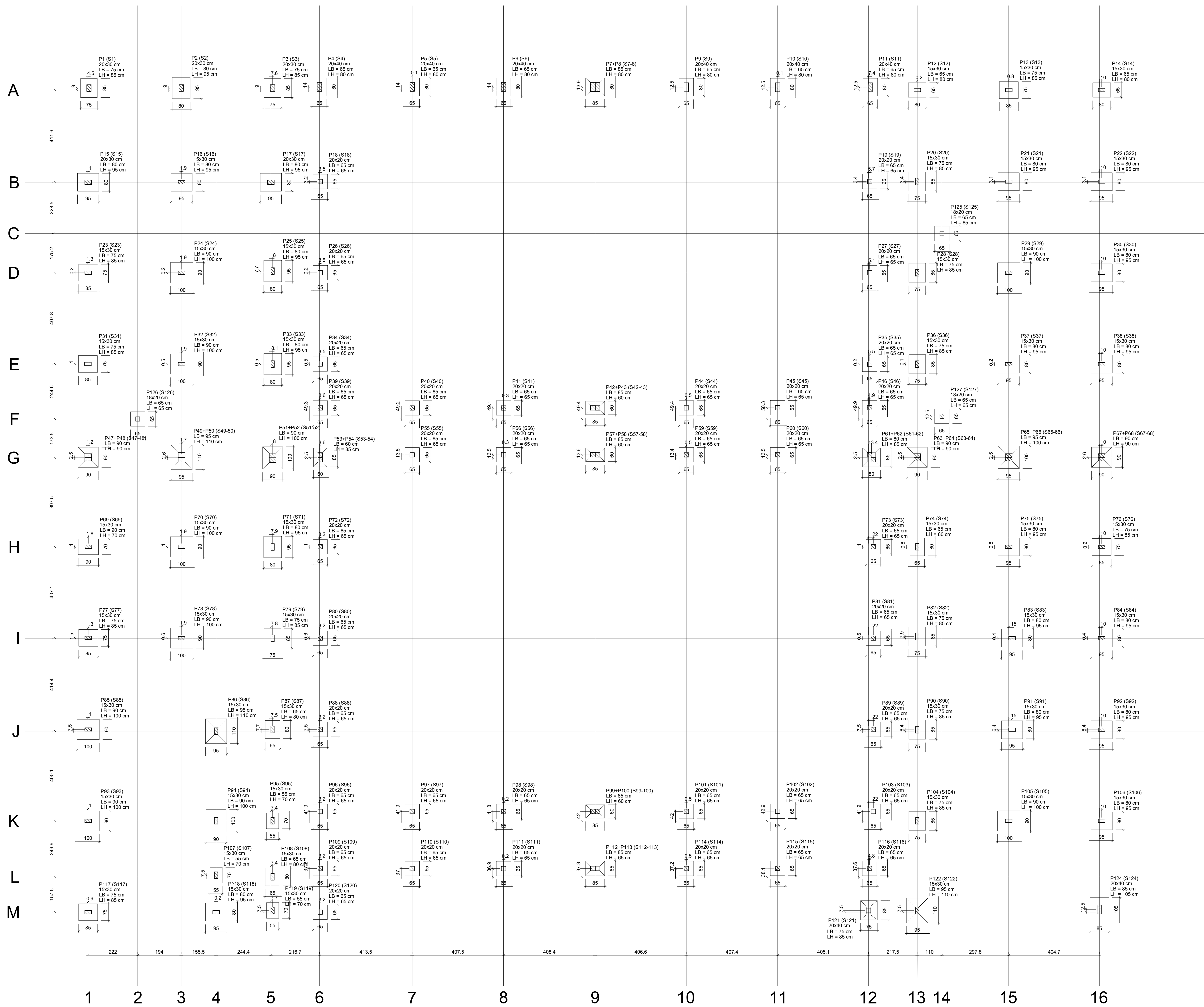
RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
P94-L2	1	5.0	115	77	8855
P95-L2	2	5.0	52	54	2808
P96-L2	3	5.0	204	67	13668
P97-L2	4	5.0	96	54	5184
P98-L2	5	10.0	4	167	668
P99-L2	6	10.0	4	388	1552
P100-L2	7	10.0	36	184	6624
P101-L2	8	10.0	32	317	10144
P102-L2	9	10.0	32	317	10144

RESUMO DO AÇO

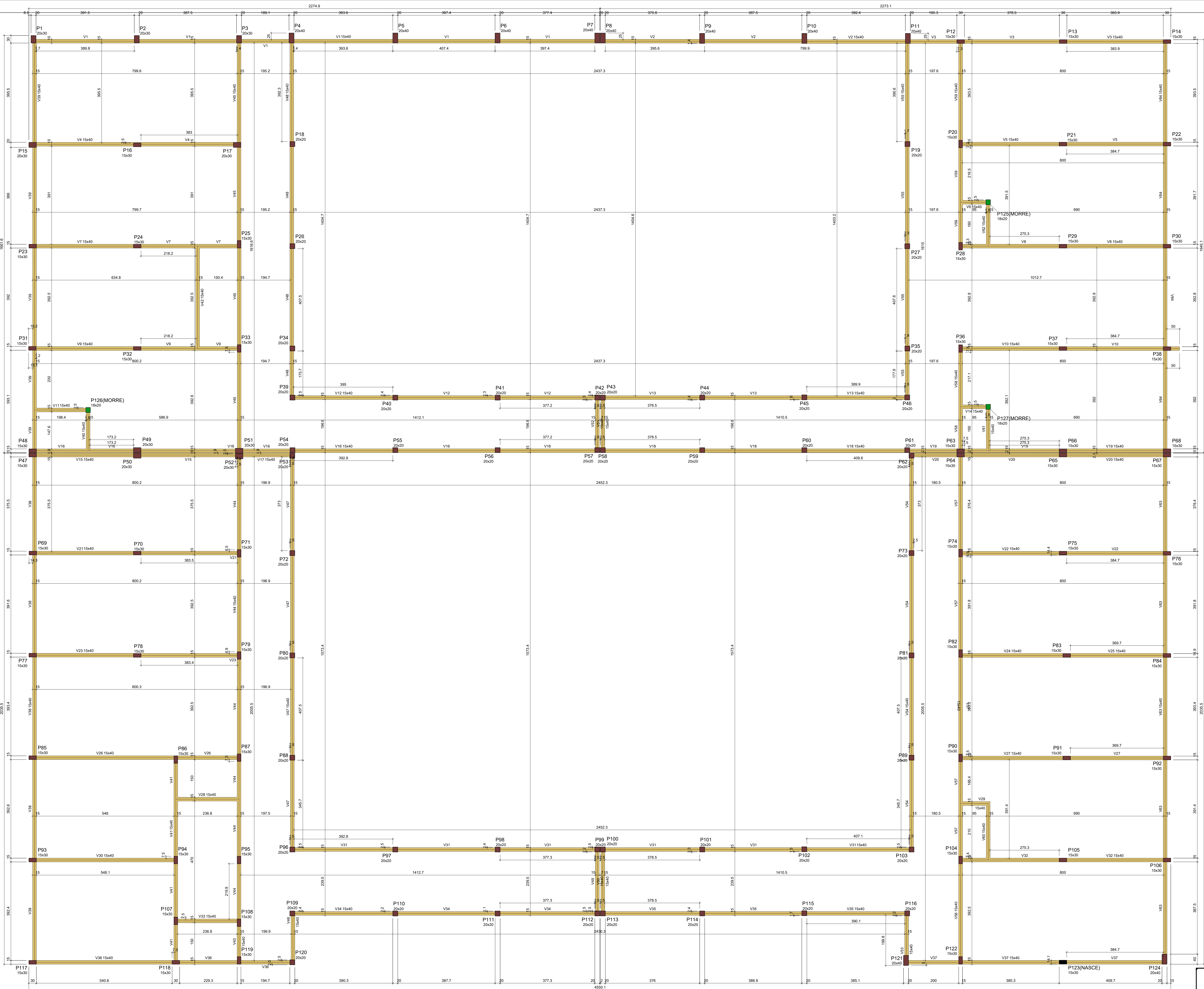
ACO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	10.0	188.7	116.3
CA60	5.0	305.2	47
PESO TOTAL (kg)			116.3
CA50			116.3
CA60			47

Volume de concreto (C-25) = 1.84 m³
Área de forma = 36.78 m²



Planta de locação
escala 1:75

Pilar		Fundação					
Nome	Seção	Nome	Lado B	Lado H	h0 / ha	h1 / hb	df
P1	20x30	S1	75	85	25	25	100
P2	20x30	S2	80	95	25	25	100
P3	20x30	S3	75	85	25	25	100
P4	20x40	S4	65	80	25	25	100
P5	20x40	S5	65	80	25	25	100
P6	20x40	S6	65	80	25	25	100
P7	20x40	S7	65	80	25	25	100
P8	20x40	S8	65	80	25	25	100
P9	20x40	S9	65	80	25	25	100
P10	20x40	S10	65	80	25	25	100
P11	20x40	S11	65	80	25	25	100
P12	20x40	S12	65	80	25	25	100
P13	20x40	S13	65	80	25	25	100
P14	20x40	S14	65	80	25	25	100
P15	20x40	S15	65	80	25	25	100
P16	20x40	S16	65	80	25	25	100
P17	20x40	S17	65	80	25	25	100
P18	20x40	S18	65	80	25	25	100
P19	20x40	S19	65	80	25	25	100
P20	20x40	S20	65	80	25	25	100
P21	20x40	S21	65	80	25	25	100
P22	20x40	S22	65	80	25	25	100
P23	20x40	S23	65	80	25	25	100
P24	20x40	S24	65	80	25	25	100
P25	20x40	S25	65	80	25	25	100
P26	20x40	S26	65	80	25	25	100
P27	20x40	S27	65	80	25	25	100
P28	20x40	S28	65	80	25	25	100
P29	20x40	S29	65	80	25	25	100
P30	20x40	S30	65	80	25	25	100
P31	20x40	S31	65	80	25	25	100
P32	20x40	S32	65	80	25	25	100
P33	20x40	S33	65	80	25	25	100
P34	20x40	S34	65	80	25	25	100
P35	20x40	S35	65	80	25	25	100
P36	20x40	S36	65	80	25	25	100
P37	20x40	S37	65	80	25	25	100
P38	20x40	S38	65	80	25	25	100
P39	20x40	S39	65	80	25	25	100
P40	20x40	S40	65	80	25	25	100
P41	20x40	S41	65	80	25	25	100
P42	20x40	S42	65	80	25	25	100
P43	20x40	S43	65	80	25	25	100
P44	20x40	S44	65	80	25	25	100
P45	20x40	S45	65	80	25	25	100
P46	20x40	S46	65	80	25	25	100
P47	20x40	S47	65	80	25	25	100
P48	20x40	S48	65	80	25	25	100
P49	20x40	S49	65	80	25	25	100
P50	20x40	S50	65	80	25	25	100
P51	20x40	S51	65	80	25	25	100
P52	20x40	S52	65	80	25	25	100
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P57	20x40	S57	65	80	25	25	100
P58	20x40	S58	65	80	25	25	100
P59	20x40	S59	65	80	25	25	100
P60	20x40	S60	65	80	25	25	100
P61	20x40	S61	65	80	25	25	100
P62	20x40	S62	65	80	25	25	100
P63	20x40	S63	65	80	25	25	100
P64	20x40	S64	65	80	25	25	100
P65	20x40	S65	65	80	25	25	100
P66	20x40	S66	65	80	25	25	100
P67	20x40	S67	65	80	25	25	100
P68	20x40	S68	65	80	25	25	100
P69	20x40	S69	65	80	25	25	100
P70	20x40	S70	65	80	25	25	100
P71	20x40	S71	65	80	25	25	100
P72	20x40	S72	65	80	25	25	100
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P74	20x40	S74	65	80	25	25	100
P75	20x40	S75	65	80	25	25	100
P76	20x40	S76	65	80	25	25	100
P77	20x40	S77	65	80	25	25	100
P78	20x40	S78	65	80	25	25	100
P79	20x40	S79	65	80	25	25	100
P80	20x40	S80	65	80	25	25	100
P81	20x40	S81	65	80	25	25	100
P82	20x40	S82	65	80	25	25	100
P83	20x40	S83	65	80	25	25	100
P84	20x40	S84	65	80	25	25	100
P85	20x40	S85	65	80	25	25	100
P86	20x40	S86	65	80	25	25	100
P87	20x40	S87	65	80	25	25	100
P88	20x40	S88	65	80	25	25	100
P89	20x40	S89	65	80	25	25	100
P90	20x40	S90	65	80	25	25	100
P91	20x40	S91	65	80	25	25	100
P92	20x40	S92	65	80	25	25	100
P93	20x40	S93	65	80	25	25	100
P94	20x40	S94	65	80	25	25	100
P95	20x40	S95	65	80	25	25	100
P96	20x40	S96	65	80	25	25	100
P97	20x40	S97	65	80	25	25	100
P98	20x40	S98	65	80	25	25	100
P99	20x40	S99	65	80	25	25	100
P100	20x40	S100	65	80	25	25	100
P101	20x40	S101	65	80	25	25	100
P102	20x40	S102	65	80	25	25	100
P103	20x40	S103	65	80	25	25	100
P104	20x40	S104	65	80	25	25	100
P105	20x40	S105	65	80	25	25	100
P106	20x40	S106	65	80	25	25	100
P107	20x40	S107	65	80	25	25	100
P108	20x40	S108	65	80	25	25	100
P109	20x40	S109	65	80	25	25	100
P110	20x40	S110	65	80	25	25	100
P111	20x40	S111	65	80	25	25	100
P112	20x40	S112	65	80	25	25	100
P113	20x40	S113	65	80	25	25	100
P114	20x40	S114	65	80	25	25	100
P115	20x40	S115	65	80	25	25	100
P116	20x40	S116	65	80	25	25	100
P117	20x40	S117	65	80	25	25	100
P118	20x40	S118	65	80	25	25	100
P119	20x40	S119	65	80	25	25	100
P120	20x40	S120	65	80	25	25	100
P121	20x40	S121	65	80	25	25	100



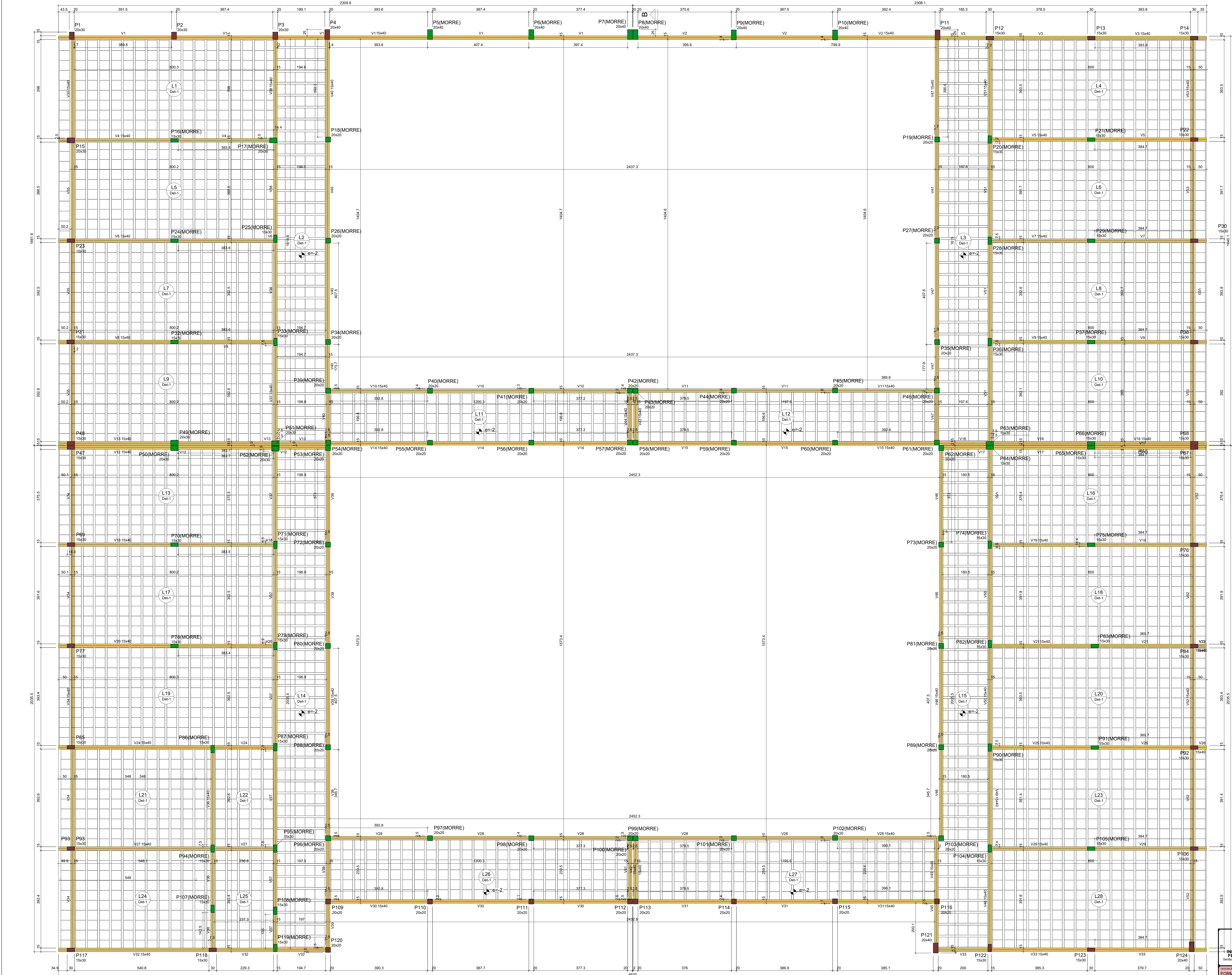
Características dos materiais		
fck (MPa)	Ecs (MPa)	Abatimento (cm)
25	24150	5,00

Dimensão máxima do agregado = 19 mm

Legenda dos pilares	
	Pilar que morre
	Pilar que passa
	Pilar que nasce
	Pilar com mudança de seção

Legenda das vigas e paredes	
	Viga

Forma do pavimento TERREO
escala 1:50

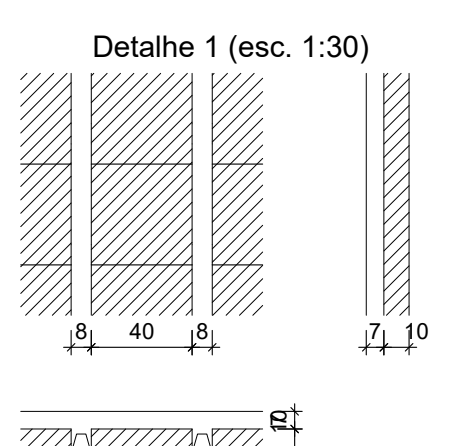


		Lajes				Sobrecarga (kN/m²)		
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Peso próprio (kN/m²)	Adicional	Acidental	Localizada
L1	Pré-moldada	17	0	320	2.18	2.27	0.50	-
L2	Pré-moldada	17	-2	318	2.18	1.82	0.50	-
L3	Pré-moldada	17	-2	318	2.18	2.27	0.50	-
L4	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L5	Pré-moldada	17	0	320	2.18	2.27	0.50	-
L6	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L7	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L8	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L9	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L10	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L11	Pré-moldada	17	-2	318	2.18	1.82	0.50	-
L12	Pré-moldada	17	-2	318	2.18	1.82	0.50	-
L13	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L14	Pré-moldada	17	-2	318	2.18	1.82	0.50	-
L15	Pré-moldada	17	-2	318	2.18	1.82	0.50	-
L16	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L17	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L18	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L19	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L20	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L21	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L22	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L23	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L24	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L25	Pré-moldada	17	0	320	2.18	1.82	0.50	-
L26	Pré-moldada	17	-2	318	2.18	2.27	0.50	-
L27	Pré-moldada	17	-2	318	2.18	1.82	0.50	-
L28	Pré-moldada	17	0	320	2.18	1.82	0.50	-

Características dos materiais		
fck (MPa)	Ecs (MPa)	Abatimento (cm)
25	24.500	5.00

Dimensão máxima do agregado = 19 mm

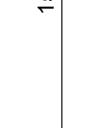
Legenda dos pilares	
■	Pilar que morre
■	Pilar que passa



Blocos de enchimento				
Detalhe	Tipo	Nome	Dimensões (cm)	Quantidade
1	EPS Unidirecional	B10140/40	10 40 40	4501

Legenda das vigas e paredes	
■	Viga

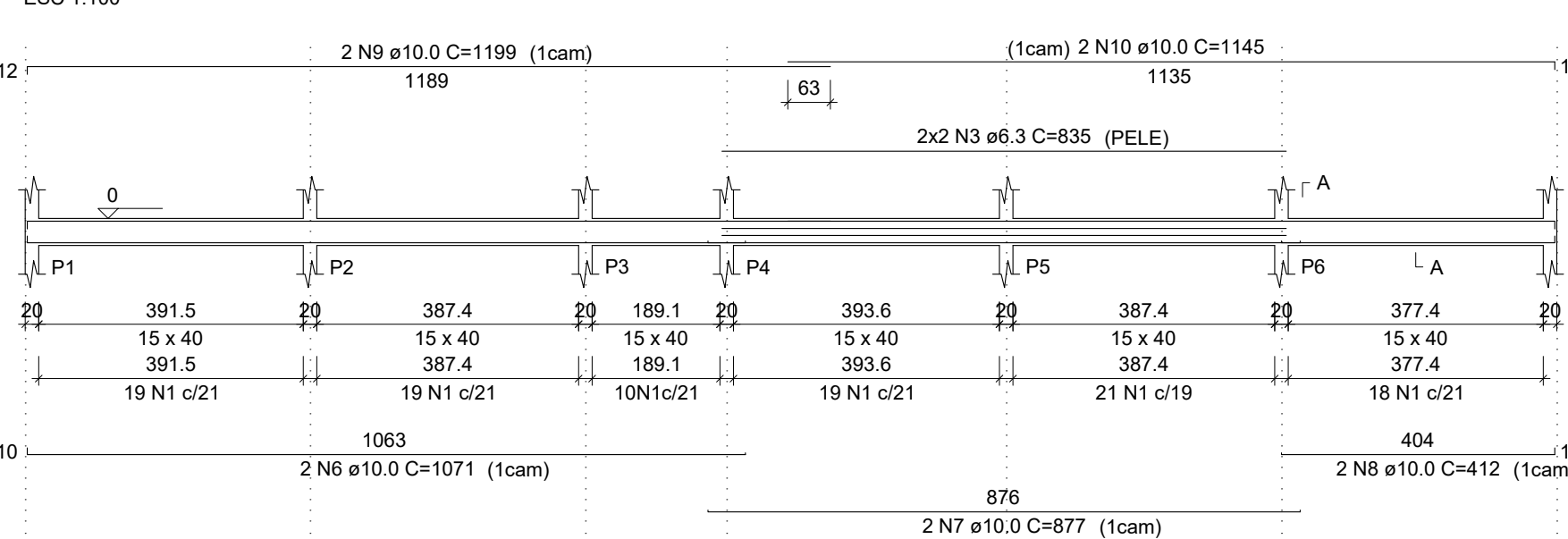
Forma do pavimento PRIMEIRO
escala 1:50

☒

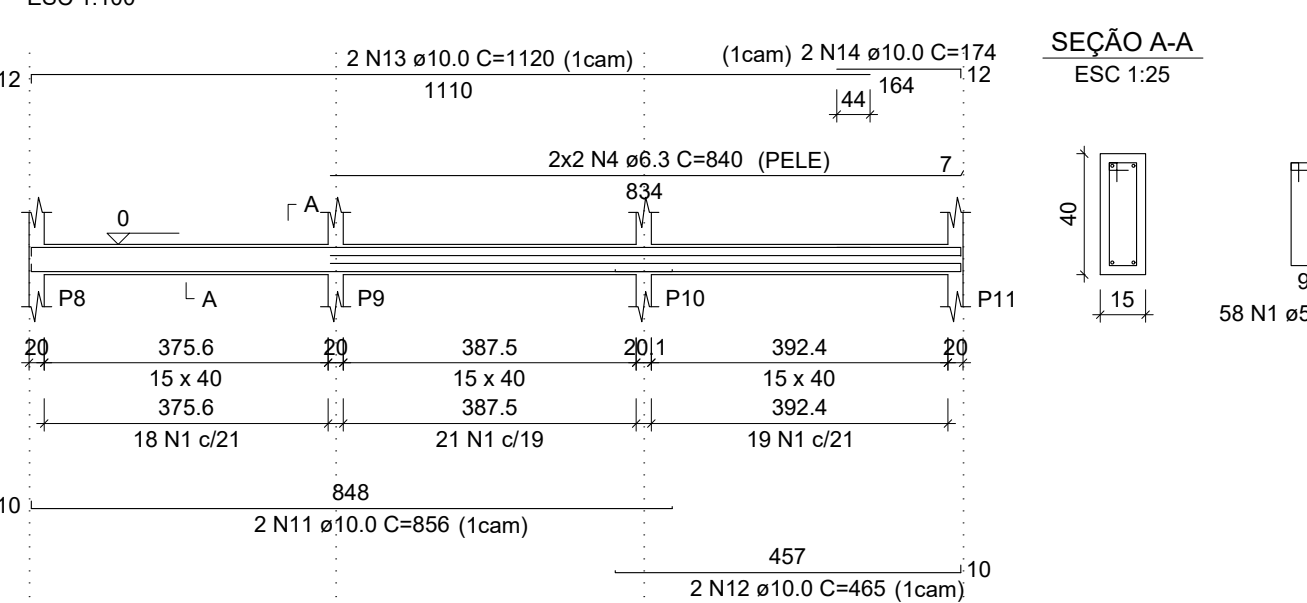
	Pilar que morre
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escala 1:50

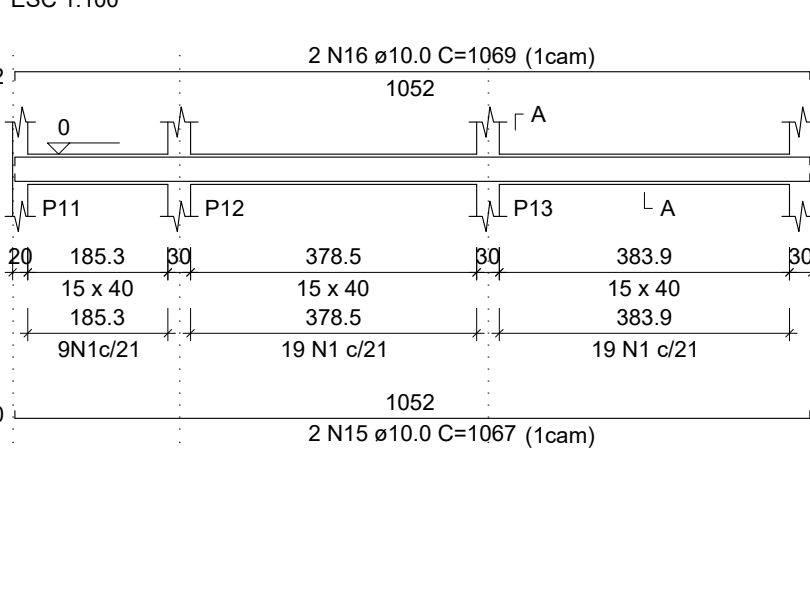
V1 (15 x 40)



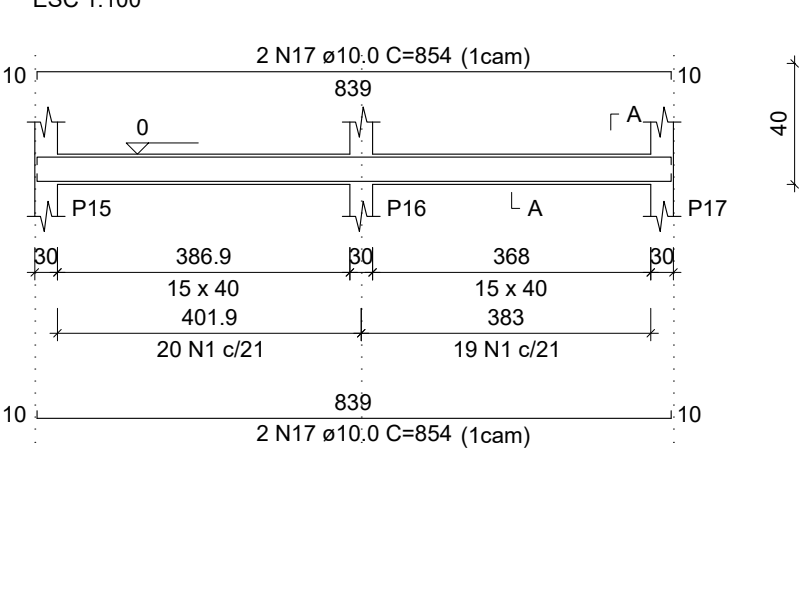
V2 (15 x 40)



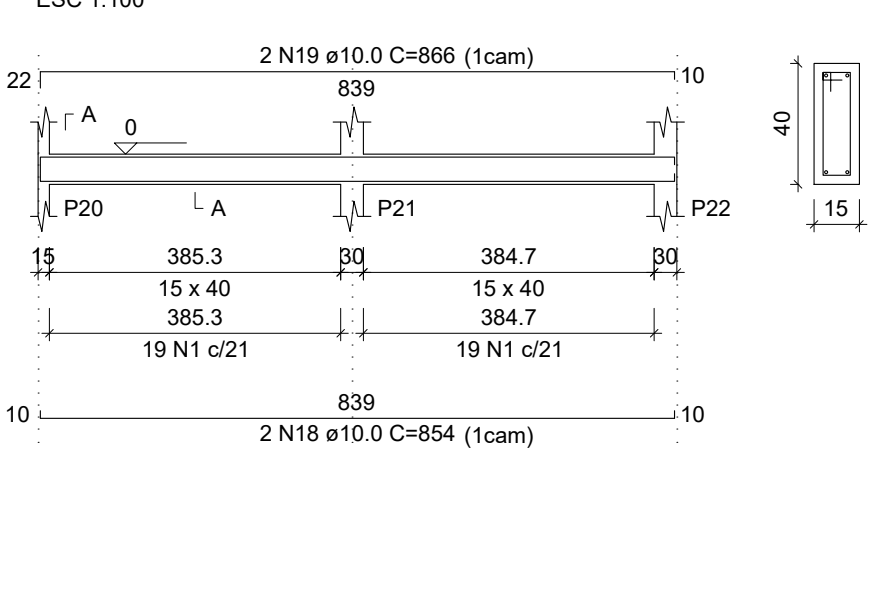
V3 (15 x 40)



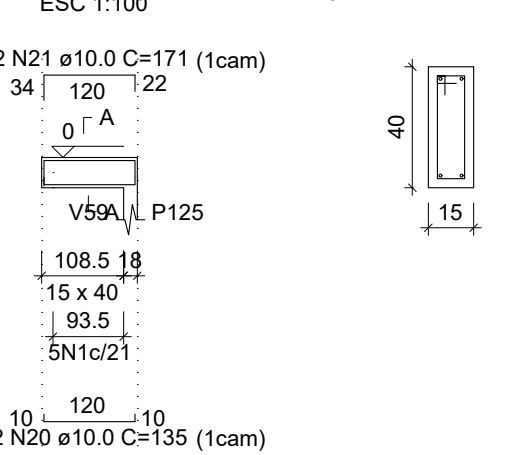
V4 (15 x 40)



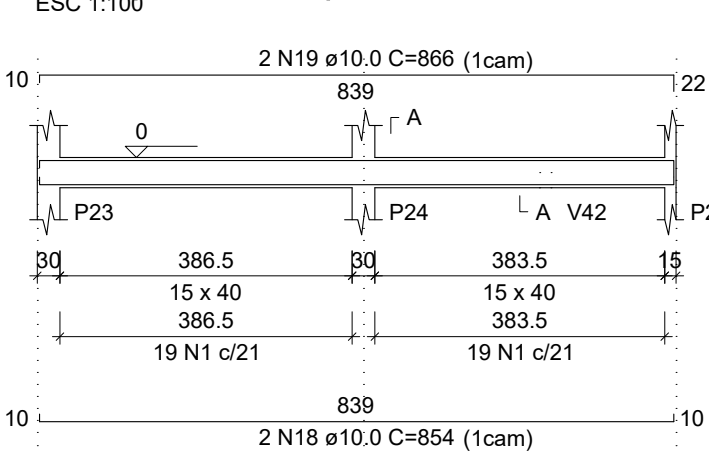
V5 (15 x 40)



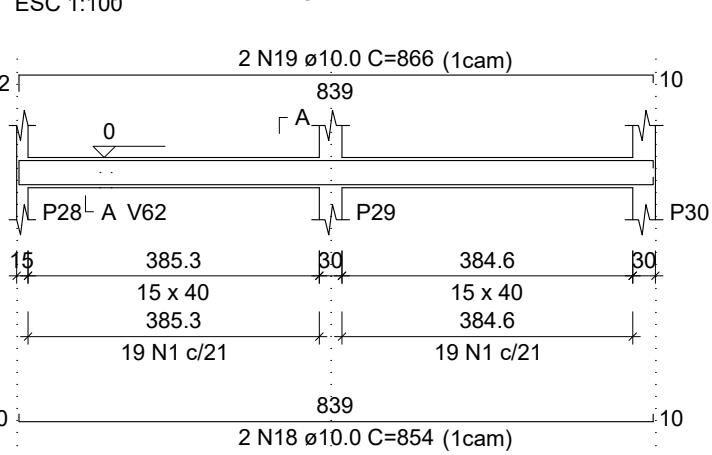
V6 (15 x 40)



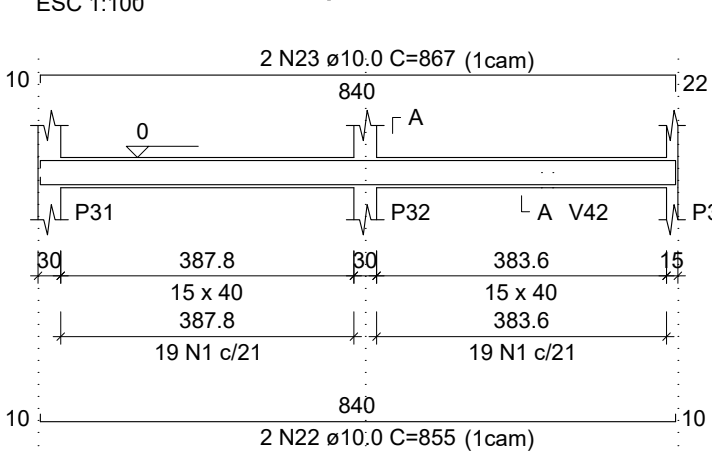
V7 (15 x 40)



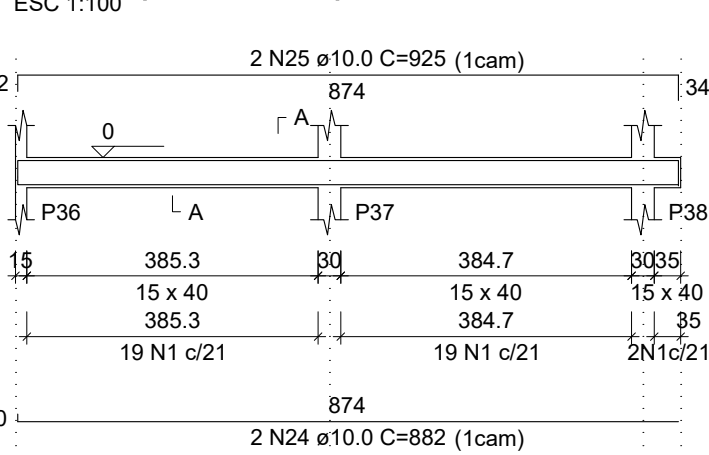
V8 (15 x 40)



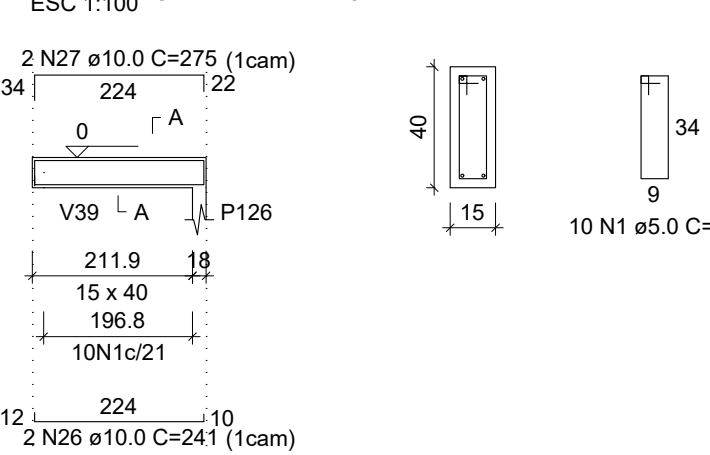
V9 (15 x 40)



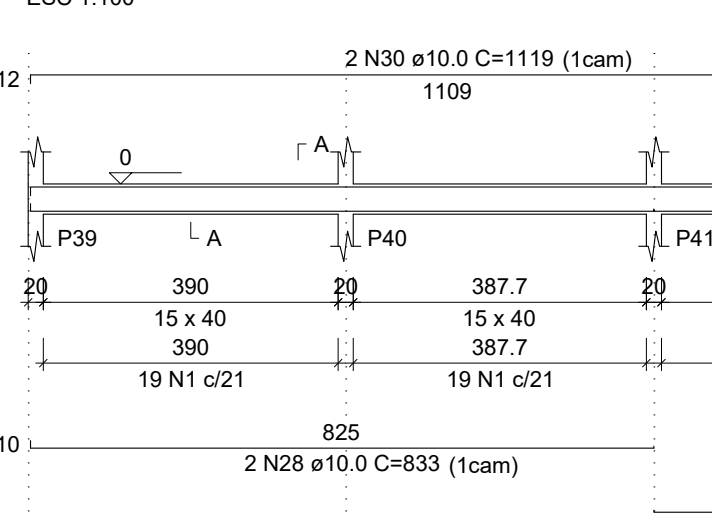
V10 (15 x 40)



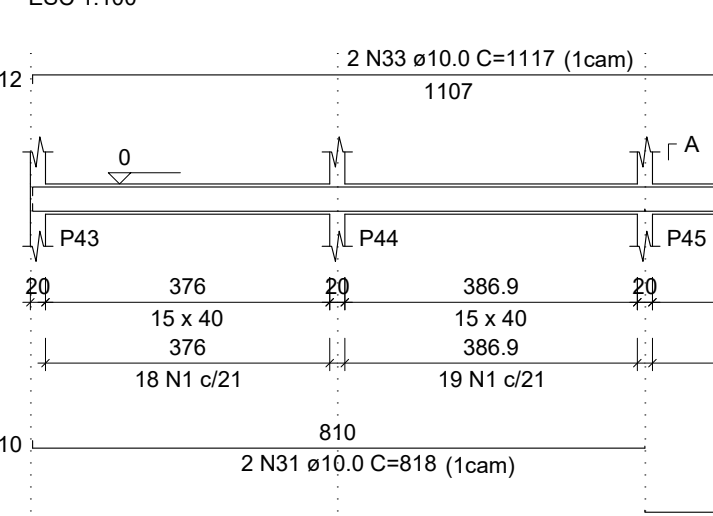
V11 (15 x 40)



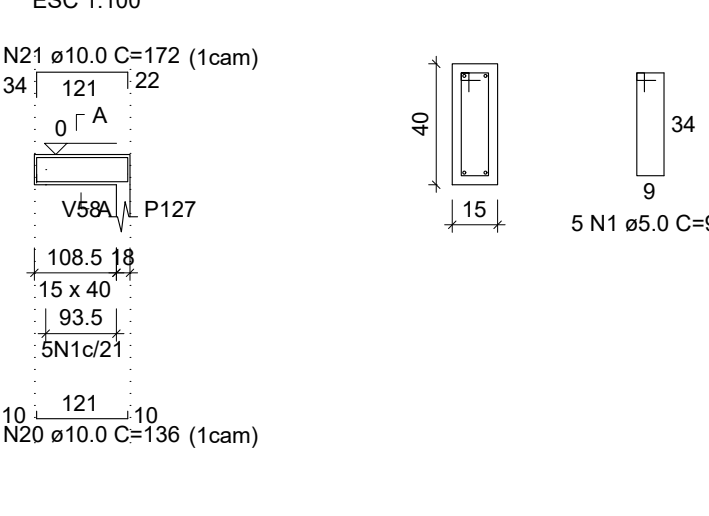
V12 (15 x 40)



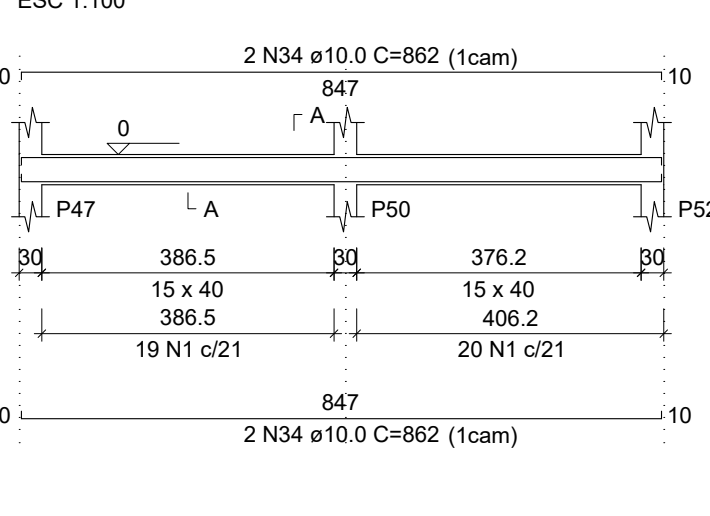
V13 (15 x 40)



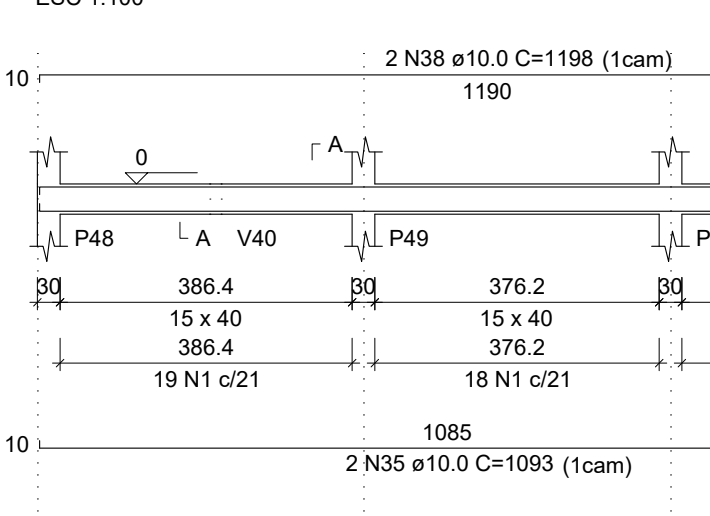
V14 (15 x 40)



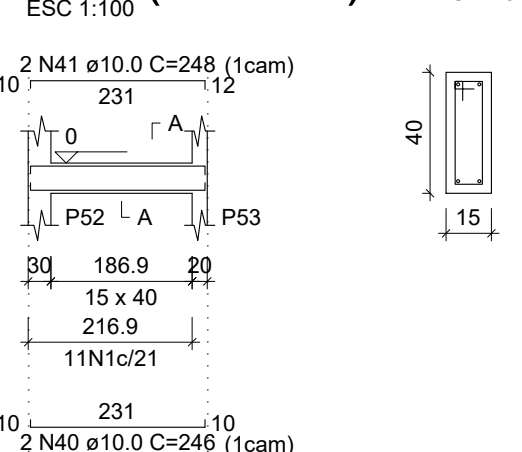
V15 (15 x 40)



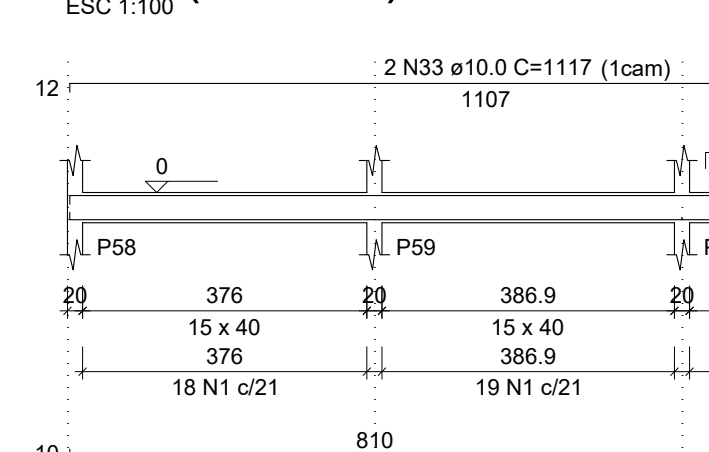
V16 (15 x 40)



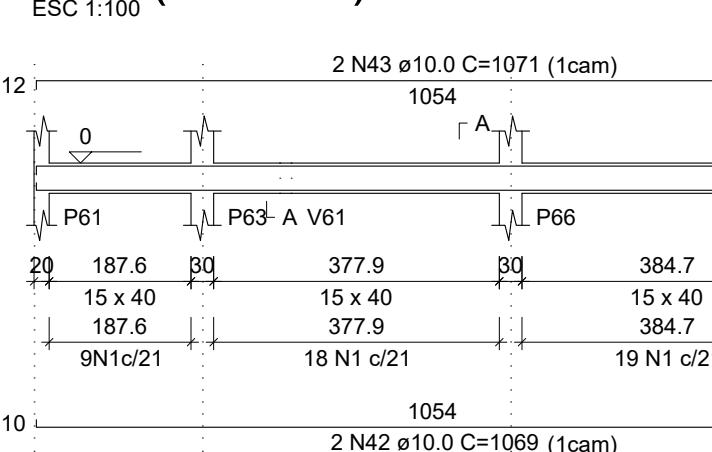
V17 (15 x 40)



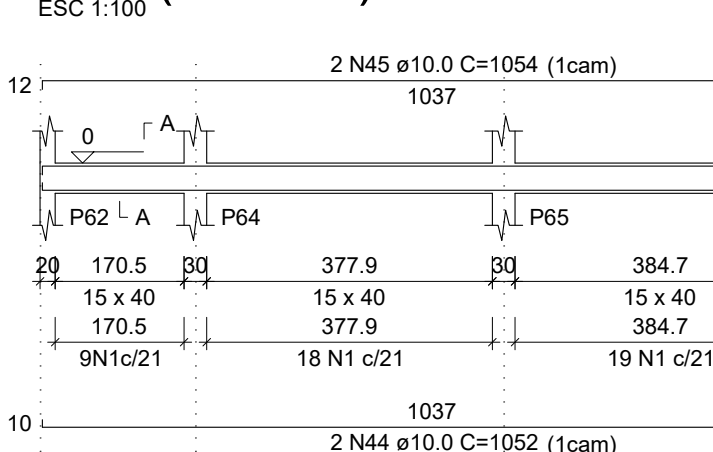
V18 (15 x 40)



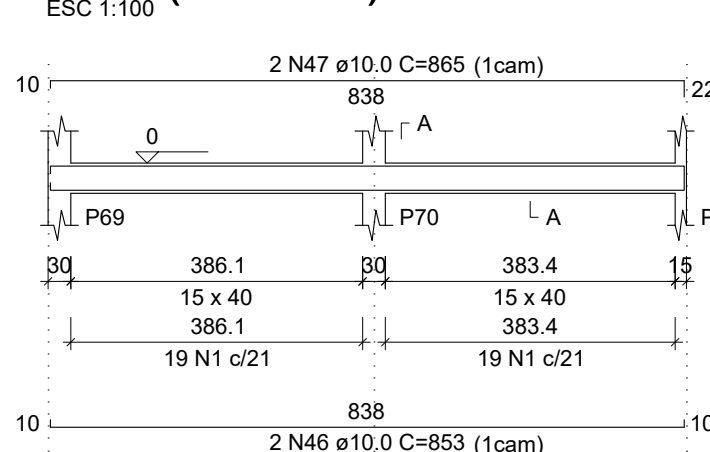
V19 (15 x 40)



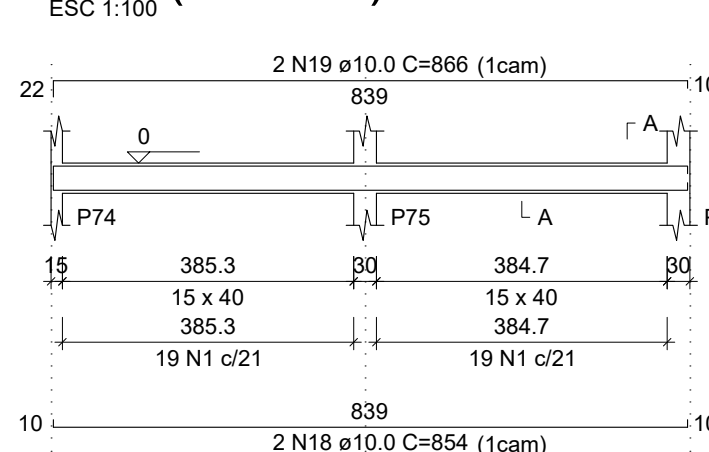
V20 (15 x 40)



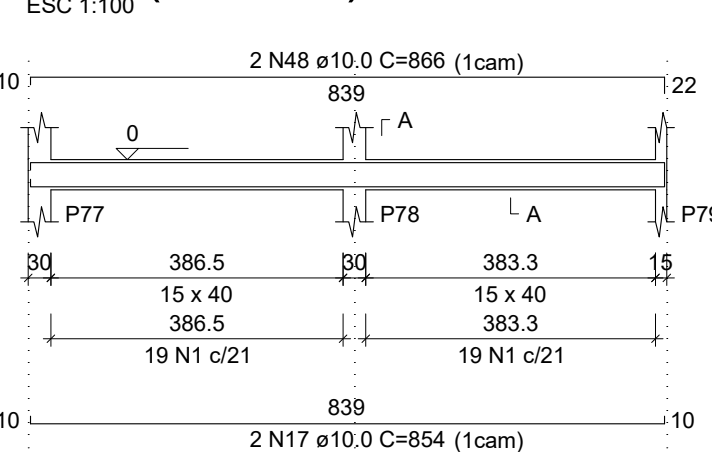
V21 (15 x 40)



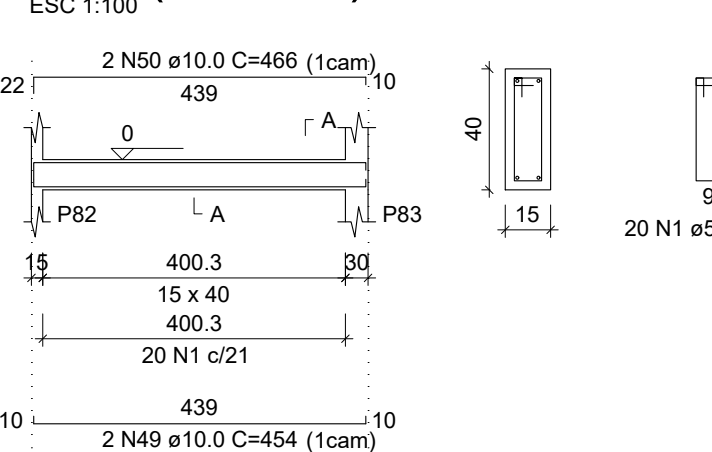
V22 (15 x 40)



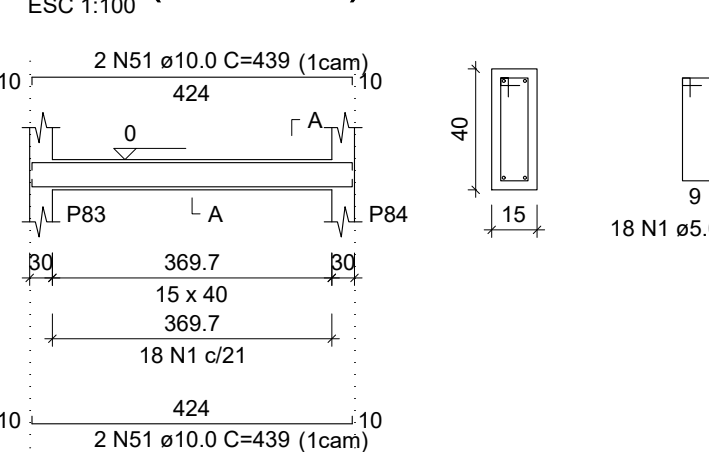
V23 (15 x 40)



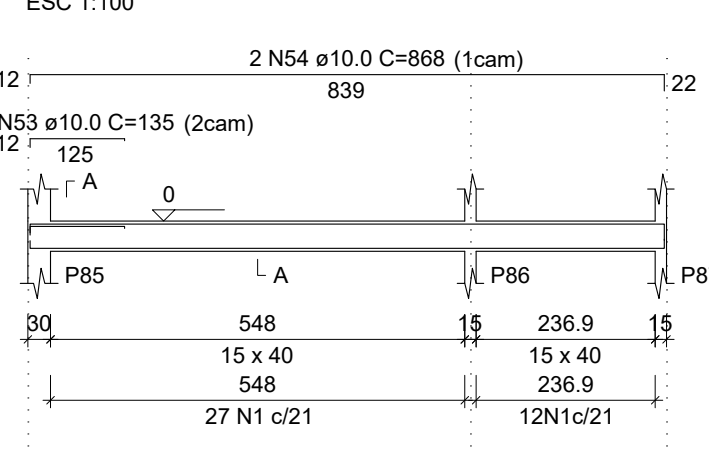
V24 (15 x 40)



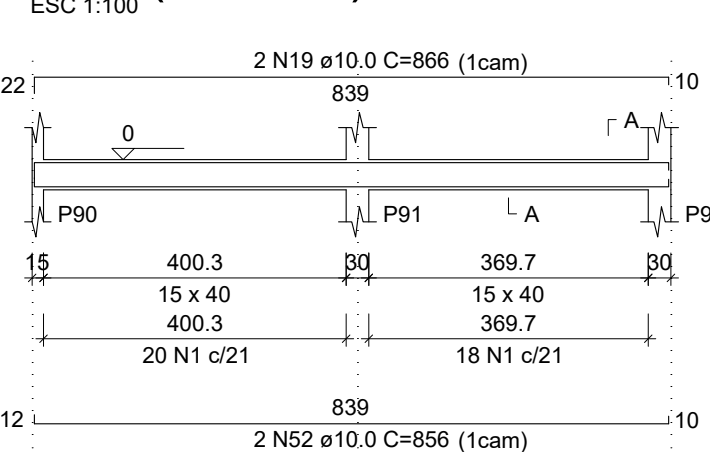
V25 (15 x 40)



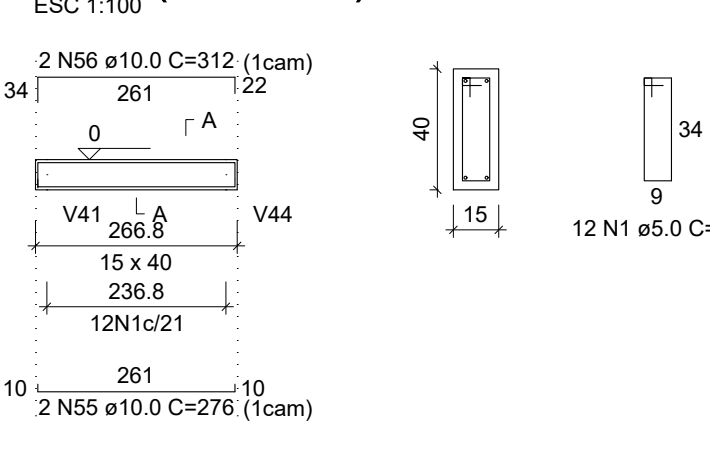
V26 (15 x 40)



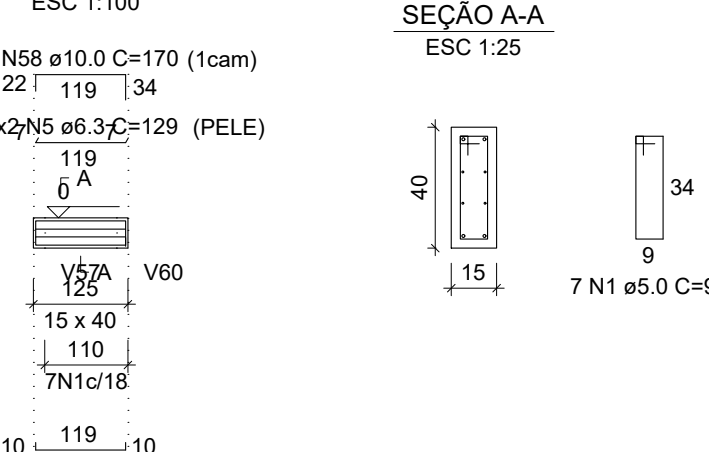
V27 (15 x 40)



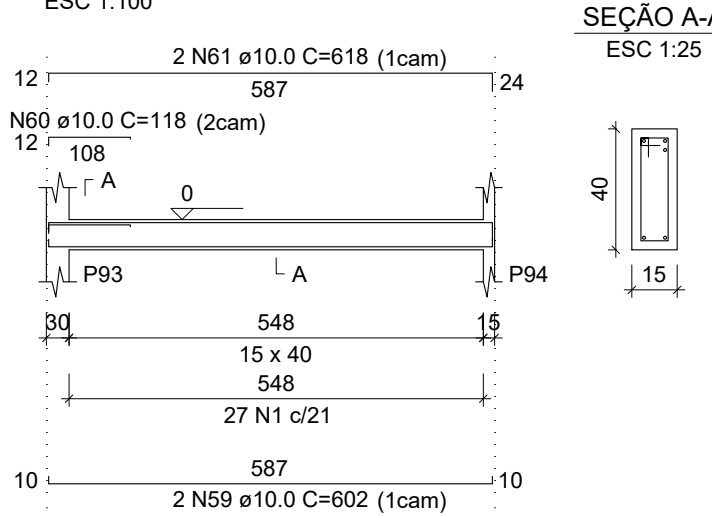
V28 (15 x 40)



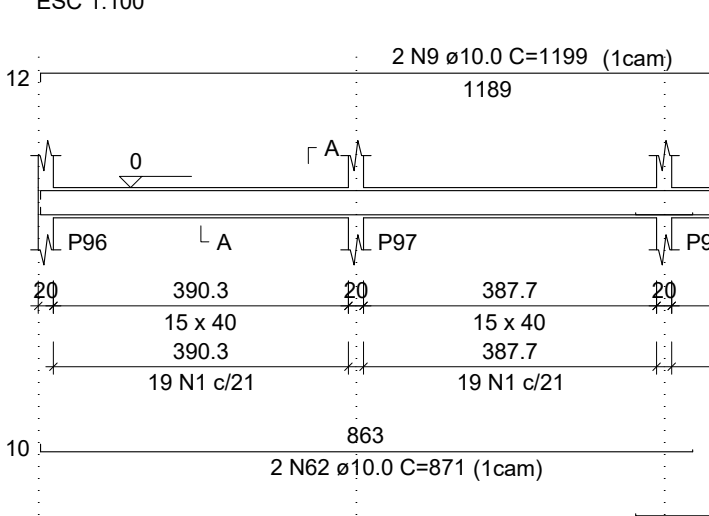
V29 (15 x 40)



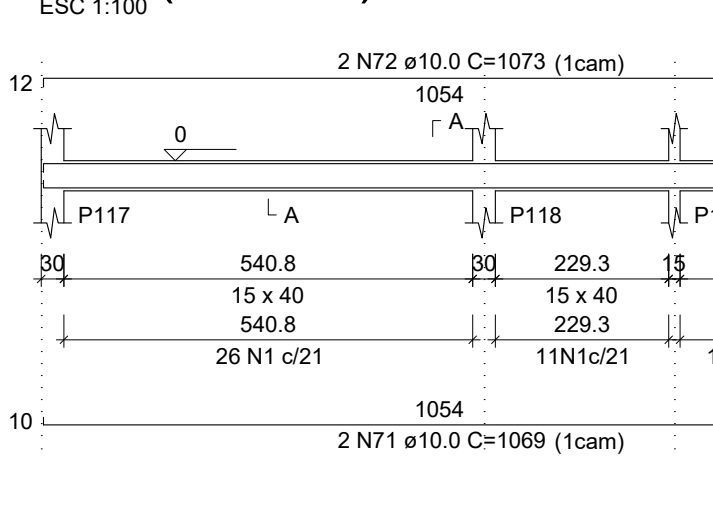
V30 (15 x 40)



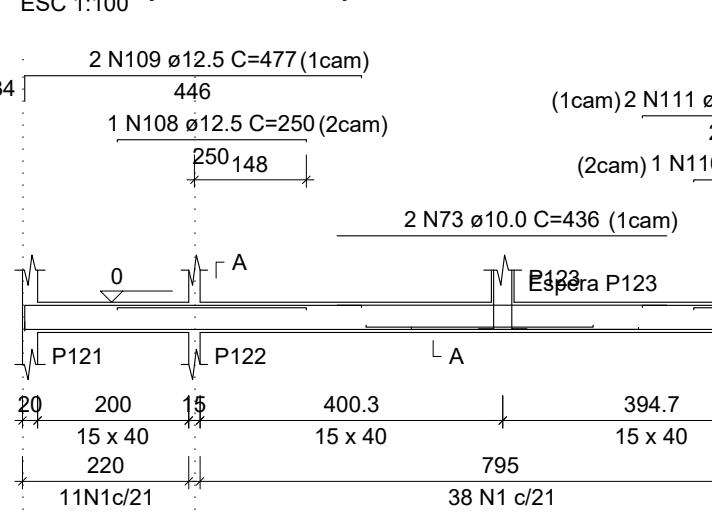
V31 (15 x 40)



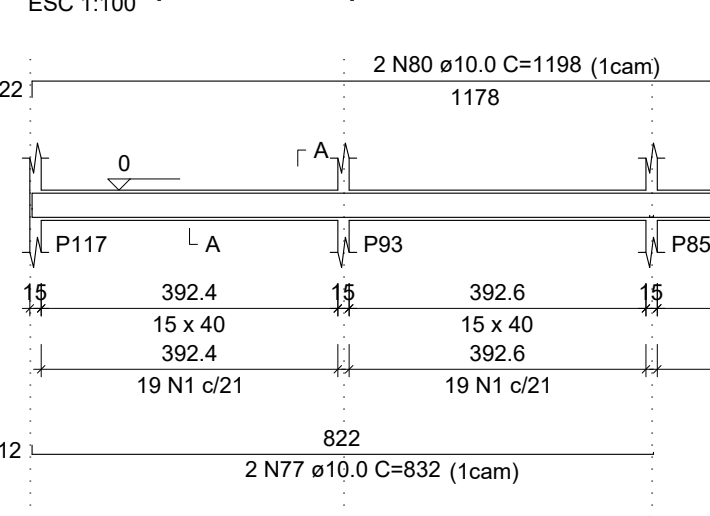
V36 (15 x 40)



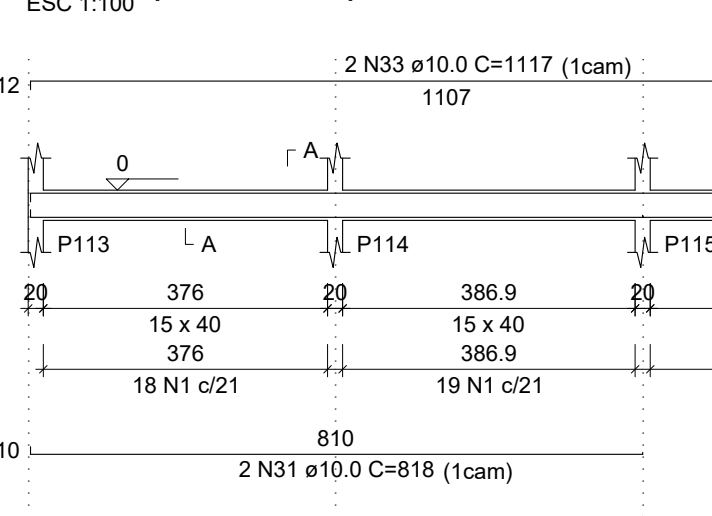
V37 (15 x 40)



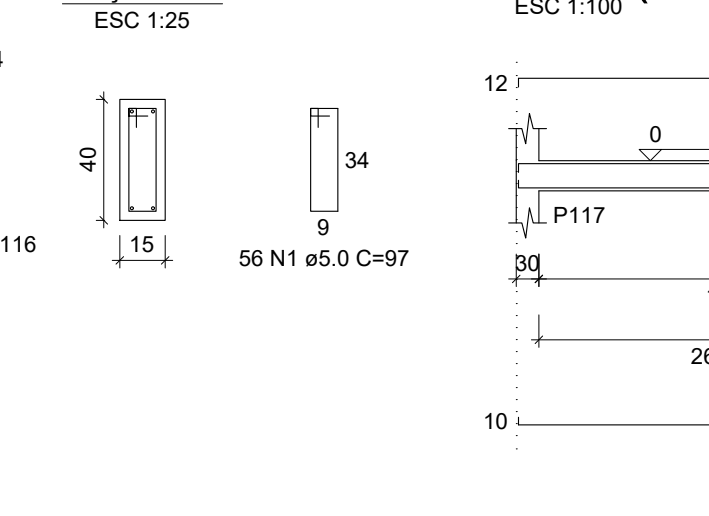
V38 (15 x 40)



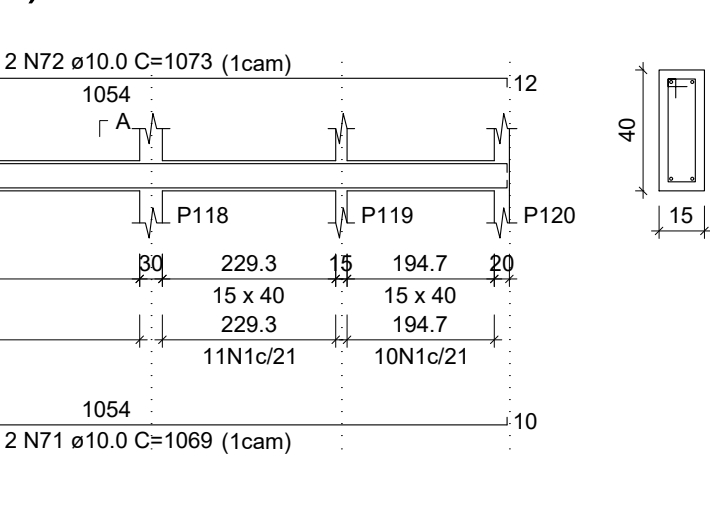
V39 (15 x 40)



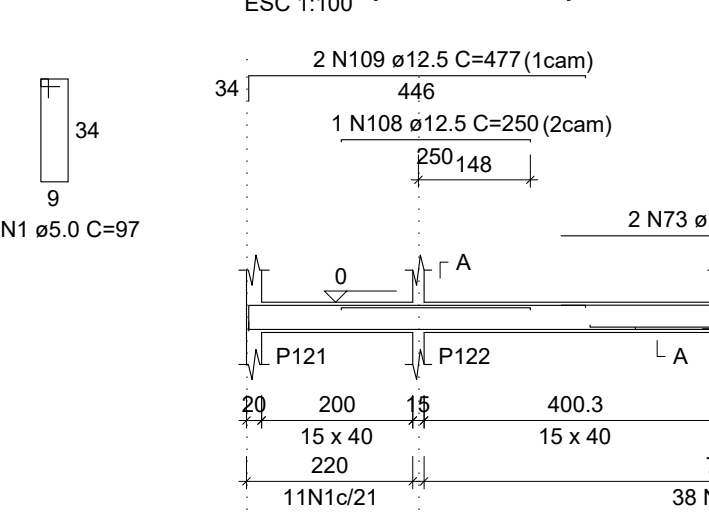
V40 (15 x 40)



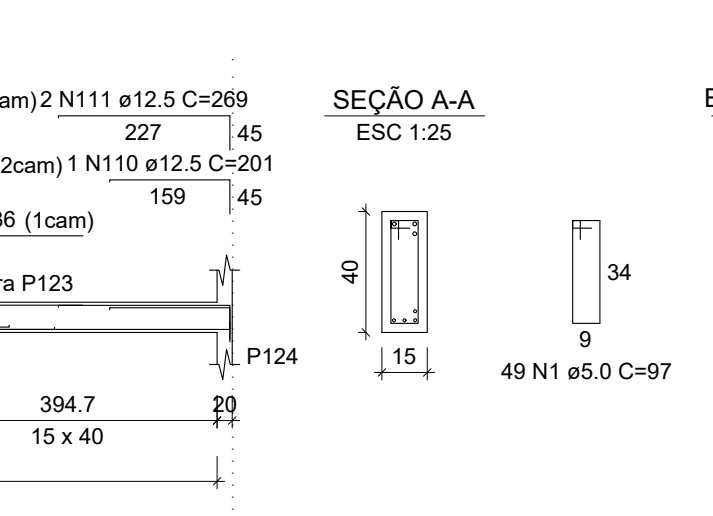
V41 (15 x 40)



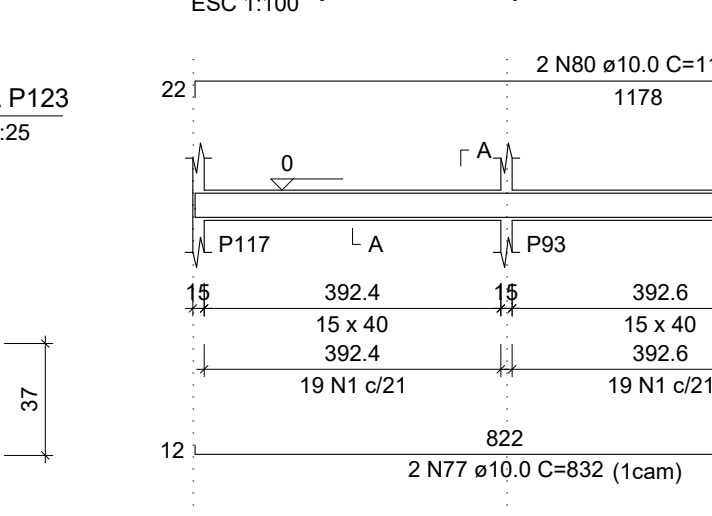
V42 (15 x 40)



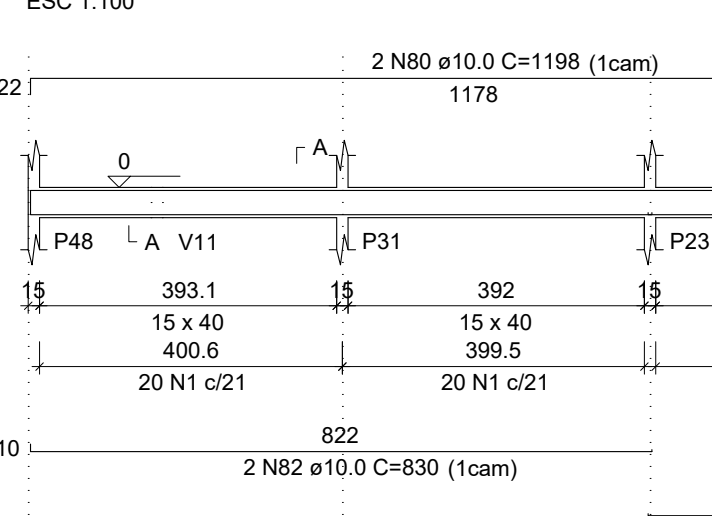
V43 (15 x 40)



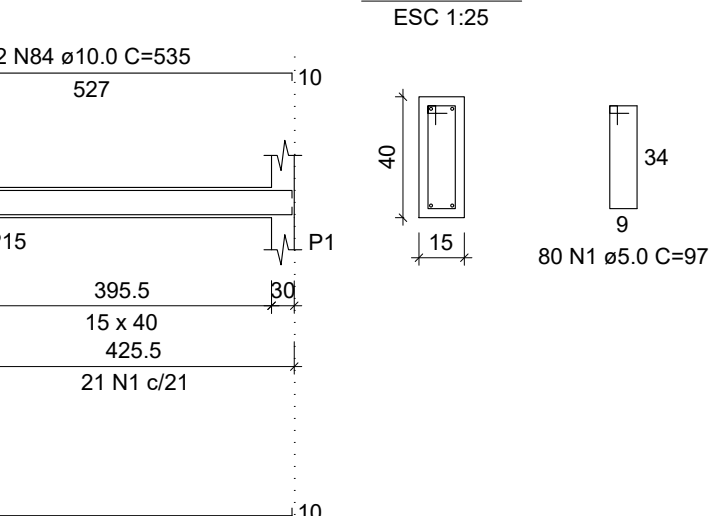
V44 (15 x 40)



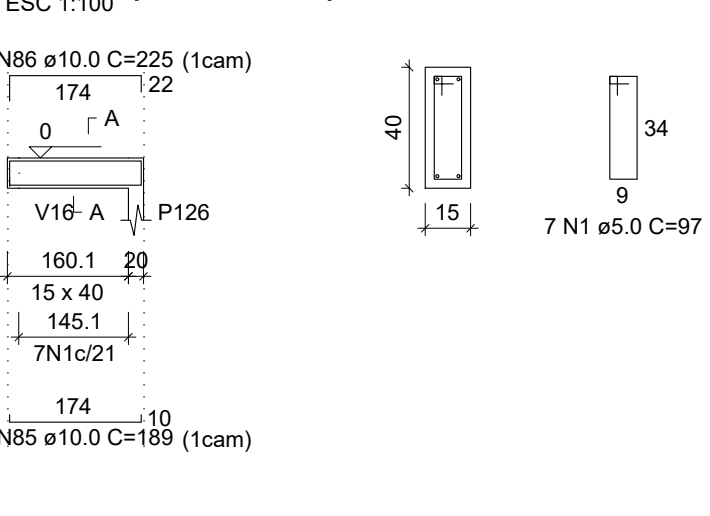
V45 (15 x 40)



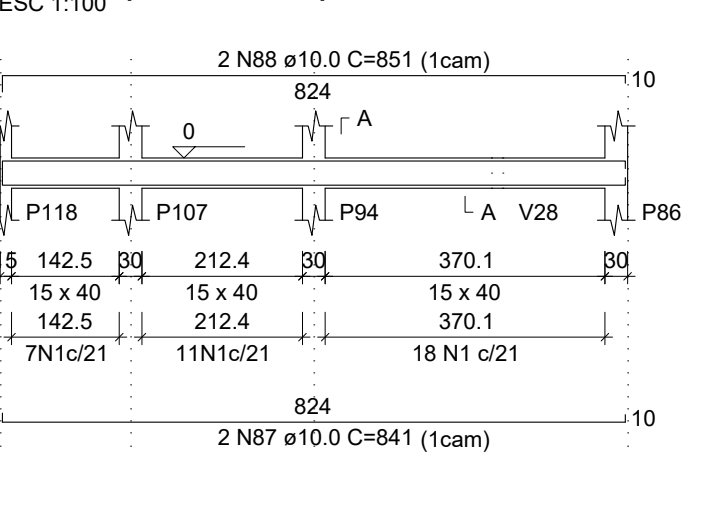
V46 (15 x 40)



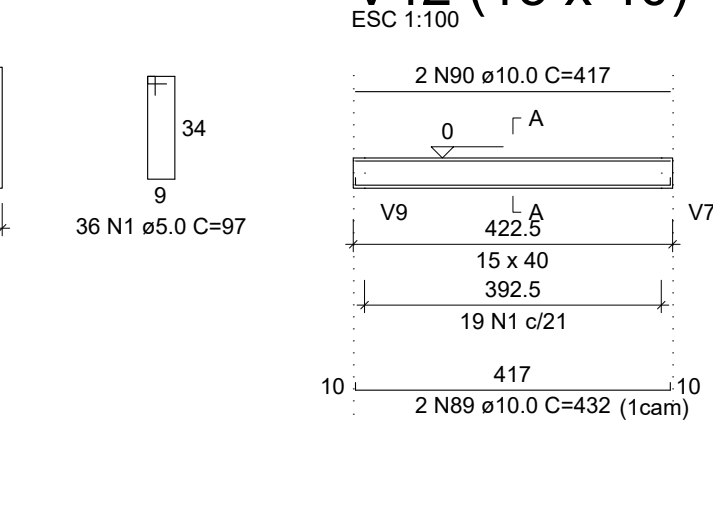
V47 (15 x 40)



V48 (15 x 40)



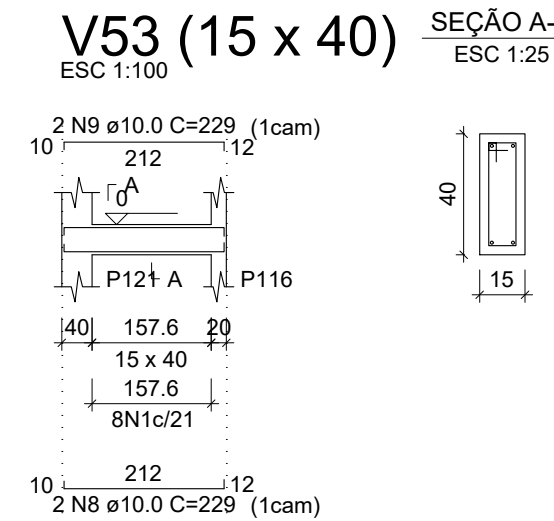
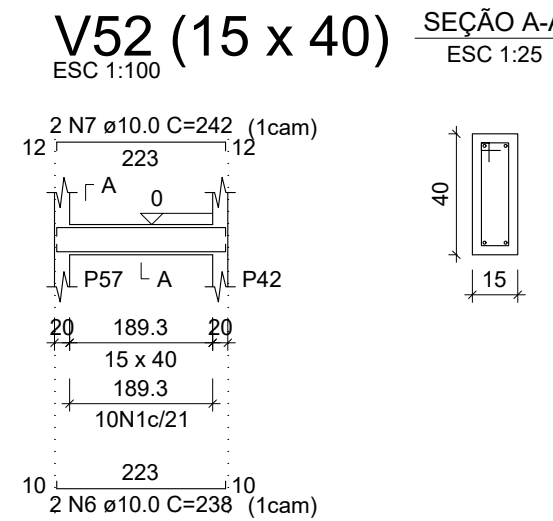
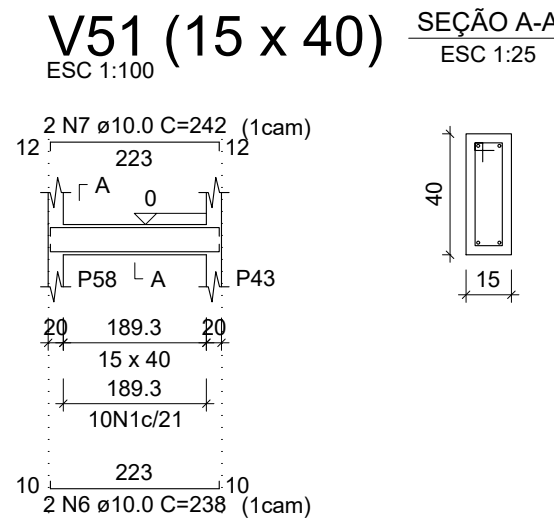
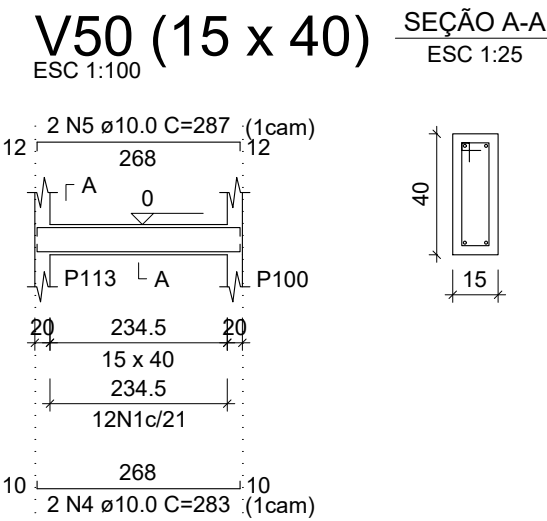
V49 (15 x 40)



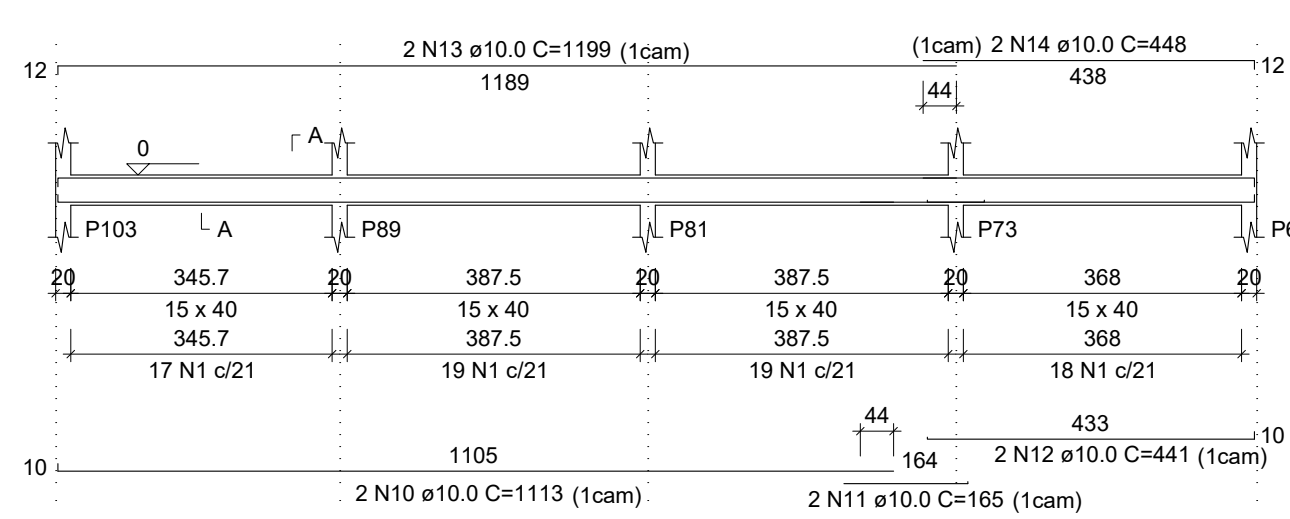
RELAÇÃO DO AÇO

V1	V2	V3
V4	V5	V6
V7	V8	V9
V10	V11	V12
V13	V14	V15
V16	V17	V18
V19	V20	V21
V22	V23	V24
V25	V26	V27
V28	V29	V30
V31	V32	V33
V34	V35	V36
V37	V38	V39
V40	V41	V42
V43	V44	V45
V46	V47	V48

ACO	N	DIAM (mm)	QUANT	C/UNIT (cm)	C/TOTAL (cm)
CA50	1	5.0	4	79	304
	2	5.0	4	840	3360
	3	6.3	4	835	3340
	4	6.3	4	840	3360
	5	6.3	4	139	516
	6	10.0	2	1071	2142
	7	10.0	2	877	1754
	8	10.0	2	854	1708
	9	10.0	10	1199	11990
	10	10.0	2	1145	2290
	11	10.0	2	856	1712
	12	10.0	2	860	1720
	13	10.0	2	1120	2240
	14	10.0	2	1099	2198
	15	10.0	2	1067	2134
	16	10.0	2	1054	2108
	17	10.0	2	854	1708
	18	10.0	1.2	860	1032
	19	10.0	1.2	856	1027
	20	10.0	1.2	854	1032
	21	10.0	1.2	856	1032
	22	10.0	1.2	854	1032
	23	10.0	1.2	856	1032
	24	10.0	1.2	854	1032
	25	10.0	1.2	856	1032
	26	10.0	1.2	854	1032
	27	10.0	1.2	856	1032
28	10.0	1.2	854	1032	
29	10.0	1.2	856	1032	
30	10.0	1.2	854	1032	
31	10.0	1.2	856	1032	
32	10.0	1.2	854	1032	
33	10.0	6	1117	6702	
34	10.0	6	885	5310	
35	10.0	6	818	4908	
36	10.0	2	1093	2186	
37	10.0	2	892	1784	
38	10.0	2	450	900	
39	10.0	4	1096	4384	
40	10.0	2	1149	2298	
41	10.0	2	248	496	
42	10.0	2	1149	2298	
43	10.0	2	1074	2148	
44	10.0	2	853	1706	
45	10.0	2	853	1706	
46	10.0	2	865	1730	
47	10.0	2	854	1708	
48	10.0	2	866	1732	
49	10.0	2	856	1712	
50	10.0	2	856	1712	
51	10.0	4	135	540	
52	10.0	2	439	878	
53	10.0	2	276	552	
54	10.0	2	276	552	
55	10.0	2	134	268	
56	10.0	2	170	340	
57	10.0	2	602	1204	
58	10.0	2	612	1224	
59	10.0	2	612	1224	
60	10.0	2	612	1224	
61	10.0	2	612	1224	
62	10.0	2	612	1224	
63	10.0	2	612	1224	
64	10.0	2	612	1224	
65	10.0	2	1200	2400	
66	10.0	2	91	182	
67	10.0	2	280	560	
68	10.0	2	280	560	
69	10.0	2	1018	2036	
70	10.0	2	1018	2036	
71	10.0	2	1018	2036	
72	10.0	2	1073	2146	
73	10.0	2	1073	2146	
74	10.0	2	301	602	
75	10.0	2	1059	2118	
76	10.0	2	821	1642	
77	10.0	2	821	1642	
78	10.0	2	821	1642	
79	10.0	2	821	1642	
80	10.0	4	1188	4752	
81	10.0	4	830	3320	
82	10.0	2	830	1660	
83	10.0	2	830	1660	
84	10.0	2	830	1660	
85	10.0	2	830	1660	
86	10.0	2	830	1660	
87	10.0	2	830	1660	
88	10.0	2	830	1660	
89	10.0	2	830	1660	
90	10.0	2	830	1660	
91	10.0	2	830	1660	
92	10.0	2	830	1660	
93	10.0	2	830	1660	
94	10.0	2	830	1660	
95	10.0	2	830	1660	
96	10.0	2	830	1660	
97	10.0	2	830	1660	
98	10.0	2	830	1660	
99	10.0	2	830	1660	
100	10.0	2	830	1660	
101	10.0	2	830	1660	
102	10.0	2	830	1660	
103	10.0	2	830	1660	
104	10.0	2	830	1660	
105	10.0	2	830	1660	
106	10.0	2	830	1660	
107	10.0	2	830	1660	
108	10.0	2	830	1660	
109	10.0	2	830	1660	
110	10.0	2	830	1660	
111	10.0	2	830	1660	

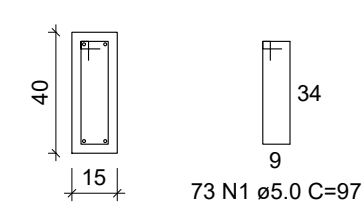


V54 (15 x 40)

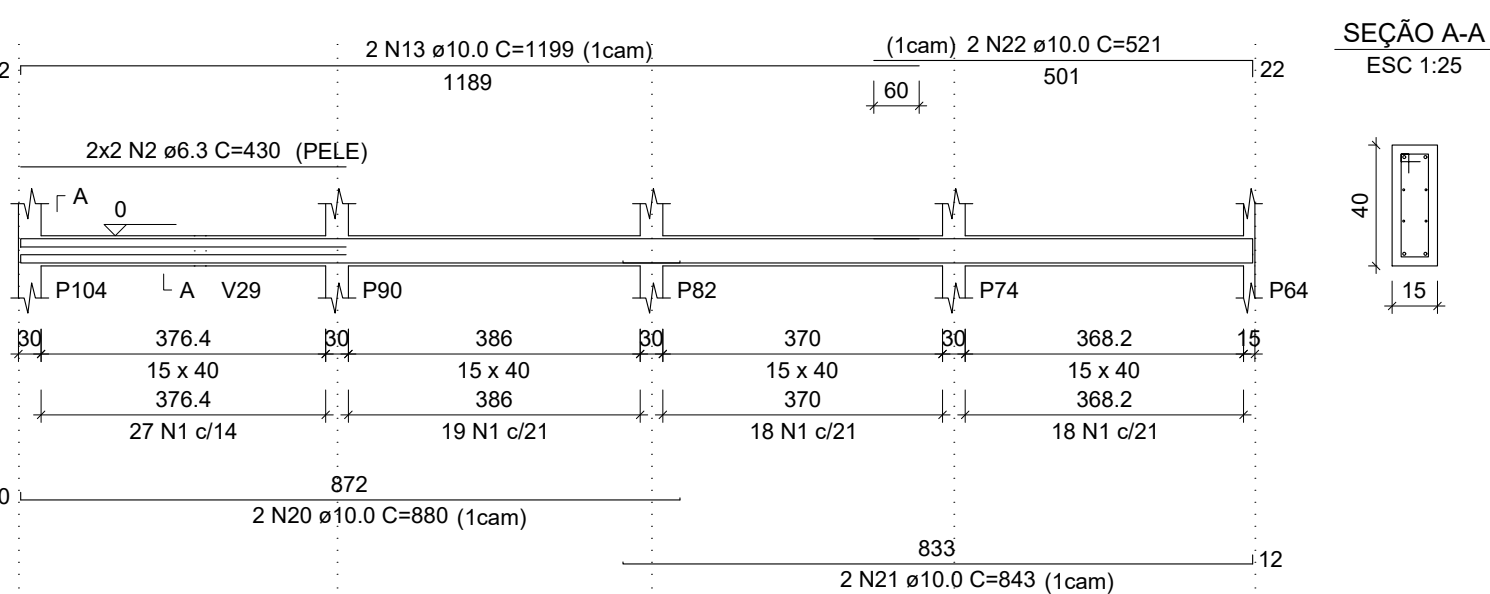


SEÇÃO A-A

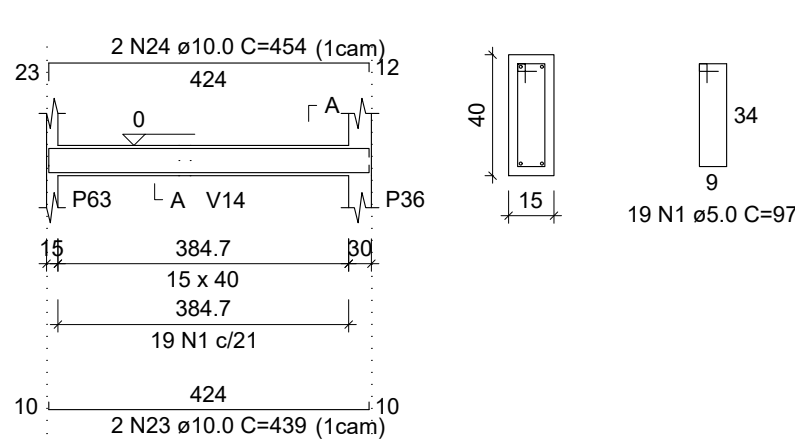
ESC 1:25



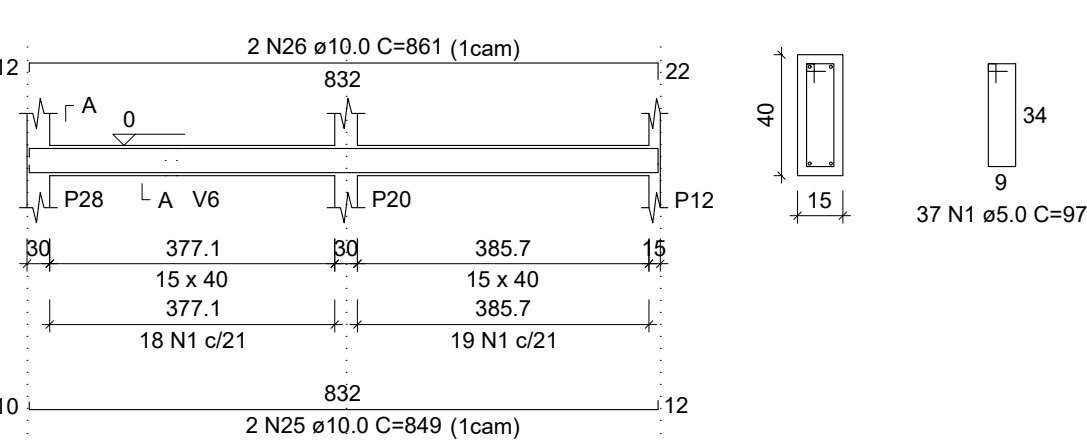
V57 (15 x 40)



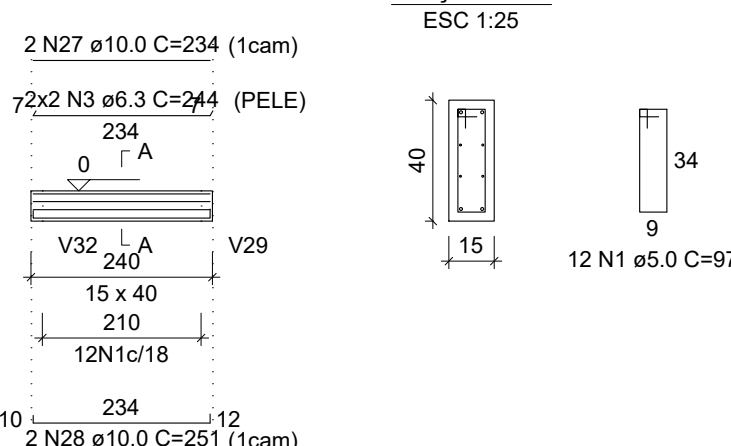
V58 (15 x 40)



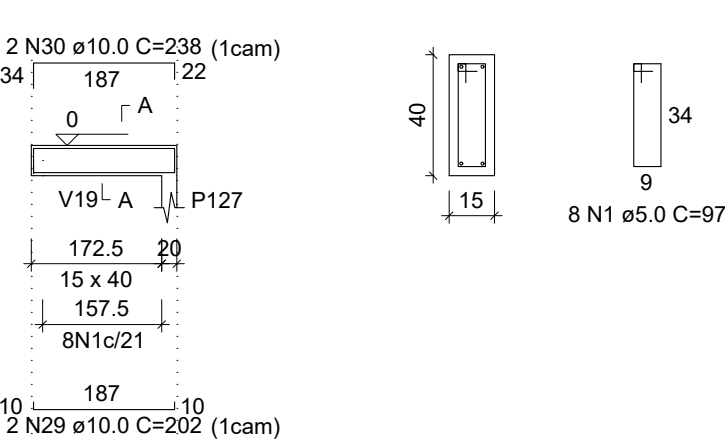
V59 (15 x 40)



V60 (15 x 40)



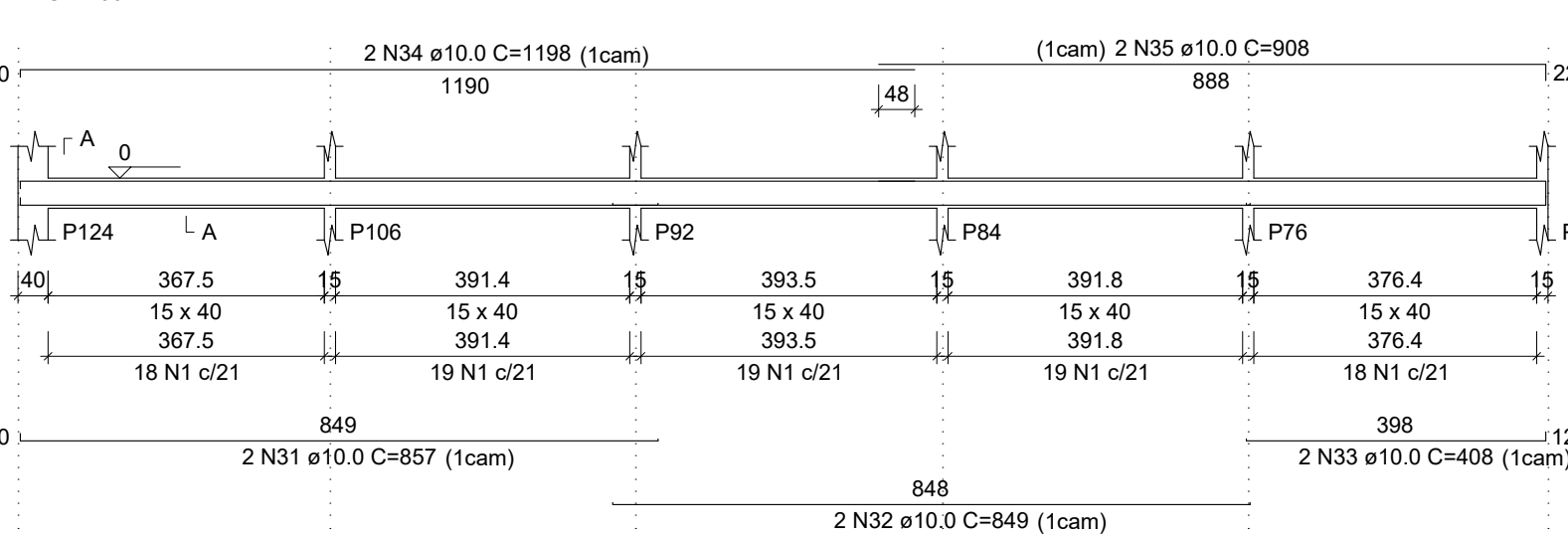
V61 (15 x 40)



RELAÇÃO DO AÇO

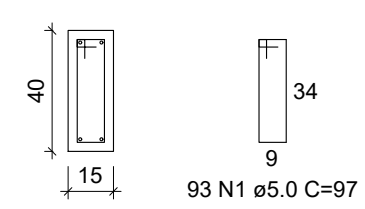
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V50	1	5.0	532	97	51604
V53	2	6.3	4	430	1720
V54	3	6.3	4	244	976
V56	4	10.0	2	283	566
V57	5	10.0	2	287	574
V58	6	10.0	4	238	952
V59	7	10.0	4	242	968
V60	8	10.0	2	229	458
V61	9	10.0	2	229	458
V62	10	10.0	2	1113	2226
	11	10.0	2	165	330
	12	10.0	2	441	882
	13	10.0	6	1199	7194
	14	10.0	2	448	896
	15	10.0	2	1062	2124
	16	10.0	2	463	926
	17	10.0	2	319	638
	18	10.0	2	439	878
	19	10.0	2	441	882
	20	10.0	2	880	1760
	21	10.0	2	843	1686
	22	10.0	2	521	1042
	23	10.0	2	439	878
	24	10.0	2	454	908
	25	10.0	2	849	1698
	26	10.0	2	861	1722
	27	10.0	2	234	468
	28	10.0	2	251	502
	29	10.0	2	202	404
	30	10.0	4	238	952
	31	10.0	2	857	1714
	32	10.0	2	849	1698
	33	10.0	2	408	816
	34	10.0	2	1198	2396
	35	10.0	2	908	1816
	36	10.0	2	830	1660
	37	10.0	2	832	1664
	38	10.0	2	1198	2396
	39	10.0	2	524	1048

V63 (15 x 40)

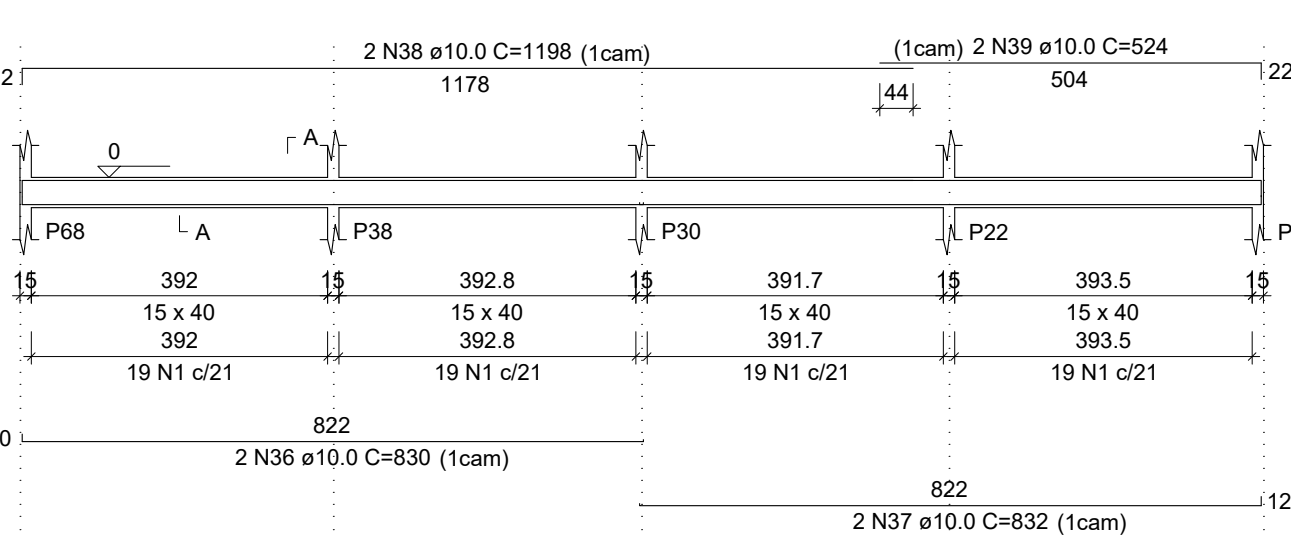


SEÇÃO A-A

ESC 1:25

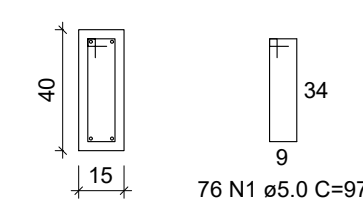


V64 (15 x 40)

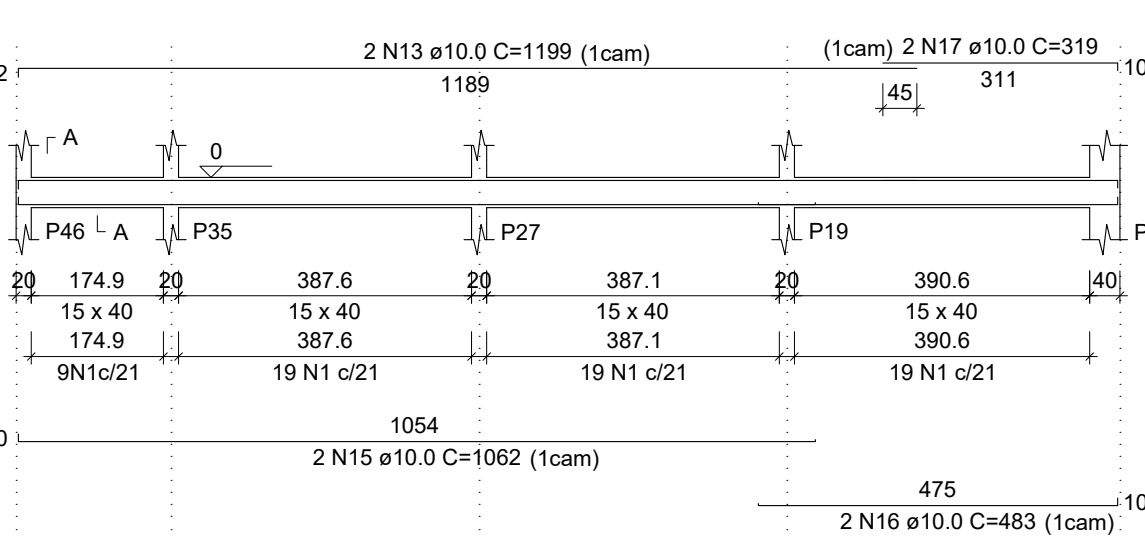


SEÇÃO A-A

ESC 1:25

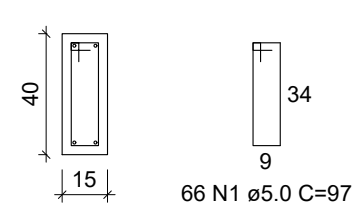


V55 (15 x 40)

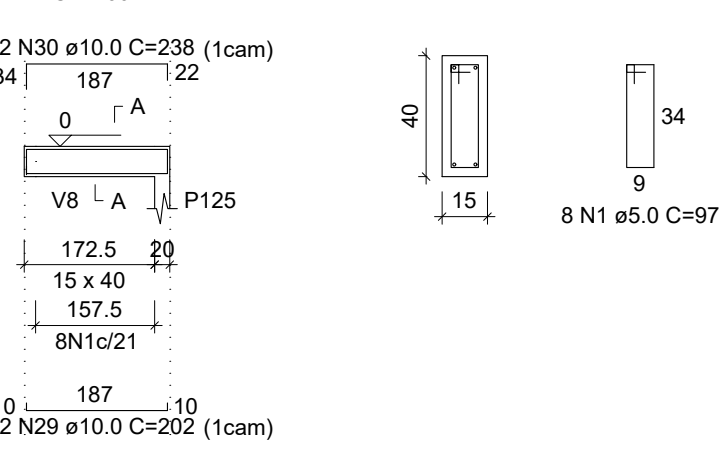


SEÇÃO A-A

ESC 1:25

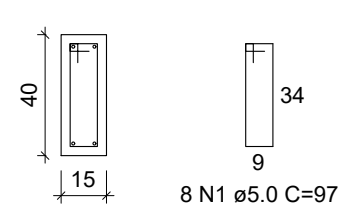


V62 (15 x 40)

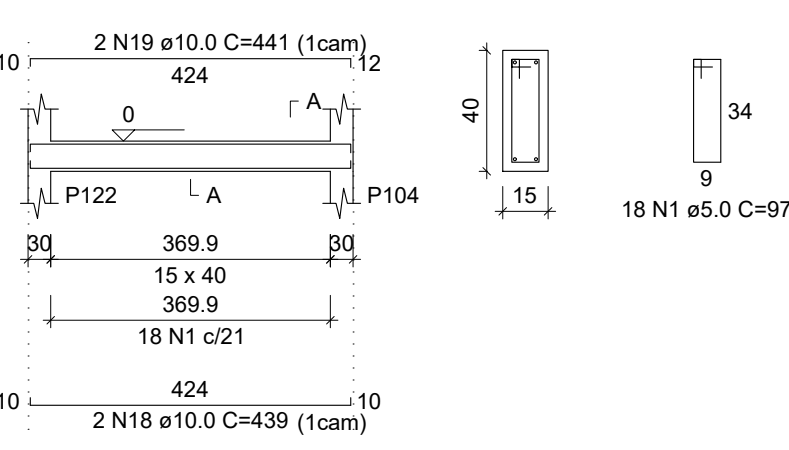


SEÇÃO A-A

ESC 1:25

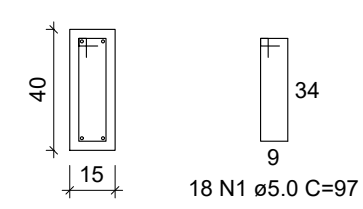


V56 (15 x 40)



SEÇÃO A-A

ESC 1:25

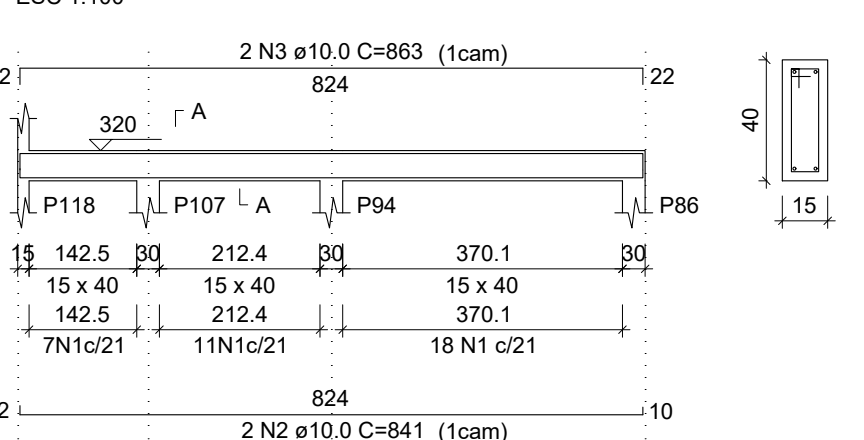


RESUMO DO AÇO

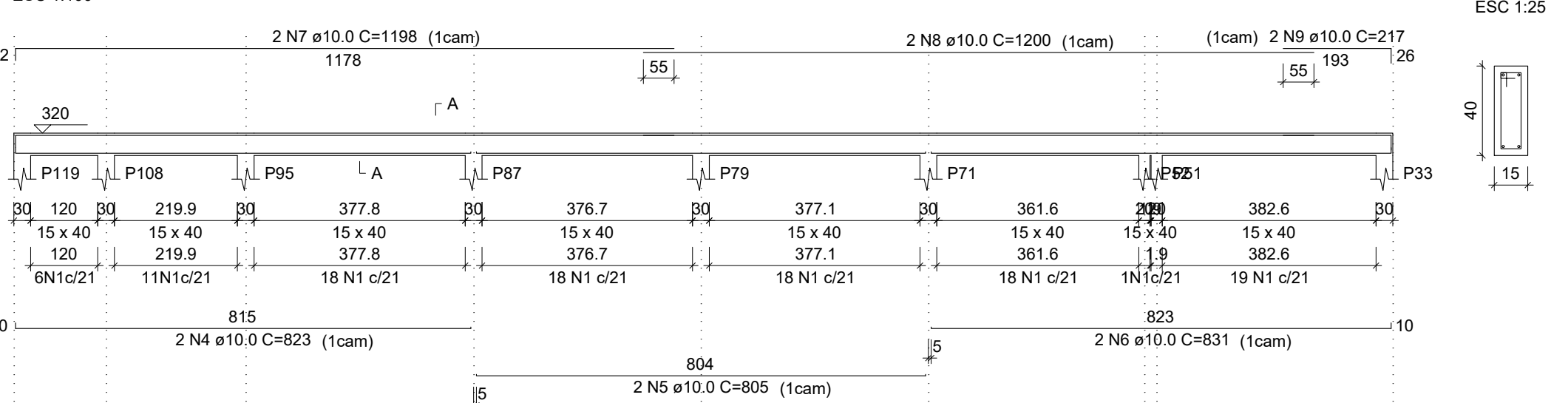
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 0% (Barras)	UNIT	PESO + 0% (kg)
CA50	6.3	27	3	12 m	6.6
CA60	10.0	486.2	41	12 m	299.8
	5.0	516	-	rolo (170 kg)	79.5

Volume de concreto (C-25) = 6.98 m³
Área de forma = 110.56 m²

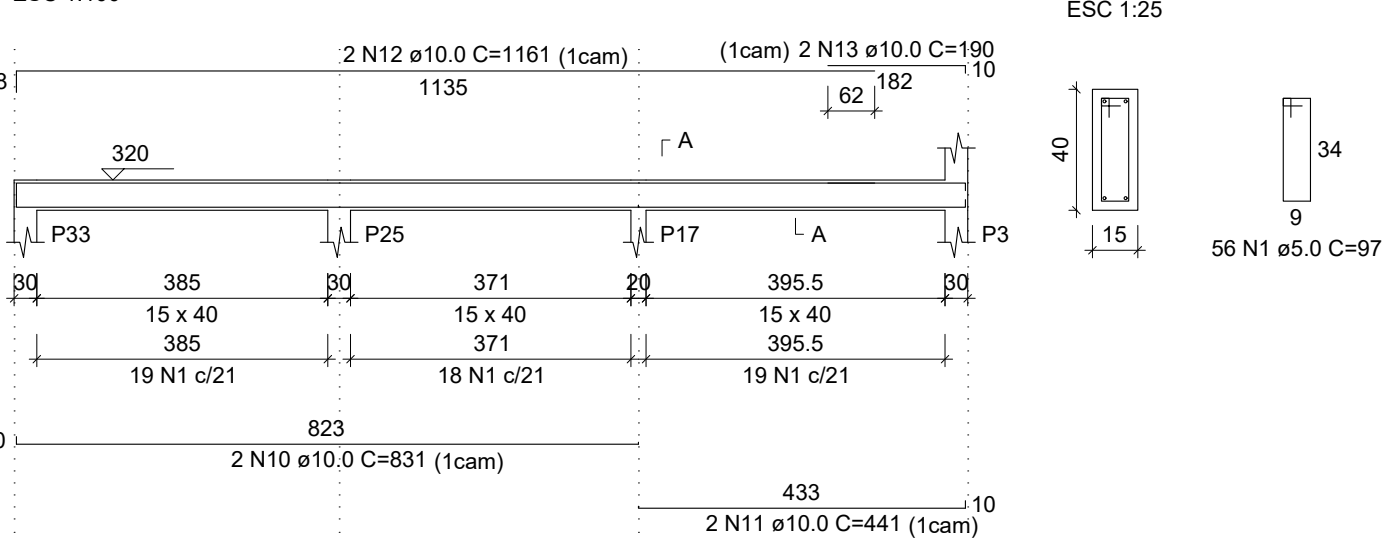
V36 (15 x 40)



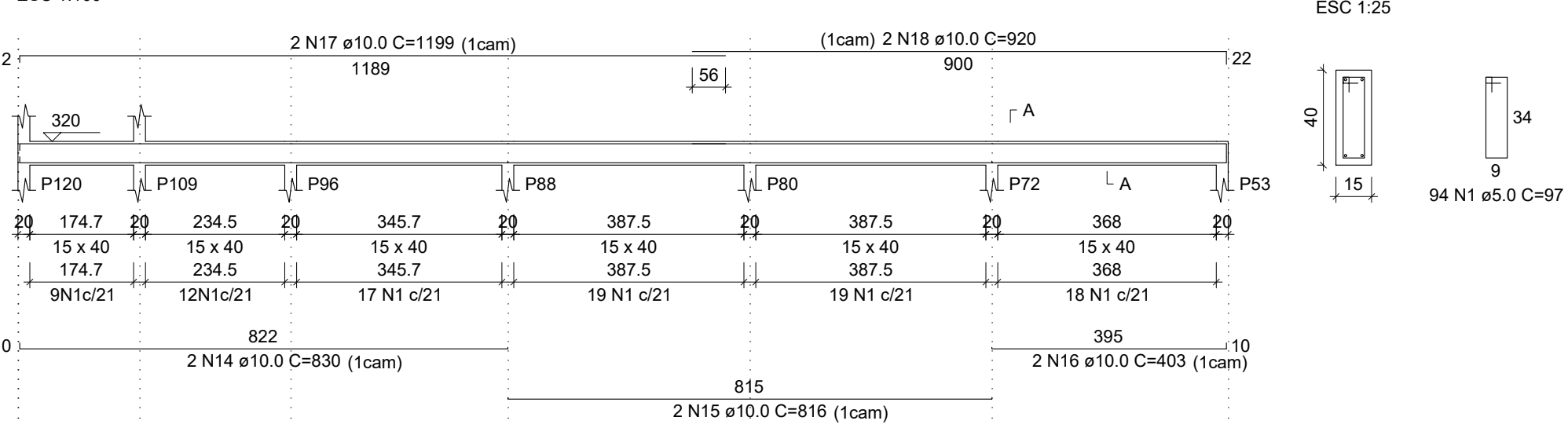
V37 (15 x 40)



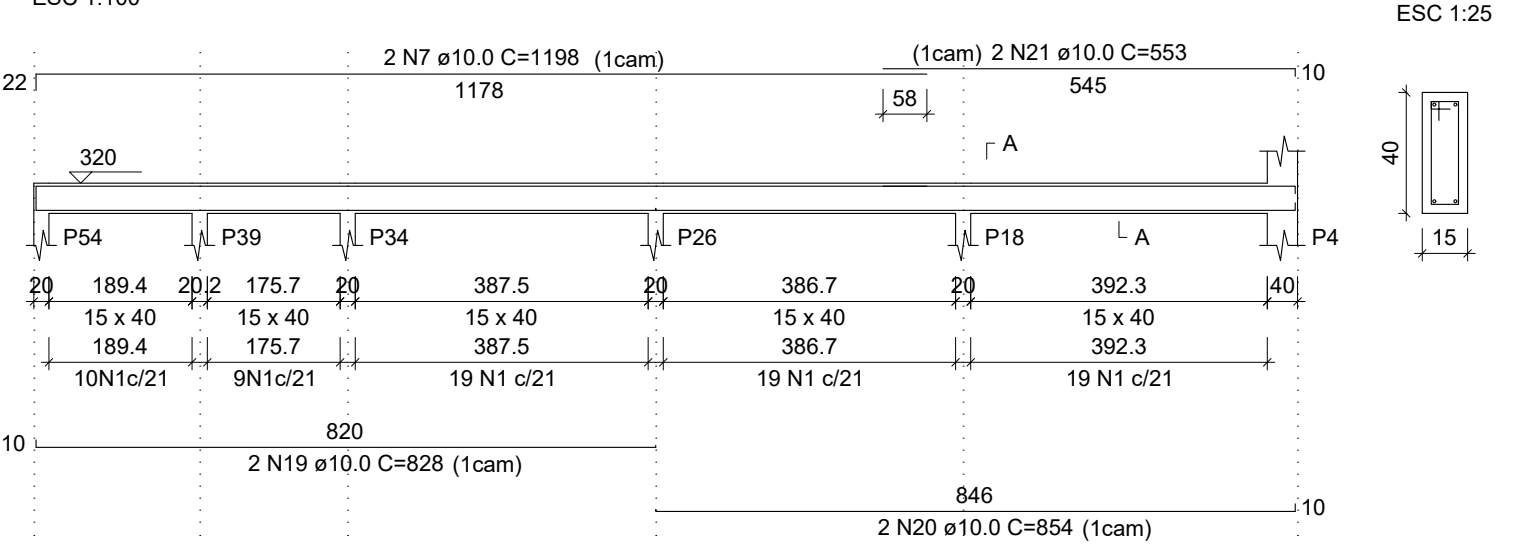
V38 (15 x 40)



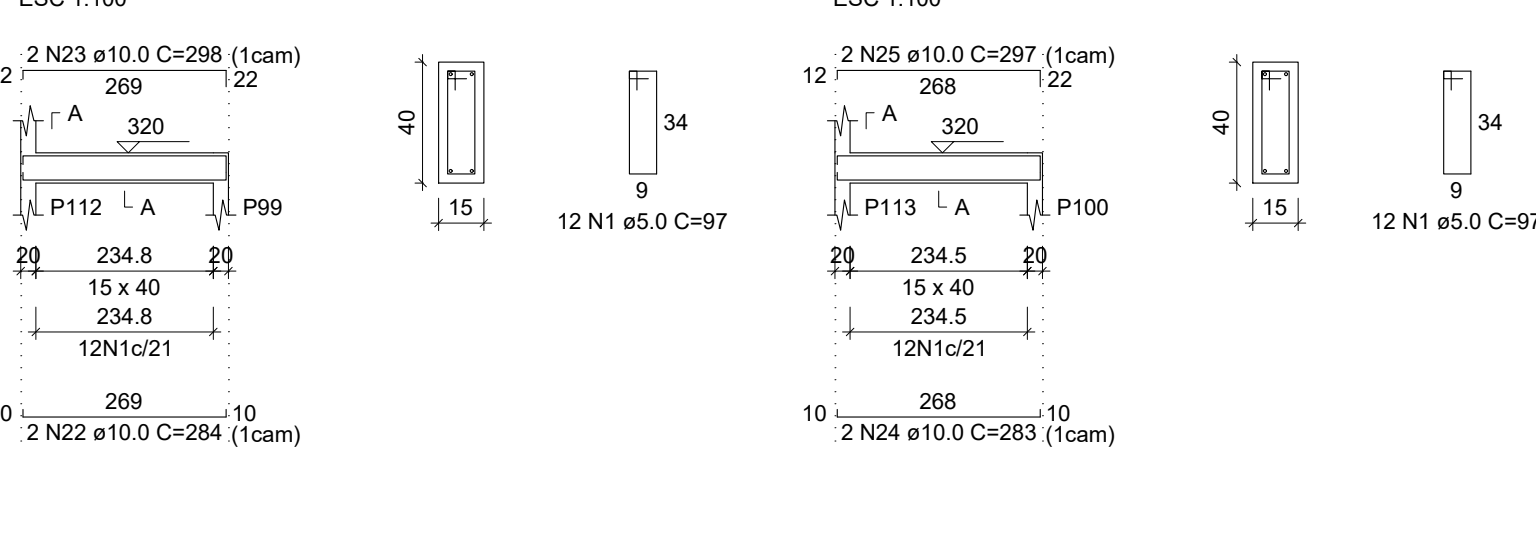
V39 (15 x 40)



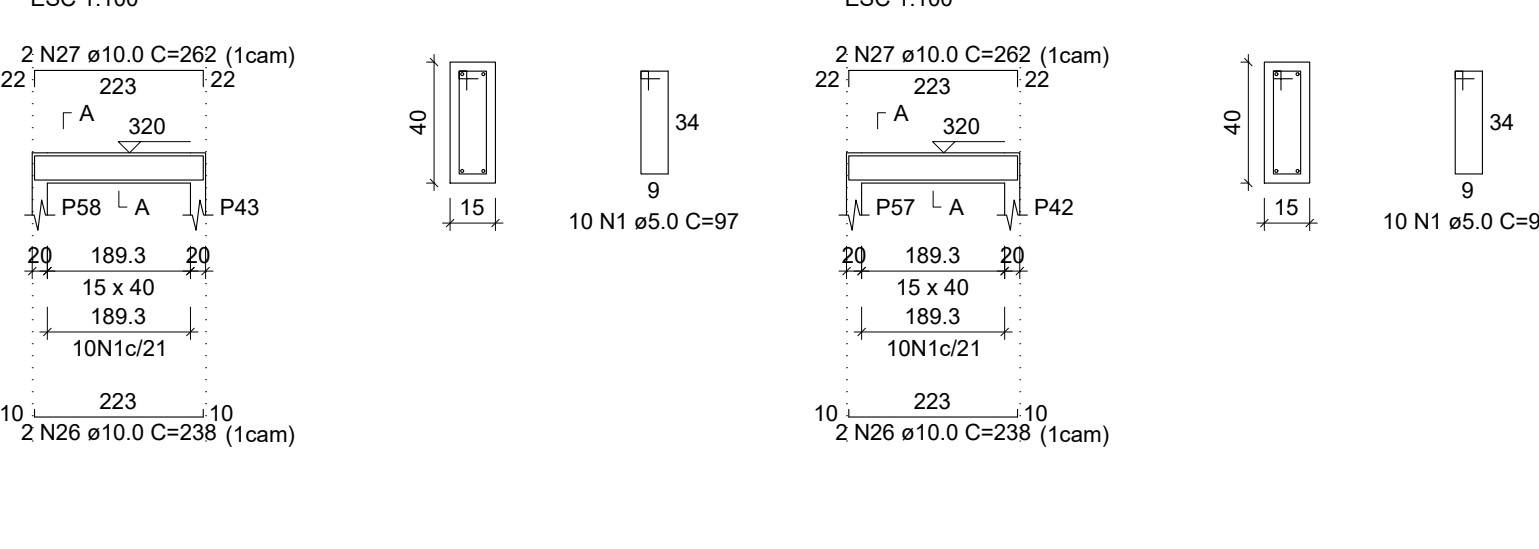
V40 (15 x 40)



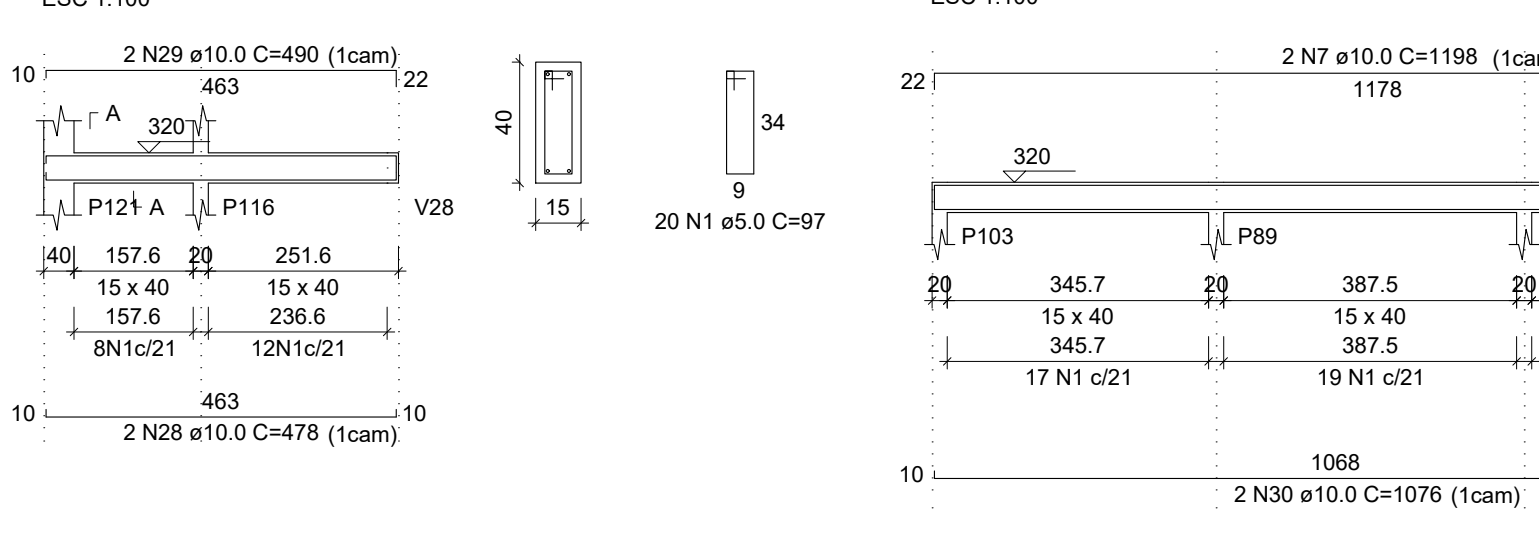
V41 (15 x 40)



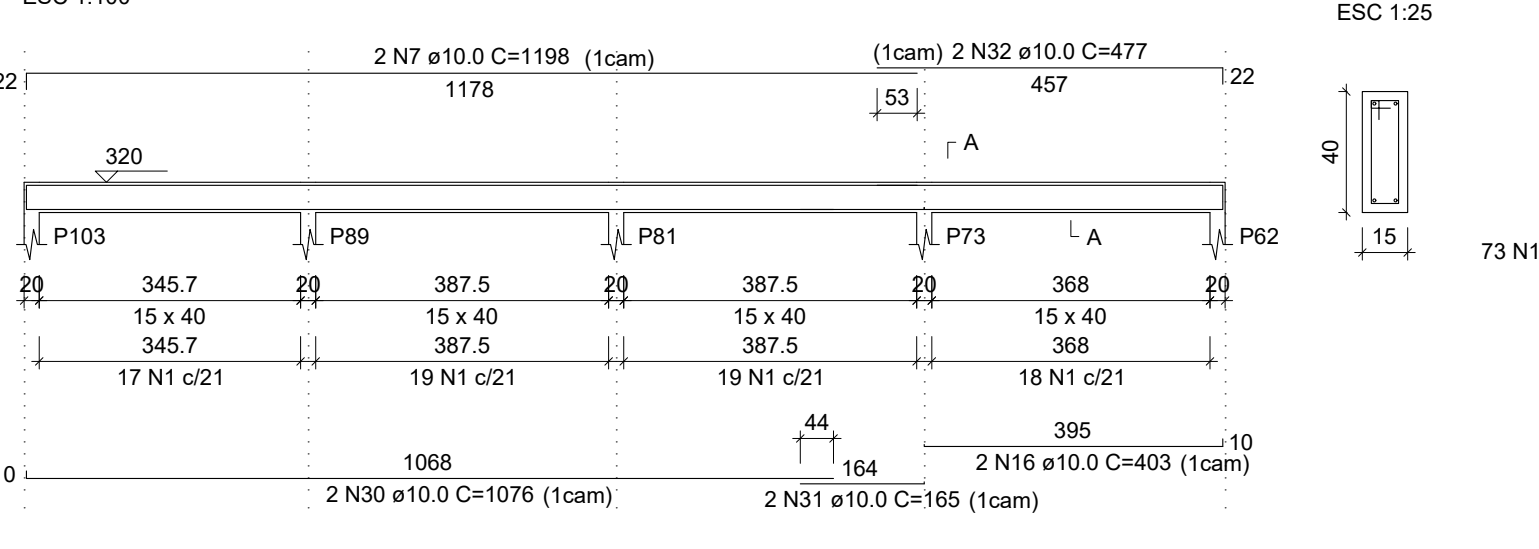
V43 (15 x 40)



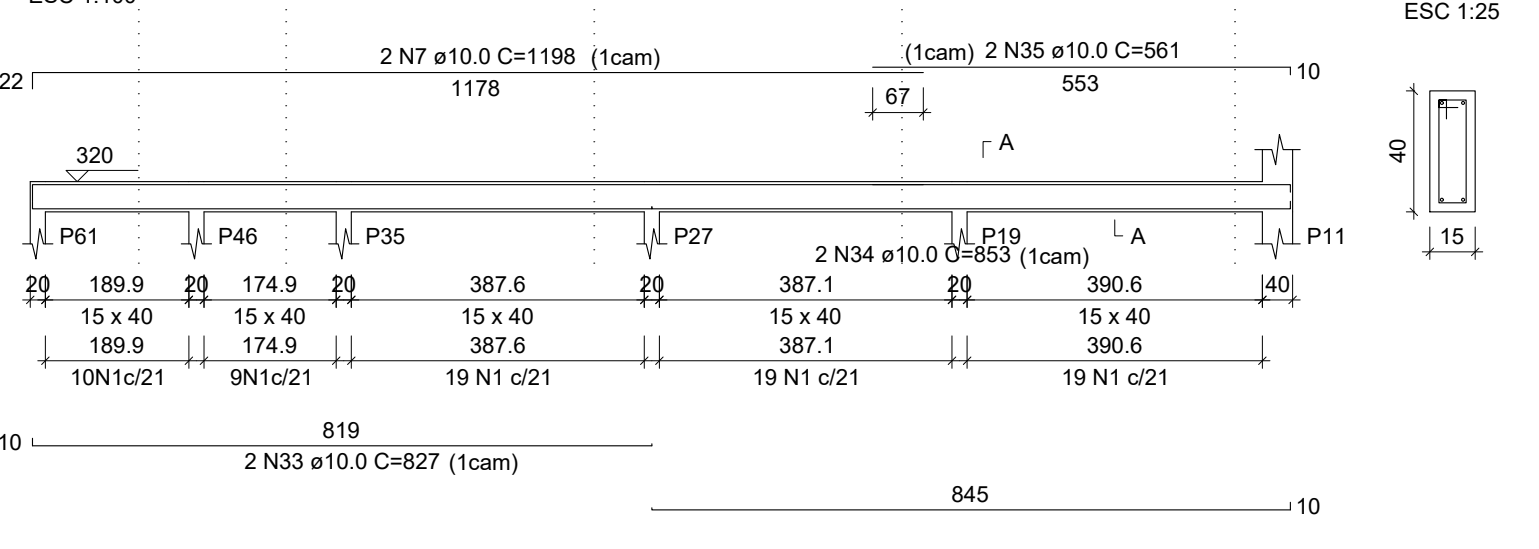
V45 (15 x 40)



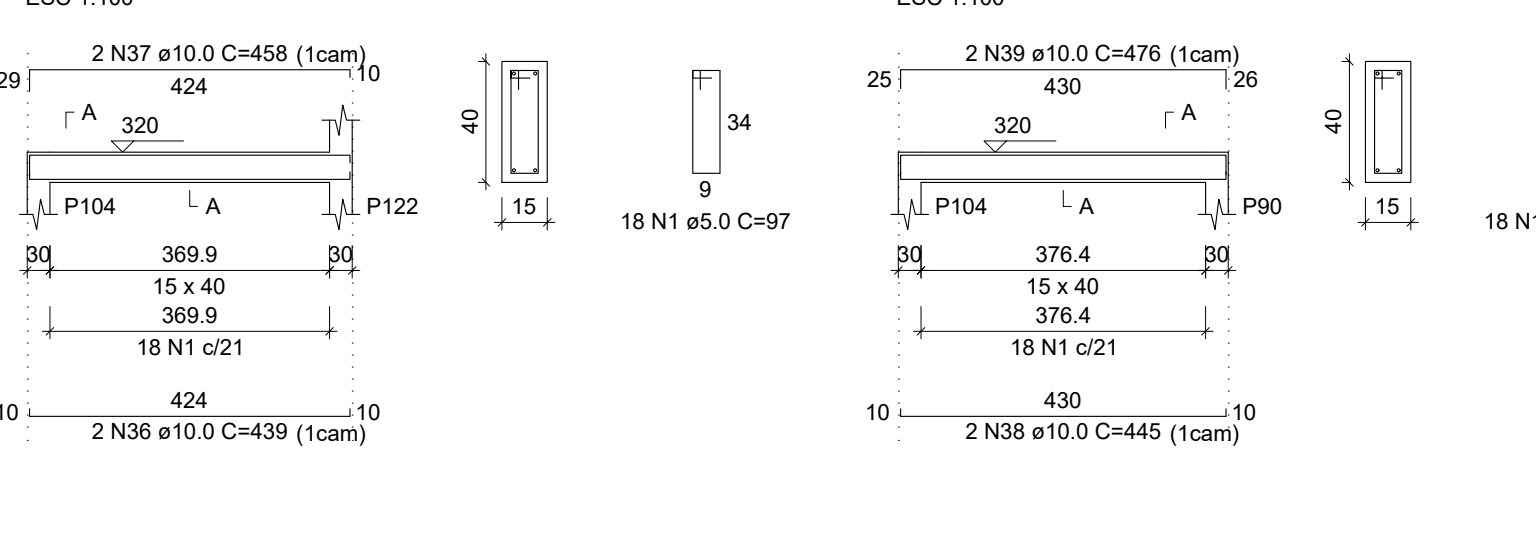
V46 (15 x 40)



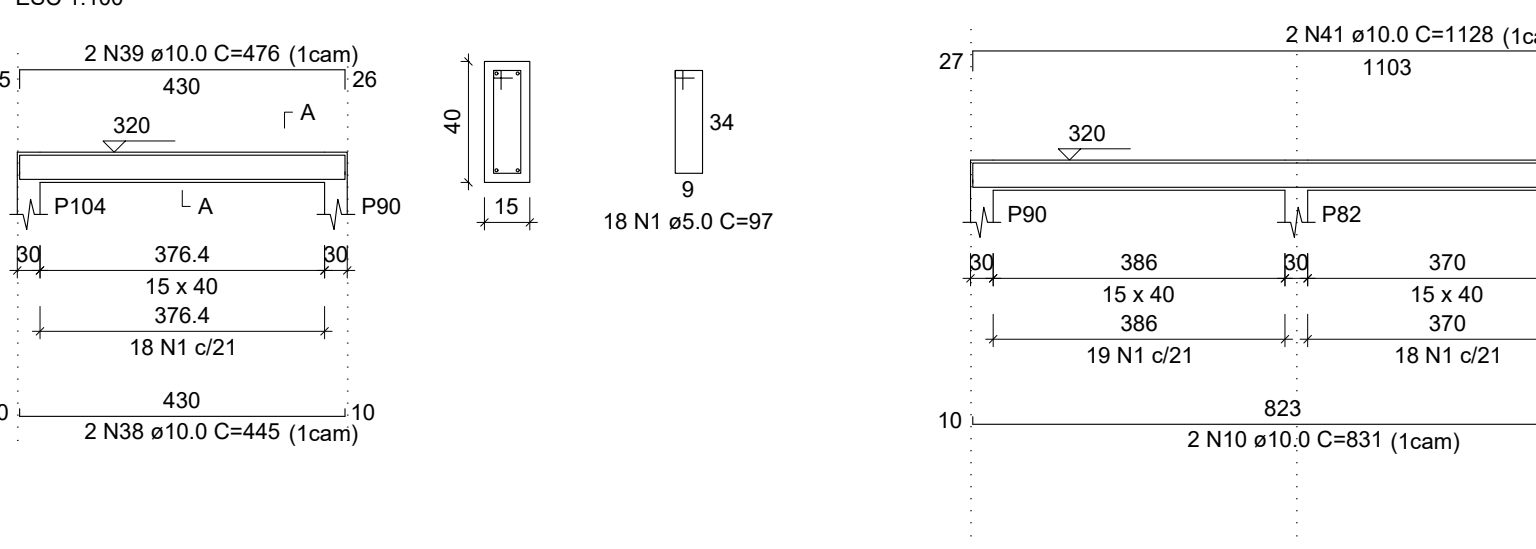
V47 (15 x 40)



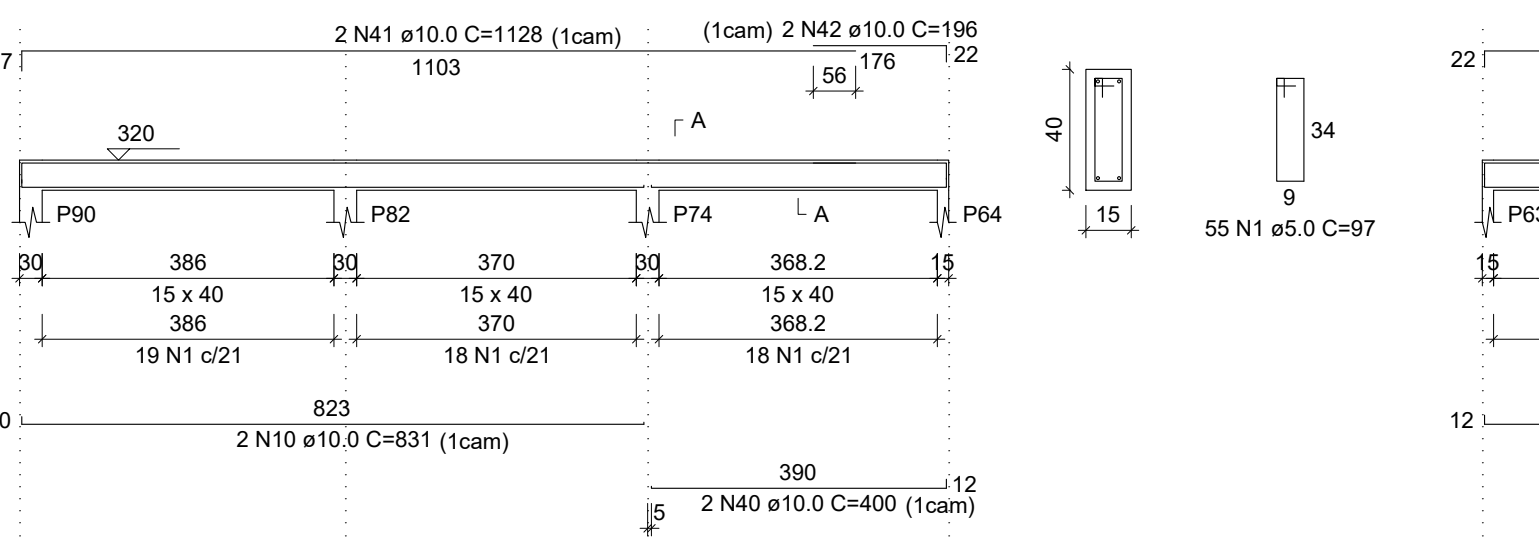
V48 (15 x 40)



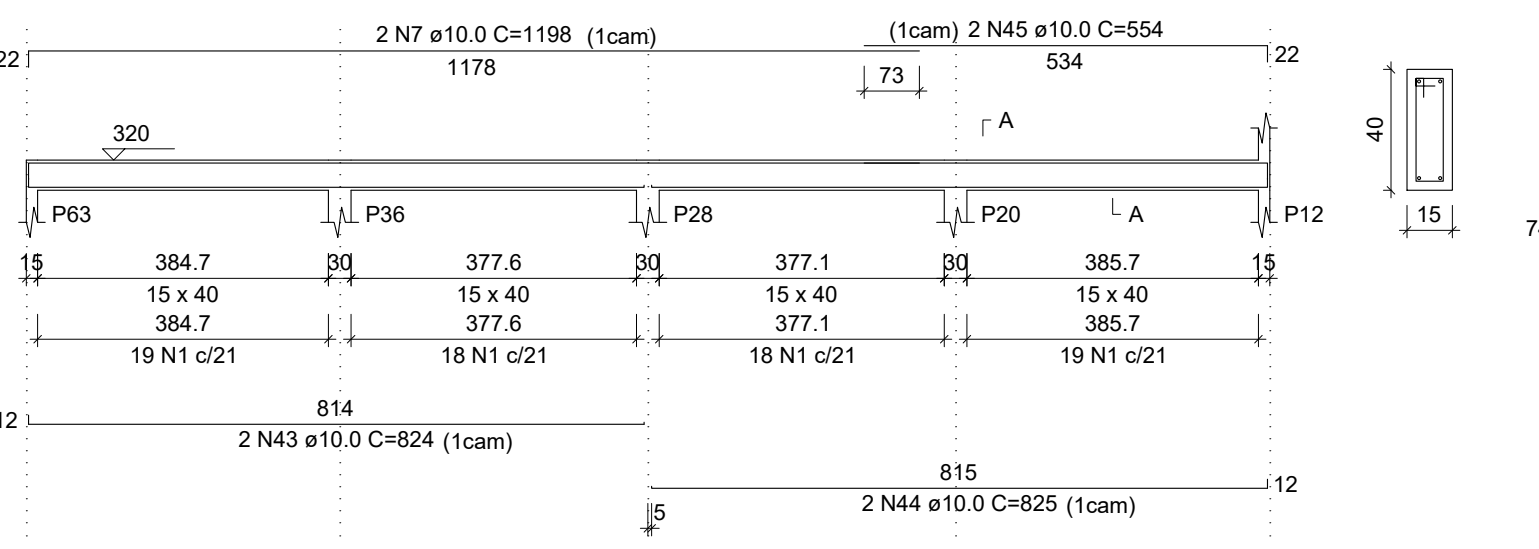
V49 (15 x 40)



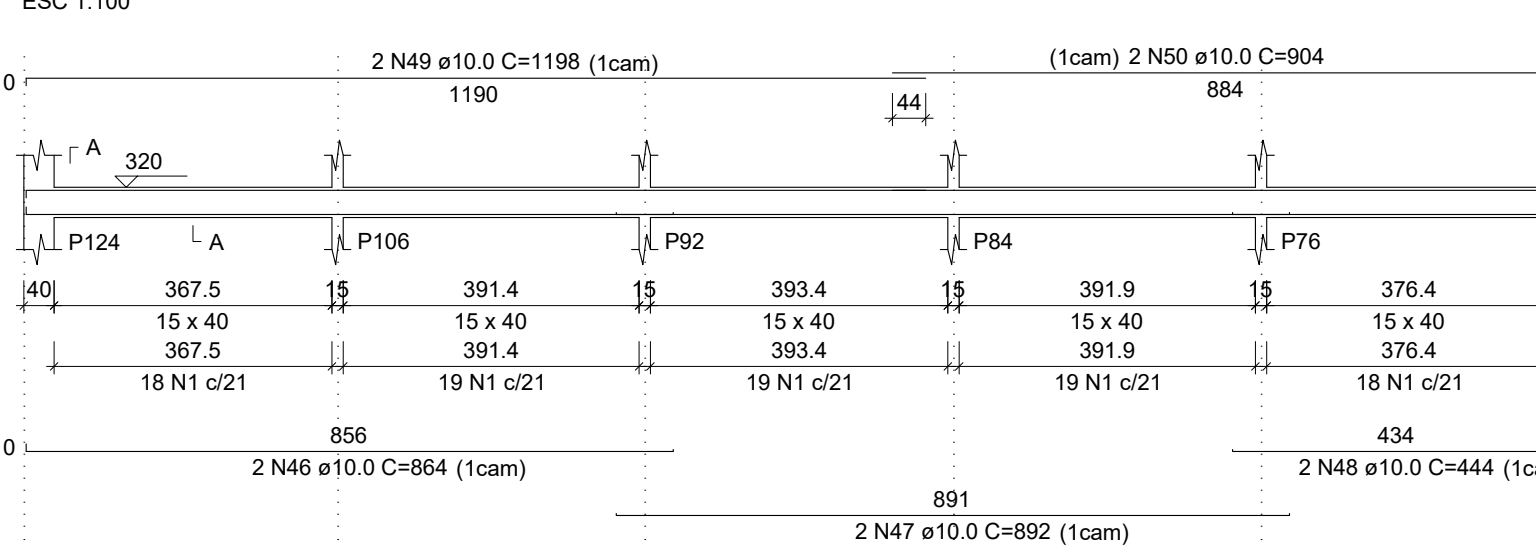
V50 (15 x 40)



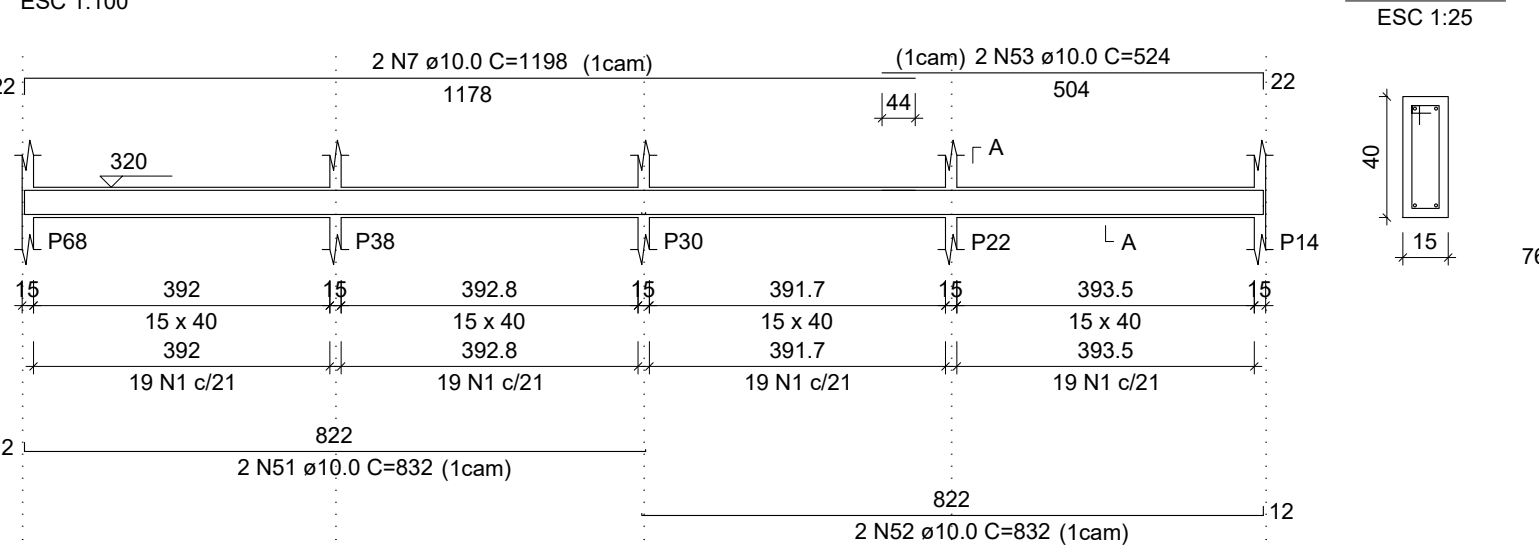
V51 (15 x 40)



V52 (15 x 40)



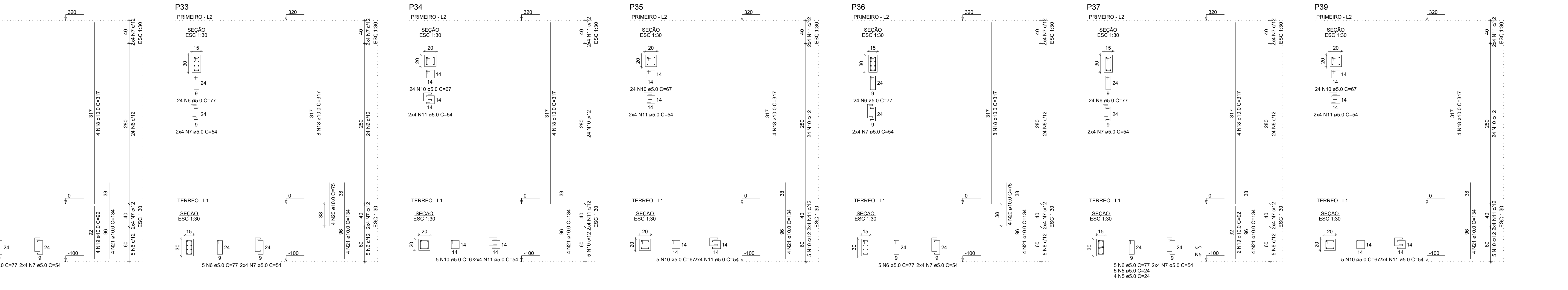
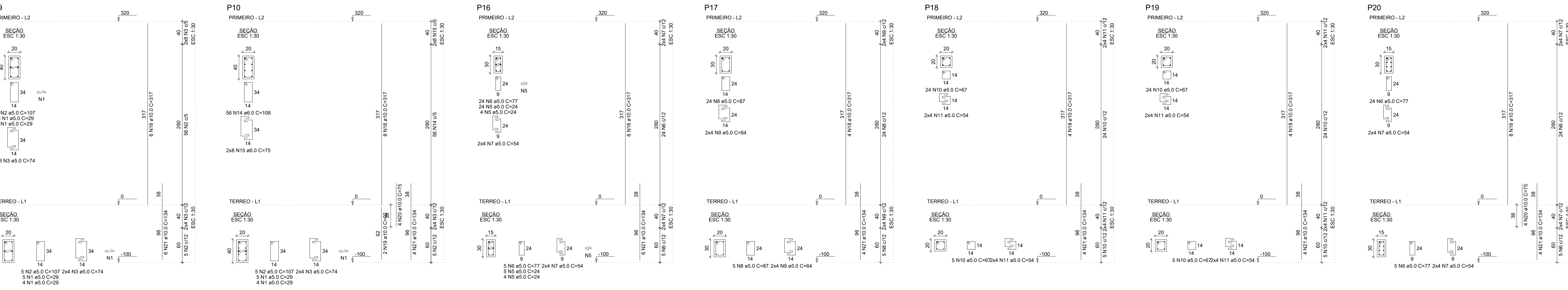
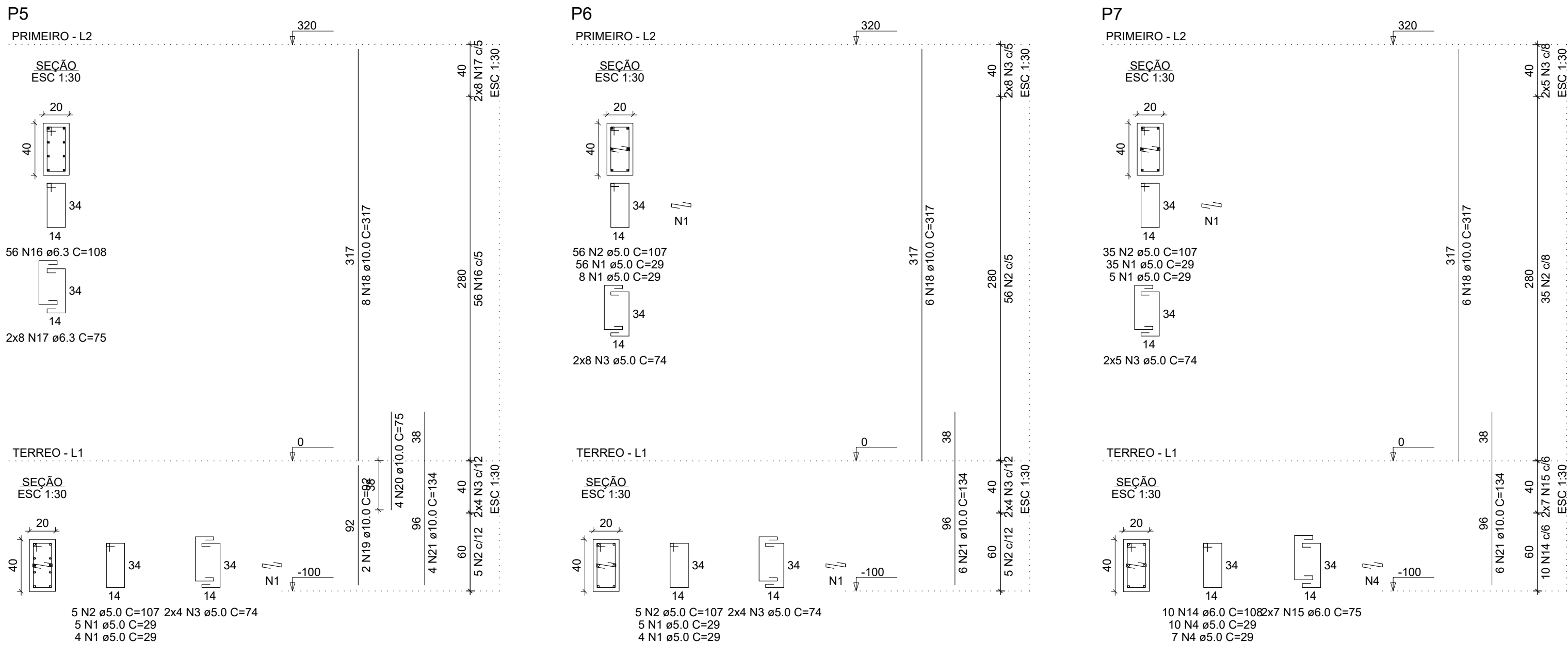
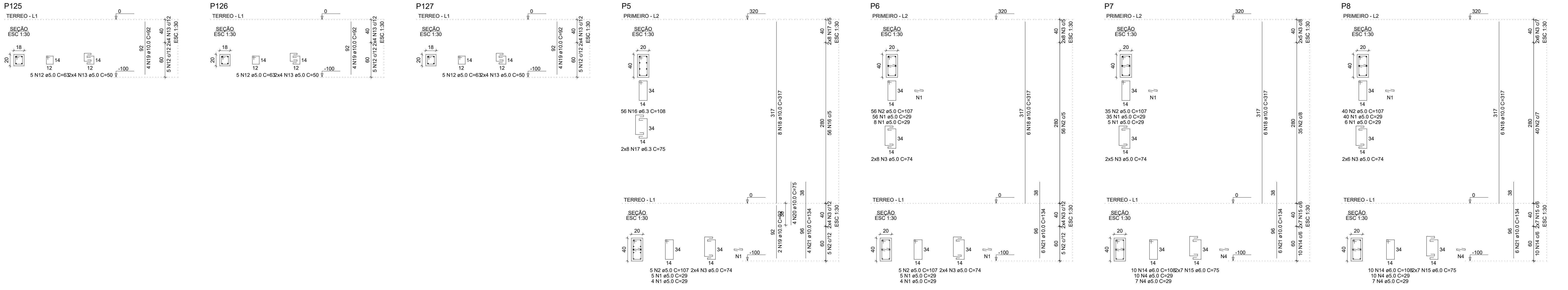
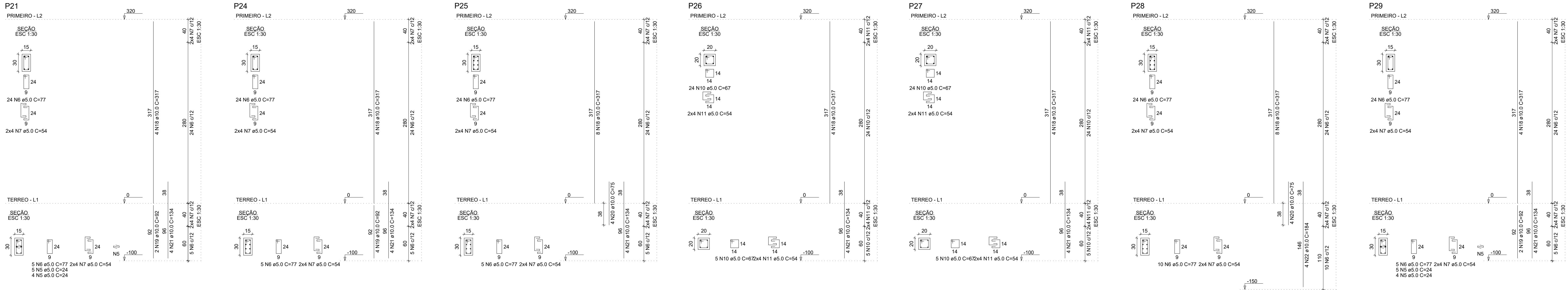
V53 (15 x 40)



RELAÇÃO DO AÇO					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V36	1	5.0	918	97	89046
V37	2	10.0	2	841	1682
V38	3	10.0	2	863	1726
V39	4	10.0	2	853	1646
V40	5	10.0	2	805	1610
V41	6	10.0	2	851	1662
V42	7	10.0	12	1198	14376
V43	8	10.0	2	1200	2400
V44	9	10.0	2	217	434
V45	10	10.0	4	631	2522
V46	11	10.0	2	441	882
V47	12	10.0	2	1161	2322
V48	13	10.0	2	190	380
V49	14	10.0	2	830	1660
V50	15	10.0	2	816	1632
V51	16	10.0	2	403	806
V52	17	10.0	2	1199	2398
V53	18	10.0	2	920	1840
V54	19	10.0	2	828	1656
V55	20	10.0	2	854	1708
V56	21	10.0	2	553	1106
V57	22	10.0	2	284	568
V58	23	10.0	2	298	596
V59	24	10.0	2	263	526
V60	25	10.0	2	297	594
V61	26	10.0	4	238	952
V62	27	10.0	4	262	1048
V63	28	10.0	2	478	956
V64	29	10.0	2	490	980
V65	30	10.0	2	1076	2152
V66	31	10.0	2	165	330
V67	32	10.0	2	477	954
V68	33	10.0	2	827	1654
V69	34	10.0	2	853	1706
V70	35	10.0	2	561	1122
V71	36	10.0	2	439	878
V72	37	10.0	2	458	916
V73	38	10.0	2	445	890
V74	39	10.0	2	476	952
V75	40	10.0	2	400	800
V76	41	10.0	2	1128	2256
V77	42	10.0	2	196	392
V78	43	10.0	2	824	1648
V79	44	10.0	2	825	1650
V80	45	10.0	2	554	1108
V81	46	10.0	2	864	1728
V82	47	10.0	2	892	1784
V83	48	10.0	2	444	888
V84	49	10.0	2	1198	2396
V85	50	10.0	2	904	1808
V86	51	10.0	2	832	1664
V87	52	10.0	2	832	1664
V88	53	10.0	2	524	1048

RESUMO DO AÇO					
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 0% (Barras)	UNIT	PESO + 0% (kg)
CASO	10.0	847	71	-	522.2
CABO	5.0	890.5	-	robo (170 kg)	137.3
PESO TOTAL (kg)					
CASO		522.2			
CABO		137.3			

Volume de concreto (C-25) = 12.26 m³
Área de forma = 194.04 m²



RELAÇÃO DO AÇO					
ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	250	29	7250
	2	5.0	207	107	22149
	3	5.0	88	74	6384
	4	5.0	34	24	816
	5	5.0	64	24	1536
	6	5.0	178	54	9604
	7	5.0	29	64	1856
	8	5.0	16	64	1024
	9	5.0	203	67	13601
	10	5.0	112	54	6048
	11	5.0	24	50	1200
	12	5.0	16	76	1216
	13	5.0	24	50	1200
	14	5.0	16	75	1200
	15	5.0	44	75	3300
	16	5.0	63	56	3528
	17	5.0	16	75	1200
	18	5.0	317	317	100469
	19	10.0	30	82	2460
	20	10.0	28	76	2100
	21	10.0	108	134	14204
	22	10.0	4	184	736

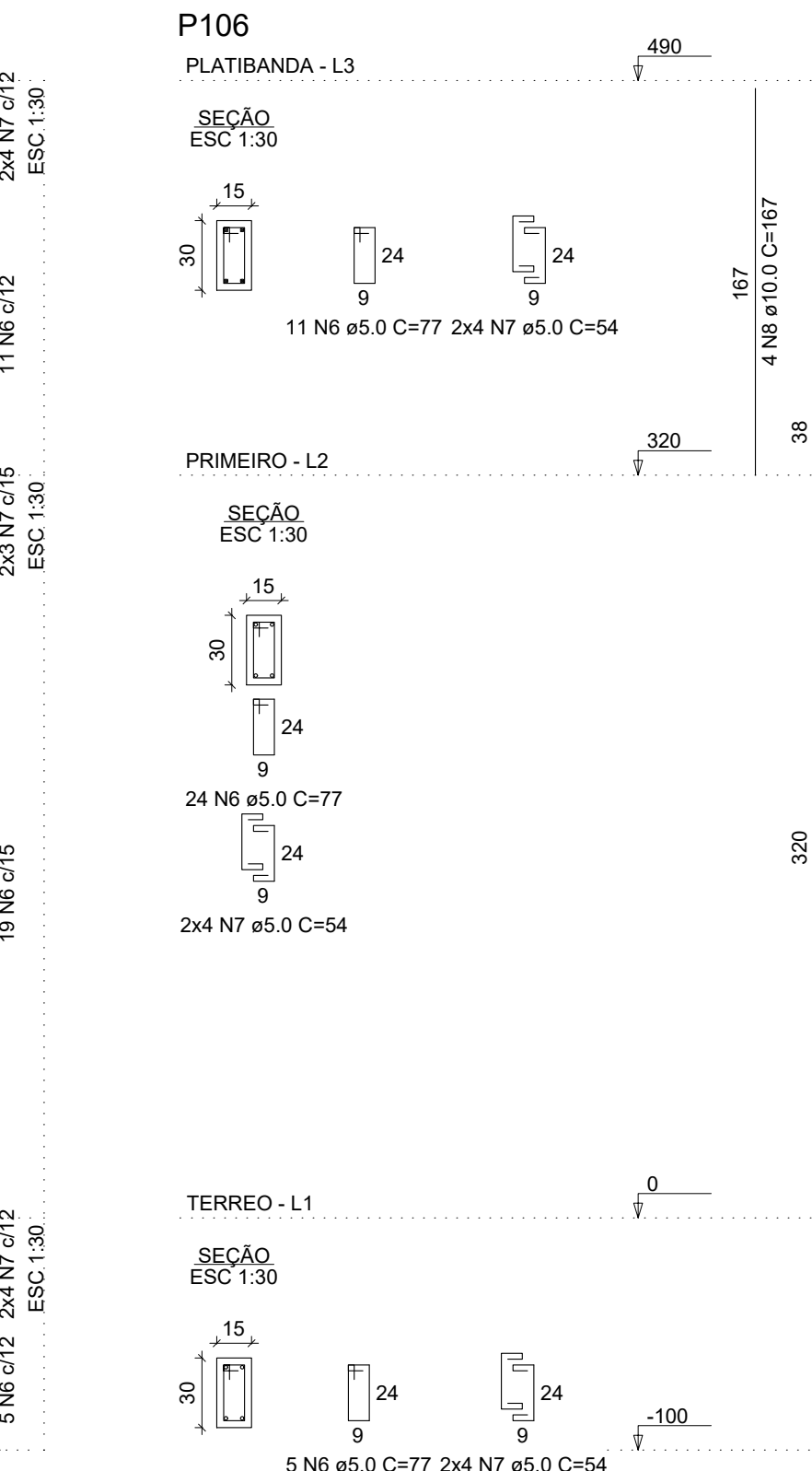
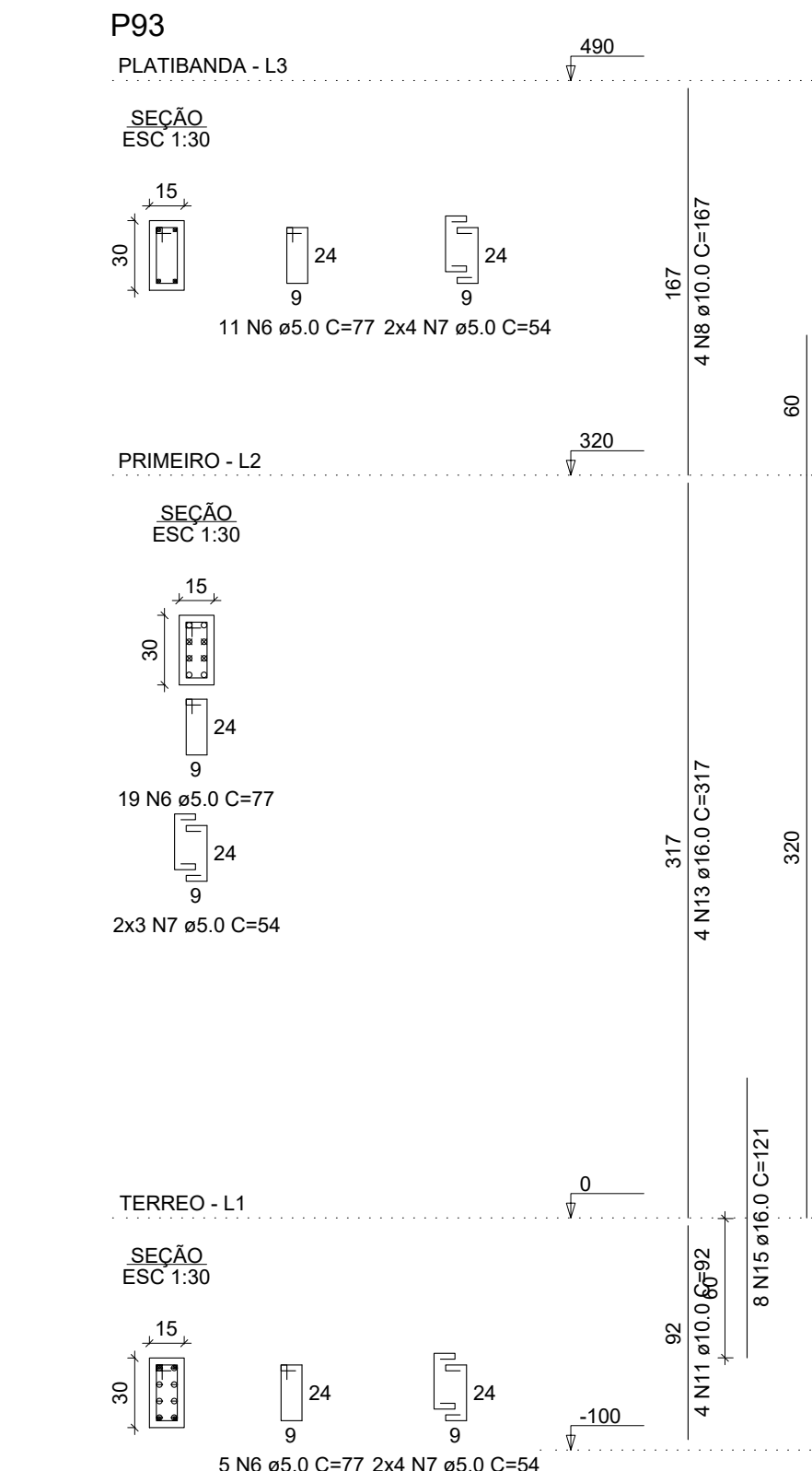
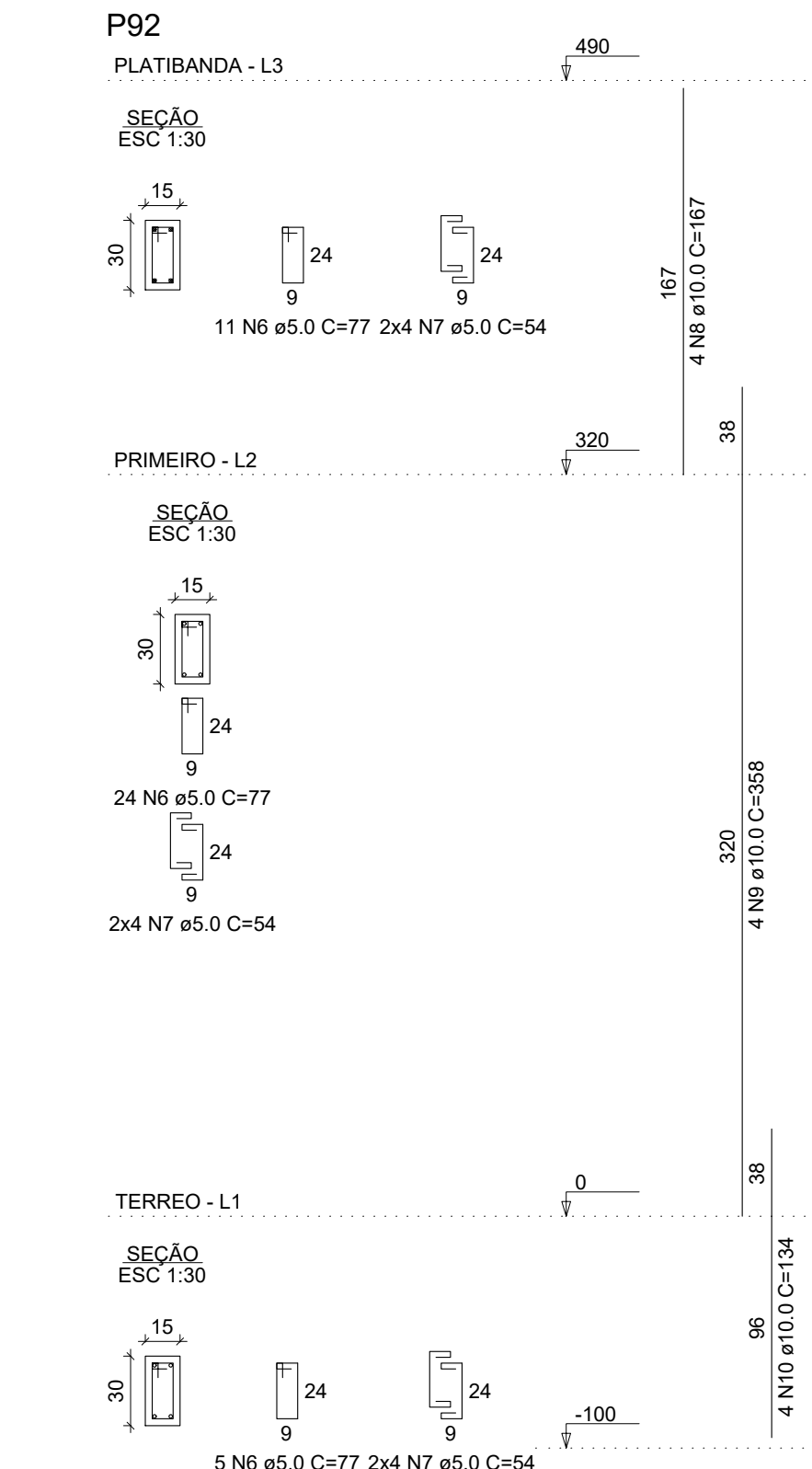
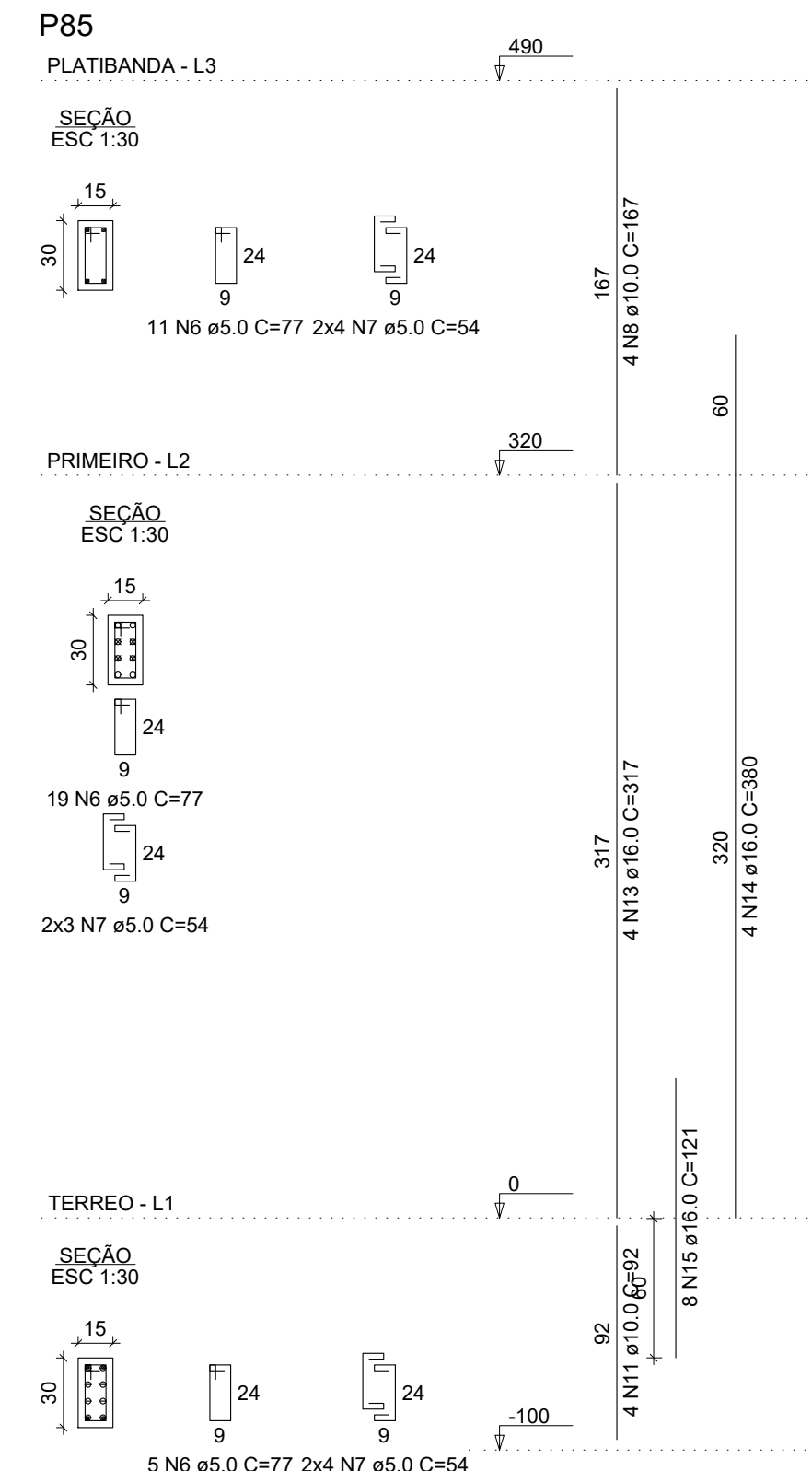
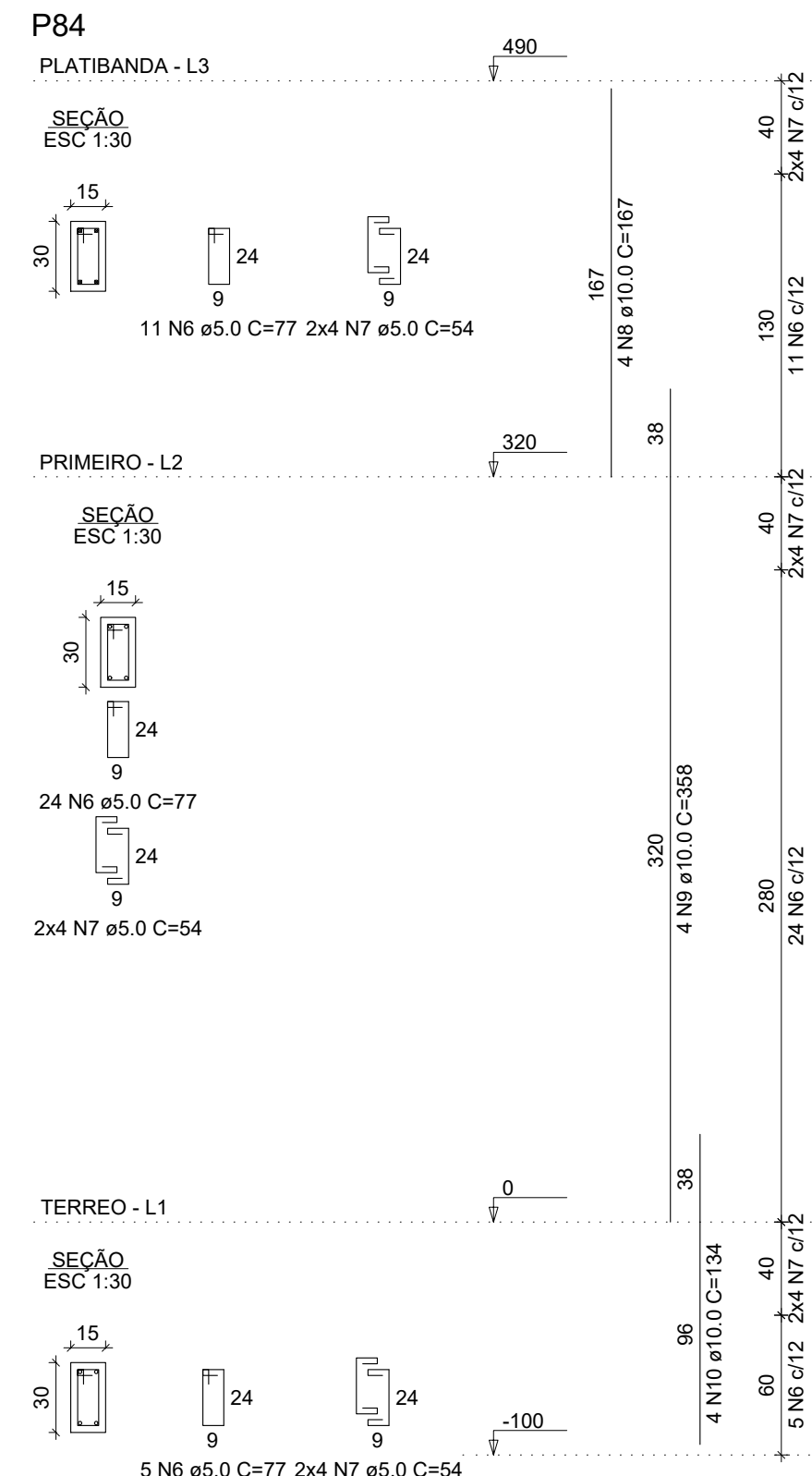
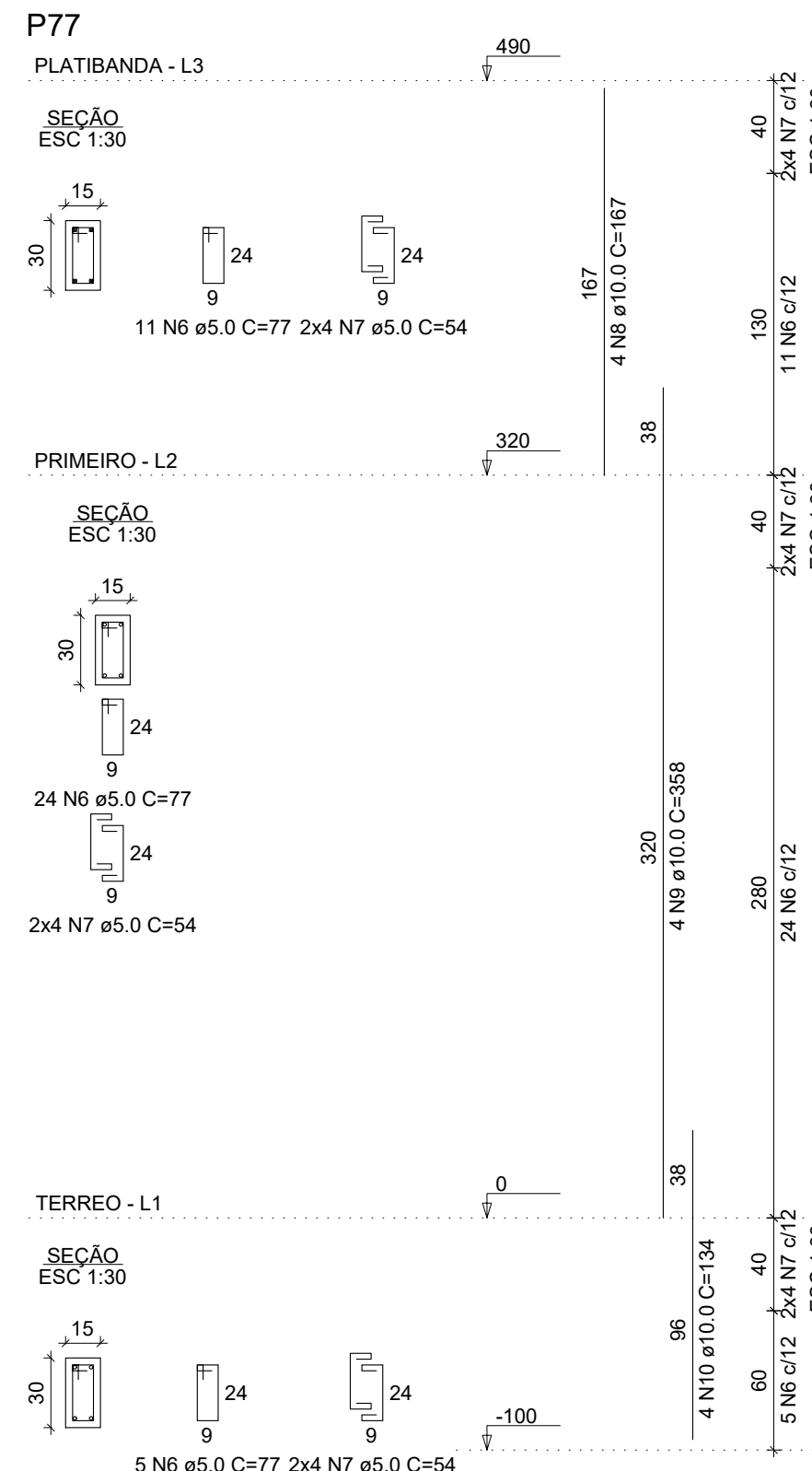
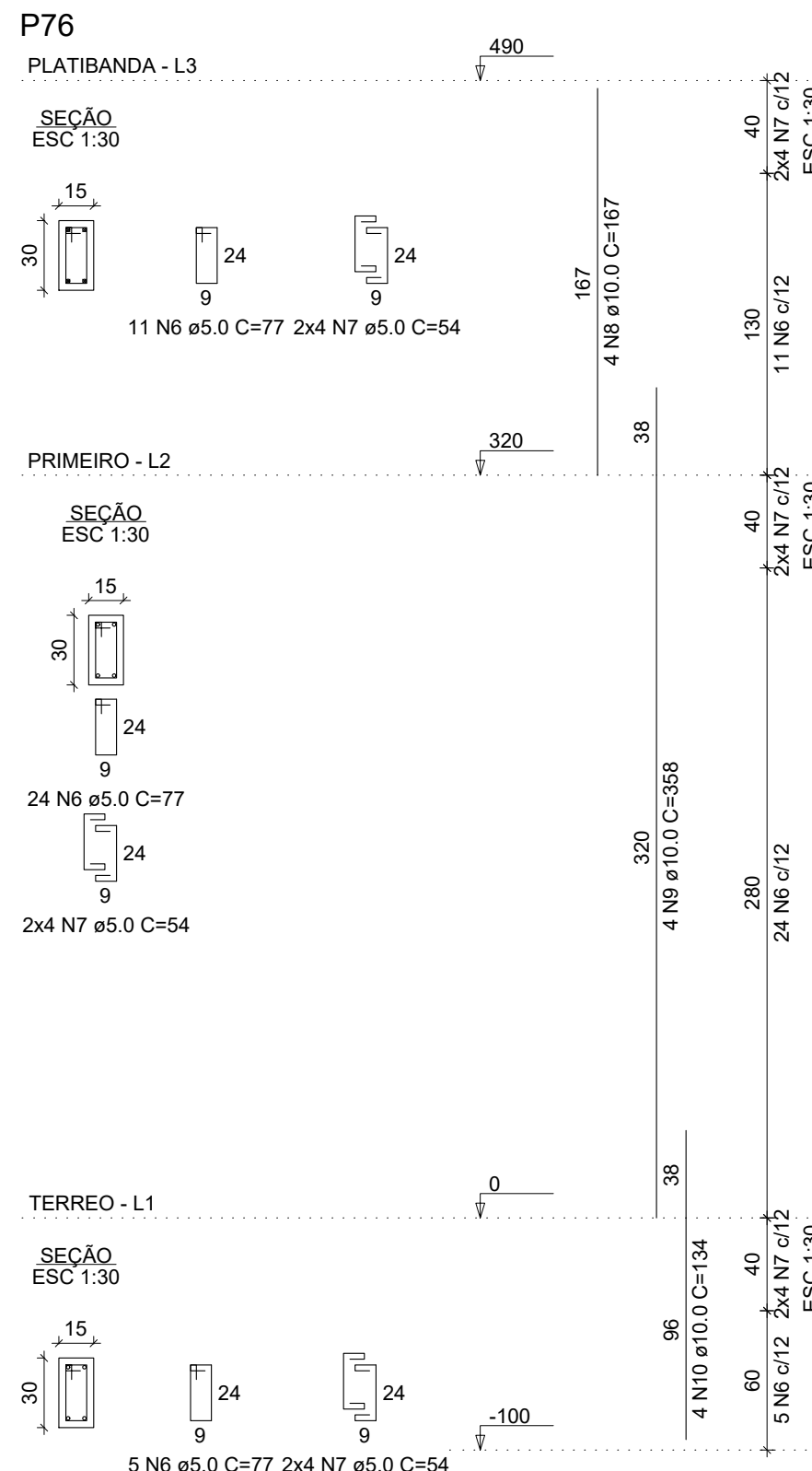
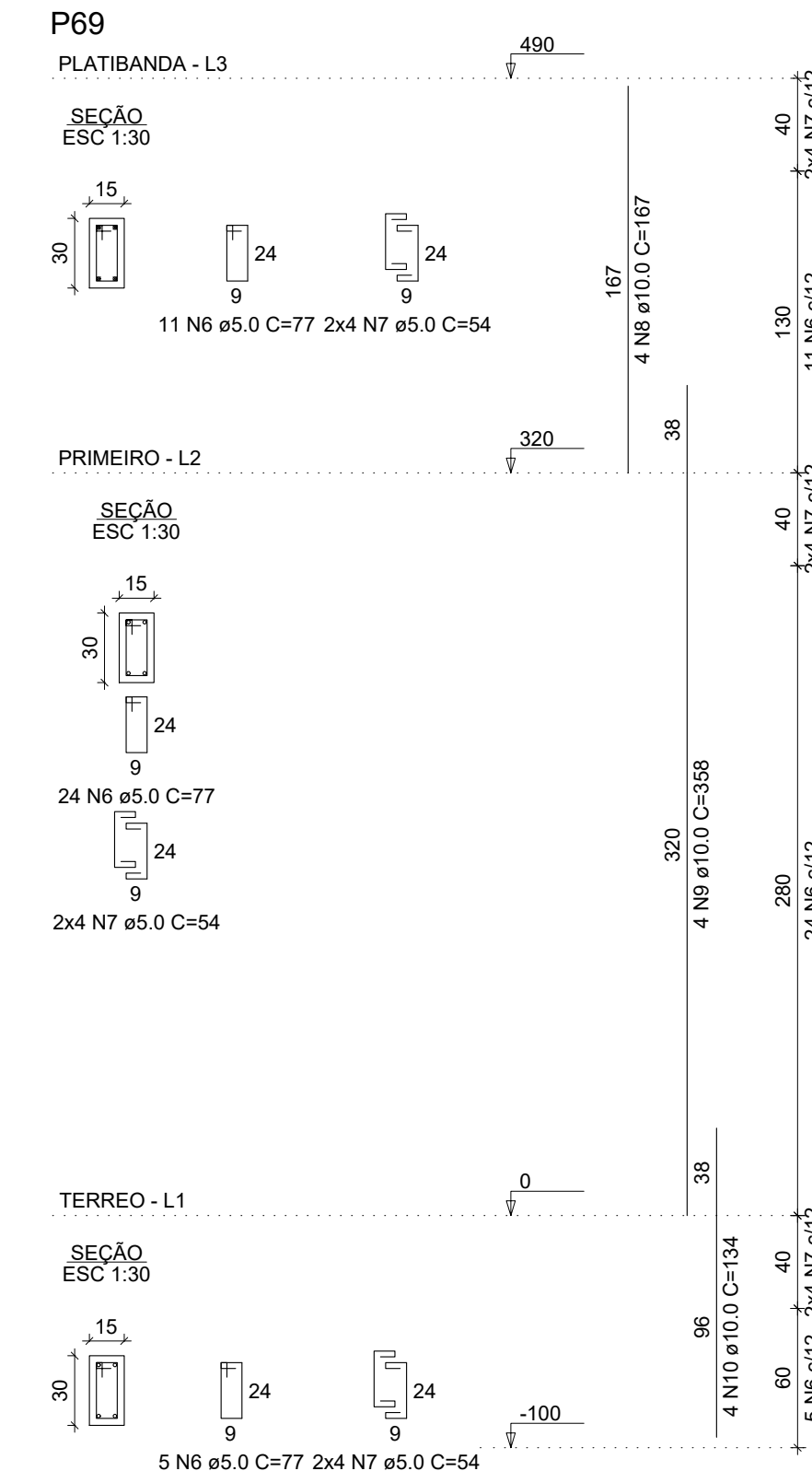
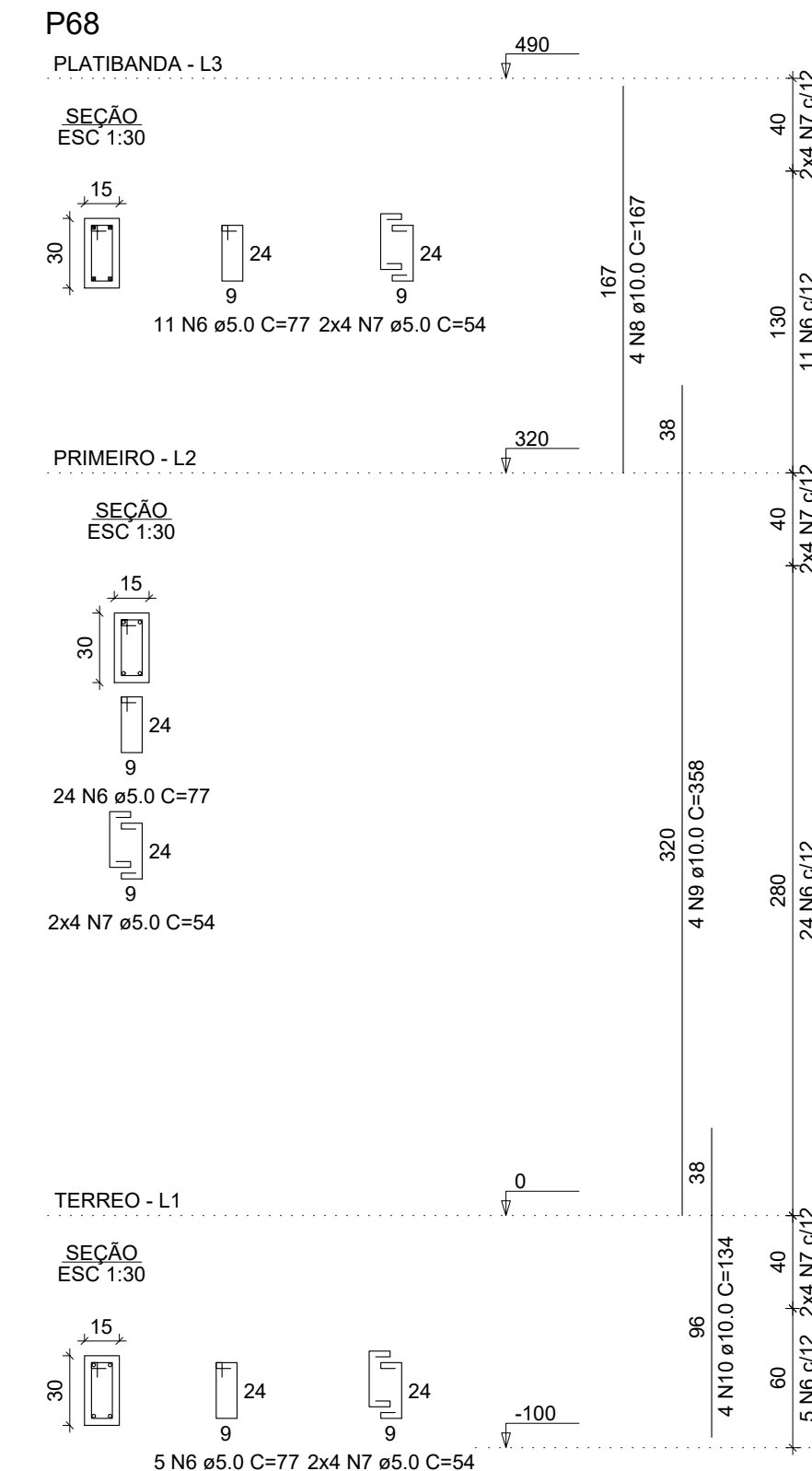
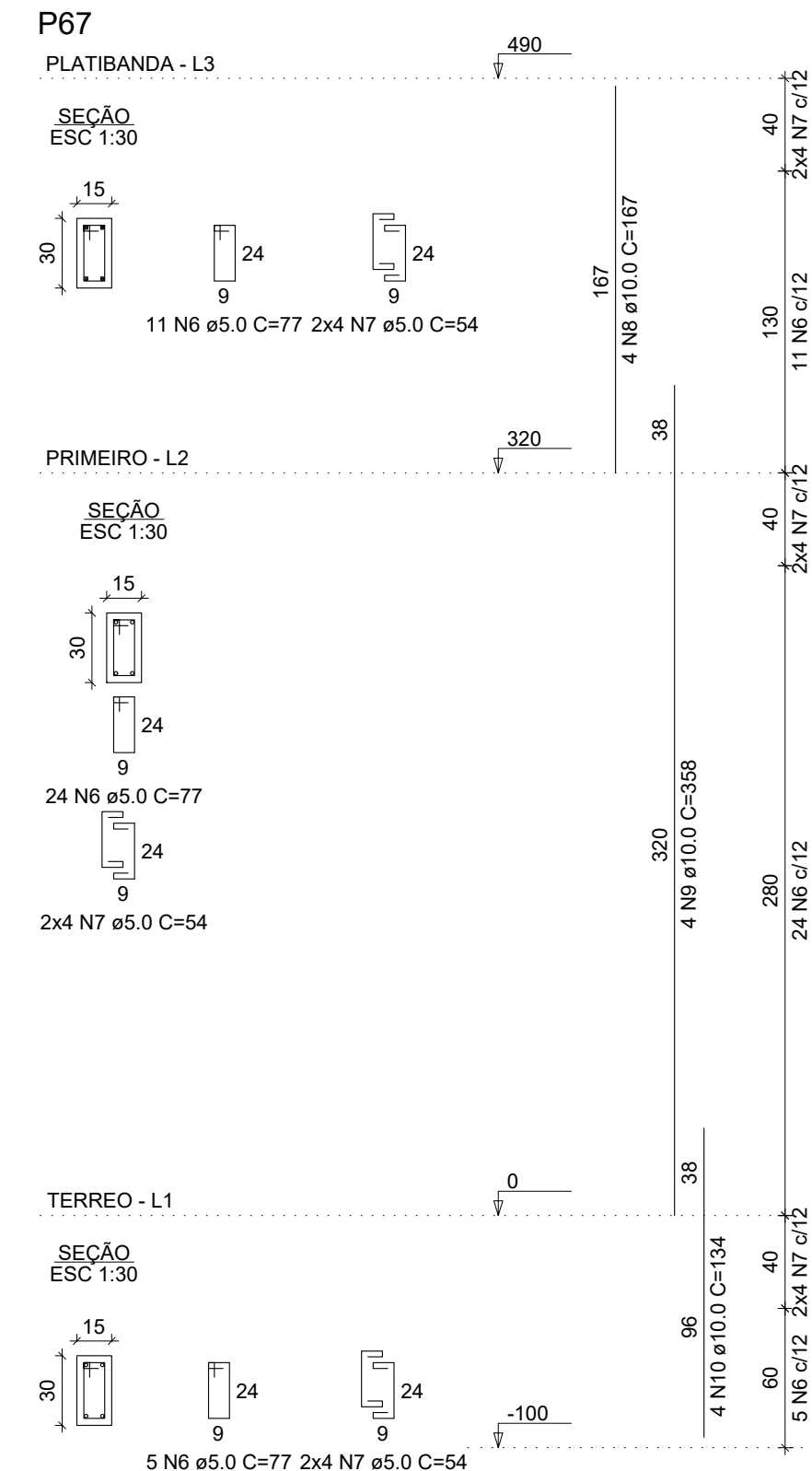
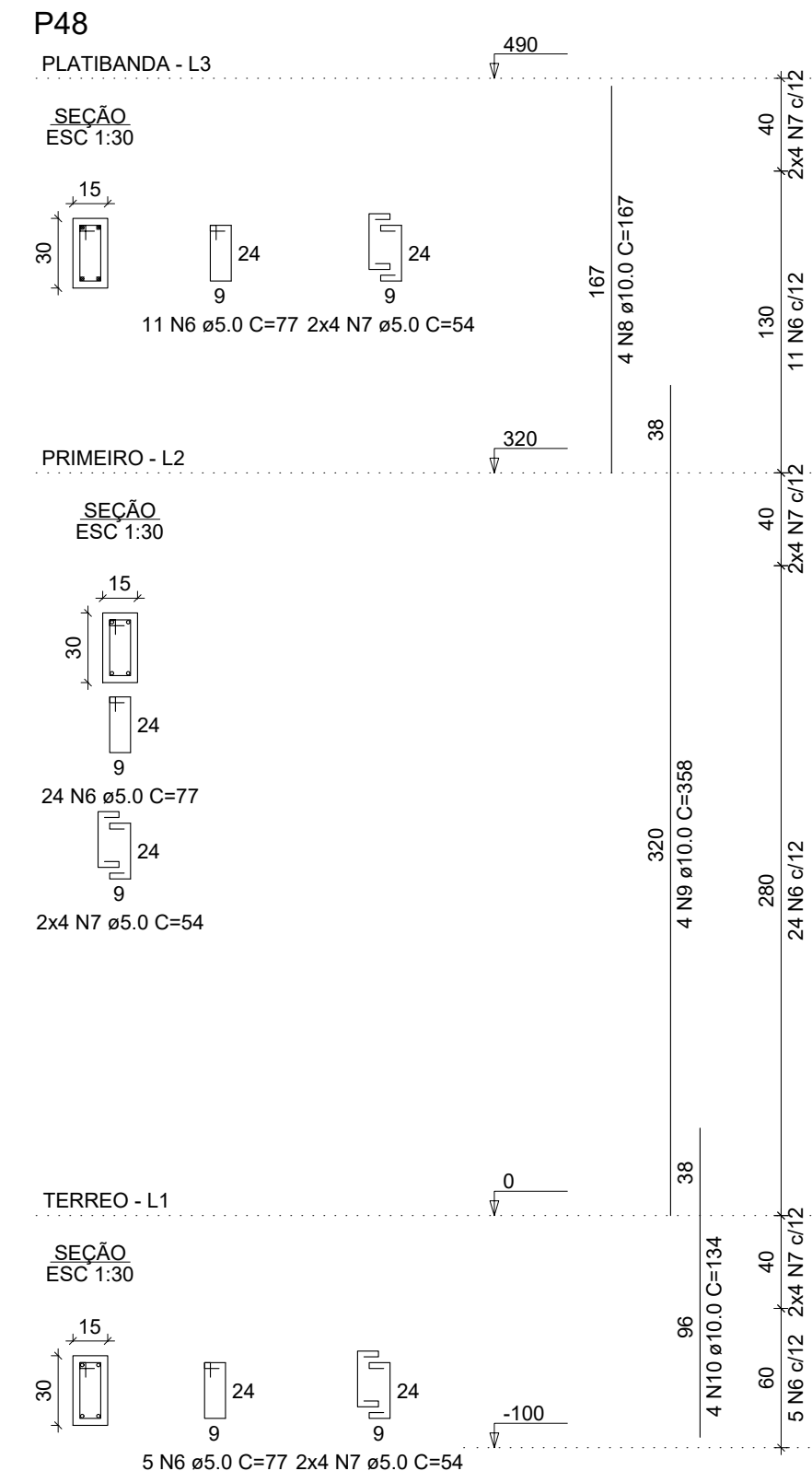
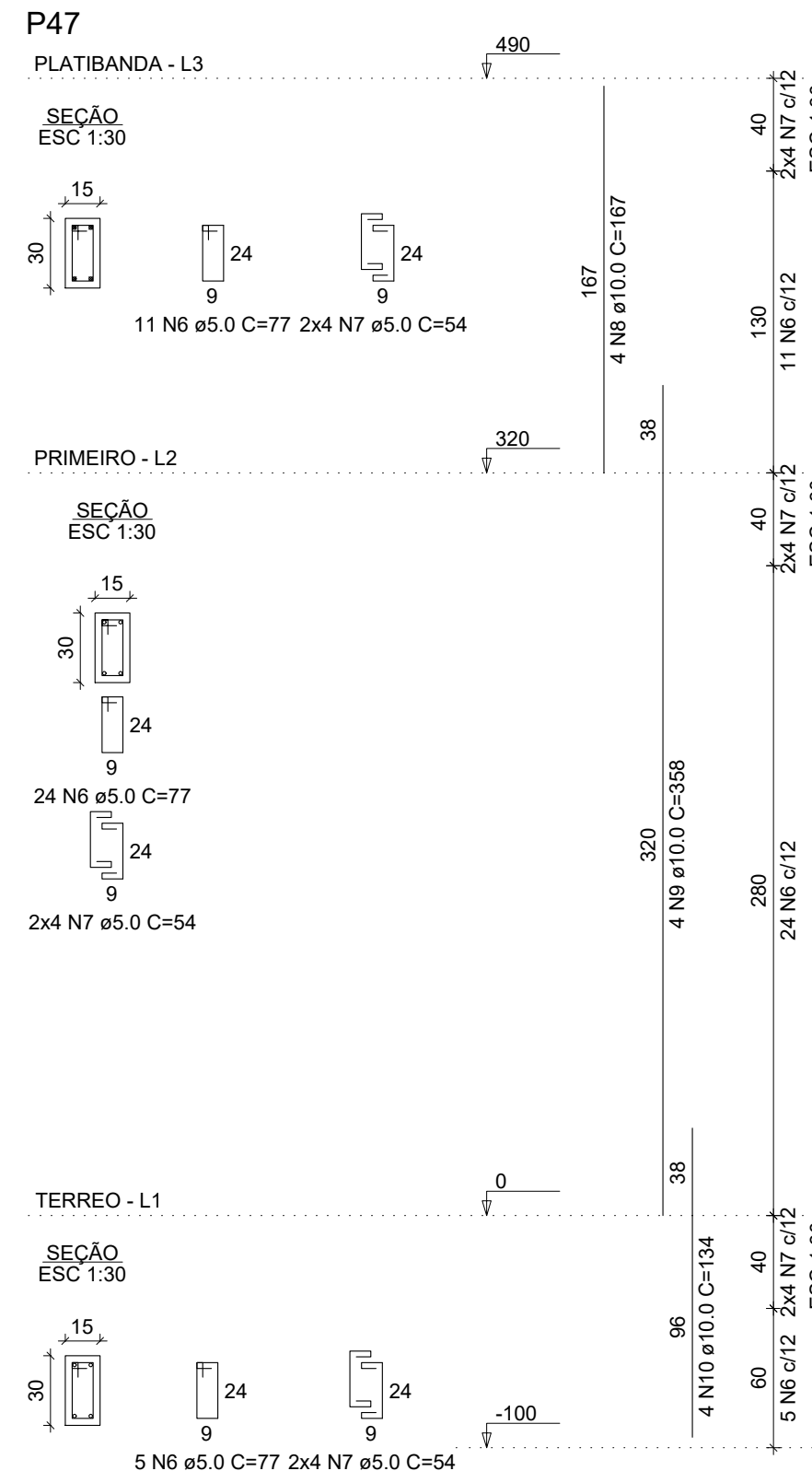
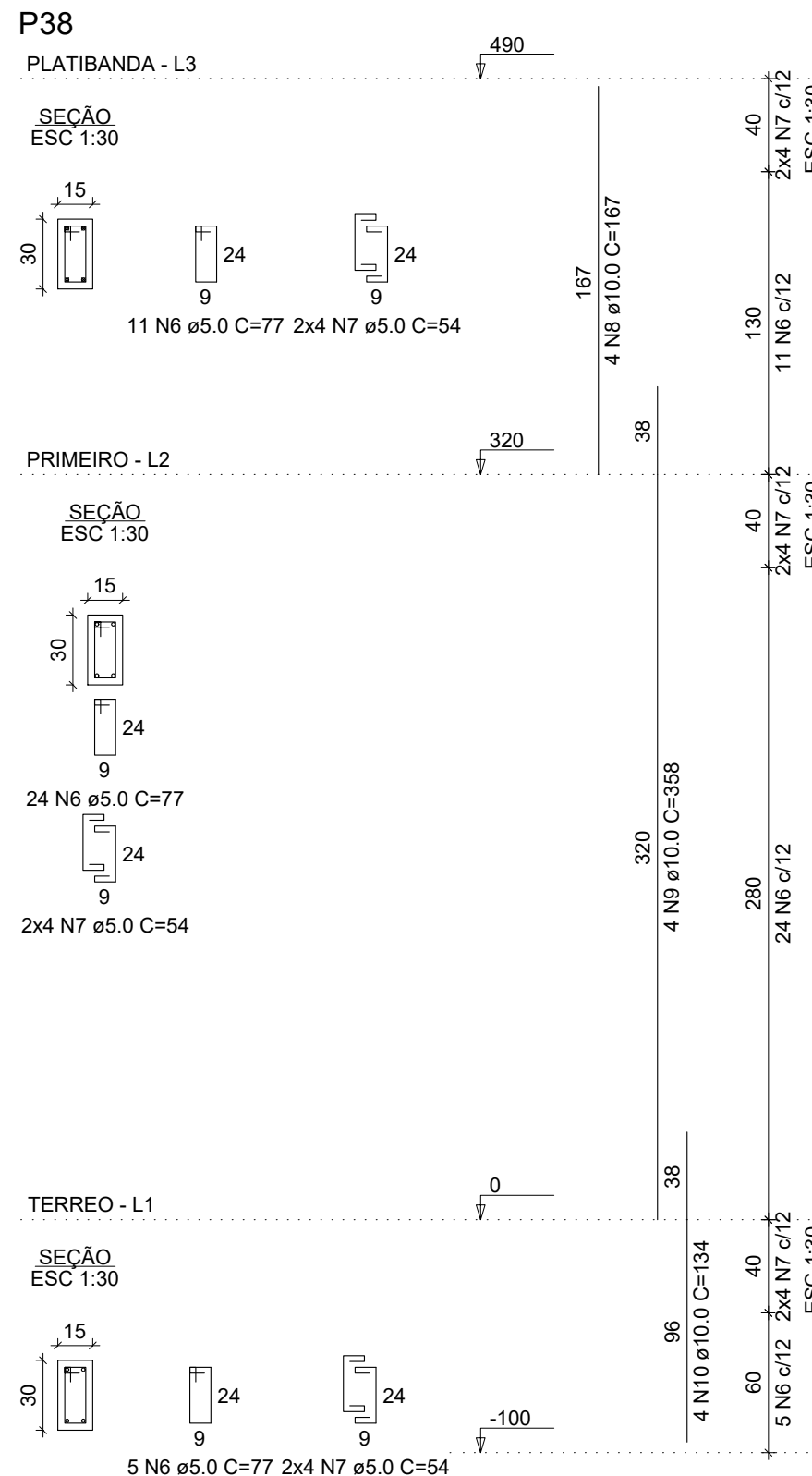
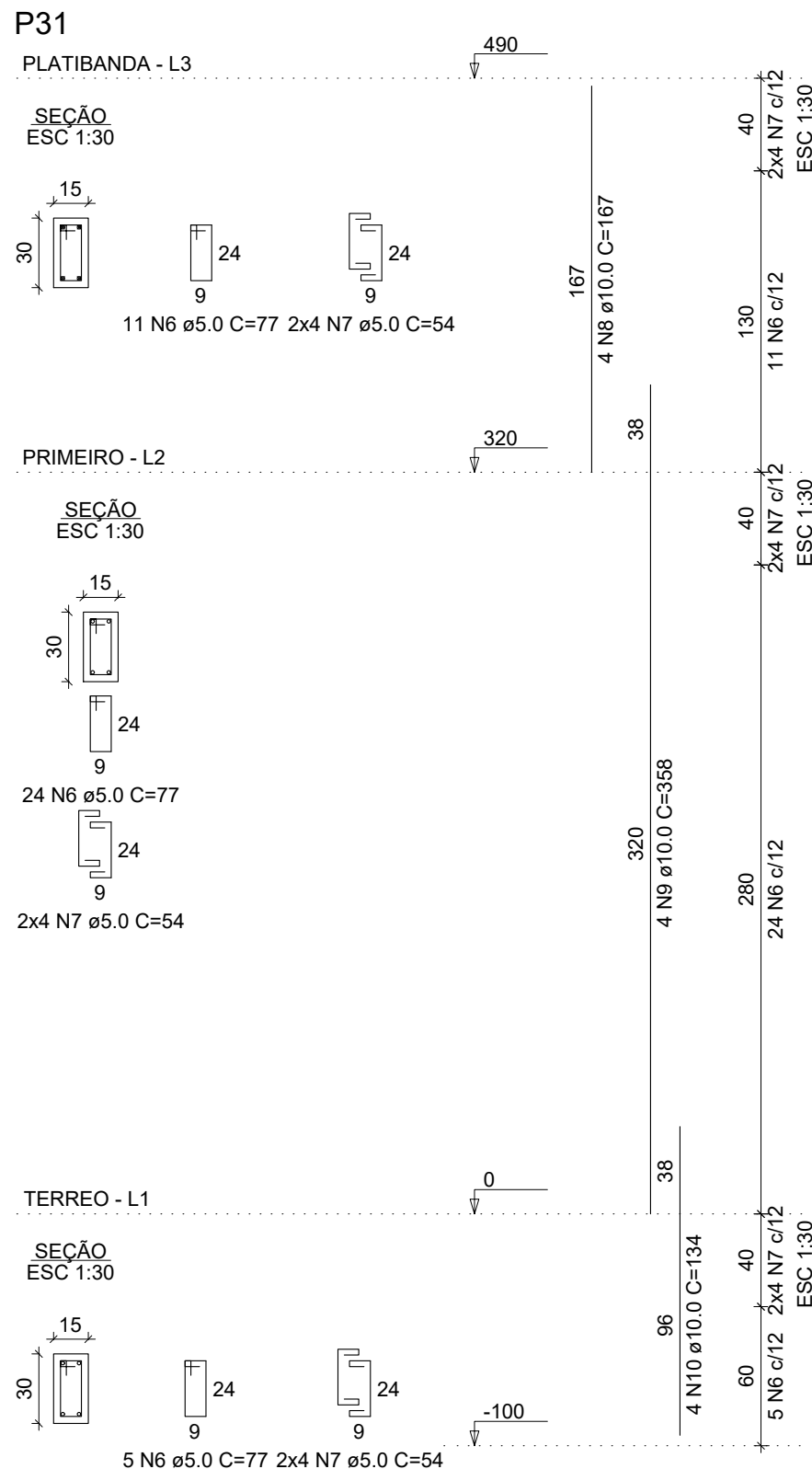
ACO	DIAM (mm)	C.TOTAL	QUANT + 0%	UNIT	PESO + 0% (kg)
CA60	5.0	72.5	7	12 m	17.7
CA60	5.0	689.8	83	rolo (170 kg)	391.8
CA60	5.0	115.1	-	rolo (170 kg)	151.2
CA60	5.0	115.1	-	rolo (170 kg)	25.5

PESO TOTAL (kg): 409.5

CA60: 171.7

Volume de concreto (C-29) = 5.65 m³

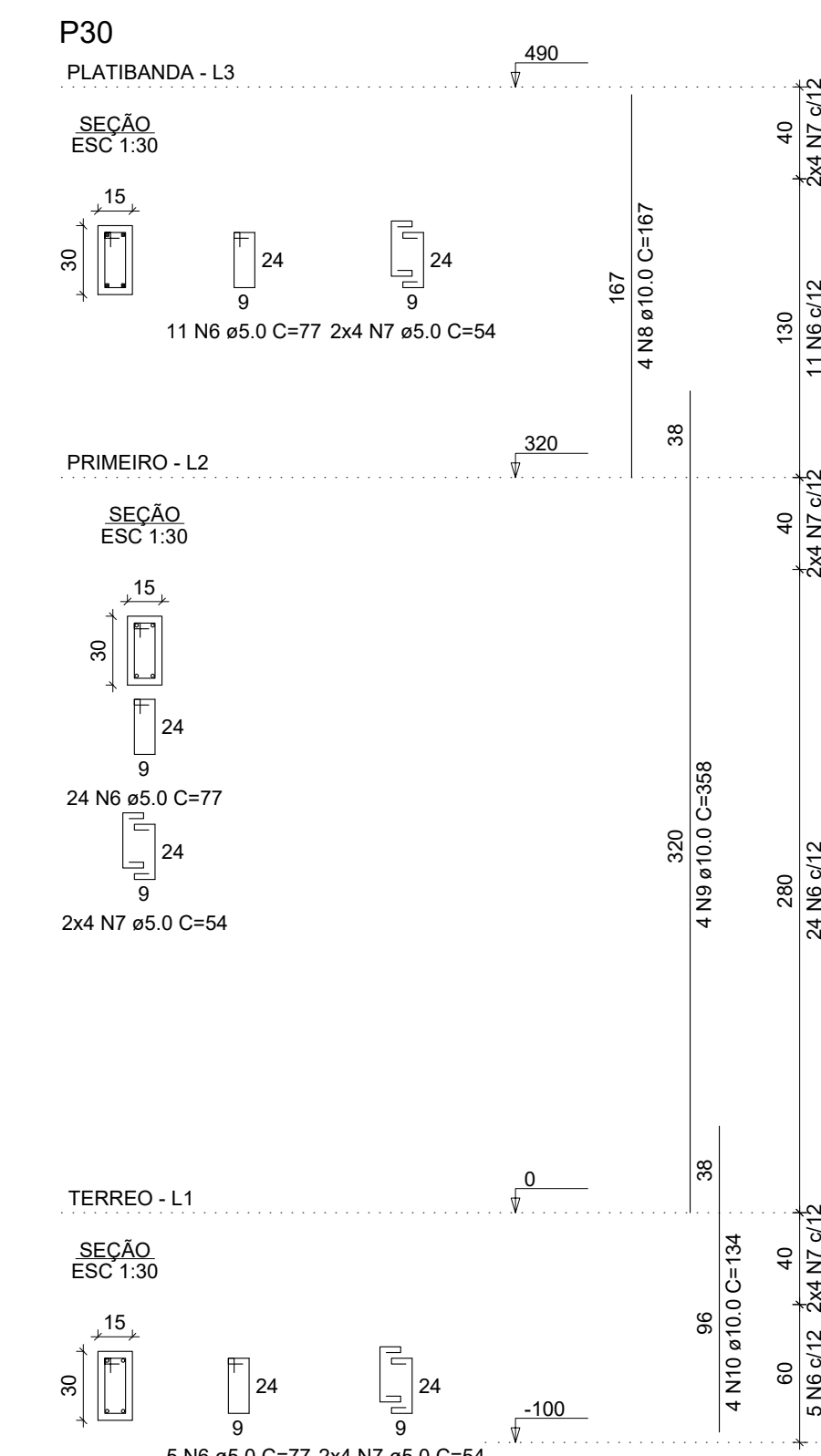
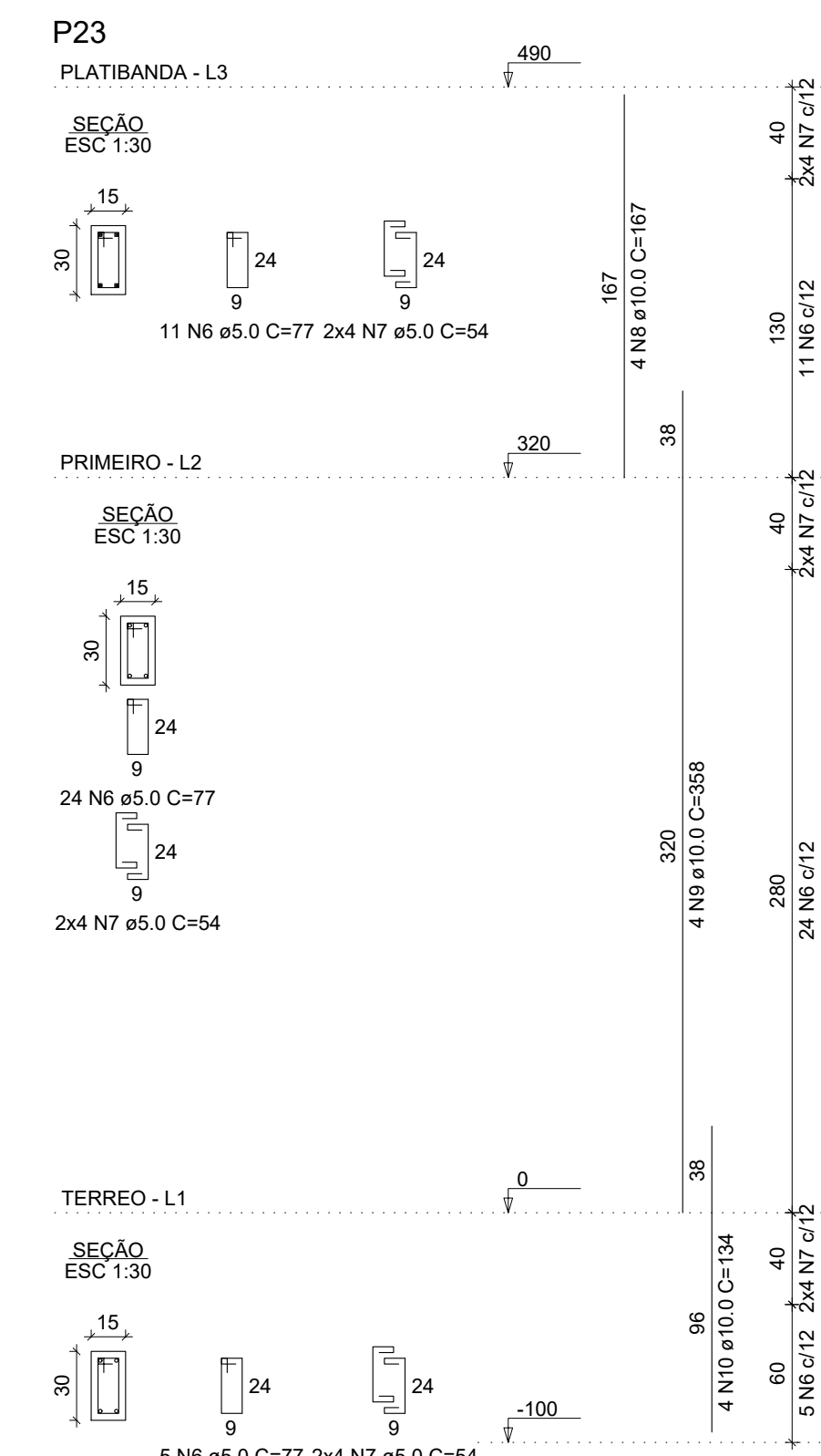
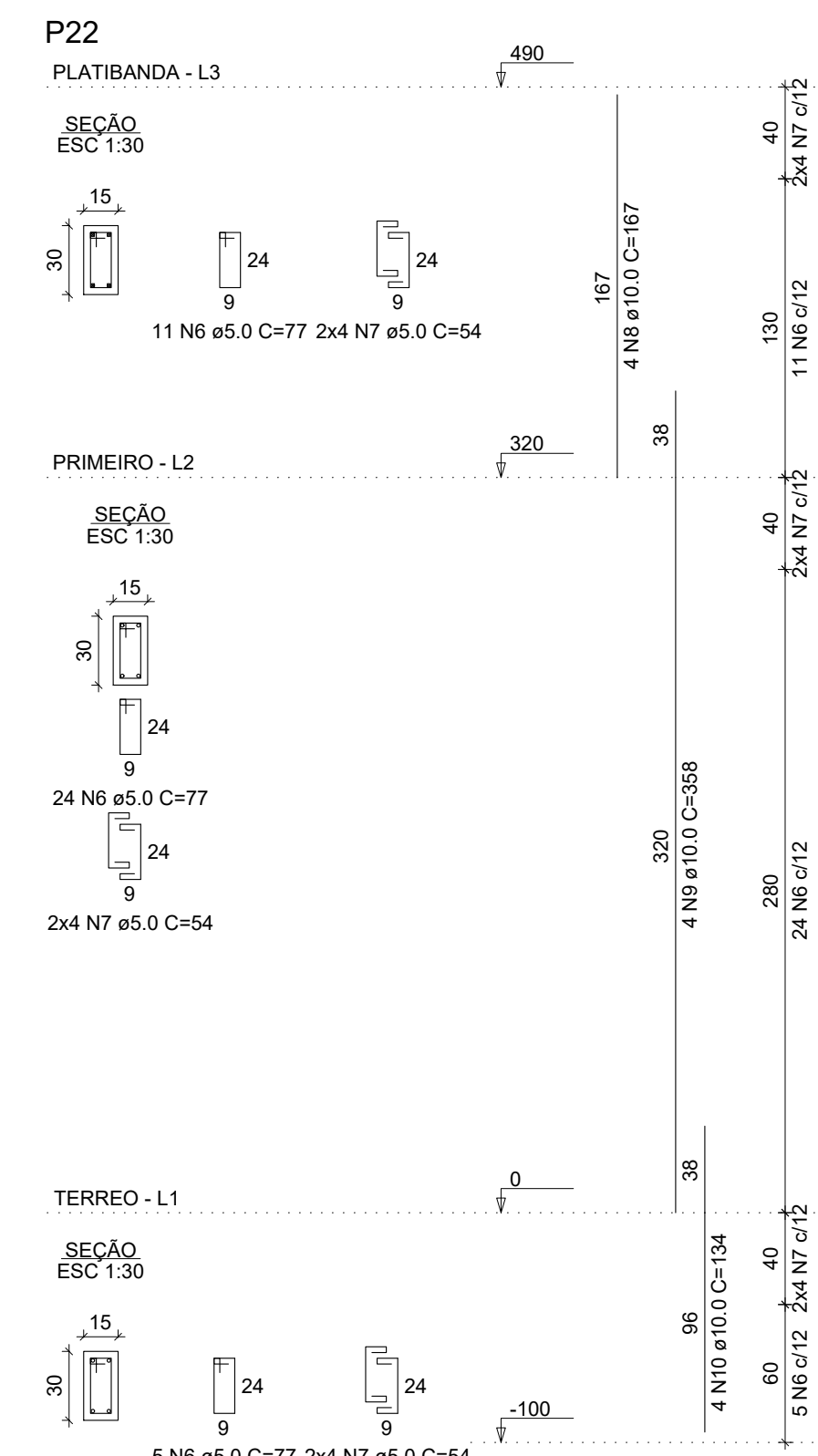
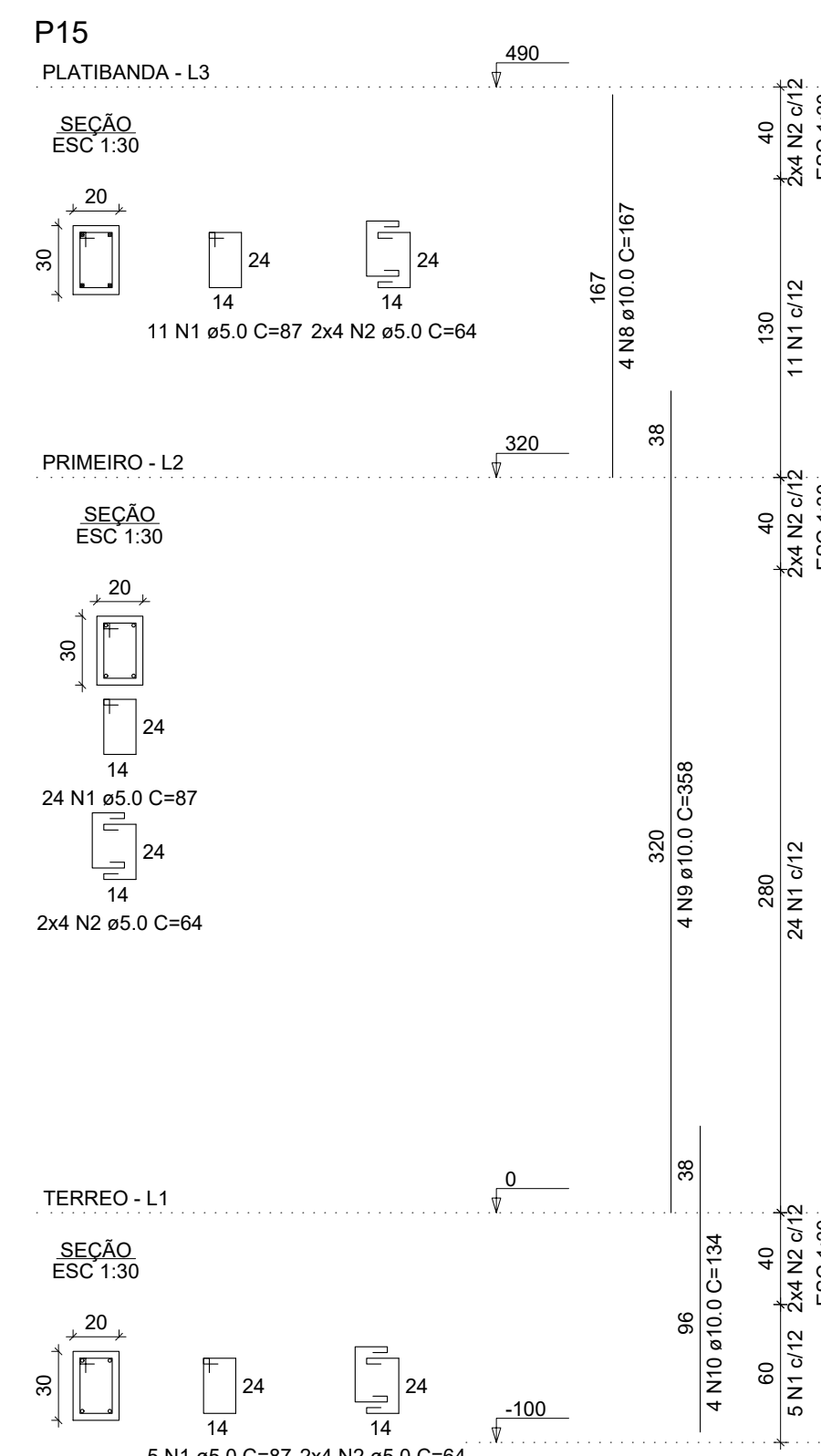
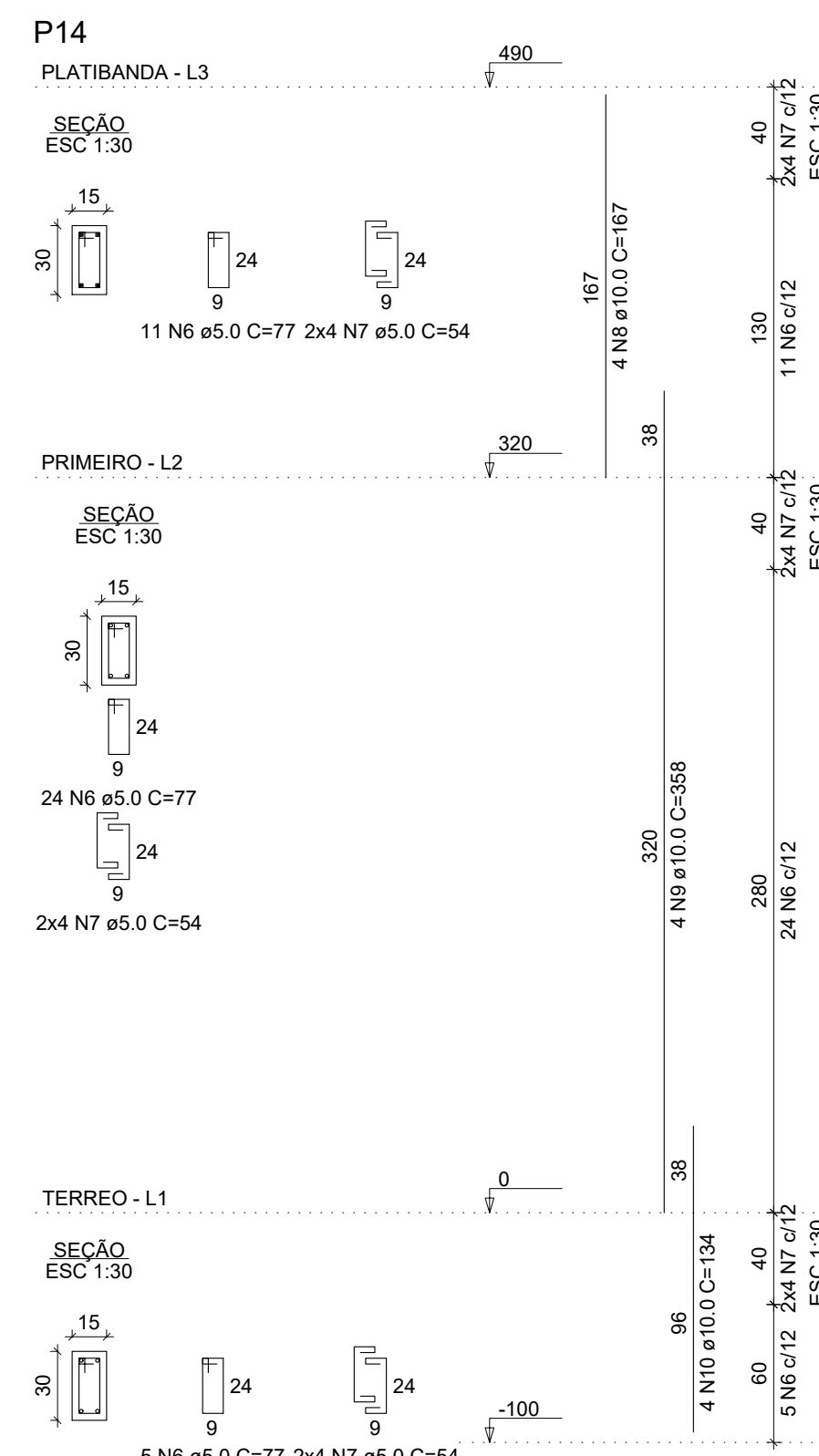
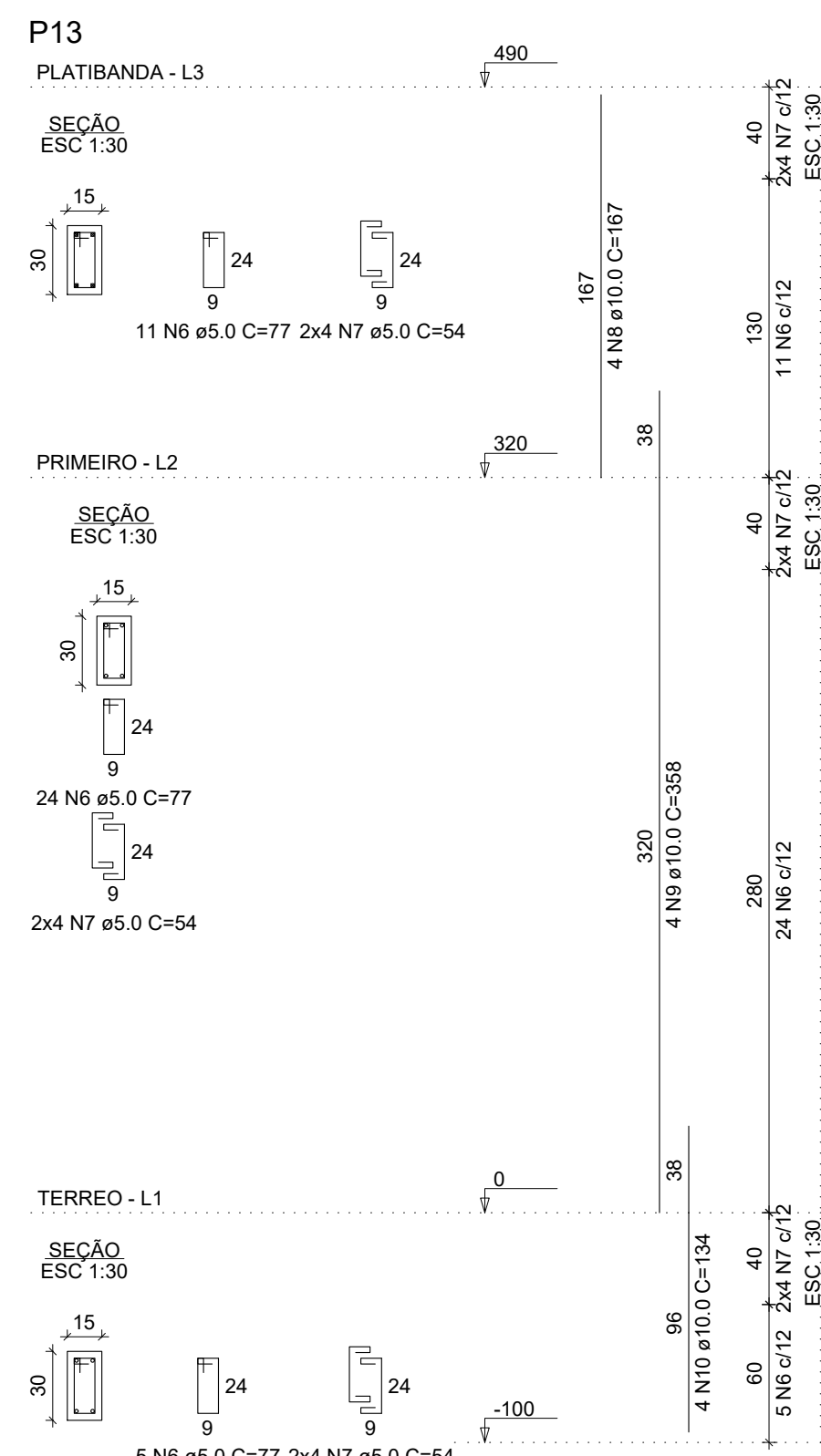
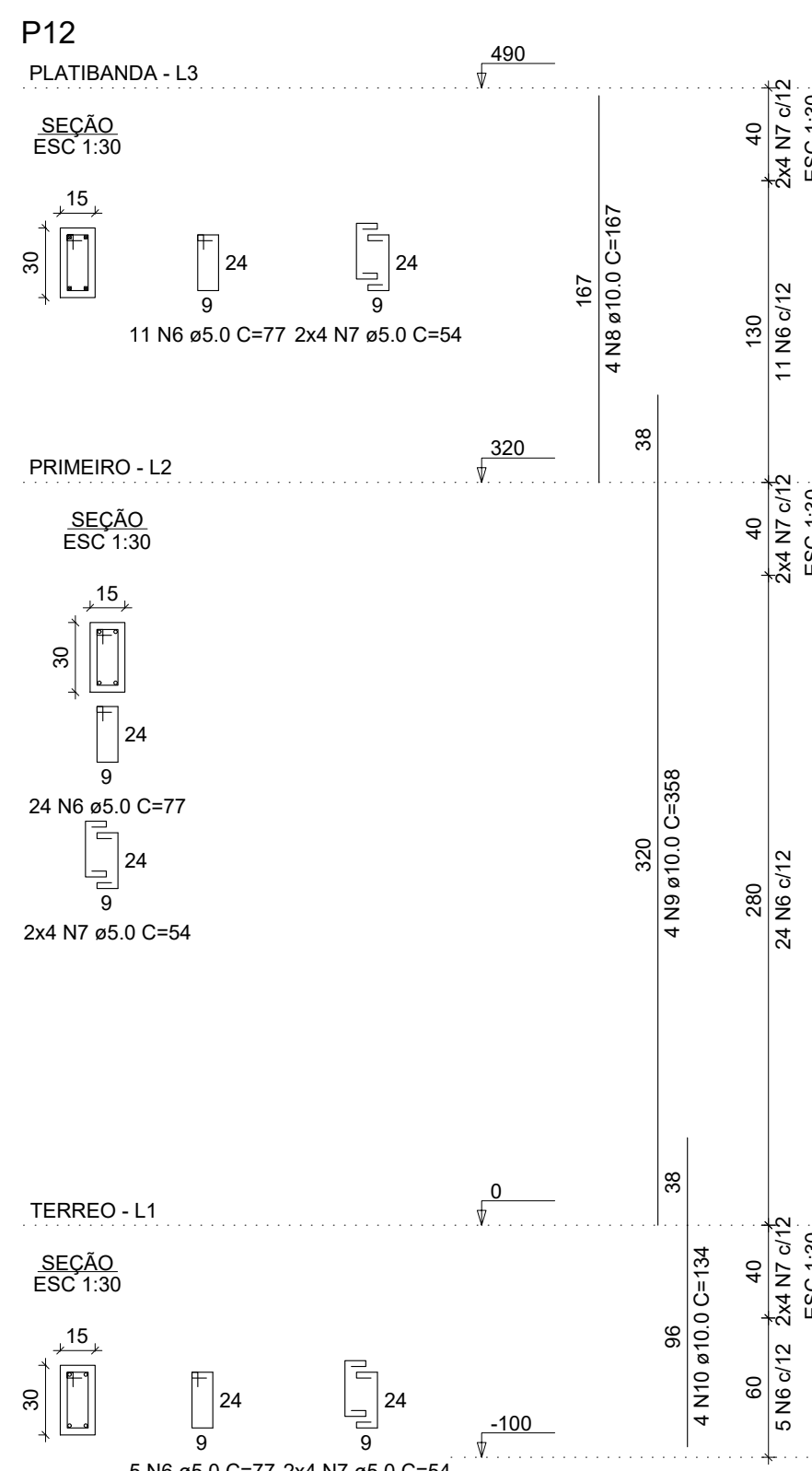
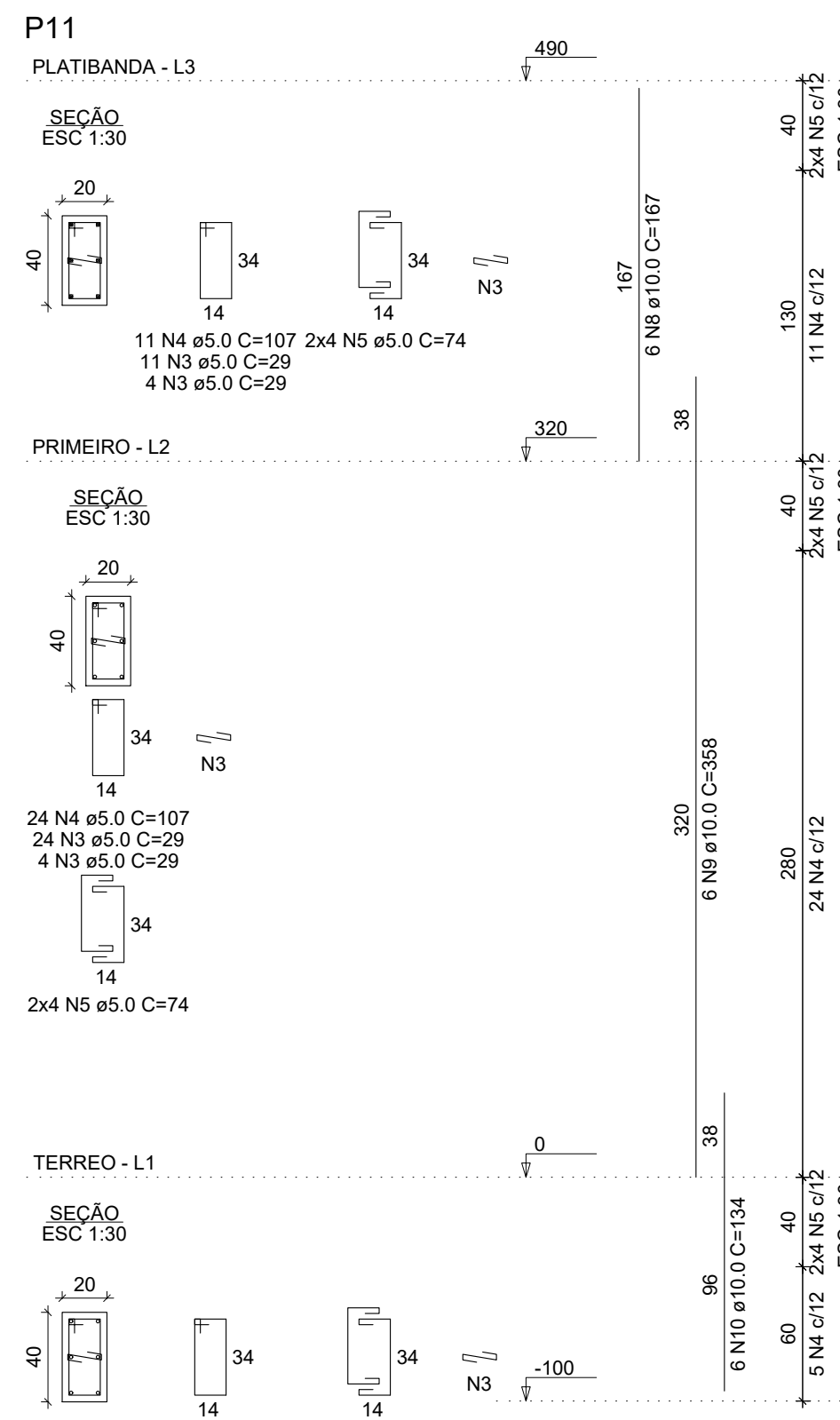
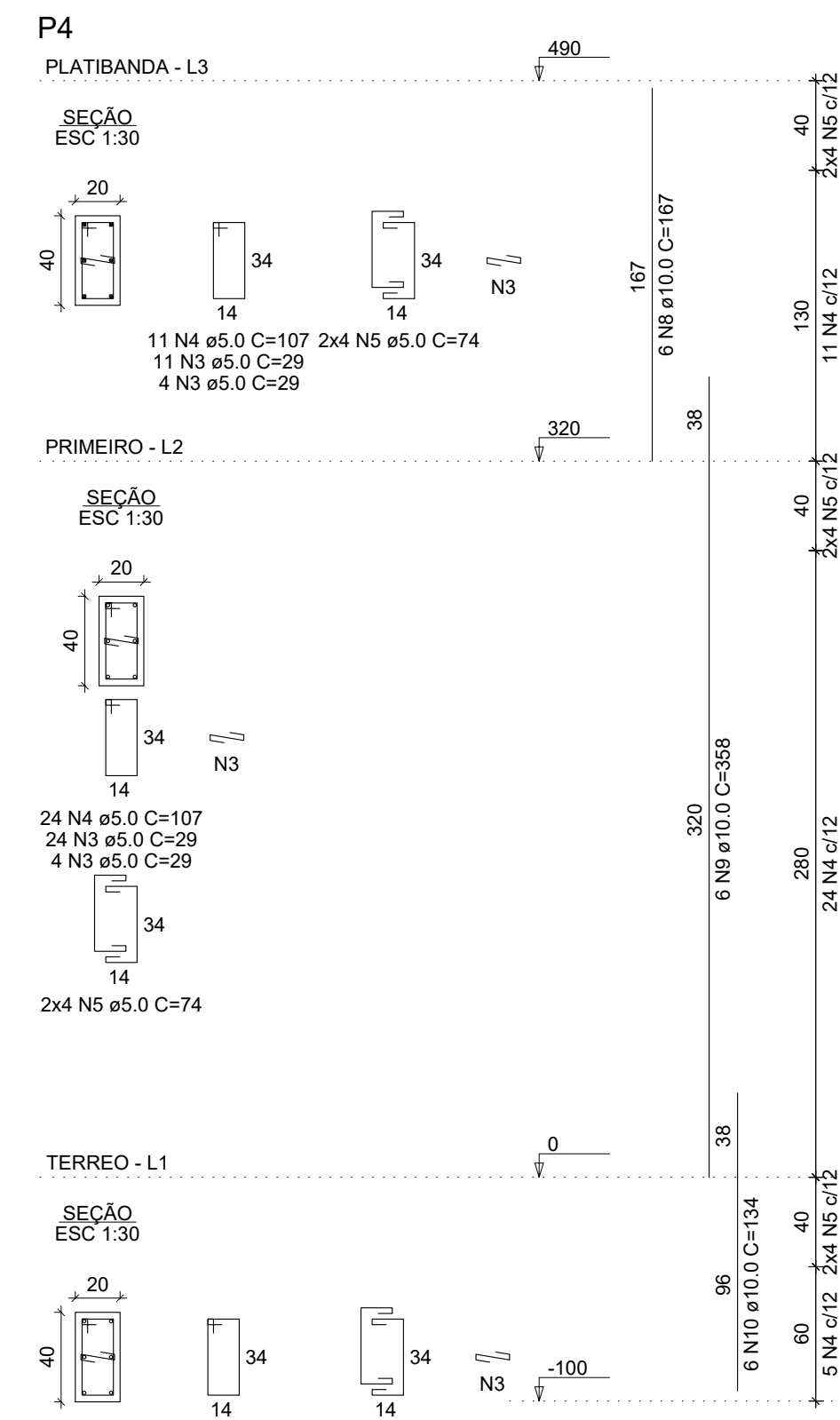
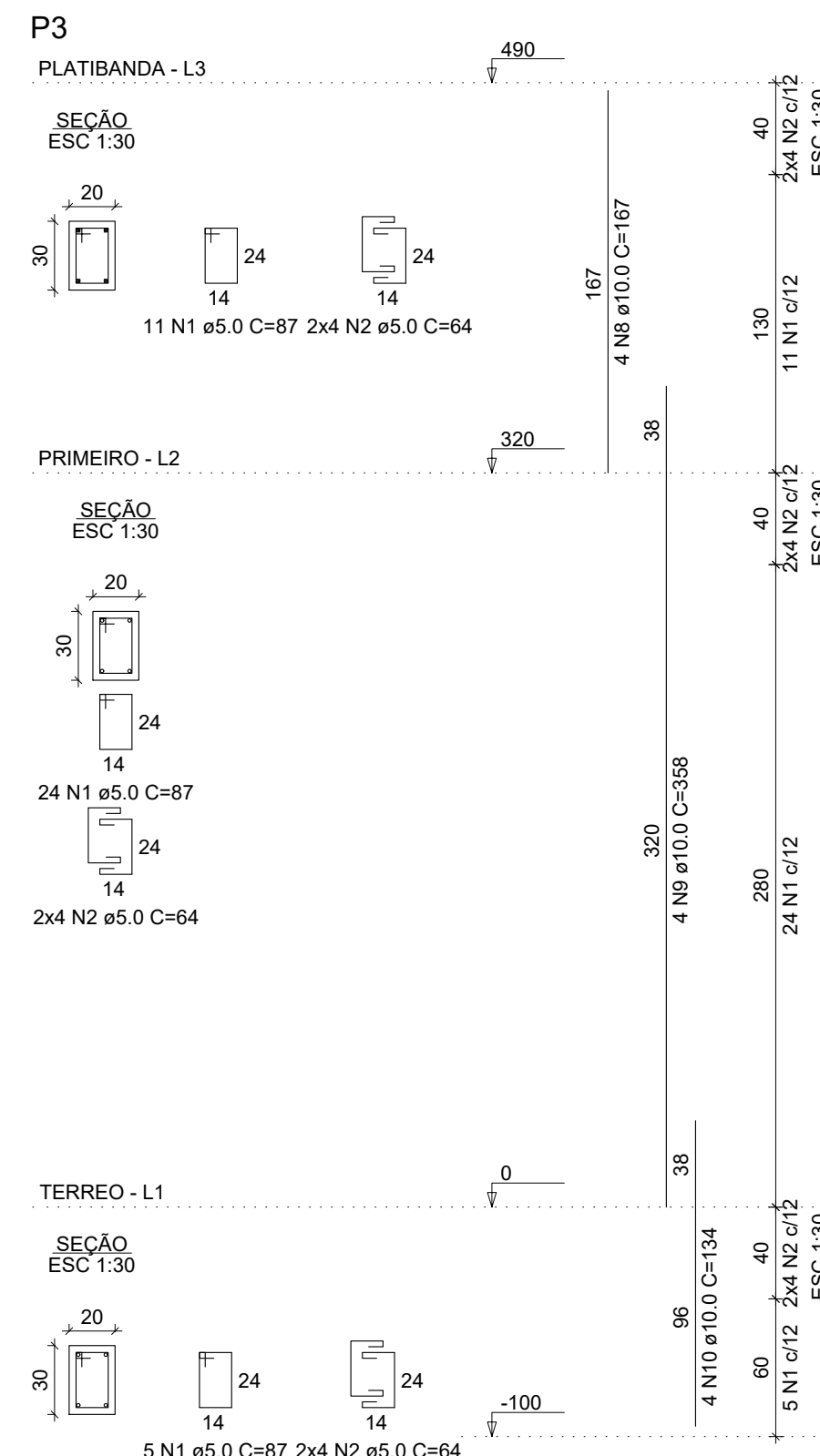
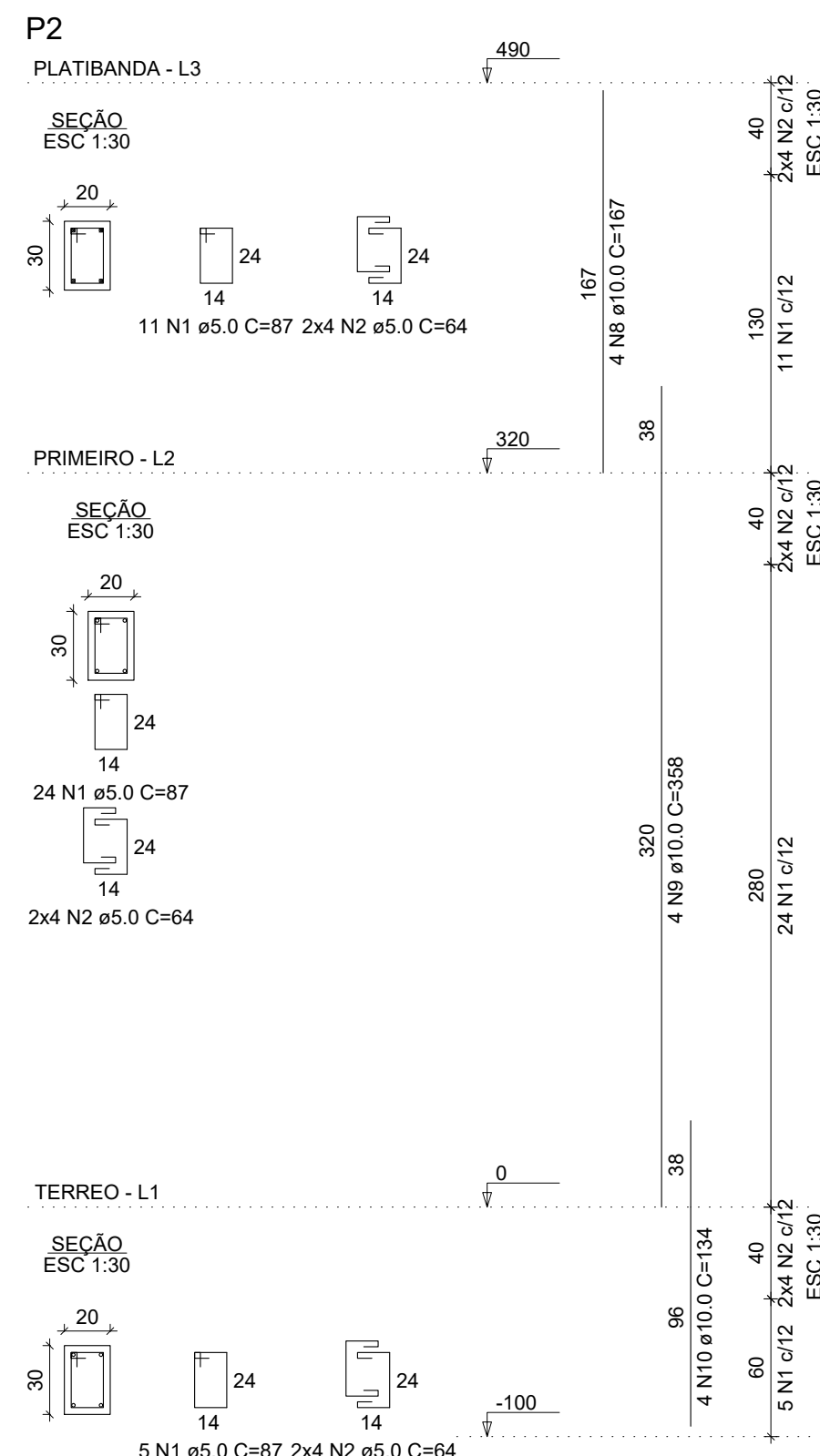
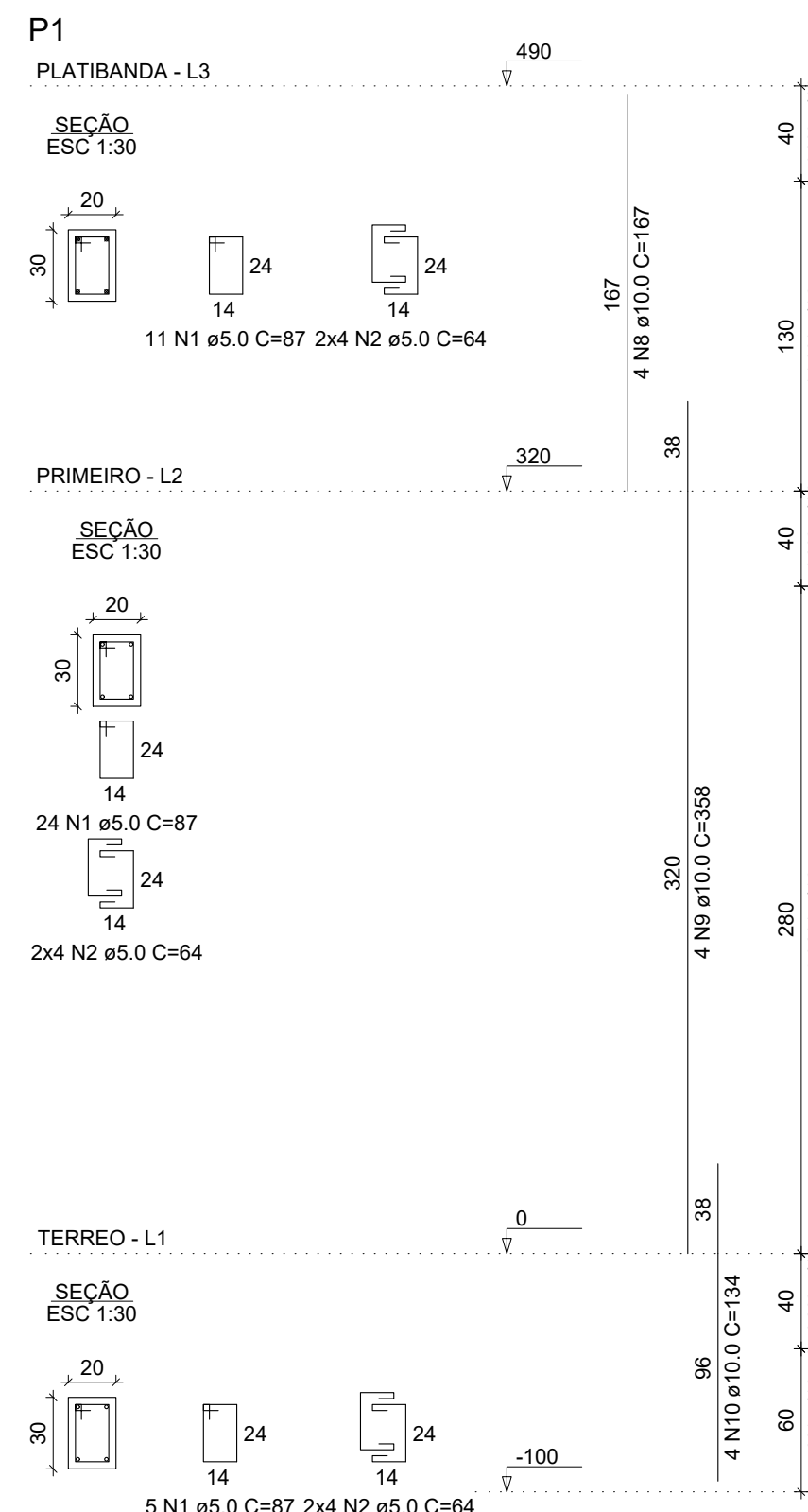
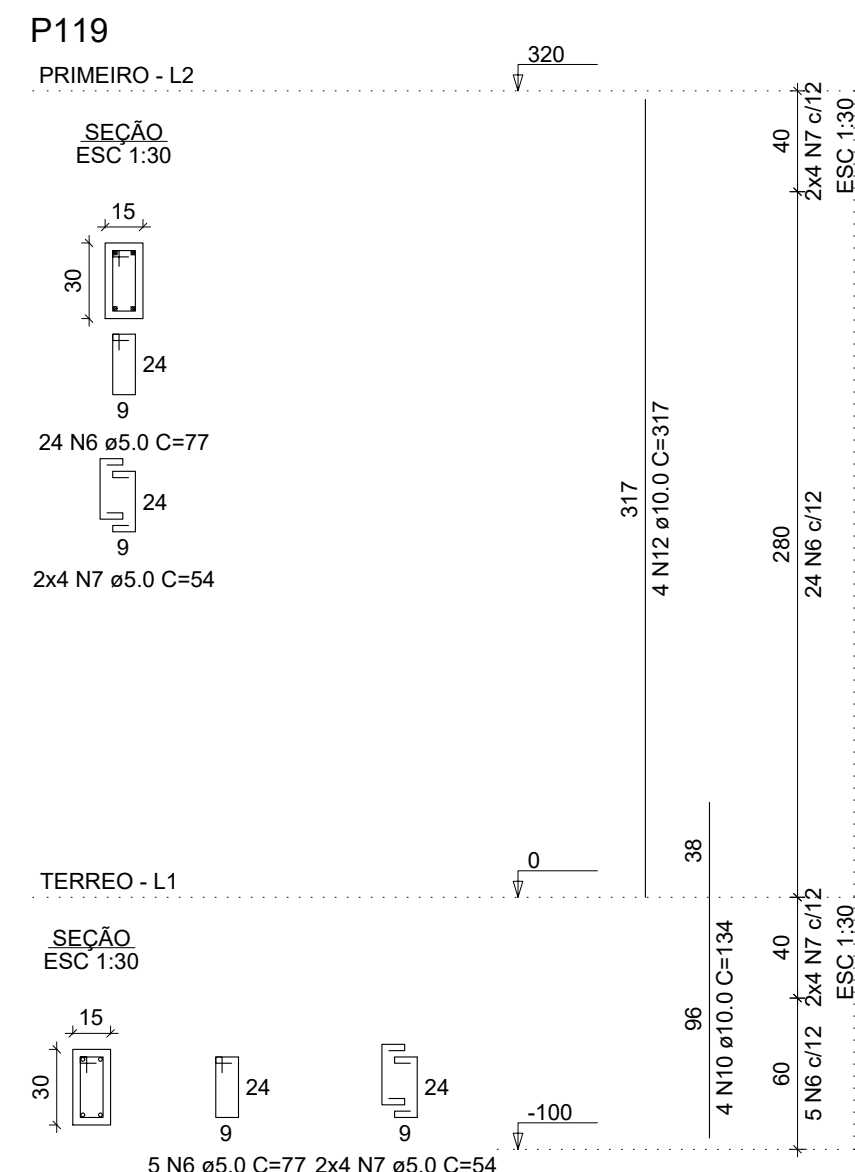
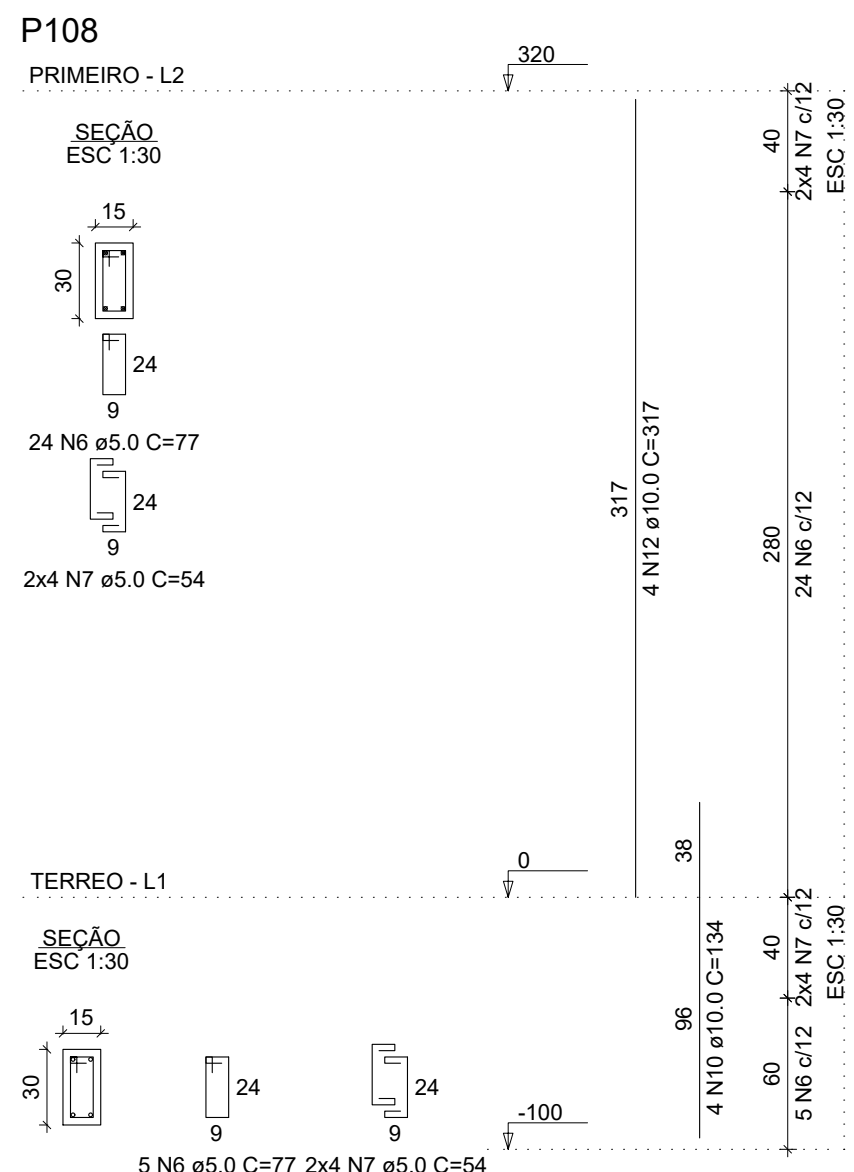
Área de forma = 102.27 m²



ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	160	87	13920
	2	5.0	98	64	6144
	3	5.0	104	29	3016
	4	5.0	80	107	8560
	5	5.0	46	14	644
	6	5.0	848	77	65296
	7	5.0	508	54	27432
	8	10.0	108	167	18036
	9	10.0	100	358	35800
	10	10.0	108	134	14472
	11	10.0	8	52	416
	12	10.0	8	317	2536
	13	16.0	8	117	936
	14	16.0	8	380	3040
	15	16.0	16	121	1936

ACO	DIAM (mm)	C.TOTAL (m)	QUANT + 9% (Barras)	UNIT	PESO + 9% (kg)
CA50	10.0	715.9	60	12 m	441.3
CA60	16.0	75.1	7	12 m	119.6
CA60	5.0	1279.2	-	role (170 kg)	197.2
PESO TOTAL					
CA50	559.9				
CA60	197.2				
Volume de concreto (C-25) = 8.05 m³					
Área de forma = 151.52 m²					

OBS. ESSA TABELA SE REFERE TAMBEM A FERRAGEM DA PRANCHA PILARES DA ESTRUTURA III-B.



RELAÇÃO DO AÇO

P1-L3	P1-L2	P1-L1
P2-L3	P2-L2	P2-L1
P3-L3	P3-L2	P3-L1
P4-L3	P4-L2	P4-L1
P11-L3	P11-L2	P11-L1
P12-L3	P12-L2	P12-L1
P13-L3	P13-L2	P13-L1
P14-L3	P14-L2	P14-L1
P22-L3	P22-L2	P22-L1
P23-L3	P23-L2	P23-L1
P30-L3	P30-L2	P30-L1
P38-L3	P38-L2	P38-L1
P48-L3	P48-L2	P48-L1
P68-L3	P68-L2	P68-L1
P78-L3	P78-L2	P78-L1
P84-L3	P84-L2	P84-L1
P92-L3	P92-L2	P92-L1
P108-L3	P108-L2	P108-L1
P118-L3	P118-L2	P118-L1

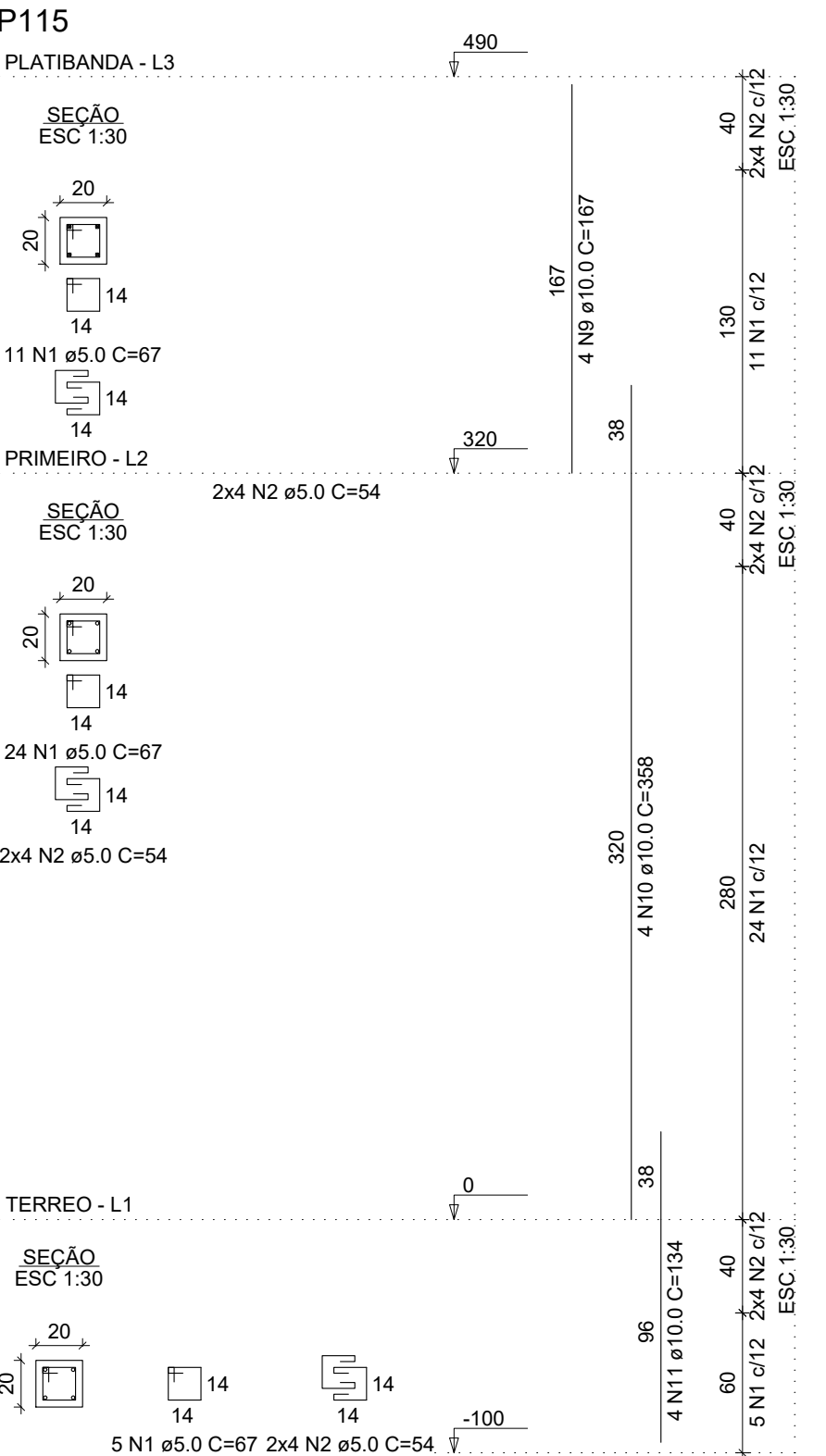
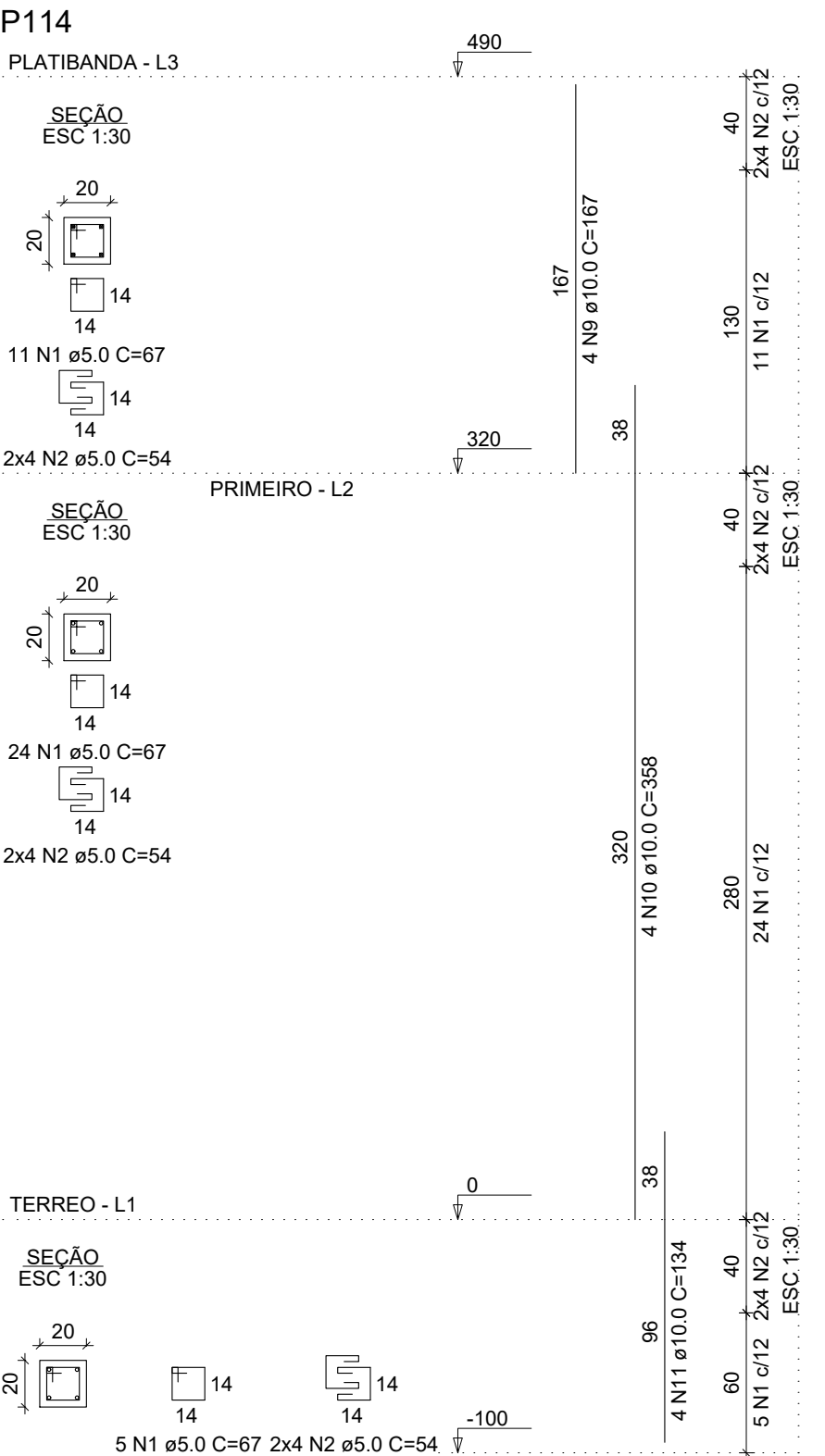
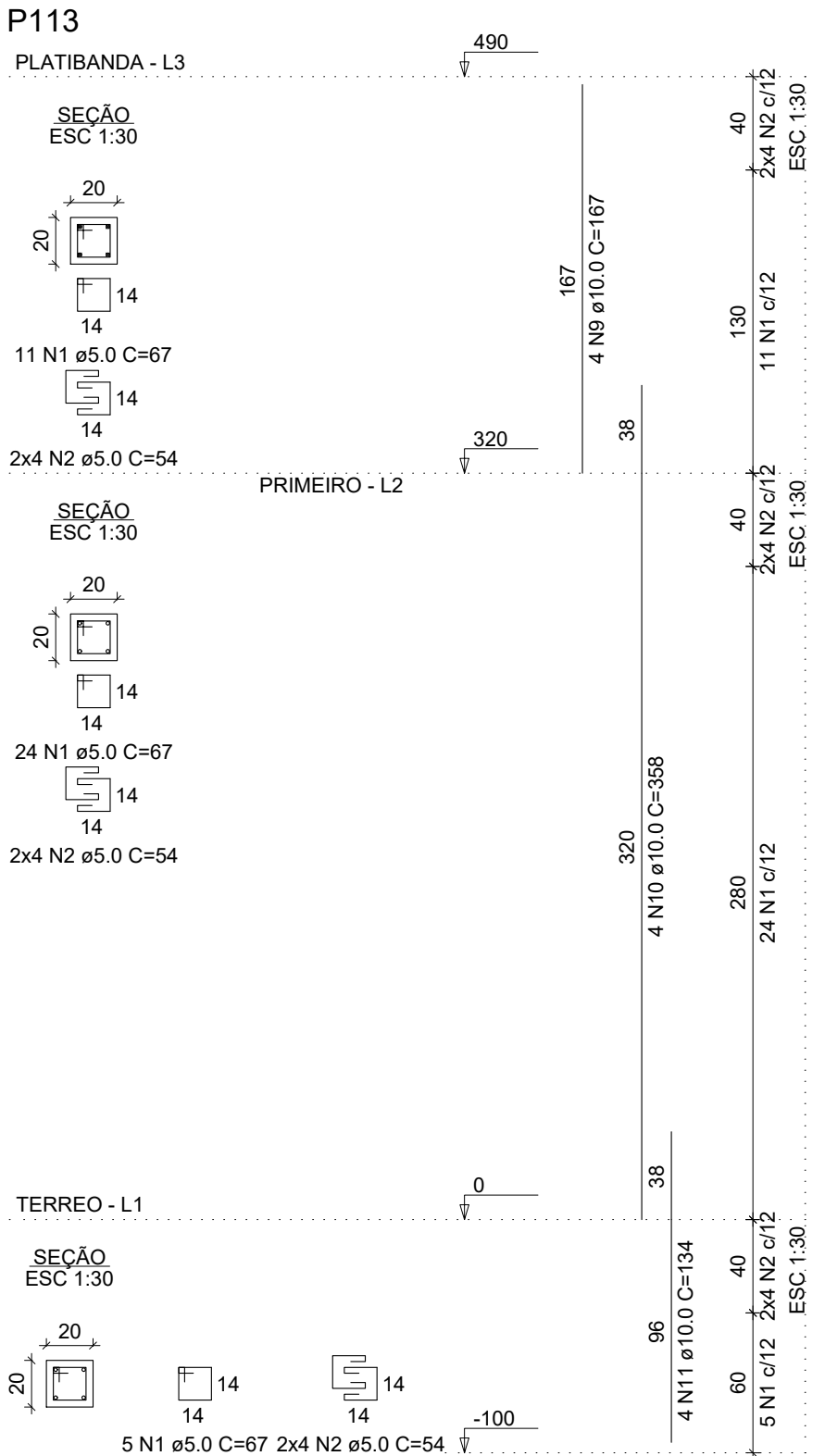
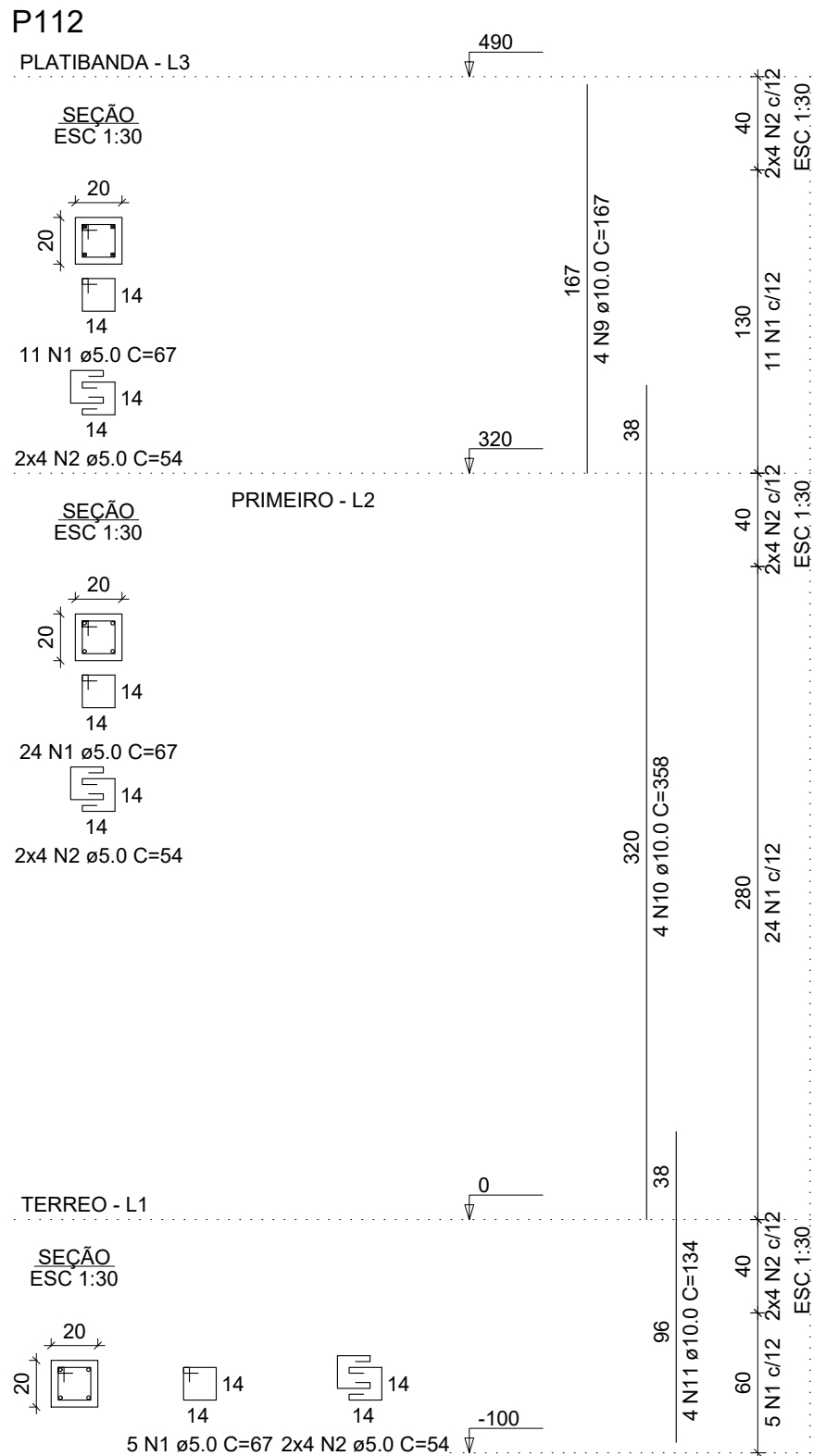
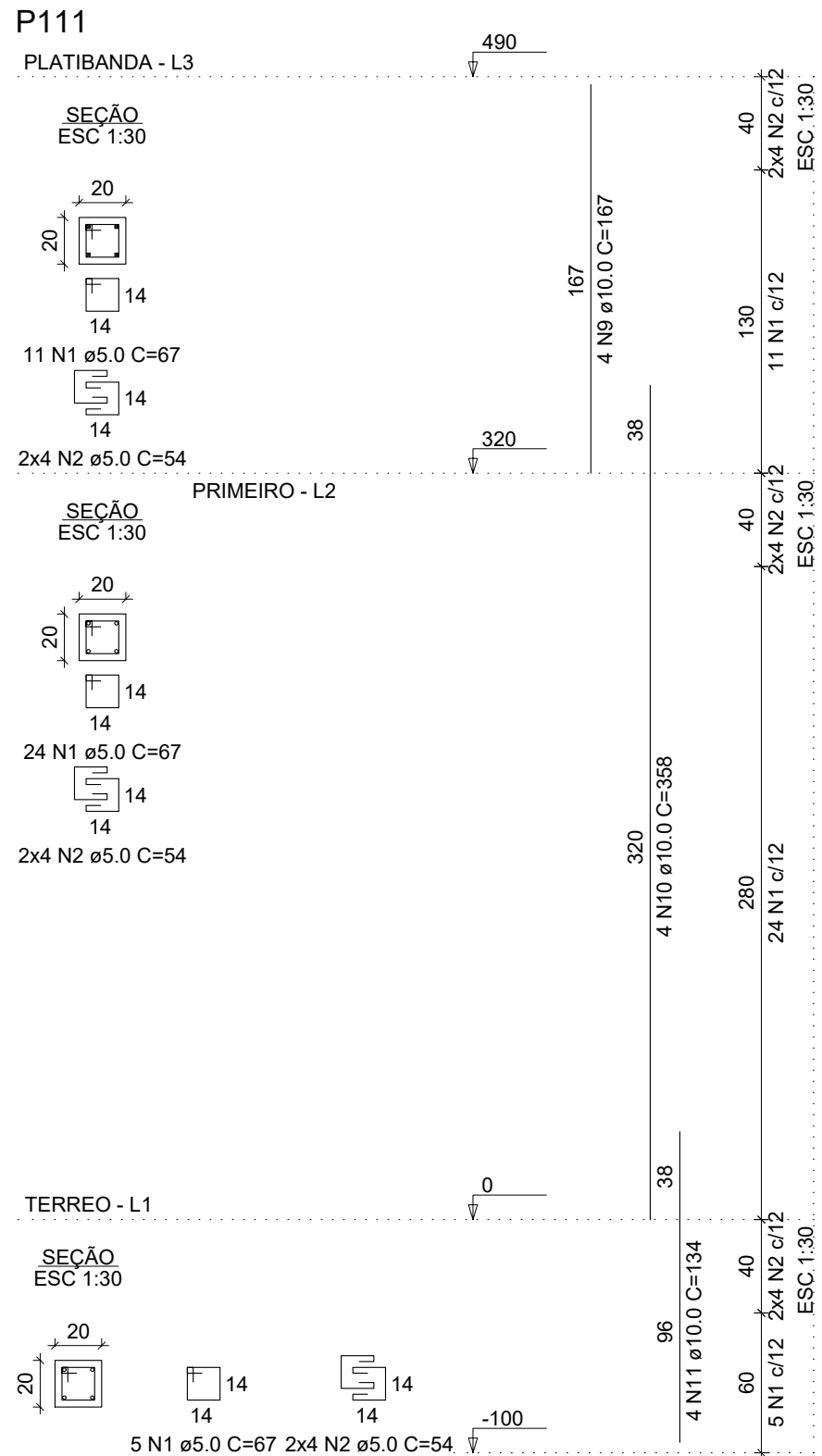
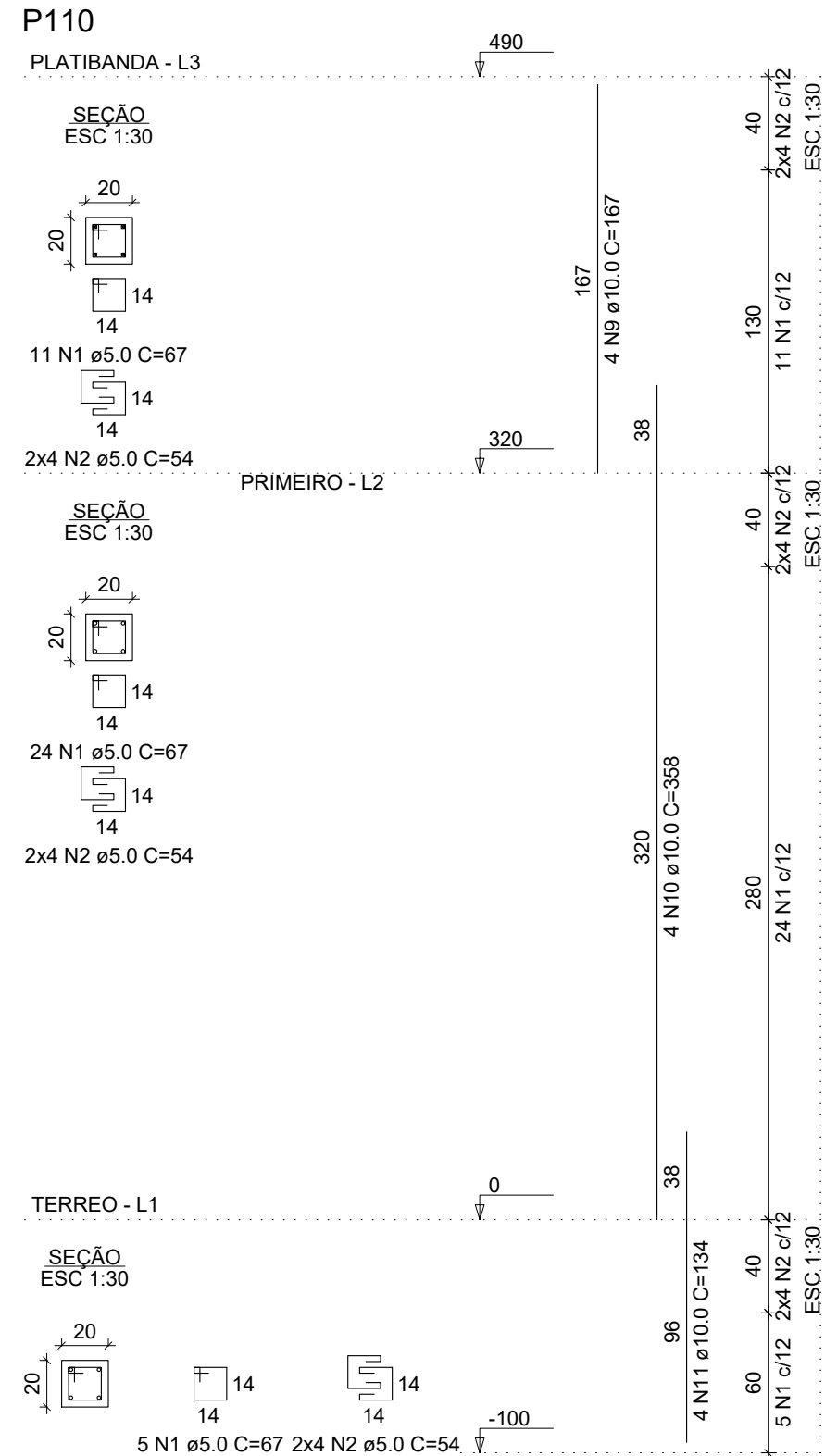
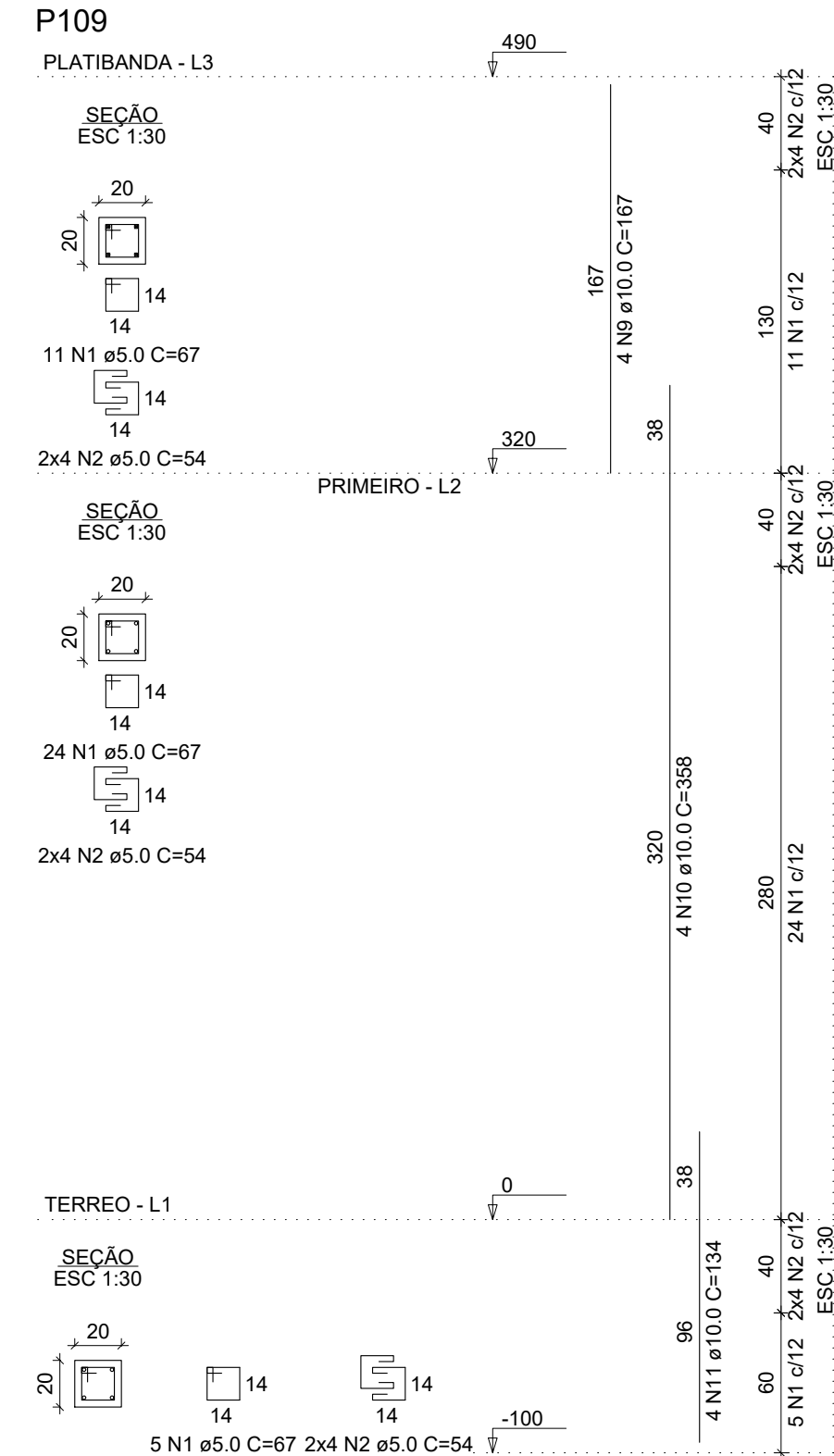
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	5.0	160	87	13920
	2	5.0	96	64	6144
	3	5.0	104	29	3016
	4	5.0	80	107	8560
CA50	5	5.0	48	14	672
	6	5.0	848	77	65296
	7	5.0	508	54	27432
	8	10.0	108	167	18036
	9	10.0	100	358	35800
	10	10.0	108	134	14472
	11	10.0	8	92	736
	12	10.0	8	317	2536
	13	16.0	8	317	2536
	14	16.0	8	380	3040
	15	16.0	16	121	1936

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT ± 0% (Barras)	UNIT	PESO ± 0% (kg)
CA50	10.0	715.8	60	12 m	441.3
CA50	16.0	75.1	7	12 m	115.6
CA50	5.0	1279.2	-	rolo (170 kg)	197.2

PESO TOTAL (kg)
CA50 559.9
CA50 197.2
Volume de concreto (C-25) = 8.05 m³
Área de forma = 151.52 m²

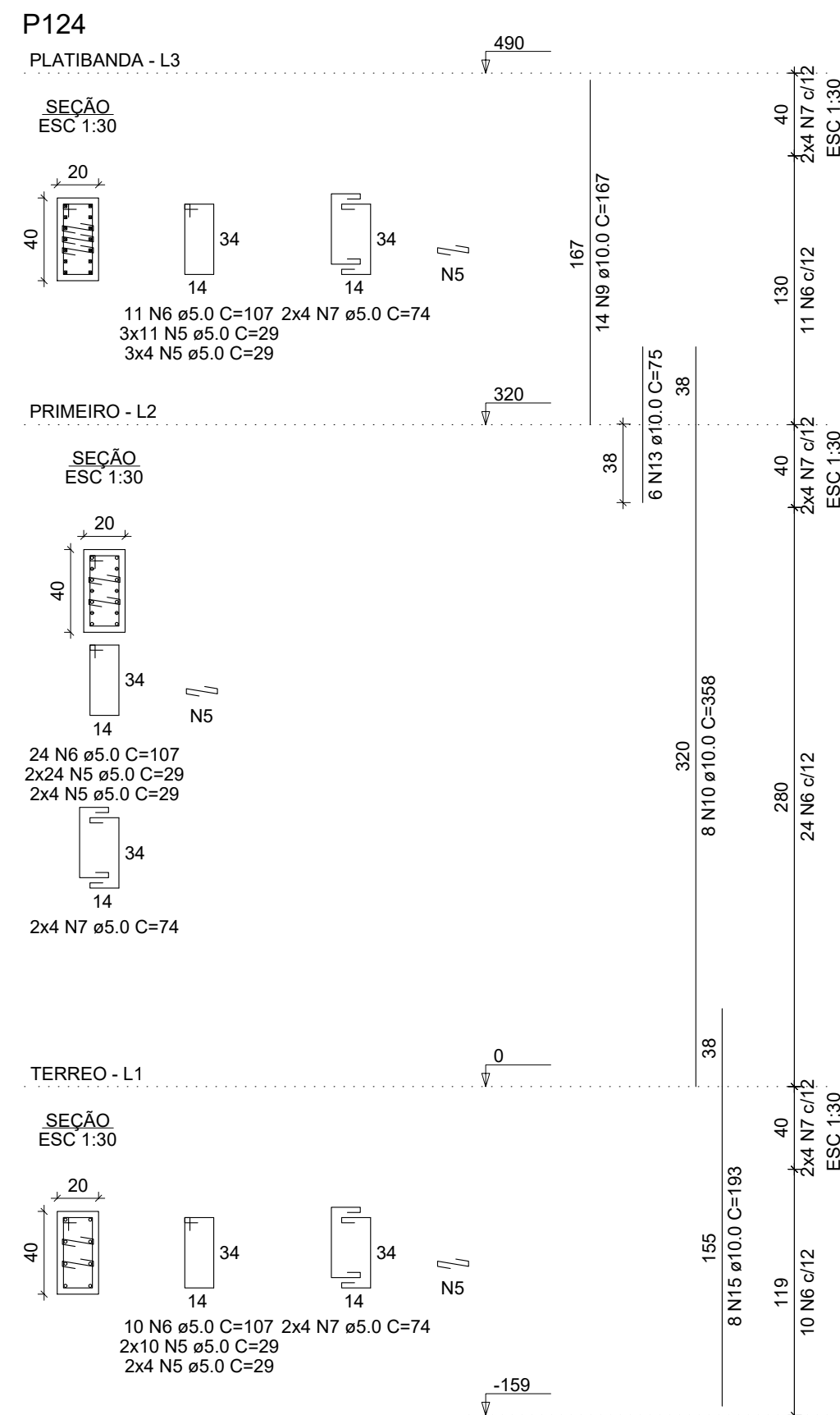
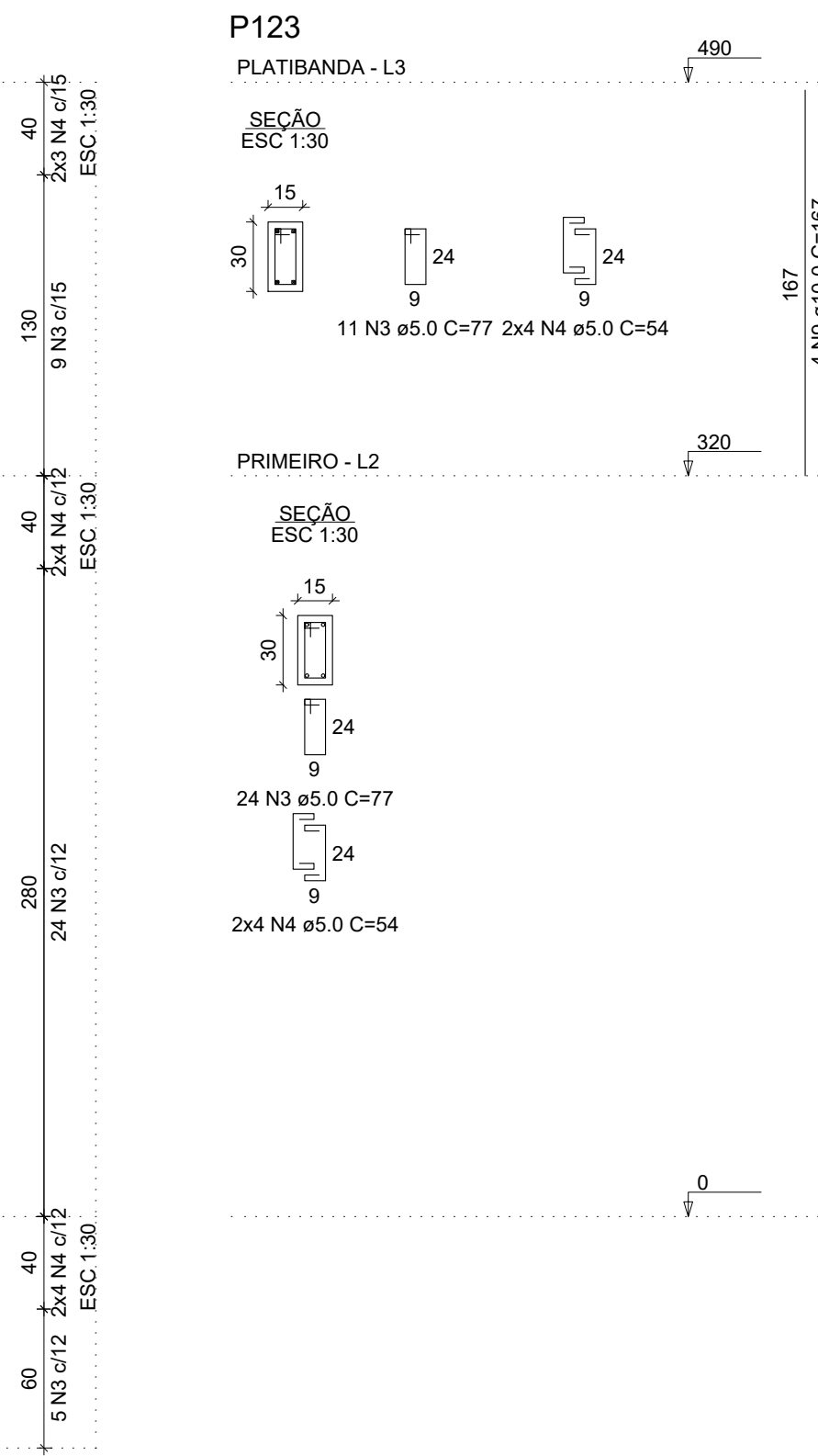
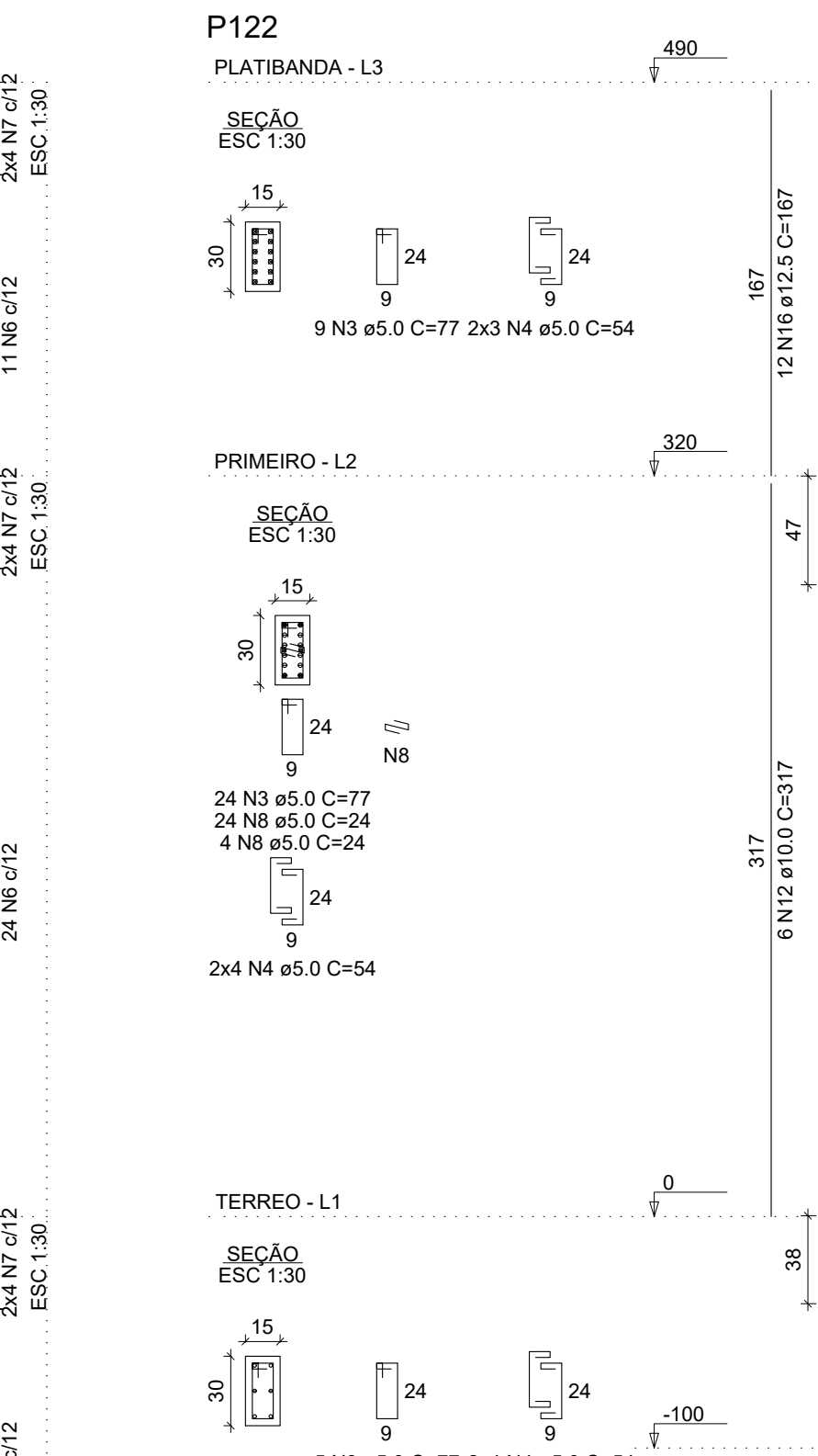
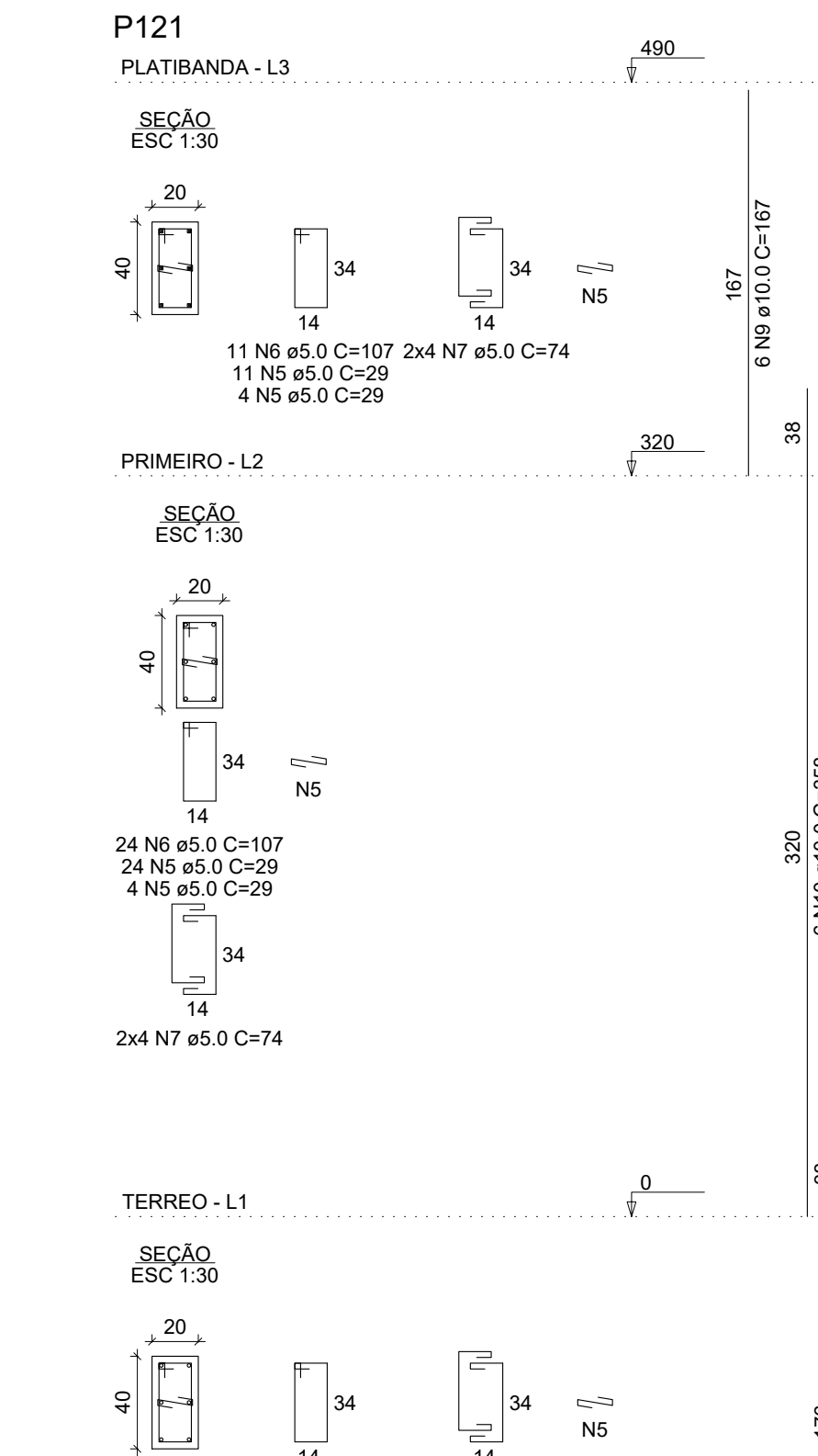
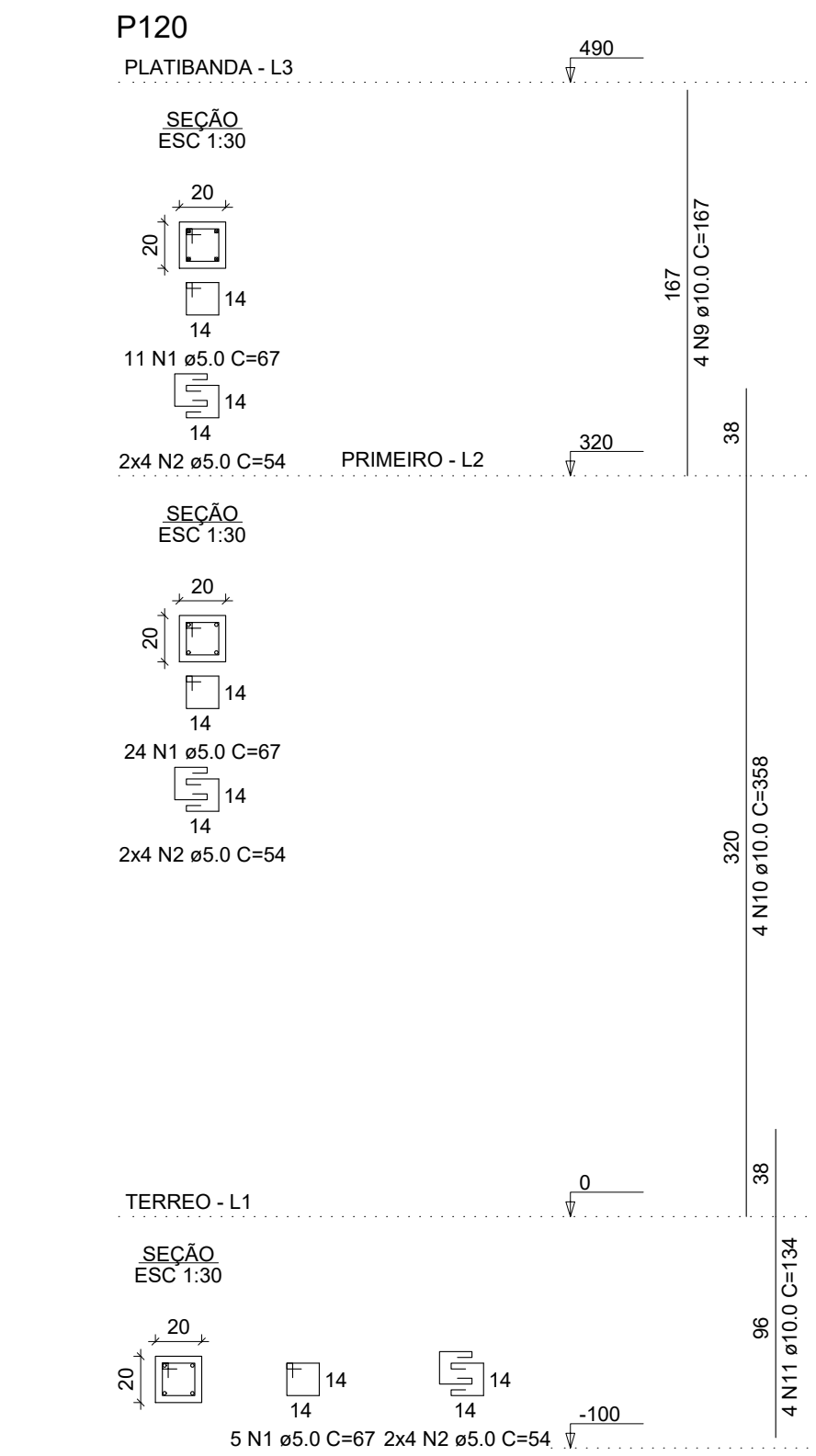
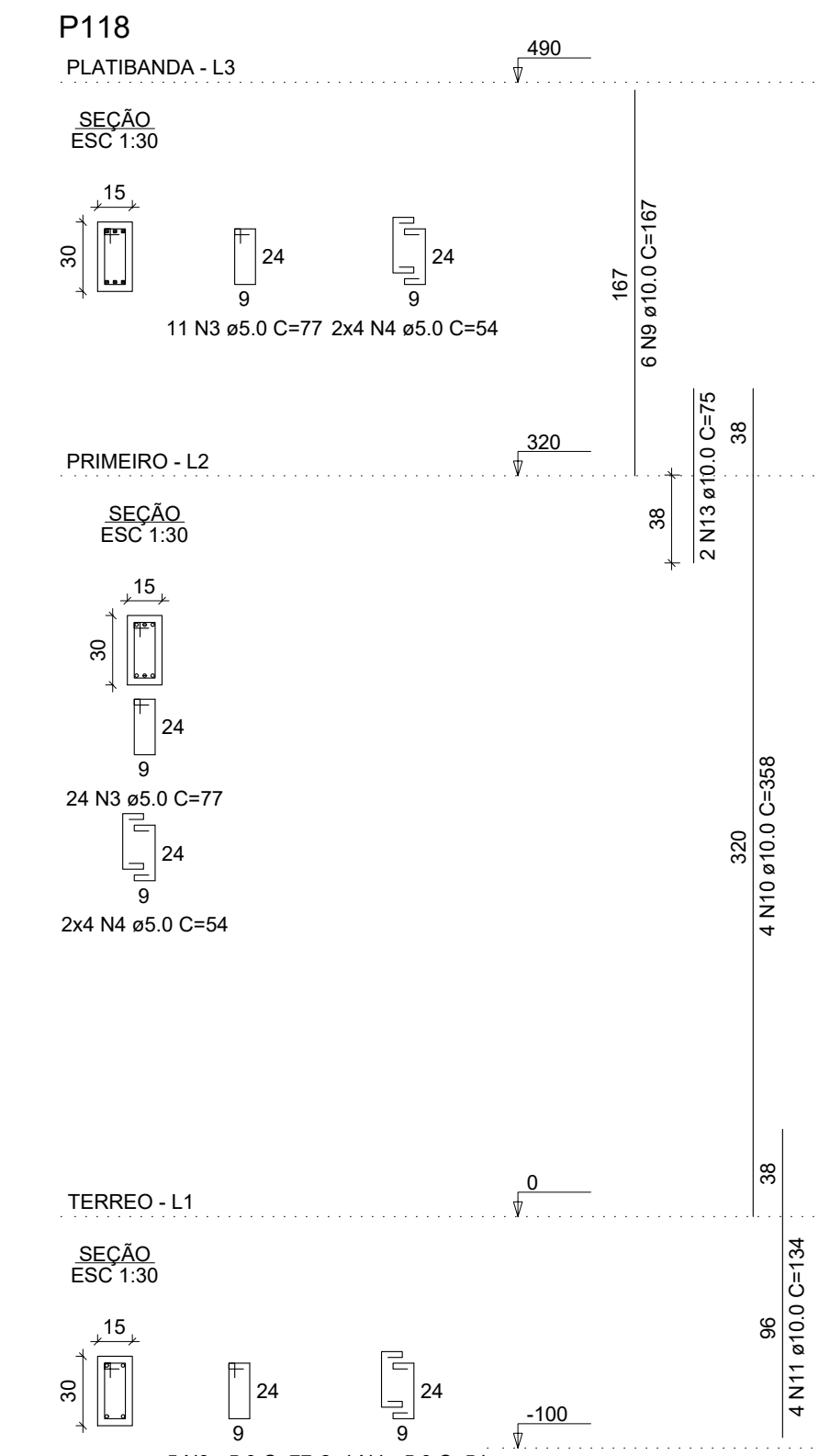
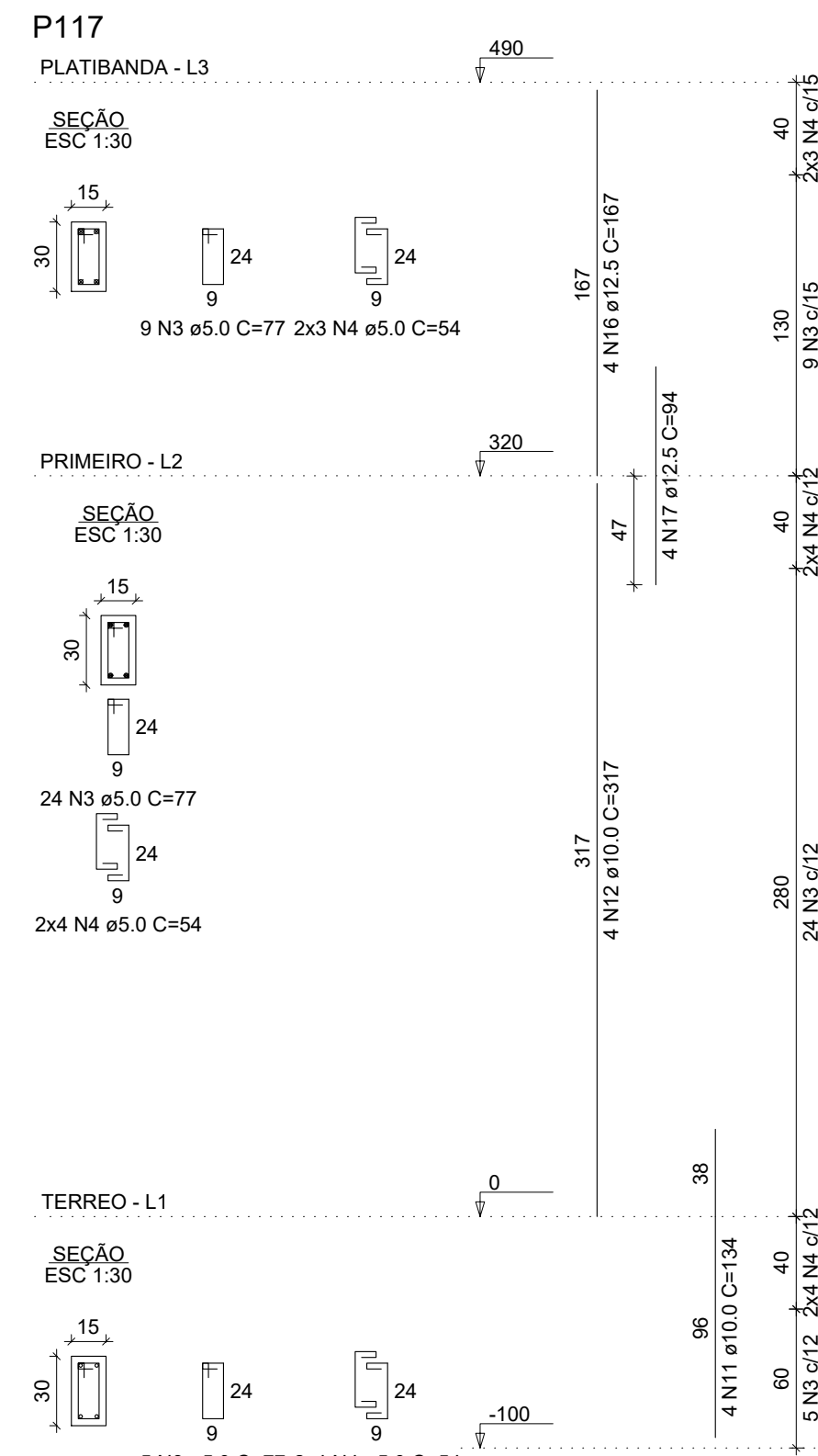
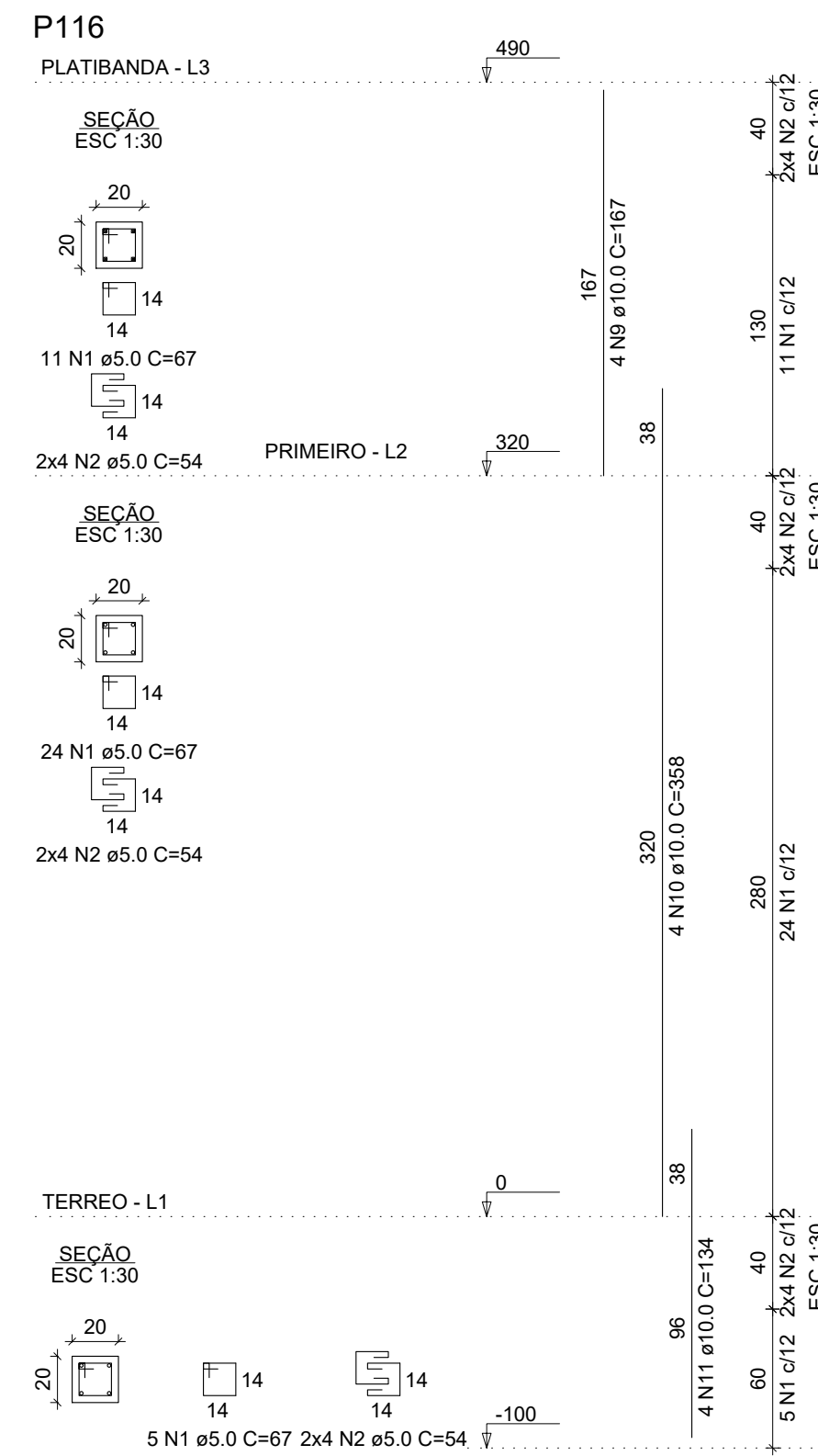
Obs: ESSA TABELA SE REFERE TAMBEM A FERRAGEM DA PRANCHA PILARES DA ESTRUTURA III-A.

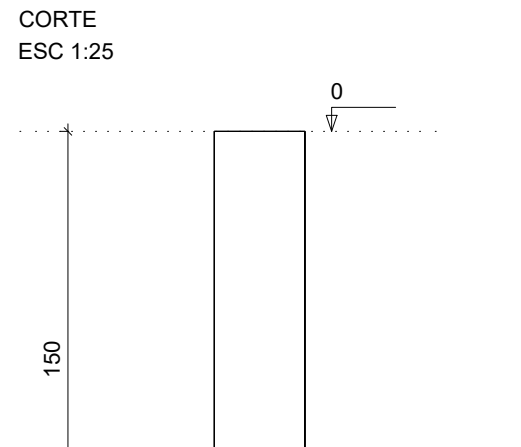
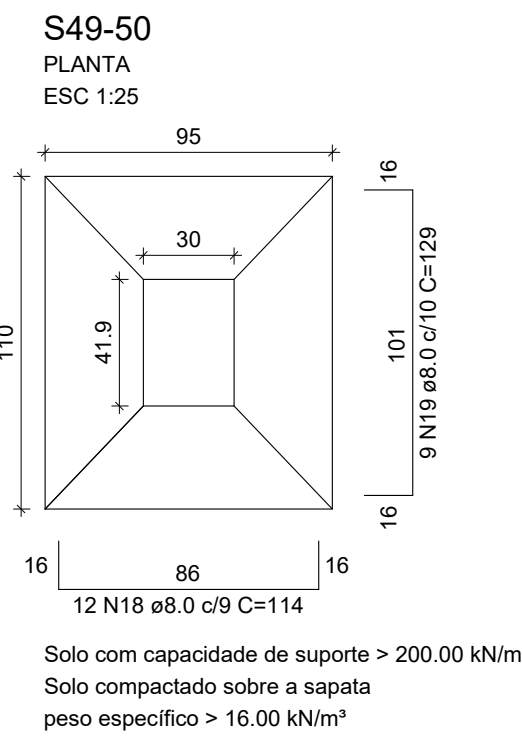
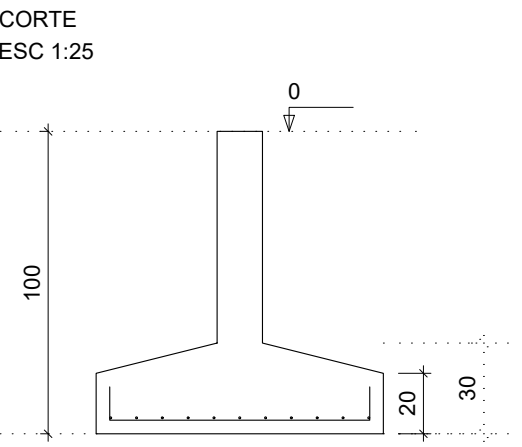
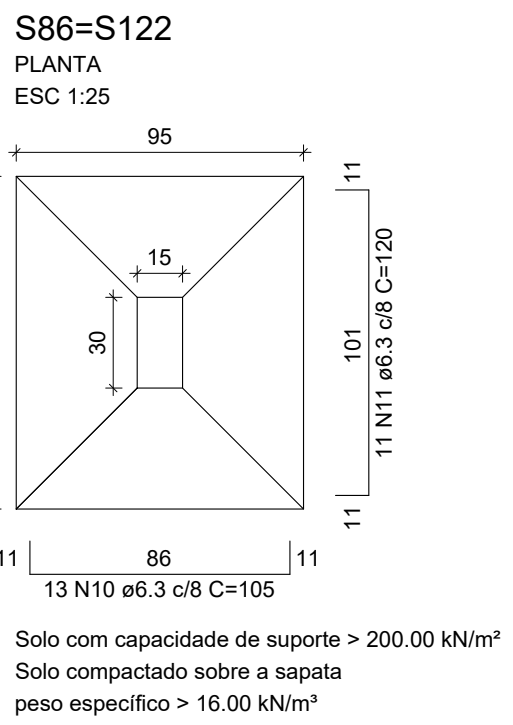
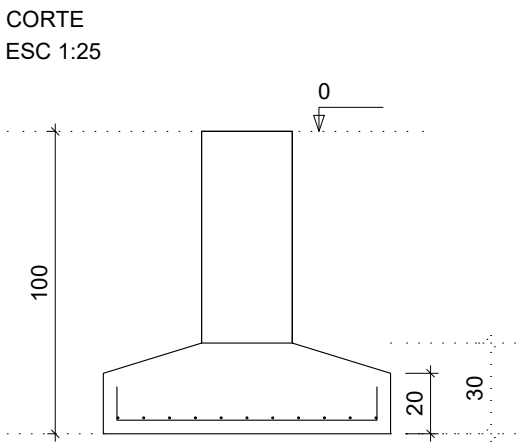
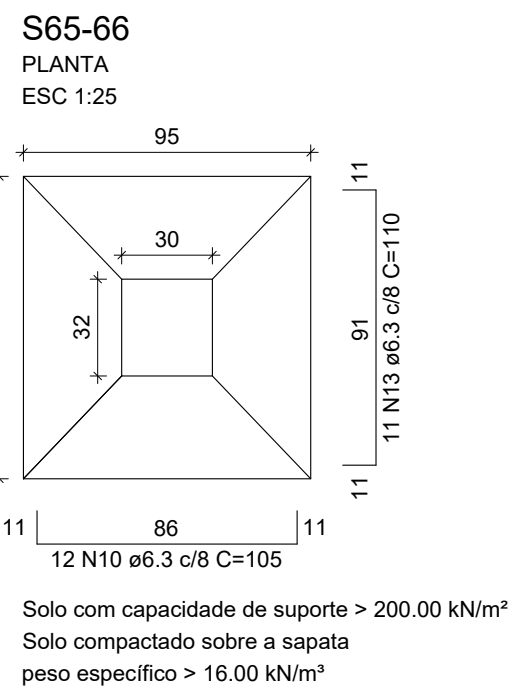
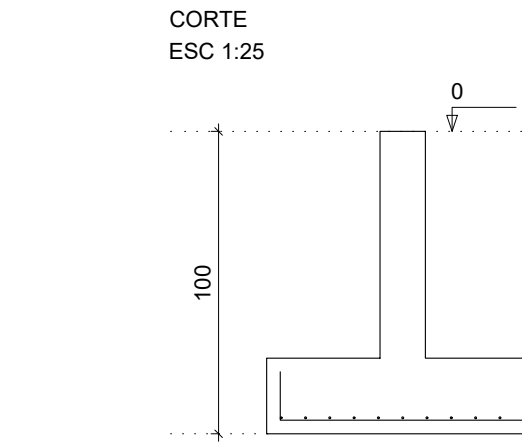
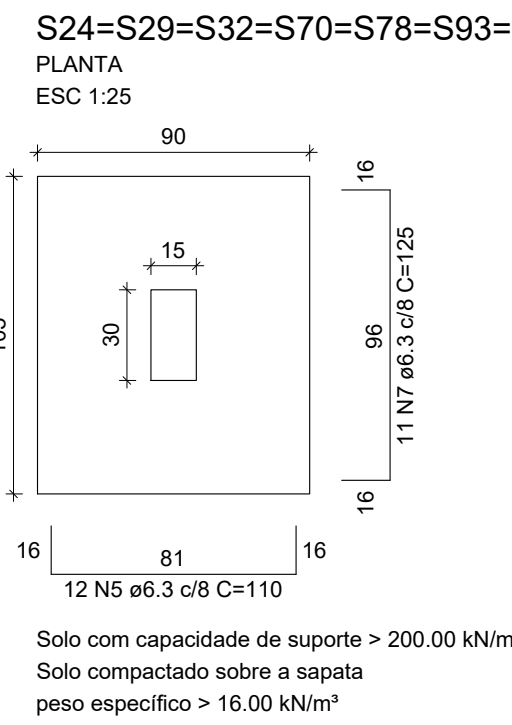
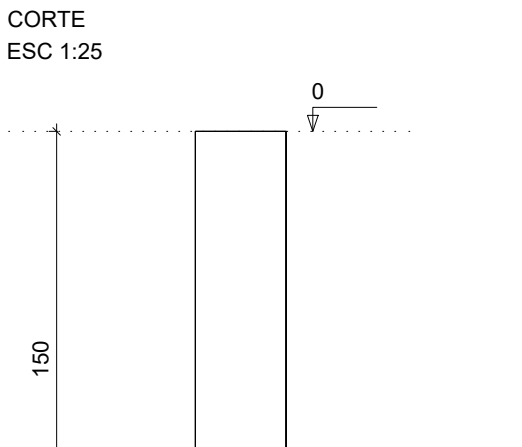
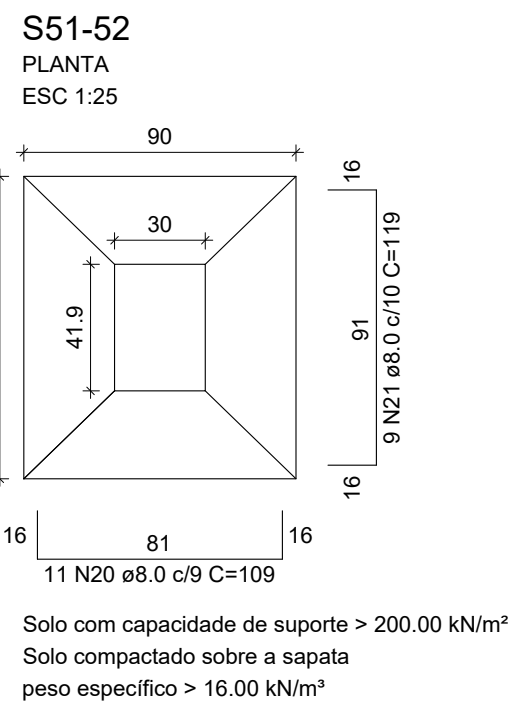
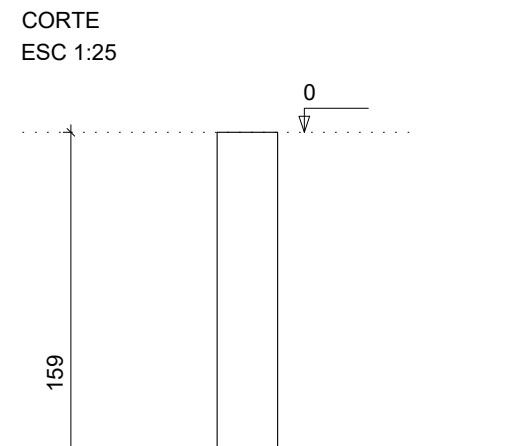
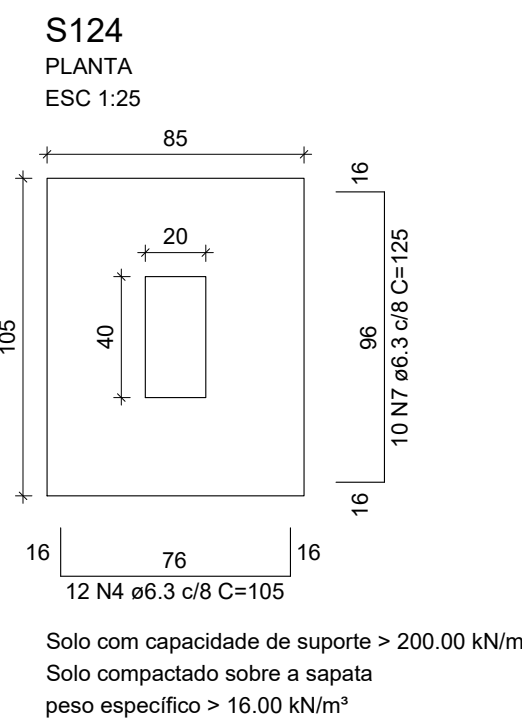
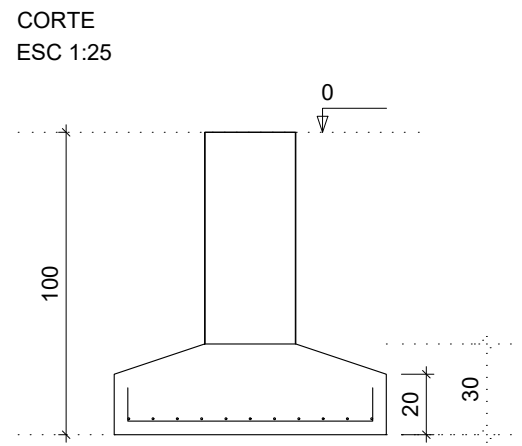
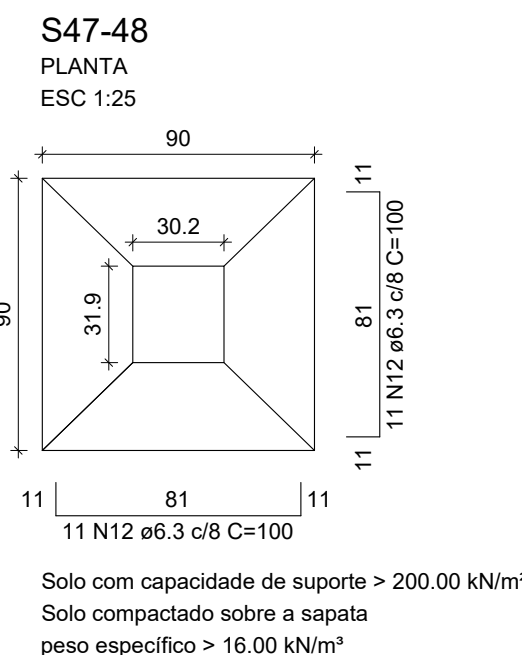
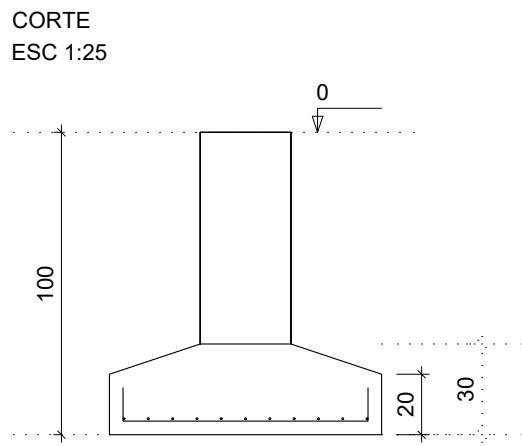
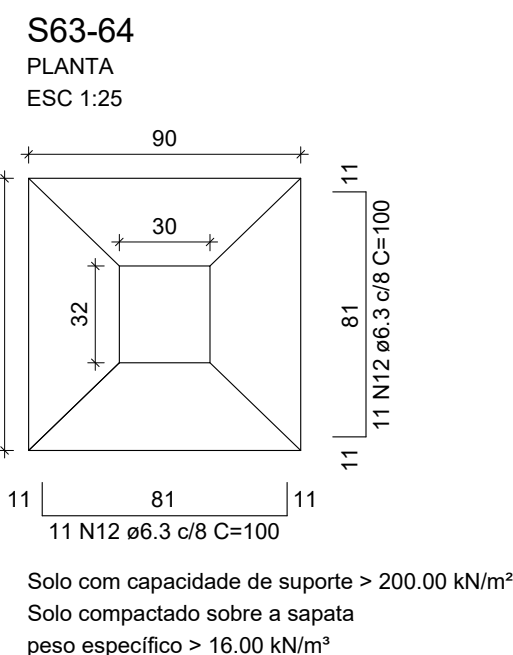
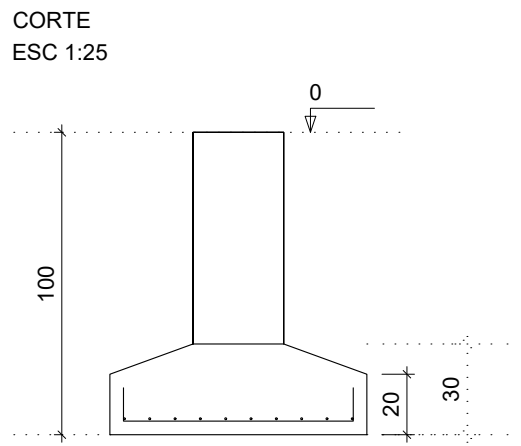
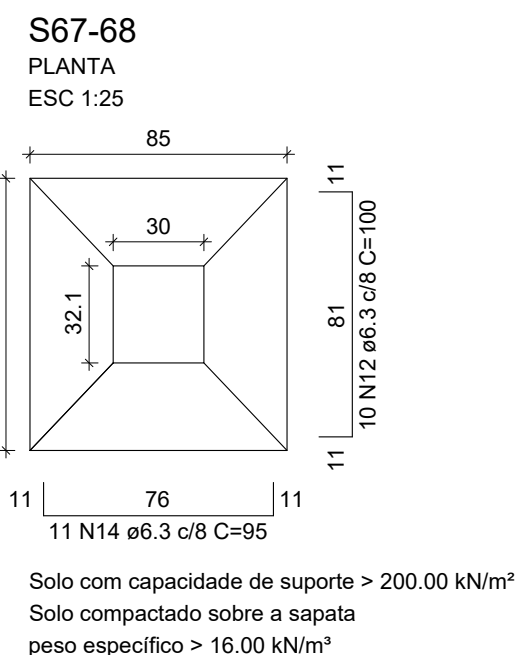
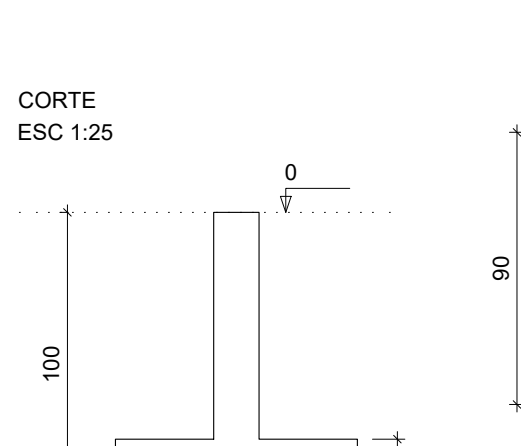
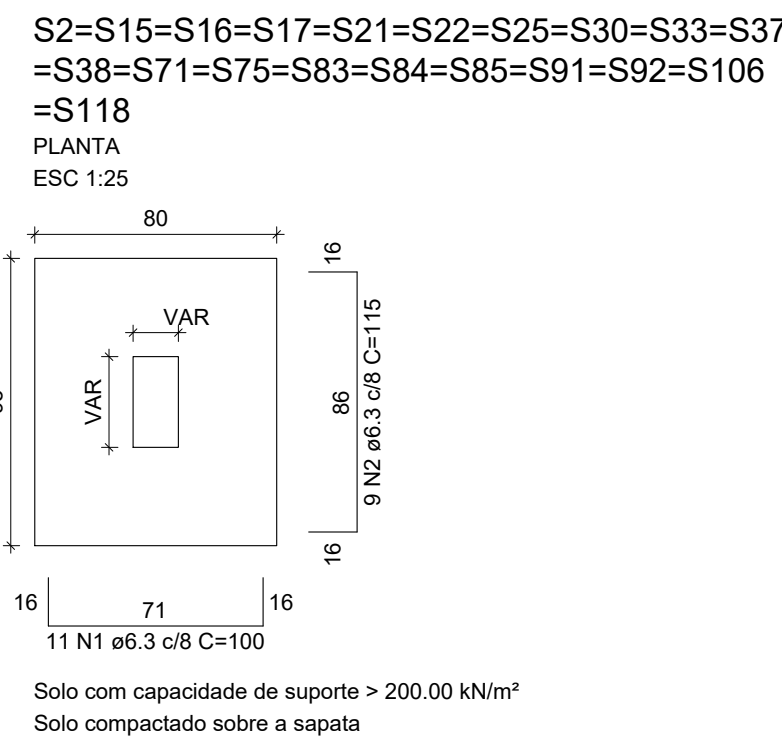
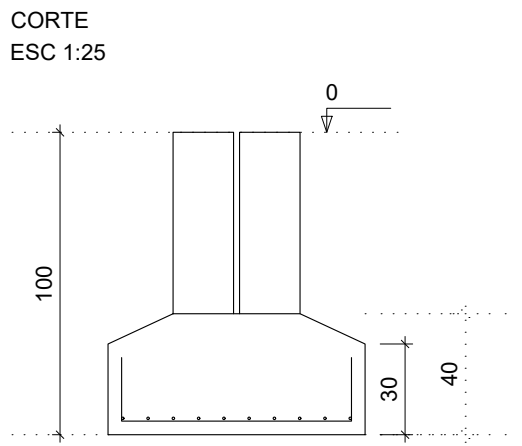
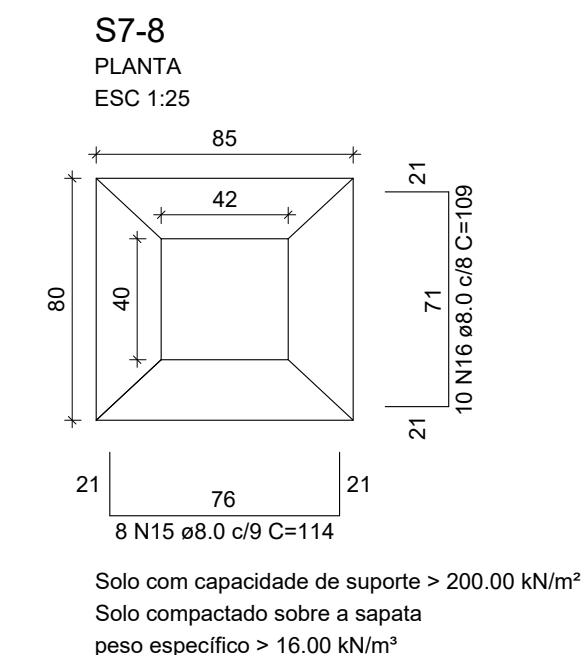
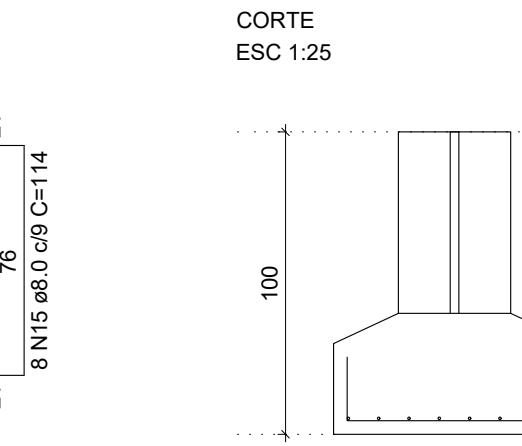
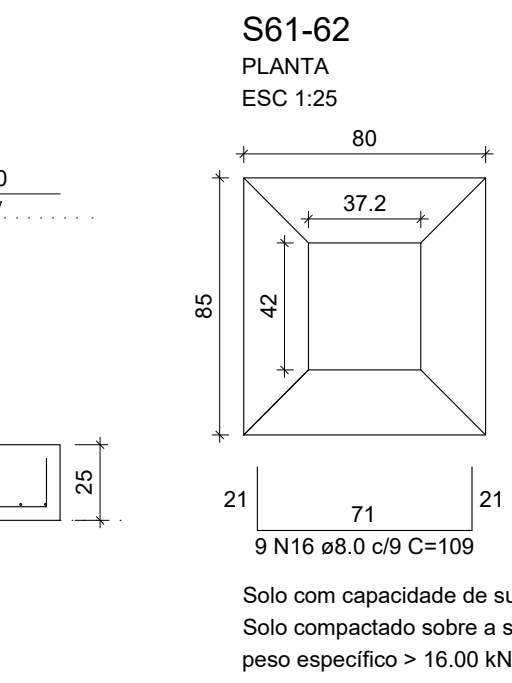
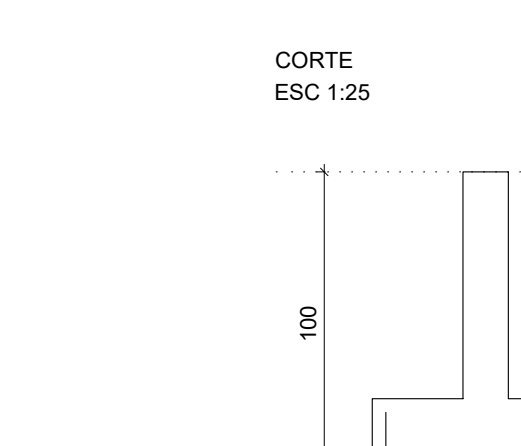
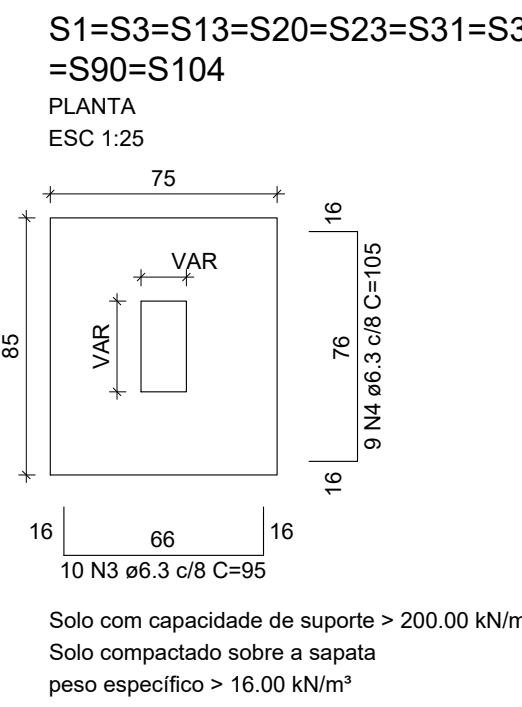
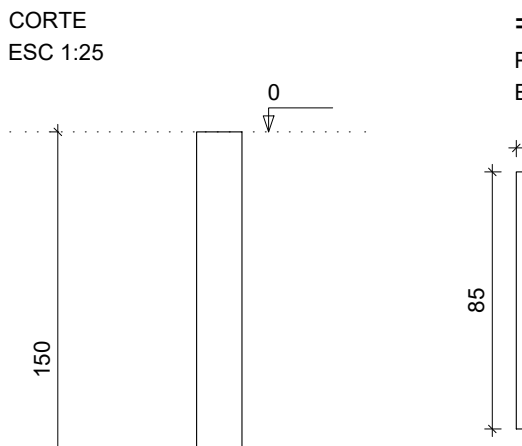
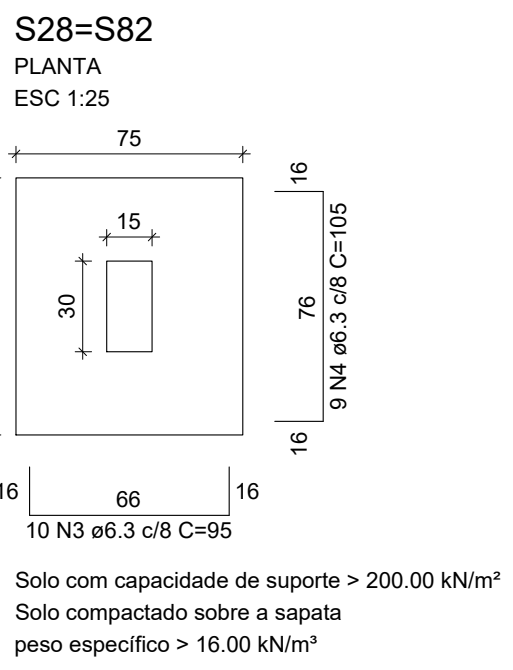
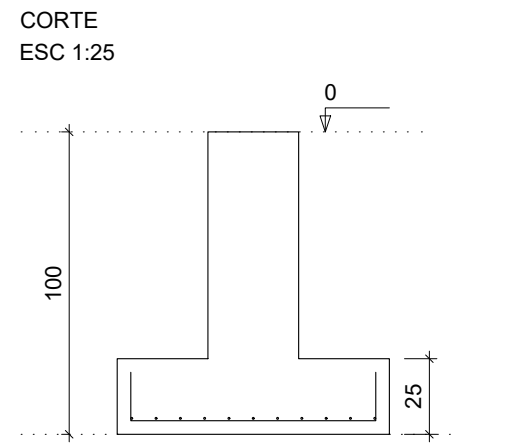
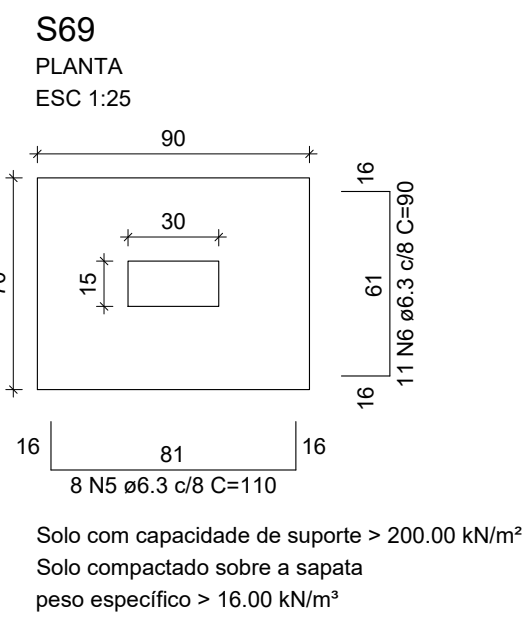
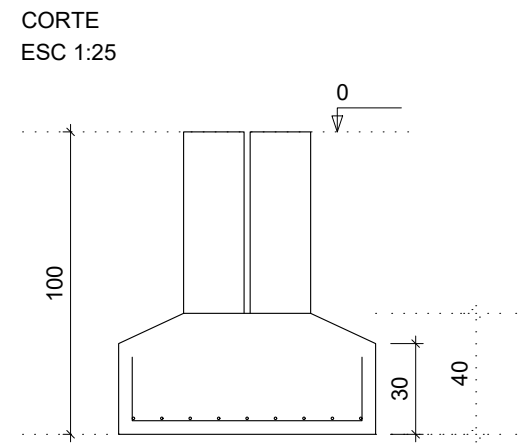
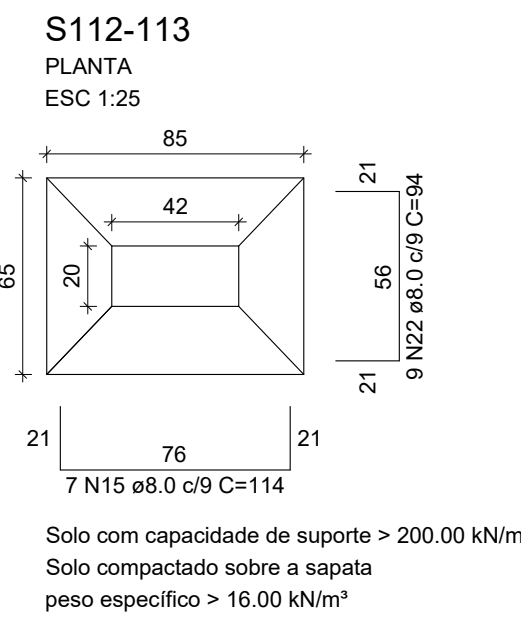
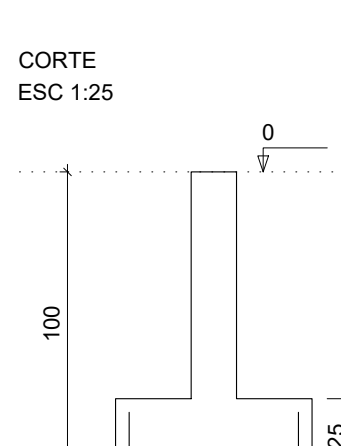
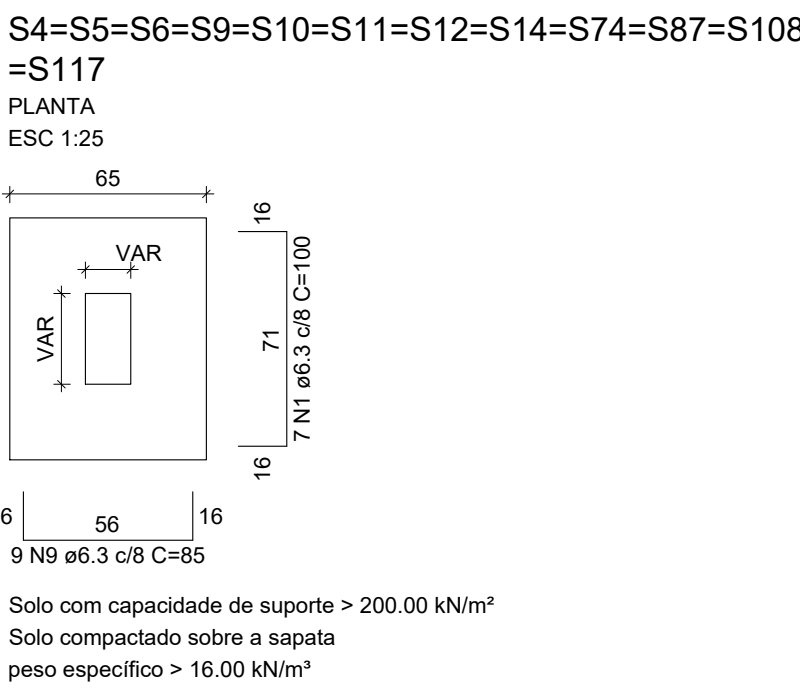
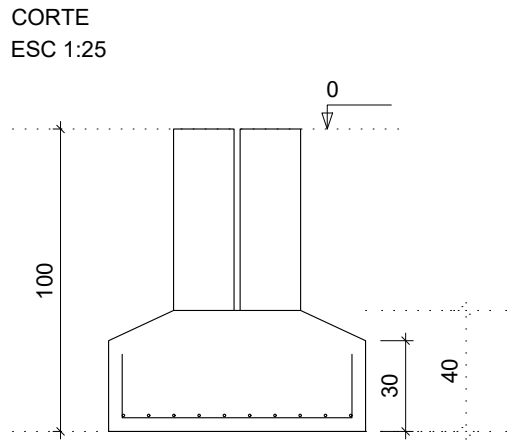
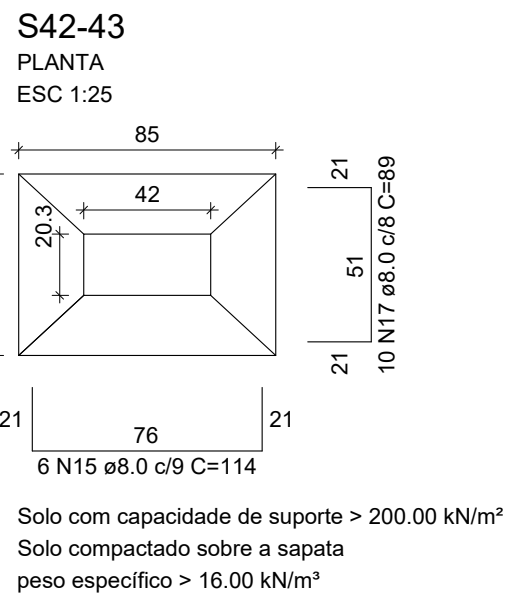
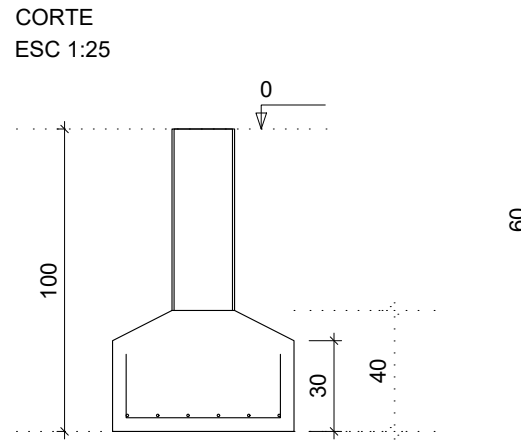
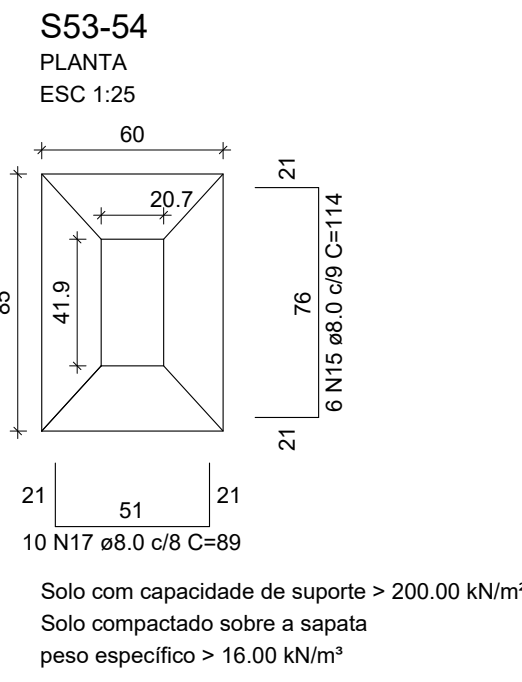
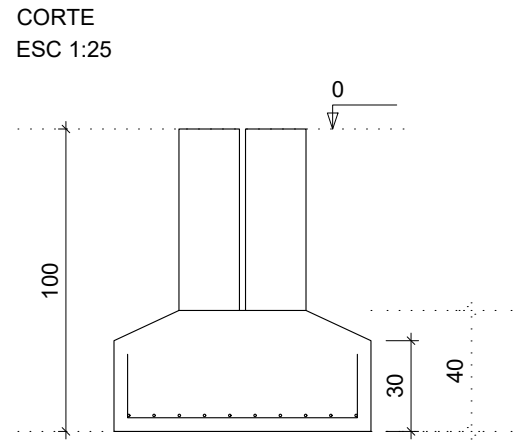
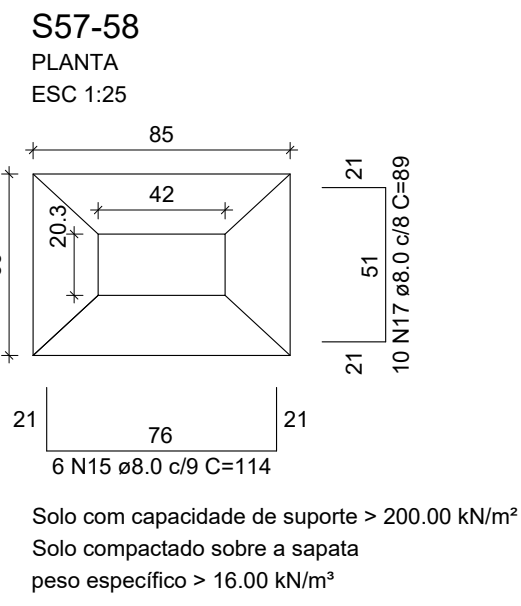
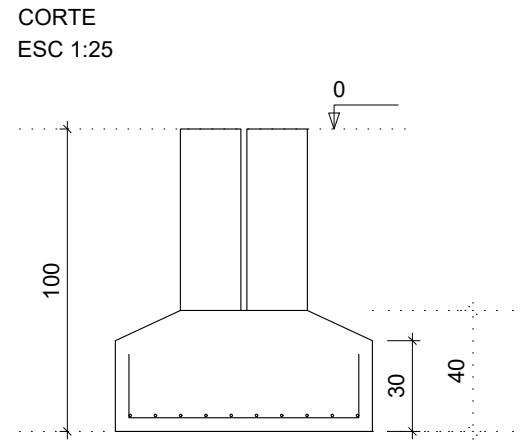
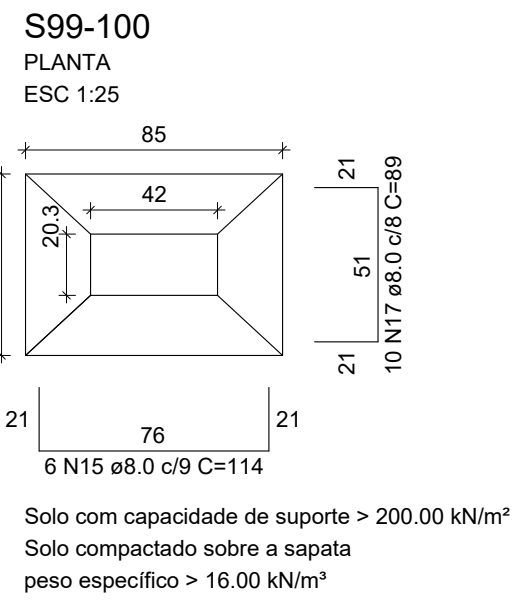
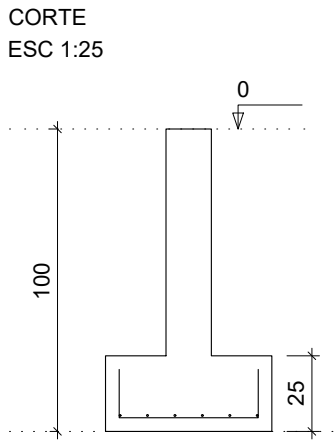
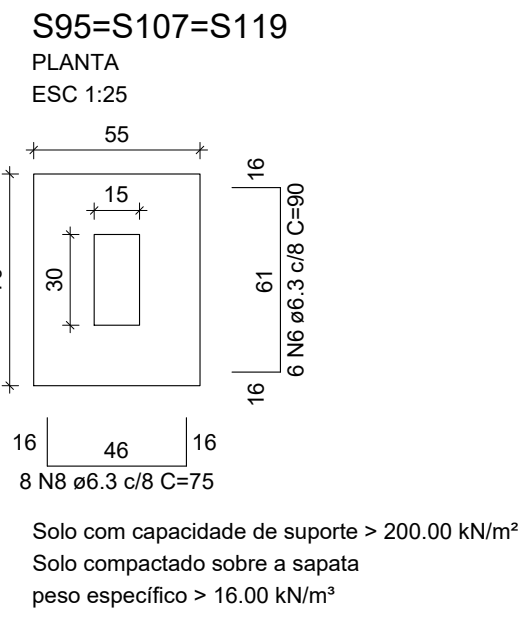
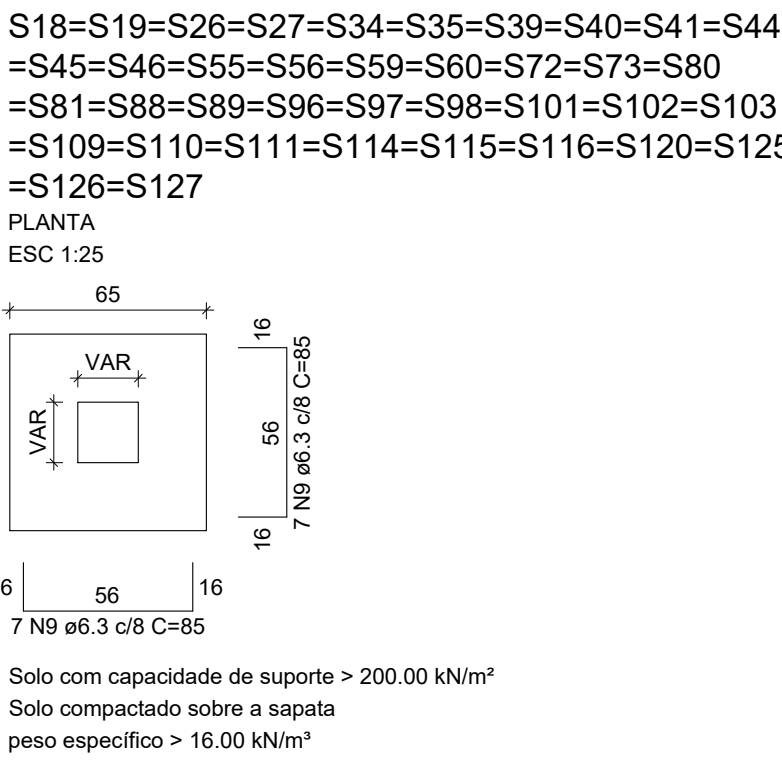


RELACÃO DO AÇO					
P10/L3			P109/L2		P109/L1
P10/L3			P110/L2		P110/L1
P11/L3			P111/L2		P111/L1
P12/L3			P112/L2		P112/L1
P13/L3			P113/L2		P113/L1
P14/L3			P114/L2		P114/L1
P15/L3			P115/L2		P115/L1
P16/L3			P116/L2		P116/L1
P17/L3			P117/L2		P117/L1
P18/L3			P118/L2		P118/L1
P19/L3			P119/L2		P119/L1
P20/L3			P120/L2		P120/L1
P21/L3			P121/L2		P121/L1
P22/L3			P122/L2		P122/L1
P23/L2			P123/L1		
P24/L2					
AÇO	N	DIAM (mm)	QUANT	C (UNIT)	C (TOTAL)
CABO	1	5,0	360	67	21420
	2	5,0	360	67	21420
	3	5,0	151	77	11627
	4	5,0	84	54	4536
	5	5,0	188	29	5452
	6	5,0	92	107	9834
CASO	7	5,0	54	44	2354
	8	5,0	28	24	672
	9	10,0	65	68	4472
	10	10,0	58	358	20764
	11	10,0	48	334	16432
	12	10,0	317	177	55770
	13	10,0	10	75	750
	14	10,0	10	10	100
	15	10,0	18	163	2934
	16	12,5	16	84	1344
	17	12,5	16	84	1344

RESUMO DO AÇO					
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 0% (Barras)	UNIT	PESO + 0% (kg)
CA50	10.0	449.7	38	12 m	277.2
	12.5	41.8	4	12 m	40.2
CA60	5.0	714.7	-	rolo (170 kg)	110.2

Volume de concreto (C-25) = 4.20 m³
Área de forma = 78.65 m²





RELAÇÃO DO AÇO

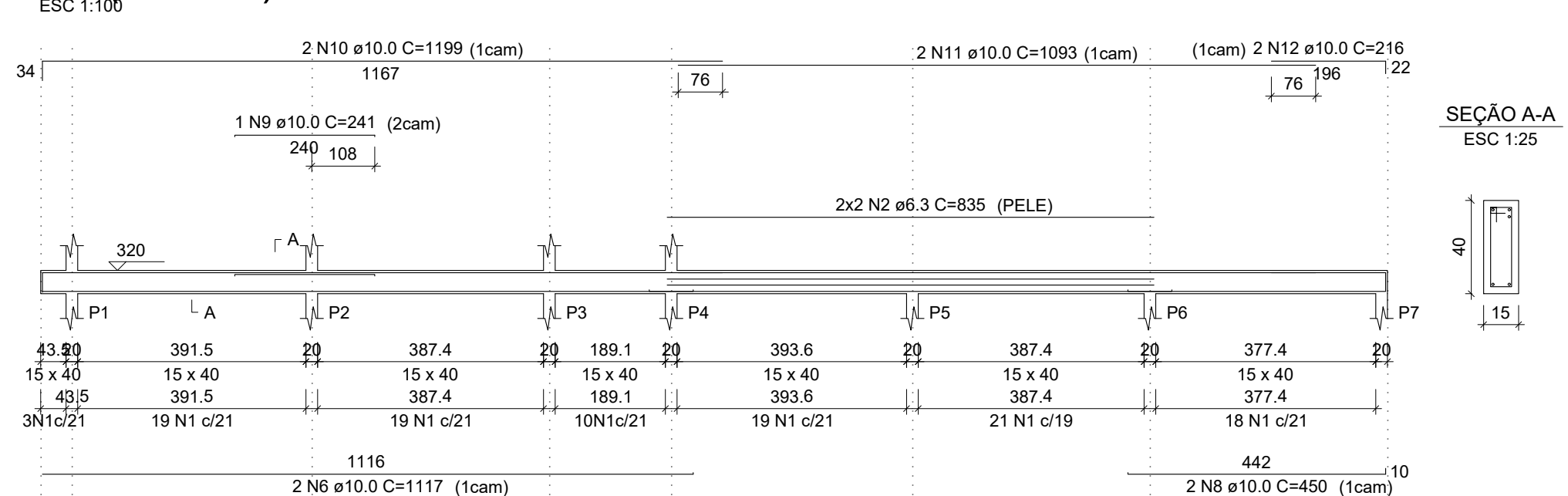
20xS21	2xS28	S69
S7-8	8xS94	12xS104
3xS107	12xS108	38xS109
2xS122	S124	S42-43
S47-48	S49-50	S51-52
S53-54	S57-58	S61-62
S63-64	S65-66	S67-68
S99-100	S112-113	

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CASO	1	6.3	304	100	30400
	2	6.3	180	115	20700
	3	6.3	140	95	13300
	4	6.3	138	105	14490
	5	6.3	104	110	11440
	6	6.3	29	90	2610
	7	6.3	98	125	12250
	8	6.3	24	75	1800
	9	6.3	640	85	54400
	10	6.3	38	105	3990
	11	6.3	22	120	2640
	12	6.3	54	100	5400
	13	6.3	11	110	1210
	14	6.3	11	95	1045
	15	8.0	47	114	5358
	16	8.0	16	109	2071
	17	8.0	40	89	3560
	18	8.0	12	114	1368
	19	8.0	9	129	1161
	20	8.0	11	109	1199
	21	8.0	9	119	1071
	22	8.0	9	94	846

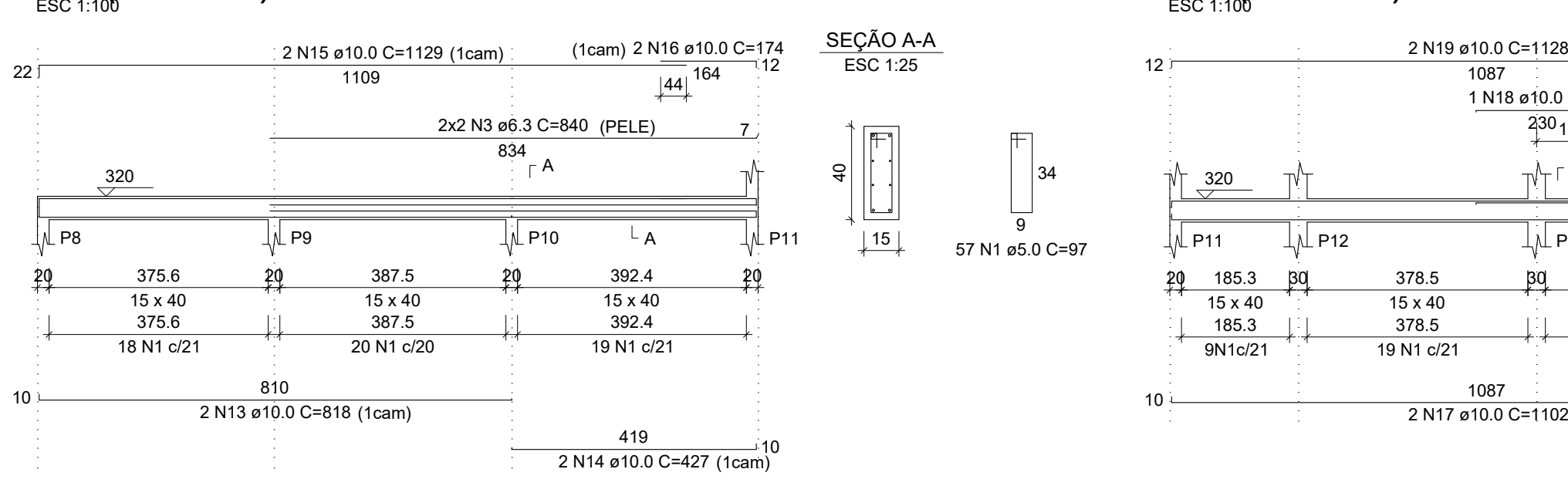
RESUMO DO AÇO				
ACO	DIAM (mm)	C.TOTAL (m)	QUANT + 0% (Barras)	UNIT
CASO	6.3	1756.8	147	12 m
	8.0	166.3	14	12 m
PESO TOTAL (kg)		495.5		
CASO		495.5		

Volume de concreto (C-25) = 17.53 m³
Área de forma = 86.42 m²

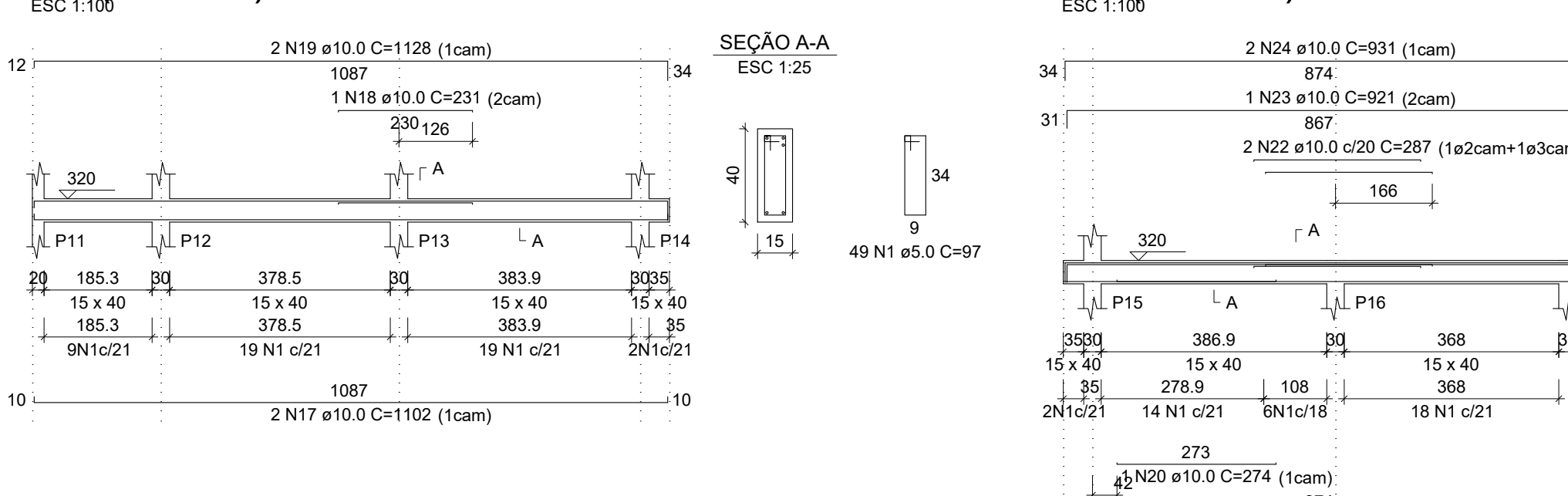
V1 (15 x 40)



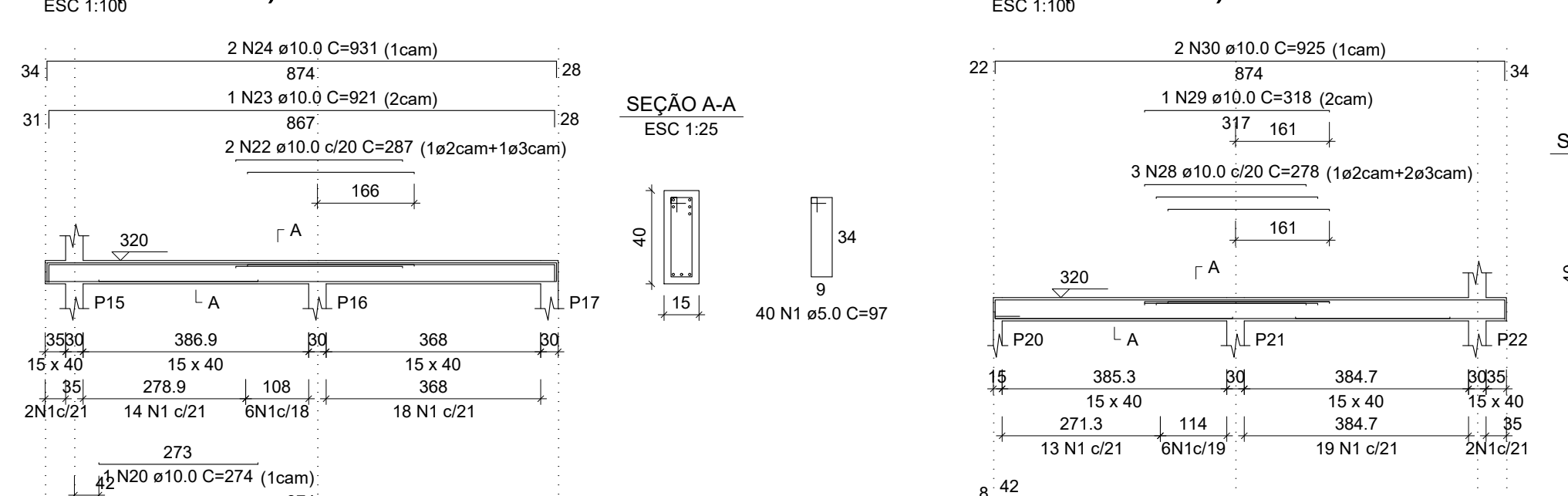
V2 (15 x 40)



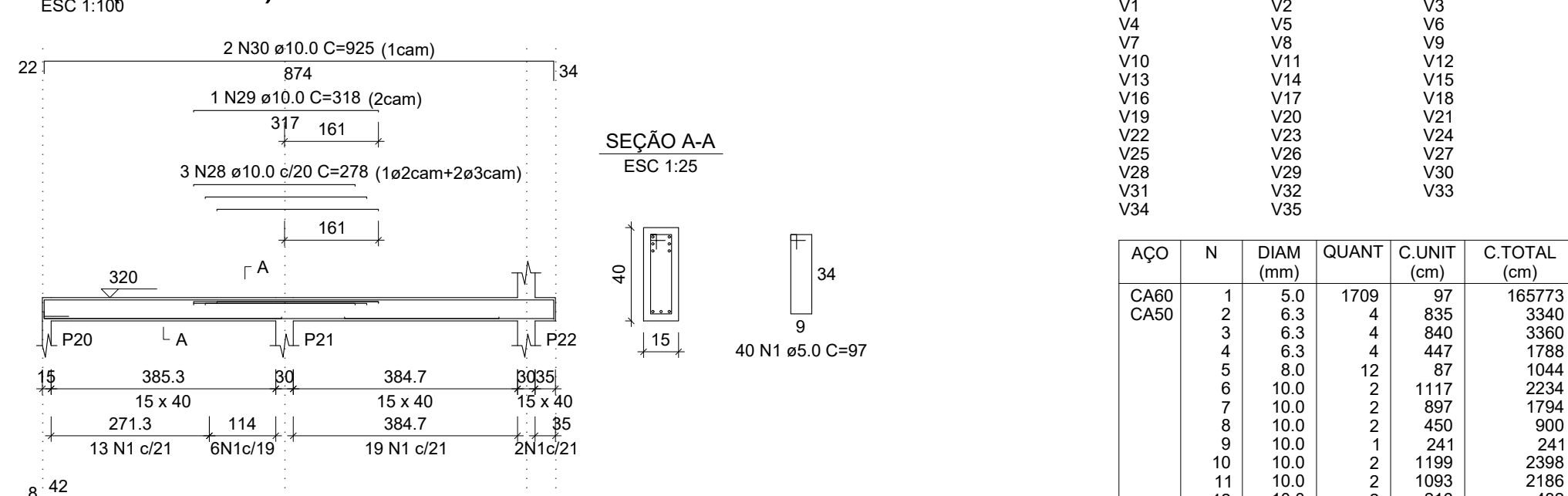
V3 (15 x 40)



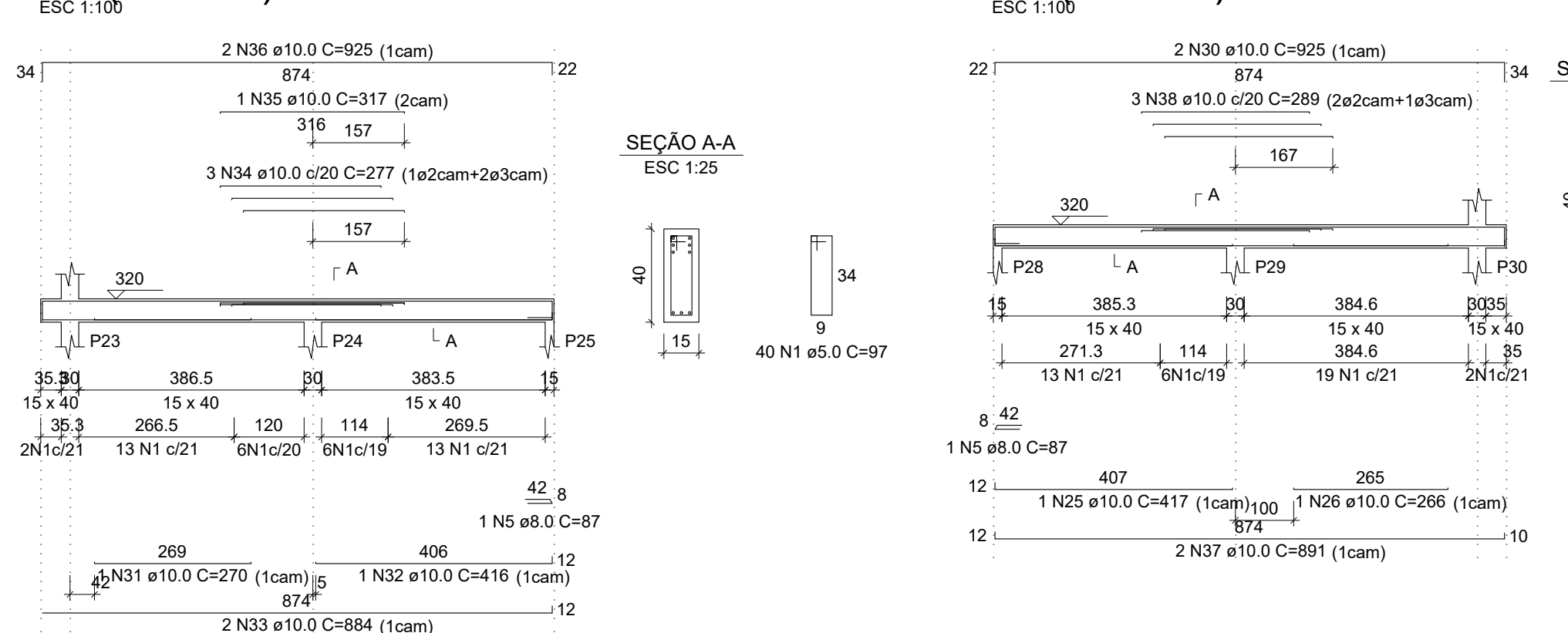
V4 (15 x 40)



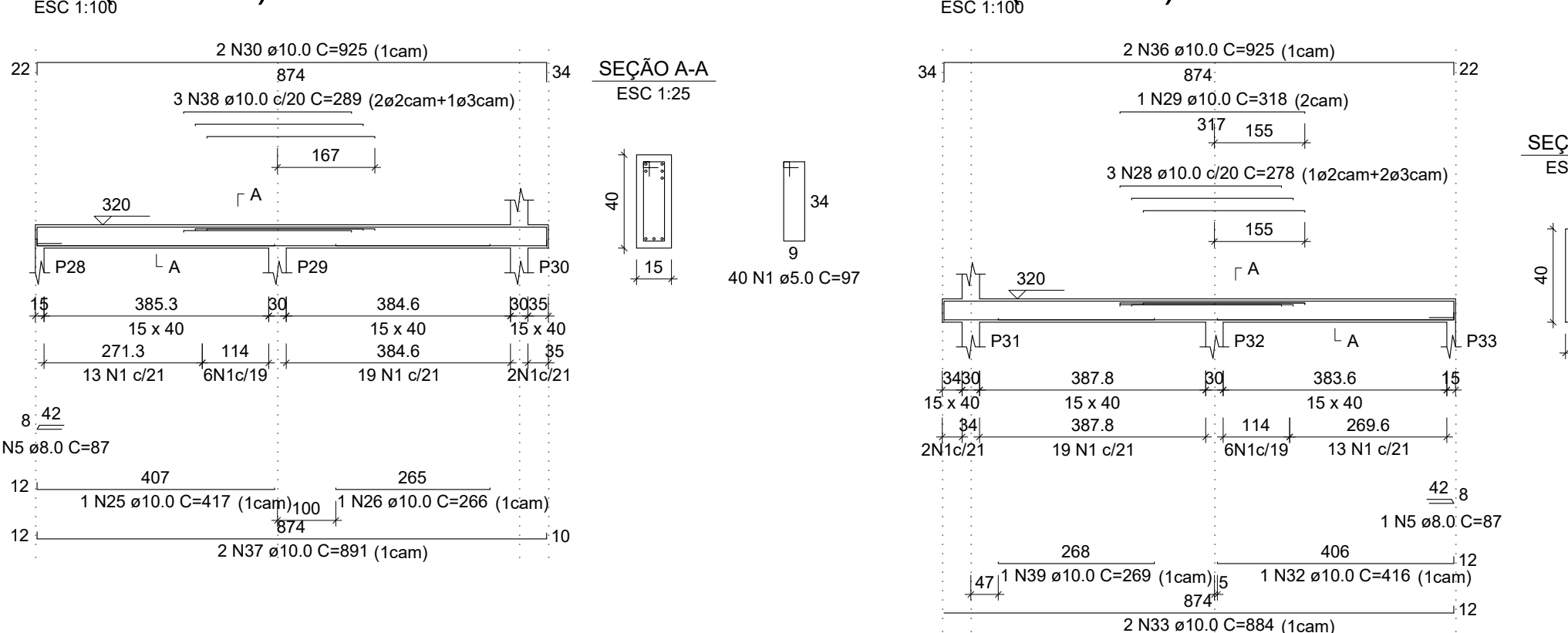
V5 (15 x 40)



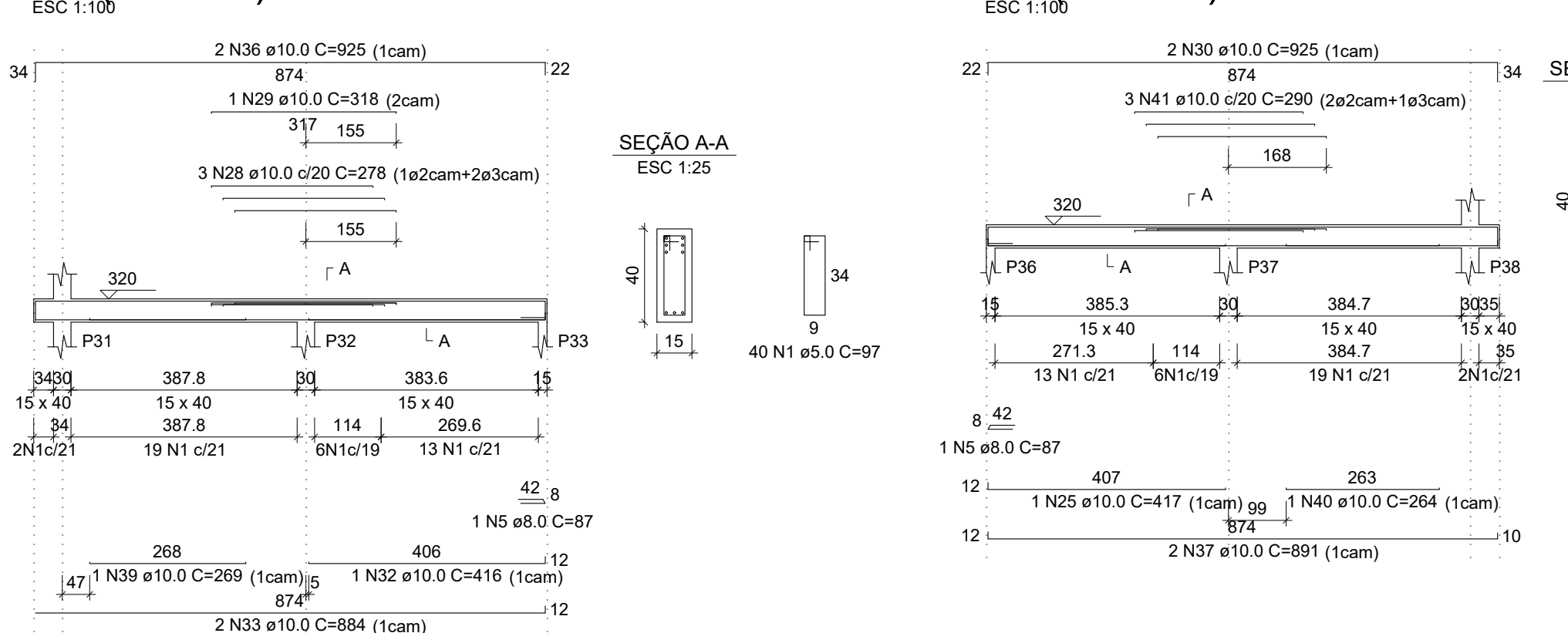
V6 (15 x 40)



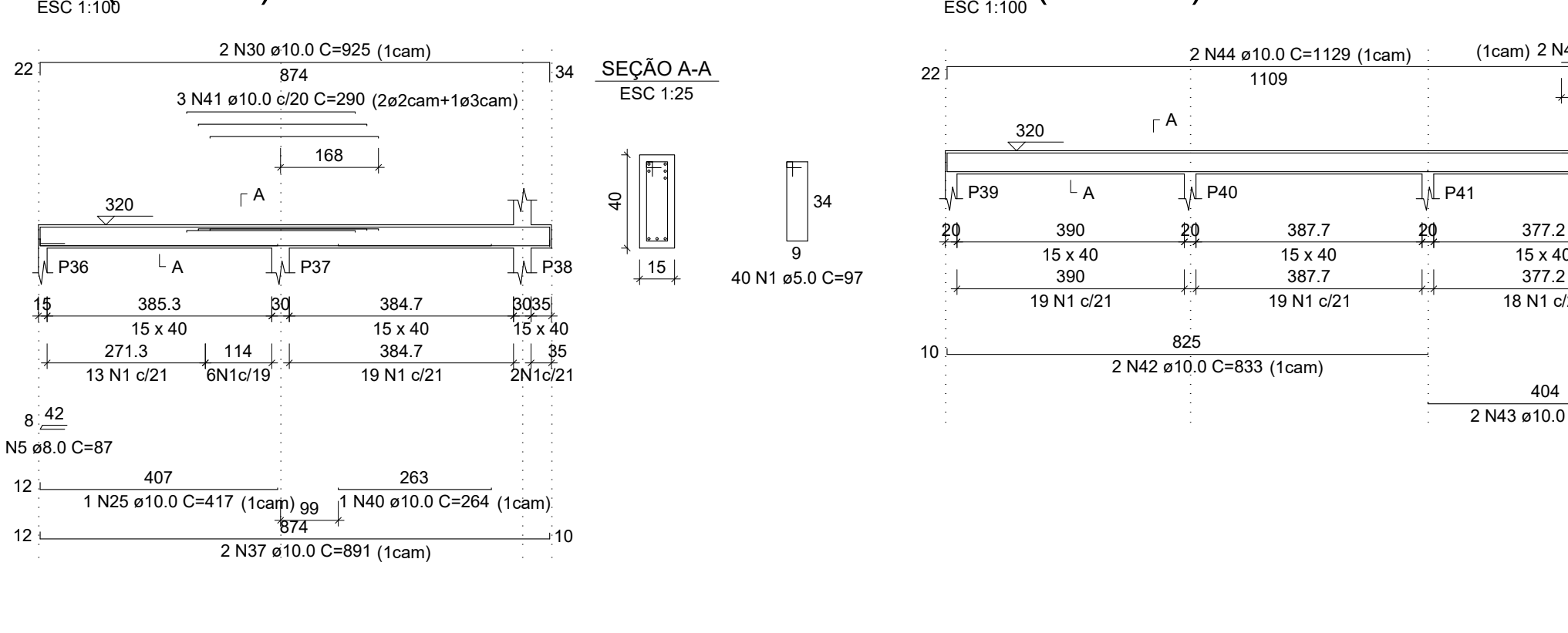
V7 (15 x 40)



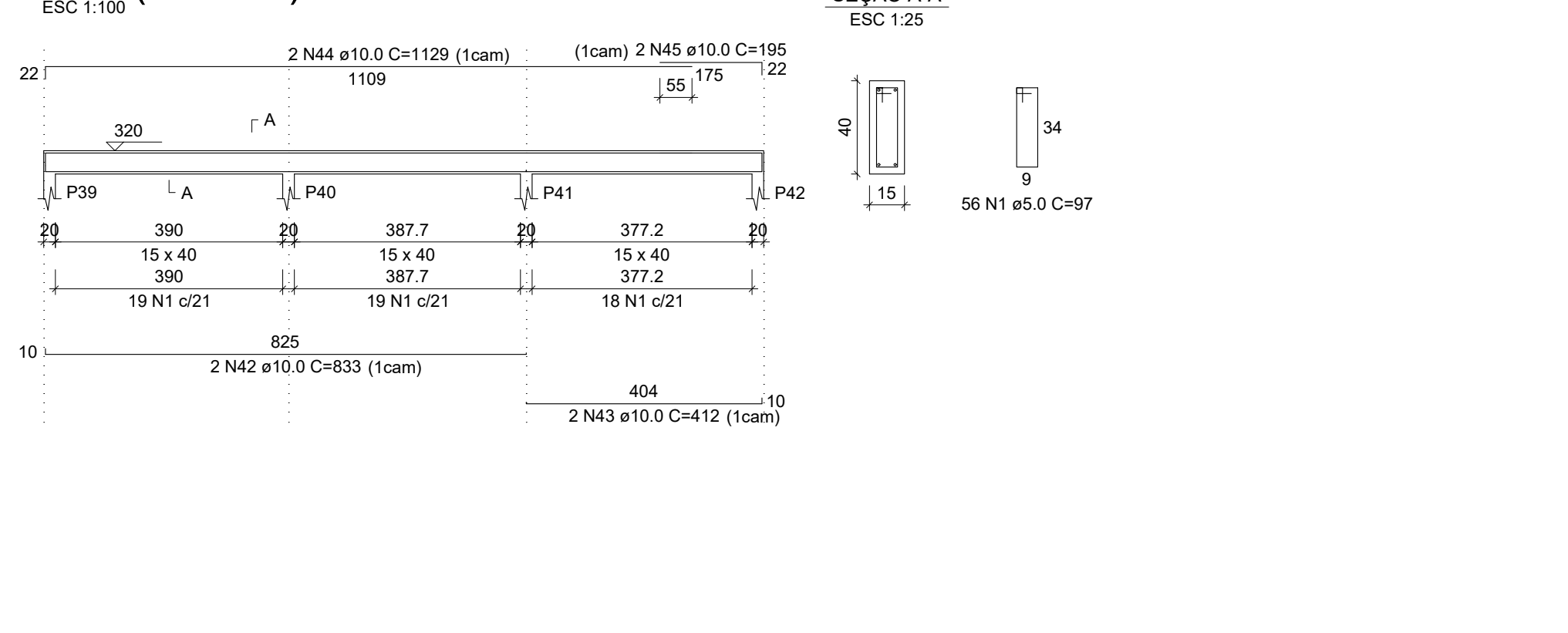
V8 (15 x 40)



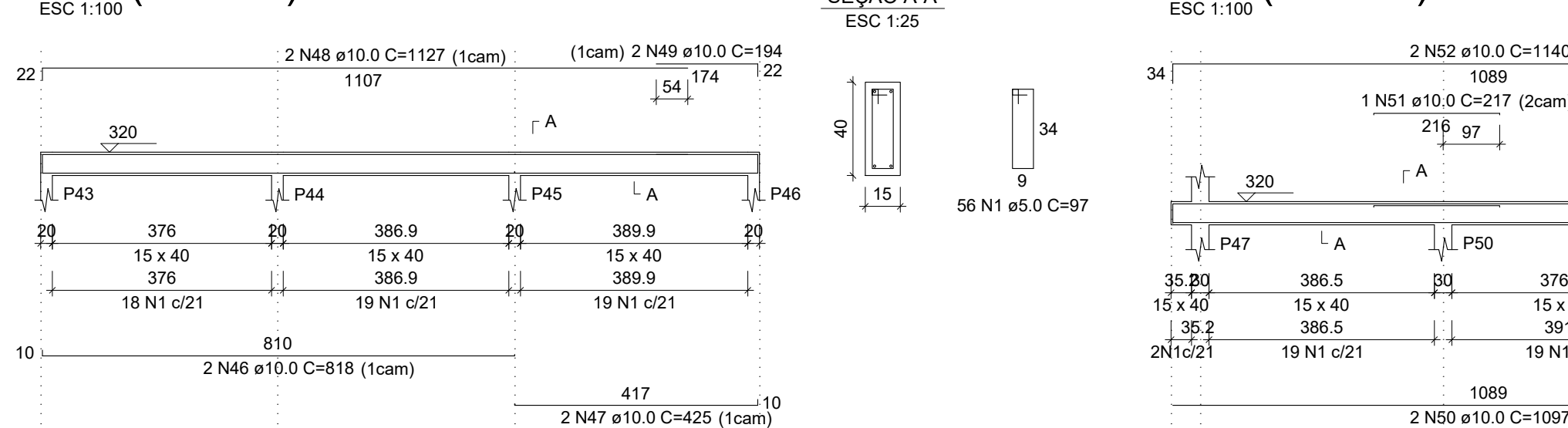
V9 (15 x 40)



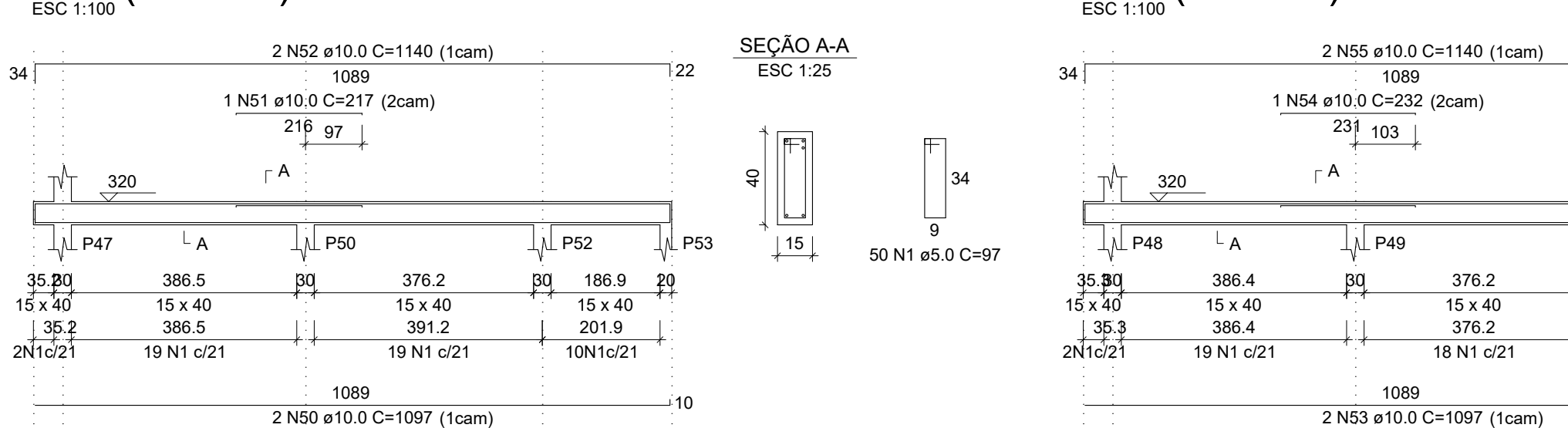
V10 (15 x 40)



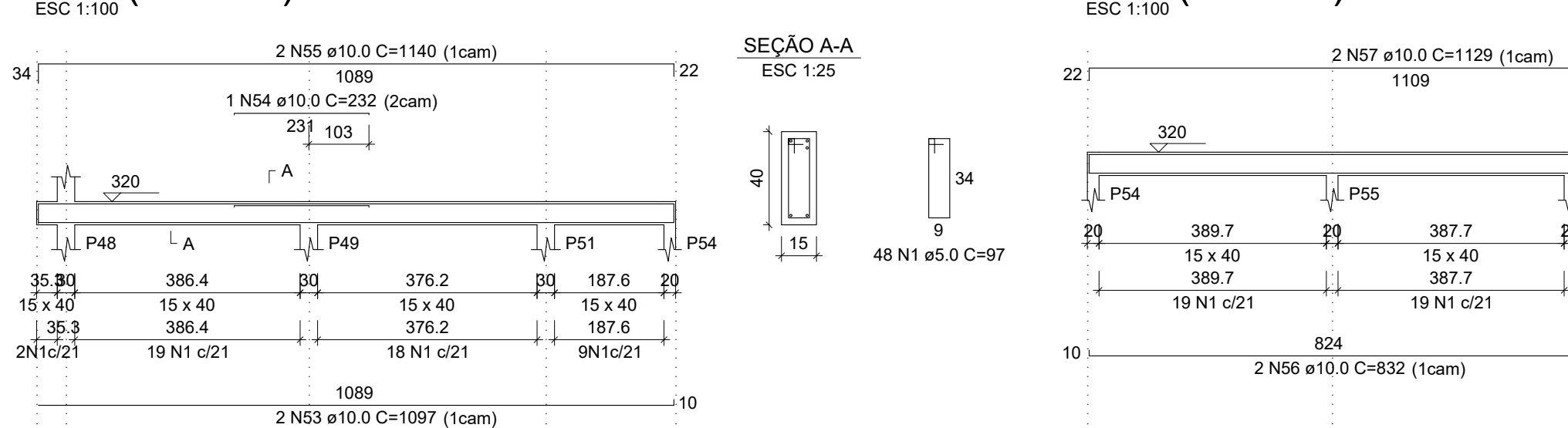
V11 (15 x 40)



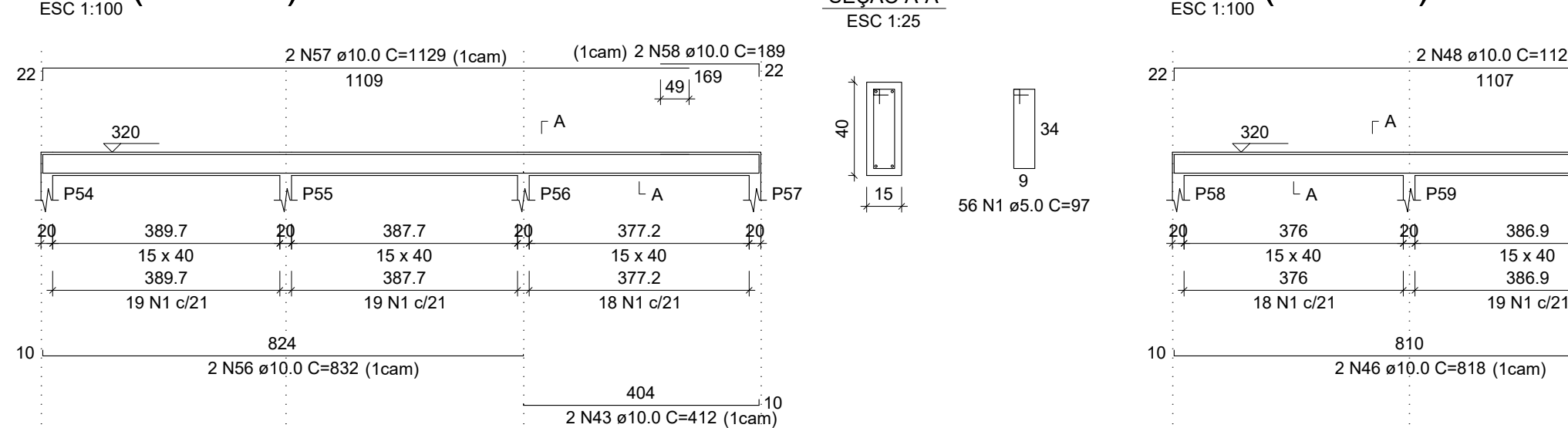
V12 (15 x 40)



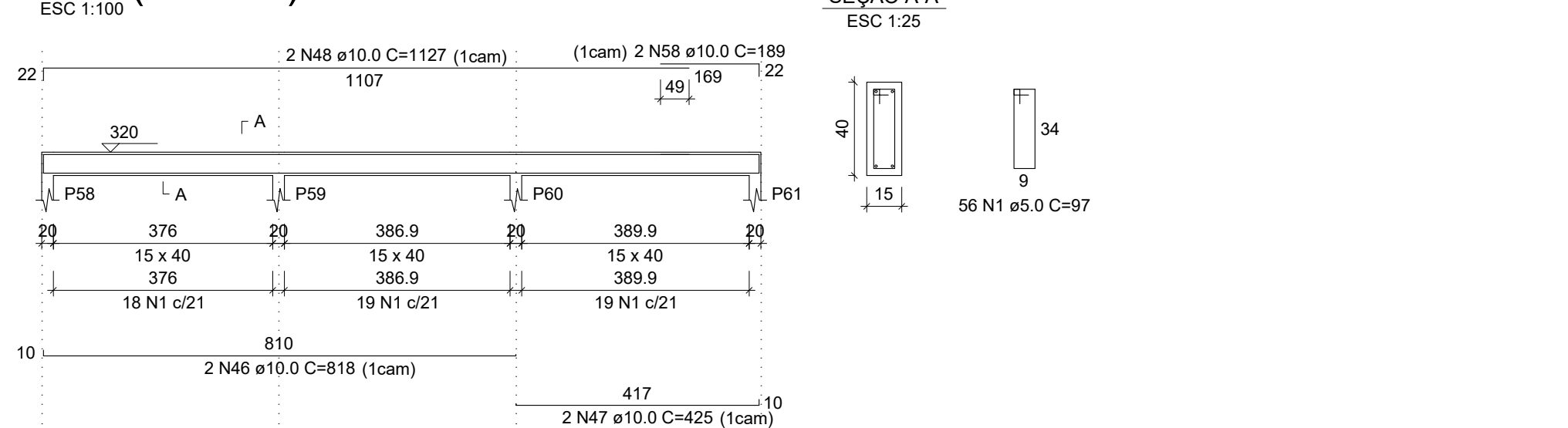
V13 (15 x 40)



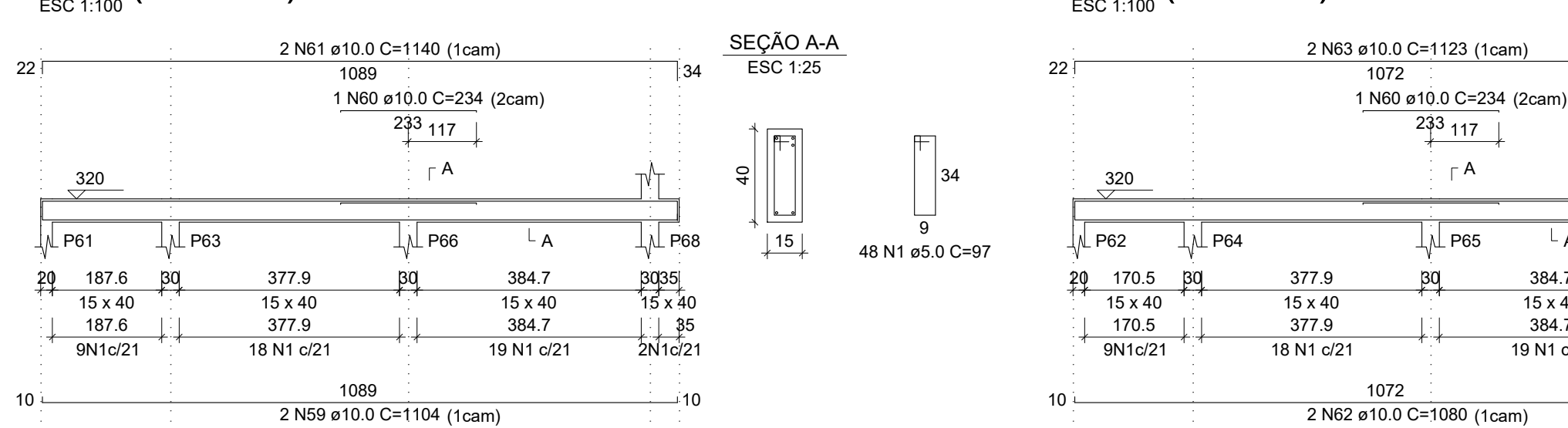
V14 (15 x 40)



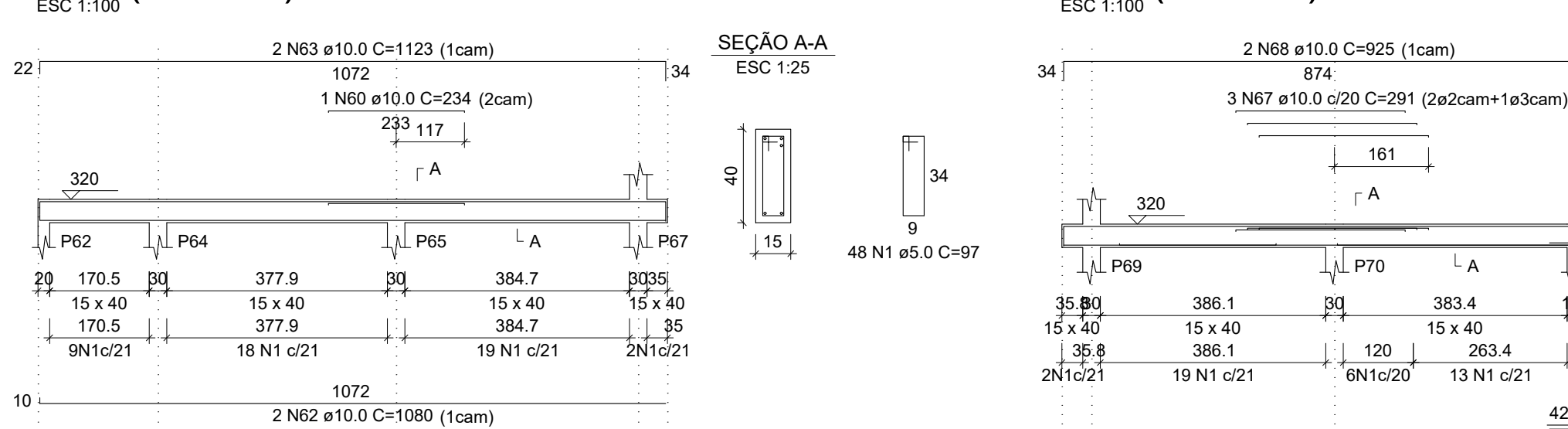
V15 (15 x 40)



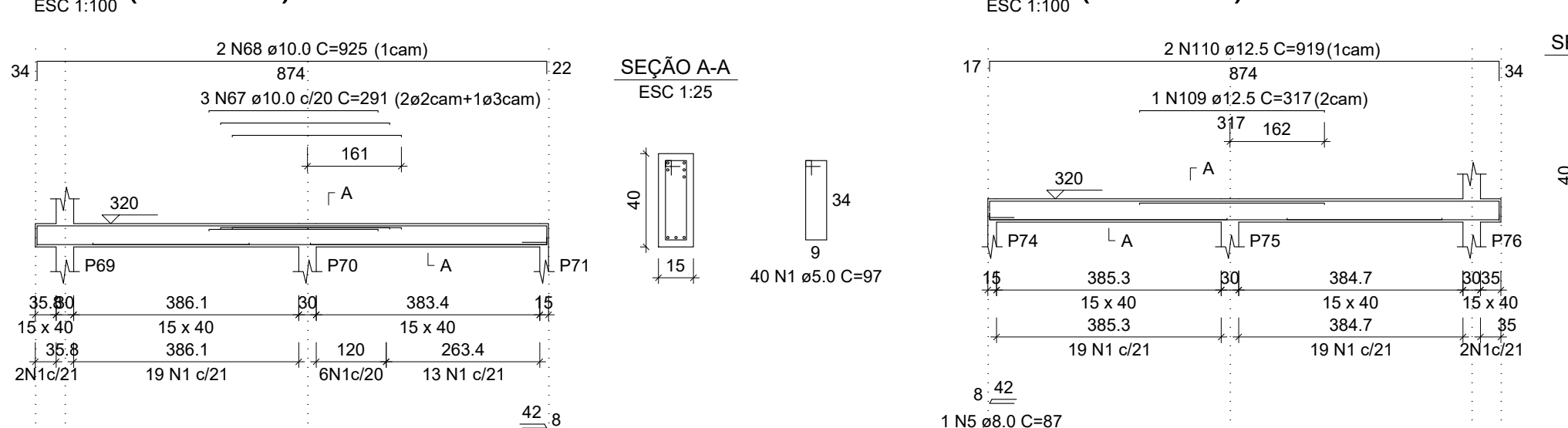
V16 (15 x 40)



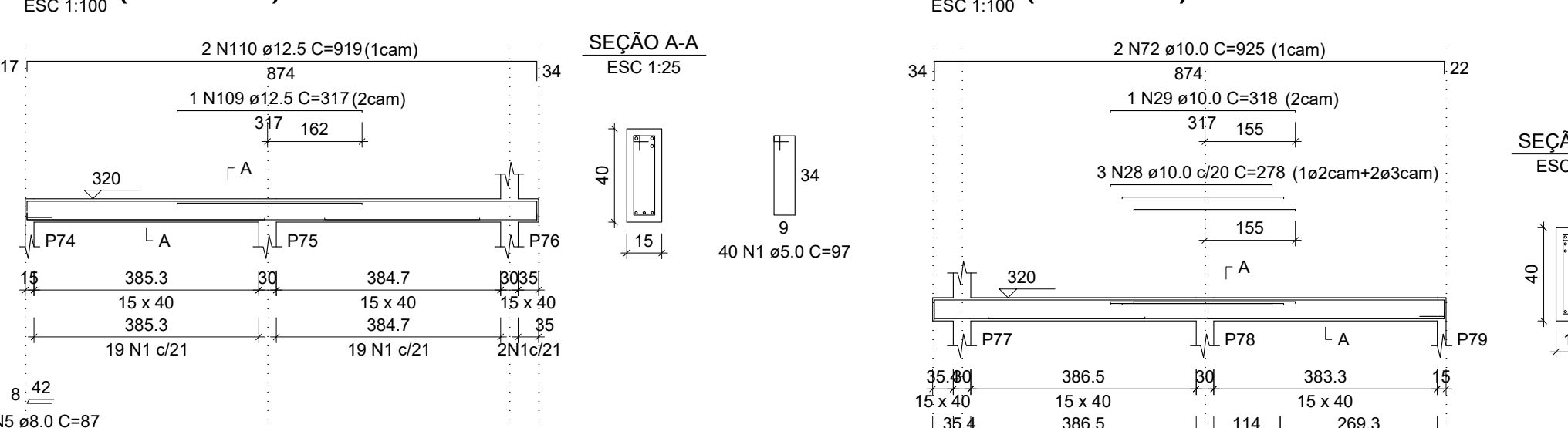
V17 (15 x 40)



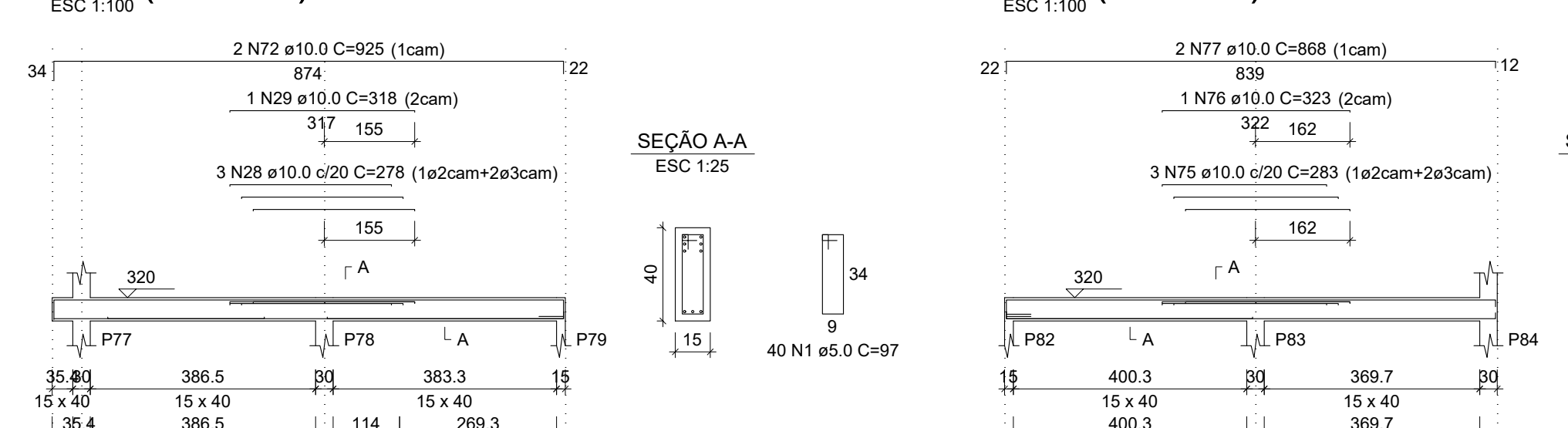
V18 (15 x 40)



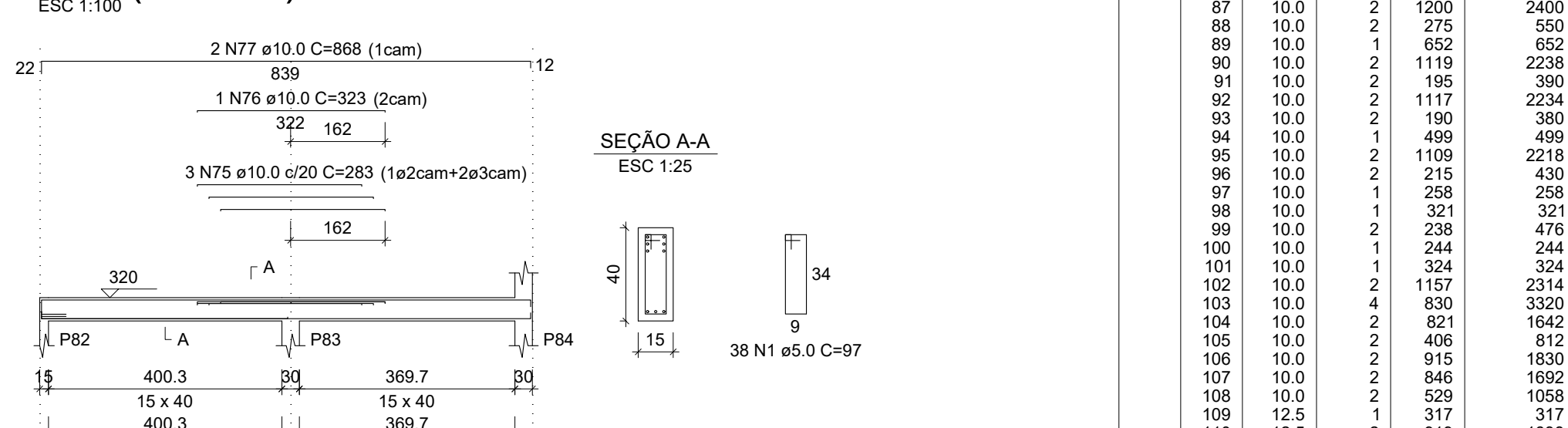
V19 (15 x 40)



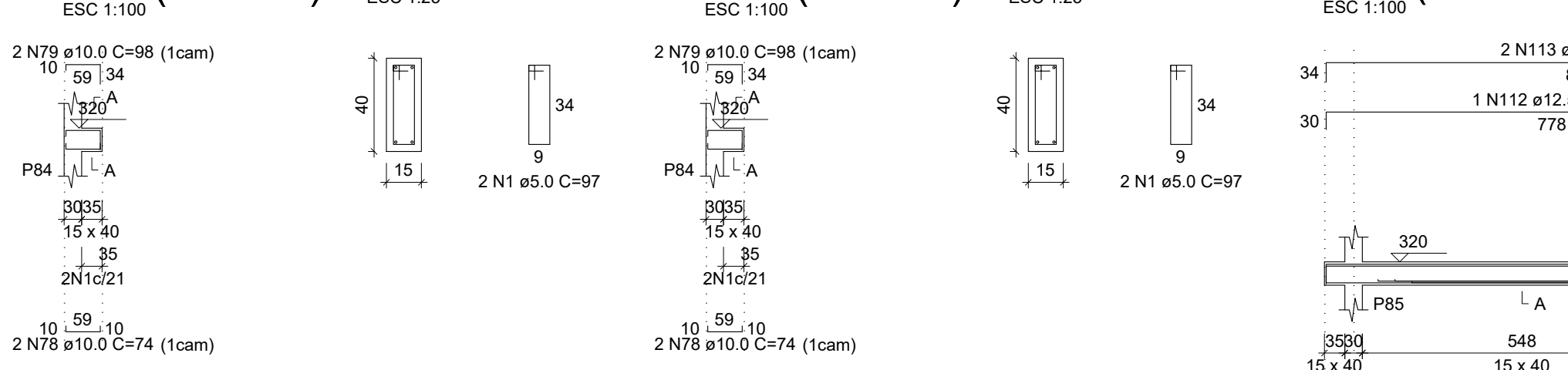
V20 (15 x 40)



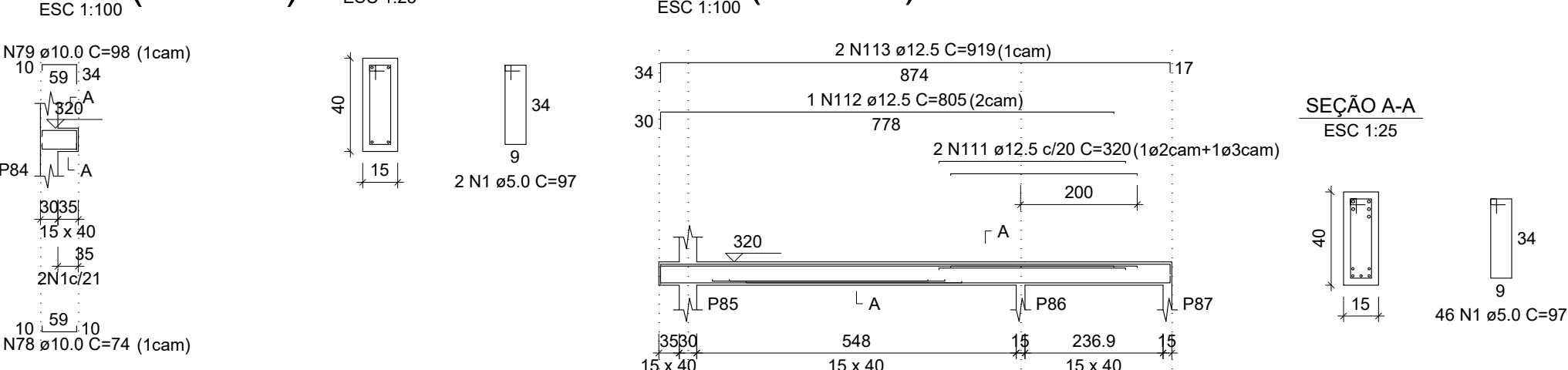
V21 (15 x 40)



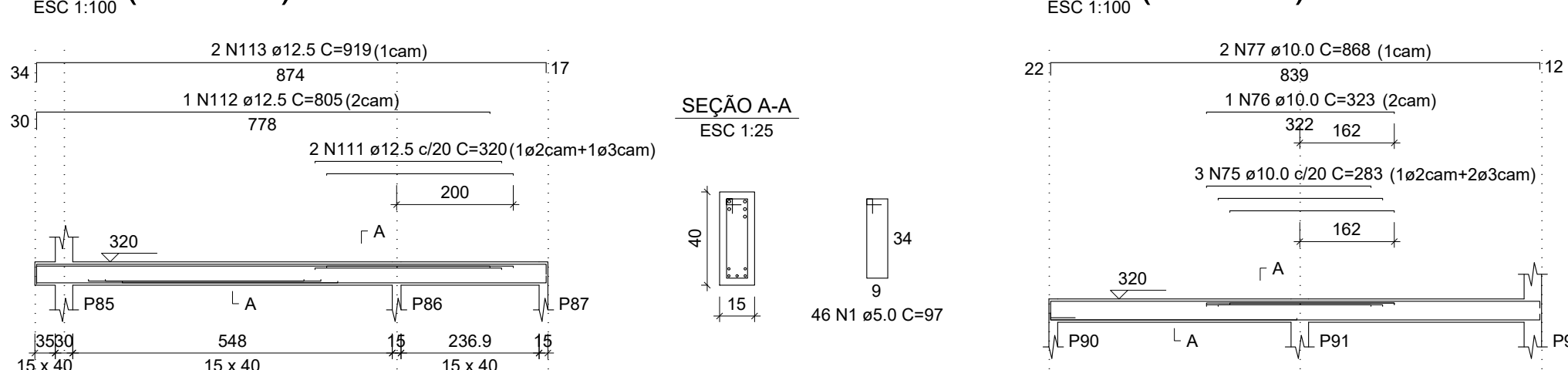
V22 (15 x 40)



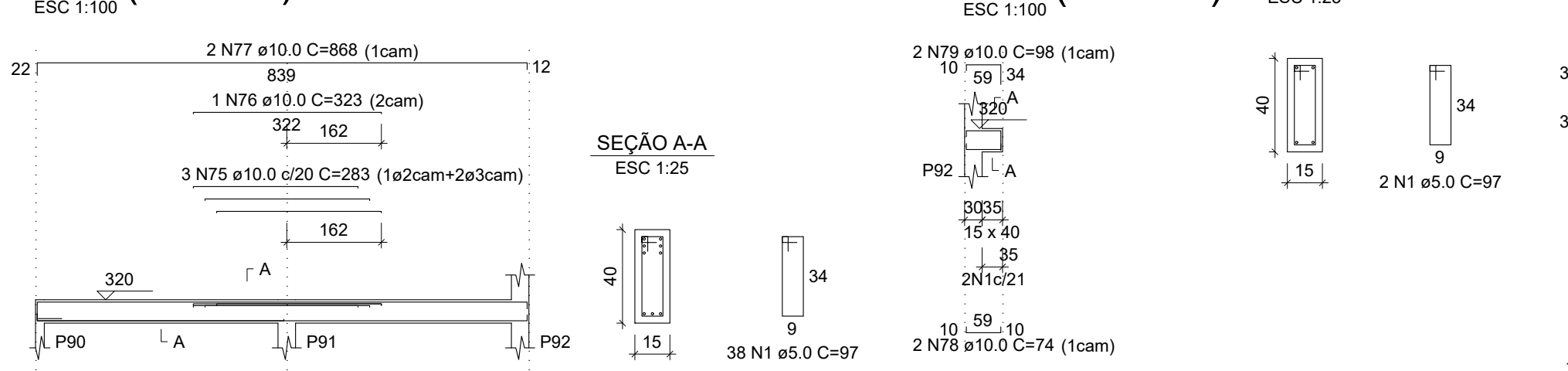
V23 (15 x 40)



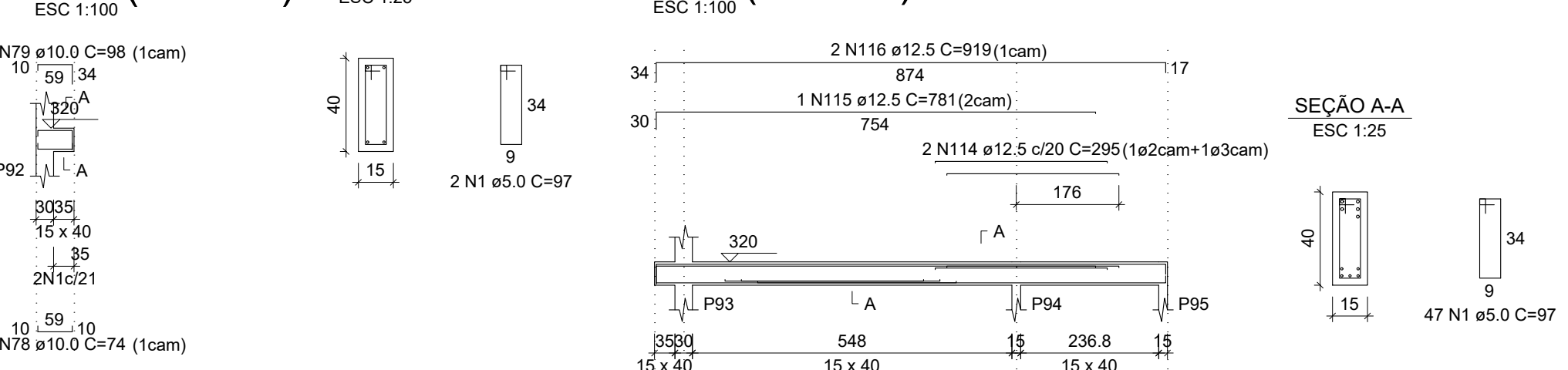
V24 (15 x 40)



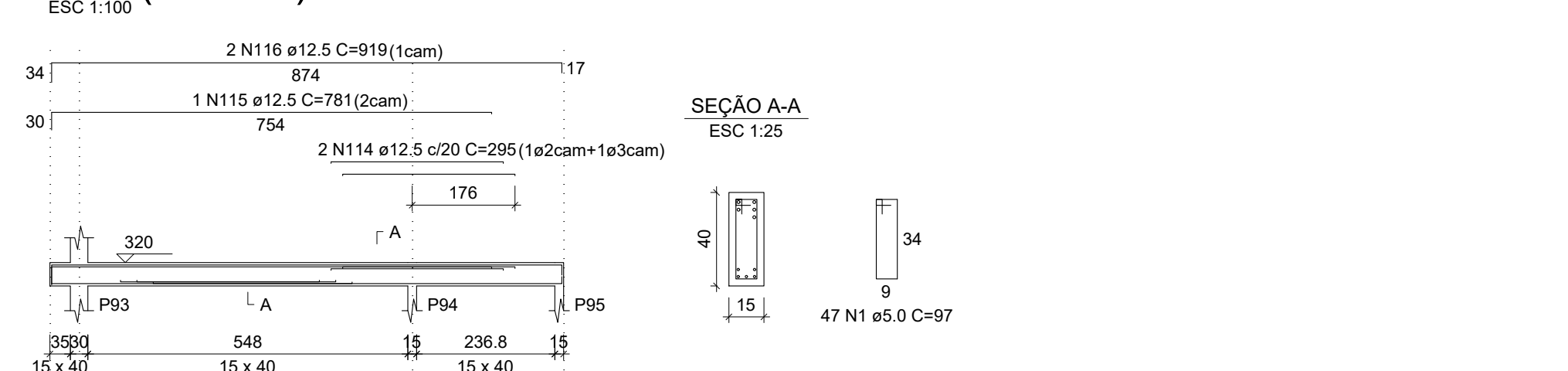
V25 (15 x 40)



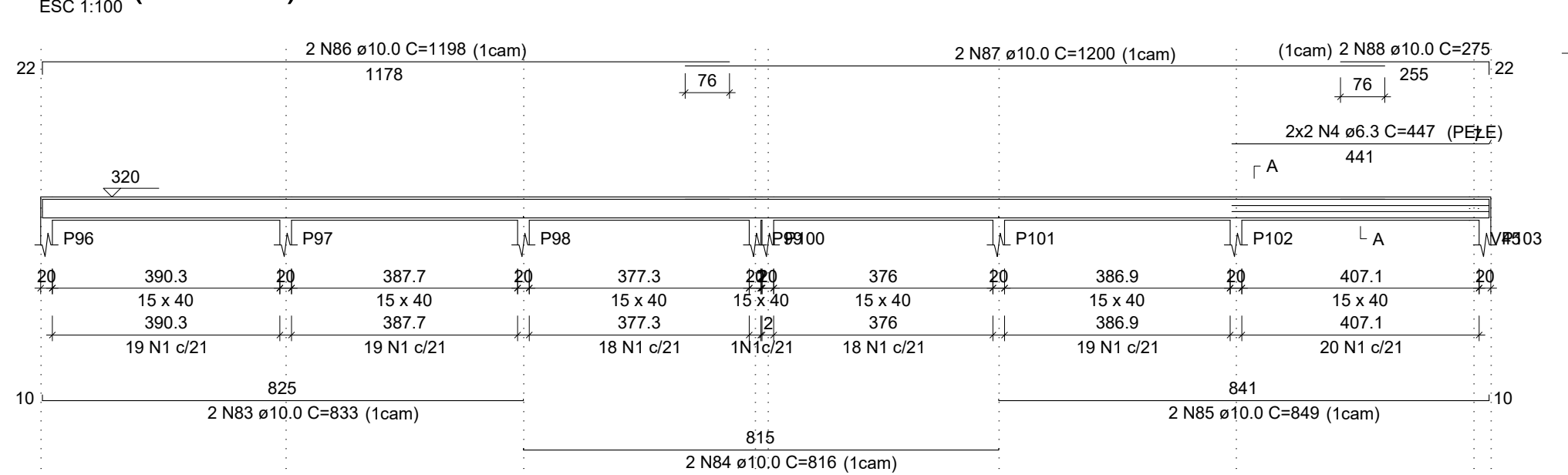
V26 (15 x 40)



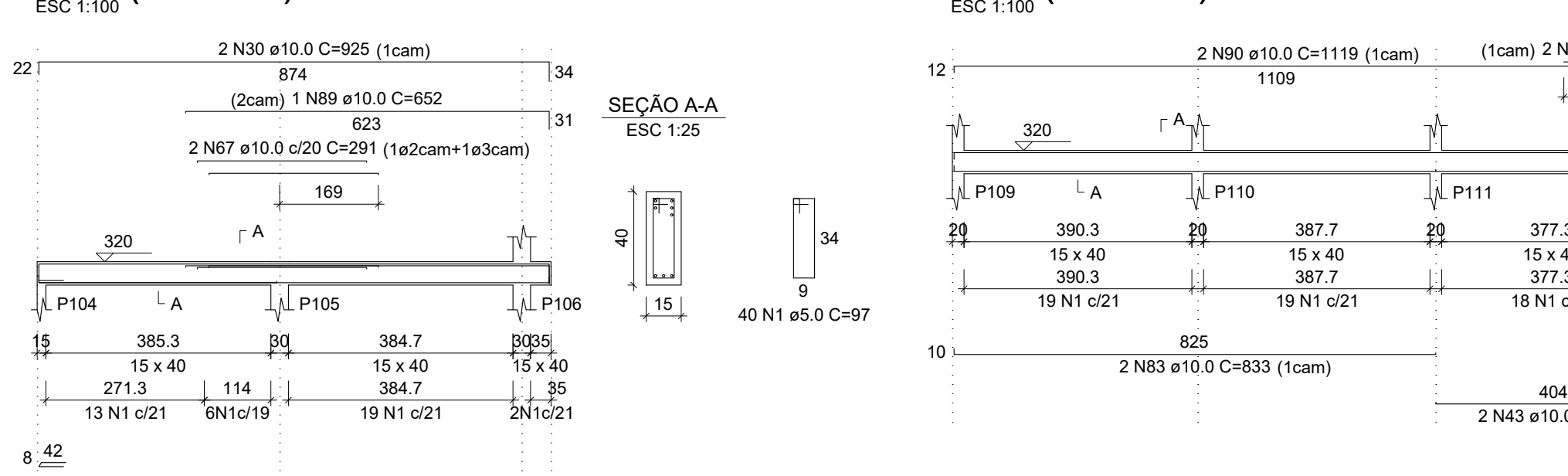
V27 (15 x 40)



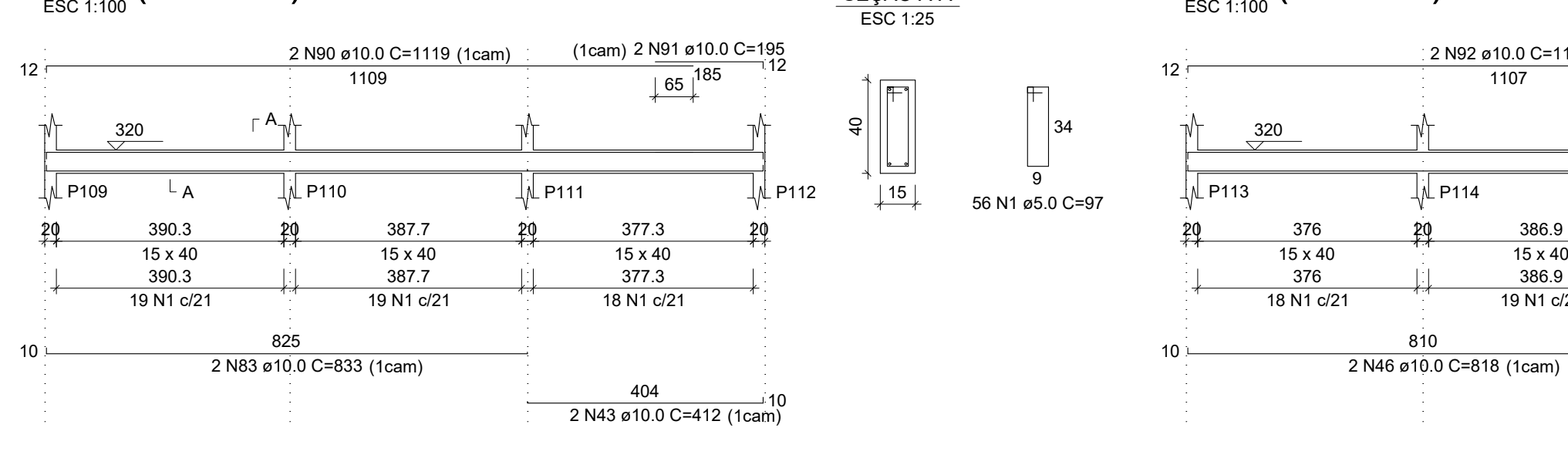
V28 (15 x 40)



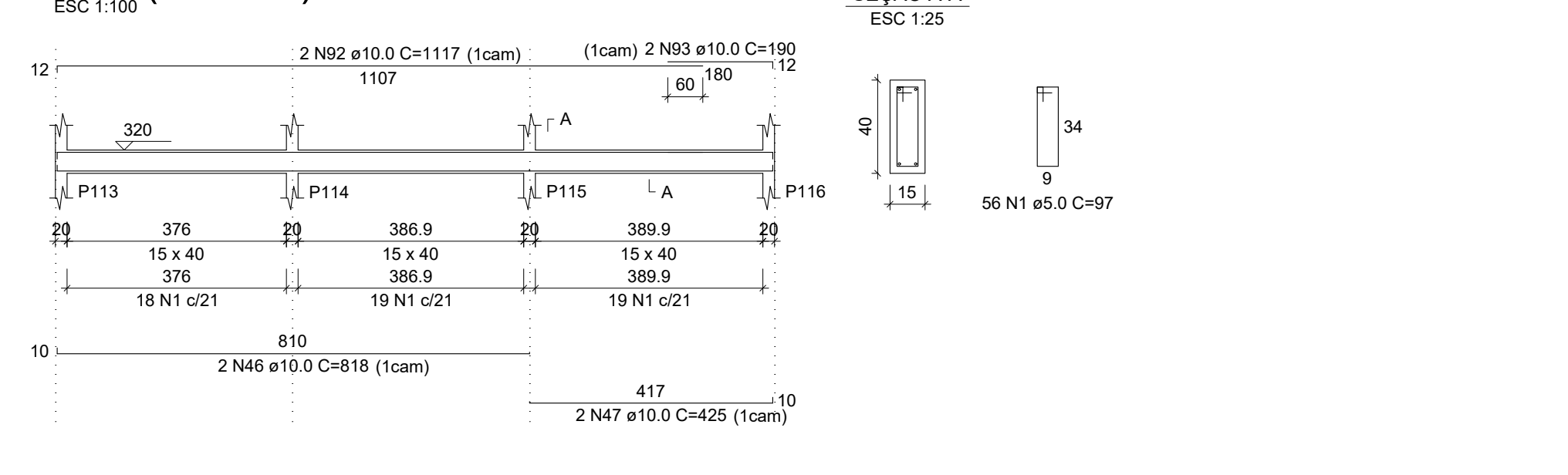
V29 (15 x 40)



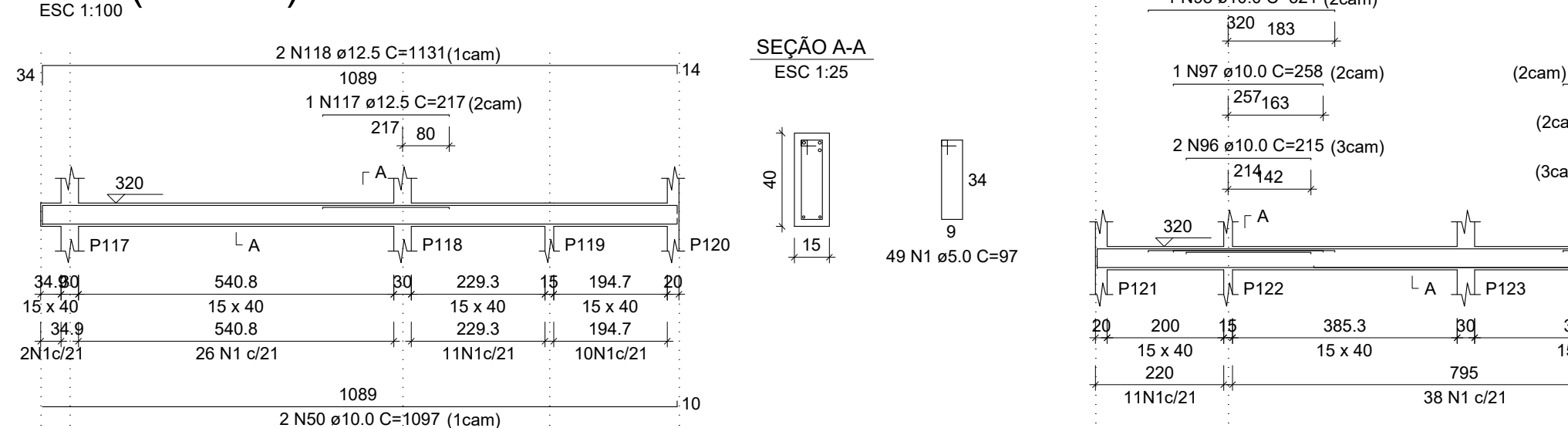
V30 (15 x 40)



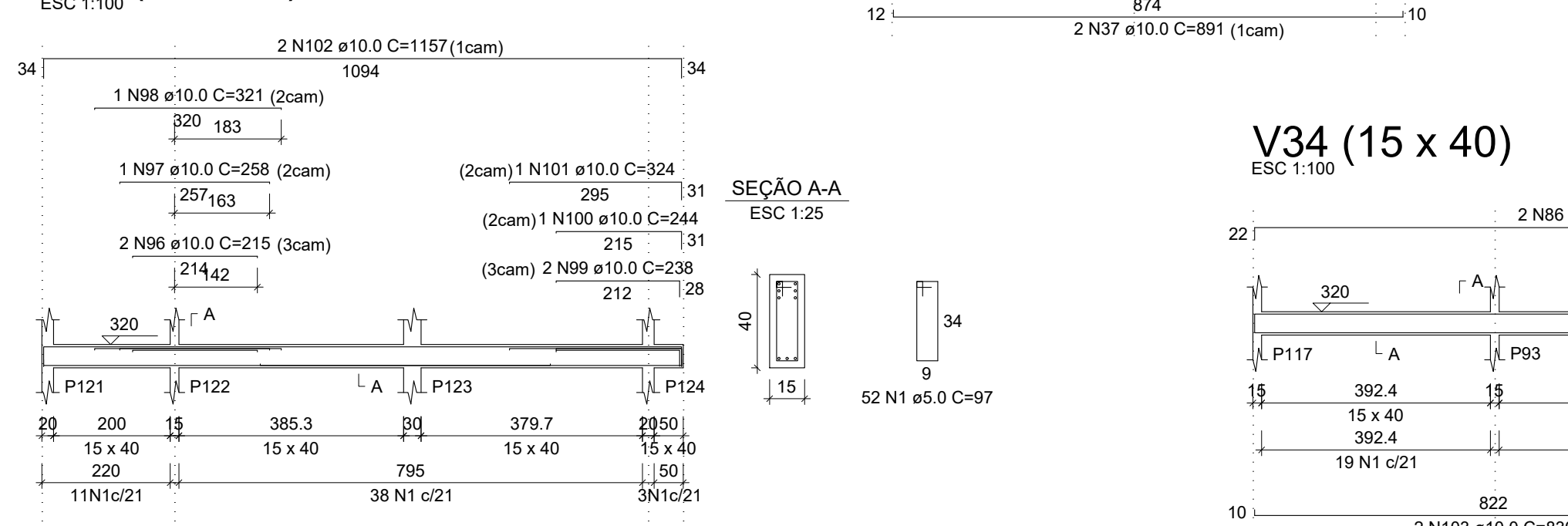
V31 (15 x 40)



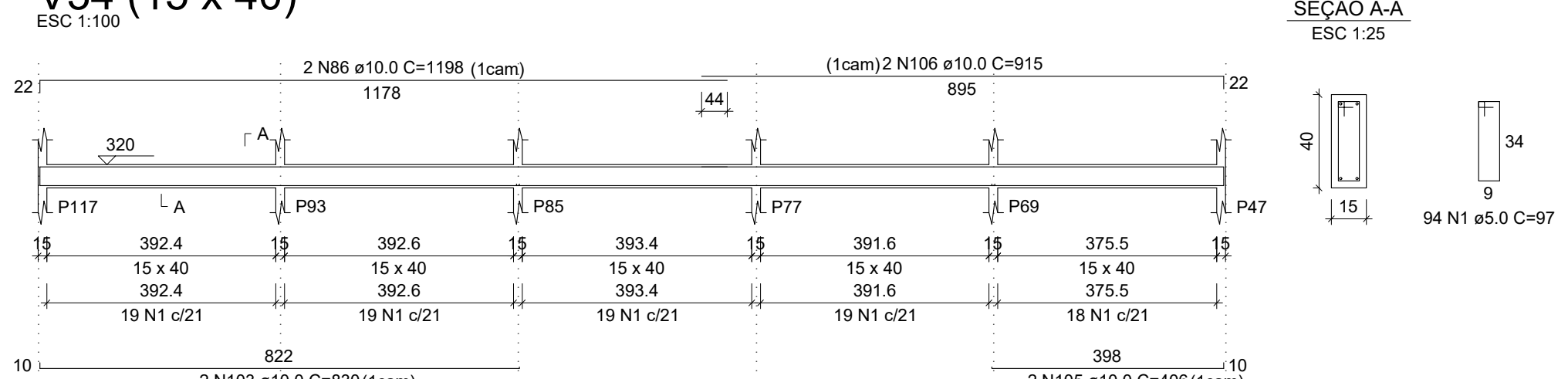
V32 (15 x 40)



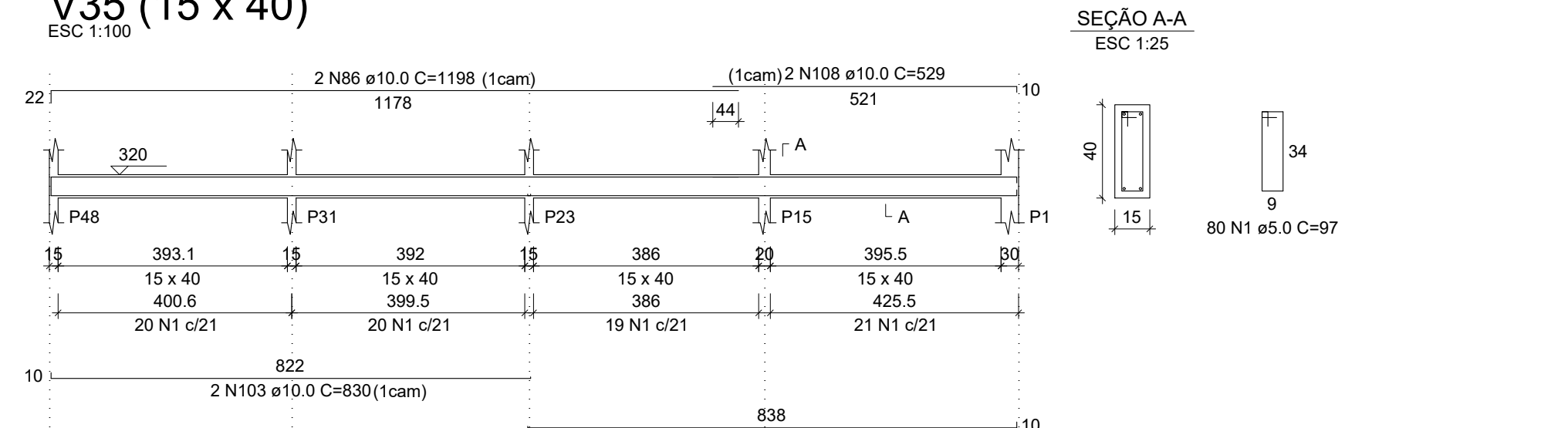
V33 (15 x 40)



V34 (15 x 40)



V35 (15 x 40)

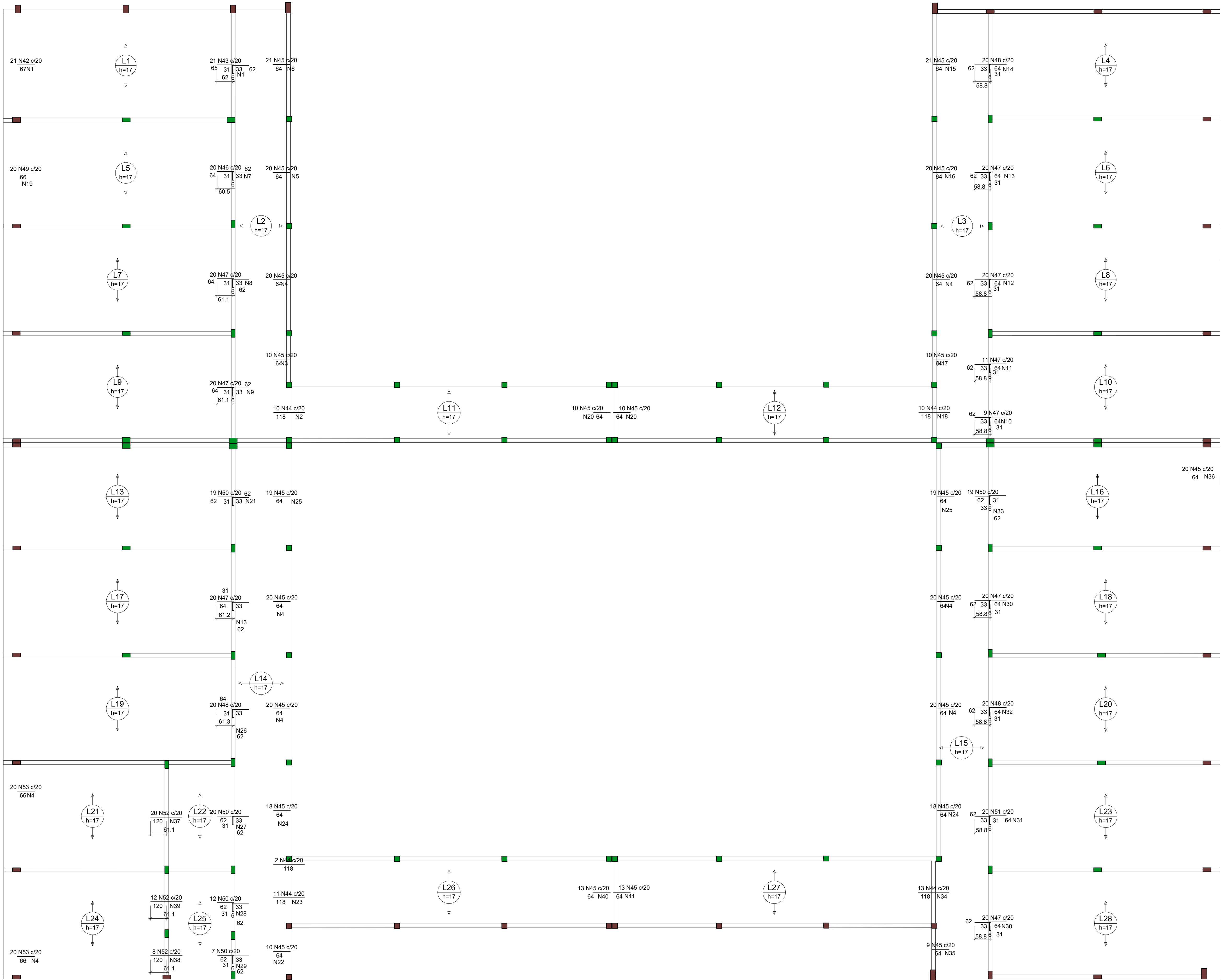


RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	5.0	1709	97	165773
CA50	2	5.0	1709	97	165773
CA50	3	6.3	4	840	3360
CA50	4	6.3	4	840	3360
CA50	5	8.0	12	87	1044
CA50	6	10.0	8	117	936
CA50	7	10.0	2	897	1794
CA50	8	10.0	2	450	900
CA50	9	10.0	1	241	241
CA50	10	10.0	2	1199	2398
CA50	11	10.0	2	1093	2186
CA50	12	10.0	2	216	432
CA50	13	10.0	2	818	1636
CA50	14	10.0	2	427	854
CA50	15	10.0	2	1129	2258
CA50	16	10.0	2	174	348
CA50	17	10.0	2	1102	2204
CA50	18	10.0	1	231	231
CA50	19	10.0	2	1128	2256
CA50	20	10.0	2	274	548
CA50	21	10.0	4	884	3536
CA50	22	10.0	2	287	574
CA50	23	10.0	1	921	921
CA50	24	10.0	2	266	532
CA50	25	10.0	5	417	2085
CA50	26	10.0	2	266	532
CA50	27	10.0	2	884	1768
CA50	28	10.0	2	276	552
CA50	29	10.0	3	318	954
CA50	30	10.0	2	925	1850
CA50	31	10.0	2	270	540
CA50	32	10.0	4	884	3536
CA50	33	10.0	4	277	1108
CA50	34	10.0	1	317	317
CA50	35	10.0	4	884	3536
CA50	36	10.0	8	691	5528
CA50	37	10.0	1	269	269
CA50	38	10.0	1	294	294
CA50	39	10.0	1	269	269
CA50	40	10.0	3	250	750
CA50	41	10.0	3	250	750
CA50	42	10.0	2	294	588
CA50	43	10.0	6	412	2472
CA50	44	10.0	2	294	588
CA50	45	10.0	2	195	390
CA50	46	10.0	2	816	1632
CA50	47	10.0	6	425	2550
CA50	48	10.0	4	1277	5108
CA50	49	10.0	2	194	388
CA50	50	10.0	2	1067	2134
CA50	51	10.0	1	217	217
CA50	52	10.0	2	1067	2134
CA50	53	10.0	2	1067	2134
CA50	54	10.0	2	1067	2134
CA50	55	10.0	2	1140	2280
CA50	56	10.0	2	189	378
CA50	57	10.0	2	1129	2258
CA50	58	10.0	2	234	468
CA50	59	10.0	2	1104	2208
CA50	60	10.0	2	1104	2208
CA50	61	10.0	2	1140	2280
CA50	62	10.0	2	1080	2160
CA50	63	10.0	2	1123	2246
CA50	64	10.0	2	1123	2246
CA50	65	10.0	1	415	415
CA50	66	10.0	2	884	1768
CA50	67	10.0	5	291	1455
CA50	68	10.0	2	925	1850
CA50	69	10.0	1	267	267
CA50	70	10.0	1	415	415
CA50	71	10.0	2	884	1768
CA50	72	10.0	2	432	864
CA50	73	10.0	2	323	646
CA50	74	10.0	6	283	1698
CA50	75	10.0	2	323	646
CA50	76	10.0	4	868	3472
CA50	77	10.0	2	74	148
CA50	78	10.0	6	98	588
CA50	79	10.0	3	311	933
CA50	80	10.0	2	891	1782
CA50	81	10.0	2	341	682
CA50	82	10.0	4	833	3332
CA50	83	10.0	2	816	1632
CA50	84	10.0	2	849	1698
CA50	85	10.0	2	849	1698
CA50	86	10.0	2	1198	2396
CA50	87	10.0	2	1200	2400
CA50	88	10.0	2	275	550
CA50	89	10.0	1	652	652
CA50	90	10.0	2	1119	2238
CA50	91	10.0	2	195	390
CA50	92	10.0	2	1117	2234
CA50	93	10.0	2	190	380
CA50	94	10.0	1	499	499
CA50	95	10.0	2	1109	2218
CA50	96	10.0	2	215	430
CA50	97	10.0	1	258	258
CA50	98	10.0	1	321	321
CA50	99	10.0	2	238	476
CA50	100	10.0	1	244	244
CA50	101	10.0	1	324	324
CA50	102	10.0	2	1157	2314
CA50	103	10.0	4	830	3320
CA50	104	10.0	2	821	1642
CA50	105	10.0	2	406	812
CA50	106	10.0	2	915	1830
CA50	107	10.0	2	846	1692
CA50	108	10.0	2	529	1058
CA50	109	12.5	1	317	317
CA50	110	12.5	1	805	805
CA50	111	12.5	2	320	640
CA50	112	12.5	2	295	590
CA50	113	12.5	2	919	1838
CA50	114	12.5	2	919	1838
CA50	115	12.5	1	761	761
CA50	116	12.5	2	217	434
CA50	117	12.5	1	217	217
CA50	118	12.5	2	1151	2302

RESUMO DO AÇO

ACO	DIAM (mm)	C.TOTAL (m)	QUANT + 6% (Barra)	UNIT	PESO + 6% (kg)
CA50	6.3	84.9	8	12 m	20.8
CA50	8.0	10.4	1	12 m	4.1
CA50	10.0	1715.5	143	12 m	1067.7
CA50	12.5	111.3	10	12 m	107.

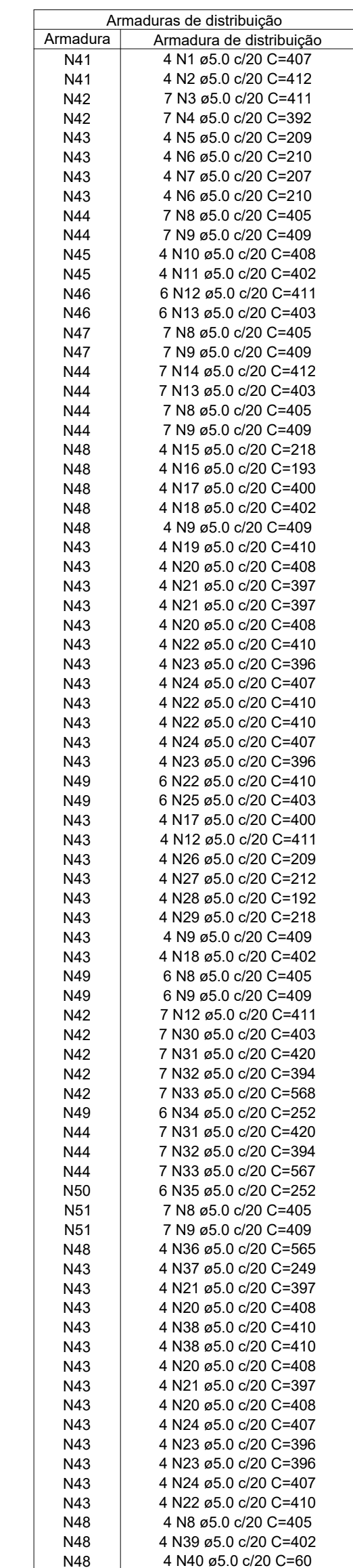


Armaduras de distribuição	
Armadura	Armadura de distribuição
N42	4 N1 a5.0 c/20 C=418
N43	6 N1 a5.0 c/20 C=418
N44	6 N2 a5.0 c/20 C=209
N45	4 N3 a5.0 c/20 C=196
N46	4 N4 a5.0 c/20 C=408
N47	4 N5 a5.0 c/20 C=407
N48	4 N6 a5.0 c/20 C=414
N49	6 N7 a5.0 c/20 C=393
N50	6 N8 a5.0 c/20 C=409
N51	6 N9 a5.0 c/20 C=405
N52	6 N10 a5.0 c/20 C=175
N53	6 N11 a5.0 c/20 C=229
N54	6 N12 a5.0 c/20 C=402
N55	6 N13 a5.0 c/20 C=401
N56	6 N14 a5.0 c/20 C=405
N57	4 N15 a5.0 c/20 C=413
N58	4 N16 a5.0 c/20 C=407
N59	4 N4 a5.0 c/20 C=408
N60	4 N17 a5.0 c/20 C=195
N61	6 N18 a5.0 c/20 C=210
N62	4 N19 a5.0 c/20 C=403
N63	4 N20 a5.0 c/20 C=209
N64	4 N21 a5.0 c/20 C=384
N65	4 N22 a5.0 c/20 C=195
N66	6 N23 a5.0 c/20 C=213
N67	4 N24 a5.0 c/20 C=366
N68	4 N4 a5.0 c/20 C=408
N69	4 N4 a5.0 c/20 C=408
N70	4 N25 a5.0 c/20 C=398
N71	6 N13 a5.0 c/20 C=401
N72	6 N26 a5.0 c/20 C=401
N73	6 N27 a5.0 c/20 C=402
N74	6 N28 a5.0 c/20 C=244
N75	6 N29 a5.0 c/20 C=144
N76	6 N30 a5.0 c/20 C=394
N77	6 N31 a5.0 c/20 C=400
N78	6 N32 a5.0 c/20 C=410
N79	6 N33 a5.0 c/20 C=394
N80	6 N34 a5.0 c/20 C=398
N81	4 N25 a5.0 c/20 C=388
N82	4 N4 a5.0 c/20 C=408
N83	4 N4 a5.0 c/20 C=408
N84	4 N24 a5.0 c/20 C=366
N85	6 N34 a5.0 c/20 C=254
N86	4 N35 a5.0 c/20 C=180
N87	4 N36 a5.0 c/20 C=391
N88	6 N37 a5.0 c/20 C=394
N89	4 N4 a5.0 c/20 C=408
N90	4 N4 a5.0 c/20 C=407
N91	6 N38 a5.0 c/20 C=162
N92	6 N39 a5.0 c/20 C=236
N93	4 N40 a5.0 c/20 C=255
N94	4 N41 a5.0 c/20 C=254

RELAÇÃO DO AÇO						
Negativos X						
ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)	
CA50	1	5.0	10	418	4180	
	2	5.0	6	209	1254	
	3	5.0	4	196	784	
	4	5.0	32	405	13056	
	5	5.0	4	407	1628	
	6	5.0	4	414	1656	
	7	5.0	6	393	2358	
	8	5.0	6	409	2454	
	9	5.0	6	405	2430	
	10	5.0	6	175	1050	
	11	5.0	6	229	1374	
	12	5.0	6	402	2412	
	13	5.0	12	401	4812	
	14	5.0	6	405	2430	
	15	5.0	4	413	1652	
	16	5.0	4	407	1628	
	17	5.0	4	195	780	
	18	5.0	6	210	1260	
	19	5.0	4	403	1612	
	20	5.0	8	209	1672	
	21	5.0	6	384	2304	
	22	5.0	4	195	780	
	23	5.0	6	213	1278	
	24	5.0	8	366	2928	
	25	5.0	8	388	3104	
	26	5.0	6	401	2406	
	27	5.0	6	402	2412	
	28	5.0	6	244	1464	
	29	5.0	6	144	864	
	30	5.0	12	394	4728	
	31	5.0	6	400	2400	
	32	5.0	6	410	2460	
	33	5.0	6	388	2328	
	34	5.0	6	254	1524	
	35	5.0	4	190	720	
	36	5.0	4	391	1564	
	37	5.0	6	394	2364	
	38	5.0	6	162	972	
	39	5.0	6	236	1416	
	40	5.0	4	255	1020	
	41	5.0	4	254	1016	
CA50	42	8.0	21	67	1407	
	43	8.0	21	190	3990	
	44	8.0	46	118	5428	
	45	8.0	381	64	24384	
	46	8.0	20	189	3780	
	47	8.0	190	189	36040	
	48	8.0	60	189	11340	
	49	8.0	20	65	1320	
	50	8.0	77	187	14399	
	51	8.0	20	189	3780	
	52	8.0	40	120	4800	
	53	8.0	40	66	2640	

RESUMO DO AÇO					
ACO	DIAM (mm)	C.TOTAL (m)	QUANT + 6% (Barras)	UNIT (kg)	PESO + 6% (kg)
CA50	8.0	1075.1	90	12	424.2
CA60	5.0	905.3	-	1	139.5
PESO TOTAL (kg)					563.7
Volume de concreto (C-25) = 0.00 m³					
Área de forma = 0.00 m²					

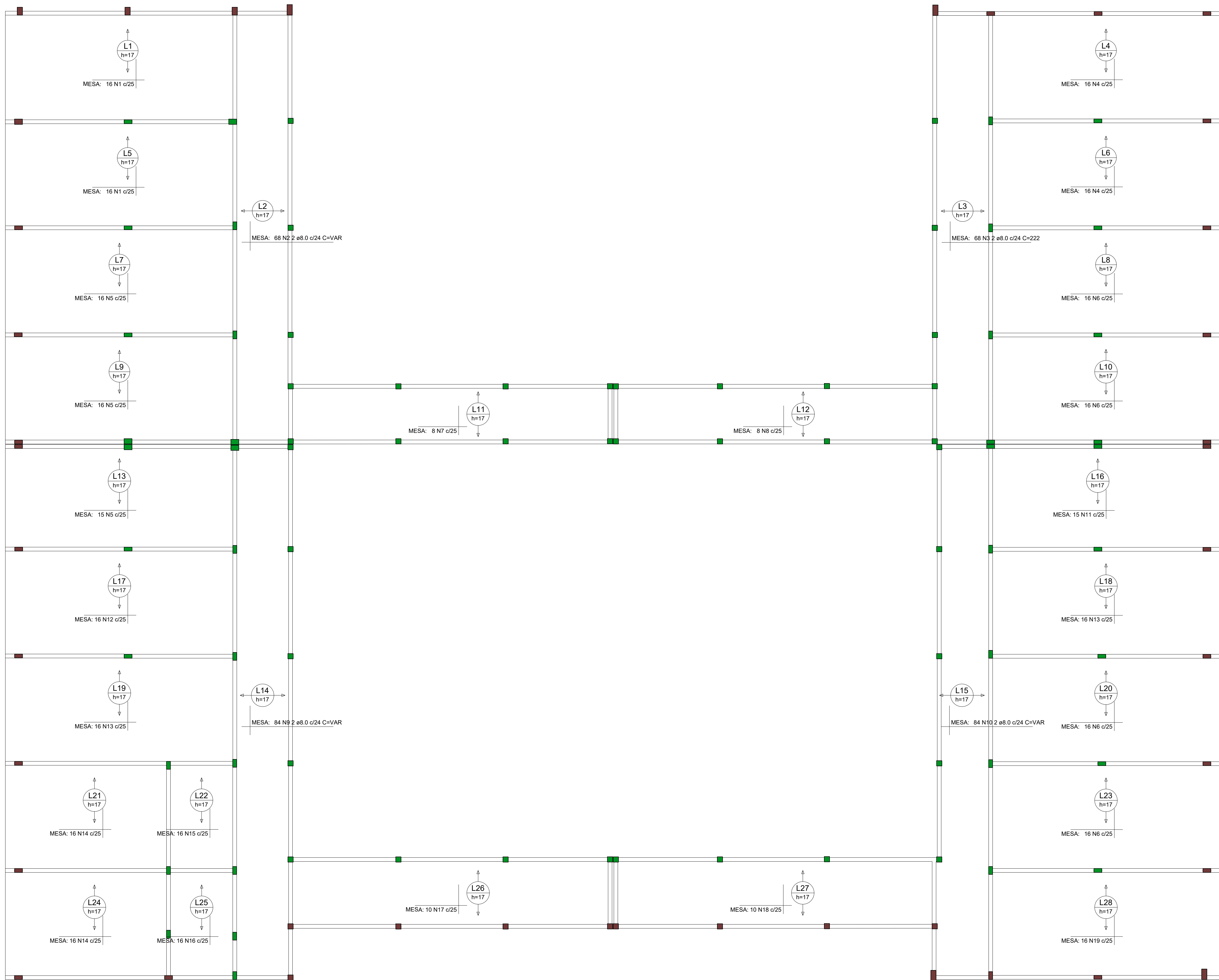
Armação negativa das lajes do pavimento PRIMEIRO (Eixo X)
escala 1:75



RELACÃO DO AÇO							
Neutros Y	AÇO	N	DIAM (mm)	QUANT (cm)	C UNIT (cm)	COT (cm)	ESTR (cm)
CASO 1	1	5,0	4	412	412	1648	
	2	5,0	4	412	412	1948	
	3	5,0	4	392	392	2048	
	4	5,0	4	392	392	2148	
	5	5,0	8	210	180	2180	
	6	5,0	8	207	180	2280	
	7	5,0	38	405	405	15300	
	8	5,0	42	405	405	16300	
	9	5,0	4	408	182	2168	
	10	5,0	4	406	182	2268	
	11	5,0	13	403	403	5238	
	12	5,0	13	403	403	5338	
	13	5,0	4	218	182	2168	
	14	5,0	4	218	182	2268	
	15	5,0	8	400	400	3200	
	16	5,0	8	402	402	3300	
	17	5,0	4	410	180	1640	
	18	5,0	4	410	180	1740	
	19	5,0	18	397	352	6352	
	20	5,0	22	410	410	1640	
	21	5,0	18	398	338	6358	
	22	5,0	18	398	338	6458	
	23	5,0	6	403	403	2418	
	24	5,0	6	403	403	2518	
	25	5,0	6	403	403	2618	
	26	5,0	6	403	403	2718	
	27	5,0	4	212	184	2168	
	28	5,0	4	212	184	2268	
	29	5,0	4	218	178	2178	
	30	5,0	4	218	178	2278	
	31	5,0	14	420	420	5880	
	32	5,0	14	384	384	5880	
33	5,0	14	368	358	5980		
34	5,0	14	368	358	6080		
35	5,0	8	252	152	2512		
36	5,0	8	252	152	2612		
37	5,0	8	256	156	2616		
38	5,0	8	256	156	2716		
39	5,0	8	240	140	3380		
40	5,0	8	240	140	3480		
CASO 2	41	5,0	4	60	240	240	
	42	8,0	155	122	122	18910	
	43	8,0	155	122	122	19910	
	44	8,0	198	122	122	24156	
	45	8,0	198	122	122	25156	
	46	8,0	41	122	502	5112	
	47	8,0	41	122	502	5212	
	48	8,0	160	86	10950	10950	
	49	8,0	160	86	11950	11950	
	50	8,0	13	118	1334	1334	
	51	8,0	13	122	122	122	

RESUMO DO AÇO					
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 0% (Barras)	UNIT	PESO + 0% (kg)
CA50	8.0	1298.2	109	12 m	512.3
CA60	5.0	1485.5	-	rola (170 kg)	229
PESO TOTAL (kg)					
CA50	512.3				
CA60	229				

escala 1:75



RELACO DO AO

Positivos X

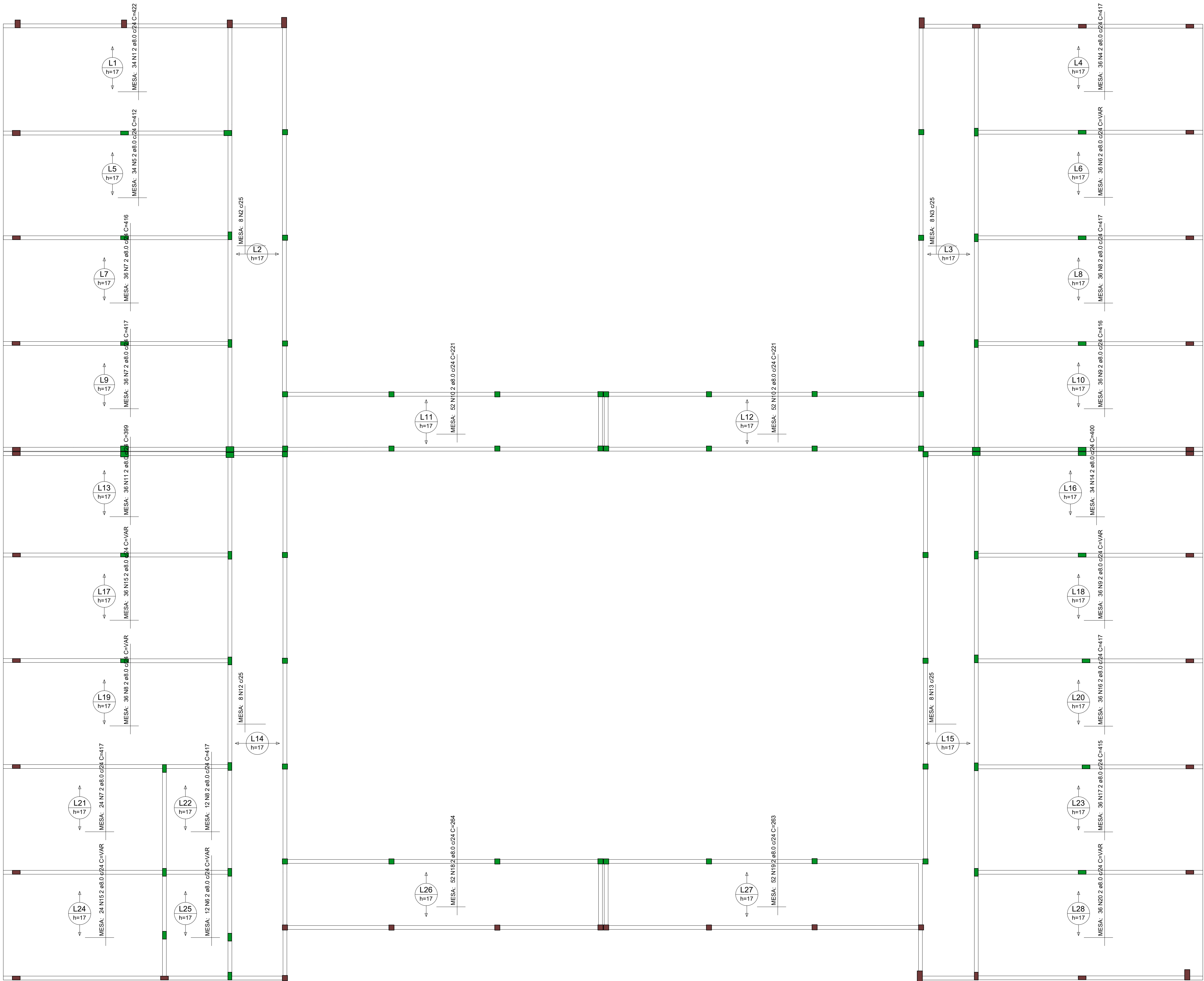
AO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	8.0	32	824	26368
	2	8.0	68	VAR	VAR
	3	8.0	68	222	15096
	4	8.0	32	874	27968
	5	8.0	47	874	41078
	6	8.0	64	874	55936
	7	8.0	8	corr	9784
	8	8.0	8	corr	9760
	9	8.0	84	VAR	VAR
	10	8.0	84	VAR	VAR
	11	8.0	15	823	12345
	12	8.0	16	VAR	VAR
	13	8.0	32	VAR	VAR
	14	8.0	32	572	18304
	15	8.0	16	261	4176
	16	8.0	16	VAR	VAR
	17	8.0	10	corr	12230
	18	8.0	10	corr	12180
	19	8.0	16	VAR	VAR

RESUMO DO AO

AO	DIAM (mm)	C.TOTAL (m)	QUANT + 0% (Barras)	UNIT	PESO + 0% (kg)
CA50	8.0	3562.5	297	12 m	1405.7
PESO TOTAL (kg)					
CA50		1405.7			

Volume de concreto (C-25) = 58.81 m³
Área de forma = 0.00 m²

Armao positiva das lajes do pavimento PRIMEIRO (Eixo X)
escala 1:75



RELAÇÃO DO AÇO

Posições Y

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	8.0	34	422	14348
	2	8.0	8	cmr	12976
	3	8.0	8	cmr	13104
	4	8.0	36	417	15012
	5	8.0	34	412	14008
	6	8.0	48	VAR	VAR
	7	8.0	96	416	39936
	8	8.0	84	417	35028
	9	8.0	72	416	29952
	10	8.0	104	221	22984
	11	8.0	36	399	14364
	12	8.0	8	cmr	16208
	13	8.0	8	cmr	15168
	14	8.0	34	400	13600
	15	8.0	60	VAR	VAR
	16	8.0	36	417	15012
	17	8.0	36	415	14940
	18	8.0	52	264	13728
	19	8.0	52	263	13676
	20	8.0	36	VAR	VAR

RESUMO DO AÇO

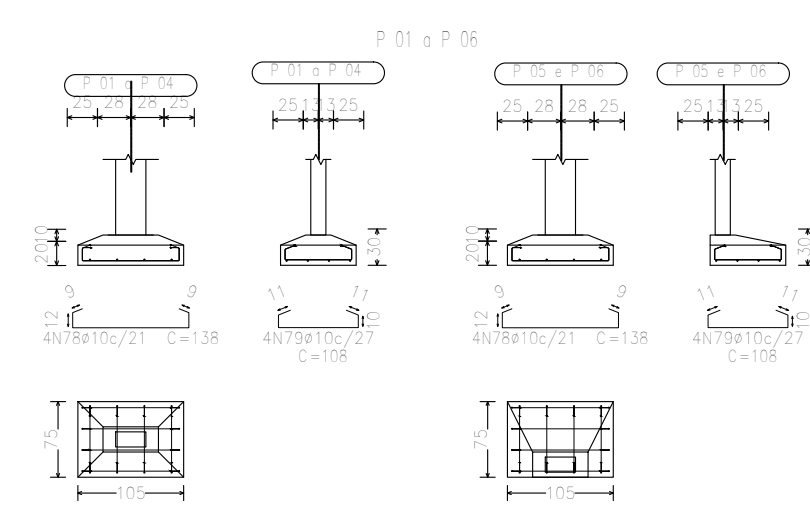
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 0% (Barra)	UNIT	PESO + 0% (kg)
CA50	8.0	3740.1	312	12 m	1475.8
PESO TOTAL (kg)					
CA50		1475.8			

Volume de concreto (C-25) = 0.00 m³
Área de forma = 0.00 m²

Armação positiva das lajes do pavimento PRIMEIRO (Eixo Y)
escala 1:75

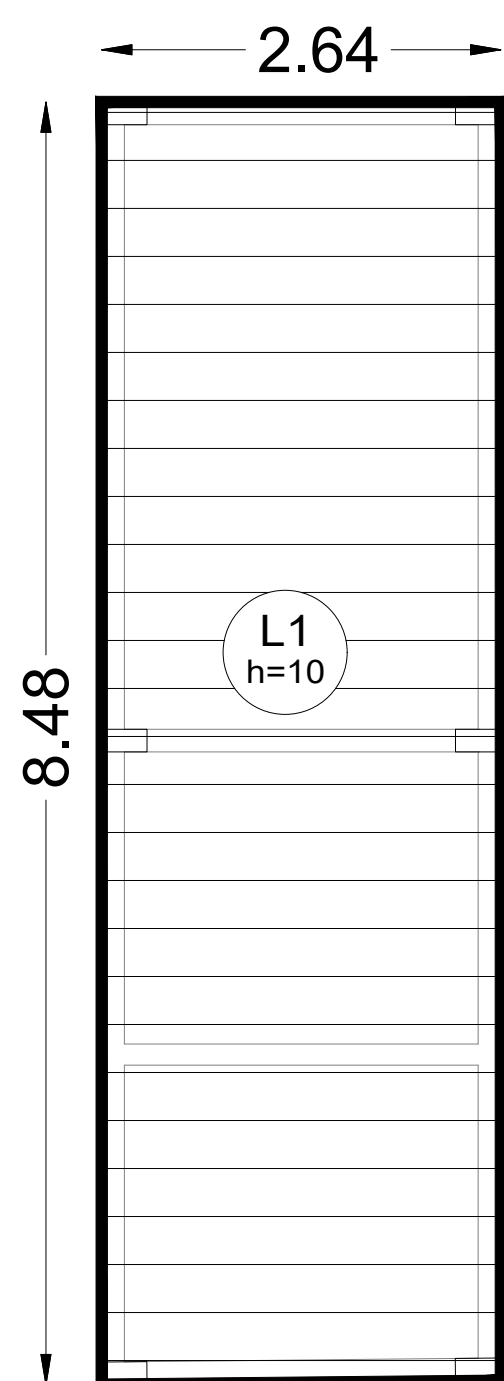


Volume de concreto (C-25) = 0.00 m³
 Área de forma = 0.00 m²



Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)
V 01	1	Ø8,0	4	305	305	4880	19,3
V 02	2	Ø5,0	13	91	91	1183	1,8
V 03	1	Ø8,0	4	890	890	3560	14,1
V 04	2	Ø5,0	42	91	91	3822	5,9
Total							32,2

Resumo Aço Fundação	Comp. total (m)	Peso+10% (kg)	Total
Detalhamento fundação			
CA-50	Ø10	14,76	10,02
			10,02

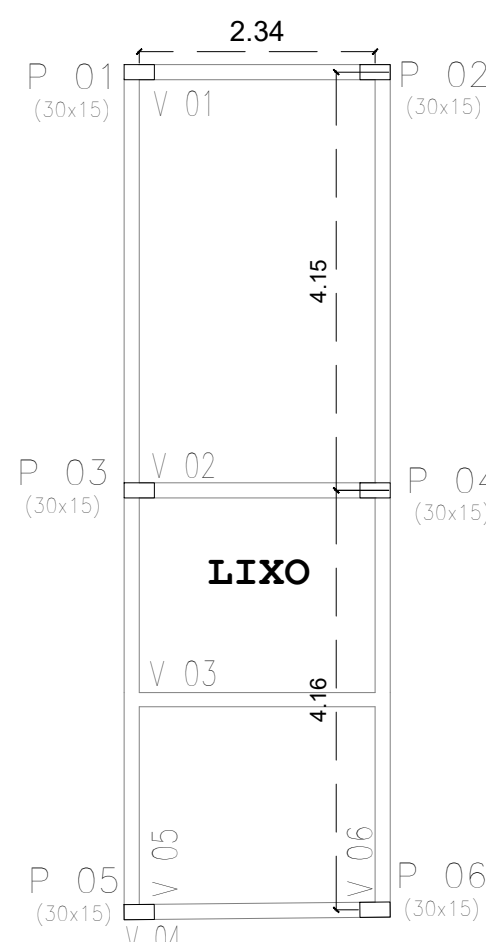
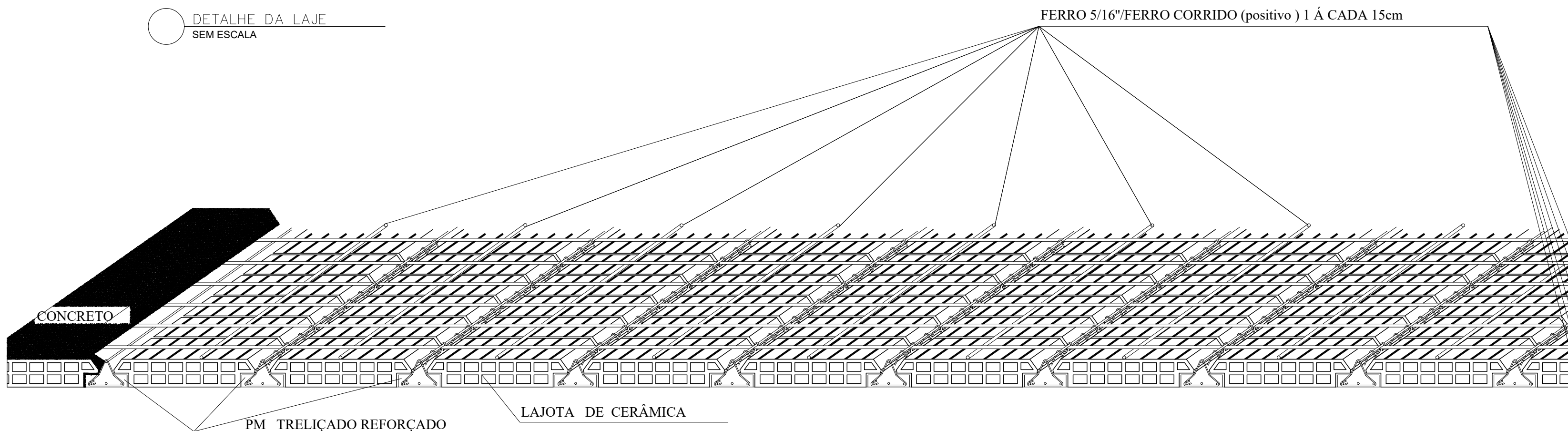


RESUMO DA ÁREA DA LAJE PRÉ-MOLDADA

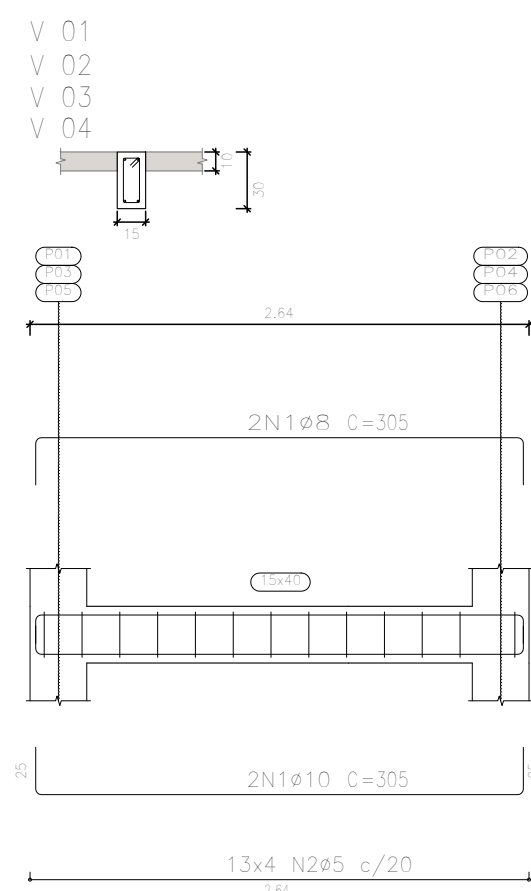
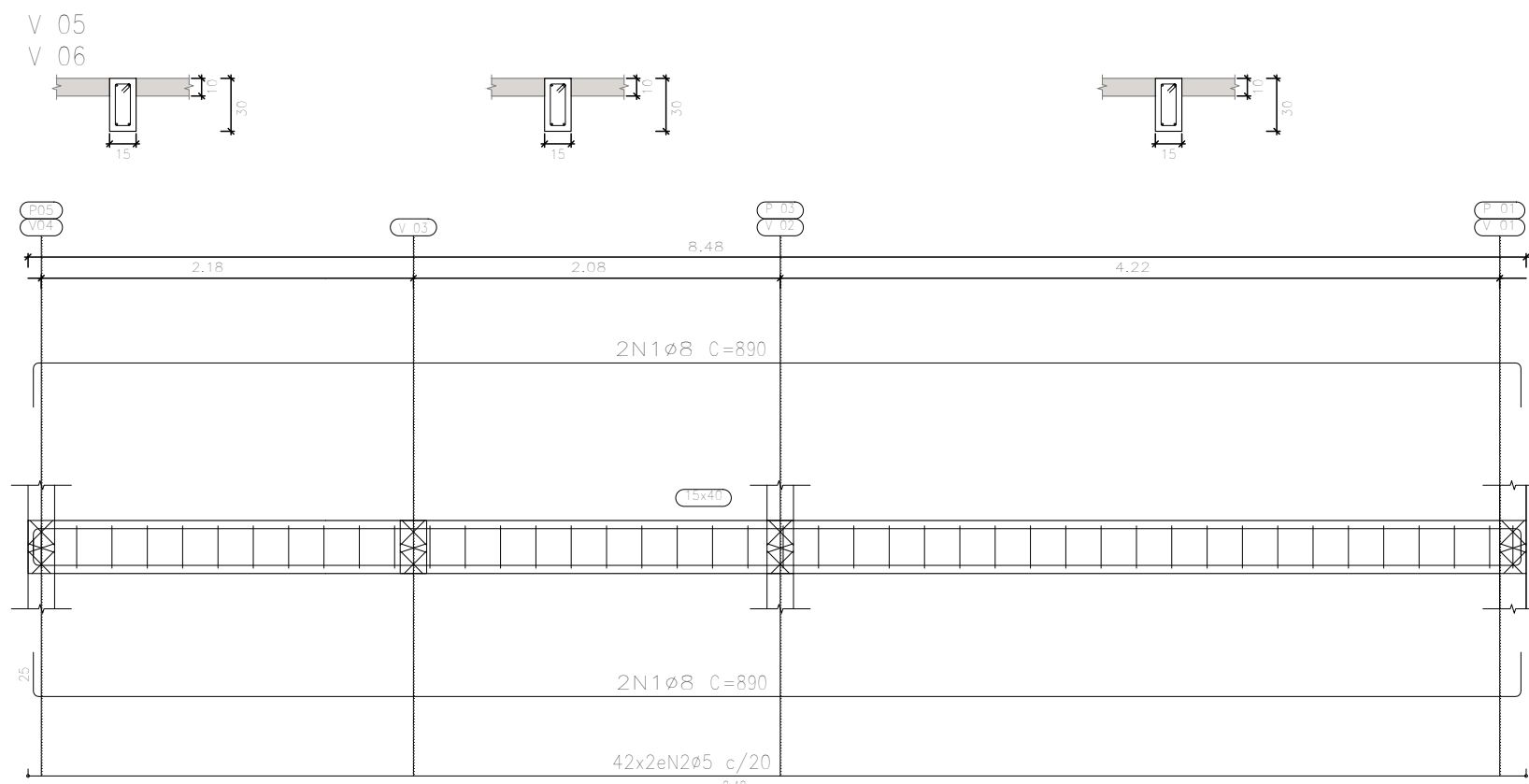
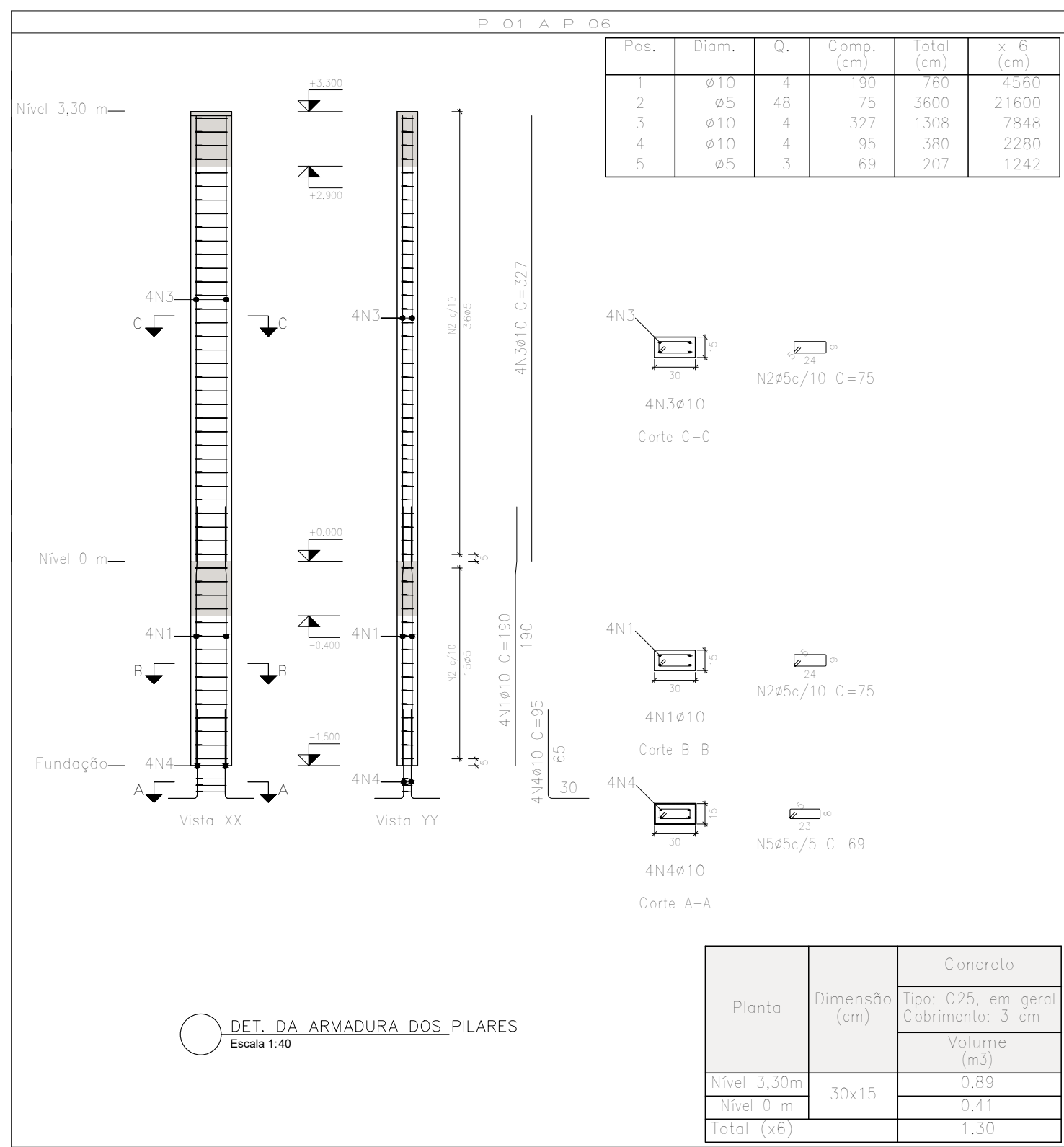
LAJES	ÁREA
L01	22,36 m²
ÁREA TOTAL	22,36 m²

Nível 2,70m
LAJE
Concreto: C25, em geral
CA-50
Escala: 1:50

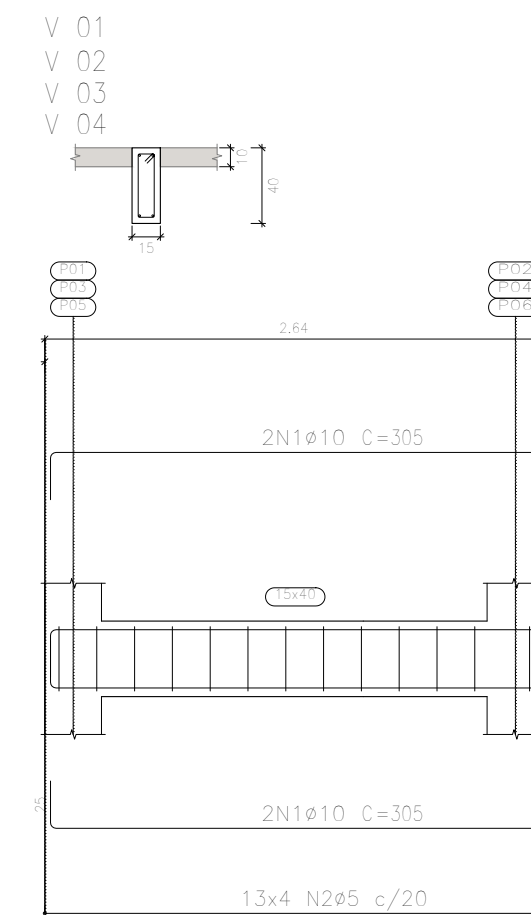
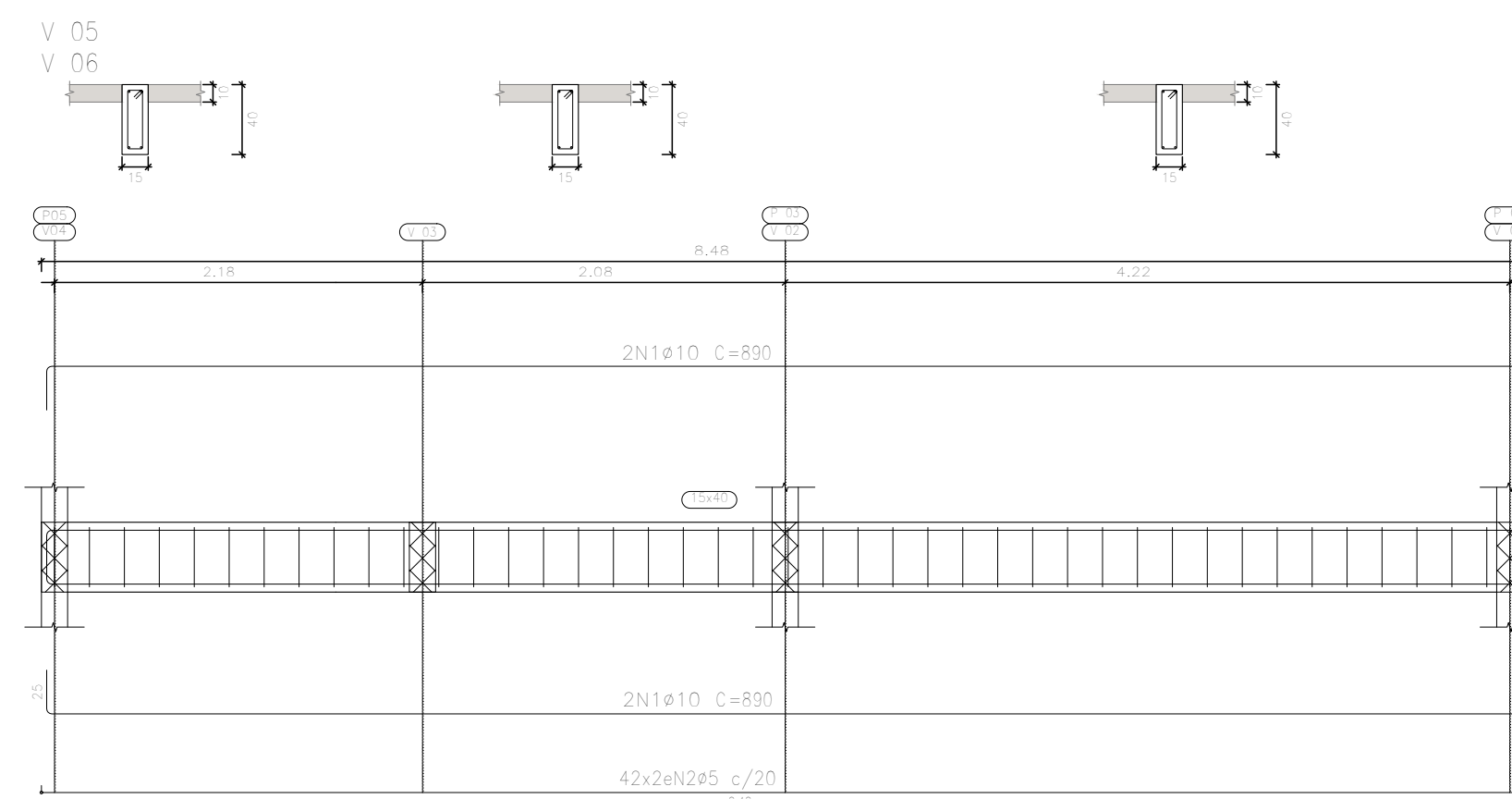
DETALHE DA LAJE
SEM ESCALA



PLANTA BAIXA - VIGAS E PILARES
Escala 1:75



Nível 0 m
Desenho de vigas
Concreto: C25, em geral
Apo. dos pilares: CA-50
Apo. dos estribos: CA-50
Escala vigas: 1:40
Escala estribos: 1:40
Escala aberturas: 1:40



Nível 3,30 m
Desenho de vigas
Concreto: C25, em geral
Apo. dos pilares: CA-50
Apo. dos estribos: CA-50
Escala vigas: 1:40
Escala estribos: 1:40
Escala aberturas: 1:40

Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)
V 01	1	Ø8,0	4	305	305	4880	19,3
V 02	2	Ø5,0	13	91	91	1183	1,8
V 03	1	Ø8,0	4	890	890	3560	14,1
V 04	2	Ø5,0	42	91	91	3822	5,9
Total							32,2

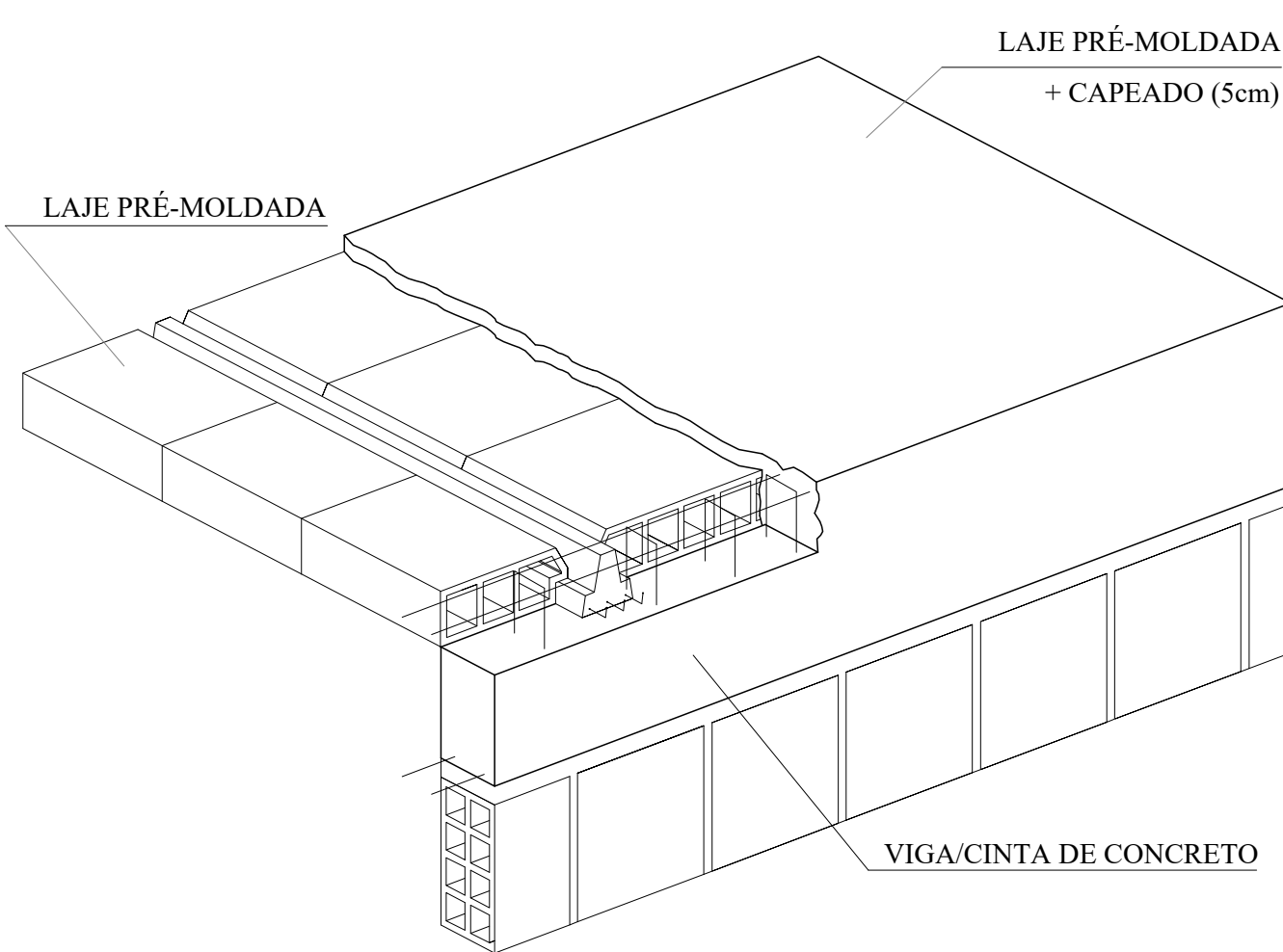
Resumo Aço Fundação	Comp. total (m)	Peso+10% (kg)	Total
Detalhamento fundação			
CA-50	Ø5	96,56	16,36
	Ø8	266,40	115,75
			132,11

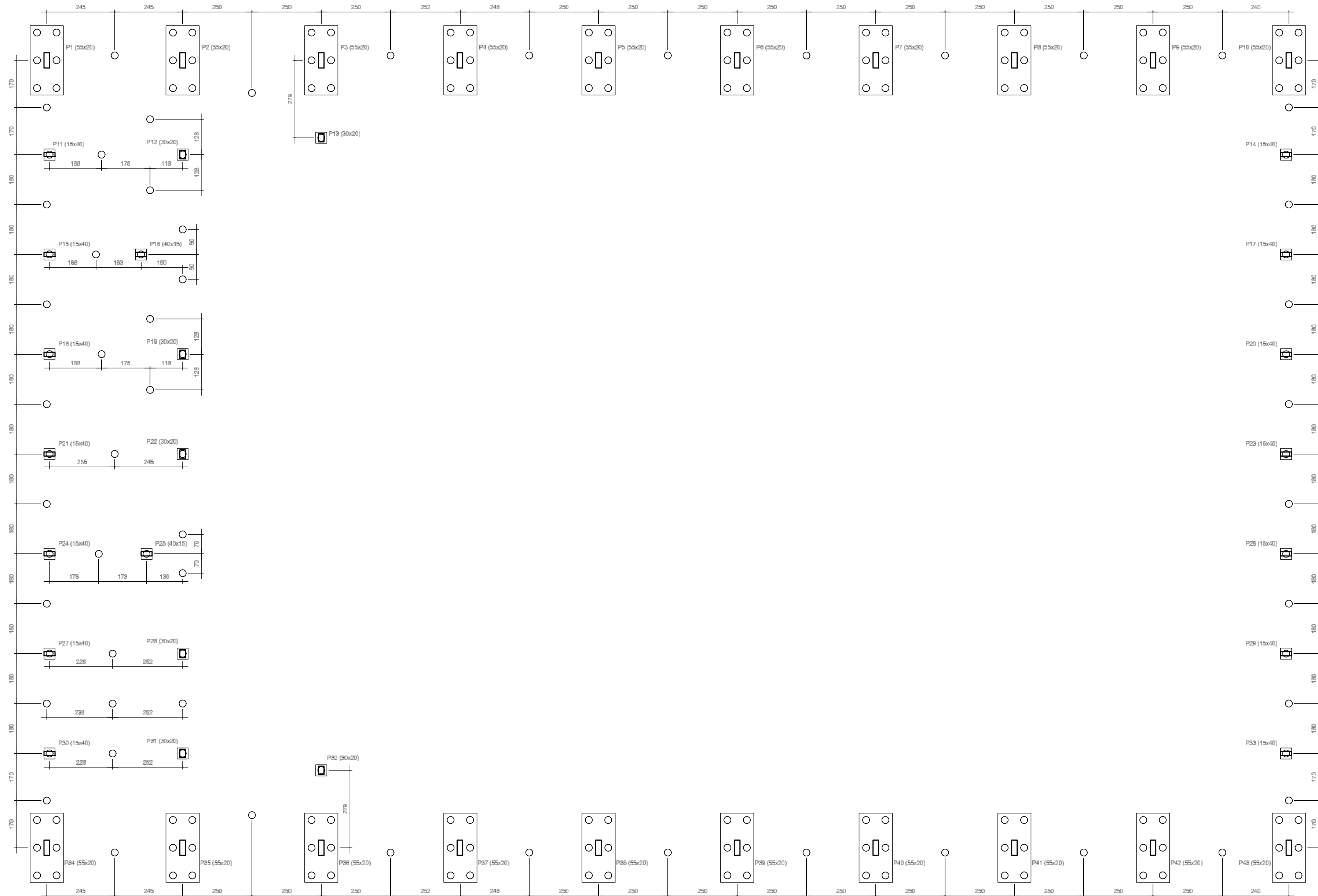
Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)
V 01	1	Ø8,0	4	305	305	4880	19,3
V 02	2	Ø5,0	13	91	91	1183	1,8
V 03	1	Ø8,0	4	890	890	3560	14,1
V 04	2	Ø5,0	42	91	91	3822	5,9
Total							32,2

Resumo Aço Fundação	Comp. total (m)	Peso+10% (kg)	Total
Detalhamento Fundação			
CA-50	Ø5	96,56	16,36
	Ø8	266,40	115,75
			132,11

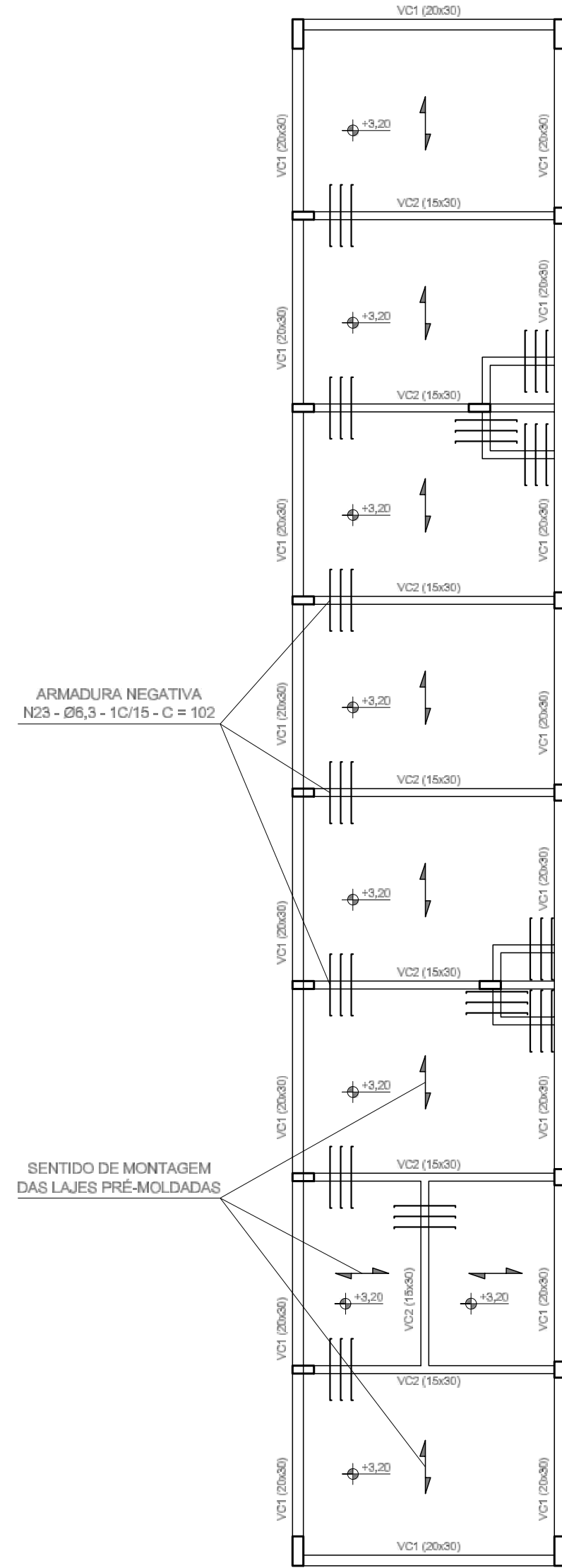
Concreto Vigas: C25, volume total (1,20m³)

DETALHE DA LIGAÇÃO DA LAJE x VIGA/CINTA
SEM ESCALA





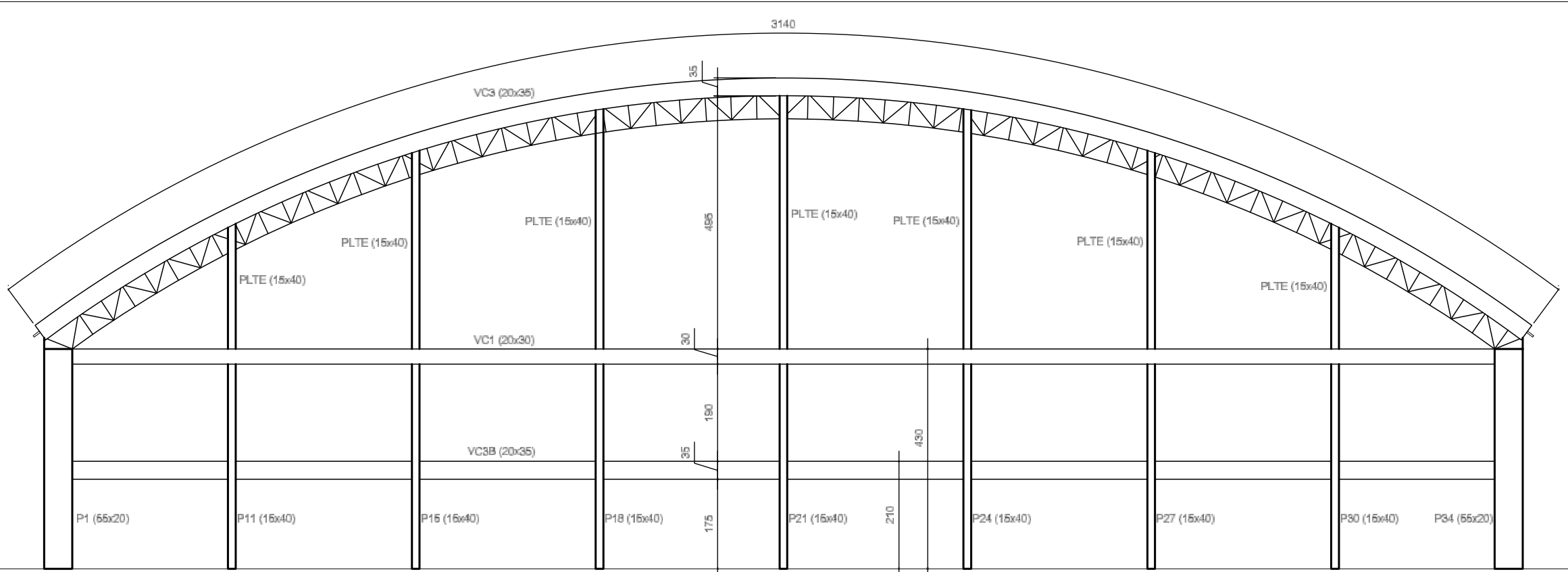
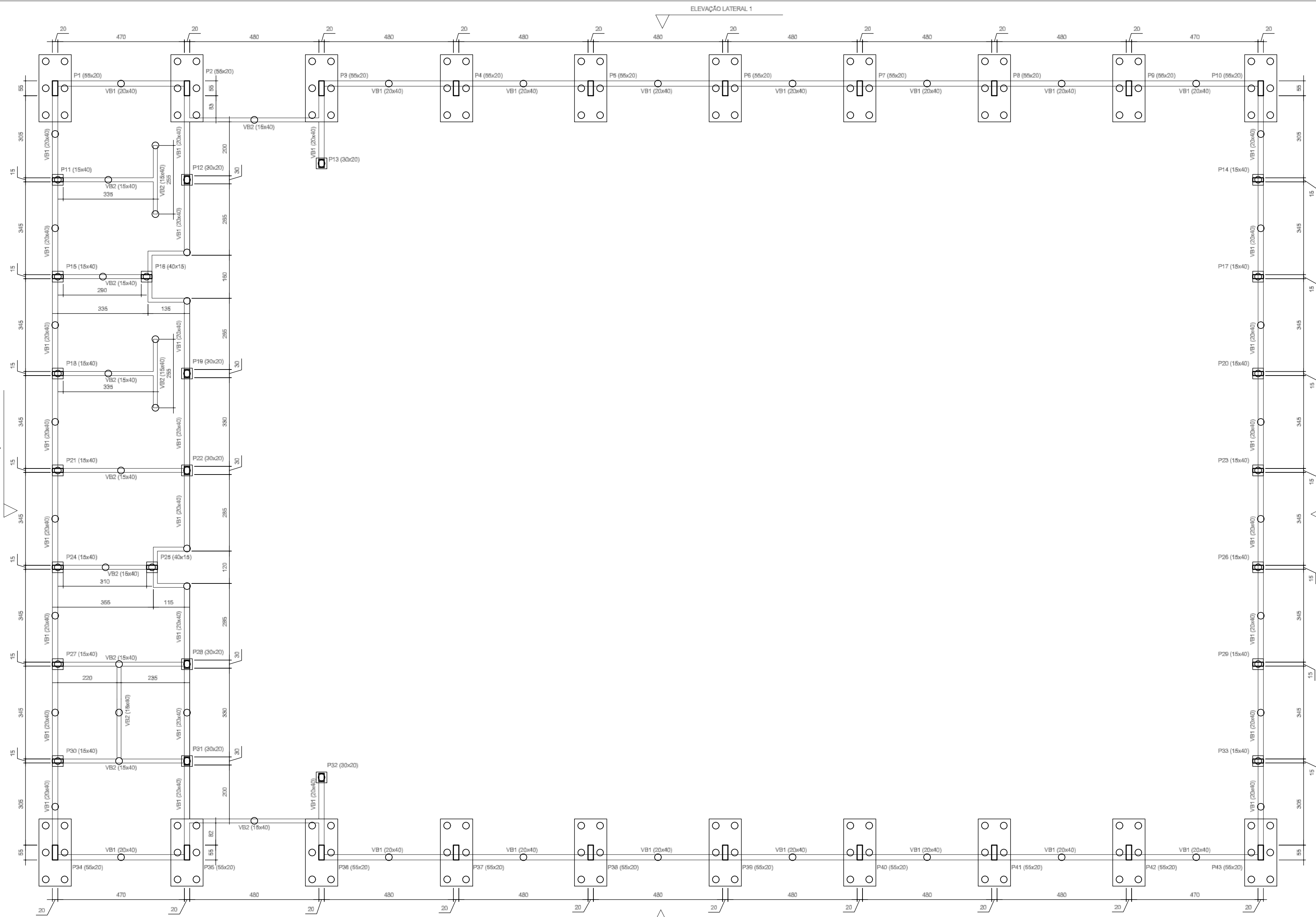
LOCAÇÃO DAS ESTACAS E PILARES
Escala - 1:100



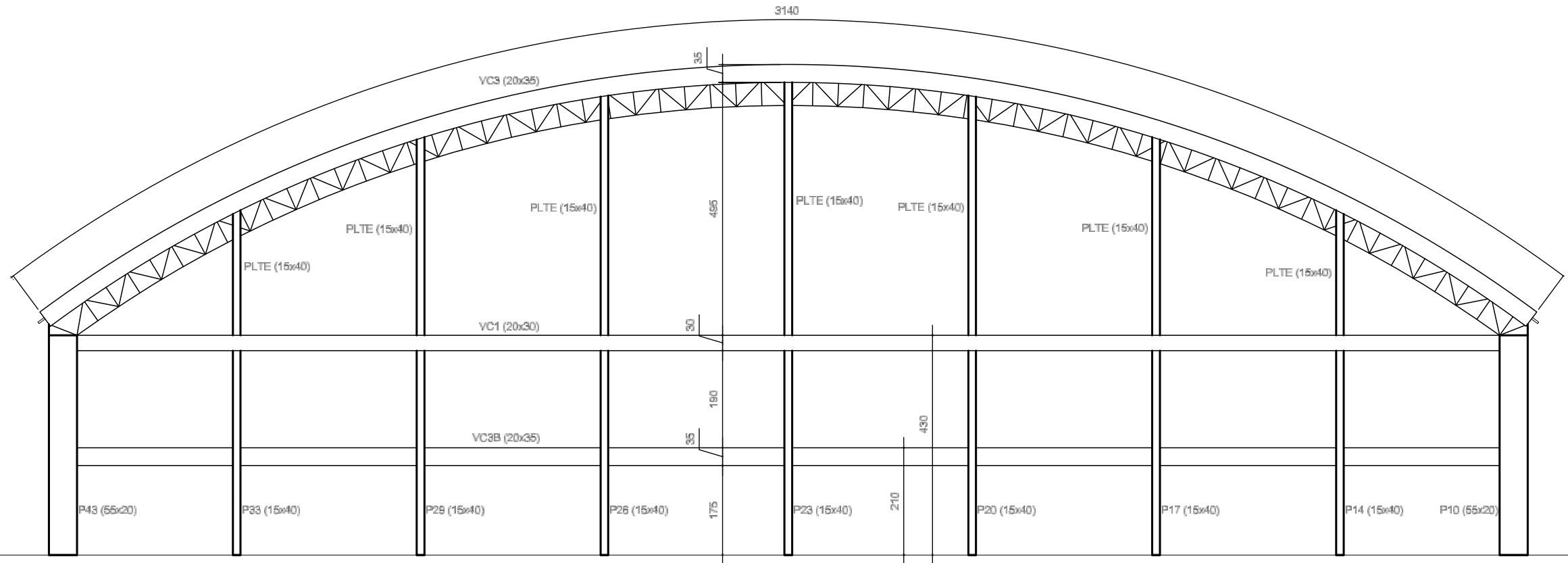
FORMA DOS VESTIÁRIOS E INSTALAÇÕES SANITÁRIAS
Escala - 1:100

NOTAS GERAIS:

- 1) PROJETO DE ACORDO COM A NORMA NBR-6118 (PROJETO E EXECUÇÃO DE ESTRUTURAS DE CONCRETO ARMADO) E NBR 6122 (PROJETO E EXECUÇÃO DE FUNDAÇÕES);
- 2) CONCRETO ADOTADO: $f_{ck} = 20$ MPa (PARA VIGAS E PILARES)
 $f_{ck} = 18$ MPa (PARA BLOCOS E ESTACAS)
- 3) VERIFICAR AS MEDIDAS NA OBRA;
- 4) TODAS AS MEDIDAS ESTÃO EM CENTÍMETROS;
- 5) É DE RESPONSABILIDADE DO FABRICANTE, A VERIFICAÇÃO DOS QUANTITATIVOS DE MATERIAIS ANTES DA ELABORAÇÃO DA PROPOSTA;
- 6) TODA E QUALQUER ALTERAÇÃO NA ESTRUTURA, COMO MUDANÇA DE BITOLAS, DEVERÃO SER AUTORIZADAS PELO PROJETISTA;
- 7) ANTES DA CONCRETAGEM MOLHAR BEM AS FORMAS E CONSERVAR ÚMIDA AS PARTES CONCRETADAS POR PELO MENOS 7 DIAS;
- 8) DEVERÃO SER COLOCADAS AS ARMADURAS ADICIONAIS (MALHAS) POR SOBRE AS LAJES ANTES DA CONCRETAGEM DAS MESMAS;
- 9) UTILIZAR ESPAÇADORES PLÁSTICOS OU DE CONCRETO NAS LAJES, VIGAS E PILARES;
- 10) EXECUTAR LASTRO DE CONCRETO MAGRO DE 5 cm EM TODOS OS BLOCOS DE FUNDAÇÃO, COBRIMENTO DAS ARMADURAS DE LAJES, BLOCOS, VIGAS E PILARES SERÁ DE 25 mm;
- 11) EM CASO DE DÚVIDAS, CONSULTAR O PROJETISTA.

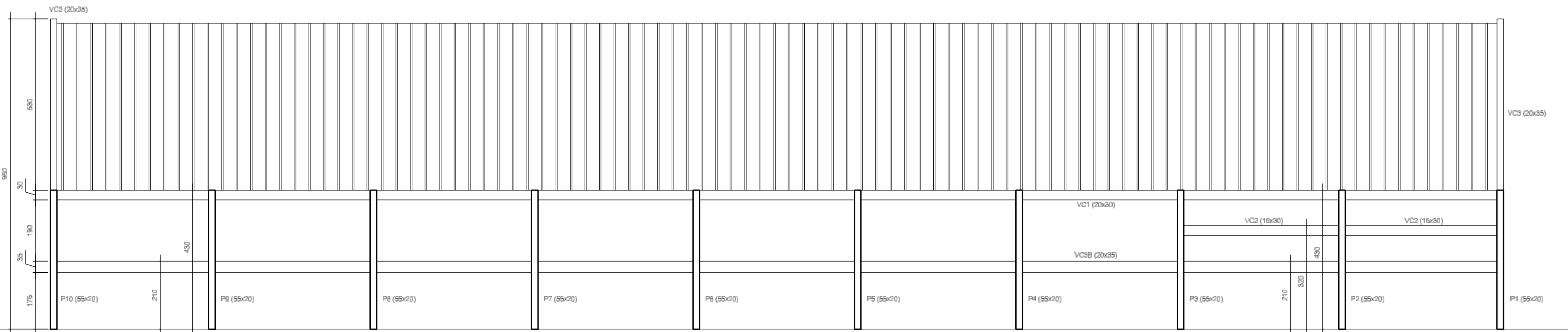


ELEVÇÃO 1
Escala - 1:100

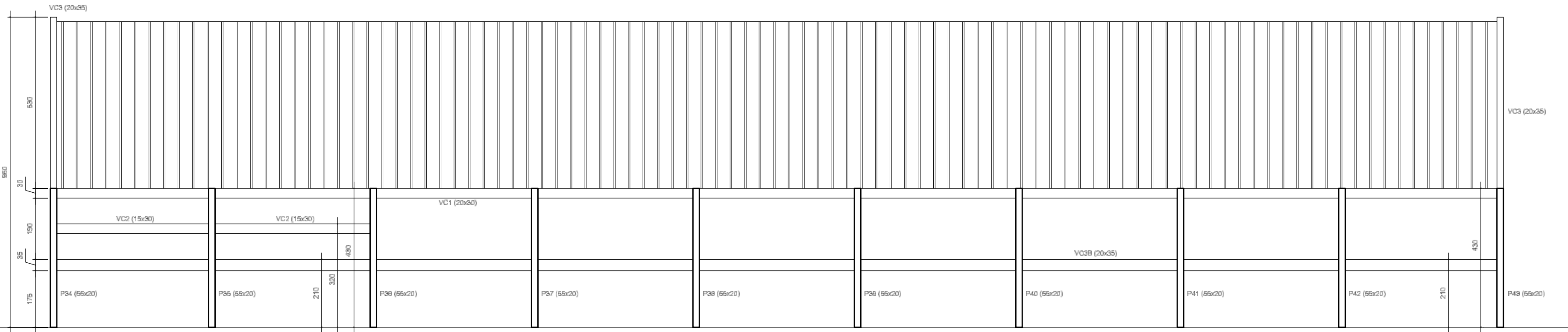


ELEVÇÃO 2
Escala - 1:100

FORMAS DOS BALDRAMES
Escala - 1:100



ELEVÇÃO LATERAL 1
Escala - 1:100



ELEVÇÃO LATERAL 2
Escala - 1:100

NOTAS GERAIS:

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 $f_{ck} = 18$ MPa (PARA BLOCOS E ESTACAS)
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 INSTITUTO FEDERAL Sertão Pernambucano	INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA SERTÃO PERNAMBUCANO DIRETORIA DE ENGENHARIA E INFRAESTRUTURA Rua Aristarco Lopes, 240 Centro Petrolina/PE CEP: 56.302-100	VCAR: PROJETO DE ESTRUTURA METÁLICA DO CAMPUS ÁGUAS BELAS DO IF Sertão PE	
	ENDEREÇO: Rodovia PE-300, S/N, CEP: 55340-000 Águas Belas/PE	ESCALA: INDICADA	DATA: ABRIL/2025
DESCRIÇÃO: FORMAS DOS BALDRAMES E ELEVÇÕES (GINÁSIO)		ASSINATURACARIMBO - RESPONSÁVEL TÉCNICO:	ASSINATURACARIMBO - RESPONSÁVEL TÉCNICO:
Ebson Alves da Silva - CREA PE 055750		02/03	

Escala - 1:20

Technical drawing of a GANCHO (hook) showing dimensions and material specifications:

- Overall height: 3
- Overall width: 20
- Material specifications:
 - N1 - 6Ø12,5 - C = 490
 - N2 - 2Ø10,0 - C = 490
- Label: GANCHO

N3 - Ø6,3 - 1C/15 - C = 140

Technical drawing of a rectangular plate with a central hole and a bolt. The plate has a width of 15 and a height of 20. A central hole is shown with a diameter of 6. A bolt is shown passing through the hole, with a label "N4 - 6Ø10,0 - C = 515" indicating its specifications.

Technical drawing of a rectangular plate with dimensions 30x20. The plate has a central hole labeled N4 - 6Ø10,0 - C = 515. The drawing shows the plate with a central hole and four smaller holes arranged in a square pattern around the center. The dimensions 30 and 20 are indicated on the left and bottom respectively. The label N4 - 6Ø10,0 - C = 515 is shown to the right of the plate.

25

15

N6 - Ø5,0 - 1C/15 - C = 90

Technical drawing of a rectangular plate. The overall dimensions are 40 (height) and 15 (width). A detail view is shown with a magnification factor of $N7 - 6 \times 8,0 - C = \text{Variável}$.

N5 - Ø5,0 - 1C/15 - C = 100

Escala - 1:25

Technical drawing of a cross-section of a reinforced concrete beam. The beam has a total height of 465 mm and a total width of 50 mm (25 mm on each side of the central core). The central core is 25 mm wide and 465 mm high. The core is reinforced with 6 N1 bars (3 on each side) and 2 N2 bars (top and bottom). The label "BLOCCO" points to the left side of the beam.

Escala - 1:20

Diagrama de uma seção transversal de uma viga de concreto armado com 3 barras de aço de cada lado. As dimensões são 40 cm de altura e 20 cm de largura. As barras são identificadas como N8 - 3Ø8,0 - C = Corrido, N9 - 2Ø6,3 - C = Corrido e N10 - 3Ø10,0 - C = Corrido.

N11 - Ø5,0 - 1C/15 - C = 110

 N5 - Ø5,0 - 1C/15 - C = 100

E
P12-P13-P19-P22
-P28-P31-P32 (20x30) (7x)

Technical drawing of a vertical rod. The rod is labeled "6 N4" vertically. The total height is dimensioned as 480. The base of the rod is dimensioned as 25. A horizontal line labeled "BLOCO" is shown to the left of the rod's base.

Escala - 1:20

Technical drawing of a mechanical part, likely a shaft or tube, showing dimensions. The drawing includes a side view and a cross-sectional view. The side view shows a long, thin component with a central section that is wider. The cross-sectional view shows a rectangular profile with a central hole. Dimensions are given in millimeters: 35 for the height of the side view, 40 for the width of the central section, and 50 for the width of the side sections.

Escala - 1:20

Technical drawing of a rectangular plate with dimensions 30 and 20. A detail callout points to the corners, labeled "N19 - 4Ø8,0 - C = Corrido".

Technical drawing of a rectangular reinforcement cage. The dimensions are 30 (height) and 15 (width). A callout points to the cage with the text "N19 - 4Ø8,0 - C = Corrido".

25

15

N20 - Ø5,0 - 1C/15 - C = 90

25

10

N20B - Ø5,0 - 1C/15 - C = 80

Escala - 1:25

Technical drawing of a rectangular table with dimensions and hole positions. The overall dimensions are 250 (width) and 120 (height). The table has six circular holes arranged in two rows of three. The top row of holes is 70 units from the top edge. The bottom row of holes is 25 units from the bottom edge. The distance between the left and right edges of the holes is 100 units. The distance between the top and bottom edges of the holes is 25 units. The distance between the left and right edges of the holes is 100 units. The distance between the top and bottom edges of the holes is 25 units. The distance between the left and right edges of the holes is 100 units. The distance between the top and bottom edges of the holes is 25 units.

Escala - 1:20

Technical drawings of two parts:

- Part 1:** A square plate with a side length of 40. It features a circular hole in the center. The hole has a diameter of 16, indicated by the dimension $\varnothing 16$.
- Part 2:** A rectangular plate with a width of 35 and a height of 35. It features a U-shaped slot on the right side. The slot has a depth of 105 and a width of 11.5. The material thickness is 8. The slot is labeled with the dimension $N16 - 4\varnothing 8,0 - 1C/11,5 - C = 105$.

Technical drawing of a square plate with dimensions 35x35 mm. A callout line points to the plate with the specification: N16-4Ø8,0-1C/11,5-C=105.

Escala - 1:20

Technical drawing showing a vertical section and two detail views of a structural element.

Vertical Section:

- Overall height: 200
- Top flange thickness: 20
- Reinforcement bar: N17 - 3Ø6,3 - C = 220

Detail N17 (Top):

- Reinforcement bar: N17 - 3Ø6,3 - C = 220

Detail N18 (Bottom):

- Reinforcement bar: N18 - Ø5,0 - 1C/20 - C = 50
- Width: 14

Escala - 1:25

Figure 1 shows the reinforcement layout for the slab. It is a grid of reinforcement bars. The vertical bars are labeled $N22 - \varnothing 5.0 - 1C/25 - C = \text{Corrido}$. The horizontal bars are labeled $R1$ and $R2$. The dimensions of 25 are indicated for the spacing between bars.

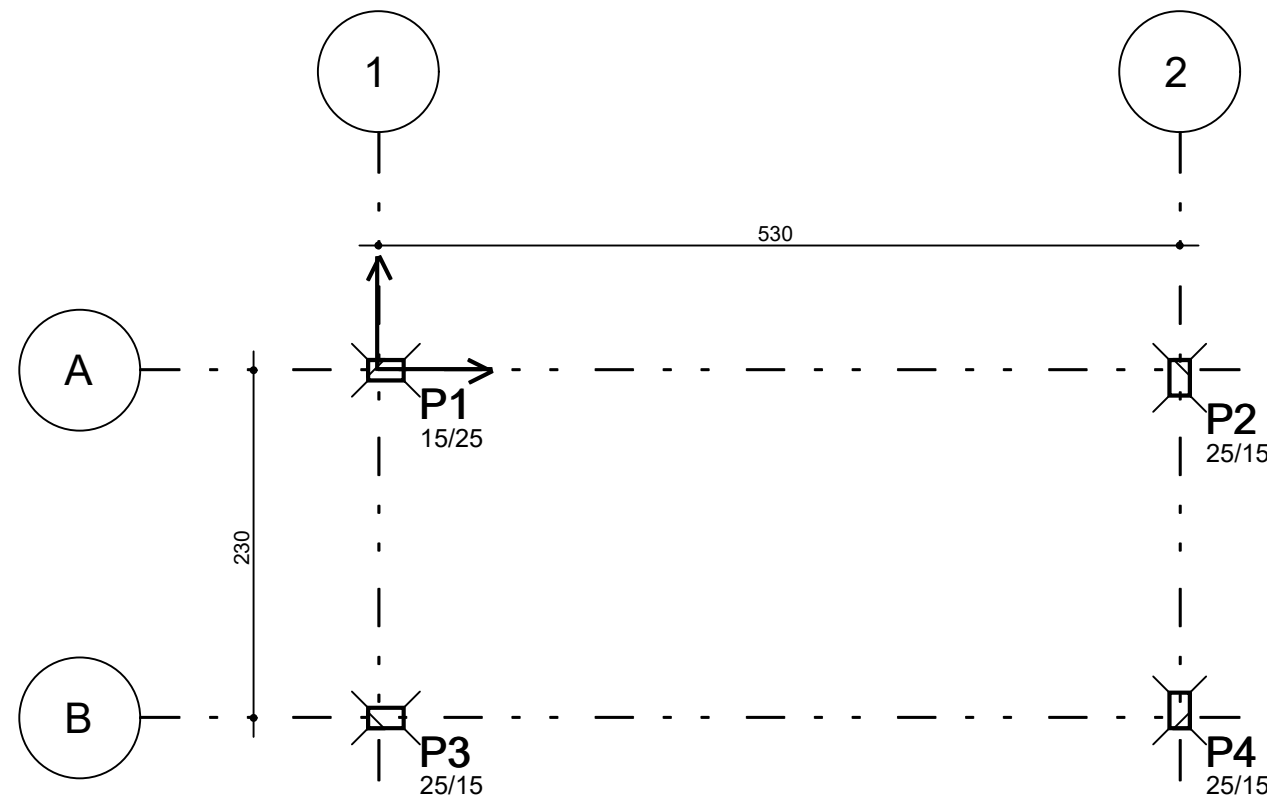
N	Ø	QUANT.	COMP. (cm)
1	12,5	120	490
2	10,0	40	490
2B	5,0	580	25
3	6,3	580	140
4	10,0	96	515
5	5,0	1464	100
6	6	231	90
7	8,0	98	VARIAEL
8	8,0	8	CORRIDO
9	6,3	8	CORRIDO
10	10,0	3	CORRIDO
11	5,0	984	110
12	8,0	4	CORRIDO
13	10,0	2	CORRIDO
14	8,0	480	315
15	8,0	440	185
16	8,0	184	105
17	6,3	555	220
18	5,0	2035	50
19	8,0	8	CORRIDO
20	5,0	134	90
20B	5,0	134	80
21	5,0	2970	100
22	5,0		CORRIDO
23	6,3	330	102

Ø		kg/m	C. Total	Peso
CA 60	4,2	0,11		—
	5,0	0,16		5850
	6,3	0,25		855
CA 50 A	8,0	0,40		530
	10,0	0,63		223
	12,5	1,00		647
	16,0	1,60		—
	20,0	2,50		—
TOTAL			8105kg	

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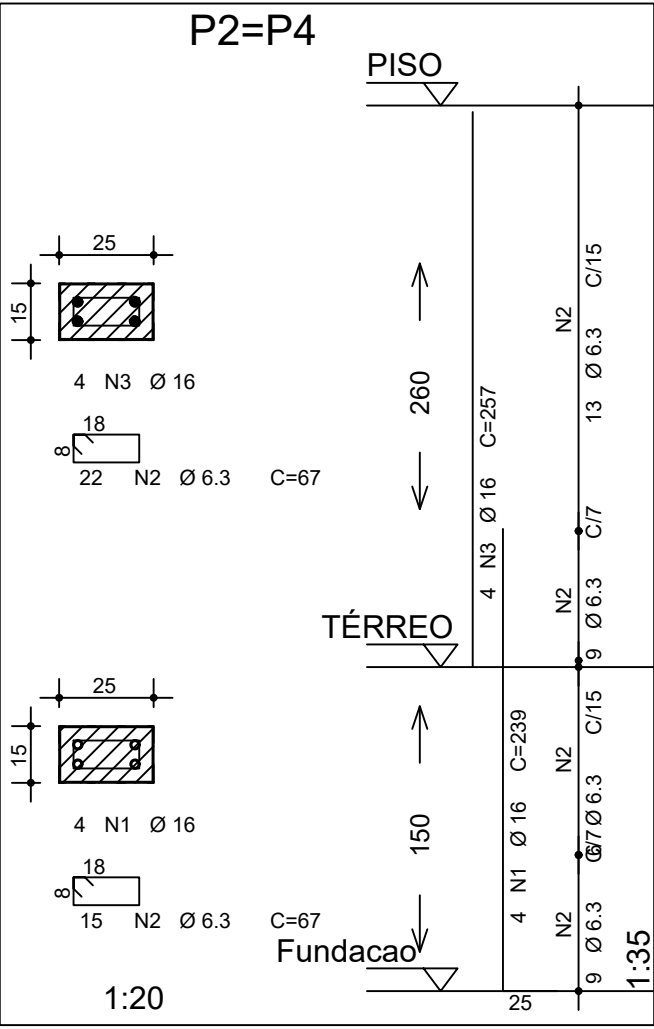
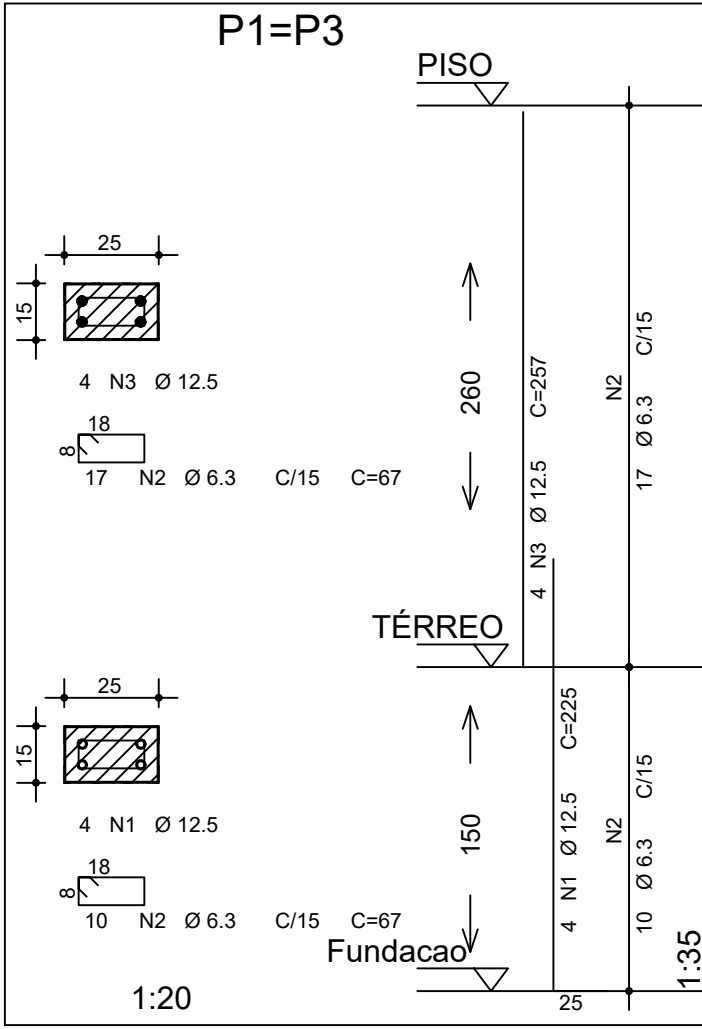
LOCAÇÃO DOS PILARES.

Esc.: 1/50



PILARES	REAÇÕES (ton, m.ton)				
	Fz	Fx	Fy	Mx	My
P1	6,8	1,2	0,8	0,7	0,7
P2	6,8	1,0	0,8	0,9	0,7
P3	6,7	1,2	0,8	0,7	0,7
P4	6,7	1,0	0,8	0,9	0,7

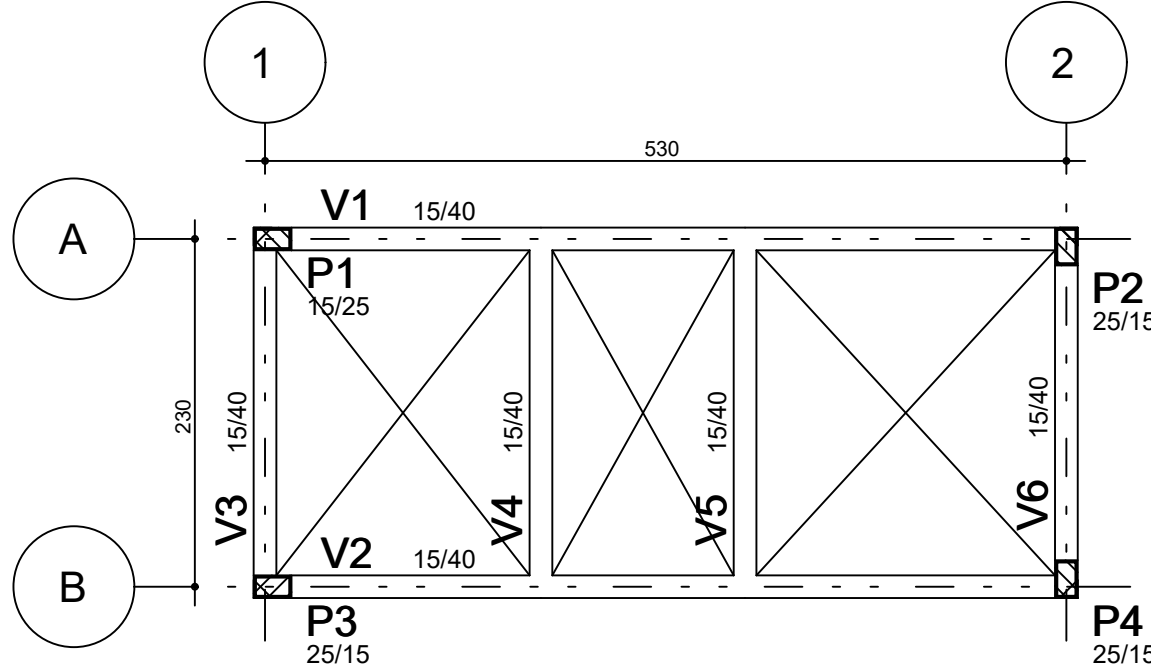
Baricentros de pilares		
Pilar	X (cm)	Y (cm)
P1	5,0	0,0
P2	530,0	-5,0
P3	5,0	-230,0
P4	530,0	-225,0



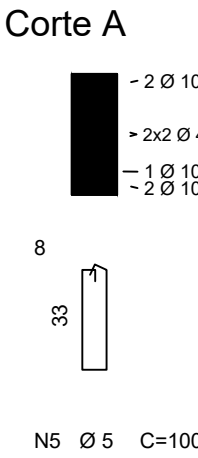
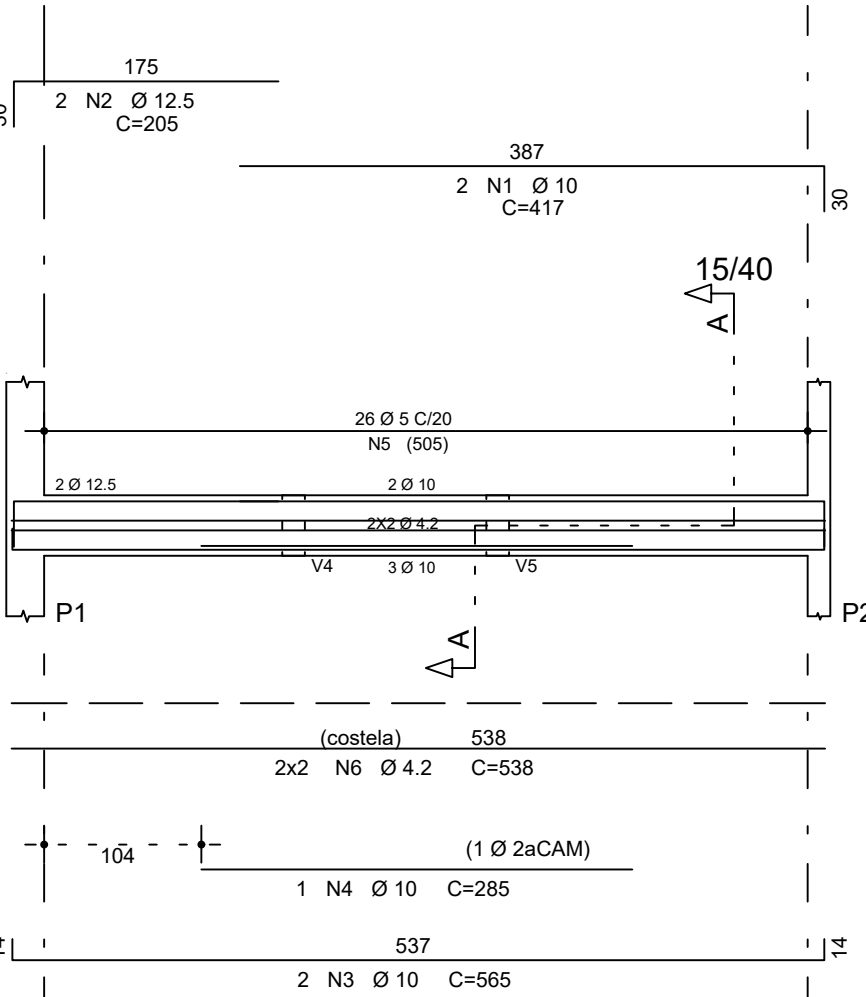
ÁÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
P1=P3 (X2)					
50A	1	12,5	8	225	1800
50A	2	6,3	54	67	3618
50A	3	12,5	8	257	2056
P2=P4 (X2)					
50A	1	16	8	239	1912
50A	2	6,3	74	67	4958
50A	3	16	8	257	2056
ARMAÇÃO NEGATIVA - FORRO					
50A	1	6,3	4	125	500
50A	2	6,3	23	90	2070
60B	3	5	1	-CORR-	1281
60B	4	5	1	-CORR-	1542
60B	5	5	1	-CORR-	1652
50A	6	6,3	6	90	540
50A	7	6,3	6	105	630
ARMAÇÃO POSITIVA - FORRO					
50A	1	6,3	11	547	6017
50A	2	6,3	26	245	6370
V1=V2 (CINTAMENTO) (X2)					
50A	1	10	4	417	1668
50A	2	12,5	4	205	820
50A	3	10	4	565	2260
50A	4	10	2	285	570
60B	5	5	52	100	5200
60B	6	4,2	8	538	4304
V1=V2 (FORRO) (X2)					
50A	1	10	4	596	2384
50A	2	10	4	565	2260
50A	3	10	2	325	650
60B	4	5	52	97	5044
60B	5	4,2	8	538	4304
V3 a V6 (CINTAMENTO) (X4)					
50A	1	8	8	295	2360
50A	2	8	8	280	2240
60B	3	5	44	92	4048
V3=V4 (FORRO) (X2)					
50A	1	10	4	297	1188
50A	2	10	4	298	1192
60B	3	5	22	97	2134
60B	4	4,2	8	238	1904

FÔRMA DO CINTAMENTO.

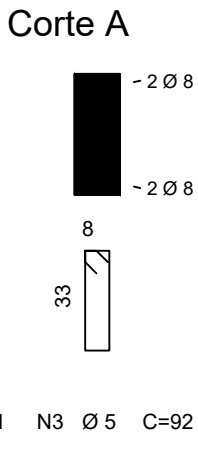
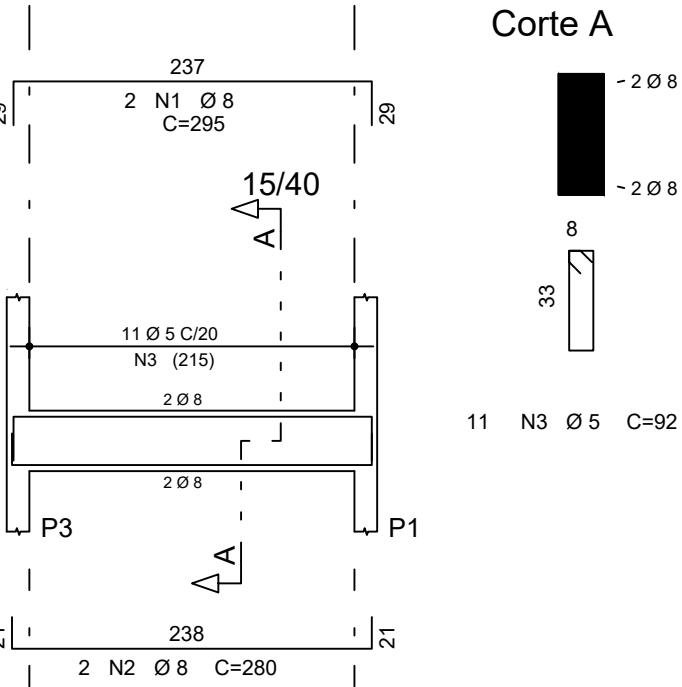
Esc.: 1/50



V1=V2 (CINTAMENTO)



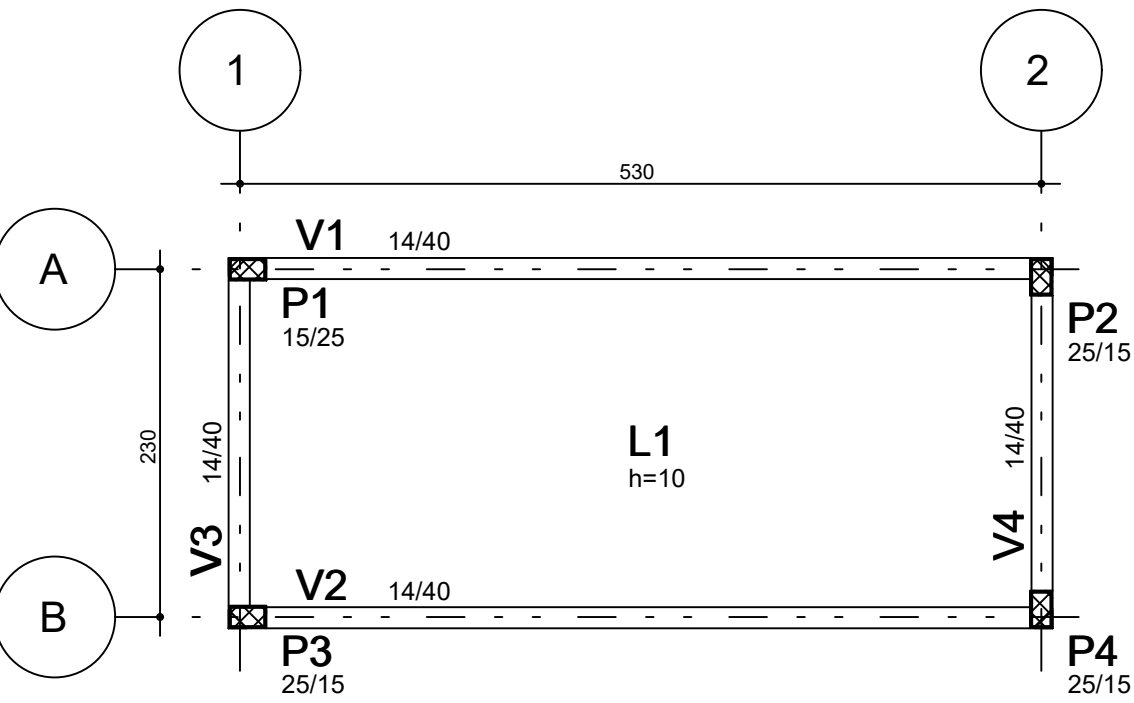
V3 a V6 (CINTAMENTO)



RESUMO AÇO CA 50-60			
ÁÇO	BIT (mm)	COMPR (m)	PESO (kg)
60B	4,2	105	11
60B	5	209	33
50A	6,3	247	62
50A	8	46	18
50A	10	122	77
50A	12,5	47	47
50A	16	40	63
Peso Total 60B =			45 kg
Peso Total 50A =			267 kg

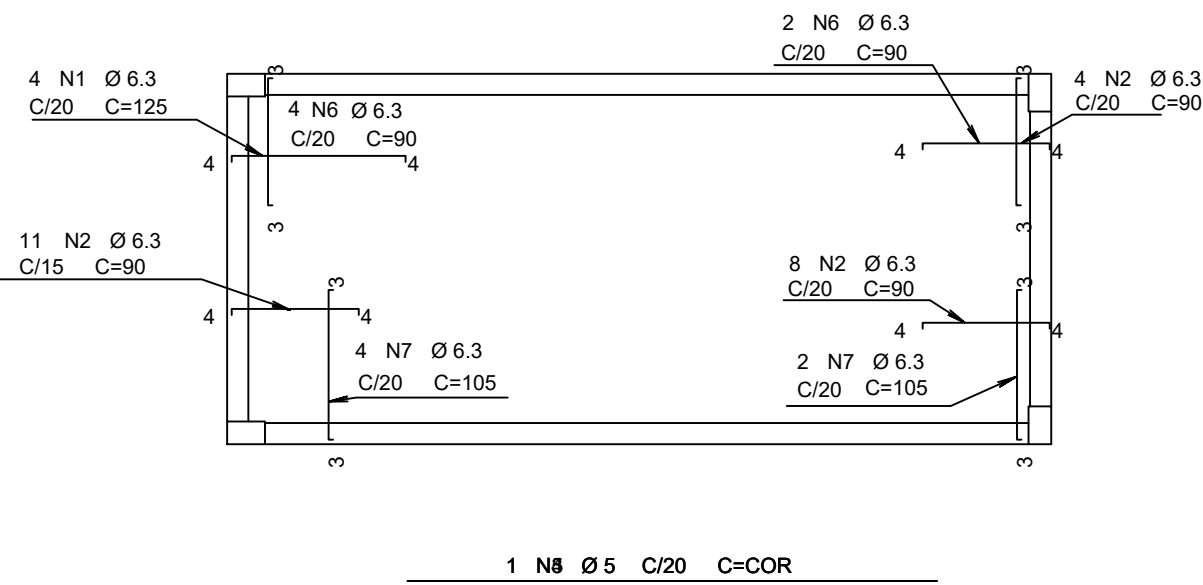
FÔRMA DO FORRO.

Esc.: 1/50



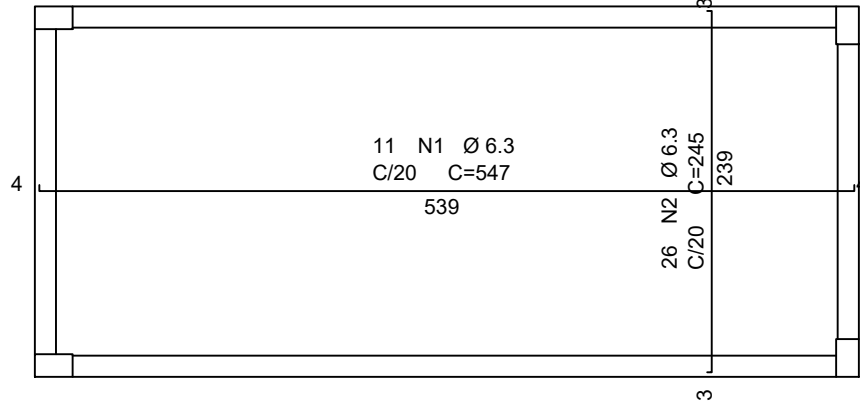
ARMAÇÃO NEGATIVA - FORRO.

Esc.: 1/50

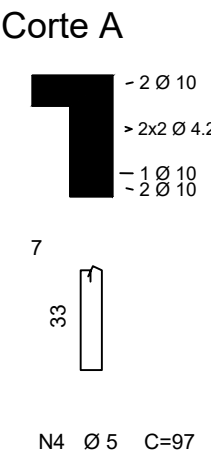
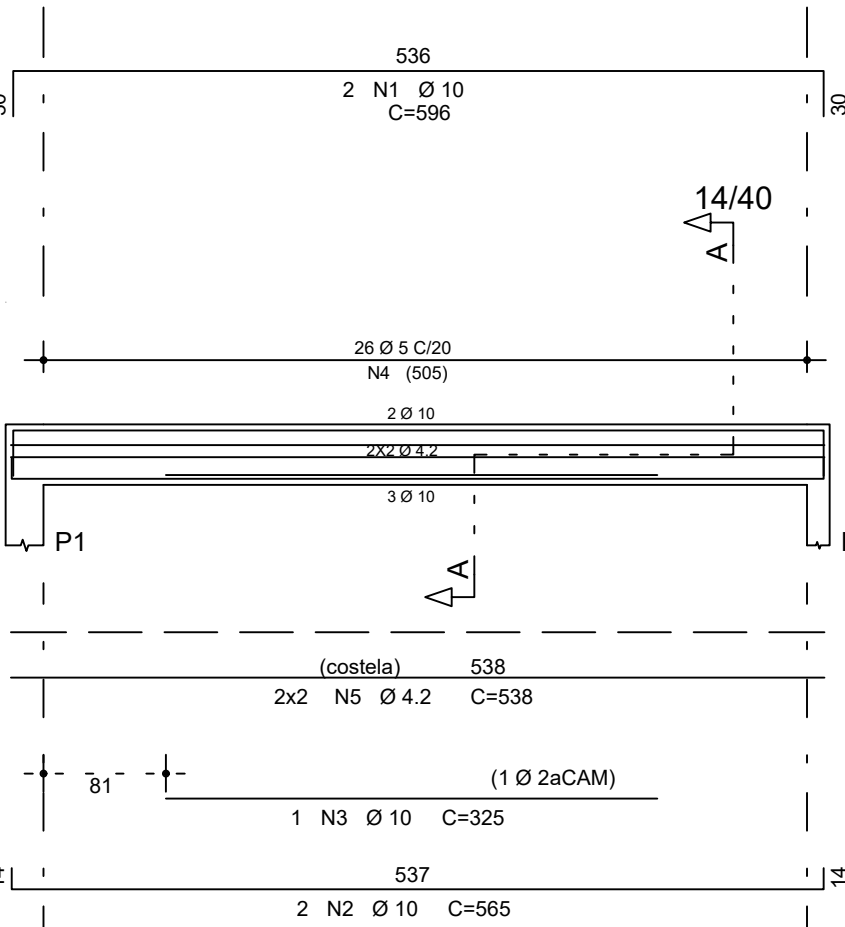


ARMAÇÃO POSITIVA - FORRO.

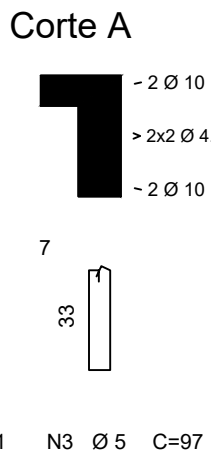
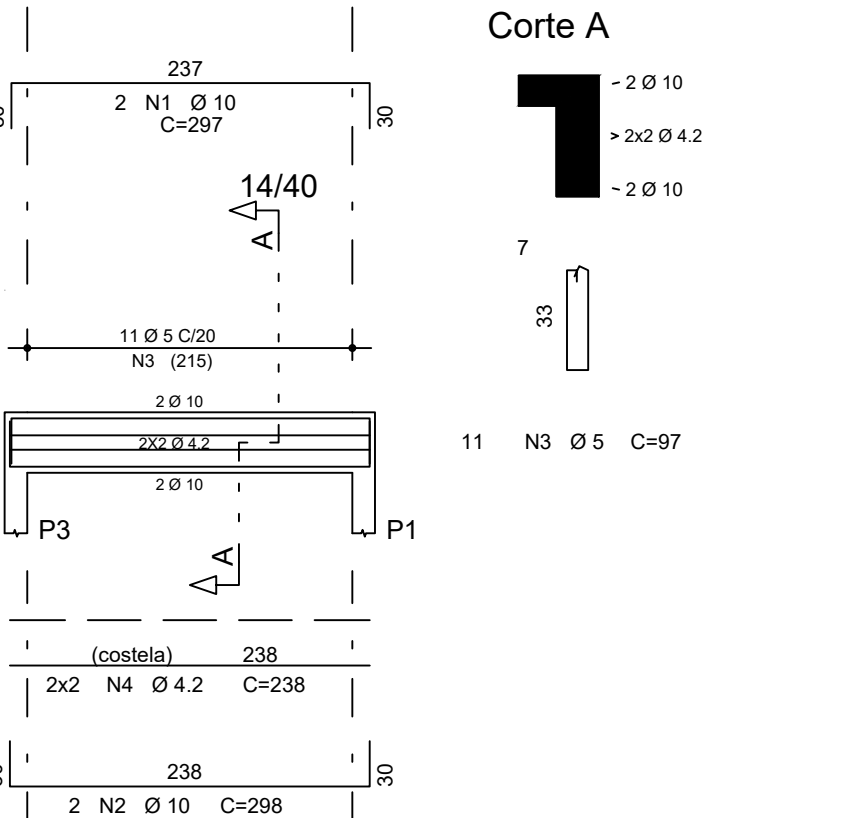
Esc.: 1/50



V1=V2 (FORRO)



V3=V4 (FORRO)





INSTITUTO FEDERAL
Sertão Pernambucano

INSTITUTO FEDERAL DE
EDUCAÇÃO, CIÊNCIA E TECNOLOGIA
SERTÃO PERNAMBUCANO
DIRETORIA DE ENGENHARIA
E INFRAESTRUTURA
Rua Anísio de Lencastre, 240 | Centro
Petrolina/PE | CEP: 56.302-100

PROJETO ESTRUTURAL DO CAMPUS
ÁGUAS BELAS DO IFSertãoPE

DESCRIÇÃO:
FORMA E ARM. (GUARITA)

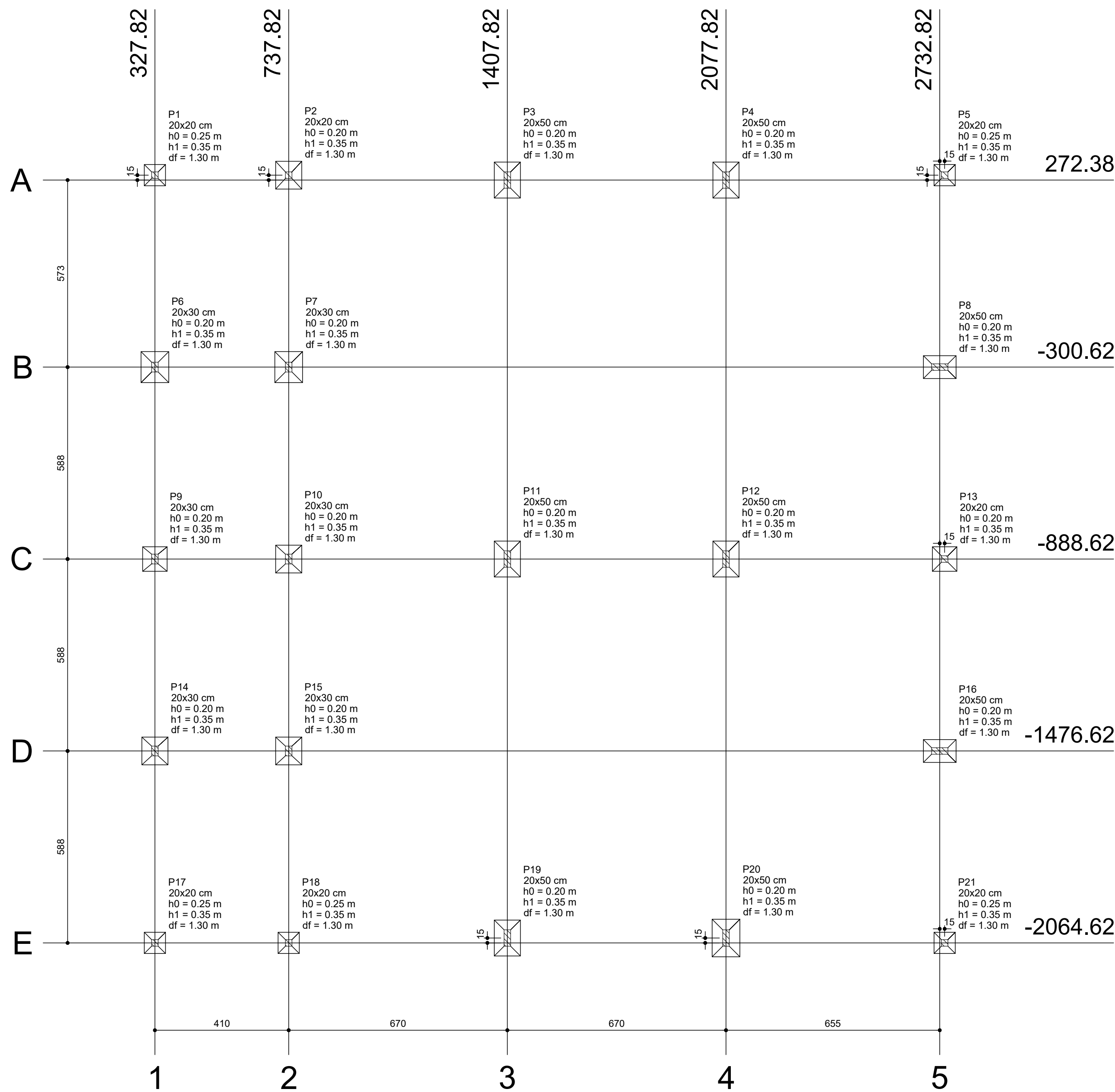
ASSINATURACARIMBO - DIREÇÃO GERAL:

ESCALA:
INDICADA

ASSINATURACARIMBO - RESPONSÁVEL TÉCNICO:

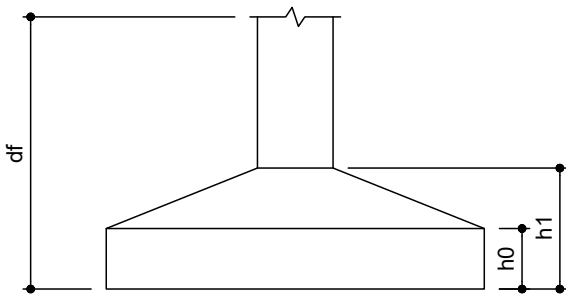
DATA:
ABRIL/2025

FRANCA:
01/01



Planta de locação
escala 1:100

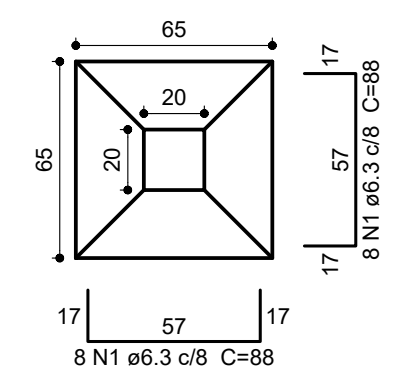
Nome	Seção (cm)	Pilar		Carga Máx. (kN)	Carga Min. (kN)	Fundação				
		X (cm)	Y (cm)			Lado B (cm)	Lado H (cm)	h0 / ha (m)	h1 / hb (m)	df (m)
P1	20x20	327.82	287.38	113	12	85	85	0.25	0.35	1.30
P2	20x20	737.82	287.38	197	23	80	85	0.20	0.35	1.30
P3	20x50	1407.82	272.38	191	14	80	110	0.20	0.35	1.30
P4	20x50	2077.82	272.38	201	16	80	110	0.20	0.35	1.30
P5	20x20	2747.82	287.38	108	12	65	65	0.25	0.35	1.30
P6	20x30	327.82	-300.62	224	23	85	95	0.20	0.35	1.30
P7	20x30	737.82	-300.62	225	22	85	95	0.20	0.35	1.30
P8	20x50	2732.82	-300.62	134	14	70	100	0.20	0.35	1.30
P9	20x30	327.82	-888.62	179	12	75	75	0.20	0.35	1.30
P10	20x30	737.82	-888.62	225	19	80	85	0.20	0.35	1.30
P11	20x50	1407.82	-888.62	235	15	80	110	0.20	0.35	1.30
P12	20x50	2077.82	-888.62	235	16	80	110	0.20	0.35	1.30
P13	20x20	2747.82	-888.62	159	18	75	75	0.20	0.35	1.30
P14	20x30	327.82	-1476.62	197	14	80	85	0.20	0.35	1.30
P15	20x30	737.82	-1476.62	196	14	80	85	0.20	0.35	1.30
P16	20x50	2732.82	-1476.62	134	14	70	100	0.20	0.35	1.30
P17	20x20	327.82	-2064.62	90	6	65	65	0.25	0.35	1.30
P18	20x20	737.82	-2064.62	150	12	65	65	0.25	0.35	1.30
P19	20x50	1407.82	-2049.62	148	16	80	110	0.20	0.35	1.30
P20	20x50	2077.82	-2049.62	200	16	85	115	0.20	0.35	1.30
P21	20x20	2747.82	-2064.62	109	12	65	65	0.25	0.35	1.30



Locação no eixo X	
Coordenadas (cm)	Nome
327.82	P1, P6, P9, P14, P17
737.82	P2, P7, P10, P15, P18
1407.82	P3, P11, P19
2077.82	P4, P12, P20
2732.82	P8, P16
2747.82	P5, P13, P21

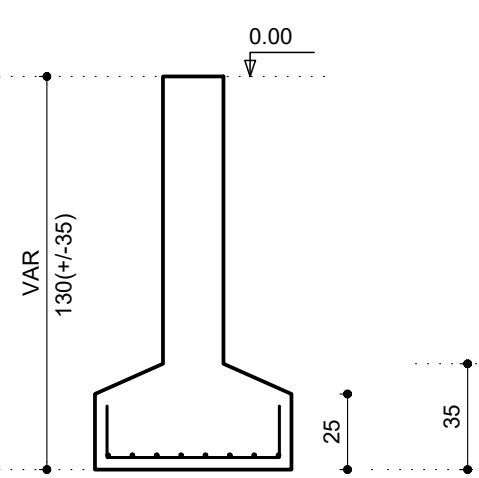
Locação no eixo Y	
Coordenadas (cm)	Nome
287.38	P1, P2, P5
272.38	P3, P4
-300.62	P6, P7, P8
-888.62	P9, P10, P11, P12, P13
-1476.62	P14, P15, P16
-2049.62	P19, P20
-2064.62	P17, P18, P21

S1=S5=S17=S18=S21
Planta
ESC 1:25

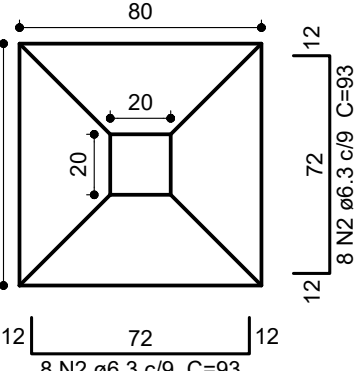


Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

Corte
ESC 1:25

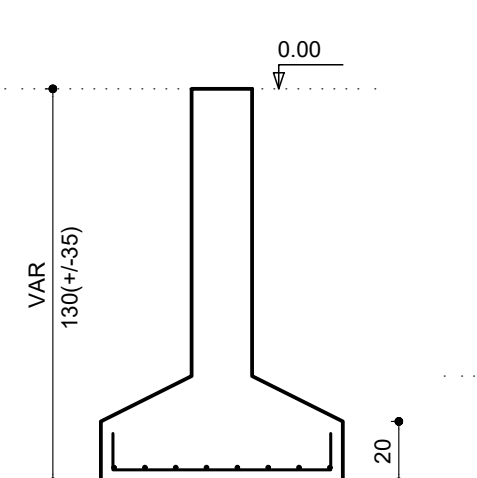


S2=S13
Planta
ESC 1:25

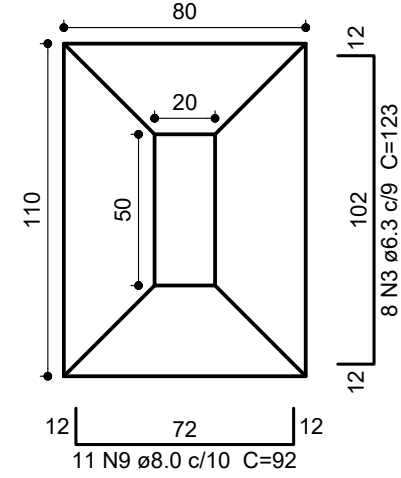


Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

Corte
ESC 1:25

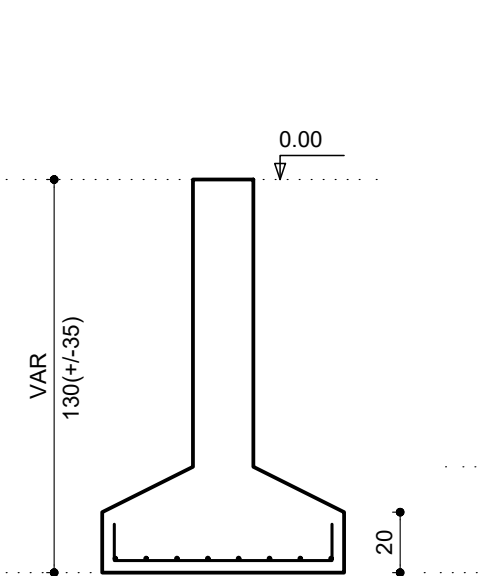


S3=S4=S11=S12=S19
Planta
ESC 1:25

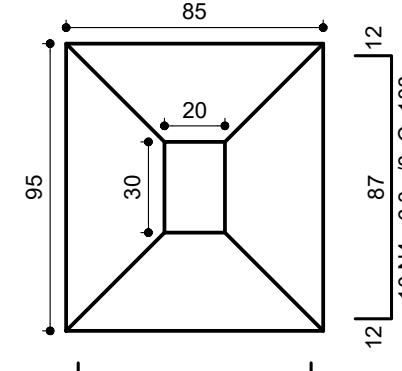


Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

Corte
ESC 1:25

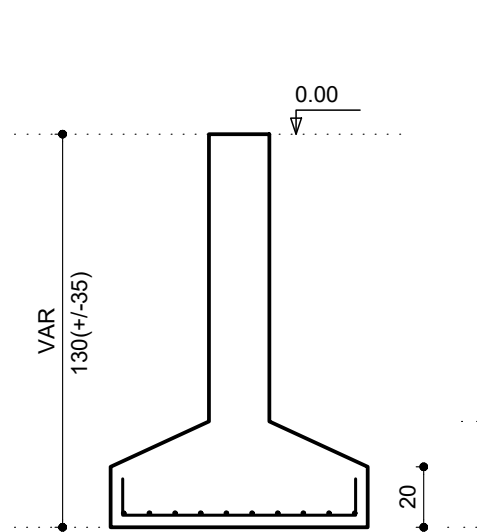


S6=S7
Planta
ESC 1:25

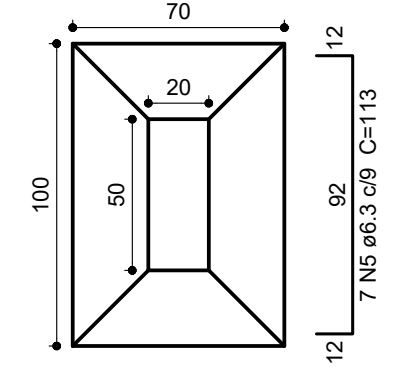


Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

Corte
ESC 1:25

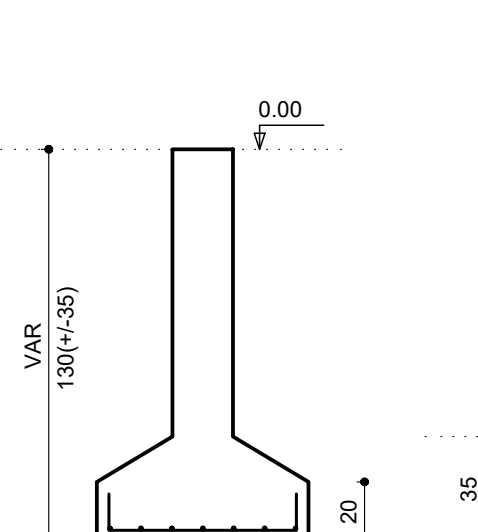


S8=S16
Planta
ESC 1:25

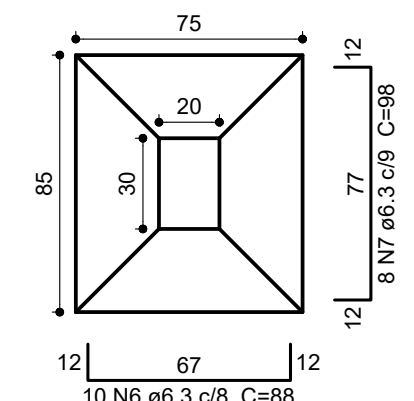


Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

Corte
ESC 1:25

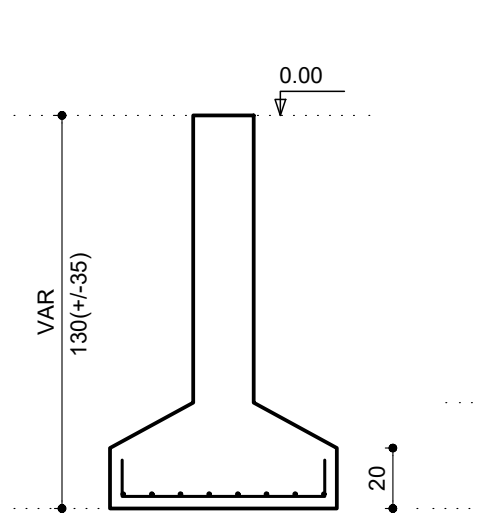


S9=S14=S15
Planta
ESC 1:25

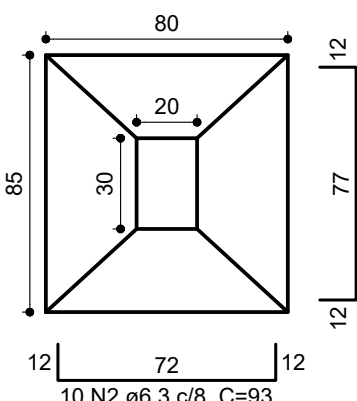


Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

Corte
ESC 1:25

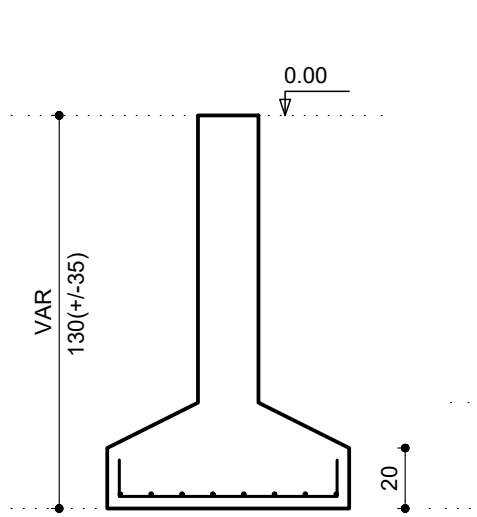


S10
Planta
ESC 1:25

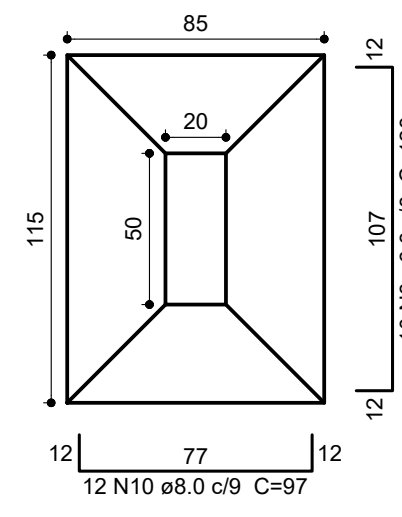


Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

Corte
ESC 1:25

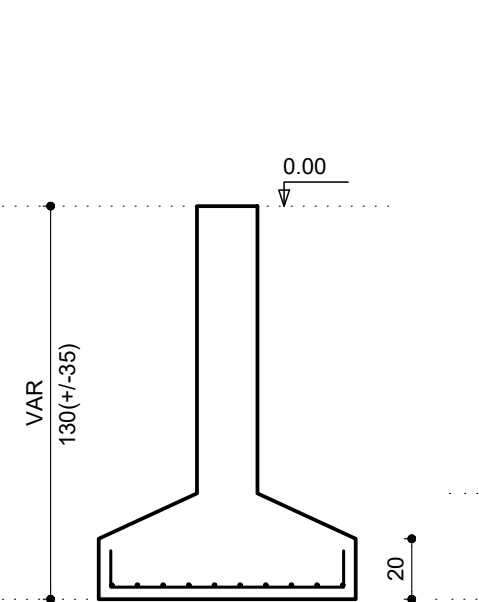


S20
Planta
ESC 1:25



Solo compactado sobre a sapata
peso específico > 16.00 kN/m³

Corte
ESC 1:25



Relação do aço

5xS1 2xS2 2xS7
S10 5xS12 3xS14
2xS16 S20

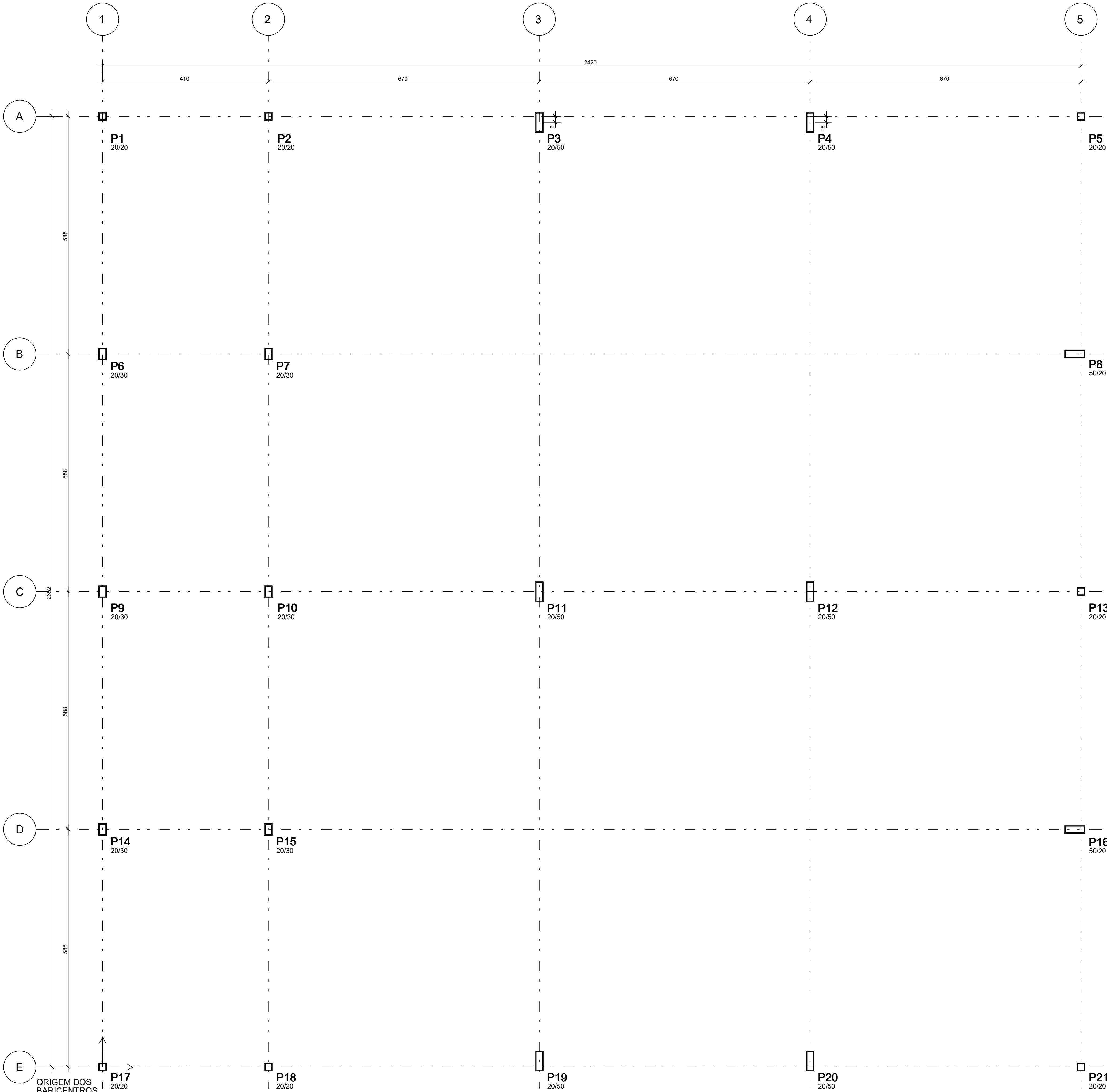
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	80	88	7040
	2	6.3	42	93	3906
	3	6.3	40	123	4920
	4	6.3	20	108	2160
	5	6.3	14	113	1582
	6	6.3	30	88	2640
	7	6.3	32	98	3136
	8	6.3	10	128	1280
	9	8.0	55	92	5060
	10	8.0	28	97	2716
	11	8.0	18	82	1476

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	266.7	71.8
	8.0	92.6	40.2
PESO TOTAL			
CA50		111.9	

Vol. de concreto total (C-20) = 3.95 m³
Área de forma total = 14.51 m²

LOCAÇÃO DOS PILARES
ESC.-1/50



Baricentros de pilares		
Pilar	X (cm)	Y (cm)
P1	0,0	2352,0
P2	410,0	2352,0
P3	1080,0	2337,0
P4	1750,0	2337,0
P5	2420,0	2352,0
P6	0,0	1784,0
P7	410,0	1784,0
P8	2405,0	1784,0
P9	0,0	1176,0
P10	410,0	1176,0
P11	1080,0	1176,0
P12	1750,0	1176,0
P13	2420,0	1176,0
P14	0,0	588,0
P15	410,0	588,0
P16	2405,0	588,0
P17	0,0	0,0
P18	410,0	0,0
P19	1080,0	15,0
P20	1750,0	15,0
P21	2420,0	0,0

ATENÇÃO:

- PROJETO CALCULADO PARA AS SEGUINTES CONDIÇÕES:
- Fck > 30 MPa (300 Kgf/cm²)
 - Ec > 30.670 MPa
 - CLASSE DE AGRESSIVIDADE: 3 (MARINHA)
 - COBRIMENTOS:
 - FUNDAÇÕES: 5 cm
 - PILARES: 4 cm
 - VIGAS: 4 cm
 - LAJES: 3 cm
 - ADOTAR CONTROLE RIGOROSO DE CONCRETO

NOTAS:

- AS FUNDAÇÕES DEVERÃO SER DIMENSIONADAS EM PROJETO ESPECÍFICO DE ACORDO COM A PLANTA DE CARGA APRESENTADA E LAUDO DE SONDAGEM (TIPO SPT) A SER EXECUTADO.
- ANTES DO INÍCIO DA EXECUÇÃO DAS FUNDAÇÕES, TORNA-SE INDISPENSÁVEL INSPEÇÃO PARA IDENTIFICAR SITUAÇÕES PARTICULARES DO TERRENO, TAIS COMO: POÇOS D'ÁGUA ATERRADOS; ZONAS DE ATERRO COM ENTULHO OU MESMO LIXO; FORMIGUEIROS; OU ATÉ MESMO MÁ QUALIDADE DO SOLO DE OCORRÊNCIA LOCALIZADA.

OBSERVAÇÕES:

- * A EXECUÇÃO DA ESTRUTURA DEVERÁ SEGUIR CRITERIOSAMENTE AS RECOMENDAÇÕES DAS NORMAS PERTINENTES DA ABNT, ESPECIALMENTE A NB-1.
- * NÃO TIRAR MEDIDAS EM ESCALA, CONFERIR COTAS "IN LOCO".
- * REALIZAR CURA E CONTROLE TECNOLÓGICO DO CONCRETO.
- * NÃO DEIXAR EM CONCRETO APARENTE ELEMENTOS NÃO PREVISTOS COMO TAL.
- * NÃO DEIXAR FUROS E PASSAGENS DE TUBULAÇÕES SUPERIORES A 10cm SEM PREVISÃO EM PROJETO.
- * NÃO PROMOVER ALTERAÇÕES NA ARQUITETURA SEM PRÉVIA AUTORIZAÇÃO DO ENGENHEIRO ESTRUTURAL.
- * ENCHIMENTOS DE LAJES, QUANDO INEVITÁVEIS, DEVERÃO SER REALIZADOS COM CONCRETO LEVE E NÃO PODERÃO TER ESPESSURA SUPERIOR A 10cm.
- * MODIFICAÇÕES NESTE PROJETO E SUA UTILIZAÇÃO EM OBRA DIVERSA DA ABAIXO ESPECIFICADA SUJEITARÁ OS RESPONSÁVEIS ÀS PENAS DA LEGISLAÇÃO VIGENTE.



INSTITUTO
FEDERAL

Sertão Pernambucano

INSTITUTO FEDERAL DE
EDUCAÇÃO, CIÊNCIA E TECNOLOGIA
SERTÃO PERNAMBUCANO
DIRETORIA DE ENGENHARIA
E INFRAESTRUTURA
Rua Anísio de
Lopes, 240 | Centro
Petrolina/PE | CEP: 56.302-100

NOME:
**PROJETO ESTRUTURAL DO CAMPUS
ÁGUAS BELAS DO IFSertãoPE**

ENDEREÇO:
Rodovia PE-300, S/N, CEP: 55340-000
Águas Belas/PE

DESCRIÇÃO:
LOCAÇÃO DOS PILARES (LAB. ESPECIAIS)

ASSINATURACARIMBO - DIREÇÃO GERAL:

ESCALA:
INDICADA

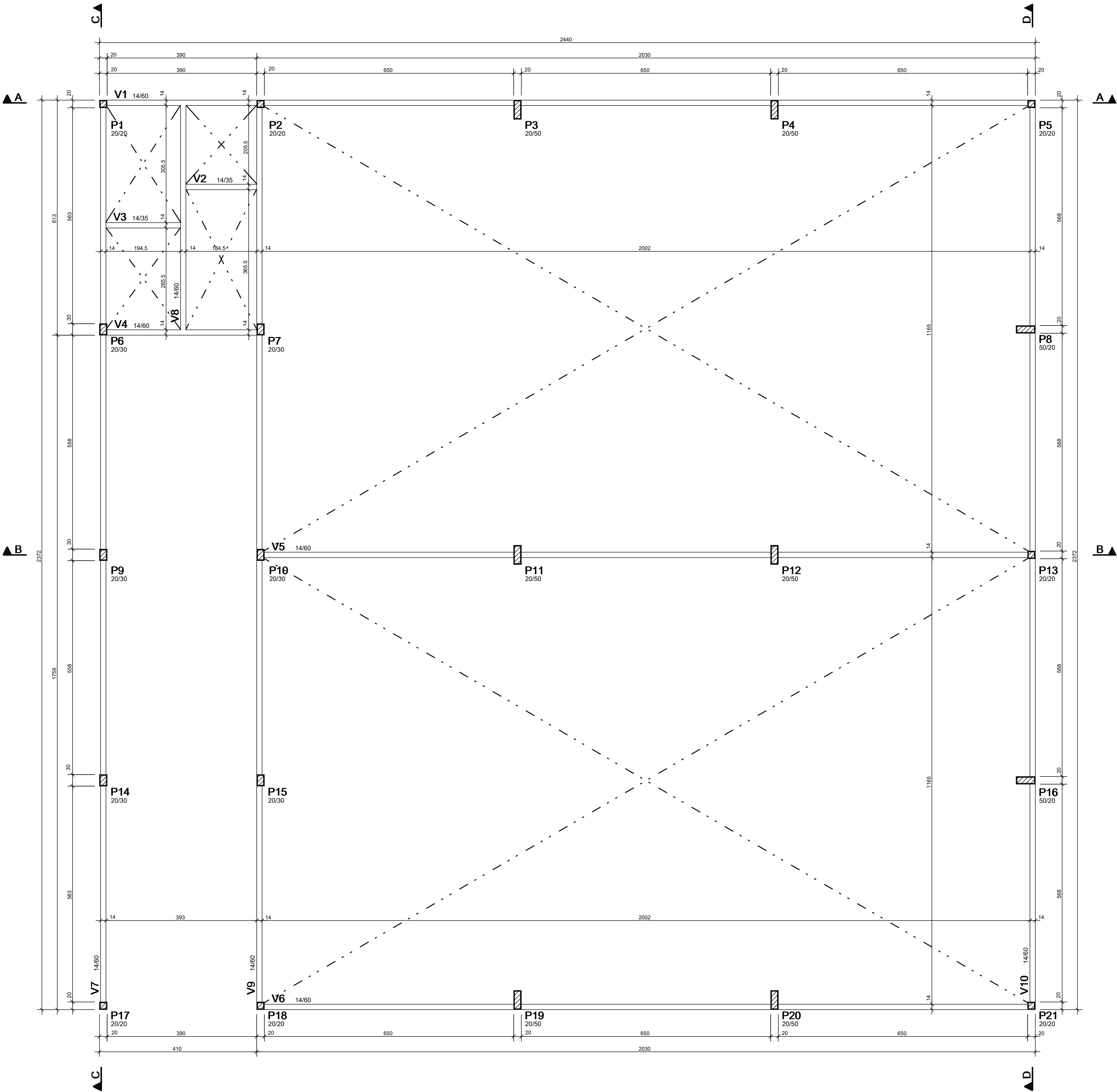
DATA:
ABRIL/2025

ASSINATURACARIMBO - RESPONSÁVEL TÉCNICO:
Ebson Alves da Silva - CREA BA 055750

PRONCH:
03/07

FÔRMA DO TÉRREO

ESC.-1/50

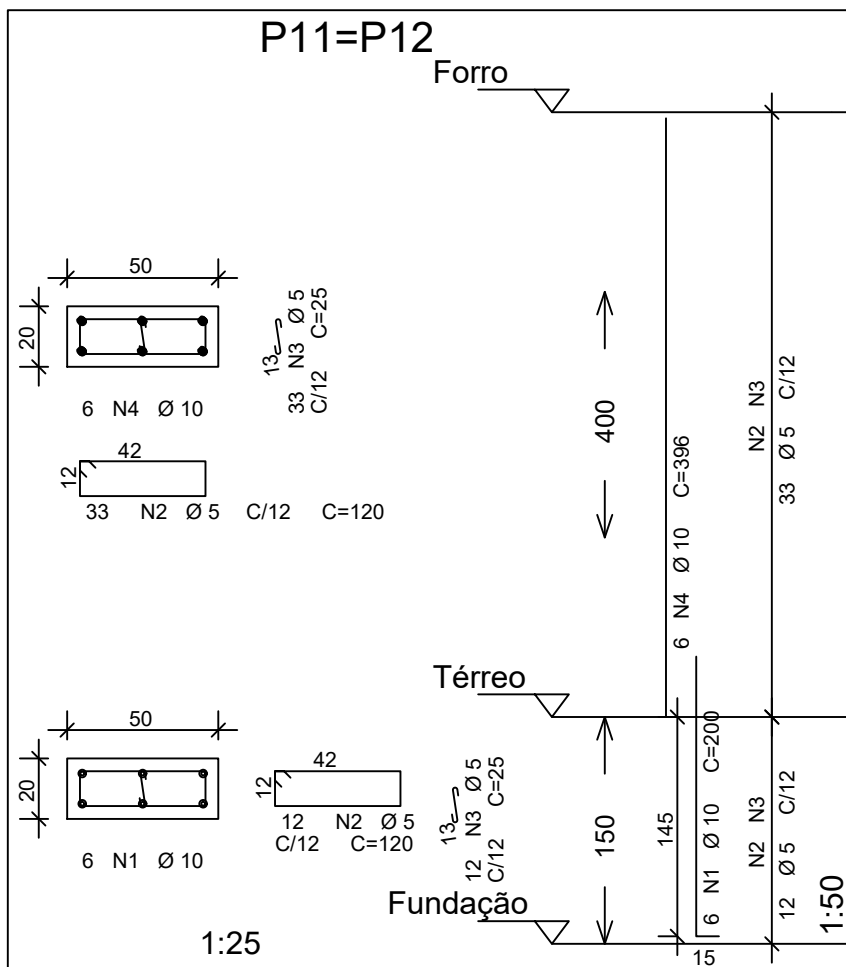
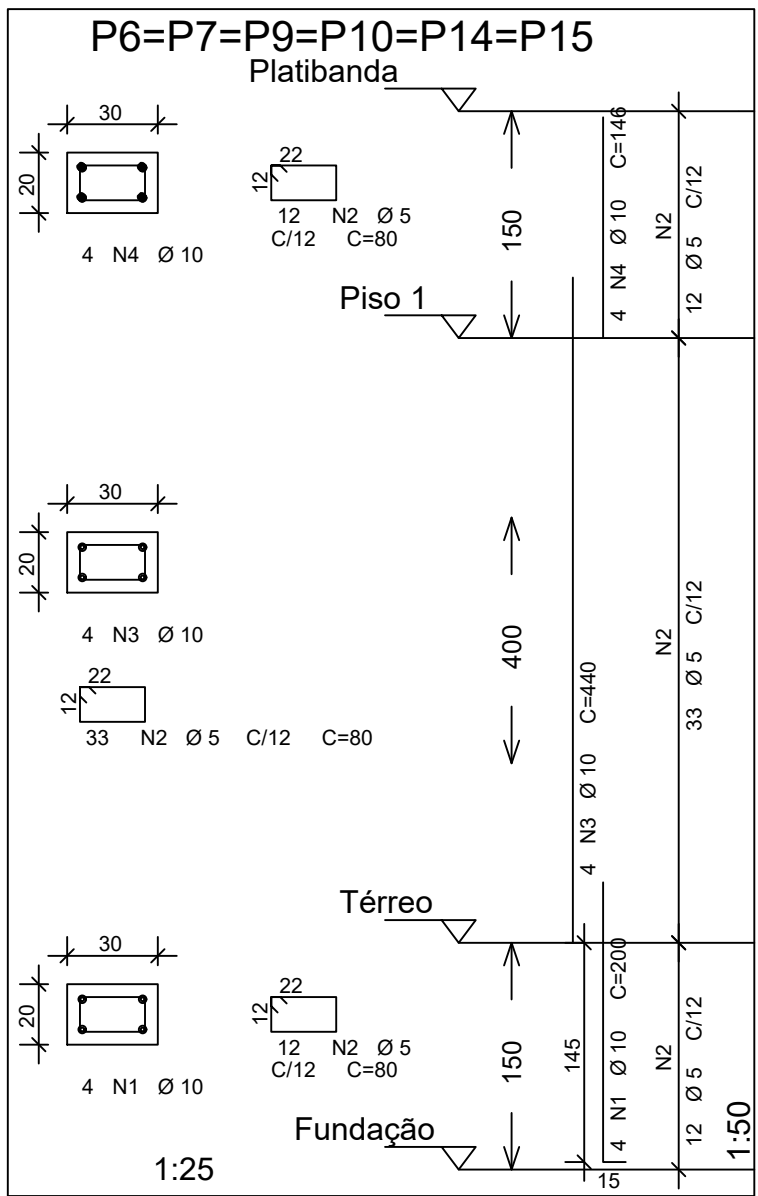
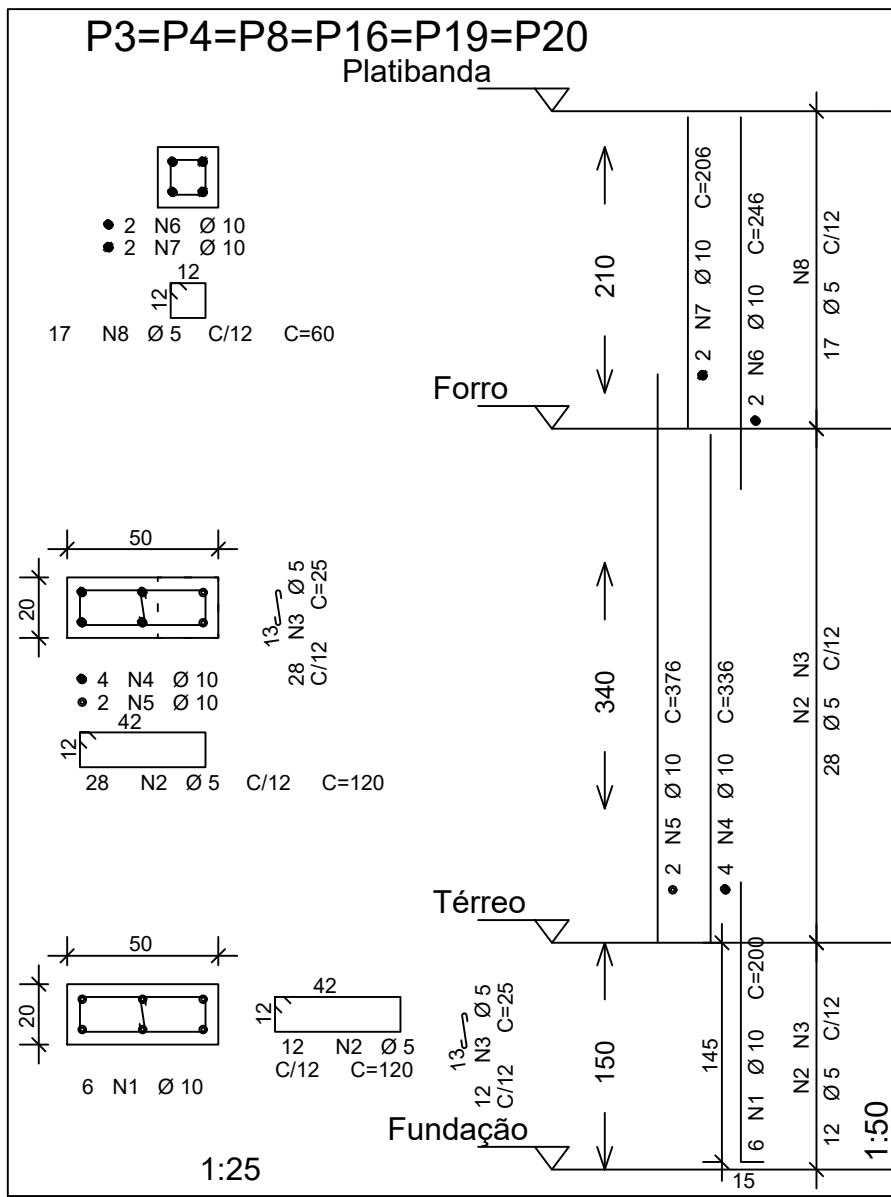
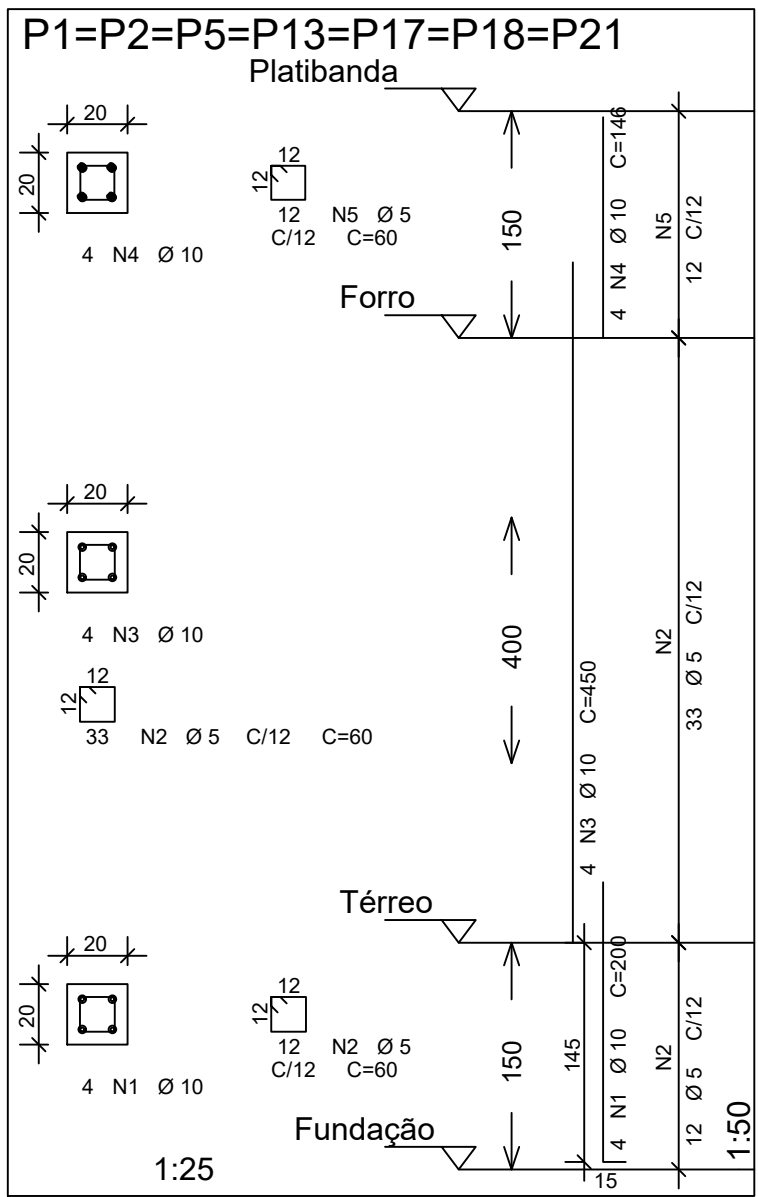


CONVENÇÃO
DE PILARES

MORRE

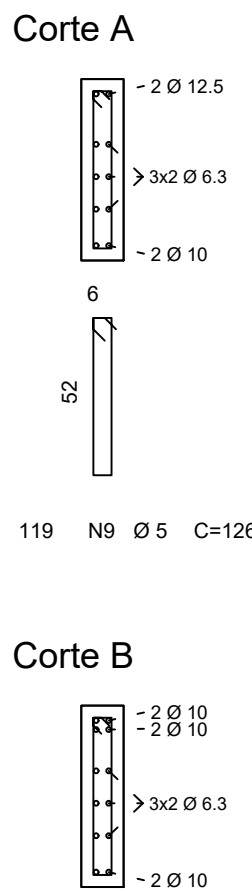
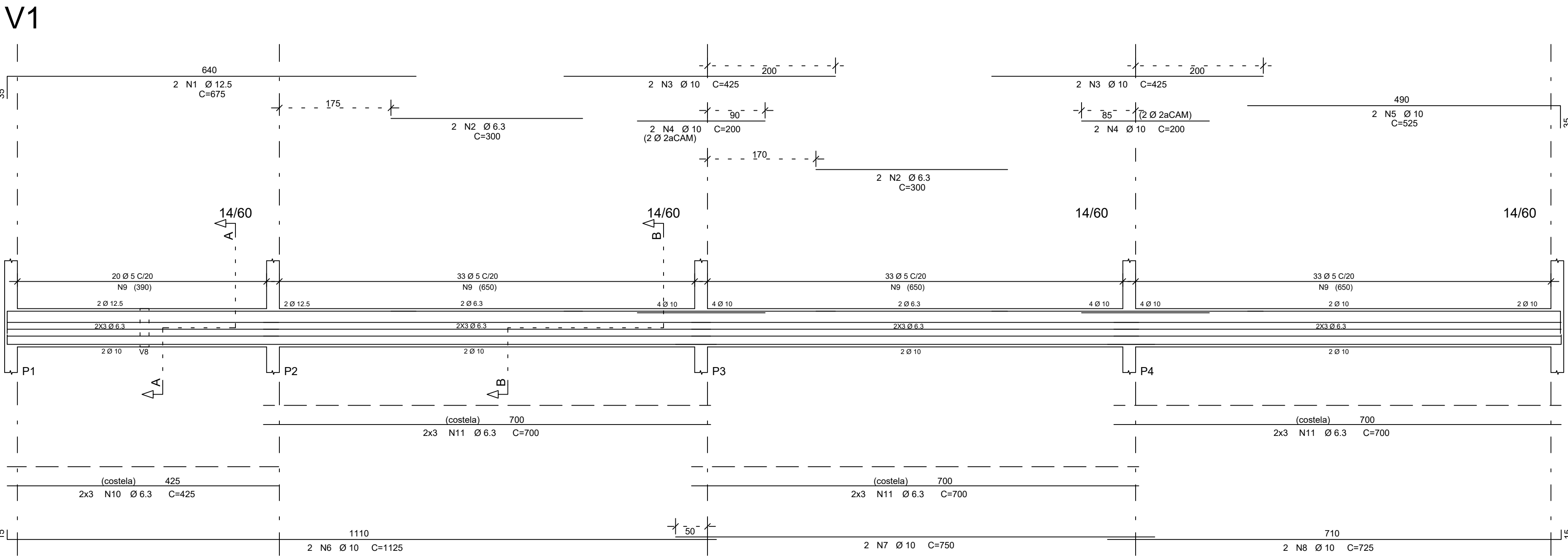
CONTINUA

NASCE

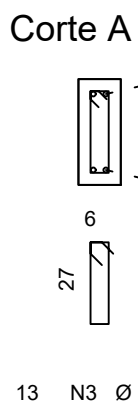
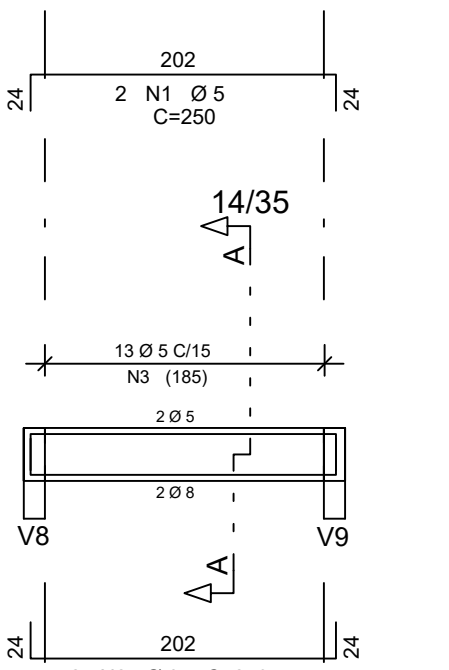


ACO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL TOTAL (cm)
P1=P2=P5=P13=P17=P18=P21 (X7)					
50	1	10	28	200	5600
60	2	5	315	60	18900
80	3	10	28	450	12600
50	4	10	28	146	4088
80	5	5	84	80	5040
P3=P4=P8=P16=P19=P20 (X6)					
50	1	10	36	200	7200
60	2	5	240	120	28800
80	3	5	240	25	6000
80	4	10	24	336	8064
80	6	10	12	376	4512
80	6	10	12	248	2976
80	7	10	12	306	3672
80	8	5	102	80	8160
P6=P7=P9=P10=P14=P15 (X6)					
50	1	10	34	200	6800
60	2	5	342	80	27360
80	3	10	24	440	10560
80	4	10	24	146	3504
P11=P12 (X2)					
50	1	10	12	200	2400
60	2	5	90	120	10800
80	3	5	80	25	2000
80	4	10	12	396	4752

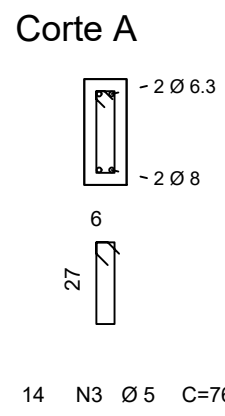
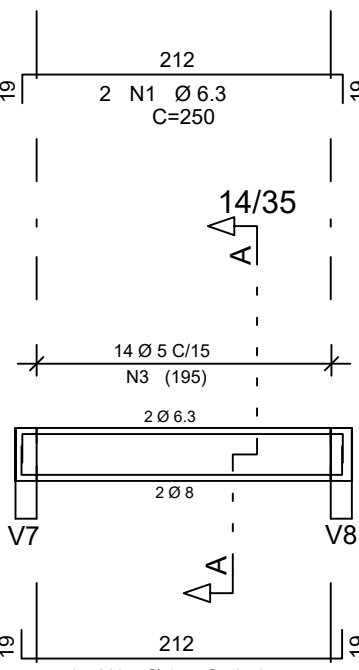
RESUMO AÇO CA 50-60			
ACO	BIT (mm)	COMPR (m)	PESO (kg)
50	5	1053	168
60	10	735	463
Peso Total		60 =	168 kg
Peso Total		50 =	463 kg



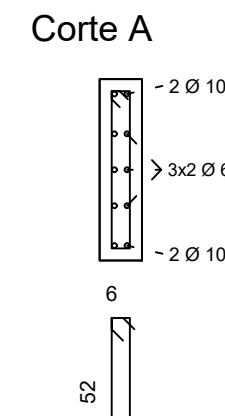
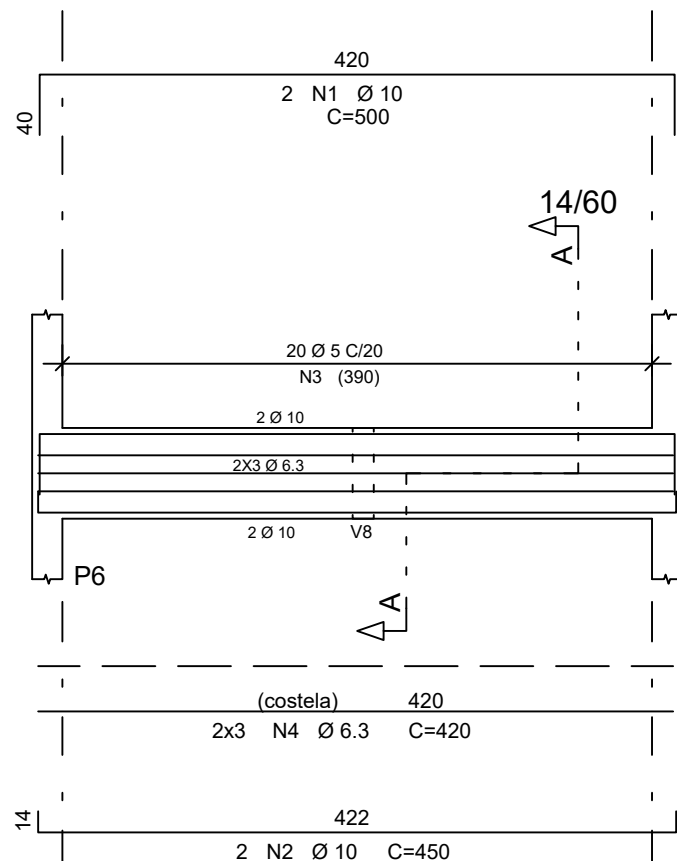
V2



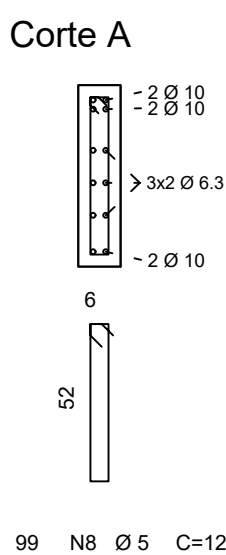
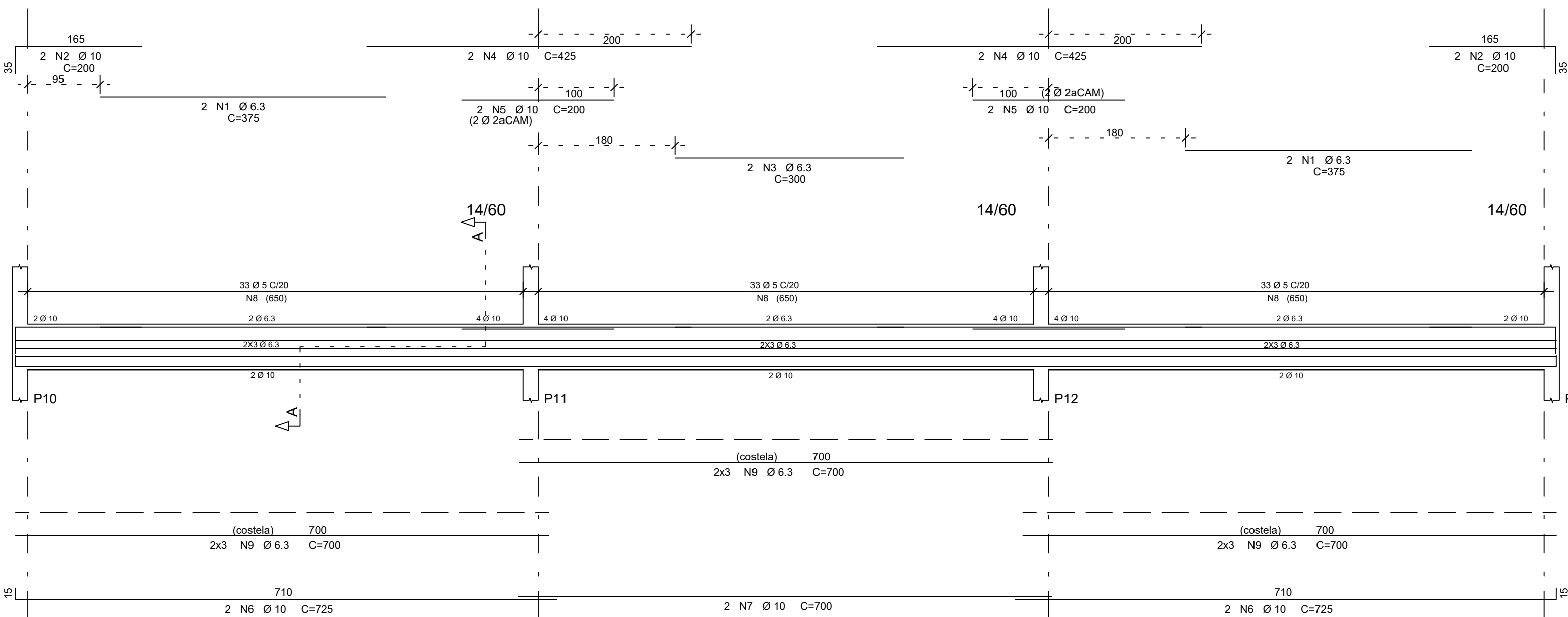
V3



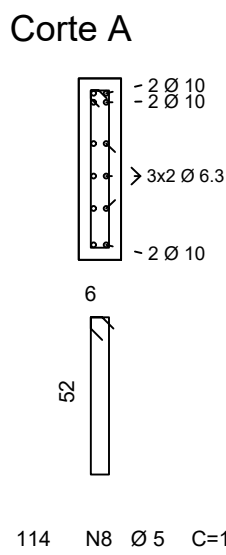
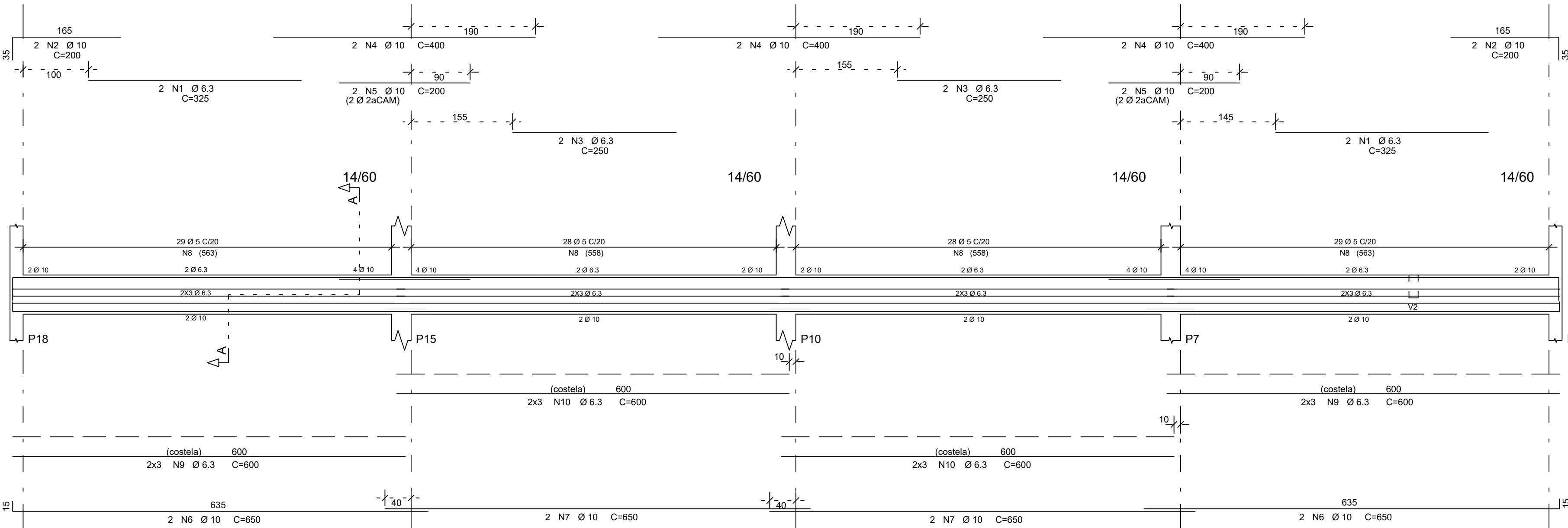
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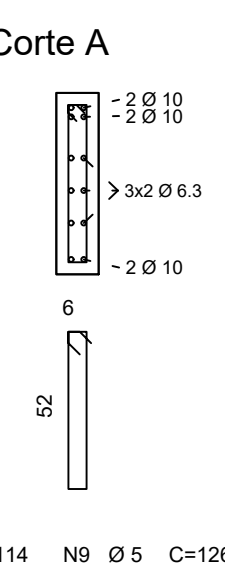
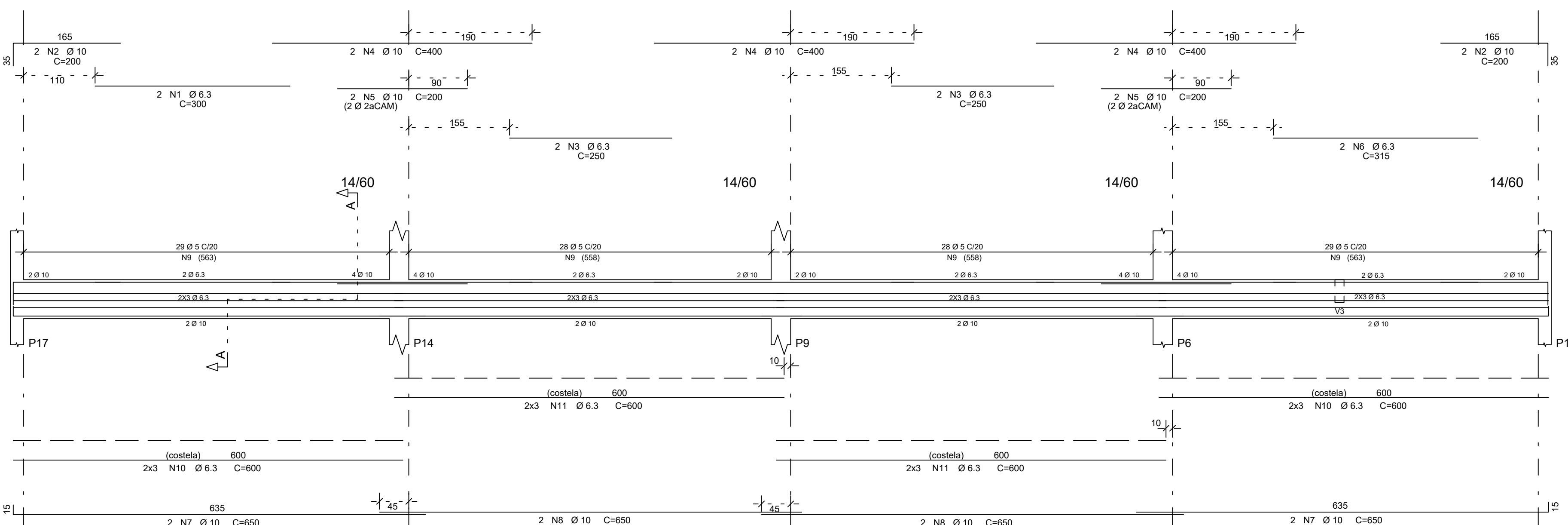
V5



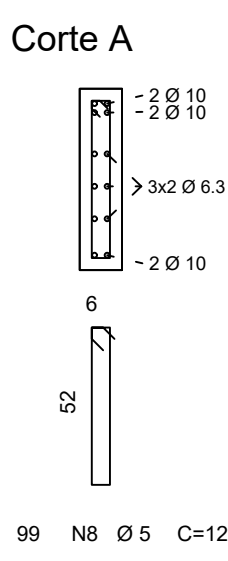
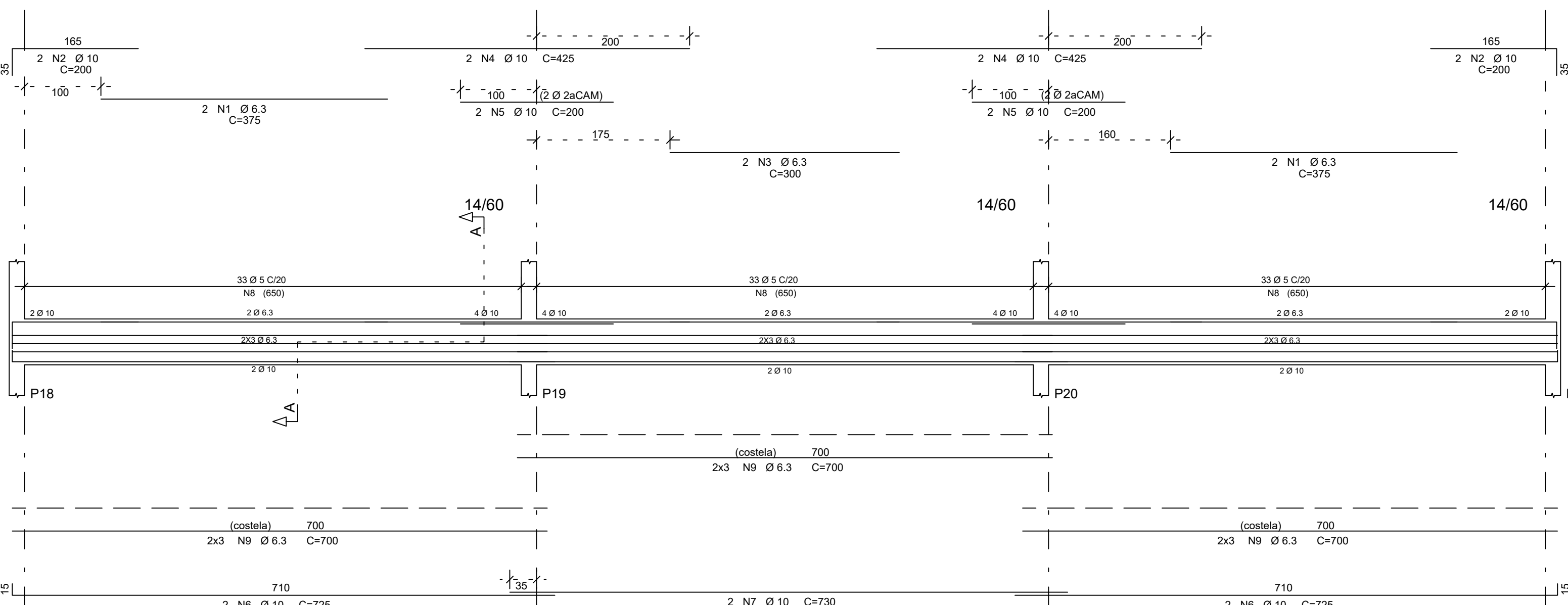
V9



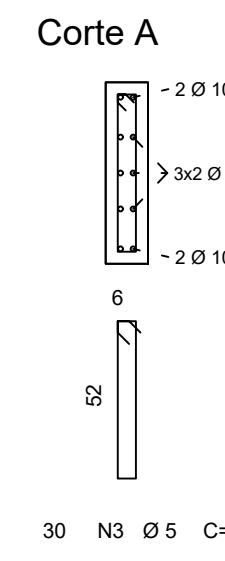
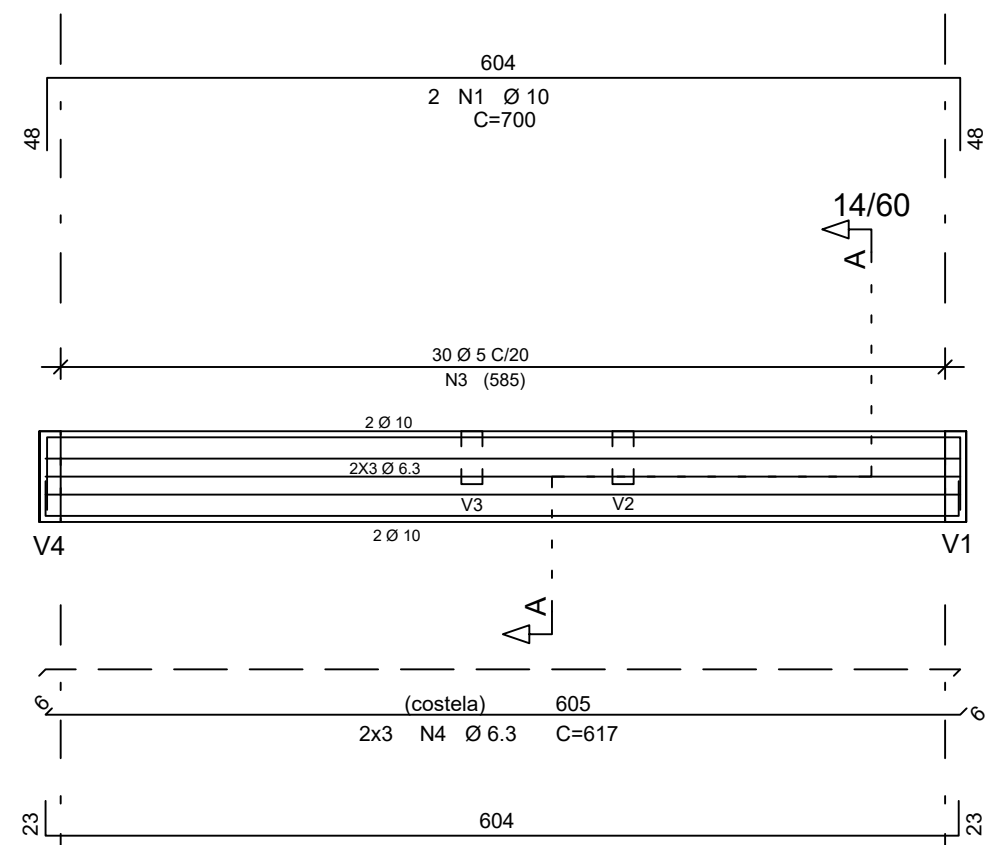
V7



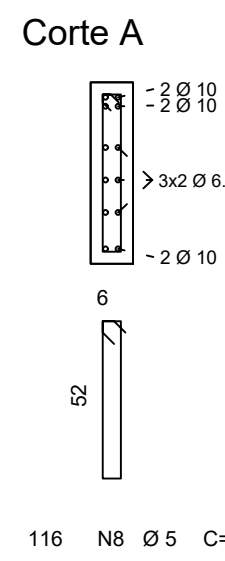
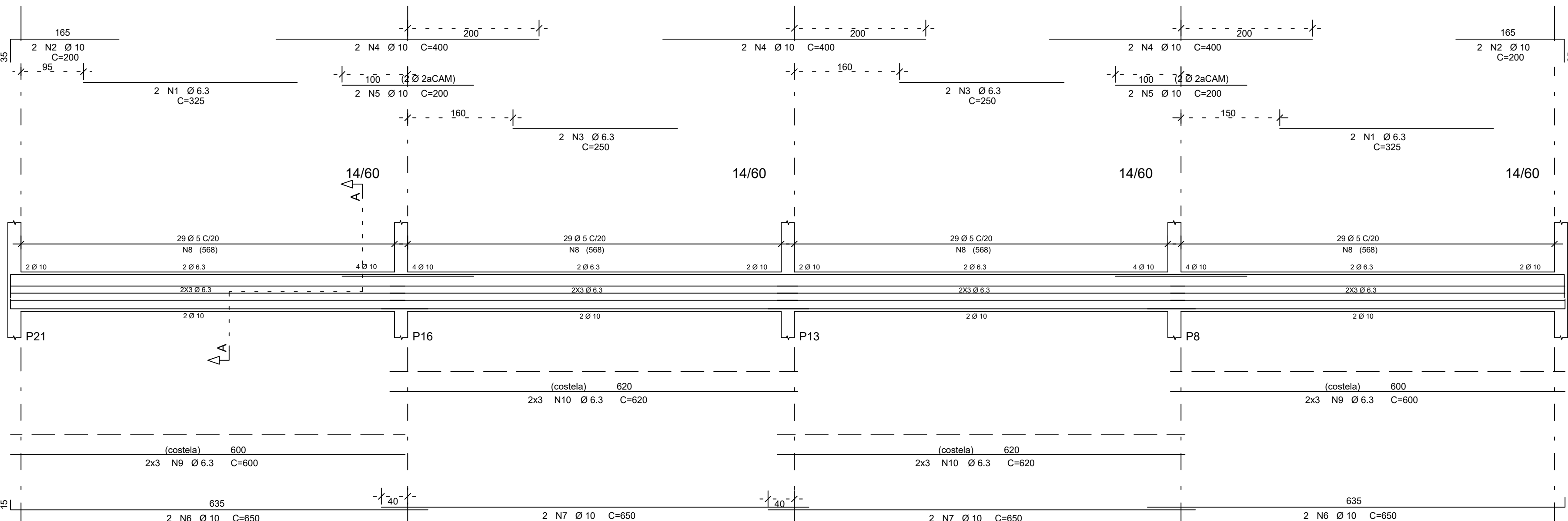
V6



V8



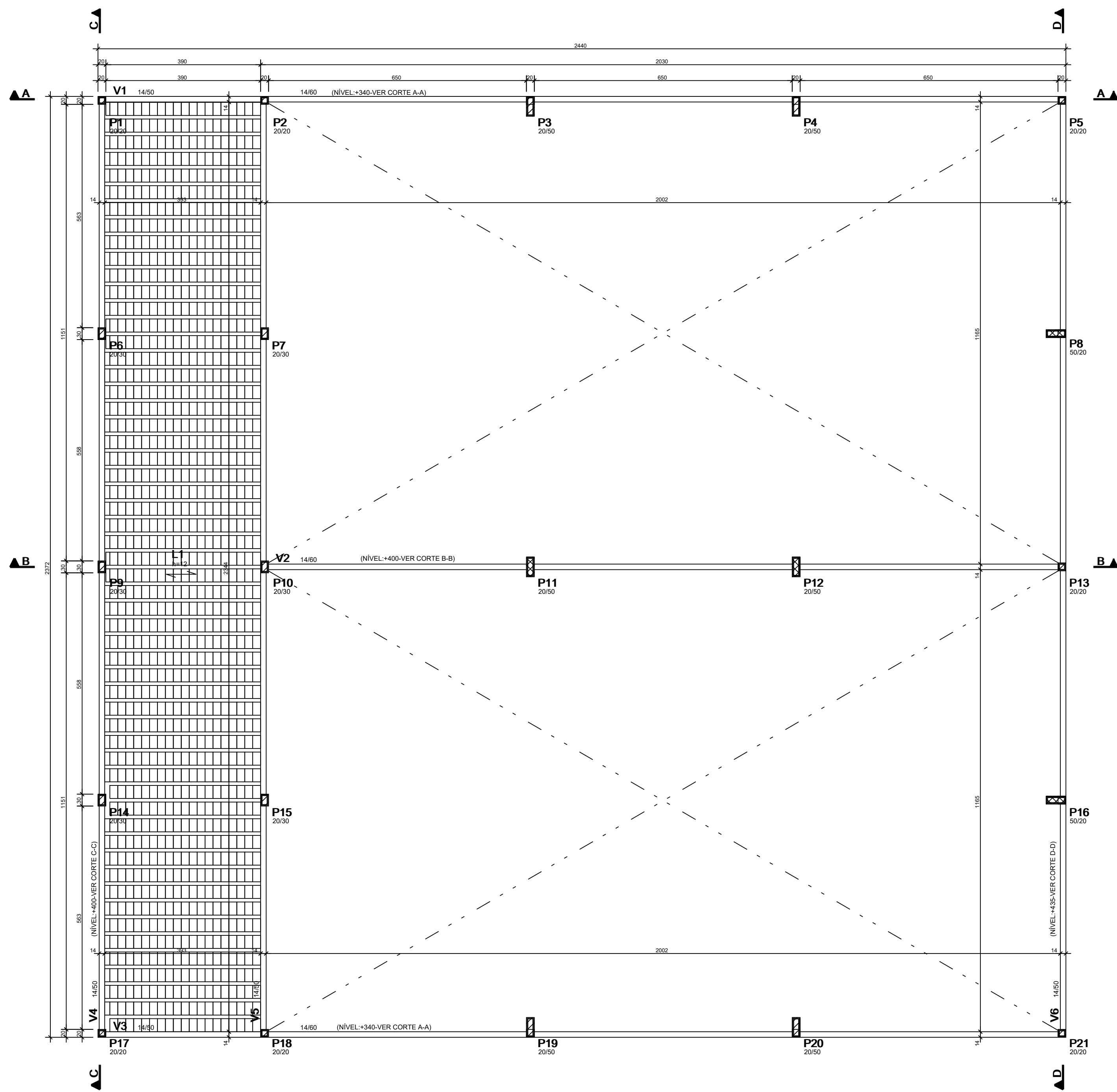
V10



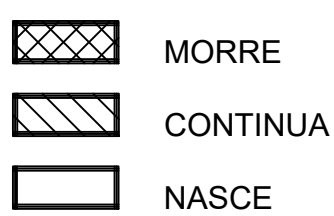
	ACO	POS	BIT (mm)	QUANT	COMPRIMENTO (cm)	TOTAL (cm)
V1	50	1	12,5	2	675	1350
	50	2	6,3	4	300	1200
	50	3	10	4	425	1700
	50	4	300	800		
	50	5	10	2	525	1050
	50	6	10	2	1120	2240
	50	7	10	2	750	1500
	50	8	10	2	725	1450
	50	9	5	119	14684	
	50	10	6,3	6	425	2550
V2	50	1	5	2	250	500
	50	2	8	2	250	500
	50	3	5	13	76	888
V3	50	1	6,3	2	250	500
	50	2	8	2	250	500
	50	3	5	14	76	1064
V4	50	1	10	2	500	1000
	50	2	10	2	450	900
	50	4	6,3	6	420	2520
V5	50	1	6,3	4	375	1500
	50	2	10	4	200	800
	50	3	6,3	2	300	600
	50	4	10	4	425	1700
	50	5	10	4	200	800
	50	6	10	4	725	2900
	50	7	10	2	1450	
	50	8	5	99	126	12474
	50	9	6,3	18	700	12600
	50	10	6,3	12	600	7200
V6	50	1	6,3	4	375	1500
	50	2	10	4	200	800
	50	3	6,3	2	300	600
	50	4	10	4	425	1700
	50	5	10	4	200	800
	50	6	10	4	725	2900
	50	7	10	2	1450	
	50	8	5	99	126	12474
	50	9	6,3	18	700	12600
	50	10	6,3	12	600	7200
V7	50	1	6,3	2	300	600
	50	2	10	4	200	800
	50	3	6,3	2	300	600
	50	4	10	6	400	2400
	50	5	10	4	200	800
V8	50	1	10	2	700	1400
	50	2	10	2	650	1300
	50	3	5	30	126	3780
	50	4	6,3	6	617	3702
	50	1	6,3	4	325	1300
	50	2	10	4	200	800
	50	3	6,3	4	250	1000
	50	4	10	6	400	2400
	50	5	10	4	200	800
	50	6	10	4	650	2600
V9	50	1	6,3	4	325	1300
	50	2	10	4	200	800
	50	3	6,3	4	250	1000
	50	4	10	6	400	2400
	50	5	10	4	200	800
	50	6	10	4	650	2600
	50	7	10	4	650	2600
	50	8	5	114	126	14364
	50	9	6,3	12	600	7200
	50	10	6,3	12	600	7200
V10	50	1	6,3	4	325	1300
	50	2	10	4	200	800
	50	3	6,3	4	250	1000
	50	4	10	6	400	2400
	50	5	10	4	200	800
	50	6	10	4	650	2600
	50	7	10	4	650	2600
	50	8	5	116	126	14616
	50	9	6,3	12	600	7200
	50	10	6,3	12	600	7200

RESUMO AÇO CA 50-60				
ACO	BIT (mm)	COMPR (m)	PESO (kg)	
50	5	561	147	
50	6,3	1027	257	
50	8	10	4	
50	10	562	354	
50	12,5	14	14	
Peso Total 60 =			147 kg	
Peso Total 50 =			628 kg	

FÔRMA DO FORRO
ESC.-1/75

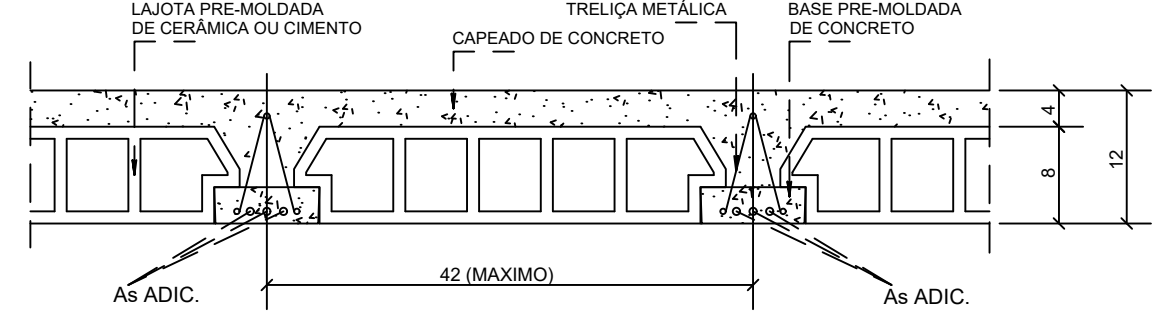


CONVENÇÃO
DE PILARES

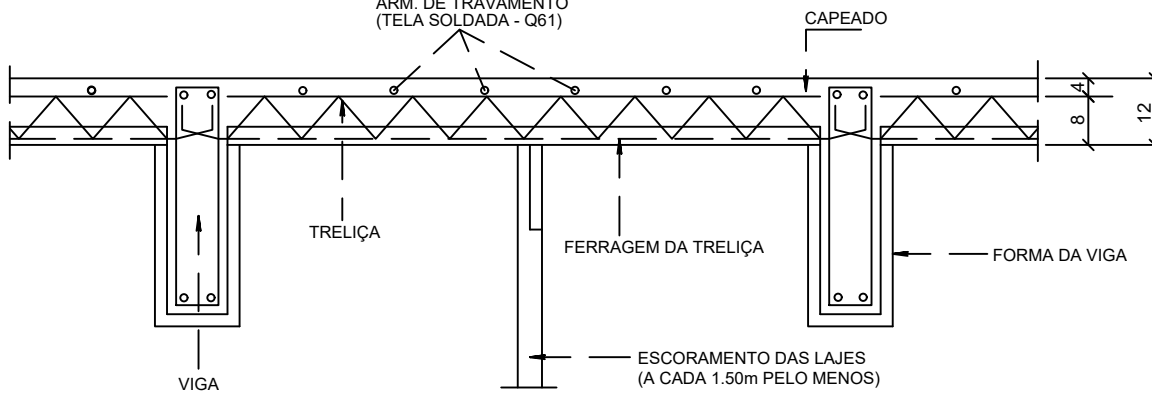


OBSERVAÇÃO:
AS LAJES PRÉ-MOLDADAS SERÃO CONFECCIONADAS PARA UMA SOBRECARGA
DE 200kg/m².

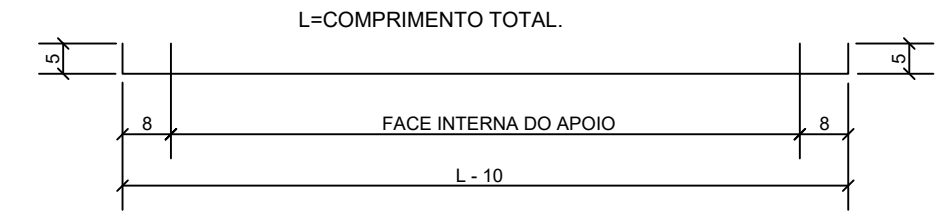
ESQUEMA PADRÃO DE MONTAGEM DAS LAJES.



ESQUEMA DE MONTAGEM DAS ESCORAS DAS LAJES



DETALHE TÍPICO DA ARMADURA DAS TRELIÇAS



* A ARMAÇÃO DAS NERVURAS DEVERÁ SEGUIR O DETALHE TÍPICO ACIMA.

NOTAS :

OBSERVE QUE O ESQUEMA DE EXECUÇÃO EXIGE A MONTAGEM DAS LAJES
TRELIÇADAS ANTES DA CONCRETAGEM TOTAL DAS VIGAS.

É CONVENIENTE A UTILIZAÇÃO DE UMA ARMADURA TRANSVERSAL DE TRAVAMENTO
DAS TRELIÇAS (Ø 3,4 X 2,0) LAÇANDO A PRIMEIRA E ÚLTIMA TRELIÇA,
APERTANDO-AS, UMAS CONTRA AS OUTRAS, OU USAR TELA SOLDADA Ø11 OU SIMILAR.

É ABSOLUTAMENTE INDISPENSÁVEL QUE TANTO OS BLOCOS COMO AS TRELIÇAS
SEJAM BEM MOLHADOS ANTES DA CONCRETAGEM DA CAPA.

O TRÂNSITO SOBRE AS LAJES DURANTE A MONTAGEM E CONCRETAGEM DAS MESMAS
DEVERÁ SER FEITO SOBRE TABUAS APOIADAS TRANSVERSALMENTE SOBRE AS
TRELIÇAS, DE MODO A EVITAR QUEBRA DE ELEMENTOS E ACIDENTES.

APÓS A CONCRETAGEM DA CAPA, A MESMA DEVERÁ SER ABUNDANTEMENTE MOLHADA,
PELO MENOS DUAS VEZES POR DIA, DURANTE OS TRÊS PRIMEIROS DIAS
APÓS A CONCRETAGEM.

INDICAR O SENTIDO DE COLOCAÇÃO DAS LAJES PRÉ-MOLDADAS.

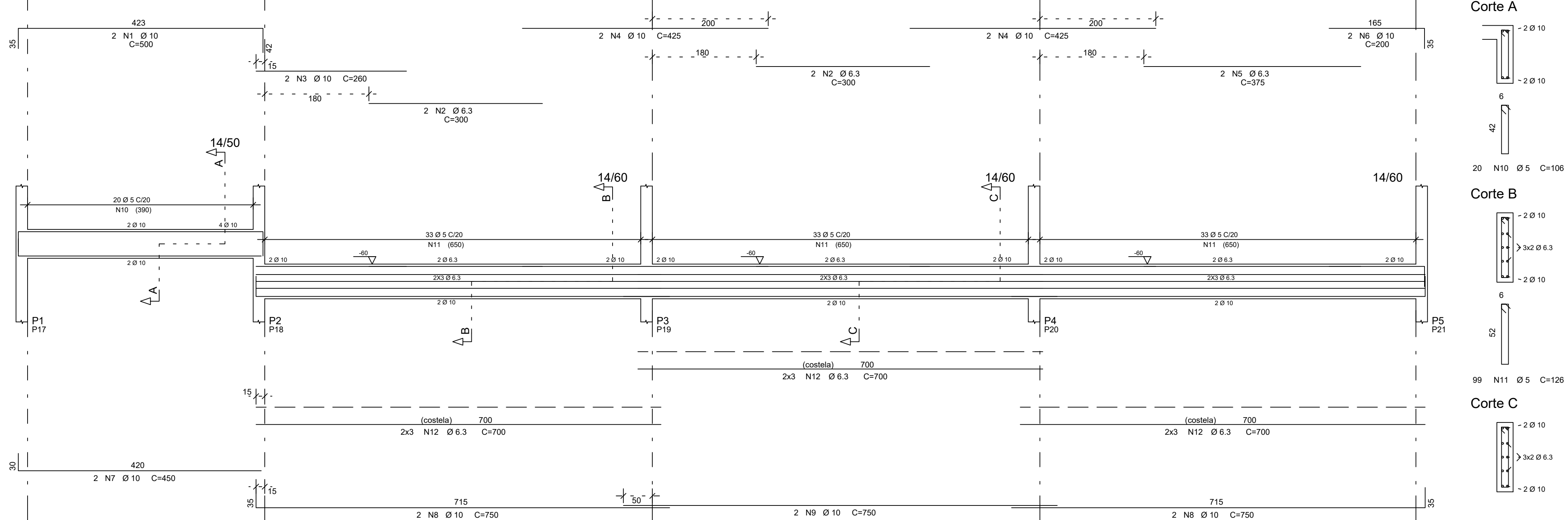
IT- INDICAM CONTRA-FLECHA EM CENTÍMETROS A SER ADOTADA NA LINHA
CENTRAL DA LAJE BEM COMO NAS VIGAS NOS LOCAIS INDICADOS EM PLANTA.

SOB+ INDICAM SOBRECARGA ACIDENTAL ADOTADA NAS LAJES E FAIXAS.

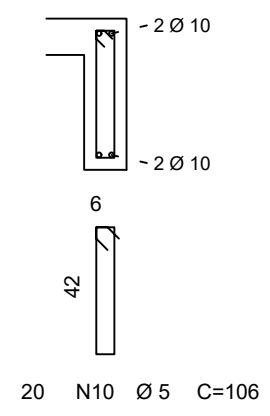
O ESCORAMENTO DEVERÁ SER CONSERVADO, NO MÍNIMO, CERCA DE 15 DIAS
APÓS A CONCRETAGEM DO CAPEAMENTO.

AS TRELIÇAS DEVERÃO SER CONCRETADAS COM O MESMO VÃO INTERIO ENTRE AS
VIGAS SOBRE AS QUAIS SE APOIARÃO, DEVENDO AS ARMADURAS PENETRAR NO
MÍNIMO 8cm NAS VIGAS (VER DETALHE TÍPICO).

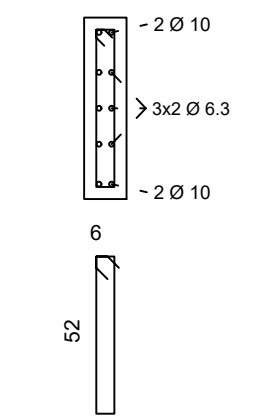
V1=V3



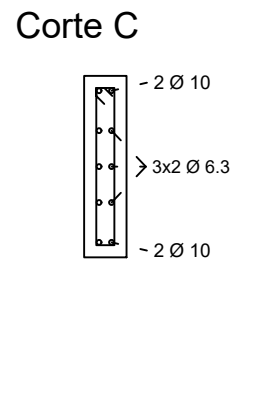
Corte A



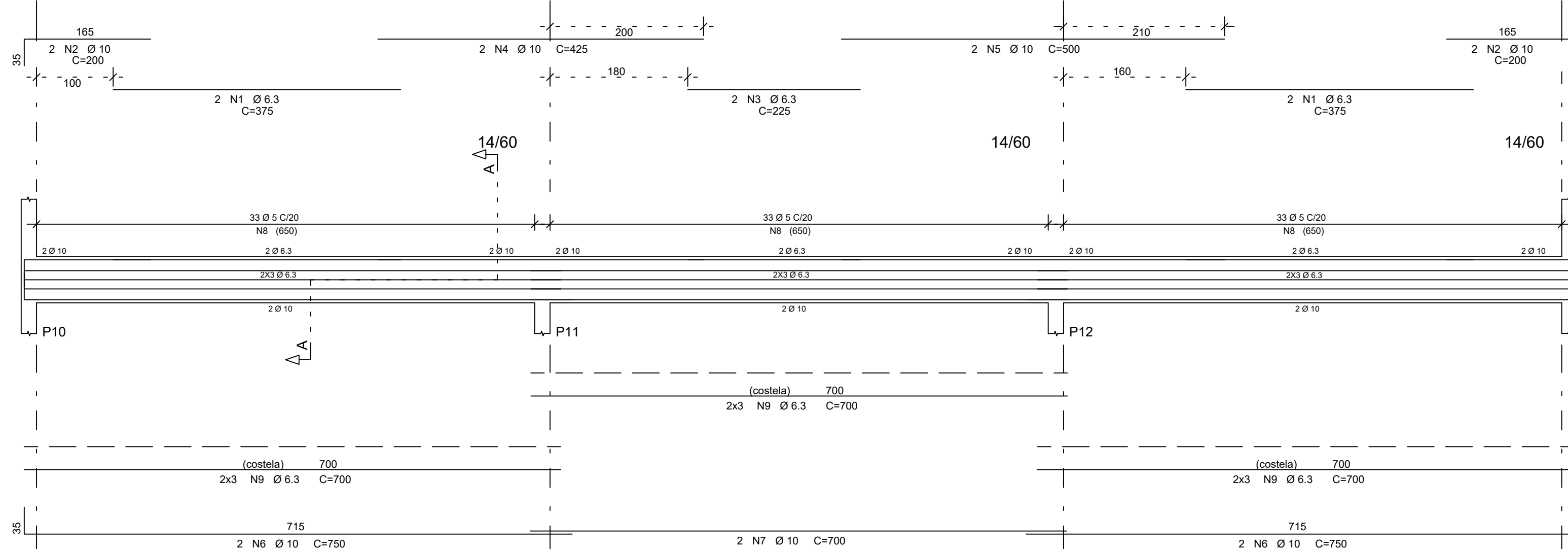
Corte B



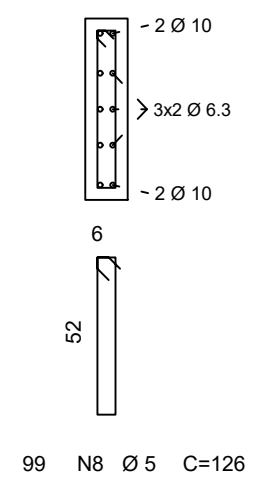
Corte C



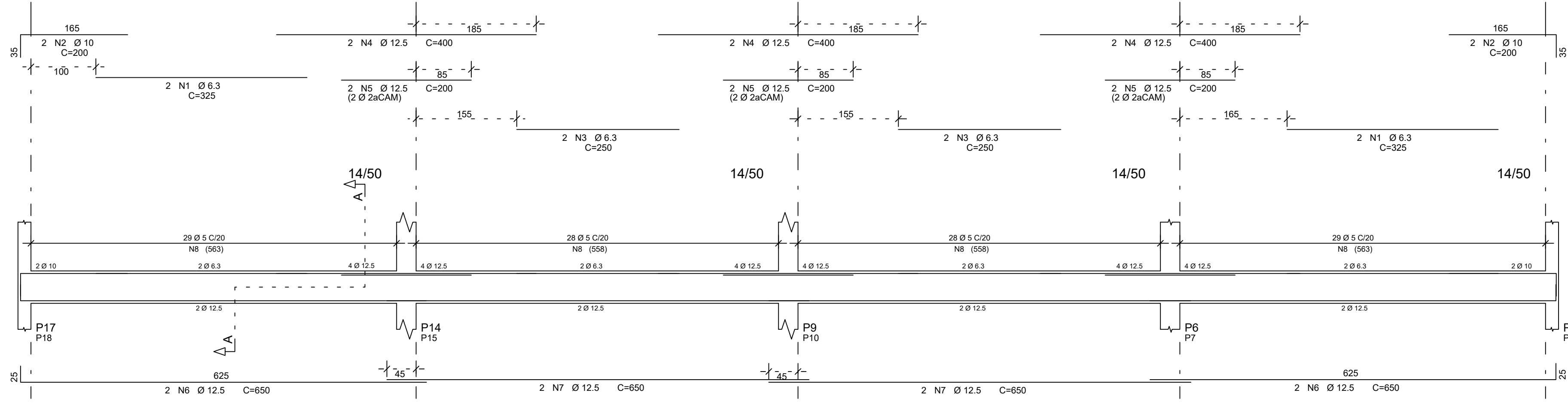
V2



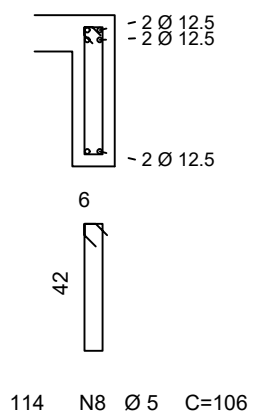
Corte A



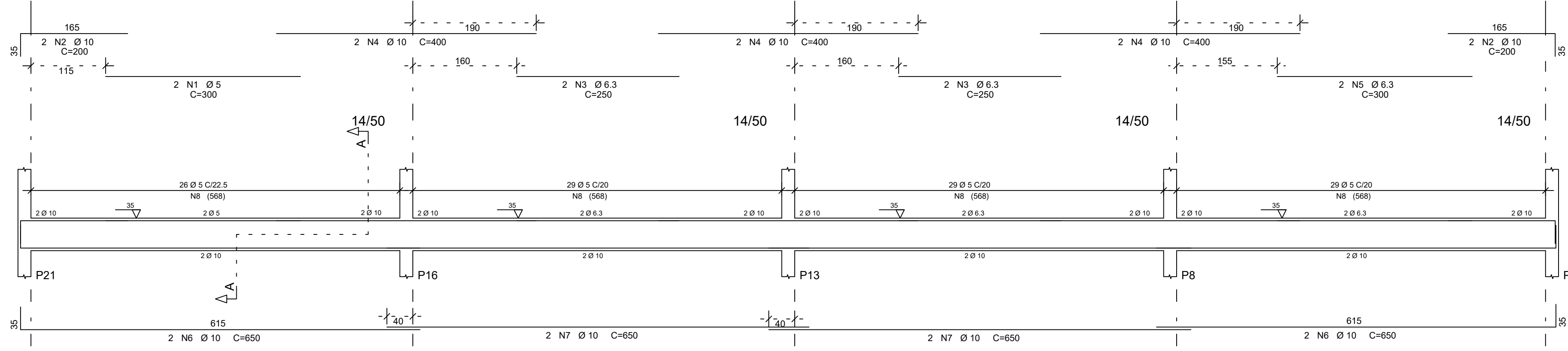
V4=V5



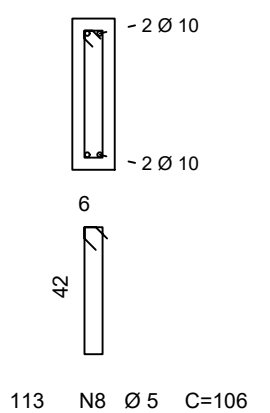
Corte A



V6



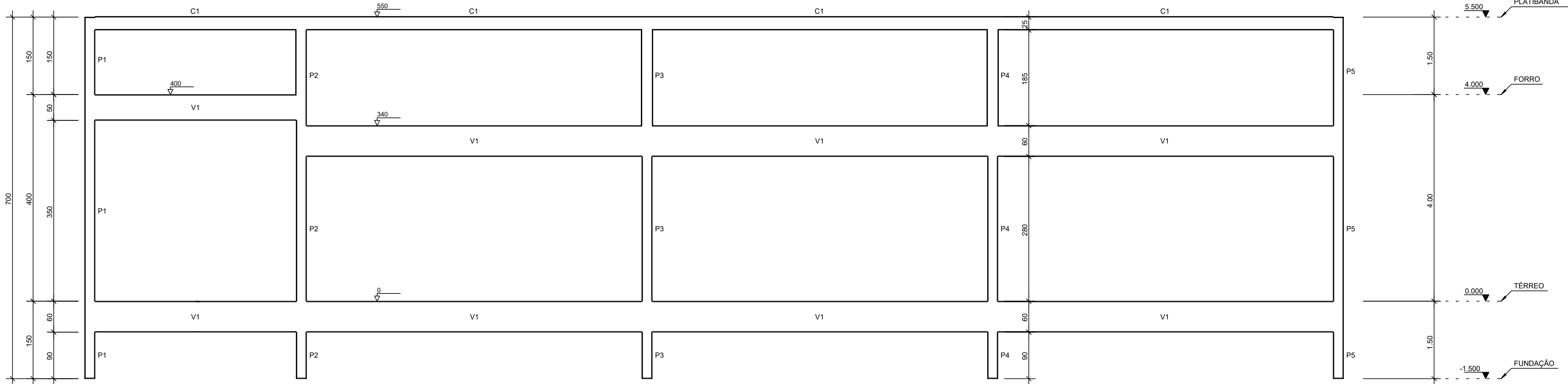
Corte A



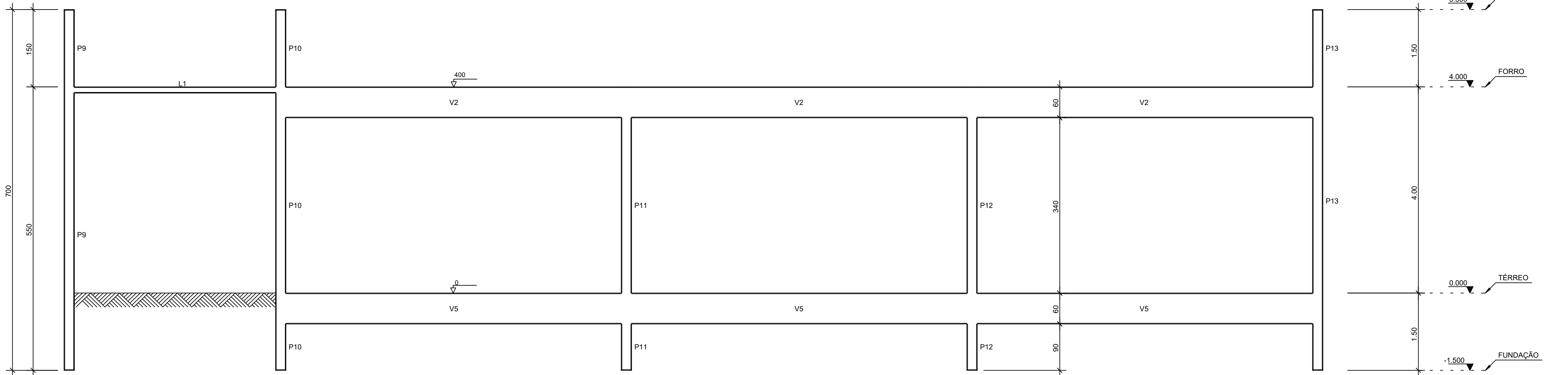
	ÁÇO	POS	BIT (mm)	QUANT	COMPRIMENTO UNIT (cm)	TOTAL (cm)
V1=V3 (X2)	50	1	10	4	500	2000
	50	2	6,3	8	300	2400
	50	3	10	4	200	1040
	50	4	10	8	400	3400
	50	5	6,3	4	375	1500
	50	6	10	4	200	800
	50	7	10	4	400	1600
	50	8	10	8	750	6000
	50	9	10	4	750	3000
	60	10	5	40	106	4240
	60	11	5	198	126	24948
V2	50	12	6,3	36	700	25200
	50	1	6,3	4	375	1500
	50	2	10	4	200	800
	50	3	6,3	2	225	450
	50	4	10	2	425	850
	50	5	10	2	600	1000
	50	6	10	4	750	3000
	50	7	10	2	700	1400
	60	8	5	99	126	12474
V4=V5 (X2)	50	9	6,3	18	700	12600
	50	1	6,3	8	325	2600
	50	2	10	8	200	1600
	50	3	6,3	8	250	2000
	50	4	12,5	12	400	4800
	50	5	12,5	12	200	2400
V6	50	6	12,5	8	650	5200
	50	7	12,5	8	650	5200
	50	8	5	228	106	24168
	60	1	5	2	300	600
	60	2	10	4	200	800
	60	3	6,3	4	250	1000
RESUMO AÇO CA 50-60	60	4	6,3	2	400	2400
	60	5	6,3	2	300	600
	60	6	10	4	650	2600
	60	7	10	4	650	2600
	60	8	5	113	106	11976
	60	9	5	113	106	11976

ÁÇO	BIT (mm)	COMPR	PESO (kg)
60	5	784	125
50	6,3	469	125
50	10	361	221
50	12,5	176	176
Peso Total 60 =			125 kg
Peso Total 50 =			522 kg

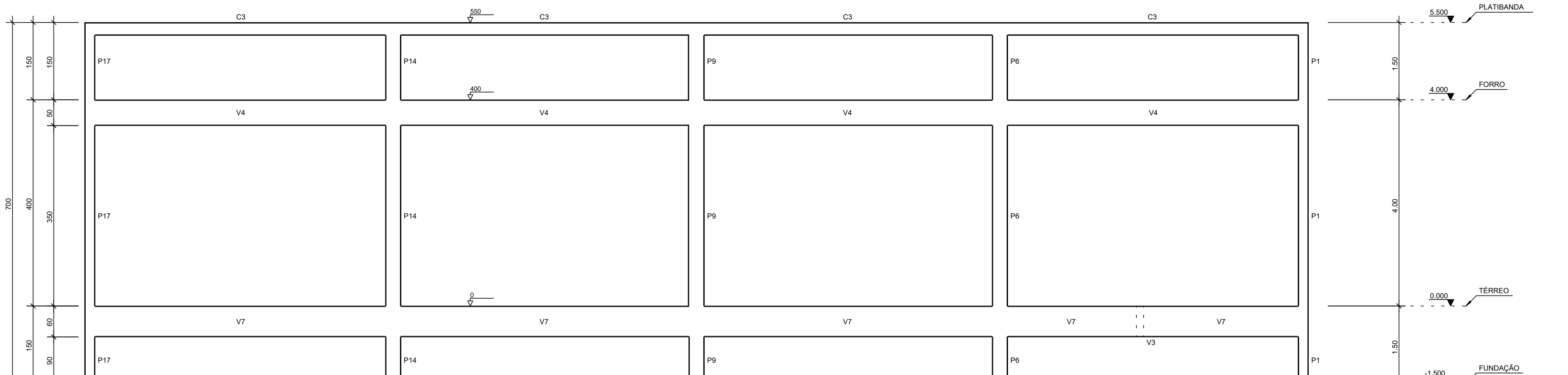
CORTE A.A
ESC.-1/50



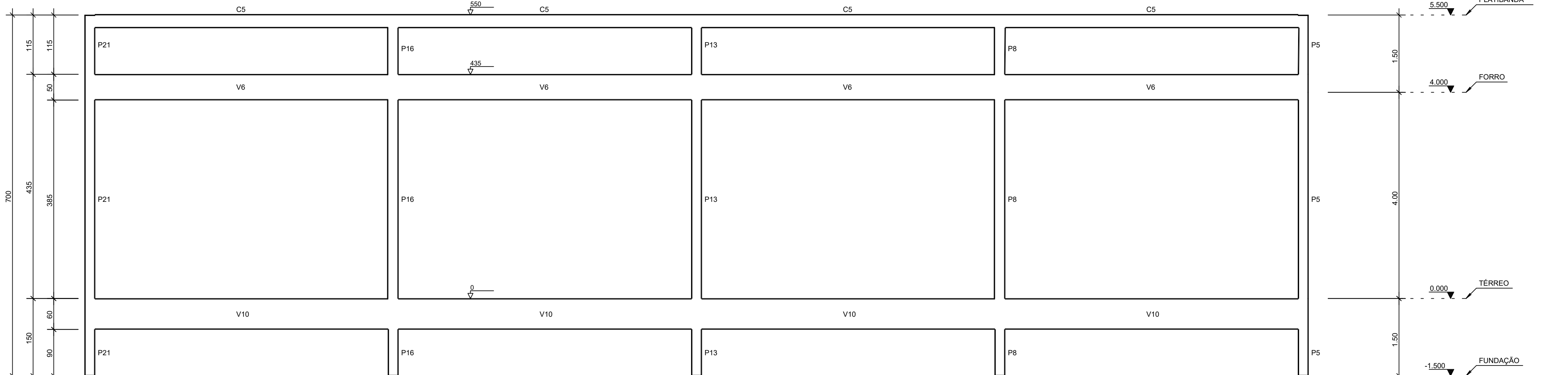
CORTE B.B
ESC.-1/50



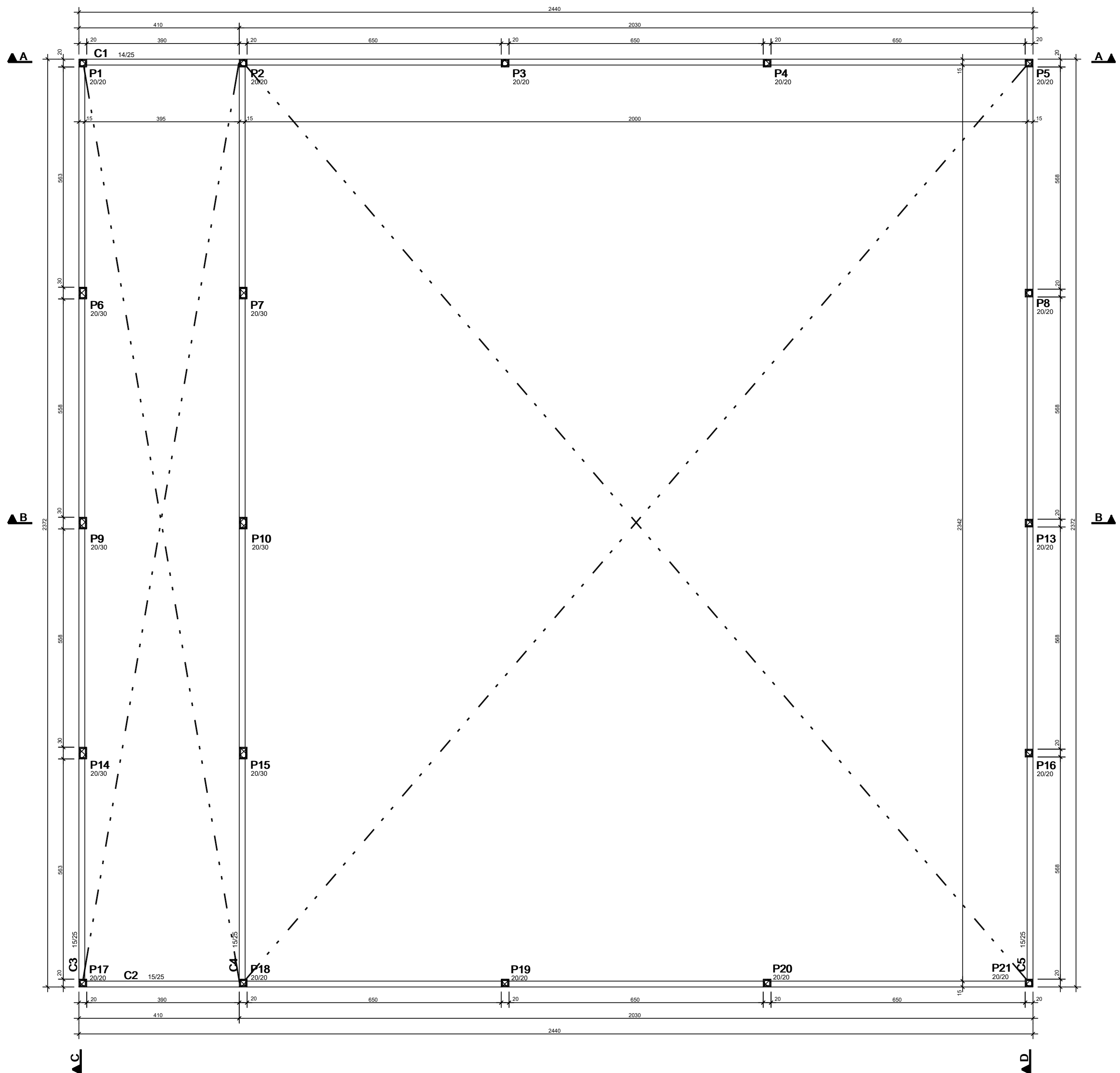
CORTE C.C
ESC.-1/50



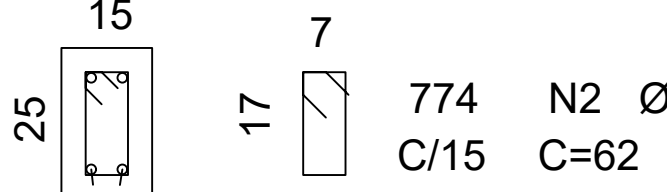
CORTE E.E
ESC.-1/50



FÔRMA DO PLATIBANDA
ESC.-1/75



DET.GENÉRICO DO
CINTAMENTO AÉREO
ESC.-1/25



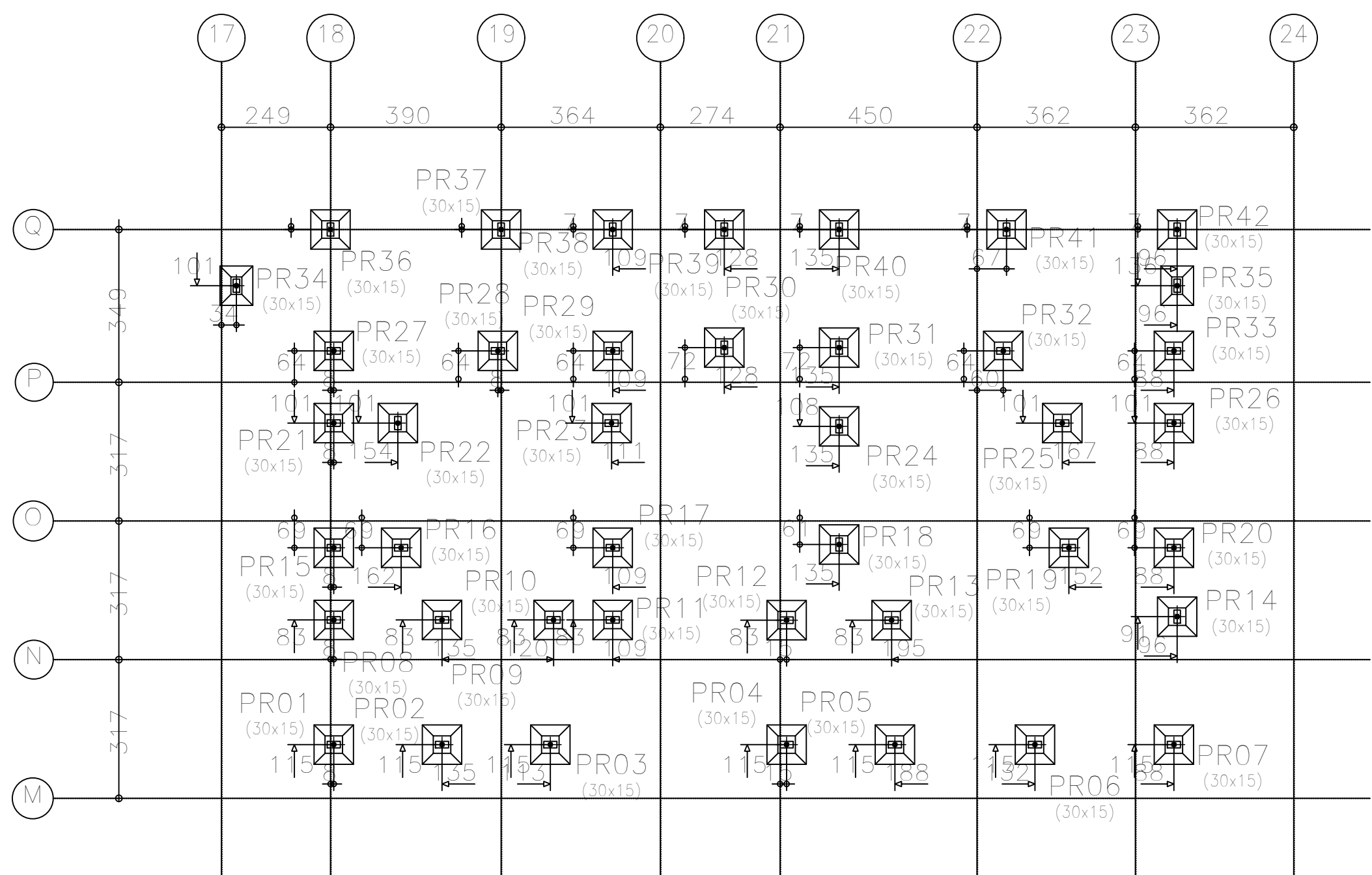
2X2 N1 Ø 8 C=COR

- COMPRIMENTO TOTAL - 125m (PLATIBANDA)

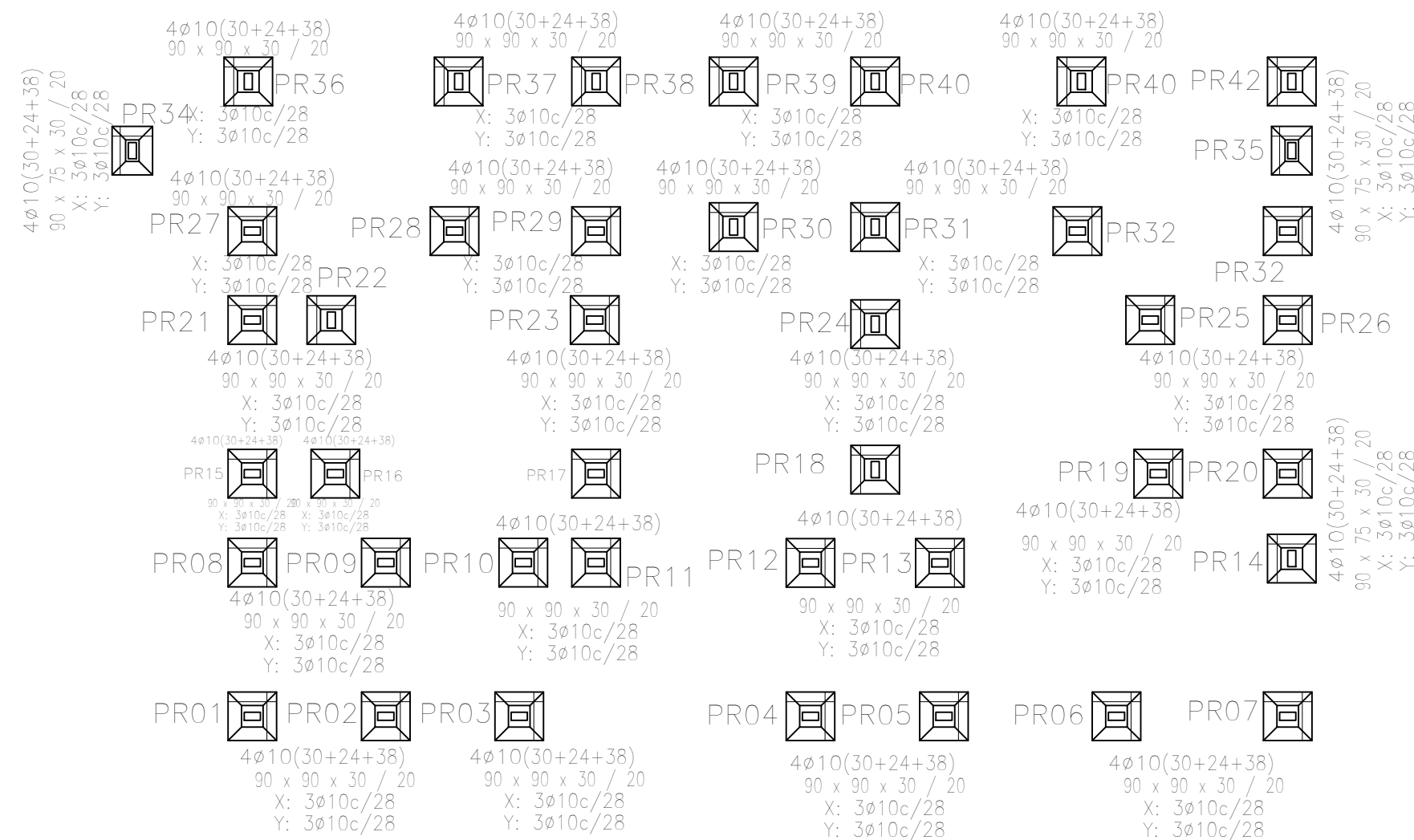
CONVENÇÃO
DE PILARES

- MORRE
- CONTINUA
- NASCE

AÇO	POS	BIT (mm)	QUANT	COMPRIMENTO	
				UNIT (cm)	TOTAL (cm)
CINTAMENTO AÉREO					
50	1	8	4	-CORR- 62	50000
60	2	5	774		47988

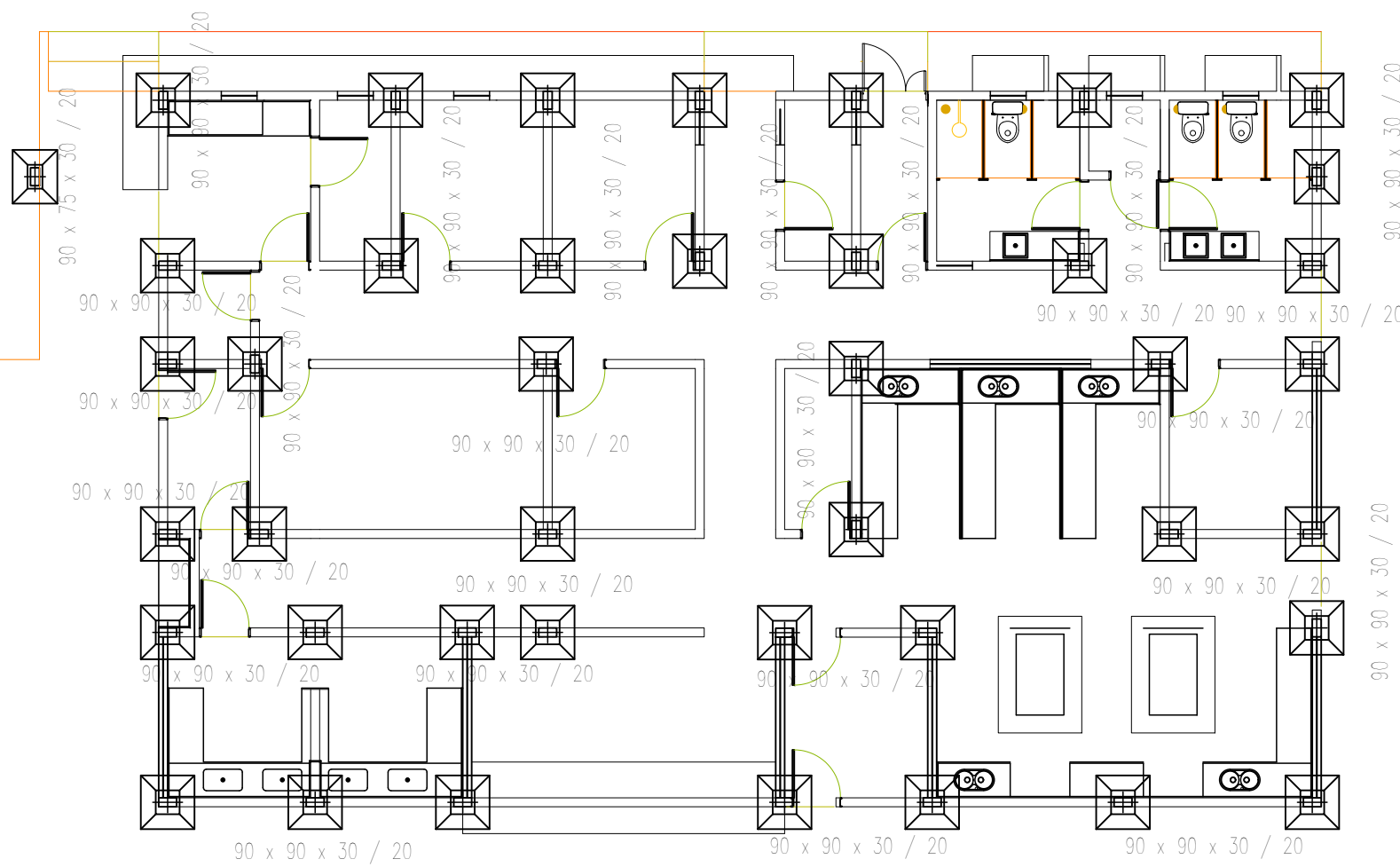


Fundação
Piso
Escala: 1:150

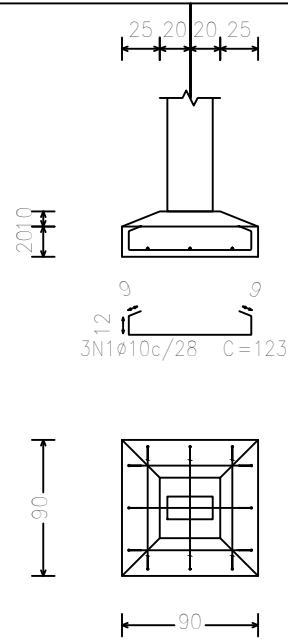


Fundação
Fundação
Concreto: C25, em geral
Escala: 1:150

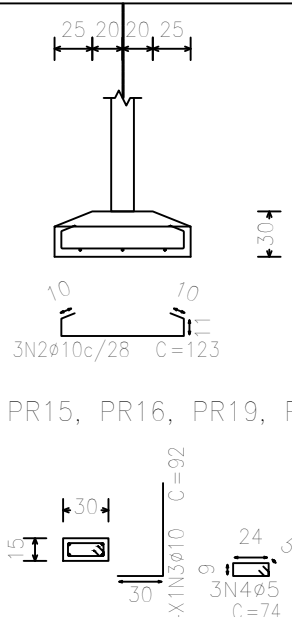
QUADRO DE ELEMENTOS DE FUNDAÇÃO						
Referências	Dimensões (cm)	Altura (cm)	Armadura inf. X	Armadura inf. Y	Armadura sup. X	Armadura sup. Y
PR04, PR08, PR12, PR14, PR15, PR16, PR19, PR27, PR30 e PR31	90x90	30 / 20	3φ10c/28	3φ10c/28		
PR03, PR13, PR20, PR23, PR24, PR25, PR26, PR28, PR32, PR33, PR36, PR37, PR39, PR40, PR41 e PR42	90x90	30 / 20	3φ10c/28	3φ10c/28		
PR08 e PR04	90x90	30 / 20	3φ10c/28	4φ10c/28		
PR07 e PR38	90x90	30 / 20	3φ10c/28	3φ10c/28		
PR01 e PR21	90x90	30 / 20	3φ10c/28	3φ10c/28		
PR02, PR05, PR09, PR17, PR22 e PR29	90x90	30 / 20	3φ10c/28	3φ10c/28		
PR06, PR10 e PR11	90x90	30 / 20	3φ10c/28	3φ10c/28		
PR18	90x90	30 / 20	3φ10c/28	3φ10c/27		



PR04, PR08, PR12, PR14, PR15, PR16, PR19, PR27, PR30 e PR31

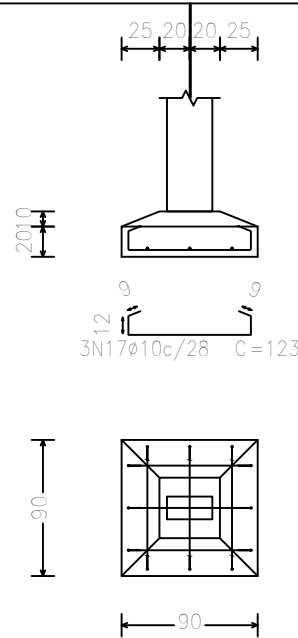


PR04, PR08, PR12, PR14, PR15, PR16, PR19, PR27, PR30 e PR31

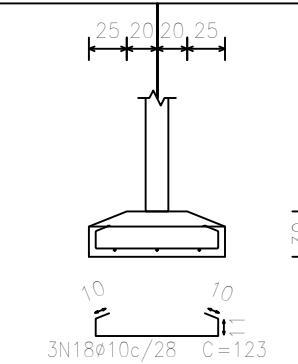


PR04, PR08, PR12, PR14, PR15, PR16, PR19, PR27, PR30 e PR31

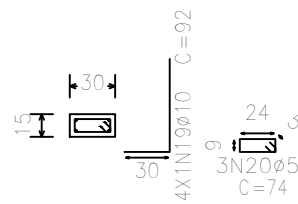
PR03, PR13, PR20, PR23, PR24, PR25, PR26, PR28, PR32, PR33, PR36, PR37, PR39, PR40, PR41 e PR42



PR03, PR13, PR20, PR23, PR24, PR25, PR26, PR28, PR32, PR33, PR36, PR37, PR39, PR40, PR41 e PR42



PR03, PR13, PR20, PR23, PR24, PR25, PR26, PR28, PR32, PR33, PR36, PR37, PR39, PR40, PR41 e PR42



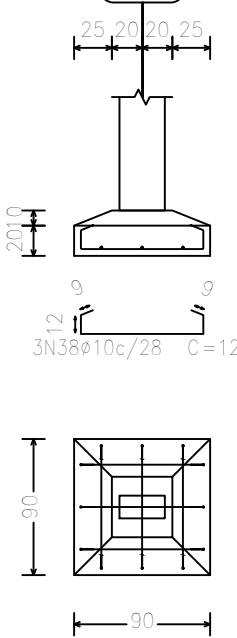
Resumo Aço	Comp. total	Peso+10%	Total
Fundação	(m)	(kg)	
Detalhamento: fundação			
CA-50			
ø5	128,76	21,81	
ø10	611,06	414,73	436,54

Concreto Sapatas: C25, volume total (8,12 m³)

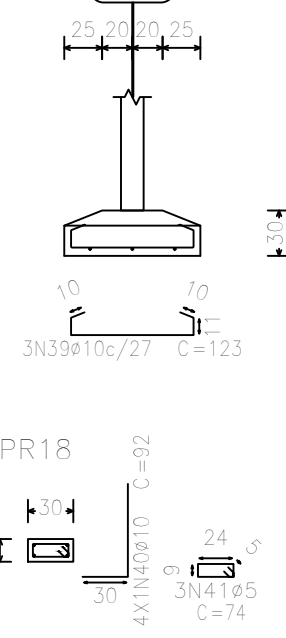
Elemento	Pos.	Diam.	Q.	Dob. (cm)	Rea. (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)
PR04=PR08 PR12=PR14=PR15 PR16=PR19=PR27 PR30=PR31	1	ø10	3	9	105	9	123	369	2,3
	2	ø10	3	10	103	10	123	369	2,3
	3	ø10	4	30	62	92	368	2,3	
	4	ø5	3		74	74	222	0,3	
Total+10%:									7,9
(x15):									118,5
PR13=PR20=PR23 PR24=PR25=PR26 PR28=PR32=PR33 PR36=PR37=PR39 PR40=PR41=PR42	17	ø10	3	9	105	9	123	369	2,3
	18	ø10	3	10	103	10	123	369	2,3
	19	ø10	4	30	62	92	368	2,3	
	20	ø5	3		74	74	222	0,3	
Total+10%:									7,9
(x15):									118,5
PR5=PR6=PR7=PR8 PR9=PR0=PR1=PR2 PR07=PR38	58	ø10	3	9	105	9	123	369	2,3
	59	ø10	3		82	82	246	1,5	
	60	ø10	4	30	62	92	368	2,3	
	61	ø5	3		74	74	222	0,3	
Total+10%:									7,9
(x10):									70,0
PR9=PR10=PR101 PR102=PR103=PR104 PR105=PR106=PR107 PR01=PR21	66	ø10	3	9	105	9	123	369	2,3
	67	ø10	3		82	82	246	1,5	
	68	ø10	4	30	62	92	368	2,3	
	69	ø5	3		74	74	222	0,3	
Total+10%:									7,9
(x11):									77,0
Elemento	Pos.	Diam.	Q.	Dob. (cm)	Rea. (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)
PR34=PR35	1	ø10	3		123		123	369	2,3
	2	ø10	3	11	86	11	108	324	2,0
	3	ø10	4	30	62	92	368	2,3	
	4	ø5	3		74	74	222	0,3	
Total+10%:									7,8
(x2):									15,2
PR02=PR05=PR09 PR17=PR22=PR29	30	ø10	3	9	105	9	123	369	2,3
	31	ø10	3	10	103	10	123	369	2,3
	32	ø10	4	30	62	92	368	2,3	
	33	ø5	3		74	74	222	0,3	
Total+10%:									7,9
(x6):									47,4
PR06=PR10=PR11	34	ø10	3	9	105	9	123	369	2,3
	35	ø10	3		82	82	246	1,5	
	36	ø10	4	30	62	92	368	2,3	
	37	ø5	3		74	74	222	0,3	
Total+10%:									7,9
(x3):									21,0
PR18	38	ø10	3	9	105	9	123	369	2,3
	39	ø10	3	10	103	10	123	369	2,3
	40	ø10	4	30	62	92	368	2,3	
	41	ø5	3		74	74	222	0,3	
Total+10%:									7,9
									ø5: 17,4
									ø10: 380,4
Total:									988,5

QUADRO DE ELEMENTOS DE FUNDAÇÃO						
Referências	Dimensões (cm)	Altura (cm)	Armadura sup. V	Armadura inf. V	Armadura sup. V	Armadura sup. V
PR04, PR12, PR14, PR15, PR16, PR18, PR21, PR30 e PR31	90x90	30 / 20	3ø10c/28	3ø10c/28		
PR03, PR13, PR20, PR23, PR24, PR25, PR26, PR28, PR32, PR33, PR36, PR37, PR39, PR40, PR41 e PR42	90x90	30 / 20	3ø10c/28	3ø10c/28		
PR34, PR35	90x75	30 / 20	3ø10c/28	3ø10c/28		
PR01 e PR21	90x90	30 / 20	3ø10c/28	3ø10c/28		
PR02, PR05, PR09, PR17, PR22 e PR29	90x90	30 / 20	3ø10c/28	3ø10c/28		
PR06, PR10 e PR11	90x90	30 / 20	3ø10c/28	3ø10c/28		
PR18	90x90	30 / 20	3ø10c/28	3ø10c/28		

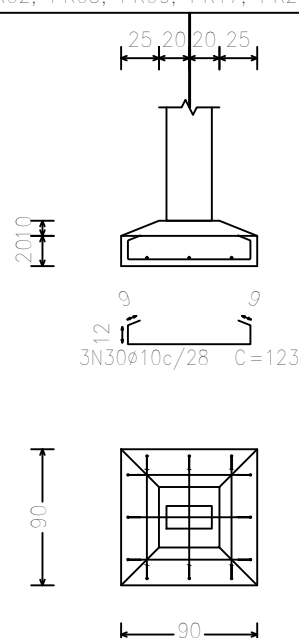
PR18



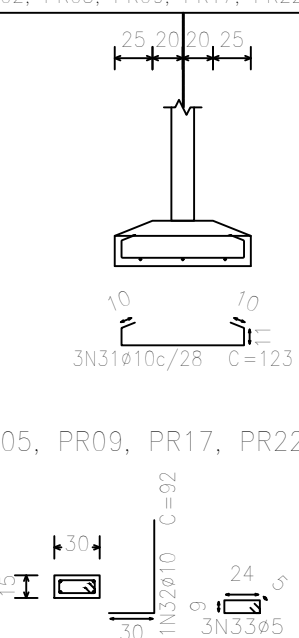
PR18



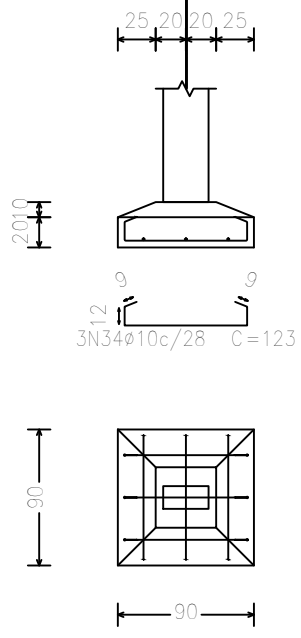
PR02, PR05, PR09, PR17, PR22 e PR29



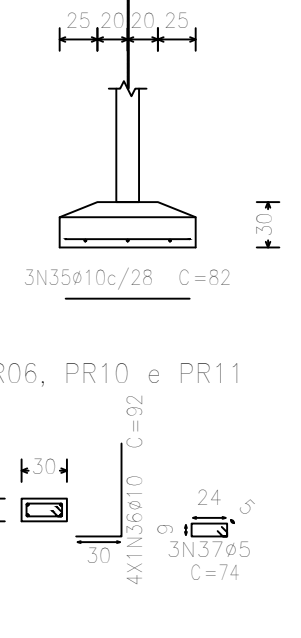
PR02, PR05, PR09, PR17, PR22 e PR29



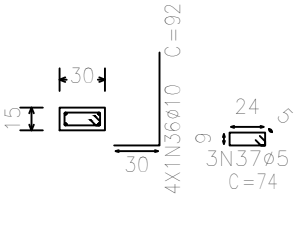
PR06, PR10 e PR11

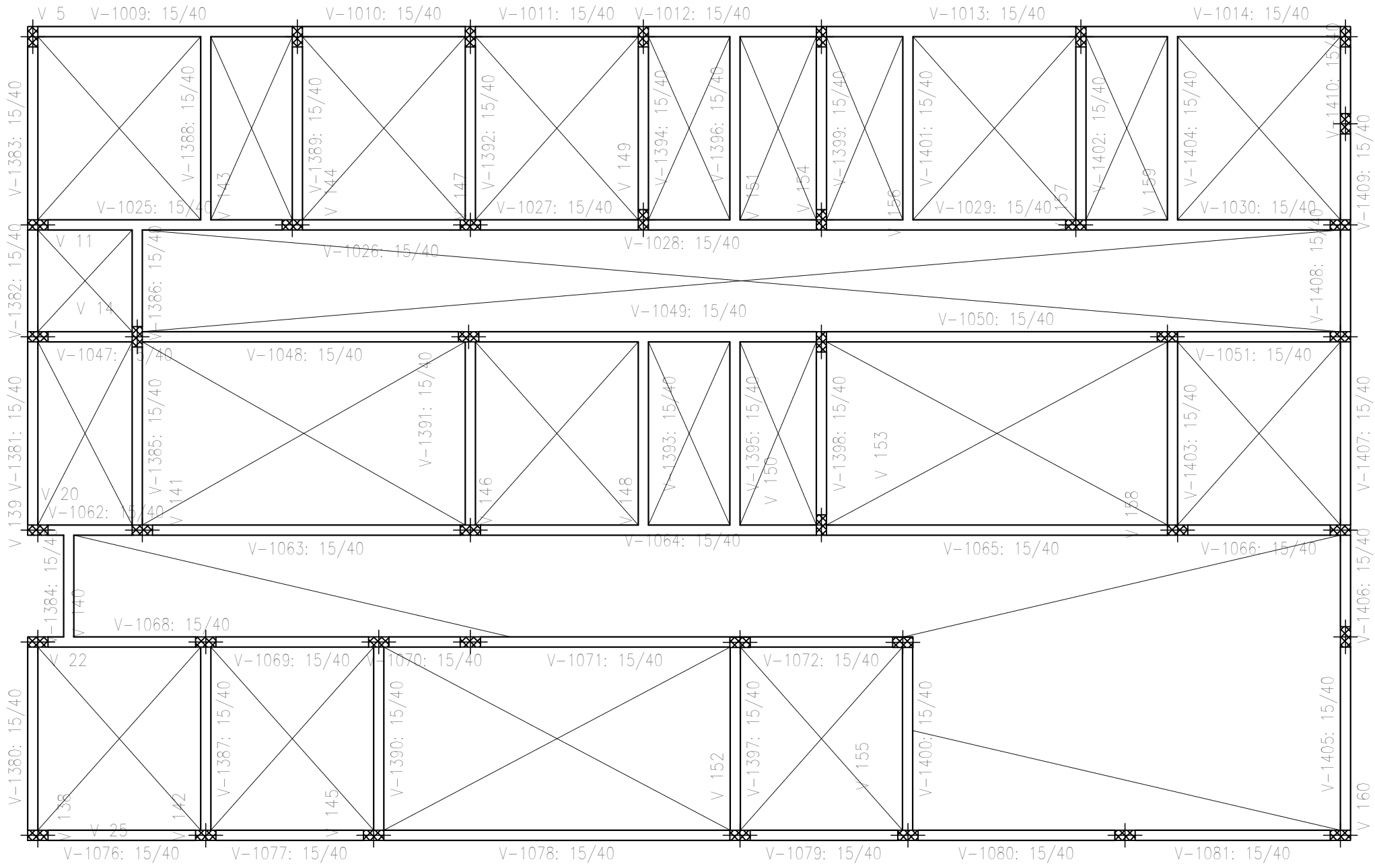


PR06, PR10 e PR11

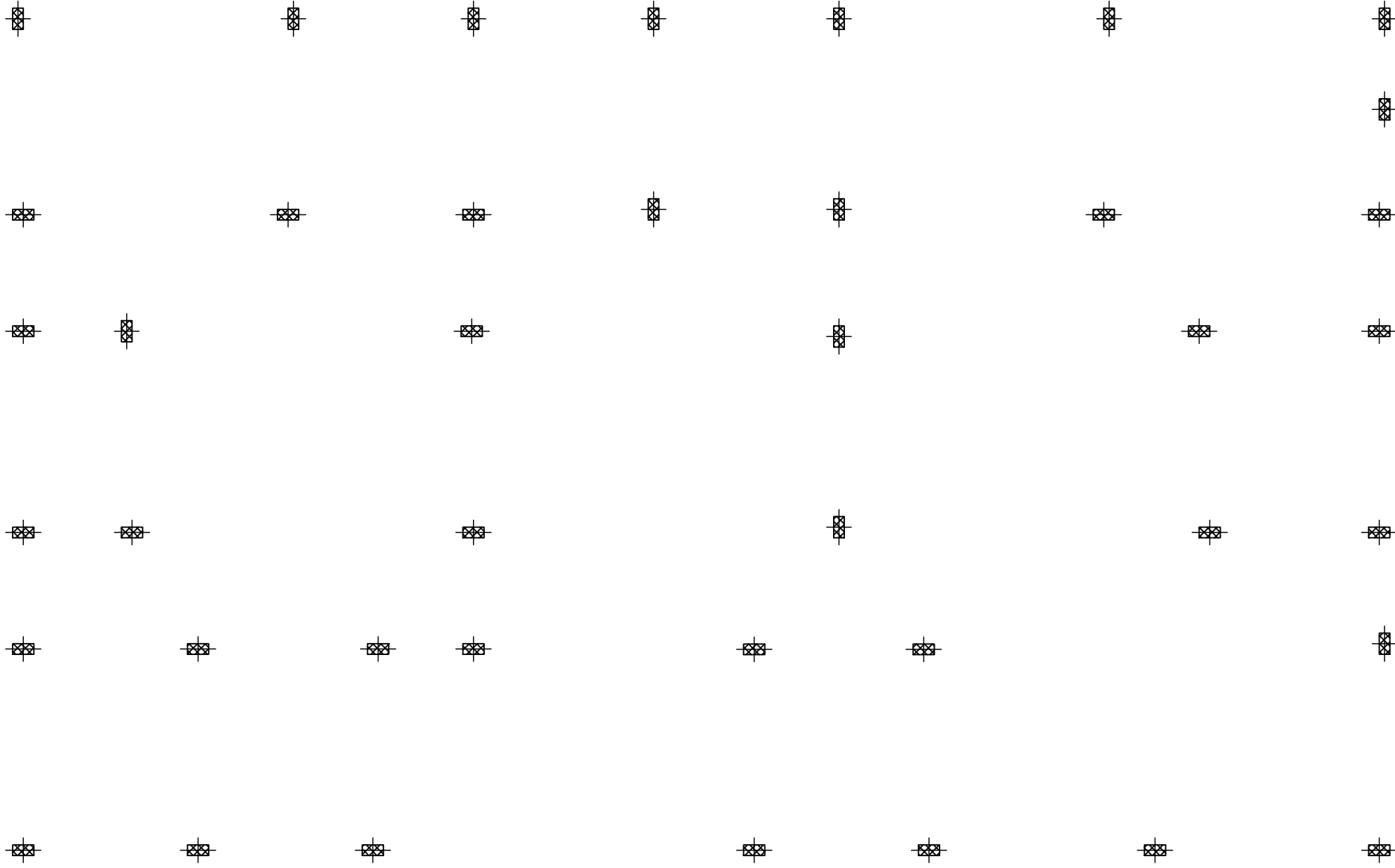


PR06, PR10 e PR11

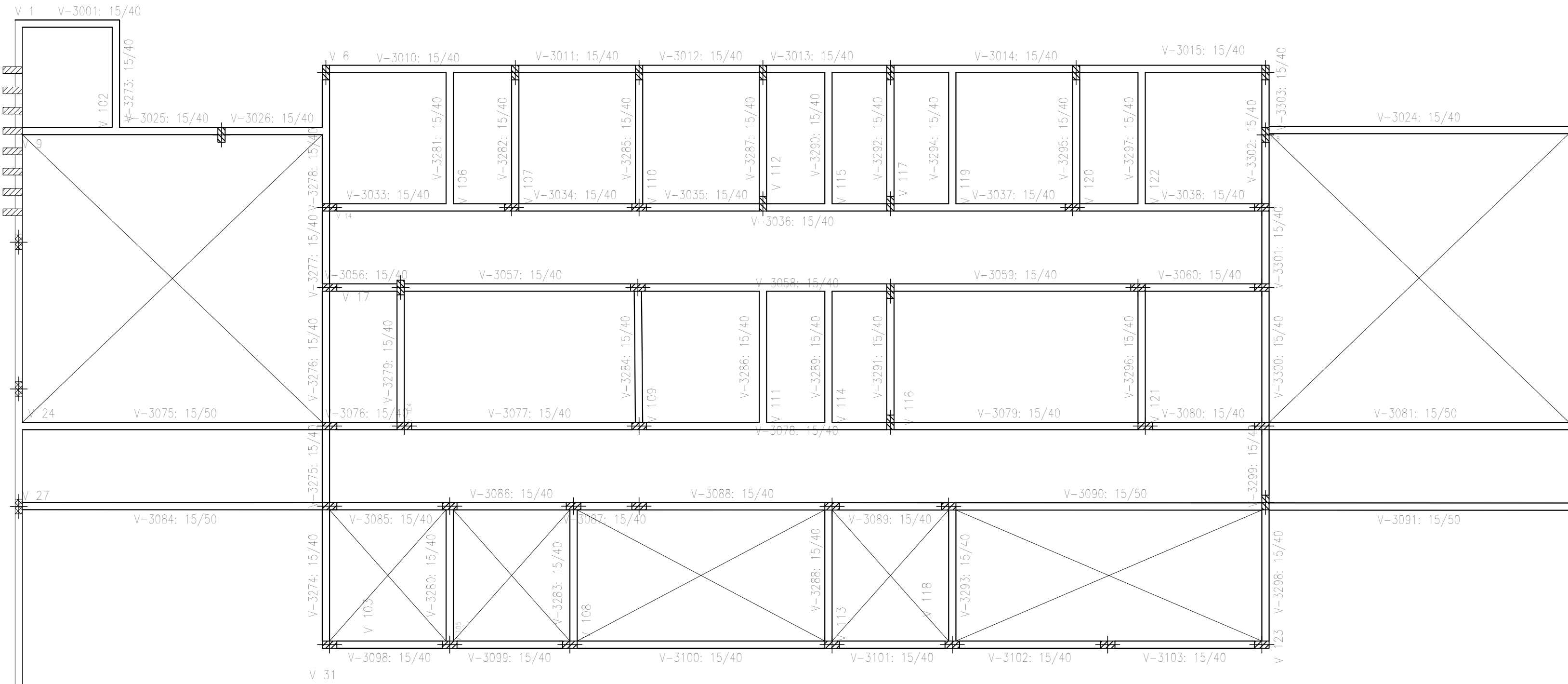




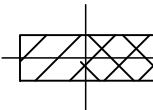
Nível 0 m
Piso
Escala: 1:50

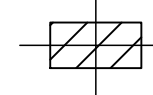


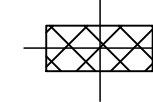
Nível 2,70m
Piso
Escala: 1:50

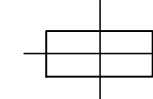


Nível 3,60 m
Piso
Escala: 1:50

 Pilar com mudança de seção

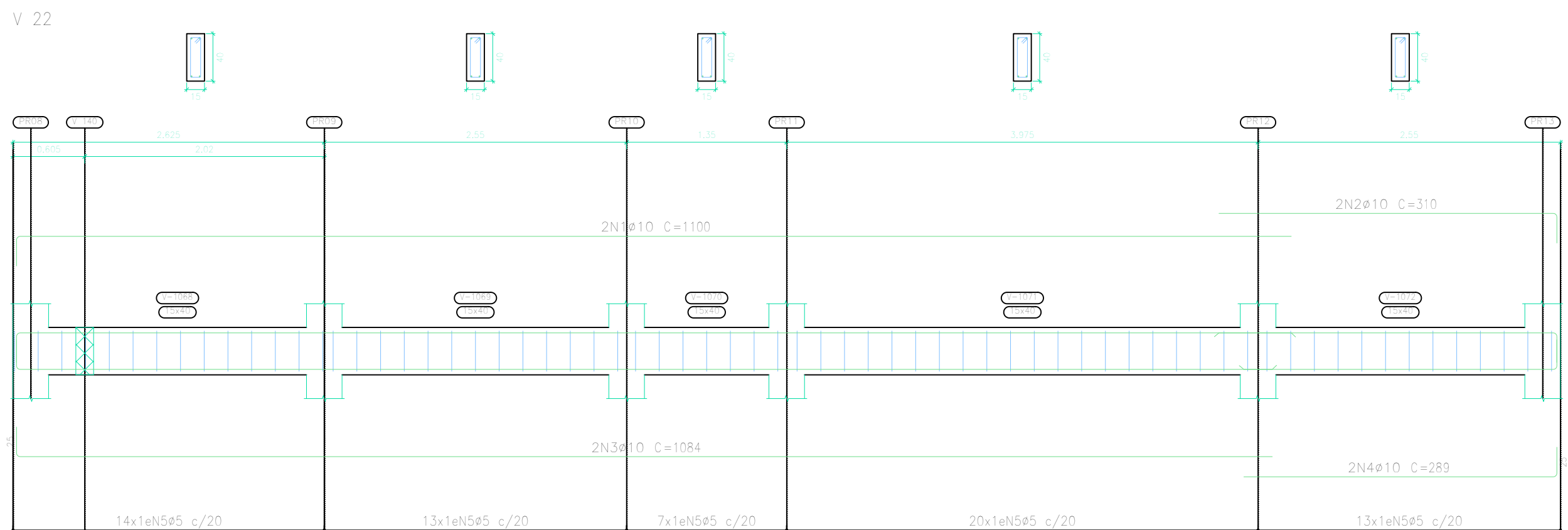
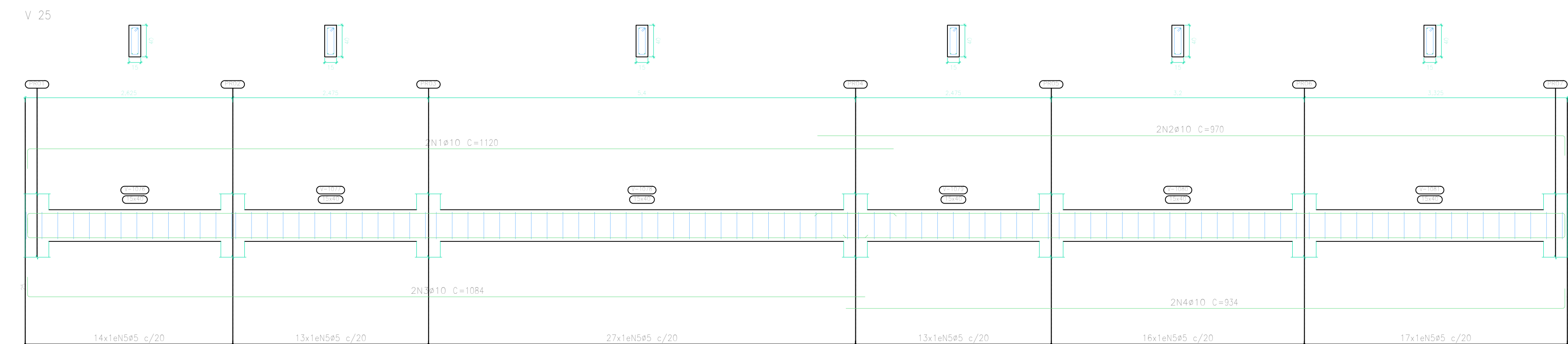
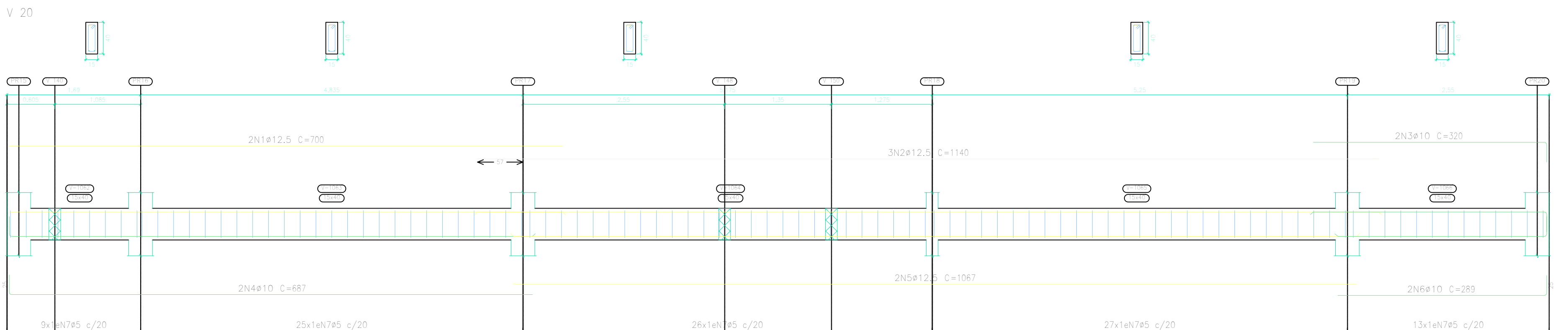
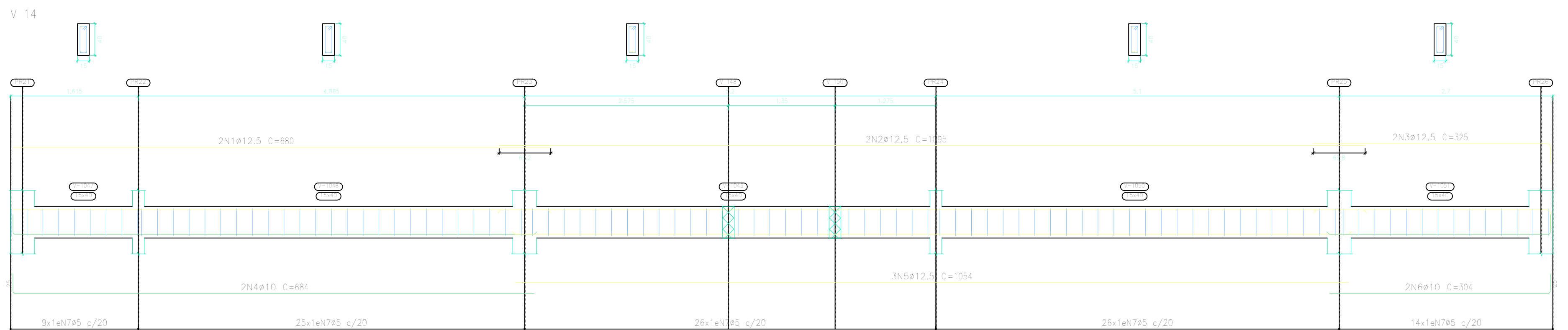
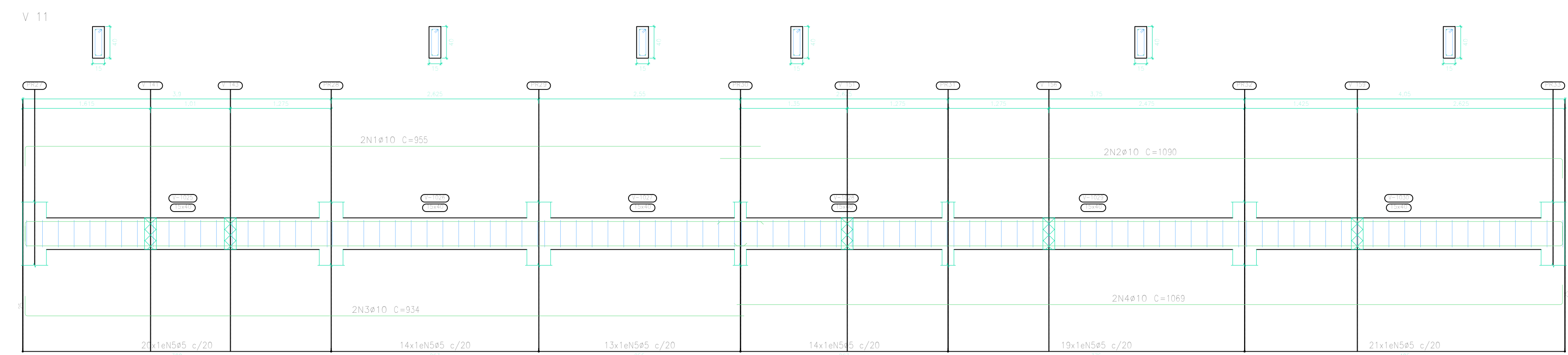
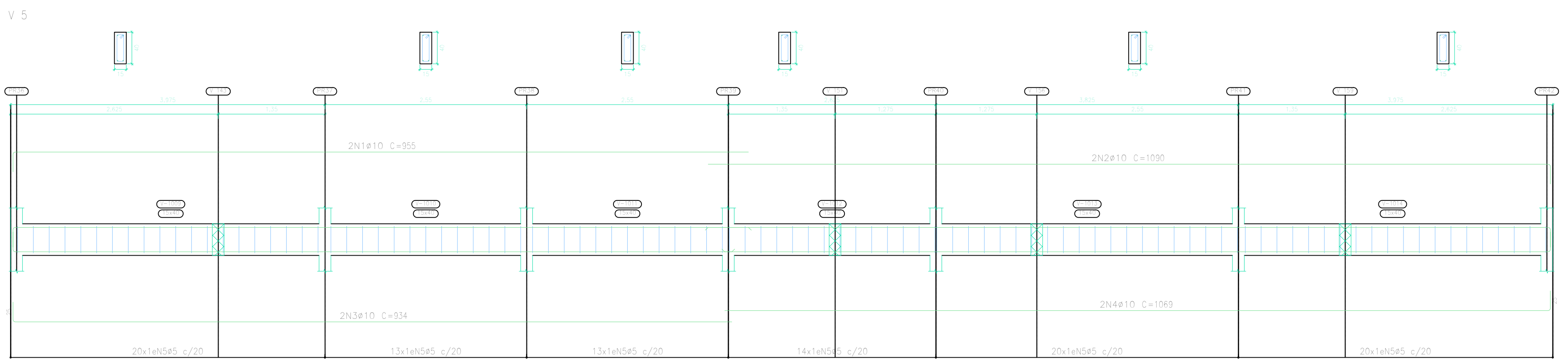
 Pilar que morre

 Pilar que continua

 Pilar que nasce

Concreto Vigas: C25, volume total (26,70 m³)

 INSTITUTO FEDERAL Sertão Pernambucano	INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA SERTÃO PERNAMBUCANO DIRETORIA DE ENGENHARIA E INFRAESTRUTURA Rua Aristarco Lopes, 240 Centro Petrolina/PE CEP: 56.302-100	NOME: PROJETO ESTRUTURAL DO CAMPUS ÁGUAS BELAS DO IF Sertão PE
	ENDEREÇO: Rodovia PE-300, S/N, CEP: 55340-000 Águas Belas/PE	DATA: ABRIL/2025
DESCRIÇÃO: FÔRMAS DE VIGAS/LAJES (REFEITÓRIO)	ESCALA: 1/50	FRANCHA: 04/09
ASSINATURA/CARIMBO - DIREÇÃO GERAL:	ASSINATURA/CARIMBO - RESPONSÁVEL TÉCNICO: Ebson Alves da Silva - CREA PE 055750	



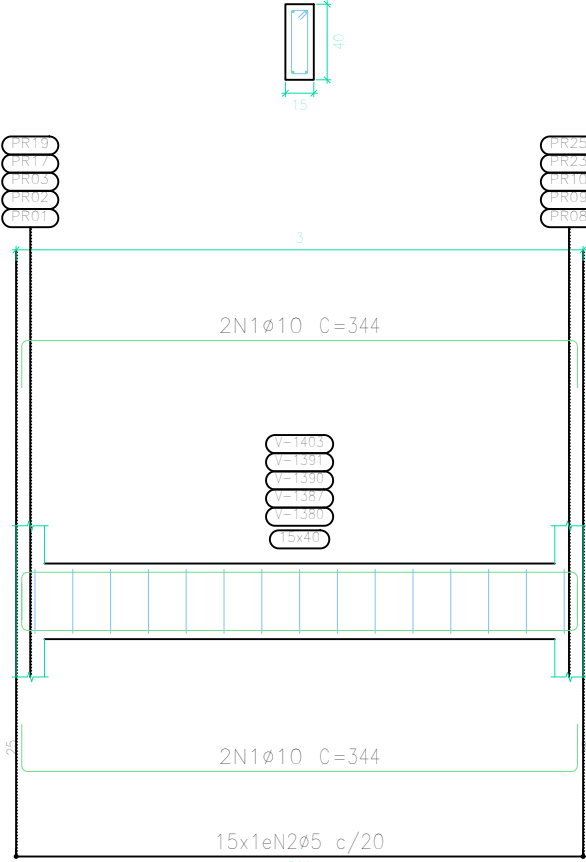
Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)
V 5	1	ø10	2		855	1590	11.8
	2	ø10	2		1050	2100	15.4
	3	ø10	2		834	1668	11.5
	4	ø10	2		1069	2138	15.2
	5	ø5	100		94	9400	14.8
						Total=105	67.7
V 11	1	ø10	2		855	1590	11.8
	2	ø10	2		1050	2100	15.4
	3	ø10	2		834	1668	11.5
	4	ø10	2		1069	2138	15.2
	5	ø5	100		94	9400	14.9
						Total=105	67.7
V 14	1	ø12.5	2		880	1360	13.1
	2	ø12.5	2		1090	2180	21.1
	3	ø12.5	2		325	650	6.3
	4	ø10	2		684	1368	8.4
	5	ø12.5	2		1064	2128	20.5
	6	ø10	2		334	668	5.7
	7	ø5	100		94	9400	14.8
						Total=105	67.7
V 20	1	ø12.5	2		700	1400	12.5
	2	ø12.5	2		1140	2280	22.9
	3	ø10	2		320	640	5.9
	4	ø10	2		687	1374	8.5
	5	ø12.5	2		1067	2134	20.6
	6	ø10	2		289	578	5.6
	7	ø5	100		94	9400	14.8
						Total=105	67.6
V 22	1	ø10	2		1100	2200	15.6
	2	ø10	2		310	620	5.8
	3	ø10	2		1064	2128	18.4
	4	ø10	2		289	578	5.6
	5	ø5	80		94	4028	9.9
						Total=105	48.7
V 25	1	ø10	2		1120	2240	15.8
	2	ø10	2		970	1940	12.0
	3	ø10	2		1064	2128	15.4
	4	ø10	2		334	668	11.5
	5	ø5	100		94	9400	14.8
						Total=105	62.3
						ø5: 89.0	
						ø10: 212.0	
						ø12.5: 138.0	
						Total:	435.0

Resumo	Aço Vigas	Comp. total (m)	Peso=10% (kg)	Total
CA-50	ø5	533,92	90,45	
	ø10	335,42	227,65	
	ø12.5	143,16	151,65	469,7

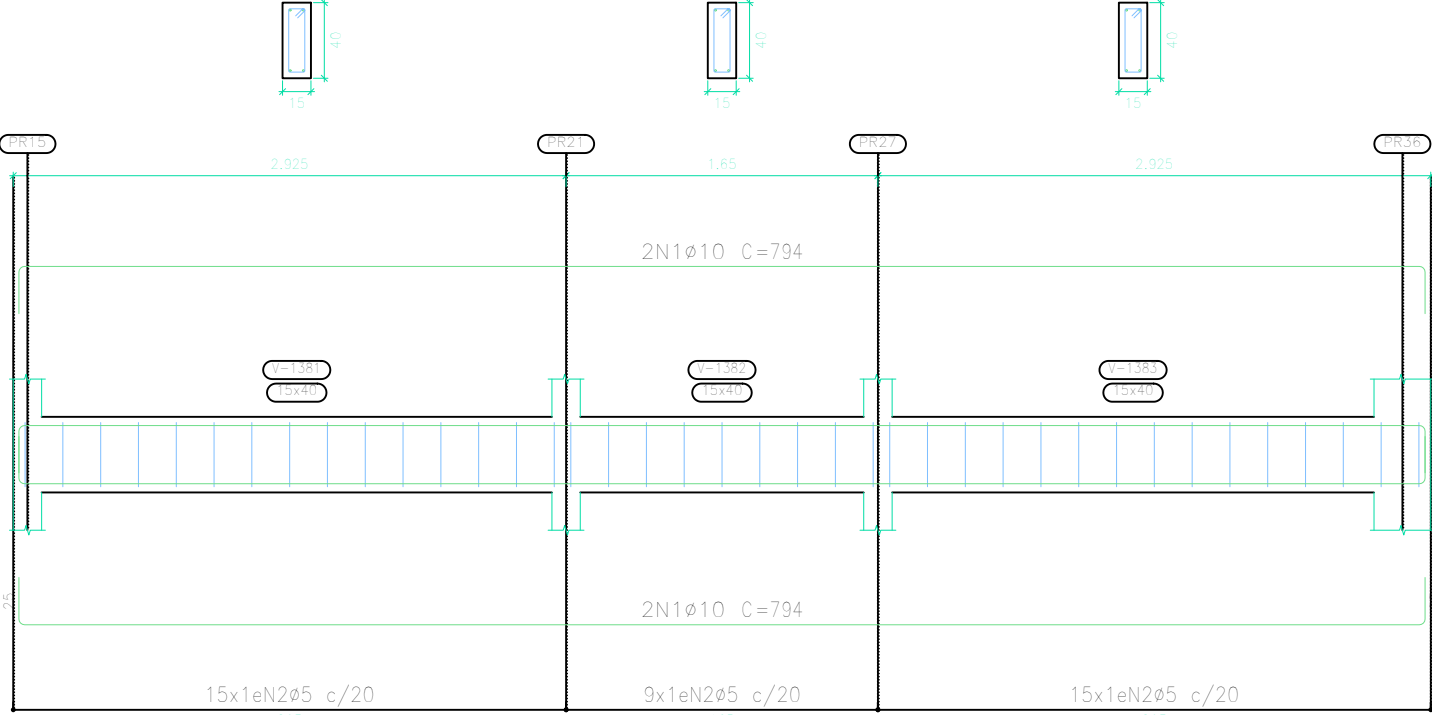
Concreto Vigas: C25, volume total (26,70 m³)

Nível: 0 m
Desenho de vigas
Concreto: C25, em geral
Aço das barras: CA-50
Aço das estribos: CA-50
Escala vigas: 1:40
Escala seções: 1:40
Escala aberturas: 1:40

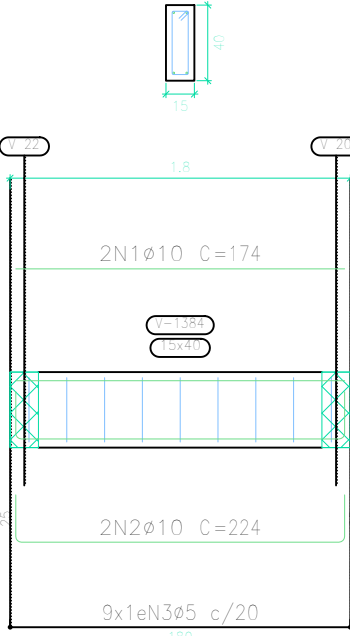
V 138
V 142
V 145
V 146
V 158



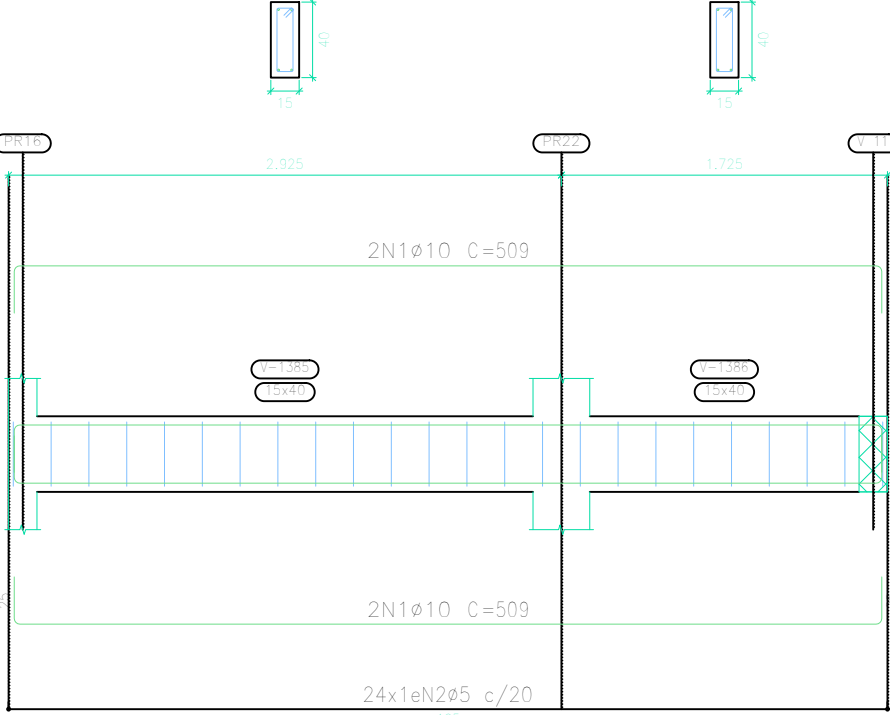
V 139



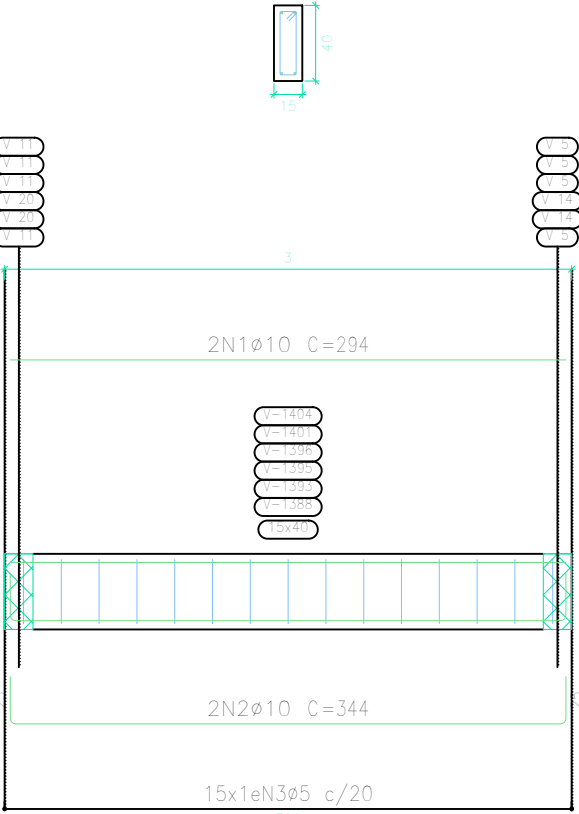
V 140



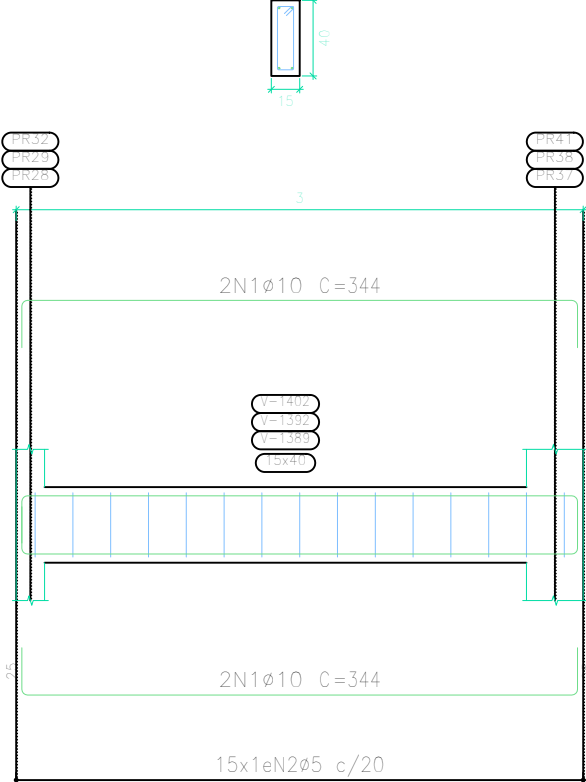
V 141



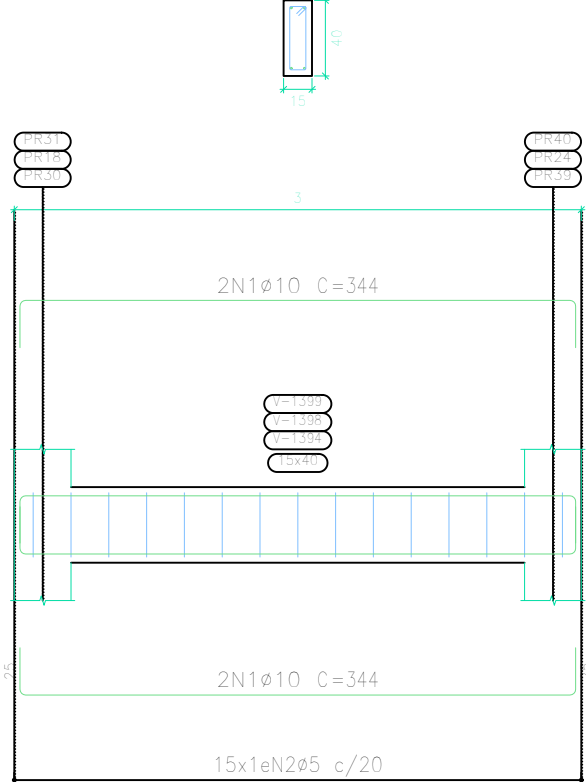
V 143
V 148
V 150
V 151
V 156
V 159



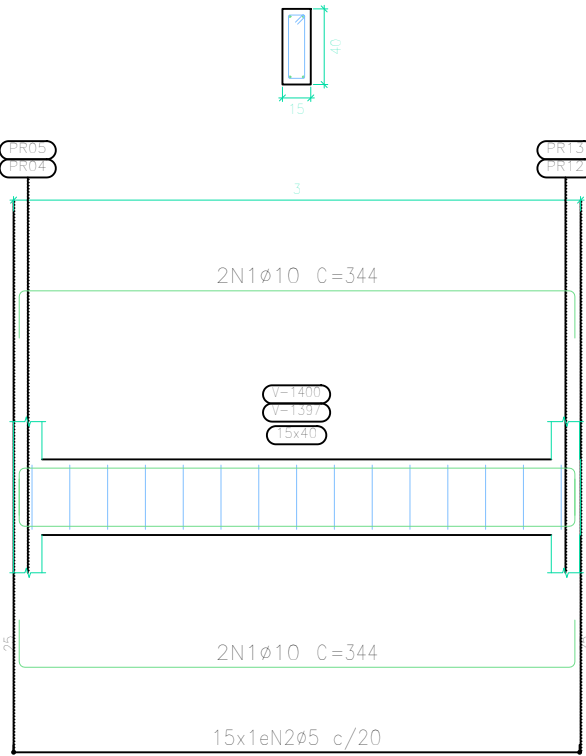
V 144
V 147
V 157



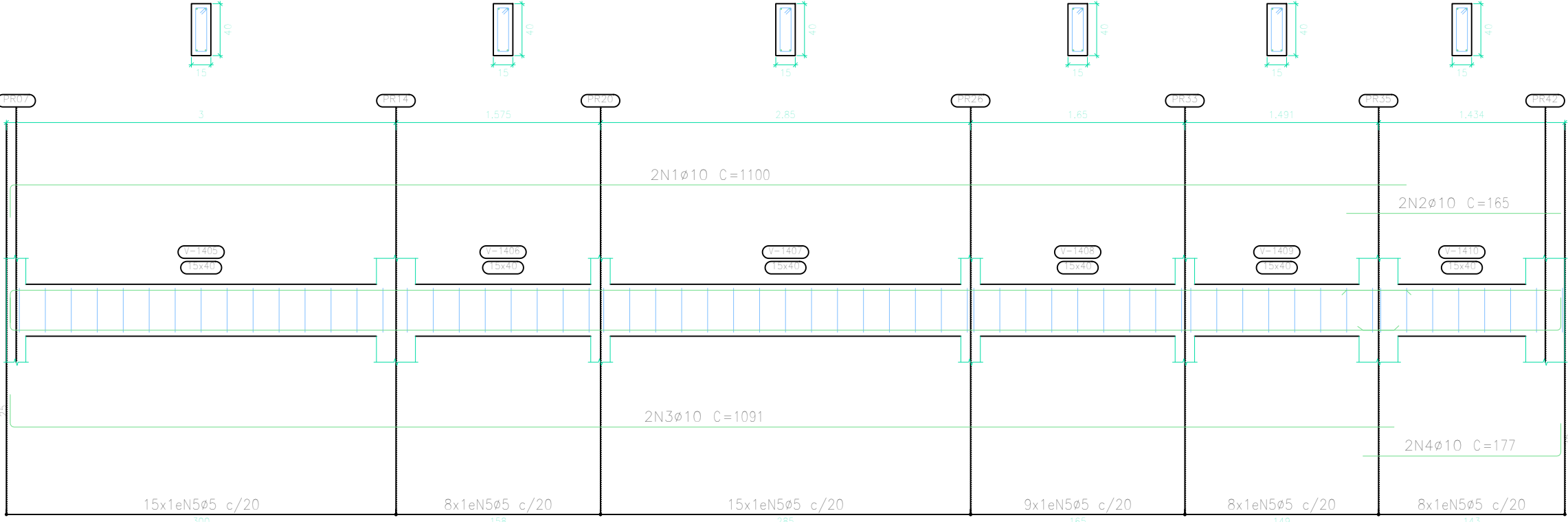
V 149
V 153
V 154



V 152
V 155



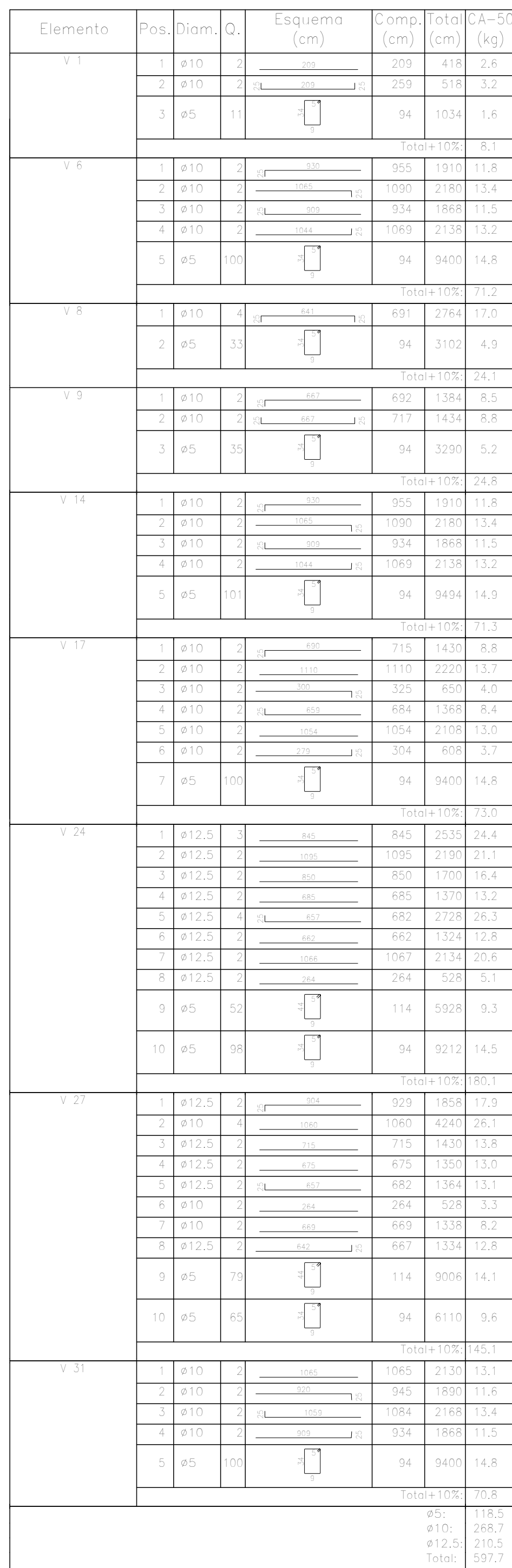
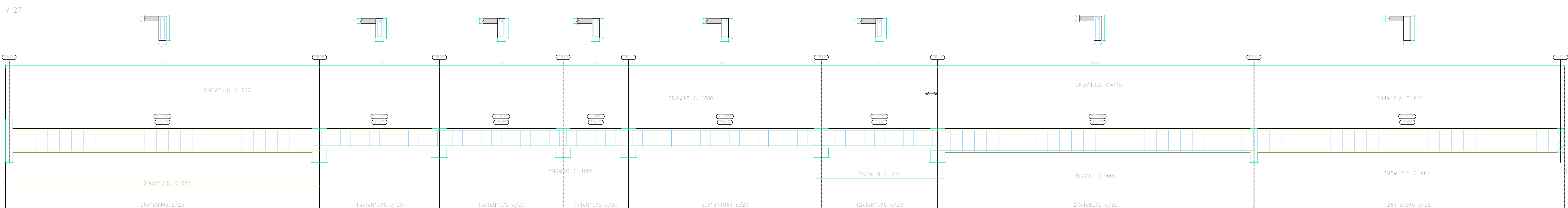
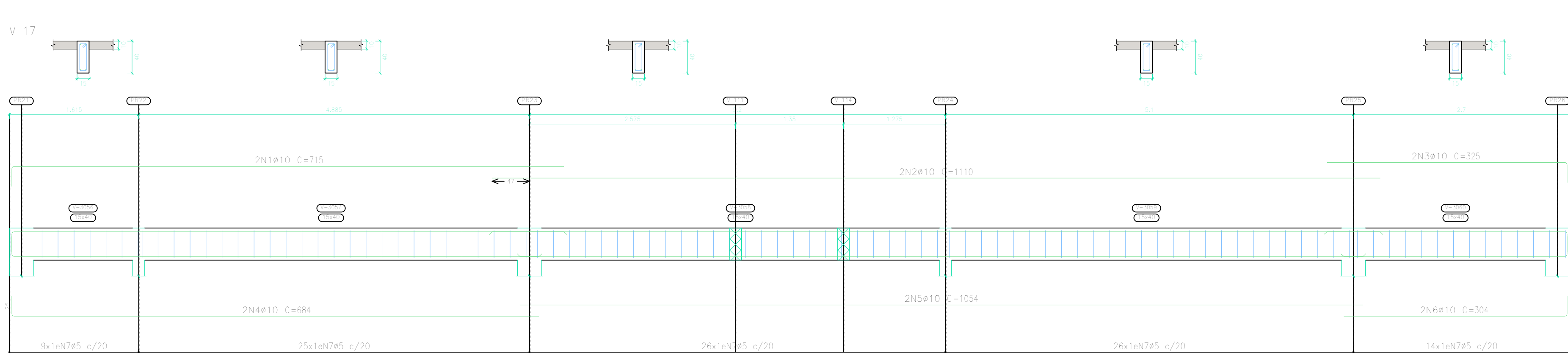
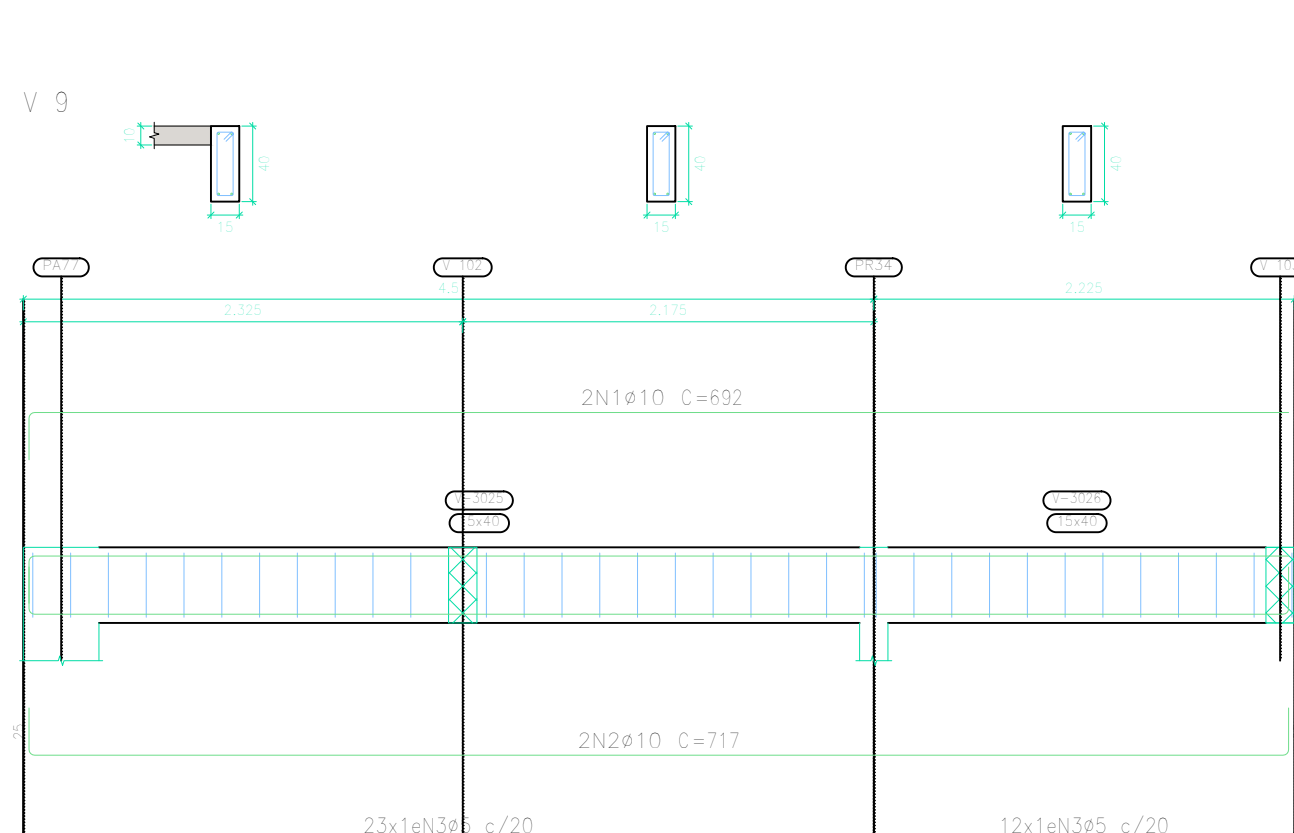
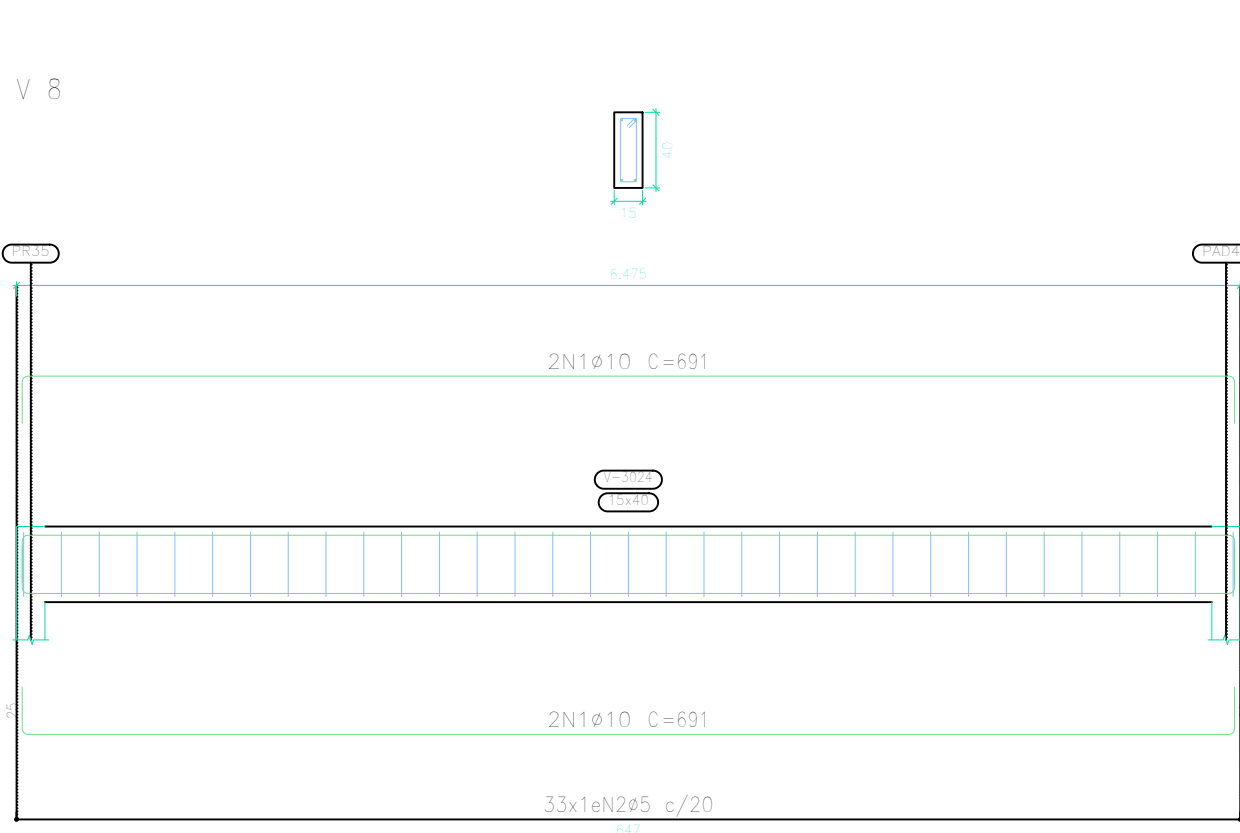
V 160



Resumo Aço Vigas	Comp. total (m)	Peso+10% (kg)	Total
CA-50 ø5 ø10	372,24 326,18	62,24 221,38	283,62

Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)
V 138=v 142=v 145 V 146=v 158	1	ø10	4		344	1376	8,5
	2	ø5	15		94	1410	2,2
	Total+10% (x5)						11,8 59,0
V 139	1	ø10	4		794	3176	19,6
	2	ø5	39		94	3666	5,8
	Total+10% (x5)						27,9
V 140	1	ø10	2		174	348	2,1
	2	ø10	2		224	448	2,8
	3	ø5	9		94	846	1,3
V 141	1	ø10	4		509	2036	12,5
	2	ø5	24		94	2256	3,5
	Total+10% (x5)						17,6
V 143=v 148=v 150 V 151=v 156=v 159	1	ø10	2		294	588	3,6
	2	ø10	2		344	688	4,2
	3	ø5	15		94	1410	2,2
V 144=v 147=v 157	1	ø10	4		344	1376	8,5
	2	ø5	15		94	1410	2,2
	Total+10% (x5)						11,8 59,0
V 149=v 153=v 154	1	ø10	4		344	1376	8,5
	2	ø5	15		94	1410	2,2
	Total+10% (x5)						11,8 59,0
V 152=v 155	1	ø10	4		344	1376	8,5
	2	ø5	15		94	1410	2,2
	Total+10% (x5)						11,8 59,0
V 160	1	ø10	2		1100	2200	13,6
	2	ø10	2		165	330	2,0
	3	ø10	2		1091	2182	13,4
	4	ø10	2		177	354	2,2
	5	ø5	63		94	5922	9,3
Total+10% (x5)							44,6
							ø5: 59,5 ø10: 225,5
Total:							285,0

Concreto Vigas: C25, volume total (26,70 m³)



Resumo Aço Vigas	Comp. total (m)	Peso+10% (kg)	Total
CA-50 Ø5	604,44	102,39	
Ø10	452,56	307,15	
Ø12.5	218,45	231,40	640,94

Nível 3,60 m
Desenho de vigas
Concreto: C25, em geral
Aço das barras: CA-50
Aço dos estribos: CA-50
Escala vigas 1:40
Escala seções 1:40
Escala aberturas 1:40

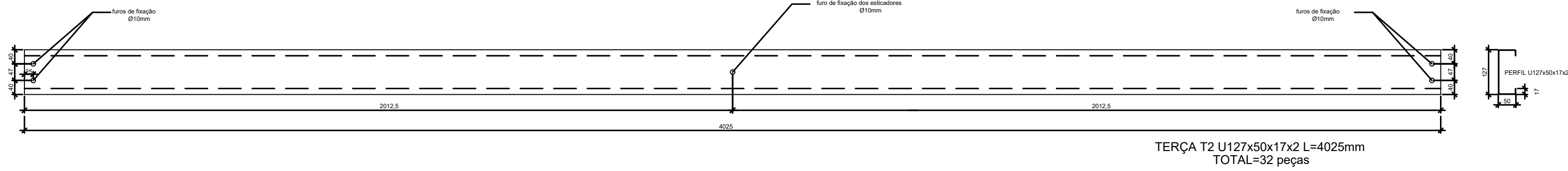
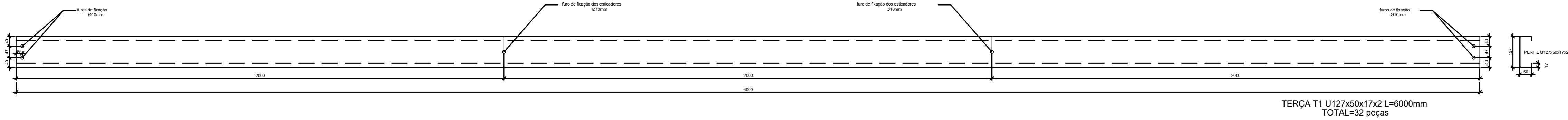


Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Vol. (cm³)	Peso (kg)
V 102	1	Ø10	2		243	610	3.1
	2	Ø10	2		280	680	3.5
	3	Ø5	12		94	1128	1.8
Total+10%							8.2
V 103	1	Ø10	2		563	1910	11.8
	2	Ø10	2		315	630	3.9
	3	Ø10	2		354	1060	1.5
	4	Ø10	2		325	650	4.0
	5	Ø5	43		94	5922	9.3
Total+10%							44.8
V 104	1	Ø10	2		327	654	4.0
	2	Ø10	2		352	704	4.3
	3	Ø5	12		94	1094	2.4
Total+10%							11.8
V 105+V 106	1	Ø10	2		319	638	3.9
	2	Ø10	2		344	698	4.2
	3	Ø5	12		94	1222	1.9
Total+10%							11.0
V 106+V 111+V 112 V 115+V 113+V 122	1	Ø10	2		294	588	3.4
	2	Ø10	2		344	698	4.2
	3	Ø5	12		94	1410	2.2
Total+10%							11.0
V 107+V 120	1	Ø10	2		344	1316	8.5
	2	Ø5	12		94	1410	2.2
	Total+10%						11.8
V 108	1	Ø10	2		319	638	3.9
	2	Ø10	2		344	698	4.2
	3	Ø5	12		94	1316	2.1
Total+10%							11.2
V 110	1	Ø10	2		319	638	3.9
	2	Ø10	2		344	698	4.2
	3	Ø5	12		94	1410	2.2
Total+10%							11.3
V 112+V 117	1	Ø10	2		319	638	3.9
	2	Ø10	2		344	698	4.2
	3	Ø5	12		94	1410	2.2
Total+10%							11.3
V 113	1	Ø10	2		319	638	3.9
	2	Ø10	2		344	698	4.2
	3	Ø5	12		94	1222	1.9
Total+10%							11.0
V 116	1	Ø10	2		319	638	3.9
	2	Ø10	2		344	698	4.2
	3	Ø5	12		94	1410	2.2
Total+10%							11.8
V 118	1	Ø10	2		319	638	3.9
	2	Ø10	2		344	698	4.2
	3	Ø5	12		94	1410	2.2
Total+10%							11.8
V 121	1	Ø10	2		344	1316	8.5
	2	Ø5	12		94	1410	2.2
	Total+10%						11.8
V 123	1	Ø10	2		1100	2200	13.4
	2	Ø10	2		160	320	2.0
	3	Ø10	2		1091	2182	13.4
	4	Ø10	2		177	354	2.2
	5	Ø5	43		94	5922	9.3
Total+10%							44.8
Ø5:							61.40
Ø10:							222.9
Total:							283.3

Concreto Vigas: C25, volume total (26,70 m³)

Resumo	Agg Vigas	Comp. tot. (m)	Peso+10% (kg)	Total
CA-50	Ø5	391,98	66,40	312,84
	Ø10	363,10	248,44	

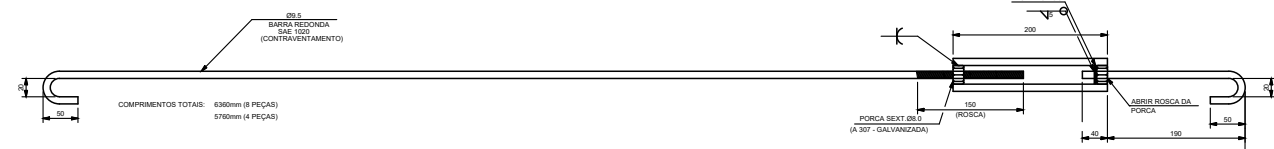
Nível 3,00 m
Desenho de vigas
Concreto: C25, em geral
Agg dos barras: CA-50
Agg dos estribos: CA-50
Escala vigas 1:40
Escala seções 1:40
Escala aberturas 1:40



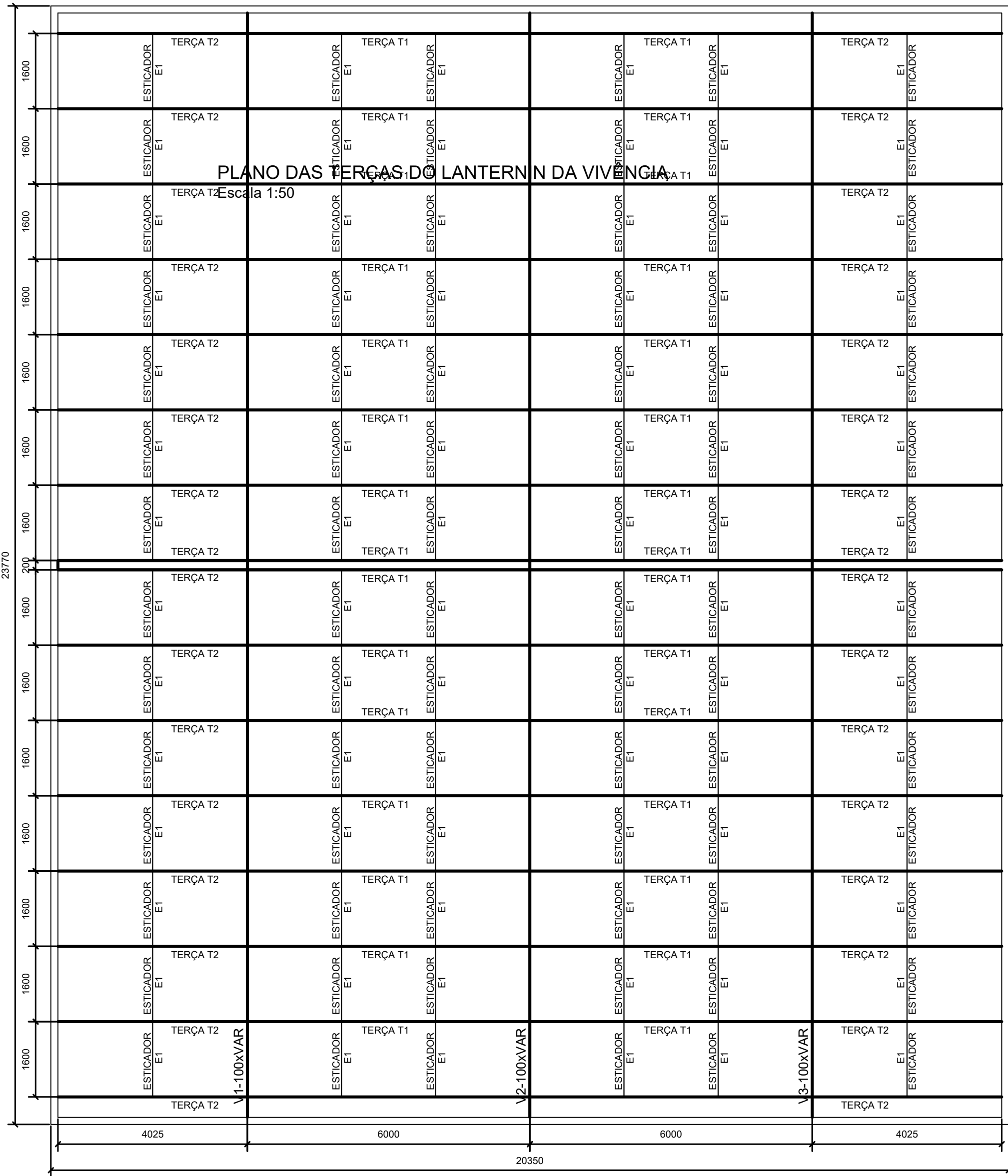
DETALHE DAS TERÇAS
1:5



ESTICADORES
1:5



CONTRAVENTAMENTO
1:5



PLANO DAS TERÇAS DA COBERTA DOS LABORATÓRIOS ESPECIAIS
Escala 1:50

NOTAS

- 1- PARA TODAS AS PEÇAS DE AÇO DEVERÁ SER UTILIZADO BASE ("PRIMER") CROMATO DE ZINCO
- 2- VERIFICAR A UTILIZAÇÃO ADEQUADA DOS ELETRODOS PARA O TIPO DE AÇO UTILIZADO
- 3- TODOS OS PARAFUSOS DEVERÃO SER DO TIPO ASTM A-307
- 4- TODAS AS LIGAÇÕES COM PARAFUSOS DEVERÃO SER ACOMPANHADAS DE ARRUELAS NAS DUAS EXTREMIDADES



INSTITUTO FEDERAL
Sertão Pernambucano

INSTITUTO FEDERAL DE
EDUCAÇÃO, CIÊNCIA E TECNOLOGIA
SERTÃO PERNAMBUCANO
DIRETORIA DE ENGENHARIA
E INFRAESTRUTURA
Rua Aristarco Lopes, 240 | Centro
Petrópolis/PE | CEP: 56.302-100

NOME:
**PROJETO DE ESTRUTURA METÁLICA DO
CAMPUS ÁGUAS BELAS DO IF Sertão PE**

ENDEREÇO:
Rodovia PE-300, S/N, CEP: 55340-000
Águas Belas/PE

DESCRIÇÃO:
PLANTA BAIXA E DETALHES (LAB. ESPECIAIS)

ESCALA:
INDICADA

DATA:
ABRIL/2025

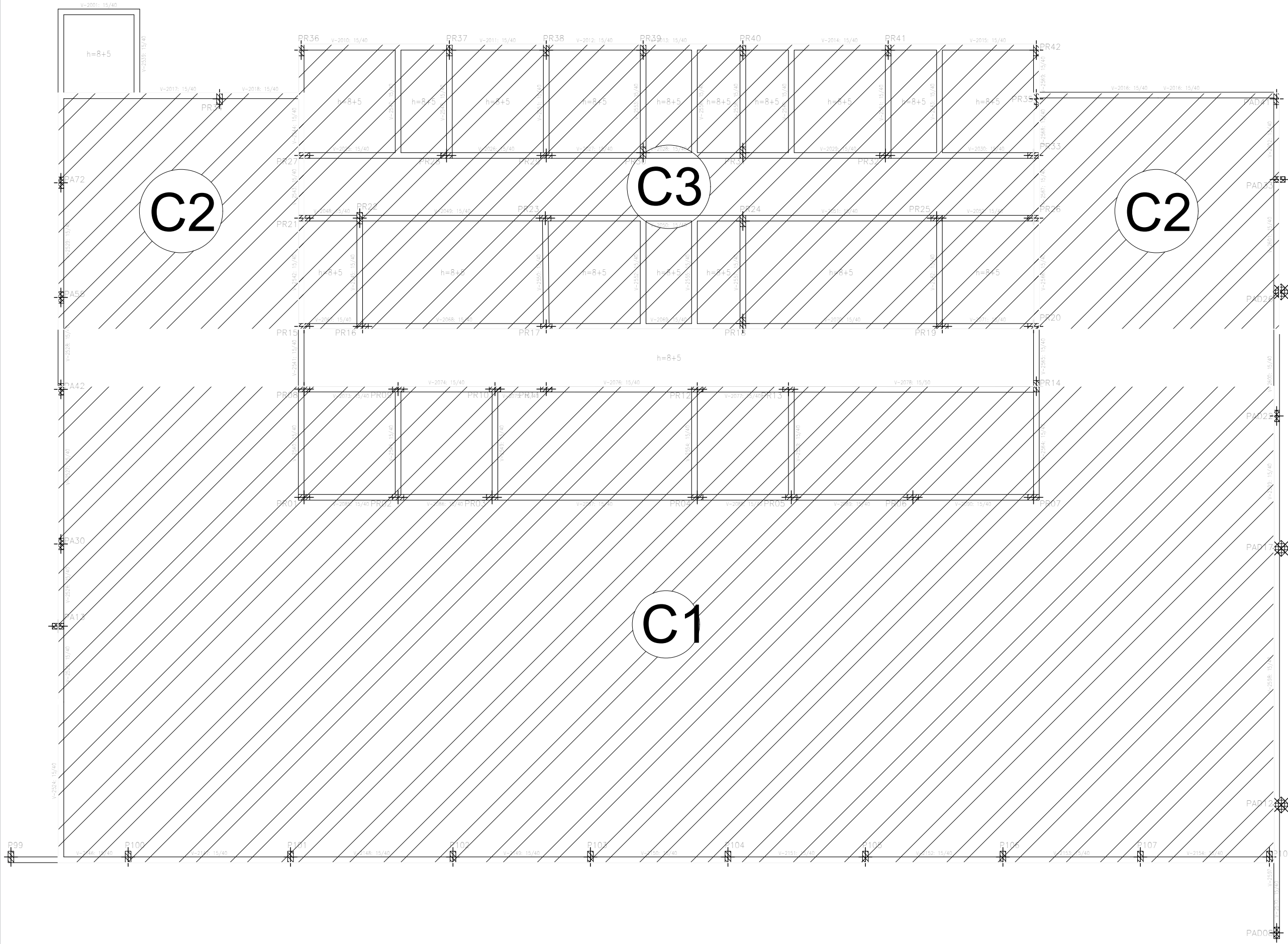
ASSINATURACARIMBO - DIREÇÃO GERAL

ASSINATURACARIMBO - RESPONSÁVEL TÉCNICO:
Ebson Alves da Silva - CREA PE 055750

BRANCHA:
01/01

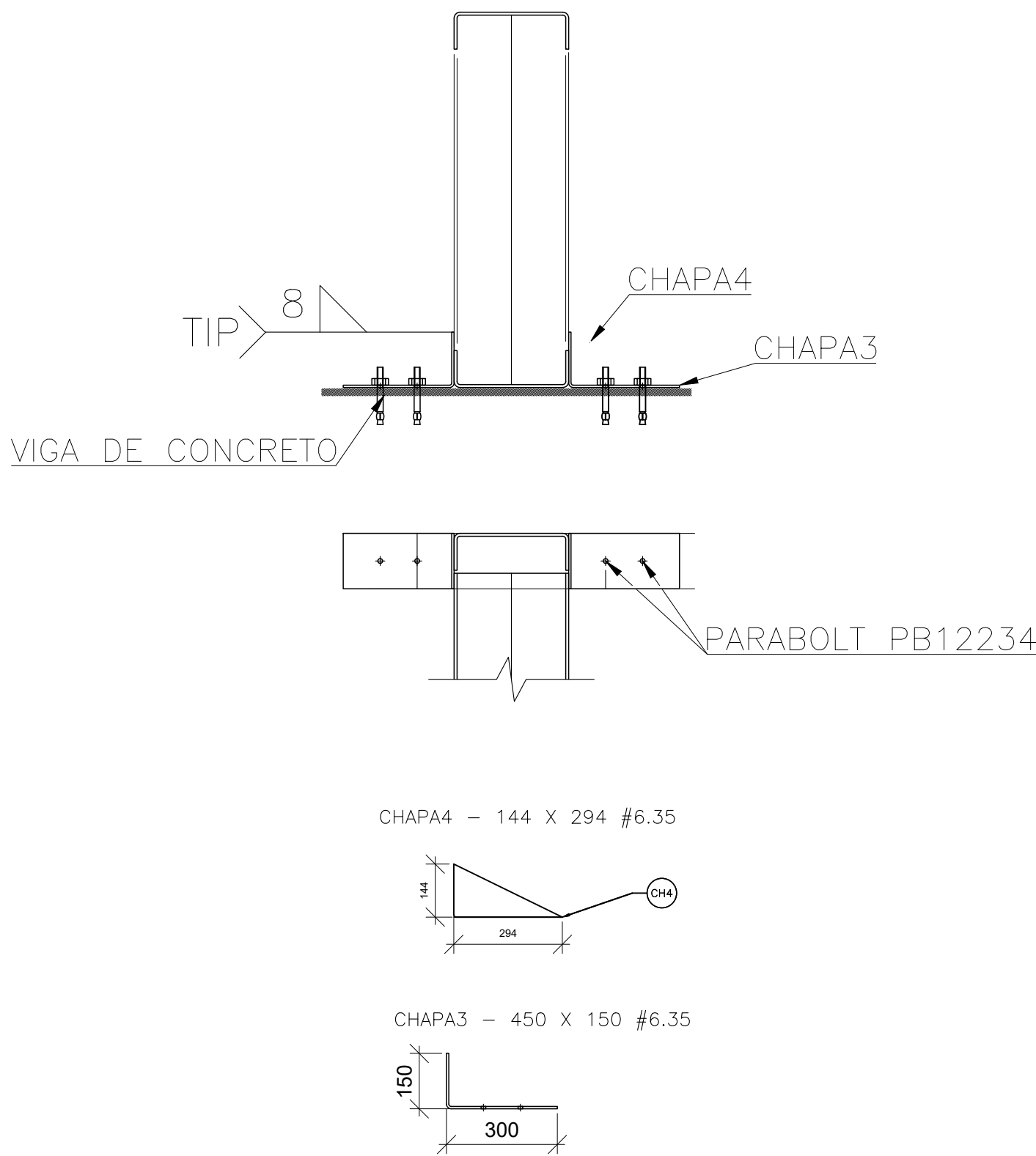
PLANTA DE LOCALIZAÇÃO

ESC: 1/ 100



DETALHE SUPORTE TRELIÇAS (32x)

ESC: 1/ 15



Lista de Material - Projeto								
LINHA	ITEM	QUANTIDADE	PERFIL	DIMENSÕES	COMPRIMENTO	PESO UNITARIO	PESO TOTAL	ÁREA DE PINTURA
1		1		CHUMBADEIROS				
2	CH3	48	#	450 x 150 #6.35	150	3.36	161.51	6.85
3	CH4	96	#	6.35x143.65	294	2.10	201.86	8.63
PESO TOTAL							363.37 kgf	
ÁREA DE PINTURA								15.48 m²

NOTAS:

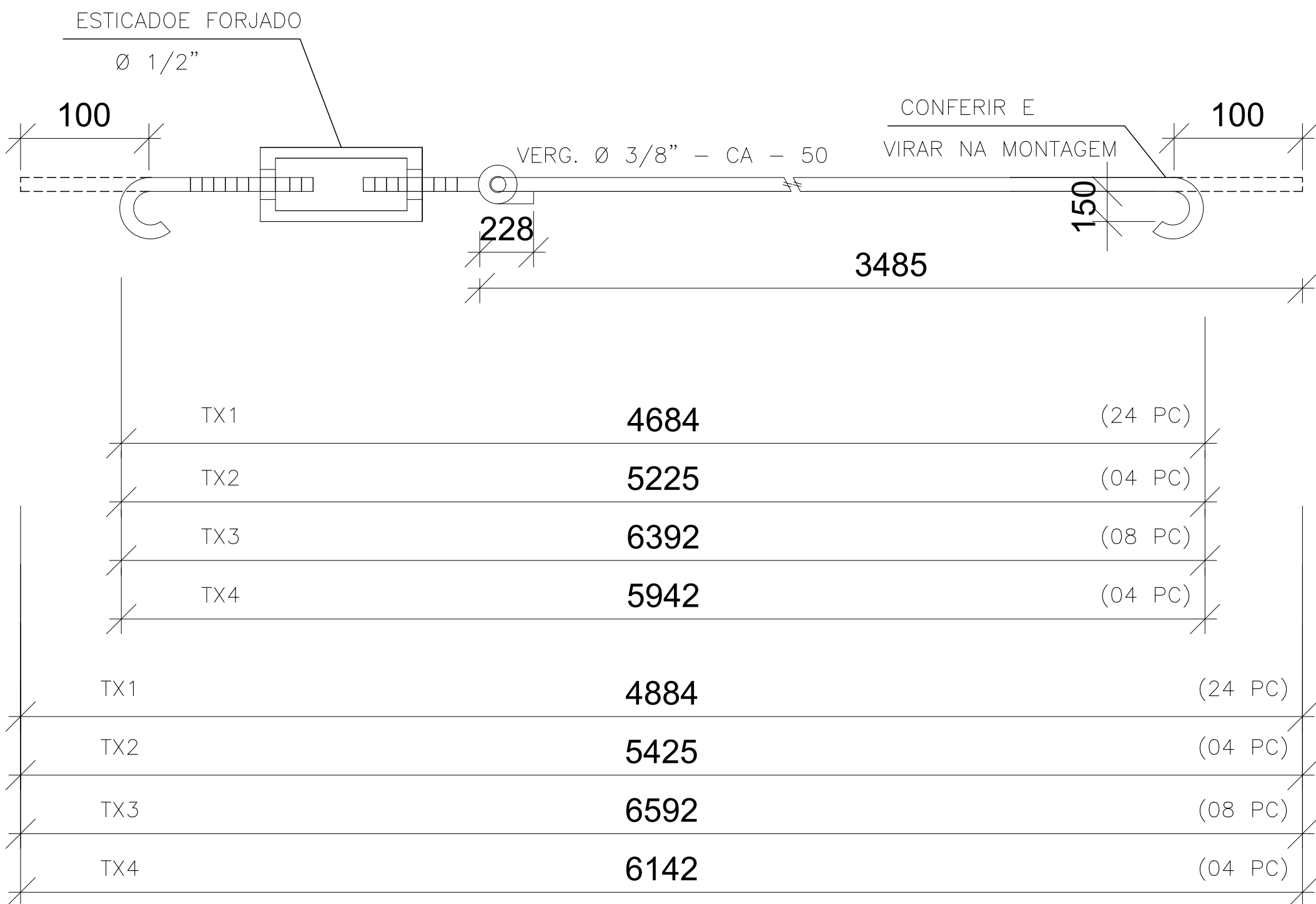
- 1- MEDIDAS EM MILÍMETROS
- 2- PEÇAS VERIFICADAS NA ANÁLISE GLOBAL E LOCAL SEGUNDO A NBR 8800
- 3- USAR SOLDA DE ELETRODOS REVESTIDOS AWS E-6013 OU SIMILARES COM TENSÃO DE RUPTURA ENTRE 480-520 MPA
- 4- USAR PARAFUSOS E PORCAS SAE 1020
- 4- USAR PARABOLTS ZINCADOS DE BAIXO TEOR DE CARBONO
- 4- CONFERIR MEDIDAS IN LOCO
- 5- EM CASO DE DUVIDA CONSULTAR O ENGENHEIRO CALCULISTA.

PREPARO DA SUPERFÍCIE METÁLICA

- 1- LIMPEZA MECÂNICA NORMA SIS - S13
- 2- APLICAR DUAS DEMÃOS DE TINTA EPOXI MASTIC CURADO COM POLIAMIDA SENDO A 1ª DEMÃO PIGMENTADA COM ALUMÍNIO E A 2ª DEMÃO NA COR DO ACABAMENTO FINAL (TIPO OXIBAR E/OU SUMASTIC), COM ESPESSURA DA PELÍCULA SECA TOTAL APLICADA DE 240MC.

TIRANTE — TX

ESC: 1/ 20



TX1	4684	(24 PC)
TX2	5225	(04 PC)
TX3	6392	(08 PC)
TX4	5942	(04 PC)
TX1	4884	(24 PC)
TX2	5425	(04 PC)
TX3	6592	(08 PC)
TX4	6142	(04 PC)

Lista de Material - Projeto								
LINHA	ITEM	QUANTIDADE	PERFIL	DIMENSÕES	COMPRIMENTO	PESO UNITARIO	PESO TOTAL	ÁREA DE PINTURA
1		1		TIRANTES				
2	TX1	24	O		12.70	4884	4.86	116.56
3	TX2	4	O		12.70	5425	5.39	21.58
4	TX3	8	O		12.70	6592	6.56	52.44
5	TX4	4	O		12.70	6142	6.11	24.43
PESO TOTAL							215.01 kgf	
ÁREA DE PINTURA								8.64 m²



INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA DO SERTÃO PERNAMBUCANO
DIRETORIA DE ENGENHARIA E INFRAESTRUTURA
Rua Aristarco Lopes, 240 | Centro
Petrolina/PE | CEP: 56.302-100

PROJETO DE ESTRUTURA METÁLICA DO CAMPUS ÁGUAS BELAS DO IFSertãoPE

ENDEREÇO: Rodovia PE-300, S/N, CEP: 55340-000 Águas Belas/PE

DESCRIÇÃO: LOCALIZAÇÃO E FIXAÇÃO (REFEITÓRIO)

ESCALA: INDICADA

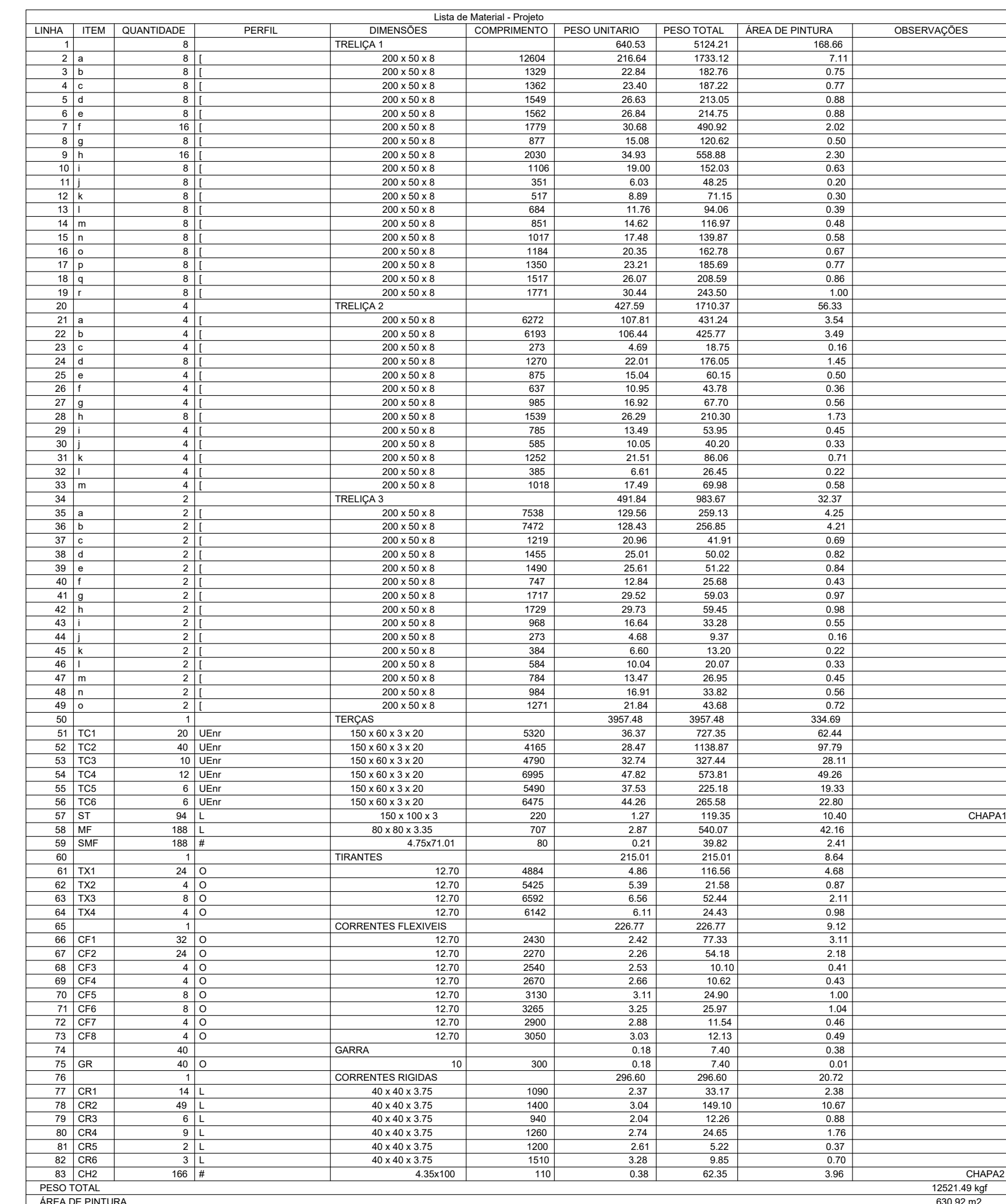
DATA: ABRIL/2025

ASSINATURACARRIMBO - DIREÇÃO GERAL

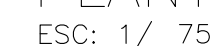
ASSINATURACARRIMBO - RESPONSÁVEL TÉCNICO: Ebson Alves da Silva - CREA PE 055750

FINANÇAS: 01/07

ESC: 1 / 75

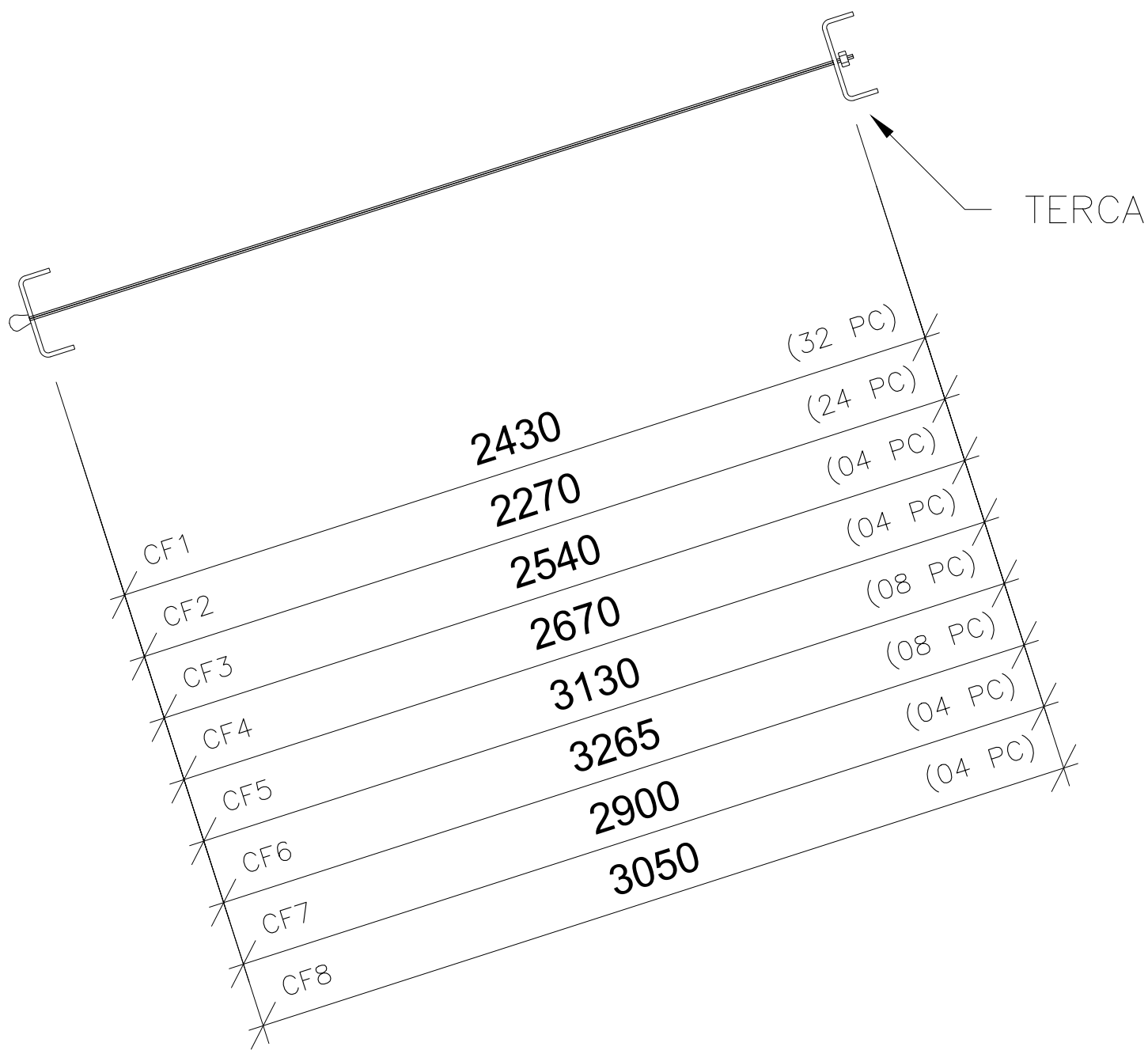


ESC: 1 / 75



CORRENTE FLEXIVEL– CF

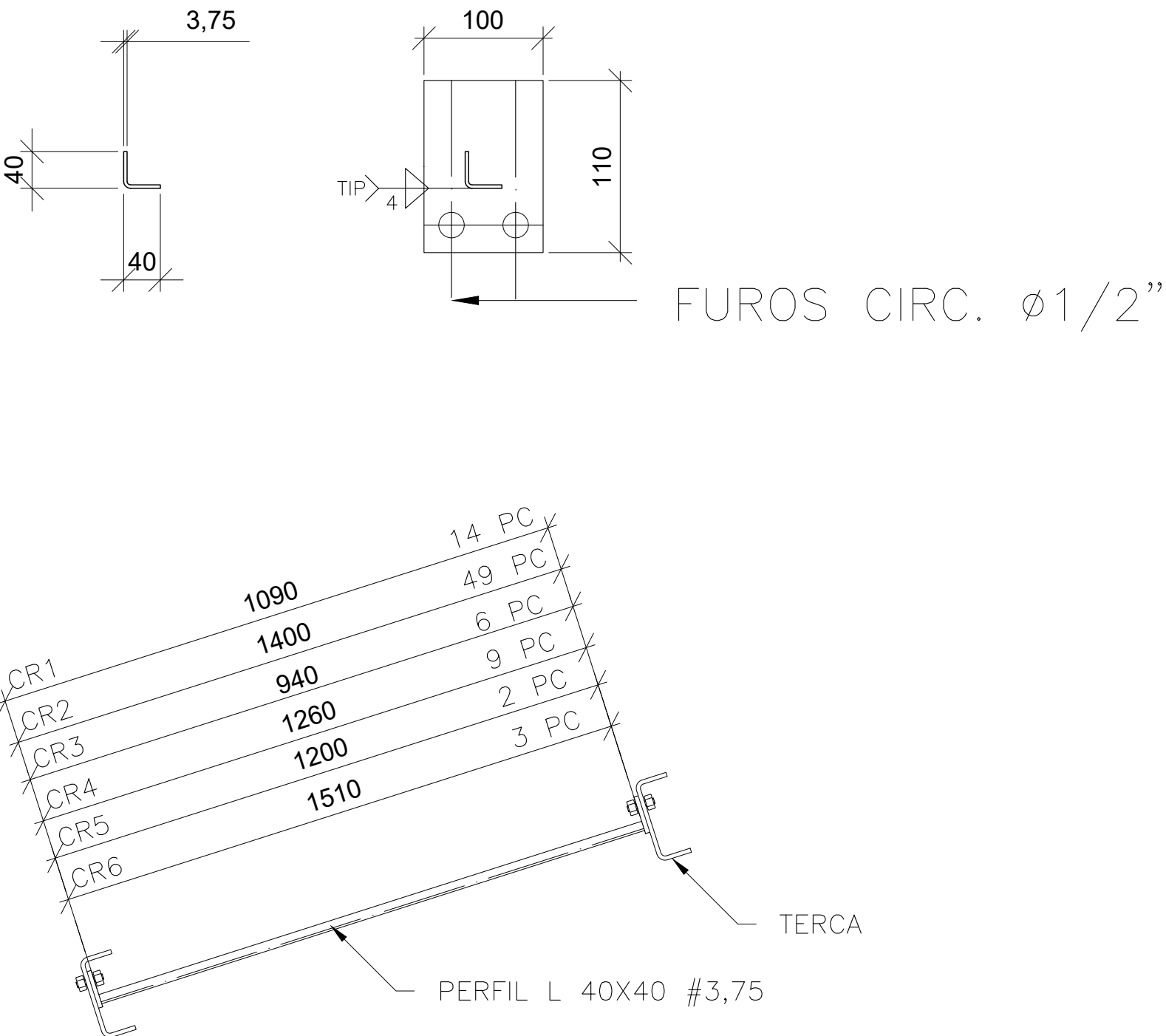
ESC: 1/ 20



CR – CORRENTES RIGIDAS (83x)

ESC: 1/ 15

CHAPA2 – 110 X 100 #4,35 (166x)

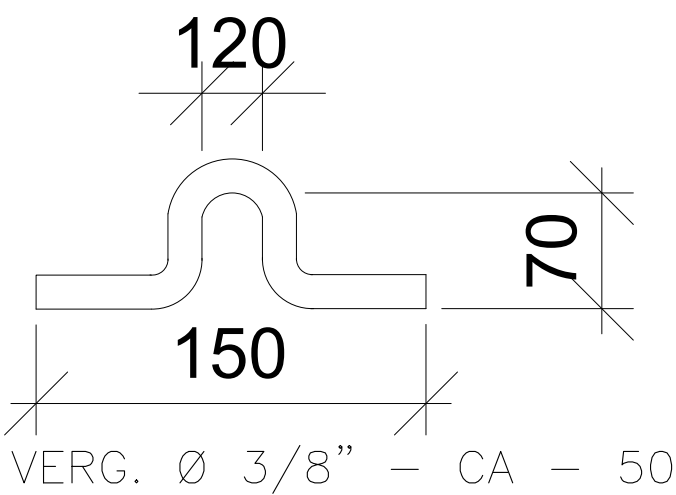


Lista de Material - Projeto								
LINHA	ITEM	QUANTIDADE	PERFIL	DIMENSÕES	COMPRIMENTO	PESO UNITARIO	PESO TOTAL	ÁREA DE PINTURA
1	1	1		CORRENTES FLEXIVEIS		226.77	226.77	9.12
2	CF1	32 O			12.70	2430	2.42	77.53
3	CF2	24 O			12.70	2270	2.26	54.18
4	CF3	4 O			12.70	2540	2.53	10.10
5	CF4	4 O			12.70	2670	2.66	10.62
6	CF5	8 O			12.70	3130	3.11	24.90
7	CF6	8 O			12.70	3265	3.25	25.97
8	CF7	4 O			12.70	2900	2.98	11.54
9	CF8	4 O			12.70	3050	3.03	12.13
PESO TOTAL							226.77 kgf	
ÁREA DE PINTURA							9.12 m2	

Lista de Material - Projeto										
LINHA	ITEM	QUANTIDADE	PERFIL	DIMENSÕES		COMPRIMENTO	PESO UNITARIO	PESO TOTAL	ÁREA DE PINTURA	OBSERVAÇÕES
1		1		CORRENTES RIGIDAS			296.60	296.60	20.72	
2	CR1	14 L		40 x 40 x 3.75		1090	2.37	33.17	2.38	
3	CR2	49 L		40 x 40 x 3.75		1400	3.04	149.10	10.67	
4	CR3	6 L		40 x 40 x 3.75		940	2.04	12.26	0.88	
5	CR4	9 L		40 x 40 x 3.75		1260	2.74	24.65	1.76	
6	CR5	2 L		40 x 40 x 3.75		1200	2.61	5.22	0.37	
7	CR6	3 L		40 x 40 x 3.75		1510	3.28	9.85	0.70	
8	CH2	166 #		4.35x100		110	0.38	62.35	3.96	CHAPA2
PESO TOTAL							296.60 kgf			
ÁREA DE PINTURA							20.72 m2			

GARRA – GR (40x)

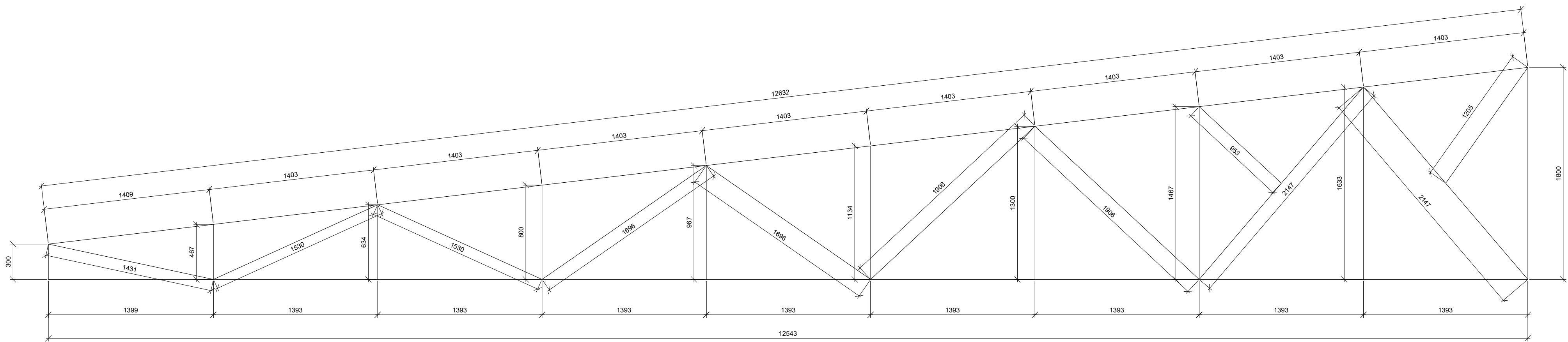
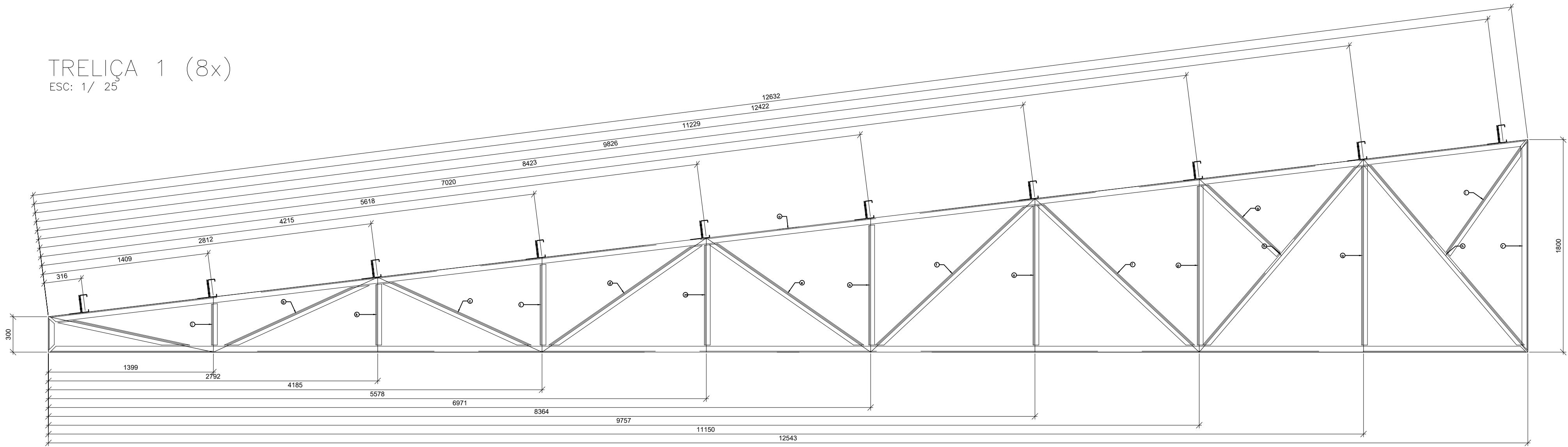
ESC: 1/ 20



Lista de Material - Projeto								
LINHA	ITEM	QUANTIDADE	PERFIL	DIMENSÕES	COMPRIMENTO	PESO UNITARIO	PESO TOTAL	ÁREA DE PINTURA
1	1	40		GARRA		0.18	7.40	0.38
2	GR	40 O			10	0.18	7.40	0.01
PESO TOTAL							7.40 kgf	
ÁREA DE PINTURA							0.38 m2	

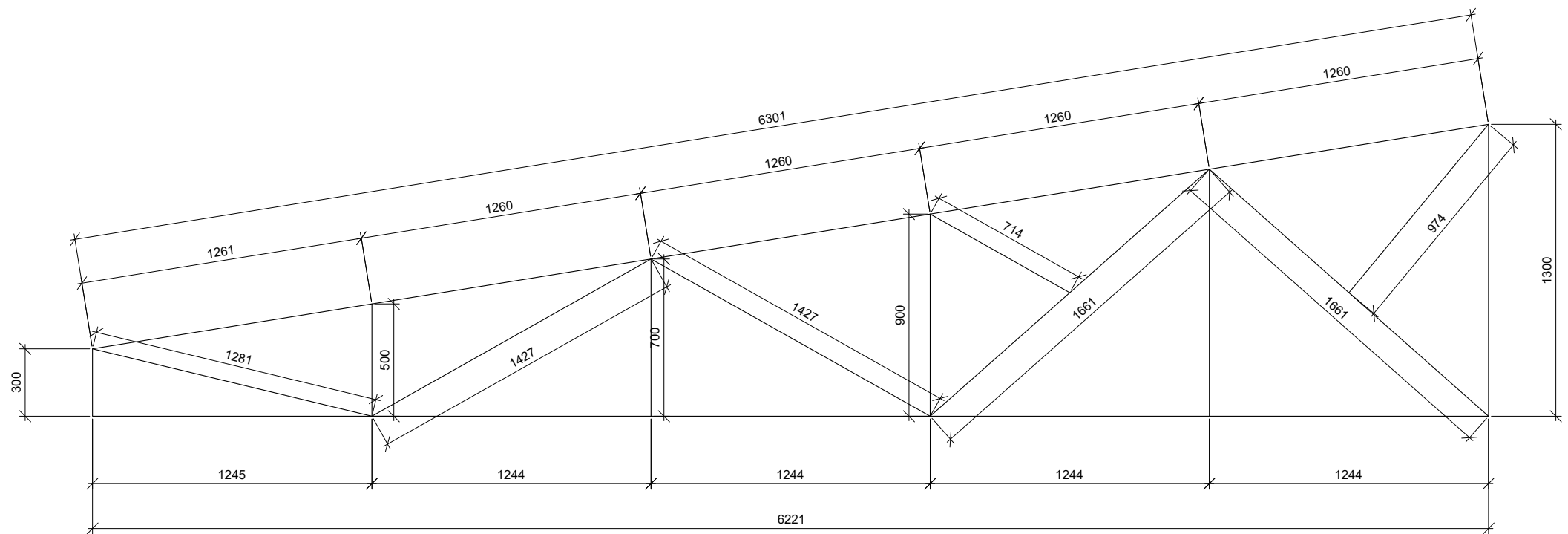
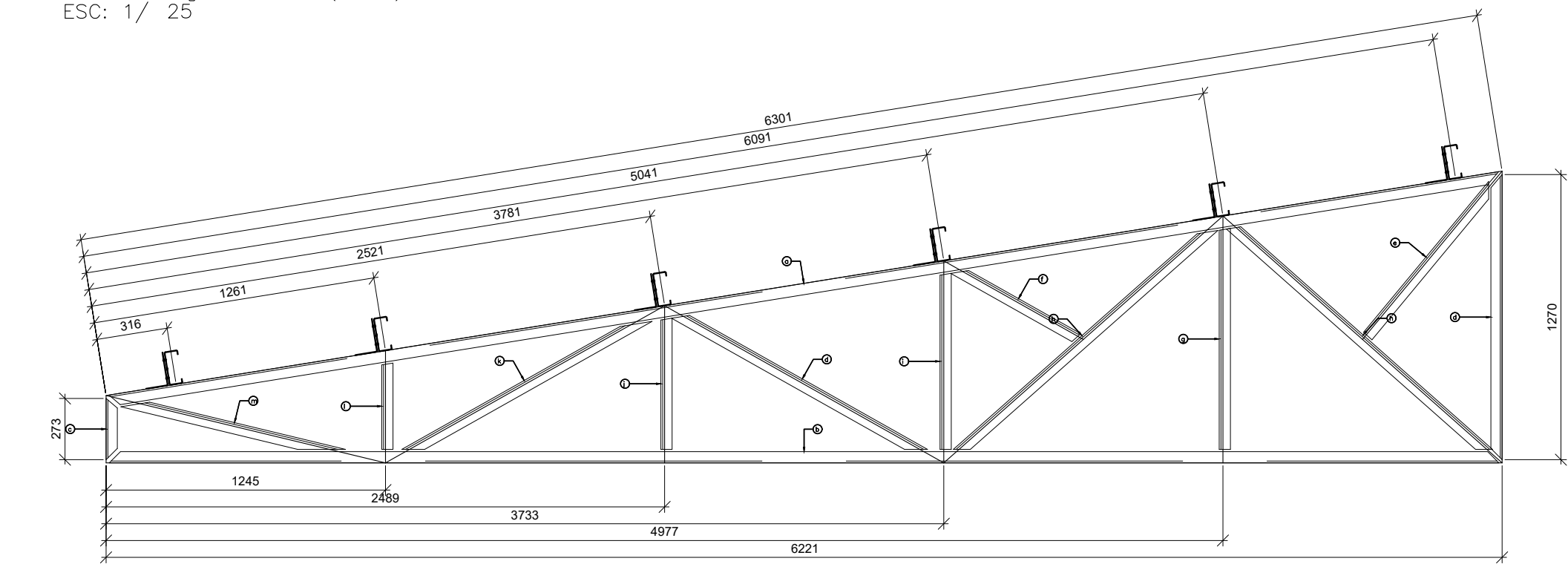
TRELIÇA 1 (8x)

ESC: 1/ 25

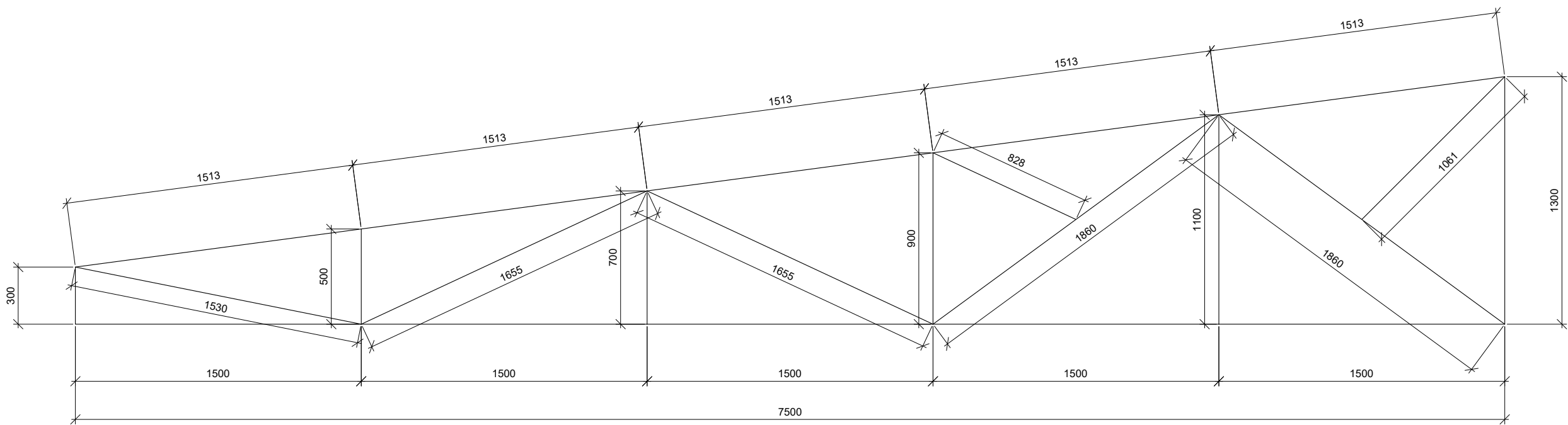
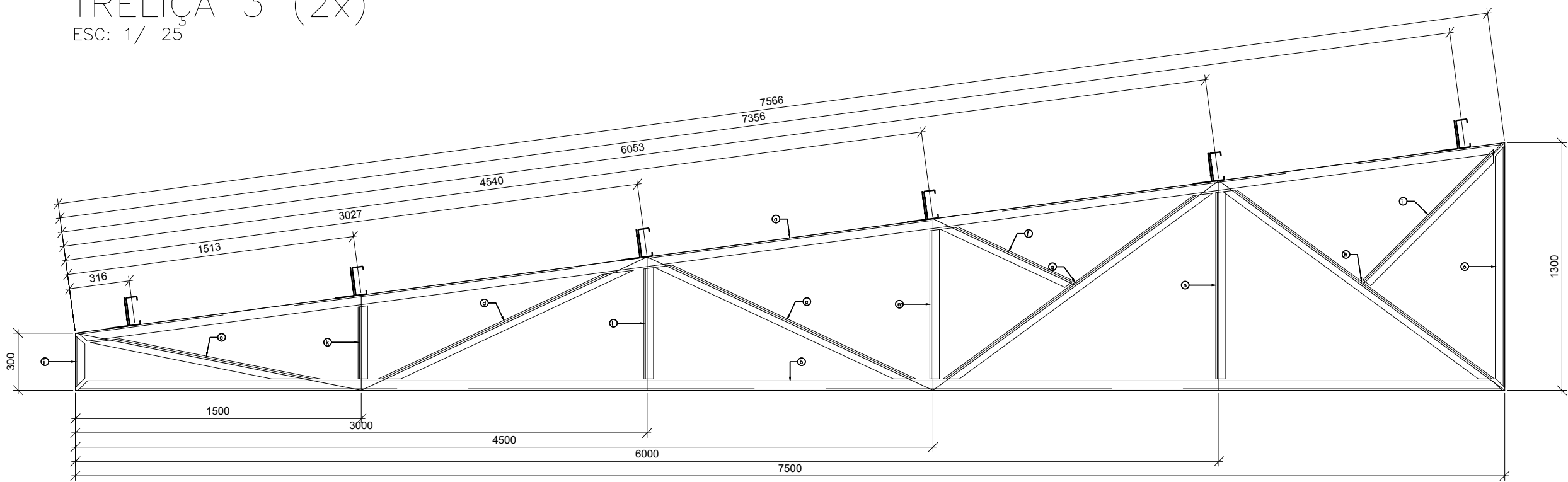


Lista de Material - Projeto								
LINHA	ITEM	QUANTIDADE	PERFIL	DIMENSÕES	COMPRIMENTO	PESO UNITARIO	PESO TOTAL	ÁREA DE PINTURA
1		8		TRELIÇA 1		640.53	5124.21	168.66
2	a	8		200 x 50 x 8	12604	216.64	1733.12	7.11
3	b	8		200 x 50 x 8	1329	22.84	182.76	0.75
4	c	8		200 x 50 x 8	1362	23.40	187.22	0.77
5	d	8		200 x 50 x 8	1549	26.63	213.05	0.88
6	e	8		200 x 50 x 8	1562	26.84	214.75	0.88
7	f	16		200 x 50 x 8	1779	30.68	490.92	2.02
8	g	8		200 x 50 x 8	677	15.08	120.62	0.50
9	h	16		200 x 50 x 8	2030	34.93	558.88	2.30
10	i	8		200 x 50 x 8	1106	19.00	152.03	0.63
11	j	8		200 x 50 x 8	351	6.03	48.25	0.20
12	k	8		200 x 50 x 8	517	8.89	71.15	0.30
13	l	8		200 x 50 x 8	684	11.76	94.06	0.39
14	m	8		200 x 50 x 8	851	14.62	116.97	0.48
15	n	8		200 x 50 x 8	1017	17.46	139.67	0.58
16	o	8		200 x 50 x 8	1184	20.35	162.78	0.67
17	p	8		200 x 50 x 8	1350	23.21	185.69	0.77
18	q	8		200 x 50 x 8	1517	26.07	208.59	0.86
19	r	8		200 x 50 x 8	1771	30.44	243.50	1.00
PESO TOTAL								5124.21 kgf
ÁREA DE PINTURA								168.66 m2

TRELIÇA 2 (4x)
ESC: 1/ 25



TRELIÇA 3 (2x)
ESC: 1/ 25

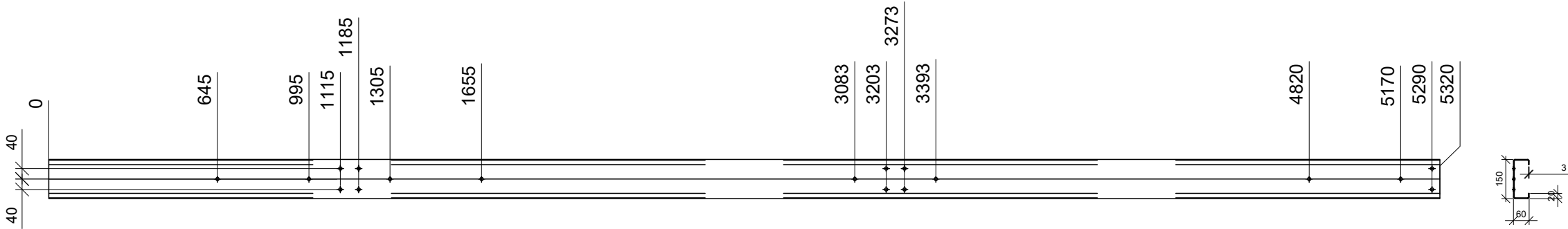


Lista de Material - Projeto								
LINHA	ITEM	QUANTIDADE	PERFIL	DIMENSÕES	COMPRIMENTO	PESO UNITARIO	PESO TOTAL	ÁREA DE PINTURA
1		4		TRELIÇA 2		427.59	1710.37	56.33
2 a		4	[	200 x 50 x 8	6272	107.81	431.34	3.54
3 b		4	[	200 x 50 x 8	6193	106.44	425.77	3.49
4 c		4	[	200 x 50 x 8	273	4.69	18.75	0.16
5 d		8	[	200 x 50 x 8	1270	22.01	176.05	1.45
6 e		4	[	200 x 50 x 8	875	15.04	60.15	0.50
7 f		4	[	200 x 50 x 8	637	10.95	43.78	0.36
8 g		4	[	200 x 50 x 8	985	16.92	67.70	0.56
9 h		8	[	200 x 50 x 8	1539	26.29	210.30	1.73
10 i		4	[	200 x 50 x 8	785	13.49	53.95	0.45
11 j		4	[	200 x 50 x 8	585	10.05	40.20	0.33
12 k		4	[	200 x 50 x 8	1252	21.51	86.06	0.71
13 l		4	[	200 x 50 x 8	385	6.61	26.45	0.22
14 m		4	[	200 x 50 x 8	1018	17.49	69.98	0.58
PESO TOTAL						1710.37 kgf		
ÁREA DE PINTURA						56.33 m2		

Lista de Material - Projeto									
LINHA	ITEM	QUANTIDADE	PERFIL	DIMENSÕES	COMPRIMENTO	PESO UNITARIO	PESO TOTAL	ÁREA DE PINTURA	OBSERVAÇÕES
1		2		TRELIÇA 3		491.84	983.67	32.37	
2 a		2	[	200 x 50 x 8	7538	129.56	259.13	4.25	
3 b		2	[	200 x 50 x 8	7472	128.43	256.85	4.21	
4 c		2	[	200 x 50 x 8	1219	20.96	41.91	0.69	
5 d		2	[	200 x 50 x 8	1455	25.01	50.02	0.82	
6 e		2	[	200 x 50 x 8	1490	25.61	51.22	0.84	
7 f		2	[	200 x 50 x 8	747	12.84	25.68	0.43	
8 g		2	[	200 x 50 x 8	1717	28.52	59.03	0.97	
9 h		2	[	200 x 50 x 8	1729	29.73	59.45	0.98	
10 i		2	[	200 x 50 x 8	968	16.64	33.28	0.55	
11 j		2	[	200 x 50 x 8	273	4.68	9.37	0.16	
12 k		2	[	200 x 50 x 8	394	6.80	13.20	0.22	
13 l		2	[	200 x 50 x 8	584	10.04	20.07	0.33	
14 m		2	[	200 x 50 x 8	784	13.47	26.95	0.45	
15 n		2	[	200 x 50 x 8	984	16.91	33.82	0.56	
16 o		2	[	200 x 50 x 8	1271	21.84	43.68	0.72	
PESO TOTAL						983.67 kgf			
ÁREA DE PINTURA						32.37 m2			

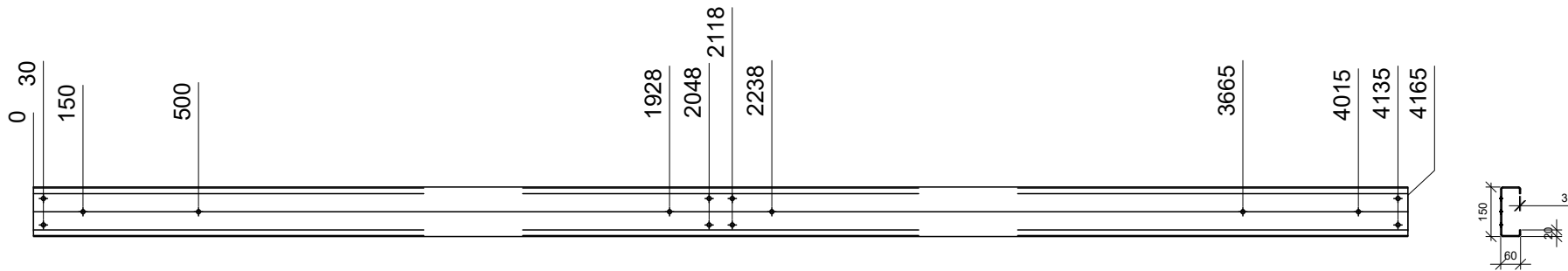
TERÇA – TC1 (20x)

ESC: 1/320



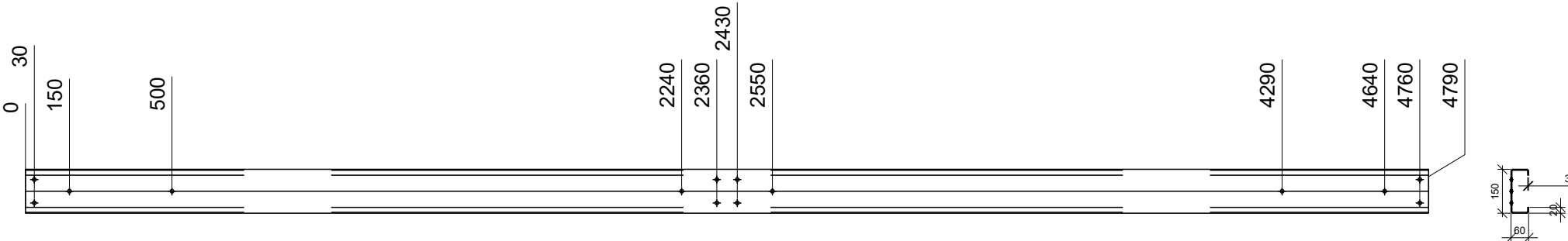
TERÇA – TC2 (40x)

ESC: 1/320



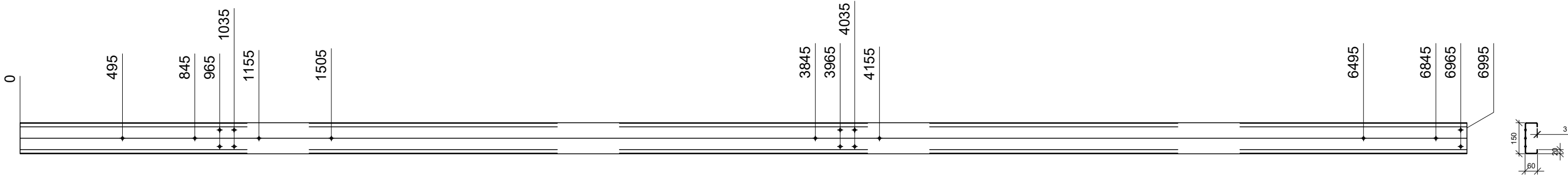
TERÇA – TC3 (10x)

ESC: 1/320



TERÇA – TC4 (12x)

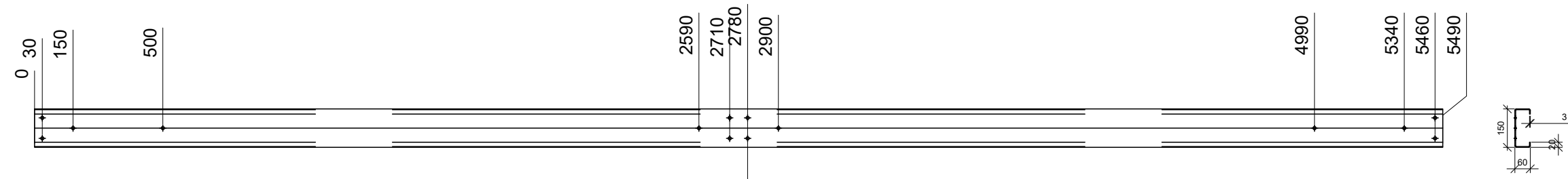
ESC: 1/320



 INSTITUTO FEDERAL Sertão Pernambucano	INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA SERTÃO PERNAMBUCANO DIRETORIA DE ENGENHARIA E INFRAESTRUTURA Rua Aristarco Lopes, 240 Centro Petrolina/PE CEP: 56.302-100	NOME: PROJETO DE ESTRUTURA METÁLICA DO CAMPUS ÁGUAS BELAS DO IFSertãoPE
		ENDEREÇO: Rodovia PE-300, S/N, CEP: 55340-000 Águas Belas/PE
DESCRIÇÃO: TERÇAS E DETALHES (REFEITÓRIO)	ESCALA: INDICADA	DATA: ABRIL/2025
ASSINATURA/CARIMBO - DIREÇÃO GERAL:	ASSINATURA/CARIMBO - RESPONSÁVEL TÉCNICO:	PRANCHA 06/07
Ebson Alves da Silva - CREA PE 055750		

TERÇA – TC5 (6x)

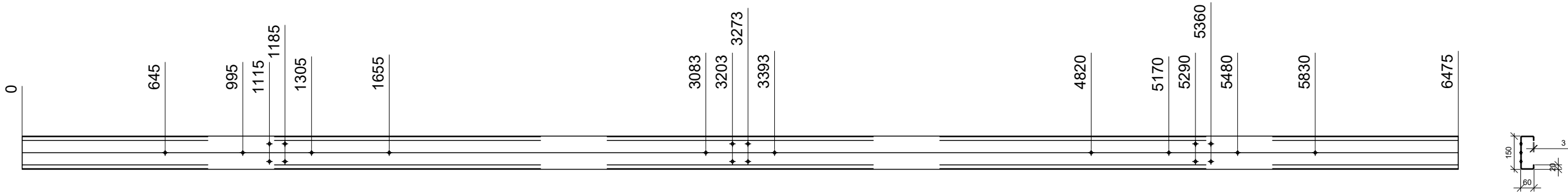
ESC: 1/20



Lista de Material - Projeto								
LINHA	ITEM	QUANTIDADE	PERFIL	DIMENSÕES	COMPRIMENTO	PESO UNITARIO	PESO TOTAL	ÁREA DE PINTURA
1		1		TERÇAS		3957.48	3957.48	334.69
2	TC1	20	UEnr	150 x 60 x 3 x 20	5320	36.37	727.35	62.44
3	TC2	40	UEnr	150 x 60 x 3 x 20	4165	28.47	1138.67	97.79
4	TC3	10	UEnr	150 x 60 x 3 x 20	4790	32.74	327.44	28.11
5	TC4	12	UEnr	150 x 60 x 3 x 20	6995	47.82	573.81	49.26
6	TC5	6	UEnr	150 x 60 x 3 x 20	5490	37.53	225.18	19.33
7	TC6	6	UEnr	150 x 60 x 3 x 20	6475	44.26	265.56	22.80
8	ST	94	L	150 x 100 x 3	220	1.27	119.35	10.40
9	MF	188	L	80 x 80 x 3.35	707	2.87	540.07	42.16
10	SMF	188	#			0.21	39.82	2.41
PESO TOTAL								3957.48 kgf
ÁREA DE PINTURA								334.69 m2

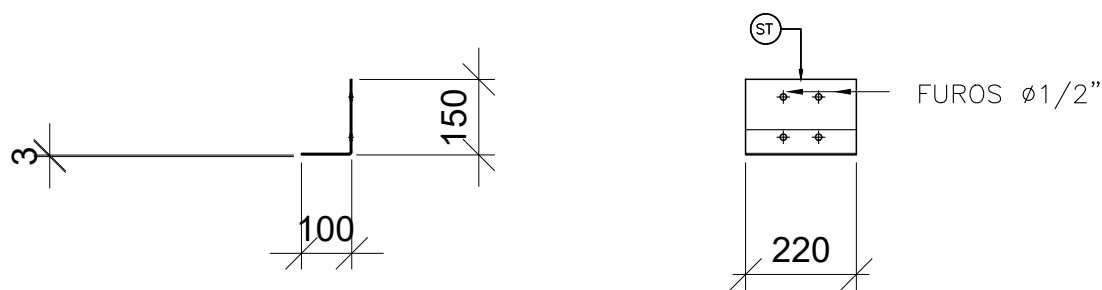
TERÇA – TC6 (6x)

ESC: 1/20



ST – SUPORTE TERÇAS (94x)

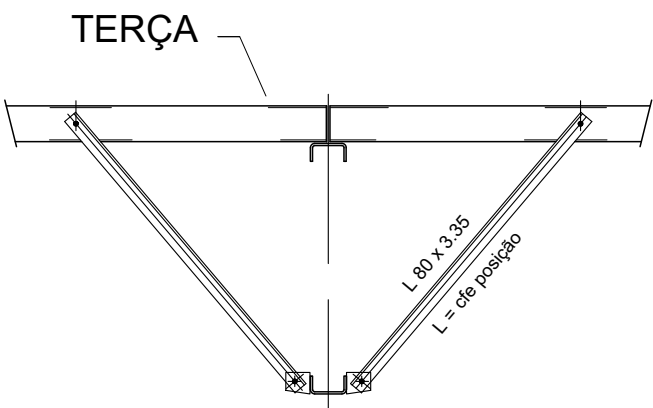
ESC: 1/15



CHAPA1 – 250 X 220 #3,00

DET. FIXAÇÃO DAS ”MF” (188x)

ESC: 1/15





INSTITUTO FEDERAL
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INSTITUTO FEDERAL DE
EDUCAÇÃO, CIÊNCIA E TECNOLOGIA
SERTÃO PERNAMBUCANO
DIRETORIA DE ENGENHARIA
E INFRAESTRUTURA
Rua Aristarco Lopes, 240 | Centro
Petrolina/PE | CEP: 56.302-100

NOME:

**PROJETO DE ESTRUTURA METÁLICA DO
CAMPUS ÁGUAS BELAS DO IFSertãoPE**

ENDEREÇO:

Rodovia PE-300, S/N, CEP: 55340-000
Águas Belas/PE

DESCRIÇÃO:

TERÇAS E DETALHES (REFEITÓRIO)

ESCALA:

INDICADA

DATA:

ABRIL/2025

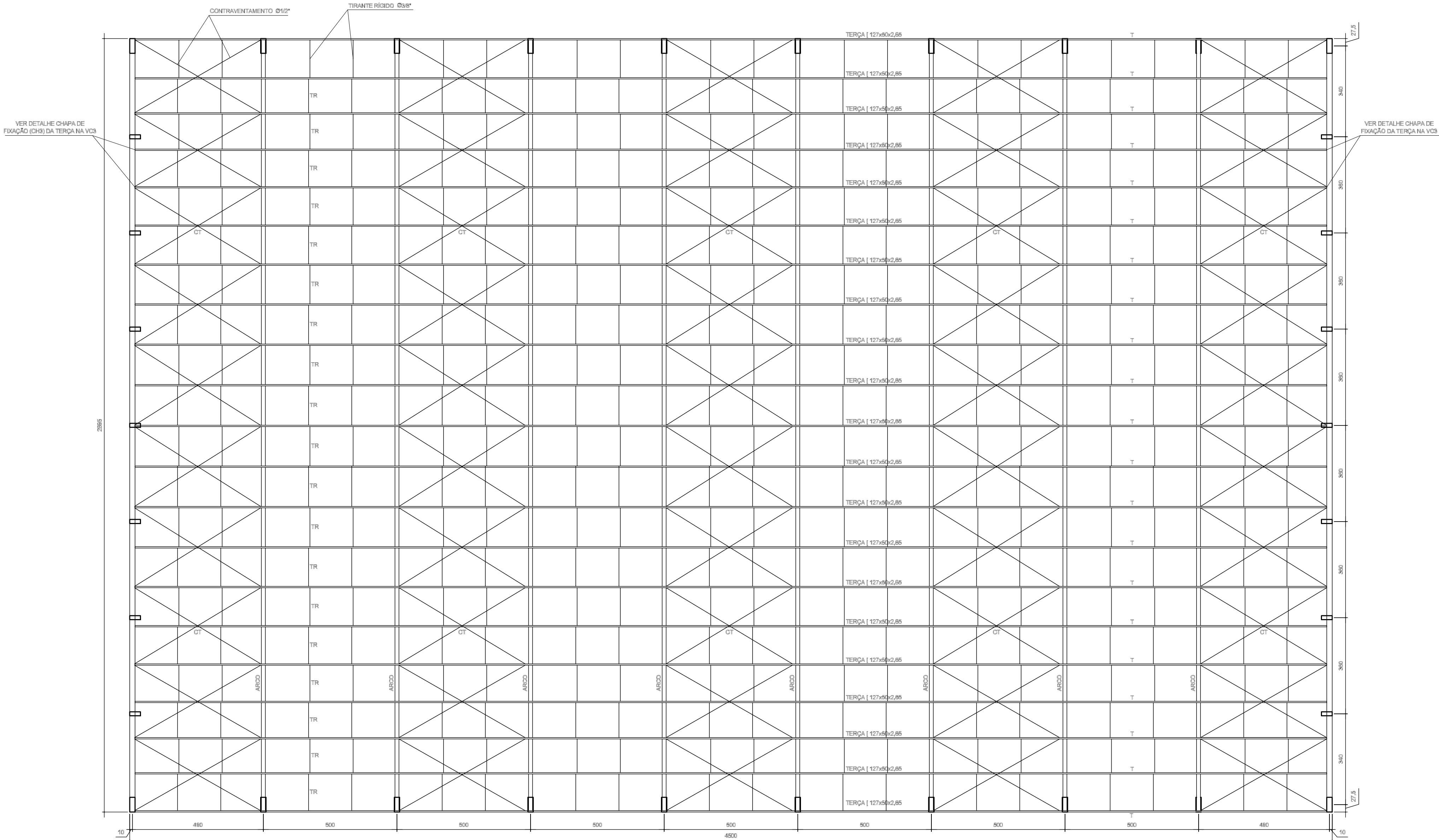
ASSINATURA/CARIMBO - DIREÇÃO GERAL:

ASSINATURA/CARIMBO - RESPONSÁVEL TÉCNICO:

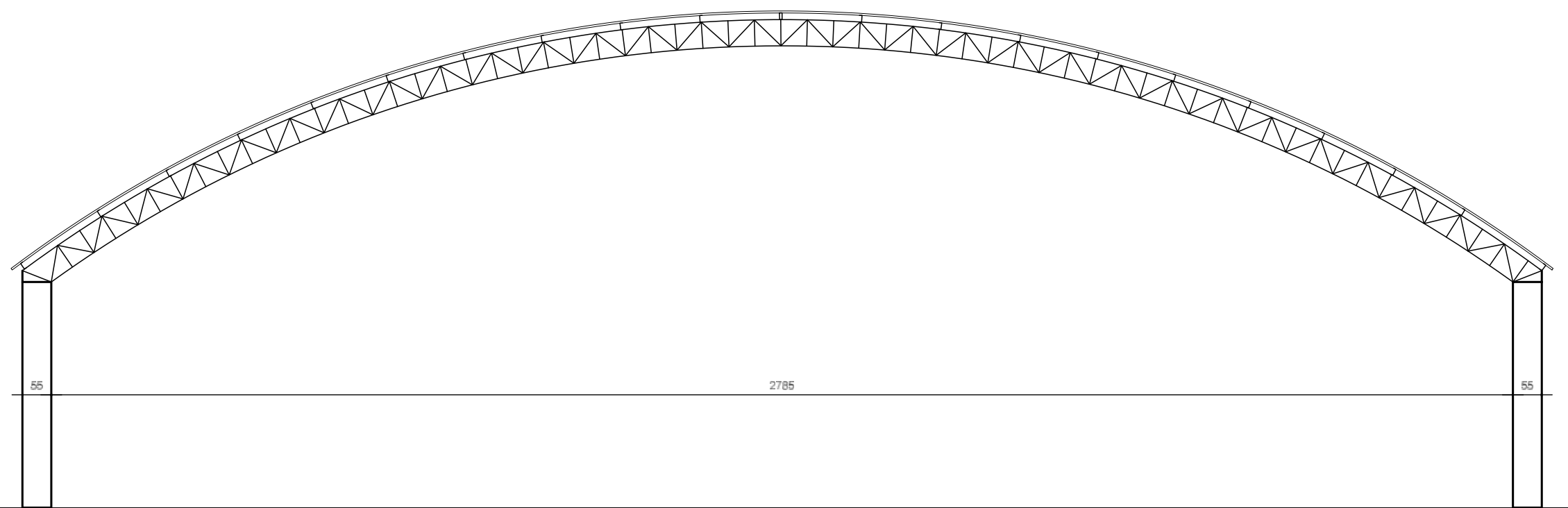
Ebson Alves da Silva - CREA PE 055750

PRANCHA

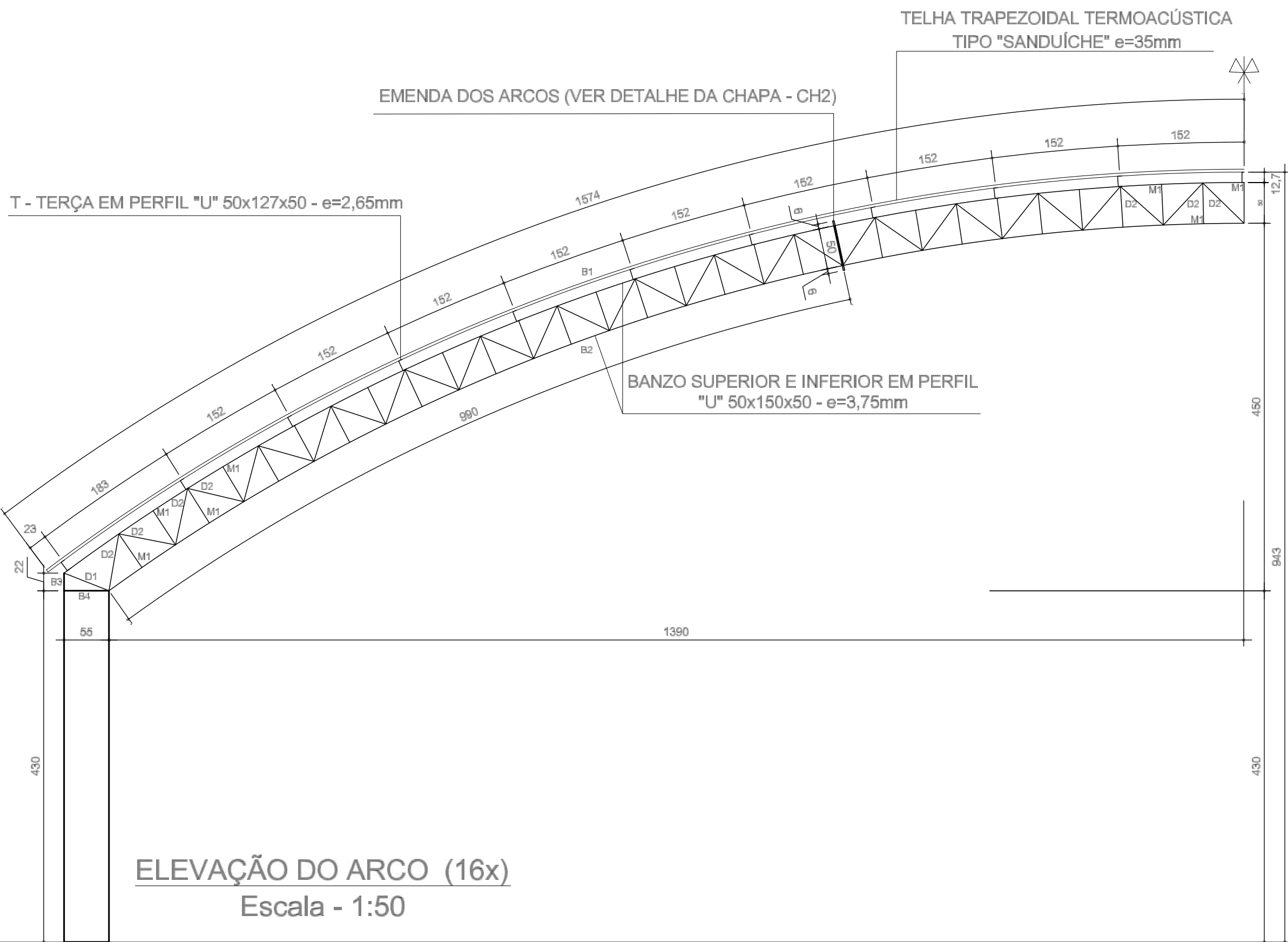
07/07



PLANTA DA COBERTURA METÁLICA
Escala - 1:100



ELEVÇÃO DA COBERTURA METÁLICA
Escala - 1:100



ELEVÇÃO DO ARCO (16x)
Escala - 1:50

RELAÇÃO DE MATERIAIS

N	MATERIAL	BITOLA	COMP. (cm)	QUANT.	PESO TOTAL	ESPECIFICAÇÃO
B1	PERFIL DOBRADO	"U" 50x150x50x3,75mm	3100	8	1914	ASTM A-36
B2	PERFIL DOBRADO	"U" 50x150x50x3,75mm	2975	8	1837	ASTM A-36
B3	PERFIL DOBRADO	"U" 50x150x50x3,75mm	22	16	28	ASTM A-36
B4	PERFIL DOBRADO	"U" 50x150x50x3,75mm	55	16	68	ASTM A-36
D1	PERFIL LAMINADO	"L" 1.1/4" x 1/8"	59	16	17	ASTM A-36
D2	PERFIL LAMINADO	"L" 1.1/4" x 1/8"	70	480	567	ASTM A-36
M1	PERFIL LAMINADO	"L" 1.1/4" x 1/8"	50	480	405	ASTM A-36
T	PERFIL DOBRADO	"U" 50x127x50x2,65mm	21	4460	4234	ASTM A-36
CH1	CHAPA LISA	200x550x3/8"	—	16	132	ASTM A-36
CH2	CHAPA LISA	270x620x1/2"	—	32	525	ASTM A-36
CH3	CHAPA LISA	130x250x5/16"	—	42	86	ASTM A-36
CT	BARRA LISA	Ø1/2"	543	100	544	ASTM A-36
TR	BARRA LISA	Ø3/8"	156	360	315	ASTM A-36
CB1	AÇO INOX	Ø1/2"	55	48	—	ASTM A-36
CB2	AÇO INOX	Ø5/16"	15	84	—	ASTM A-36
P	AÇO INOX	Ø5/8"	1.1/2"	192	—	ASTM A-36

NOTAS GERAIS:

- 1) PROJETO DE ACORDO COM A NORMA NBR-8800 (PROJETO E EXECUÇÃO DE ESTRUTURAS DE AÇO);
- 2) VERIFICAR AS MEDIDAS NA OBRA ANTES DA FABRICAÇÃO;
- 3) TODAS AS MEDIDAS ESTÃO EM MILÍMETROS E CENTÍMETROS;
- 4) É DE RESPONSABILIDADE DO FABRICANTE, A VERIFICAÇÃO DOS QUANTITATIVOS DE MATERIAIS ANTES DA ELABORAÇÃO DA PROPOSTA;
- 5) TODA E QUALQUER ALTERAÇÃO NA ESTRUTURA, COMO MUDANÇA DE BITOLAS, DEVERÃO SER AUTORIZADAS PELO PROJETISTA;
- 6) MATERIAIS:
 - PERFÍS LAMINADOS - AÇO ASTM A-36
 - PERFÍS DE CHAPA DOBRADA - AÇO ASTM A-36
 - BARRAS LISAS (REDONDAS) - AÇO ASTM A-36
 - CHAPAS GROSSAS - AÇO ASTM A-36
 - PARAFUSOS DE ALTA RESISTÊNCIA - ASTM A-325
 - ELETRODOS PARA SOLDA - AWS E- 70XX
 - CHUMBADORES DE EXPANSÃO (PARABOLT) - WALSYWA OU SIMILAR
- 7) PROTEÇÃO ANTI-CORROSIVA:
 - TRATAMENTO DE SUPERFÍCIE: JATO AO METAL QUASE BRANCO PADRÃO SA 21/2
 - FUNDO: ÉPOXI DUPLA FUNÇÃO 80 MICRÔMETROS (SECA) EM UMA DEMÃO, COR A DEFINIR.
- 8) SOLDAS DE FILETE E CONTÍNUA DE 6 mm;
- 9) SOBRECARGA CONSIDERADA: 0,25 kN/m² (DE ACORDO COM A NORMA NBR-8800/2008);
- 9.1) VENTO INCIDENTE: CONFORME NBR 6123/88.



INSTITUTO FEDERAL DE
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SERTÃO PERNAMBUCANO
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Rua Aristarco Lopes, 240 | Centro
Petrolina/PE | CEP: 56.302-100

PROJETO DE ESTRUTURA METÁLICA DO
CAMPUS ÁGUAS BELAS DO IFSertãoPE

ENDERÇO:
Rodovia PE-300, S/N, CEP: 55340-000
Águas Belas/PE

DESCRIÇÃO
PLANTA DE MONTAGEM, ELEVÇÕES E DETALHES (GINÁSIO)

ASSINATURACARIMBO - DIREÇÃO GERAL

ESCALA:
INDICADA

ASSINATURACARIMBO - RESPONSÁVEL TÉCNICO

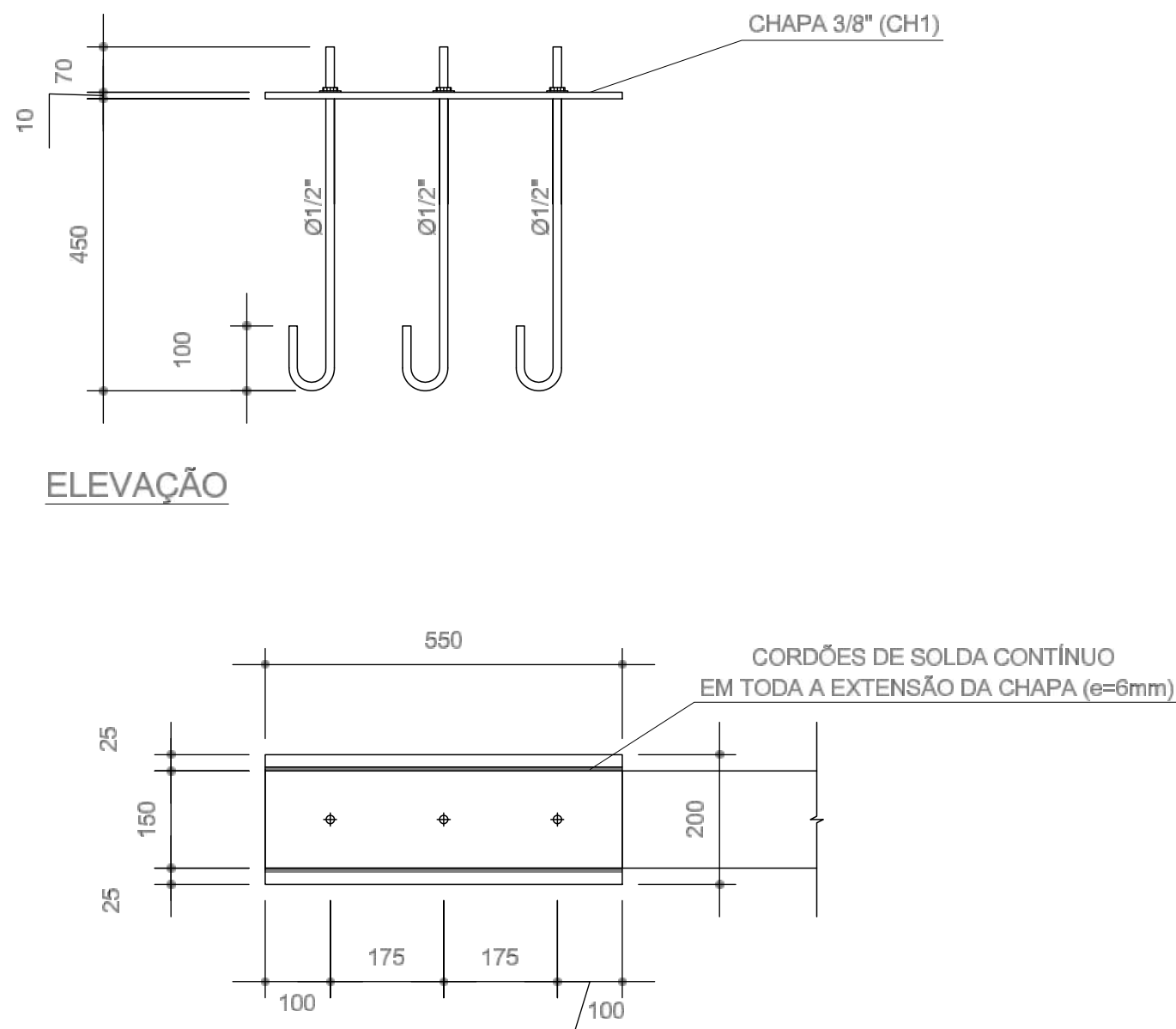
DATA:
ABRIL/2025

01/02

Elson Alves da Silva - CREA PE 055750

DETALHE DA CHAPA DE FIXAÇÃO (CH1) COM OS CHUMBADORES (16x)

Escala - 1:10

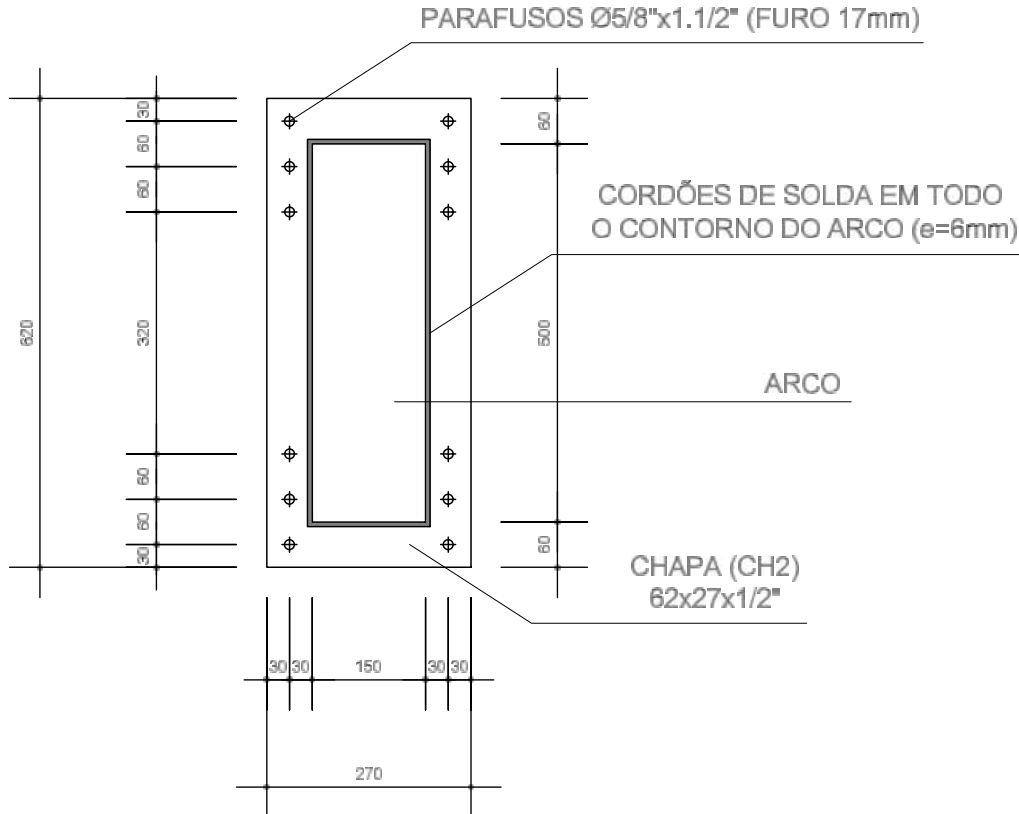


ELEVAÇÃO

PLANTA

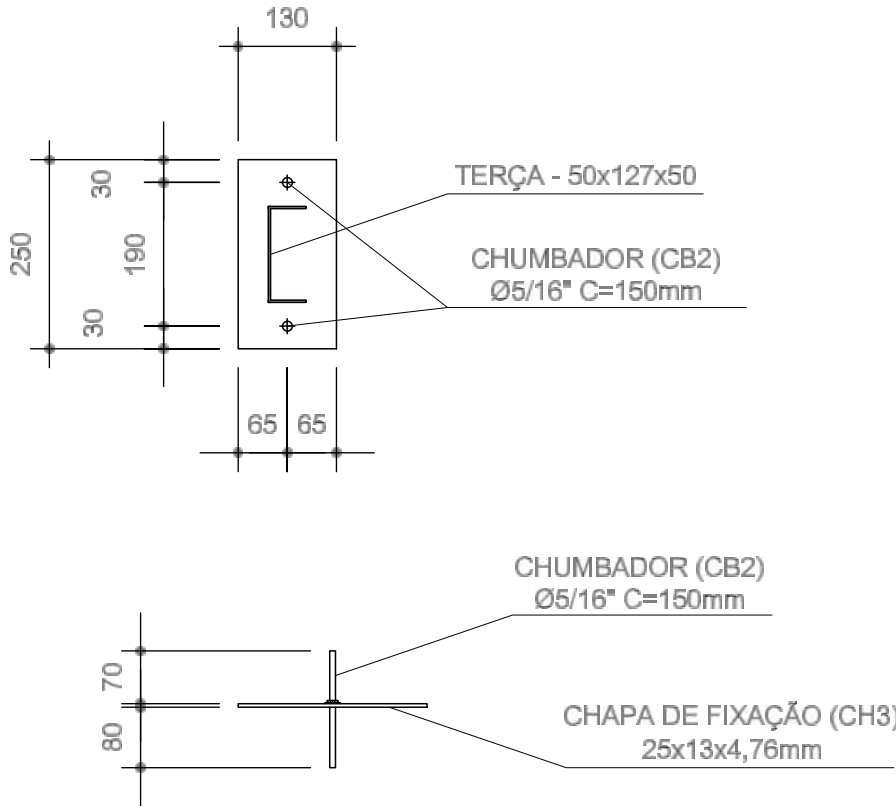
DETALHE DA CHAPA (CH2) DA EMENDA DOS ARCOS (16x)

Escala - 1:10



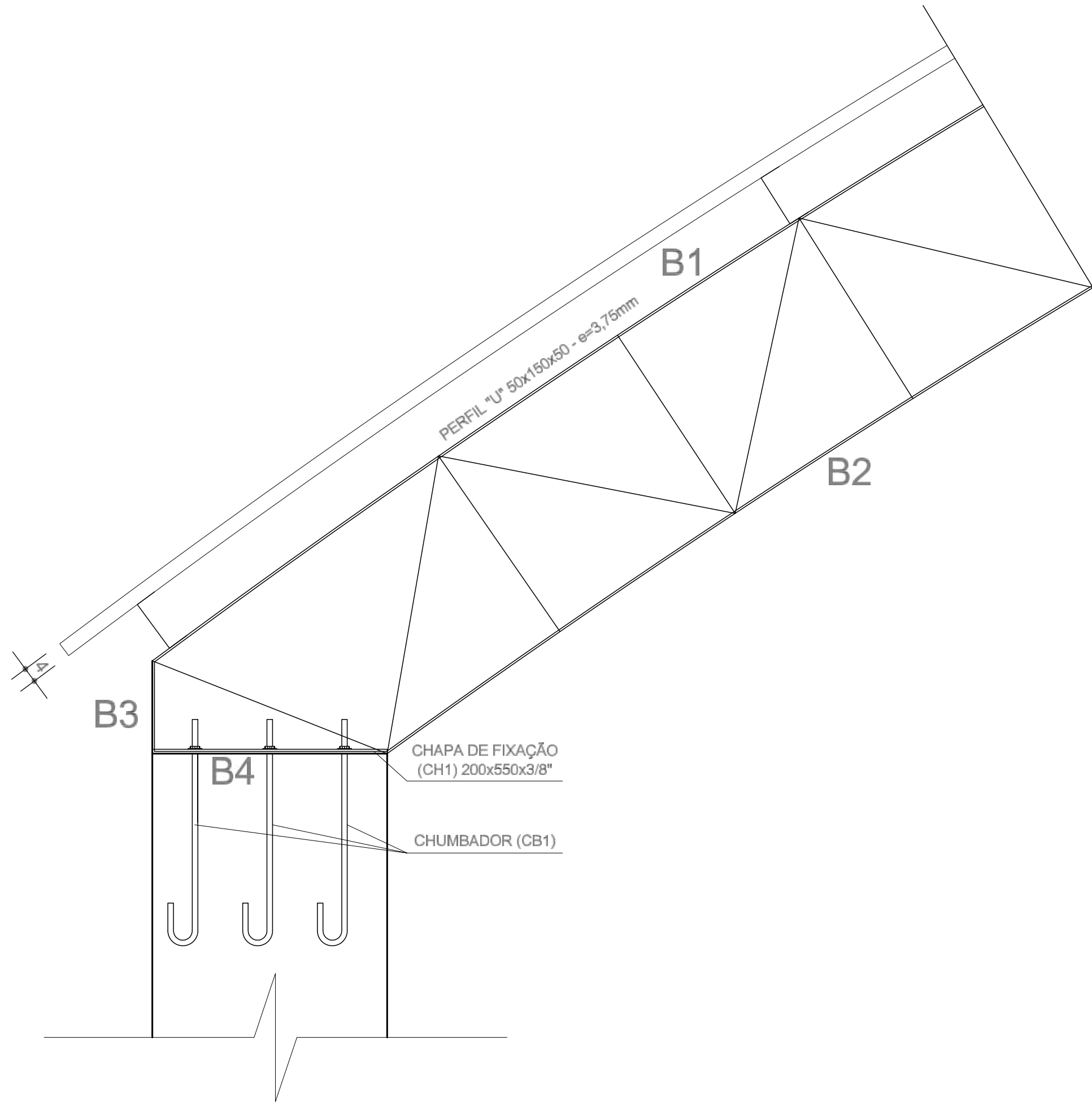
DETALHE DA CHAPA DE FIXAÇÃO (CH3) NA PONTA DAS TERÇAS (42x)

Escala - 1:10



DETALHE DA CHAPA DE FIXAÇÃO (CH1) NOS PILARES (16x)

Escala - 1:10



DETALHE DOS TIRANTES RÍGIDOS (360x)

Escala - 1:10



CORTE

PLANTA

NOTAS GERAIS:

- 1) PROJETO DE ACORDO COM A NORMA NBR-8800 (PROJETO E EXECUÇÃO DE ESTRUTURAS DE AÇO);
- 2) VERIFICAR AS MEDIDAS NA OBRA ANTES DA FABRICAÇÃO;
- 3) TODAS AS MEDIDAS ESTÃO EM MILÍMETROS E CENTÍMETROS;
- 4) É DE RESPONSABILIDADE DO FABRICANTE, A VERIFICAÇÃO DOS QUANTITATIVOS DE MATERIAIS ANTES DA ELABORAÇÃO DA PROPOSTA;
- 5) TODA E QUALQUER ALTERAÇÃO NA ESTRUTURA, COMO MUDANÇA DE BITOLAS, DEVERÃO SER AUTORIZADAS PELO PROJETISTA;
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 - PERFÍS DE CHAPA DOBRADA - AÇO ASTM A-36
 - BARRAS LISAS (REDONDAS) - AÇO ASTM A-36
 - CHAPAS GROSSAS - AÇO ASTM A-36
 - PARAFUSOS DE ALTA RESISTÊNCIA - ASTM A-325
 - ELETRODOS PARA SOLDA - AWS E- 70XX
 - CHUMBADORES DE EXPANSÃO (PARABOLT) - WALSYWA OU SIMILAR
- 7) PROTEÇÃO ANTI-CORROSIVA:
 - TRATAMENTO DE SUPERFÍCIE: JATO AO METAL QUASE BRANCO PADRÃO SA 21/2
 - FUNDO: ÉPOXI DUPLA FUNÇÃO 80 MICRÔMETROS (SECA) EM UMA DEMÃO, COR A DEFINIR.
- 8) SOLDAS DE FILETE E CONTÍNUA DE 6 mm;
- 9) SOBRECARGA CONSIDERADA: 0,25 kN/m² (DE ACORDO COM A NORMA NBR-8800/2008);
- 9.1) VENTO INCIDENTE: CONFORME NBR 6123/88.