

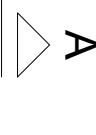
OBSERVAÇÕES:  
1 - Origem das cotas: Horizontais e verticais nos eixos do pilar P49;  
2 - Localização da obra deve seguir o projeto arquitetônico de implantação, locando-a a partir de edificações existentes;  
3 - Convenções: B - Blobo; E - Estaca; S - Sapata; L - Laje; P - Pilar; V - Viga;  
4 - A profundidade mínima de ponta das estacas deverá ser conforme tabela "LOCAÇÃO DAS ESTACAS" e na planta de detalhamento;  
5 - Medidas em centímetros.


Nome	Seção	Pilar				Fundação				Banco			
		X (cm)	Y (cm)	Carga Máx. (t)	Carga Mín. (t)	Lado B (cm)	Lado H (cm)	Nº h1/h2	df	ni	Estaca (cm)	Cota Fundo (cm)	
P4	20x20	2071.50	1211.00	4.1	3.3	60	60	0	55	0	1	C30	-45
P5	20x20	2000.00	1211.00	3.9	3.7	60	60	0	55	0	1	C30	-45
P6	20x20	2088.00	1211.00	3.2	2.7	60	60	0	55	0	1	C30	-45
P7	15x30	-1209.50	1108.50	8.0	6.5	60	60	0	55	0	1	C30	-45
P8	15x30	-864.50	1108.50	7.8	7.2	60	60	0	55	0	1	C30	-45
P9	15x30	-327.50	1108.50	6.6	3.7	60	60	0	55	0	1	C30	-45
P11	15x30	-535.00	891.00	8.4	5.5	60	60	0	55	0	1	C30	-45
P12	15x30	-327.50	891.00	10.9	8.9	60	60	0	55	0	1	C30	-45
P13	15x30	2082.50	923.00	12.1	10.7	60	60	0	55	0	1	C30	-45
P14	15x30	2592.50	923.00	11.0	9.8	60	60	0	55	0	1	C30	-45
P15	15x30	-1217.00	811.00	8.7	8.4	60	60	0	55	0	1	C30	-45
P16	15x40	0.00	791.00	8.9	6.6	60	60	0	55	0	1	C30	-45
P18	15x40	415.00	791.00	9.3	7.5	60	60	0	55	0	1	C30	-45
P20	15x40	830.00	791.00	10.2	8.0	60	60	0	55	0	1	C30	-45
P22	15x40	1245.00	791.00	11.5	8.6	60	60	0	55	0	1	C30	-45
P24	15x40	1660.00	791.00	12.5	8.3	60	60	0	55	0	1	C30	-45
P28	15x30	2253.00	673.00	12.0	9.9	60	60	0	55	0	1	C30	-45
P29	20x20	2898.00	673.00	3.6	3.4	60	60	0	55	0	1	C30	-45
P30	15x30	-1217.00	521.00	8.7	8.4	60	60	0	55	0	1	C30	-45
P32	15x30	-535.00	441.00	8.5	5.9	60	60	0	55	0	1	C30	-45
P33	15x30	-327.50	448.50	11.4	9.3	60	60	0	55	0	1	C30	-45
P34	15x30	2071.50	458.00	10.8	9.2	60	60	0	55	0	1	C30	-45
P35	15x30	2600.00	458.00	14.4	13.1	60	60	0	55	0	1	C30	-45
P36	15x30	-1209.50	223.50	8.1	6.5	60	60	0	55	0	1	C30	-45
P37	15x30	-864.50	223.50	7.8	7.3	60	60	0	55	0	1	C30	-45
P38	15x30	-327.50	223.50	7.8	4.7	60	60	0	55	0	1	C30	-45
P39	15x40	0.00	236.00	7.1	5.9	60	60	0	55	0	1	C30	-45
P40	15x40	415.00	236.00	14.3	10.4	60	60	0	55	0	1	C30	-45
P41	15x40	830.00	236.00	12.9	9.7	60	60	0	55	0	1	C30	-45
P42	15x40	1245.00	236.00	8.5	7.8	60	60	0	55	0	1	C30	-45
P43	15x40	1660.00	236.00	16.5	11.3	60	60	0	55	0	1	C30	-45
P45	15x30	2253.00	243.00	12.6	10.2	60	60	0	55	0	1	C30	-45
P46	15x30	0.00	0.00	4.0	2.6	60	60	0	55	0	1	C30	-45
P51	15x30	415.00	0.00	5.7	4.8	60	60	0	55	0	1	C30	-45
P53	15x30	830.00	0.00	5.8	4.3	60	60	0	55	0	1	C30	-45
P55	15x30	1245.00	0.00	5.8	4.2	60	60	0	55	0	1	C30	-45
P57	15x30	1660.00	0.00	5.7	4.7	60	60	0	55	0	1	C30	-45
P59	15x30	2071.50	0.00	9.9	8.6	60	60	0	55	0	1	C30	-45
P60	15x30	2071.50	334.00	11.2	9.7	60	60	0	55	0	1	C30	-45
P61	15x30	2253.00	334.00	9.8	7.7	60	60	0	55	0	1	C30	-45
P62	20x30	2070.00	-50.00	8.0	5.4	60	60	0	55	0	1	C30	-45
P63	20x30	2597.50	-50.00	8.0	6.2	60	60	0	55	0	1	C30	-45
P64	14x26	-1432.50	444.50	1.4	1.3	70	30	30	70	30	30	70	
P2	14x26	-990.00	1324.00	1.4	1.3	60	70	30	30	70	30	70	
P3	14x26	-1411.00	1324.00	1.2	0.9	60	70	30	30	70	30	70	
P10	14x26	-1432.50	887.50	1.4	1.4	70	30	30	70	30	70	70	
P31	14x26	-1432.50	444.50	1.5	1.4	60	70	30	30	70	30	70	
P46	14x26	-1426.50	8.00	1.4	1.3	60	70	30	30	70	30	70	
P57	14x26	-940.60	6.00	1.4	1.4	70	30	30	70	30	70	70	
P48	14x26	-472.50	6.00	1.5	1.4	60	70	30	30	70	30	70	





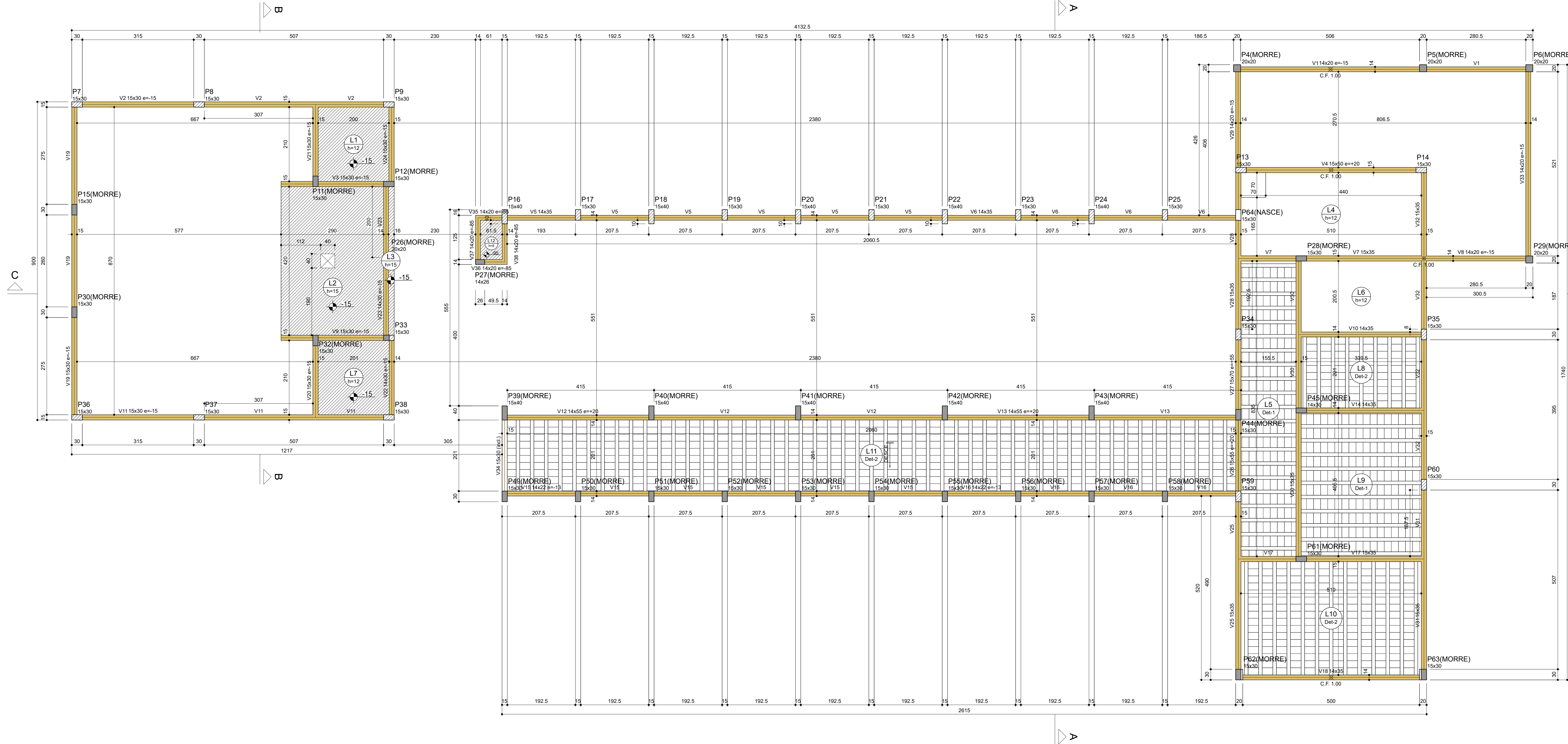




Legenda das vigas e paredes	
	Viga

[illegible]





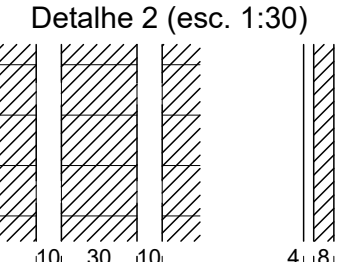
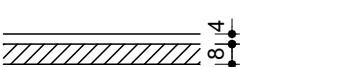
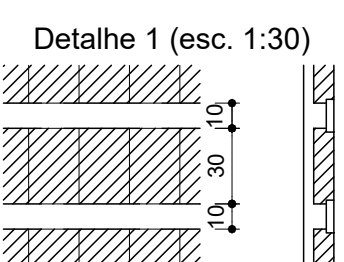
Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	14x20	-15	300
V2	15x30	-15	300
V3	15x30	-15	300
V4	15x30	-15	300
V5	14x20	-15	300
V6	14x20	-15	300
V7	14x20	-15	300
V8	14x20	-15	300
V9	15x30	-15	300
V10	14x35	-15	300
V11	15x30	-15	300
V12	14x55	-15	300
V13	14x55	-15	300
V14	14x35	-15	300
V15	14x22	-13	302
V16	14x22	-13	302
V17	15x35	-15	300
V18	14x35	-15	300
V19	15x30	-15	300
V20	15x30	-15	300
V21	15x30	-15	300
V22	14x30	-15	300
V23	14x30	-15	300
V24	15x30	-15	300
V25	15x35	-15	300
V26	15x55	-20	335
V27	15x70	-55	370
V28	15x35	-15	300
V29	14x20	-15	300
V30	15x35	-15	300
V31	15x35	-15	300
V32	15x35	-15	300
V33	14x20	-15	300
V34	15x30	-15	300
V35	14x20	-15	300
V36	14x20	-15	300
V37	14x20	-15	300
V38	14x20	-15	300

Lajes					
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Sobrecarga (kgf/m²)
L1	Maciça	12	-15	300	300
L2	Maciça	15	-15	300	300
L3	Maciça	15	-15	300	300
L4	Maciça	12	0	315	200
L5	Trellçada 1D	12	0	315	200
L6	Maciça	12	0	315	200
L7	Maciça	12	-15	300	300
L8	Trellçada 1D	12	0	315	200
L9	Trellçada 1D	12	0	315	200
L10	Trellçada 1D	12	0	315	200
L11	Maciça	12	0	315	200
L12	Maciça	8	-85	230	150

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

Legenda das vigas e paredes	
	Viga
	Viga inclinada

Blocos de enchimento				
Detalhe	Tipo	Nome	Dimensões (cm)	Quantidade
1/2	Lajota cerâmica	B8/30/20	8 30 20	579



#### NOTAS DE PROJETO:

- 1- QUALQUER DÚVIDA EM RELAÇÃO AO PROJETO OU COMPATIBILIDADE ENTRE OS MESMOS DEVERÁ SER ENCAMINHADA À FISCALIZAÇÃO E AO RESPONSÁVEL PELO PROJETO DA OBRA;
- 2- AS ARMADURAS DEVERÃO SER ISENTAS DE FERRUGEM, PRODUTOS DE OLEOS, ARGILAS, BARRO, ETC. DE MODO A PERMITIR UMA BOA ANCORAGEM DAS MESMAS;
- 3- AS FORMAS E ARMADURAS DEVERÃO ESTAR LIMPAS E ISENTAS DE SUGERAS, POEIRAS, RESTOS DE MATERIAIS USADOS NA OBRA DE MODO A PERMITIR QUE A CONCRETAÇÃO ATINJA AS ESPECIFICAÇÕES DE PROJETADAS;
- 4- O ENGENHEIRO RESPONSÁVEL PELA EXECUÇÃO DEVE OBRIGATORIAMENTE CONFERIR TODAS AS ARMADURAS ANTES DE CADA CONCRETAÇÃO;
- 5- EM CASO DE NECESSIDADE DE ALTERAÇÃO DO PROJETO, DEVE-SE OBRIGATORIAMENTE CONSULTAR O RESPONSÁVEL TÉCNICO PELO PROJETO E A FISCALIZAÇÃO DA OBRA ANTES DA EXECUÇÃO DO SERVIÇO;
- 6- ESPECIFICAÇÕES DE MATERIAIS ADOTADOS NA OBRA:
  - CONCRETO
    - FUNDACÕES= FCK 25MPa
    - SUPERESTRUTURA= FCK 22MPa
    - AÇO
      - Ø8-3MM - CA 60
      - Ø10-3MM - CA 60
      - Ø12-3MM - CA 60
      - Ø14-3MM - CA 60
      - Ø16-3MM - CA 60
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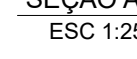


Forma do pavimento Intermediário (Nível 422)  
escala 1:50

Forma do pavimento Superior (Nível 566)  
escala 1:50

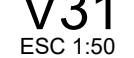
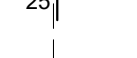
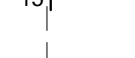
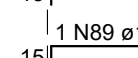
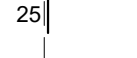
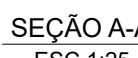
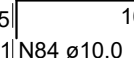
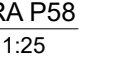
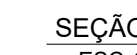
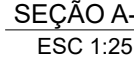
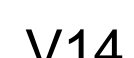
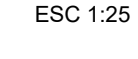
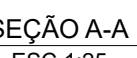
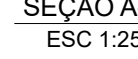


## V1



### Resumo do aço

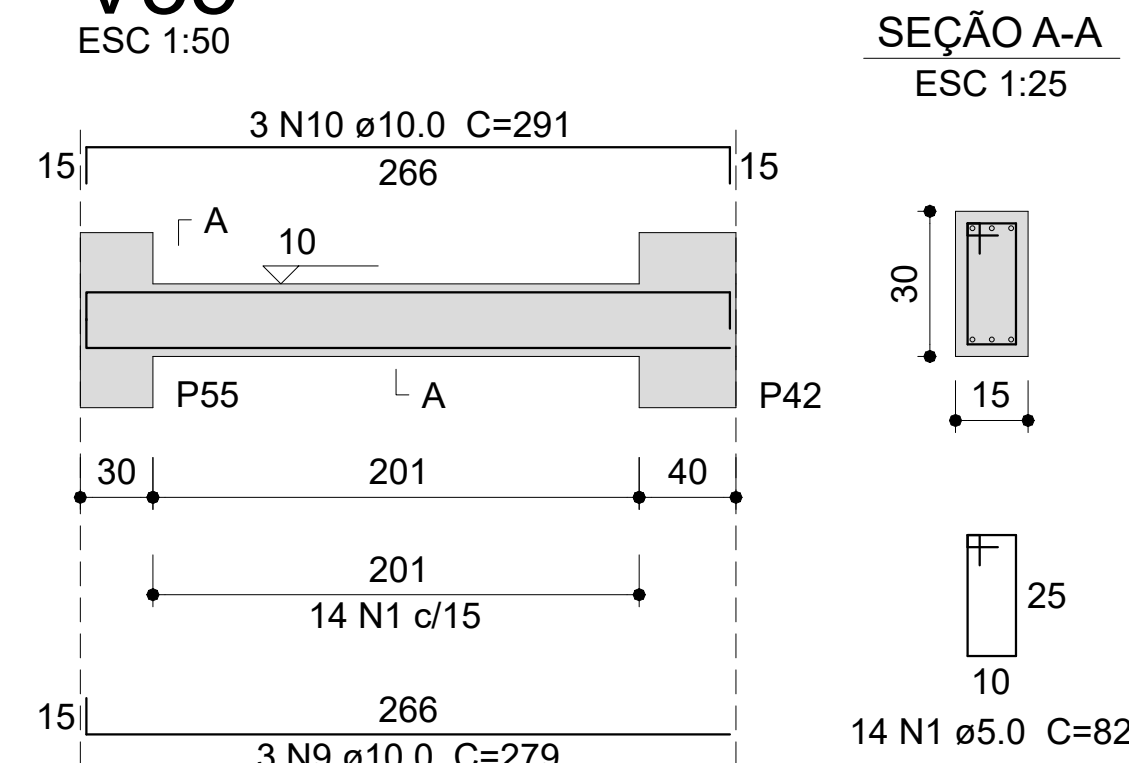
Volume de concreto (C-25) = 8.84 m<sup>3</sup>  
Área de forma = 152.7 m<sup>2</sup>





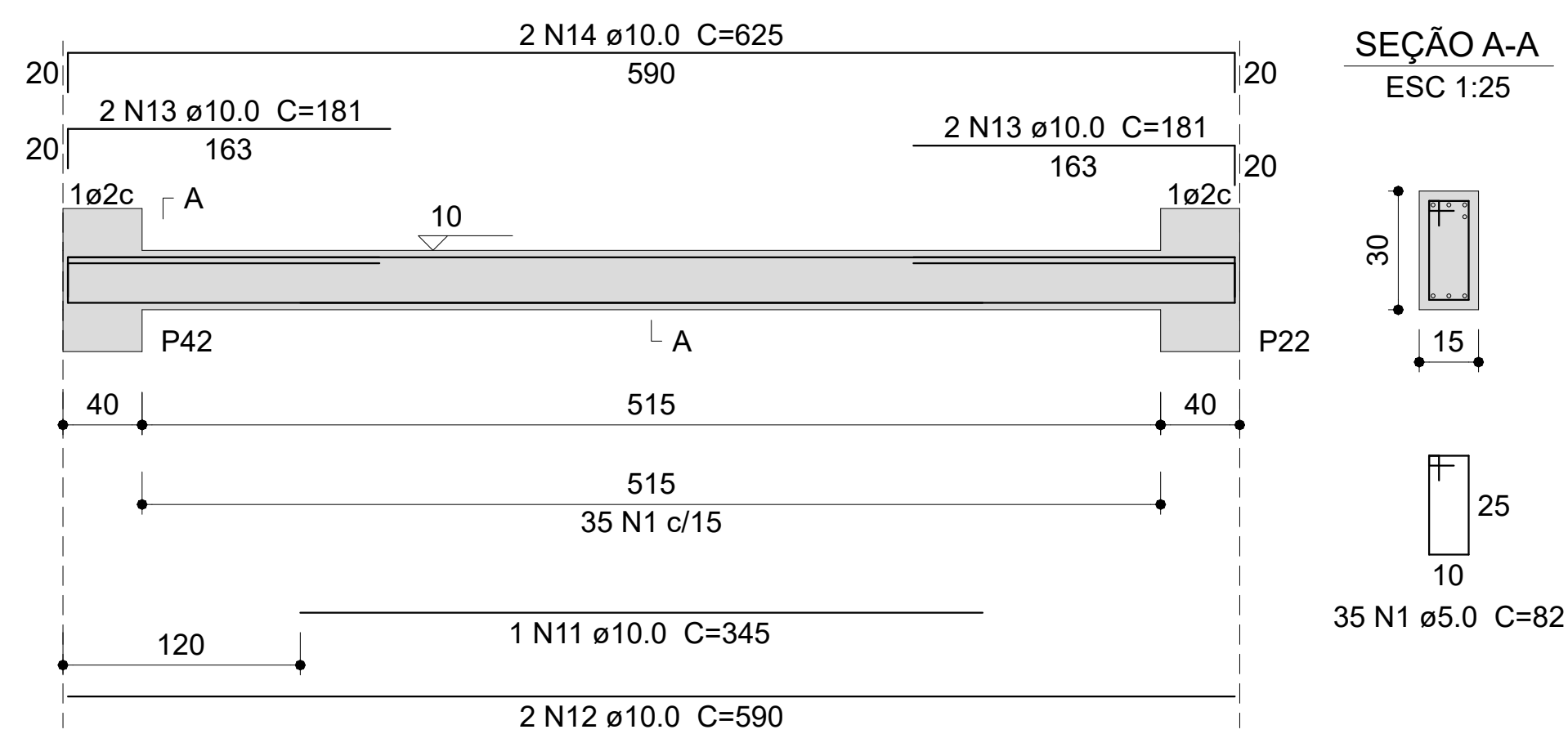
# V35

ESC 1:50



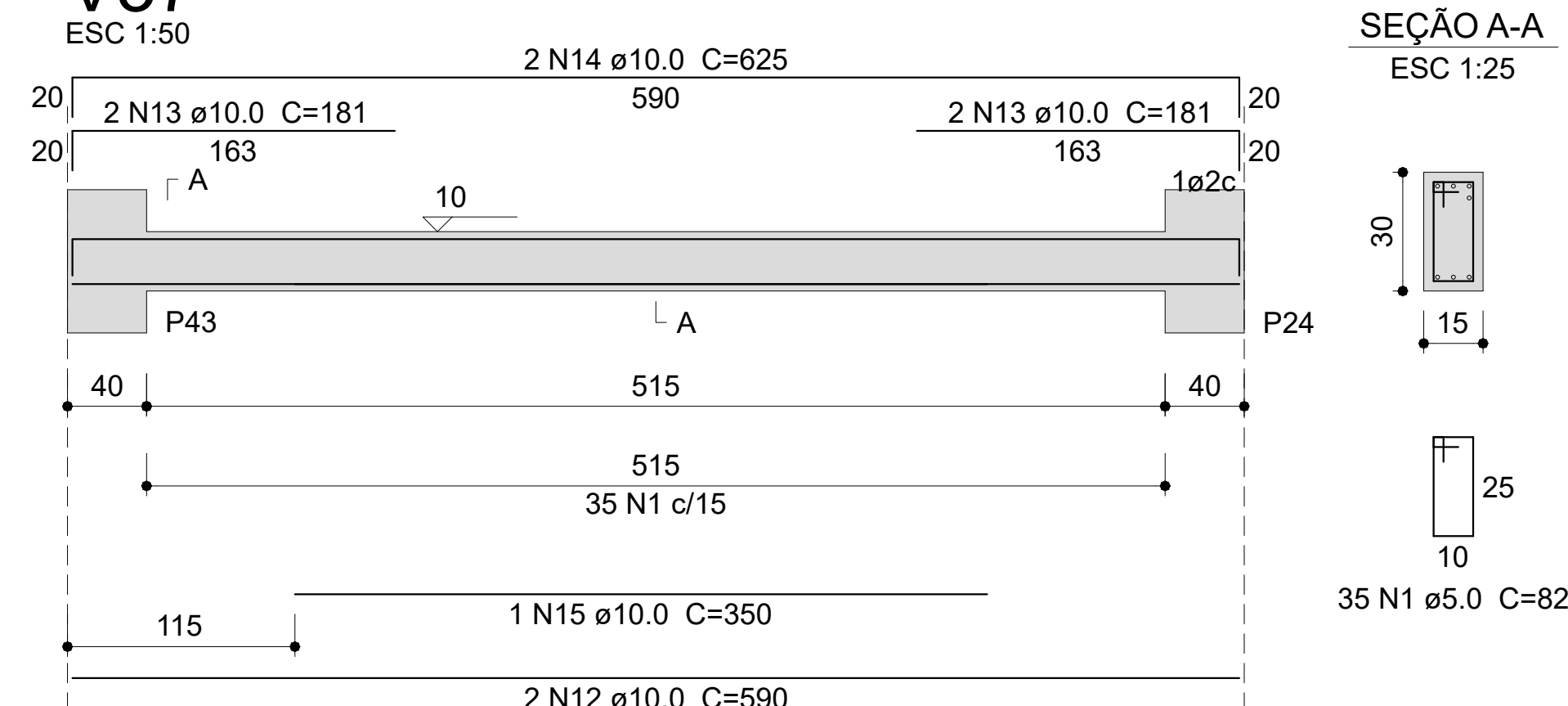
## V36

ESC 1:50



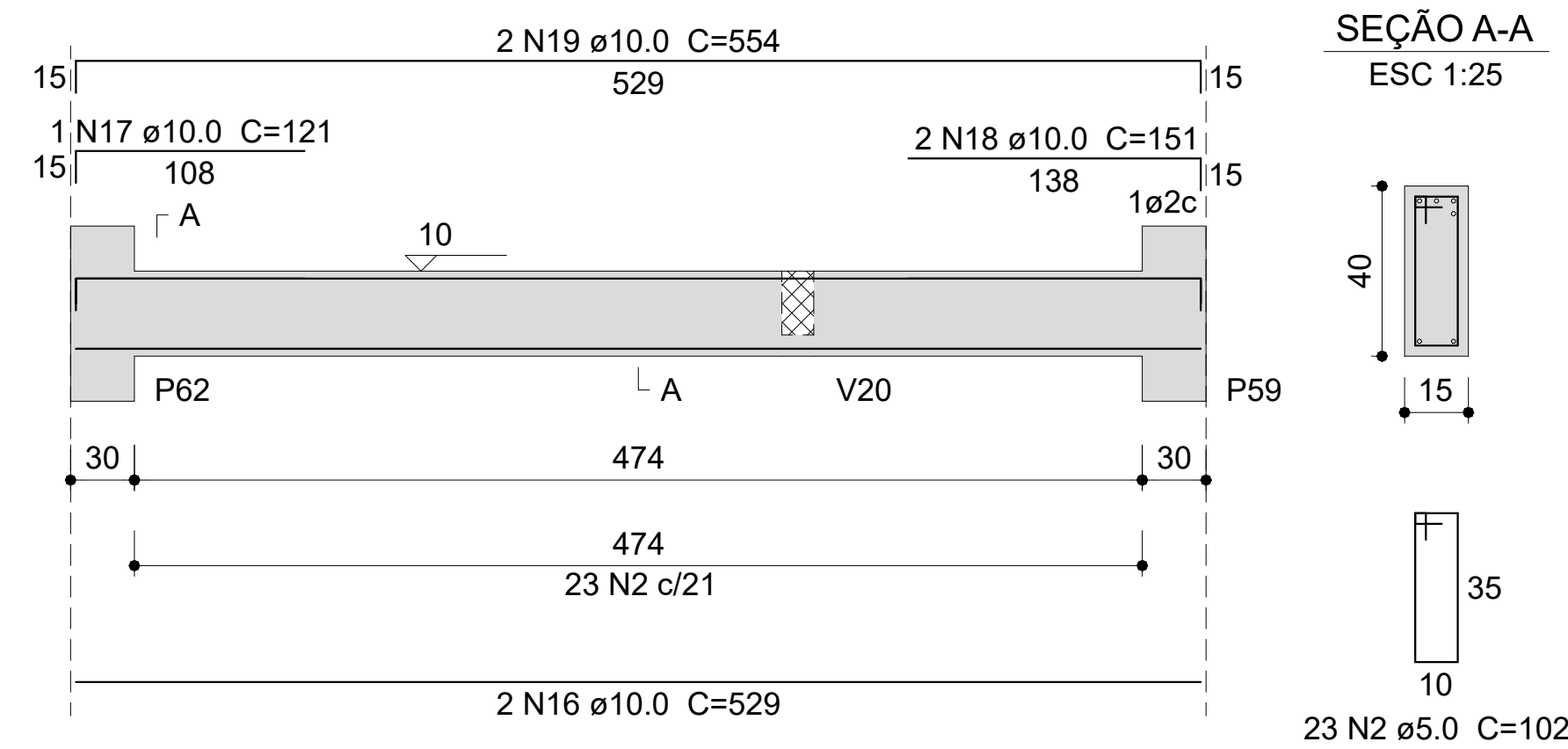
## V37

ESC 1:50



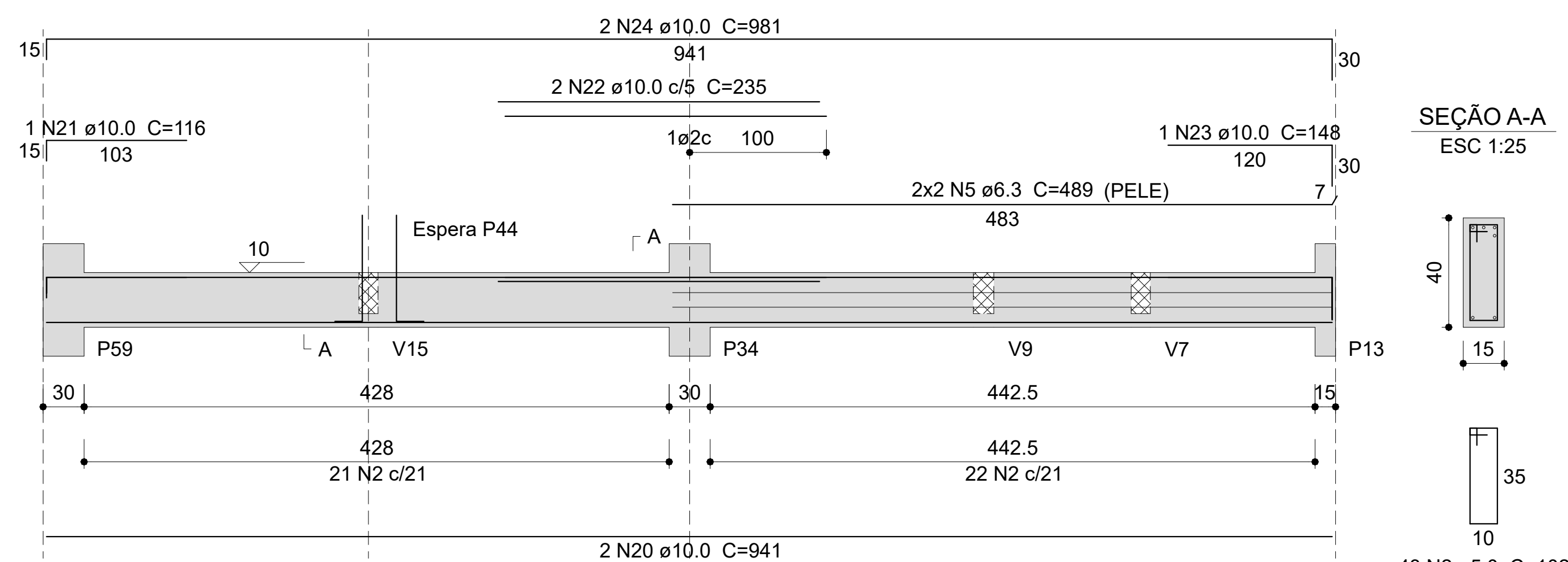
## V38

ESC 1:50



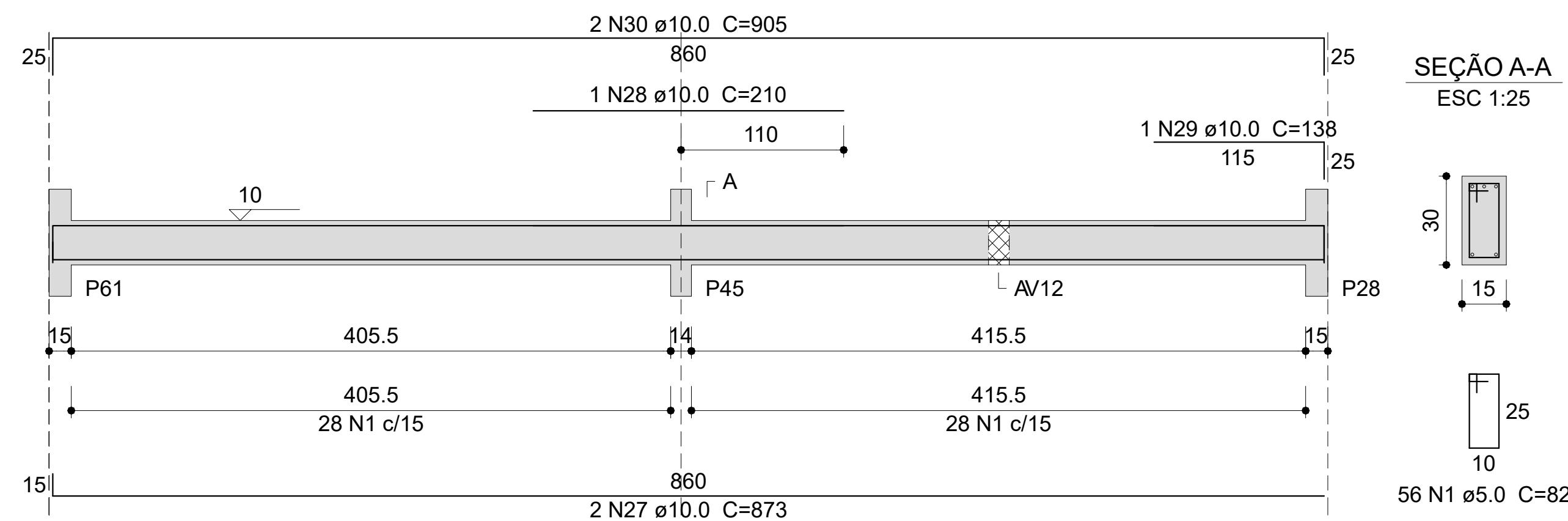
## V39

ESC 1:50



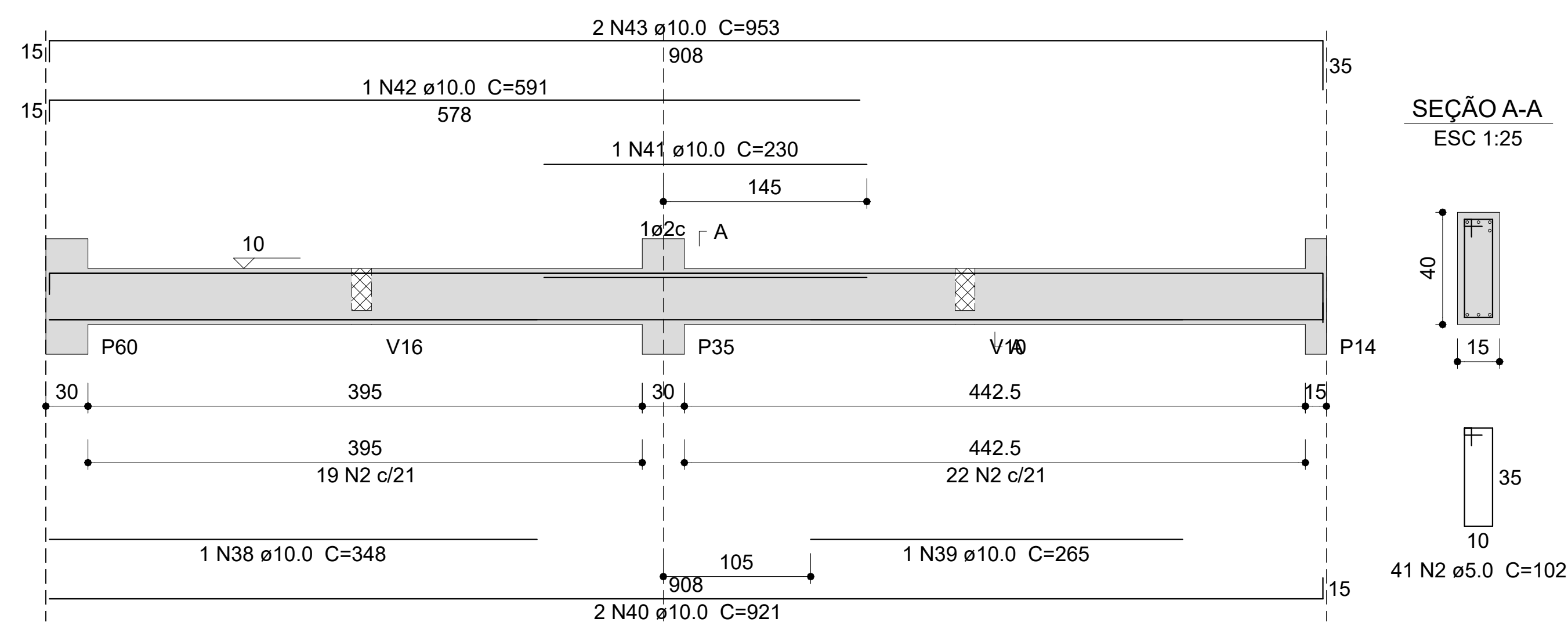
## V41

ESC 1:50



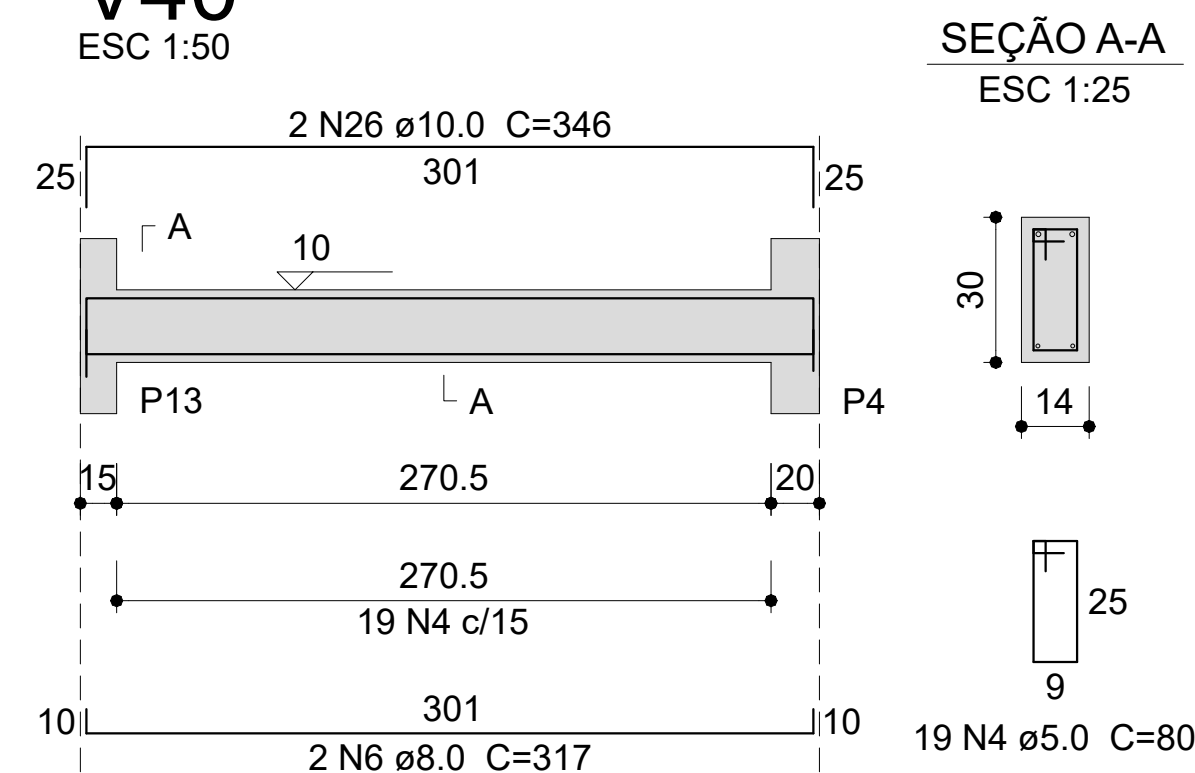
## V43

ESC 1:50



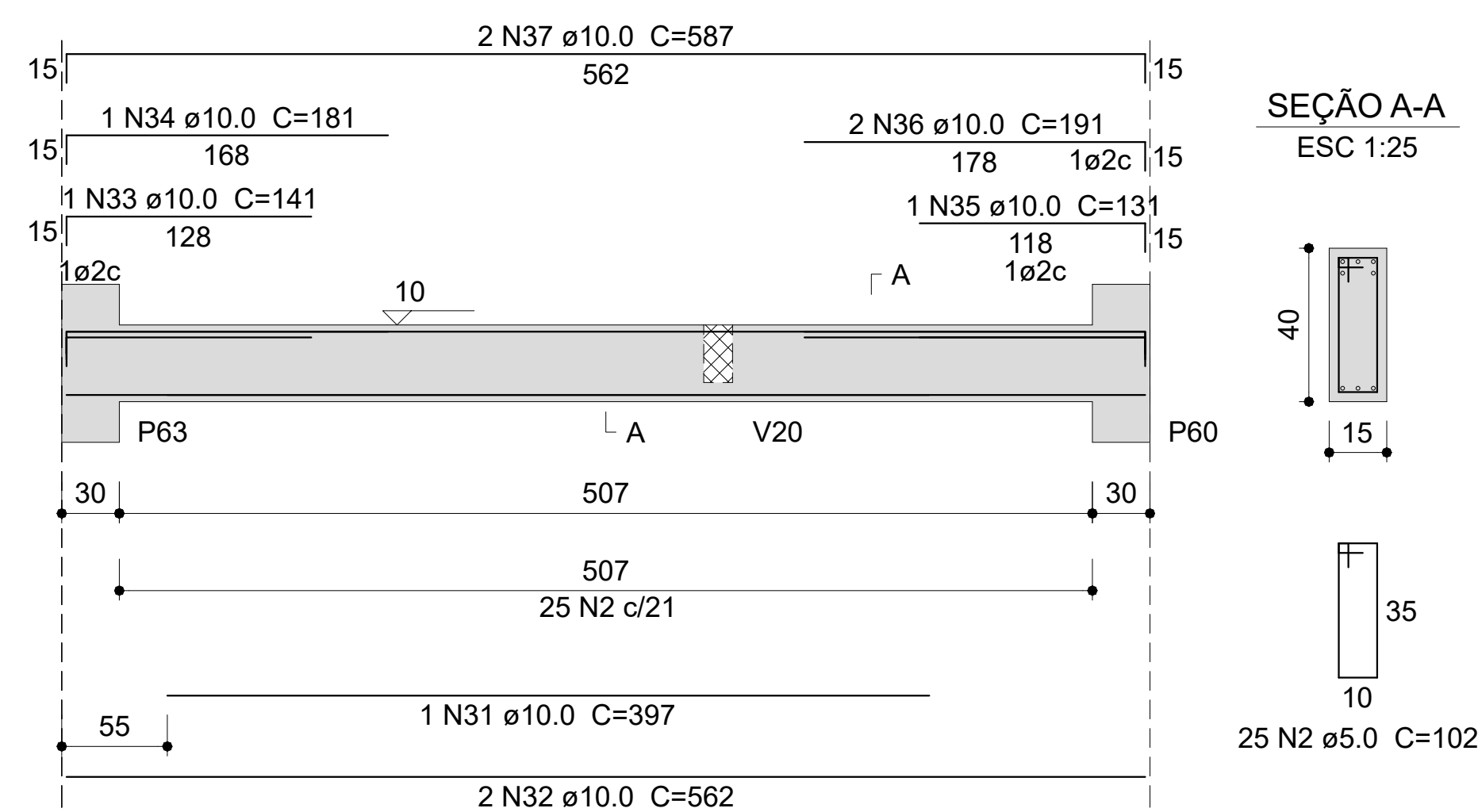
## V40

ESC 1:50



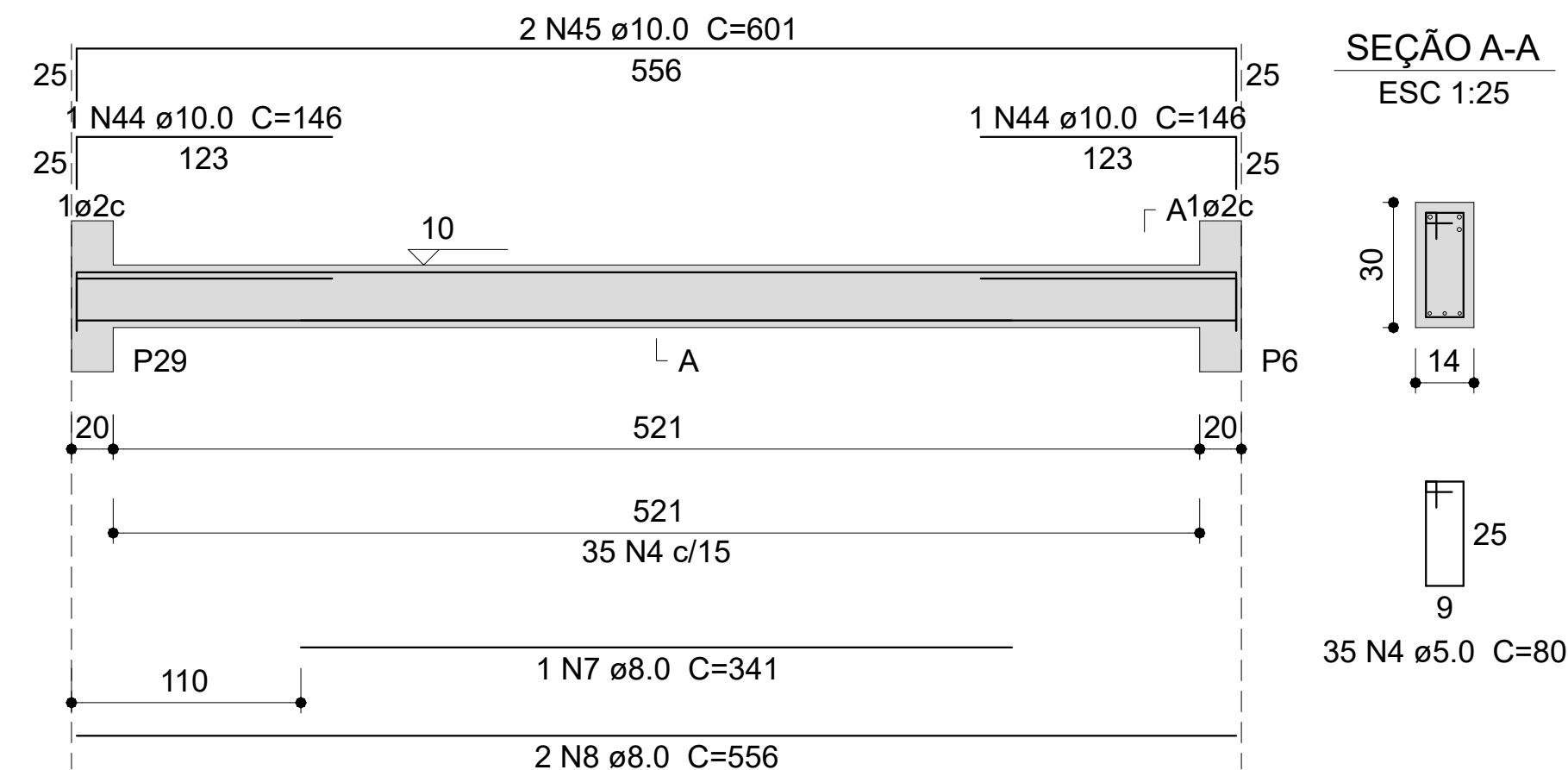
## V42

ESC 1:50



## V44

ESC 1:50

Relação do aco

V35		V36		V37	
V38		V39		V40	
V41		V42		V43	
V44					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	144	82	11808
	2	5.0	132	102	13464
	3	5.0	4	25	100
CA50	4	5.0	54	80	4320
	5	6.3	4	489	1956
	6	8.0	2	317	634
	7	8.0	1	341	341
	8	8.0	2	556	1112
	9	10.0	3	279	837
	10	10.0	3	291	873
	11	10.0	1	345	345
	12	10.0	4	590	2360
	13	10.0	8	181	1448
	14	10.0	4	625	2500
	15	10.0	1	350	350
	16	10.0	2	529	1058
	17	10.0	1	121	121
	18	10.0	2	151	302
	19	10.0	2	554	1108
	20	10.0	2	941	1882
	21	10.0	1	116	116
	22	10.0	2	235	470
	23	10.0	1	148	148
	24	10.0	2	981	1962
	25	10.0	8	96	768
	26	10.0	2	346	692
	27	10.0	2	873	1746
	28	10.0	1	210	210
	29	10.0	1	138	138
	30	10.0	2	905	1810
31	10.0	1	397	397	
32	10.0	2	562	1124	
33	10.0	1	141	141	
34	10.0	1	181	181	
35	10.0	1	131	131	
36	10.0	2	191	382	
37	10.0	2	587	1174	
38	10.0	1	348	348	
39	10.0	1	265	265	
40	10.0	2	921	1842	
41	10.0	1	230	230	
42	10.0	1	591	591	
43	10.0	2	953	1906	
44	10.0	2	146	292	
45	10.0	2	601	1202	

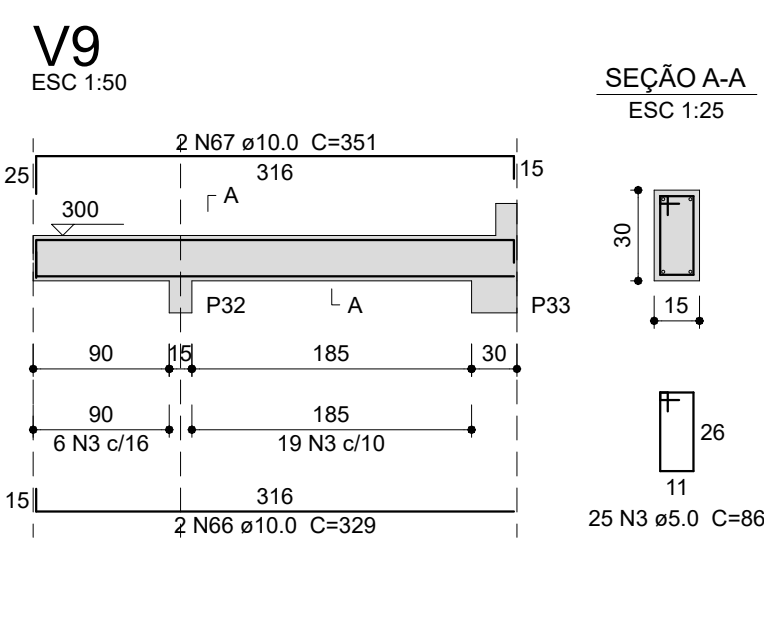
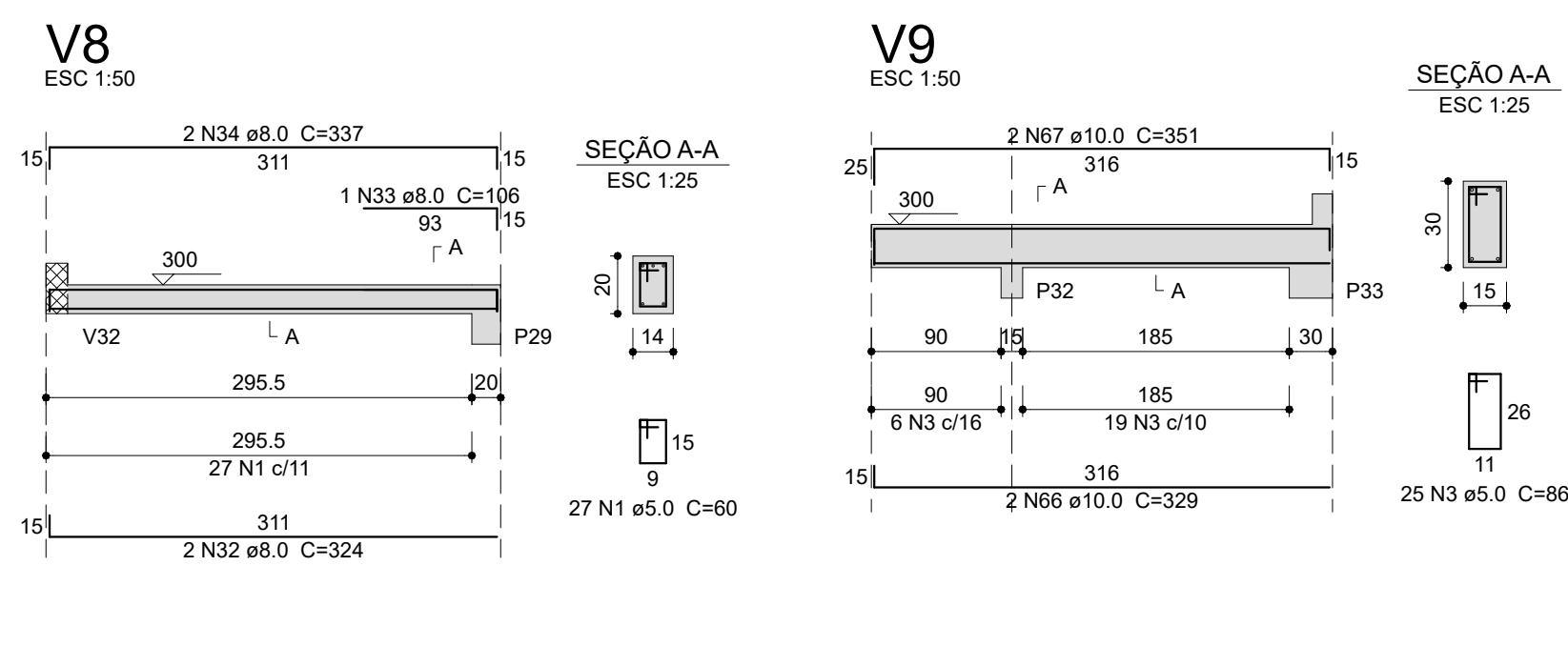
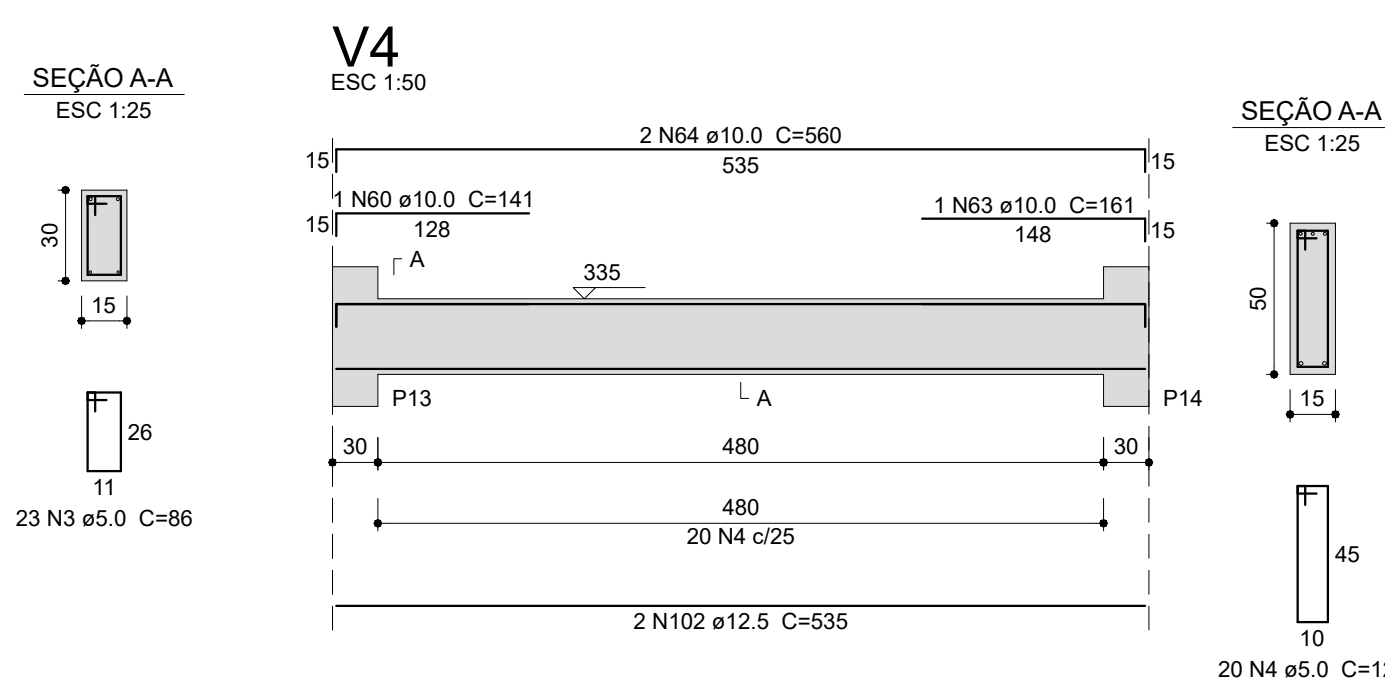
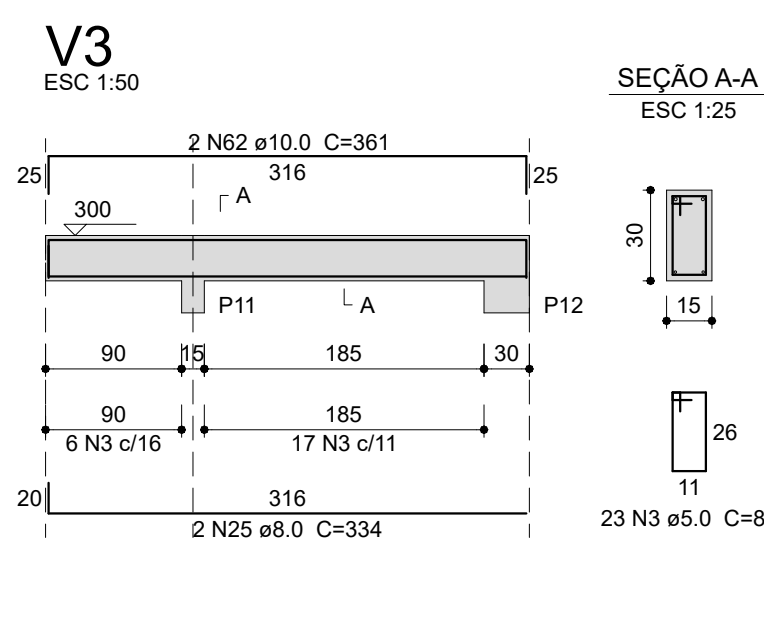
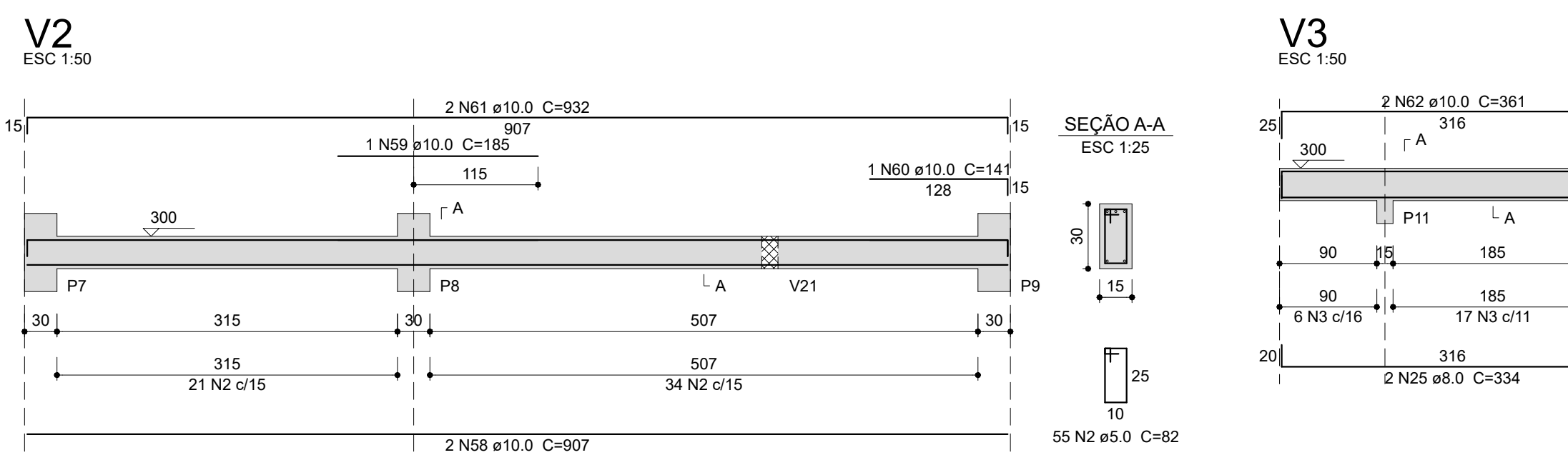
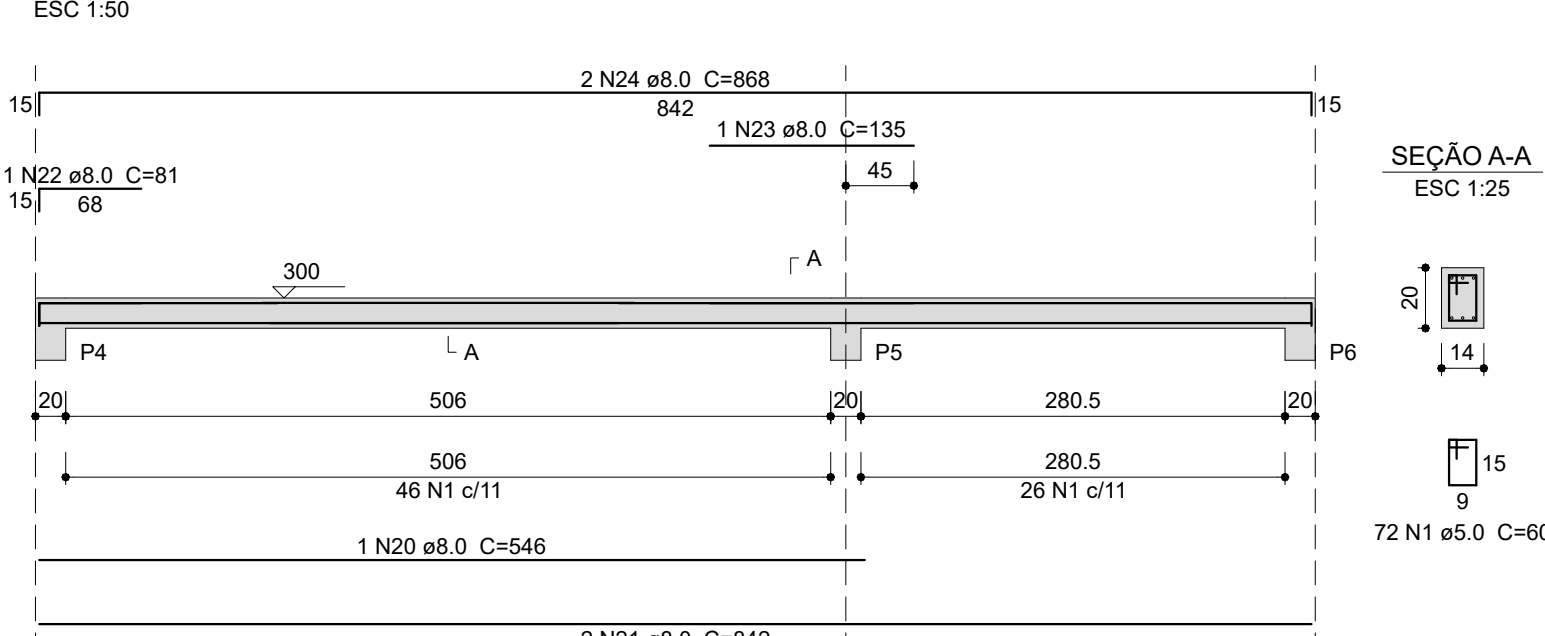
## Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	19.6	5.3
	8.0	20.9	9.1
	10.0	314.5	213.3
CA60	5.0	297	50.3
PESO TOTAL (kg)			
CA50	227.6		
CA60	50.3		

Volume de concreto (C-25) = 3.19 m<sup>3</sup>  
 Área de forma = 51.97 m<sup>2</sup>



## V



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

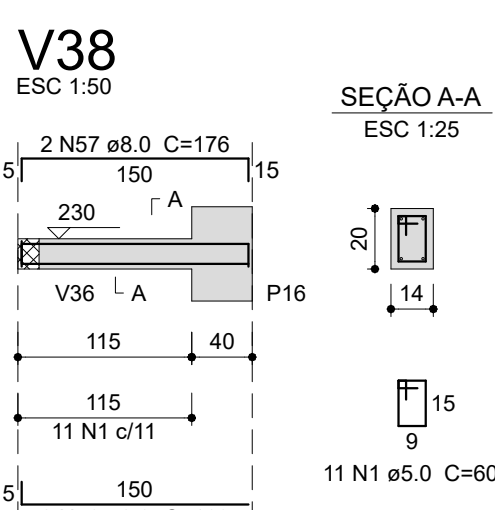
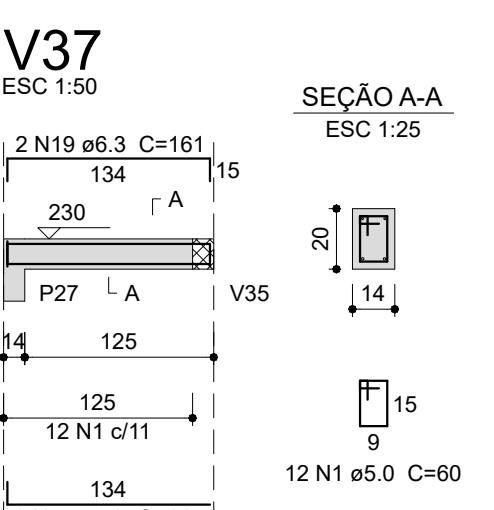
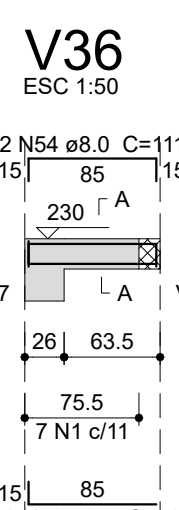
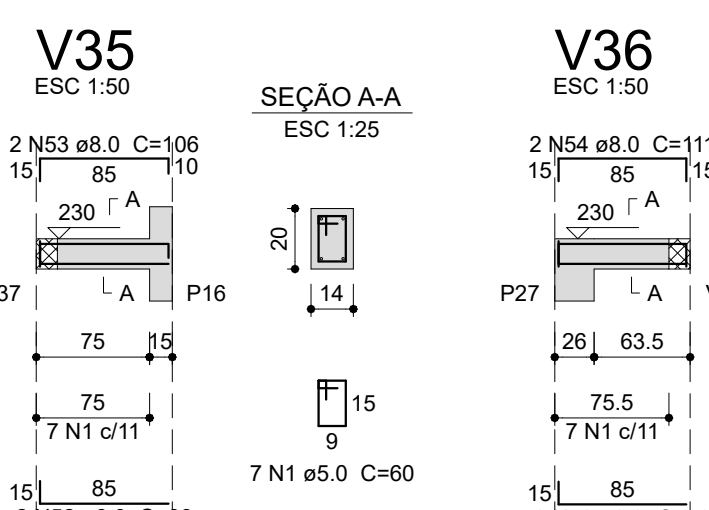
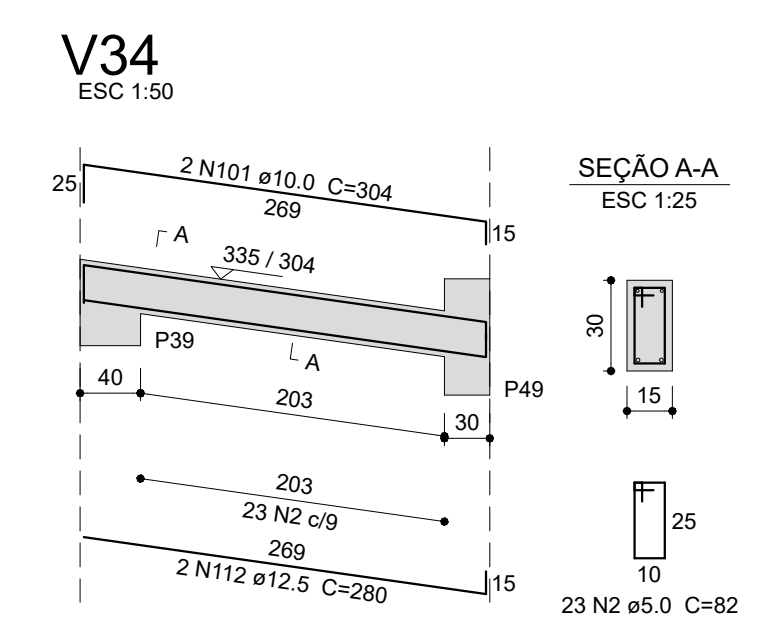
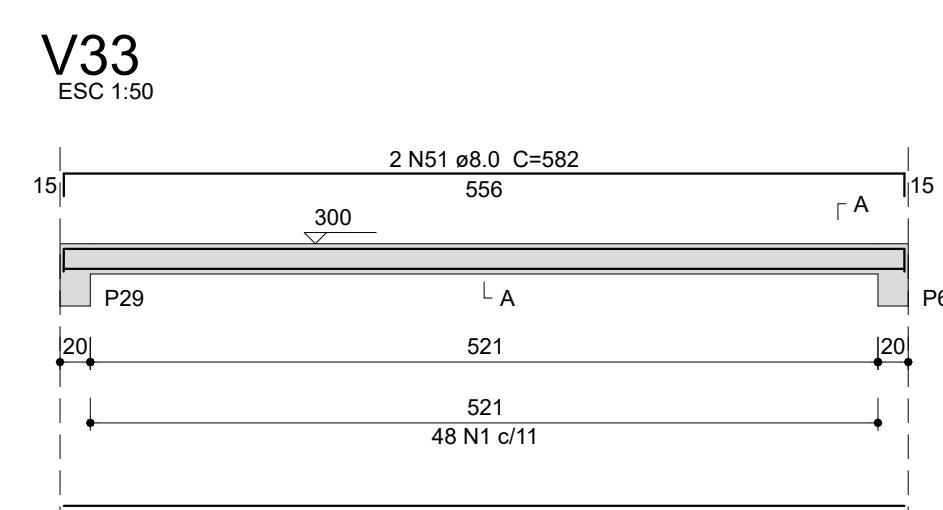
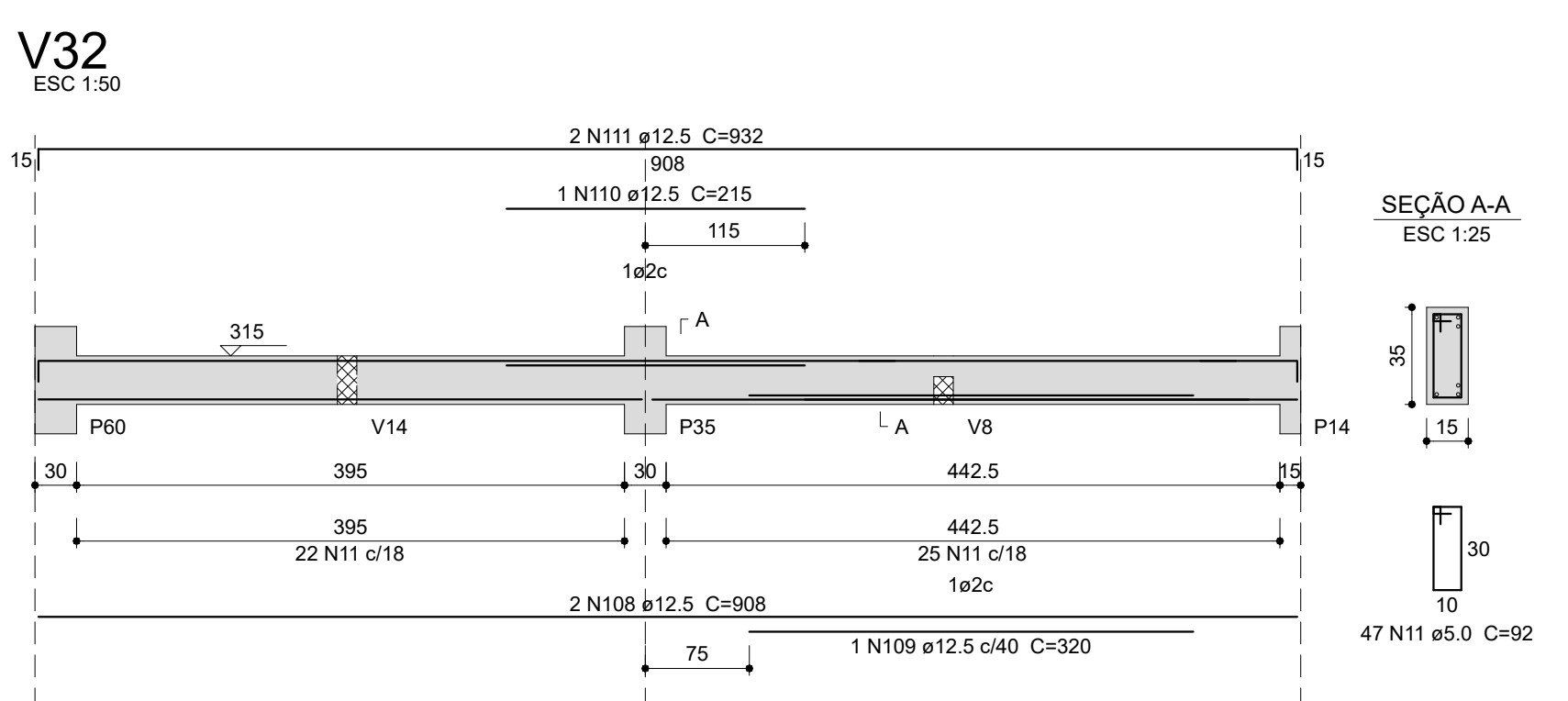
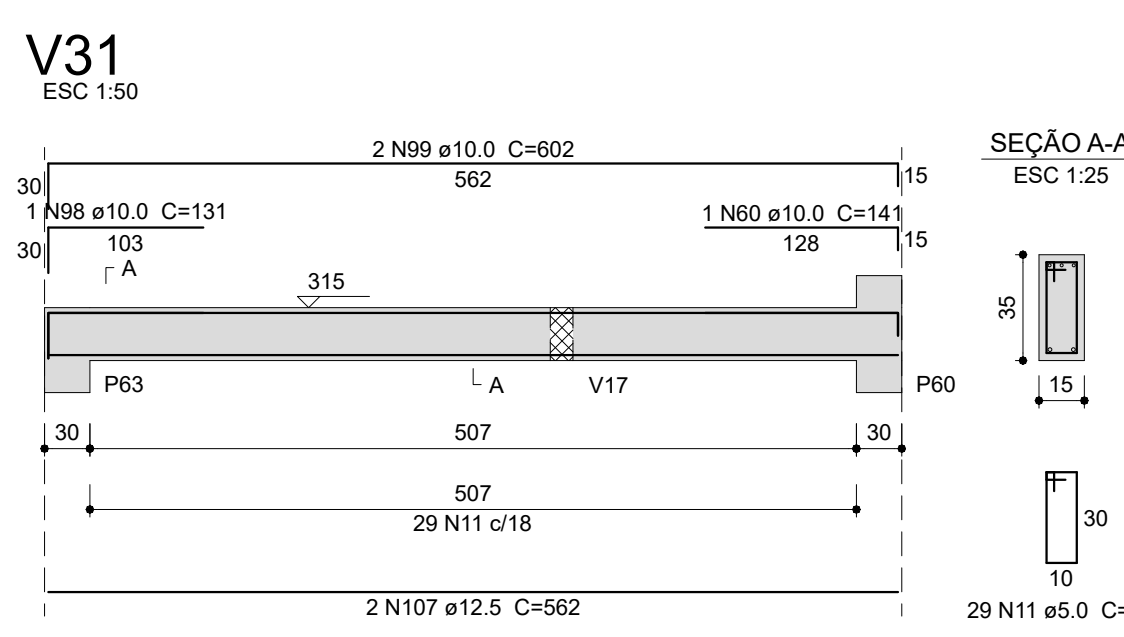
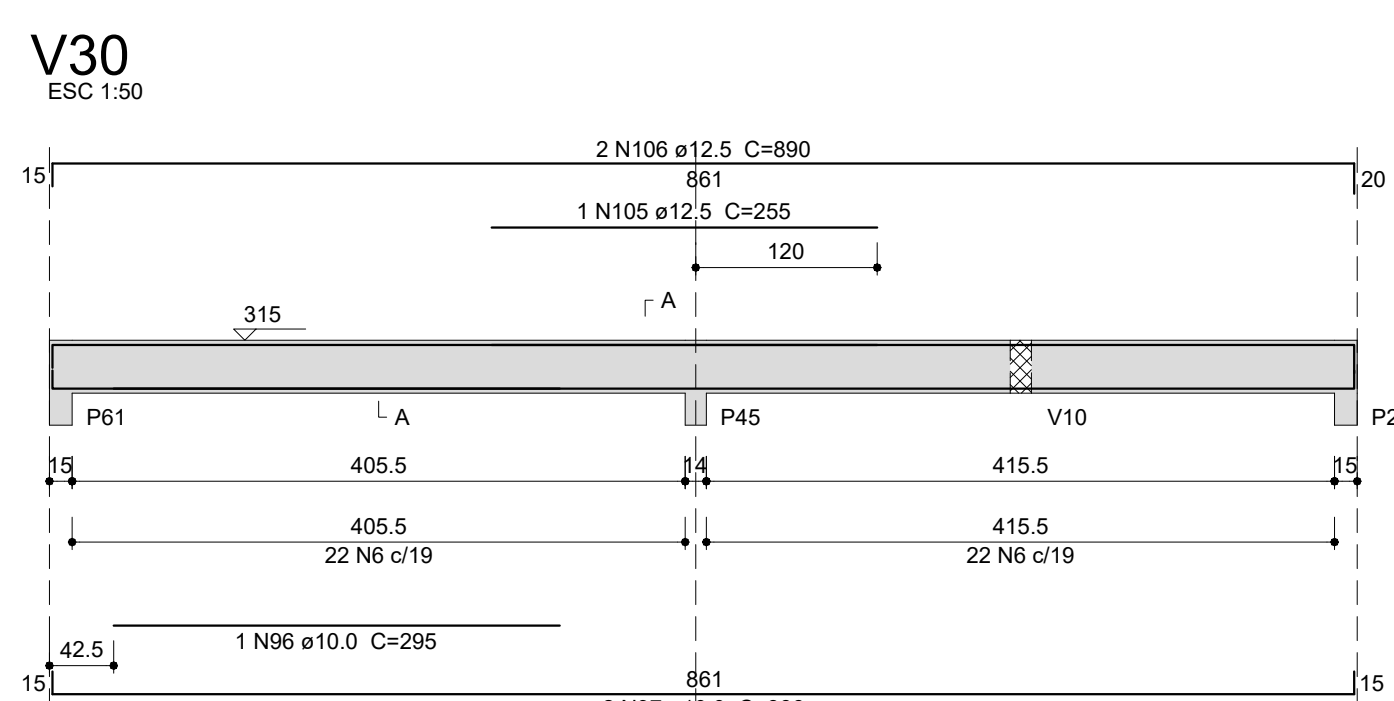
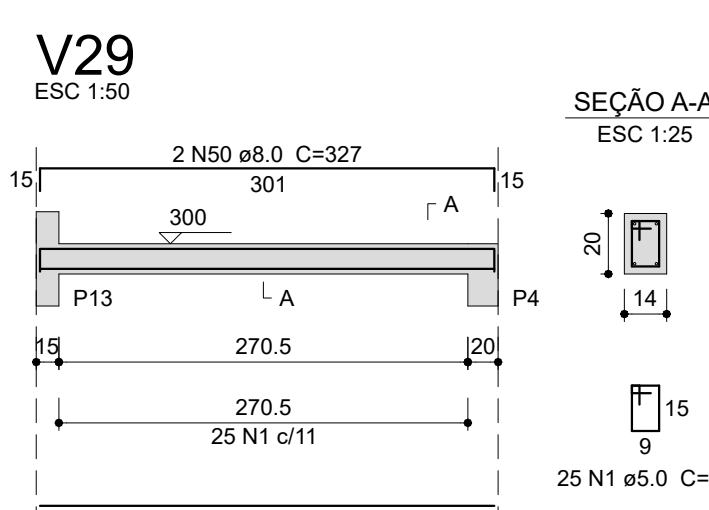
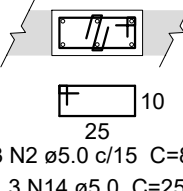
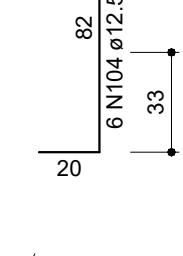
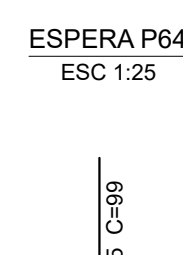
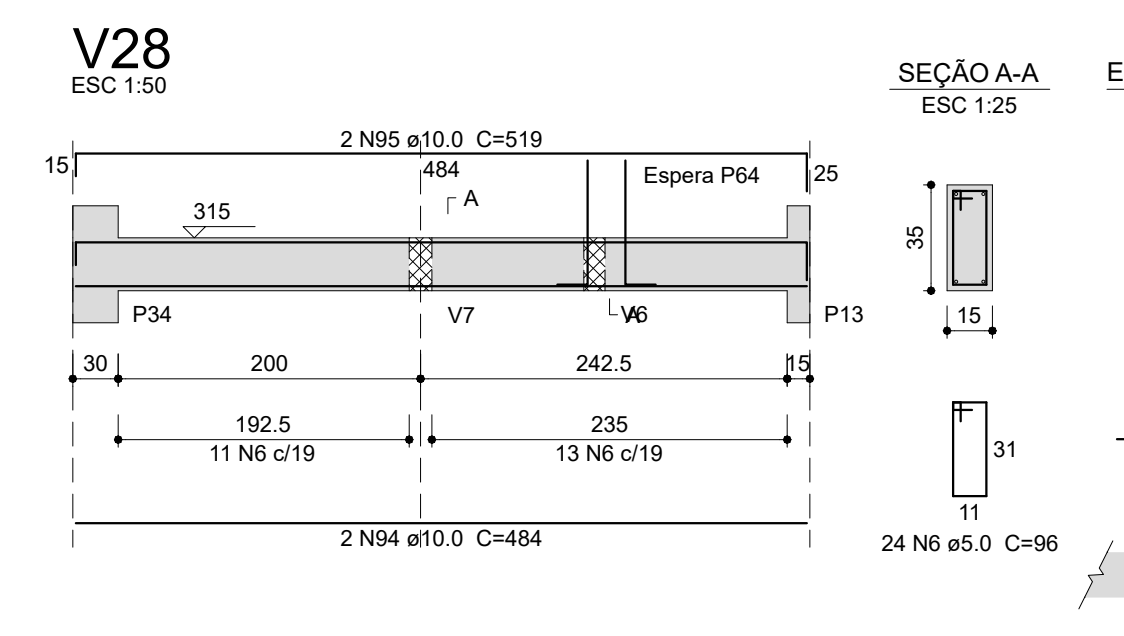
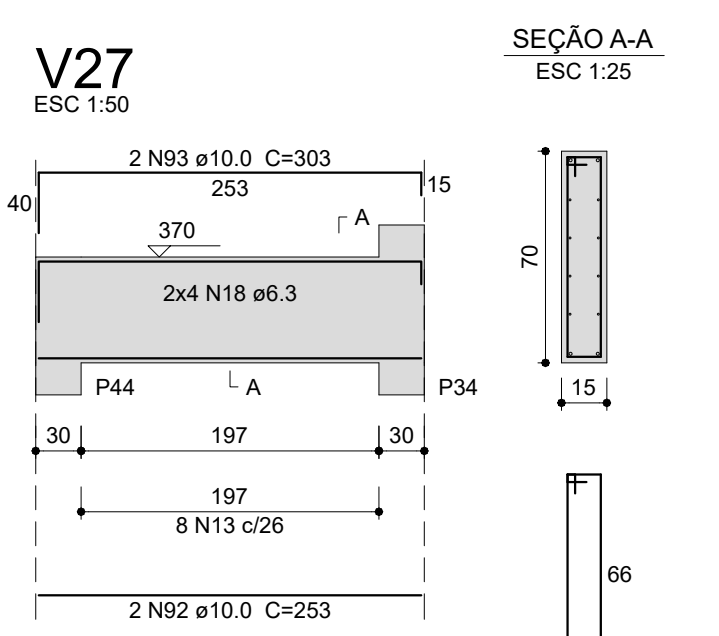
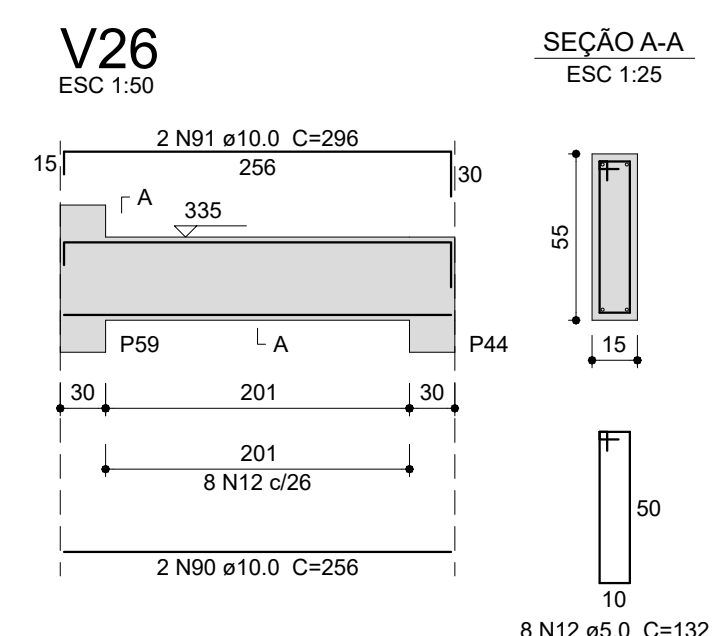
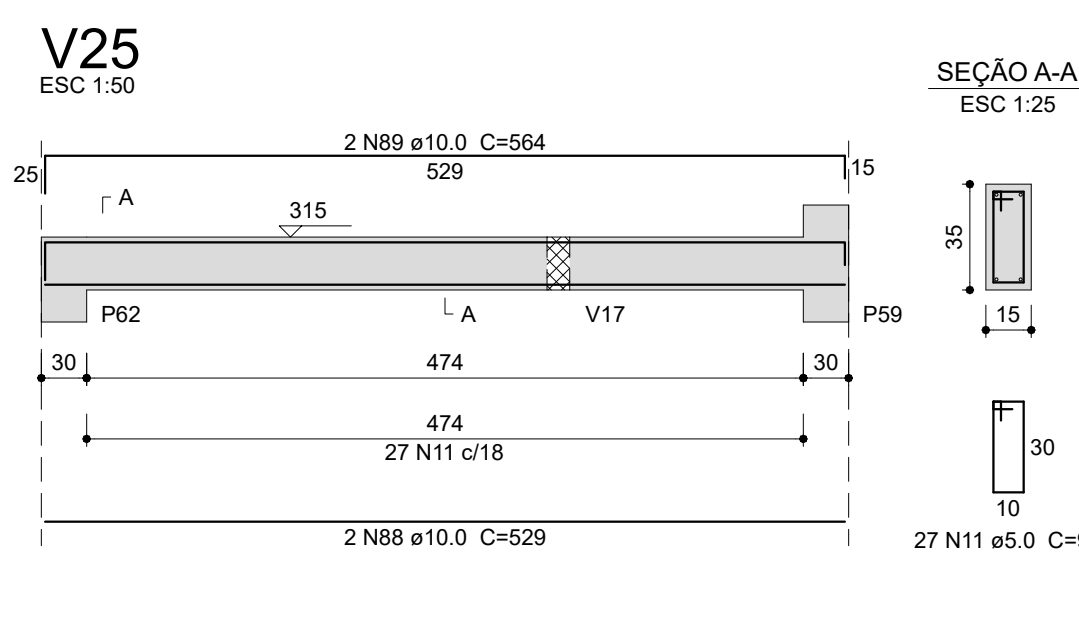
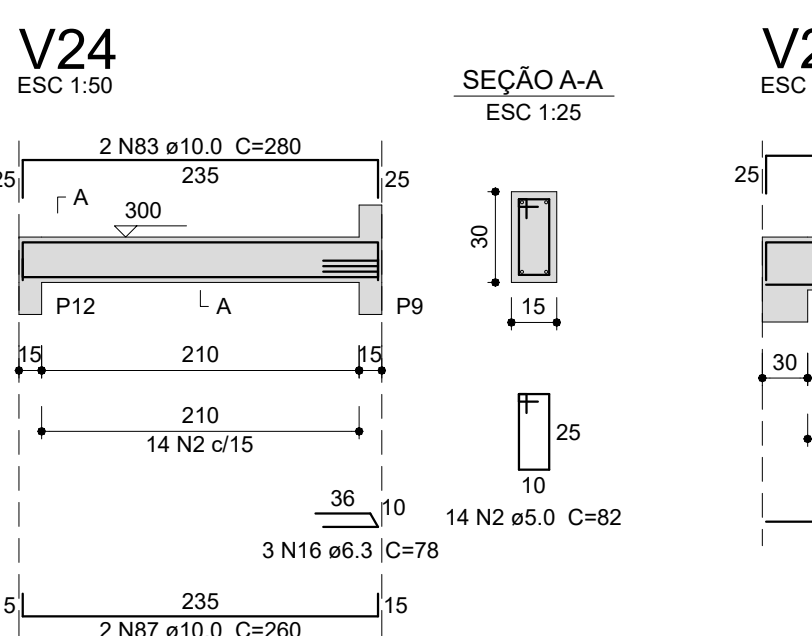
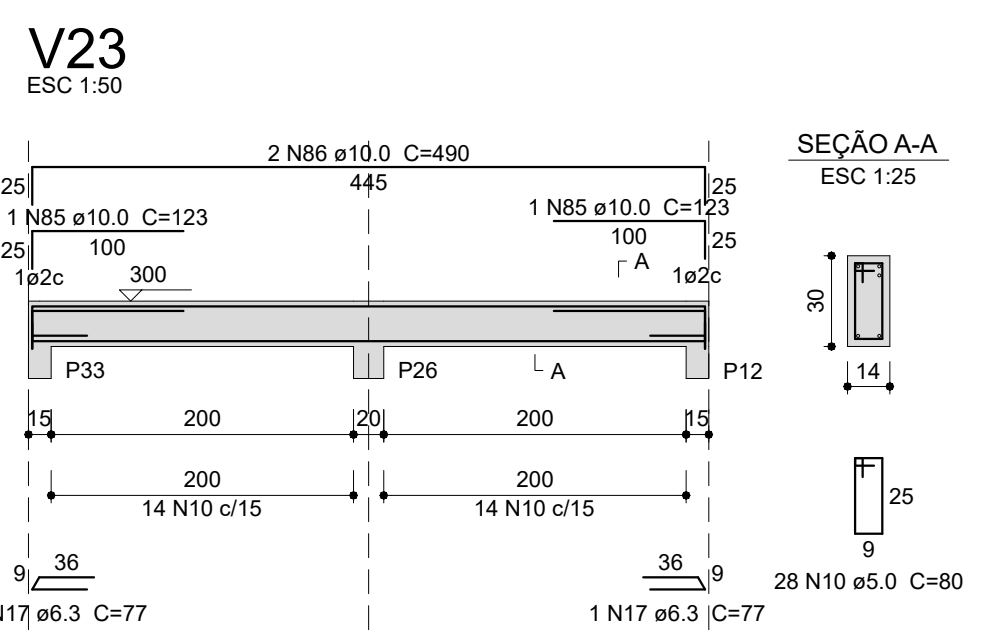
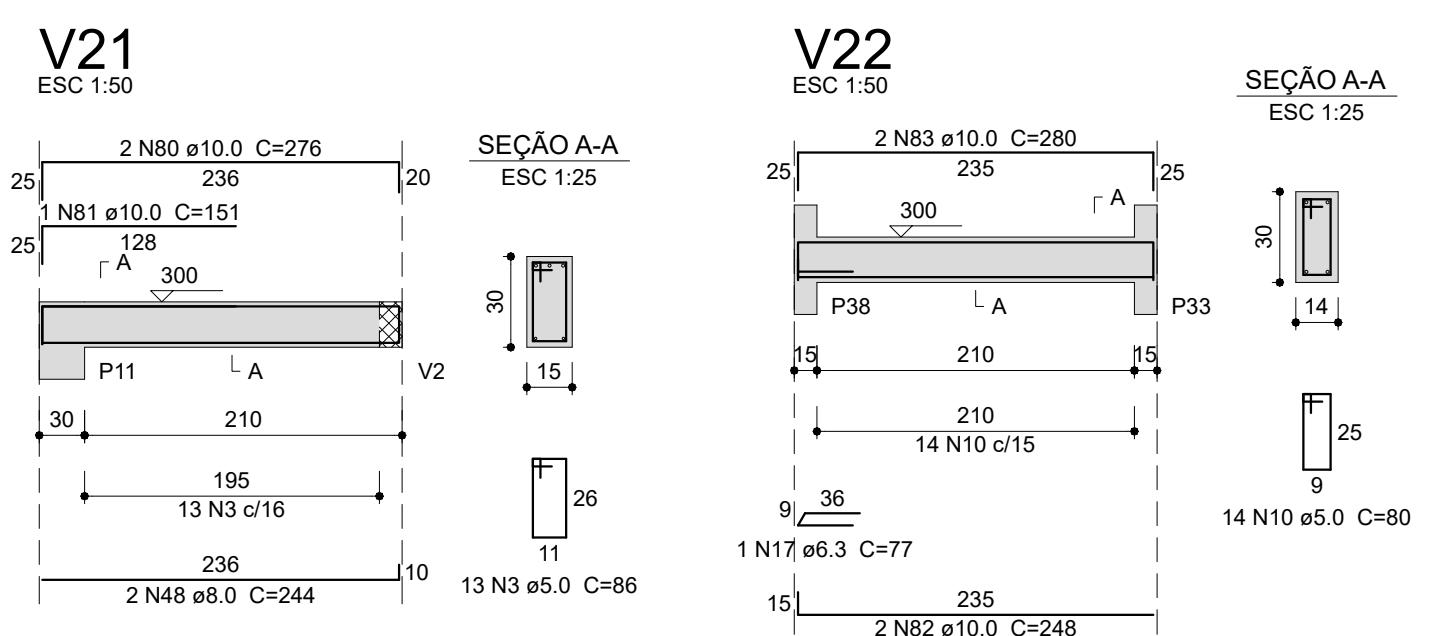
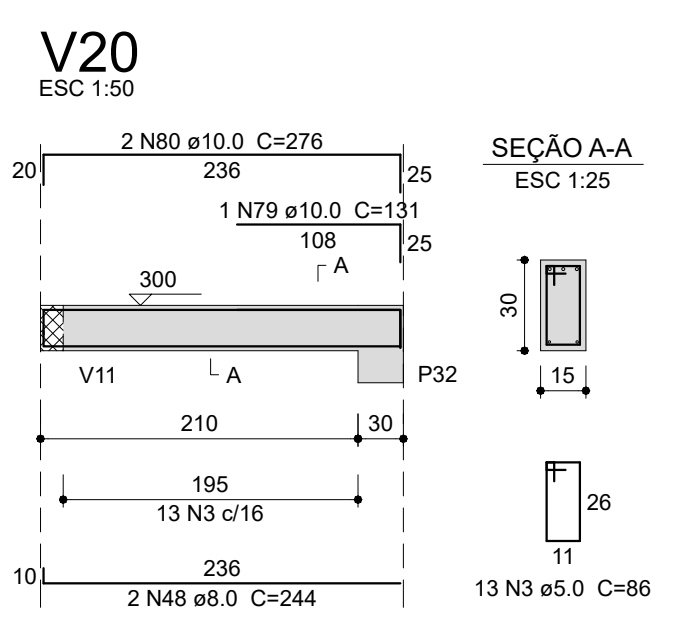
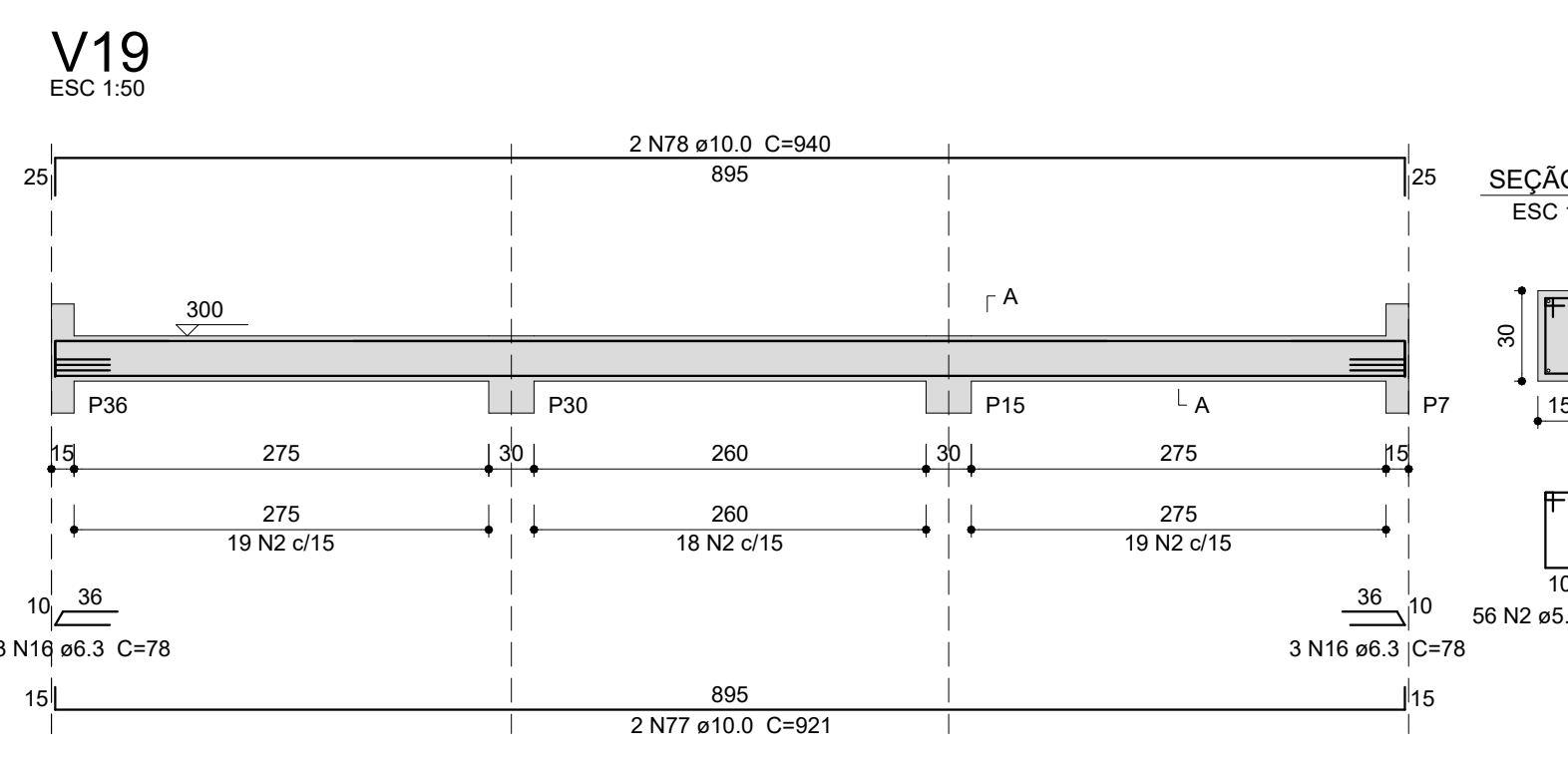
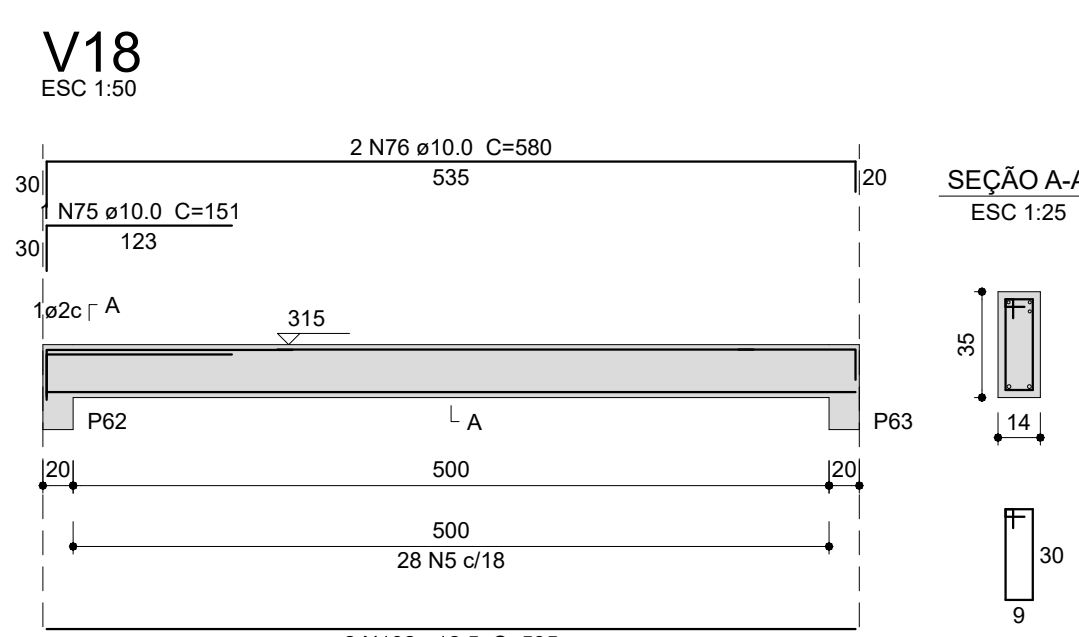
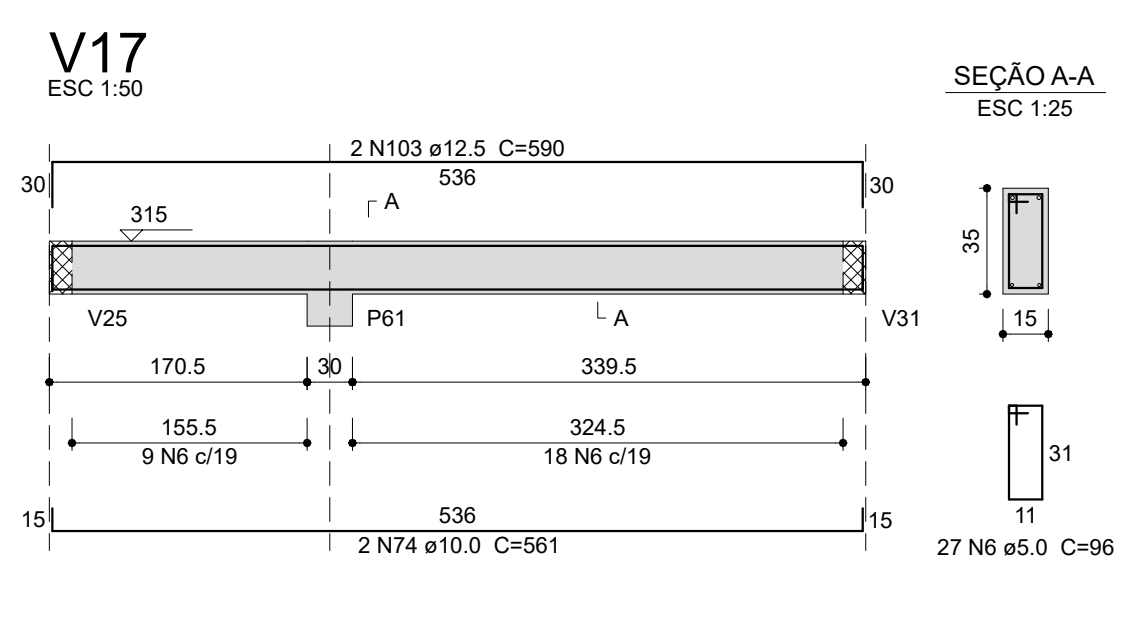
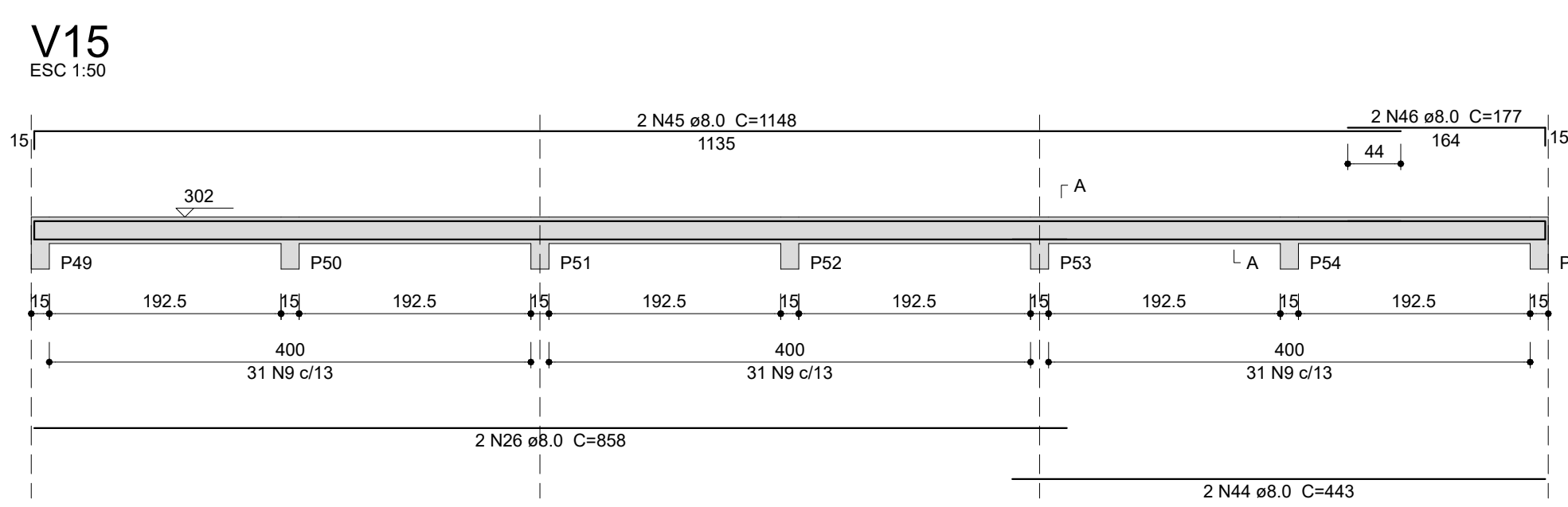
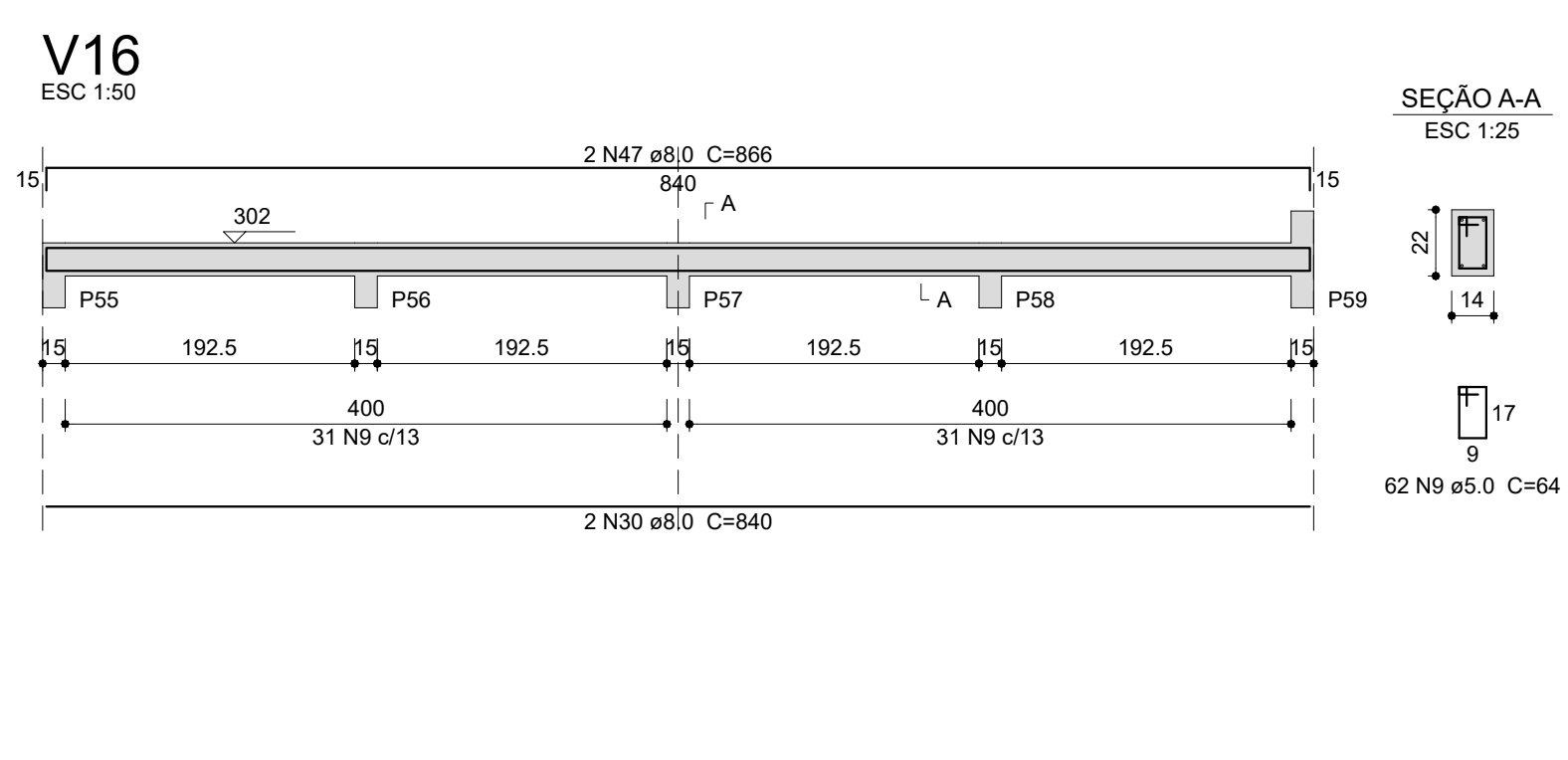
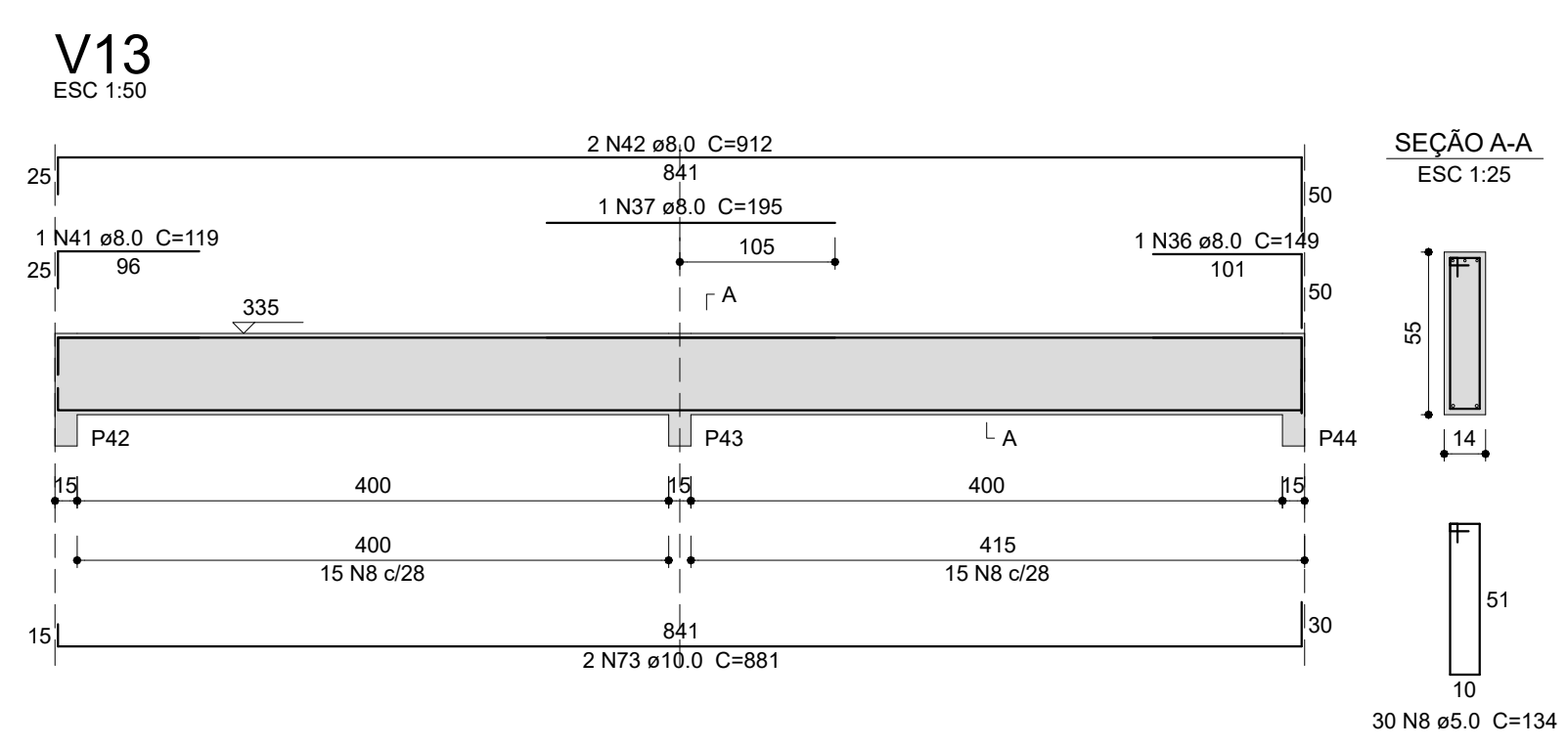
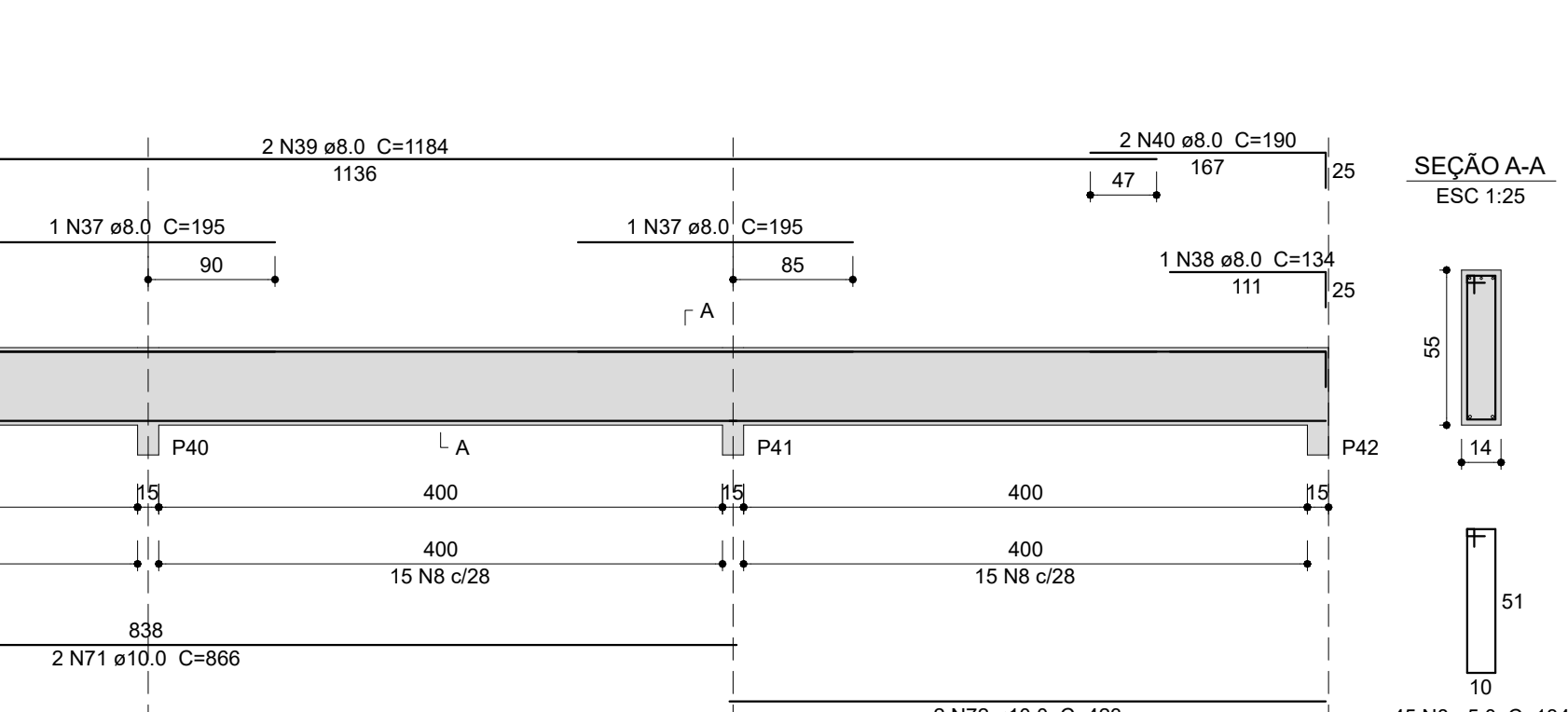
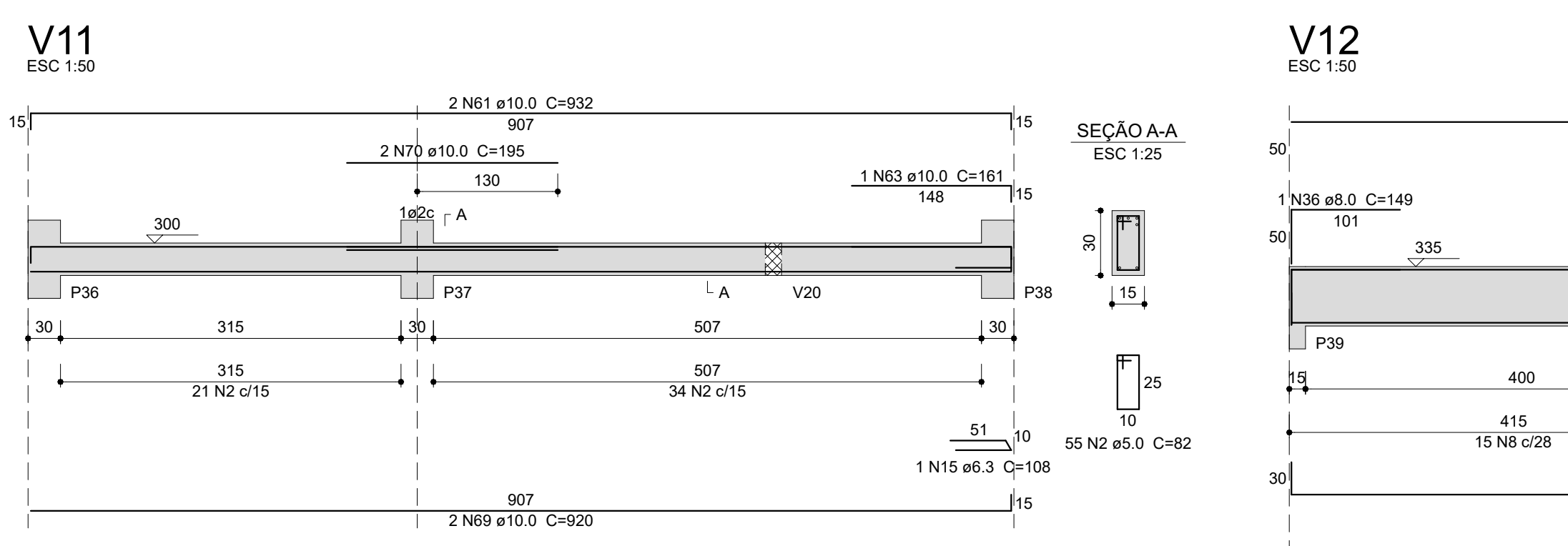
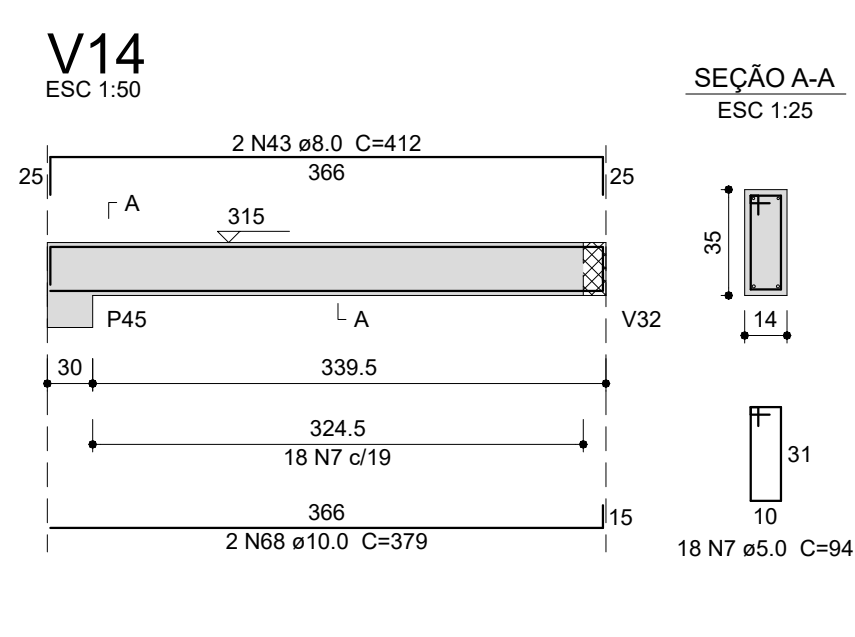
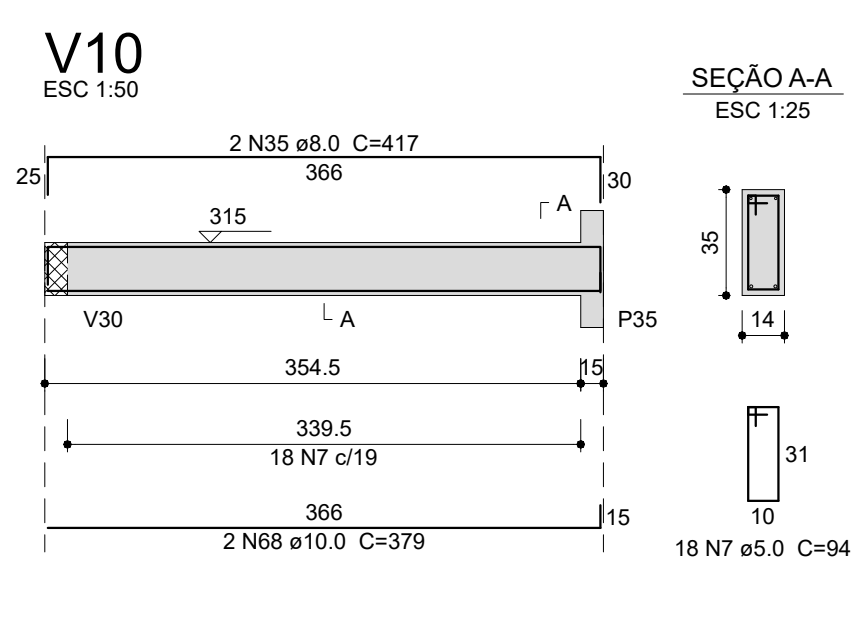
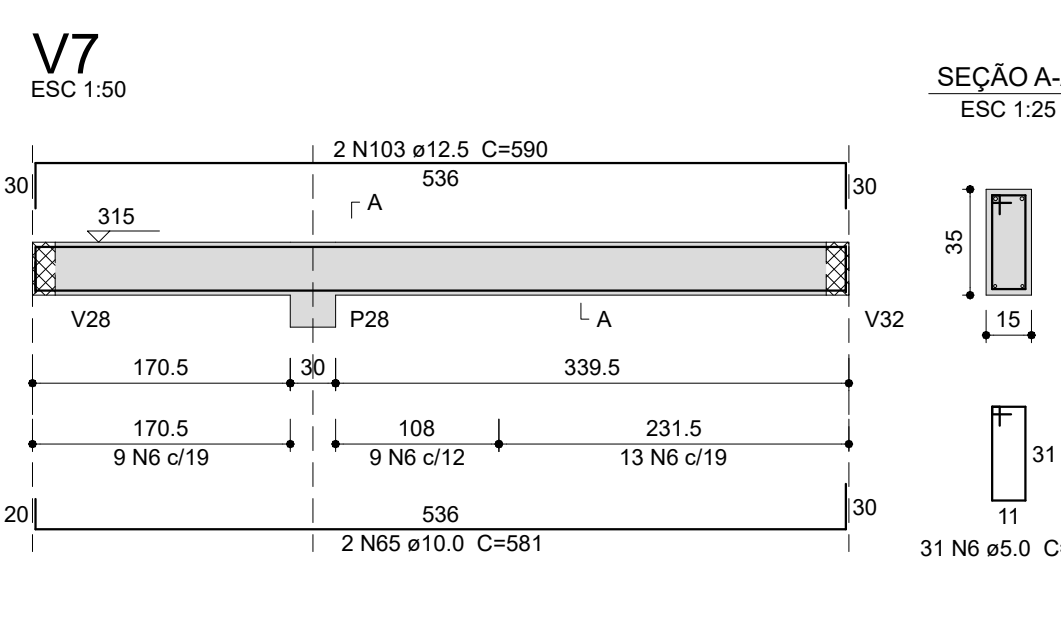
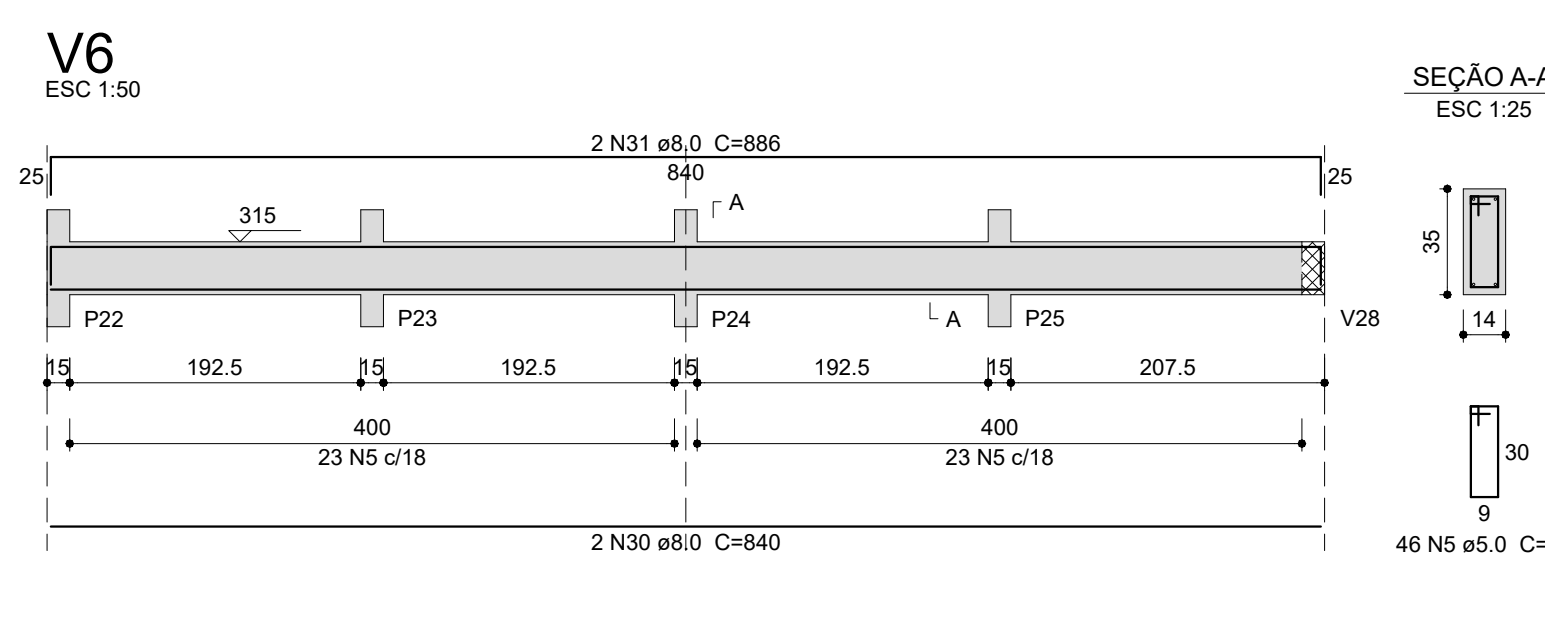
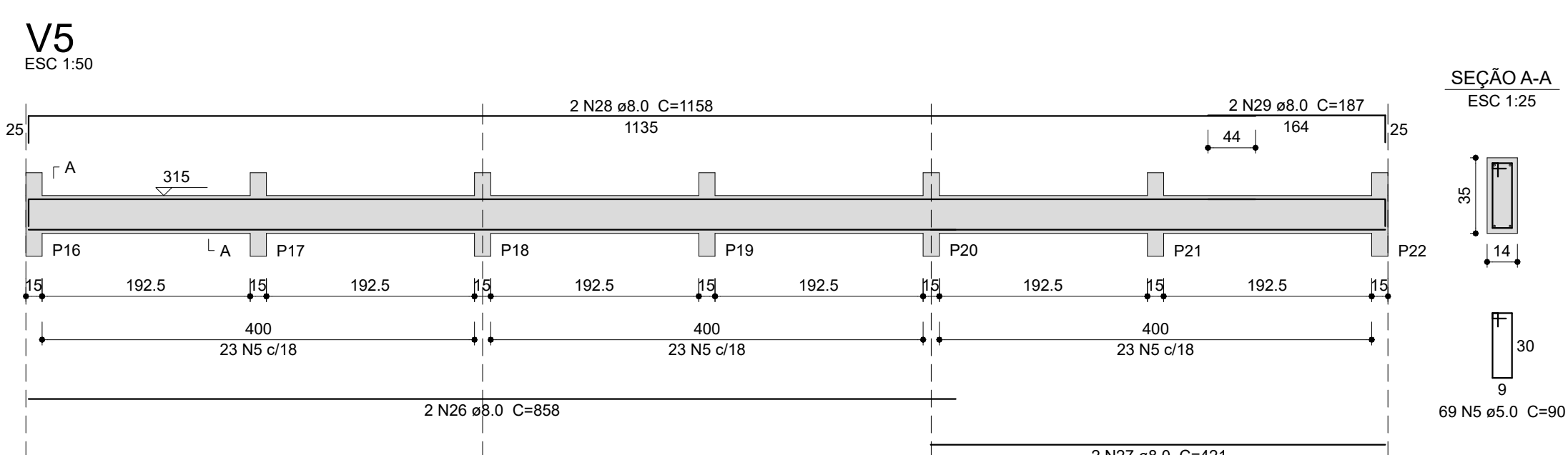
ACO	N	DIAM	QUANT	C-UNIT	C-TOTAL
CASS	2	5.0	200	82	16400
	2	5.0	200	82	16892
	3	5.0	74	86	6384
	4	5.0	143	122	12708
	5	5.0	143	90	12870
	6	5.0	143	108	12708
	7	5.0	38	94	3384
	8	5.0	155	84	13000
	10	5.0	42	80	3360
	10	5.0	103	103	10300
CASSO	12	5.0	8	132	1056
	12	5.0	8	132	1026
	14	5.0	3	132	1026
	15	6.3	1	108	108
	16	6.3	1	108	108
	17	6.3	2	77	231
	18	6.3	2	77	231
	19	6.3	2	101	322
	20	8.0	1	540	540
	20	8.0	1	540	842
	22	8.0	1	81	81
	22	8.0	1	81	135
	24	8.0	2	868	1736
	25	8.0	2	334	668
	26	8.0	4	858	1716
	27	8.0	2	421	842
	28	8.0	1	2510	2510
	29	8.0	2	187	374
	30	8.0	4	840	3360
	32	8.0	2	328	648
	32	8.0	2	328	648
	34	8.0	2	334	668
	35	8.0	2	417	834
	36	8.0	2	194	388
	37	8.0	3	195	585
	38	8.0	1	134	134
	39	8.0	2	1184	2368
	40	8.0	2	190	380
41	8.0	1	119	119	
42	8.0	2	913	824	
43	8.0	2	824	412	
44	8.0	2	412	824	
45	8.0	2	1162	2324	
46	8.0	2	777	386	
47	8.0	2	866	1732	
48	8.0	2	301	602	
49	8.0	2	654	327	
51	8.0	2	582	1164	
52	8.0	4	98	392	
52	8.0	2	182	364	
54	8.0	1	111	222	
54	8.0	2	147	294	
56	8.0	2	163	326	
57	8.0	2	178	352	
58	8.0	2	184	368	
59	10.0	1	935	187	
61	10.0	1	423	846	
62	10.0	2	561	1122	
62	10.0	2	561	1122	
64	10.0	2	382	764	
65	10.0	2	382	764	
66	10.0	2	329	658	
67	10.0	2	351	702	
68	10.0	2	371	742	
69	10.0	2	320	640	
70	10.0	2	380	760	
71	10.0	2	866	1732	
72	10.0	2	423	846	
73	10.0	2	881	1762	
74	10.0	2	561	1122	
75	10.0	1	151	302	
76	10.0	2	580	1160	
77	10.0	2	582	1164	
78	10.0	2	940	1880	
79	10.0	1	131	131	
80	10.0	2	278	1014	
81	10.0	1	151	151	
82	10.0				
83	10.0	4	280	1120	
84	10.0	2	470	940	
85	10.0	2	256	512	
86	10.0	2	490	980	
87	10.0	2	520	1040	
88	10.0	2	529	1058	
89	10.0	2	564	1128	
90	10.0	2	564	1128	
91	10.0	2	296	592	
92	10.0	2	508	1016	
93	10.0	2	303	606	
94	10.0	2	434	868	
95	10.0	2	519	1038	
96	10.0	1	235	235	
97	10.0	2	472	944	
98	10.0	1	131	131	
99	10.0	2	602	1204	
100	10.0	2	561	1122	
101	10.0	2	304	608	
102	10.0	2	2140	4280	
103	12.5	4	590	2360	
104	12.5	6	590	2360	
105	12.5	6	590	2360	
106	12.5	6	890	3560	
107	12.5	6	890	3560	
108	12.5	2	980	1960	
109	12.5	2	320	640	
110	12.5	2	215	215	
111	12.5	2	932	1864	
112	12.5	2	560	1120	

### Resumo do aço

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	33.9	9.1
	8.0	362.1	157.1
	10.0	423	286.8
	12.5	130.3	138.1
CA60	5.0	1018.6	172.7
PESO TOTAL (kg)			
CA50	591.1		
CA60	172.7		

Volume de concreto (C-25) = 10.1 m<sup>3</sup>  
Área de forma = 169.26 m<sup>2</sup>

PLATE 10. 100-20 IN.

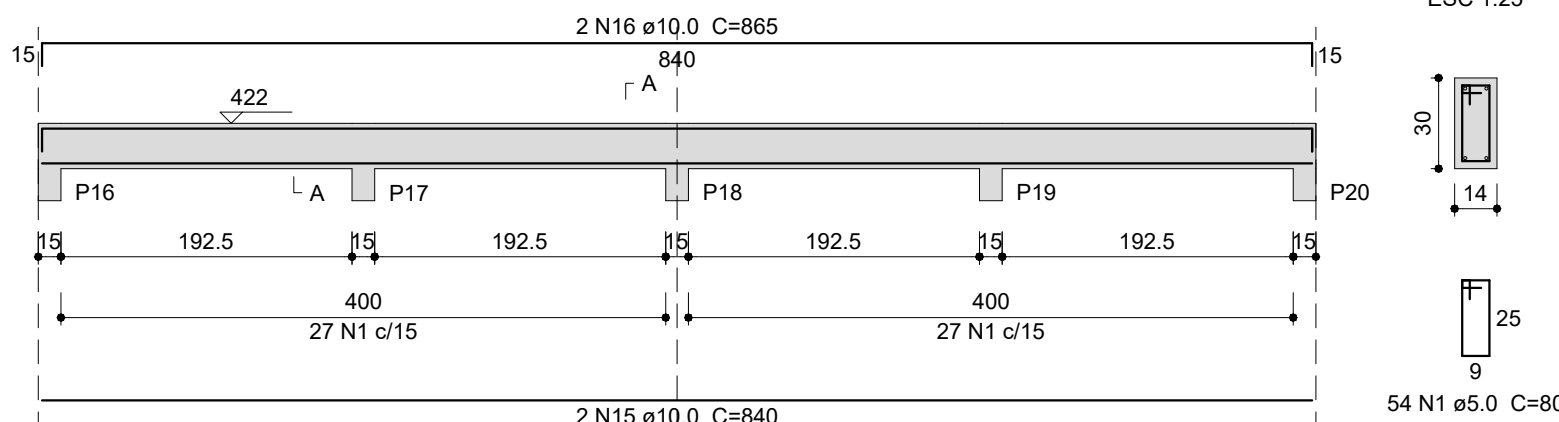




DETALHE - VIGAS INTERMEDIÁRIO

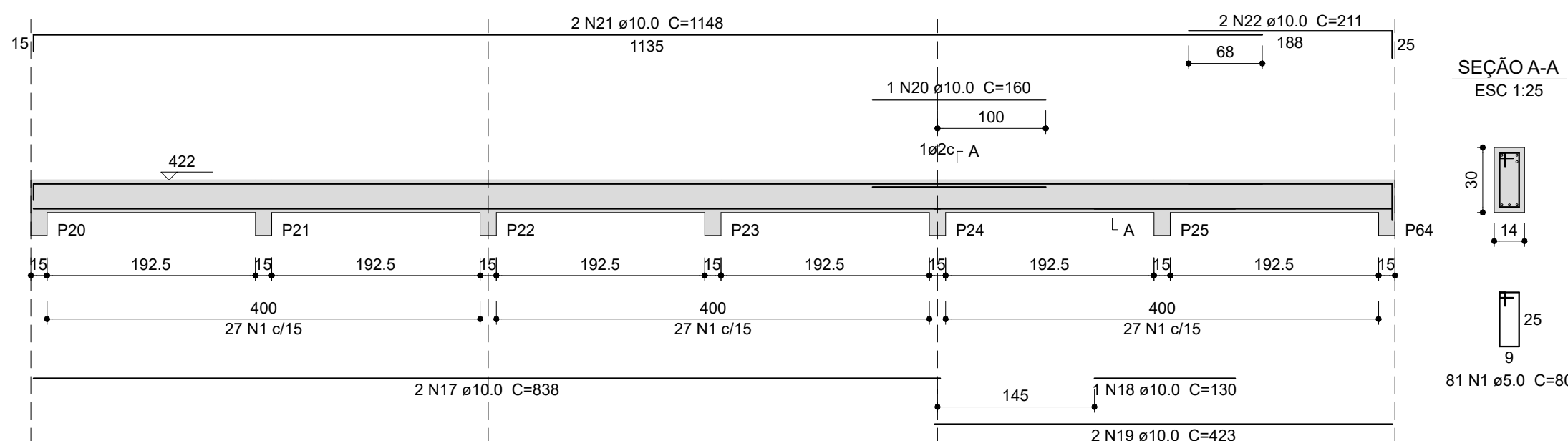
V1

ESC 1:50



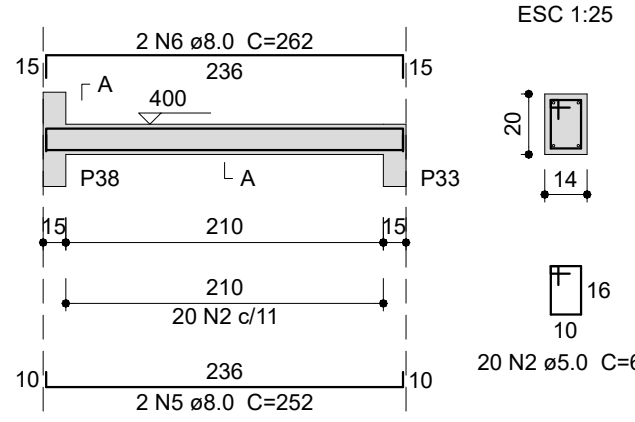
V2

ESC 1:50



V3

ESC 1:50



Relação do aço

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	135	80	10800
	2	5.0	20	64	1280
	3	5.0	125	102	12750
	4	5.0	97	82	7954
CA50	5	8.0	2	252	504
	6	8.0	2	262	524
	7	8.0	1	132	132
	8	8.0	1	138	138
	9	8.0	2	581	1162
	10	8.0	2	488	976
	11	8.0	2	534	1068
	12	8.0	1	142	142
	13	8.0	1	143	143
	14	8.0	2	614	1228
	15	10.0	2	840	1680
	16	10.0	2	865	1730
	17	10.0	2	838	1676
	18	10.0	1	130	130
	19	10.0	2	423	846
	20	10.0	1	160	160
	21	10.0	2	1148	2296
	22	10.0	2	211	422
	23	10.0	6	176	1056
	24	10.0	8	202	1616
	25	10.0	10	661	6610
	26	10.0	8	216	1728
	27	10.0	8	243	1944
	28	10.0	2	535	1070
	29	10.0	2	568	1136
	30	12.5	10	596	5960
	31	12.5	3	364	1092
	32	12.5	1	348	348

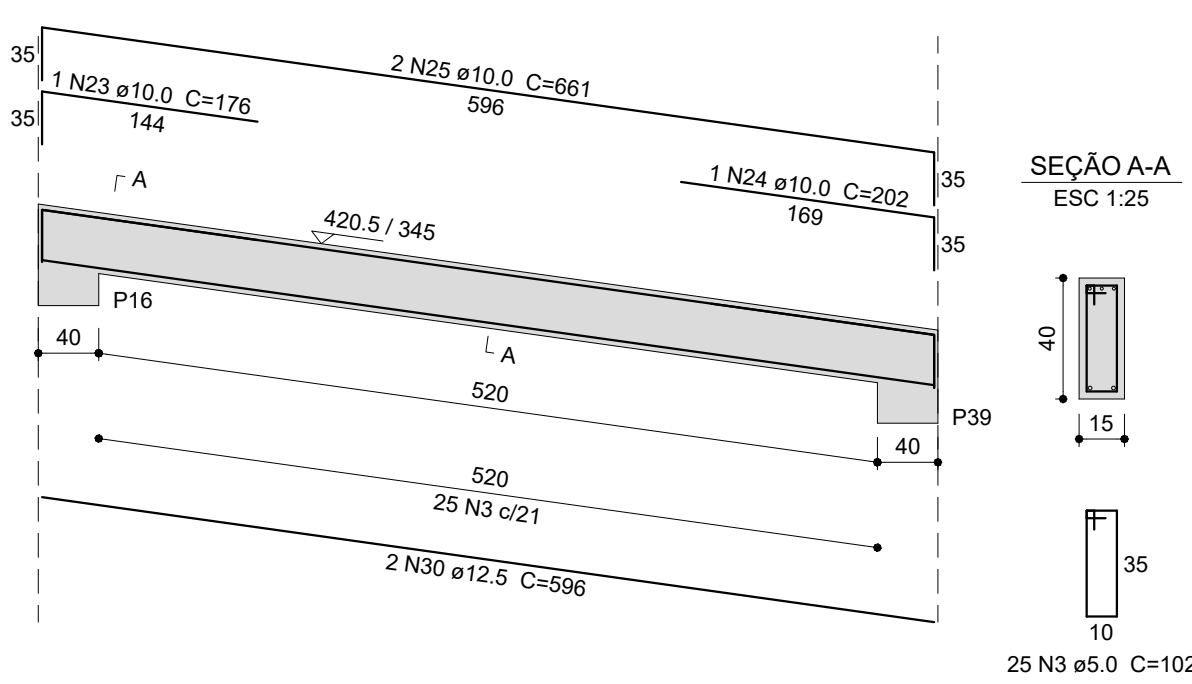
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8.0	60.2	26.1
	10.0	241	163.4
	12.5	74	78.4
CA60	5.0	327.9	55.6
PESO TOTAL (kg)			
CA50		268	
CA60		55.6	

Volume de concreto (C-25) = 3.45 m³  
Área de forma = 57.05 m²

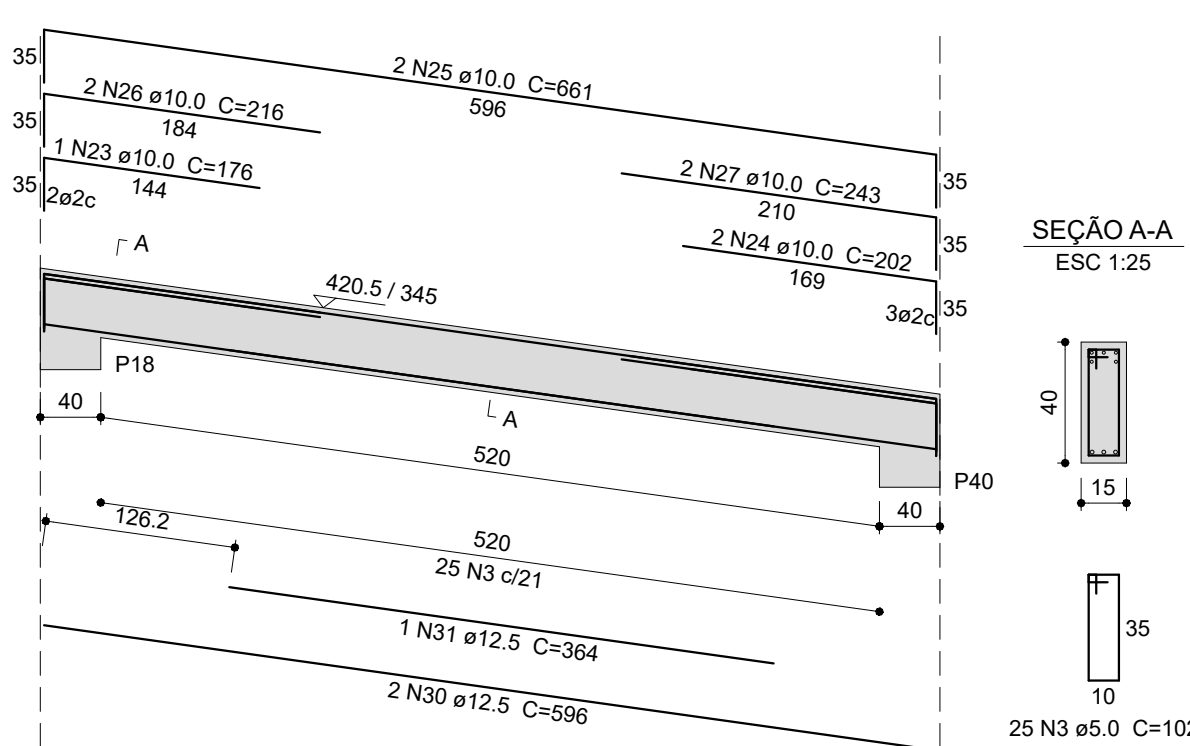
V4

ESC 1:50



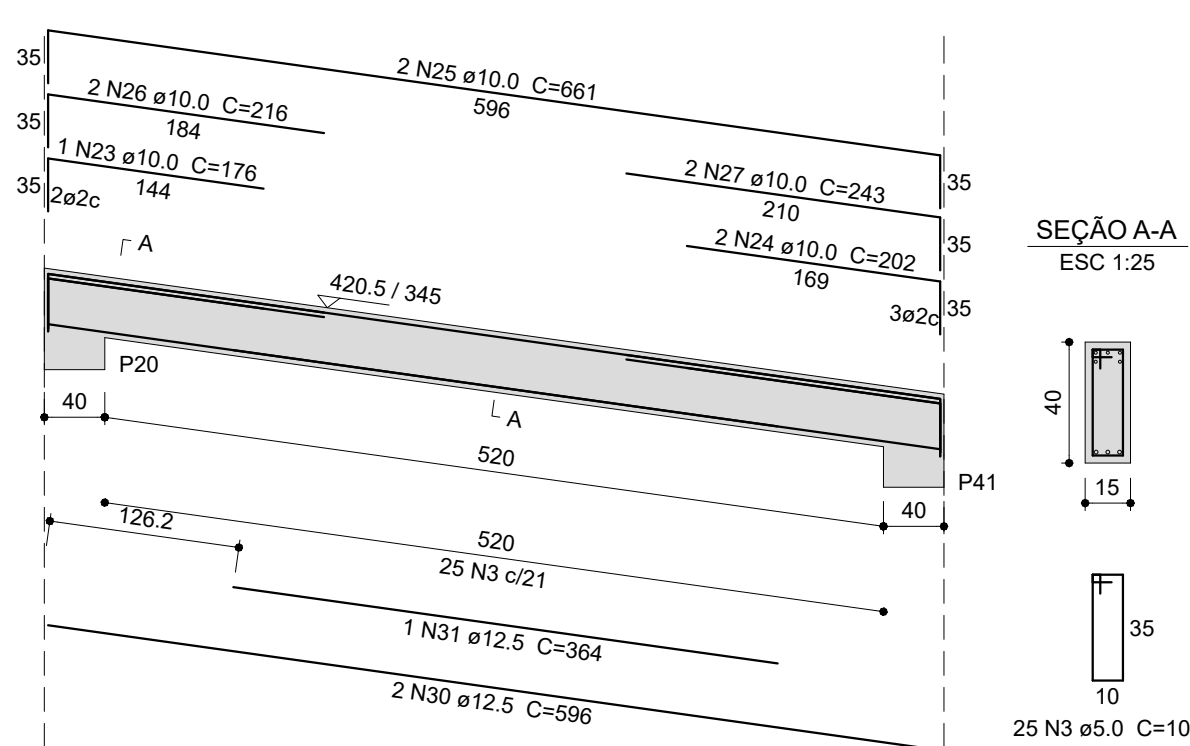
V5

ESC 1:50



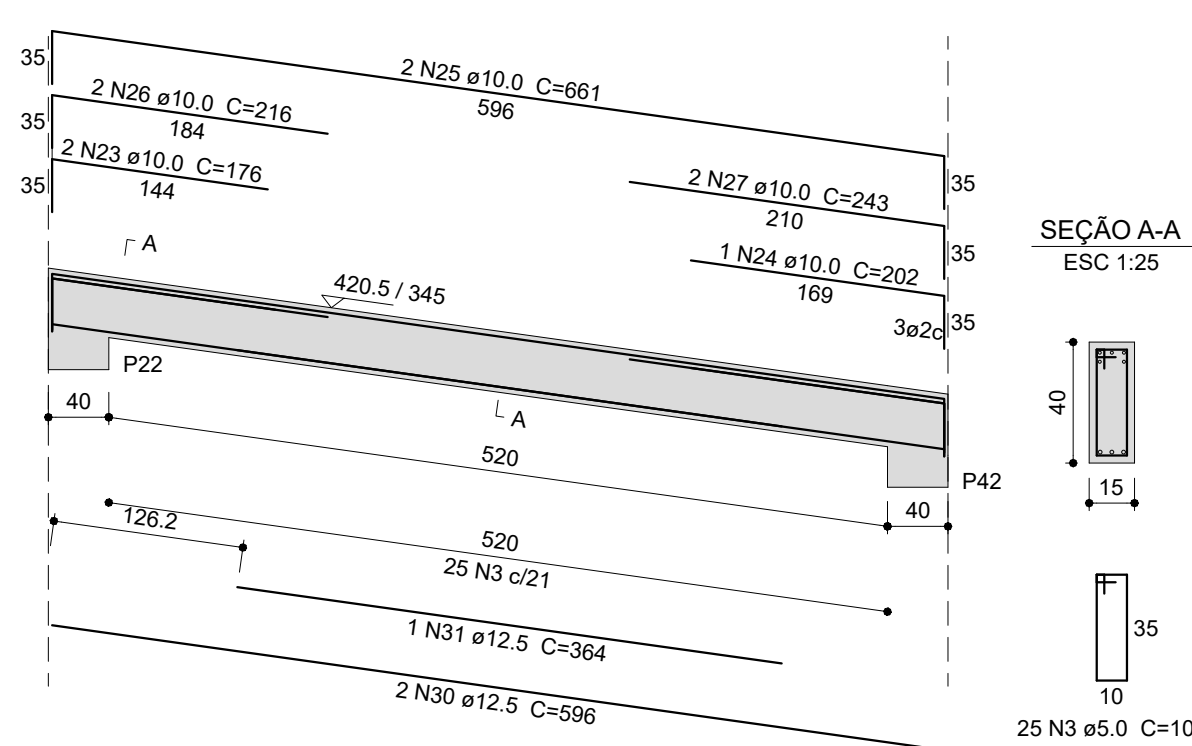
V6

ESC 1:50



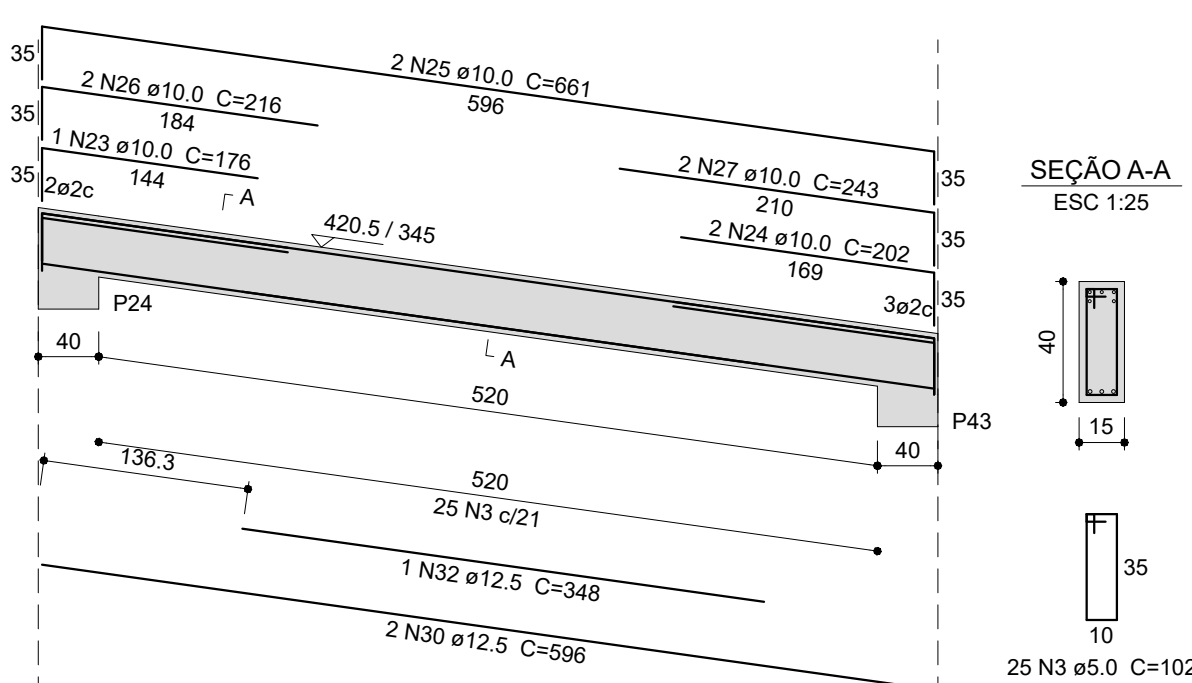
V7

ESC 1:50



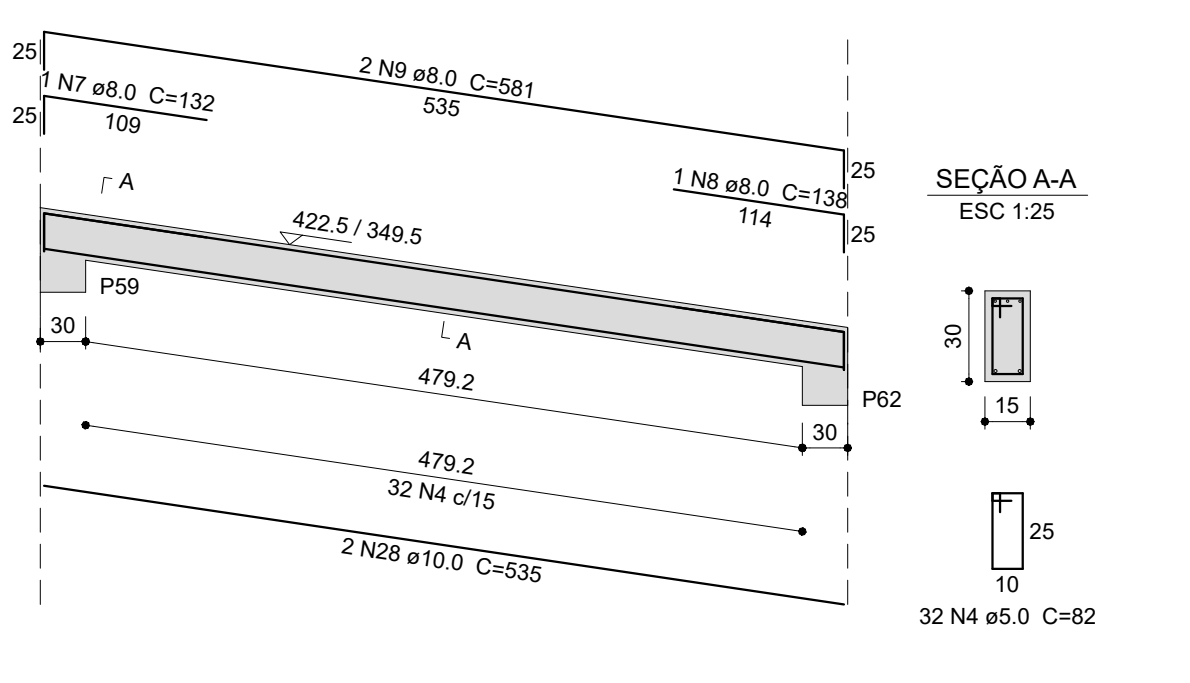
V8

ESC 1:50



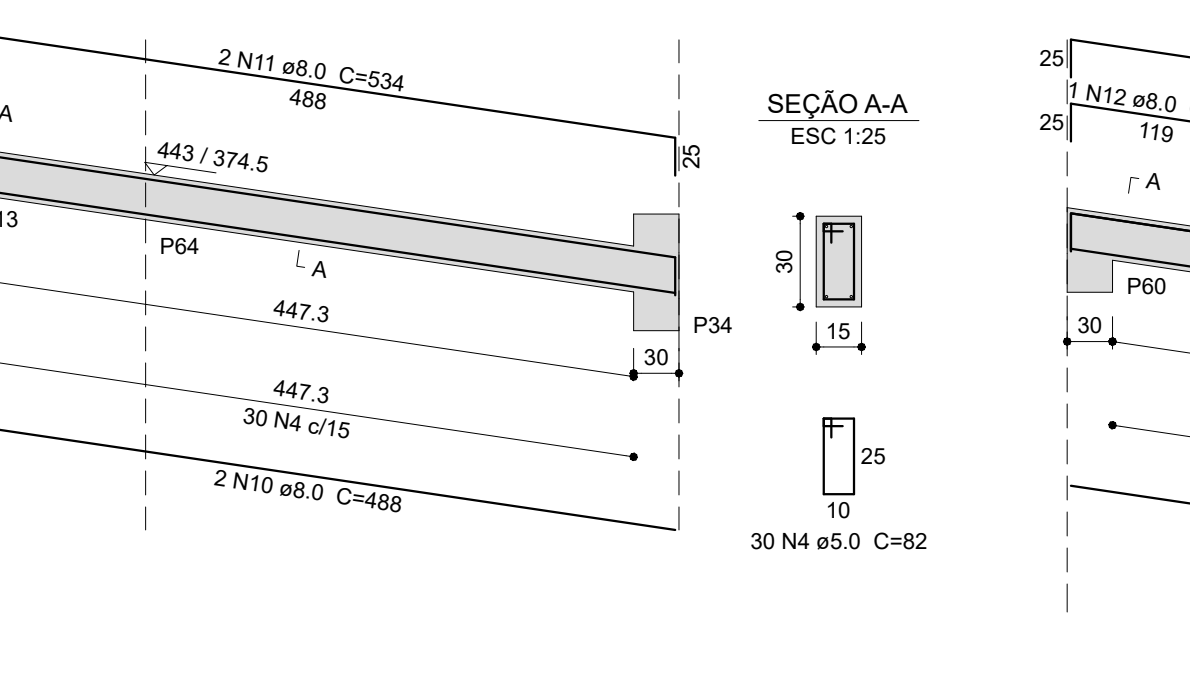
V9

ESC 1:50



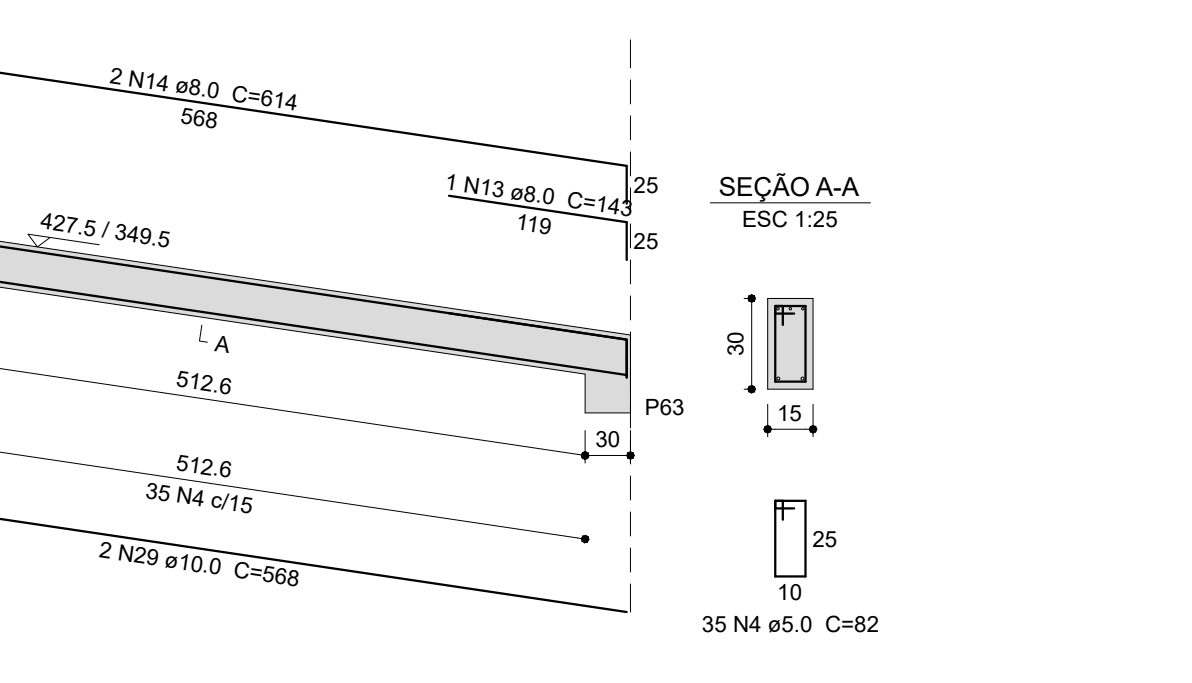
V10

ESC 1:50



V11

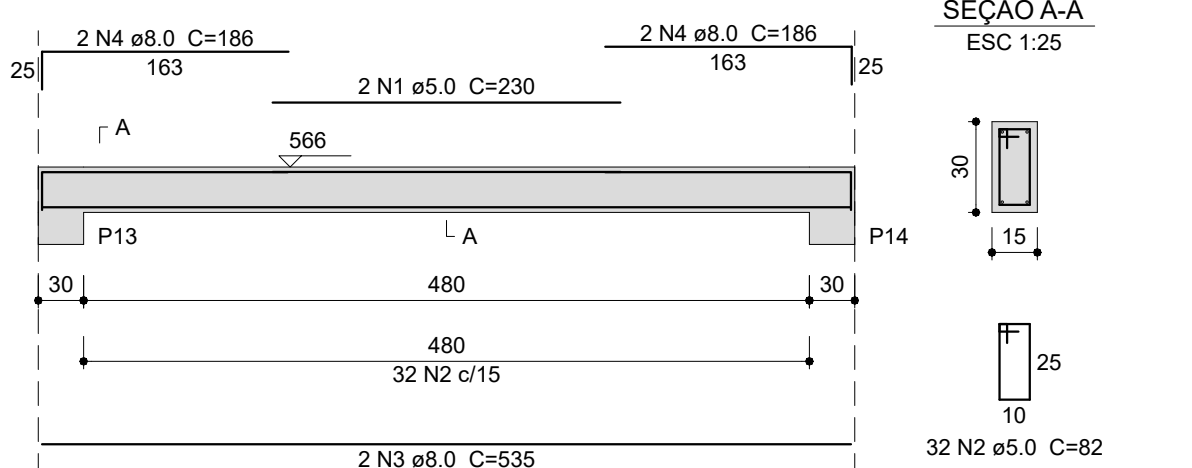
ESC 1:50



DETALHE - VIGAS SUPERIOR

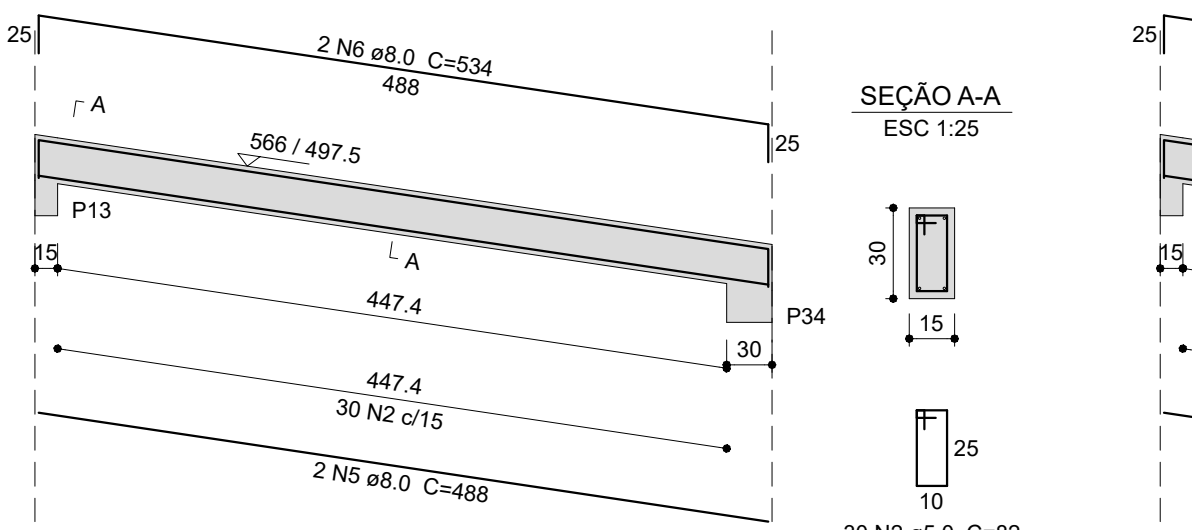
V1

ESC 1:50



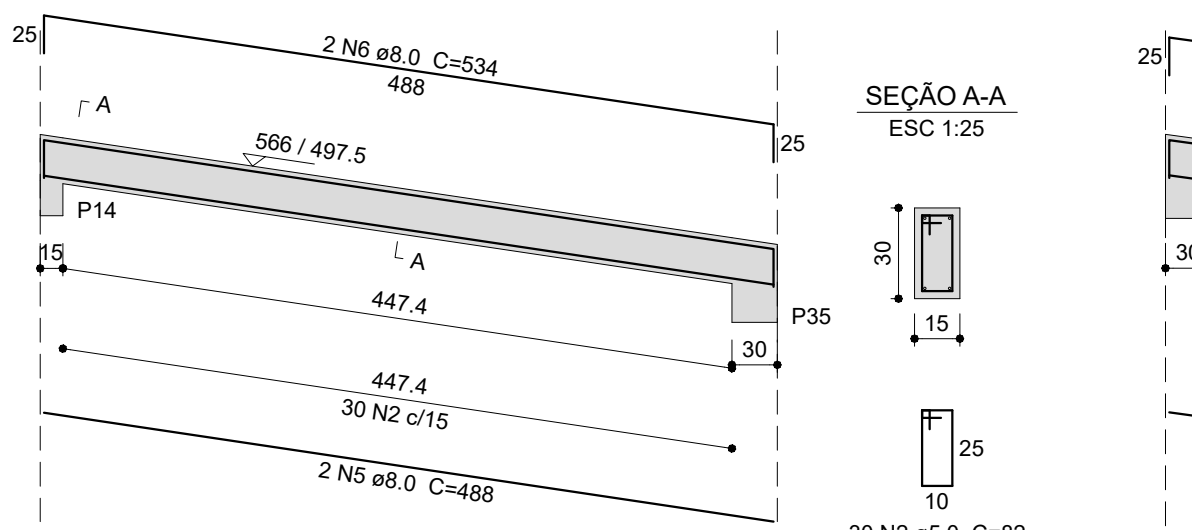
V2

ESC 1:50



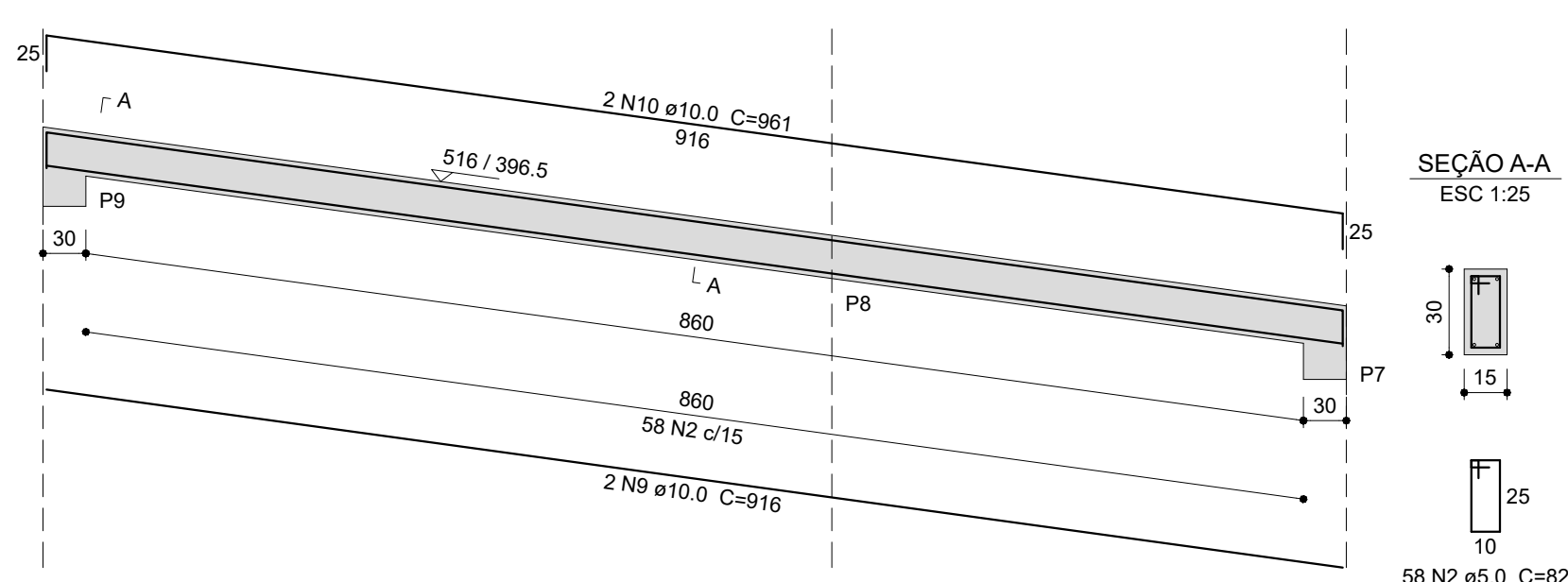
V3

ESC 1:50



V4

ESC 1:50



Relação do aço

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	2	230	460
	2	5.0	264	82	21648
CA50	3	8.0	2	535	1070
	4	8.0	4	186	744
	5	8.0	4	488	1952
	6	8.0	4	534	2136
	7	8.0	2	534	1068
	8	8.0	2	501	1002
	9	10.0	4	916	3664
	10	10.0	4	961	3844
	11	10.0	2	488	976
	12	10.0	2	455	910

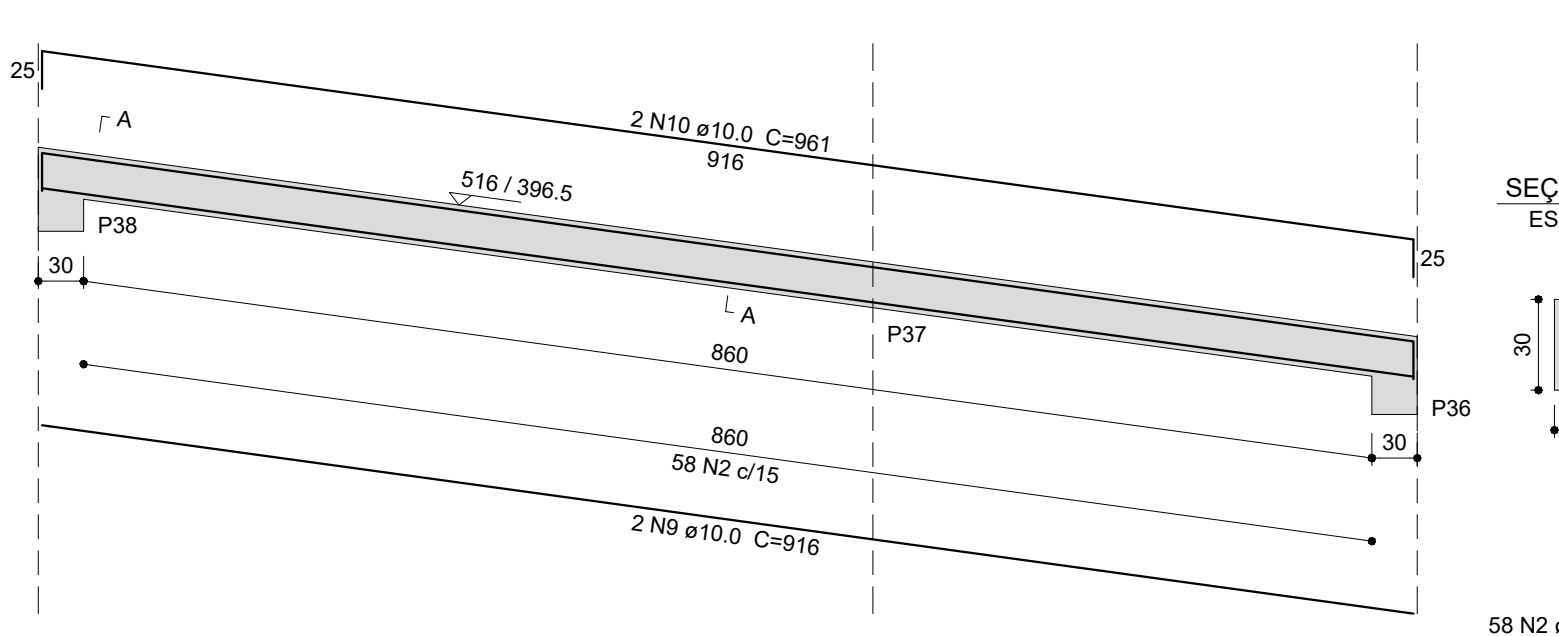
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8.0	79.8	34.6
	10.0	94	63.7
CA60	5.0	221.1	37.5
PESO TOTAL (kg)			
CA50		98.3	
CA60		37.5	

Volume de concreto (C-25) = 1.93 m³  
Área de forma = 32.12 m²

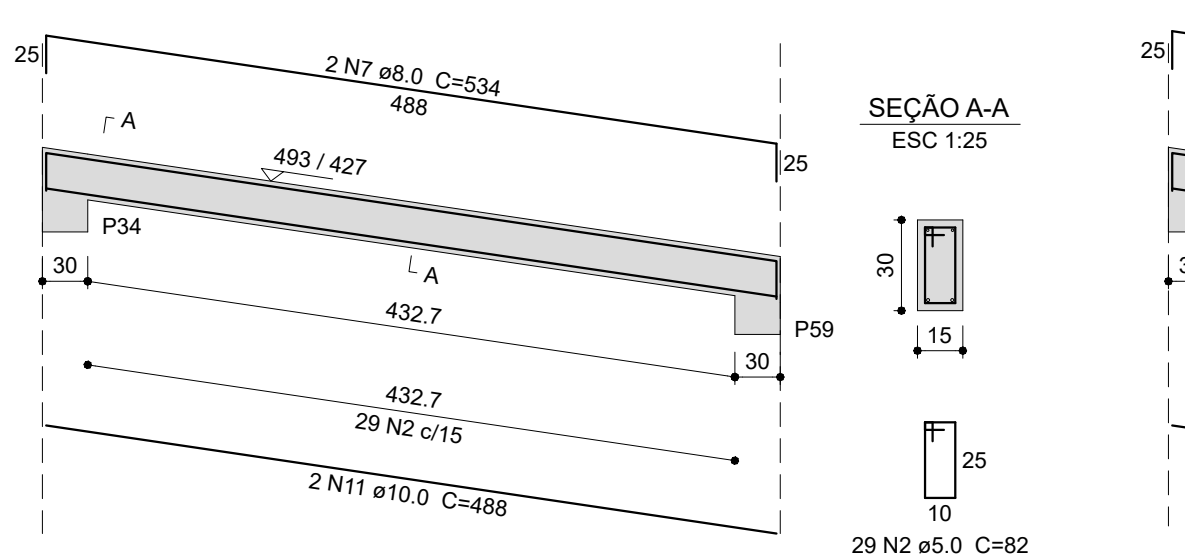
V5

ESC 1:50



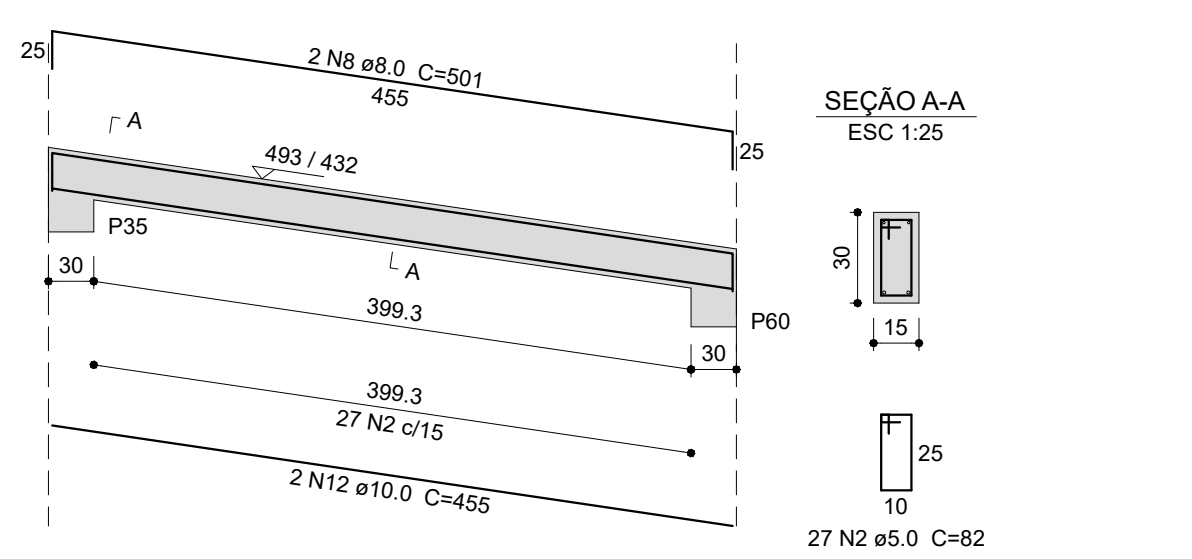
V6

ESC 1:50



V7

ESC 1:50





Secretaria Especial de Obras



DESENVOLVIMENTO E SUSTENTABILIDADE

SECRETARIA ESPECIAL DE OBRAS  
SECRETARIA DE OBRAS  
FISCALIZAÇÃO DE OBRAS  
COORDENADORES  
ENGENHEIROS  
ARQUITETOS

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EQUIPE TÉCNICA APO  
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LOCAL:  
LARANJEIRAS DO SUL - PR  
OBRA:  
CENTRO DE ACOLHIMENTO  
PROJETO:  
ESTRUTURAL  
CONTEÚDO:  
DETALHE - VIGAS INTERMEDIÁRIO (V1 A V11)  
DETALHE - VIGAS SUPERIOR (V1 A V7)  
ENDEREÇO:  
RODOVIA BR 158, KM 405, ZONA RURAL

FASE:  
EXECUTIVO  
REVISÃO Nº:  
R00  
DATA:  
07/10/2025  
DESENHADO POR:  
RODRIGO  
NOME DO ARQUIVO:  
CENTRO-ACOLHIMENTO\_LIFE\_L1A\_P12.DWG

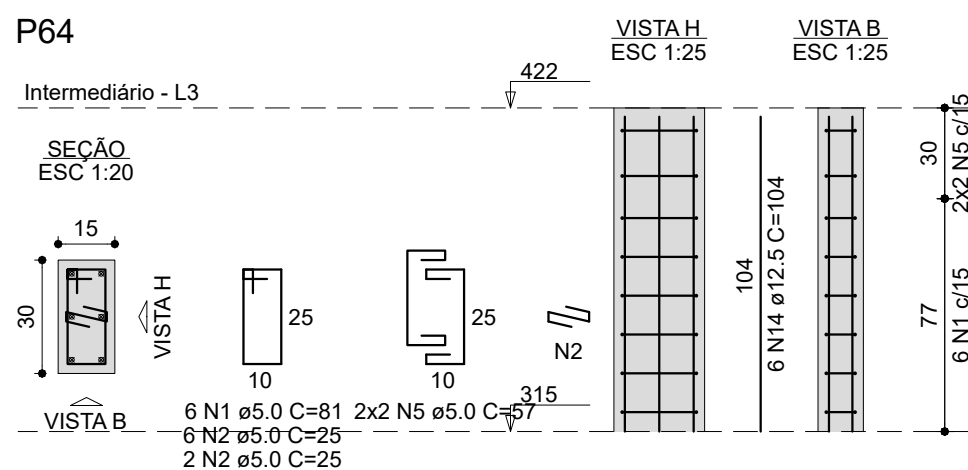
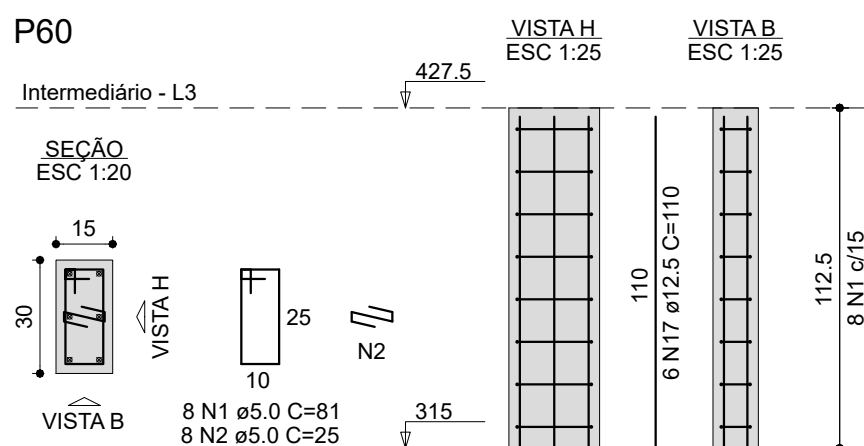
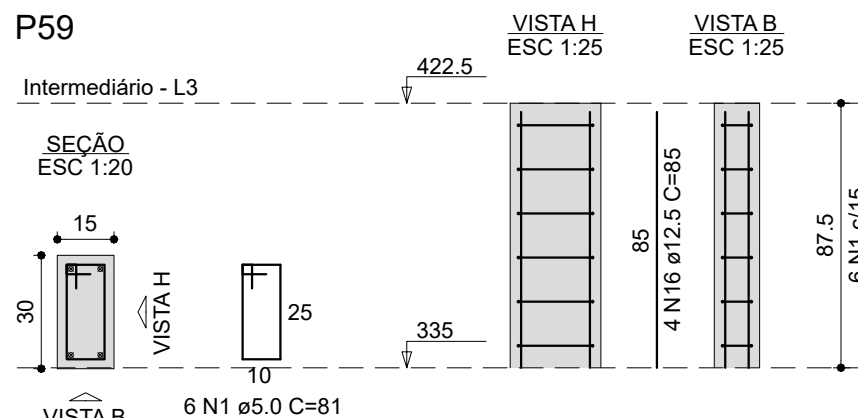
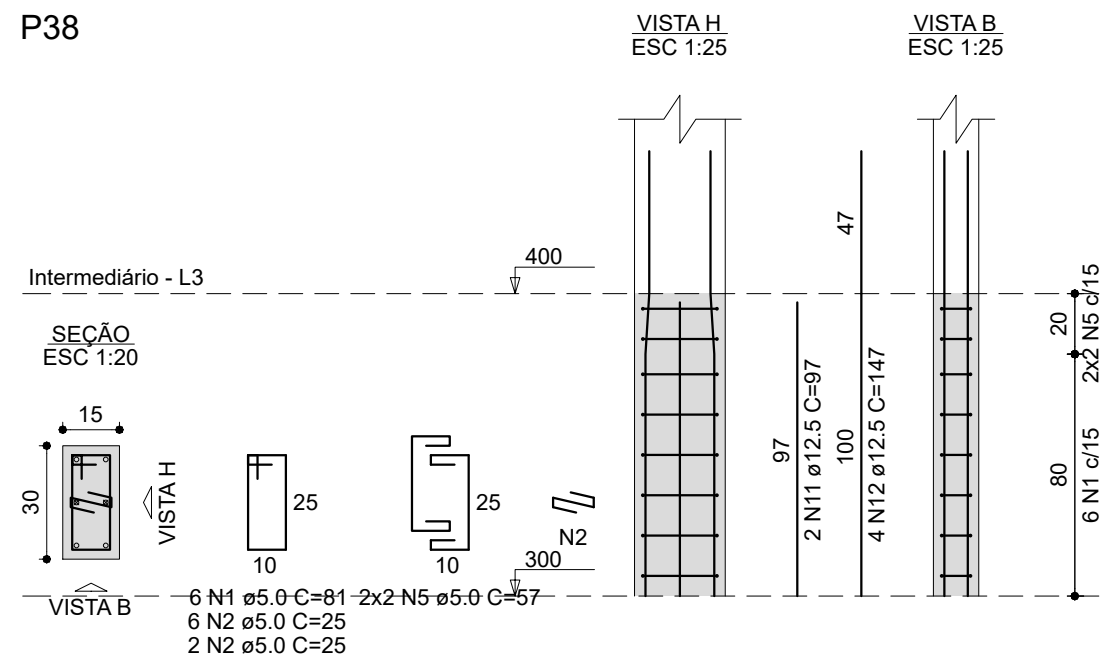
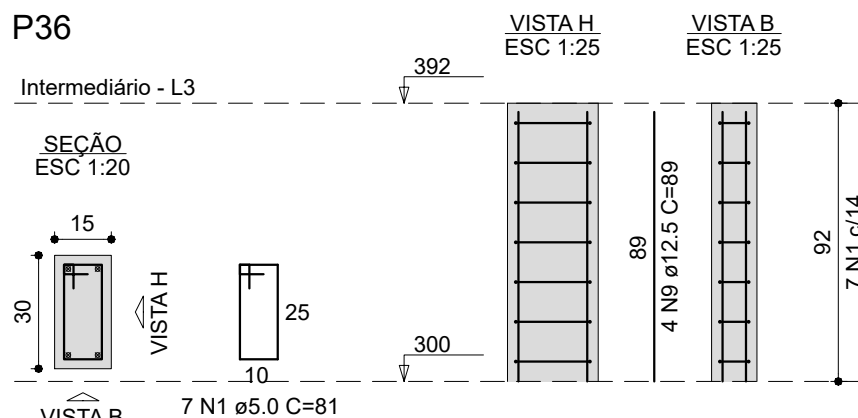
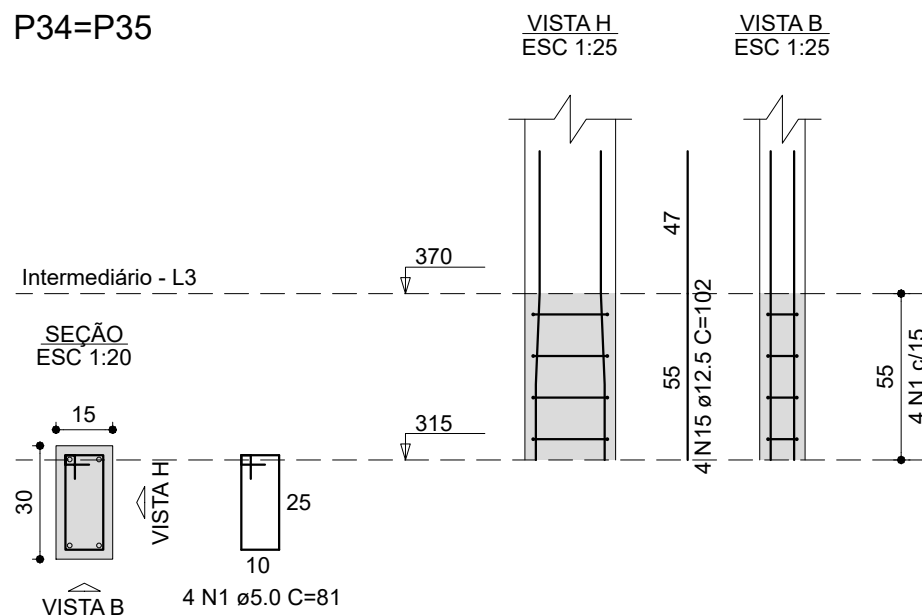
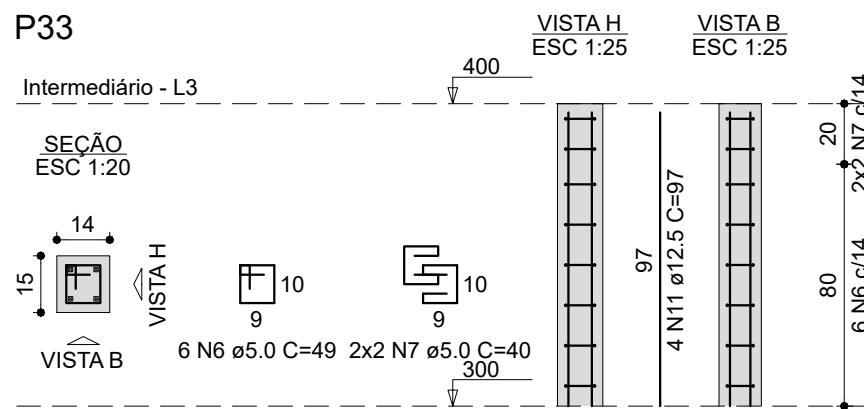
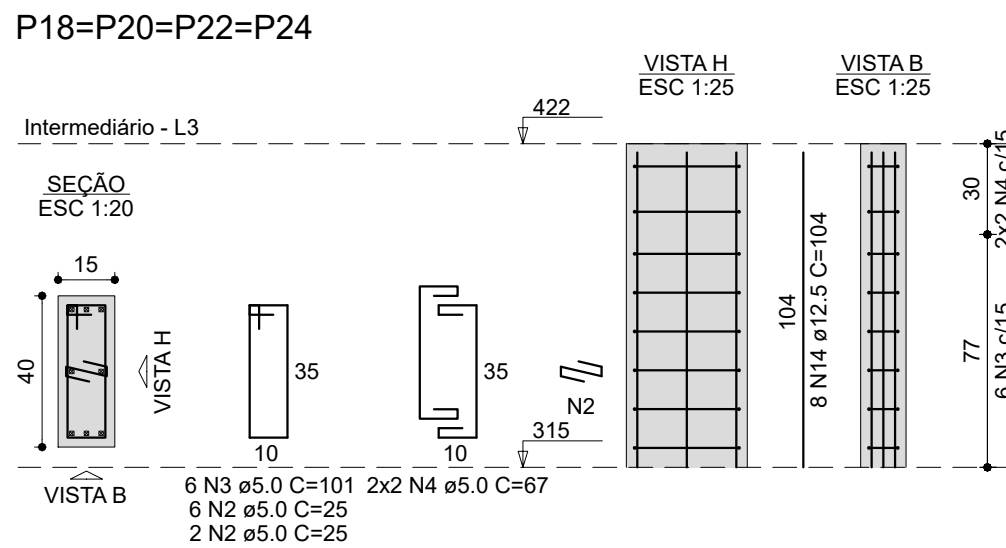
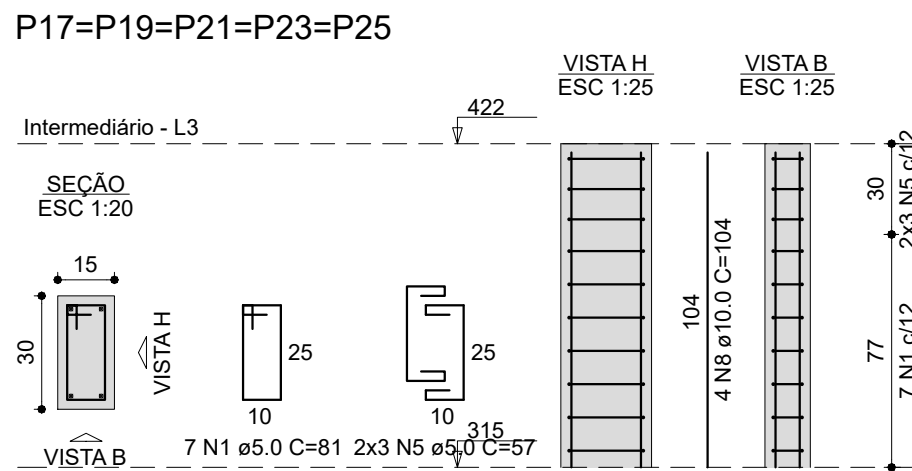
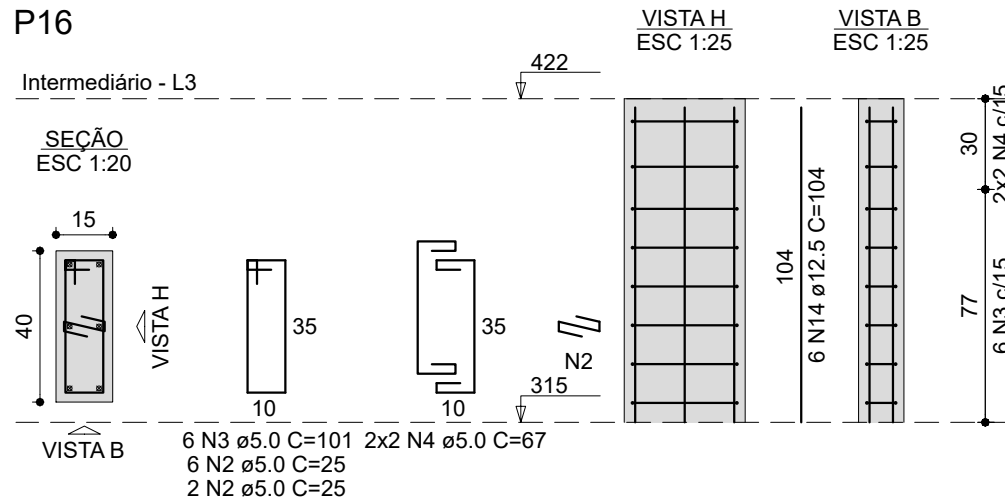
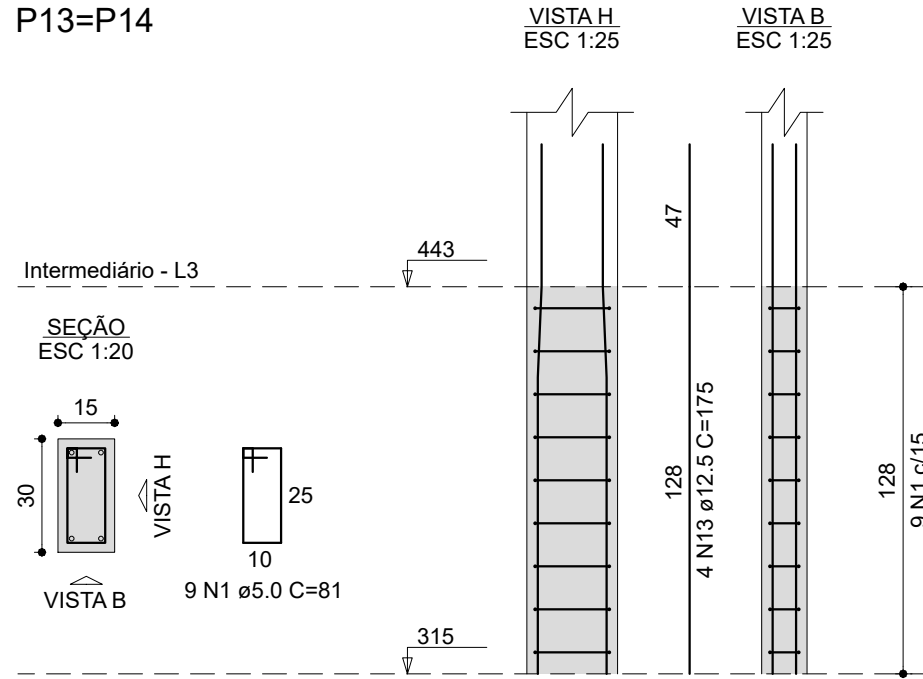
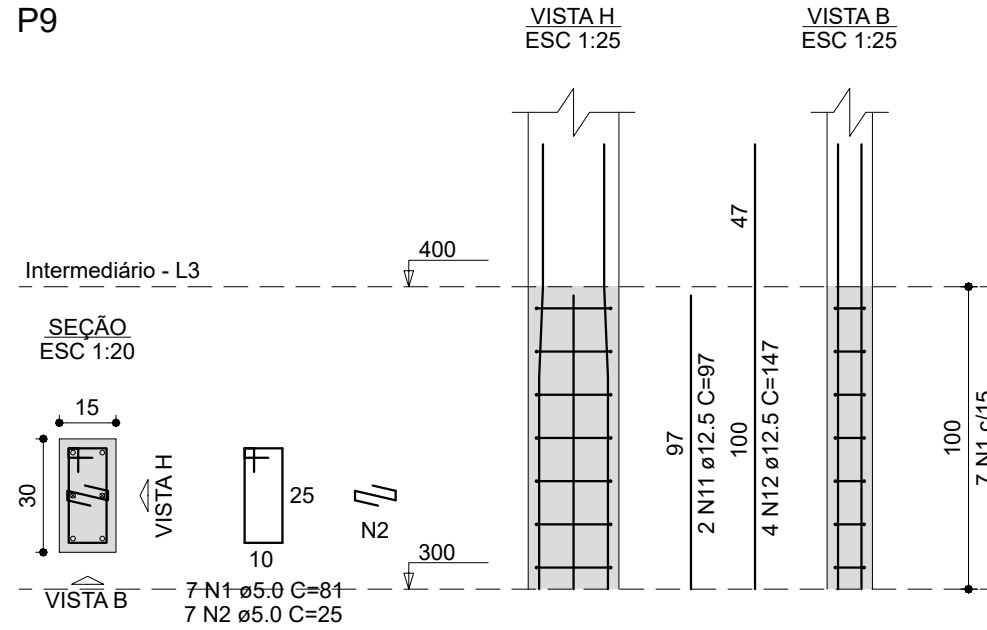
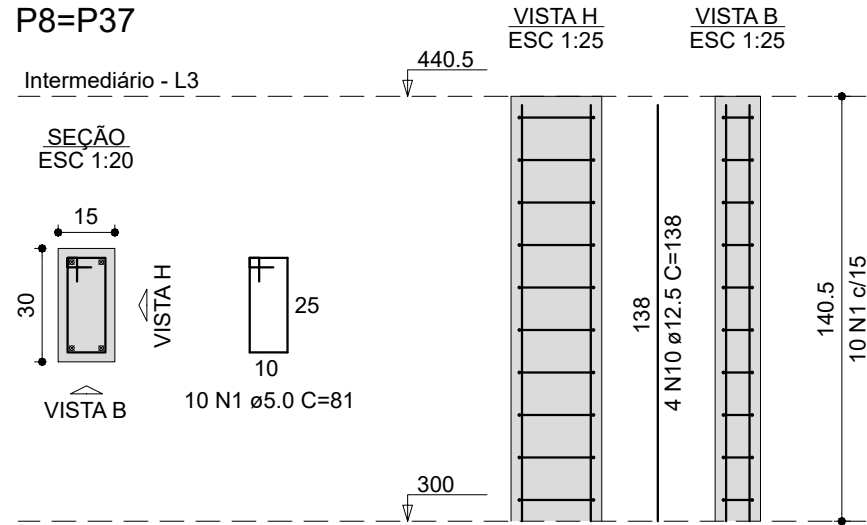
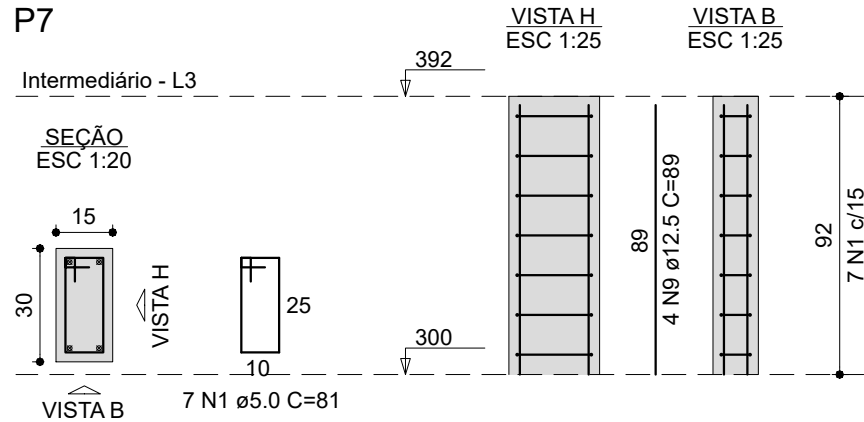
ESCALA:  
1:25 E 1:50  
TAMANHO FOLHA:  
A0  
Nº PRANCHA:  
1509  
14







DETALHE - PILARES INTERMEDIÁRIO



RELAÇÃO DO AÇO

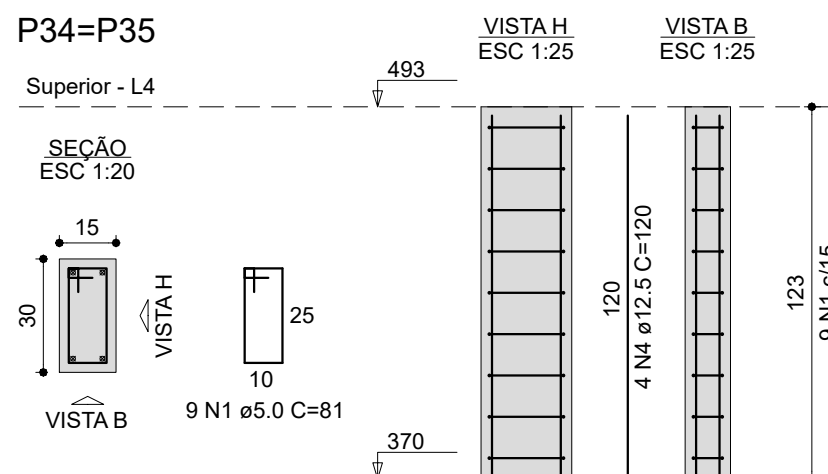
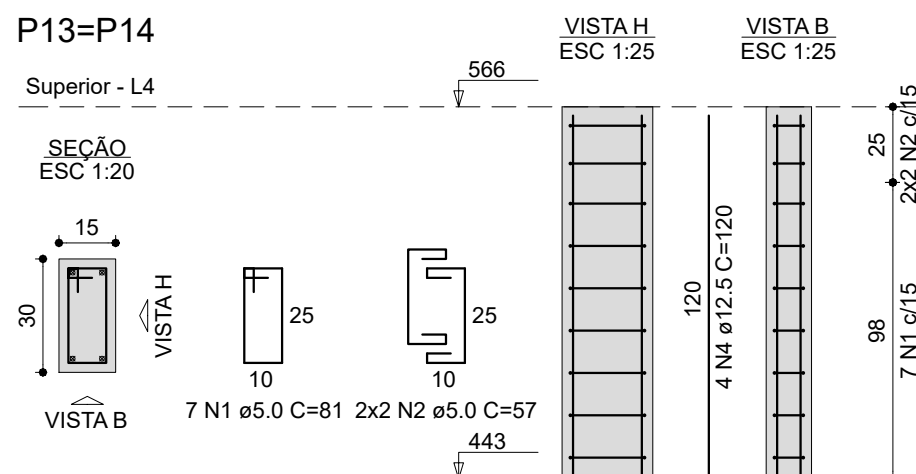
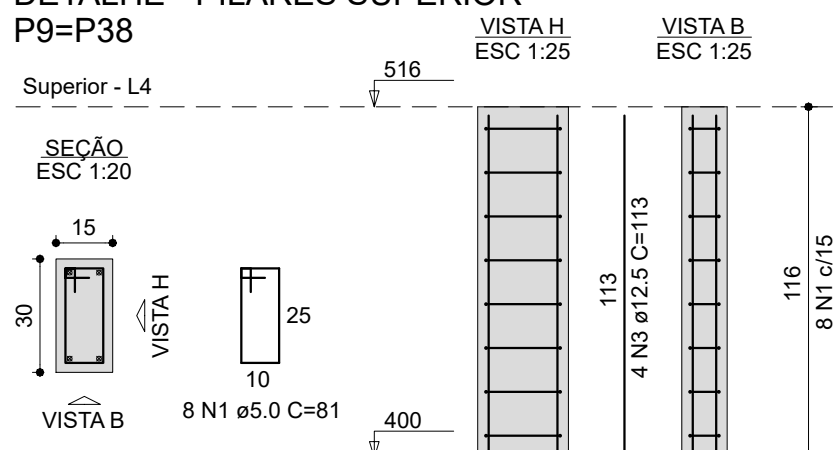
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	128	81	10368
	2	5.0	71	25	1775
	3	5.0	30	101	3030
	4	5.0	20	67	1340
	5	5.0	38	57	2166
CA50	6	5.0	6	49	294
	7	5.0	4	40	160
	8	10.0	20	104	2080
	9	12.5	8	89	712
	10	12.5	8	138	1104
	11	12.5	8	97	776
	12	12.5	8	147	1176
	13	12.5	8	175	1400
	14	12.5	44	104	4576
	15	12.5	8	102	816
	16	12.5	4	85	340
	17	12.5	6	110	660

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	20.8	14.1
	12.5	115.6	122.5
CA60	5.0	191.3	32.4
PESO TOTAL (kg)			
CA50		136.6	
CA60		32.4	

Volume de concreto (C-25) = 1.18 m³  
Área de forma = 23.32 m²

DETALHE - PILARES SUPERIOR



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	48	81	3888
	2	5.0	8	57	456
CA50	3	12.5	8	113	904
	4	12.5	16	120	1920

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	12.5	28.2	29.9
CA60	5.0	43.4	7.4
PESO TOTAL (kg)			
CA50		29.9	
CA60		7.4	

Volume de concreto (C-25) = 0.33 m³  
Área de forma = 6.52 m²



Secretaria Especial de Obras

NOVO PAC

DESENVOLVIMENTO E SUSTENTABILIDADE

Eng. Civil: FABRÍCIO BALESTRIN  
CREA/SC: 108058-6  
RESPONSÁVEL TÉCNICO

Eng. Civil: RODRIGO EMMER  
CREA/SC: 108058-6  
RESPONSÁVEL TÉCNICO

LOCAL:  
LARANJEIRAS DO SUL - PR

OBRA:  
CENTRO DE ACOLHIMENTO

PROJETO:  
ESTRUTURAL

CONTEÚDO:  
DETALHE - PILARES INTERMEDIÁRIO  
DETALHE - PILARES SUPERIOR

ENDEREÇO:  
RODOVIA BR 158, KM 405, ZONA RURAL

FASE:  
EXECUTIVO

REVISÃO Nº:  
R00

DATA:  
07/10/2025

DESENHADO POR:  
RODRIGO

NOME DO ARQUIVO:  
CENTRO-ACOLHIMENTO\_LIFE\_EST008

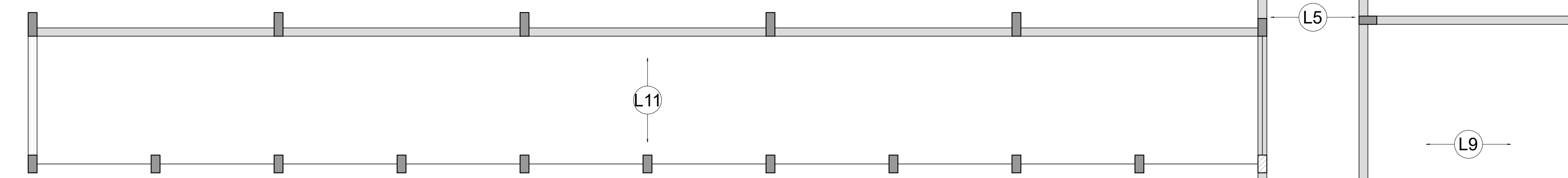
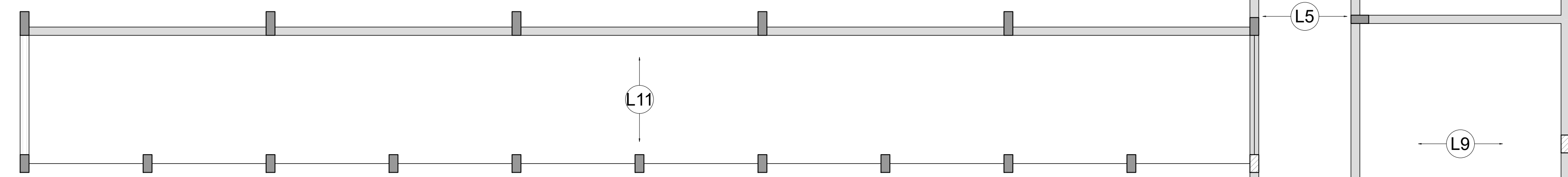
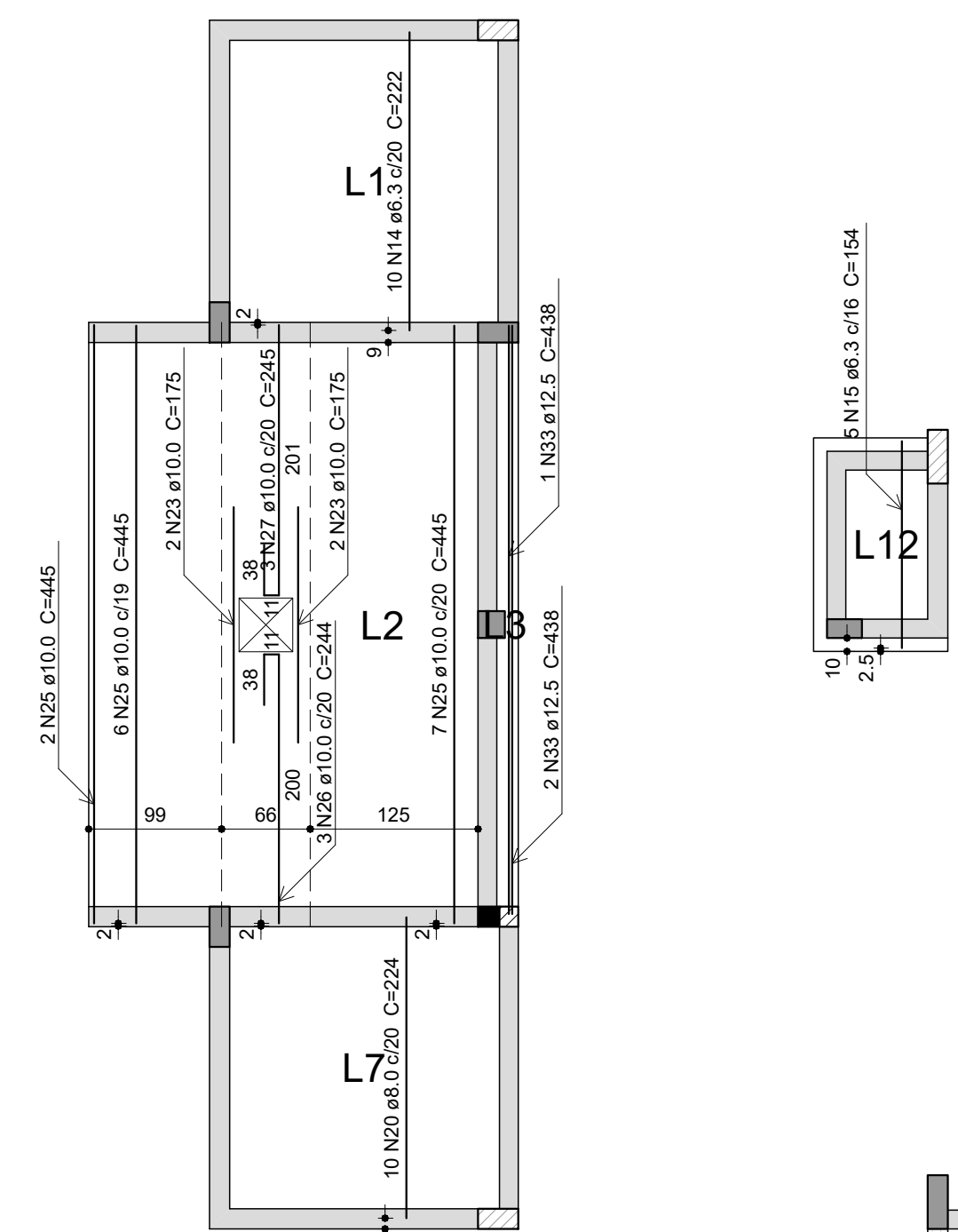
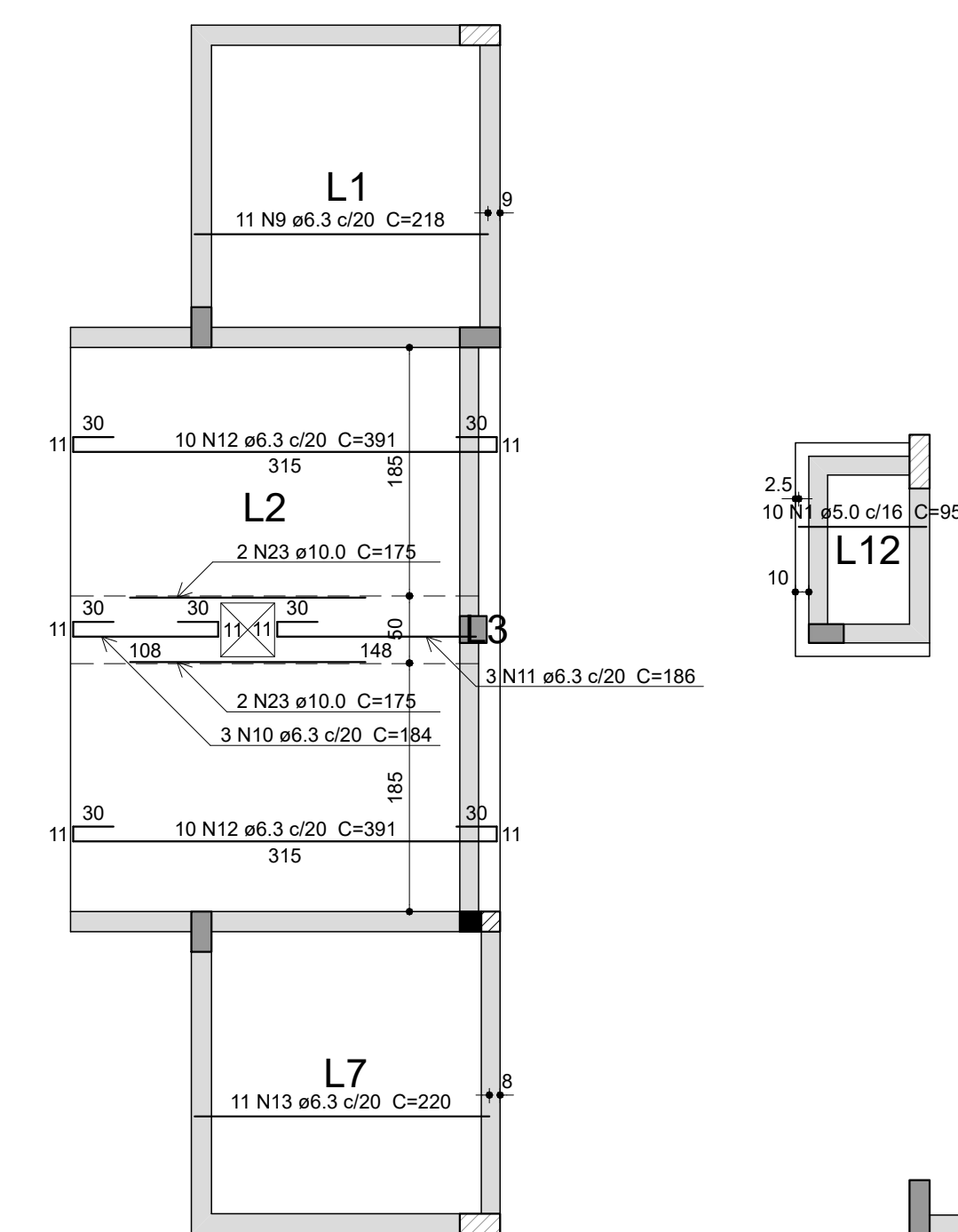
ESCALA:  
1:25 E 1:50

TAMANHO FOLHA:  
A1

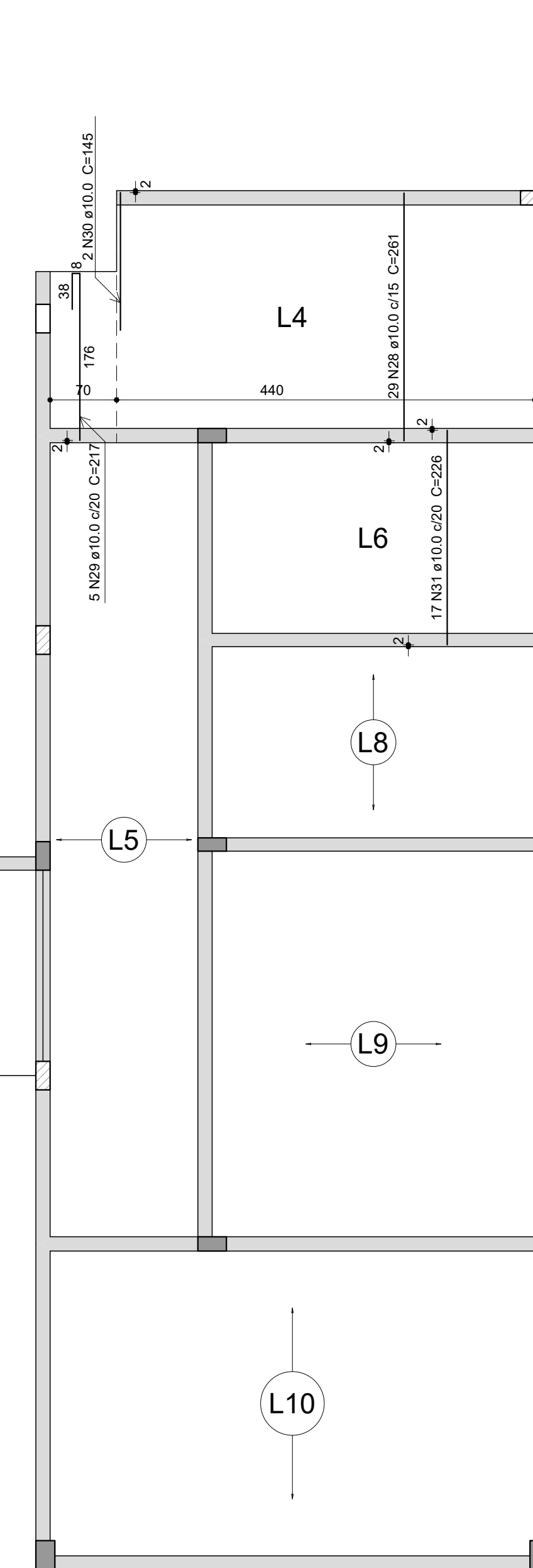
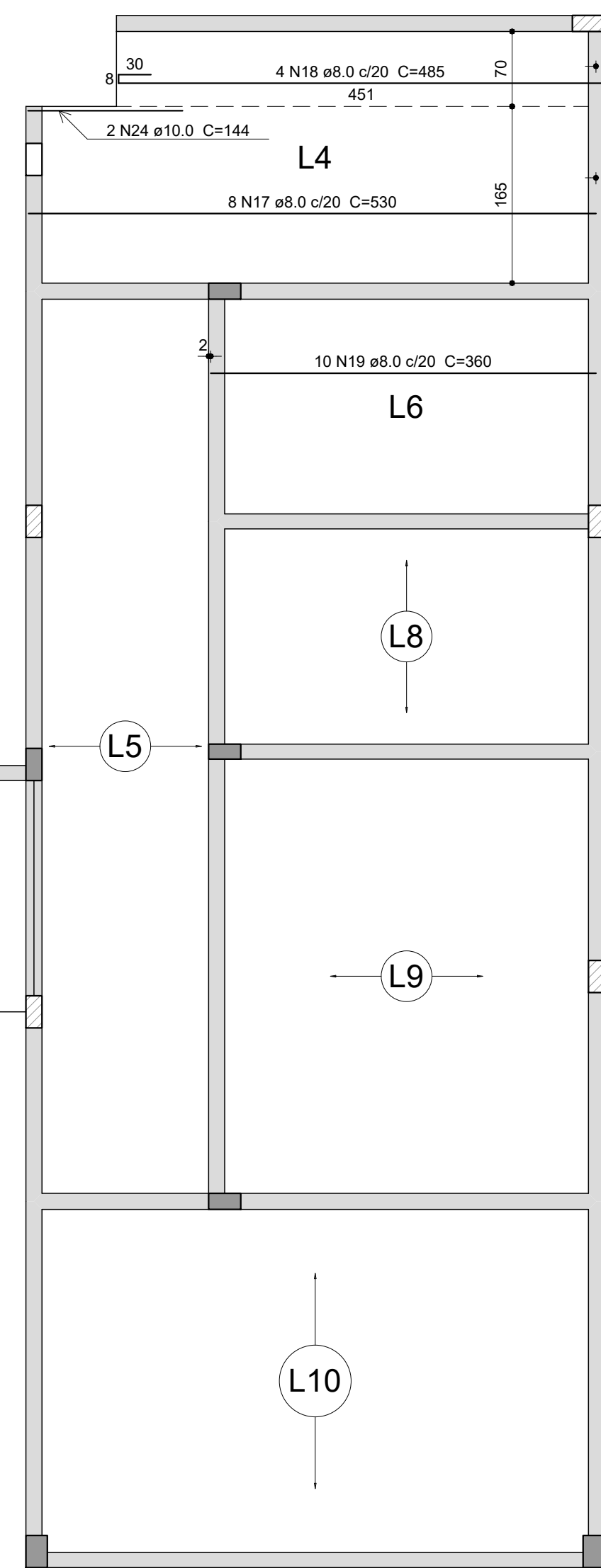
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EST 14

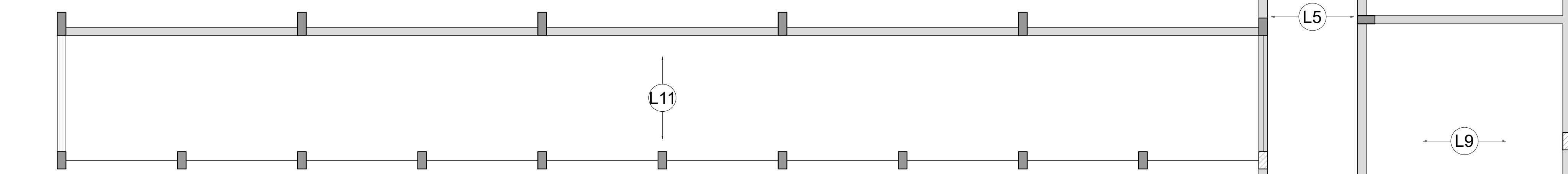
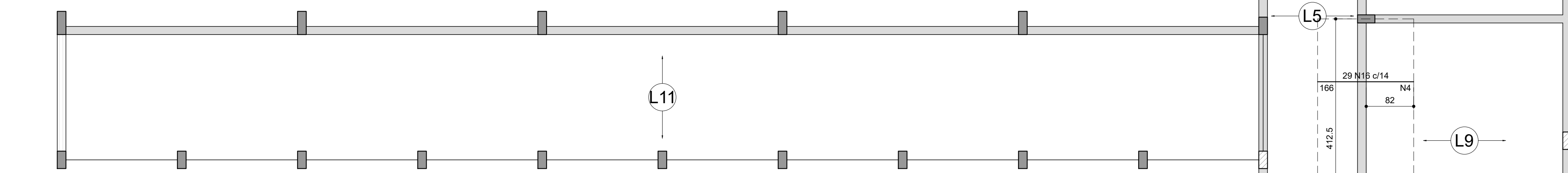
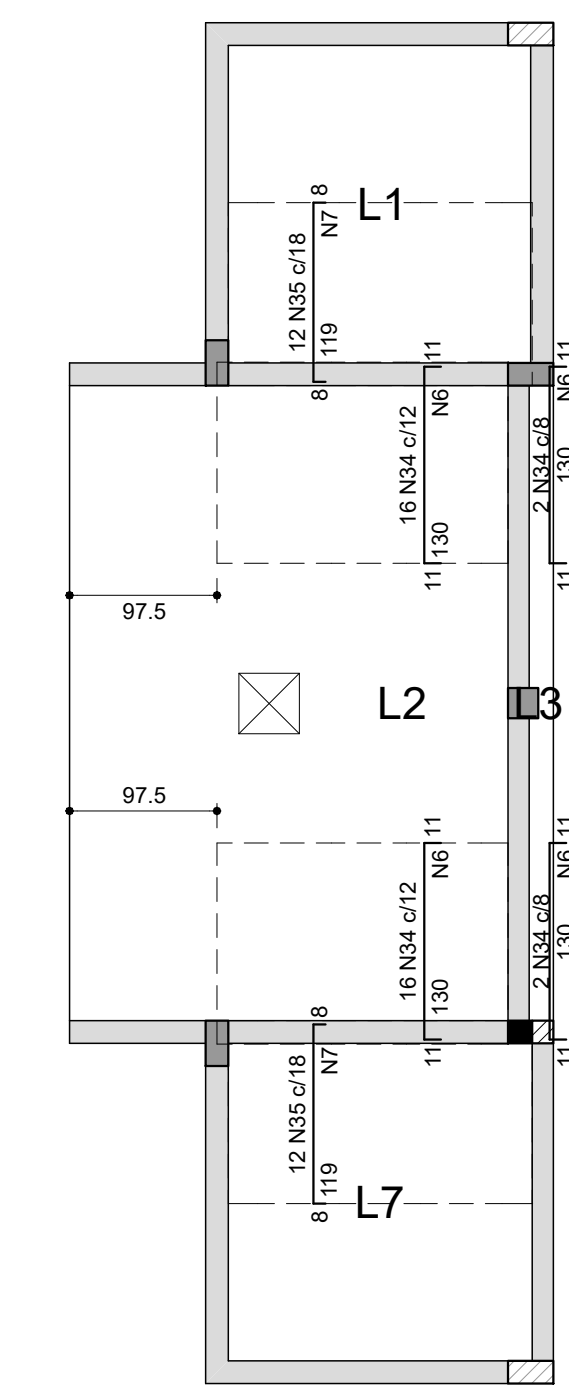
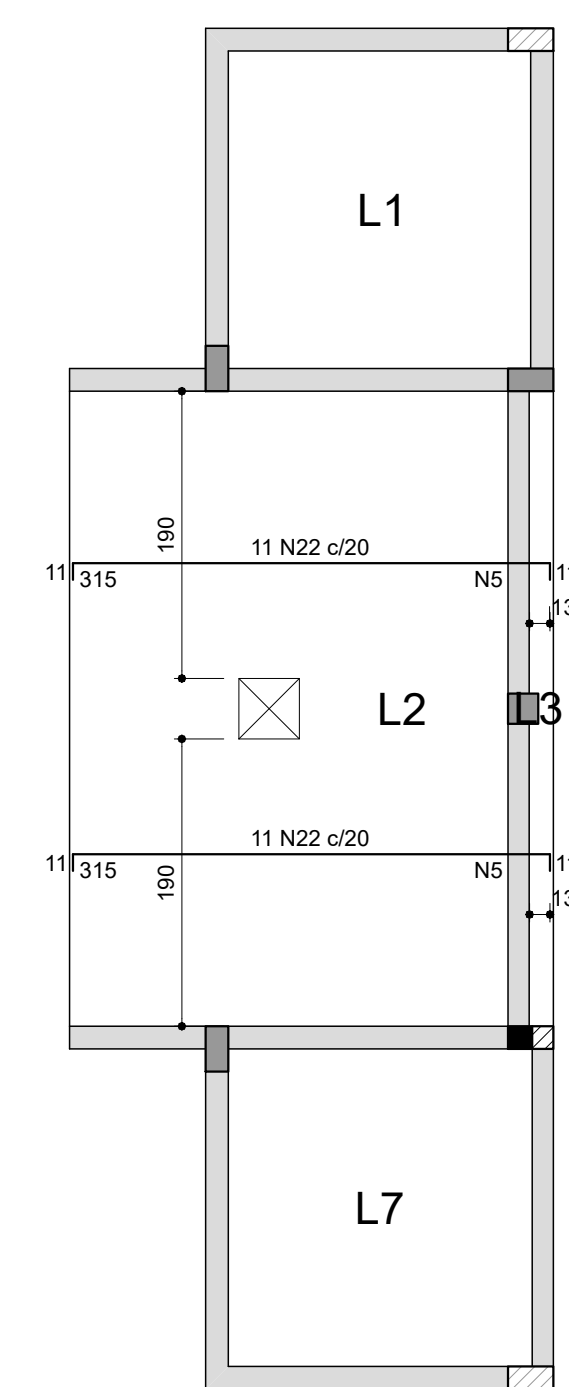




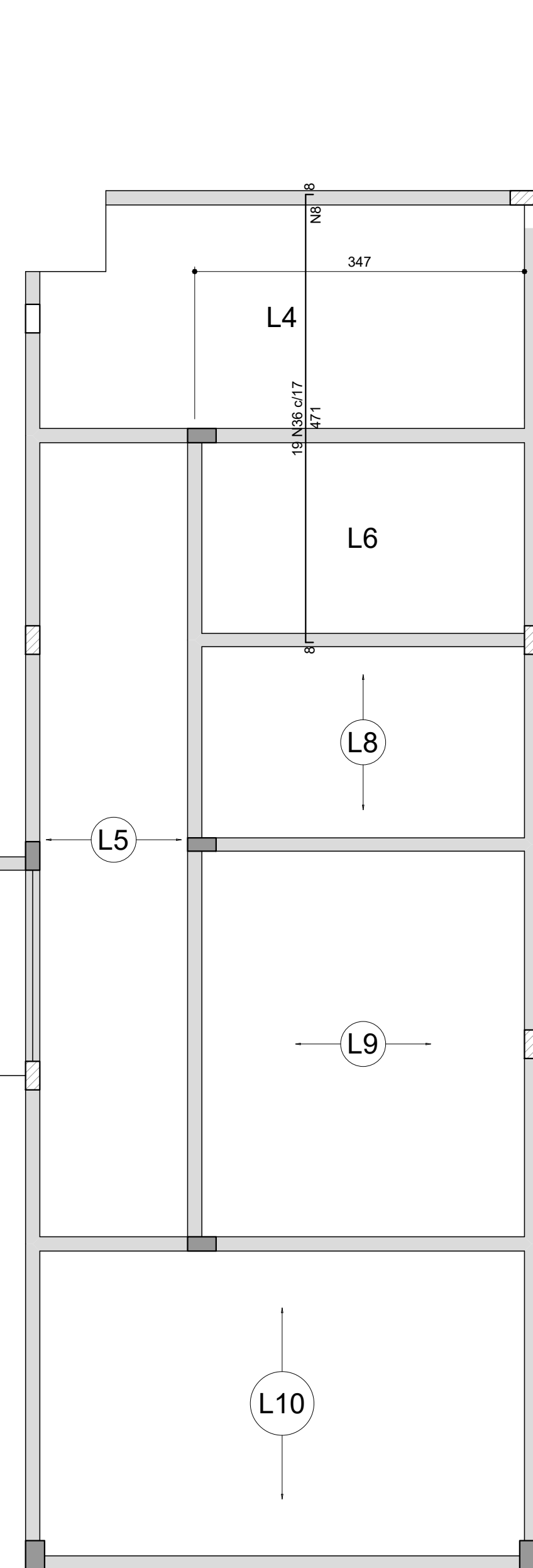
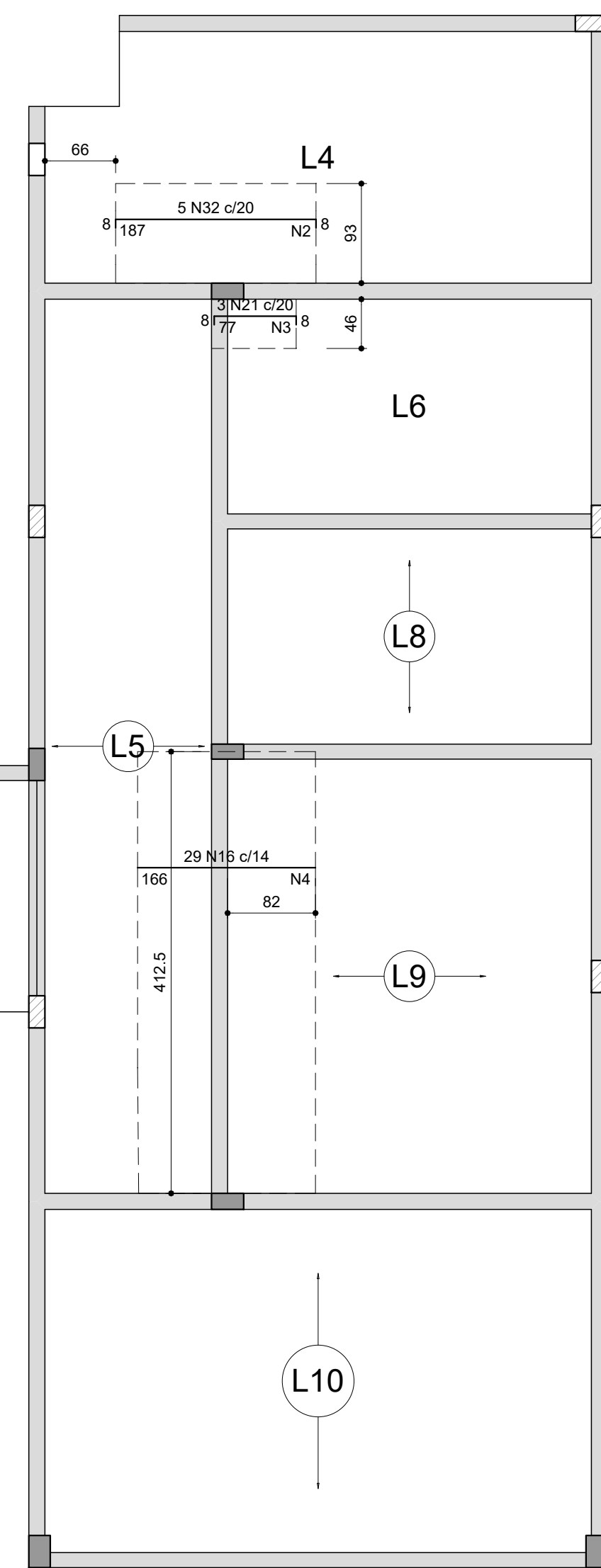
Armação positiva das lajes - Cintamento (Eixo X)  
escala 1:50



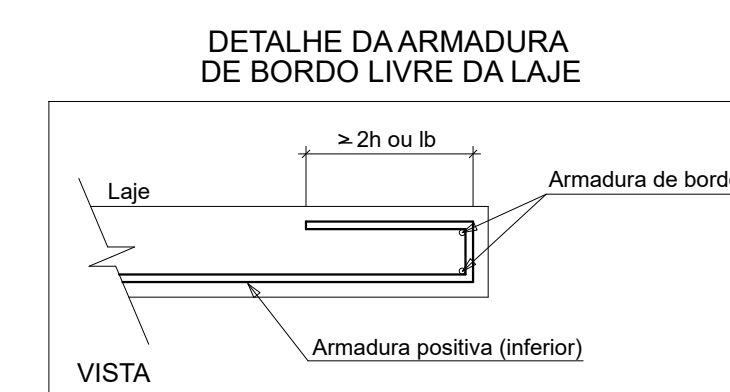
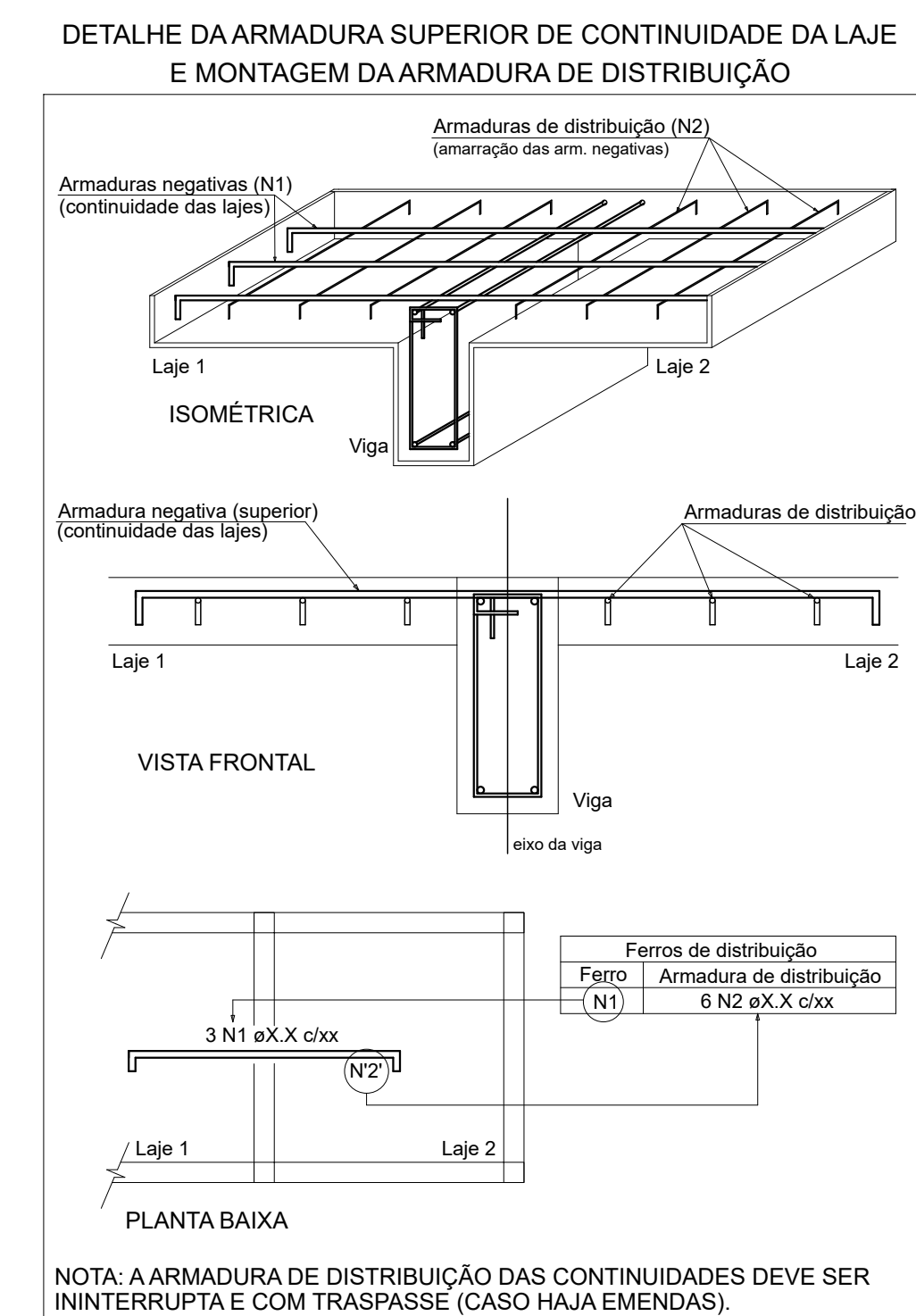
Armação positiva das lajes - Cintamento (Eixo Y  
escala 1:50)



Armação negativa das lajes - Cintamento (Eixo X)  
escala 1:50



Armação negativa das lajes - Cintamento (Eixo Y)  
escala 1:50



Armaduras de distribuição	
Armadura	Armadura de distribuição
N32	10 N2 a5.0 c/20 C=93
N21	4 N3 a5.0 c/20 C=46
N16	9 N4 a5.0 c/20 C=405
N22	32 N5 a5.0 c/20 C=190
N34	22 N6 a5.0 c/20 C=222
N35	20 N7 a5.0 c/20 C=201
N36	17 N8 a5.0 c/20 C=347

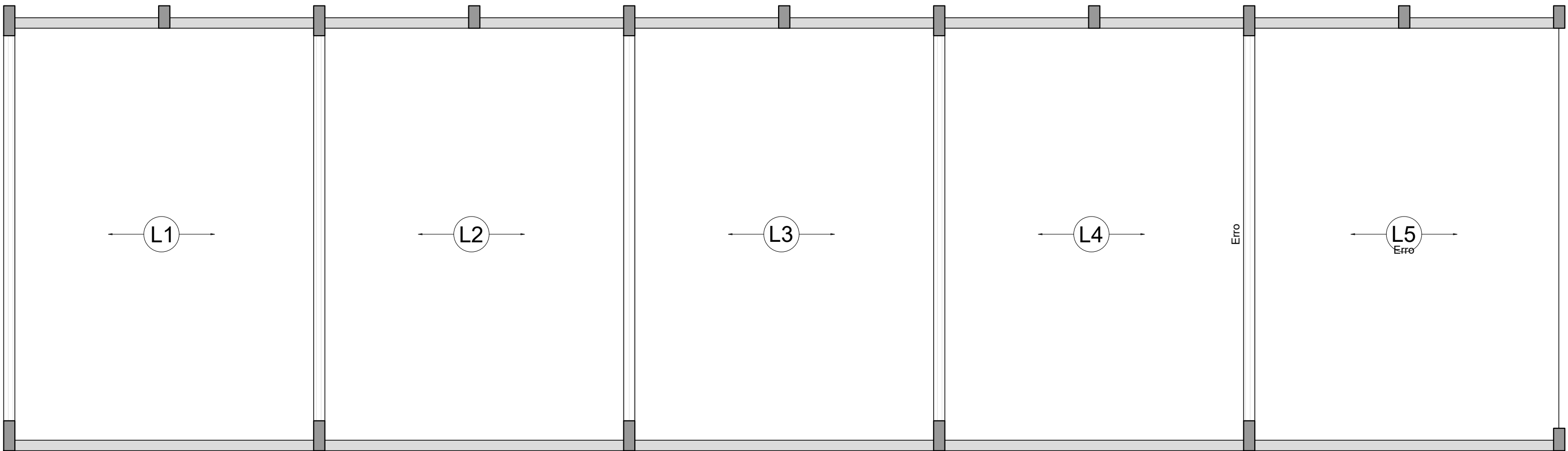
Relação do aço					
ACO	N	DIAM	QUANT	C. UNIT	C. TOTAL
CA60	2	5,0	10	90	900
	2	5,0	10	93	930
	4	5,0	4	184	736
	4	5,0	9	405	3645
CA50	2	5,0	32	100	3200
	4	5,0	22	222	4884
	6	5,0	17	200	3400
	8	5,0	17	247	5899
	10	6,3	11	218	2398
	10	6,3	3	184	552
	11	6,3	3	186	558
	12	6,3	3	201	603
	12	6,3	11	220	2420
	13	6,3	11	222	2442
	15	6,3	5	154	770
	16	8,0	5	169	845
	17	8,0	8	330	4240
	18	8,0	4	485	1940
	19	8,0	10	360	3600
	20	8,0	10	224	2240
22	8,0	3	89	267	
22	8,0	8	175	1738	
24	10,0	2	144	288	
24	10,0	2	166	332	
26	10,0	3	244	732	
28	10,0	3	244	732	
28	10,0	3	261	783	
30	10,0	3	281	843	
30	10,0	2	145	290	
31	10,0	2	128	384	
32	10,0	3	188	564	
33	12,5	3	148	434	
33	12,5	3	146	438	
35	12,5	3	146	438	
35	12,5	24	129	3096	

### Resumo do aço

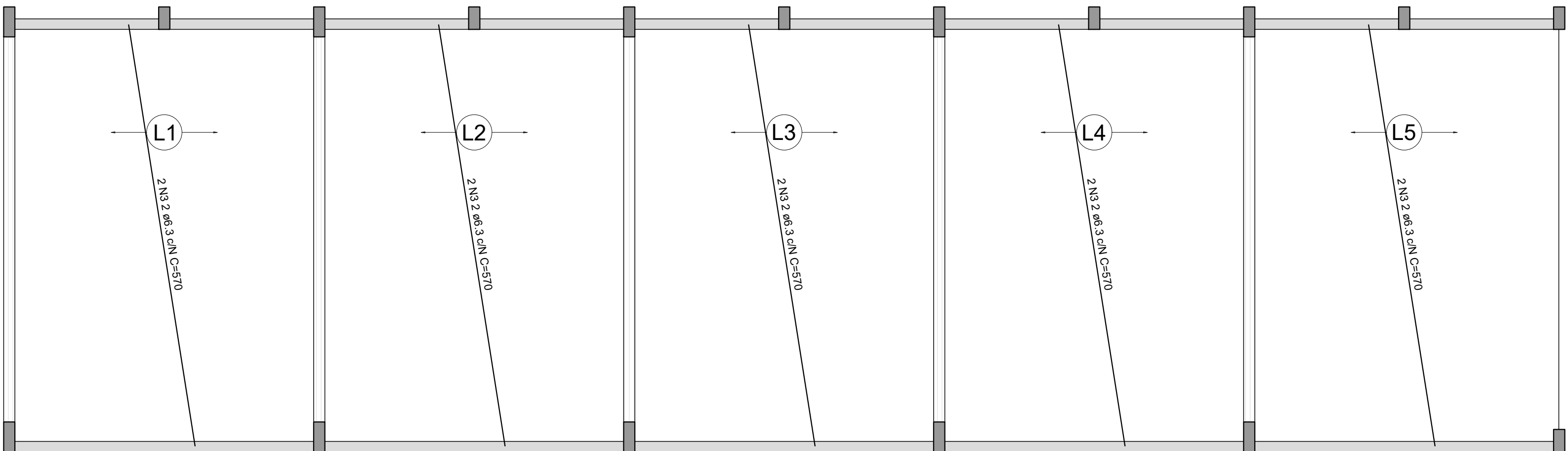
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	215.5	60.2
	8.0	196.2	85.1
	10.0	236.1	160.1
	12.5	188.1	199.3
CA60	5.0	265.9	45.1
<b>PESO TOTAL (kg)</b>			
CA50		504.7	
CA60		45	

Volume de concreto (C-25) = 7.80 m<sup>3</sup>  
 Área de forma = 41.79 m<sup>2</sup>

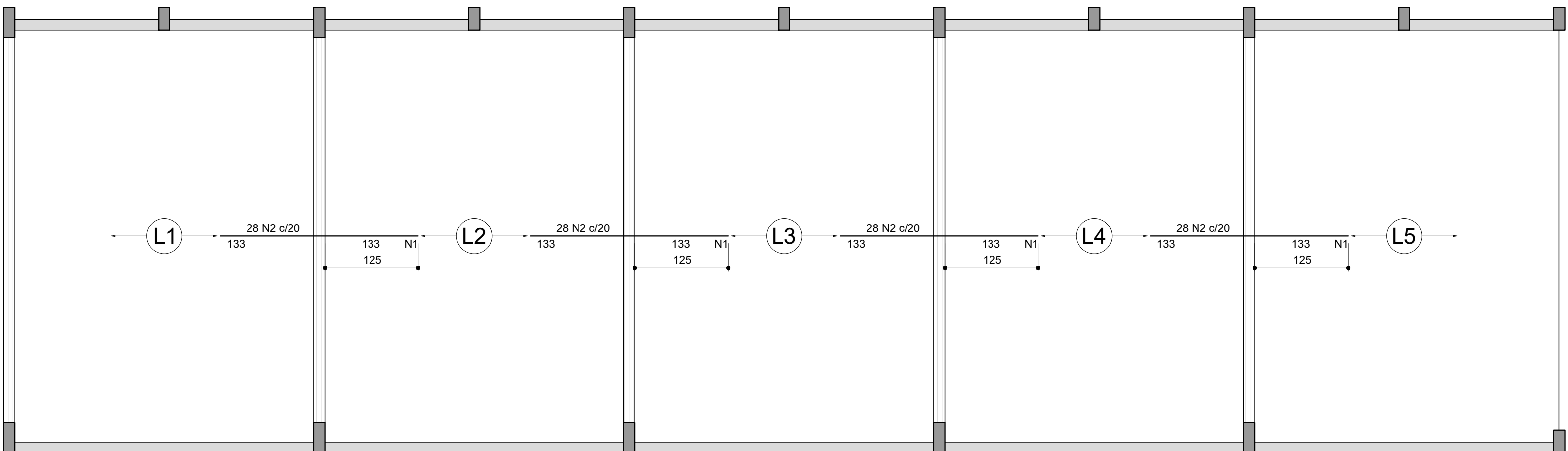




Armação positiva das lajes - Intermediário (Eixo X)  
escala 1:50

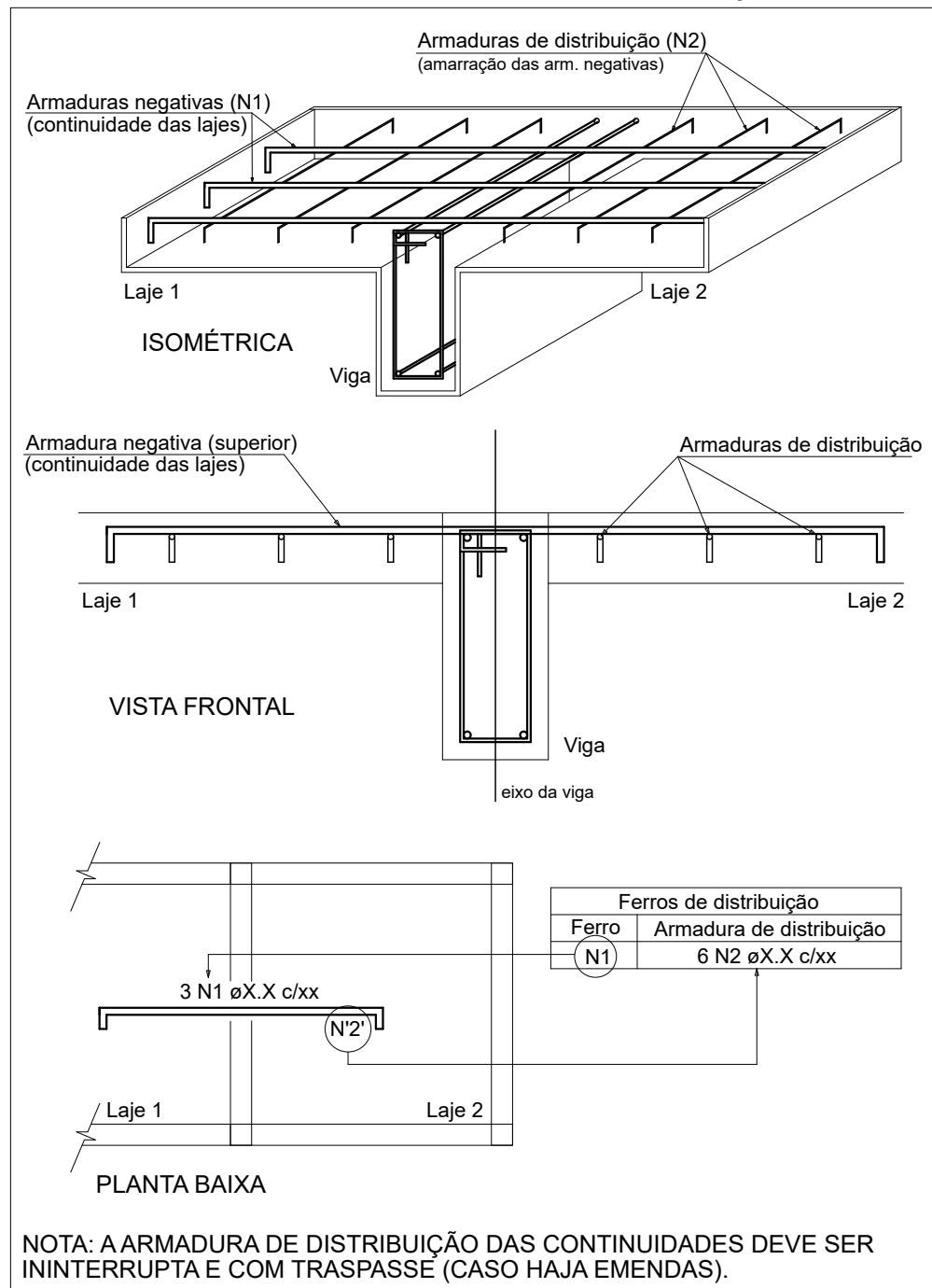


Armação positiva das lajes - Intermediário (Eixo Y)  
escala 1:50

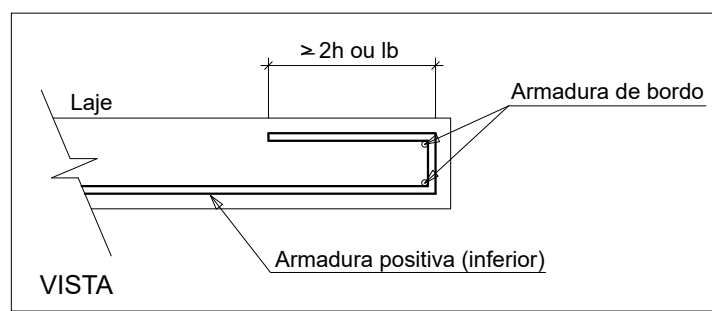


Armação negativa das lajes - Intermediário (Eixo X)  
escala 1:50

#### DETALHE DA ARMADURA SUPERIOR DE CONTINUIDADE DA LAJE E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



#### DETALHE DA ARMADURA DE BORDO LIVRE DA LAJE



Armaduras de distribuição	
Armadura	Armadura de distribuição
N2	14 N1 ø5,0 c/20 C=565

#### RELAÇÃO DO AÇO

Negativos X-L3 NEGATIVOS X-L1 Positivos Y-L3  
POSITIVOS Y-L1

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	56	565	31640
CA50	2	6,3	112	266	29792
	3	6,3	10	570	5700

#### RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6,3	354,9	95,5
CA60	5,0	316,4	53,6
PESO TOTAL (kg)			
CA50		95,5	
CA60		53,6	

Volume de concreto (C-25) = 7,07 m³  
Volume de concreto (I) = 0,00 m³  
Área de forma = 0,00 m²



**UNIVERSIDADE FEDERAL DA FRONTEIRA SUL**

Endereço: Rua 15 de Novembro, 1500 - Foz de Iguaçu, Paraná - CEP: 85901-900  
Telefone: (41) 3333-1234 - Fax: (41) 3333-1235  
E-mail: ufes@ufes.br

**Secretaria Especial de Obras**

Endereço: Rua 15 de Novembro, 1500 - Foz de Iguaçu, Paraná - CEP: 85901-900  
Telefone: (41) 3333-1234 - Fax: (41) 3333-1235  
E-mail: seo@ufes.br



**NOVO PAC**

DESENVOLVIMENTO E SUSTENTABILIDADE

**SECRETARIA ESPECIAL DE OBRAS**

SECRETARIA DE OBRAS: ARLI, URB. DIANE REGINA VALENTINI

**FISCALIZAÇÃO DE OBRAS:**

CHARGE/COORDENADOR: ENG. CIV. FABIO ALEX ZENARO

CHARGE/COORDENADOR: ENG. ELETRIC. MARCELO TOLESCATTI

CHARGE/COORDENADOR: ENG. CIV. PAULO ROBERTO RENGES

CHARGE/COORDENADOR: ENG. CIV. CARLOS ROQUE SCHMIDT

CHARGE/COORDENADOR: ENG. CIV. JULIANA ANA CHIMELLO

CHARGE/COORDENADOR: ENG. CIV. FABIO ORTEGA

CHARGE/COORDENADOR: ENG. CIV. FABIO DALETRIN

CAURB A51414.4

CHARGE/COORDENADOR: ENG. CIV. FABIO ALEX ZENARO

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CHARGE/COORDENADOR: ENG. CIV. FABIO DALETRIN

LOCAL: LARANJEIRAS DO SUL - PR	FASE: EXECUTIVO	ESCALA: 1:50
OBRA: CENTRO DE ACOLHIMENTO	REVISÃO Nº: R00	TAMANHO FOLHA: A1
PROJETO: ESTRUTURAL	DATA: 07/10/2025	Nº PRANCHA: 13
CONTEÚDO: DETALHE - LAJES INTERMEDIÁRIO	DESENHADO POR: RODRIGO	14
ENDEREÇO: RODOVIA BR 158, KM 405, ZONA RURAL	NOME DO ARQUIVO: CENTRO-ACOLHIMENTO_LF15_L1_LF_EST005	



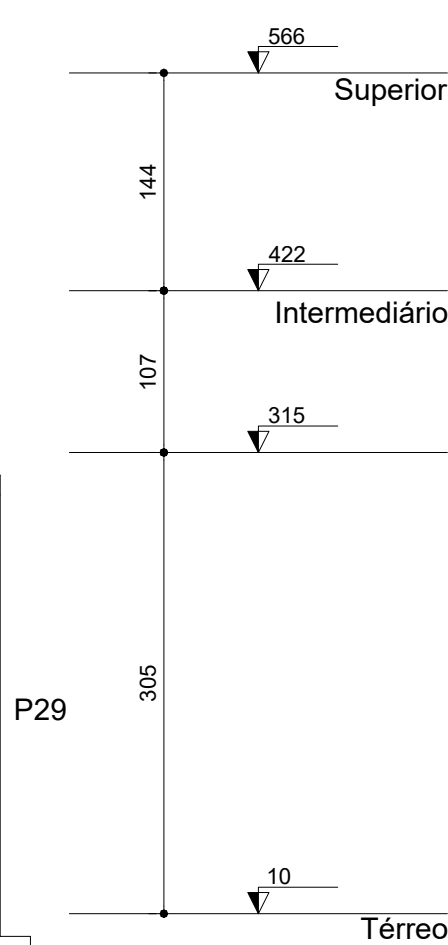
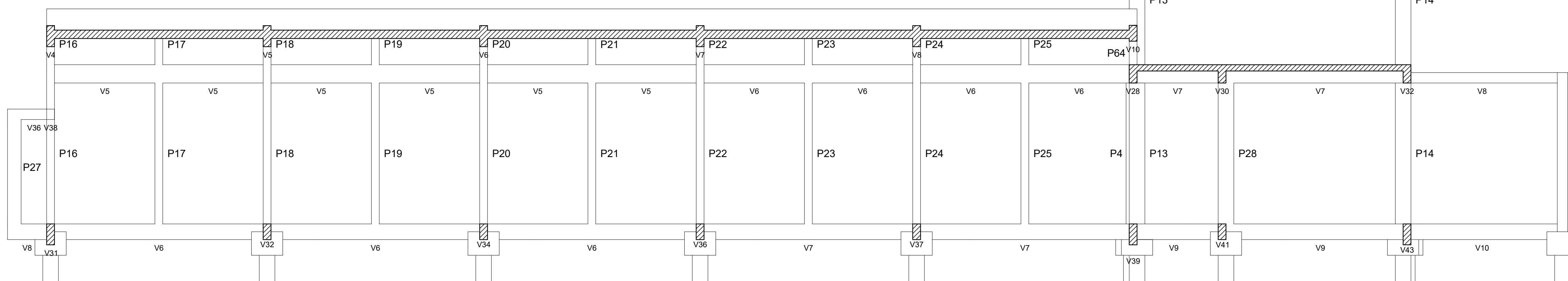
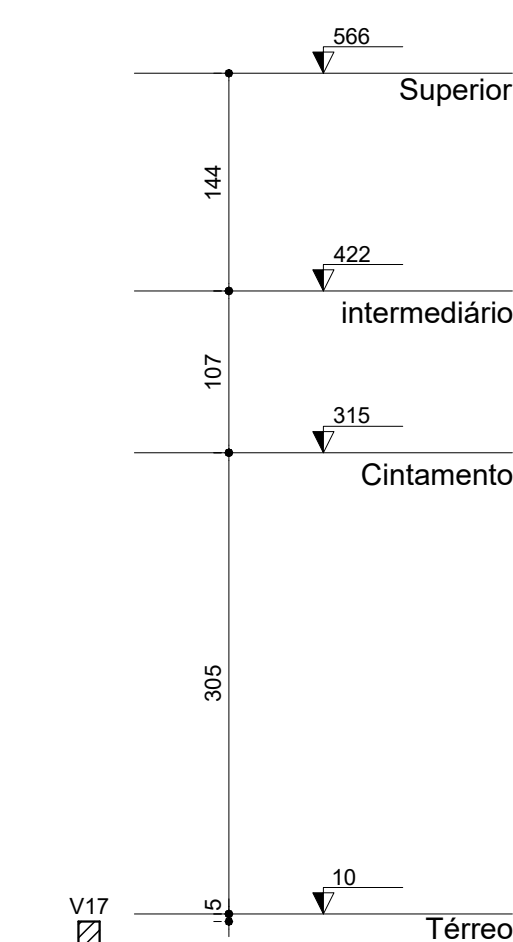
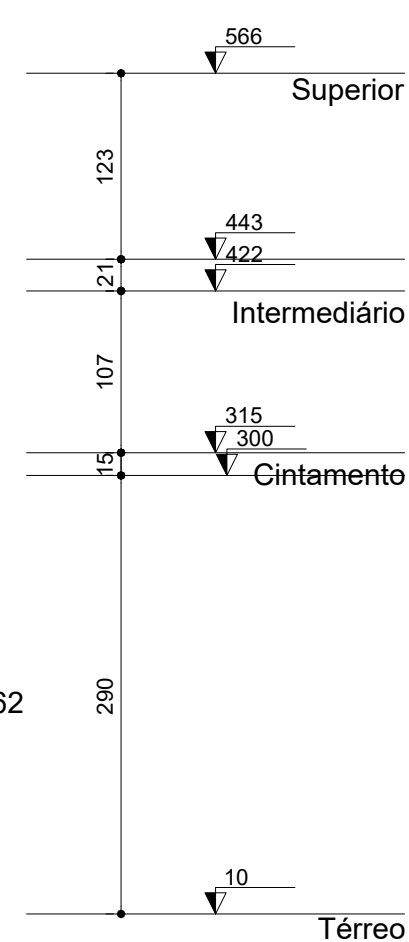


Diagrama de perfil de um terreno com cotas e níveis:

- Nível 1: Térreo (Cota 150)
- Nível 2: Cintamento (Cota 305)
- Nível 3: Intermediário (Cota 107)
- Nível 4: Superior (Cota 144)

Alturas verticais indicadas:

- De 150 a 305: 10
- De 305 a 107: 315
- De 107 a 144: 566





**Projeto Nº ITEM 4 - PROJETO ESTRUTURAL\_1-14/2025 - DAADM (10.55.01)**  
**(Nº do Documento: 65)**

**(Nº do Protocolo: NÃO PROTOCOLADO)**

**(Assinado digitalmente em 10/10/2025 17:58 )**

**FABRICIO BALESTRIN**  
SECRETARIO(A) - TITULAR  
SEO (10.55)  
Matrícula: ###730#5

**(Assinado digitalmente em 10/10/2025 19:03 )**

**RODRIGO EMMER**  
ENGENHEIRO-AREA  
DPA (10.55.04)  
Matrícula: ###708#2

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