



Estacas		
Nome	d (cm)	Quantidade
C30	30,00	27
C40	40,00	13

Diagrama de uma estaca submetida a cargas. No topo, há uma carga vertical descendente P_y e um momento M_y . No lado direito, há uma carga horizontal F_x e um momento M_x .

Legenda dos blocos
escala 1:25

[illegible]

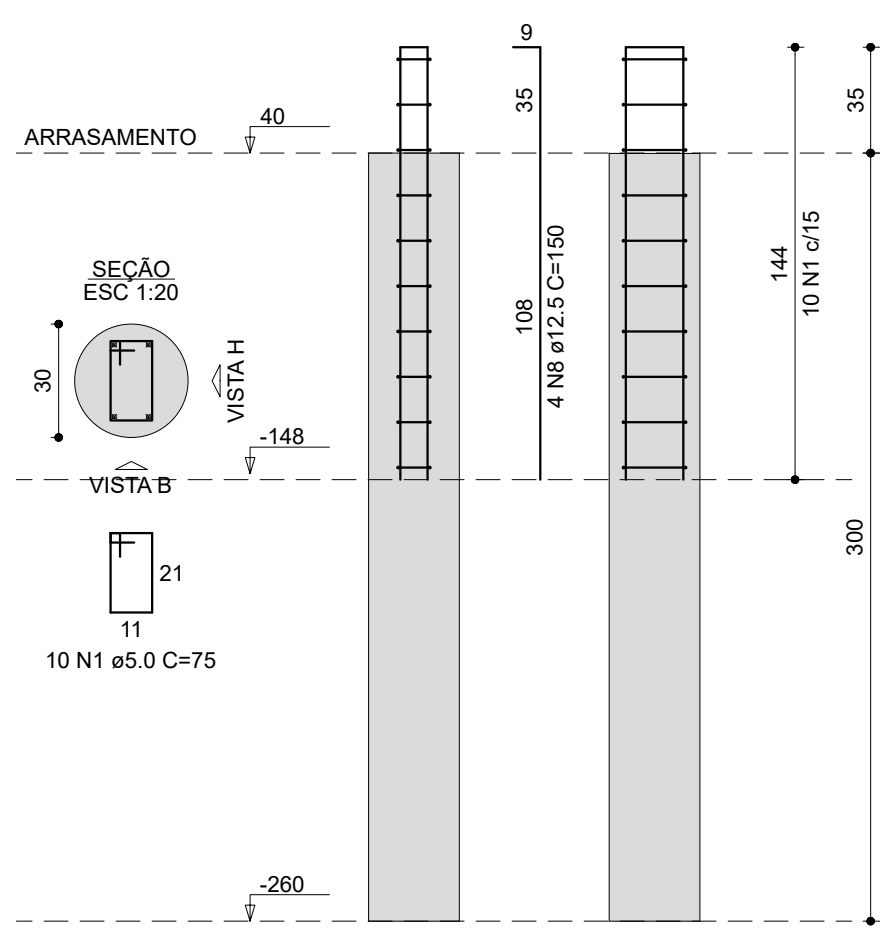
OBSERVAÇÕES:

- 1 - Origem da conta: Horizontais e verticais nos eixos do pilar B25 / P25;
- 2 - Locação da obra deve seguir o projeto arquitetônico de implantação, locando-a a partir de edificações existentes;
- 3 - Convenções: B - Blobo; E - Estaca; 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.

DETALHAMENTO - ESTACAS

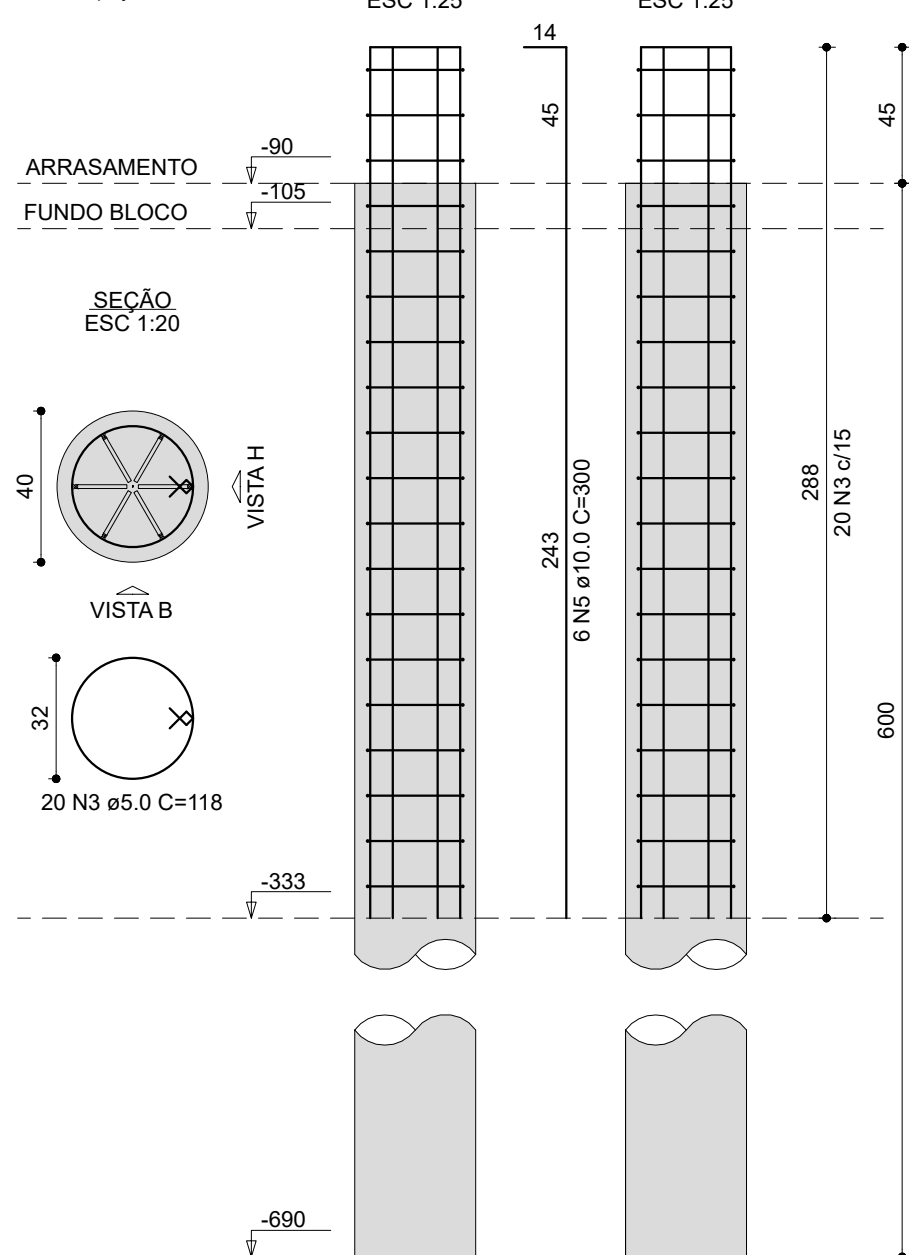
ES1

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



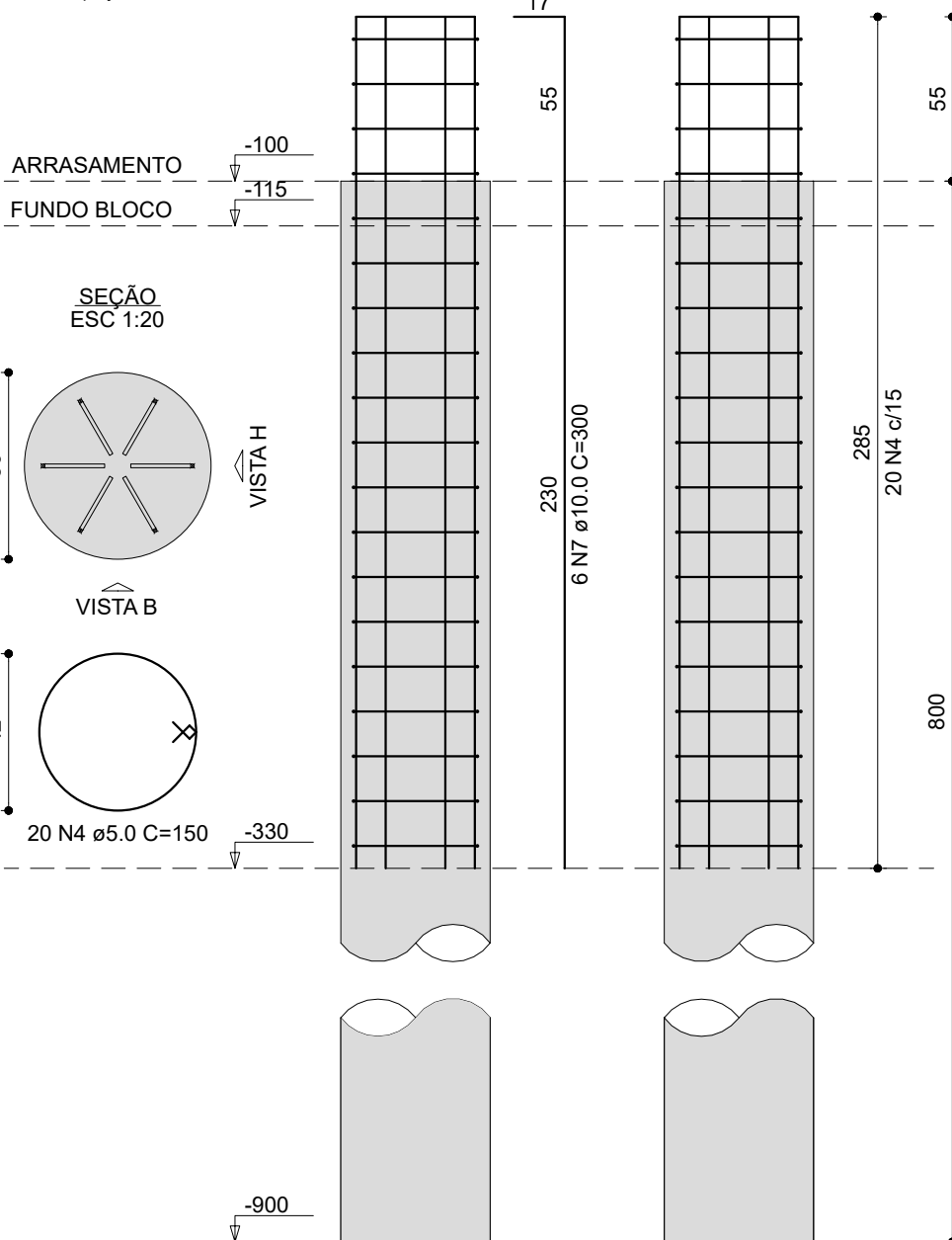
E1

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



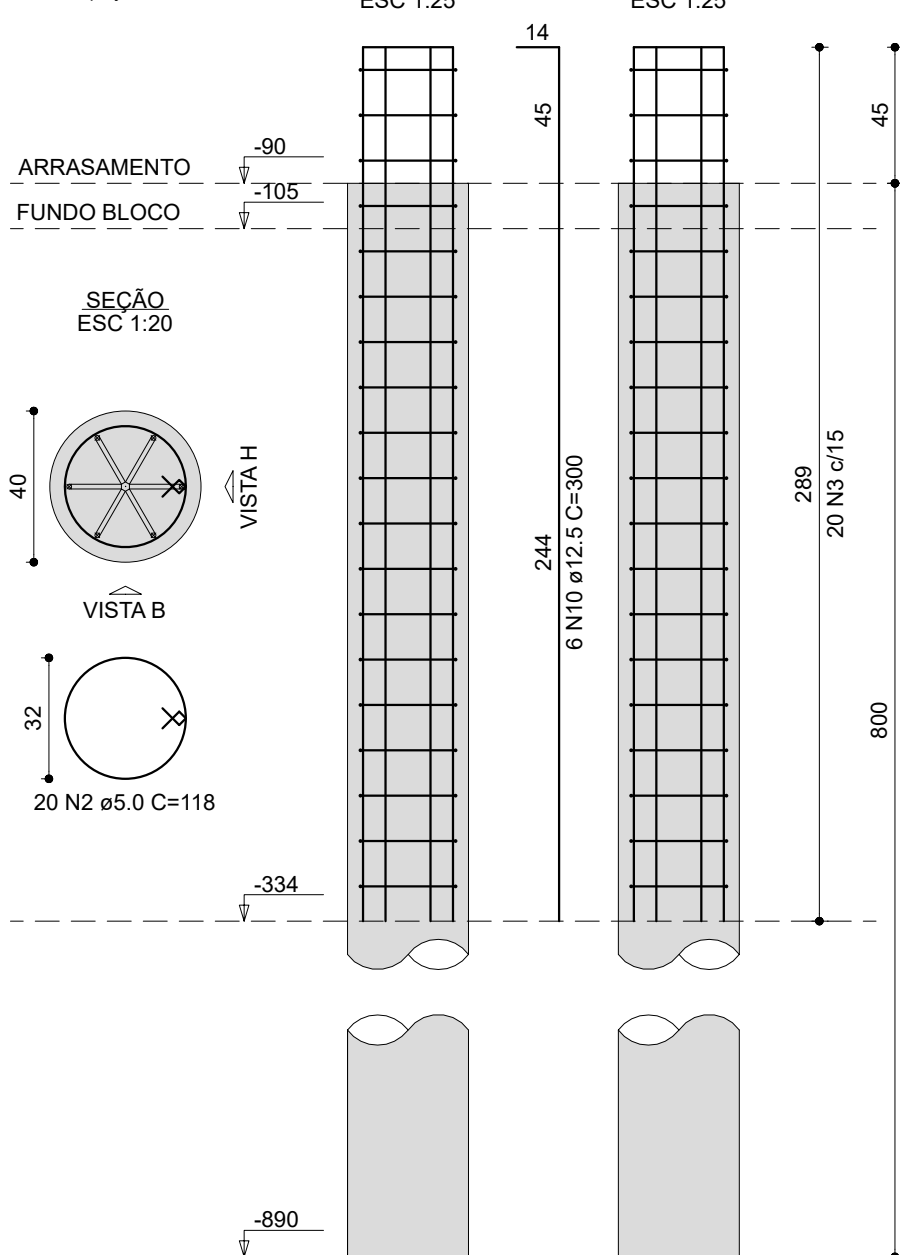
E2=P17

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



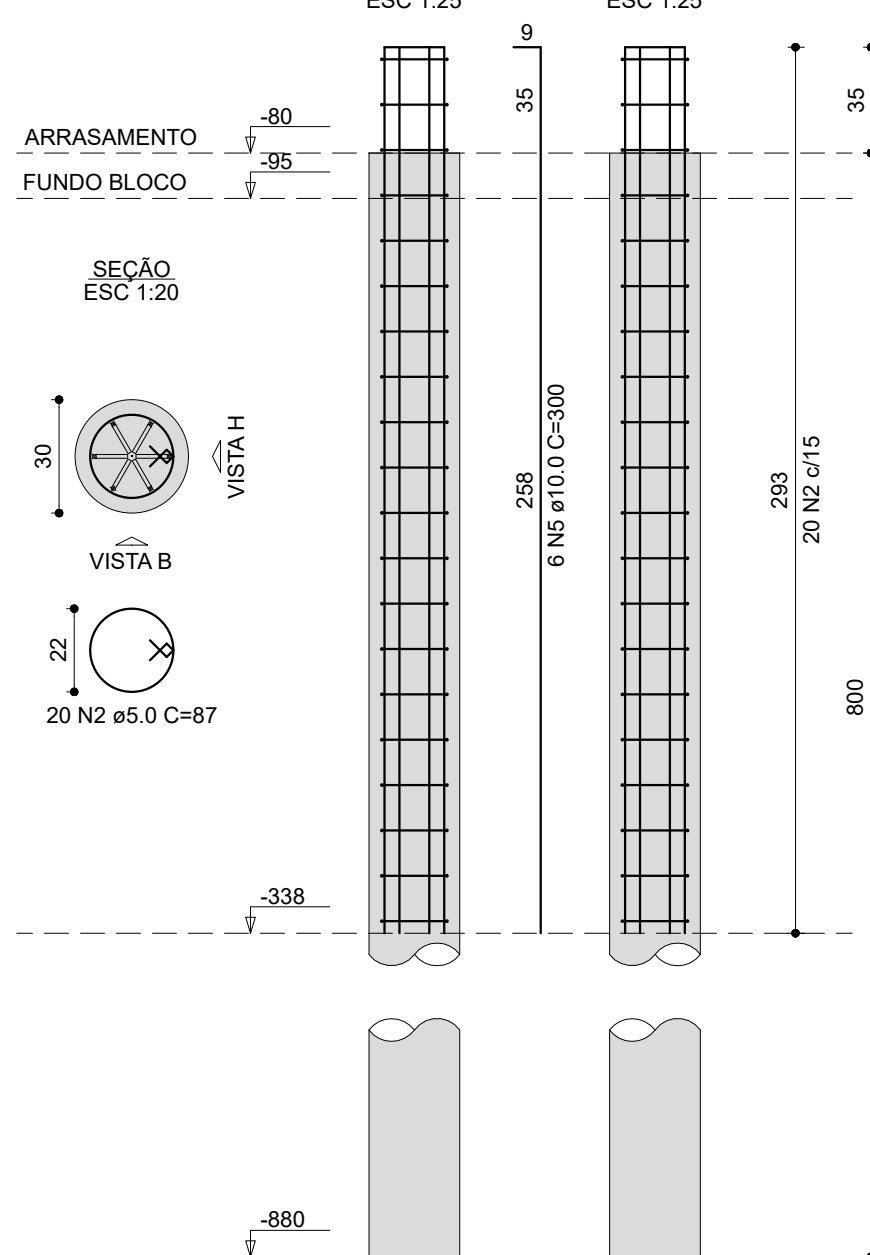
E3

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



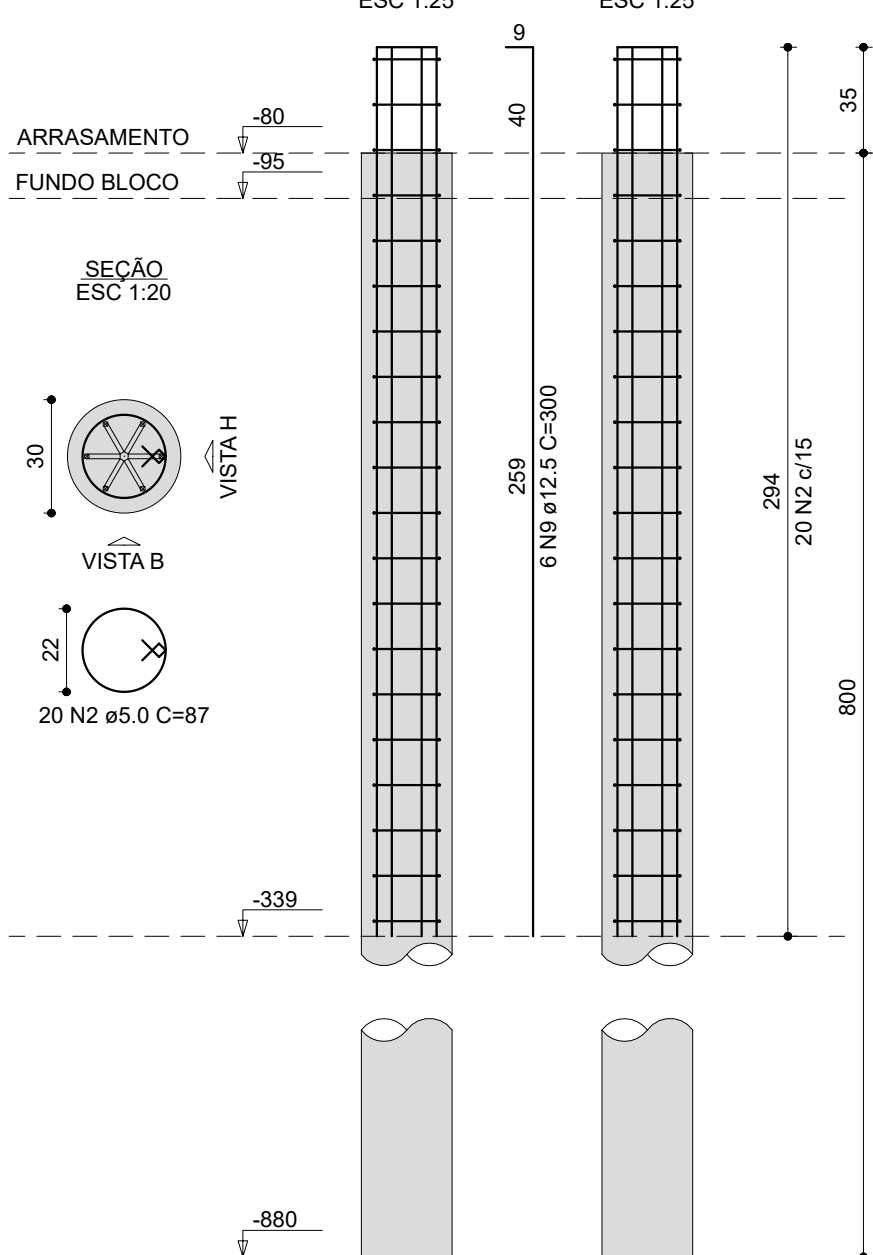
E4=E29

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



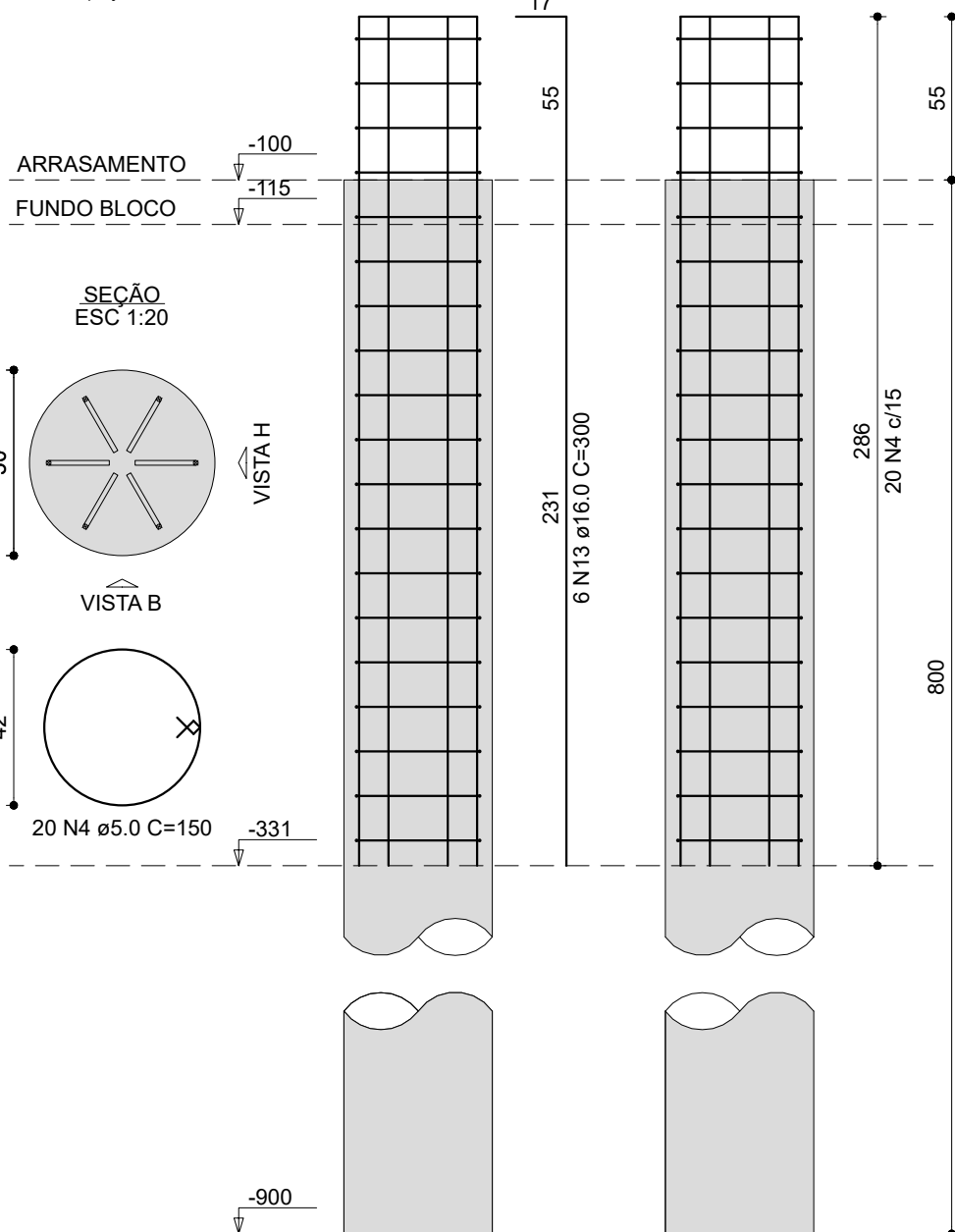
E5

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



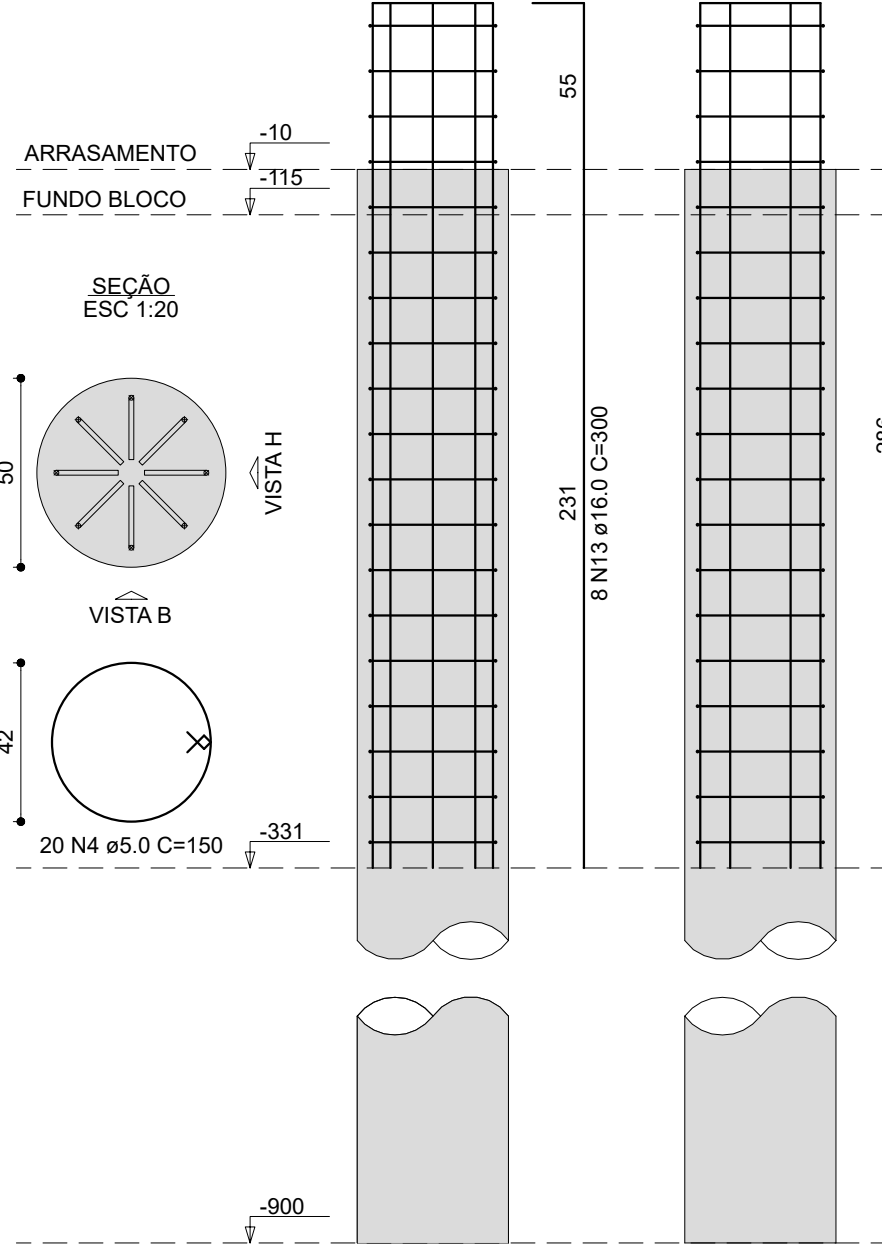
P6

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



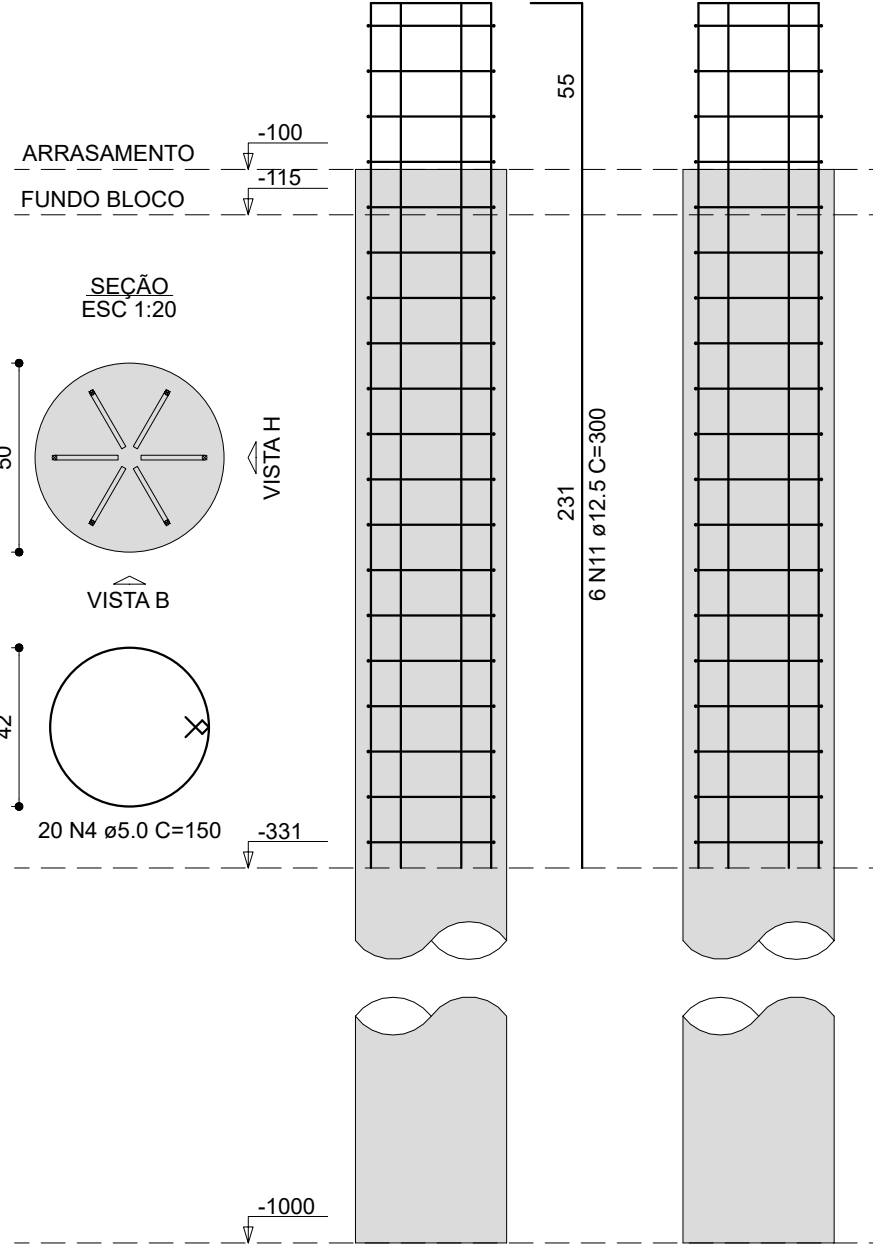
P7

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



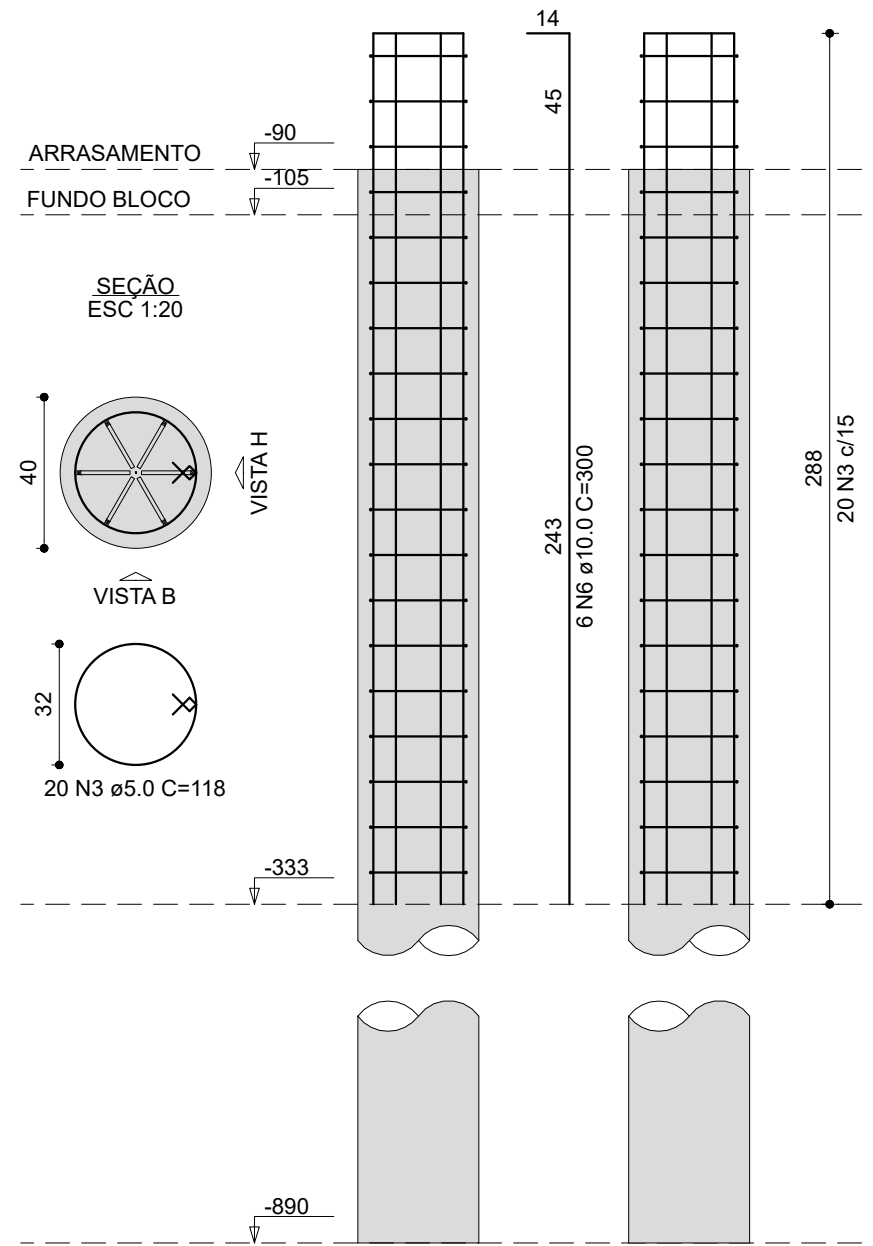
P9

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



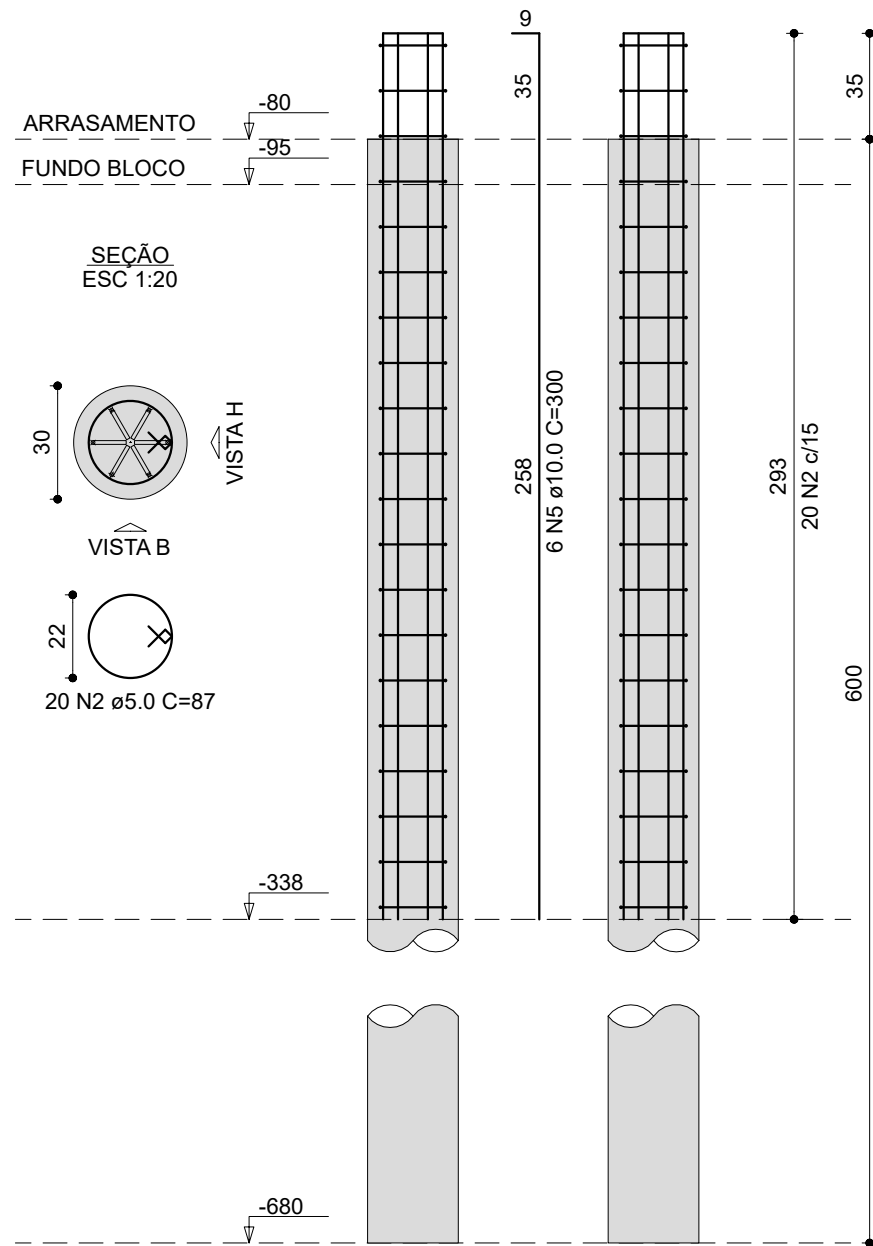
E10=E18-E23

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



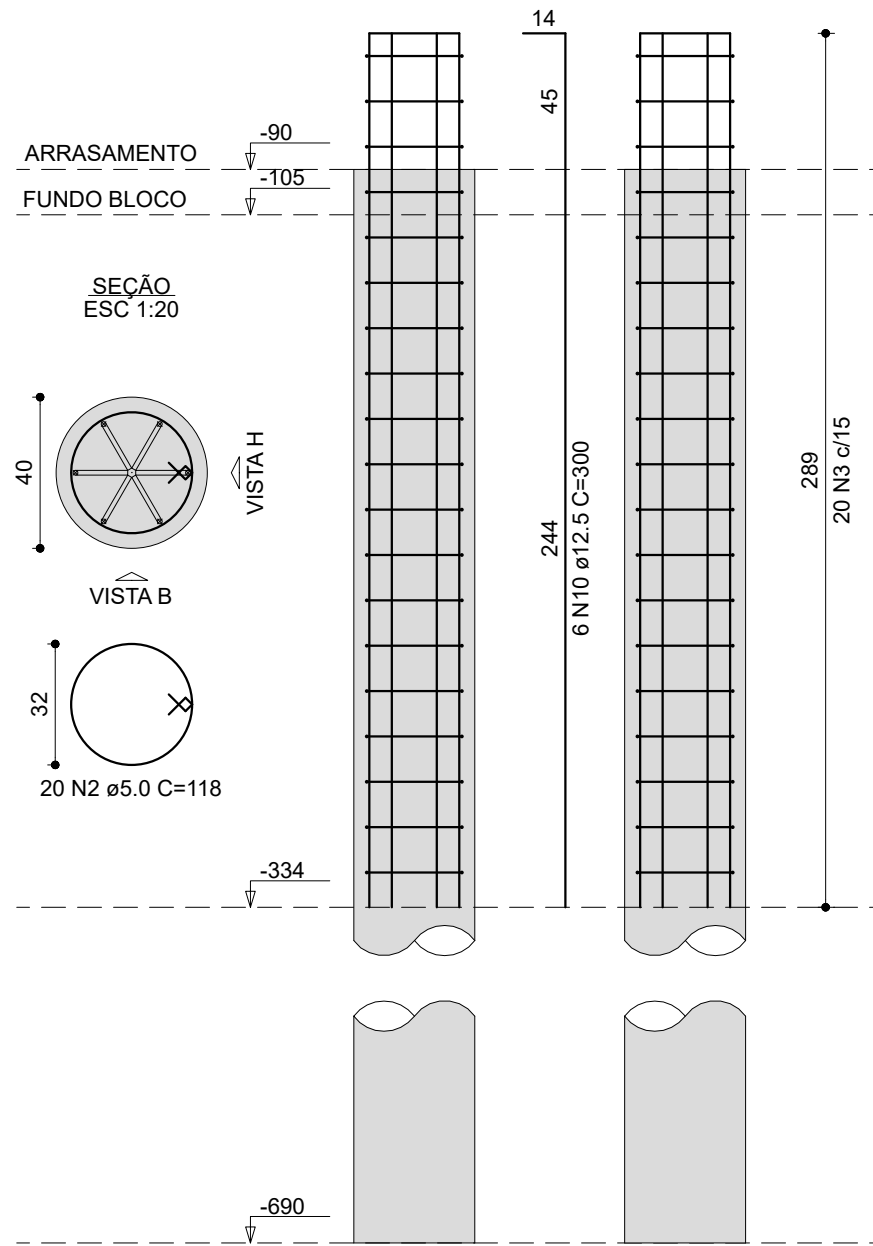
E13=E19-E25

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



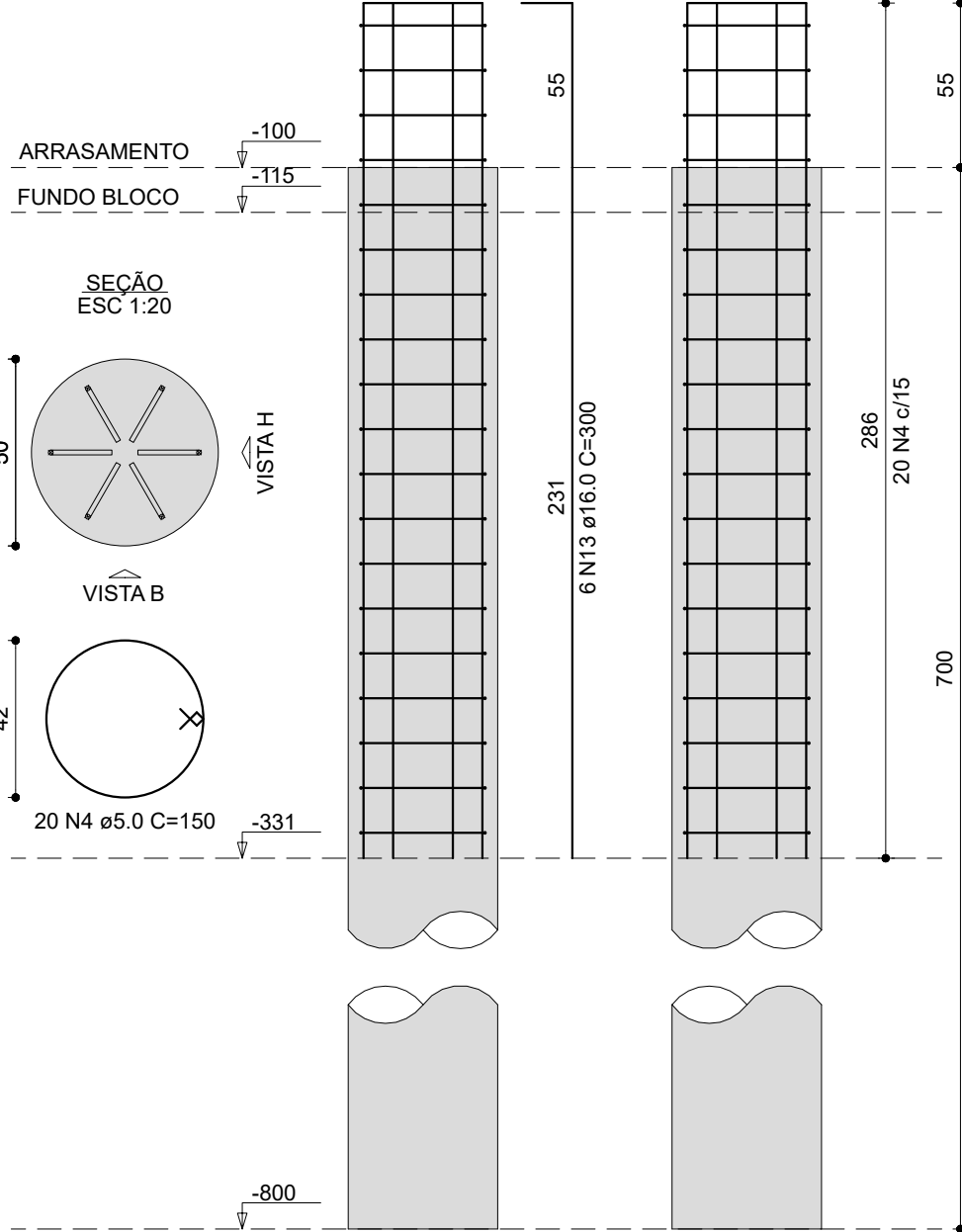
E14

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



P15=P16

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



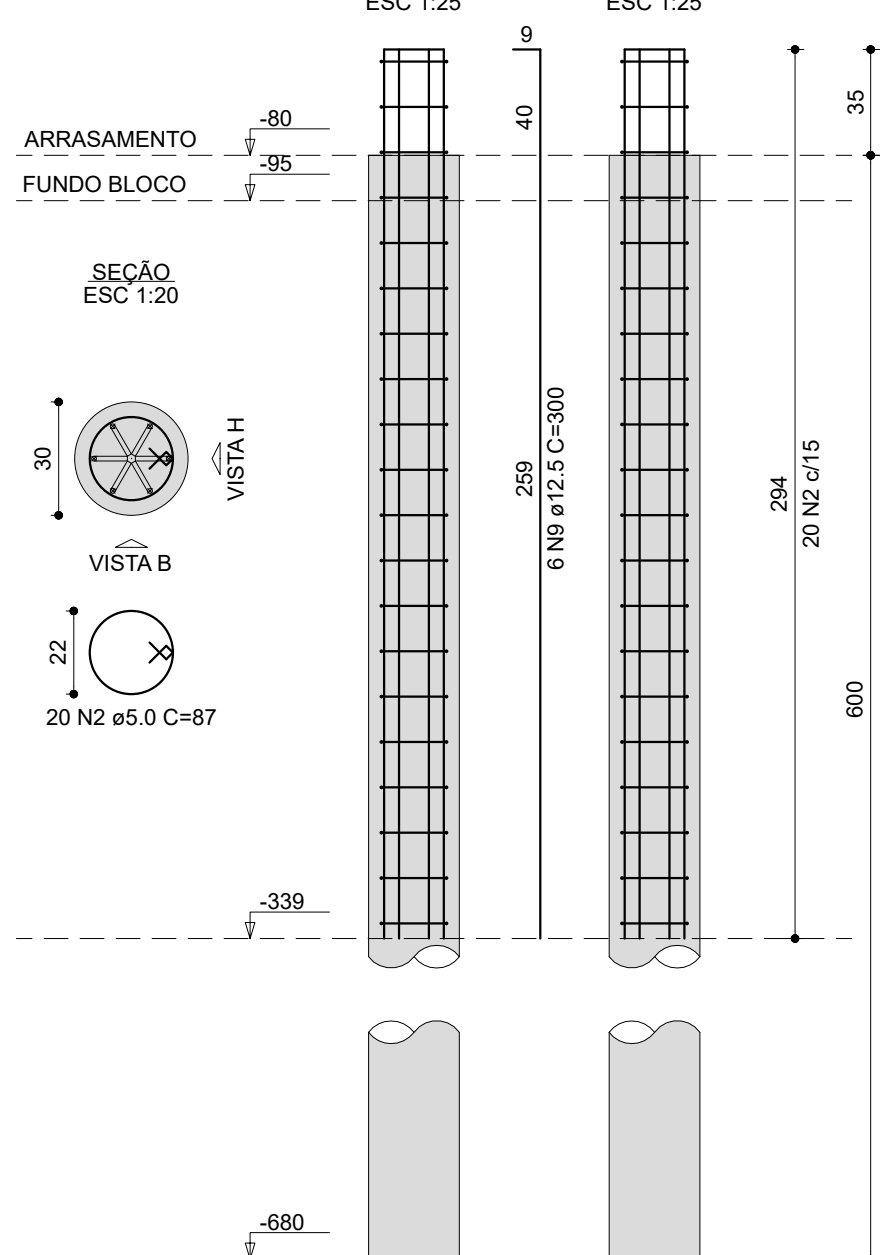
RELAÇÃO DO AÇO				
ACO	N	DIAM (mm)	QUANT	C.TOTAL (cm)
CASO	1	5.0	10	75
	2	5.0	300	67
	3	5.0	240	118
	4	5.0	140	150
	5	10.0	60	300
	6	10.0	30	300
	7	10.0	12	300
	8	12.5	4	150
	9	12.5	28	300
	10	12.5	16	300
	11	12.0	6	300
	12	16.0	28	300
	13	16.0	28	300

RESUMO DO AÇO			
ACO	DIAM (mm)	C.TOTAL (cm)	PESO = 10% (kg)
CASO	10.0	306.0	93.7
	12.5	156.0	185.3
	16.0	182.0	291.2
	5.0	881.7	146.0

PESO TOTAL (kg)
CASO 540.2
CASO 146.0
Volume de concreto (C-25) = 29.1 m³
Volume de escavação = 31.3 m³
Área de forma = 0.00 m²

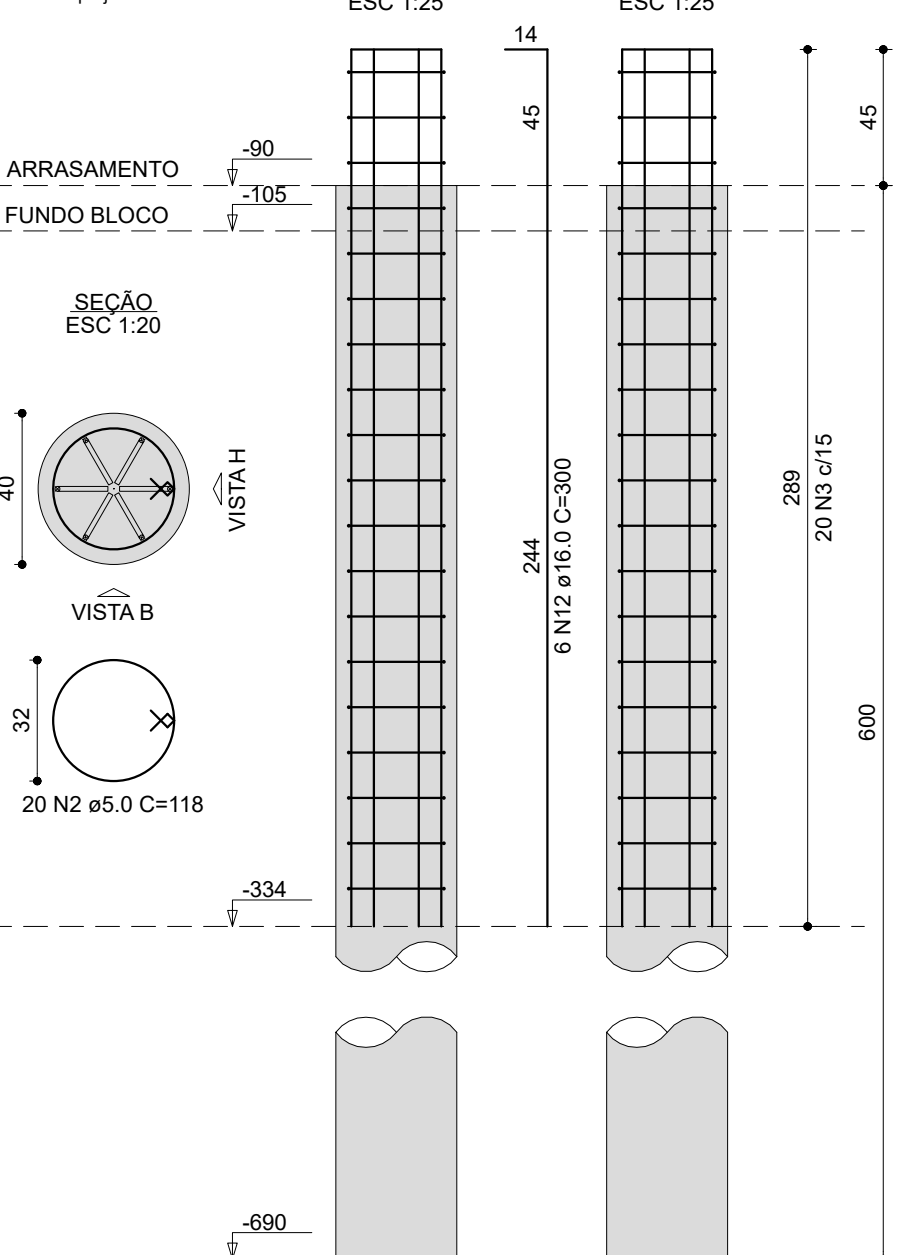
E20

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



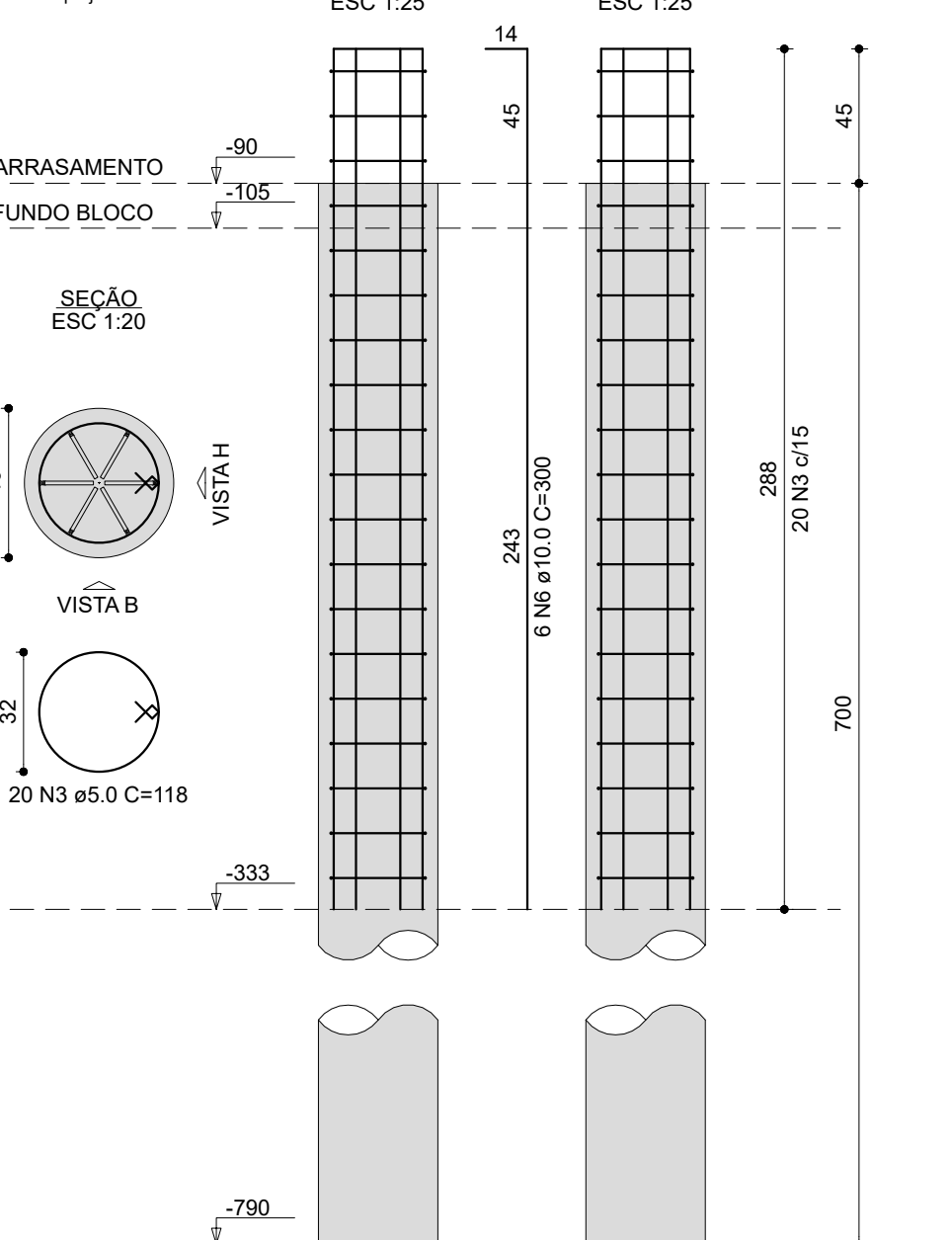
E21=E22

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



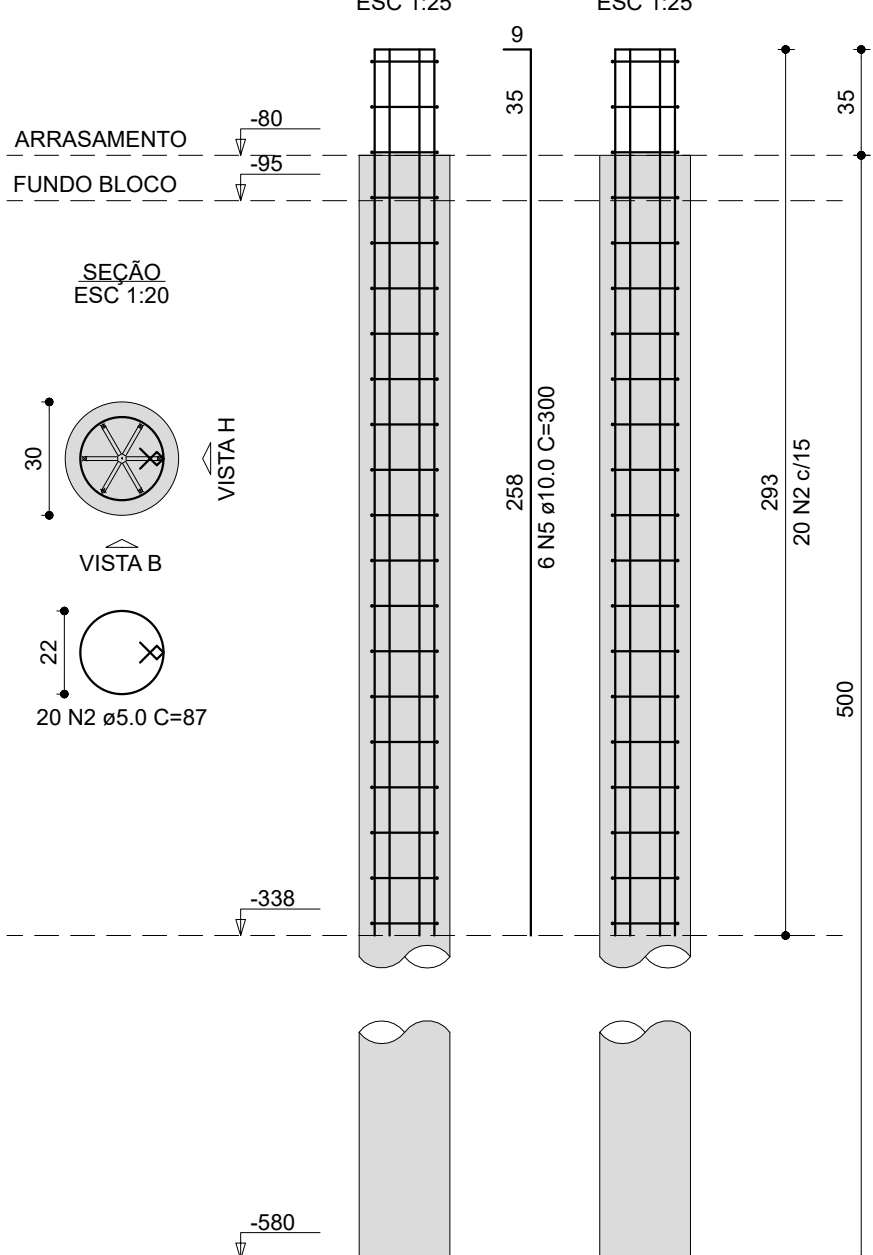
E24

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



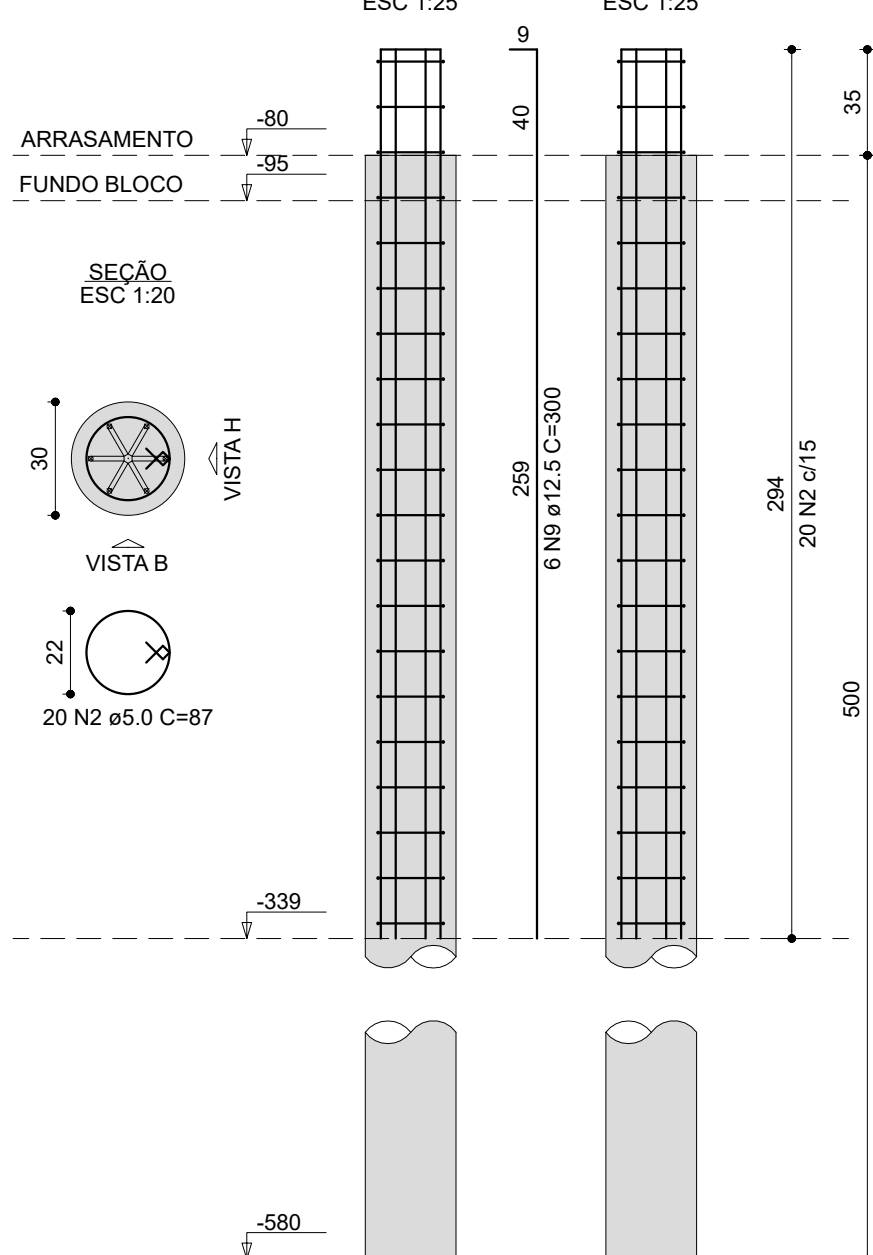
E26=E28

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



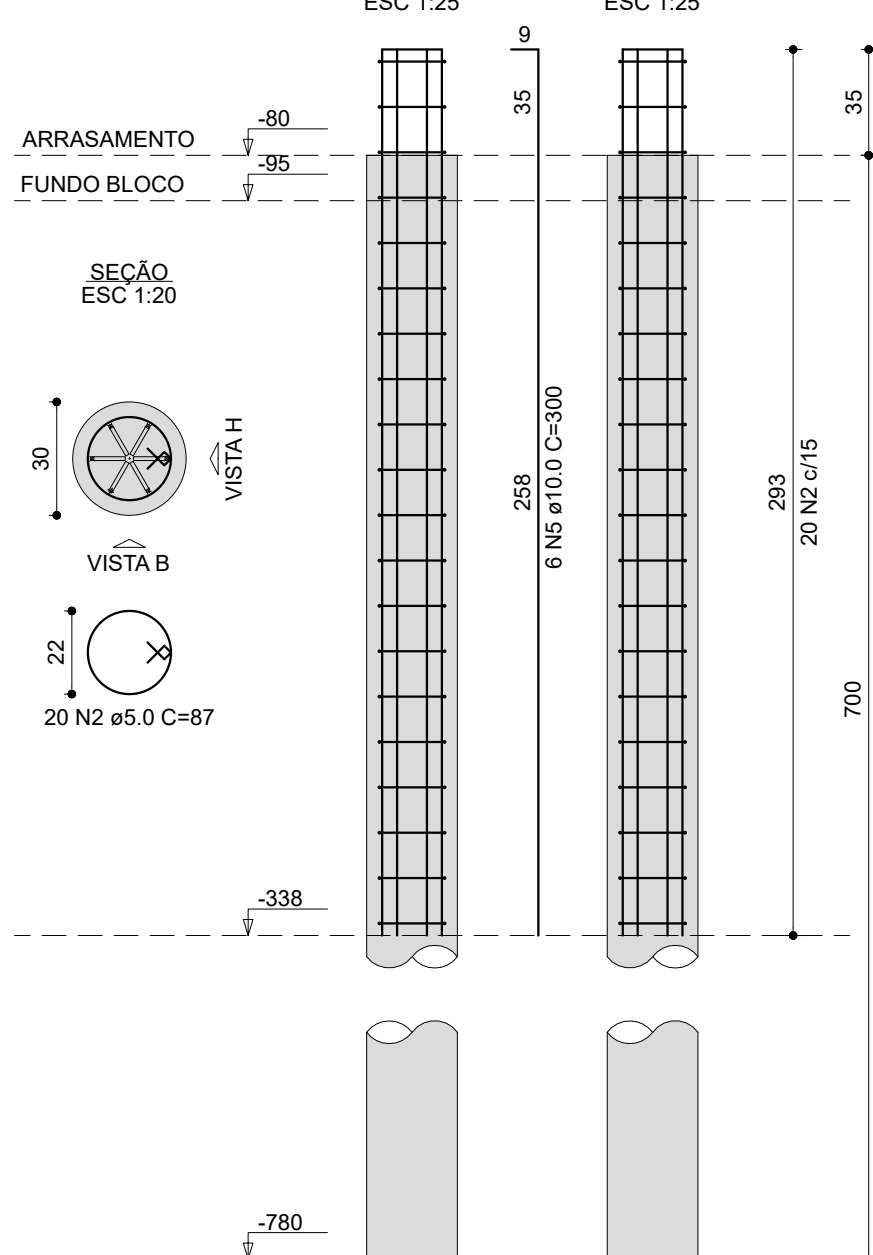
E27

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



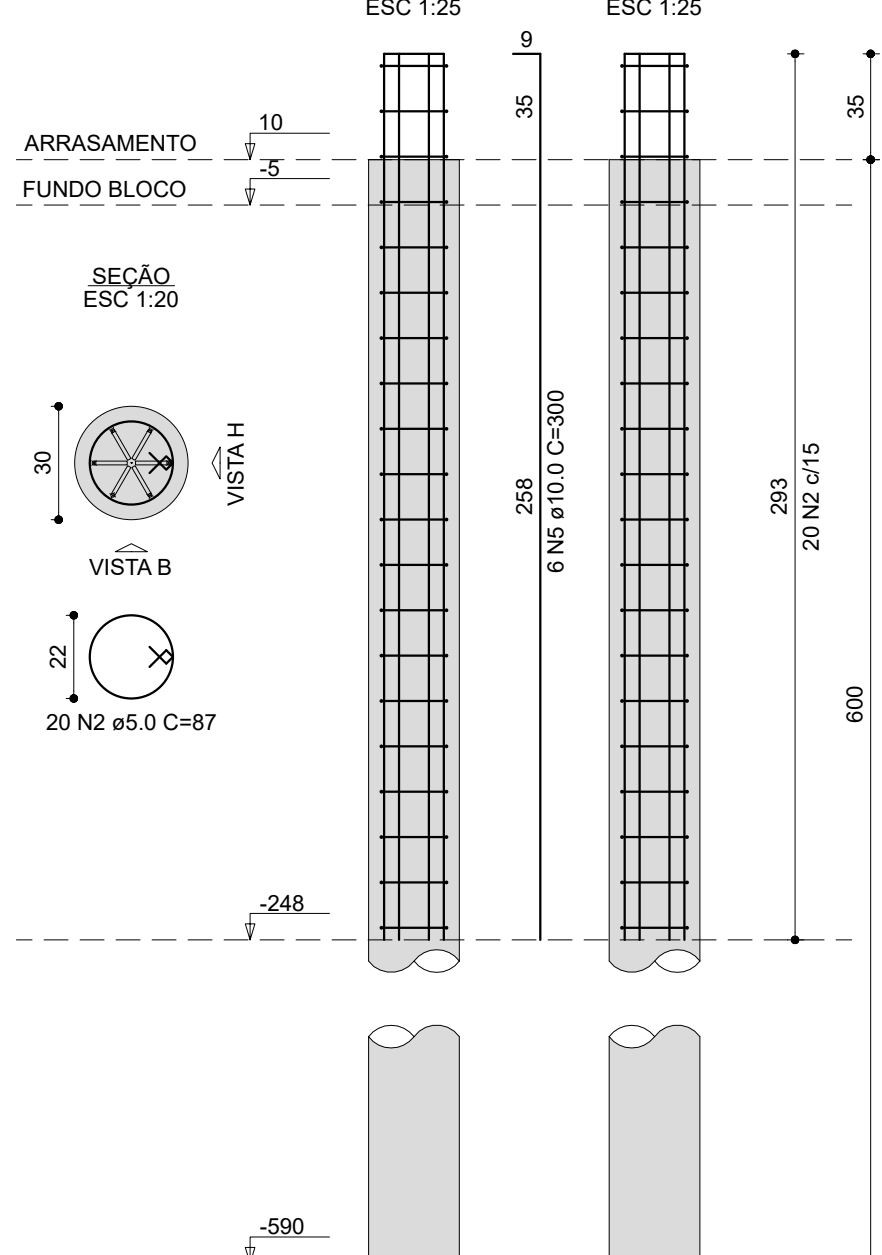
E30

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



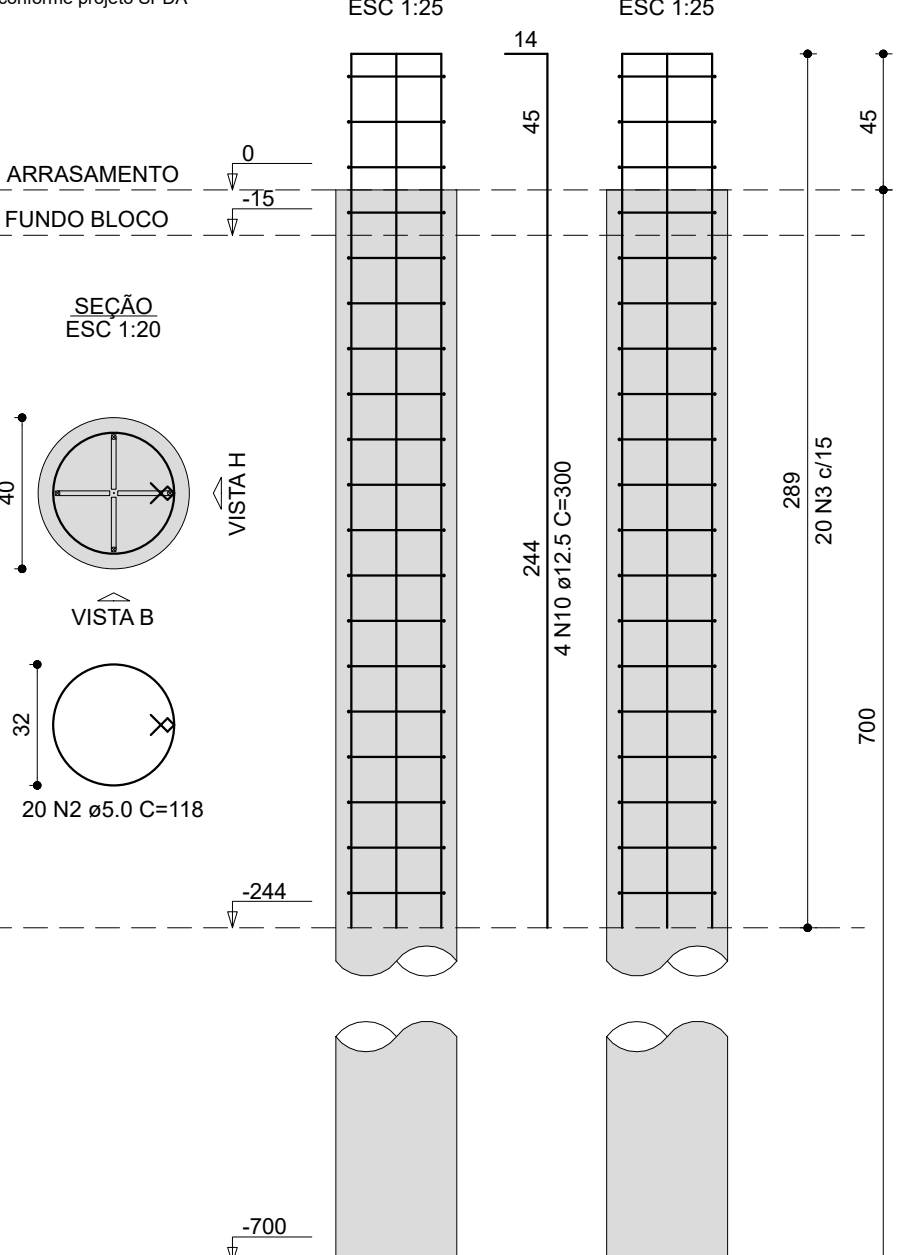
E31=E34

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



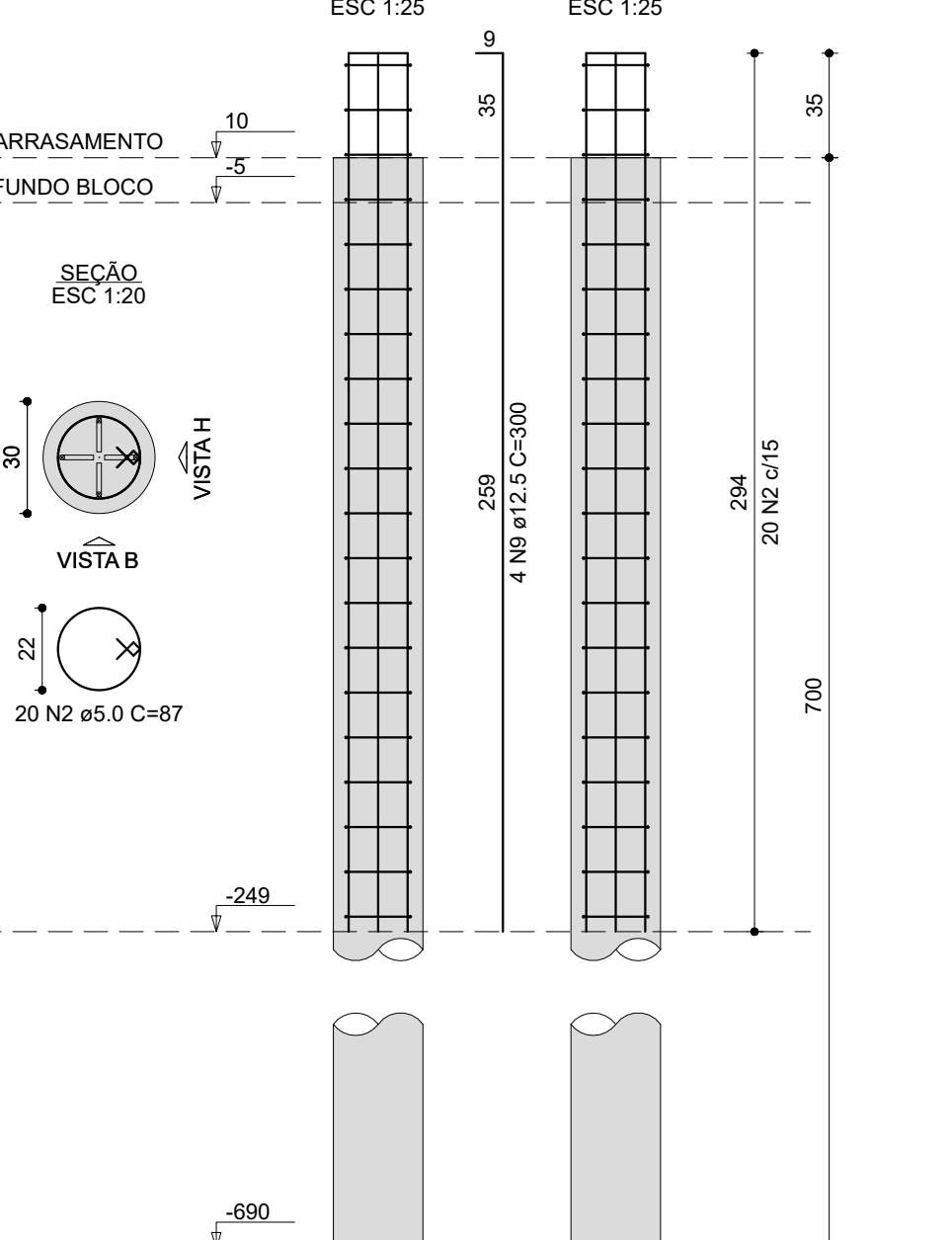
E32

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



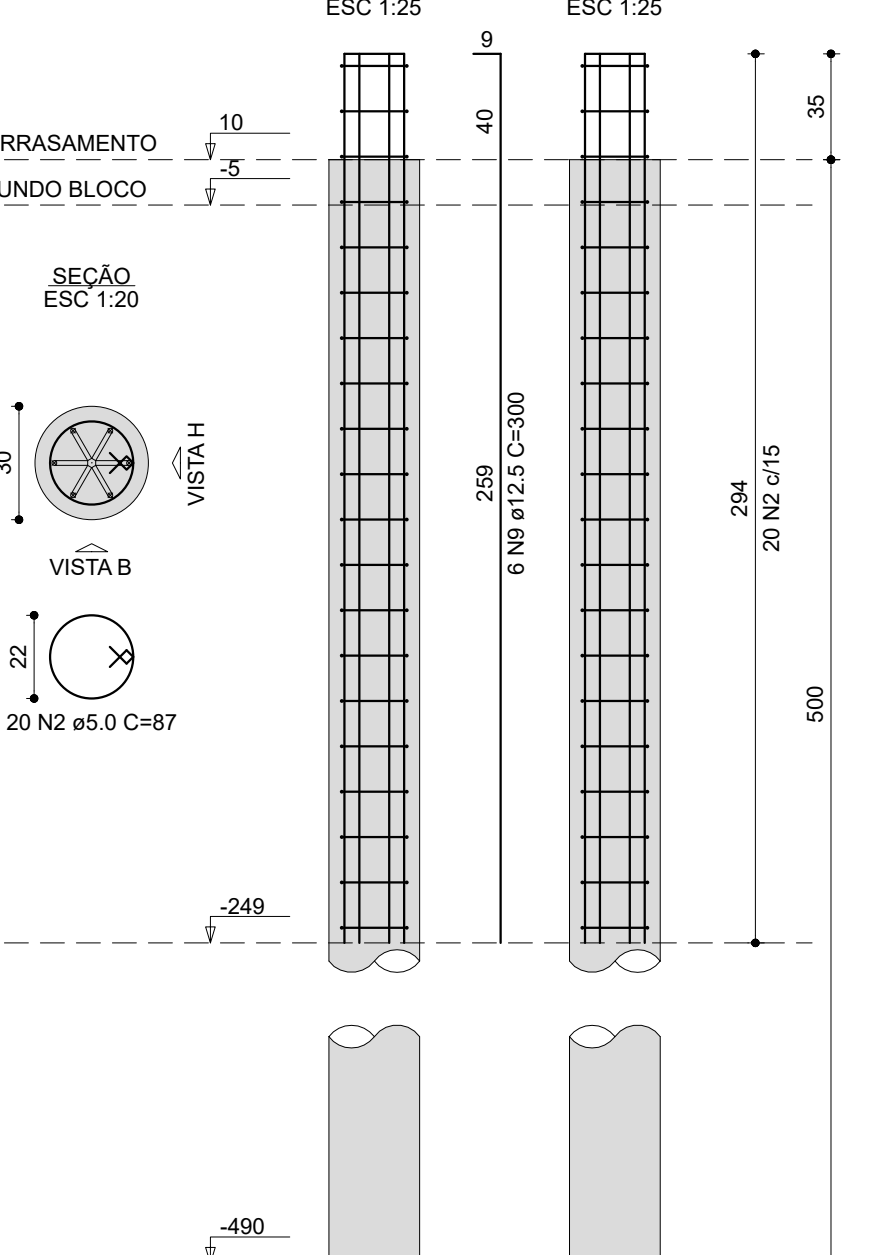
E33

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



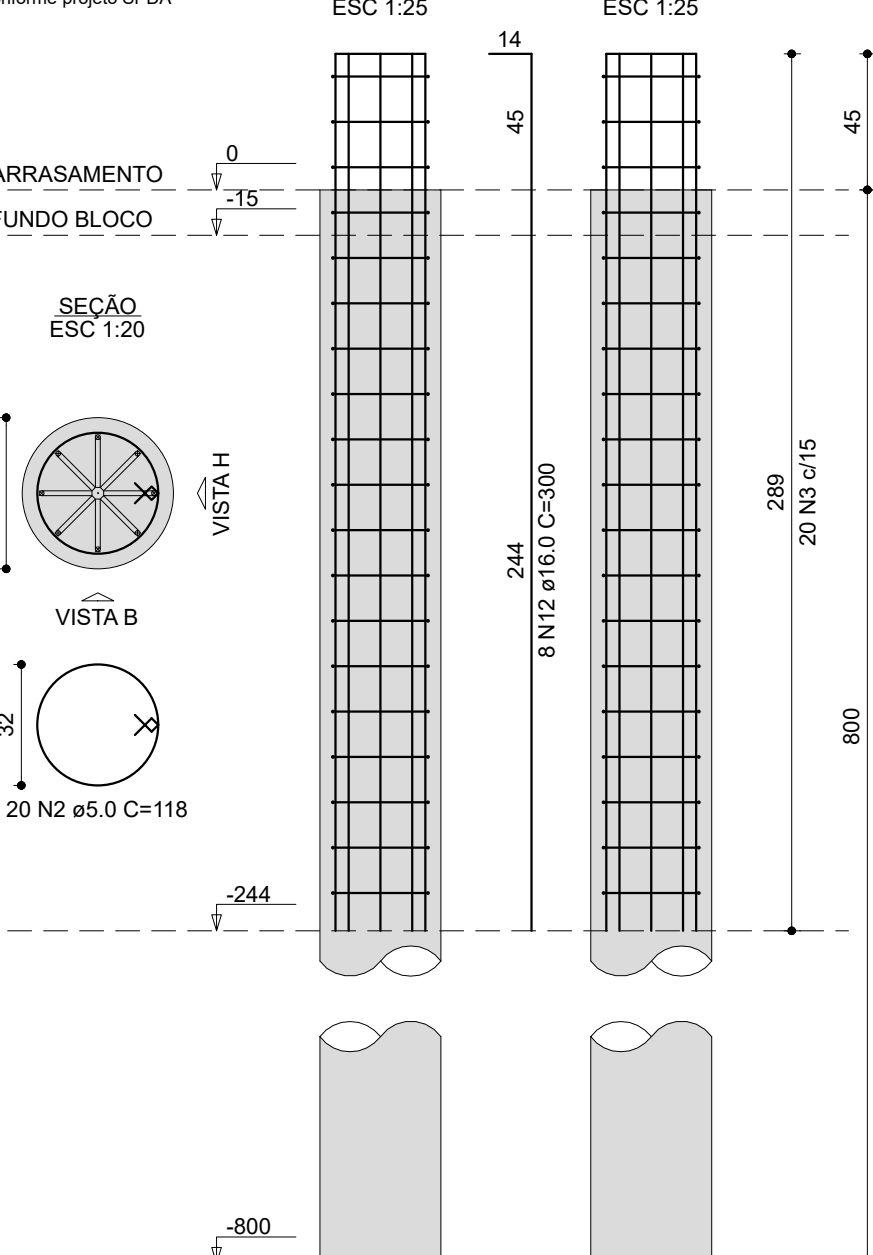
E35

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



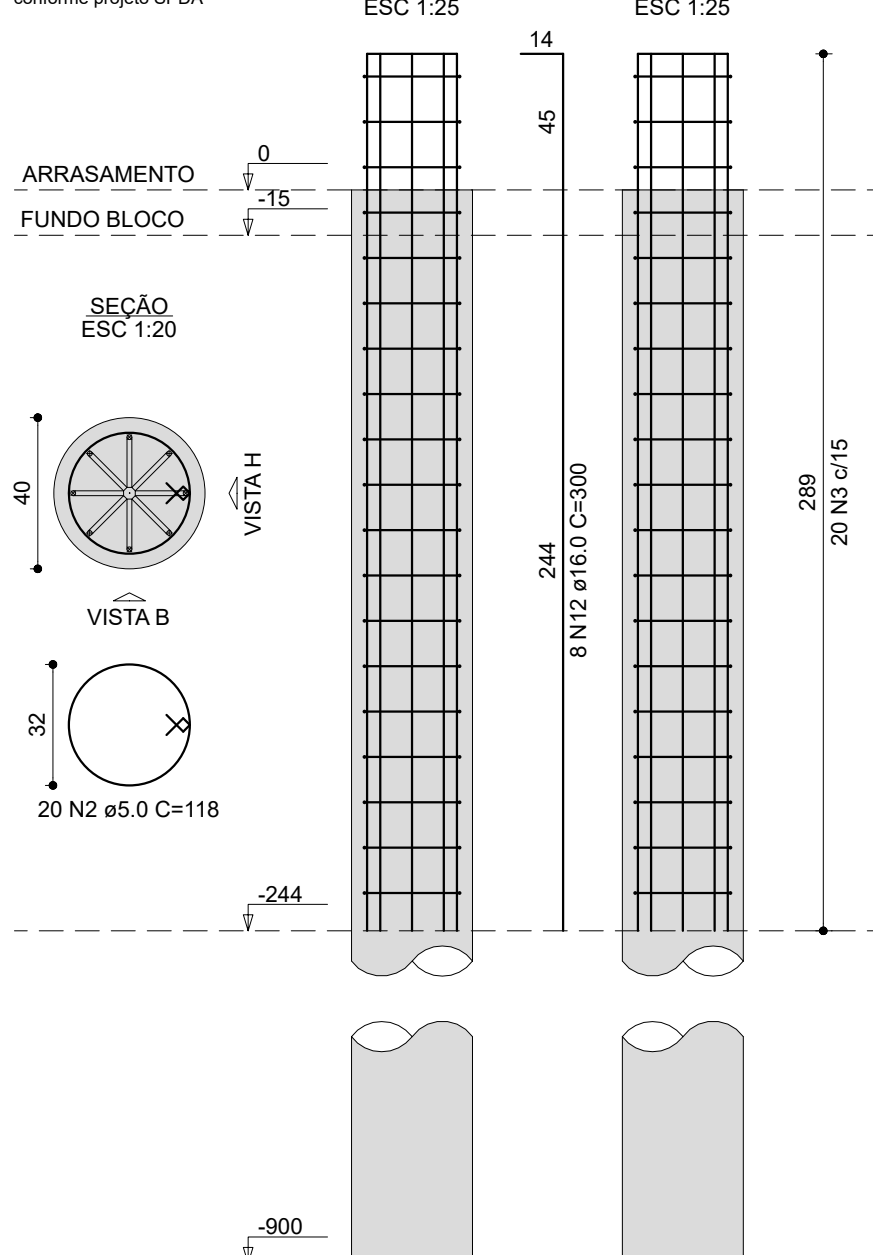
E36

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



E37

OBS: Ver Rebar em aço galvanizado conforme projeto SPDA



CARIMBOS:

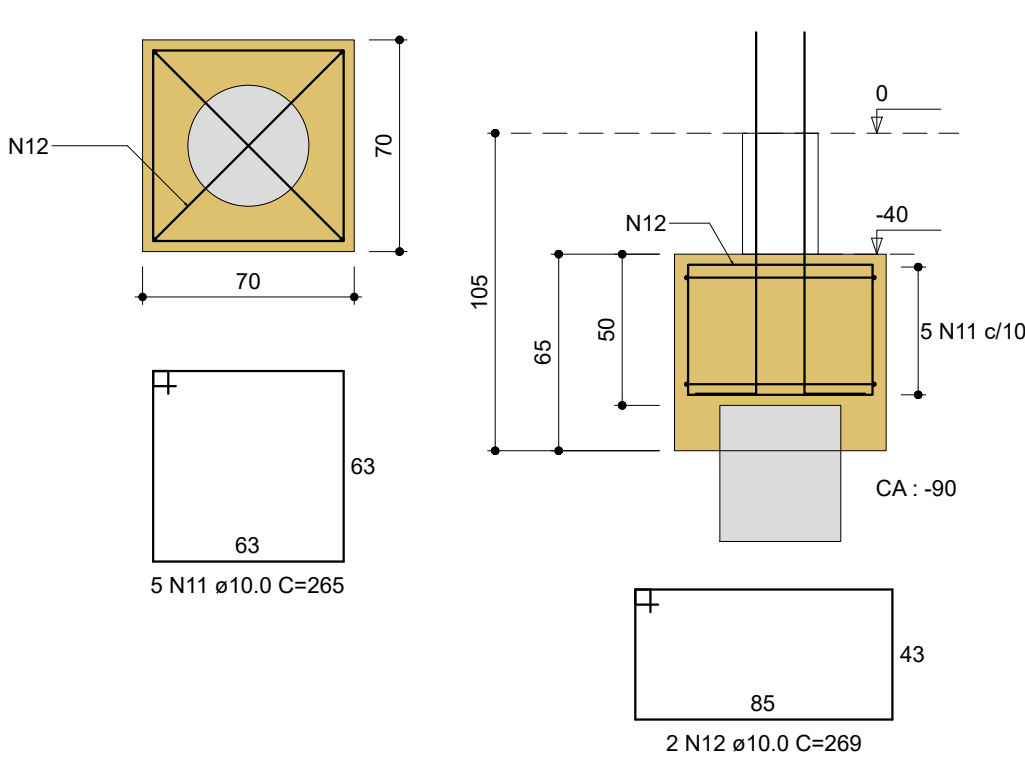


Secretaria Especial de Obras

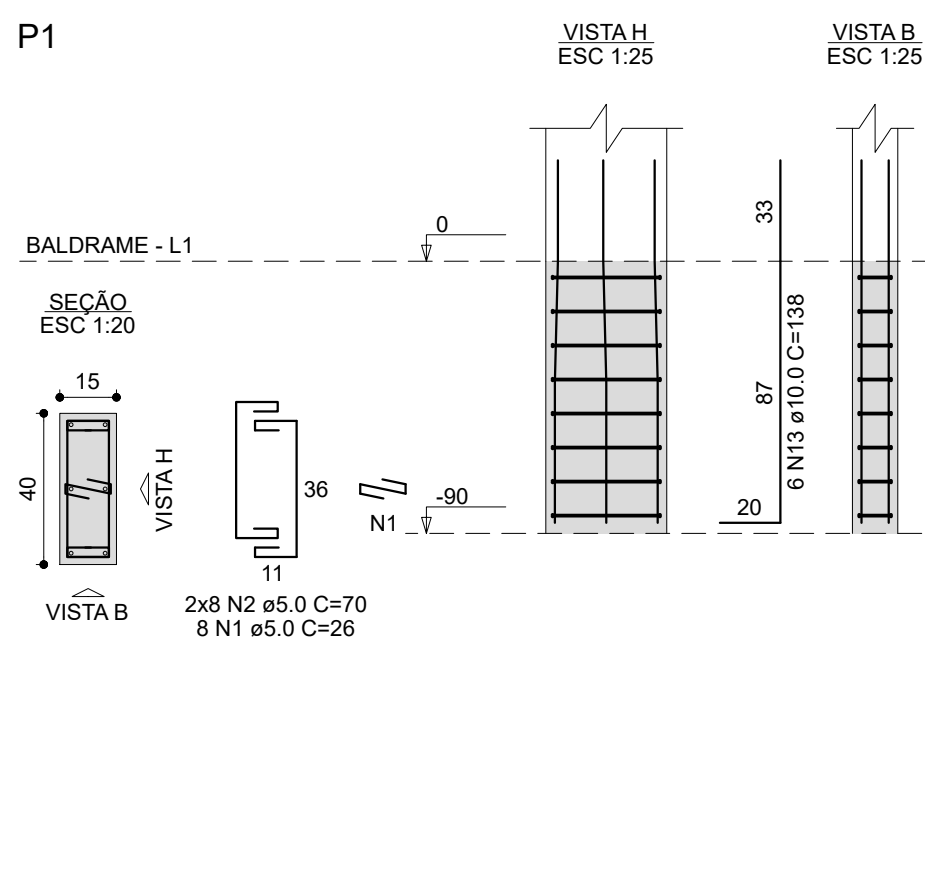
LOCAL: PASSO FUNDO - RS
OBRA: RESTAURANTE UNIVERSITÁRIO E CANTINA
PROJETO: ESTRUTURAL
ÁREA TOTAL DA EDIFICAÇÃO: 1.064,58 m²
CONTEÚDO: DETALHAMENTO - ESTACAS
ENDEREGO: RUA CAPITÃO ARAÚJO, 20, CENTRO

FASE: EXECUTIVO
REVISÃO Nº: R00
DATA: 03/10/2023
DESENHADO POR: RODRIGO
REVISADO POR: RODRIGO
NOME DO ARQUIVO: 120 E 125
TAMANHO FOLHA: A0
Nº PRANCHA: 02
120 E 125

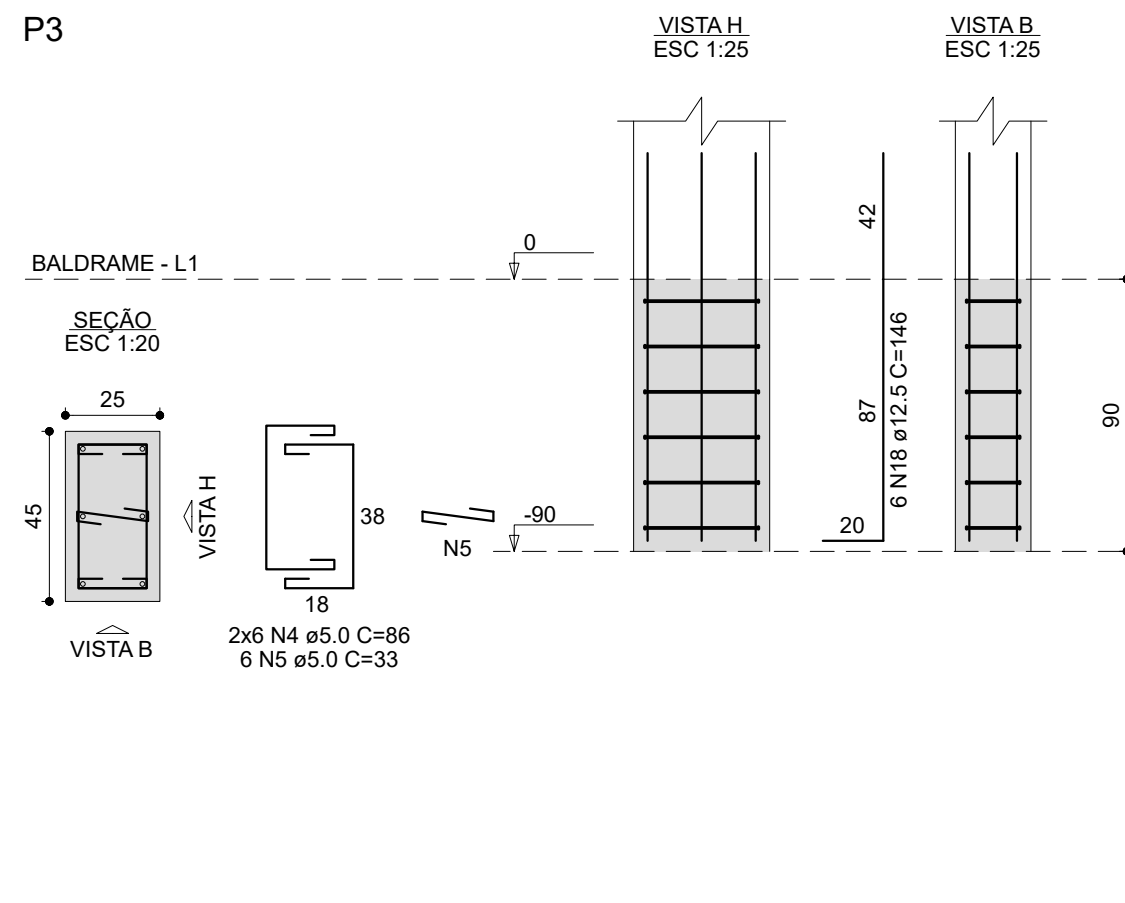
DETALHAMENTO - BLOCOS BALDRAME
B1=B3=B10=B14=B18=B21=B22=B23=B24
1xC40
PLANTA
ESC 1:25



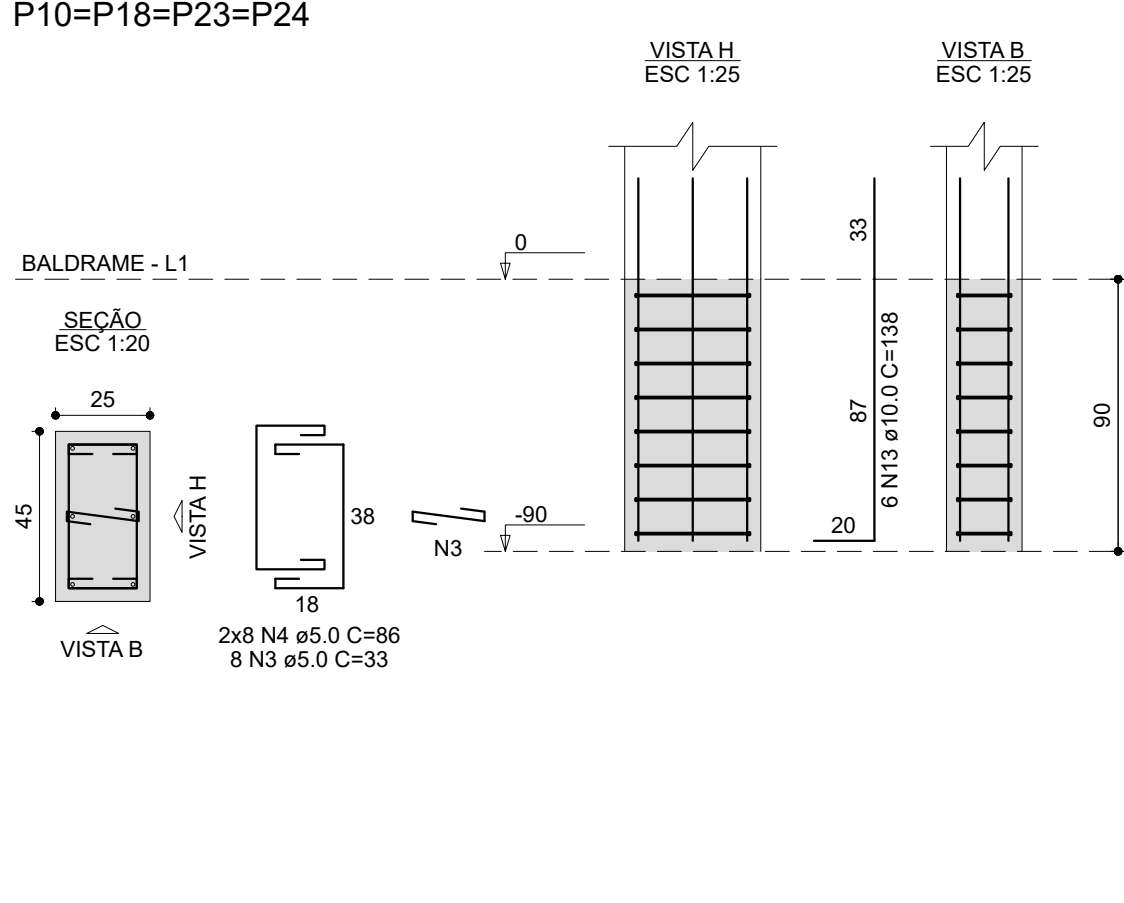
P1



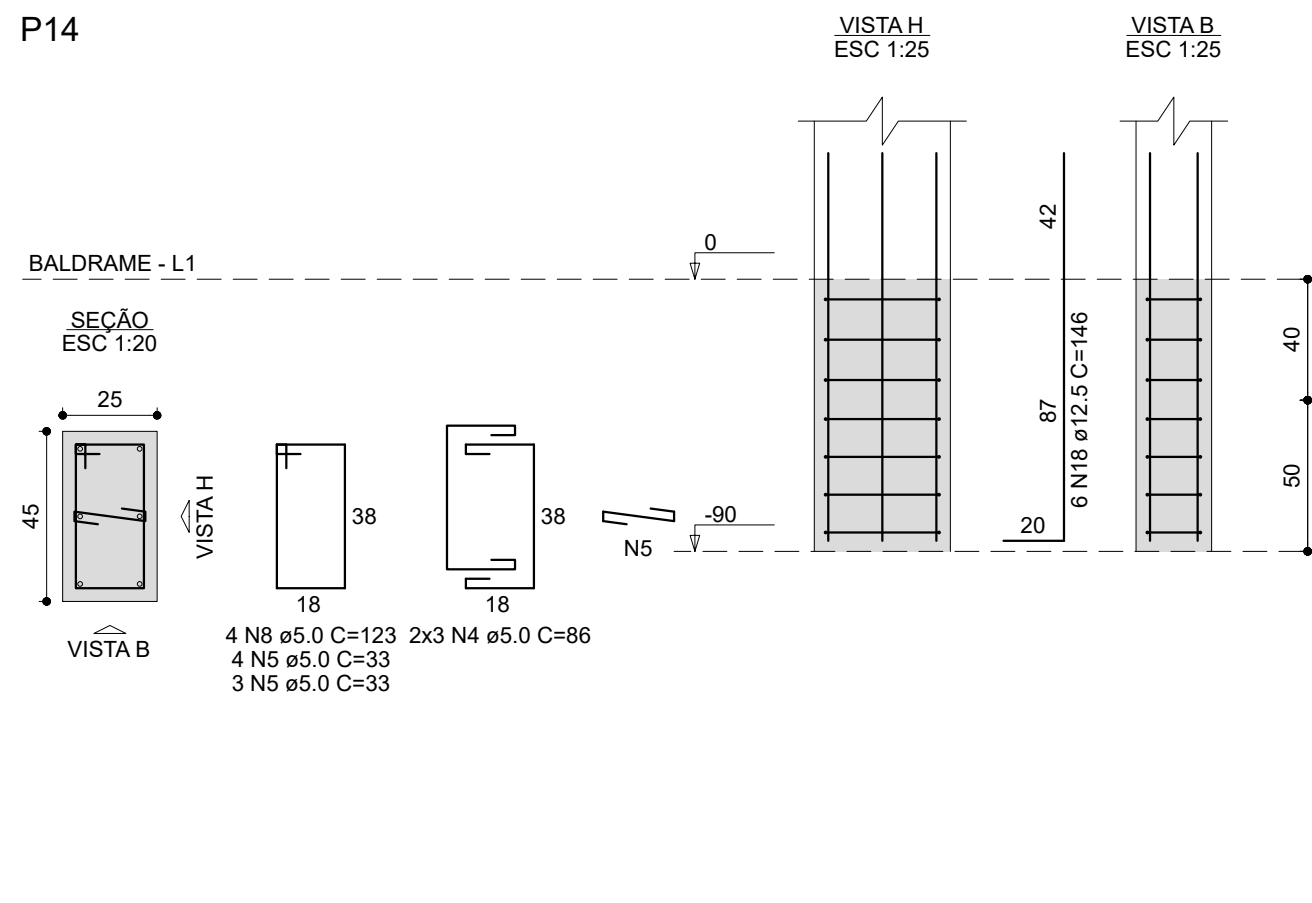
P3



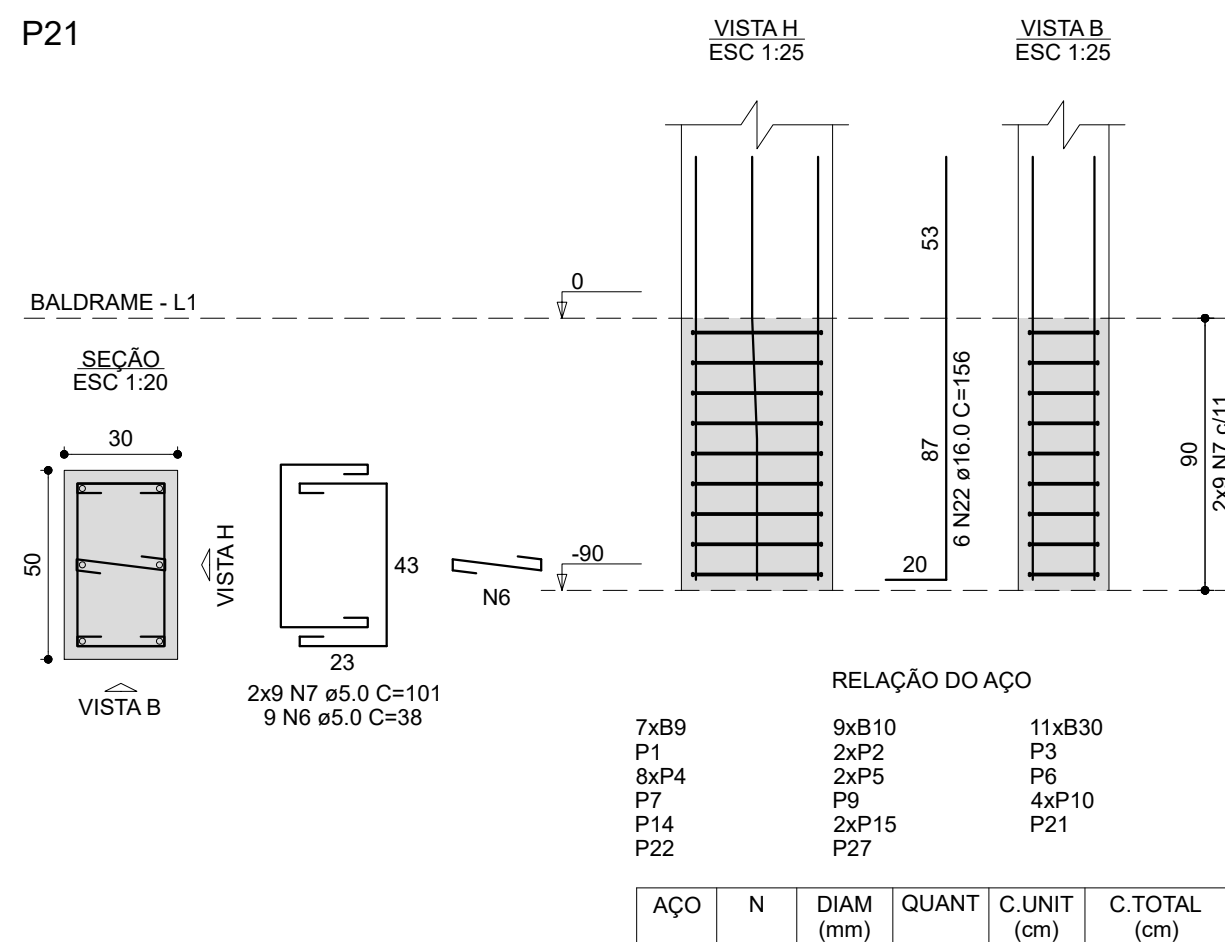
P10=P18=P23=P24



P14



P21



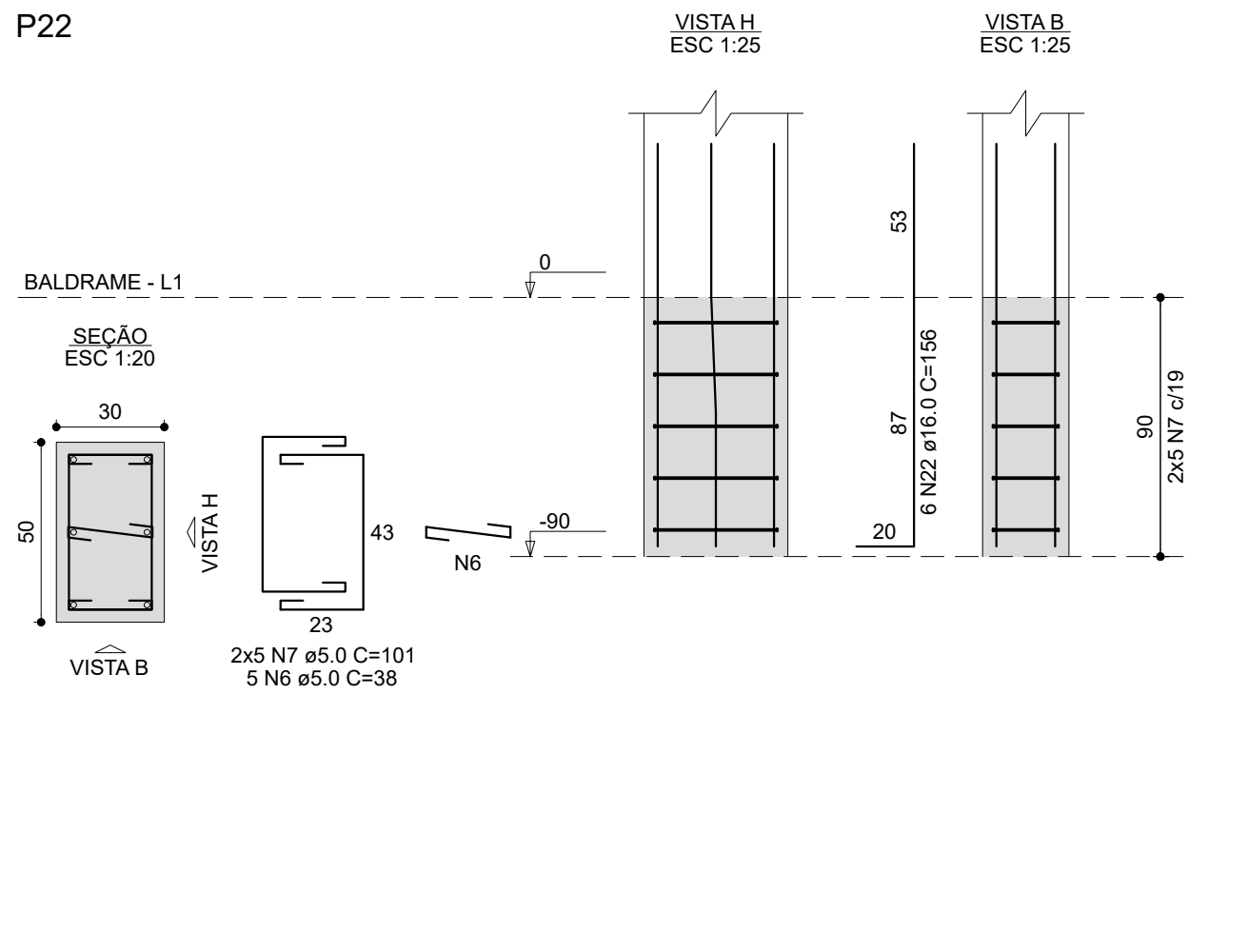
RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.LIMIT (cm)	C.TOTAL (cm)
CA50	1	5.0	8	26	266
	2	5.0	18	70	1120
	3	5.0	106	106	3466
	4	5.0	264	86	22794
	5	5.0	138	38	1122
	6	5.0	56	38	2128
	7	5.0	22	107	9203
	8	5.0	15	123	1845
	9	5.0	45	265	11925
	10	6.3	22	222	4884
CA60	1	6.3	45	265	11925
	2	10.0	18	269	4842
	3	10.0	85	138	8146
	4	10.0	12	148	1776
	5	10.0	12	128	1514
	6	12.5	35	312	10820
	7	12.5	12	200	4460
	8	12.5	12	146	1752
	9	12.5	16	136	2448
	10	12.5	6	156	836
CA60	21	16.0	26	166	4316
	22	16.0	12	156	1872

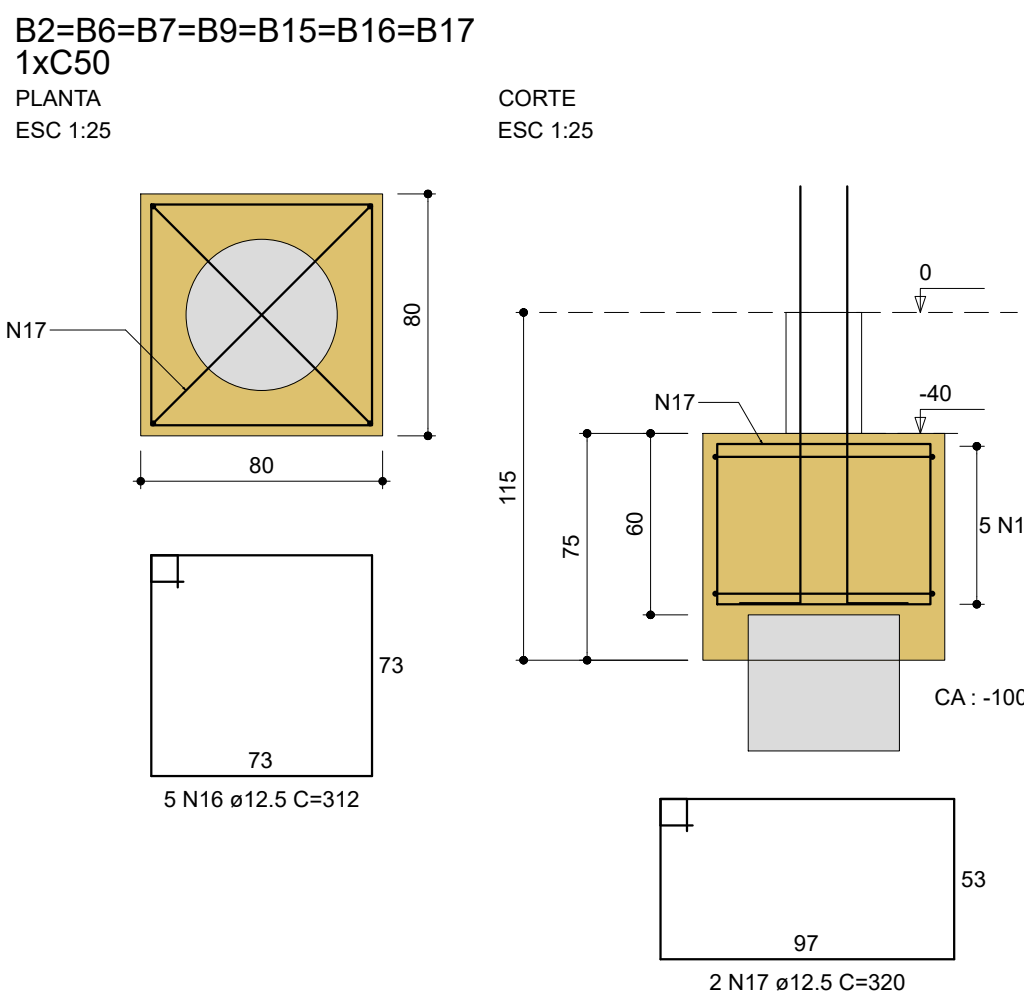
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO (kg)
CA50	6.3	172	
	10.0	288.3	
	12.5	205.4	
	16.0	61.9	
CA60	5.0	419.2	
PESO TOTAL (kg)			
CA50	586.9		
CA60	71.1		
Volume de concreto (C-25) = 7.91 m³			
Volume de concreto (C-30) = 2.86 m³			
Área de forma = 82.05 m²			

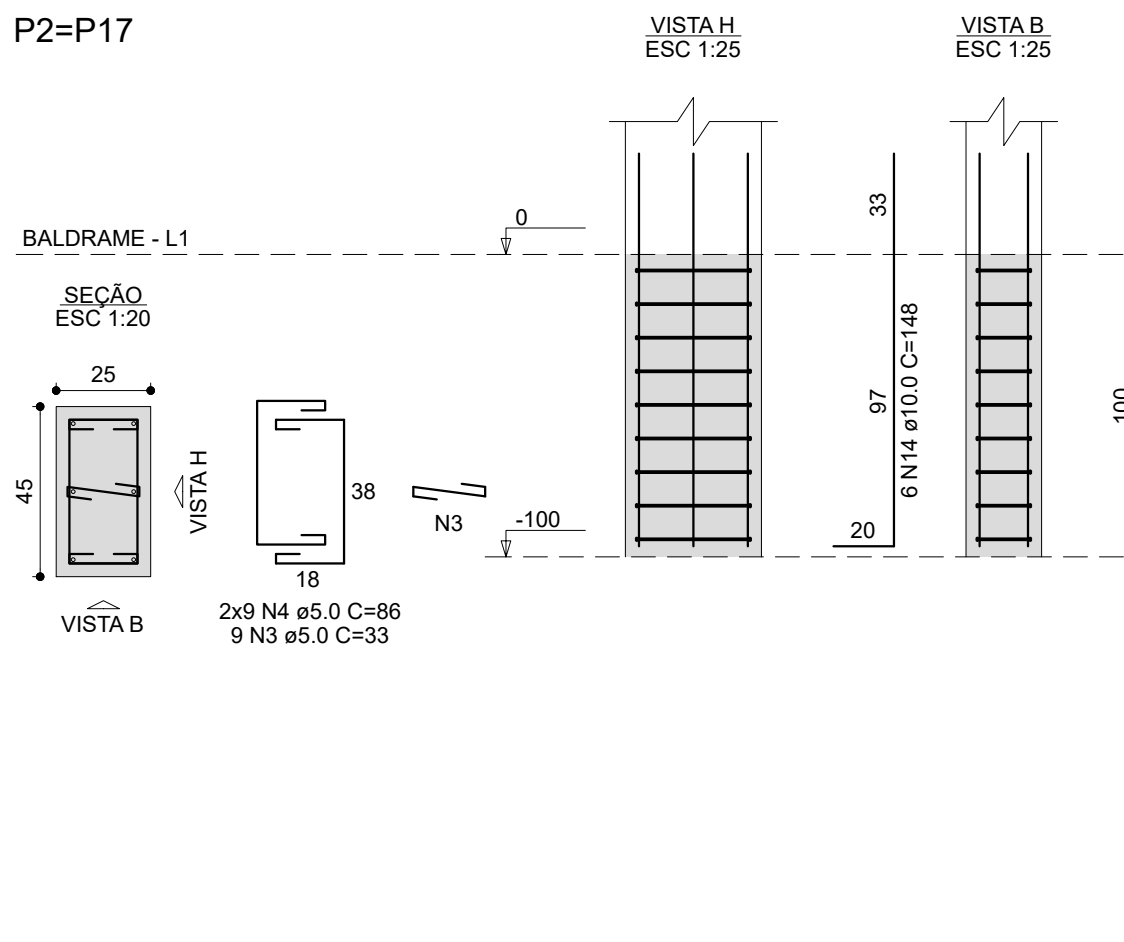
P22



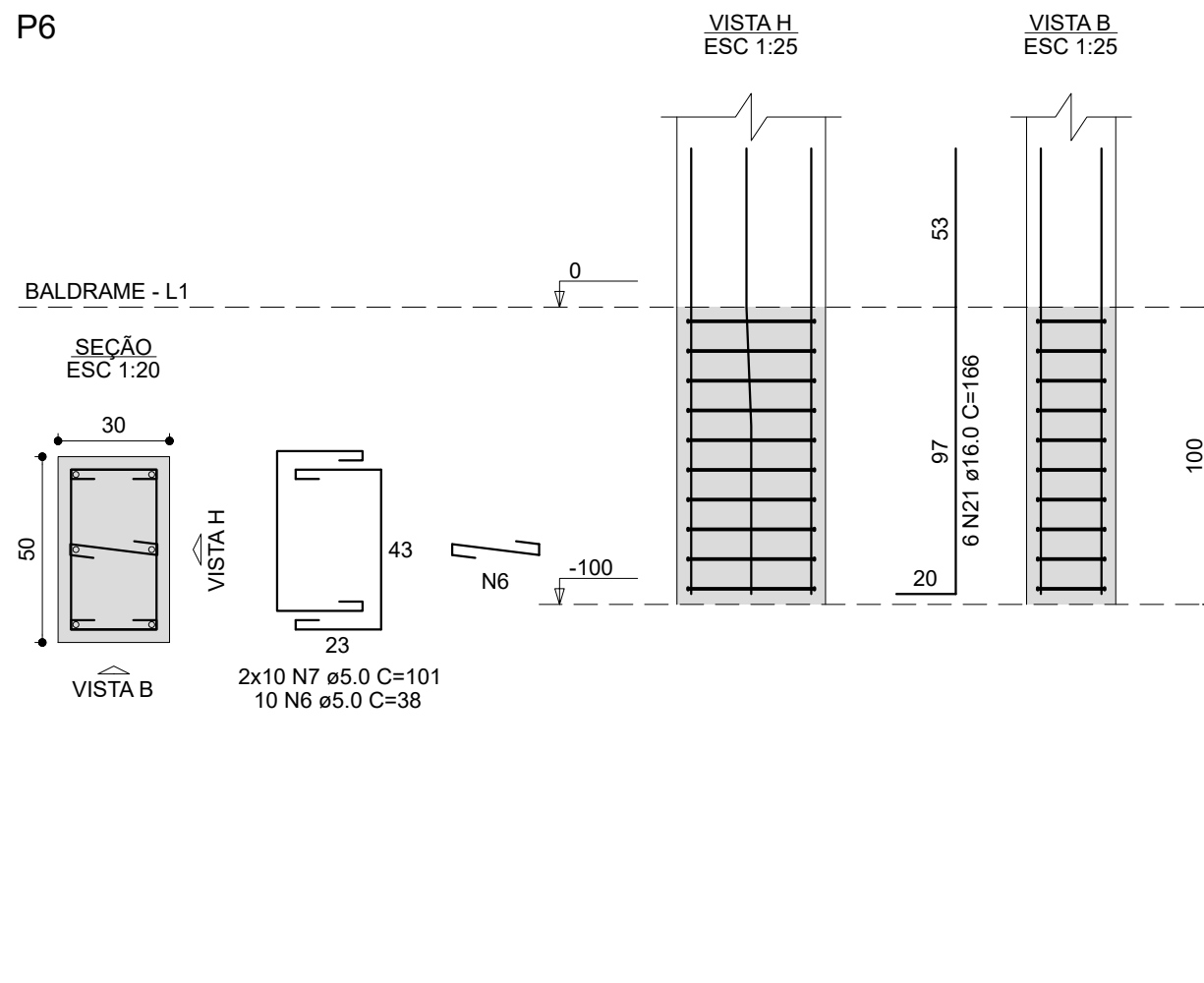
B2=B6=B7=B9=B15=B16=B17



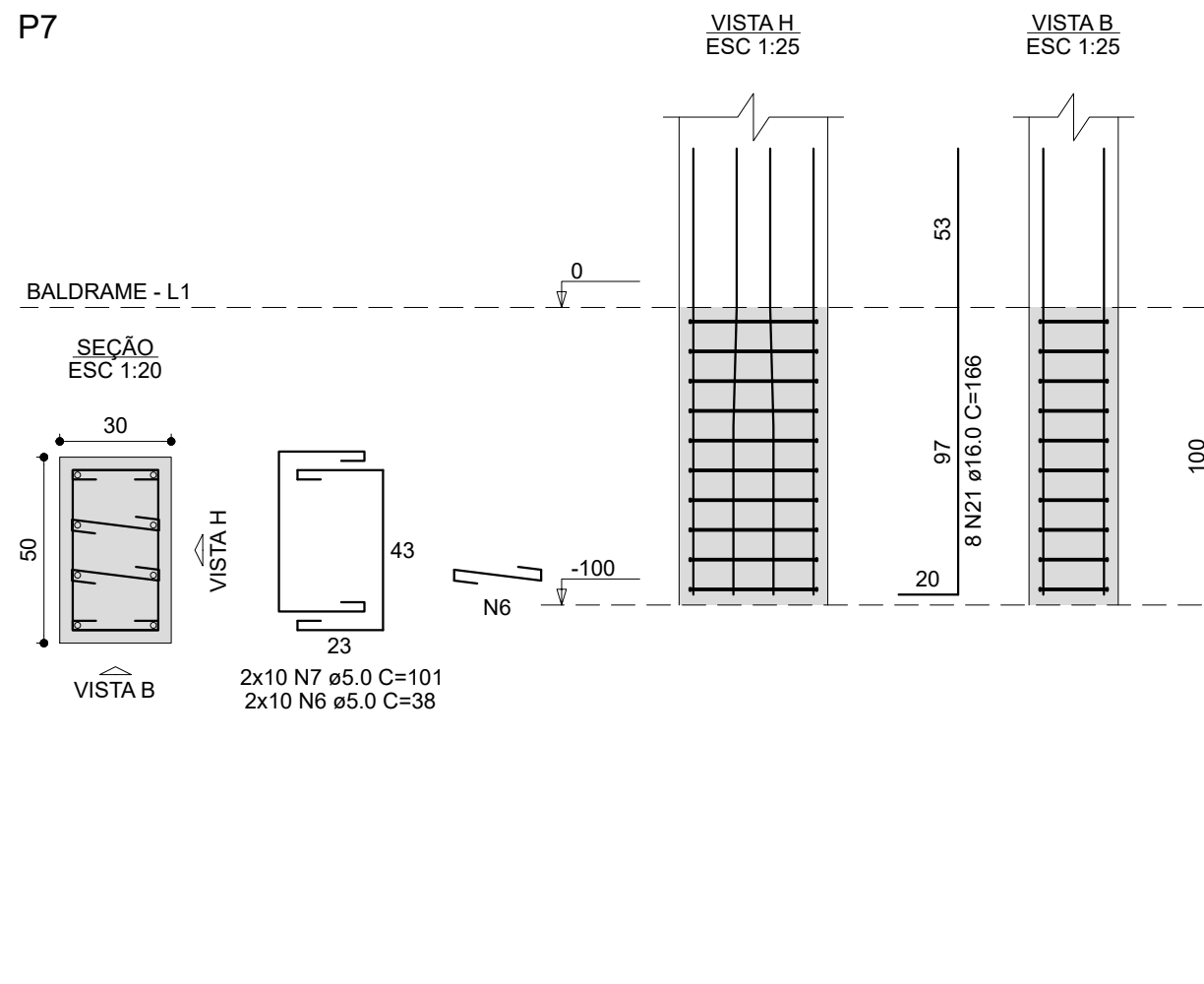
P2=P17



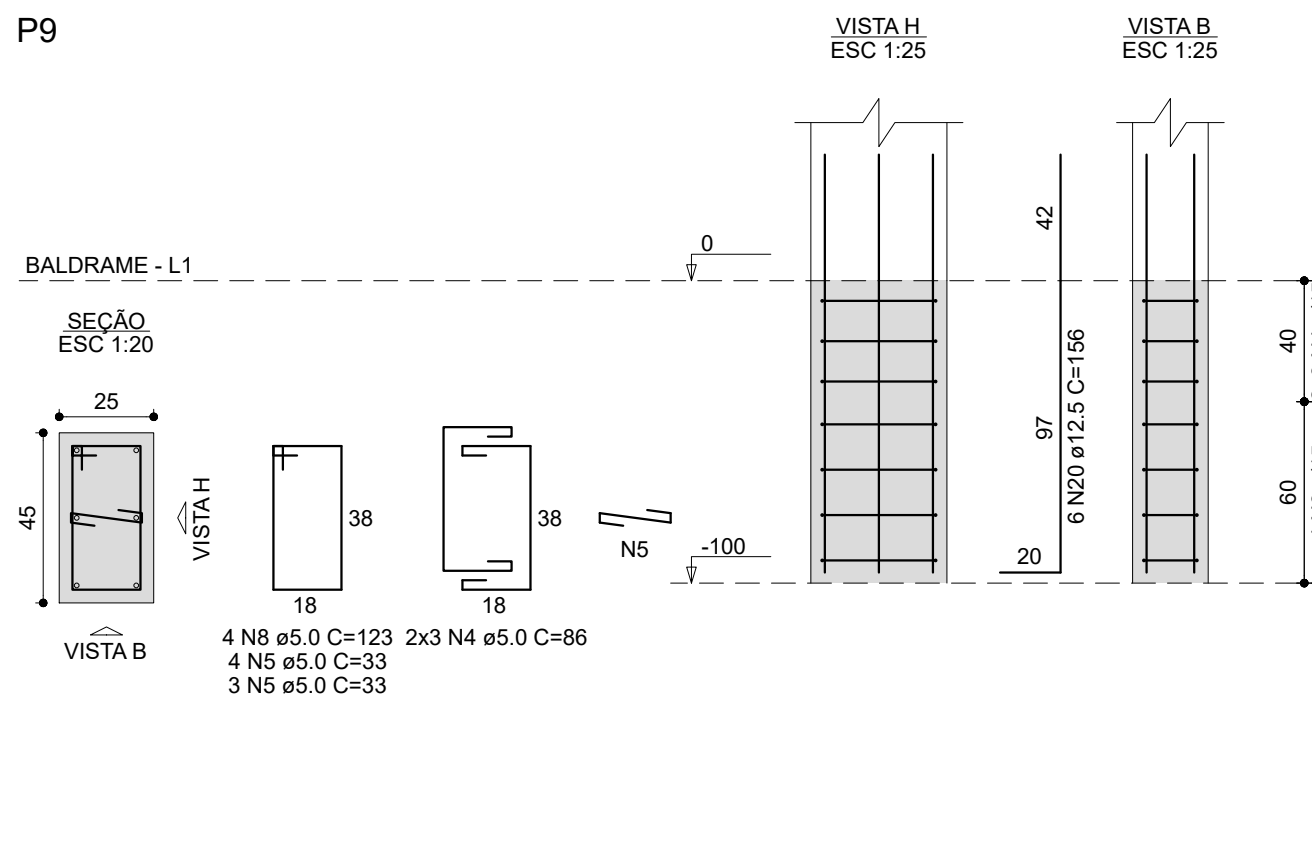
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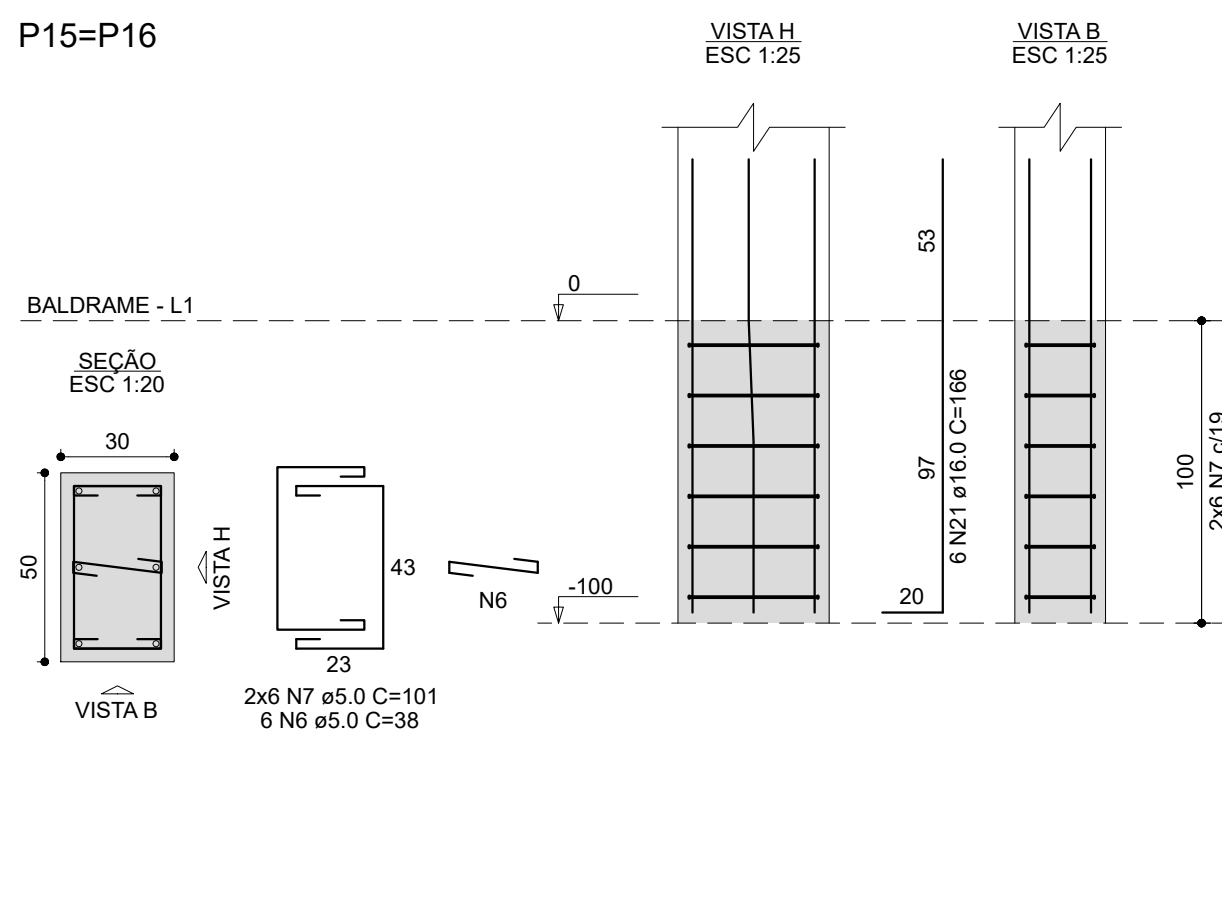
P7



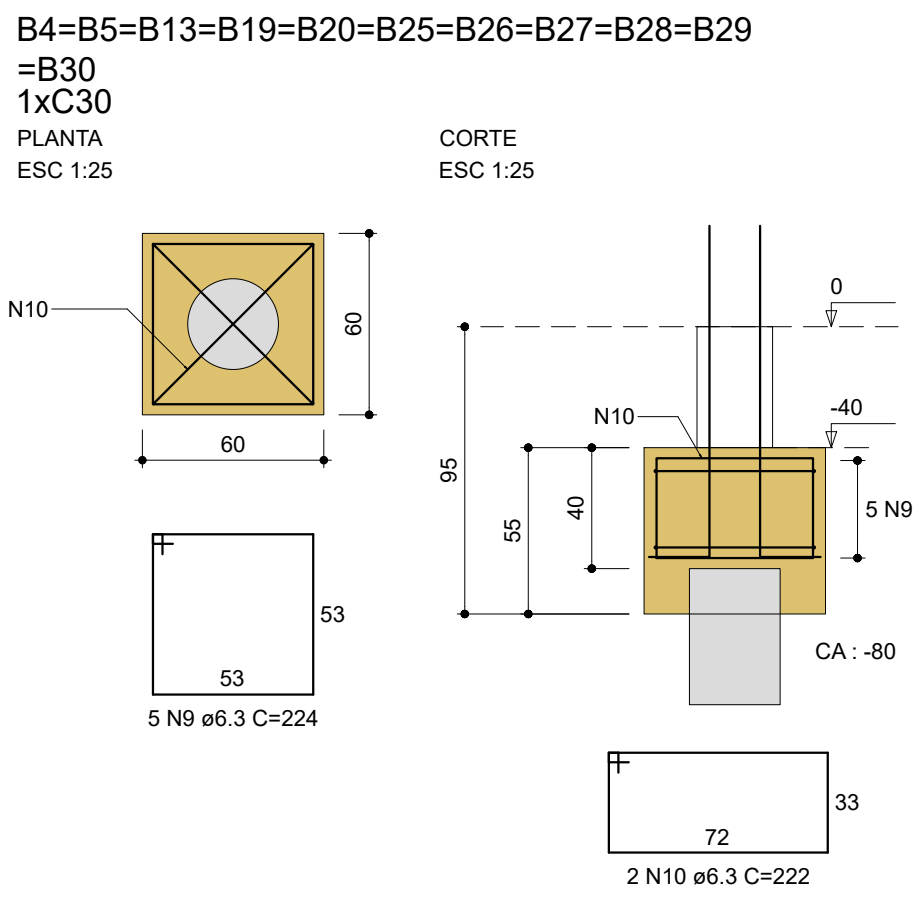
P9



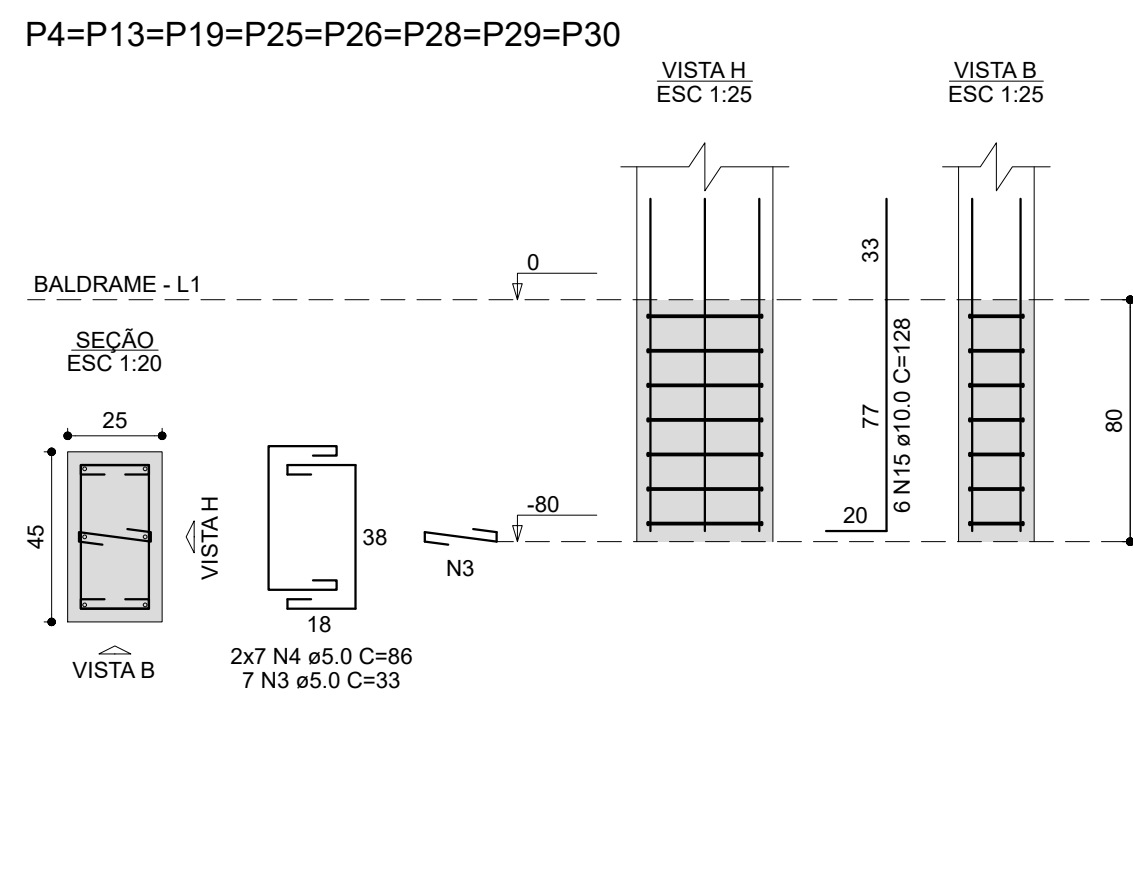
P15=P16



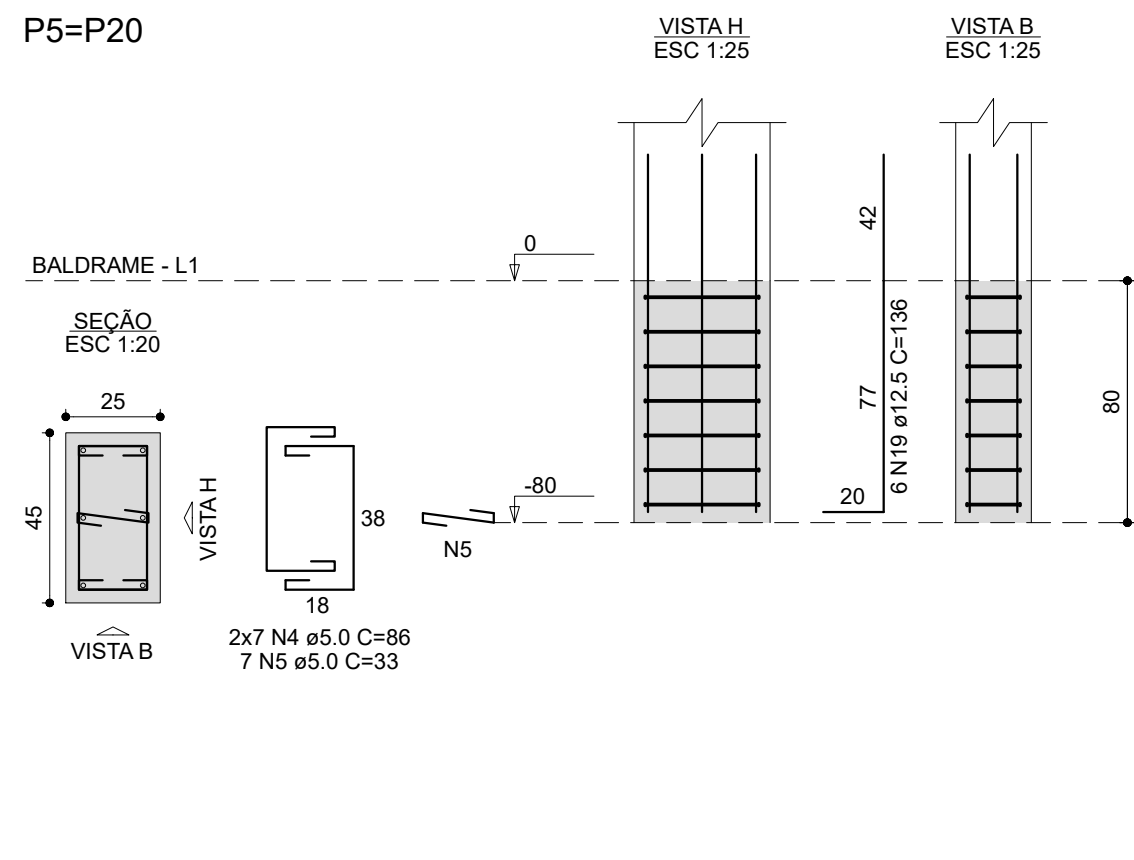
B4=B5=B13=B19=B20=B25=B26=B27=B28=B29



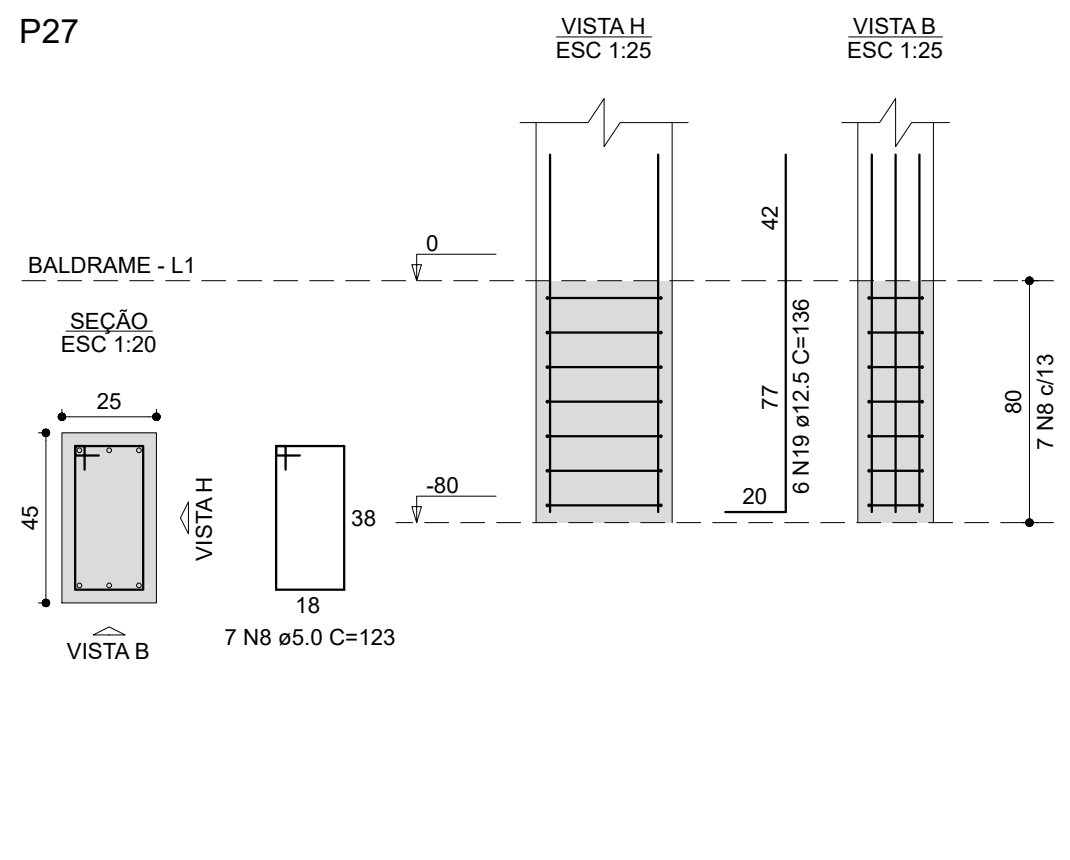
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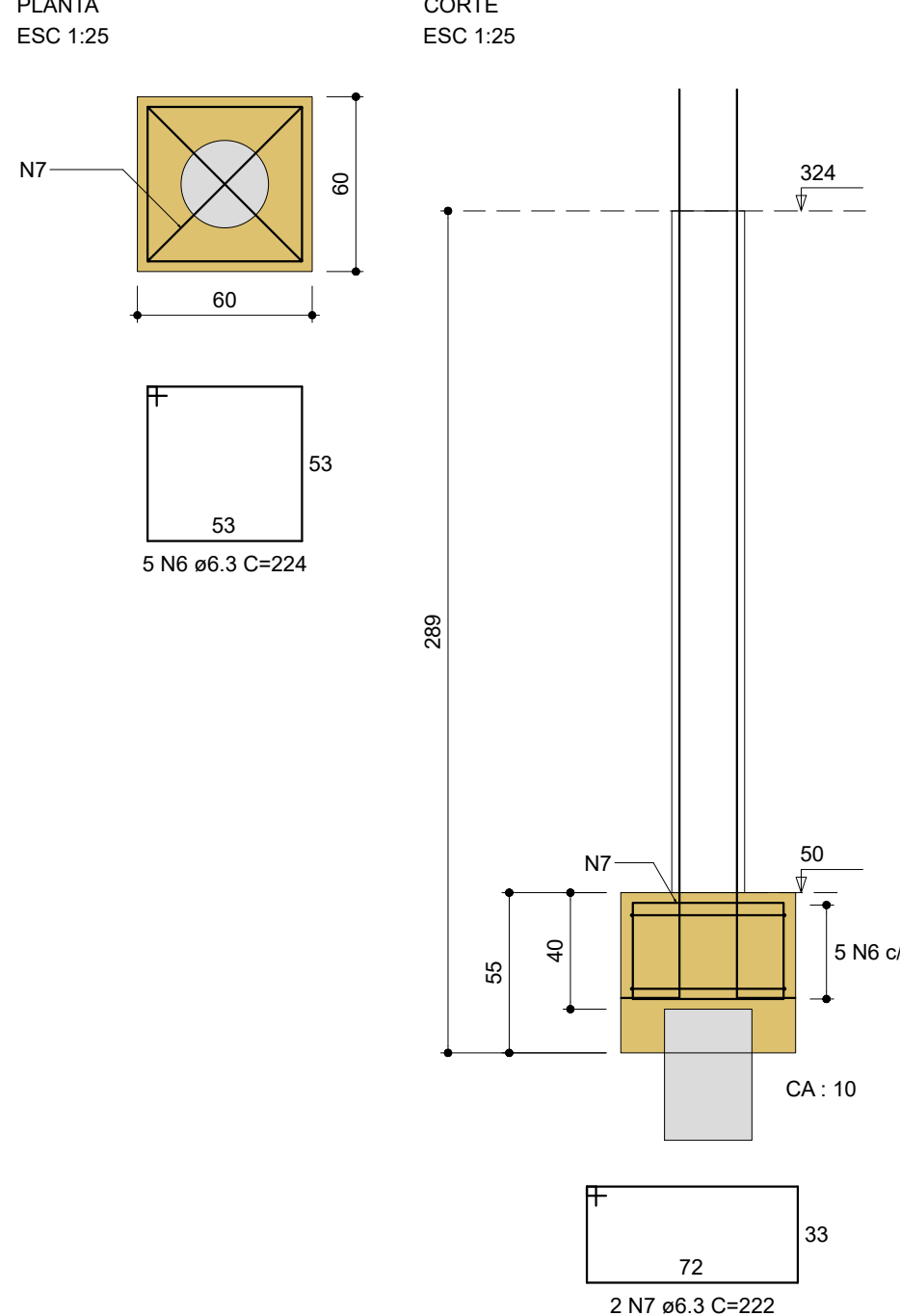
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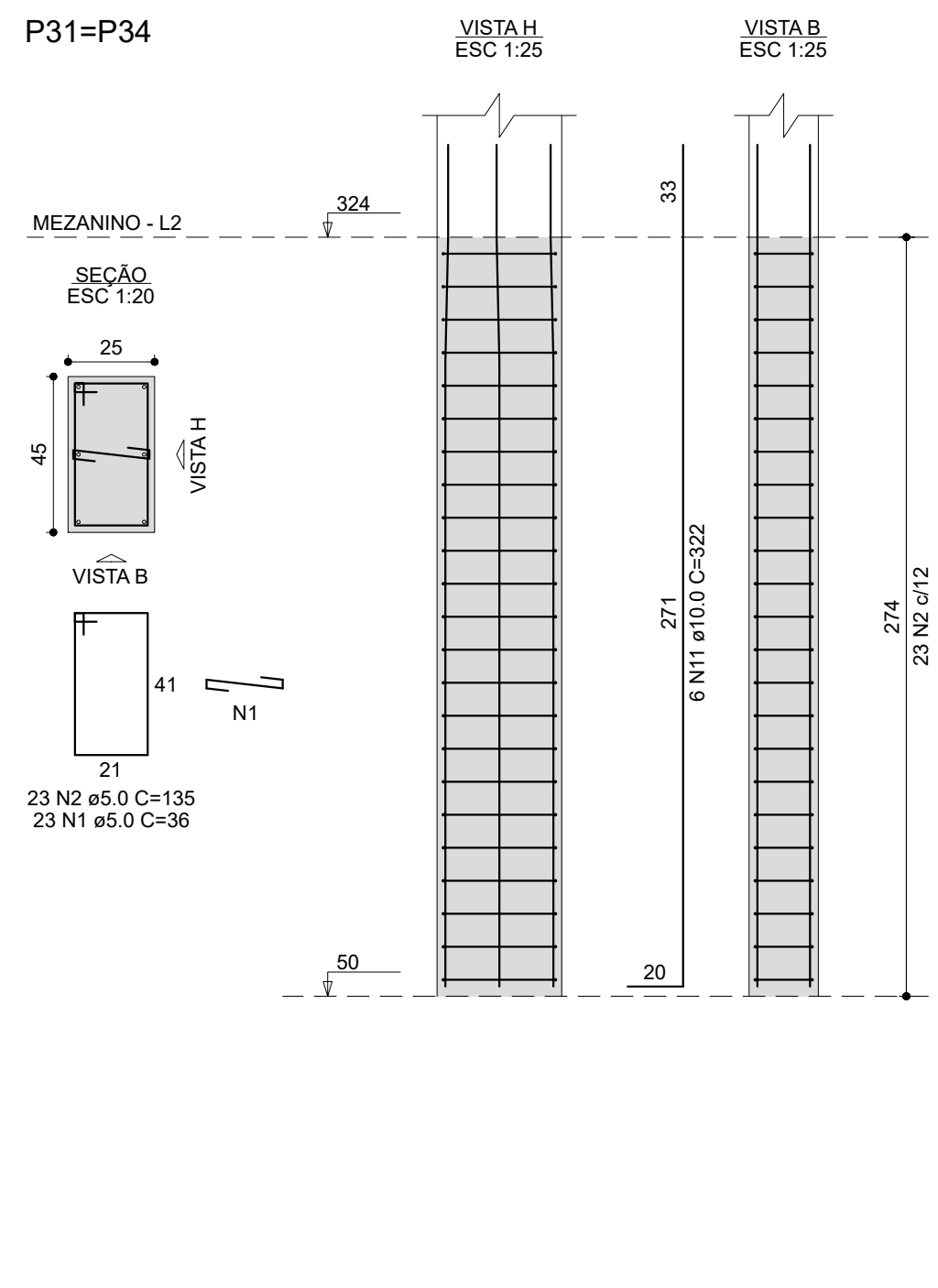
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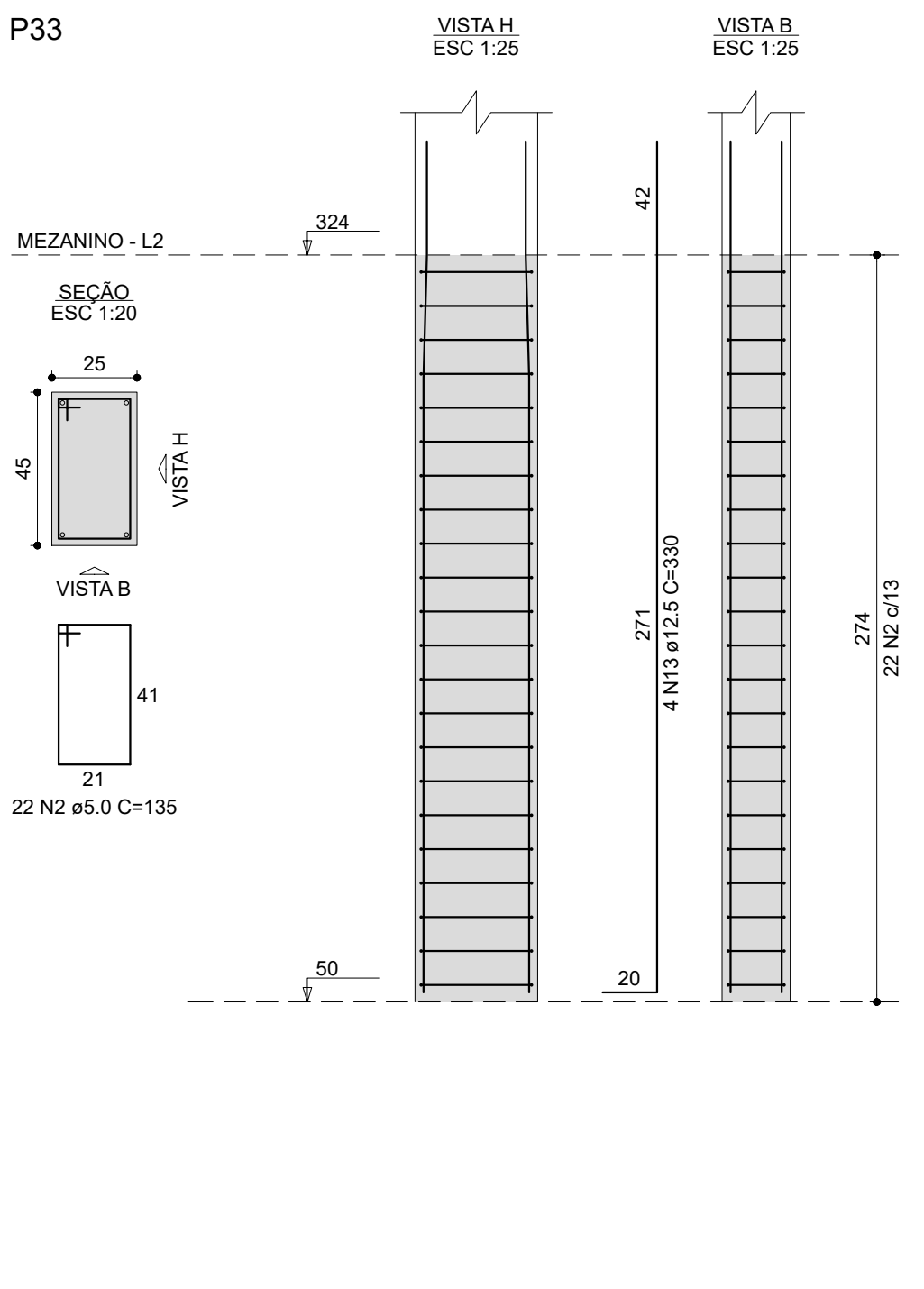
DETALHAMENTO - BLOCOS MEZANINO
B31=B33=B34=B35
1xC30
PLANTA
ESC 1:25



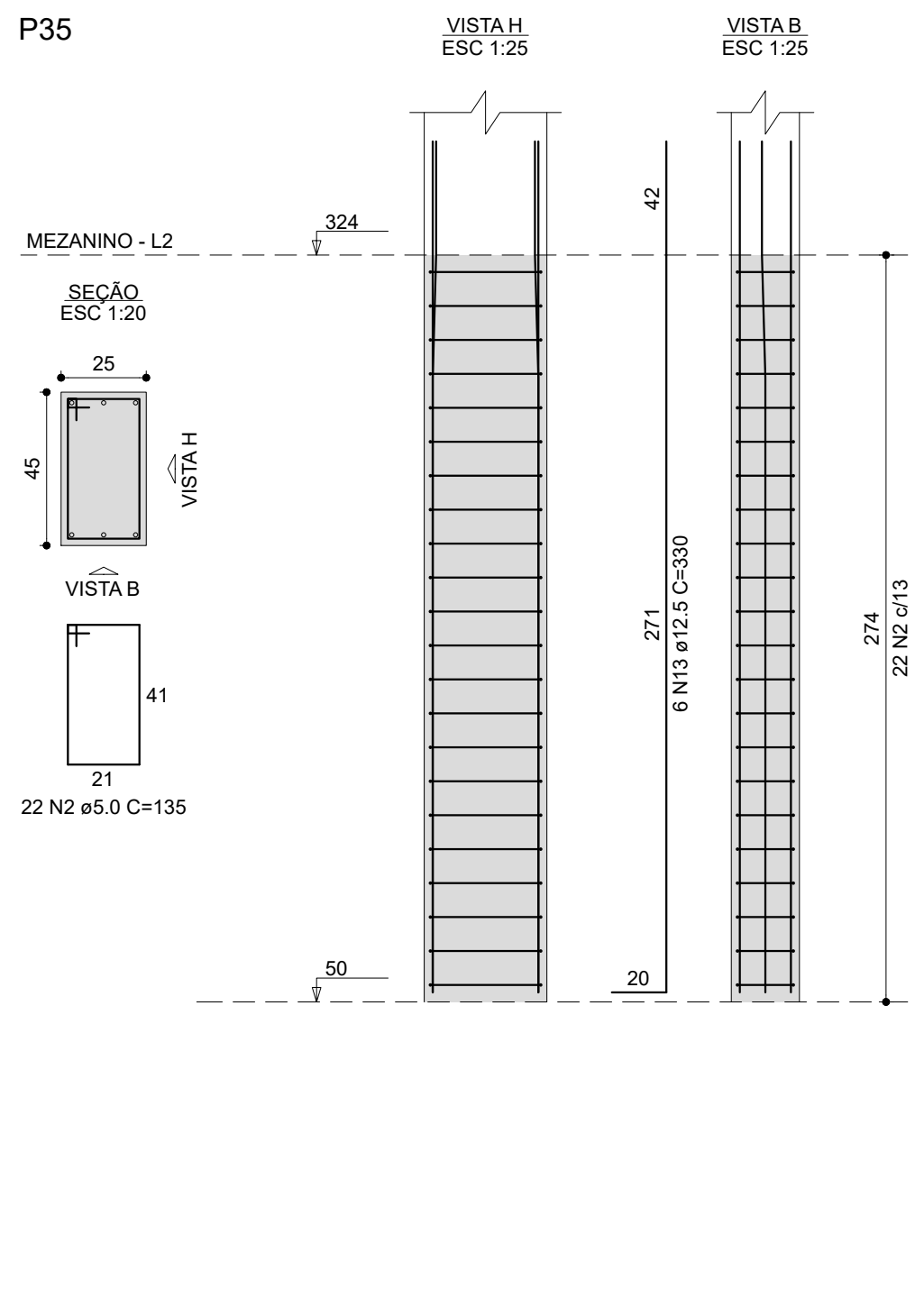
P31=P34



P33



P35



RELAÇÃO DO AÇO

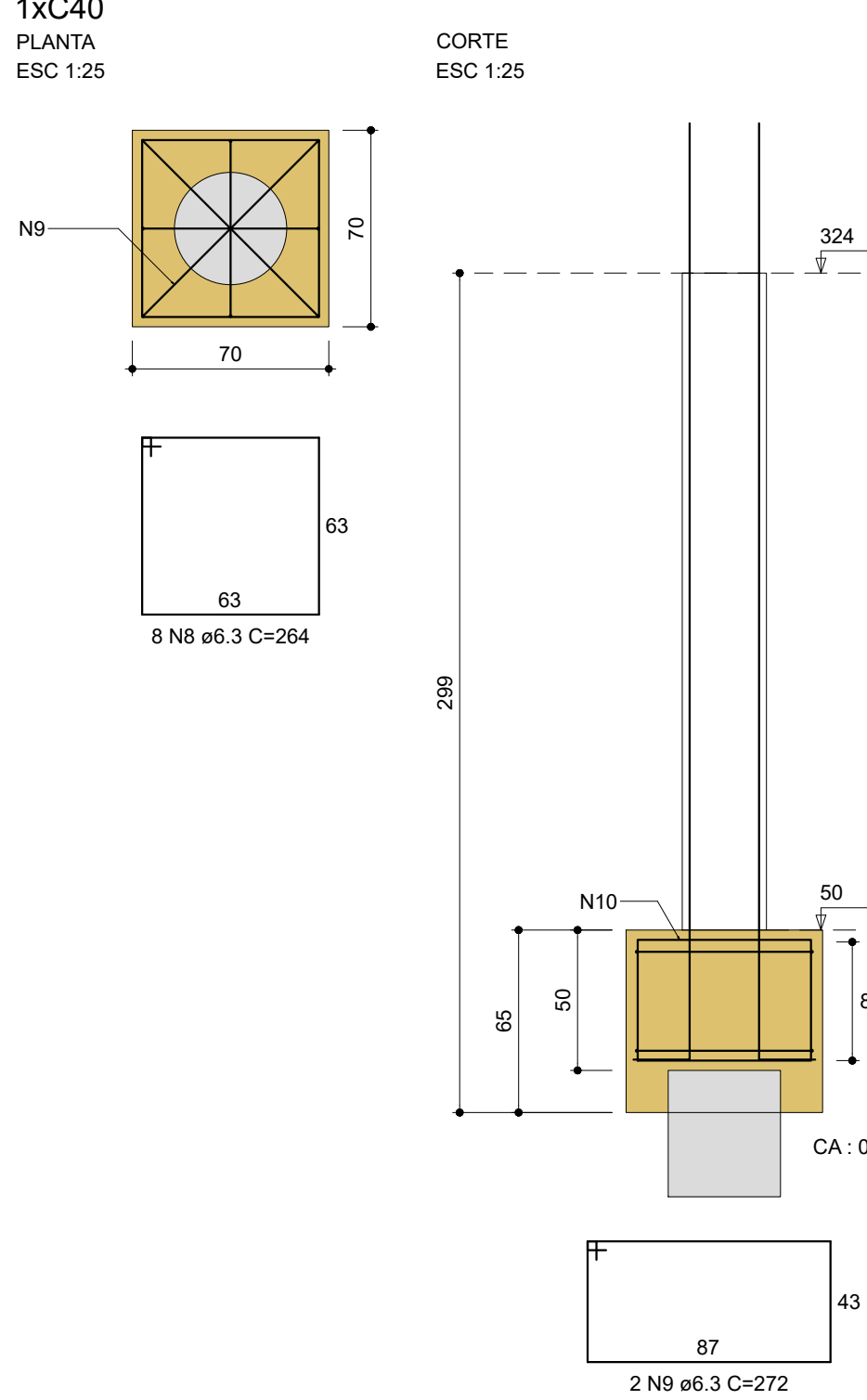
AÇO	N	DIAM (mm)	QUANT	C.LIMIT (cm)	C.TOTAL (cm)
CA60	1	5.0	46	38	1656
	2	5.0	112	135	15120
	3	5.0	106	41	4346
	4	5.0	51	110	7995
	5	5.0	4	110	440
	6	5.0	25	224	4460
	7	6.3	24	264	1736
	8	6.3	6	272	1632
	9	6.3	6	272	1632
	10	10.0	12	312	3864
CA50	11	10.0	12	340	1260
	12	12.5	10	360	1360
	13	12.5	10	330	1300
CA60	14	16.0	16	350	5600

RESUMO DO AÇO

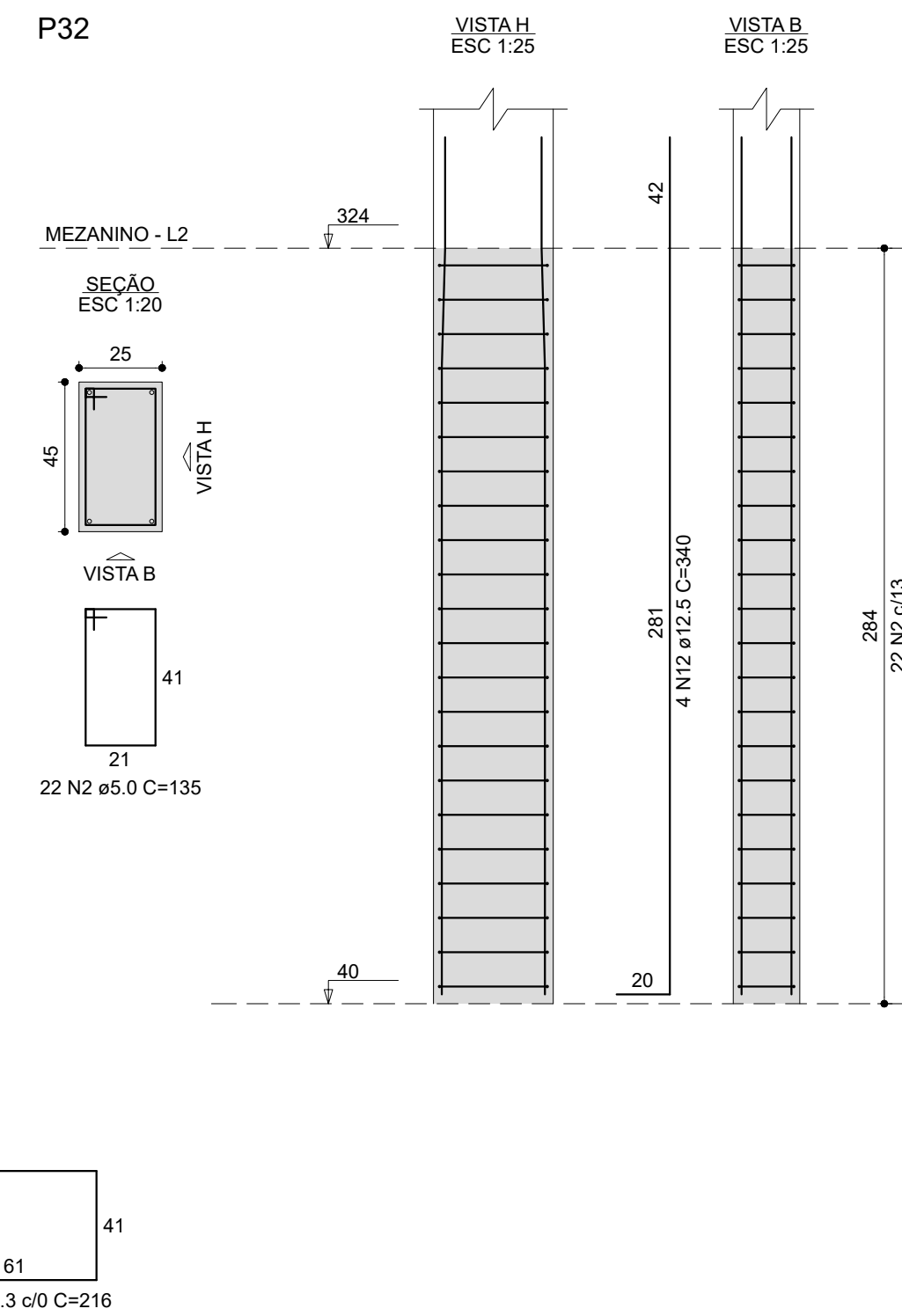
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	155.2	41.8
	10.0	38.6	26.2
	12.5	46.6	49.4
CA60	16.0	56	97.2
	5.0	294.7	50
PESO TOTAL (kg)			
CA50	214.6		
CA60	50		

Volume de concreto (C-25) = 1.65 m³
Volume de concreto (C-30) = 2.40 m³
Área de forma = 39.15 m²

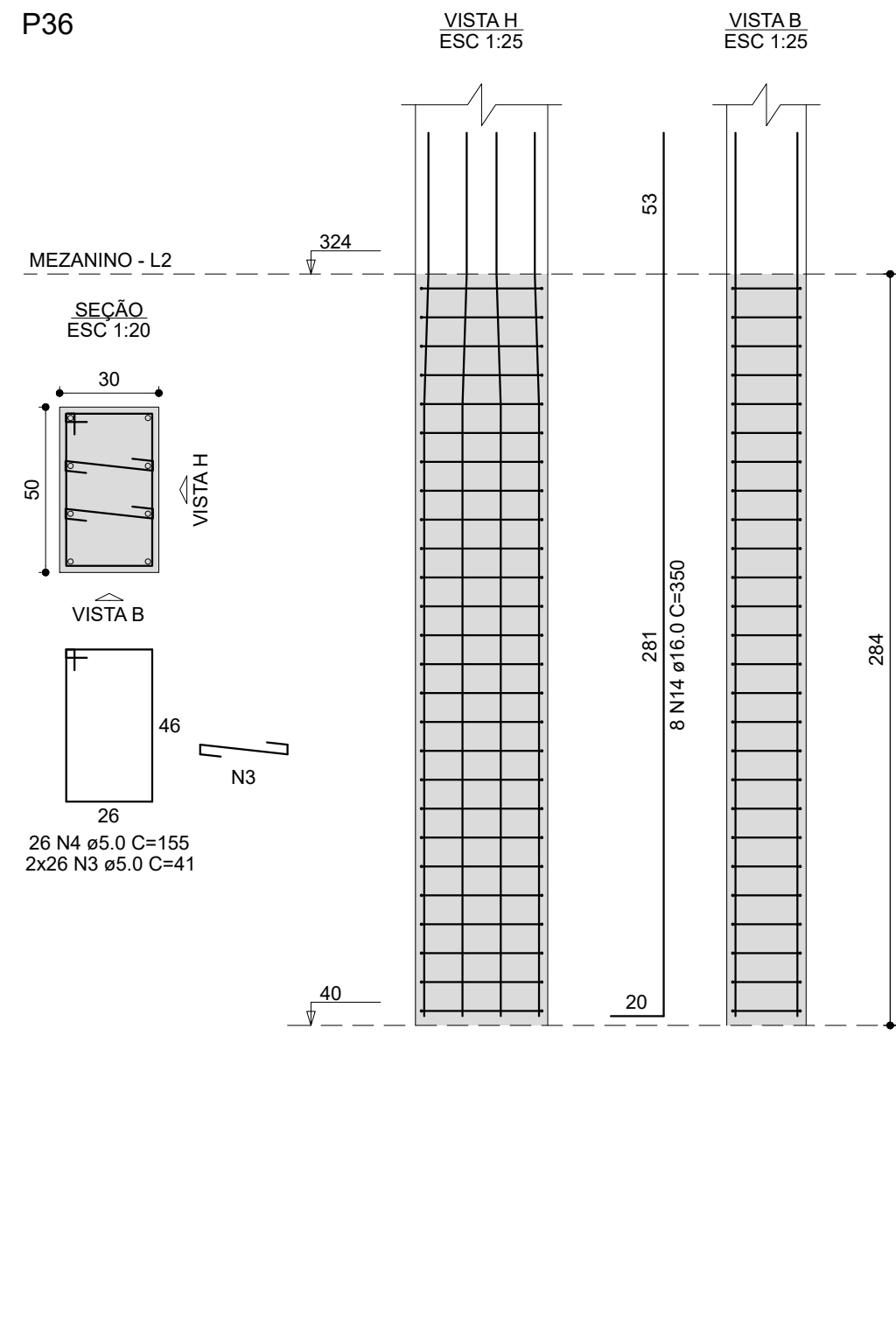
B32=B36=B37



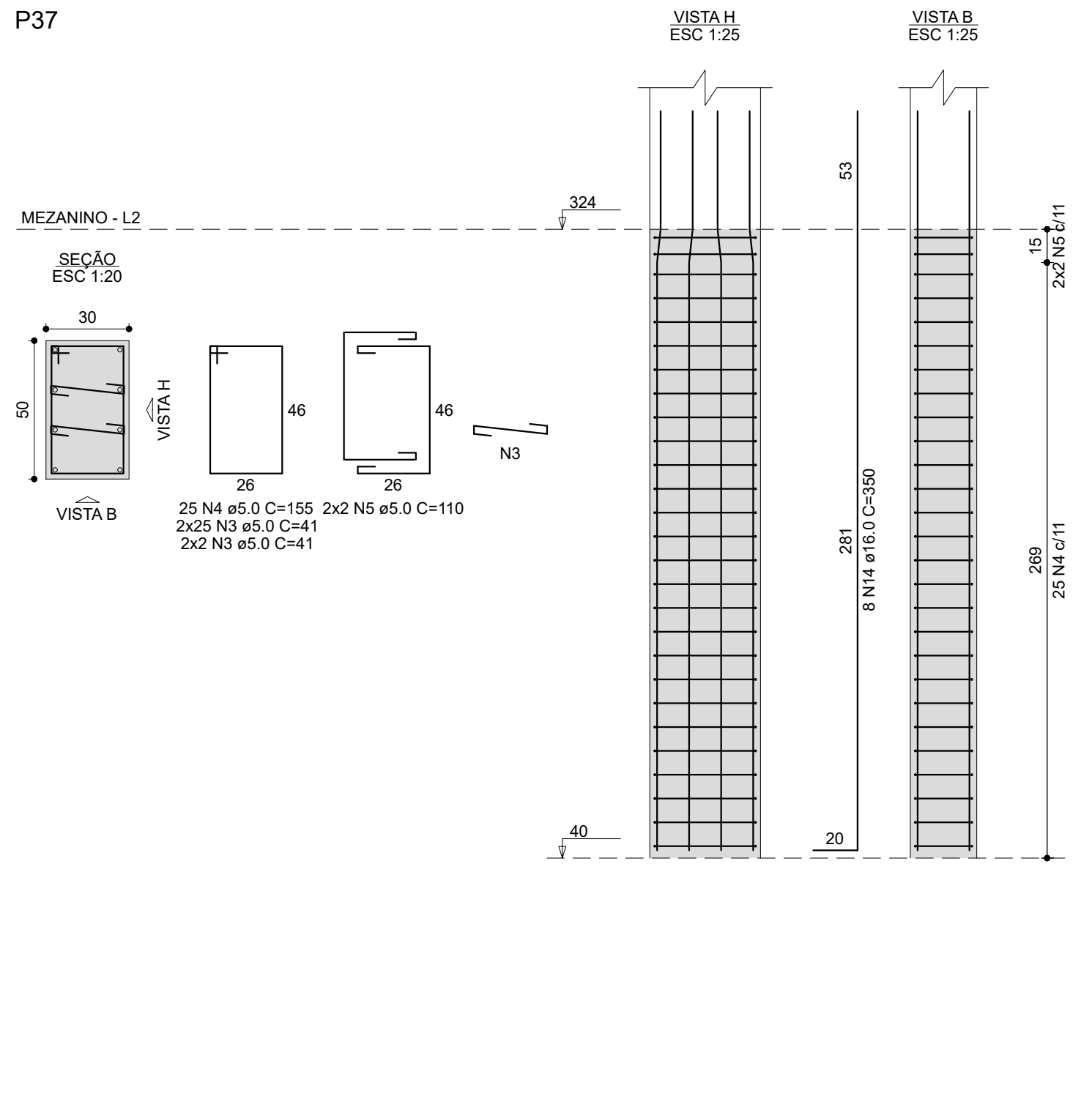
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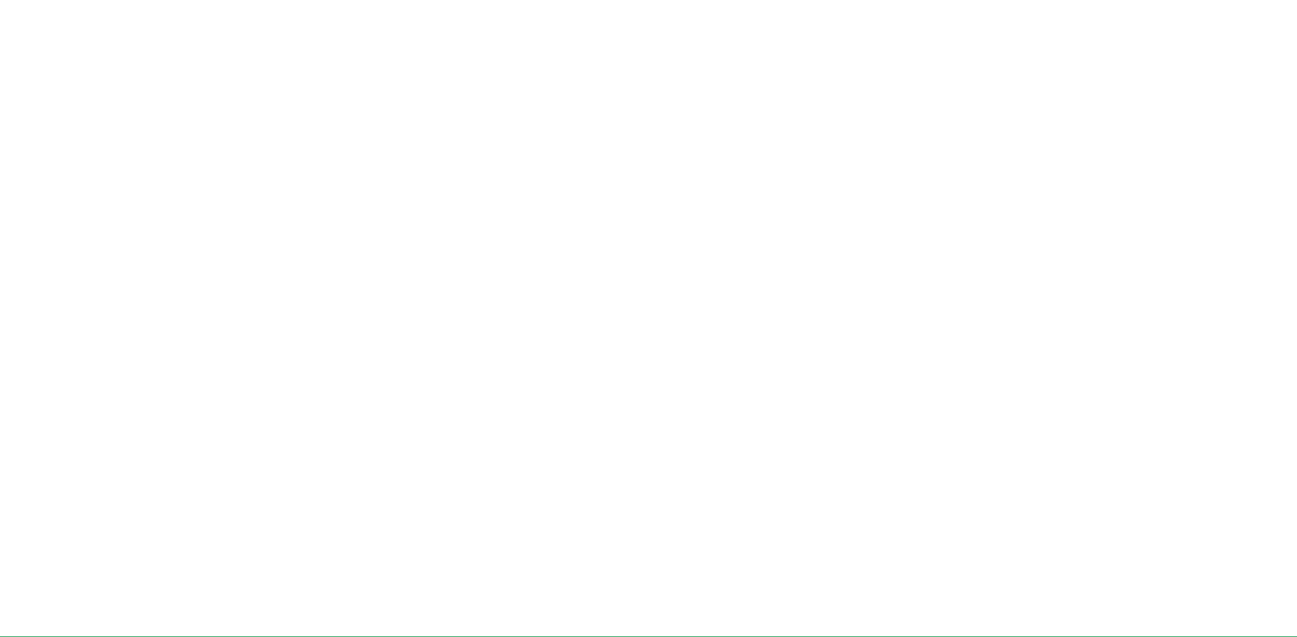
P36



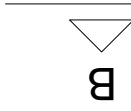
P37



CARIMBOS:





LOCAL: PASSO FUNDO - RS	FASE: EXECUTIVO	ESCALA: 1:20 E 1:25
OBRA: RESTAURANTE UNIVERSITÁRIO E CANTINA	REVISÃO Nº: R00	TAMANHO FOLHA: A0
PROJETO: ESTRUTURAL	DATA: 03/10/2023	Nº PRANCHA: 1
ÁREA TOTAL DA EDIFICAÇÃO: 1.064,58 m²	DESENHADO POR: RODRIGO	EST 03 19
CONTEÚDO: DETALHAMENTO - BLOCOS	REVISADO POR: RODRIGO	
ENDEREÇO: RUA CAPITÃO ARAÚJO, 20, CENTRO	NOME DO ARQUIVO: PRANCHA_03_19_01.dwg	



Lajes					
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Sobrecarga (kg/m²)
L1	Maciça	10	-30	-30	587

Elemento	fck (kgf/cm ²)	Ecs (kgf/cm ²)
Vigas	300	268384
Pilares	300	268384
Lajes	300	268384
Blocos	250	241500

Legenda das vigas e paredes	
	Viga
	Viga chata ou invertida



**UNIVERSIDADE
FEDERAL DA
FRONTEIRA SUL**

[illegible]

Edifício Bloco C, 4º Andar, Sala 401
Rodovia SC 488, km 02, Barra Fronteira Sul, Chapecó-SC, CEP 89815-890
Contatos: (41) 3049-3115 / 2049-3750 / seobras@ufsc.edu.br
Site Oficial: www.ufsc.edu.br

ENG. CIVIL RODRIGO EMMER
CREA-SC 106626-8
RESPONSÁVEL TÉCNICO

REVISADO POR:
RODRIGO

CONTEÚDO:
PLANTA DE FO

ENDEREÇO:
RUA CAPITÃO ARAÚJO, 20, CENTRO

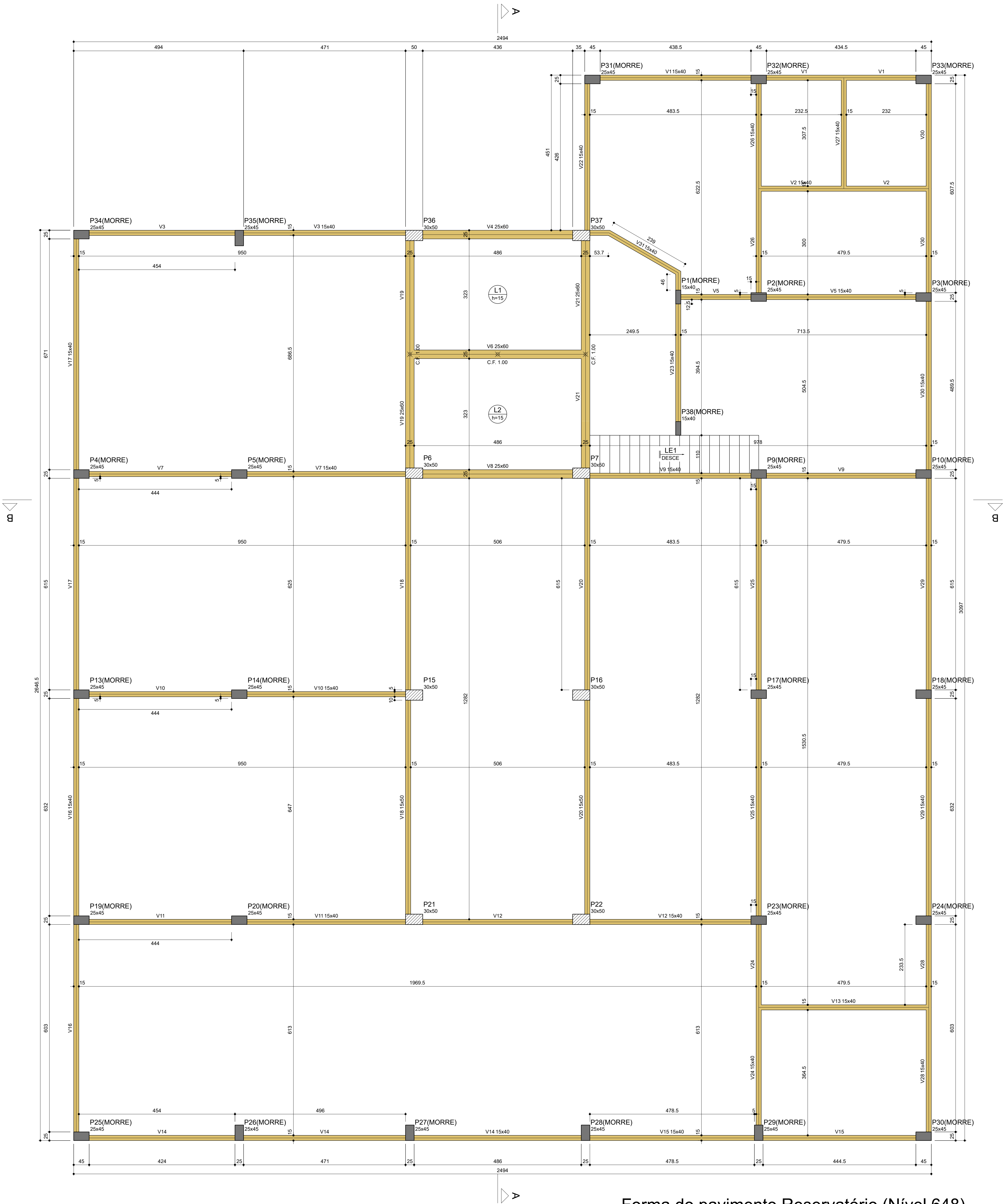
REVISADO POR:
RODRIGO

NOME DO ARQUIVO: RU+CANTINA_LUFFS_PF_PE_EST0000

RU+CANTINA_UFFS_PF_PC_EST.DWG

21

Forma do pavimento Baldrame (Nível 0)
escala 1:50



Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x40	0	648
V2	15x40	0	648
V3	15x40	0	648
V4	25x60	0	648
V5	15x40	0	648
V6	25x60	0	648
V7	15x40	0	648
V8	25x60	0	648
V9	15x40	0	648
V10	15x40	0	648
V11	15x40	0	648
V12	15x40	0	648
V13	15x40	0	648
V14	15x40	0	648
V15	15x40	0	648
V16	15x40	0	648
V17	15x40	0	648
V18	15x50	0	648
V19	25x60	0	648
V20	15x50	0	648
V21	25x60	0	648
V22	15x40	0	648
V23	15x40	0	648
V24	15x40	0	648
V25	15x40	0	648
V26	15x40	0	648
V27	15x40	0	648
V28	15x40	0	648
V29	15x40	0	648
V30	15x40	0	648
V31	15x40	0	648

Lajes					
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Sobrecarga (kgf/m²)
L1	Maciça	15	0	648	287
L2	Maciça	15	0	648	287
LE1	Maciça	12	0	648	419

Características dos materiais		
fck	Ecs	
300	(kgf/cm²)	266384

Legenda das vigas e paredes	
	Viga



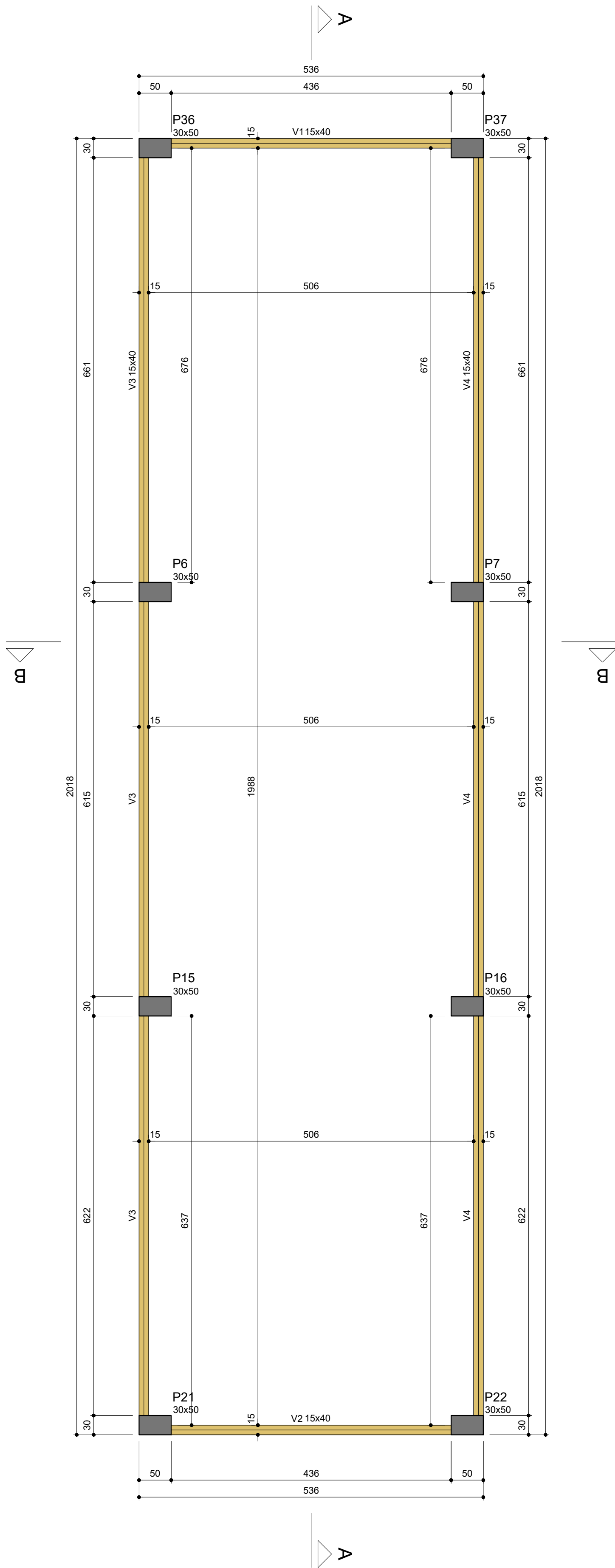
Secretaria Especial de Obras

Reitoria da Universidade Federal da Fronteira Sul - Rua Capitão Araújo, 20, Centro - Caixa Postal 10001-900 - Foz de Iguaçu, Paraná, Brasil

LOCAL: PASSO FUNDO - RS
OBRA: RESTAURANTE UNIVERSITÁRIO E CANTINA
PROJETO: ESTRUTURAL
ÁREA TOTAL DA EDIFICAÇÃO: 1.064,58 m²
CONTEÚDO: PLANTA DE FORMAS - RESERVATÓRIO
ENDEREÇO: RUA CAPITÃO ARAÚJO, 20, CENTRO

FASE: EXECUTIVO
REVISÃO Nº: R00
DATA: 03/10/2023
DESENHADO POR: RODRIGO
REVISADO POR: RODRIGO
NOME DO ARQUIVO: PL-02-CANTINA_LAJES_PV_F01.DWG

ESCALA: 1:50
TAMANHO FOLHA: 950x750
Nº PRANCHA: 06
150621



Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x40	0	1048
V2	15x40	0	1048
V3	15x40	0	1048
V4	15x40	0	1048

Características dos materiais	
fck (kgf/cm²)	Ecs (kgf/cm²)
300	268384

Legenda das vigas e paredes	
	Viga

Forma do pavimento Superior
escala 1:50

CARIMBOS:



Secretaria Especial de Obras

SECRETARIA ESPECIAL DE OBRAS:
SECRETARIA DE OBRAS: ARQ. URB. DAIANE REGINA VALENTINI CAU/BR A51414-4

FISCALIZAÇÃO DE OBRAS:
CHAPECÓSC: ENG. CIV. FÁBIO ALEX ZENARO CREA/SC 109121-3
ENG. ELETRIC. WATHEUR TODDSCATT CREA/RS 115951-1
CERRO LARGOIRS: ENG. CIV. PAULO ROBERTO HENDRICKS CREA/RS 107012
ENG. CIV. CAMILO ROQUE SCHMIDT CREA/RS 42399
ENG. CIV. JULIANA ANA CHARELLO CREA/RS 127886
ERECIMMRS: LARANJEIRAS DO SUL/PR: ENG. CIV. FÁBIO ONETTA CREA/PR 84187-D
REALIZAPR: ENG. CIV. FABRÍCIO MALESTRINI CREA/PR 127466

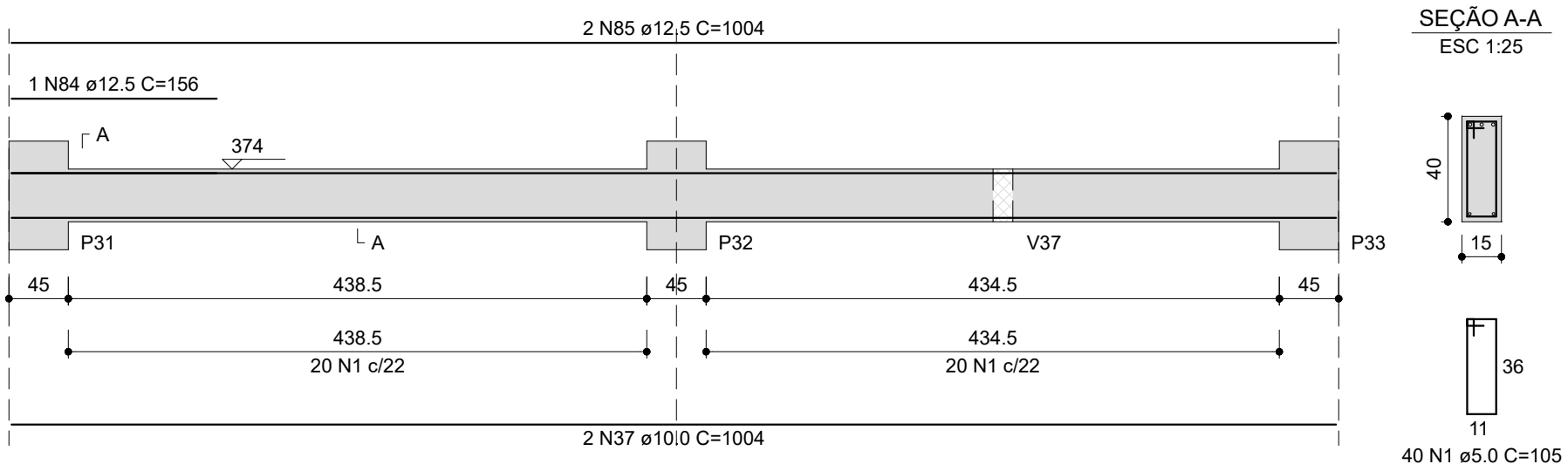
EQUIPE TÉCNICA SED:
ARQ. URB. AURORA PRESTIA MCOTT CAU/BR A41125-6
ARQ. URB. WELLINGTON TISCHER CAU/BR A58626-9
ENG. CIV. CLAUDIO LUZ POMERBAUER CREA/SC 177729-6
ENG. CIV. FÁBIO CORREIA GASPAROTTO CREA/SC 867202-5
ENG. CIV. RODRIGO EMMER CREA/SC 108628-8
ENG. ELETRIC. SILVIO ANTONIO TESTON CREA/SC 184669-8
ENG. SANIT. ADEMIR TANCINI CREA/SC 113595-2
ENG. MEC. DANIEL ESPRIS CREA/SC 141137-1
TEC. MEC. GIOVANI FAVERO
TEC. ELETROTEC. DIEGO GONATTO

ARQ. URB. DAIANE REGINA VALENTINI CAU/BR A51414-4 RESPONSÁVEL SED-UFFS		ENG. CIVIL RODRIGO EMMER CREA-SC 108628-8 RESPONSÁVEL TÉCNICO	
LOCAL: PASSO FUNDO - RS	FASE: EXECUTIVO	ESCALA: 1:50	07 21
OBRA: RESTAURANTE UNIVERSITÁRIO E CANTINA	REVISÃO Nº: R00	TAMANHO FOLHA: 580x594	
PROJETO: ESTRUTURAL	DATA: 03/10/2023	Nº PRANCHA:	
ÁREA TOTAL DA EDIFICAÇÃO: 1.064,58 m²	DESENHADO POR: RODRIGO		
CONTEÚDO: PLANTA DE FORMAS - SUPERIOR	REVISADO POR: RODRIGO		
ENDEREÇO: RUA CAPITÃO ARAÚJO, 20, CENTRO	NOME DO ARQUIVO: RU+CANTINA_UFFS_FF_PFE_EST.DWG		

DETALHAMENTO - VIGAS MEZANINO (PRANCHA 1/2)

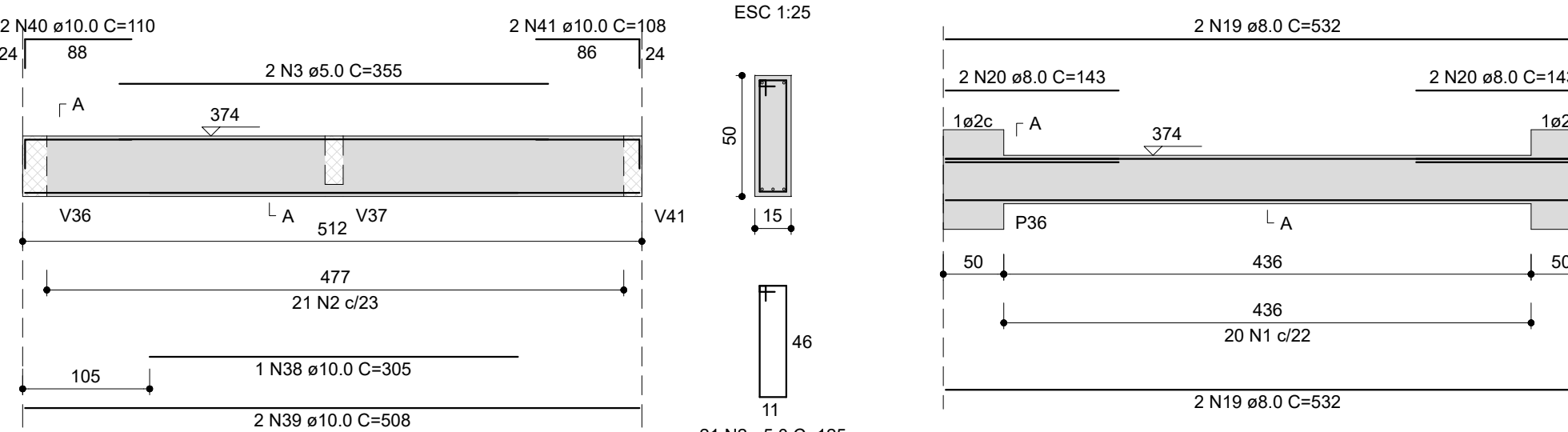
V1

ESC 1:50



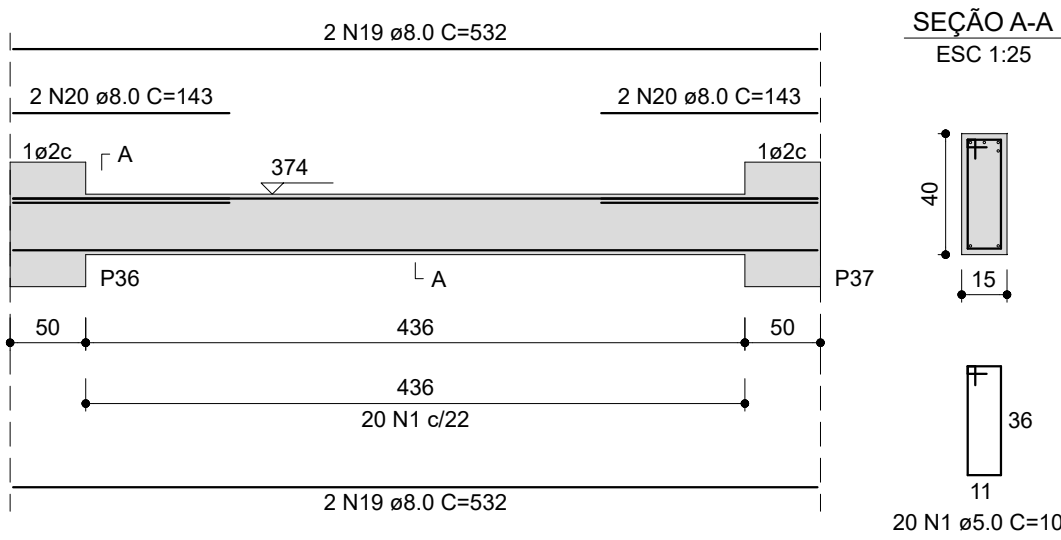
V2

ESC 1:50



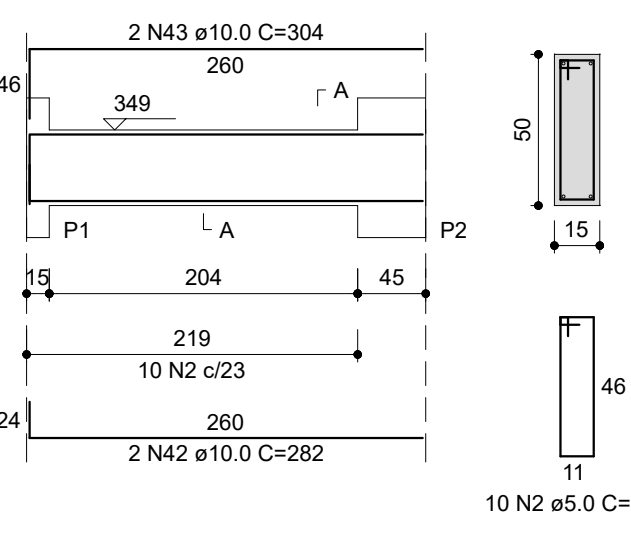
V3

ESC 1:50



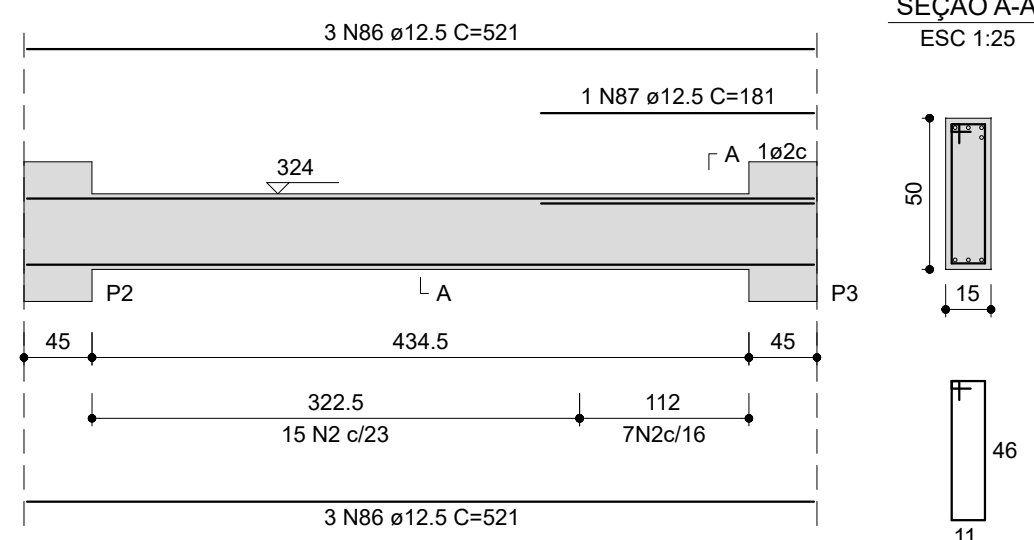
V4

ESC 1:50



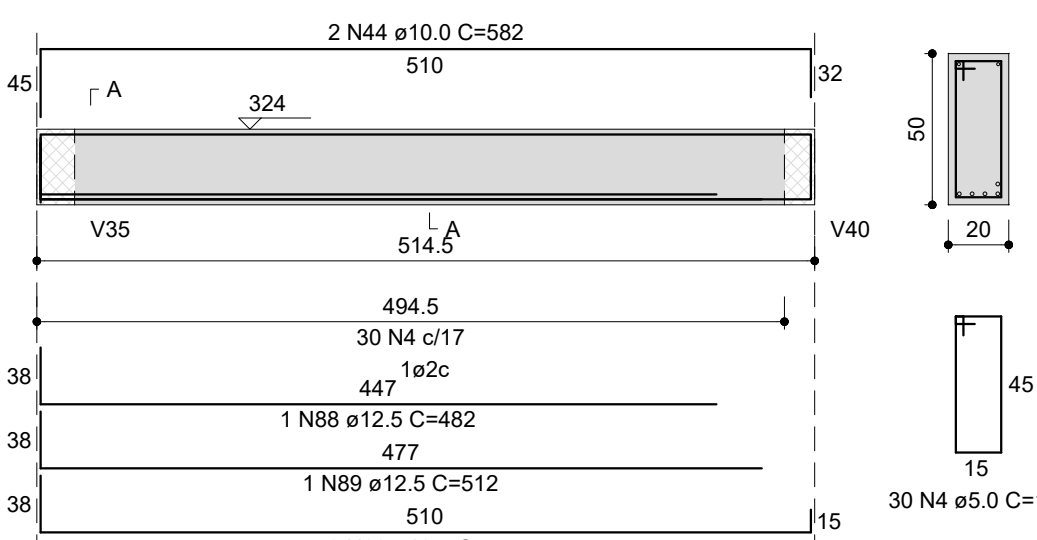
V5

ESC 1:50



V6

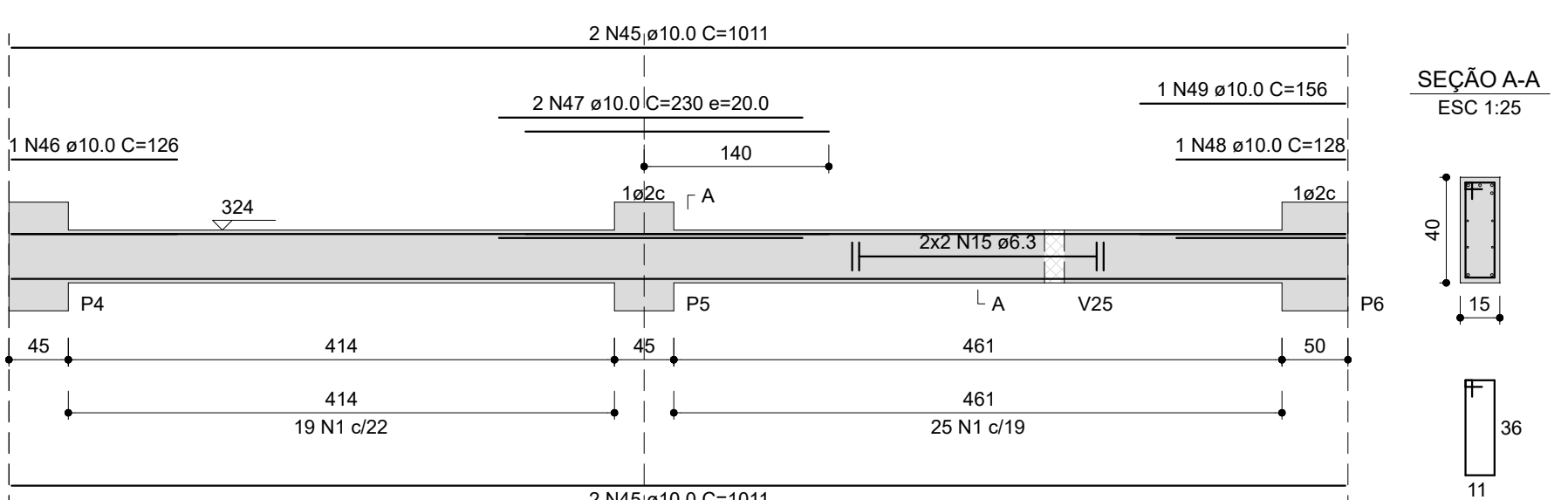
ESC 1:50



RELAÇÃO DO AÇO					RESUMO DO AÇO				
AÇO	N	DIAM (mm)	QUANT	C.TOTAL (cm)	AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)	
CA60	1	5.0	317	1585	CA50	5.3	63.5	17.1	
	2	5.0	185	925		8.0	240.1	104.2	
	3	5.0	135	675		10.0	584.4	276	
	4	5.0	30	150		12.5	287.9	315.7	
	5	5.0	438	2190		16.0	112.2	184.8	
	6	5.0	122	610		5.0	1467.5	248.8	
	7	5.0	2	10					
	8	5.0	2	10					
	9	5.0	2	10					
	10	5.0	2	10					
	11	5.0	2	10					
	12	5.0	2	10					
	13	5.0	162	810					
	14	5.0	4	20					
	15	5.3	4	21					
	16	6.3	6	31					
	17	6.3	2	10					
	18	6.3	2	10					
	19	6.3	2	10					
	20	8.0	4	20					
	21	8.0	4	20					
	22	8.0	4	20					
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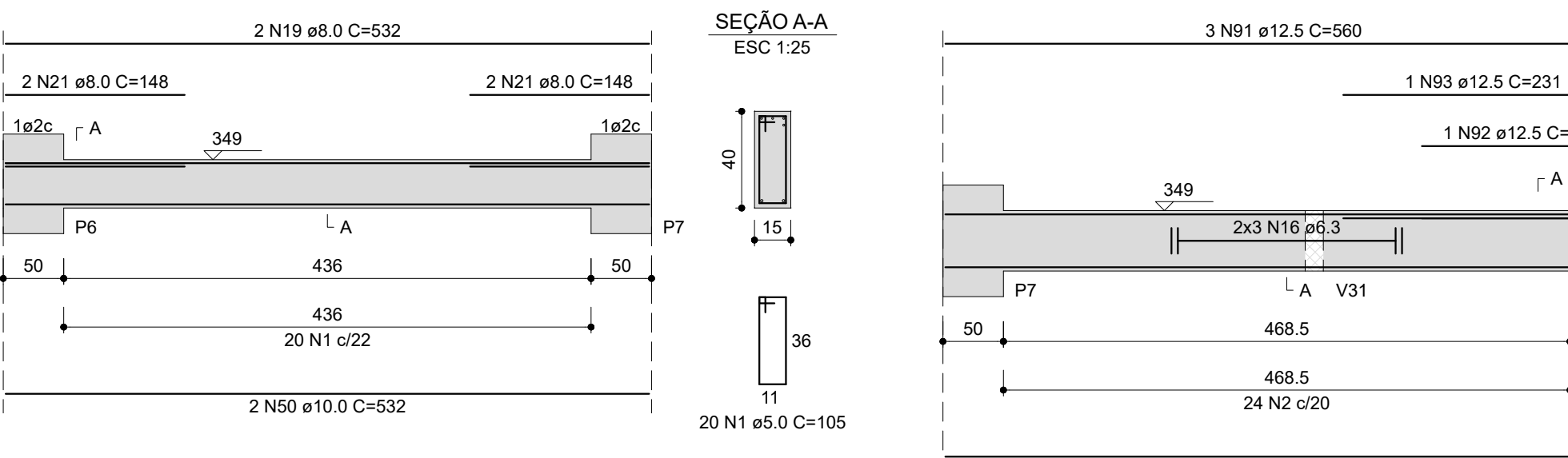
V7

ESC 1:50



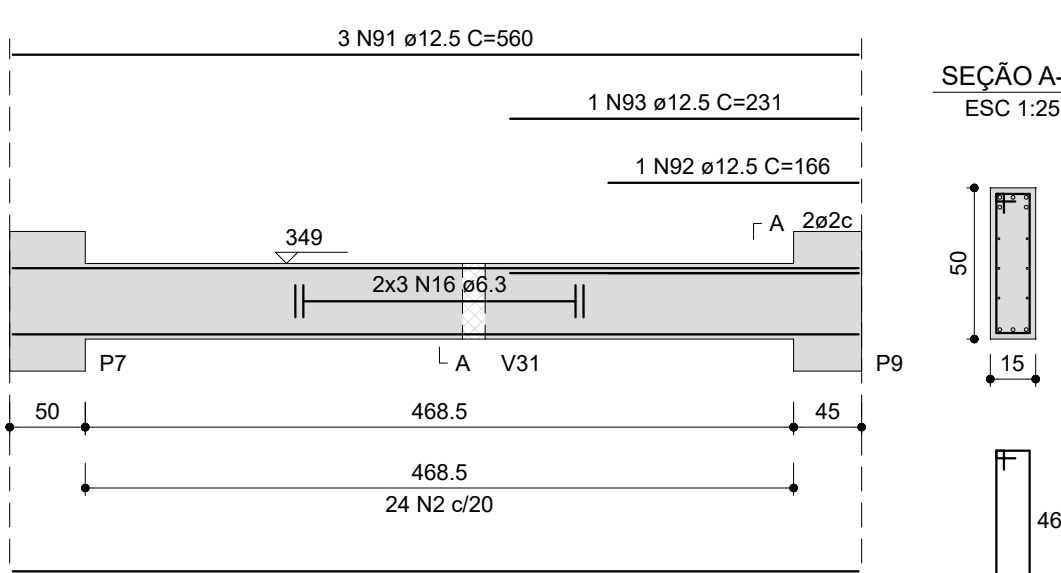
V8

ESC 1:50



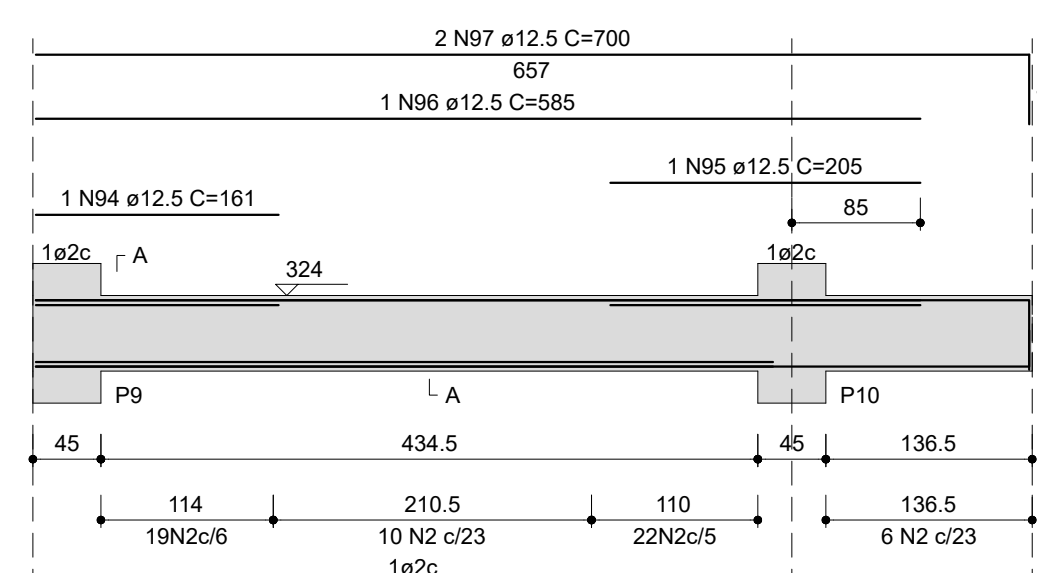
V9

ESC 1:50



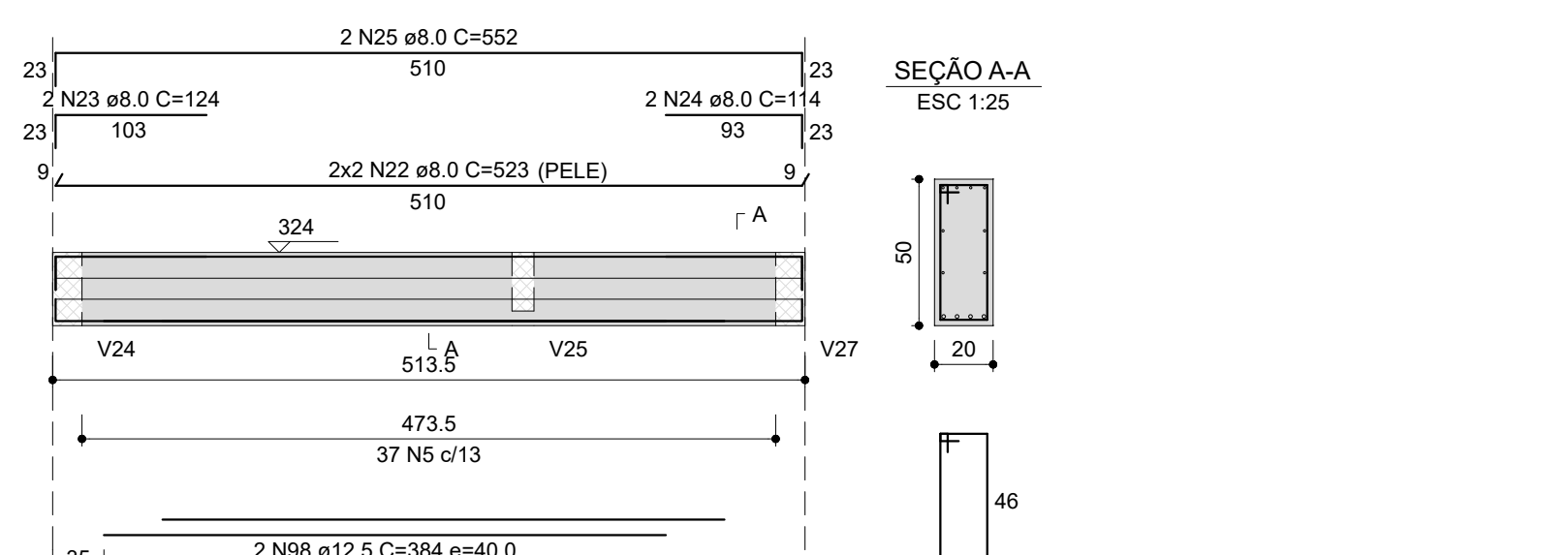
V10

ESC 1:50



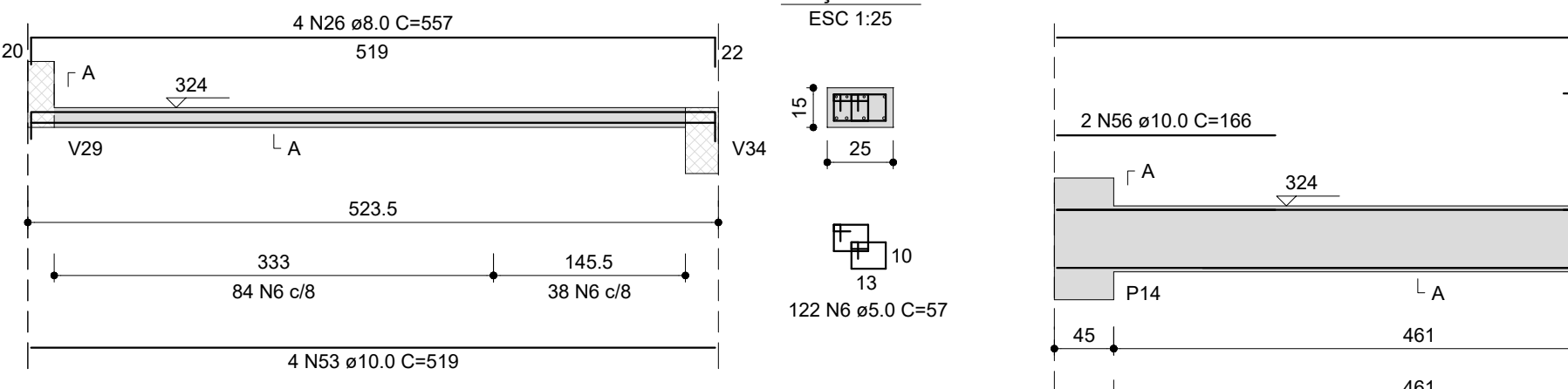
V11

ESC 1:50



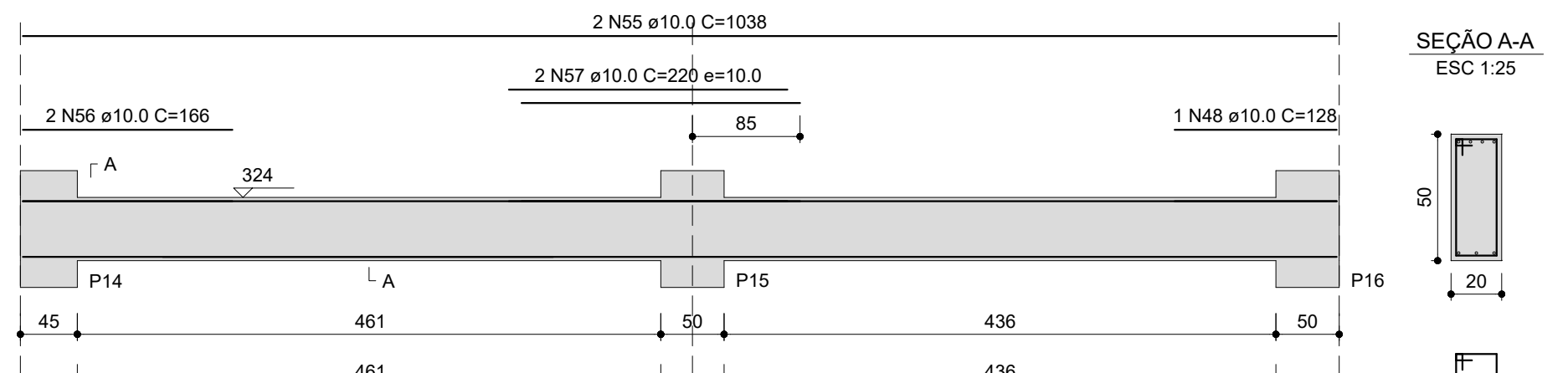
V12

ESC 1:50



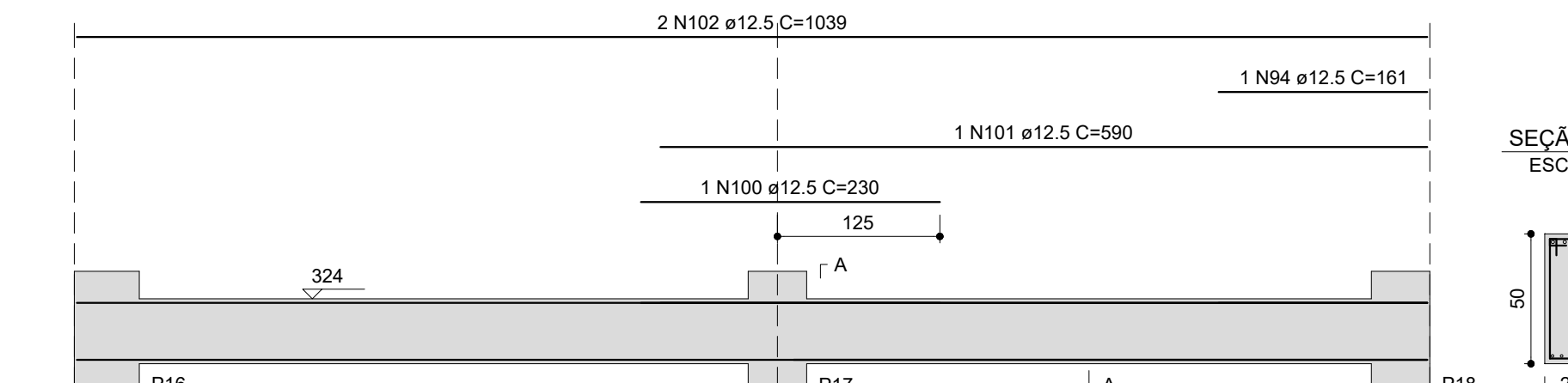
V13

ESC 1:50



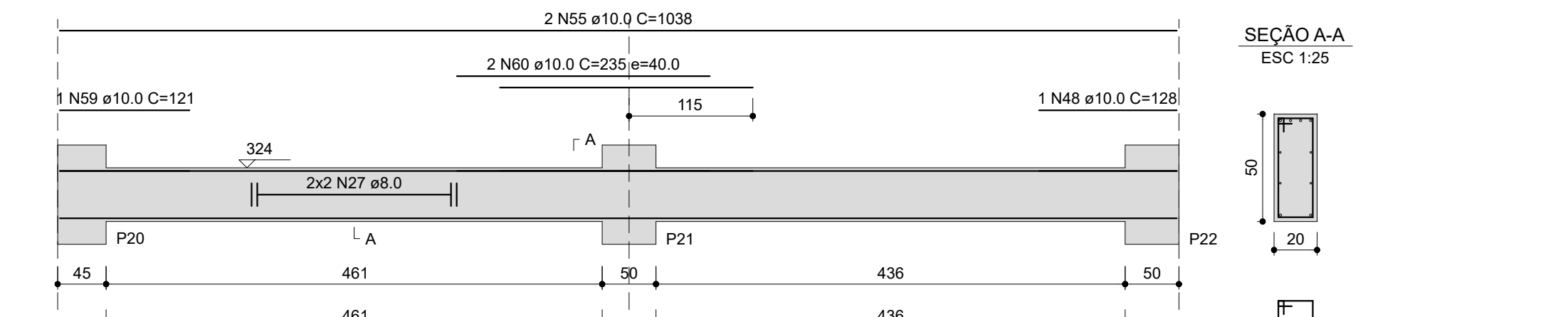
V14

ESC 1:50



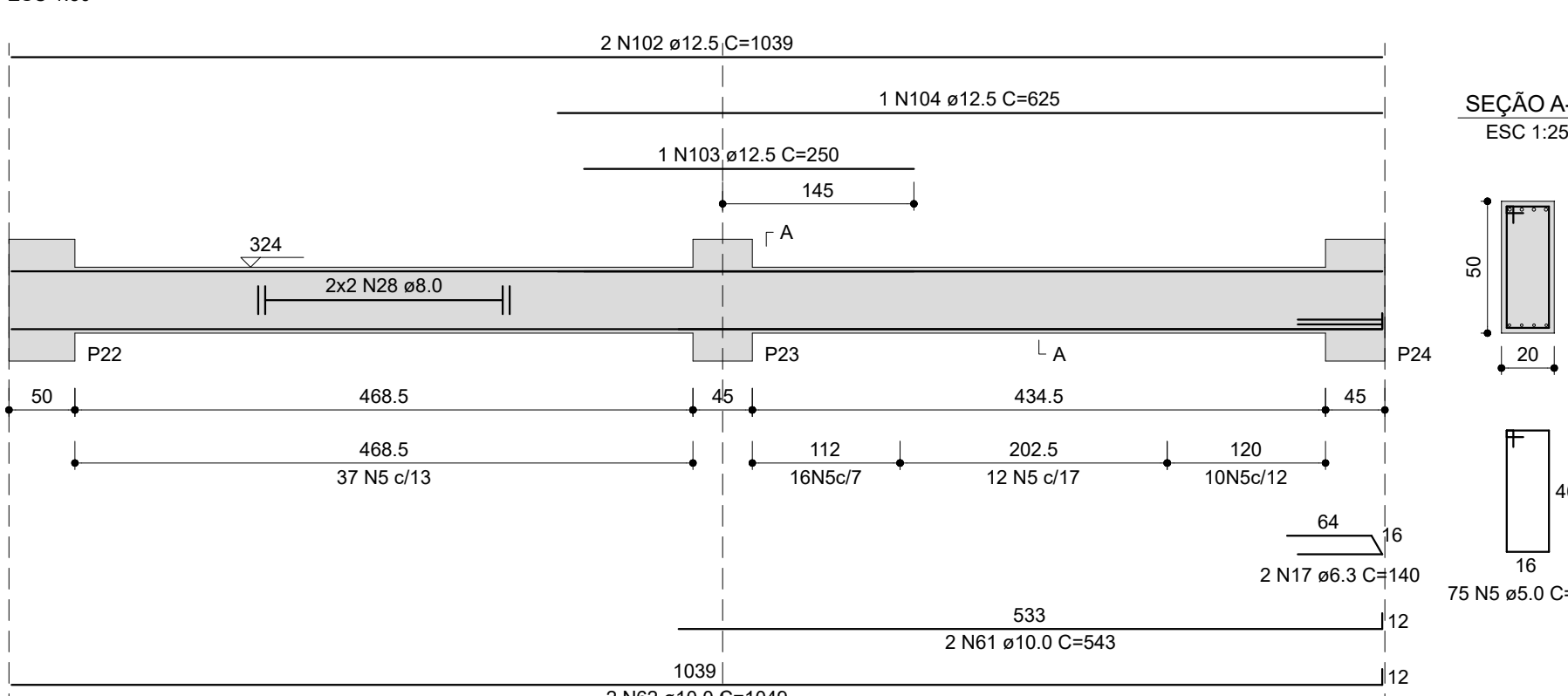
V15

ESC 1:50



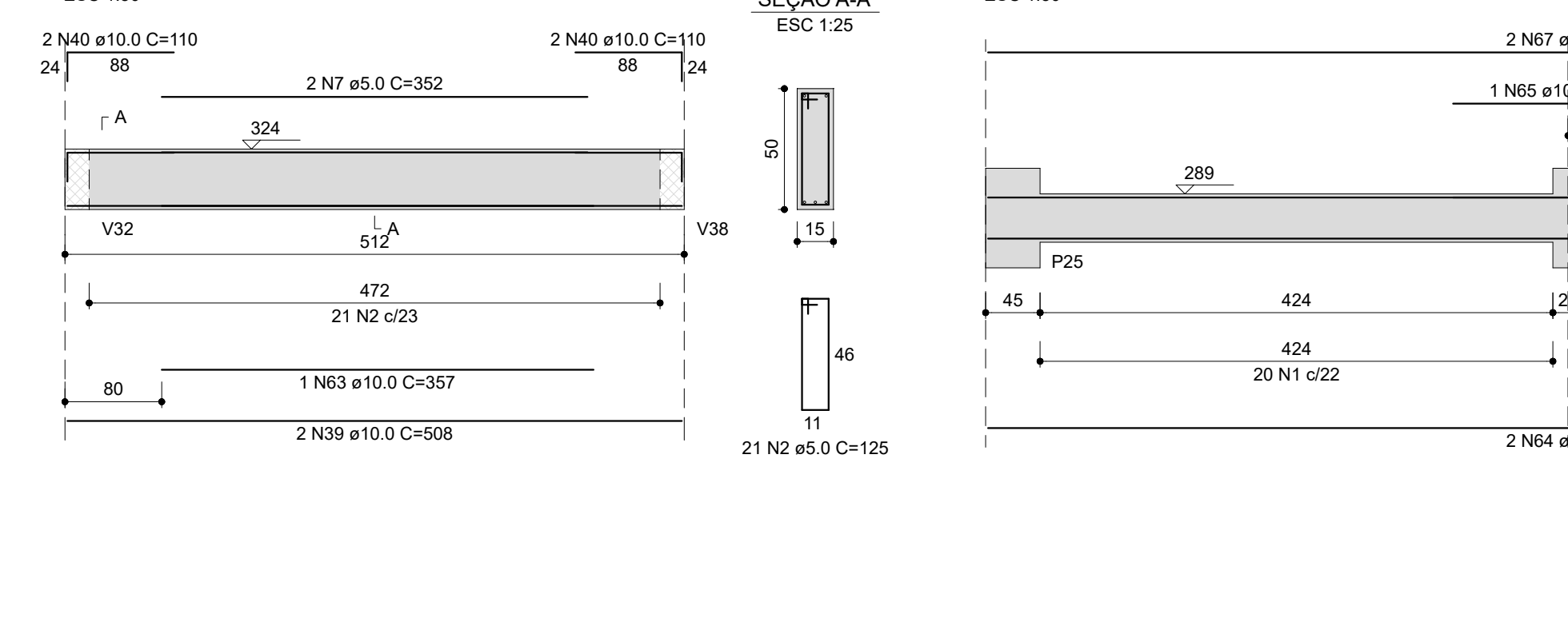
V16

ESC 1:50



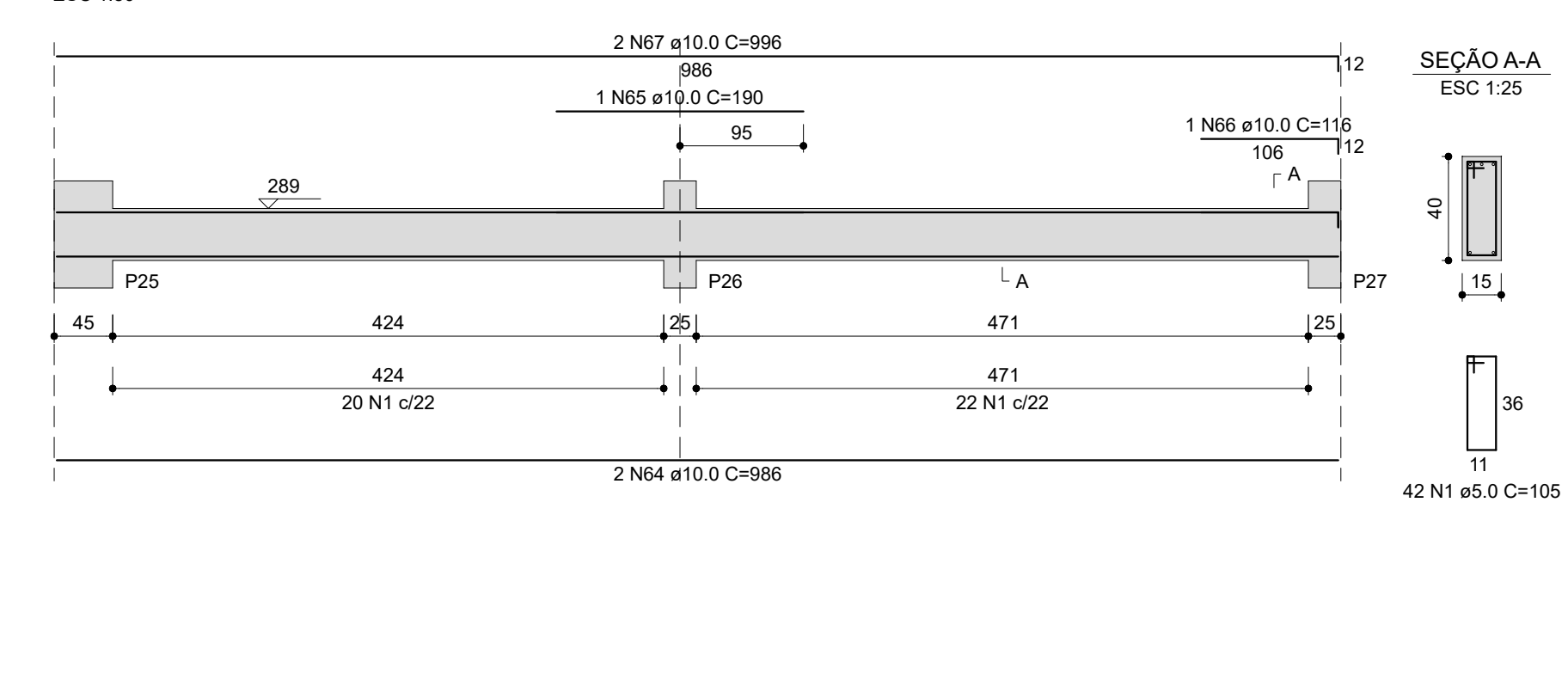
V17

ESC 1:50



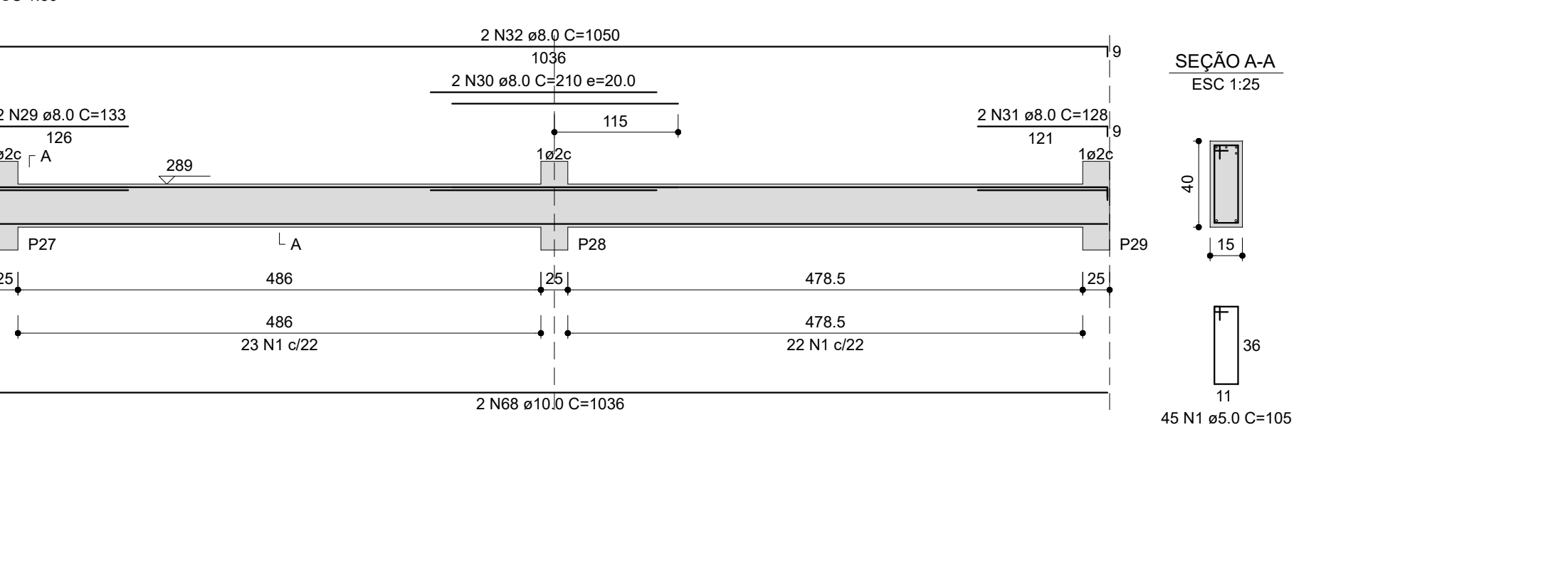
V18

ESC 1:50



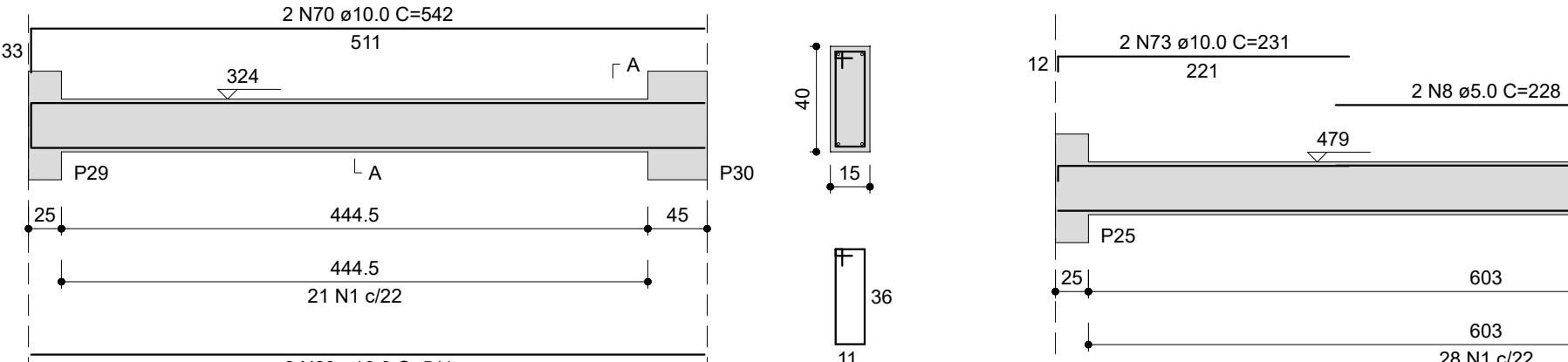
V19

ESC 1:50



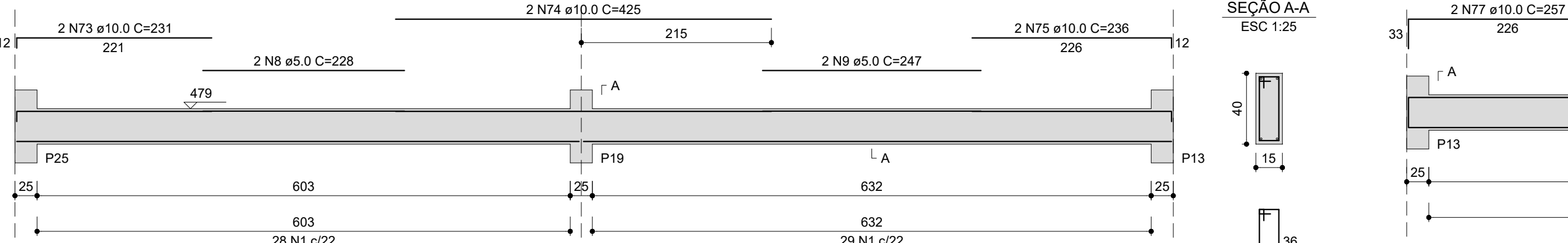
V20

ESC 1:50



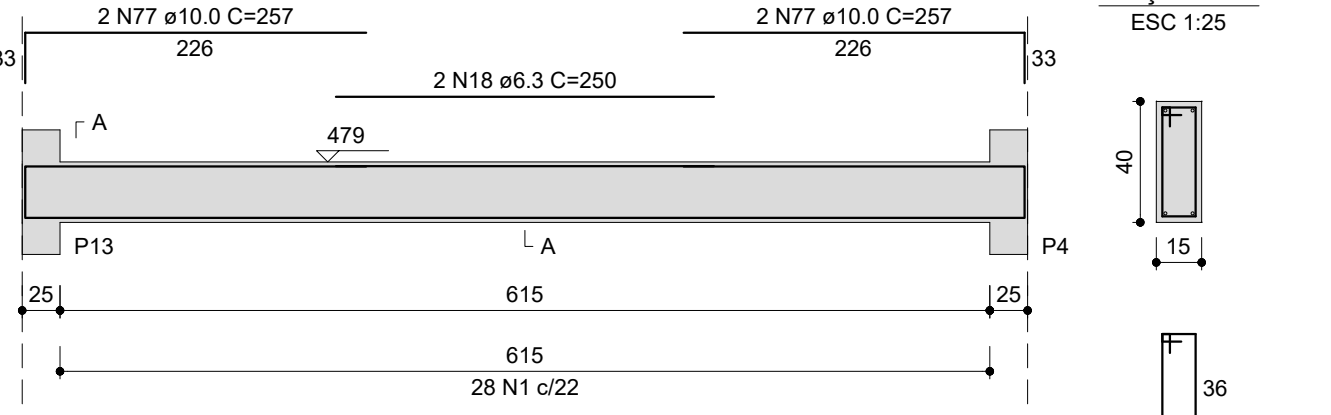
V21

ESC 1:50



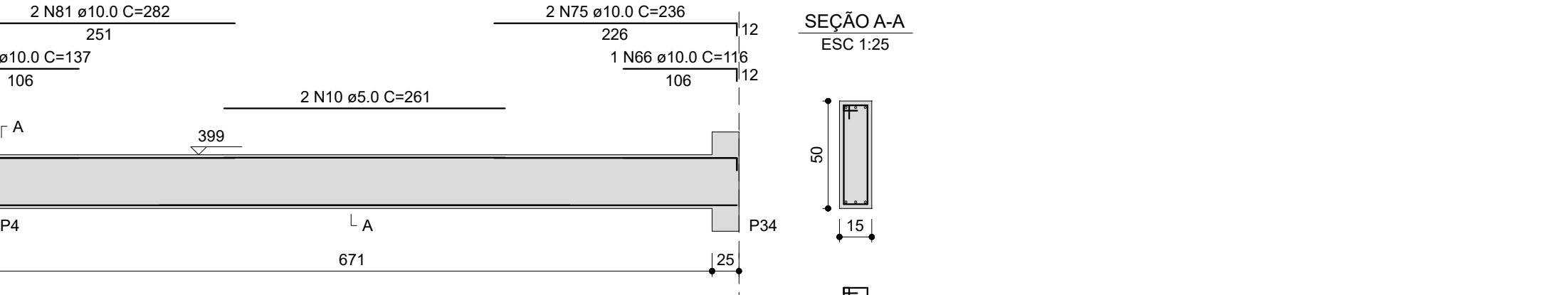
V22

ESC 1:50



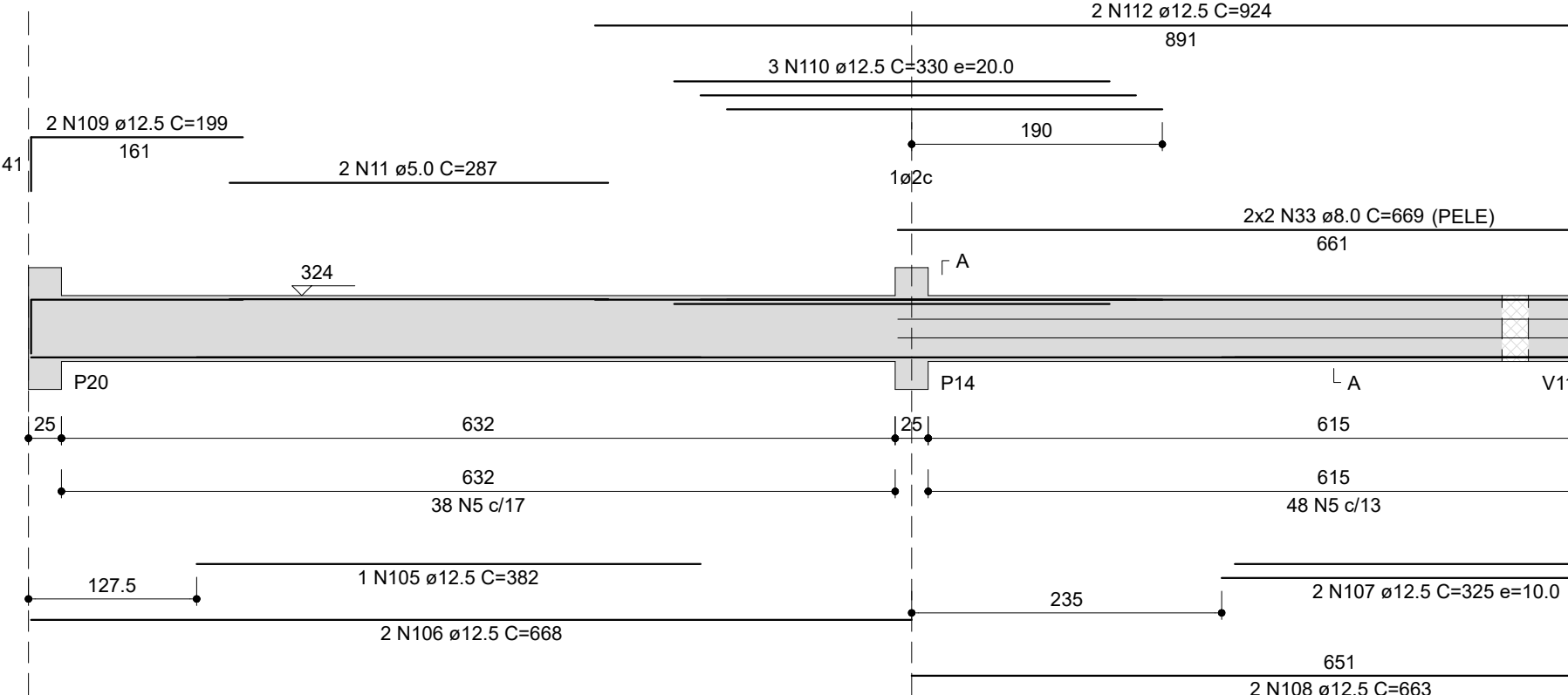
V23

ESC 1:50



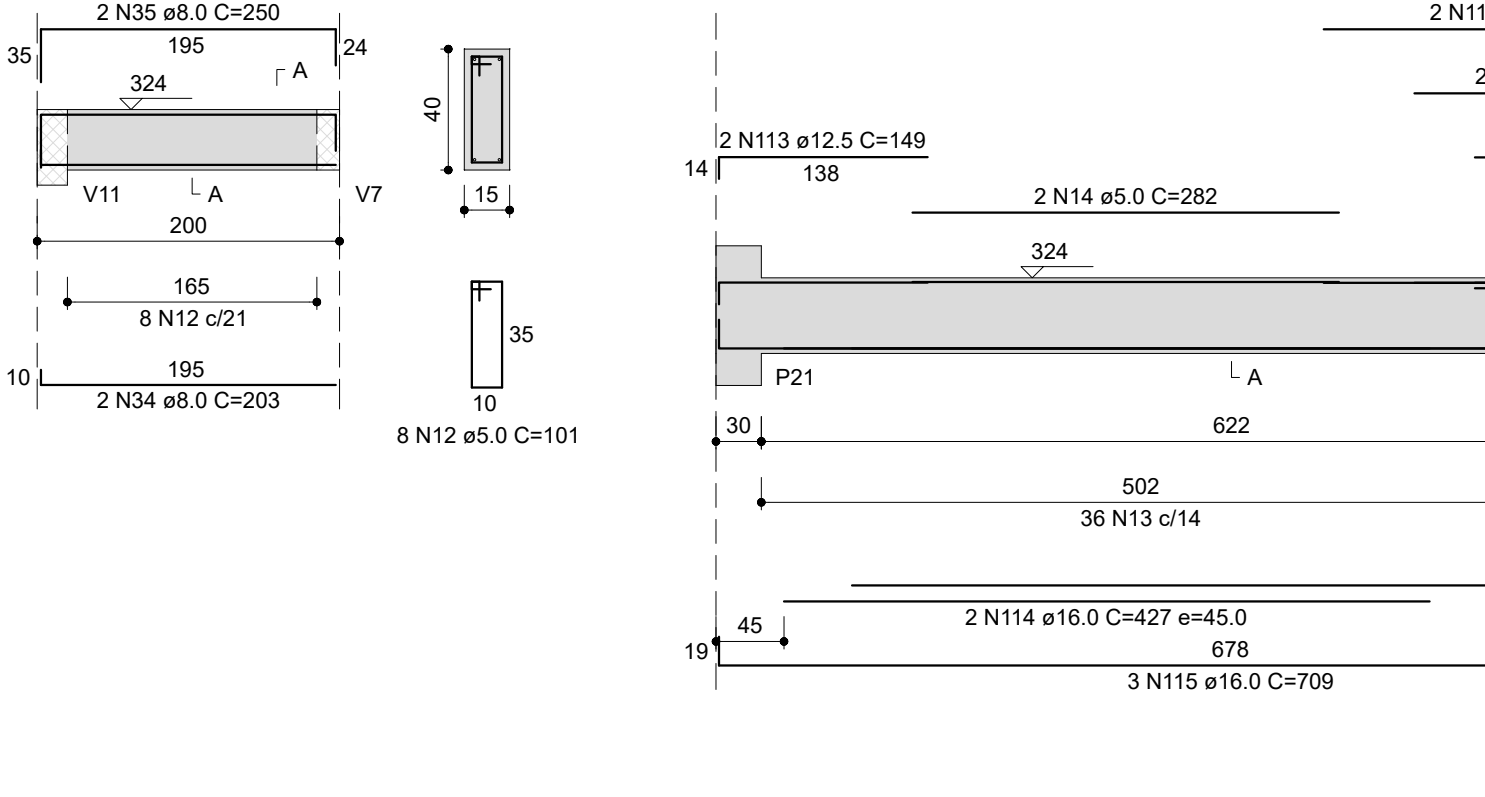
V24

ESC 1:50

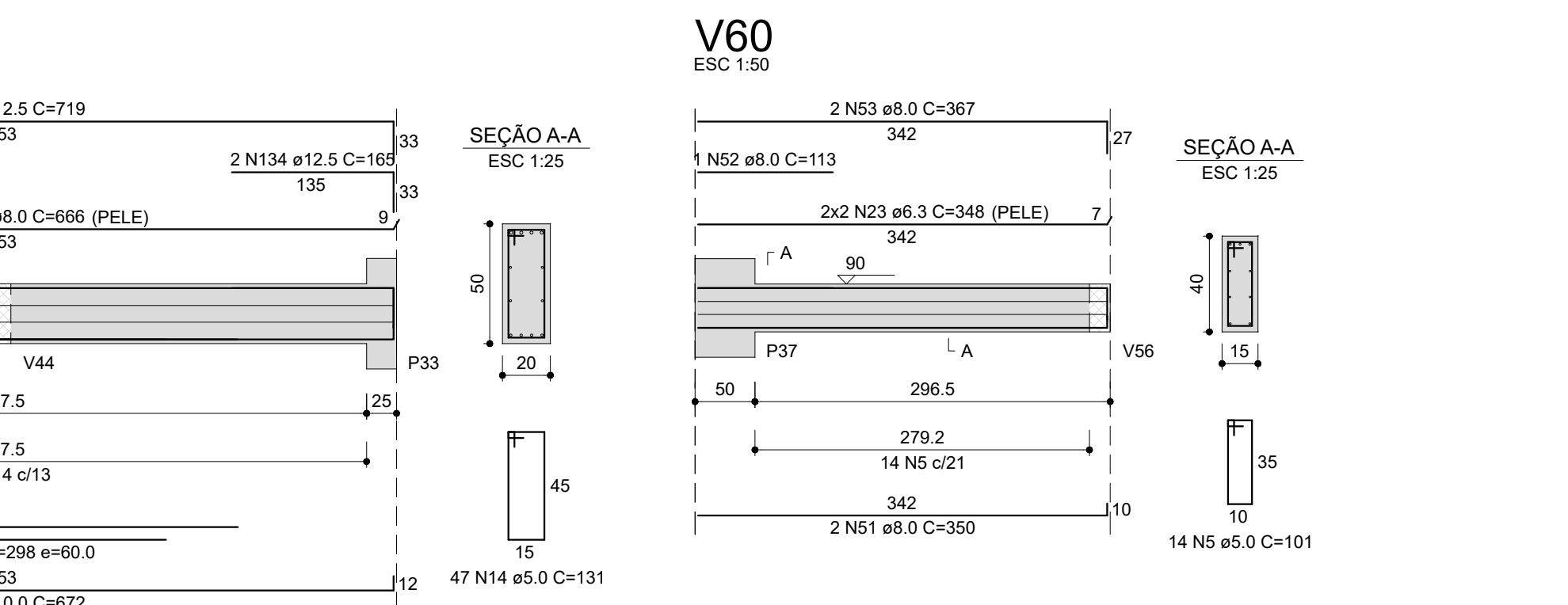
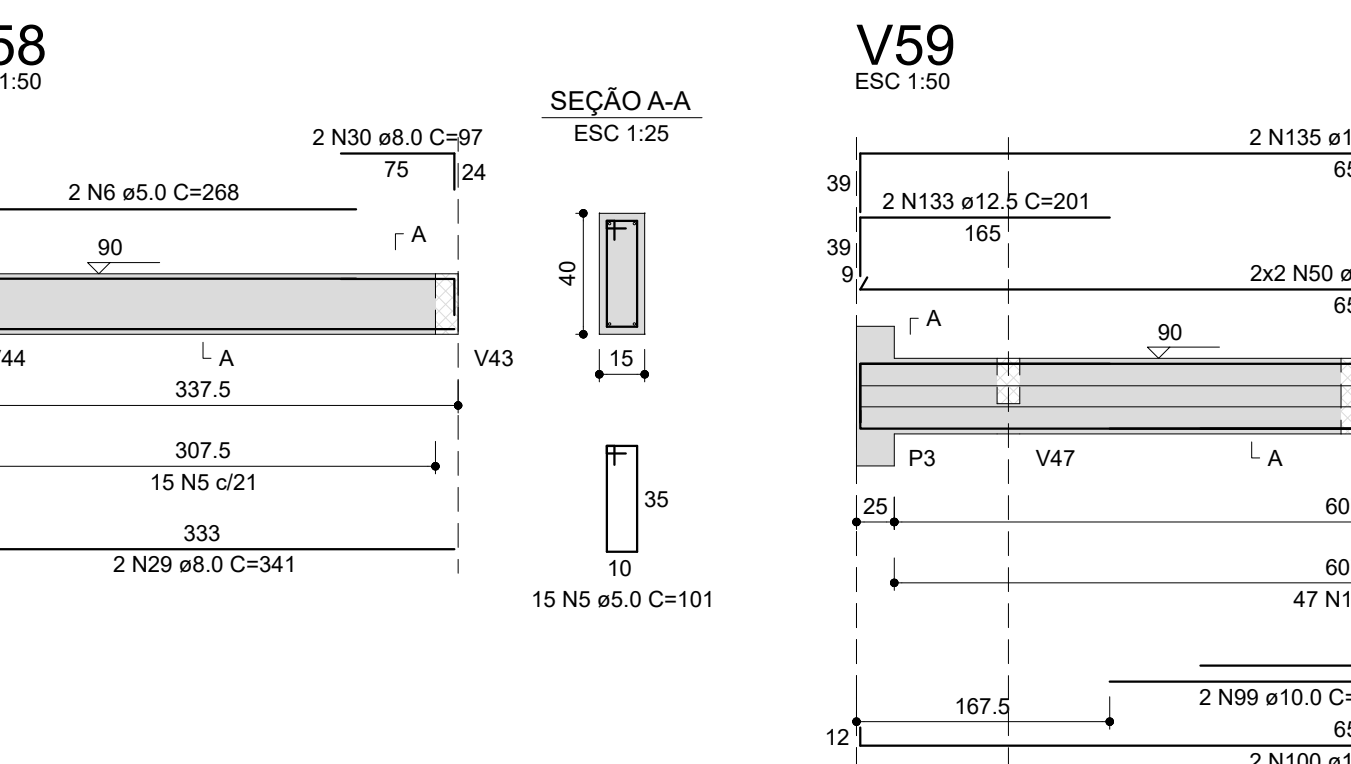
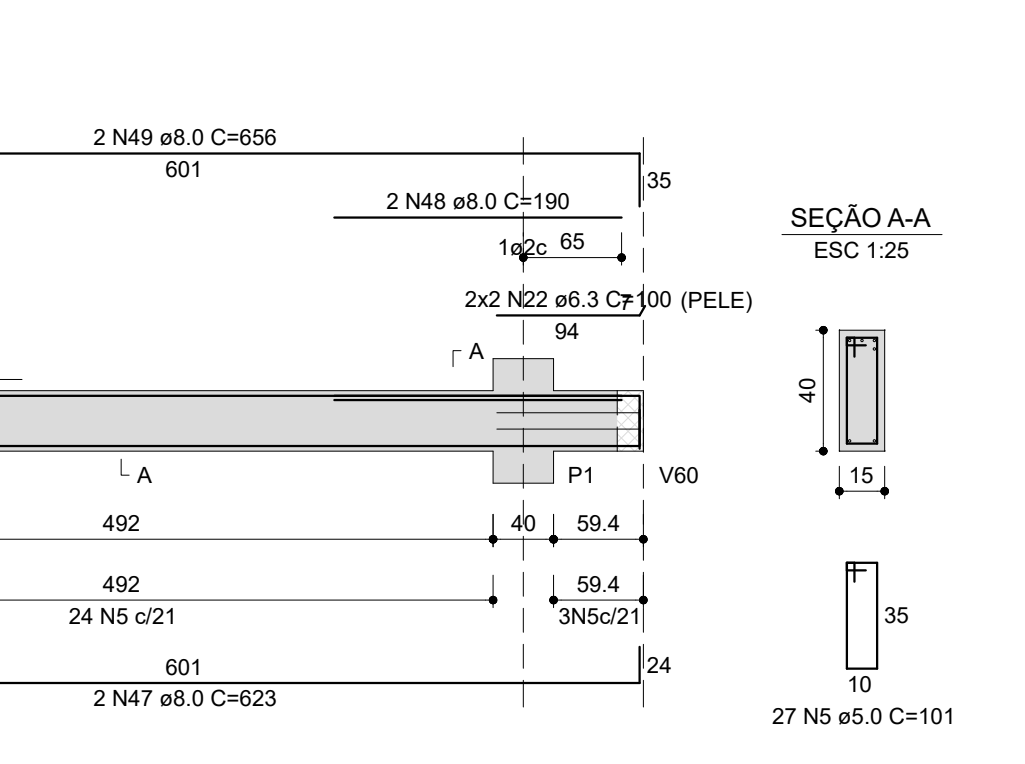
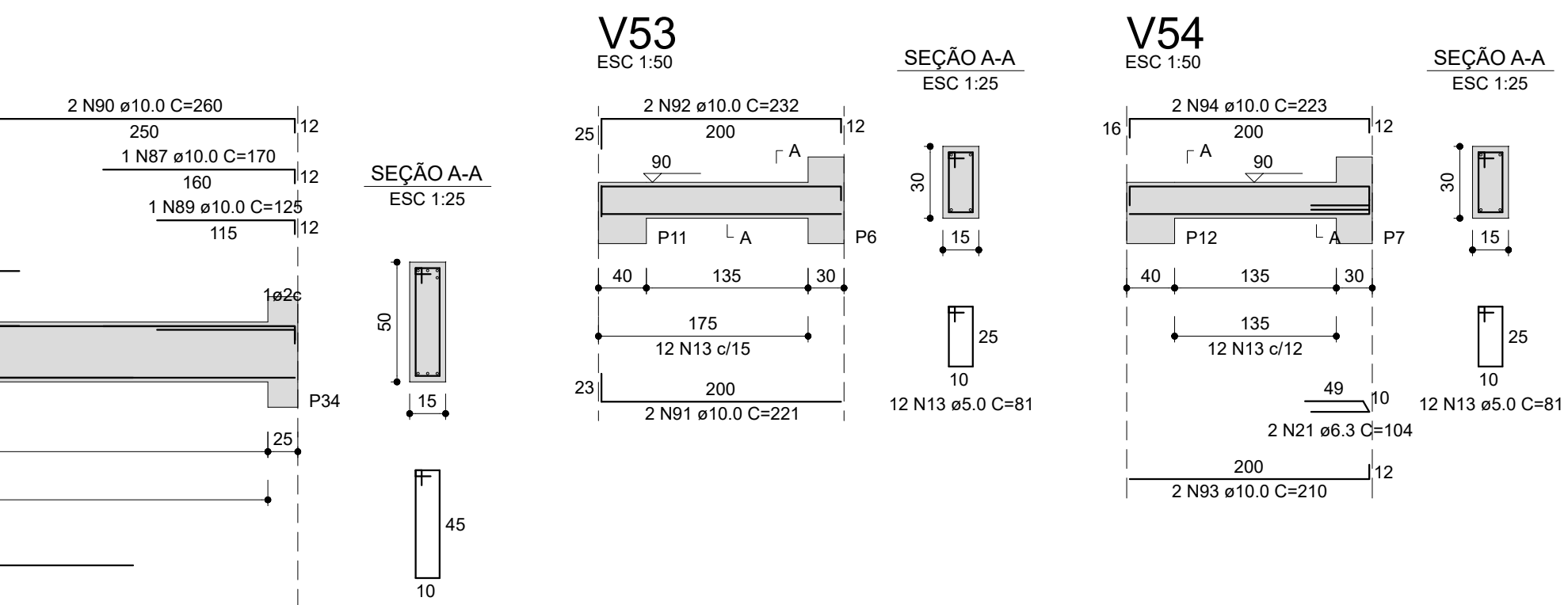
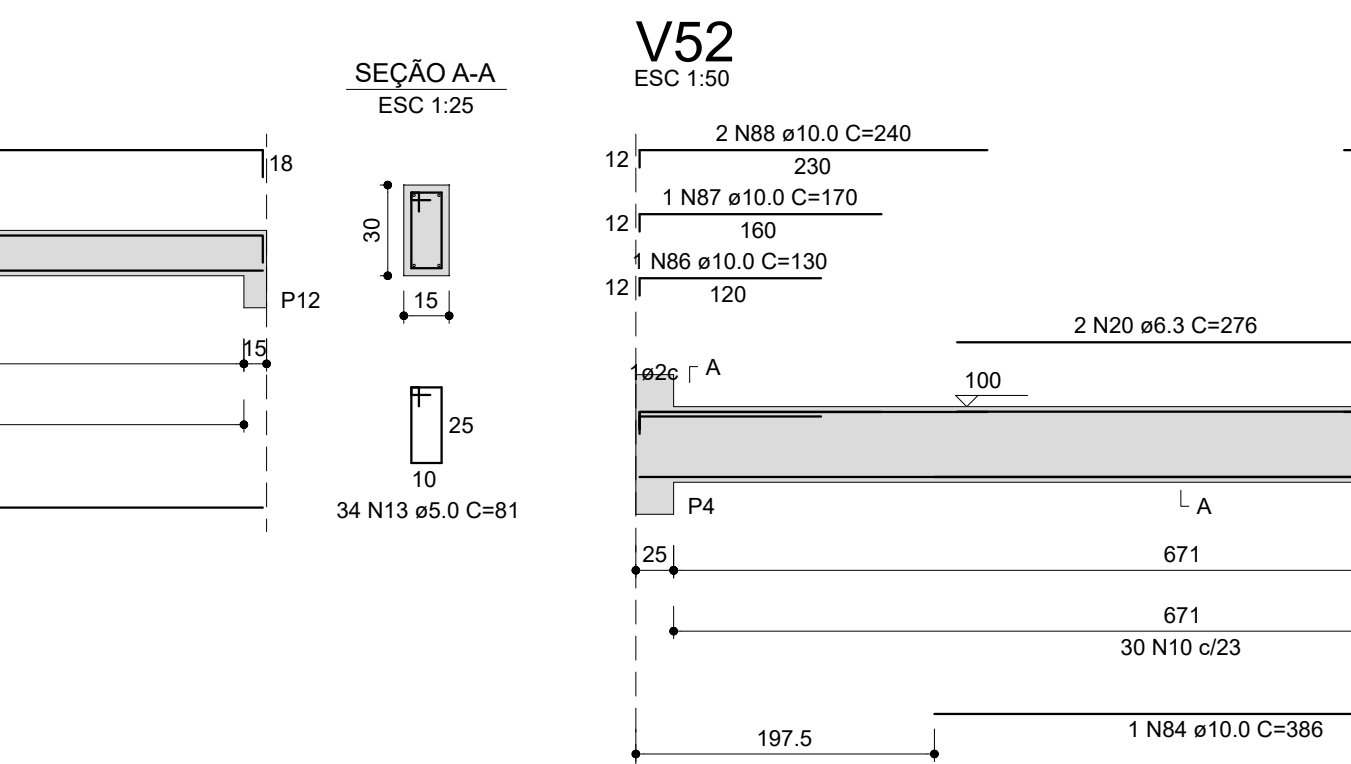
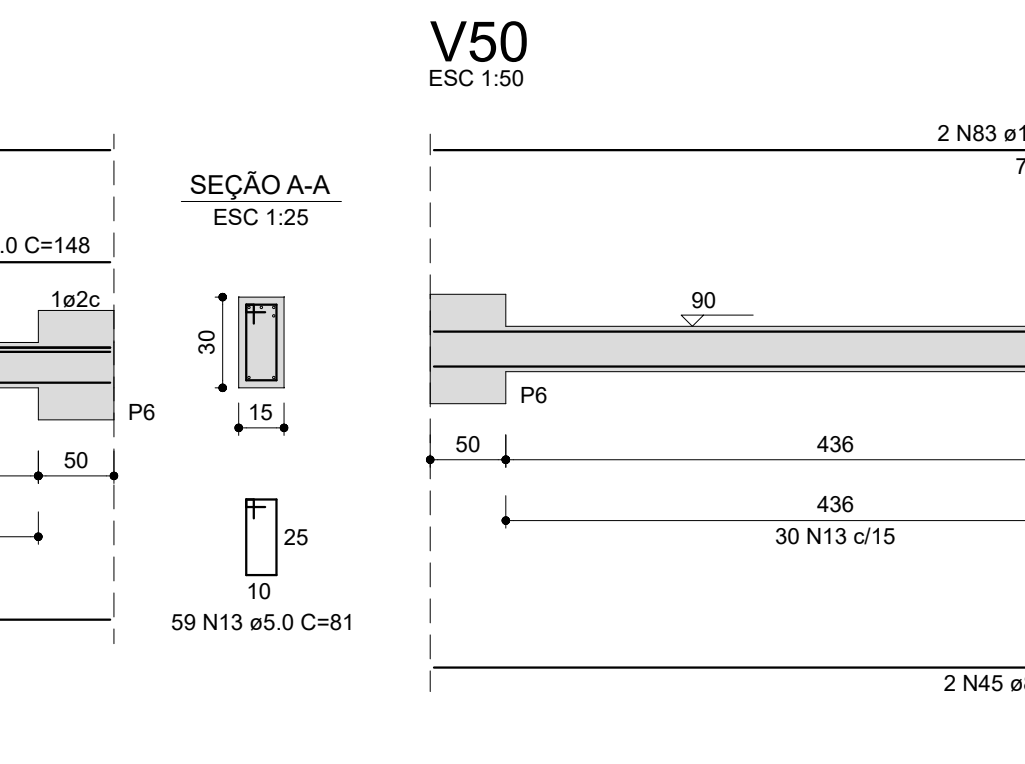
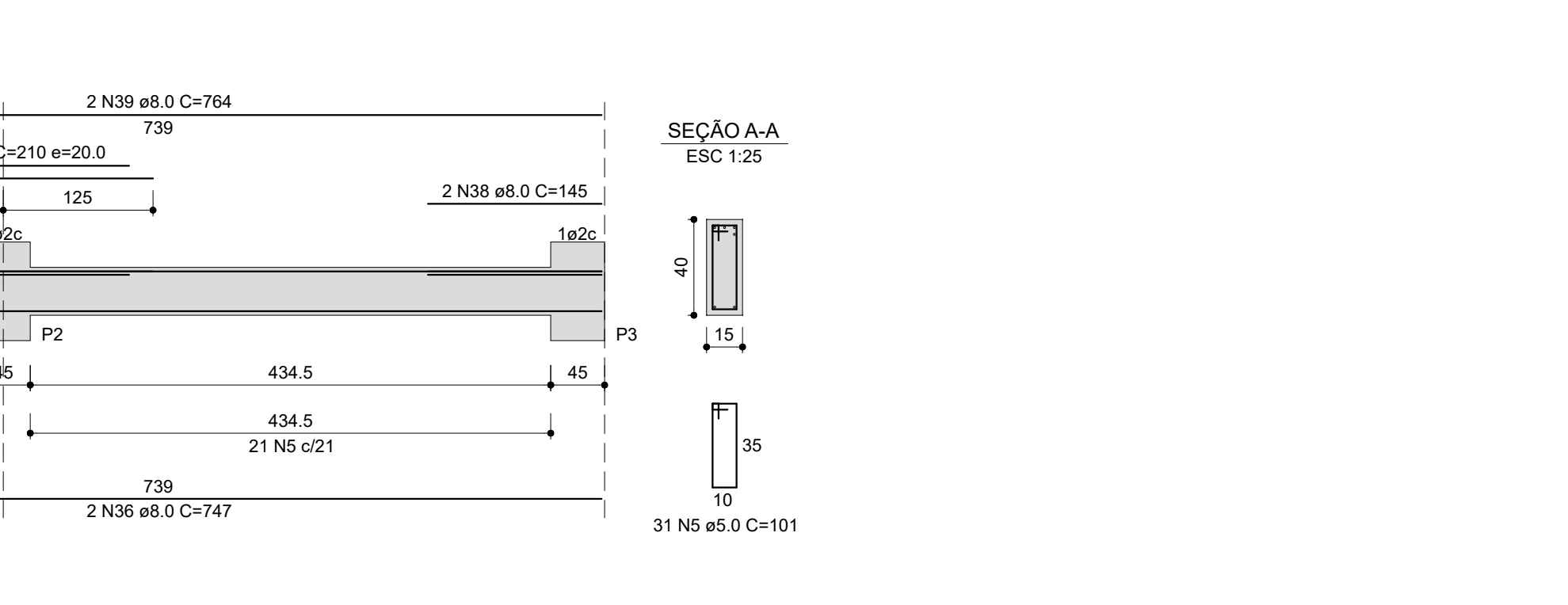
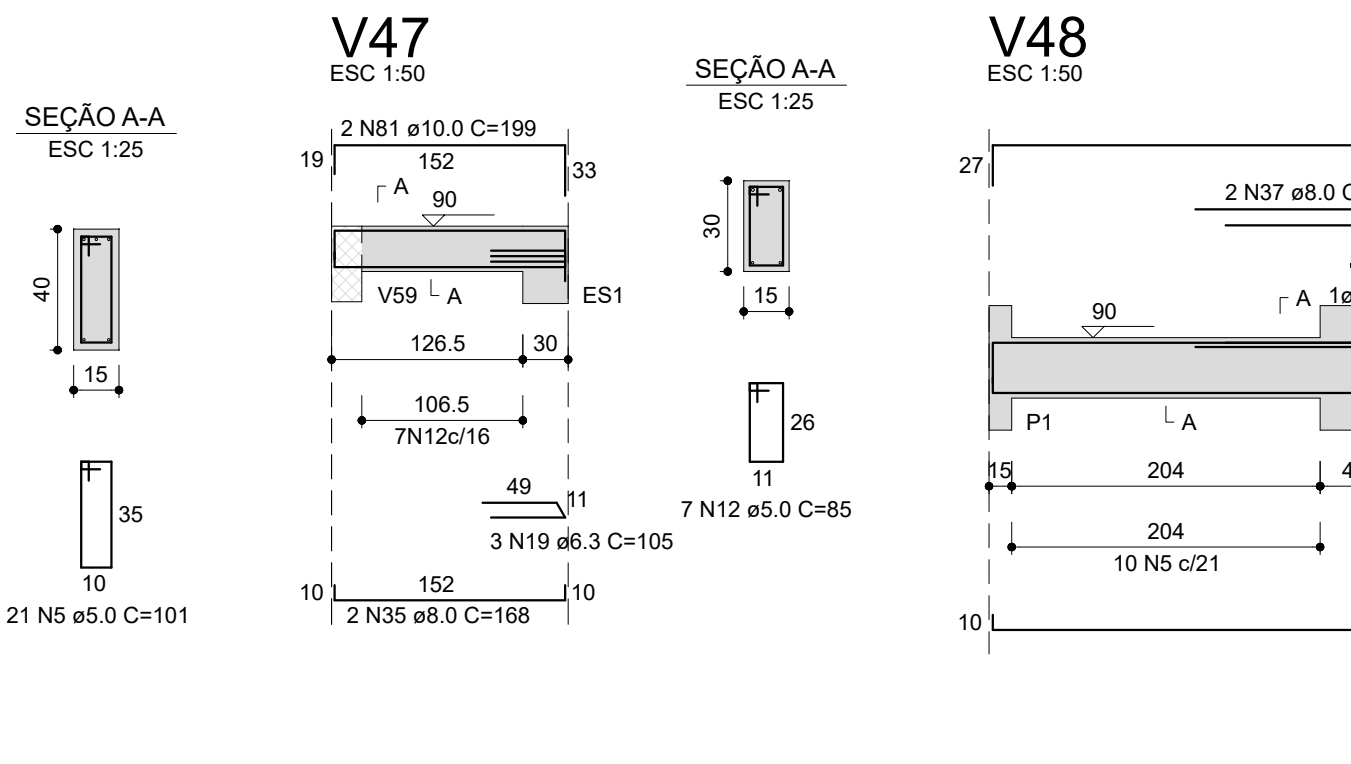
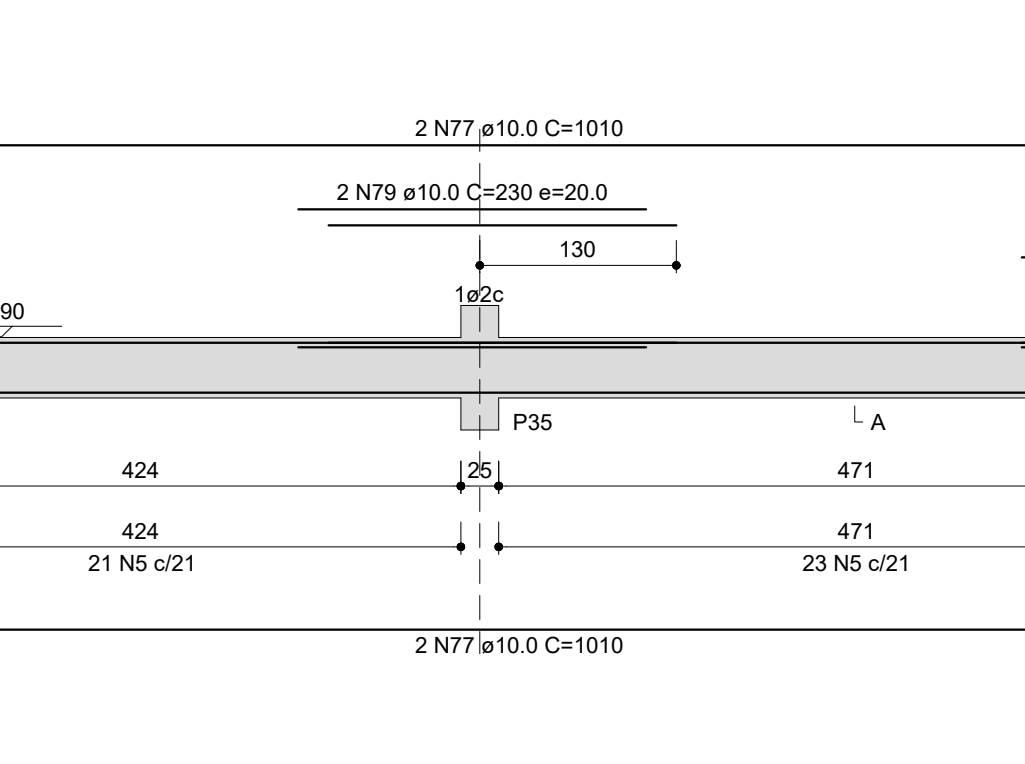
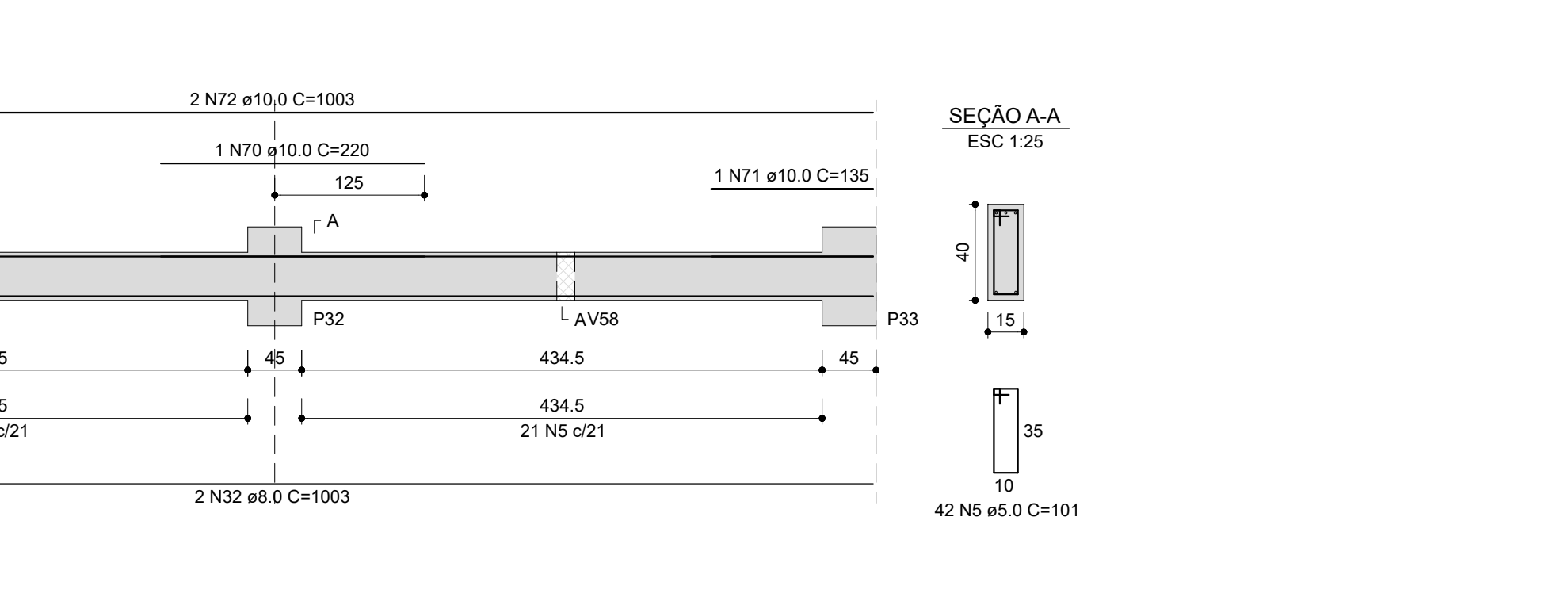
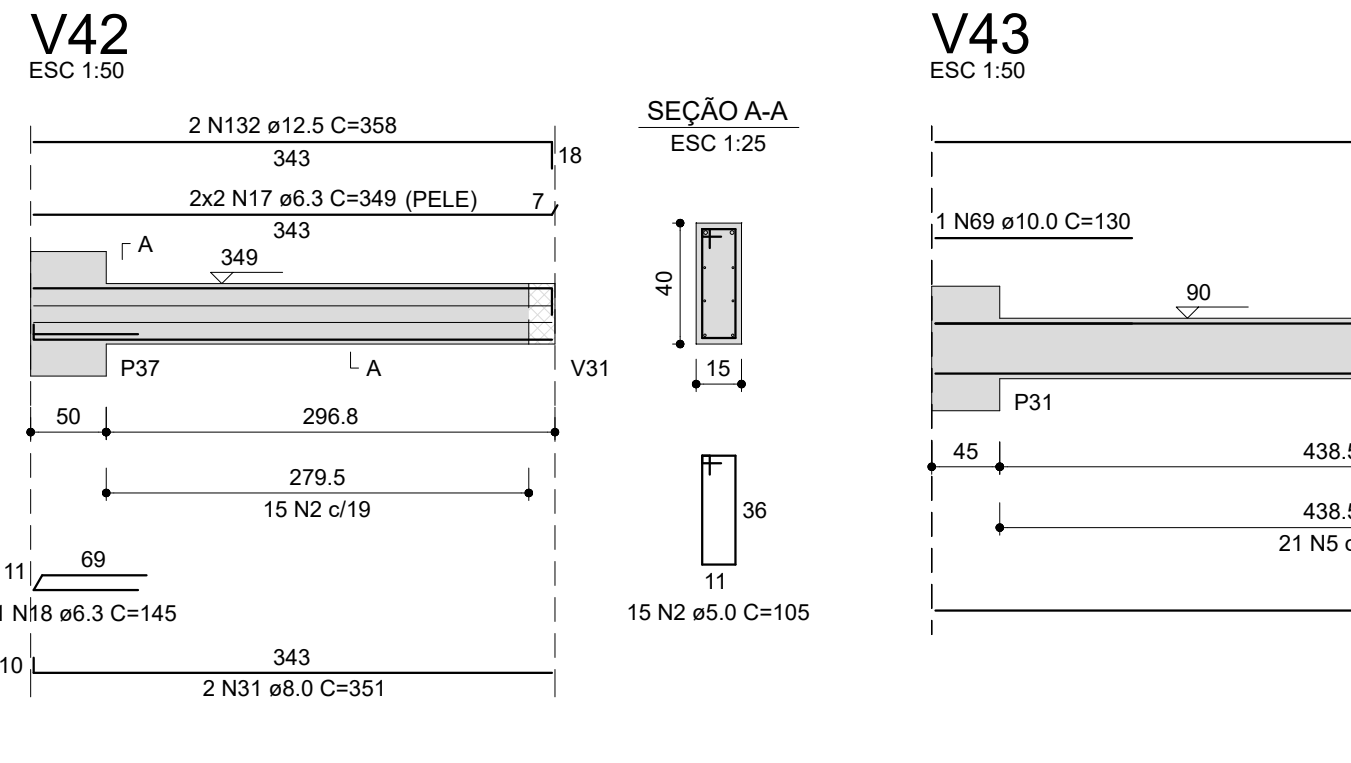
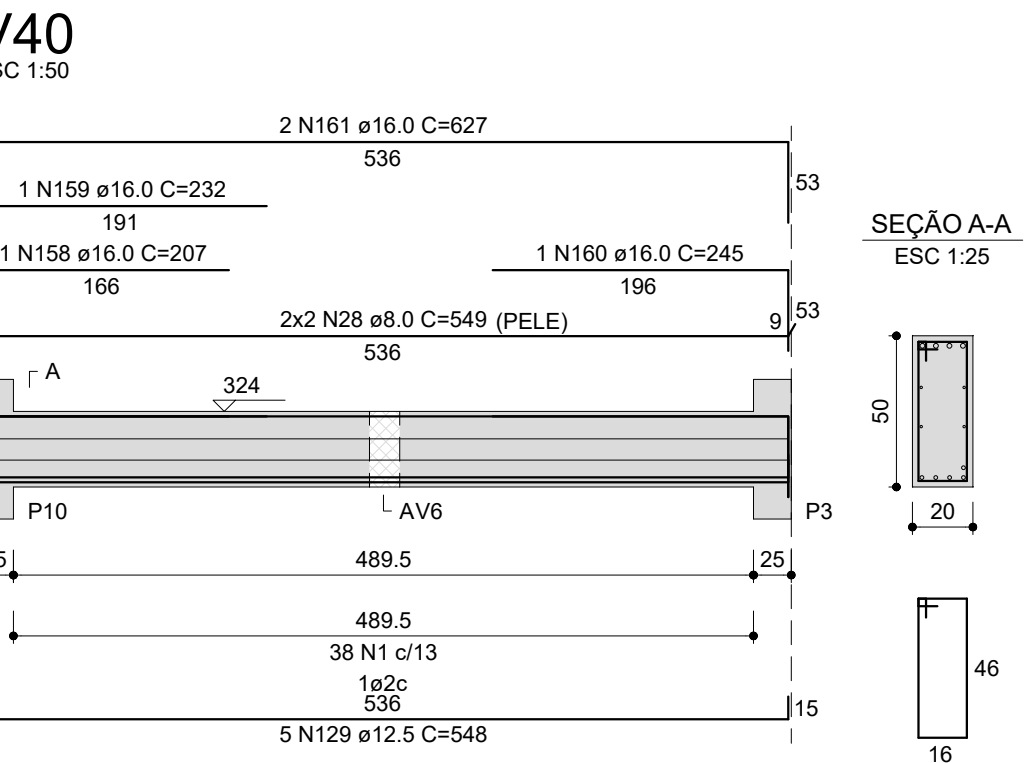
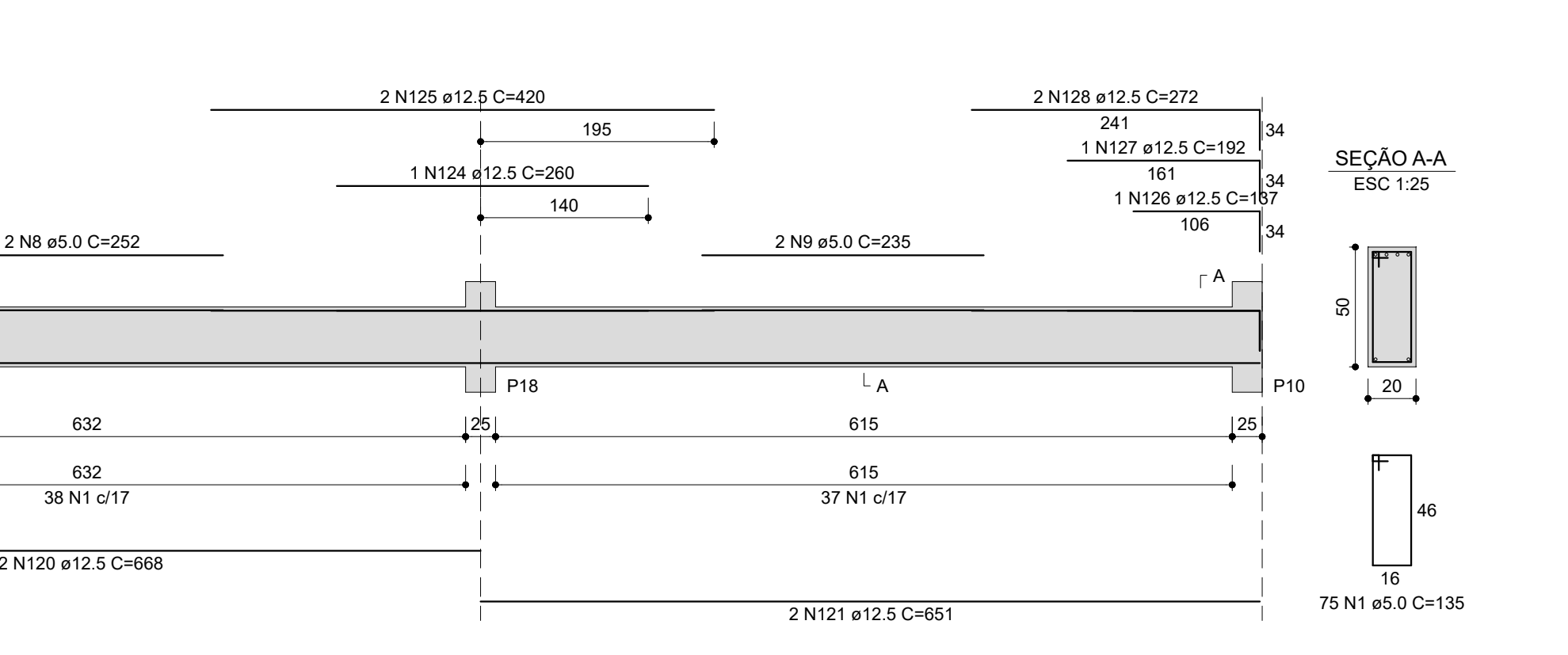
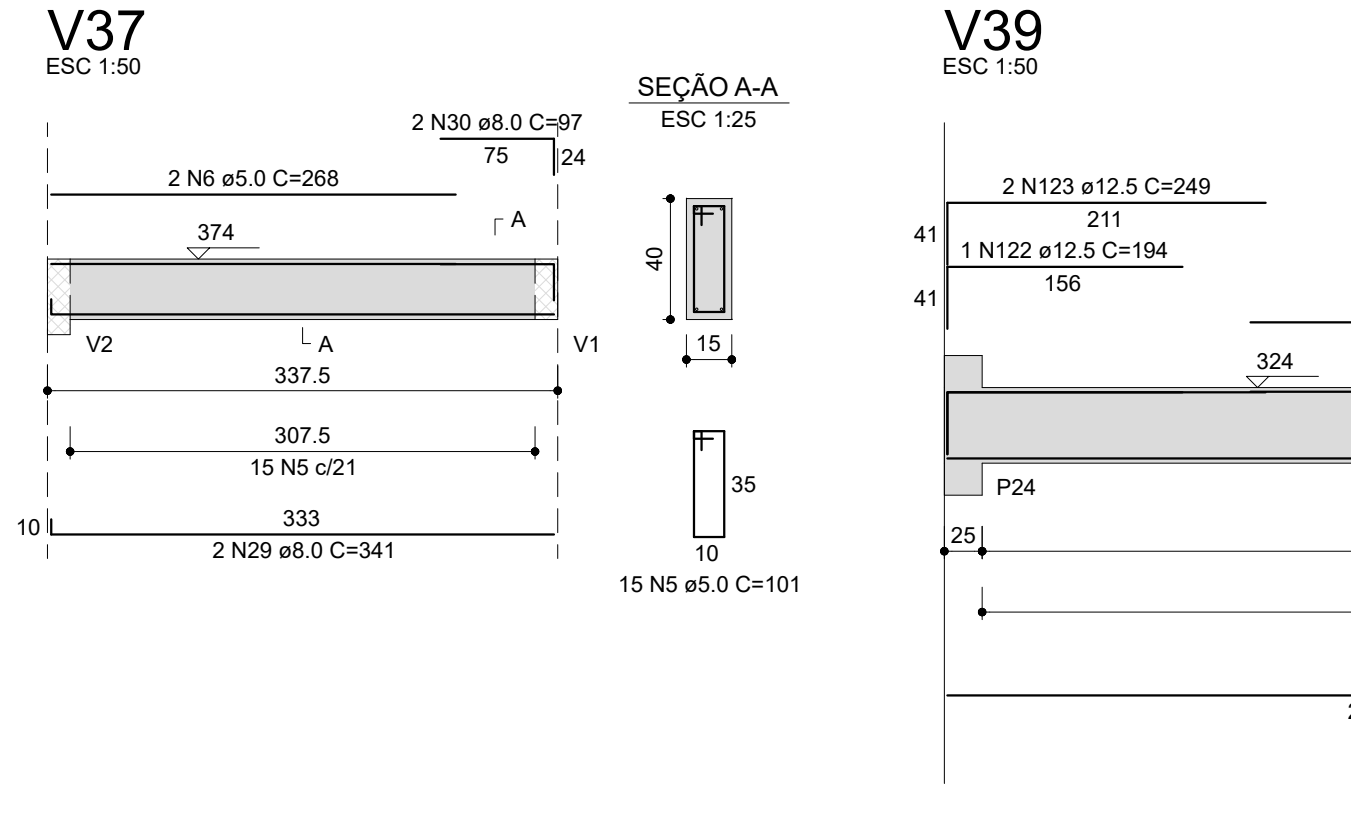
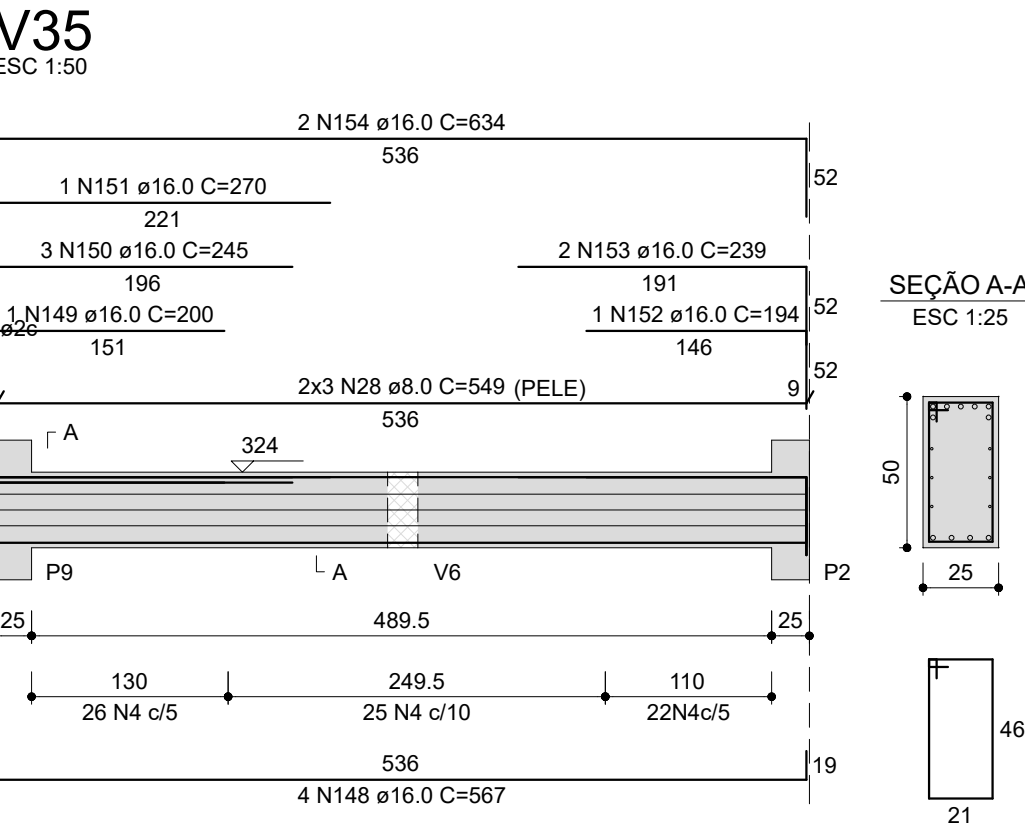
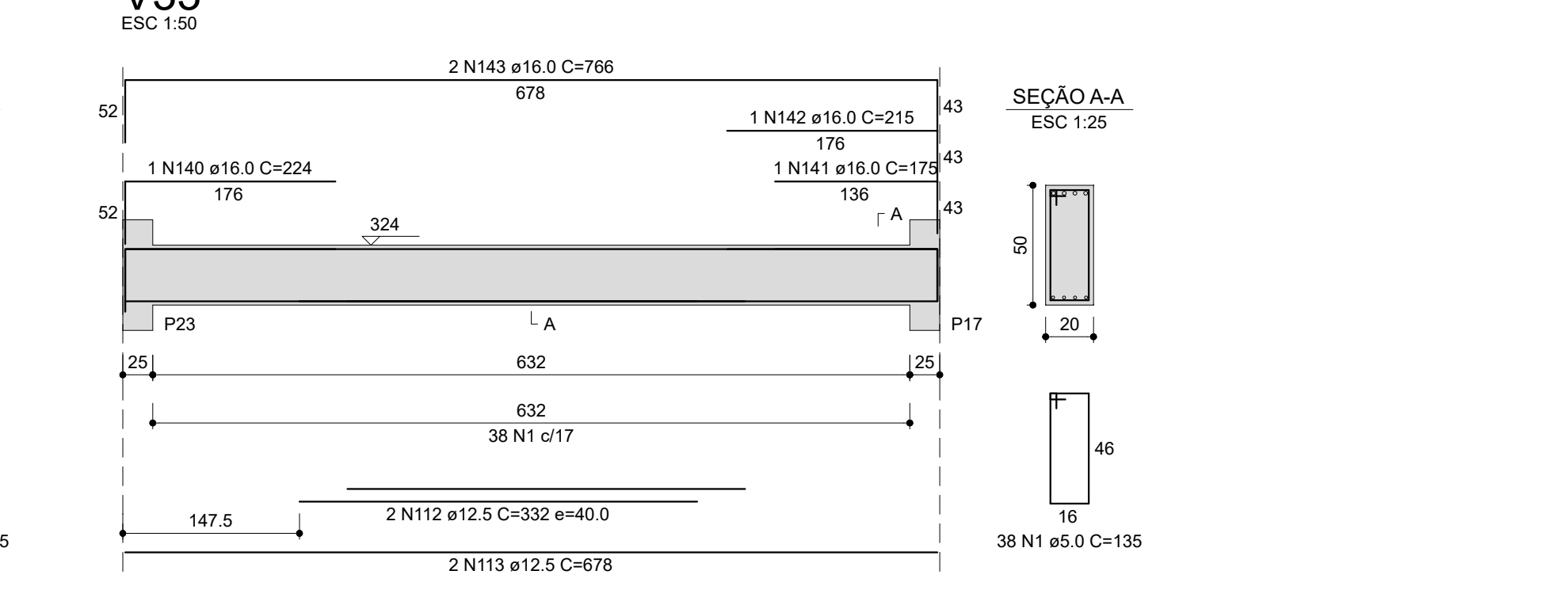
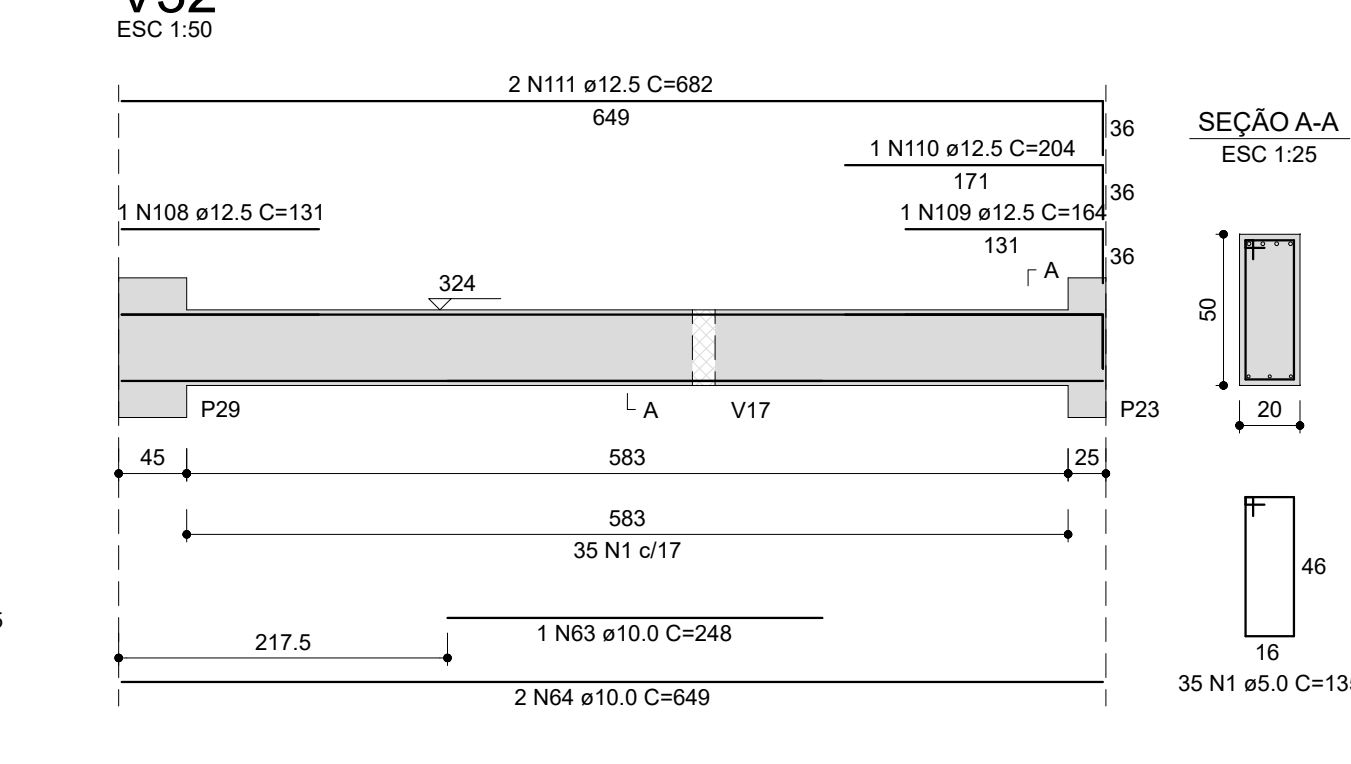
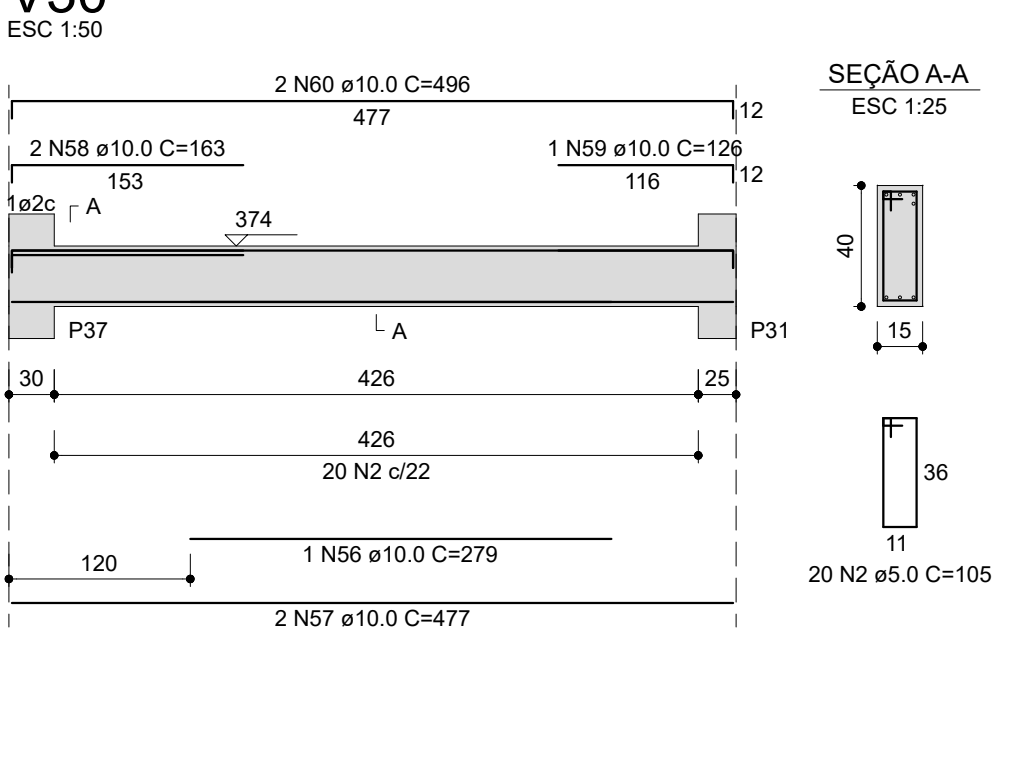


V25

ESC 1:50



V/29

ARIMBOS:

ARQ. LUIS DAJANE REGINA VALENTINI
CNU/BR 551414-4

ENG. CIVIL RODRIGO EMMER
CNU/BR 138828-8

OCAL: ASSO FUNDO - RS BRA: RESTAURANTE UNIVERSITÁRIO E CANTINA PROJETO: ESTRUTURAL ÁREA TOTAL DA EDIFICAÇÃO: 064,58 m² CONTEÚDO: ESTALAMENTO - VIGAS MEZANINO (PRANCHAS 2/2) ENDEREÇO: LA CAPIATA ARAUJO, 20 CENTRO		FASE: EXECUTIVO REVISÃO Nº: R00 DATA: 03/10/2023 DESINHADO POR: RODRIGO REVISADO POR: RODRIGO NOME DO ARQUIVO:		ESCALA: 1:25 E 1:5 TAMANHO FOLHA: A0 Nº PRANCHA:
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	----------------------------------------------------------------------

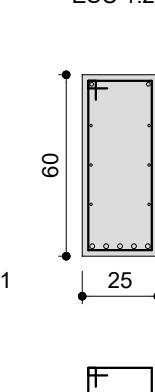
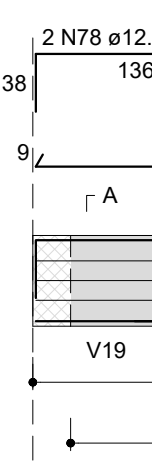
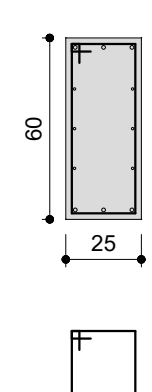
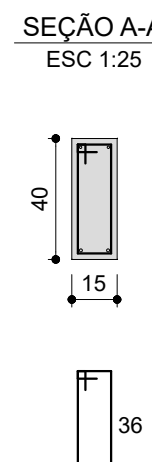
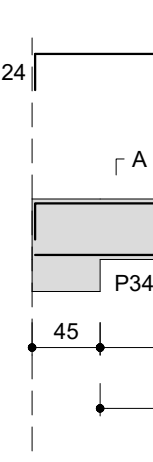
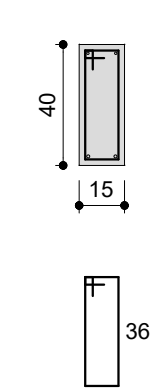
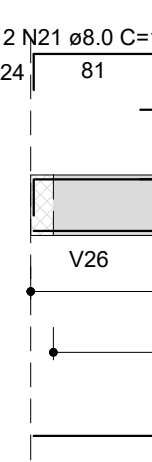
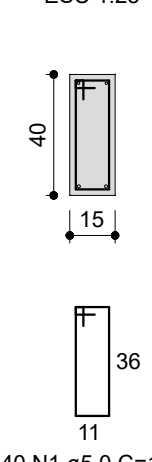
Technical drawing of a beam-column joint (Knoten) showing reinforcement details. The drawing includes a top view and a side view.

Top View:

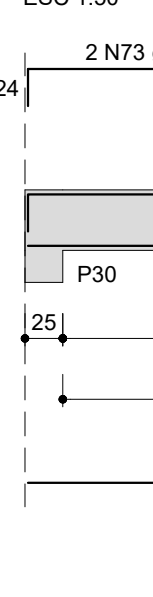
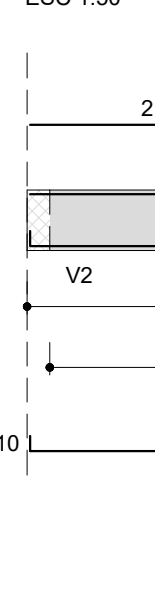
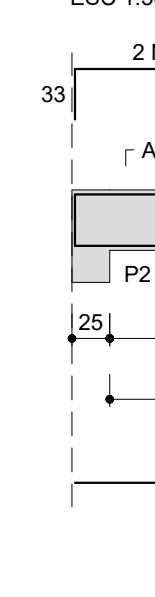
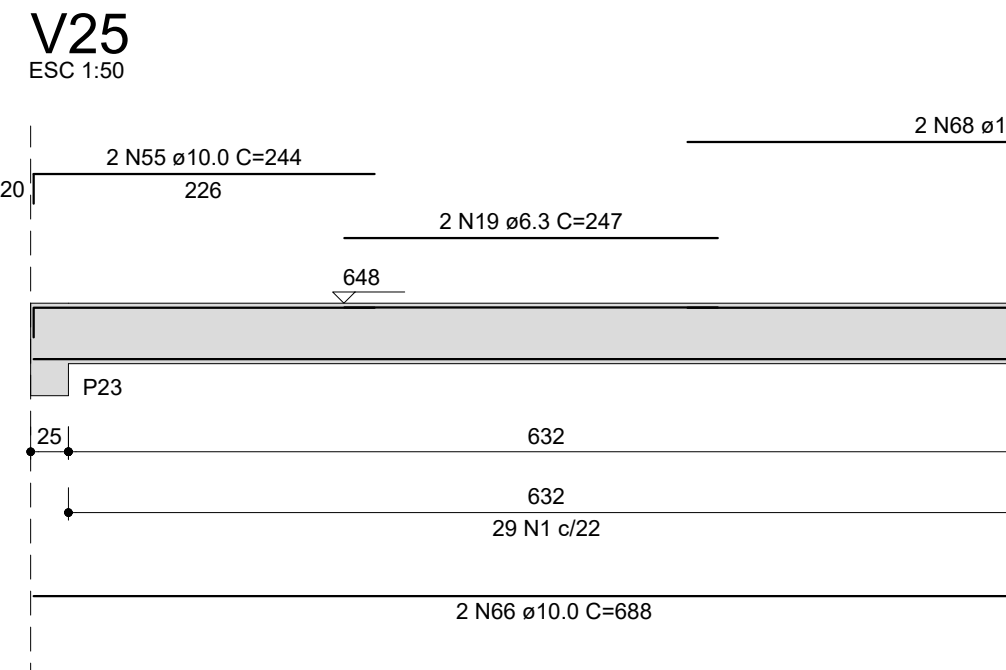
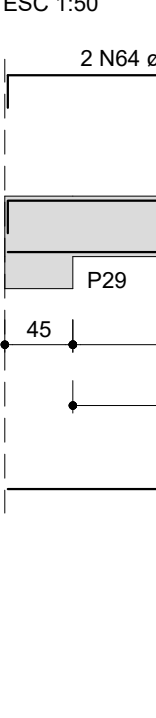
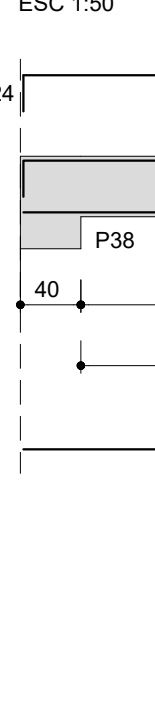
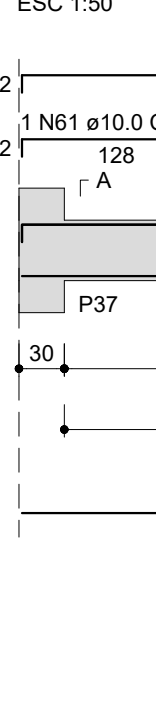
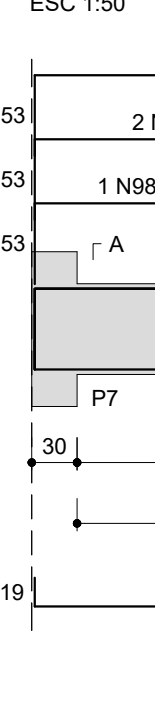
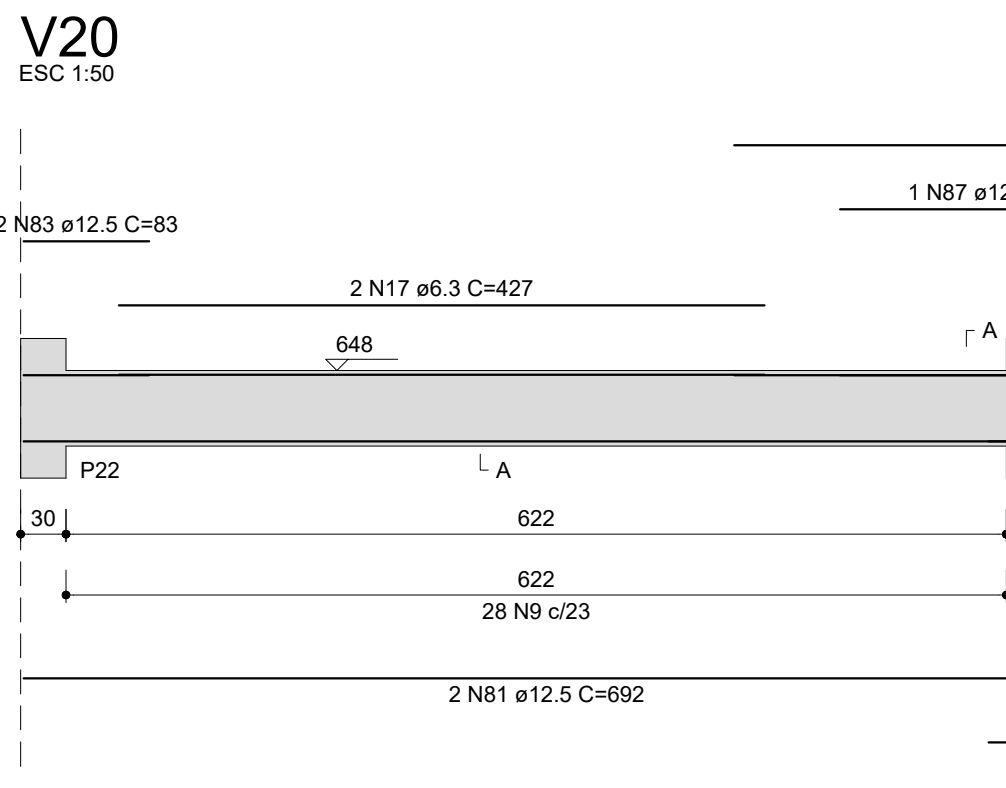
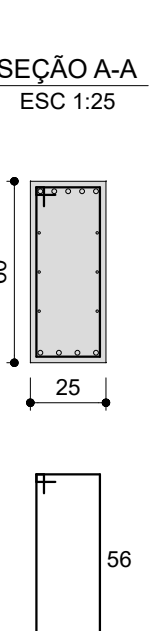
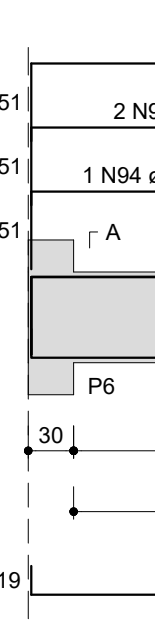
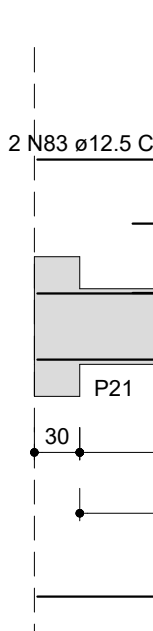
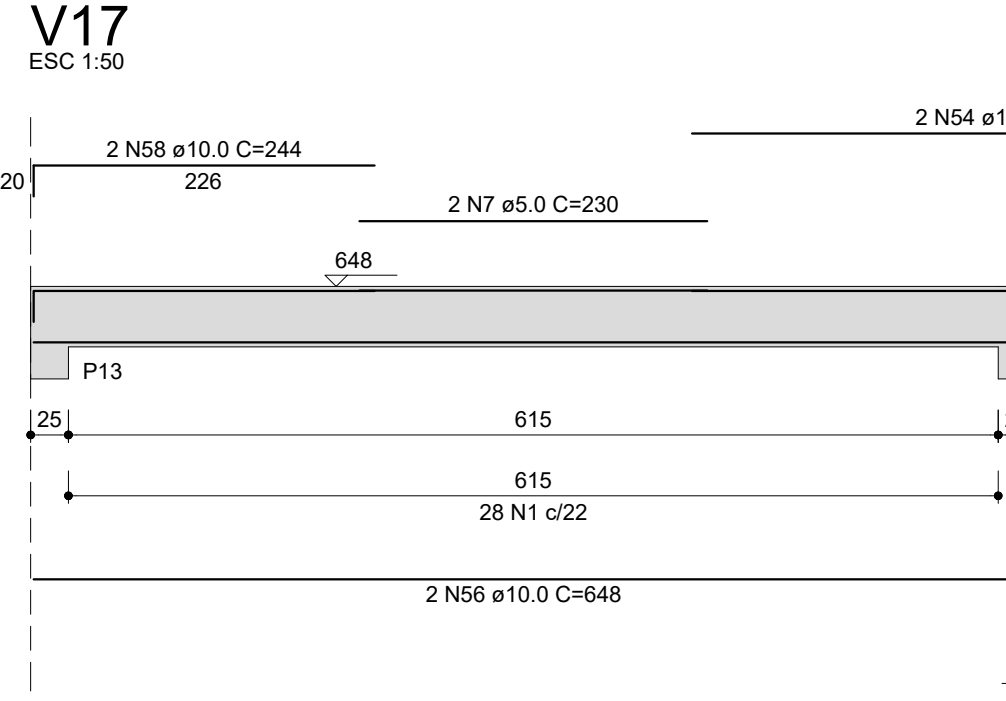
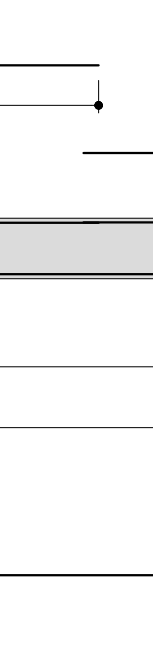
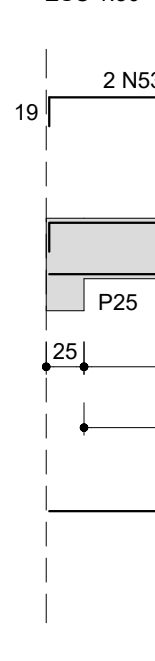
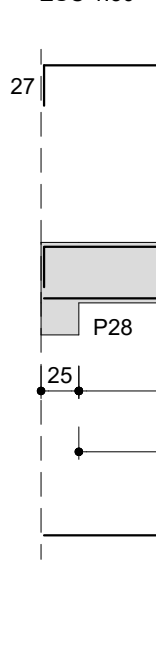
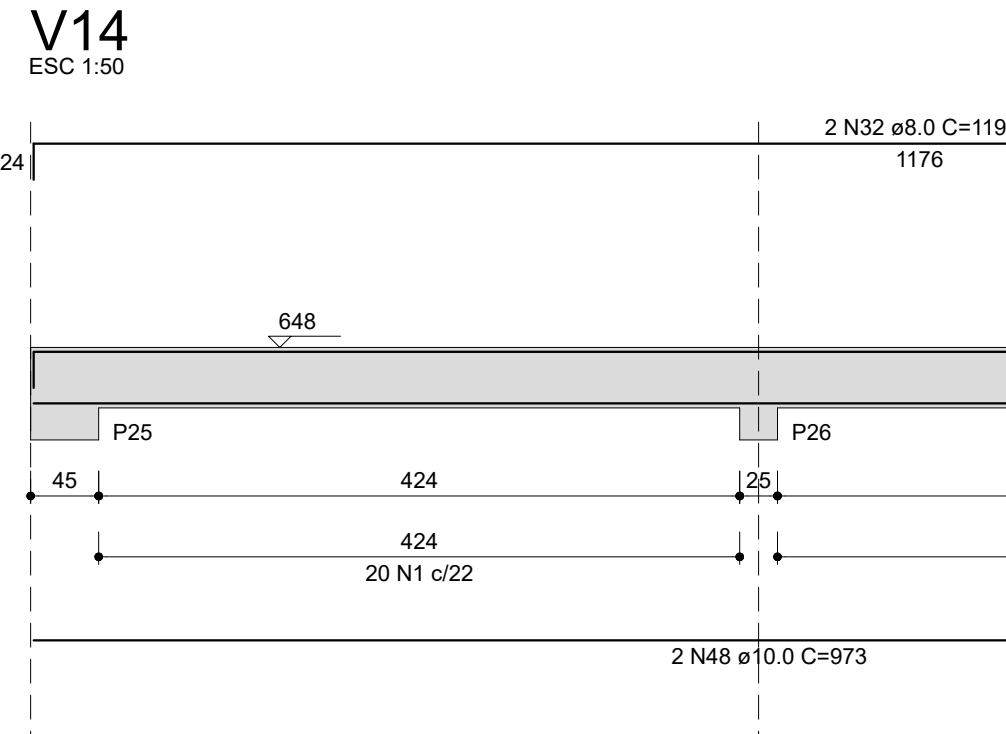
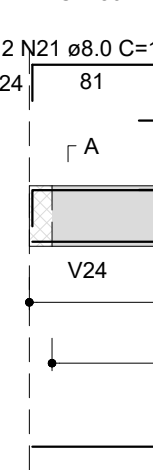
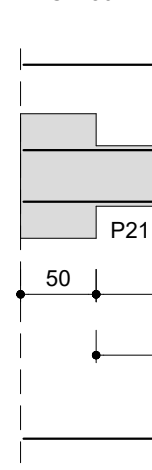
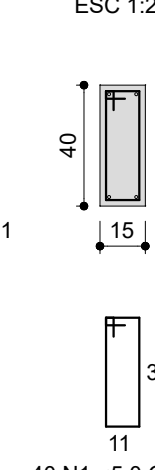
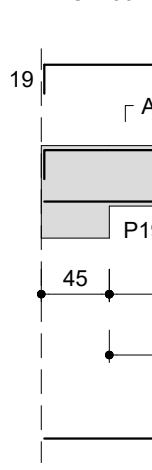
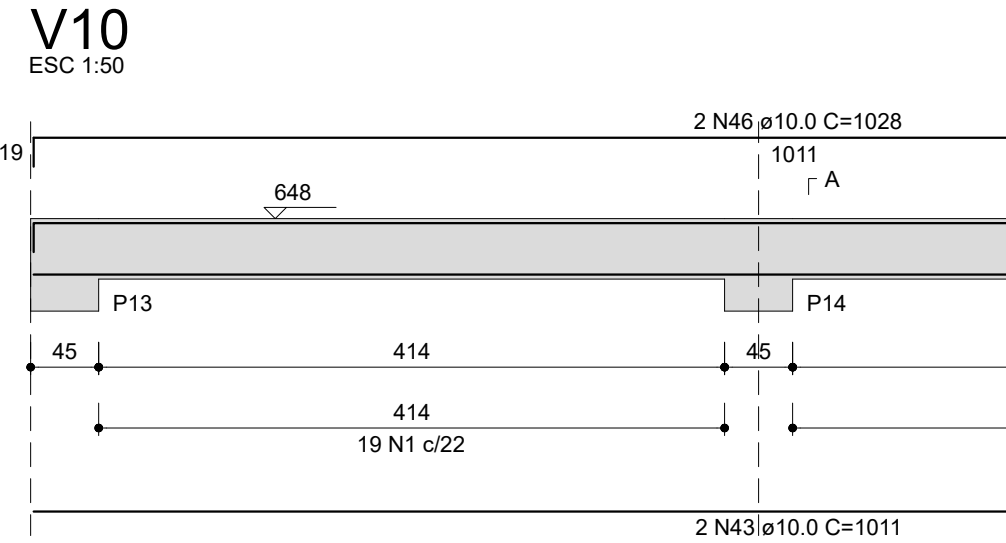
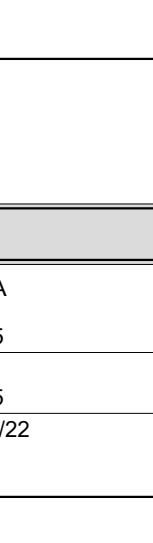
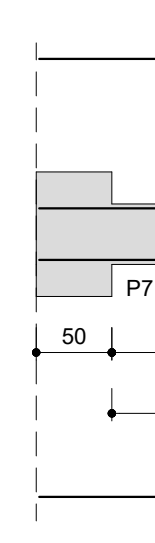
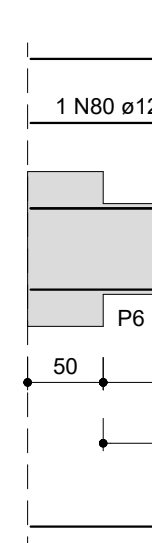
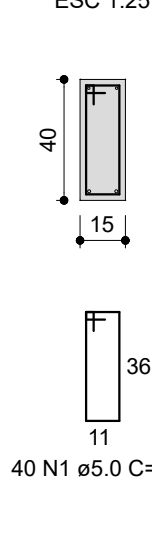
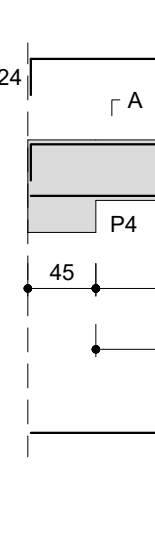
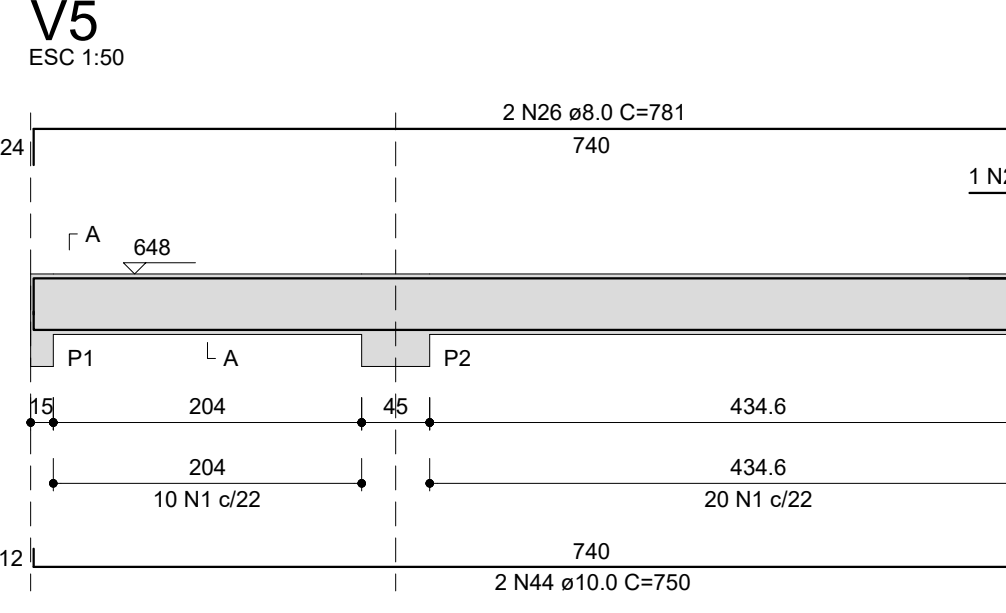
- Overall dimensions: 24 (width) and 1004 (length).
- Reinforcement bars: 2 N20 ø8.0 C=1050 (top), 2 N41 ø10.0 C=1004 (bottom), and 20 N1 ø22 (middle).
- A diagonal bar is labeled 648.
- Section line A-A is indicated.

Side View:

- Overall dimensions: 45 and 438.5.
- Reinforcement bars are labeled P31 and P32.



16	6.3	2	412	824
17	6.3	2	427	854
18	6.3	2	335	670



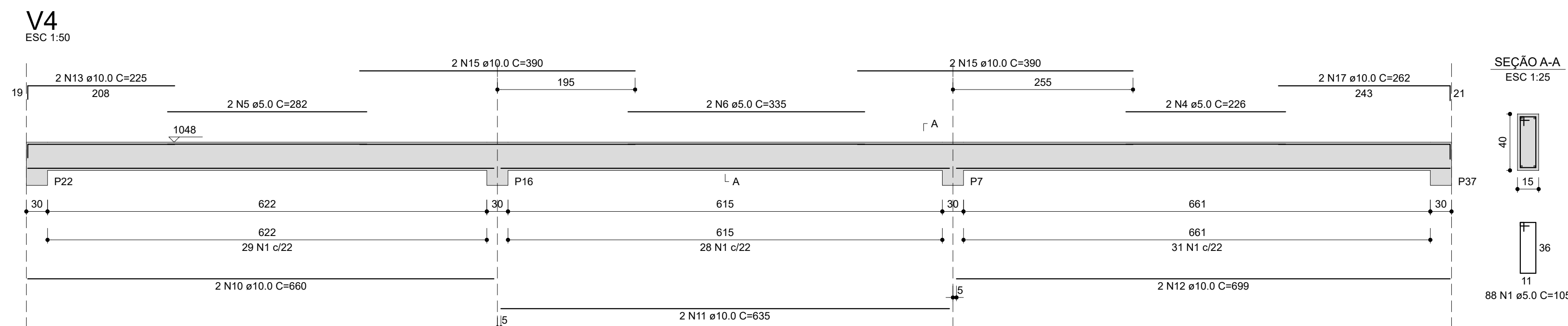
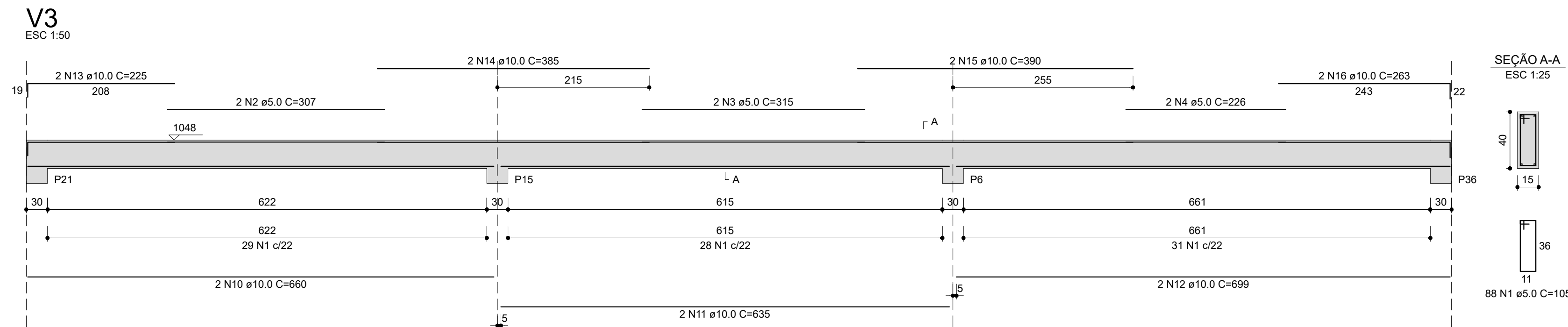
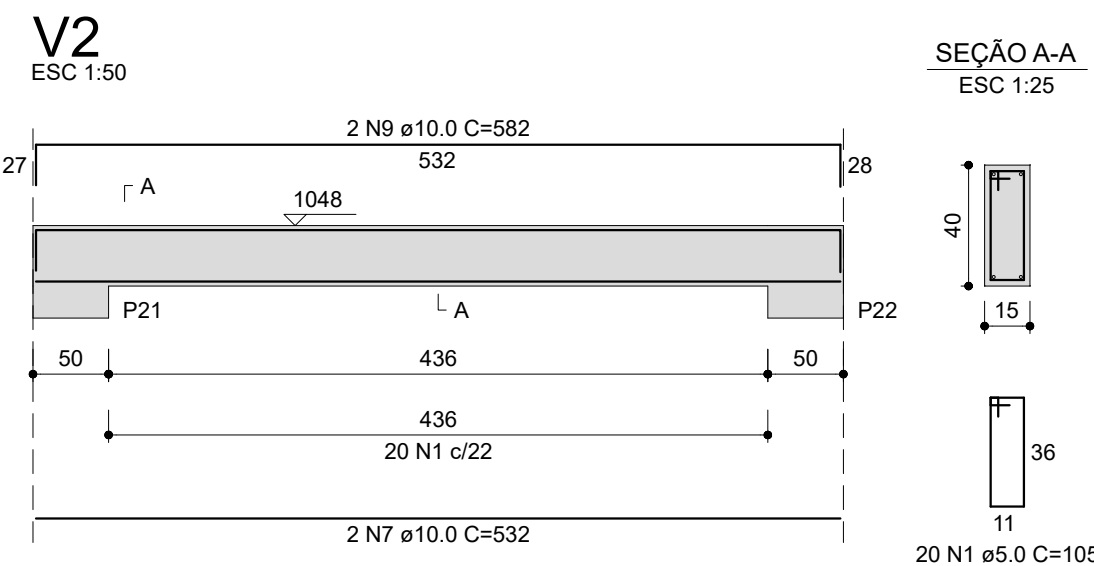
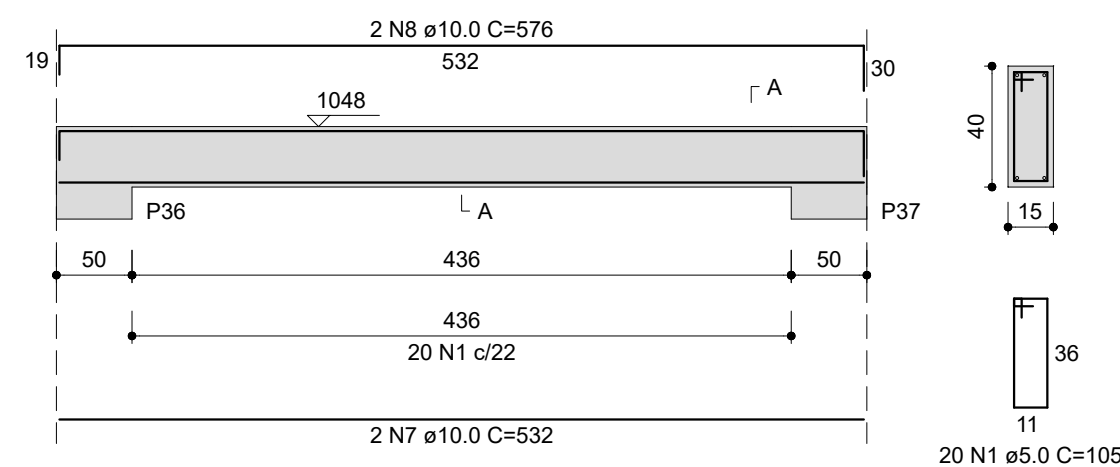
SECRETARIA ESPECIAL DE CERRAJE:		
SECRETARIA DE CERRAJE:	MRQ. URS. DAMIAN REGINA VALENTIN	CAJABAS 1414-4
FISCALIZACION DE CERRAJE:		

 UNIVERSIDADE FEDERAL DA FRONTEIRA SUL	Secretaria Especial de Obras	EMPRESA: LACONSTRUTORA DE OBRAS LTDA CNPJ: 07.043.848/0001-00 END: RUA: ADOLFO LUIZ DE ALMEIDA, 100 JARDIM: JARDIM SANTA LUCIA CIDADE: JARDIM SANTA LUCIA CEP: 75.000-000 FONE: (61) 3333-1111		PROJETO: RECONSTRUÇÃO DE OBRAS DE REFORMA E AMPLIAÇÃO DO RESTAURANTE UNIVERSITÁRIO E CANTINA DA UFRRS	
		EMPRESA ENCARREGADA: LACONSTRUTORA DE OBRAS LTDA CNPJ: 07.043.848/0001-00 END: RUA: ADOLFO LUIZ DE ALMEIDA, 100 JARDIM: JARDIM SANTA LUCIA CIDADE: JARDIM SANTA LUCIA CEP: 75.000-000 FONE: (61) 3333-1111		PROJETO ENCARREGADO: LACONSTRUTORA DE OBRAS LTDA CNPJ: 07.043.848/0001-00 END: RUA: ADOLFO LUIZ DE ALMEIDA, 100 JARDIM: JARDIM SANTA LUCIA CIDADE: JARDIM SANTA LUCIA CEP: 75.000-000 FONE: (61) 3333-1111	

RUA: ADOLFO LUIZ DE ALMEIDA, 100
 JARDIM: JARDIM SANTA LUCIA
 CIDADE: JARDIM SANTA LUCIA
 CEP: 75.000-000
 FONE: (61) 3333-1111

LOCAL: PASSO FUNDO - RS OBRA: RESTAURANTE UNIVERSITÁRIO E CANTINA PROJETO: ESTRUTURAL ÁREA TOTAL DA EDIFICAÇÃO: 1.064,58 m² DETALHAMENTO - VIGAS RESERVATÓRIO ENDEREÇO: RUA: ADOLFO LUIZ DE ALMEIDA, 100 - CENTRO	FASE: EXECUTIVO REVISÃO Nº: R00 DATA: 03/10/2023 DESENHADO POR: RODRIGO REVISADO POR: RODRIGO NOME DO ARQUIVO:	ESCALA: 1:25 E 1:50 TAMANHO DA FOLHA: A0 Nº FRANCA: <div style="display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 2em; font-weight: bold;">EST</div> <div style="font-size: 4em; font-weight: bold; margin: 0 10px;">/</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 2em; font-weight: bold;">21</div> </div>
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V1 ESC 1:50 SEÇÃO A-A
ESC 1:25



RELAÇÃO DO AÇO					
V1		V2		V3	
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	216	105	22680
	2	5,0	2	307	614
	3	5,0	2	315	630
	4	5,0	4	226	904
	5	5,0	2	282	564
CA50	6	10,0	2	335	670
	7	10,0	4	532	2128
	8	10,0	2	576	1152
	9	10,0	2	582	1164
	10	10,0	4	660	2640
	11	10,0	4	635	2540
	12	10,0	4	699	2796
	13	10,0	4	225	900
	14	10,0	2	385	770
	15	10,0	6	390	2340
	16	10,0	2	263	526
	17	10,0	2	262	524

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	174.8	118.5
CA60	5.0	260.6	44.2
PESO TOTAL (kg)			
CA50	118.5		
CA60	44.2		

Volume de concreto (C-30) = 3.06 m³
 Área de forma = 48.53 m²



UNIVERSIDADE
FEDERAL DA
FRONTEIRA SUL

**Secretaria
Especial
de Obras**

Edifício Bloco C, 4º Andar, Sala 401
Rodovia SC 484, km 02, Bairro Fronteira Sul, Chapecó-SC, CEP 89815-899
Contatos: (0xx48) 2049-3115 / 2049-3750 / secnas@uffs.edu.br

ARQ. URB. DAIANE REGINA VALENTIN
CAUIBR A51414-4
RESPONSÁVEL SEO-UFFS

ENG. CIVIL RODRIGO EMME
CREA-SC 109826-8
RESPONSÁVEL TÉCNICO

LOCAL:
PASSO FUNDO - RS
OBRA:
RESTAURANTE UNIVERSITÁRIO E CANTINA
PROJETO:
ESTRUTURAL
CONTEÚDO:
DETALHAMENTO - VIGAS SUPERIOR
ENDEREÇO:
RUA CAPITÃO ARAÚJO, 20, CENTRO

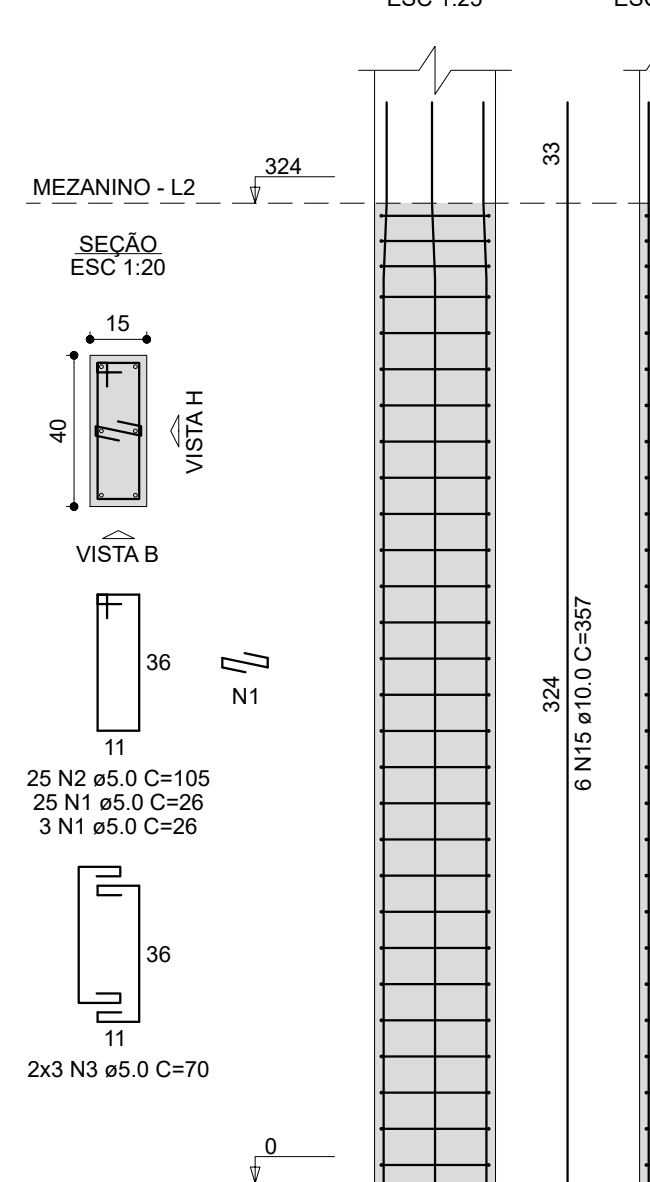
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EXECUTIVO
REVISÃO Nº:
R00
DATA:
03/10/2023
DESENHADO POR:
RODRIGO
NOME DO ARQUIVO
RU+CANTINA_UFFS_PF_PE_EST.DWG

ESCALA:	1:25 E 1:50
TAMANHO FOLHA	841x420
Nº PRANCHA:	

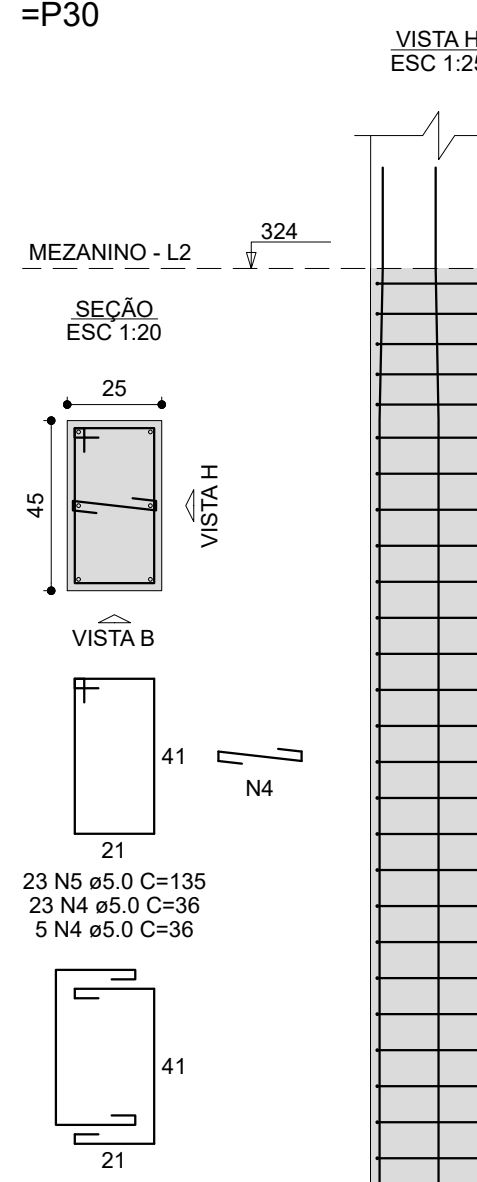
EST 12/21

DETALHAMENTO - PILARES MEZANINO

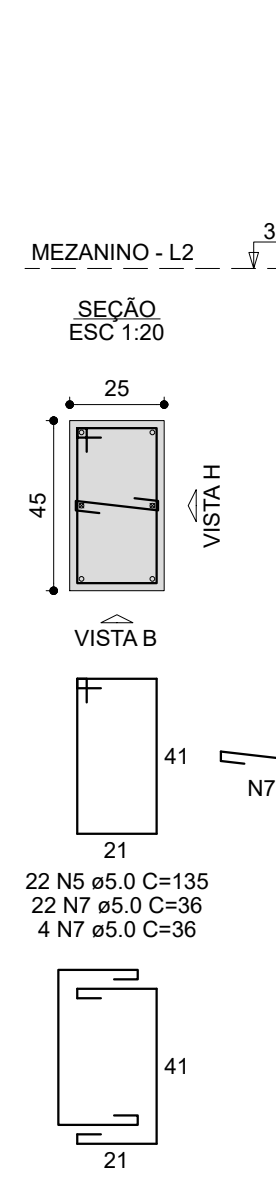
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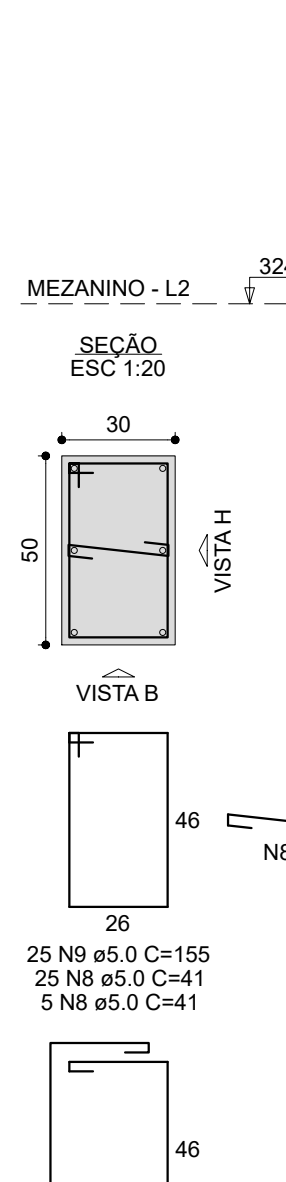
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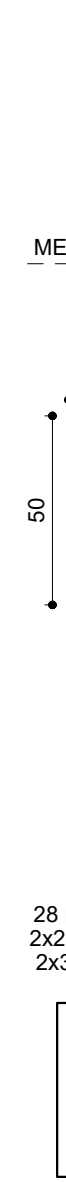
P4



P6=P15=P16=P21



P7



P9



RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	5.0	28	26	728
	2	5.0	33	105	3465
	3	5.0	16	70	1120
	4	5.0	436	36	15696
	5	5.0	265	135	35775
	6	5.0	186	95	17670
	7	5.0	130	36	4680
	8	5.0	306	41	12546
	9	5.0	194	155	30070
	10	5.0	56	110	6160
	11	5.0	20	26	520
	12	5.0	8	23	184
	13	5.0	5	93	465
	14	5.0	6	61	366
CA50	15	10.0	90	357	32130
	16	10.0	6	86	516
	17	10.0	12	322	3864
	18	12.5	10	322	3220
	19	12.5	26	366	9516
	20	12.5	14	86	1232
	21	12.5	4	340	1360
	22	12.5	10	330	3300
	23	16.0	38	377	14326
	24	16.0	16	350	5600

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	365.1	247.6
	12.5	186.3	197.4
	16.0	199.3	345.9
	5.0	1699.5	288.1
PESO TOTAL (kg)			
CA50			791
CA50			288.1

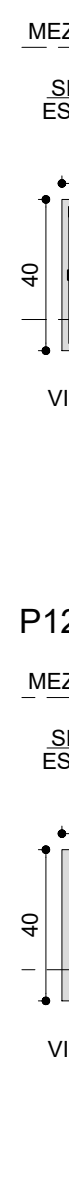
Volume de concreto (C-30) = 12.97 m³

Área de forma = 156.77 m²

P8



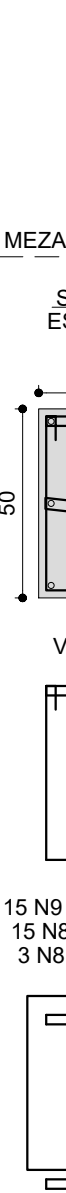
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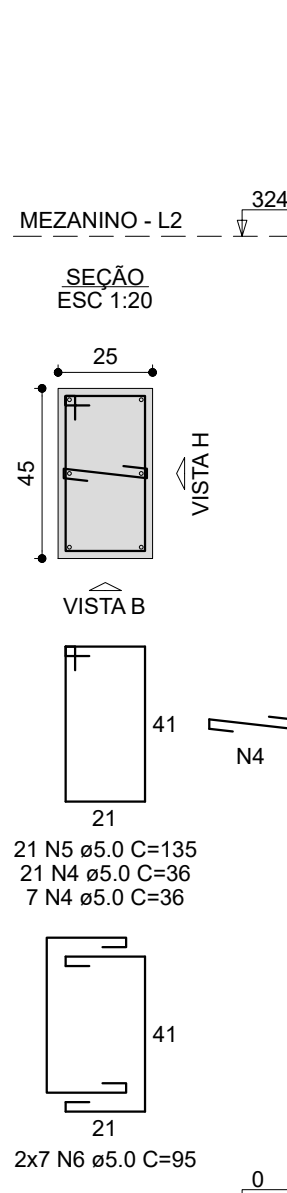
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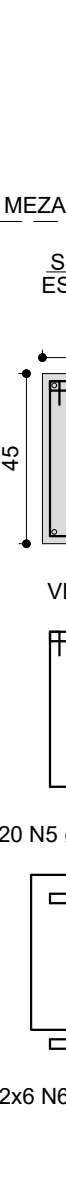
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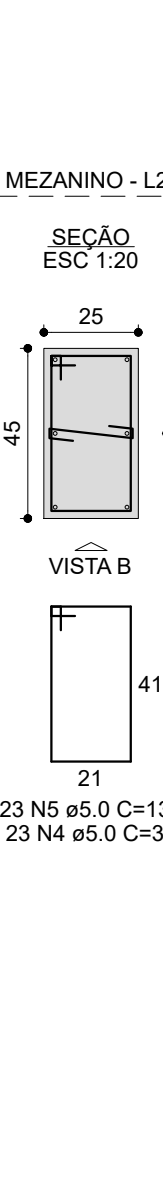
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P27



P31=P34



P32



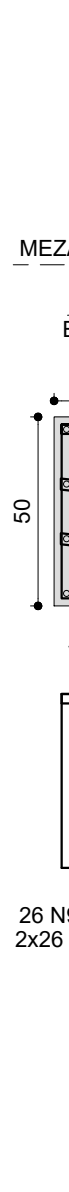
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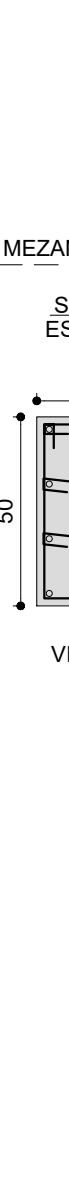
P35



P36



P37



SECRETARIA ESPECIAL DE OBRAS

PROFESSOR RESPONSÁVEL: ENG. CIVIL DAVINE REGINA VALENTE

PROFESSOR RESPONSÁVEL: ENG. CIVIL DAVINE REGINA VALENTE

PROFESSOR RESPONSÁVEL: ENG. CIVIL DAVINE REGINA VALENTE

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SECRETARIA ESPECIAL DE OBRAS

PROFESSOR RESPONSÁVEL: ENG. CIVIL DAVINE REGINA VALENTE

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PROFESSOR RESPONSÁVEL: ENG. CIVIL DAVINE REGINA VALENTE

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PROFESSOR RESPONSÁVEL: ENG. CIVIL DAVINE REGINA VALENTE

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PROFESSOR RESPONSÁVEL: ENG. CIVIL DAVINE REGINA VALENTE

PROFESSOR RESPONSÁVEL: ENG. CIVIL DAVINE REGINA VALENTE

LOCAL: PASSO FUNDO - RS

OBRA: RESTAURANTE UNIVERSITÁRIO E CANTINA

PROJETO: ESTRUTURAL

ÁREA TOTAL DA EDIFICAÇÃO: 1.064,58 m²

CONTEÚDO: DETALHAMENTO - PILARES MEZANINO

ENDEREÇO: RUA CAPITÃO ARAÚJO, 20, CENTRO

FASE: EXECUTIVO

REVISÃO Nº: R00

DATA: 03/10/2023

DESENHADO POR: RODRIGO

REVISADO POR: RODRIGO

NOME DO ARQUIVO:

ESCALA: 1:20 E 1:25

TAMANHO FOLHA: 1260x594

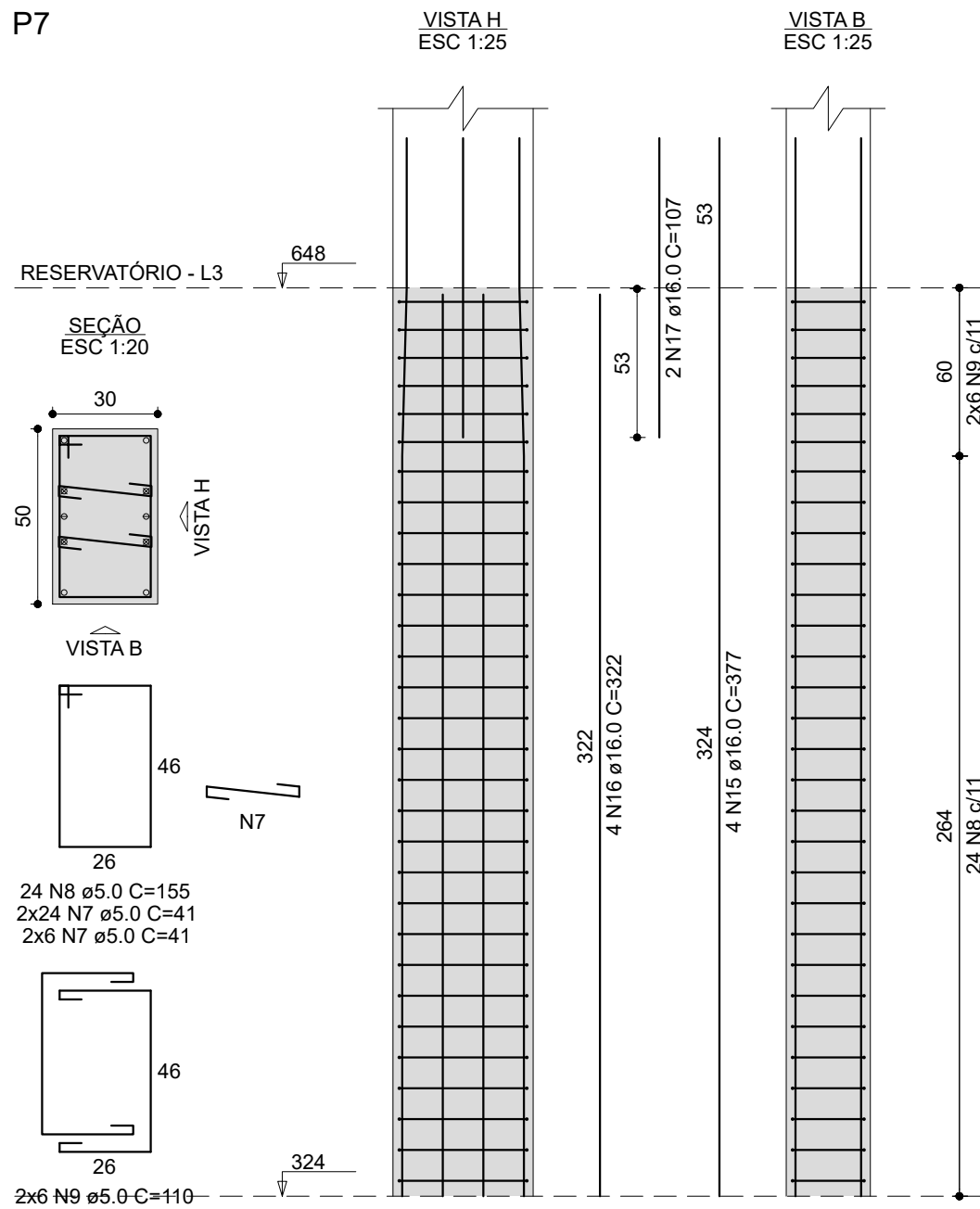
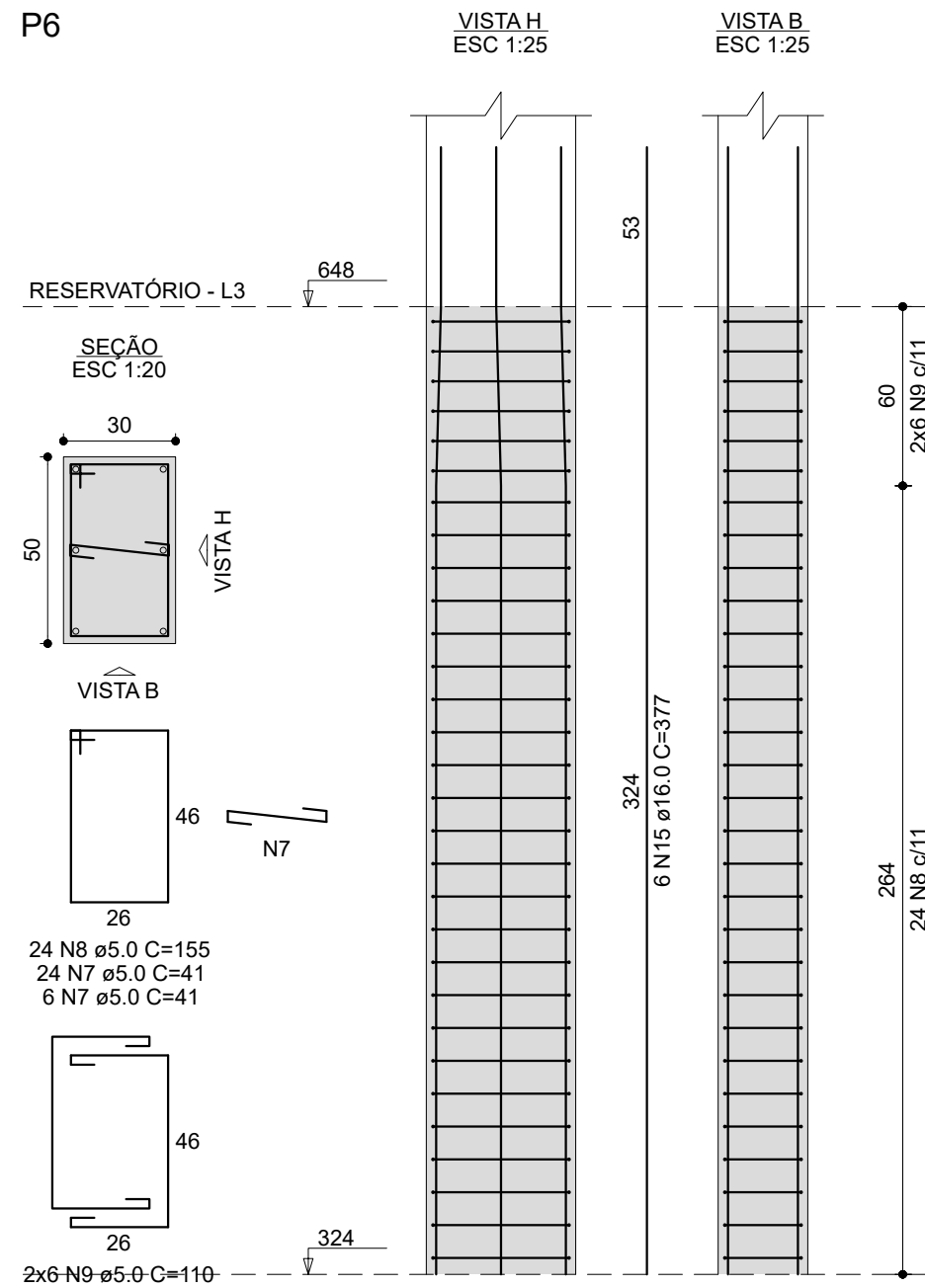
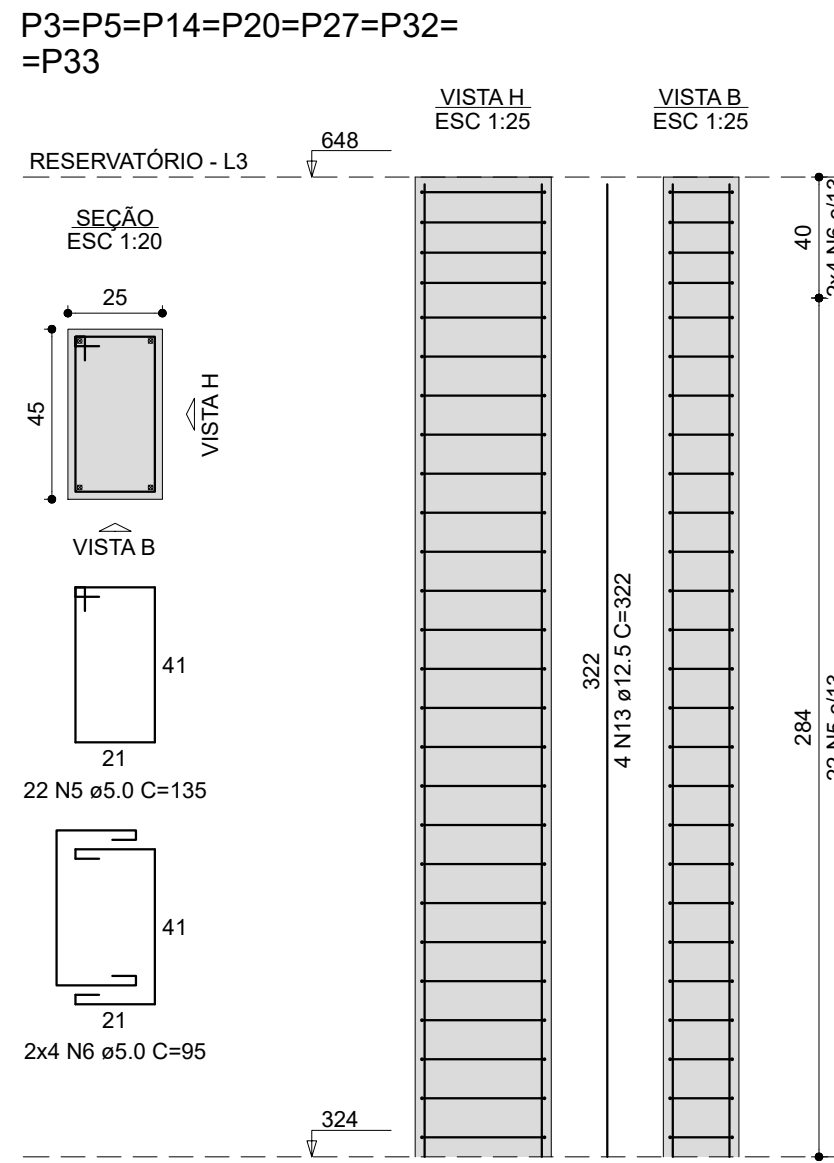
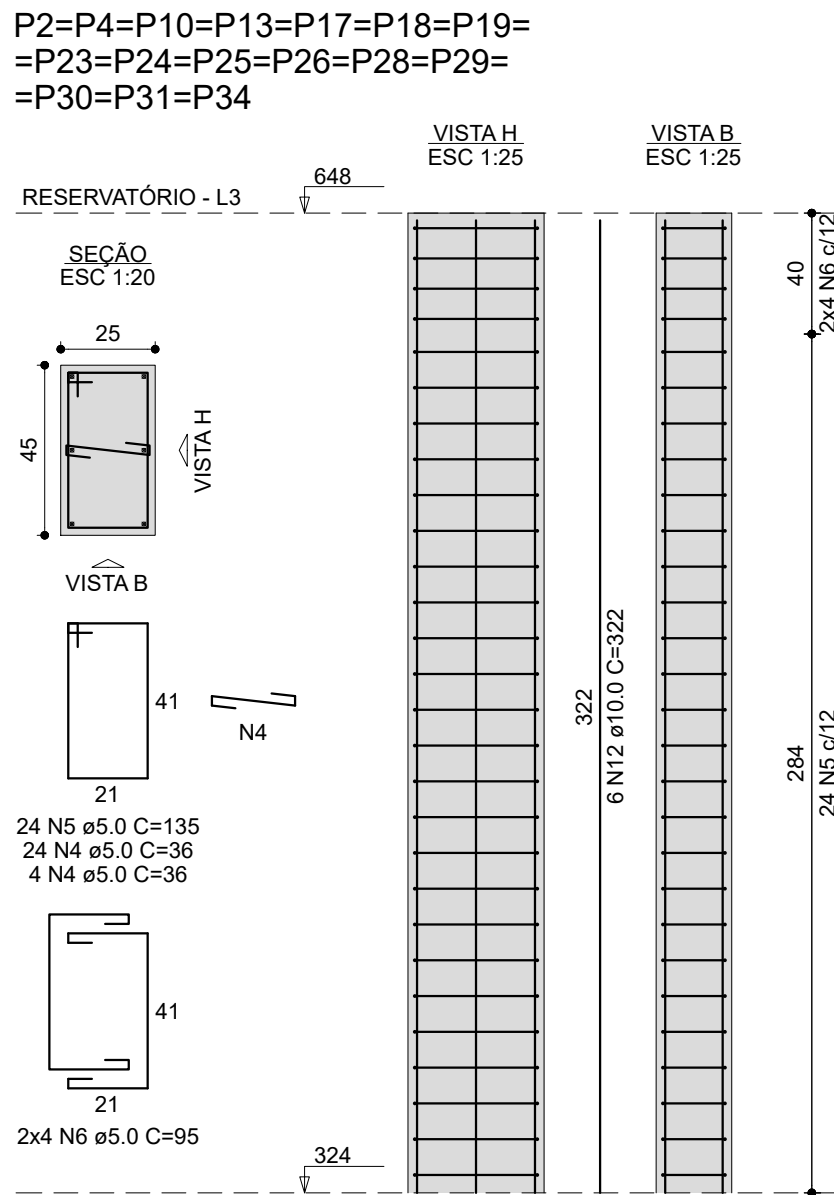
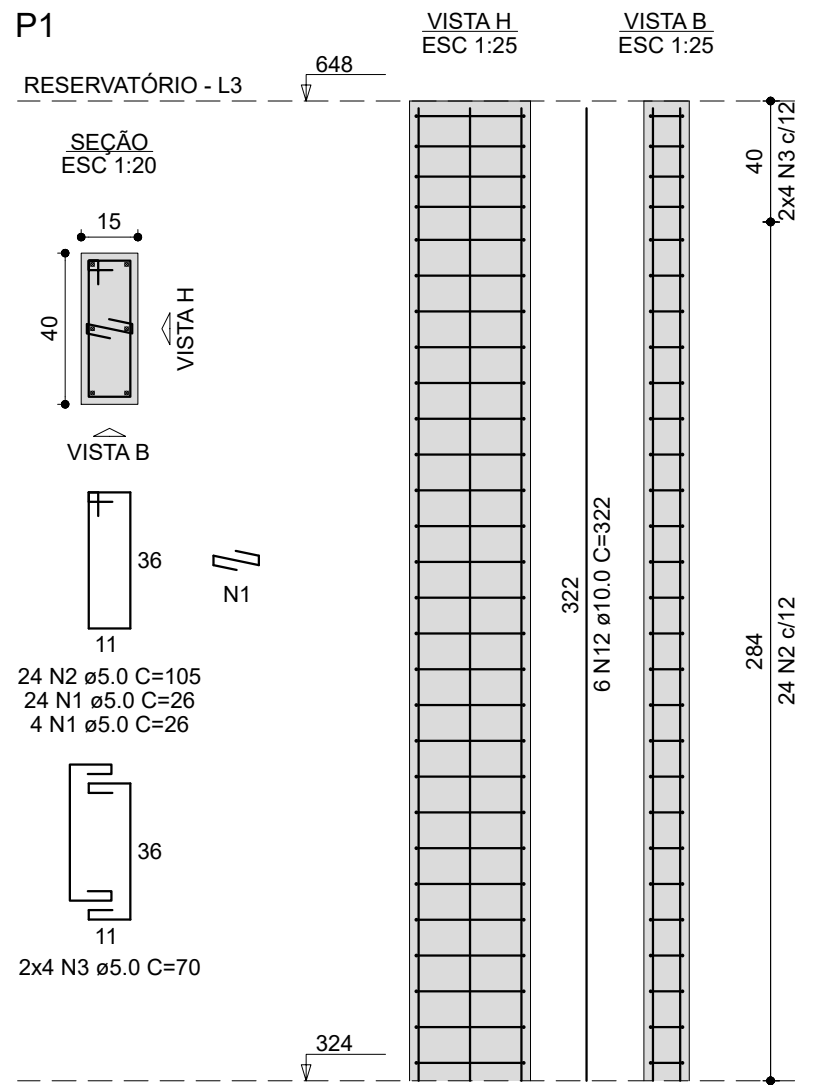
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13

15

21

DETALHAMENTO - PILARES RESERVATÓRIO



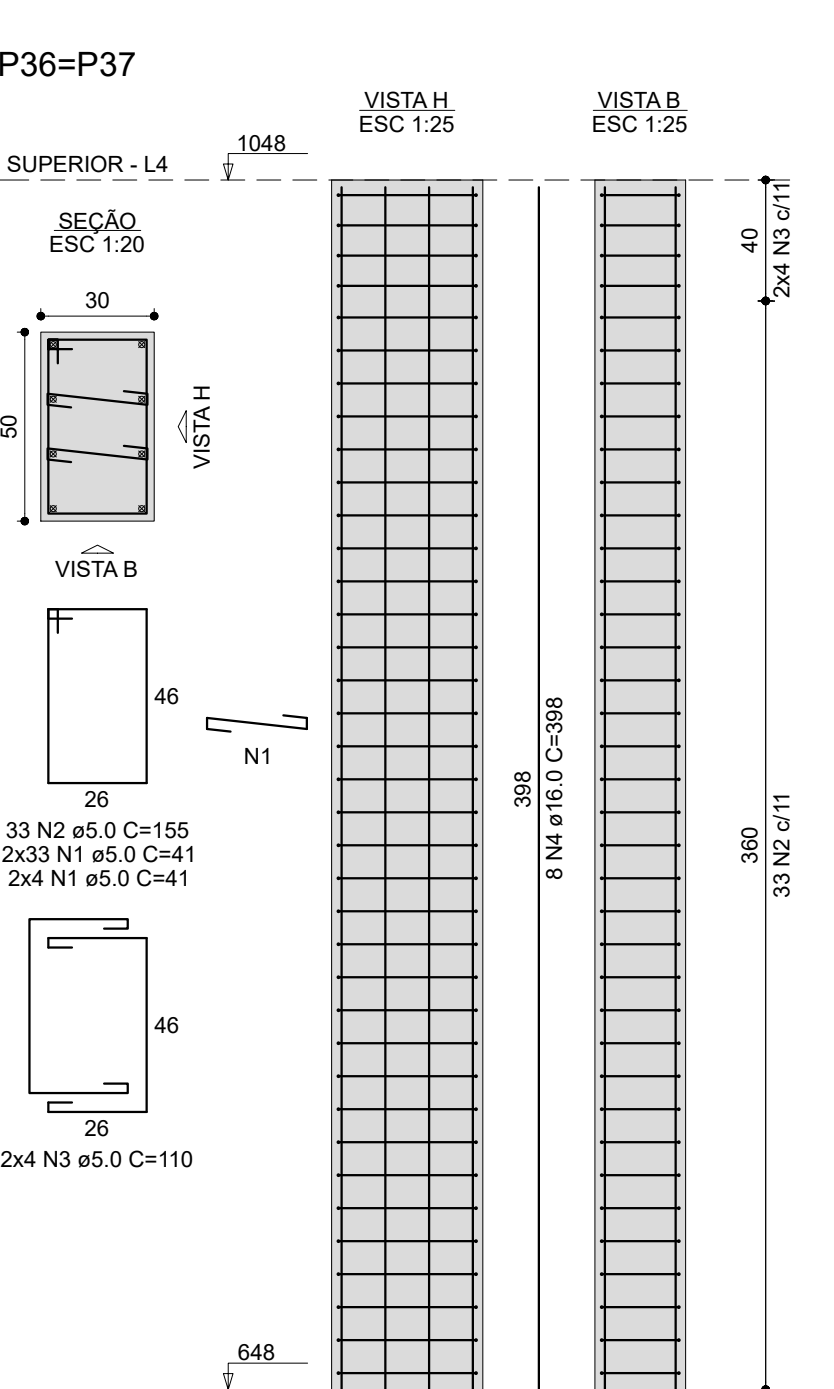
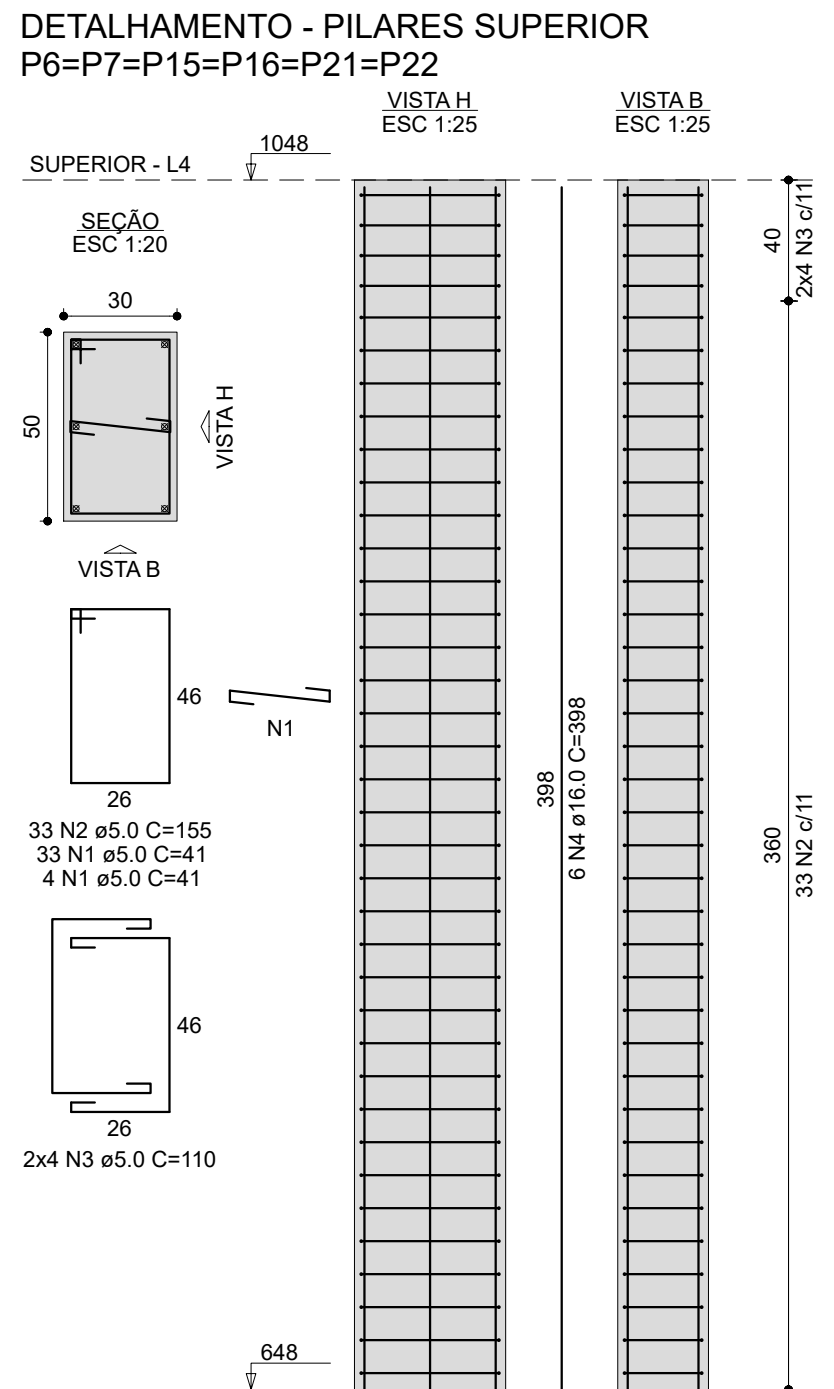
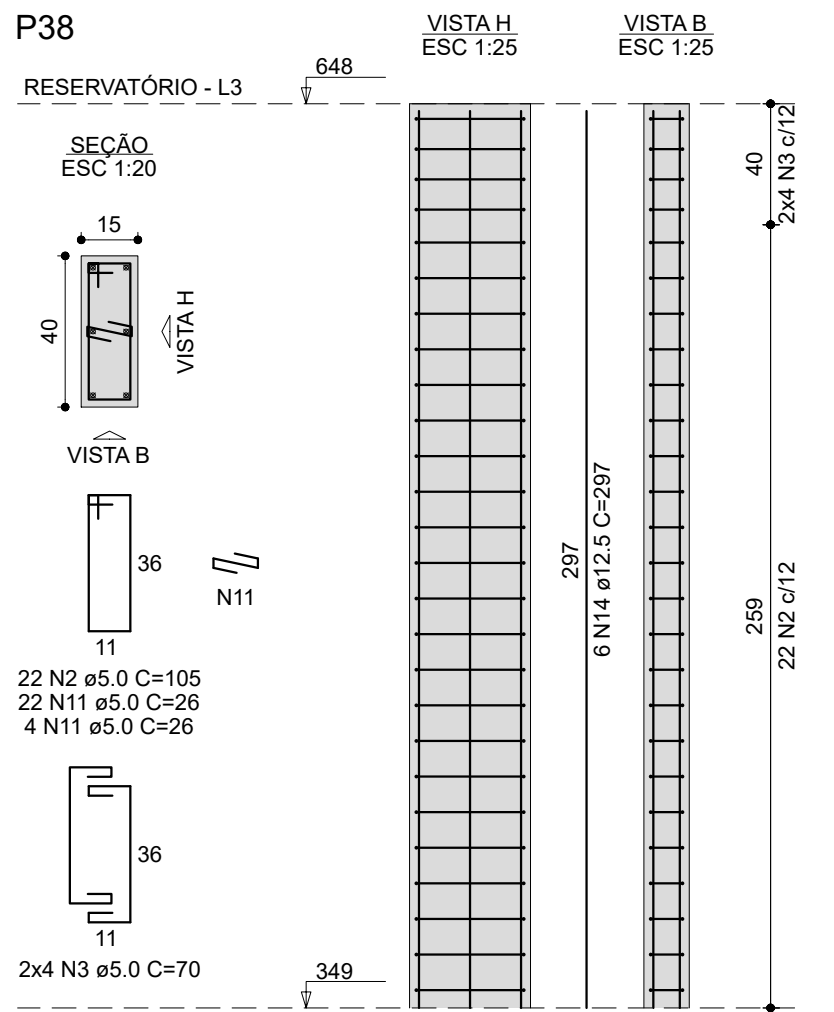
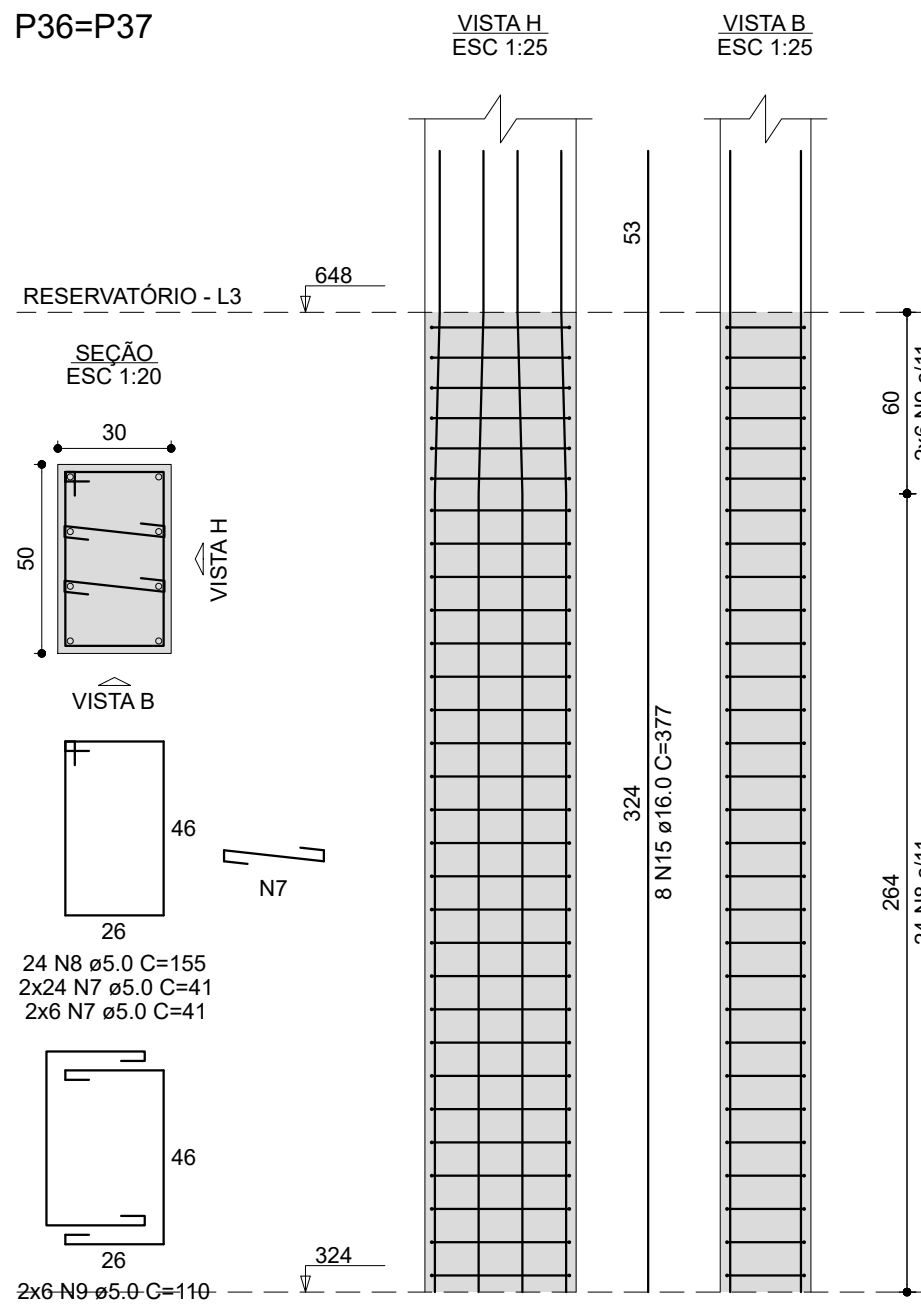
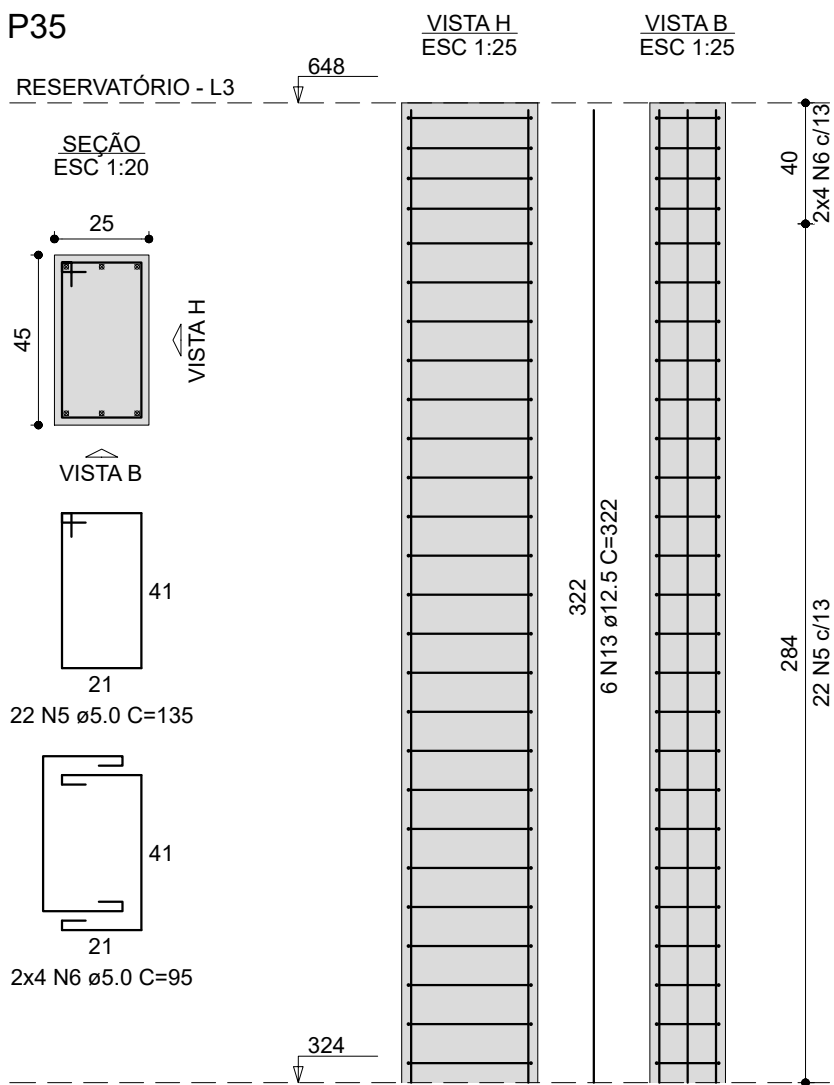
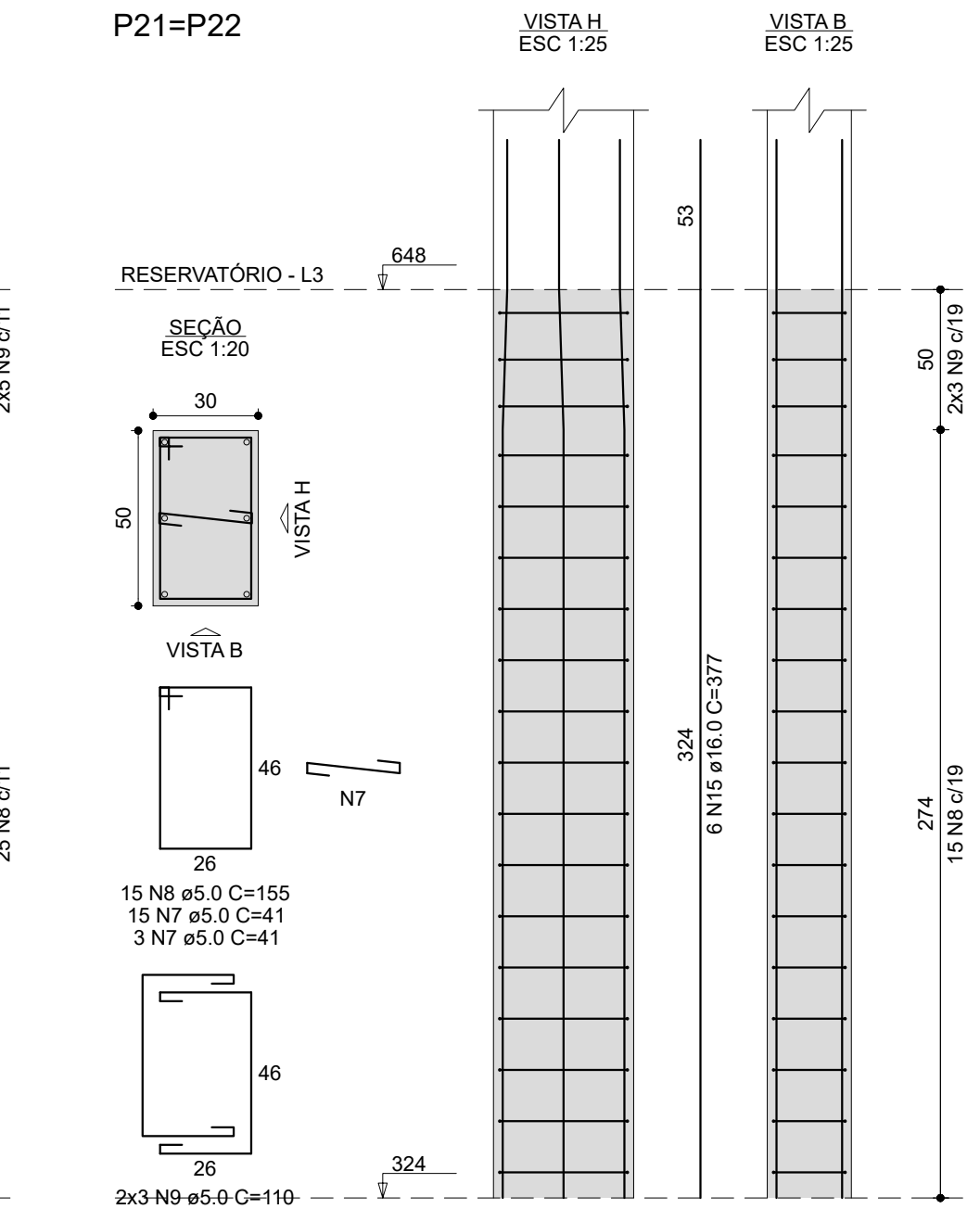
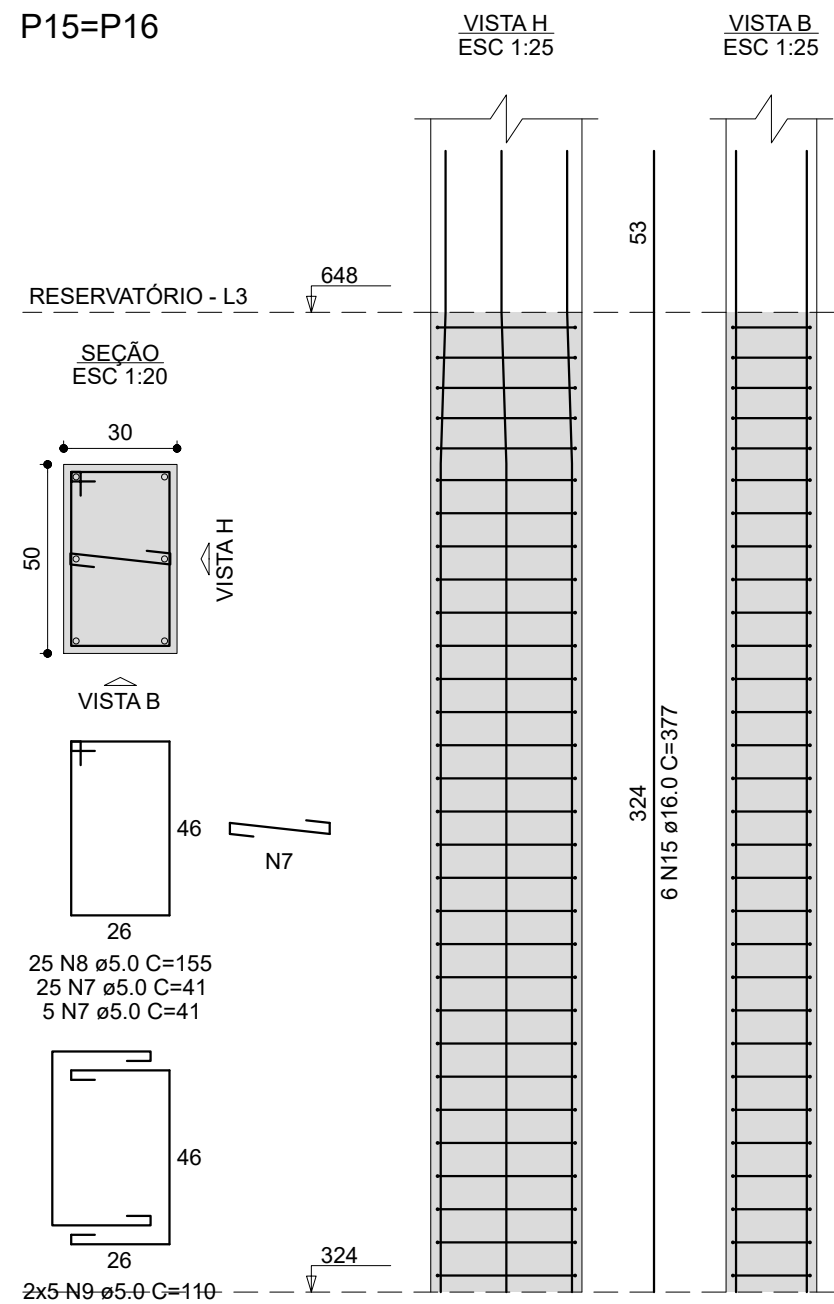
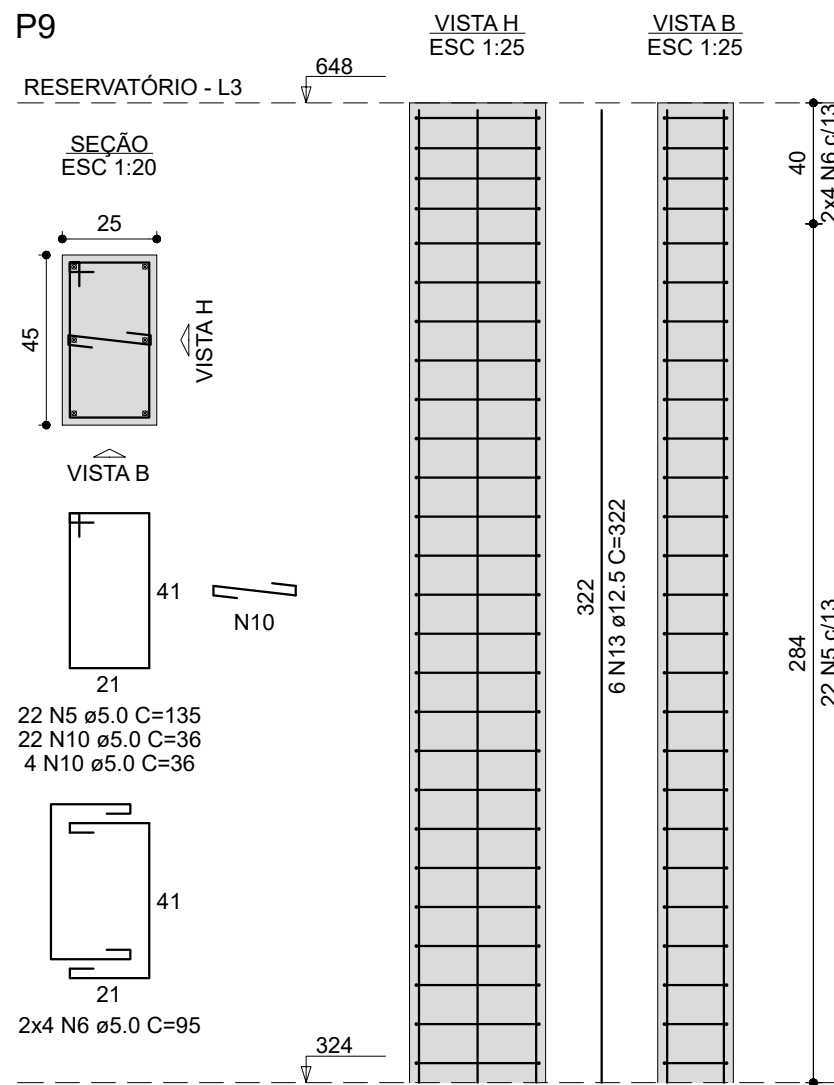
RELAÇÃO DO AÇO

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	28	26	728
	2	5.0	46	105	4830
	3	5.0	16	70	1120
	4	5.0	448	36	16128
	5	5.0	582	135	78570
	6	5.0	200	95	19000
	7	5.0	306	41	12546
	8	5.0	176	155	27280
	9	5.0	80	110	8800
	10	5.0	26	36	936
CA50	11	5.0	26	26	676
	12	10.0	102	322	32844
	13	12.5	40	322	12880
	14	12.5	6	297	1782
	15	16.0	50	377	18850
	16	16.0	4	322	1288
	17	16.0	2	107	214

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	328.4	222.7
	12.5	146.6	155.4
CA60	16.0	203.5	353.3
	5.0	1706.1	289.3
PESO TOTAL (kg)			
CA50	731.5		
CA60	289.3		

Volume de concreto (C-30) = 13.37 m³
Área de forma = 161.72 m²



RELAÇÃO DO AÇO

6xP6

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	370	41	15170
	2	5.0	264	155	40920
	3	5.0	64	110	7040
CA50	4	16.0	52	398	20696

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	16.0	207	359.3
CA60	5.0	631.3	107

PESO TOTAL (kg)

CA50 359.3
CA60 107

Volume de concreto (C-30) = 4.80 m³
Área de forma = 51.20 m²

CARIMBOS:



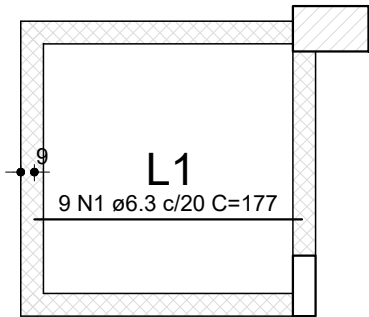
Secretaria Especial de Obras

Projeto: RUA CAPITÃO ARAÚJO, 20, CENTRO

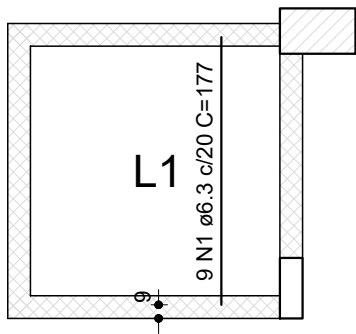
LOCAL: PASSO FUNDO - RS
OBRA: RESTAURANTE UNIVERSITÁRIO E CANTINA
PROJETO: ESTRUTURAL
ÁREA TOTAL DA EDIFICAÇÃO: 1.064,58 m²
CONTEÚDO: DETALHAMENTO - PILARES RESERVATÓRIO
ENDEREÇO: RUA CAPITÃO ARAÚJO, 20, CENTRO

FASE: EXECUTIVO
REVISÃO Nº: R00
DATA: 03/10/2023
DESENHADO POR: RODRIGO
REVISADO POR: RODRIGO
NOME DO ARQUIVO: RUA-CANTINA_LIFE_P_F_0323.DWG

ESCALA: 1:20 E 1:25
TAMANHO FOLHA: 950x600
Nº PRANCHA: 14
15
21



Armação positiva
laje Baldrame (Eixo X)
escala 1:50



Armação positiva
laje Baldrame (Eixo Y)
escala 1:50

RELAÇÃO DO AÇO					
Positivos X			Positivos Y		
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	18	177	3186


RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	31.9	8.6
PESO TOTAL (kg)			
CA50	8.6		

Volume de concreto (C-30) = 0.27 m³
Área de forma = 0.0 m²

CARIMBOS:

ARO. URB. DAIANE REGINA VALENTINI
CAUIBR A51414-4
RESPONSÁVEL SEQ-UFFS

ENG. CIVIL RODRIGO EMMER
CREA/SC 19826-8
RESPONSÁVEL TÉCNICO



Universidade
Federal da
Fronteira Sul

Secretaria
Especial
de Obras

Rodovia SC 484, km 02, Bairro Fronteira Sul, Chapecó-SC, CEP 89815-899
Contatos: (0xx49) 2049-3115 / 2049-3750 / seobras@uffs.edu.br
Site Oficial: www.uffs.edu.br

Edifício Bloco C, 4º Andar, Sala 401

SECRETARIA ESPECIAL DE OBRAS:
SECRETARIA DE OBRAS: ARO. URB. DAIANE REGINA VALENTINI
CAUIBR A51414-4

FISCALIZAÇÃO DE OBRAS:
CHAPECÓ/SC: ENG. CIV. FÁBIO ALEX ZENARO
CREA/SC 103121-3
ENG. ELETRIC. MATHEUS TODESCATT
CREA/SC 111551-1
ENG. CIV. PAULO ROBERTO HENDGES
CREA/RS 107012
ENG. CIV. CANÍSIO ROQUE SCHMIDT
CREA/RS 43789
ENG. CIV. JULIANA ANA CHIARELLO
CREA/RS 127886
LARANJEIRAS DO SUL/PR: ENG. CIV. FÁBIO ONETTA
CREA/PR 84187-D
REALIZA/PR: ENG. CIV. FABRICIO SALESTRIN
CREA/PR 127486

EQUIPE TÉCNICA SEQ:
ARO. URB. ADRIANA FREITAG MIGOTT
CAUIBR A51829-9
ENG. CIV. CLÁUDIO LUIZ POMPERMAIER
CREA/SC 177729-8
ENG. CIV. FÁBIO CORRÊA GASPARETTO
CREA/SC 087202-5
ENG. CIV. RODRIGO EMMER
CREA/SC 109626-8
ENG. ELETRIC. SILVIO ANTONIO TESTON
CREA/SC 094939-8
ENG. SANIT. ADEMIR TANCINI
CREA/SC 113390-2
TEC. MEC. DANIEL ESPINO
CREA/SC 114131-1
TEC. ELETROTÉC. DIEGO GONÇALVES

CAUIBR A51829-9
CREA/SC 177729-8
CREA/SC 087202-5
CREA/SC 109626-8
CREA/SC 094939-8
CREA/SC 113390-2
CREA/SC 114131-1

LOCAL:
PASSO FUNDO - RS

OBRA:
RESTAURANTE UNIVERSITÁRIO E CANTINA

PROJETO:
ESTRUTURAL

CONTEÚDO:
DETALHAMENTO - LAJE BALDRAME
FOÇO PLATAFORMA

ENDEREÇO:
RUA CAPITÃO ARAÚJO, 20, CENTRO

DESENHADO POR:
RODRIGO

NOME DO ARQUIVO:
RU+CANTINA_UFFS_PF_PE_EST.DWG

FASE:
EXECUTIVO

REVISÃO Nº: R00

DATA: 03/10/2023

ESCALA: 1:50

TAMANHO FOLHA: A3

Nº PRANCHA:

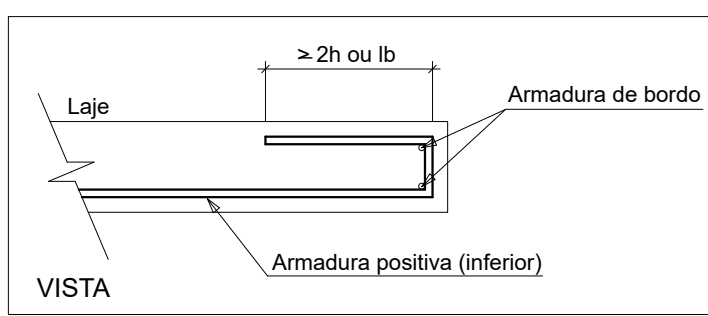
EST

15

21



RELAÇÃO DO AÇO							
Negativos X	Negativos Y			Positivos X			
AÇO	N	DIAM	QUANT	C/UNIT	C.TOTAL		
CA680	1	5,0	1,24	132	440	58080	
	2	5,0	11	40	148	5920	
	3	5,0	24	30	148	3552	
	4	5,0	17	44	220	3740	
	5	5,0	11	45	180	1980	
	6	5,0	10	65	240	1560	
	7	5,0	10	102	1734	17340	
	8	5,0	10	102	2460	24600	
	9	5,0	15	662	930	13950	
	10	5,0	14	106	2044	20440	
	11	5,0	14	31	VAR	VAR	
	12	5,0	7	50	350	3500	
	13	5,0	10	630	930	58800	
	14	5,0	12	470	560	26320	
	15	5,0	10	167	4076	68064	
	16	5,0	30	39	59	2301	
	17	5,0	28	39	1070	41530	
	CA50	18	5,0	28	39	134	1206
19		5,0	11	177	194	1940	
20		5,0	5	240	1230	29520	
21		5,0	40	492	1980	98160	
22		5,0	40	492	1255	61800	
23		5,0	25	111	1980	22000	
24		5,0	25	111	2775	30825	
25		6,3	8,3	10	4840	4840	
26		6,3	8,3	337	101	34057	
27		6,3	8,3	145	55	7975	
28		6,3	8,0	246	198	4880	
29		6,3	8,0	275	50	13750	
30		6,3	8,0	10	336	3360	
31A		6,3	8,0	6	91	546	5460
		6,3	8,0	6	189	1890	18900
		6,3	8,0	6	656	3936	39360
32		10,0	4,0	92	368	3384	
33		10,0	32	144	4608	46080	
34		10,0	32	144	1883	27120	
35		10,0	7	163	114	1842	
36		10,0	12	107	1980	21180	
37		10,0	12	107	1980	21180	
38		10,0	12	107	1980	21180	
39		10,0	12	107	1980	21180	
40		10,0	12	107	1980	21180	
41		10,0	12	107	1980	21180	
42		10,0	12	107	1980	21180	
43		10,0	12	107	1980	21180	
44		10,0	12	107	1980	21180	
45		10,0	12	107	1980	21180	
46	10,0	12	107	1980	21180		
47	10,0	12	107	1980	21180		
48	10,0	12	107	1980	21180		
49	10,0	12	107	1980	21180		
50	10,0	12	107	1980	21180		
51	10,0	12	107	1980	21180		
52	10,0	12	107	1980	21180		
53	10,0	12	107	1980	21180		
54	10,0	12	107	1980	21180		
55	10,0	12	107	1980	21180		
56	10,0	12	107	1980	21180		
57	10,0	16	171	2736			
58	10,0	4,0	201	884			
59	10,0	12	112	114			
60	10,0	11	531	584			
61	10,0	12	107	1980			
62	10,0	3	148	988			
63	10,0	16	105	656			
64	10,0	3	484	444			
65B	65	10,0	3	340	1020		
	66	10,0	3	144	114		
	66	10,0	3	211	633		
	67	10,0	3	138	688		
	68	10,0	3	167	501		
	69	10,0	3	309	930		
	70	10,0	16	171	2736		
	71	10,0	1	241	241		
	72	10,0	1	161	161		
	73	10,0	4	151	604		
	74	12,5	1	106	318		
	75	12,5	1	114	336		
	76	12,5	1	105	105		
	78	12,5	3	122	426		
	79	12,5	3	142	456		
	80	12,5	1	51	51		
	81	12,5	14	142	408		
	82	12,5	43	144	6192		
	83	12,5	3	91	273		
	84	12,5	3	91	273		
	85	12,5	3	94	282		
	86	12,5	3	142	460		
	87	12,5	4	93	372		
	88	12,5	4	93	372		
	89	12,5	6	113	678		
	90	12,5	6	113	678		
	91	12,5	8	208	1664		
	91	12,5	8	255	2040		
	92	12,5	10	157	1570		
	93	12,5	12	112	144		
94	12,5	3	120	360			
95	12,5	3	120	360			
96	12,5	6	109	654			
97	12,5	6	109	654			
98	12,5	7	VAR	VAR			
99	12,5	4	160	640			
100	12,5	4	160	640			
101	12,5	34	140	4760			
102	12,5	12	164	2168			
103	12,5	1	103	103			
104	12,5	1	103	103			
105	12,5	41	367	15047			
106	12,5	14	334	4676			
107	12,5	6	242	2420			
108	12,5	5	242	2420			
109	12,5	5	VAR	VAR			
110	12,5	5	VAR	VAR			
111	12,5	5	VAR	VAR			
112	12,5	6	125	750			
113	12,5	8	504	4032			
114	12,5	8	504	4032			
115	12,5	2	477	954			
116	12,5	2	477	954			
117	12,5	3	255	1530			
118	12,5	3	255	1530			
119	12,5	5	283	849			
120	12,5	3	249	747			
121	12,5	3	249	747			
122	12,5	8	177	1416			
123	12,5	8	177	1416			
124	12,5	12	400	5880			
125	12,5	12	400	5880			
126	12,5	2	122	222			
127	12,5	1	363	363			
128	12,5	1	363	363			
129	12,5	1	363	363			
130	12,5	1	159	159			
131	12,5	2	116	232			
132	12,5	2	116	232			
133	12,5	2	690	1380			
134	12,5	8	649	5192			
135	12,5	8	649	5192			
136	12,5	3	222	666			
137	12,5	3	222	666			
138	12,5	4	192	768			
139	12,5	4	192	768			
140	12,5	37	276	10212			
141	12,5	37	276	10212			

[illegible]

Edifício Beca C, 4º andar, Sala 401
 Rodovia SC-484, km 62, Bairro Fronteira Sul, Chapecó-SC, CEP 89615-099
 Contatos: (049) 3249-3115 / 3249-3156 / neutron@ufpa.edu.br
 Site Oficial: www.ufpa.edu.br

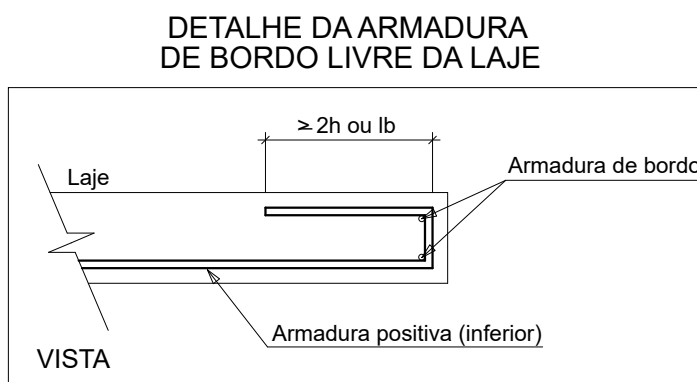
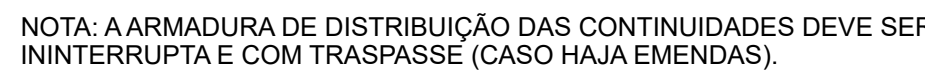
TEC. MEC. GIOVANI FÁVERO
 TEC. ELETROTÉC. DIEGO GWATTO

LOCAL: PASSO FUNDO - RS	FASE: EXECUTIVO	ESCALA: 1:50
OBRA: RESTAURANTE UNIVERSITÁRIO E CANTINA	REVISÃO Nº:	TAMANHO FOLHA: 1260x594
PROJETO	DATA: R00	Nº PRANCHA:
ESTRUTURAL	DATA: 03/10/2023	
ÁREA TOTAL DA EDIFICAÇÃO: 1.064,58 m²	DESENHADO POR: RODRIGO	EST 16 / 21
CONTEÚDO: DETALHAMENTO - LAJES MEZANINO	REVISADO POR: RODRIGO	
DETALHAMENTO - ARMAÇÃO POSITIVA	NOME DO ARQUIVO:	
ENDERÇO: RUA CAPITÃO ARAÚJO, 20, CENTRO		



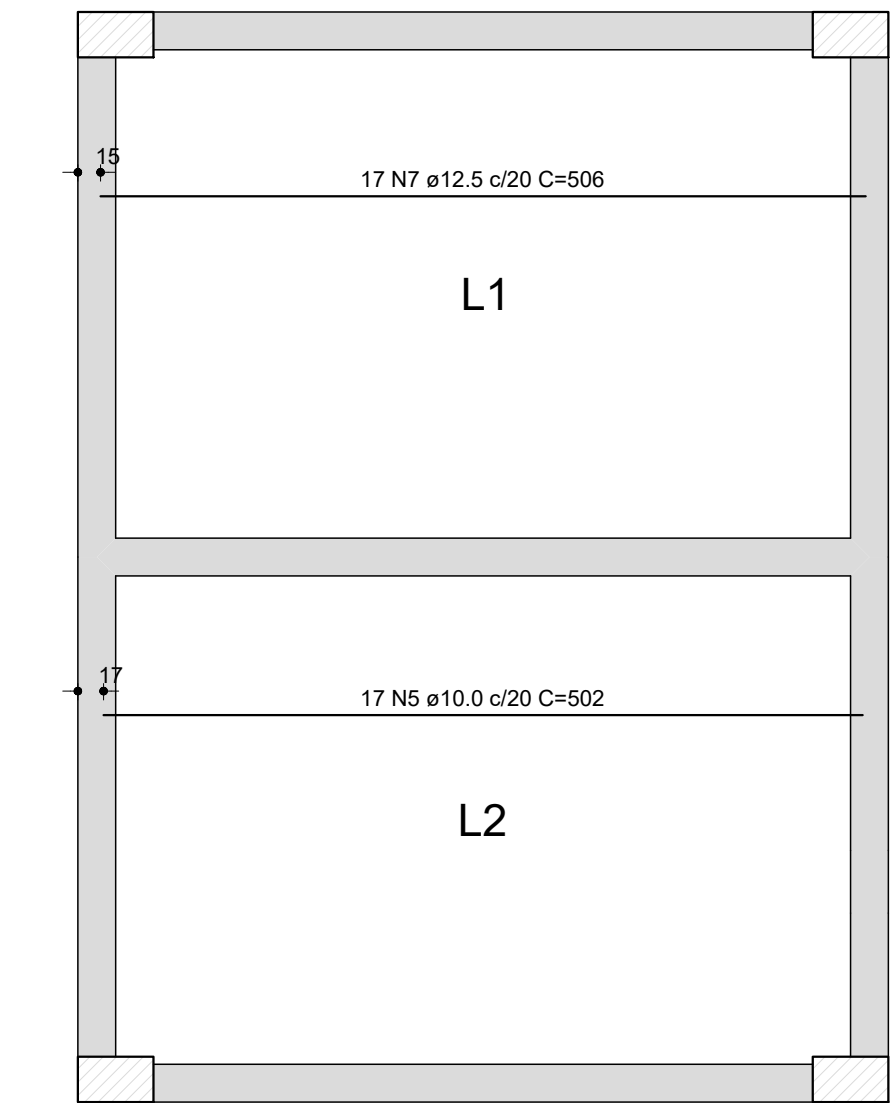
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	123.2	33.2
	8.0	234.3	101.8
	10.0	1012.6	687.3
	12.5	1212.2	1284.1
CA60	5.0	833.8	141.2
PESO TOTAL (kg)			
CA50	2106.4		
	141.2		

VOLUME de concreto (C-30) = 24.29 m³
 Área de forma = 127.02 m²

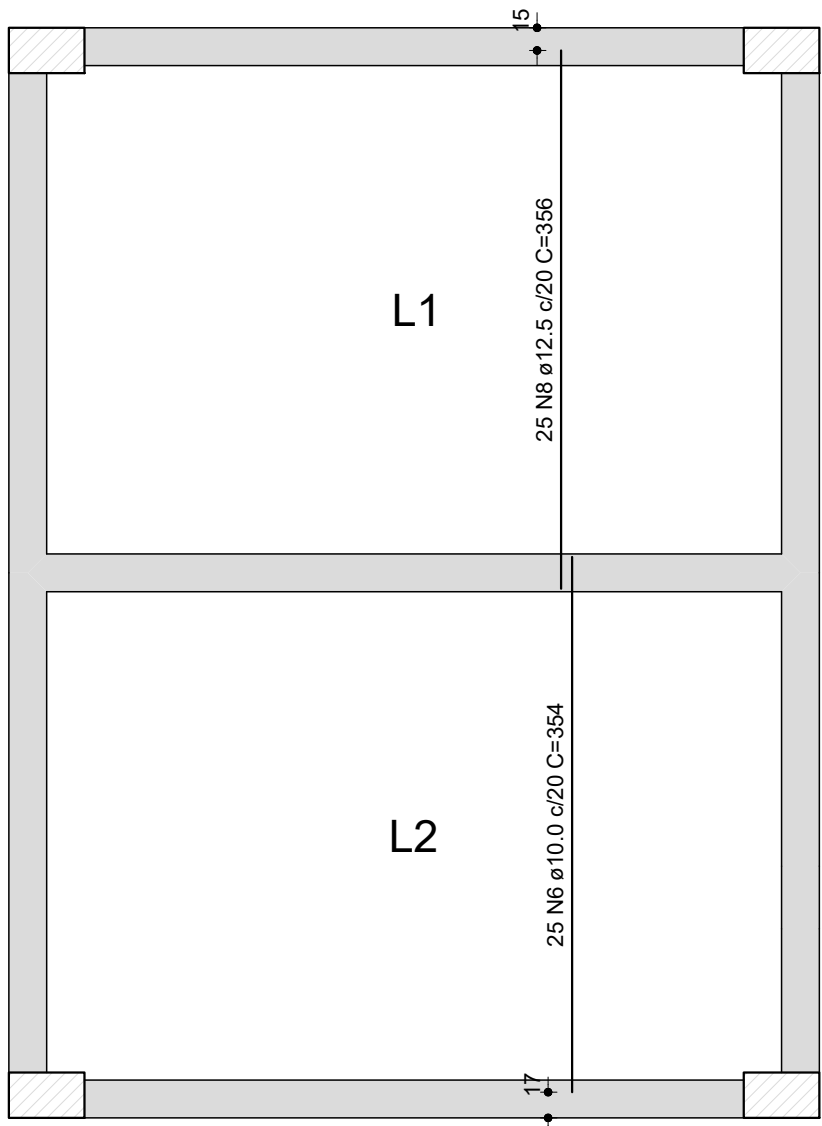
CARIMBOS



PROJ. LRB: DAVIANE REGINA VALENTE CADENB. 05/11/14 RESPONSÁVEL: BEO-UFES		ENG. CIVIL: RODRIGO EMMER CREA/RS: 100008 RESPONSÁVEL: TÉCNICO	
LOCAL: PASSO FUNDO - RS OBRA: RESTAURANTE UNIVERSITÁRIO E CANTINA PROJETO: ESTRUTURAL ÁREA TOTAL DA EDIFICAÇÃO: 1.064,58 m² CONTEÚDO: DETALHAMENTO - LAJES MEZANINO PLANTA DE VIGOTAS PRE-MOLDADAS ENDEREÇO: RUA CAPITÃO ARAÚJO, 20, CENTRO		FASE: EXECUTIVO REVISÃO Nº: R00 DATA: 03/10/2023 DESENHADO POR: RODRIGO REVISADO POR: RODRIGO NOME DO ARQUIVO:	
		ESCALA: 1:50 TAMANHO FOLHA: 950x600 Nº PRANCHA: <div> <div>EST</div> <div>18</div> <div>21</div> </div>	



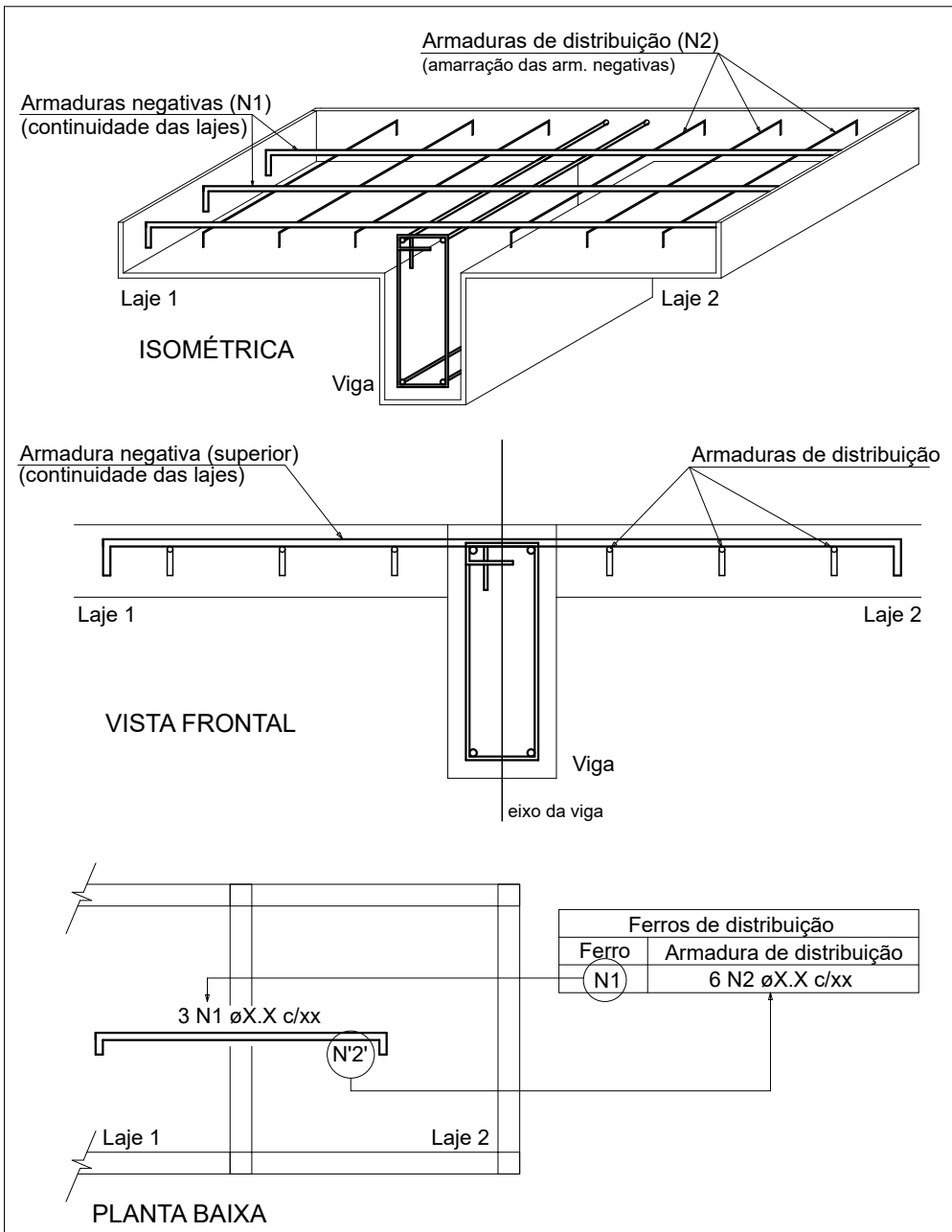
Armação positiva
lajes Reservatório (Eixo X)
escala 1:50



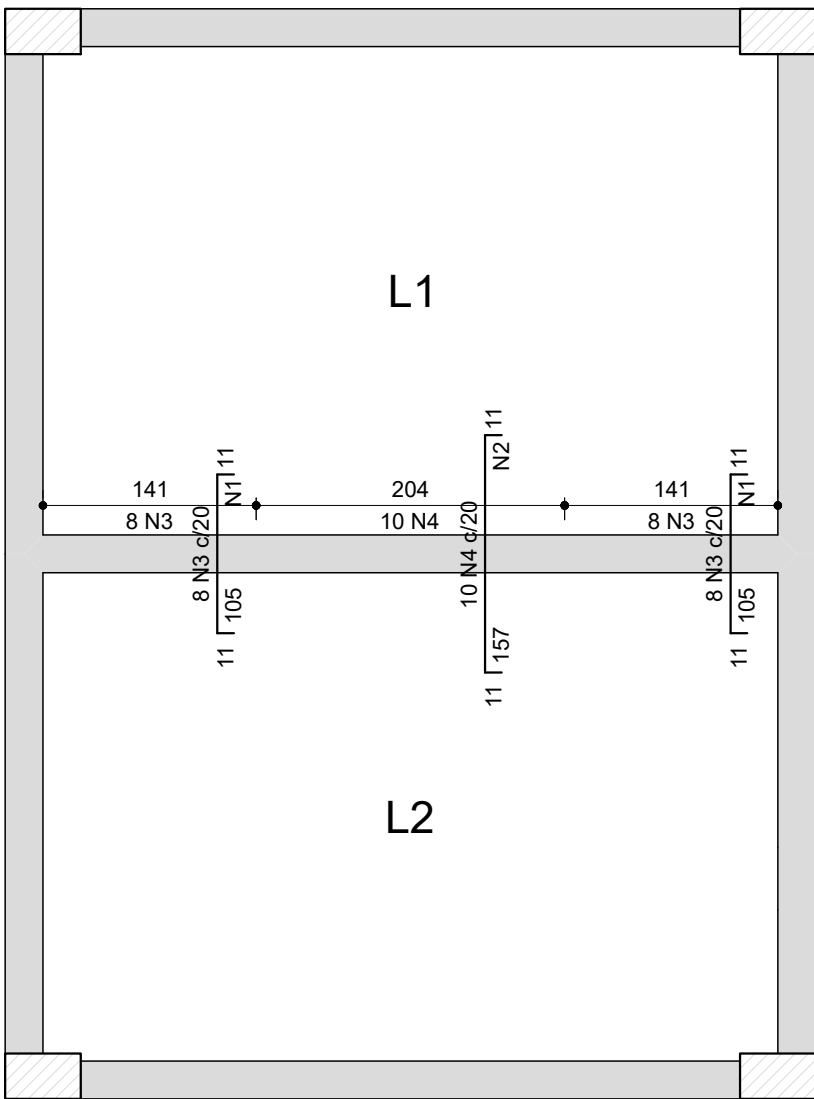
Armação positiva
lajes Reservatório (Eixo Y)
escala 1:50

Armaduras de distribuição	
Armadura	Armadura de distribuição
N3	7 N1 Ø5.0 c/17 C=153
N4	10 N2 Ø5.0 c/17 C=204
N3	7 N1 Ø5.0 c/17 C=153

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



NOTA: A ARMADURA DE DISTRIBUIÇÃO DAS CONTINUIDADES DEVE SER ININTERRUPTA E COM TRASPASSE (CASO HAJA EMENDAS).



Armação negativa
lajes Reservatório (Eixo Y)
escala 1:50

RELAÇÃO DO AÇO					
Negativos Y		Positivos X		Positivos Y	
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	14	153	2142
	2	5.0	10	204	2040
CA50	3	10.0	16	122	1952
	4	10.0	10	174	1740
	5	10.0	17	502	8534
	6	10.0	25	354	8850
	7	12.5	17	506	8602
	8	12.5	25	356	8900

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	210.8	142.9
CA60	12.5	175	185.5
PESO TOTAL (kg)			7.1
CA50	328.4		
CA60	7.1		

Volume de concreto (C-30) = 4.73 m³
Área de forma = 31.54 m²



Secretaria Especial de Obras

Edifício Bloco C - 4º Andar - Sala 401
Rodovia SC 484, km 02, Bairro Fronteira Sul, Chapadão-SC, CEP 89815-899
Contatos: (0xx48) 2040-3115 / 2040-3150 / secretaria@ufes.edu.br
Site Oficial: www.ufes.edu.br

LOCAL:
PASSO FUNDO - RS
OBRA:
RESTAURANTE UNIVERSITÁRIO E CANTINA
PROJETO:
ESTRUTURAL
CONTEÚDO:
DETALHAMENTO - LAJES RESERVATÓRIO
ENDEREÇO:
RUA CAPITÃO ARAÚJO, 20, CENTRO

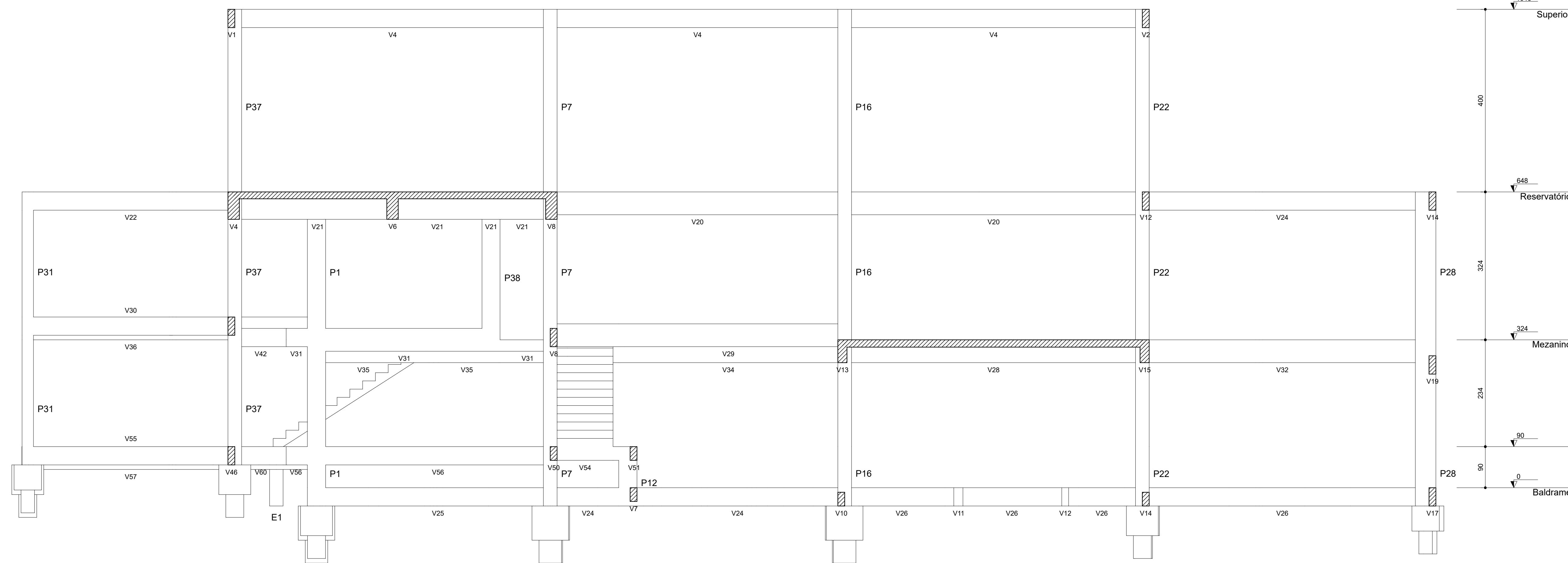
SECRETARIA ESPECIAL DE OBRAS:
SECRETARIA DE OBRAS: ARQ. URB. DAIANE REGINA VALENTINI
CAU/BR A51414-4
FISCALIZAÇÃO DE OBRAS:
CHAPECÓ-SC: ENG. CIV. FÁBIO ALEX ZEMARO
CAU/BR A51414-4
ENG. ELETRO. MATHEUS TODESCATT
CAU/BR A51414-4
CERRO LARGO: ENG. CIV. INÉLIO ROBERTO HENDGES
CAU/BR A51414-4
ENG. CIV. GABRIEL RODRIGUE SCHMIDT
CAU/BR A51414-4
ERECIM: ENG. CIV. JULIANA ANA CHARELLO
CAU/BR A51414-4
LARANJEIRAS DO SUL: ENG. CIV. FÁBIO ONETTA
CAU/BR A51414-4
REALIZA-PR: ENG. CIV. FABRÍCIO BALESTRIN
CAU/BR A51414-4
EQUIPE TÉCNICA SED:
ARQ. URB. ADRIANA FREITAS MOUTT
CAU/BR A51414-4
ARQ. URB. WELLINGTON TROCHER
CAU/BR A51414-4
ENG. CIV. CLAUDIO LUIS POMERANER
CREA-SC 177739-4
ENG. CIV. FÁBIO CORRÊA GASPARETTO
CREA-SC A51414-4
ENG. ELETRO. SILVIO ANTONIO TESTON
CREA-SC 094698-4
ENG. MEC. ADRIAN FAIXO
CREA-SC 113589-2
ENG. MEC. DANIEL ESPINO
CREA-SC 114331-1
ENG. ELETROTÉC. DIEGO GAVIOTTO

ARQ. URB. DAIANE REGINA VALENTINI
CAU/BR A51414-4
RESPONSÁVEL SEO-UFFS

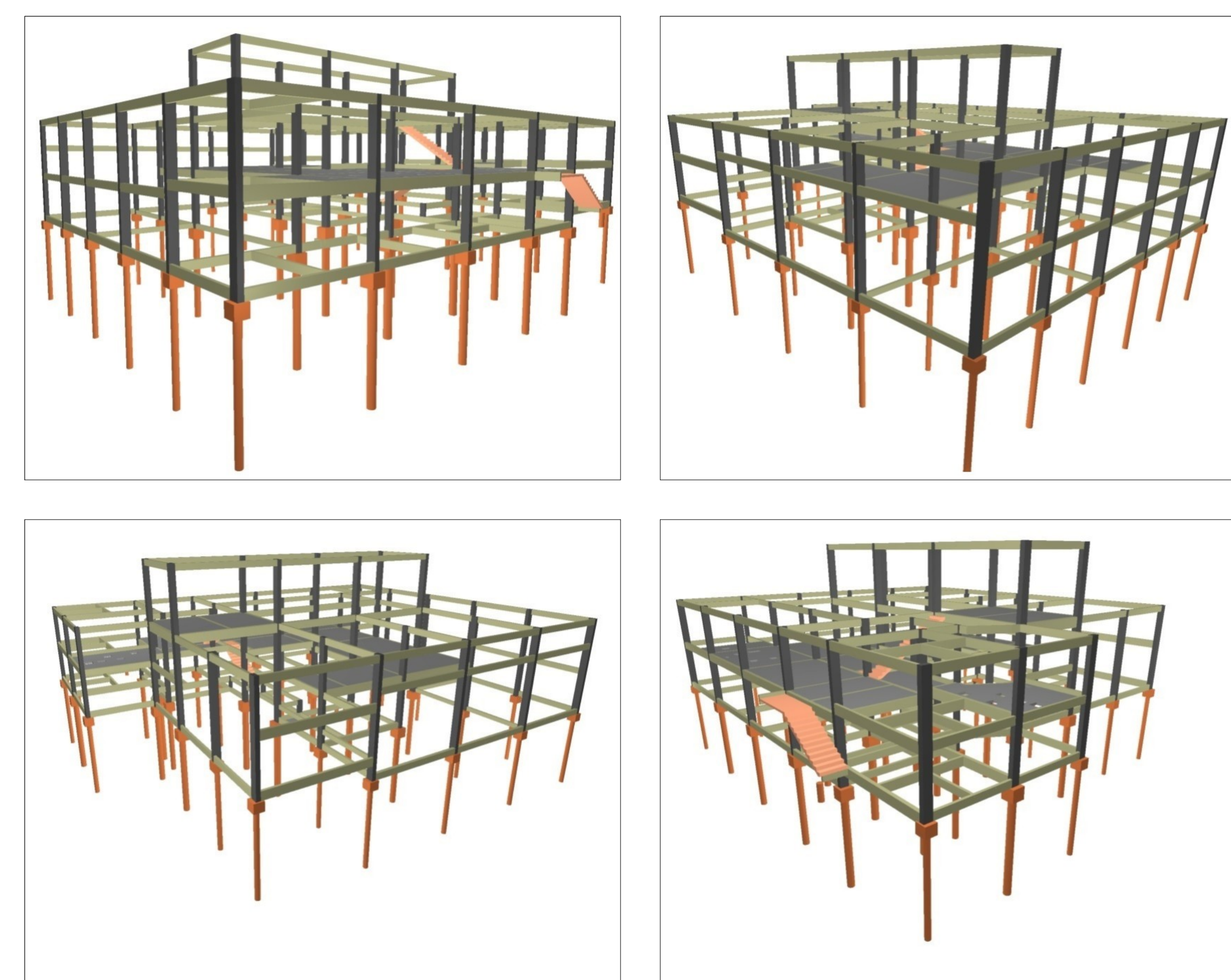
ENG. CIVIL RODRIGO EMMER
CREA-SC 109526-8
RESPONSÁVEL TÉCNICO

FASE:
EXECUTIVO
REVISÃO Nº:
R00
DATA:
03/10/2023
DESENHADO POR:
RODRIGO
NOME DO ARQUIVO:
RU-CANTINA_UFFS_PFE_ESTDVG

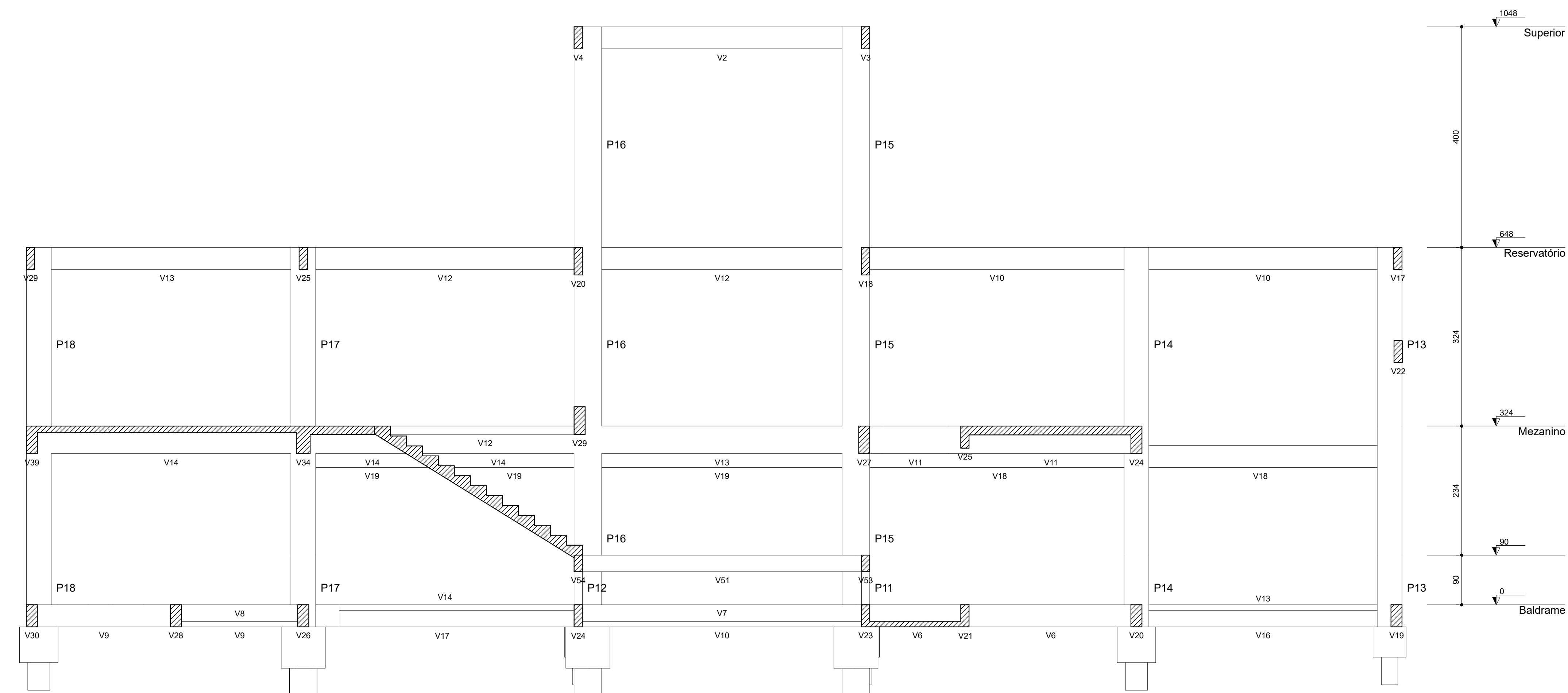
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1:50
TAMANHO FOLHA:
A2
Nº PRANCHA:
EST 19 / 21



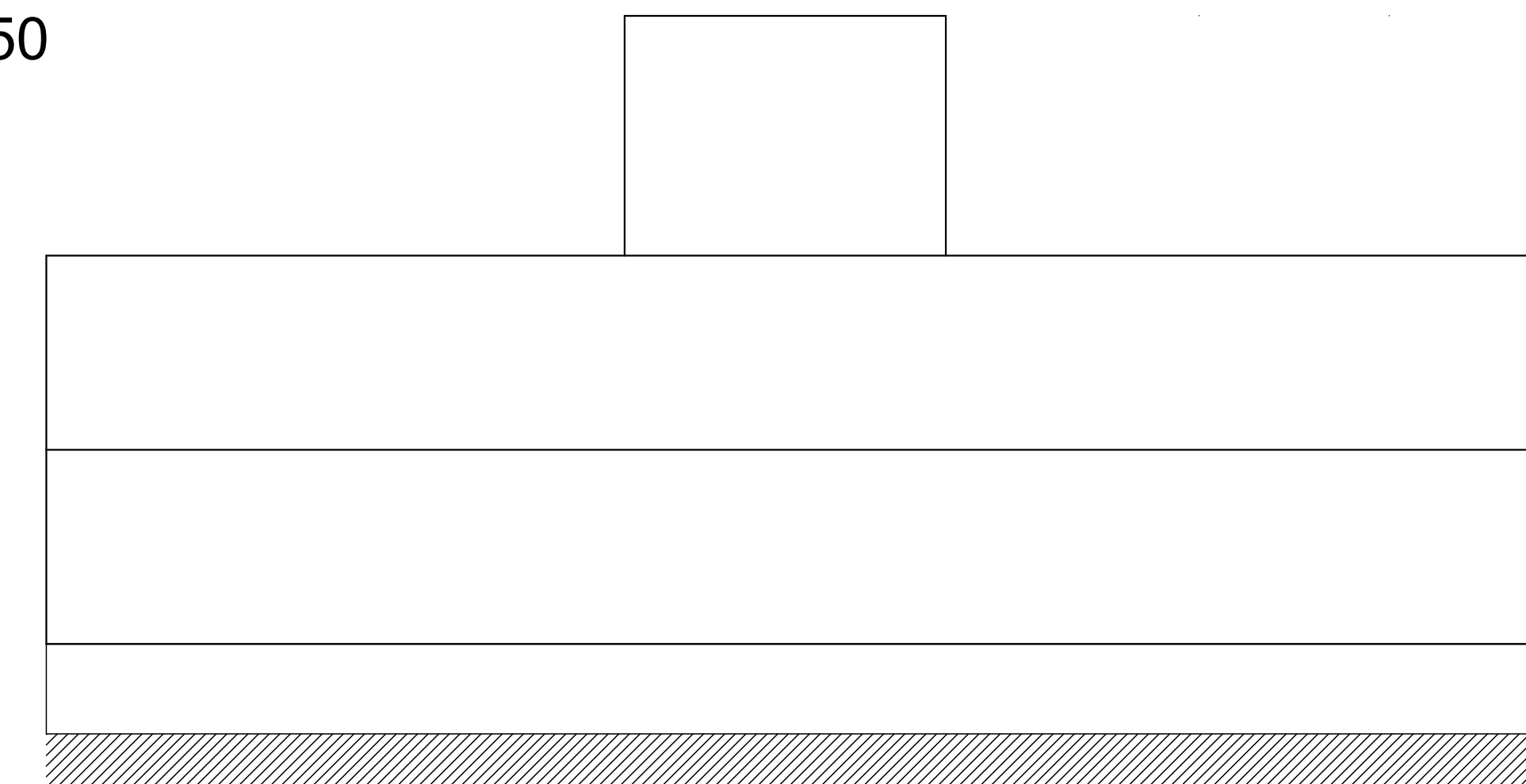
Corte A-A
escala 1:50



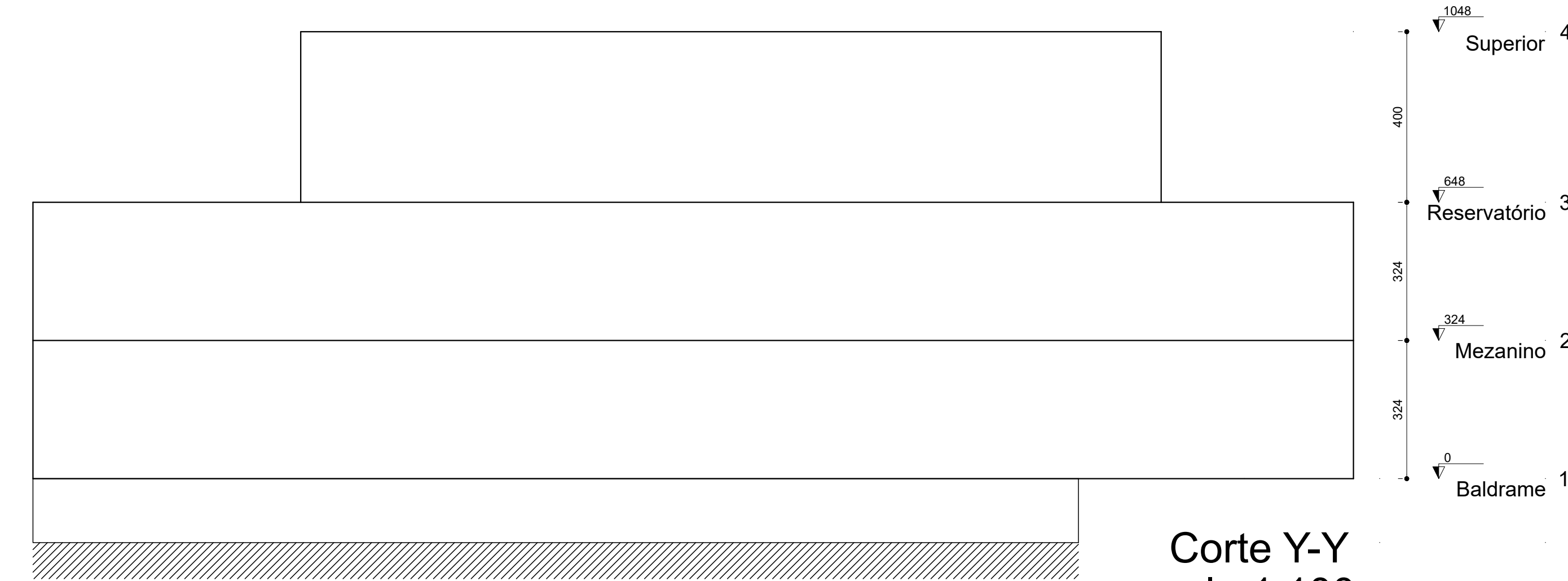
Perspectivas 3D
Sem escala



Corte B-B
escala 1:50



Corte X-X
escala 1:100



Corte Y-Y
escala 1:100

CARIMBOS:



**UNIVERSIDADE
FEDERAL DA
FRONTEIRA SUL**

**Secretaria
Especial de
Obras**

Rua São João Batista, 100 - Bairro Centro, 89.000-000, Foz de Iguaçu, SP
 Telefone: (16) 3311-1111 - Fax: (16) 3311-1112 - E-mail: ufes@ufes.br
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SECRETARIA ESPECIAL DE OBRAS
 SECRETARIA ESPECIAL DE OBRAS - ARS - URS - CHAVE REGINA VALENTE

CAUBER 4014-04

RESOLUÇÃO DE OBRAS
 CONHECIMENTO
 ENG. CIV. FÁBIO ALEX ZIMINO
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Emitido em 09/10/2023

Projeto Nº DOC (29) PROJETOS - EST - 21 PRANCHAS/2023 - DGCT (10.55.01.01)

(Nº do Documento: 42)

(Nº do Protocolo: NÃO PROTOCOLADO)

(Assinado digitalmente em 11/10/2023 15:05)

DAIANE REGINA VALENTINI

SECRETARIO

SEO (10.55)

Matrícula: ###769#2

(Assinado digitalmente em 11/10/2023 15:14)

RODRIGO EMMER

ENGENHEIRO-AREA

DPA (10.55.04)

Matrícula: ###708#2

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