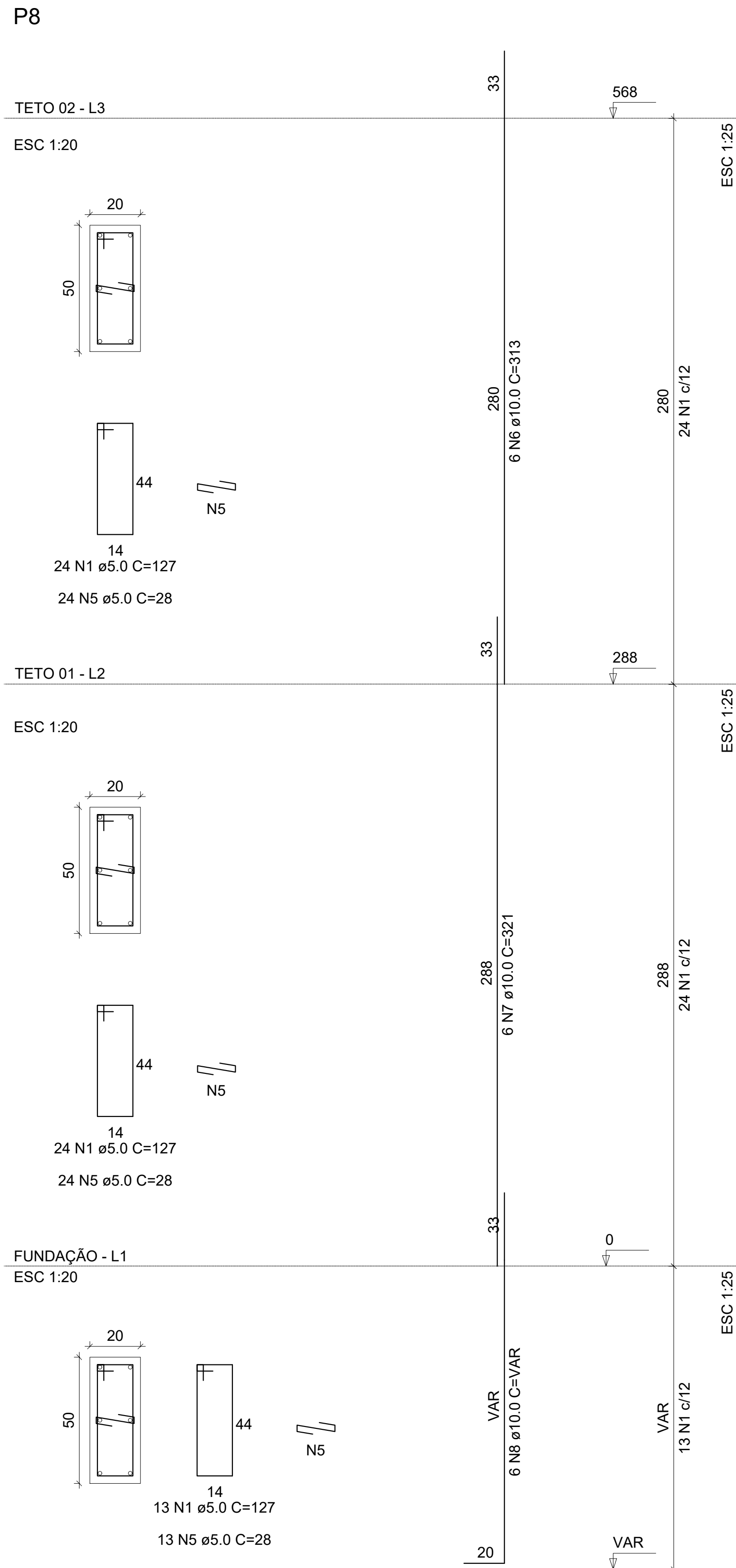
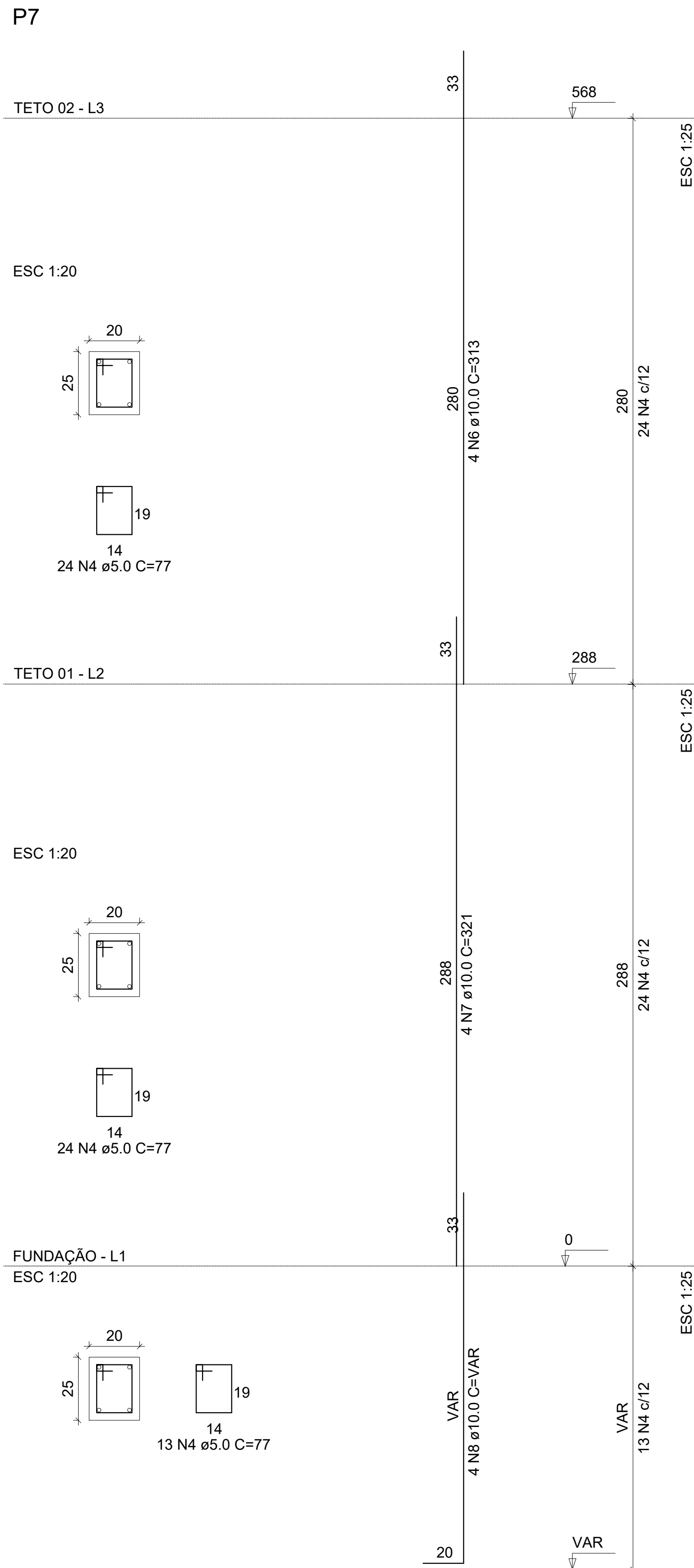
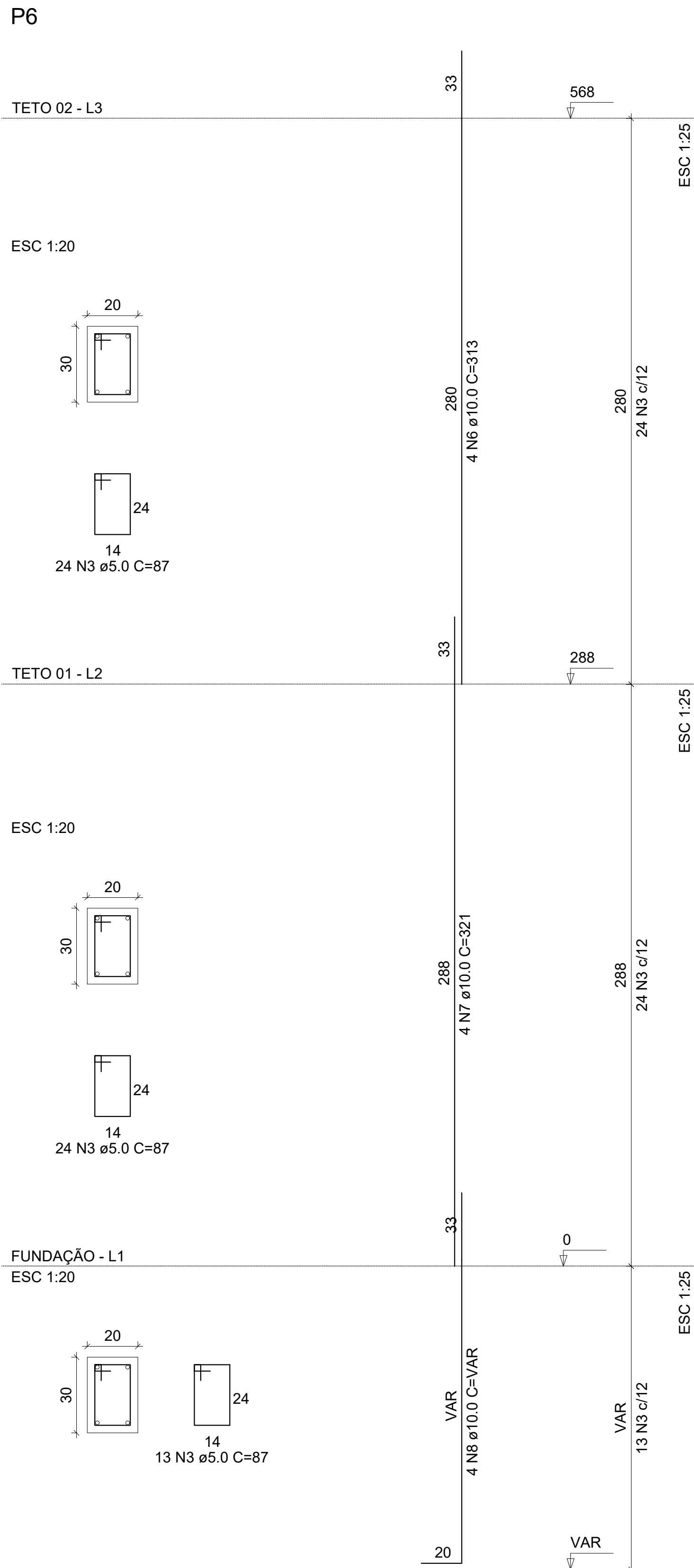
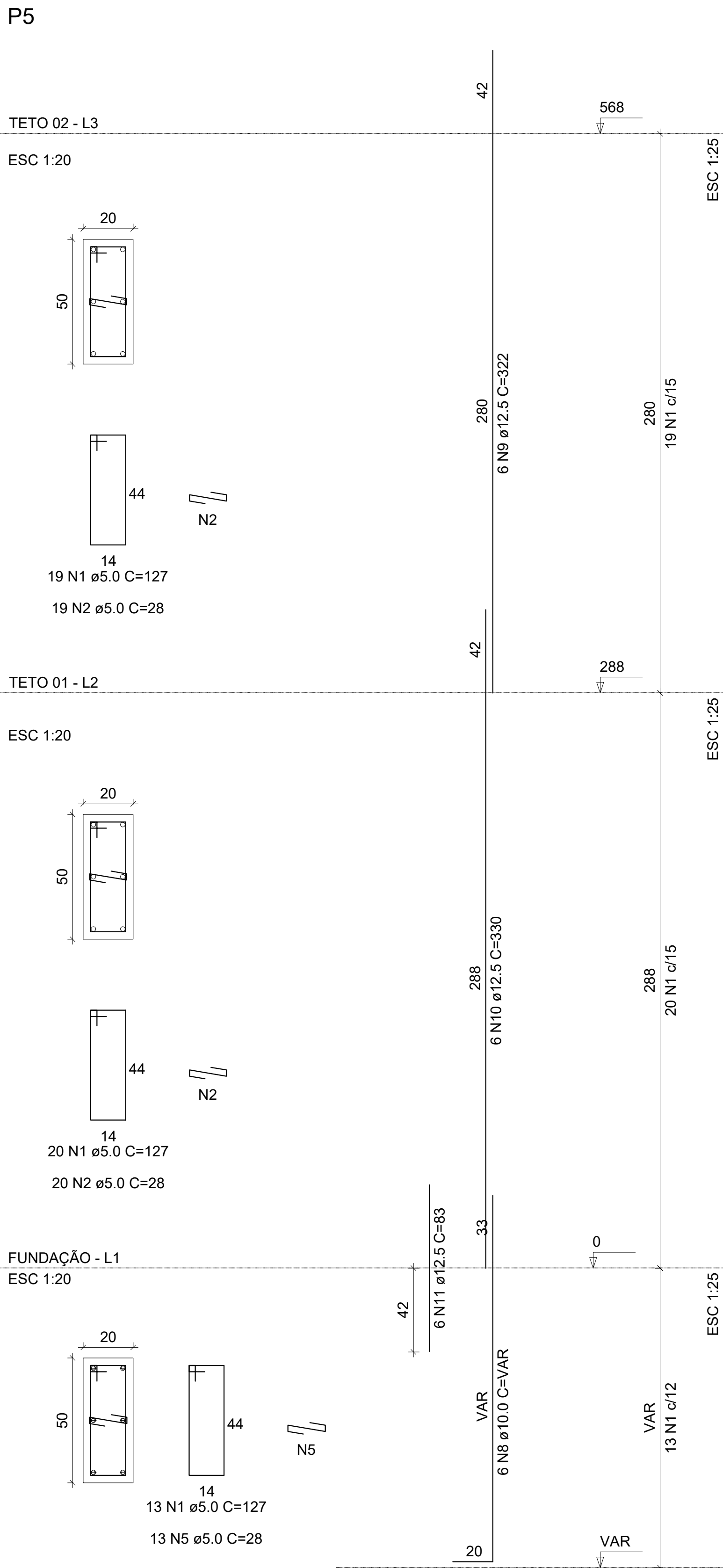




RELAÇÃO DO AÇO

P5-L3 P8-L3 P7-L2 P6-L1	P6-L3 P5-L2 P8-L2 P7-L1	P7-L3 P6-L2 P5-L1 P8-L1			
AÇO	N	DIAM	Q	UNIT (cm)	C TOTAL (cm)
60	1	5.0	113	127	14351
	2	5.0	39	28	1092
	3	5.0	61	87	5307
	4	5.0	61	77	4697
	5	5.0	74	28	2072
50	6	10.0	14	313	4382
	7	10.0	14	321	4494
	8	10.0	20	VAR	VAR
	9	12.5	6	322	1932
	10	12.5	6	330	1980
	11	12.5	6	83	498

RESUMO DO AÇO

AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	10.0	128.9	87.4
CA60	5.0	276.1	46.8
PESO TOTAL			
CA50	134.2		
CA60	46.8		

Vol. de concreto total (C-30) ≈2.23 m³
Área de forma total = 33.75 m²

QUADRO DE REVISÕES		
REVISÃO	MODIFICAÇÃO	DATA
PROPRIETÁRIO PROJETO		APROVO
PROJETO ESTRUTURAL		
RESPONSÁVEL ENGº CIVIL WESLEY RAFAEL DA COSTA-CREA-CE: 061562514-2		DESENHO
PROPRIETÁRIO SISAR RUSSAS-CE		ESCALA INDICADA
OBRA SEDE SISAR	LOCAL RUSSAS-CE	DATA ABR/2017
ASSUNTO ARMADURA DOS PILARES		PRANCHA 07/24

TETO 02 - L3		33	568	ESC 1:20
ESC 1:20 20 50 44 14 24 N2 ø5.0 C=127 24 N3 ø5.0 C=28		280 6 N7 ø10.0 C=313	280 24 N2 ø12	ESC 1:25
TETO 01 - L2		33	288	ESC 1:25
ESC 1:20 20 50 44 14 24 N2 ø5.0 C=127 24 N3 ø5.0 C=28		288 6 N8 ø10.0 C=321	288 24 N2 ø12	ESC 1:25
FUNDAÇÃO - L1		33	0	ESC 1:25
ESC 1:20 20 50 44 14 13 N2 ø5.0 C=127 13 N3 ø5.0 C=28		VAR 6 N9 ø10.0 C=VAR	VAR 13 N2 ø12	ESC 1:25
		20	VAR	

[illegible]

TETO 01 - L2

ESC 1:20

288

33

288

4 N8 ϕ 10.0 C=321

24 N4 ϕ 12

ESC 1:25

FUNDAÇÃO - L1

ESC 1:20

0

33

VAR

4 N8 ϕ 10.0 C=VAR

VAR

13 N4 ϕ 12

ESC 1:25

20

VAR

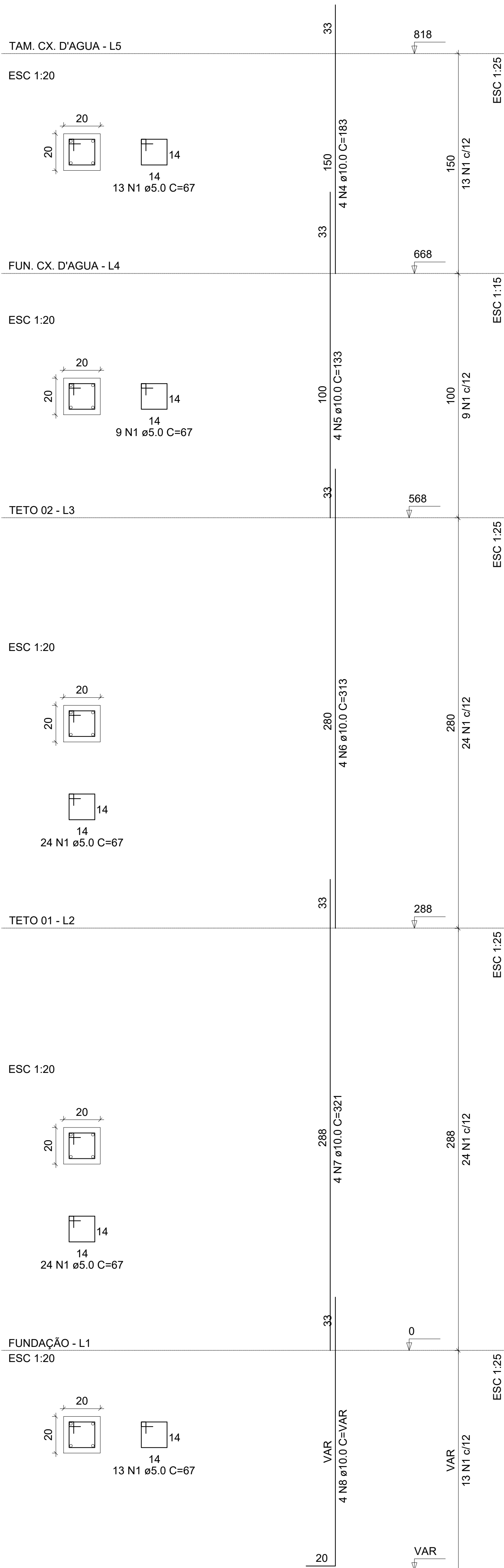
Item	Descrição	Quantidade	Unidade	Valor Unitário (R\$)	Valor Total (R\$)
1	TAM. CX. D'AGUA - L5	1	m²	818,00	818,00
2	ESC 1:20	4	N5 ø10,0 C=183	150,00	600,00
3	FUN. CX. D'AGUA - L4	1	m²	668,00	668,00
4	ESC 1:20	4	N6 ø10,0 C=133	100,00	400,00
5	TETO 02 - L3	1	m²	568,00	568,00
6	ESC 1:20	4	N7 ø10,0 C=313	280,00	1.120,00
7	TETO 01 - L2	1	m²	288,00	288,00
8	ESC 1:20	4	N8 ø10,0 C=321	288,00	1.152,00
9	FUNDAÇÃO - L1	1	m²	0,00	0,00
10	ESC 1:20	4	N9 ø10,0 C=VAR	VAR	VAR

RESUMO DO AÇO			
AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	10.0	137.8	93.5
CA60	5.0	208.1	35.2
PESO TOTAL			
CA50	93.5		
CA60	35.2		

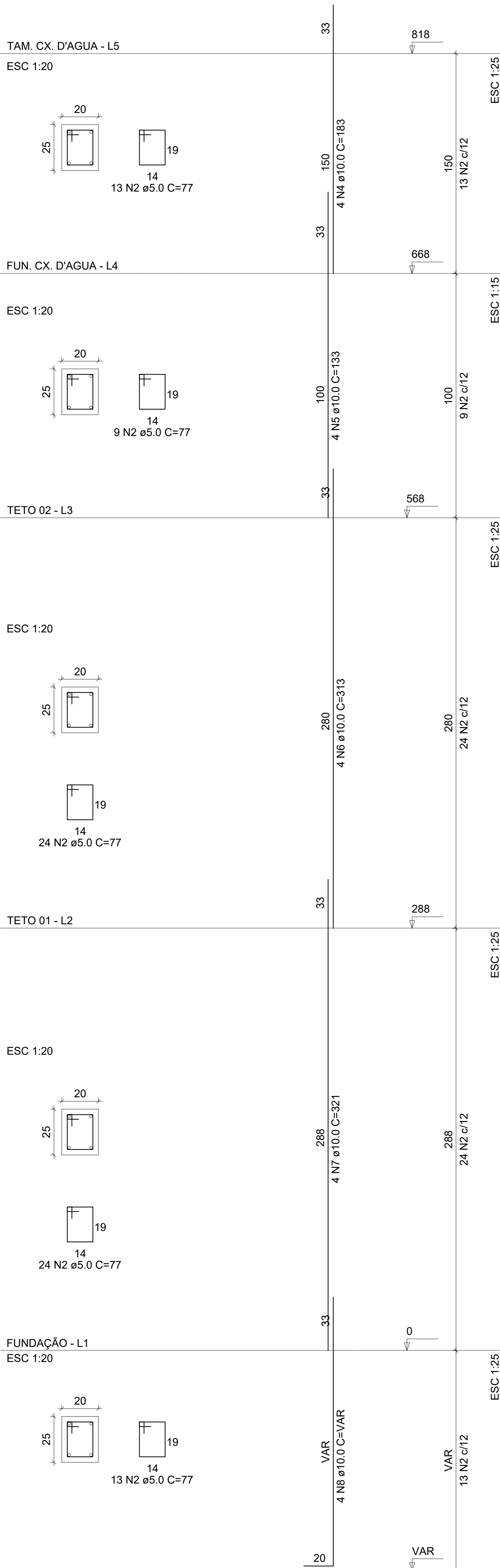
Vol. de concreto total (C-30) = 1.54 m³
Área de forma total = 25.68 m²

QUADRO DE REVISÕES			
REVISÃO	MODIFICAÇÃO		DATA
_____ PROPRIETÁRIO		APROVO	
_____ PROJETO			
PROJETO ESTRUTURAL			
RESPONSÁVEL ENGº CIVIL WESLEY RAFAEL DA COSTA-CREA-CE: 061562514-2			DESENHO
PROPRIETÁRIO SISAR RUSSAS-CE			ESCALA INDICADA
OBRA SEDE SISAR		LOCAL RUSSAS-CE	DATA ABR/2017
ASSUNTO ARMADURA DOS PILARES			PRANCHA 08/24

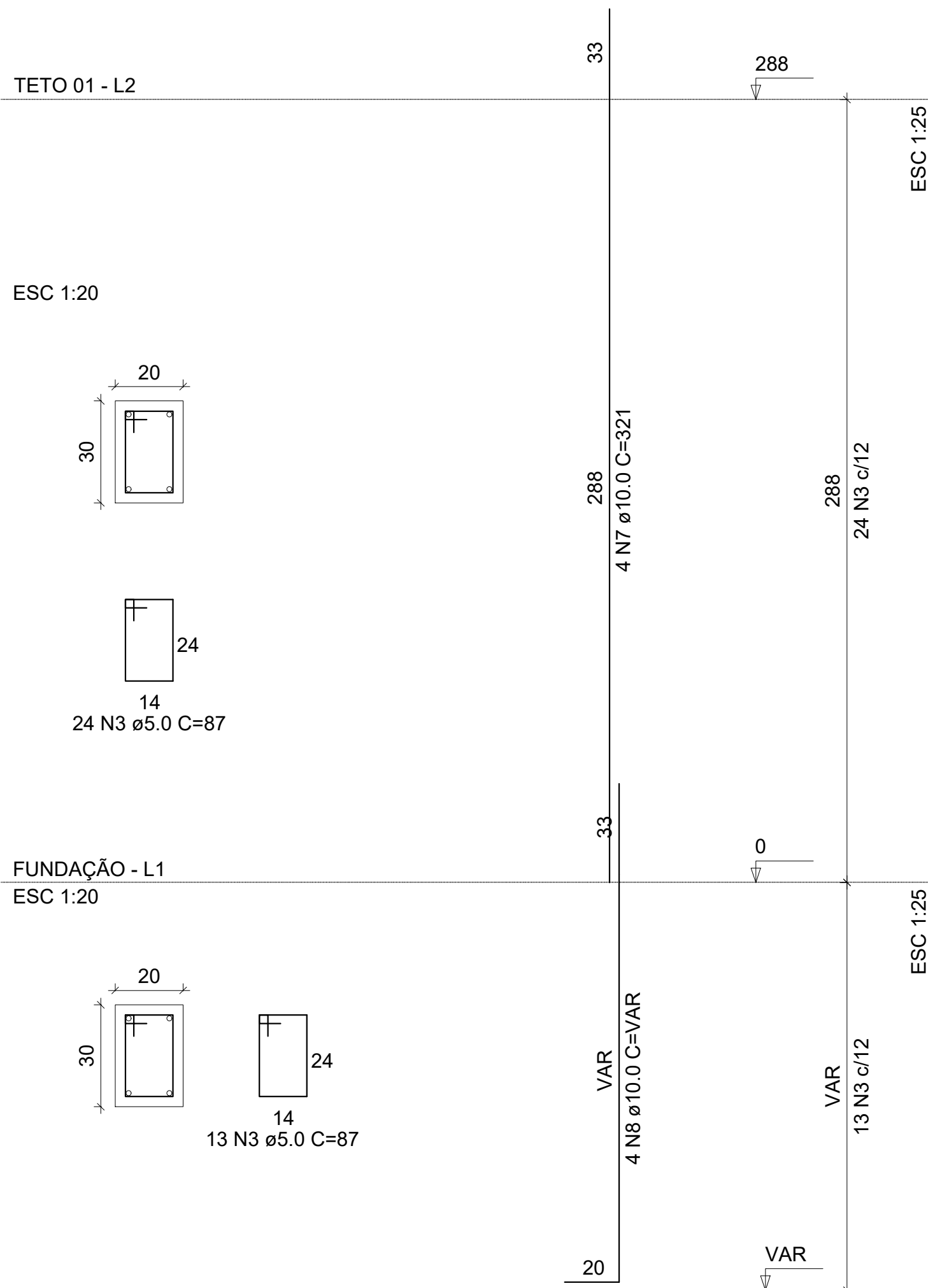
P13



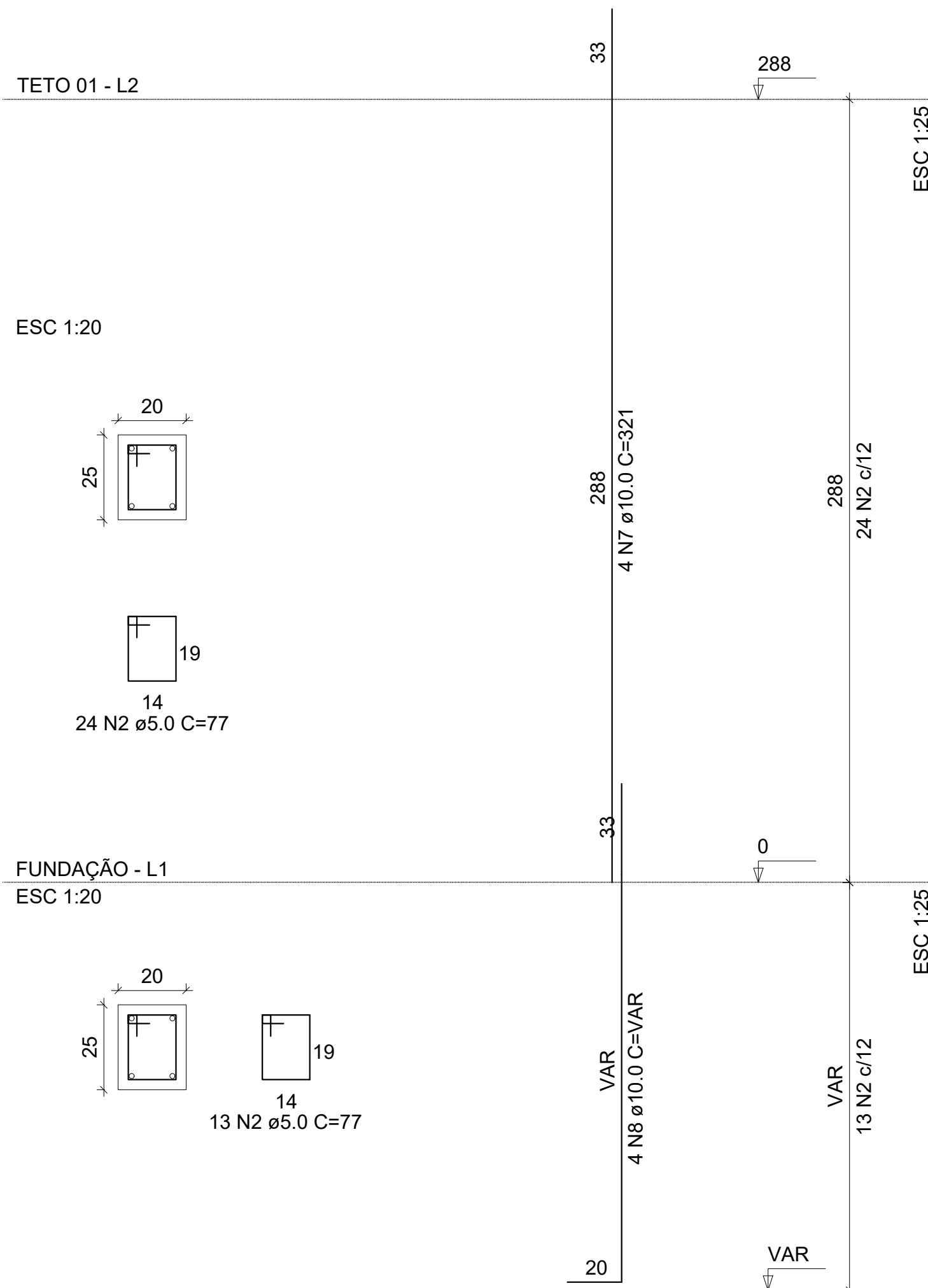
P14



P15



P16

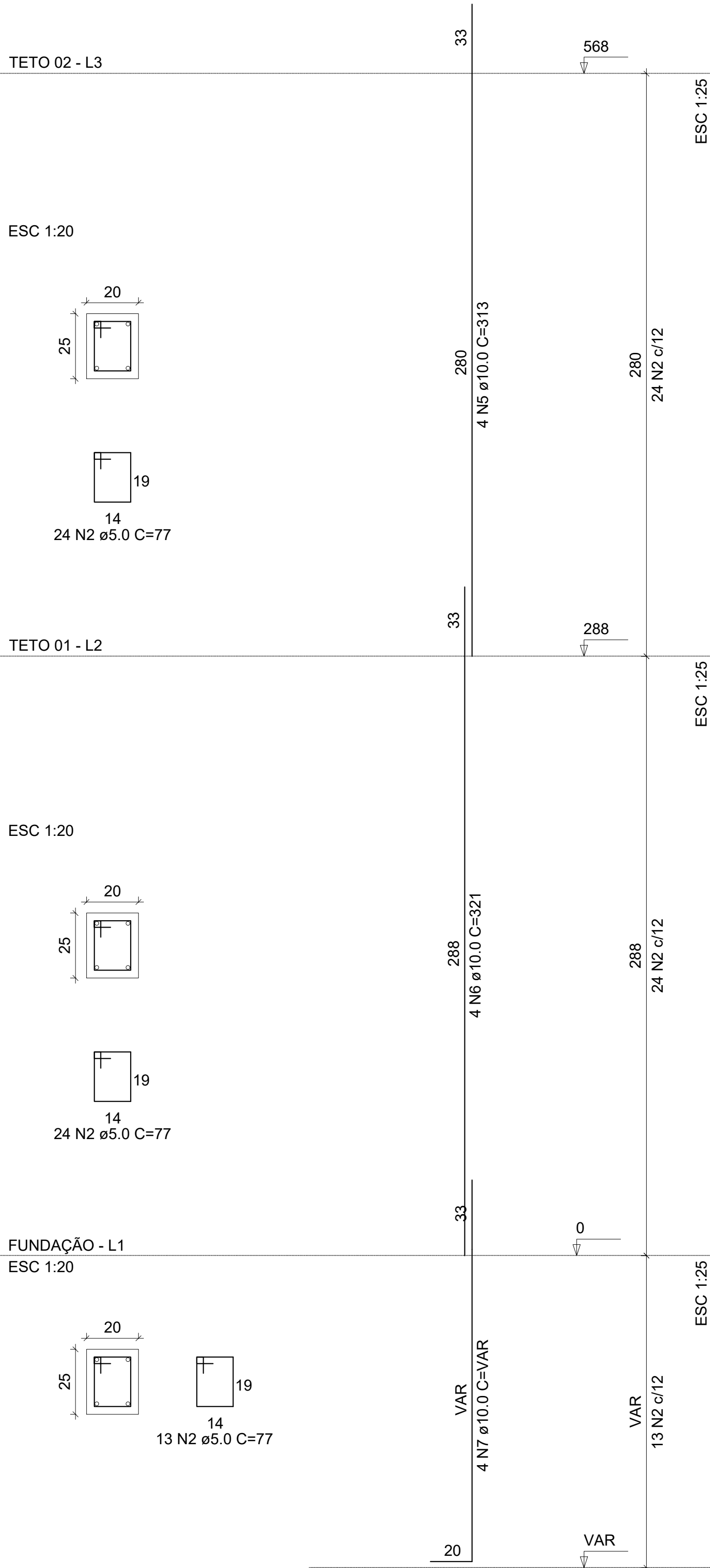


RELAÇÃO DO AÇO						
		P13-L5	P14-L5	P13-L4		
		P14-L4	P13-L3	P14-L3		
		P13-L2	P14-L2	P15-L2		
		P16-L2	P14-L1	P14-L1		
		P15-L1	P16-L1			
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)	
60	1	5.0	83	67	5561	
	2	5.0	120	77	9240	
	3	5.0	37	87	3219	
	4	10.0	8	183	1464	
	5	10.0	8	133	1064	
	6	10.0	8	313	2504	
	7	10.0	16	321	5136	
	8	10.0	16	VAR	VAR	

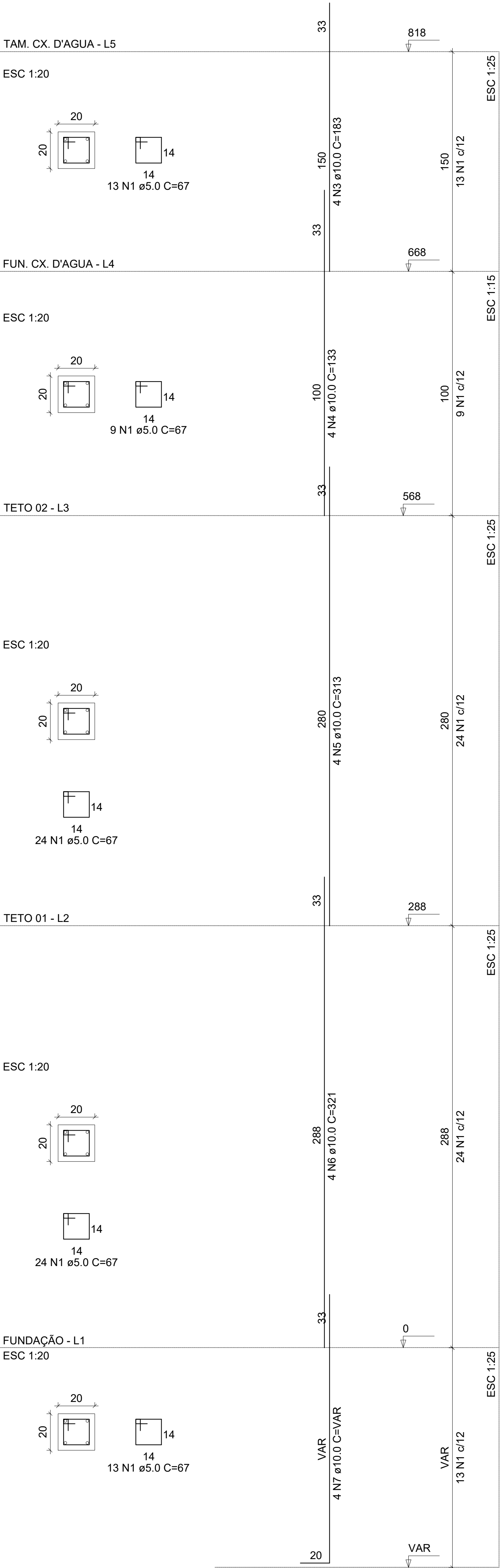
RESUMO DO AÇO			
AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	10.0	133.8	90.8
CA60	5.0	181.4	30.7
PESO TOTAL			
CA50	90.8		
CA60	30.7		

QUADRO DE REVISÕES			
REVISÃO	MODIFICAÇÃO		DATA
_____ PROPRIETÁRIO _____ PROJETO		_____ APROVO	
PROJETO ESTRUTURAL			
RESPONSAVEL ENGº CIVIL WESLEY RAFAEL DA COSTA-CREA-CE: 061562514-2			DESENHO
PROPRIETARIO SISAR RUSSAS-CE			ESCALA INDICADA
OBRA SEDE SISAR		LOCAL RUSSAS-CE	DATA ABR/2017
ASSUNTO ARMADURA DOS PILARES			PRANCHA 09/24

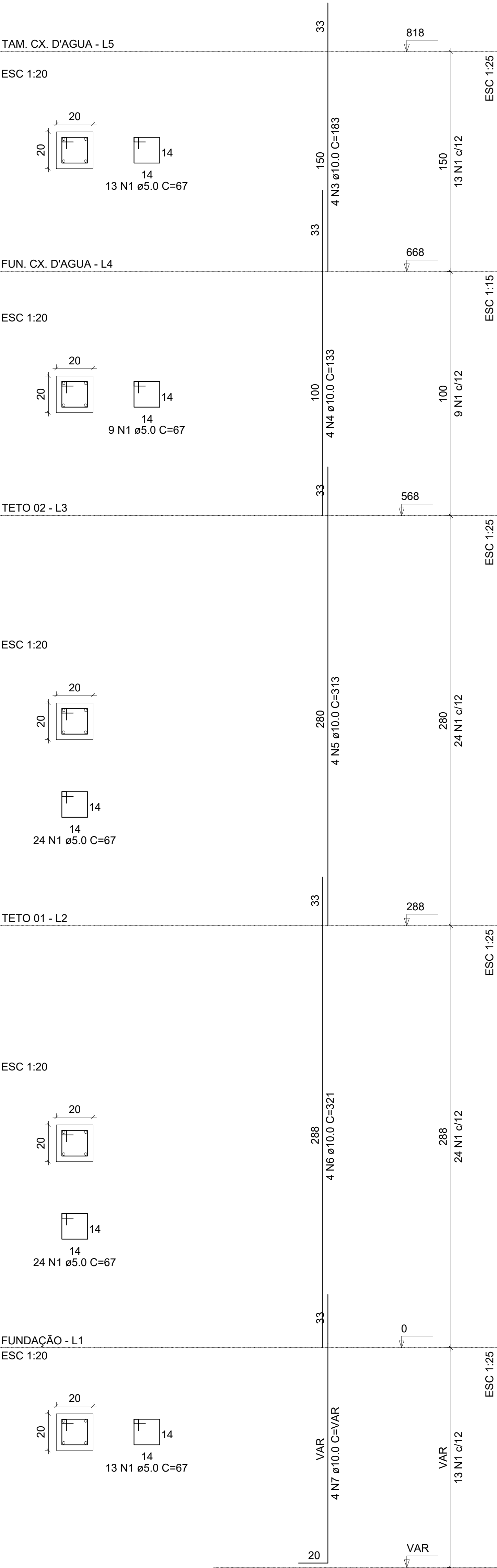
P17



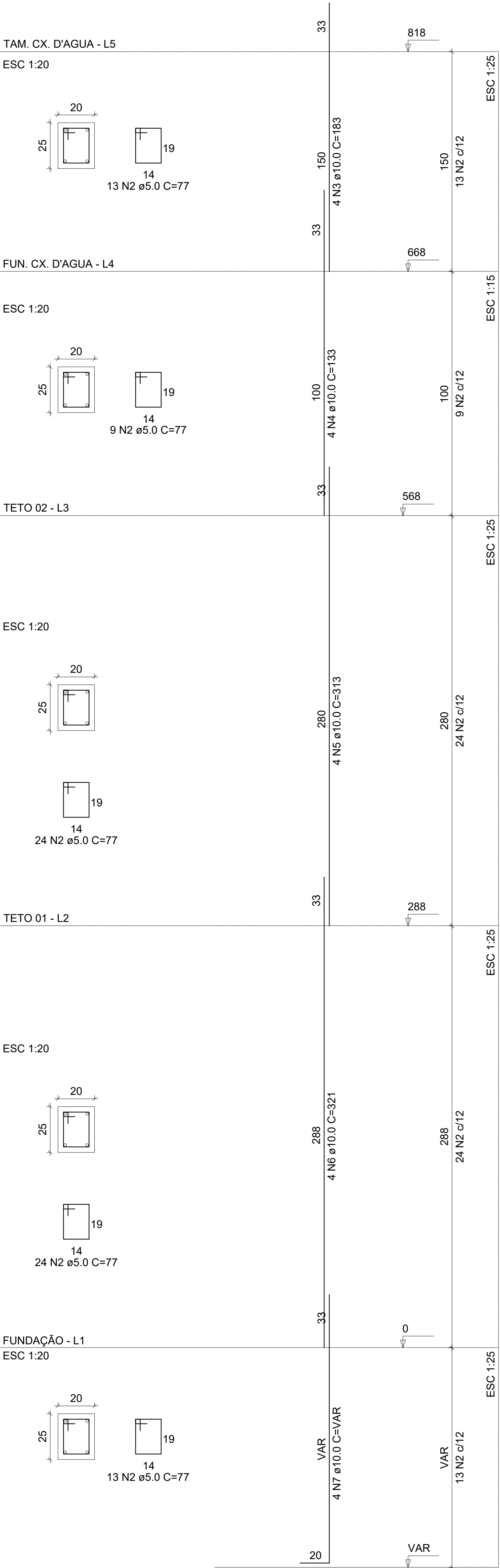
P18



P19



P20



RELAÇÃO DO AÇO					
P18-L5	P19-L5	P20-L5			
P18-L4	P19-L4	P20-L4			
P17-L3	P18-L3	P19-L3			
P20-L3	P17-L2	P18-L2			
P19-L2	P20-L2	P17-L1			
P18-L1	P19-L1	P20-L1			
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5.0	166	67	11122
50	2	5.0	144	77	11088
	3	10.0	12	183	2196
	4	10.0	12	133	1596
	5	10.0	16	313	5006
	6	10.0	16	321	5136
	7	10.0	16	VAR	VAR

RESUMO DO AÇO			
AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	10.0	171.5	116.3
CA60	5.0	223.6	37.9
PESO TOTAL			
CA50		116.3	
CA60		37.9	

Vol. de concreto total (C-30) =1.62 m³
Área de forma total = 30.66 m²

QUADRO DE REVISÕES

REVISÃO	MODIFICAÇÃO	DATA

PROPRIETARIO

PROJETO

APROVO

PROJETO ESTRUTURAL

RESPONSÁVEL

ENGº CIVIL WESLEY RAFAEL DA COSTA-CREA-CE: 061562514-2

PROPRIETARIO

SISAR RUSSAS-CE

OBRA

SEDE SISAR

ASSUNTO

ARMADURA DOS PILARES

DESENHO

ESCALA

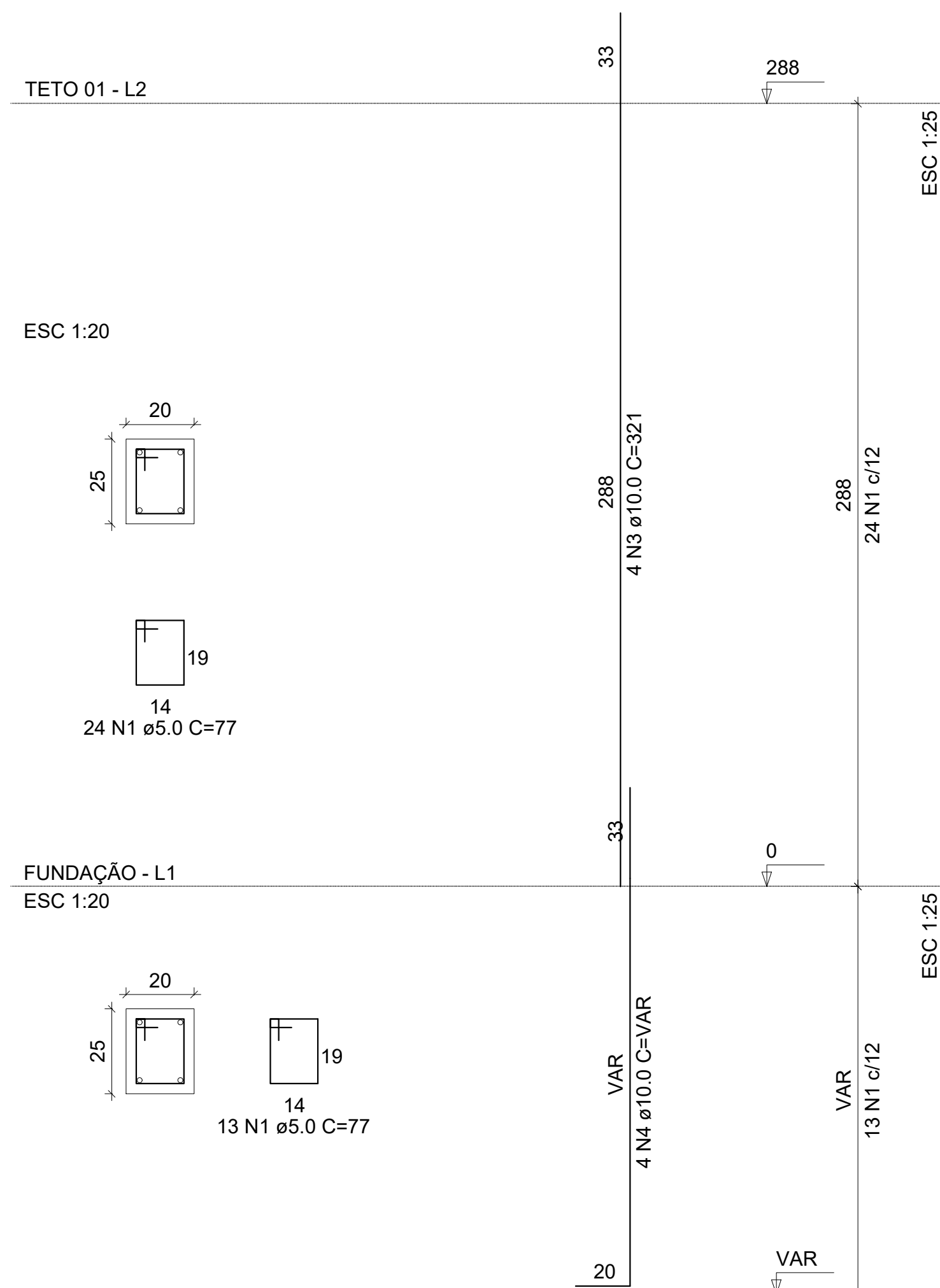
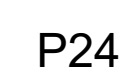
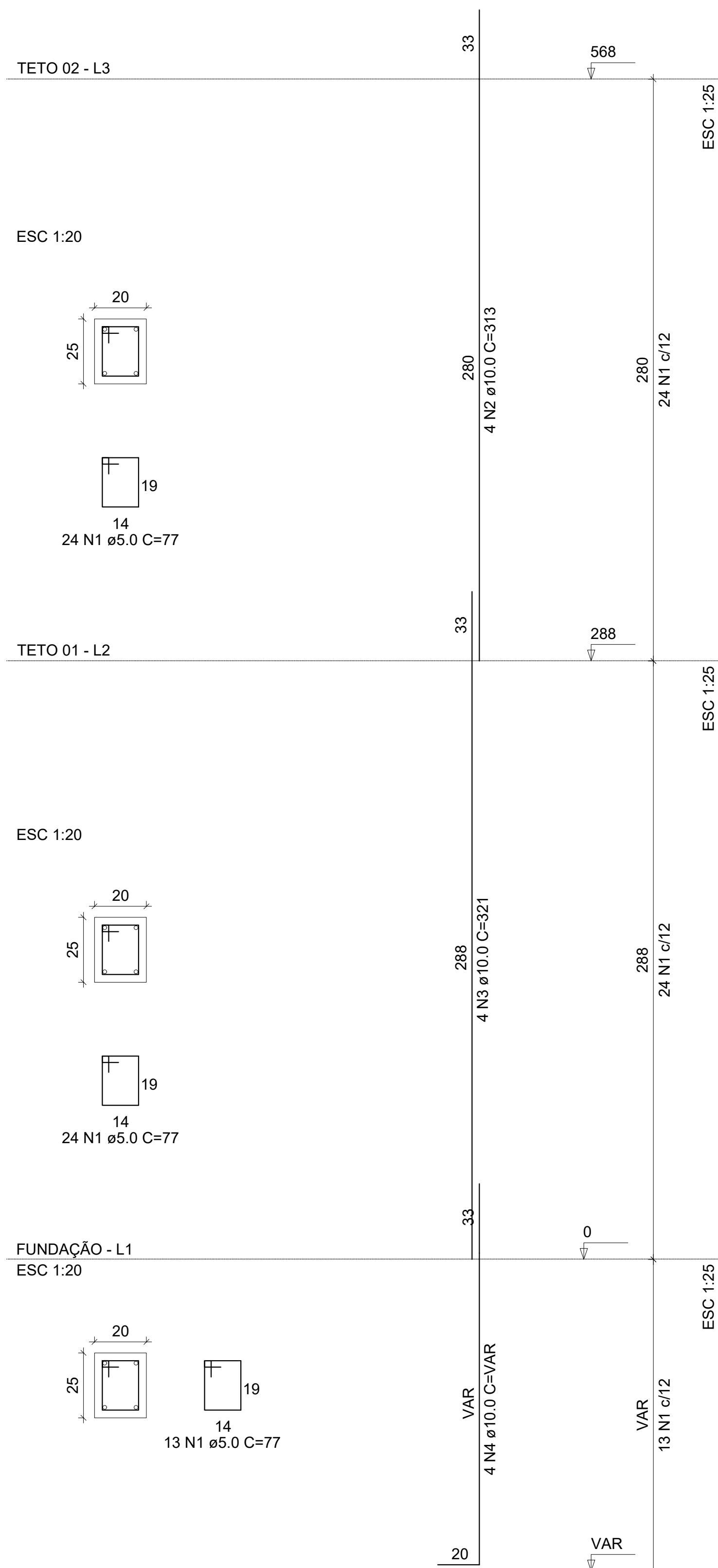
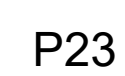
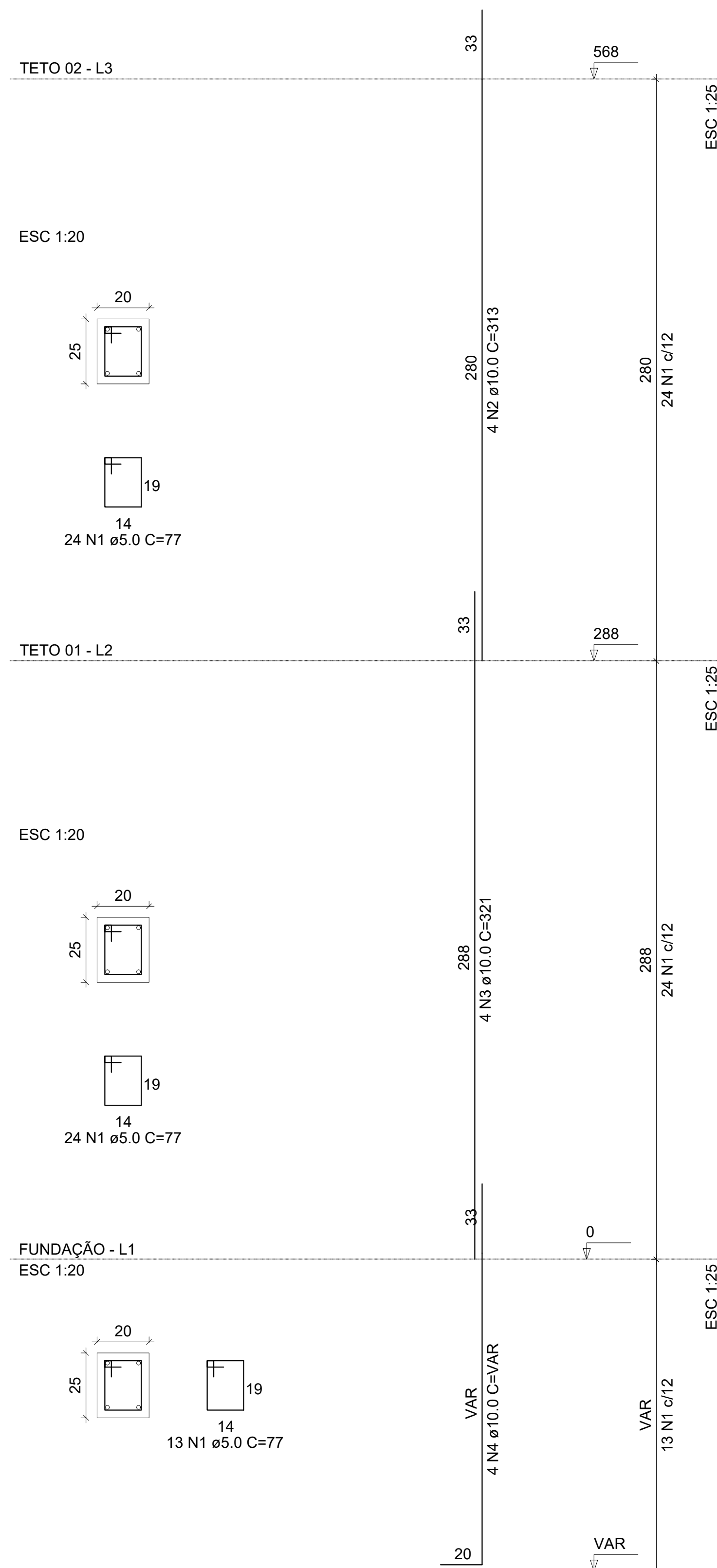
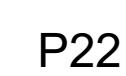
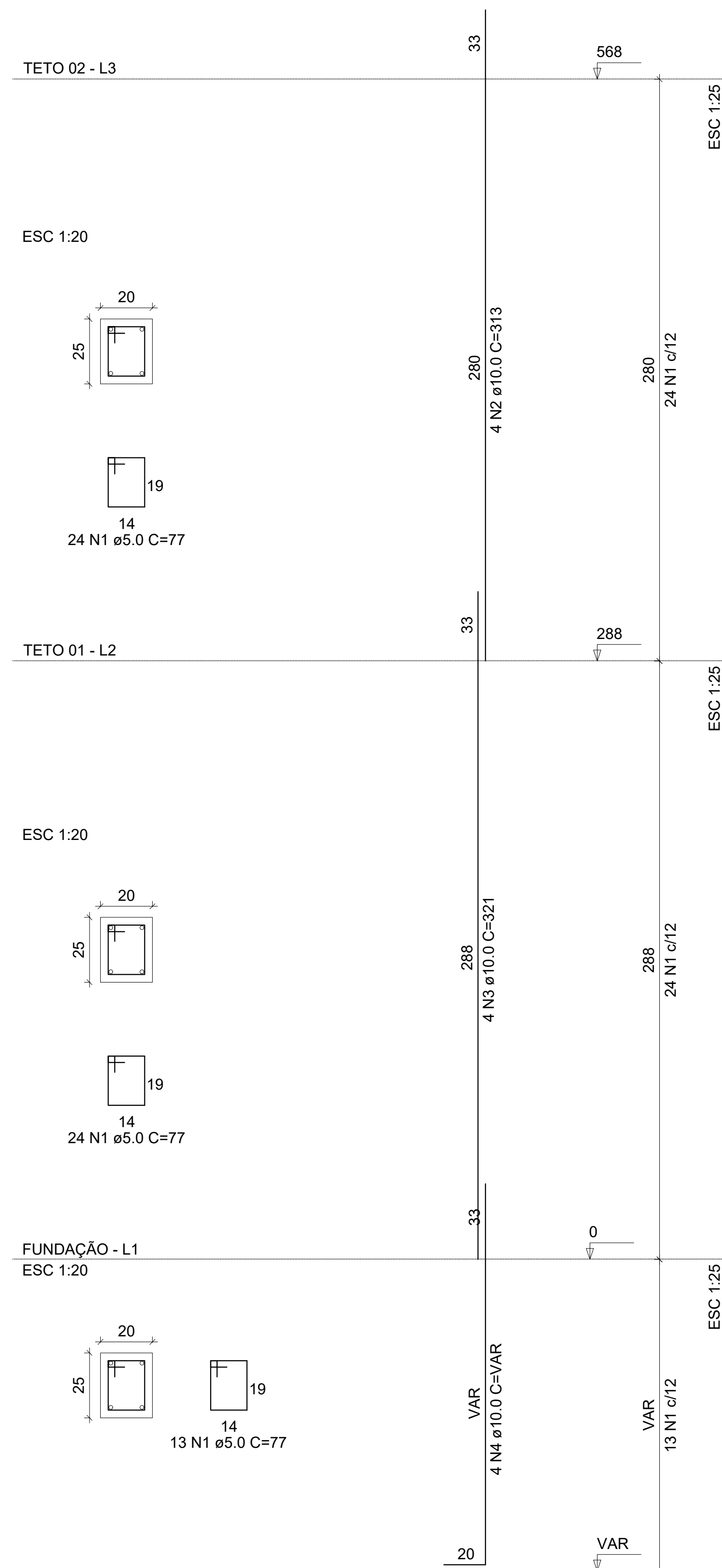
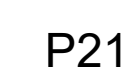
INDICADA

DATA

ABR/2017

PRANCHA

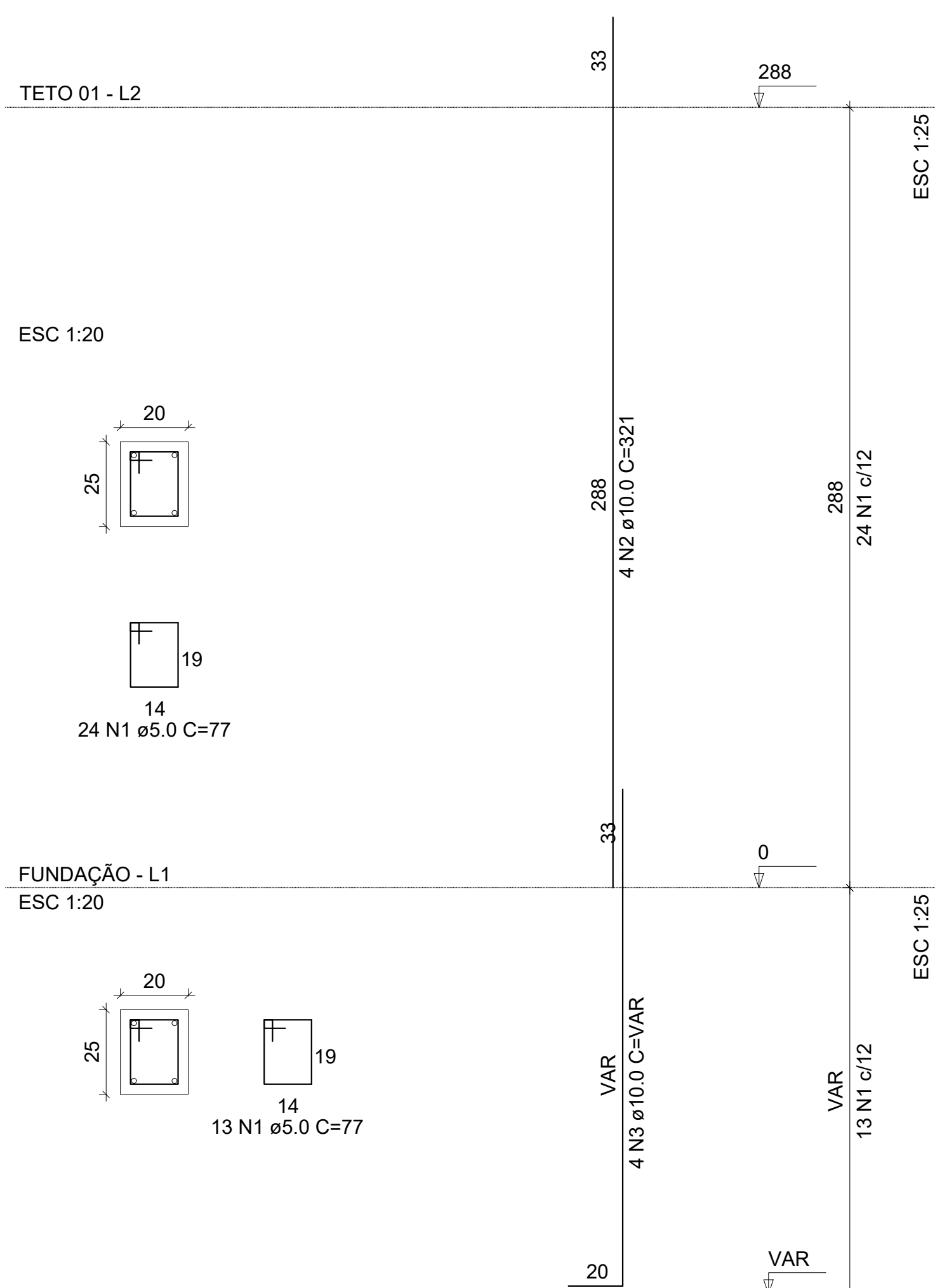
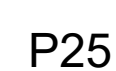
10/24



RELAÇÃO DO AÇO					
P21-L3		P22-L3		P23-L3	
P22-L2		P22-L2		P23-L2	
P24-L2		P21-L1		P22-L1	
P23-L1		P24-L1			
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5,0	220	77	16940
50	2	10,0	12	313	3756
	3	10,0	16	321	5136
	4	10,0	16	VAR	VAR

RESUMO DO AÇO			
AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	10.0	121.0	82.1
CA60	5.0	170.5	28.9
PESO TOTAL			
CA50	82.1		
CA60	28.9		

Vol. de concreto total (C-30) = 1.3 m³
Área de forma total = 23.33 m²



RELAÇÃO DO AÇO					
P25-L2		P25-L1			
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5.0	37	77	2849
50	2	10.0	4	321	1284
	3	10.0	4	VAR	VAR

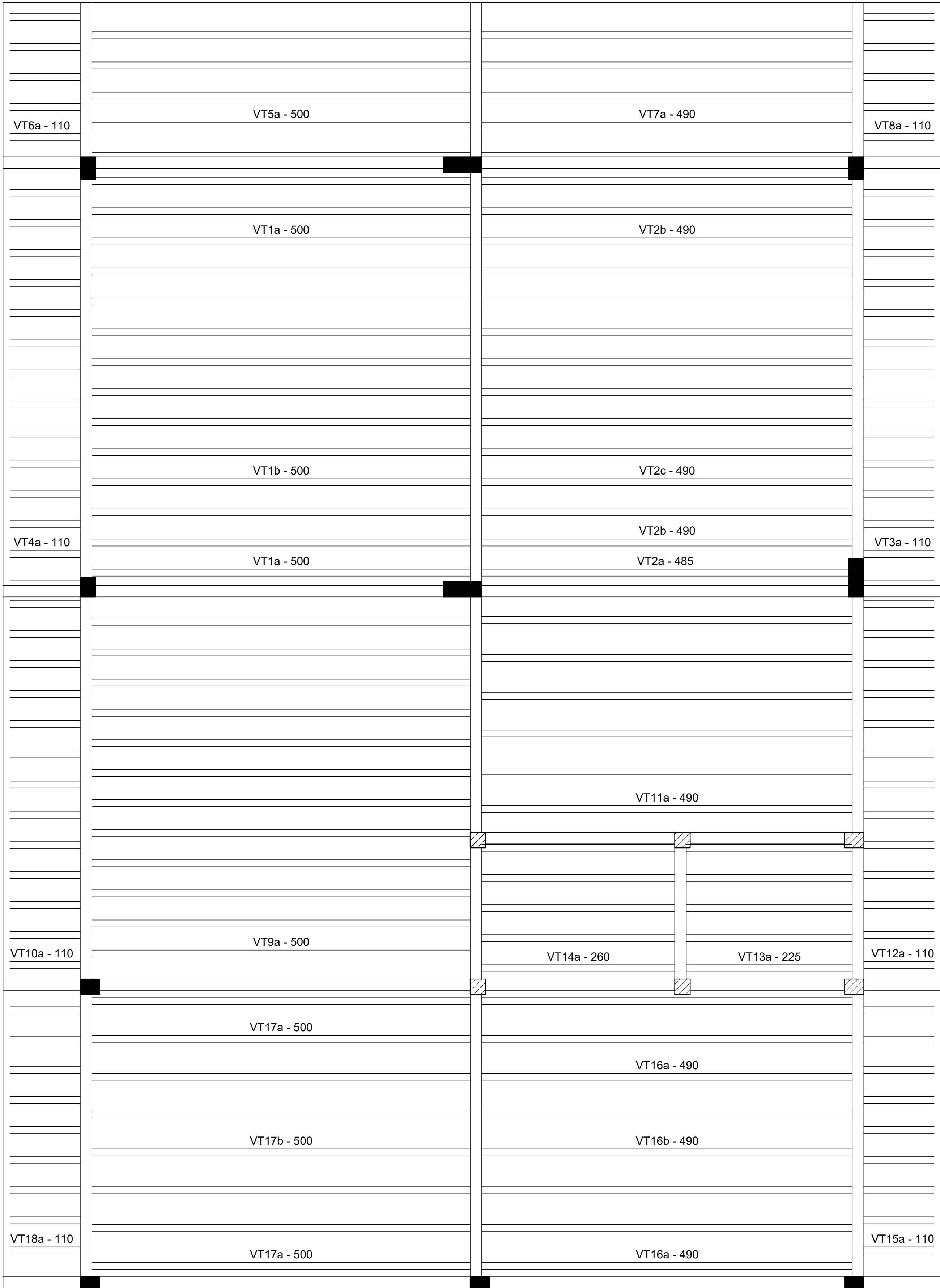
RESUMO DO AÇO			
AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	10.0	20.9	14.2
CA60	5.0	28.7	4.9
PESO TOTAL			
CA50	14.2		
CA60	4.9		

Vol. de concreto total (C-30) = 0.22 m³
Área de forma total = 3.94 m²

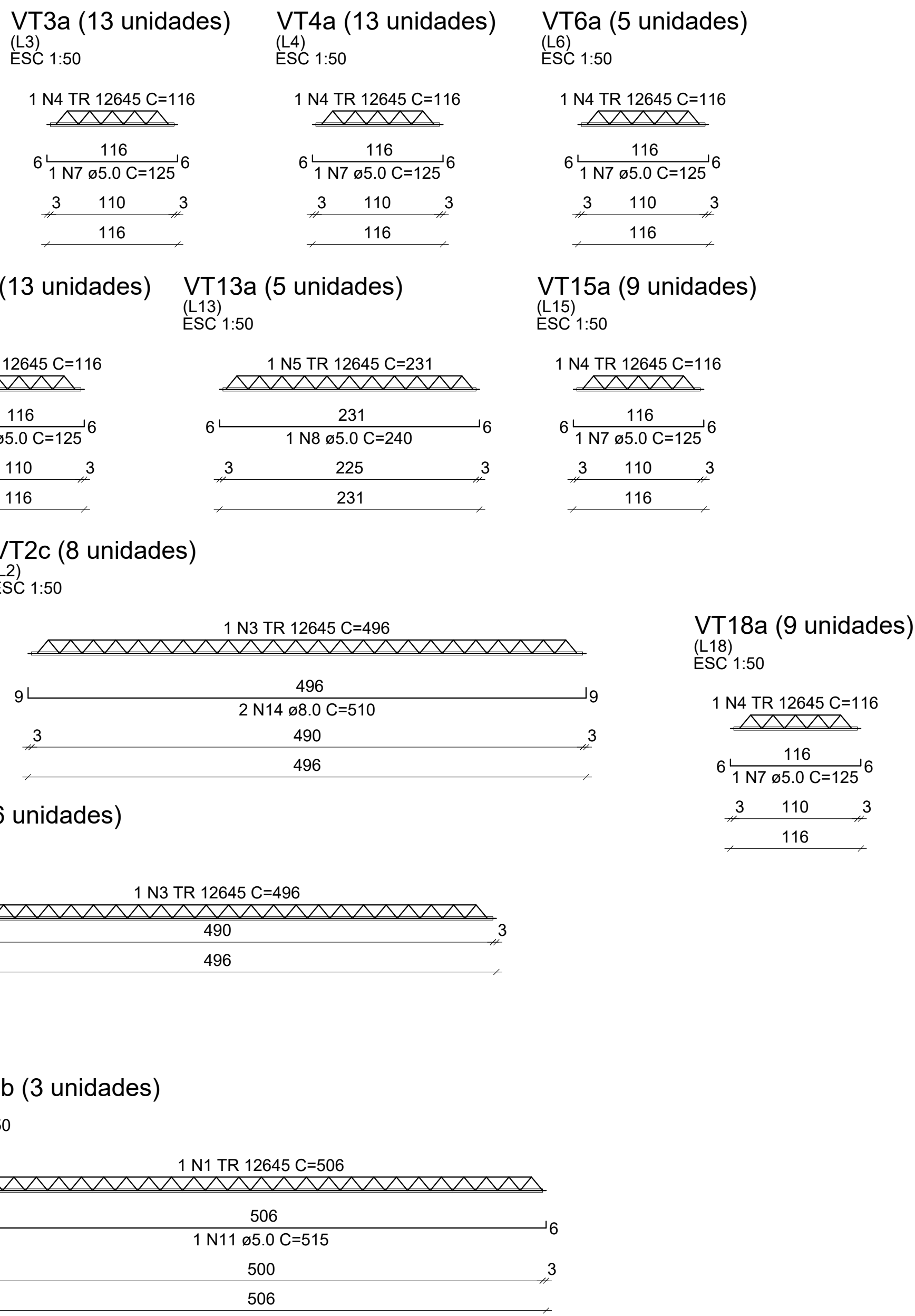
QUADRO DE REVISÕES			
REVISÃO	MODIFICAÇÃO		DATA
_____ PROPRIETARIO _____ PROJETO		APROVO	
PROJETO ESTRUTURAL			
RESPONSÁVEL ENGº CIVIL WESLEY RAFAEL DA COSTA-CREA-CE: 061562514-2			DESENHO
PROPRIETÁRIO SISAR RUSSAS-CE			ESCALA INDICADA
OBRA SEDE SISAR		LOCAL RUSSAS-CE	DATA ABR/2017
ASSUNTO ARMADURA DOS PILARES			PRANCHAS 11/24



ARMADURA POSITIVA LAJES DO TETO 01	



Planta de vigotas pré-moldadas
escala 1:50

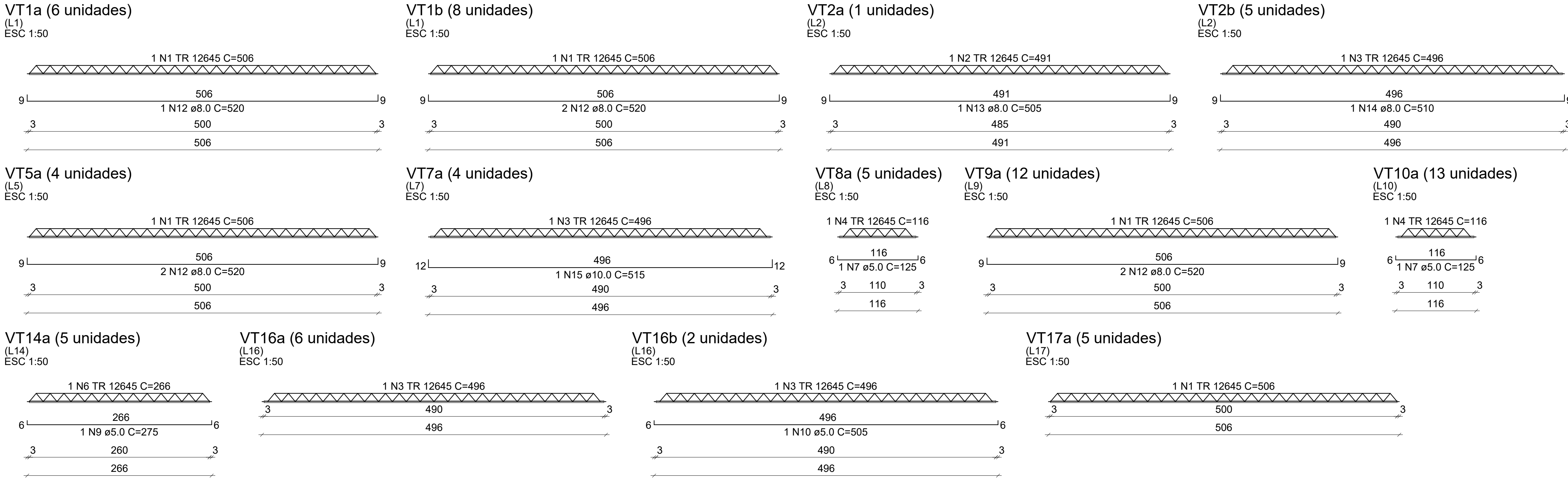


RELAÇÃO DO AÇO					
6xVT1a (L3) ESC 1:50	8xVT1b 5xVT2b 13xVT4a 4xVT7a 13xVT10a 5xVT13a 6xVT16a 3xVT17b	13xVT3a 5xVT6a 12xVT9a 13xVT12a 9xVT15a 2xVT16b 5xVT17a	VT2a	UNIT (cm)	C.TOTAL (cm)
60	1	TR 12645	38	506	19228
	2	TR 12645	1	491	491
	3	TR 12645	31	496	15376
	4	TR 12645	80	116	9280
	5	TR 12645	5	231	1155
	6	TR 12645	5	266	1330
	7	5.0	80	125	10000
	8	5.0	5	240	1200
	9	5.0	5	275	1375
	10	5.0	2	505	1010
	11	5.0	3	515	1545
	12	8.0	54	520	28080
	13	8.0	1	505	505
	14	8.0	21	510	10710
	15	10.0	4	515	2060

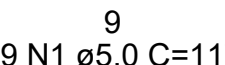
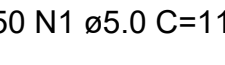
RESUMO DO AÇO			
AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	8.0	393.2	170.9
CA60	10.0	20.6	14.0
	TR 12645	468.6	458.8
		151.8	25.7

PESO TOTAL	
CA50	184.9
CA60	484.5

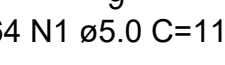
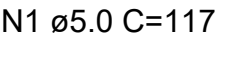
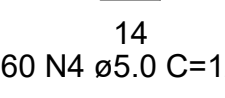
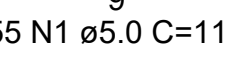
Área de forma total = 0.00 m²

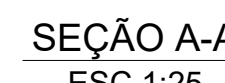
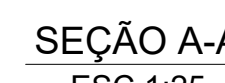
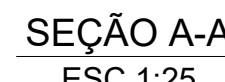


QUADRO DE REVISÕES		
REVISÃO	MODIFICAÇÃO	DATA
_____ PROPRIETARIO _____ PROJETO		APROVO
PROJETO ESTRUTURAL		
RESPONSÁVEL ENGº CIVIL WESLEY RAFAEL DA COSTA-CREA-CE: 061562514-2		DESENHO
PROPRIETARIO SISAR RUSSAS-CE		ESCALA INDICADA
OBRA SEDE SISAR	LOCAL RUSSAS-CE	DATA ABR/2017
ASSUNTO FORMA E ARMADURA POSITIVA DO TETO 02		PRANCHA 21/24

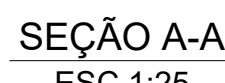
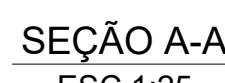


Vol. de concreto total (C-30) = 8.51 m³
Área de forma total = 122.02 m²

16/24

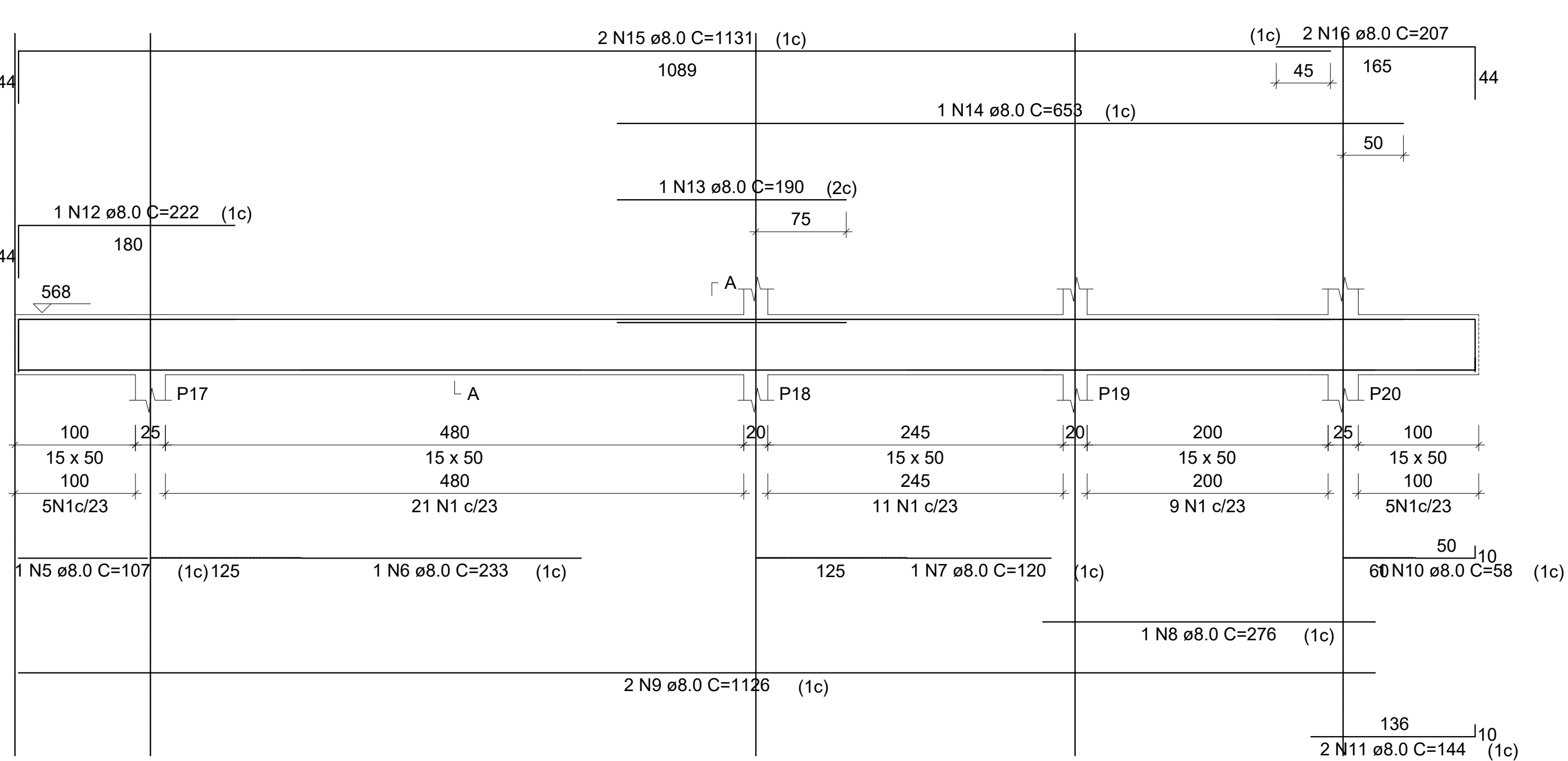


ACO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5.0	167	2	21209
	2	5.0	2	2332	40
	3	5.0	2	1258	516
	4	5.0	91	117	10647
	5	5.0	104	147	15288
	6	5.0	15	1617	2612
	7	5.0	2	225	450
	8	5.0	2	228	456
	9	5.0	12	97	1164
50	10	6.3	8	449	3592
	11	6.3	8	369	2952
	12	6.3	1	145	145
	13	6.3	8	1074	8580
	14	8.0	1	272	272
	15	8.0	3	612	1836
	16	8.0	1	268	268
	17	8.0	1	343	343
	18	8.0	3	578	1734
	19	8.0	1	95	95
	20	8.0	1	160	160
	21	8.0	1	332	332
	22	8.0	2	537	1074
	23	8.0	6	204	1224
	24	8.0	5	92	460
	25	8.0	1	240	240
	26	8.0	1	310	310
	27	8.0	2	450	900
	28	8.0	2	295	590
	29	8.0	2	403	806
	30	8.0	1	200	200
	31	8.0	1	175	175
	32	8.0	3	122	366
	33	8.0	4	1060	4240
	34	8.0	1	169	169
	35	8.0	2	209	418
	36	8.0	1	233	233
	37	8.0	1	323	323
	38	8.0	1	218	218
	39	8.0	1	283	283
	40	8.0	1	198	198
	41	8.0	3	234	702
	42	8.0	1	180	180
	43	8.0	1	250	250
	44	8.0	2	244	488
	45	8.0	2	373	1454
	46	8.0	4	85	340
	47	8.0	2	282	624
	48	10.0	4	297	598
	49	10.0	2	480	960
	50	10.0	2	250	500
	51	10.0	1	330	330
	52	10.0	1	375	375
	53	10.0	1	440	880
	54	10.0	2	252	504
	55	10.0	1	215	215
	56	10.0	2	560	1120
	57	10.0	1	184	184
	58	10.0	2	573	446
	59	10.0	1	574	1722
	60	10.0	1	754	1488
	61	12.5	1	505	1010
	62	12.5	1	255	255
	63	12.5	1	300	300
	64	12.5	1	270	270
	65	12.5	2	1191	2382
	66	12.5	2	202	404
	67	12.5	3	588	1764
	68	12.5	5	221	442
	69	12.5	1	198	198
	70	12.5	2	634	1268
	71	12.5	1	132	132
	72	12.5	2	1045	2090
	73	12.5	1	197	197
	74	12.5	2	575	1150
	75	12.5	1	208	208
	76	12.5	1	257	257

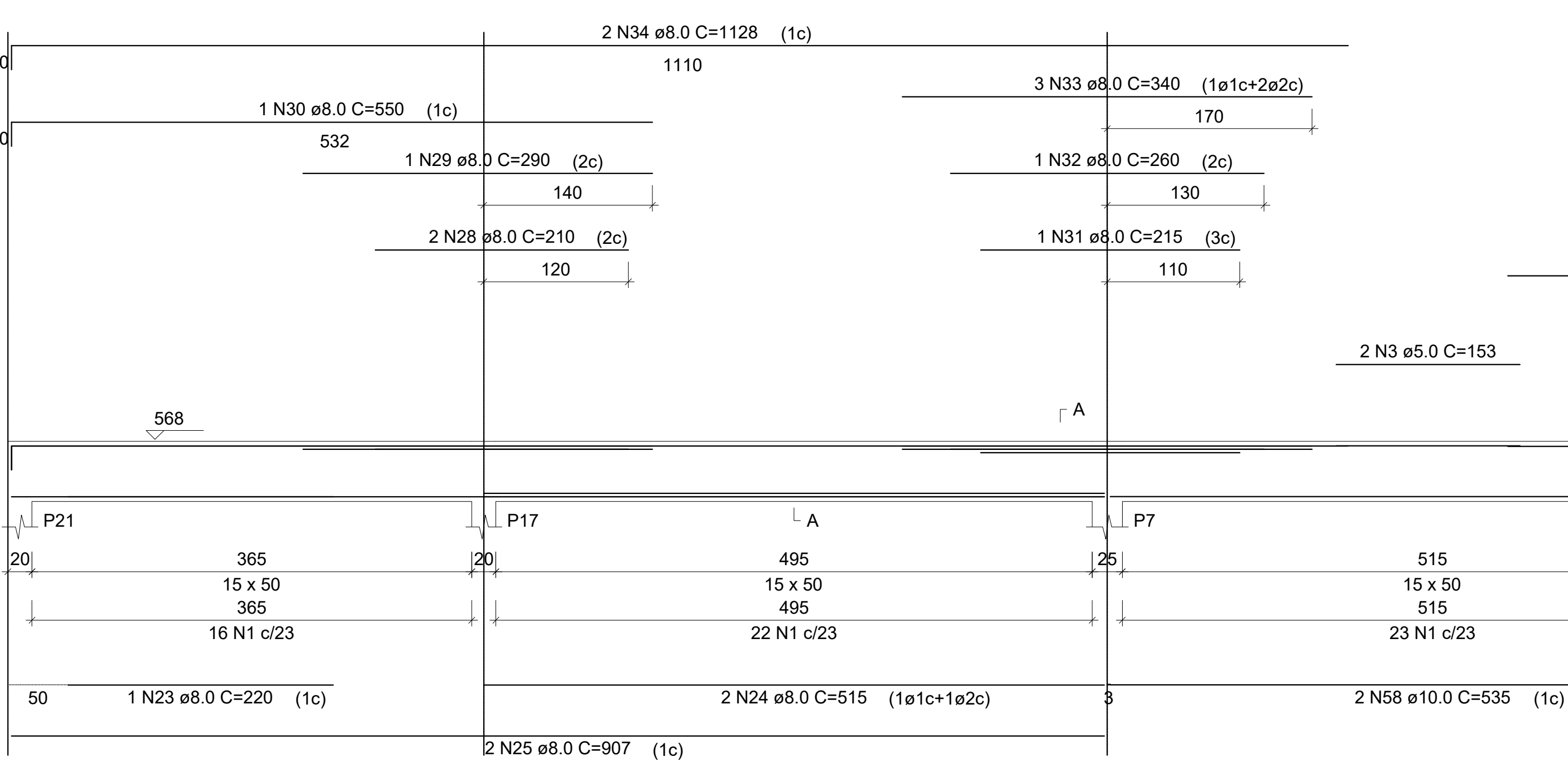


QUADRO DE REVISÕES			
REVISÃO	MODIFICAÇÃO		DATA
_____ PROPRIETARIO _____ PROJETO		APROVO	
PROJETO ESTRUTURAL			
RESPONSÁVEL			DESENHO
ENGº CIVIL WESLEY RAFAEL DA COSTA-CREA-CE: 061562514-2			
PROPRIETÁRIO			ESCALA
SISAR RUSSAS-CE			INDICADA
OBRA	LOCAL	DATA	PRANCHA
SEDE SISAR	RUSSAS-CE	ABR/2017	
ASSUNTO			17/24
ARMADURA VIGAS TETO 01			

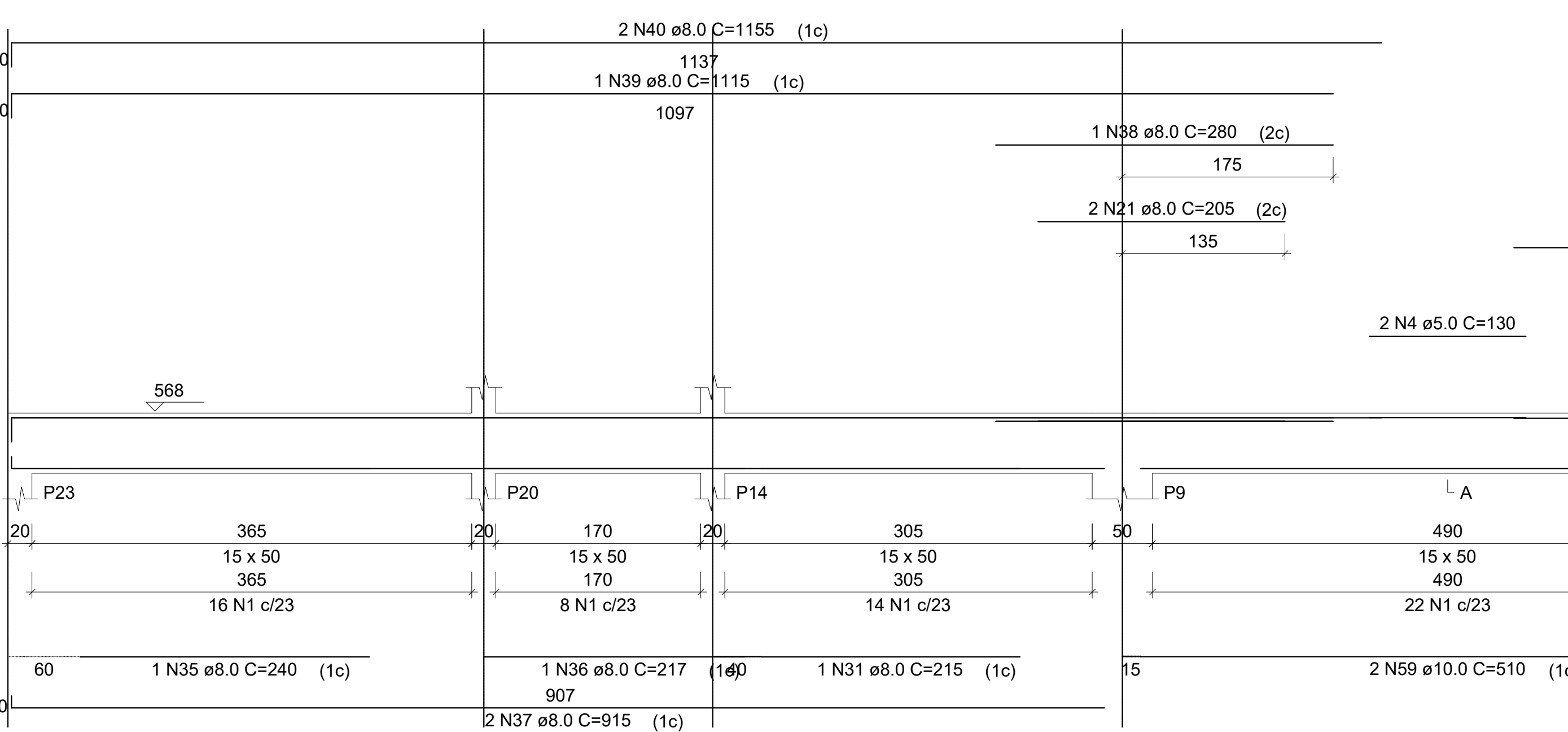
V3
ESC 1:50



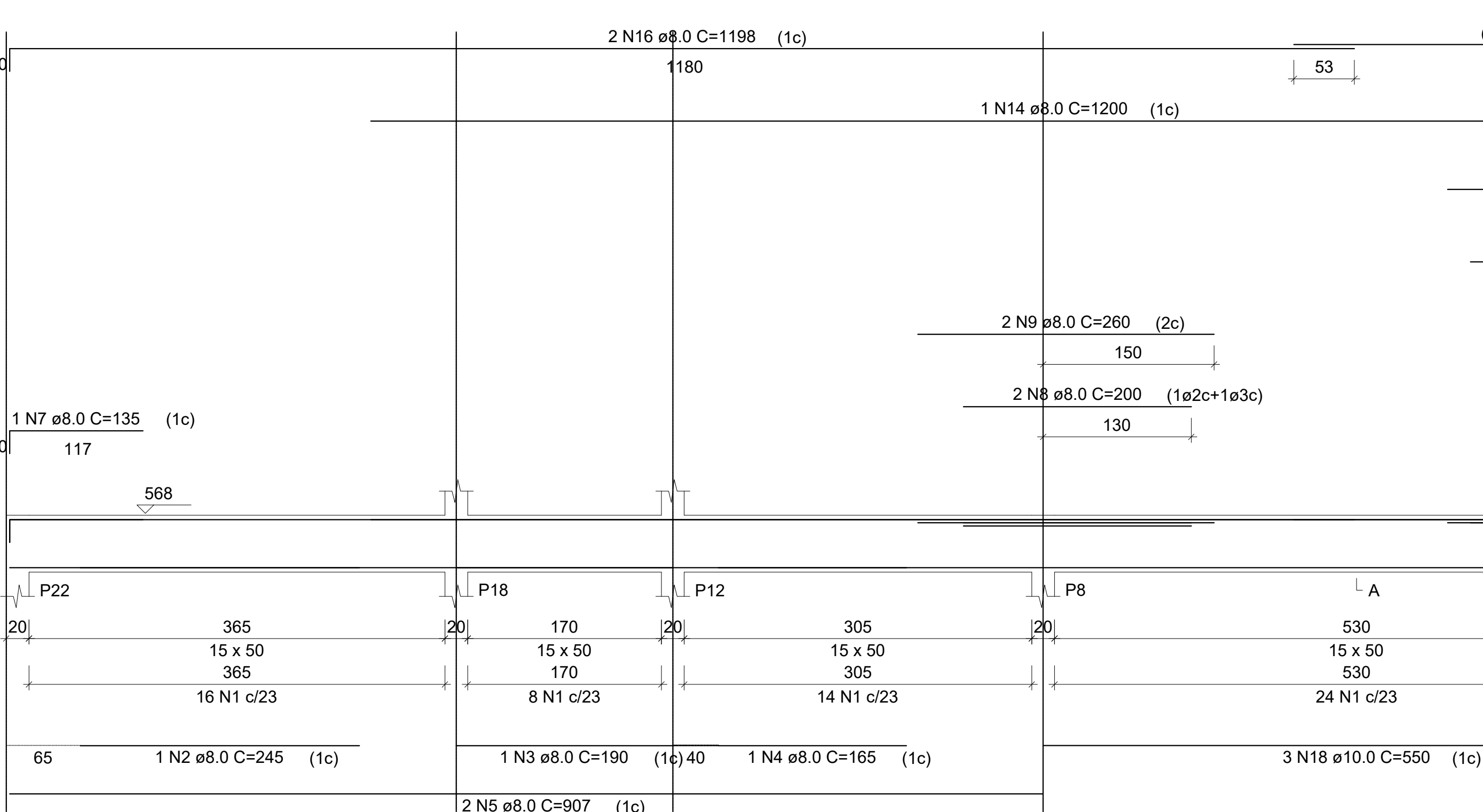
V5
ESC 1:50



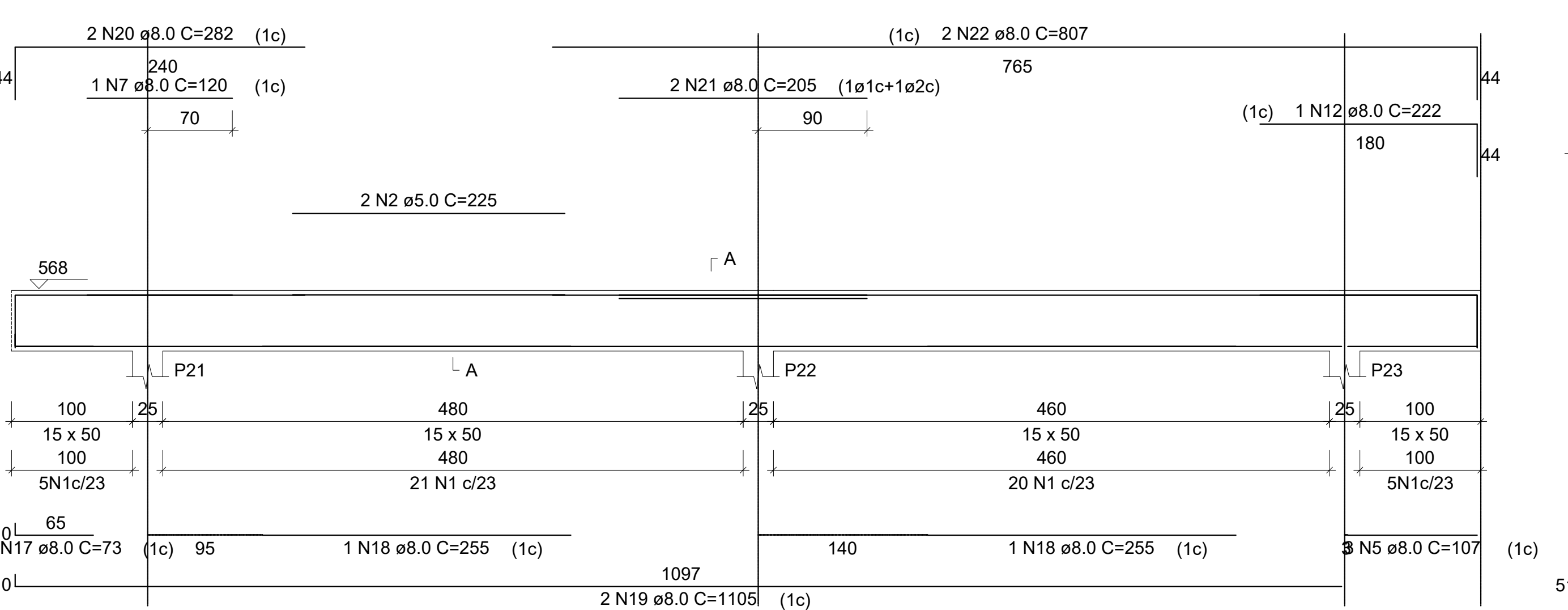
V7
ESC 1:50



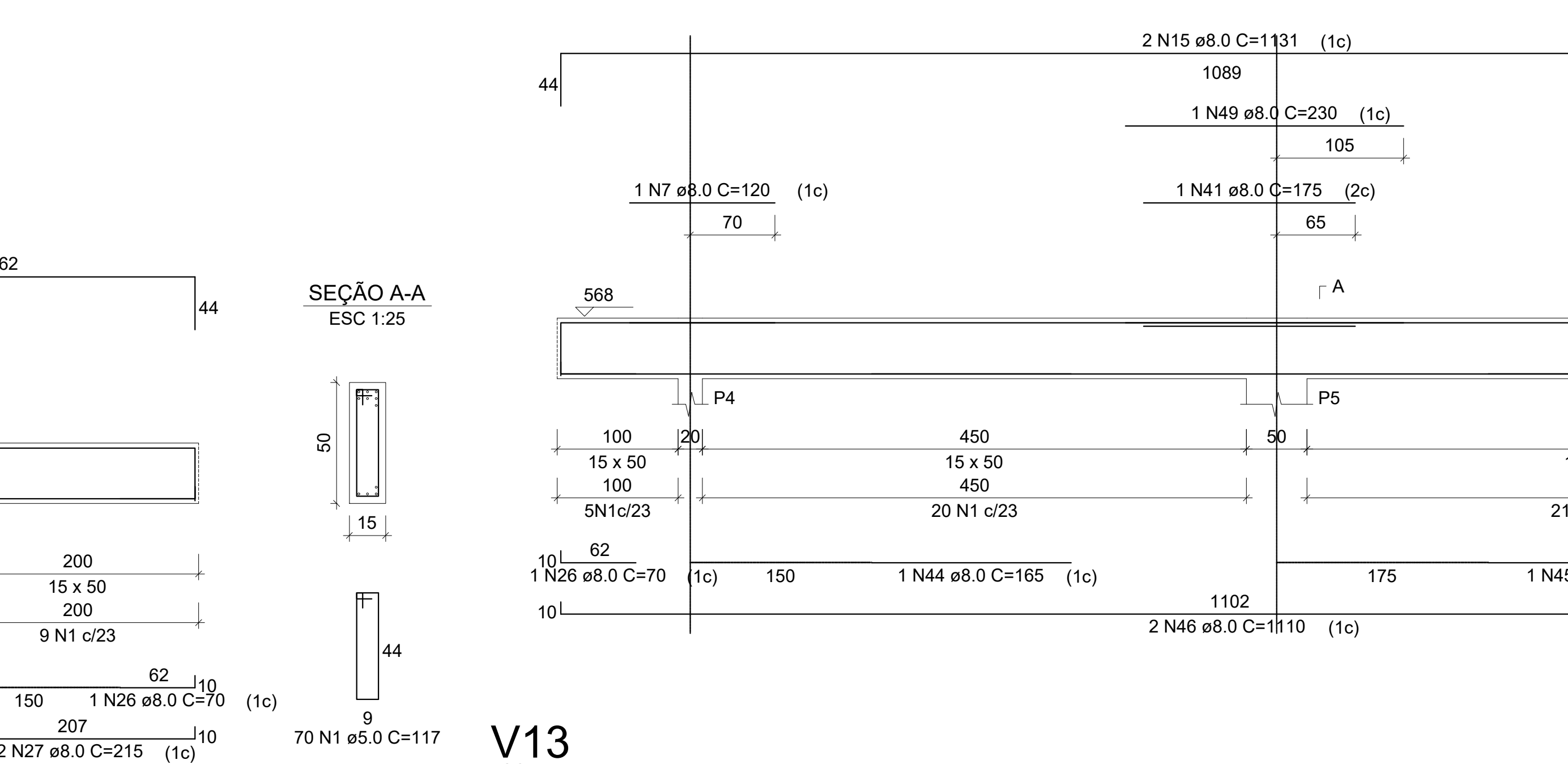
V14
ESC 1:50



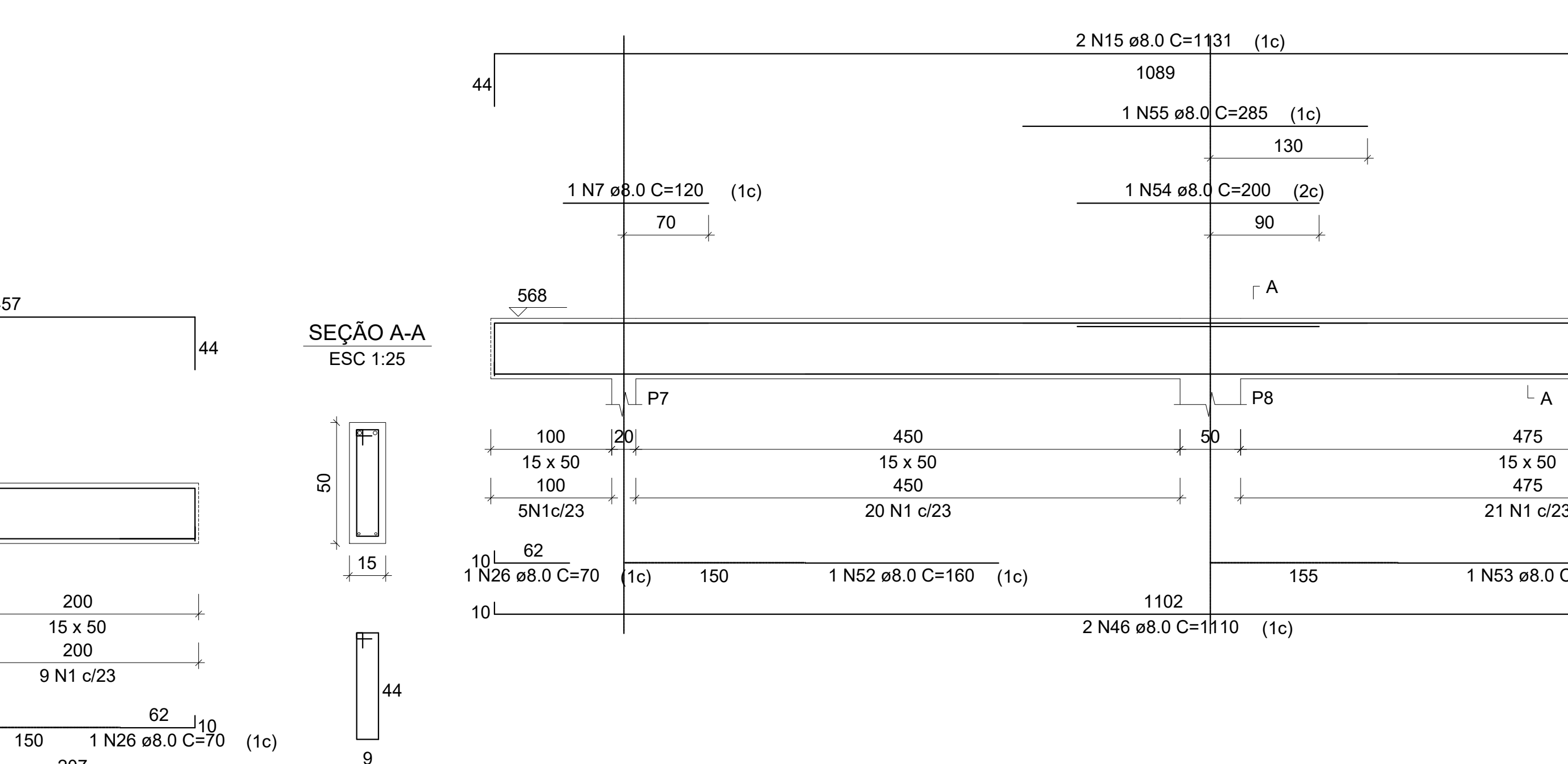
V4
ESC 1:50



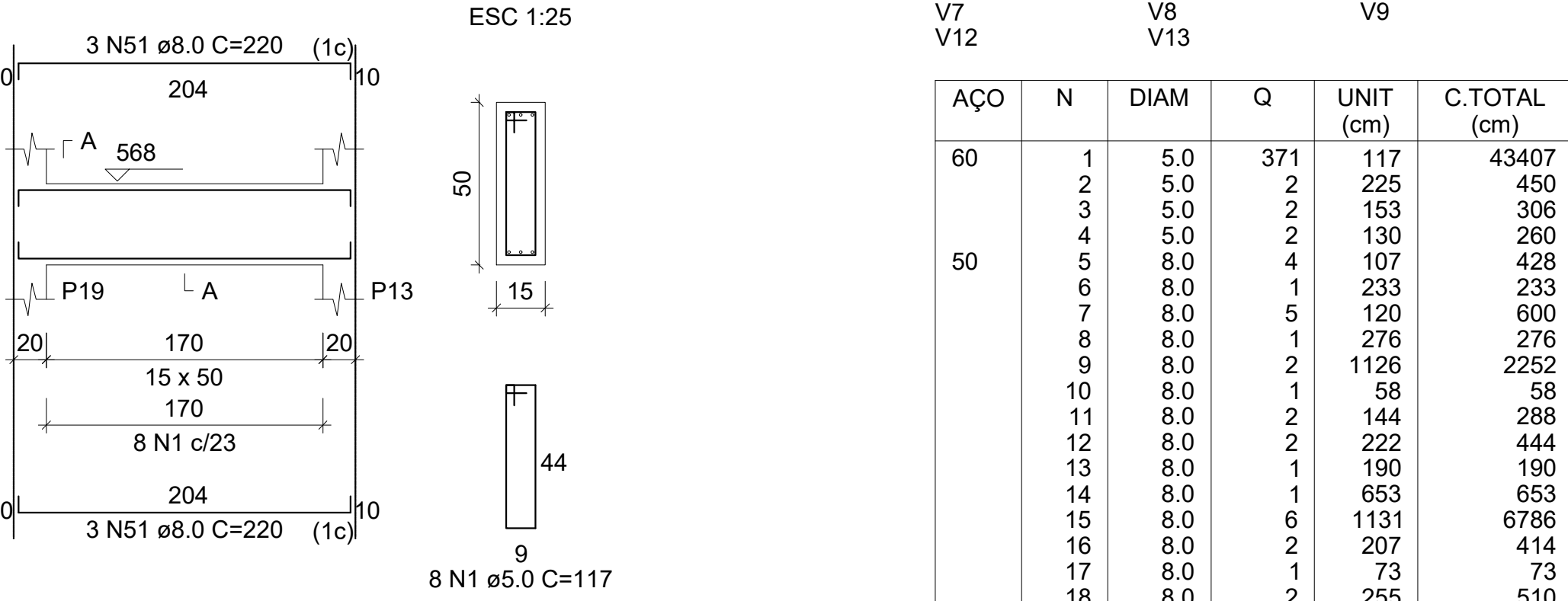
V9
ESC 1:50



V13
ESC 1:50



V12
ESC 1:50

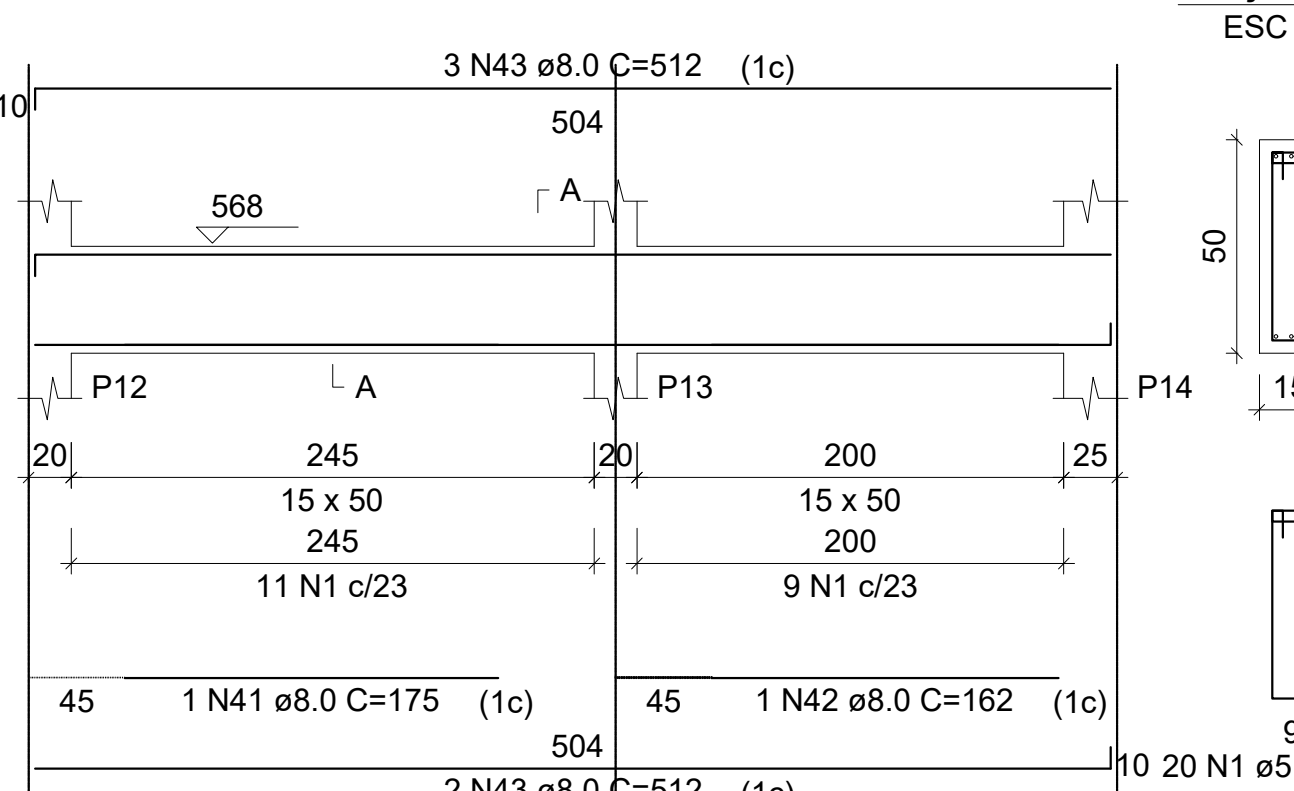


RELAÇÃO DO AÇO					
V3 V7 V12	V4 V8 V13	V5 V9			
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5.0	371	117	43407
	2	5.0	2	225	450
	3	5.0	2	153	306
	4	5.0	2	130	260
	5	8.0	4	107	428
	6	8.0	1	233	233
	7	8.0	5	120	600
	8	8.0	1	276	276
	9	8.0	2	1126	2252
	10	8.0	1	58	58
	11	8.0	2	144	288
	12	8.0	2	222	444
	13	8.0	1	190	190
	14	8.0	1	653	653
	15	8.0	6	1131	6786
	16	8.0	4	207	414
	17	8.0	1	73	73
	18	8.0	2	255	510
	19	8.0	2	1105	2210
	20	8.0	2	282	564
50	21	8.0	4	205	820
	22	8.0	2	807	1614
	23	8.0	1	220	220
	24	8.0	2	515	1030
	25	8.0	2	907	1814
	26	8.0	1	70	70
	27	8.0	4	215	860
	28	8.0	2	210	420
	29	8.0	1	290	290
	30	8.0	1	550	550
	31	8.0	2	215	430
	32	8.0	1	260	260
	33	8.0	3	340	1020
	34	8.0	2	1128	2256
	35	8.0	1	240	240
	36	8.0	1	217	217
	37	8.0	2	915	1830
	38	8.0	1	280	280
	39	8.0	1	1115	1115
40	40	8.0	2	1155	2310
	41	8.0	2	175	350
	42	8.0	1	162	162
	43	8.0	5	512	2560
	44	8.0	1	165	165
	45	8.0	1	185	185
	46	8.0	4	1110	4440
	47	8.0	1	55	55
	48	8.0	5	115	575
	49	8.0	1	230	230
	50	8.0	2	210	420
	51	8.0	6	220	1320
	52	8.0	1	160	160
	53	8.0	1	235	235
	54	8.0	1	200	200
	55	8.0	1	285	285
	56	8.0	1	219	219
	57	8.0	2	215	430
	58	10.0	2	535	1070
	59	10.0	2	510	1020
CA50	60	16.0	2	462	924
	61	16.0	2	457	914

RESUMO DO AÇO			
AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)
CA50	8.0	458.4	199.2
	10.0	20.9	14.2
CA60	5.0	446.1	32.0
	5.0		75.6
PESO TOTAL		245.4	
CA50			
CA60			

Vol. de concreto total (C-30) =6.69 m³
Área de forma total = 102.58 m²

V8
ESC 1:50



SEÇÃO A-A
ESC 1:25

RELAÇÃO DO AÇO

V14

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5.0	71	117	8307
	2	8.0	1	245	245
	3	8.0	1	190	190
	4	8.0	1	165	165
	5	8.0	2	907	1814
	6	8.0	3	215	645
	7	8.0	1	135	135
	8	8.0	2	200	400
	9	8.0	2	260	520
	10	8.0	2	210	420
50	11	8.0	2	270	540
	12	8.0	2	335	670
	13	8.0	1	395	395
	14	8.0	1	1200	1200
	15	8.0	1	242	242
	16	8.0	2	1198	2396
	17	8.0	2	579	1158
	18	10.0	3	550	1650
RESUMO DO AÇO					
AÇO	DIAM	C.TOTAL (m)	PESO+10% (kg)		
CA50	8.0	111.4	48.4		
	10.0	16.5	11.2		
CA60	5.0	83.4	14.1		
PESO TOTAL		59.6			
CA50					
CA60					

Vol. de concreto total (C-30) =1.25 m³
Área de forma total = 19.21 m²

QUADRO DE REVISÕES

REVISÃO	MODIFICAÇÃO	DATA

PROPRIETARIO	
PROJETO	
APROVO	

PROJETO ESTRUTURAL

RESPONSÁVEL	DESENHO
ENGº CIVIL WESLEY RAFAEL DA COSTA-CREA-CE: 061562514-2	
PROPRIETARIO	ESCALA
SISAR RUSSAS-CE	INDICADA
OBRA	DATA
SEDE SISAR	ABR/2017
ASSUNTO	PRANCHA
ARMADURA DAS VIGAS DO TETO 02	22/24