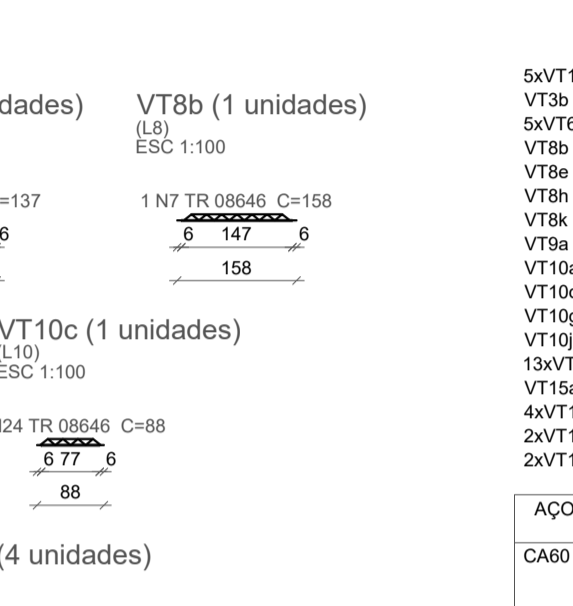
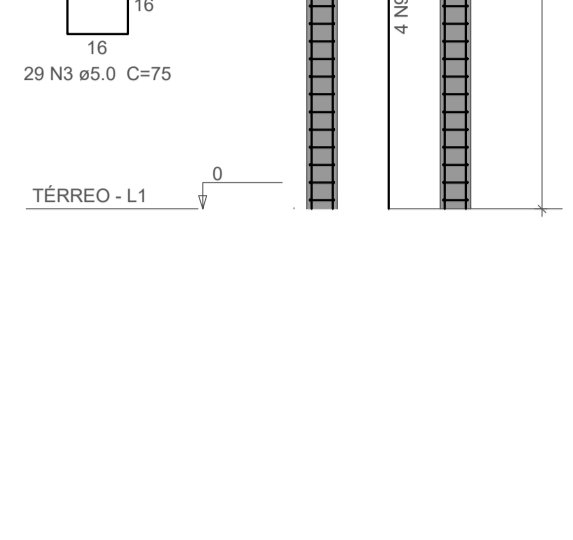
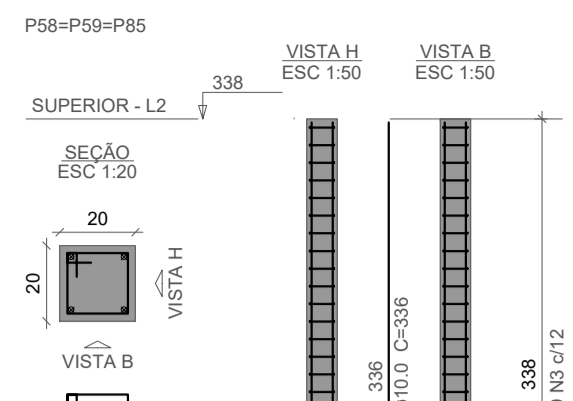
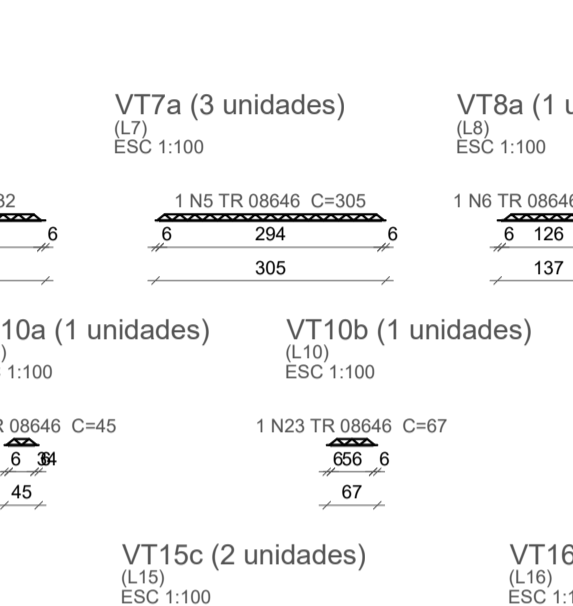
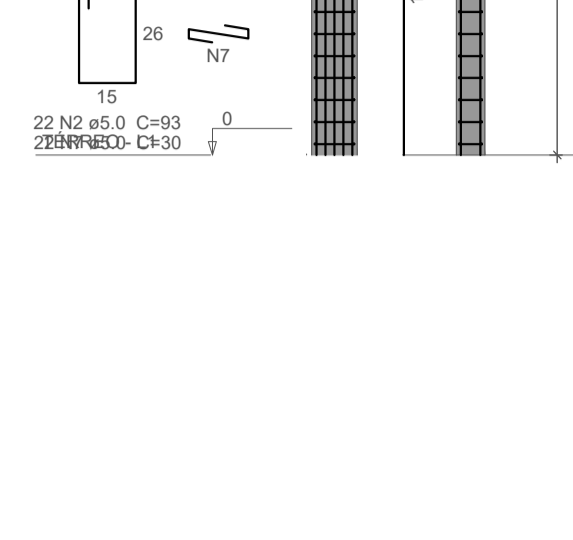
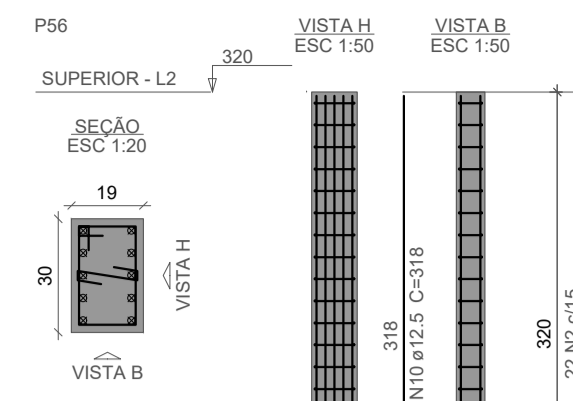
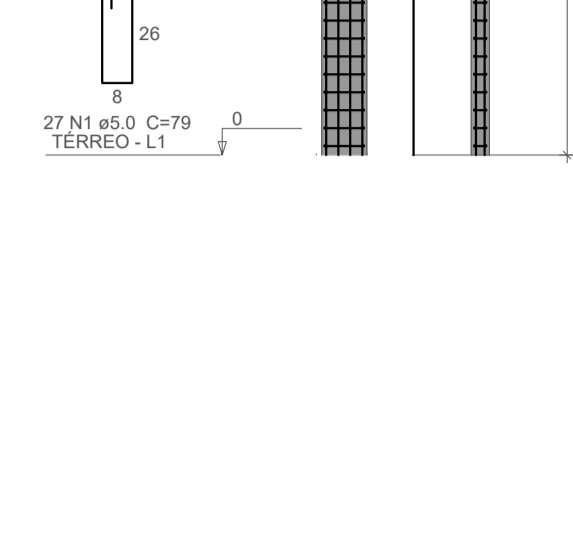
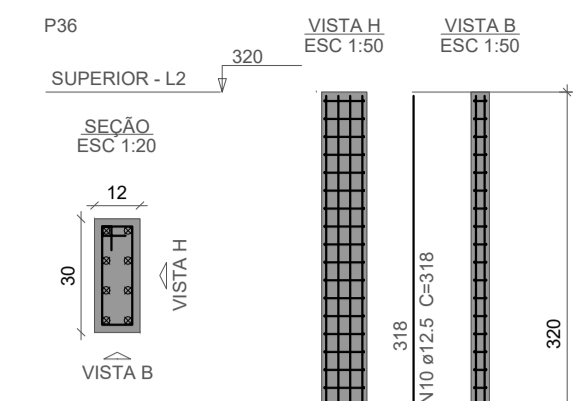
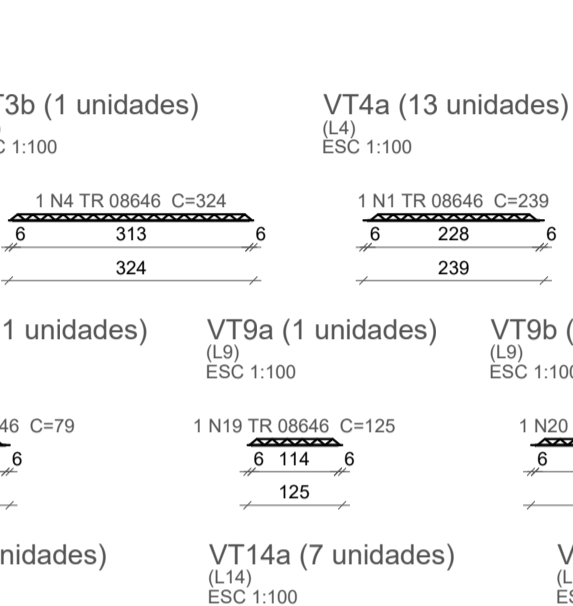
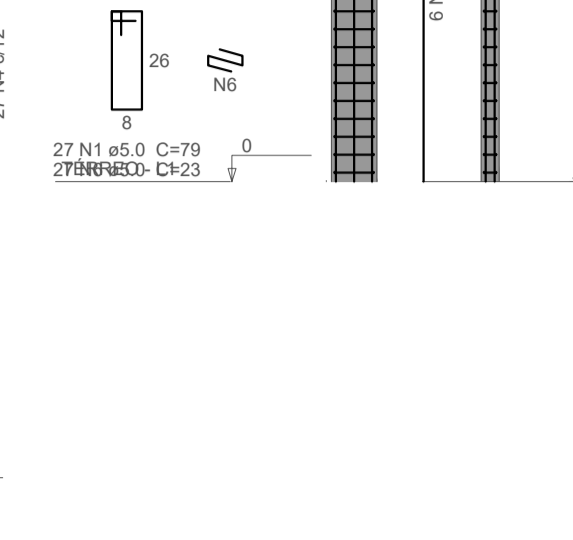
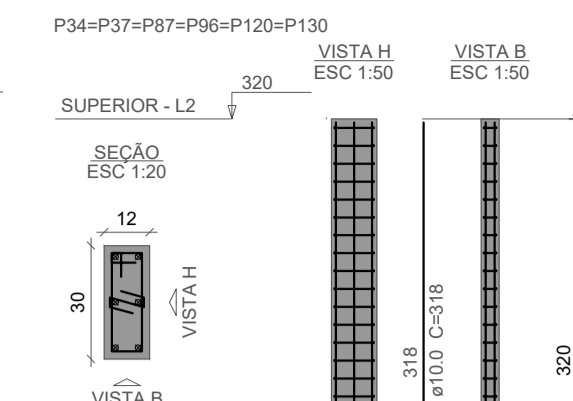
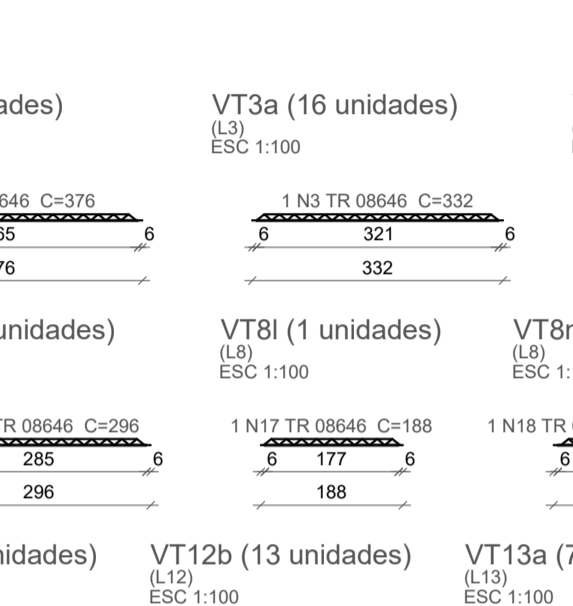
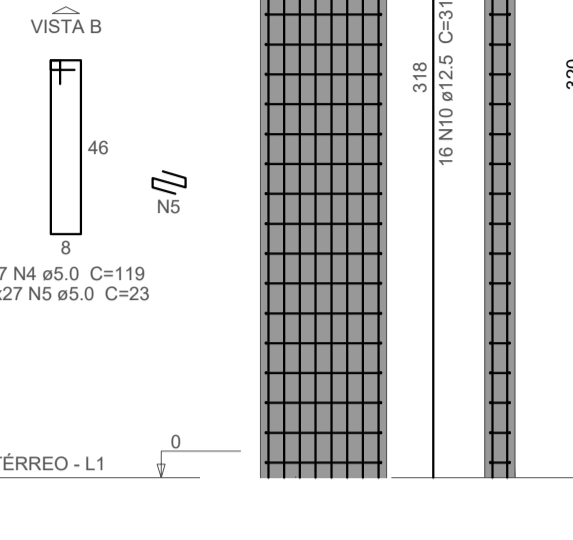
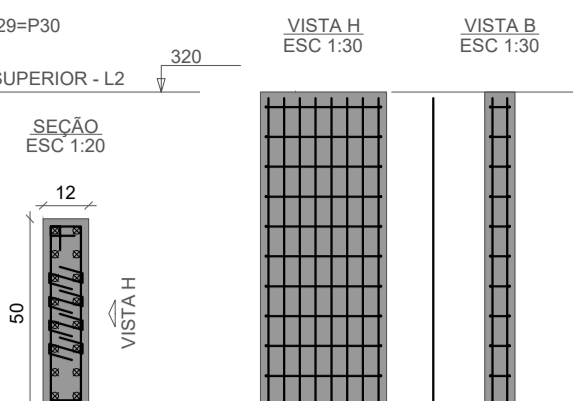
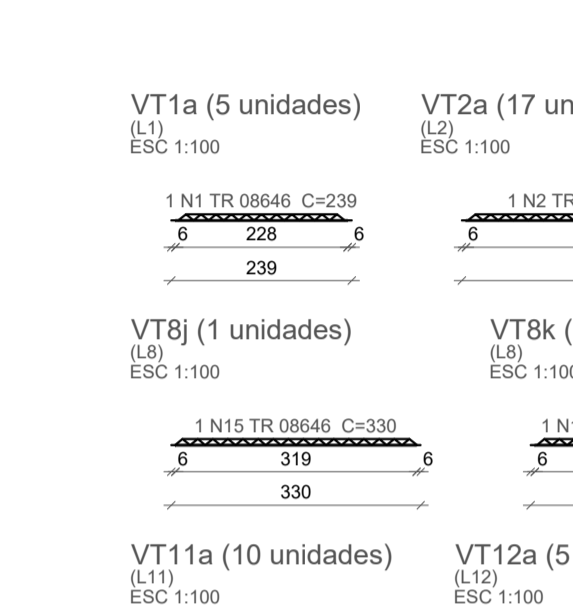
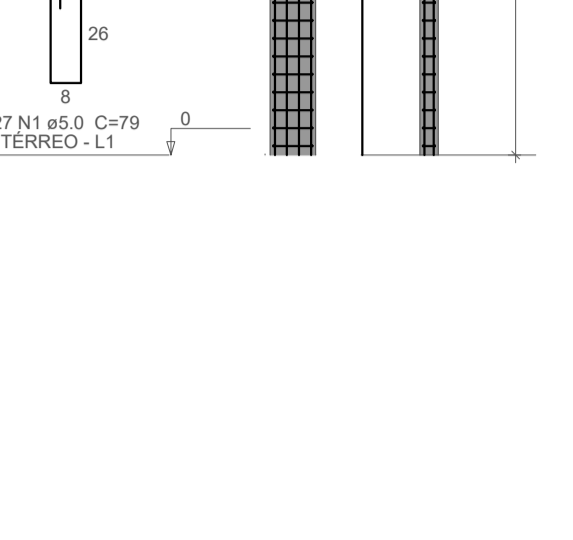
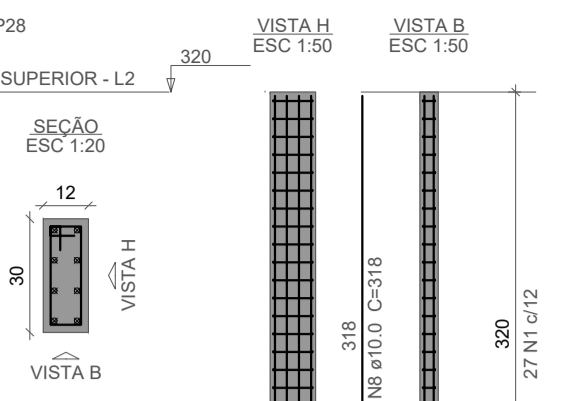
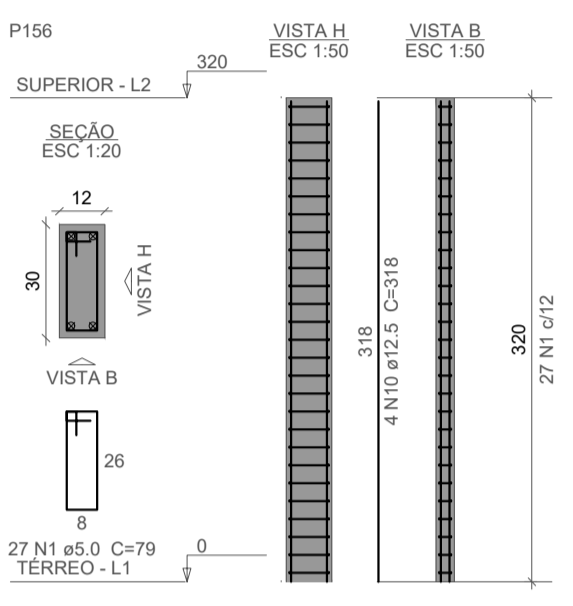
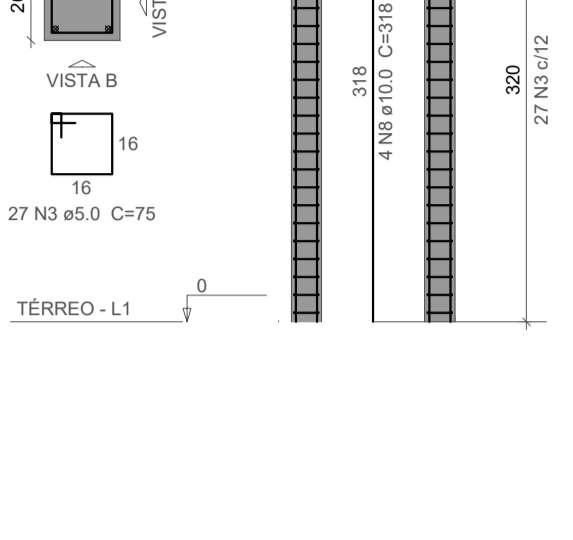
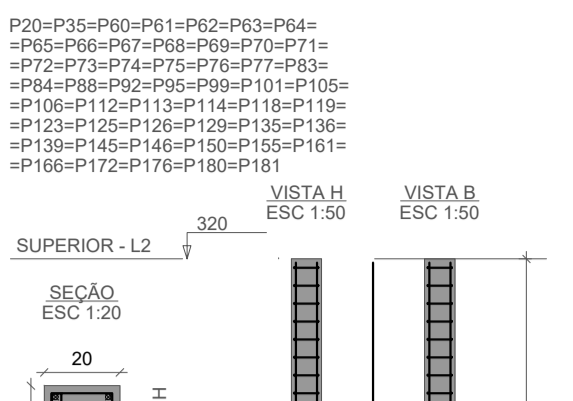
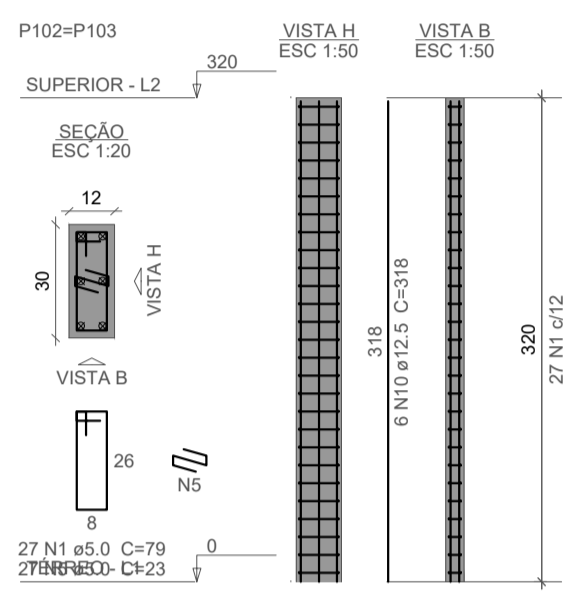
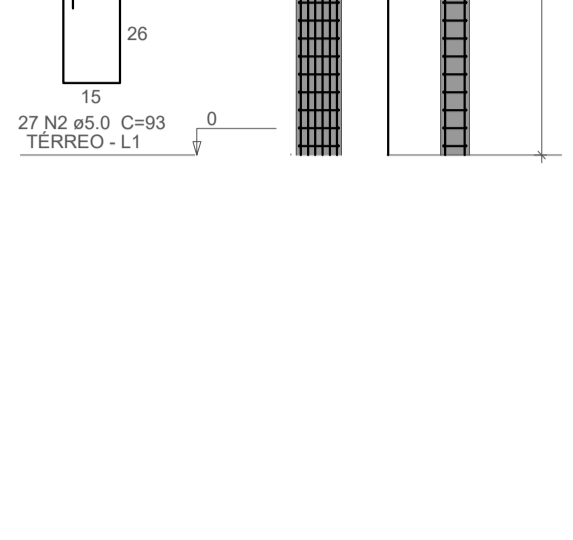
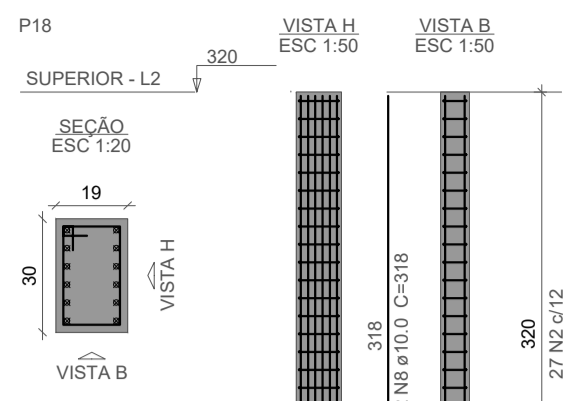
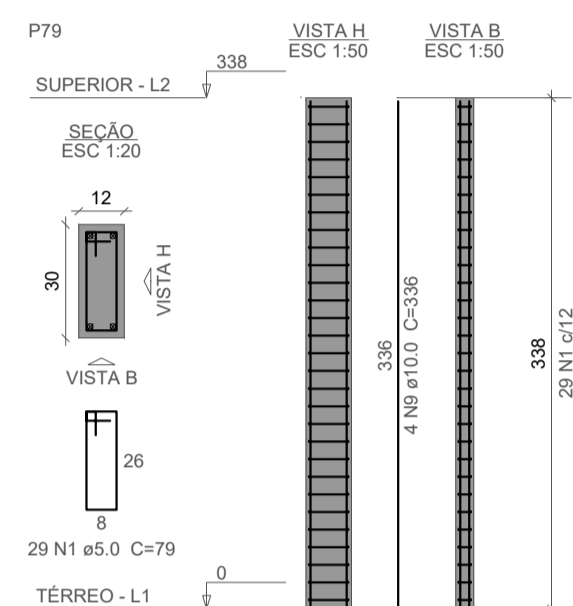
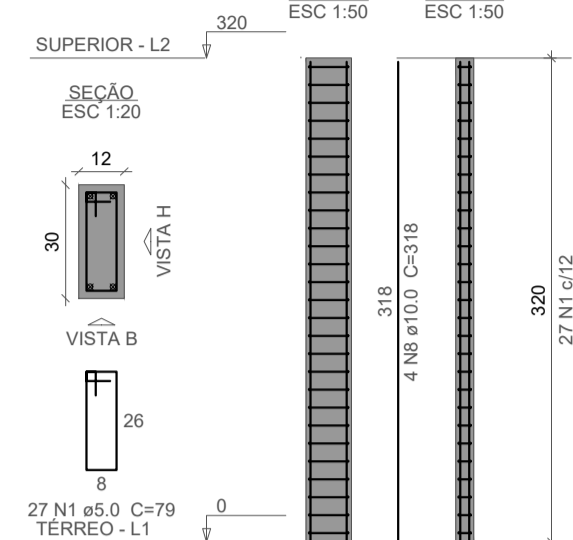


P1+P2+P3+P4+P5+P6+P7+P8+P9+
 P10+P11+P12+P13+P14+P15+P16+
 P17+P18+P19+P20+P21+P22+P23+P24+P25+
 P26+P27+P28+P29+P30+P31+P32+P33+P34+P35+
 P36+P37+P38+P39+P40+P41+P42+P43+P44+P45+P46+
 P47+P48+P49+P50+P51+P52+P53+
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 P158+P159+P160+P161+P162+P163+P164+
 P165+P166+P167+P168+P169+P170+
 P171+P172+P173+P174+P175+P176+
 P177+P178+P179



Relação do aço

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	3323	79	262517
	2	5.0	49	93	4557
	3	5.0	1464	75	109800
	4	5.0	54	119	6426
	5	5.0	270	23	6210
	6	5.0	162	23	3726
CA50	7	6.0	22	30	660
	8	10.0	704	318	223872
	9	10.0	16	336	5376
	10	12.5	66	318	20988

Resumo do aço

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	2292.5	1554.7
CA60	12.5	209.9	222.4
			3938
PESO TOTAL (kg)			1777.1
CA50			1777.1
CA60			667.8

Volume de concreto (C-25) = 21.86 m³
 Área de forma = 483.66 m²

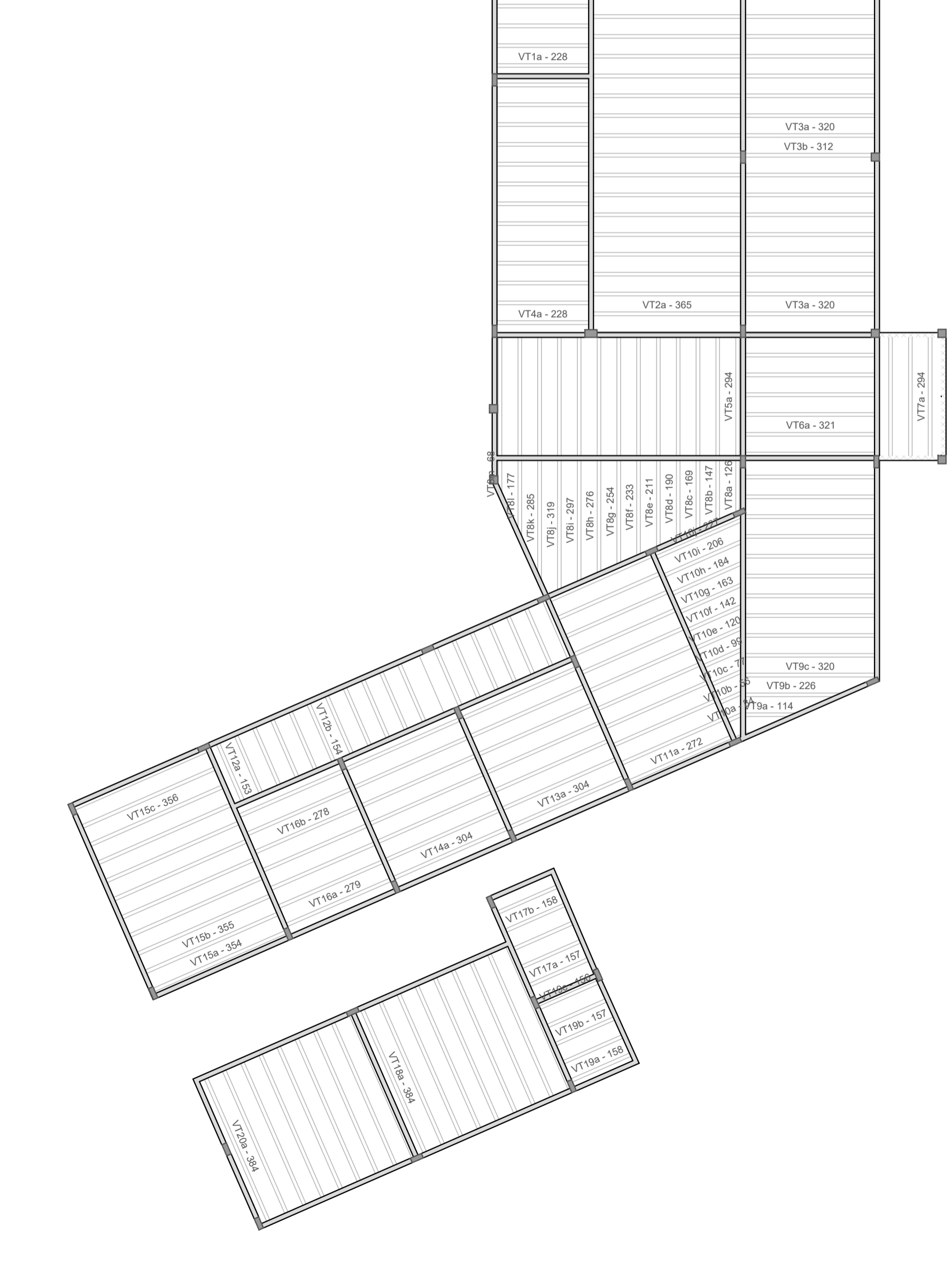
Relação do aço

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	TR 08646	18	239	4302
	2	TR 08646	17	376	6392
	3	TR 08646	21	332	6972
	4	TR 08646	1	324	324
	5	TR 08646	16	305	4880
	6	TR 08646	1	137	137
	7	TR 08646	1	158	158
	8	TR 08646	1	180	180
	9	TR 08646	1	201	201
	10	TR 08646	1	222	222
	11	TR 08646	1	244	244
	12	TR 08646	1	265	265
	13	TR 08646	1	287	287
	14	TR 08646	1	308	308
15	TR 08646	1	330	330	
16	TR 08646	1	296	296	
17	TR 08646	1	188	188	
18	TR 08646	1	79	79	
19	TR 08646	1	125	125	
20	TR 08646	1	237	237	
21	TR 08646	11	331	3641	
22	TR 08646	1	45	45	
23	TR 08646	1	67	67	
24	TR 08646	1	88	88	
25	TR 08646	1	110	110	
26	TR 08646	1	131	131	
27	TR 08646	1	153	153	
28	TR 08646	1	174	174	
29	TR 08646	1	195	195	
30	TR 08646	1	217	217	
31	TR 08646	1	238	238	
32	TR 08646	10	293	2930	
33	TR 08646	5	164	820	
34	TR 08646	13	165	2145	
35	TR 08646	14	315	4410	
36	TR 08646	1	365	365	
37	TR 08646	7	366	2562	
38	TR 08646	2	367	156	
39	TR 08646	4	290	1160	
40	TR 08646	3	289	867	
41	TR 08646	5	168	840	
42	TR 08646	4	169	676	
43	TR 08646	16	395	6320	
44	TR 08646	1	167	167	

Resumo do aço

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA60	TR 08646	550.9	582.3
PESO TOTAL (kg)			582.3

01 Pilares do pavimento Cobertura (Nível 320)
 Escala: indicada



03 Vigotas
 Escala: 1/100

VT1a (5 unidades)	VT2a (17 unidades)	VT3a (16 unidades)	VT3b (1 unidades)	VT4a (13 unidades)	VT5a (13 unidades)	VT6a (5 unidades)	VT7a (3 unidades)	VT8a (1 unidades)	VT8b (1 unidades)
1 N1 TR 08646 C=239 6 228 6 239	1 N2 TR 08646 C=376 6 365 6 376	1 N3 TR 08646 C=332 6 321 6 332	1 N4 TR 08646 C=324 6 313 6 324	1 N1 TR 08646 C=239 6 228 6 239	1 N5 TR 08646 C=305 6 294 6 305	1 N3 TR 08646 C=332 6 321 6 332	1 N5 TR 08646 C=305 6 294 6 305	1 N6 TR 08646 C=137 6 126 6 137	1 N7 TR 08646 C=158 6 147 6 158
VT8j (1 unidades)	VT8k (1 unidades)	VT8l (1 unidades)	VT8m (1 unidades)	VT9a (1 unidades)	VT9b (1 unidades)	VT9c (11 unidades)	VT10a (1 unidades)	VT10b (1 unidades)	VT10c (1 unidades)
1 N15 TR 08646 C=330 6 319 6 330	1 N16 TR 08646 C=296 6 285 6 296	1 N17 TR 08646 C=188 6 177 6 188	1 N18 TR 08646 C=79 6 68 6 79	1 N19 TR 08646 C=125 6 114 6 125	1 N20 TR 08646 C=237 6 228 6 237	1 N21 TR 08646 C=331 6 321 6 331	1 N22 TR 08646 C=45 6 45 6 45	1 N23 TR 08646 C=67 6 67 6 67	1 N24 TR 08646 C=88 6 88 6 88
VT11a (10 unidades)	VT12a (5 unidades)	VT12b (13 unidades)	VT13a (7 unidades)	VT14a (7 unidades)	VT15a (1 unidades)	VT15b (7 unidades)	VT15c (2 unidades)	VT16a (4 unidades)	
1 N32 TR 08646 C=283 6 272 6 283	1 N33 TR 08646 C=164 6 153 6 164	1 N34 TR 08646 C=165 6 154 6 165	1 N35 TR 08646 C=315 6 304 6 315	1 N35 TR 08646 C=315 6 304 6 315	1 N36 TR 08646 C=365 6 354 6 365	1 N37 TR 08646 C=366 6 355 6 366	1 N38 TR 08646 C=367 6 356 6 367	1 N39 TR 08646 C=290 6 279 6 290	
VT8c (1 unidades)	VT8d (1 unidades)	VT8e (1 unidades)	VT8f (1 unidades)	VT8g (1 unidades)	VT8h (1 unidades)	VT8i (1 unidades)	VT20a (8 unidades)		
1 N8 TR 08646 C=180 6 169 6 180	1 N9 TR 08646 C=201 6 190 6 201	1 N10 TR 08646 C=222 6 211 6 222	1 N11 TR 08646 C=244 6 233 6 244	1 N12 TR 08646 C=265 6 254 6 265	1 N13 TR 08646 C=287 6 276 6 287	1 N14 TR 08646 C=308 6 297 6 308	1 N43 TR 08646 C=395 6 384 6 395		
VT10d (1 unidades)	VT10e (1 unidades)	VT10f (1 unidades)	VT10g (1 unidades)	VT10h (1 unidades)	VT10i (1 unidades)	VT10j (1 unidades)			
1 N25 TR 08646 C=110 6 99 6 110	1 N26 TR 08646 C=131 6 120 6 131	1 N27 TR 08646 C=153 6 142 6 153	1 N28 TR 08646 C=174 6 163 6 174	1 N29 TR 08646 C=195 6 184 6 195	1 N30 TR 08646 C=217 6 206 6 217	1 N31 TR 08646 C=238 6 227 6 238			
VT16b (3 unidades)	VT17a (3 unidades)	VT17b (2 unidades)	VT18a (8 unidades)	VT19a (2 unidades)	VT19b (2 unidades)	VT19c (1 unidades)			
1 N40 TR 08646 C=289 6 278 6 289	1 N41 TR 08646 C=168 6 157 6 168	1 N42 TR 08646 C=169 6 158 6 169	1 N43 TR 08646 C=395 6 384 6 395	1 N42 TR 08646 C=169 6 158 6 169	1 N41 TR 08646 C=168 6 157 6 168	1 N44 TR 08646 C=167 6 156 6 167			

Tabela de estribos para pilares e detalhes de fechamento.

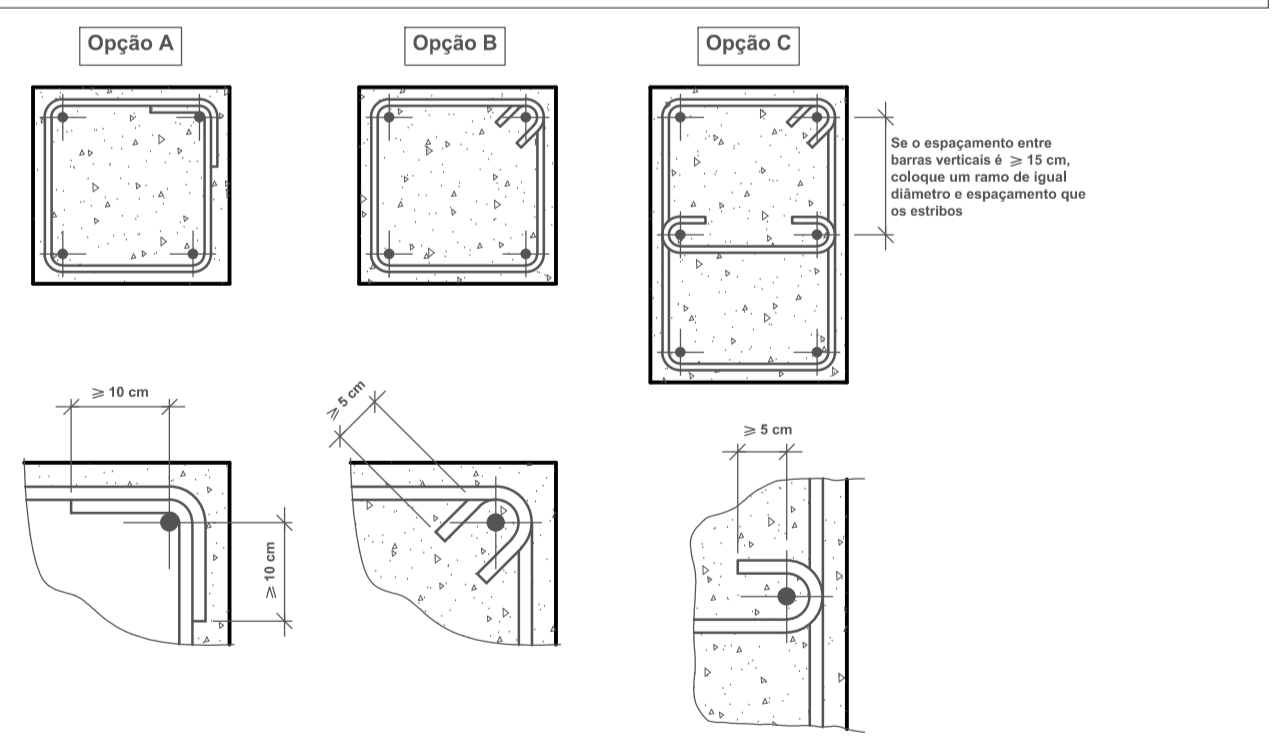


Tabela de estribos para pilares

(ØL) Diâmetro da armadura longitudinal vertical, em mm	(Øe) Diâmetro do estribo, em mm	S, em mm
12	6	15
14	6	20
16	6	20
20	6	25
25	8	30

Notas:
 - Em caso de pilares armados com diferentes diâmetros, adotar o valor de ØL menor para o espaçamento e o maior para o diâmetro do estribo.
 - Com esforços horizontais e em zona sísmica concentrar estribos no topo e arrastar do pilar em um comprimento de 1/6 da altura com espaçamento S' (5 cm ≤ S' ≤ 10 cm).

Máxima relação água/cimento e mínimo conteúdo de cimento

Parâmetro de dosagem	Tipo de concreto	Classe de exposição													
		I	IIa	IIb	IIIa	IIIb	IIIc	IV	Qa	Qb	Qc	II	F	E	
Máxima relação a/c	Massa	0,85	-	-	-	-	-	-	0,80	0,80	0,65	0,60	0,50	0,50	0,50
	Armadura	0,85	0,80	0,85	0,80	0,80	0,65	0,65	0,50	0,50	0,65	0,55	0,50	0,50	
	Pré-tensionado	0,80	0,80	0,85	0,80	0,65	0,65	0,65	0,50	0,45	0,65	0,55	0,50	0,50	
Mínimo conteúdo de cimento (kg/m³)	Massa	200	-	-	-	-	-	-	275	300	325	275	300	275	
	Armadura	250	275	300	300	325	350	325	300	350	350	300	325	300	
	Pré-tensionado	275	300	300	300	325	350	325	300	350	350	300	325	300	

Resistências mínimas compatíveis com os requisitos de durabilidade

Parâmetro de dosagem	Tipo de concreto	Classe de exposição												
		I	IIa	IIb	IIIa	IIIb	IIIc	IV	Qa	Qb	Qc	II	F	E
Resistência mínima (N/mm²)	Massa	30	-	-	-	-	-	-	30	30	35	30	30	30
	Armadura													