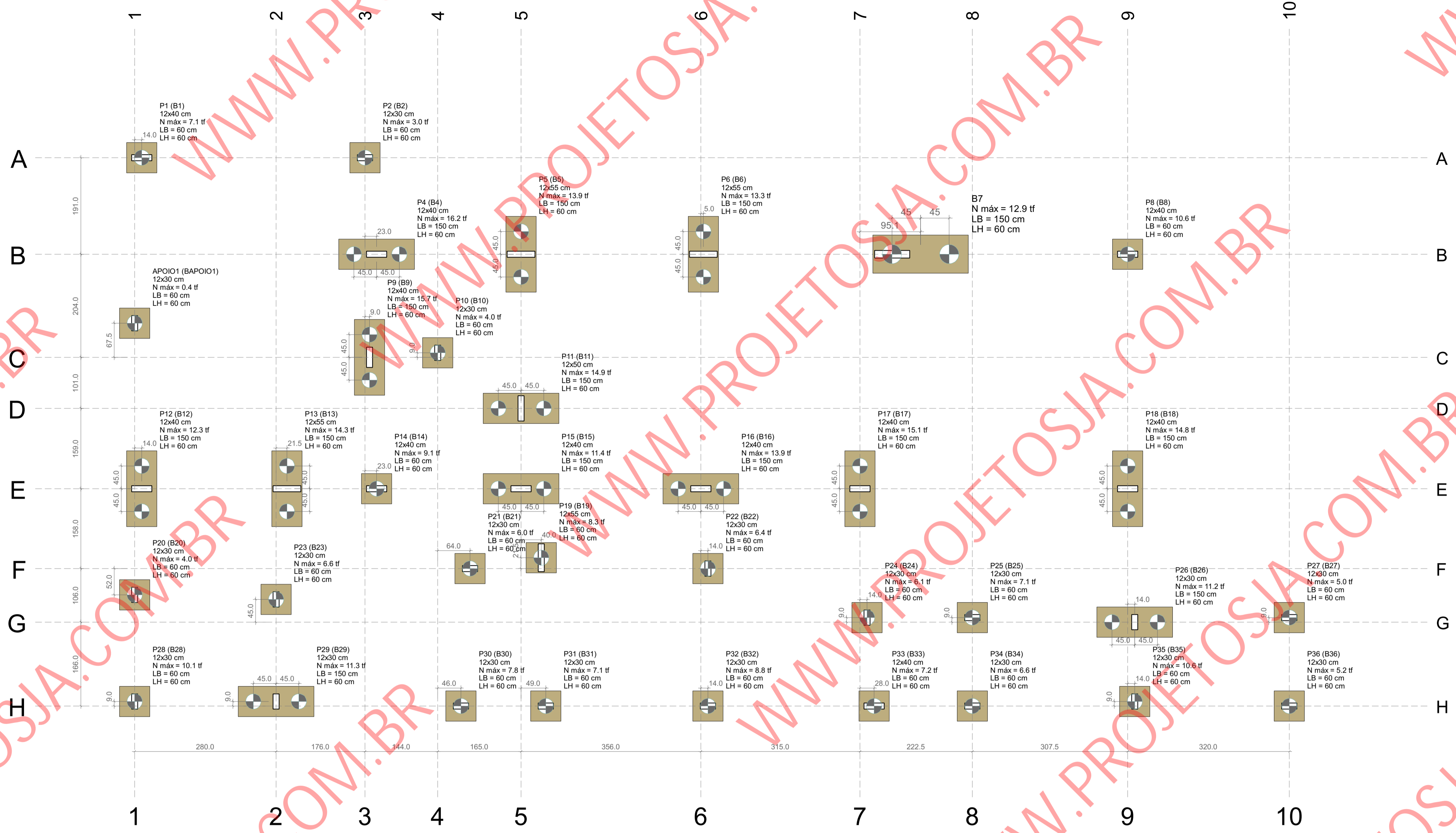
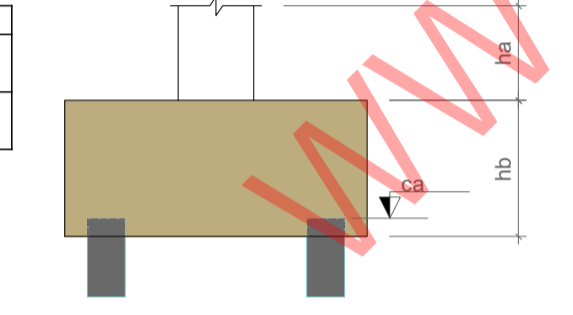
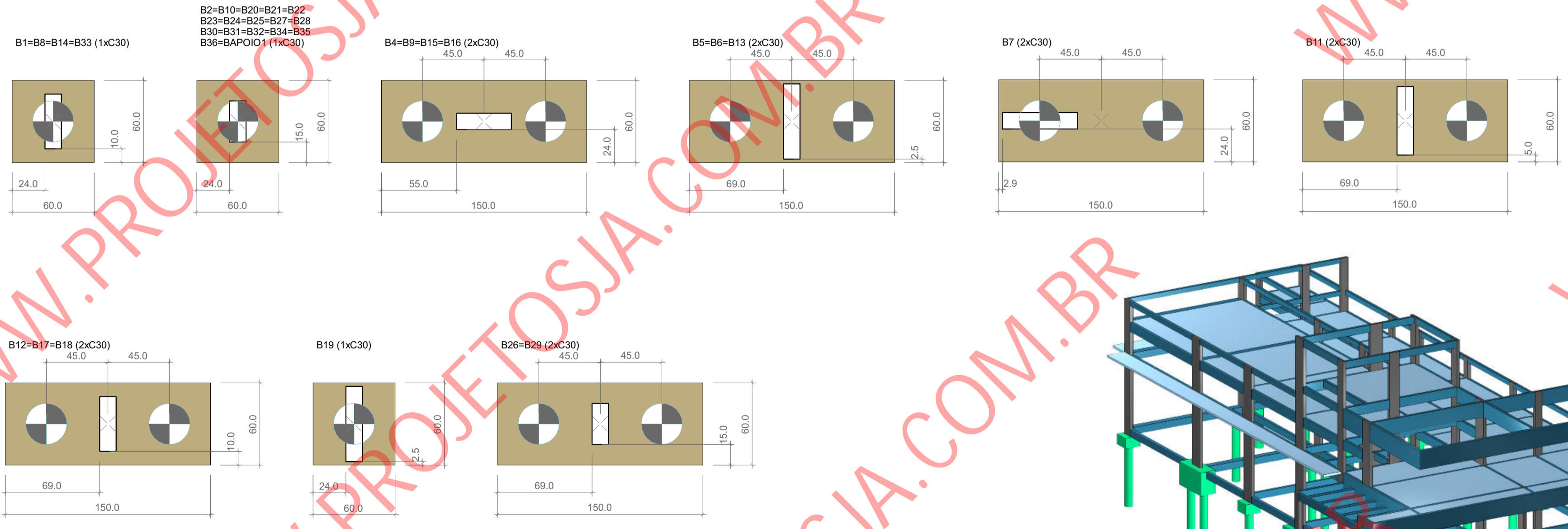


Nome	Pilar		Fundação				Bloco	Estaca	ca
	Seção (cm)	Carga Máx. (tf)	Nome	Lado B (cm)	Lado H (cm)	h0 / ha (cm)			
APOIO1	12x30	0.4	BAPOIO1	60	60	30	60	1	C30 -75
P1	12x40	7.1	B1	60	60	30	60	1	C30 -75
P2	12x30	3.0	B2	60	60	30	60	1	C30 -75
P4	12x40	16.2	B4	150	60	30	55	2	C30 -70
P5	12x55	13.9	B5	150	60	30	60	2	C30 -75
P6	12x55	13.3	B6	150	60	30	60	2	C30 -75
P7	12x55	13.8	B7	150	60	30	60	2	C30 -75
P8	12x40	10.6	B8	60	60	30	60	1	C30 -75
P9	12x40	15.7	B9	150	60	30	55	2	C30 -70
P10	12x30	4.0	B10	60	60	30	60	1	C30 -75
P11	12x50	14.9	B11	150	60	30	60	2	C30 -75
P12	12x40	12.3	B12	150	60	30	60	2	C30 -75
P13	12x55	14.3	B13	150	60	30	60	2	C30 -75
P14	12x40	9.1	B14	60	60	30	60	1	C30 -75
P15	12x40	11.4	B15	150	60	30	55	2	C30 -70
P16	12x40	13.9	B16	150	60	30	55	2	C30 -70
P17	12x40	15.1	B17	150	60	30	60	2	C30 -75
P18	12x40	14.8	B18	150	60	30	60	2	C30 -75
P19	12x55	8.3	B19	60	60	30	60	1	C30 -75
P20	12x30	4.0	B20	60	60	30	60	1	C30 -75
P21	12x30	6.0	B21	60	60	30	60	1	C30 -75
P22	12x30	6.4	B22	60	60	30	60	1	C30 -75
P23	12x30	6.6	B23	60	60	30	60	1	C30 -75
P24	12x30	6.1	B24	60	60	30	60	1	C30 -75
P25	12x30	7.1	B25	60	60	30	60	1	C30 -75
P26	12x30	11.2	B26	150	60	30	60	2	C30 -75
P27	12x30	5.0	B27	60	60	30	60	1	C30 -75
P28	12x30	10.1	B28	60	60	30	60	1	C30 -75
P29	12x30	11.3	B29	150	60	30	60	2	C30 -75
P30	12x30	7.8	B30	60	60	30	60	1	C30 -75
P31	12x30	7.1	B31	60	60	30	60	1	C30 -75
P32	12x30	8.8	B32	60	60	30	60	1	C30 -75
P33	12x40	7.2	B33	60	60	30	60	1	C30 -75
P34	12x30	6.6	B34	60	60	30	60	1	C30 -75
P35	12x30	10.6	B35	60	60	30	60	1	C30 -75
P36	12x30	5.2	B36	60	60	30	60	1	C30 -75

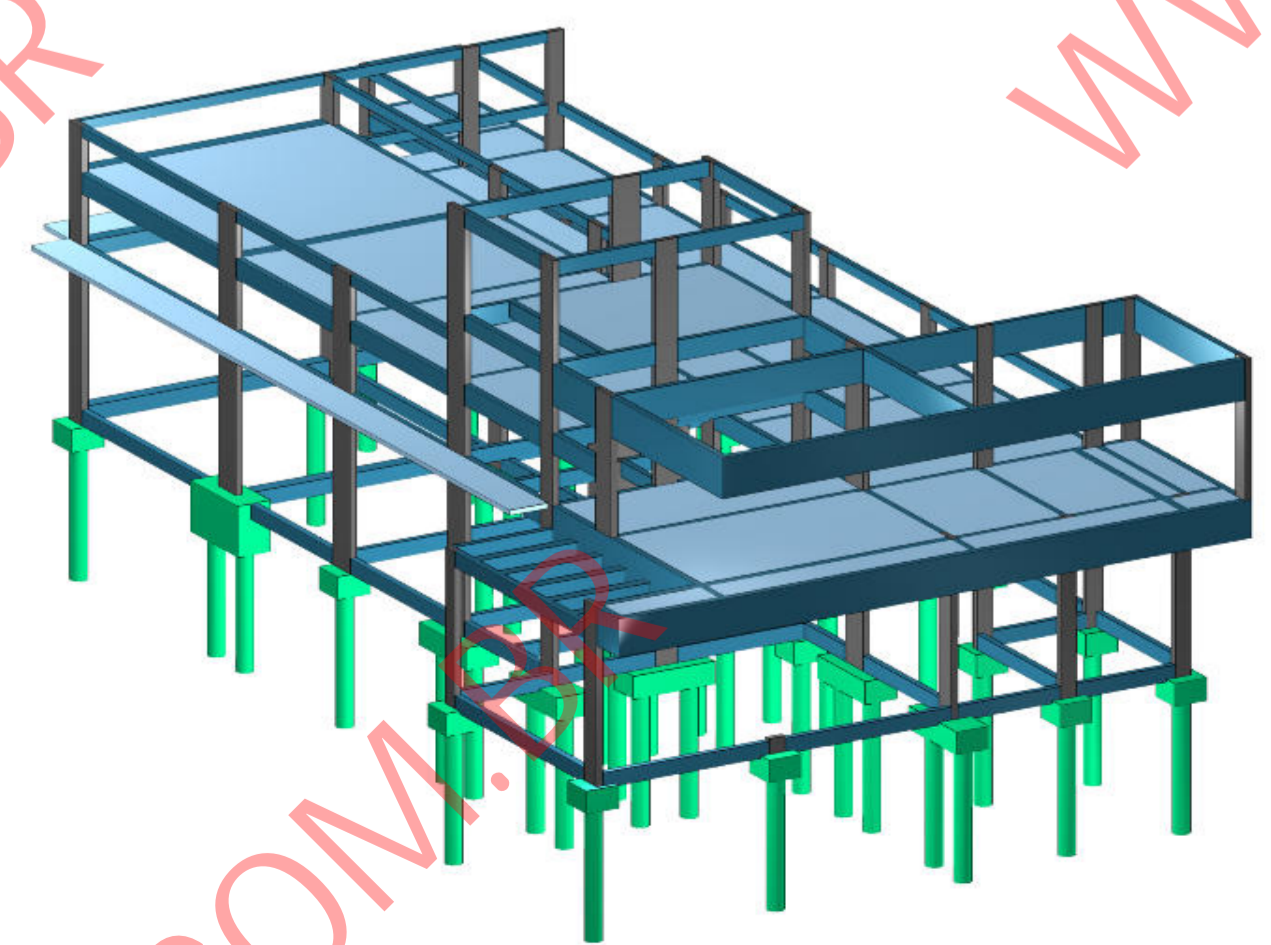
Simbologia	Estacas	
	Nome	Quantidade
	C30	50



Planta de localização  
escala 1:50

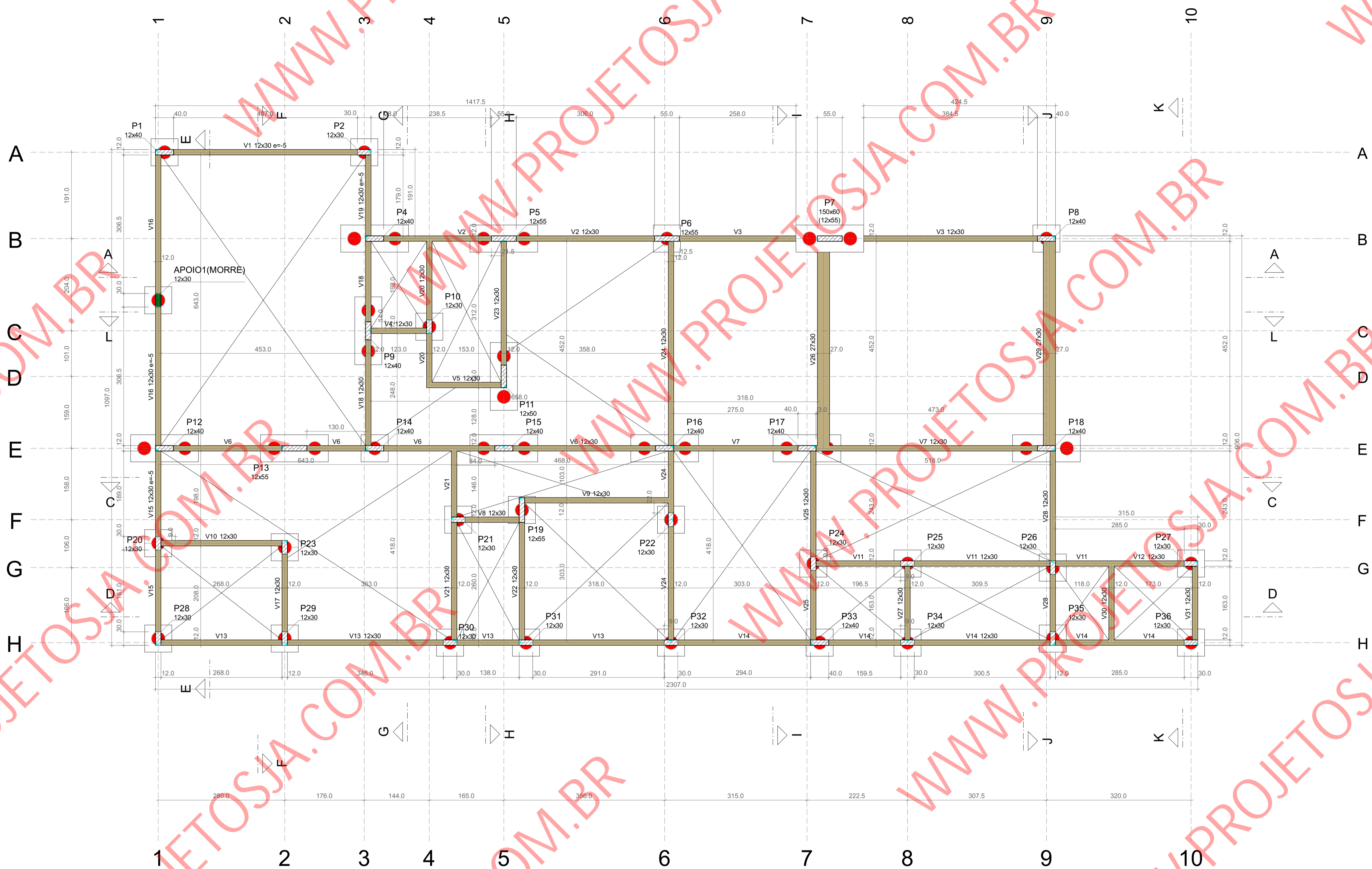


Legenda dos blocos  
escala 1:25



ESTRUTURA EM 3D





Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	12x30	-5	-5
V2	12x30	0	0
V3	12x30	0	0
V4	12x30	0	0
V5	12x30	0	0
V6	12x30	0	0
V7	12x30	0	0
V8	12x30	0	0
V9	12x30	0	0
V10	12x30	0	0
V11	12x30	0	0
V12	12x30	0	0
V13	12x30	0	0
V14	12x30	0	0
V15	12x30	-5	-5
V16	12x30	-5	-5
V17	12x30	0	0
V18	12x30	0	0
V19	12x30	-5	-5
V20	12x30	0	0
V21	12x30	0	0
V22	12x30	0	0
V23	12x30	0	0
V24	12x30	0	0
V25	12x30	0	0
V26	27x30	0	0
V27	12x30	0	0
V28	12x30	0	0
V29	27x30	0	0
V30	12x30	0	0
V31	12x30	0	0

Características dos materiais			
fck (kgf/cm²)	Ecs (kgf/cm³)	fct (kgf/cm²)	Abatimento (cm)
250	241500	26	5,00

Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
APOIO1	12x30	0	0
P1	12x40	0	0
P2	12x30	0	0
P4	12x40	0	0
P5	12x55	0	0
P6	12x55	0	0
P8	12x40	0	0
P9	12x40	0	0
P10	12x30	0	0
P11	12x50	0	0
P12	12x40	0	0
P13	12x55	0	0
P14	12x40	0	0
P15	12x40	0	0
P16	12x40	0	0
P17	12x40	0	0
P18	12x40	0	0
P19	12x55	0	0
P20	12x30	0	0
P21	12x30	0	0
P22	12x30	0	0
P23	12x30	0	0
P24	12x30	0	0
P25	12x30	0	0
P26	12x30	0	0
P27	12x30	0	0
P28	12x30	0	0
P29	12x30	0	0
P30	12x30	0	0
P31	12x30	0	0
P32	12x30	0	0
P33	12x40	0	0
P34	12x30	0	0
P35	12x30	0	0
P36	12x30	0	0

**Legenda dos pilares**

- Pilar que morre
- Pilar que passa
- Fundação

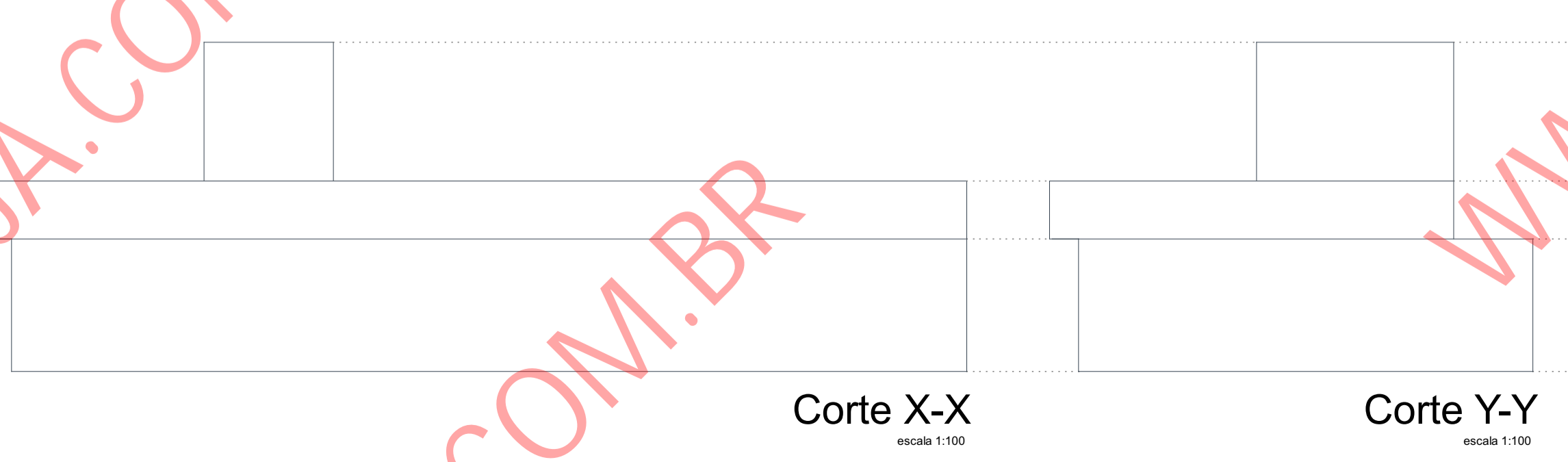
**Legenda das vigas e paredes**

- Viga

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

Resumo por Material e por Elemento

		Vigas	Pilares	Lajes	Fundações	Total
Peso total + 10% (kg)	CA50	1.505,2	1.030,1	46,9	63,1	2.645,3
	CA60	495,5	310,5	383,1	180,0	1.369,1
	<b>Total</b>	<b>2.000,7</b>	<b>1.340,6</b>	<b>430,0</b>	<b>243,1</b>	<b>4.014,4</b>
Volume concreto (m³)	C-25	22,7	8,9	12,7	10,8	55,1
Área de forma (m²)		375,1	193,6	33,5	63,3	665,5
Consumo de aço (kg/m³)		88,1	151,4	33,8	22,6	72,9

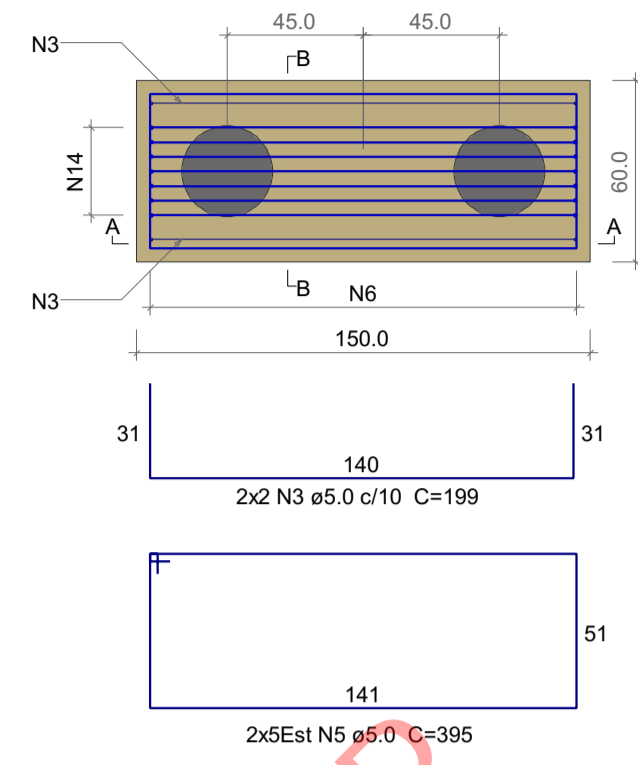


Corte X-X escala 1:100

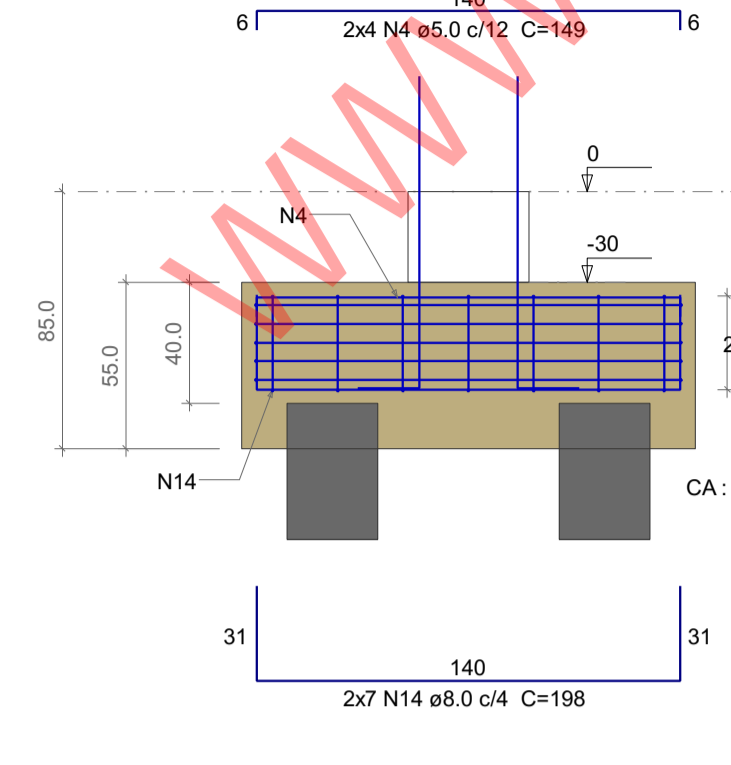
Corte Y-Y escala 1:100



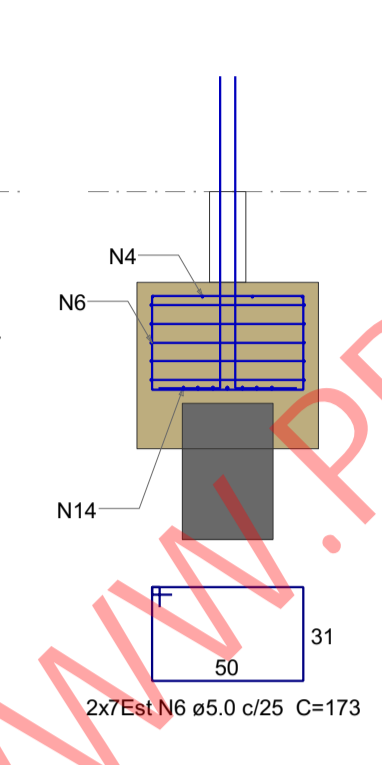
B4=B17  
2xC30  
PLANTA  
ESC 1:25



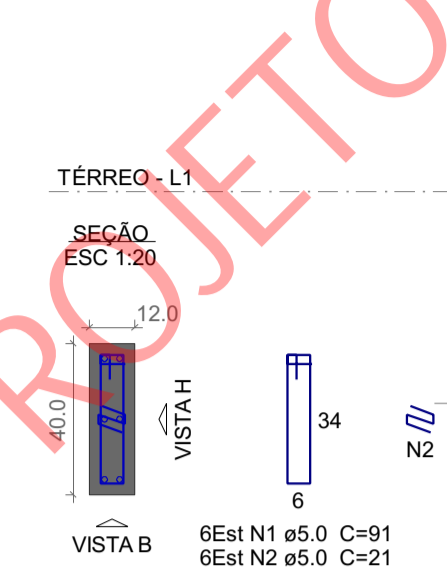
CORTE A-A  
ESC 1:25



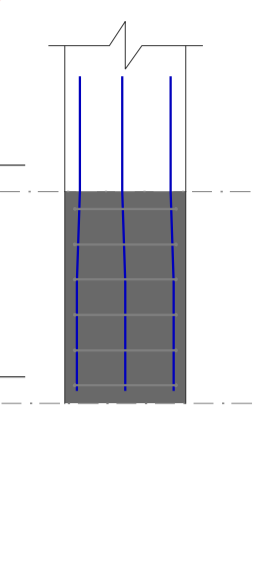
CORTE B-B  
ESC 1:25



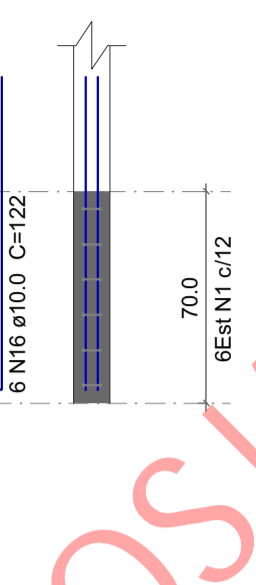
P17



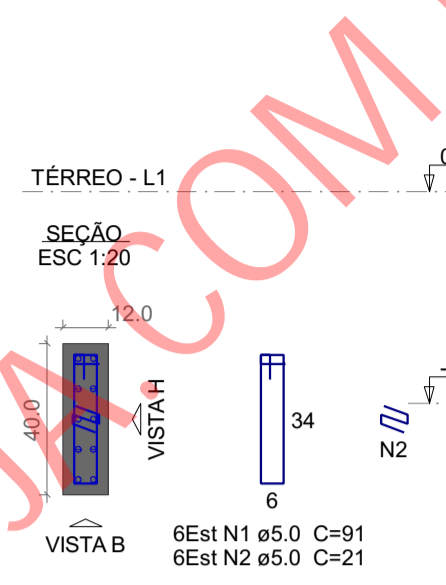
VISTA H  
ESC 1:25



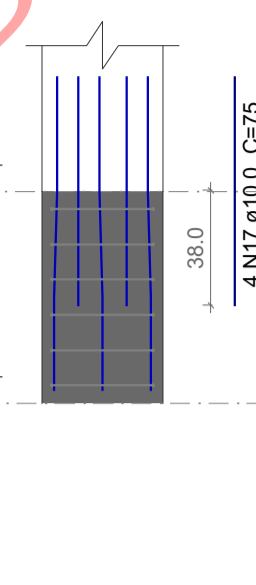
VISTA B  
ESC 1:25



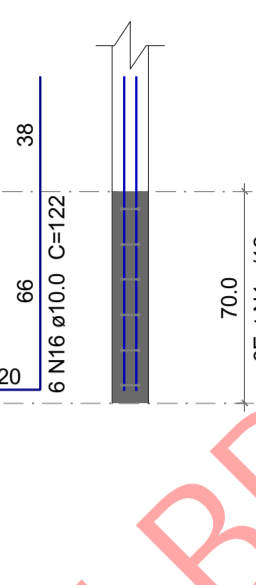
P4



VISTA H  
ESC 1:25



VISTA B  
ESC 1:25



Relação do aço

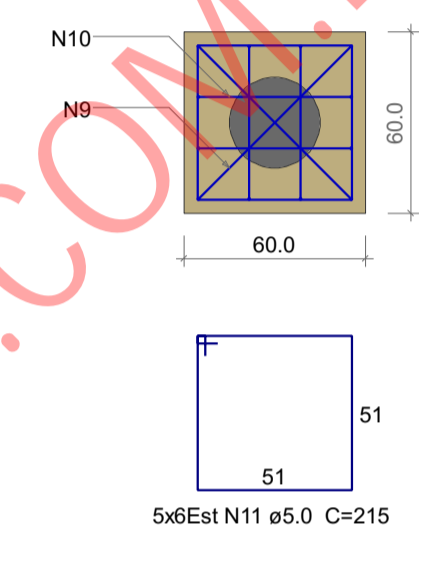
CAO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	18	91	1638
	2	5.0	39	24	919
	3	5.0	8	199	1592
	4	5.0	20	149	2980
	5	5.0	28	395	11060
	6	5.0	28	173	4844
	7	5.0	28	71	1988
	8	5.0	23	121	2541
	9	5.0	20	223	2230
	10	5.0	20	181	3620
	11	5.0	30	215	6450
	12	5.0	2	209	418
	13	5.0	7	263	1841
	14	8.0	26	198	5148
	15	8.0	5	288	1440
	16	10.0	30	122	3660
	17	10.0	8	75	600
	18	10.0	22	127	2794
	19	10.0	6	136	816

Resumo do aço

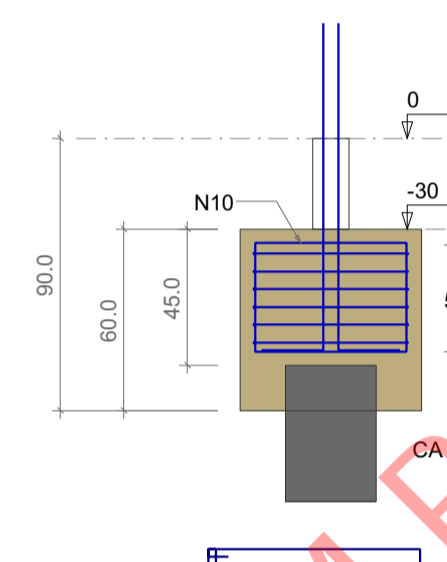
CAO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT	PESO + 10 % (kg)
CA50	8.0	65.9	7	12 m	28.6
CA50	10.0	78.7	8	12 m	53.4
CA60	5.0	420.3	-	rolo (170 kg)	71.2
PESO TOTAL (kg)					
CA50					82
CA60					71.2

Volume de concreto (C-25) = 3.93 m³  
Área de forma = 23.39 m²

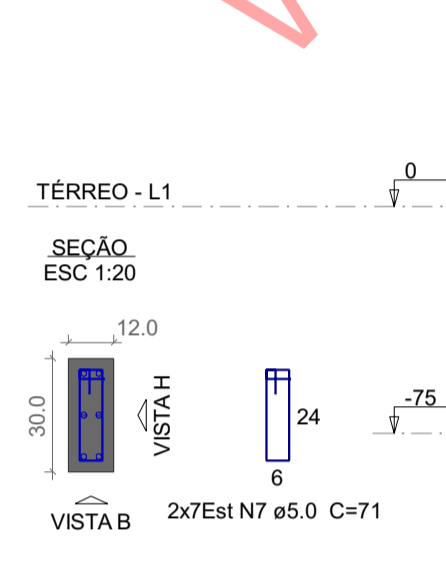
B6=B26=B28=B29=B35  
1xC30  
PLANTA  
ESC 1:25



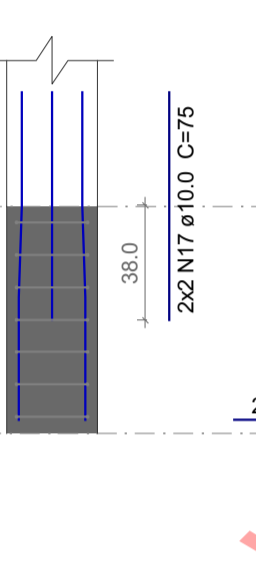
CORTE  
ESC 1:25



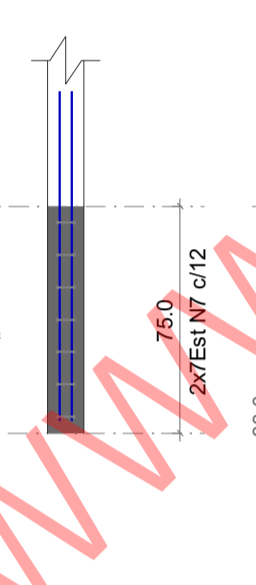
P26=P28



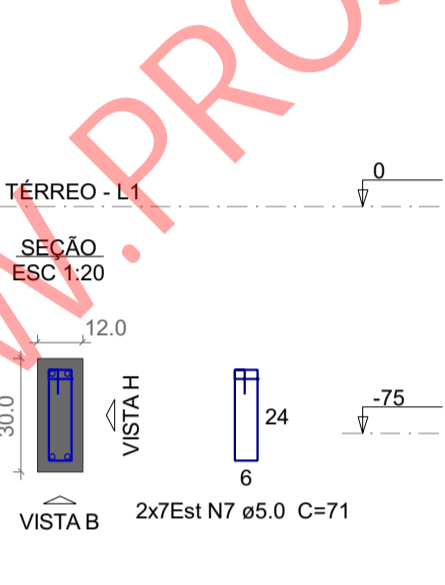
VISTA H  
ESC 1:25



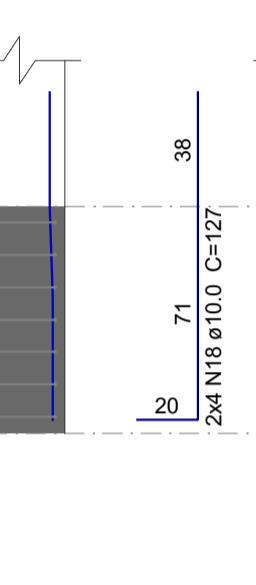
VISTA B  
ESC 1:25



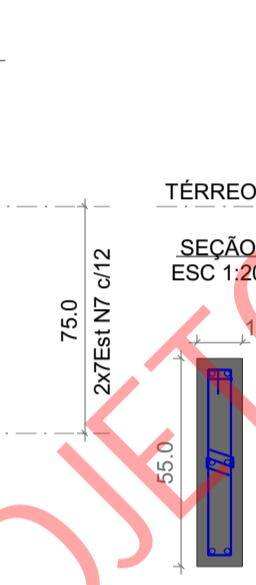
P29=P35



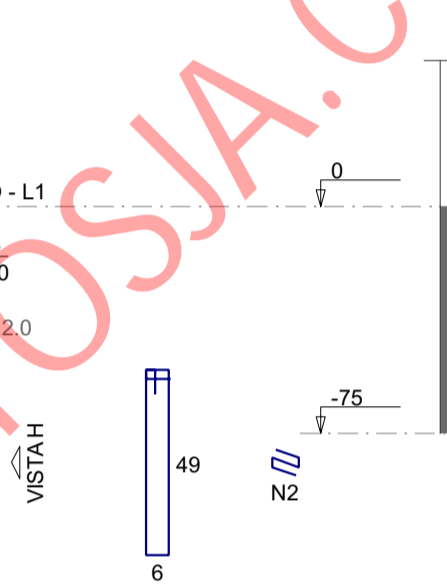
VISTA H  
ESC 1:25



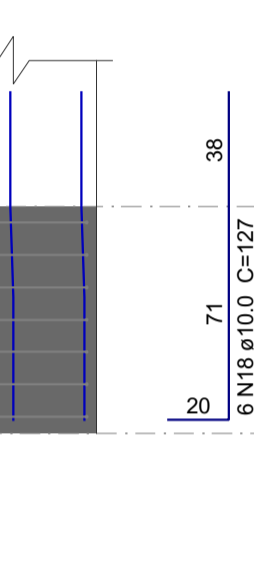
VISTA B  
ESC 1:25



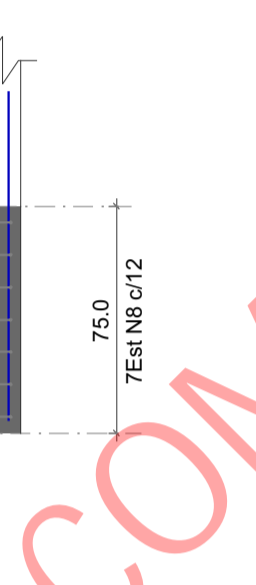
P6



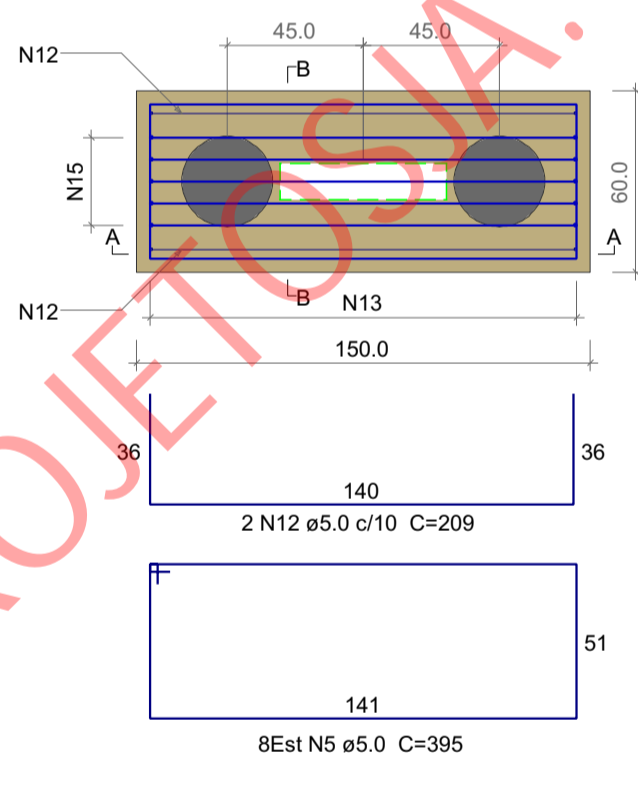
VISTA H  
ESC 1:25



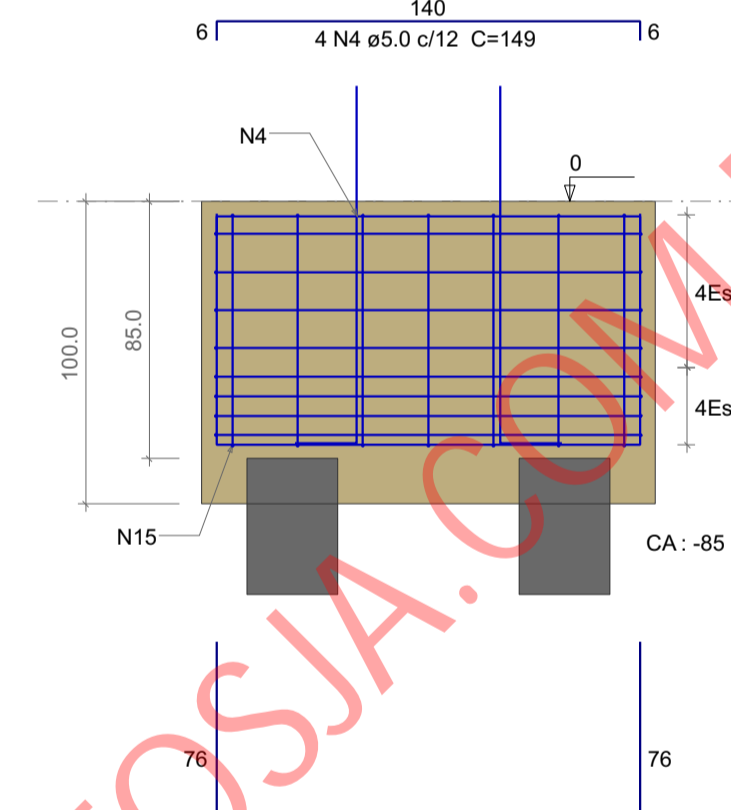
VISTA B  
ESC 1:25



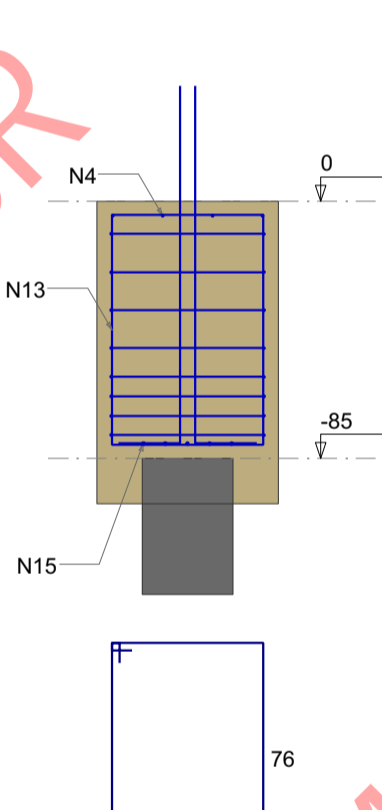
B7  
2xC30  
PLANTA  
ESC 1:25



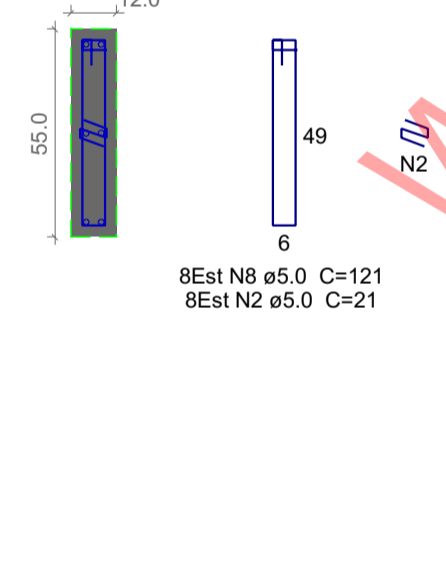
CORTE A-A  
ESC 1:25



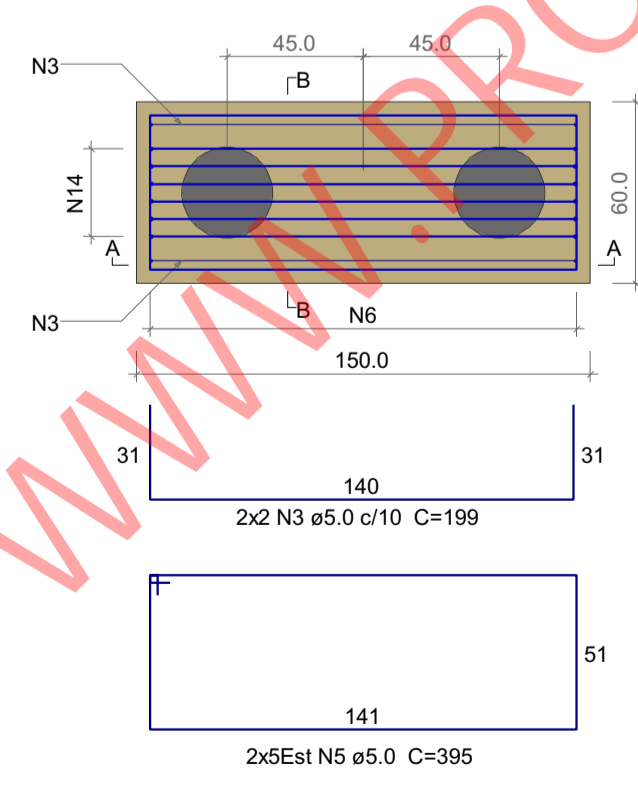
CORTE B-B  
ESC 1:25



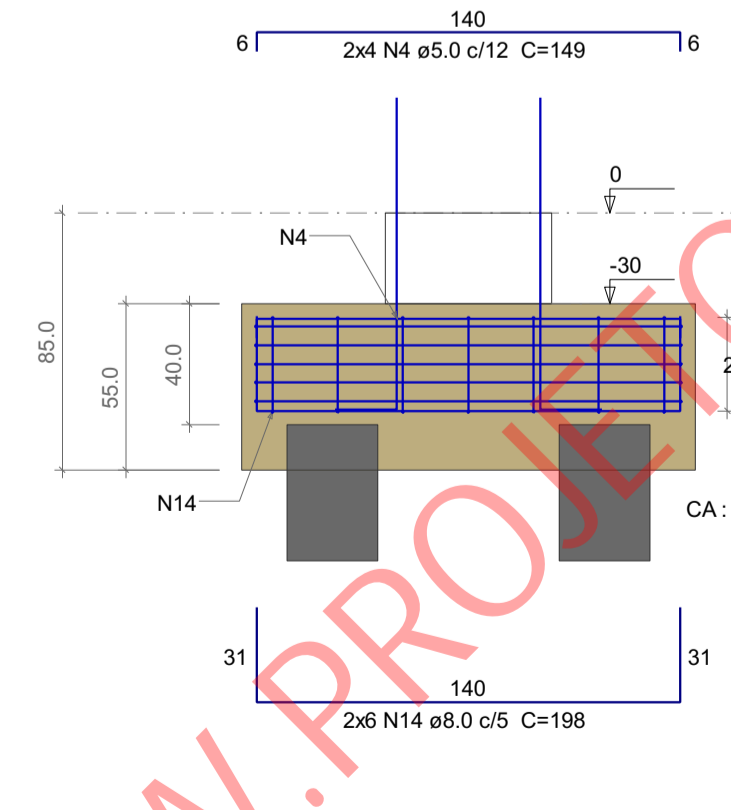
DETALHE DO PILAR  
ESC 1:20



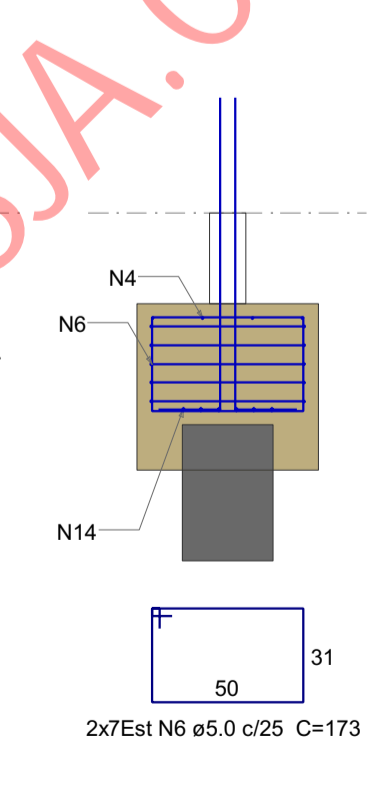
B12=B13  
2xC30  
PLANTA  
ESC 1:25



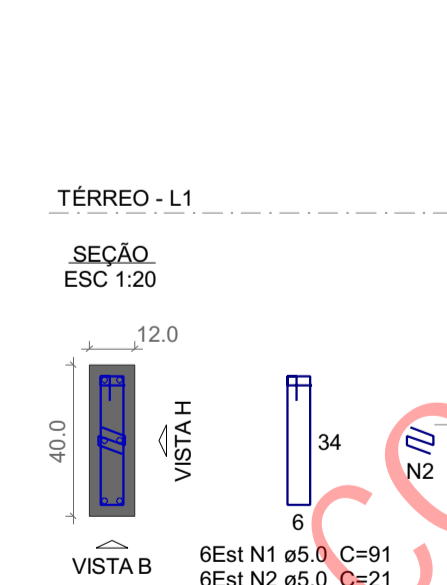
CORTE A-A  
ESC 1:25



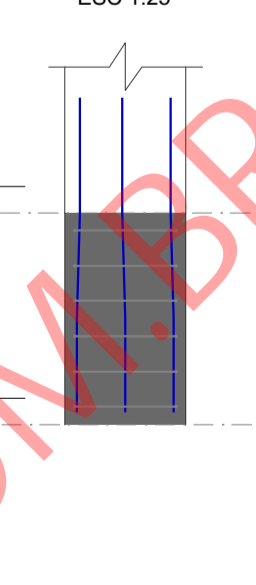
CORTE B-B  
ESC 1:25



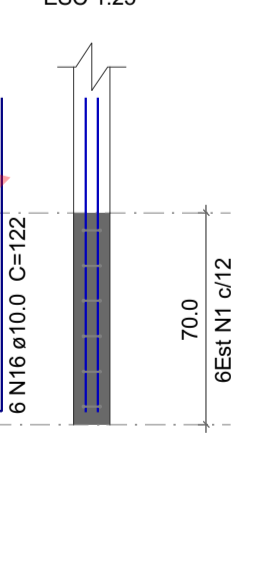
P12



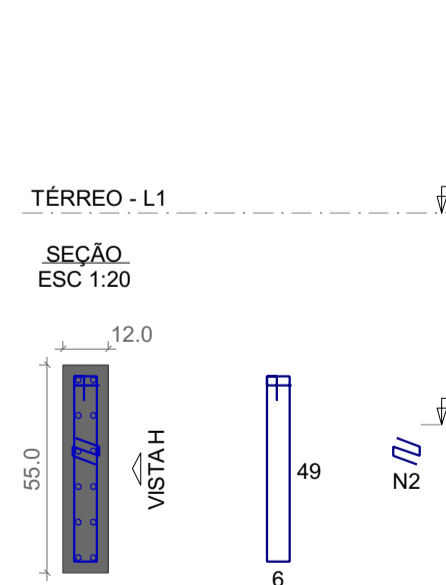
VISTA H  
ESC 1:25



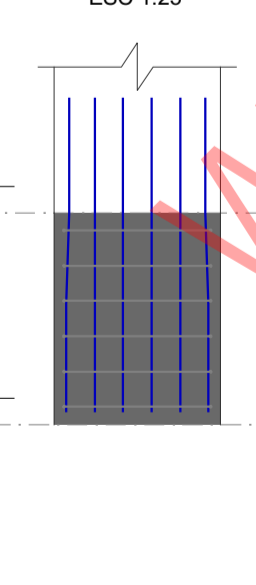
VISTA B  
ESC 1:25



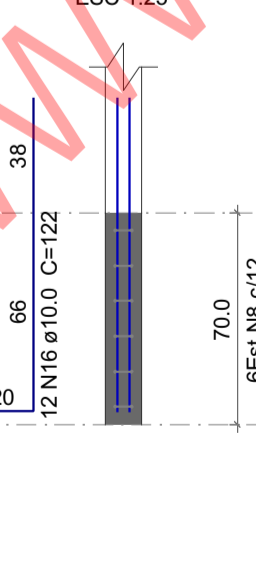
P13



VISTA H  
ESC 1:25

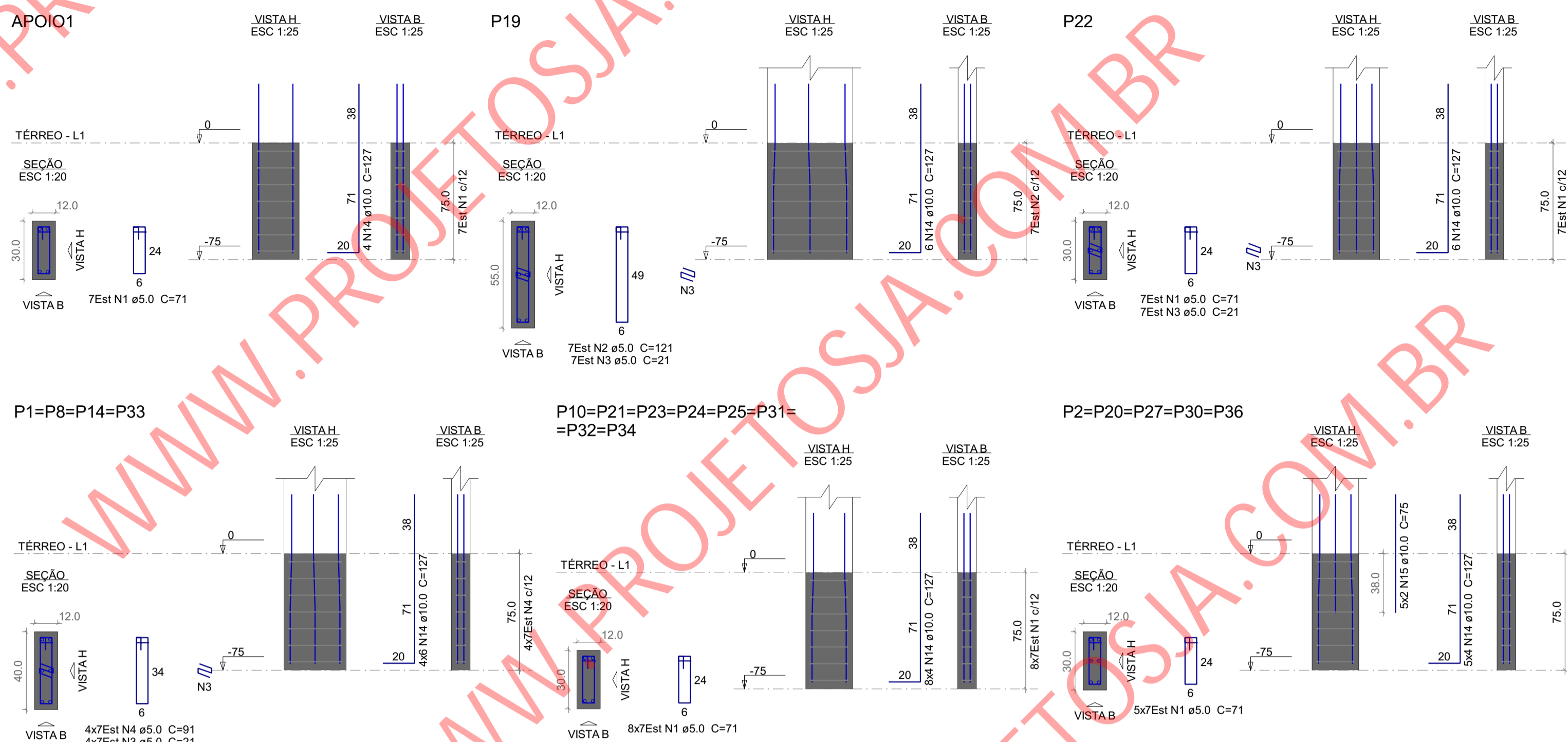
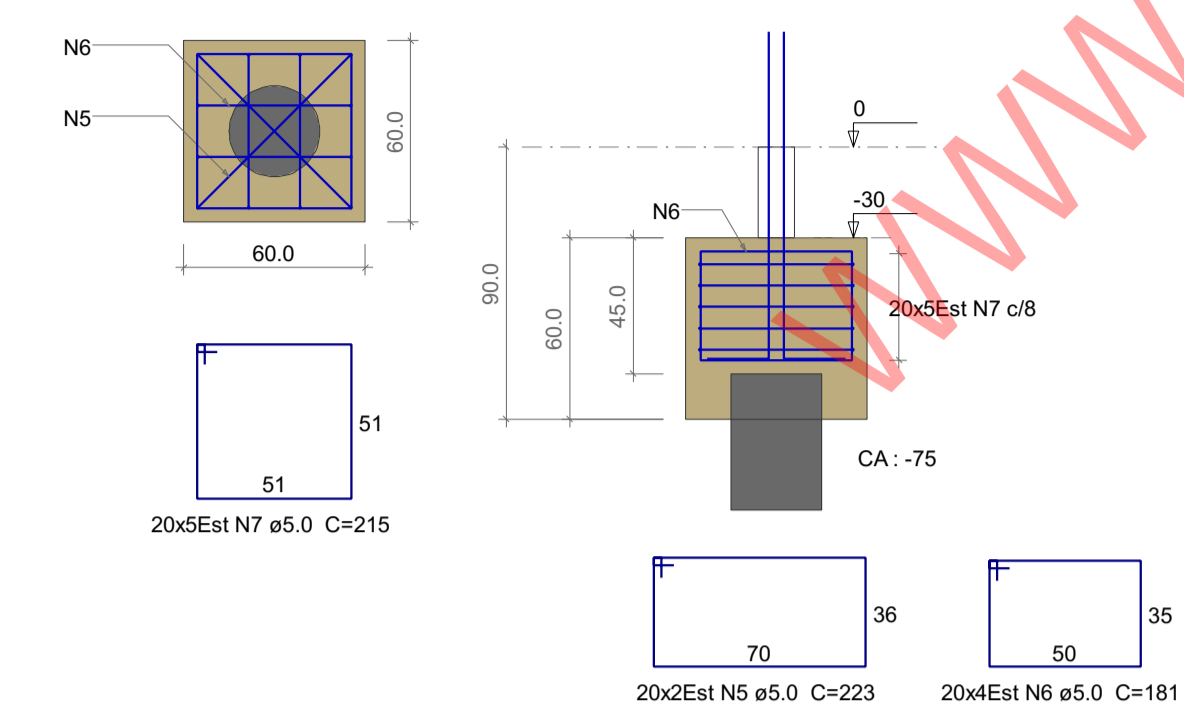


VISTA B  
ESC 1:25





B1=B2=B8=B10=B14=B19=B20=B21=B22=B23  
 =B24=B25=B27=B30=B31=B32=B33=B34=B36  
 =BAPOIO1  
 1xC30  
 PLANTA  
 ESC 1:25



Relação do aço

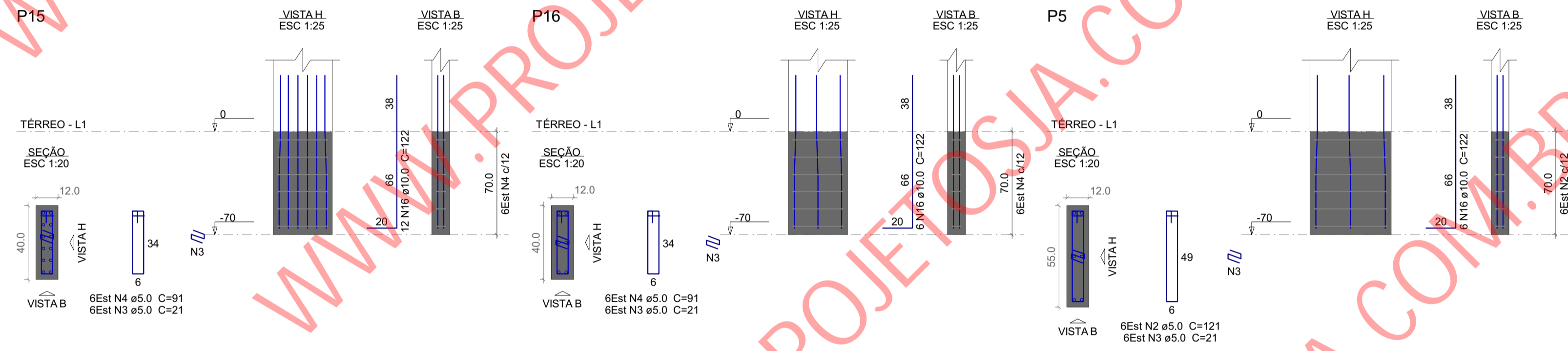
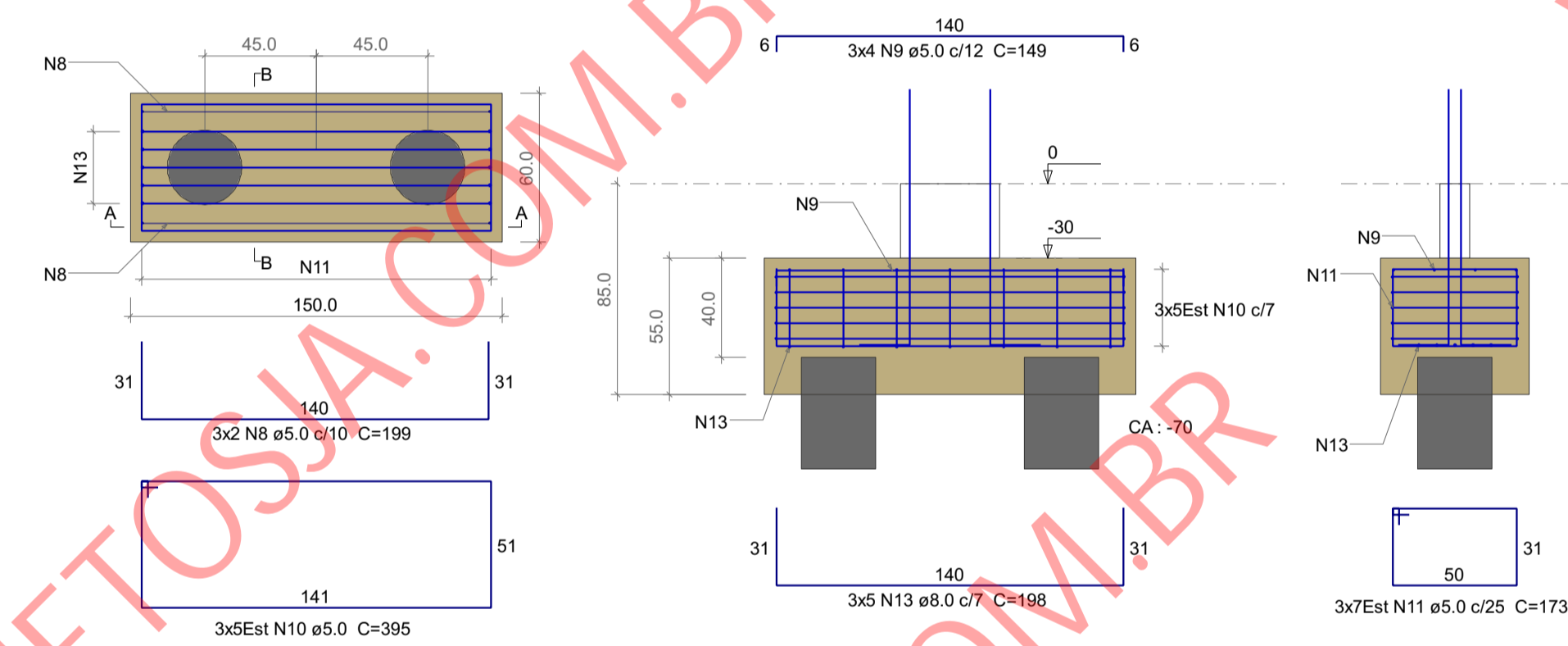
AÇO	N	DIAM (mm)	QUANT	C.TOTAL (cm)	
				(cm)	(cm)
CA60	1	5.0	105	71	7455
	2	5.0	13	21	1573
	3	5.0	78	21	1638
	4	5.0	52	91	4732
	5	5.0	40	223	8920
	6	5.0	80	181	14480
	7	5.0	100	215	21500
	8	5.0	12	199	2388
	9	5.0	24	149	3576
	10	5.0	30	395	11850
	11	5.0	42	173	7266
	12	5.0	6	111	666
	13	8.0	15	198	2970
	14	10.0	92	127	11684
	15	10.0	14	75	1050
	16	10.0	42	122	5124
	17	10.0	12	197	2364

Resumo do aço

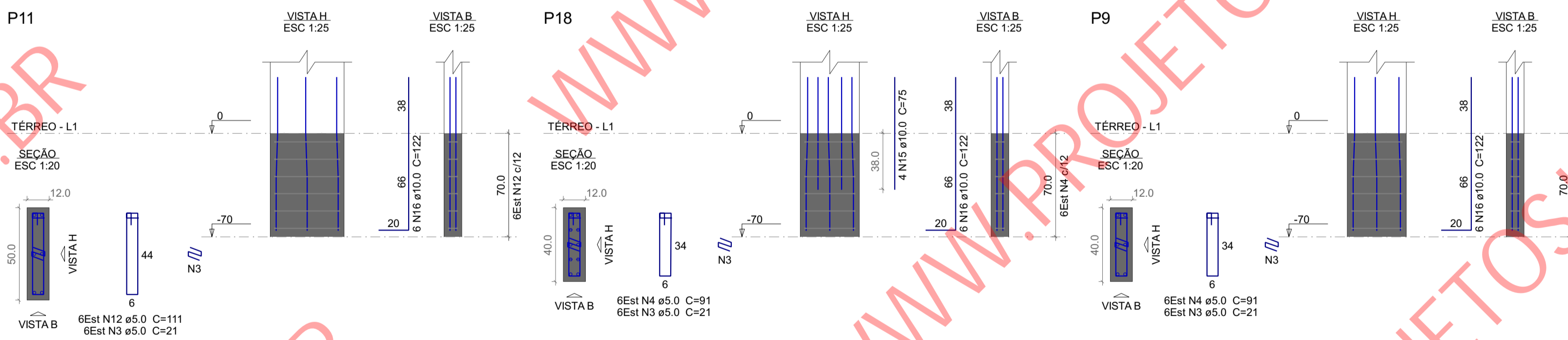
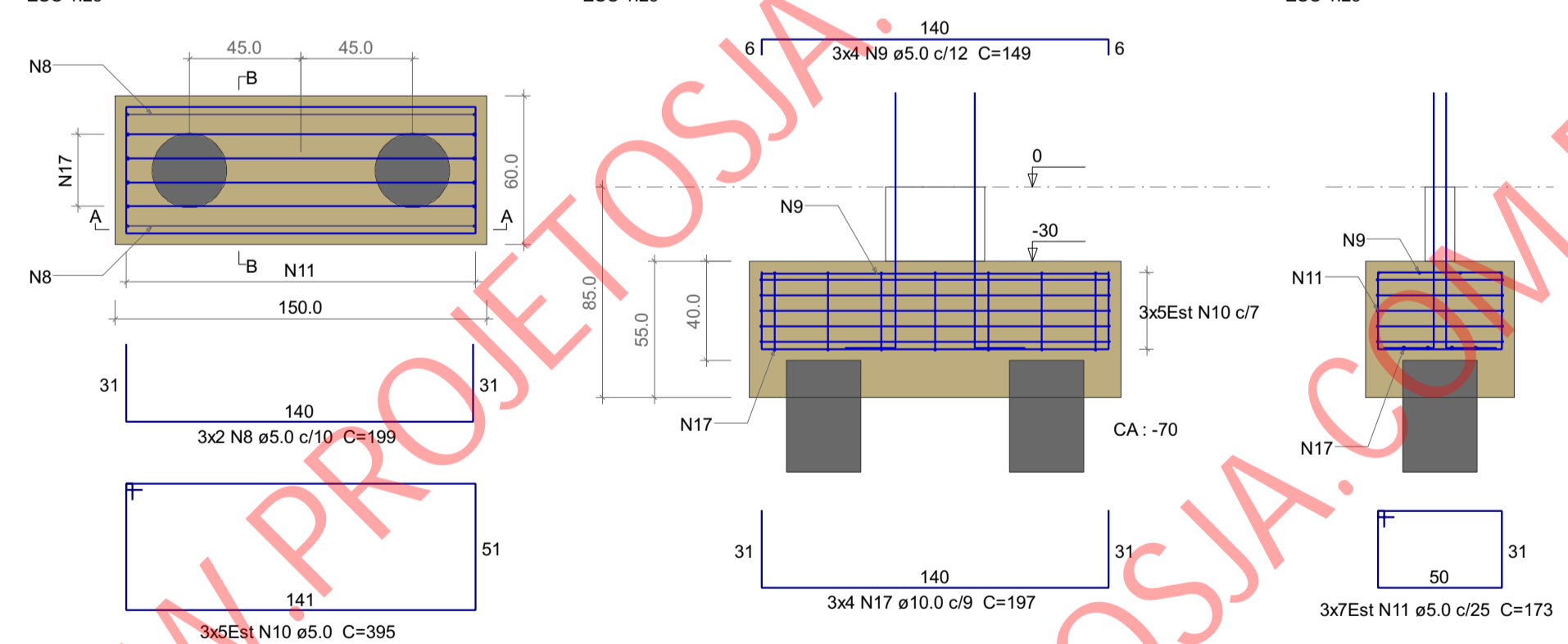
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT	PESO + 10 % (kg)
CA50	8.0	29.7	3	12 m	12.9
CA60	10.0	202.3	19	12 m	137.1
	5.0	860.5	-	rolo (170 kg)	145.9
PESO TOTAL (kg)					
CA50					150
CA60					145.9

Volume de concreto (C-25) = 7.29 m³  
 Área de forma = 50.11 m²

B5=B15=B16  
 2xC30  
 PLANTA  
 ESC 1:25

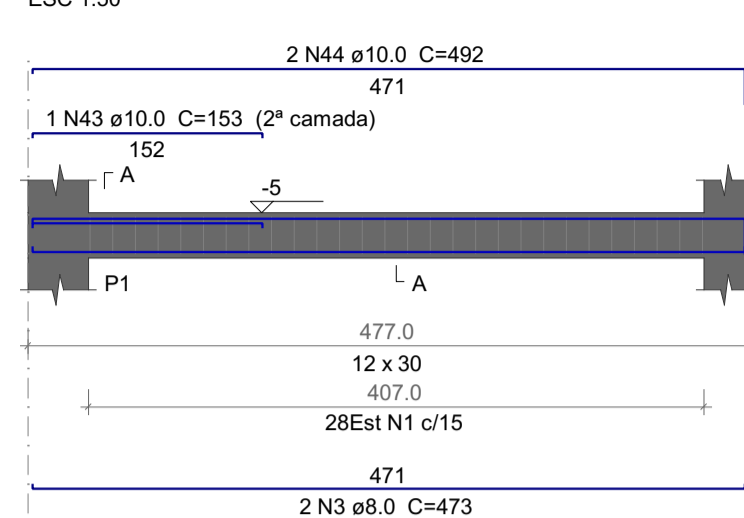


B9=B11=B18  
 2xC30  
 PLANTA  
 ESC 1:25

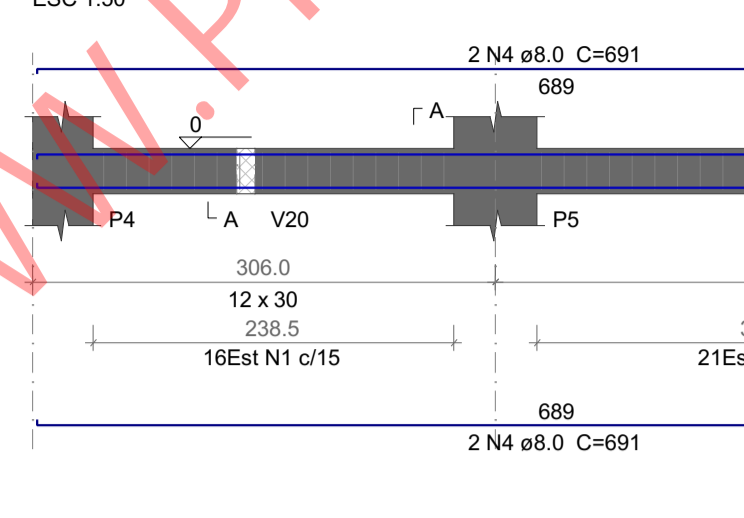




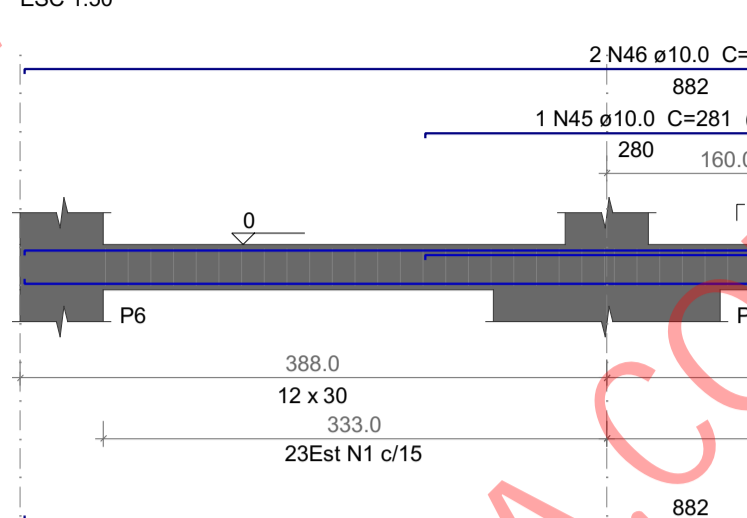
V1 (12 x 30)



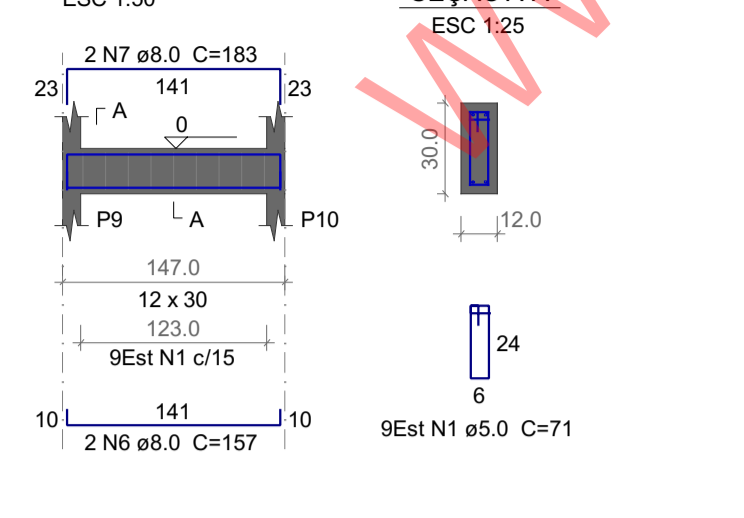
V2 (12 x 30)



V3 (12 x 30)



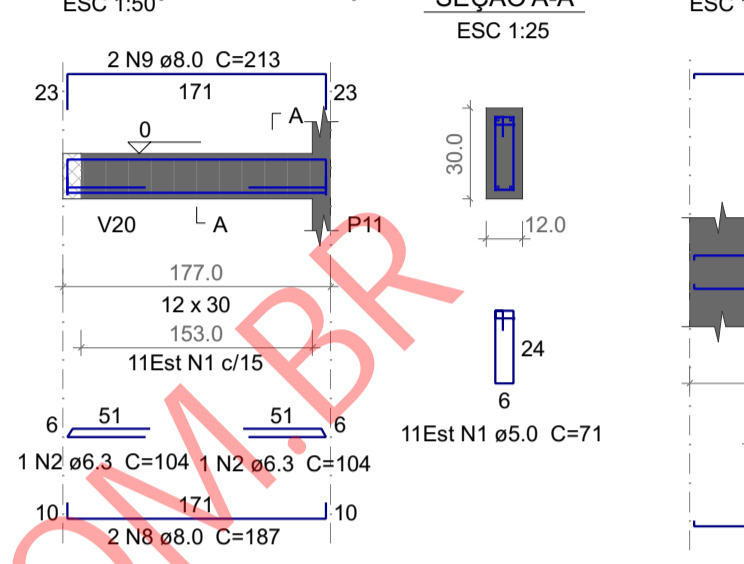
V4 (12 x 30)



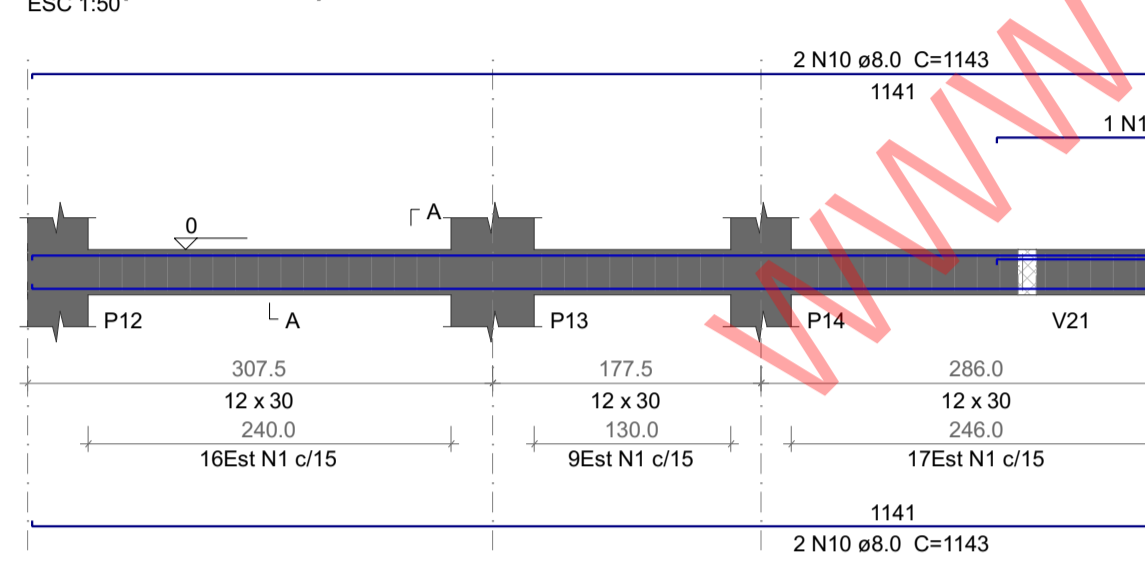
Relação do aço

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	706	71	50126
CA50	2	6.3	12	104	1248
	3	8.0	2	473	946
	4	8.0	4	691	2764
	5	8.0	2	884	1768
	6	8.0	2	157	314
	7	8.0	2	183	366
	8	8.0	2	187	374
	9	8.0	2	213	426
	10	8.0	4	1143	4572
	11	8.0	1	267	267
	12	8.0	2	324	648
	13	8.0	2	165	330
	14	8.0	2	178	356
	15	8.0	2	352	704
	16	8.0	2	385	770
	17	8.0	2	302	604
	18	8.0	2	328	656
	19	8.0	2	682	1364
	20	8.0	1	277	277
	21	8.0	2	708	1416
	22	8.0	2	200	400
	23	8.0	2	233	466
	24	8.0	2	1159	2318
	25	8.0	2	1172	2344
	26	8.0	2	1056	2112
	27	8.0	2	175	350
	28	8.0	1	142	142
	29	8.0	2	1076	2152
	30	8.0	2	201	402
	31	8.0	2	445	890
	32	8.0	2	677	1354
	33	8.0	2	703	1406
	34	8.0	2	228	456
	35	8.0	2	486	972
	36	8.0	2	213	426
	37	8.0	2	239	478
	38	8.0	2	346	692
	39	8.0	2	452	904
	40	8.0	2	478	956
	41	8.0	2	330	660
	42	8.0	2	339	678
	43	10.0	1	153	153
	44	10.0	2	492	984
	45	10.0	1	281	281
	46	10.0	2	883	1766
	47	10.0	2	566	1132
	48	10.0	1	176	176
	49	10.0	1	640	640
	50	10.0	2	900	1800
	51	10.0	2	457	914
	52	10.0	2	267	534
	53	10.0	2	511	1022
	54	10.0	2	371	742
	55	10.0	1	196	196
	56	10.0	2	342	684
	57	10.0	1	183	183
	58	10.0	2	351	702

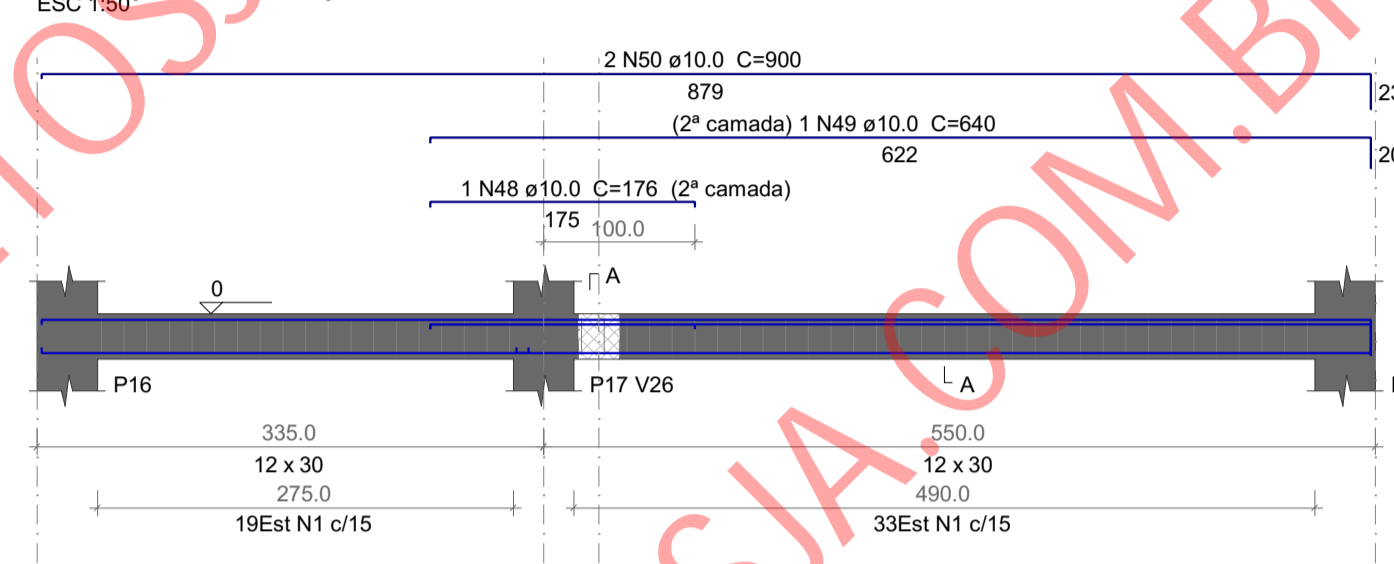
V5 (12 x 30)



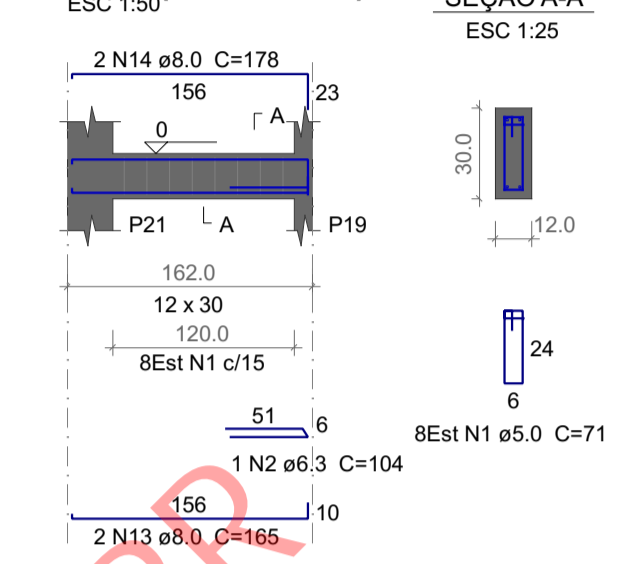
V6 (12 x 30)



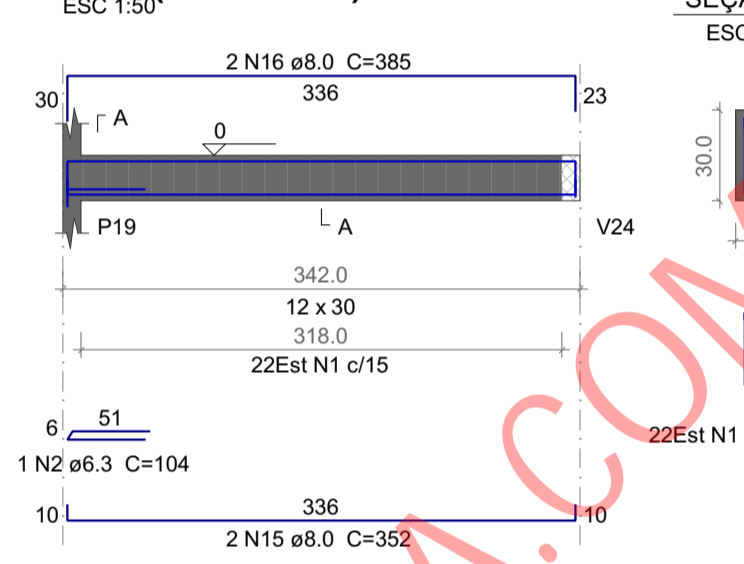
V7 (12 x 30)



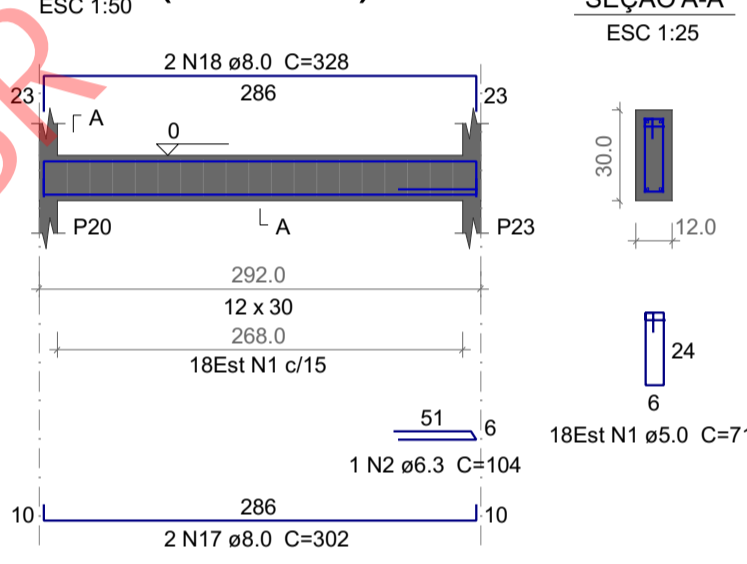
V8 (12 x 30)



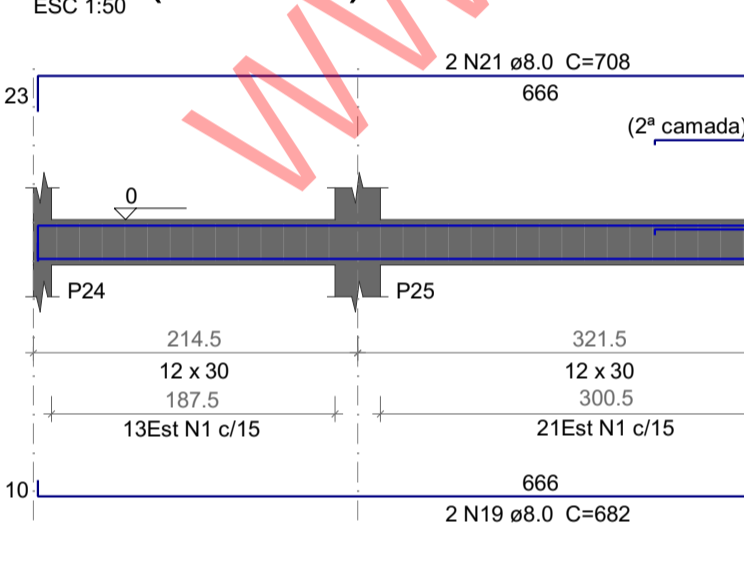
V9 (12 x 30)



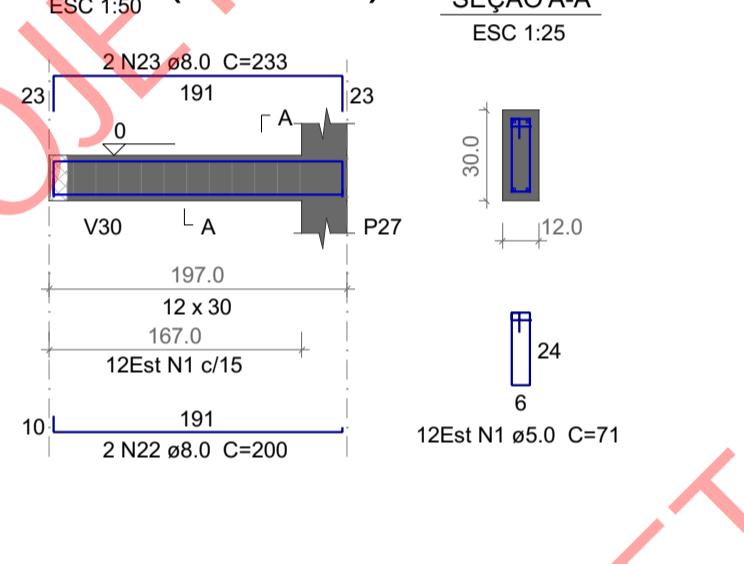
V10 (12 x 30)



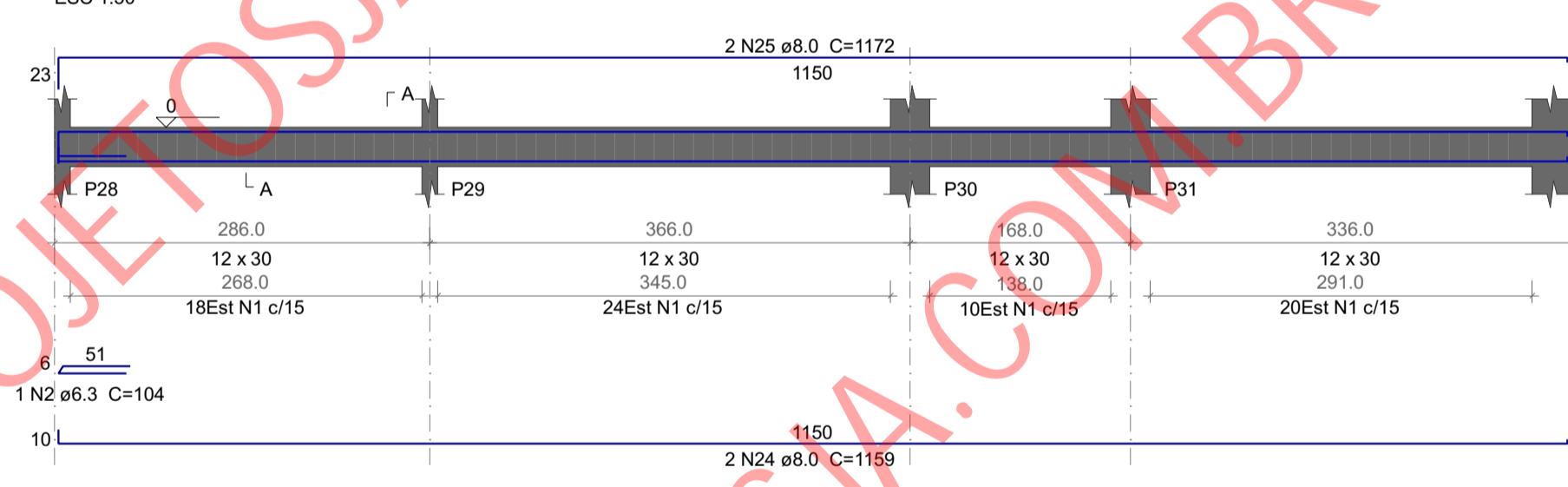
V11 (12 x 30)



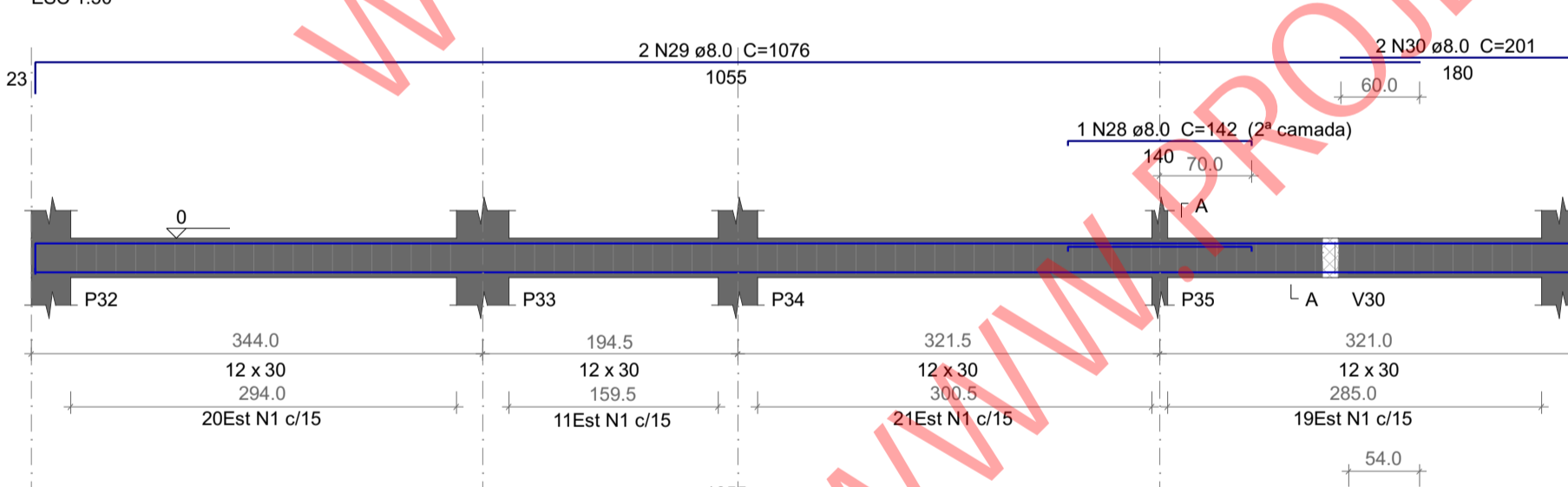
V12 (12 x 30)



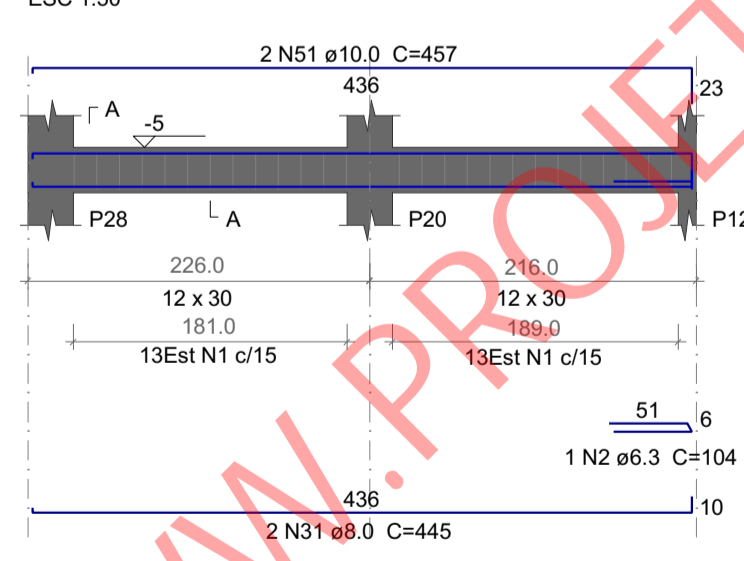
V13 (12 x 30)



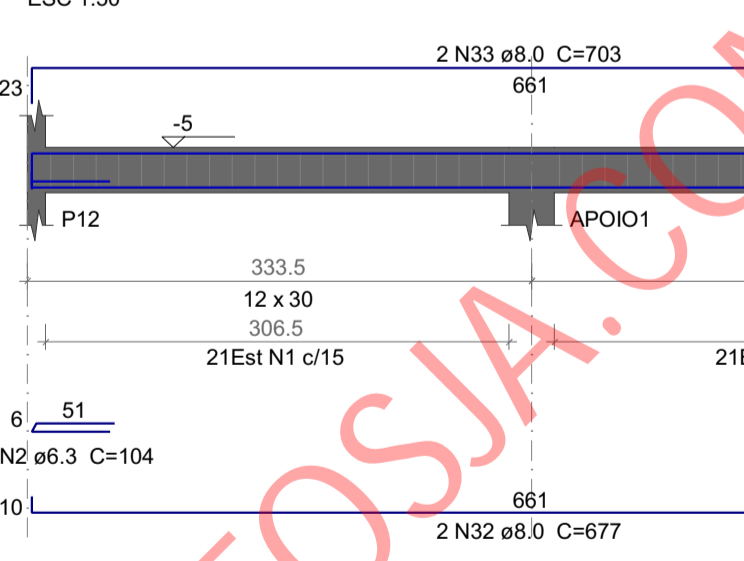
V14 (12 x 30)



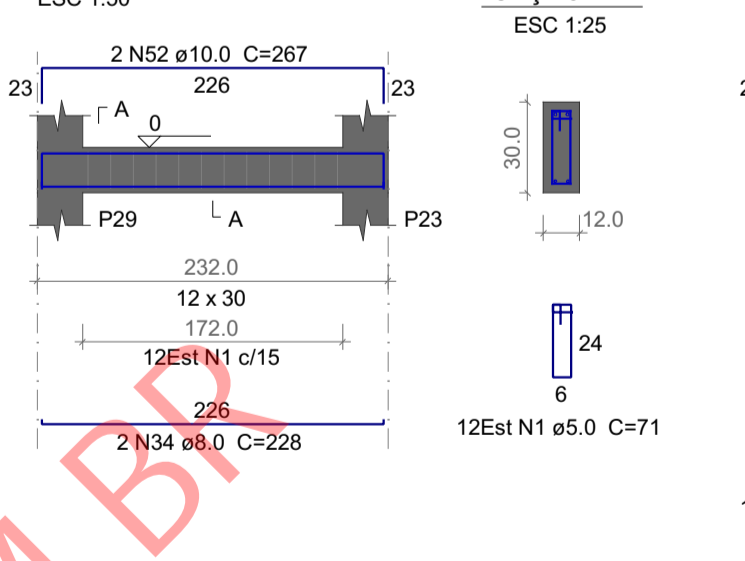
V15 (12 x 30)



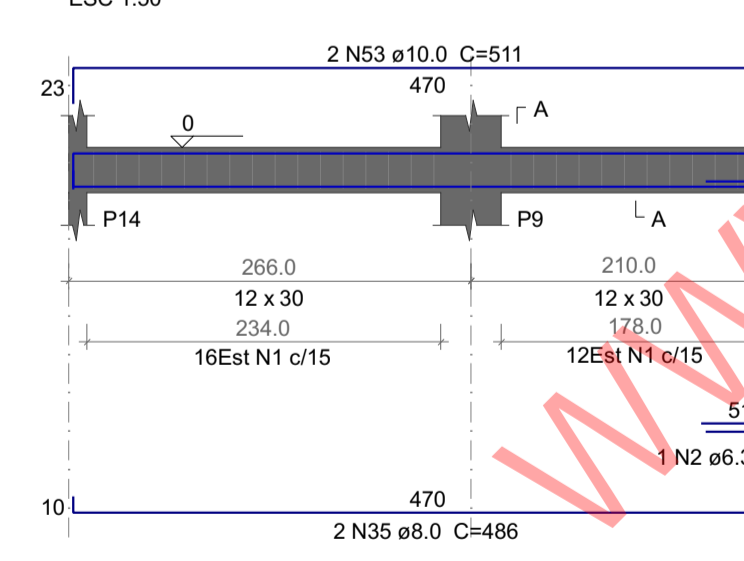
V16 (12 x 30)



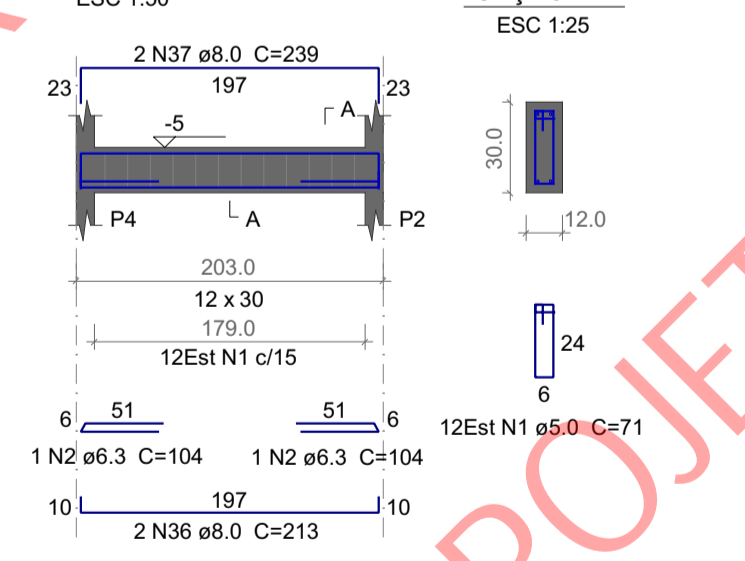
V17 (12 x 30)



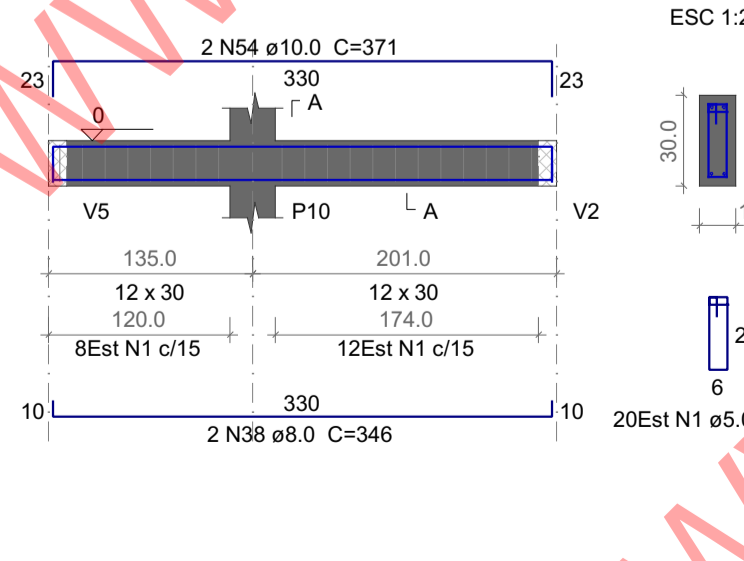
V18 (12 x 30)



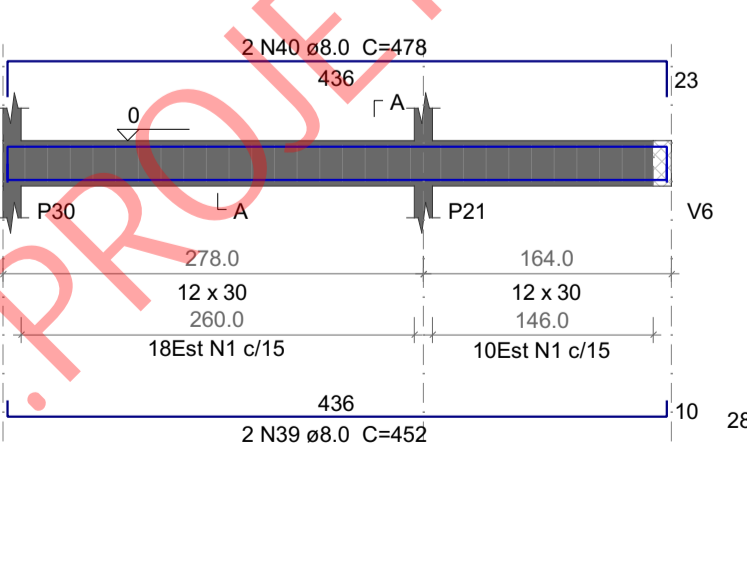
V19 (12 x 30)



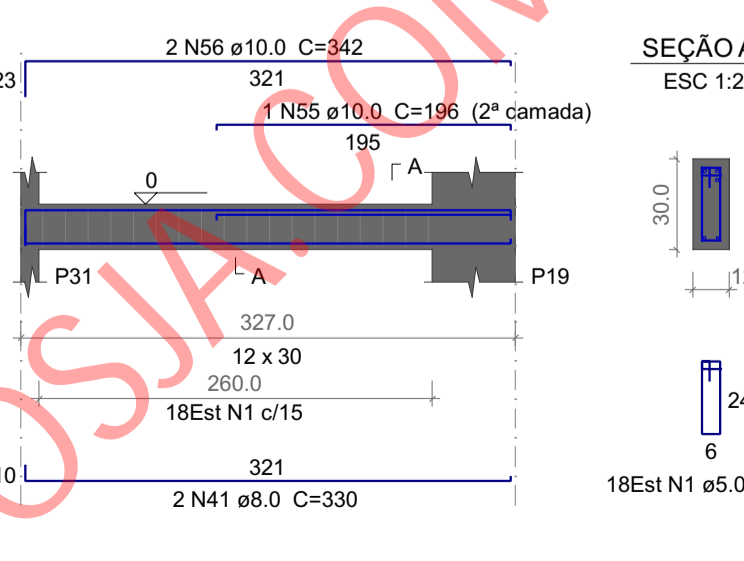
V20 (12 x 30)



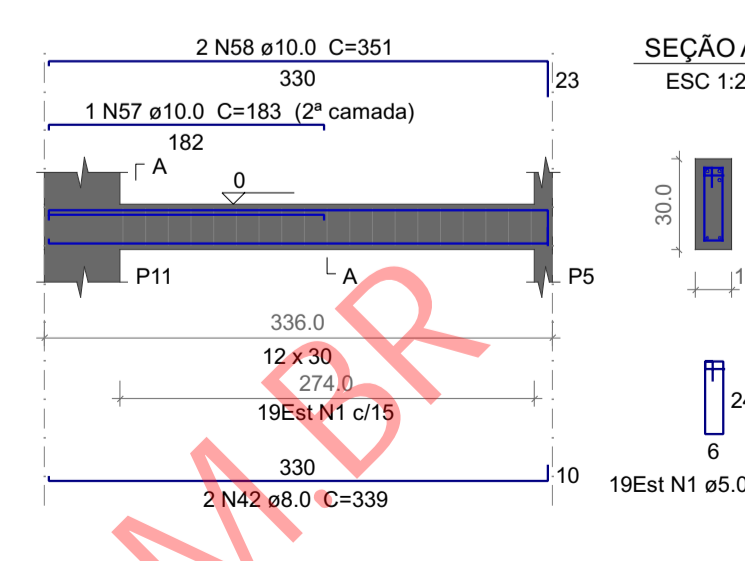
V21 (12 x 30)



V22 (12 x 30)



V23 (12 x 30)



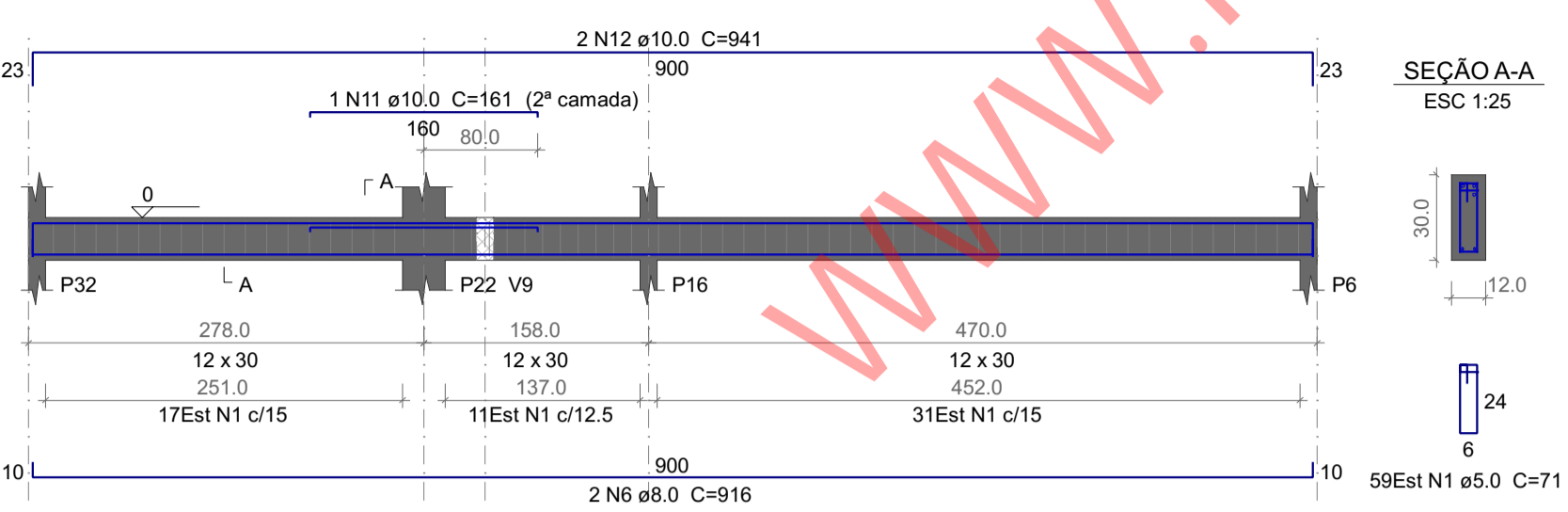
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT	PESO + 10 % (kg)
CA50	6.3	12.5	2	12 m	3.4
	8.0	394.8	37	12 m	171.4
	10.0	119.1	11	12 m	80.8
CA60	5.0	501.3	-	rolo (170 kg)	85
PESO TOTAL (kg)					
CA50					255.5
CA60					85

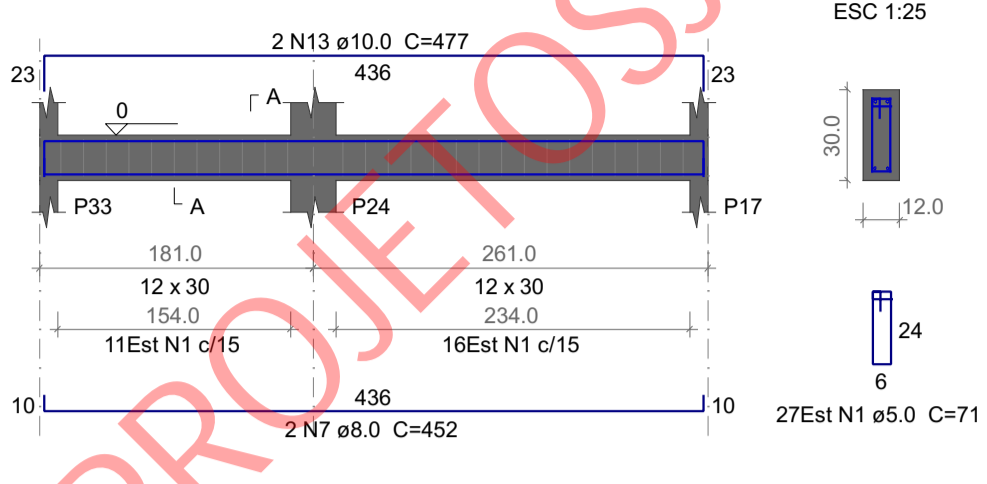
Volume de concreto (C-25) = 3.65 m³  
Área de forma = 72.89 m²



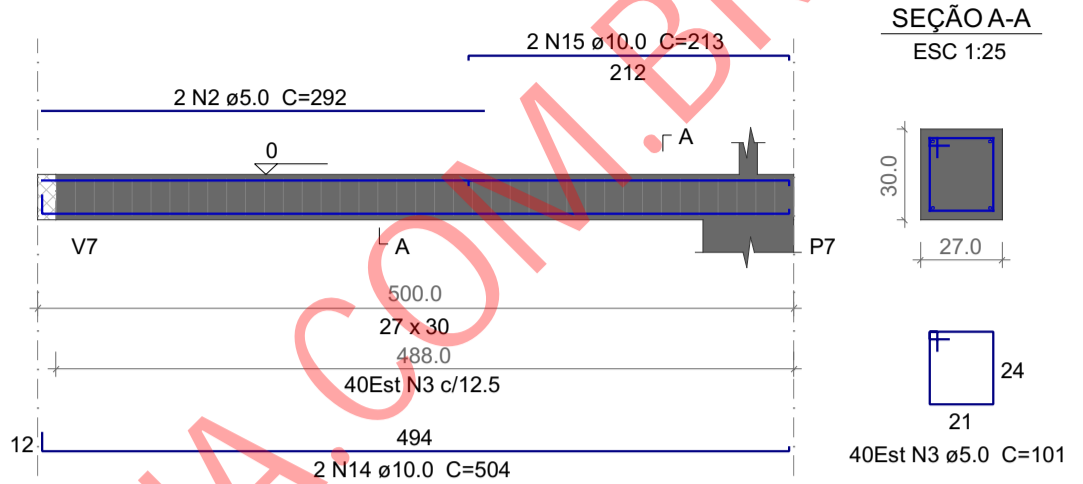
V24 (12 x 30)



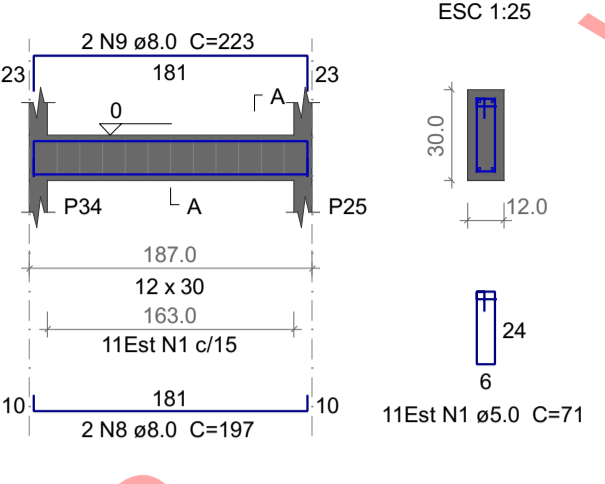
V25 (12 x 30)



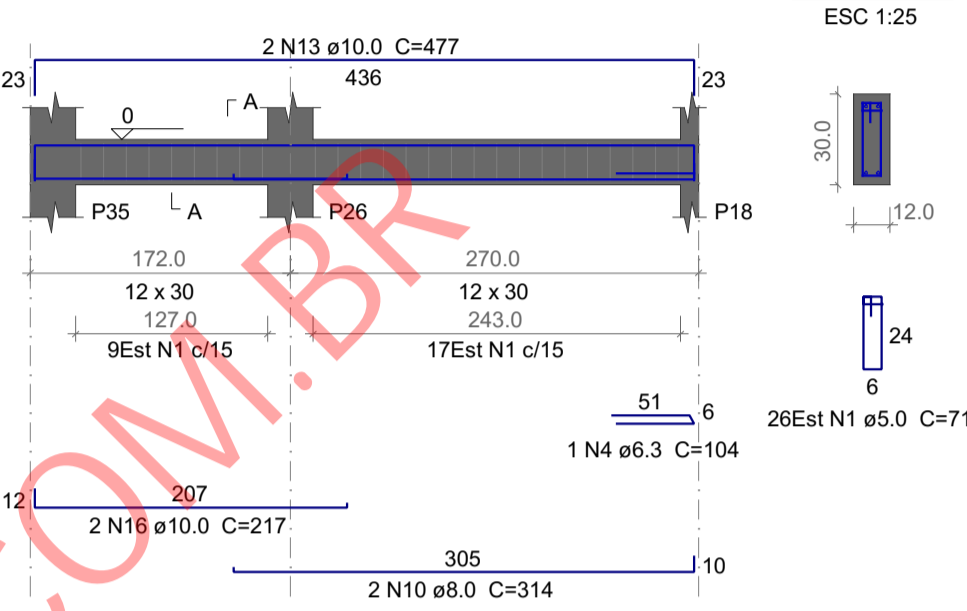
V26 (27 x 30)



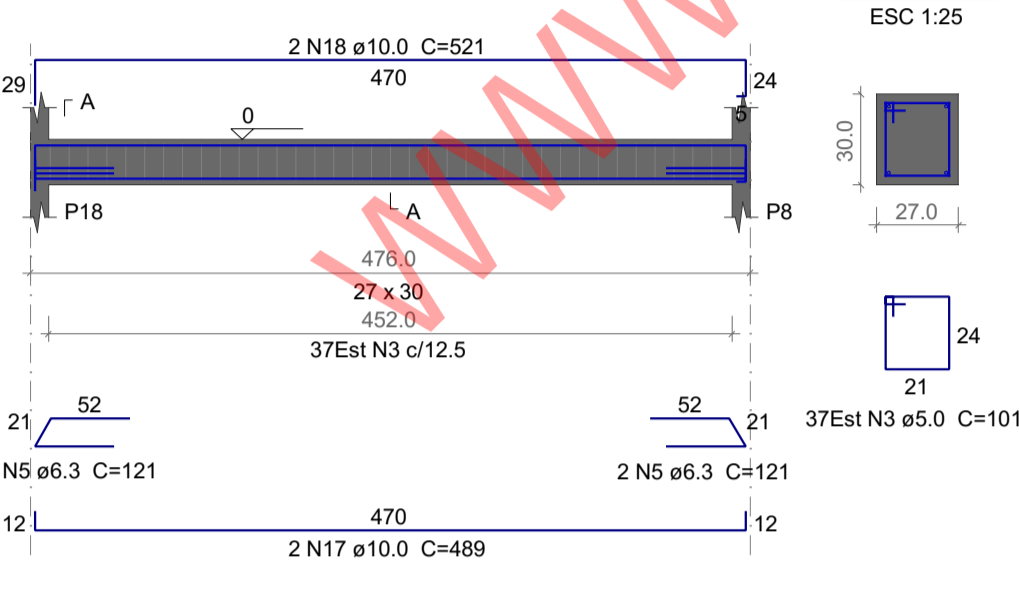
V27 (12 x 30)



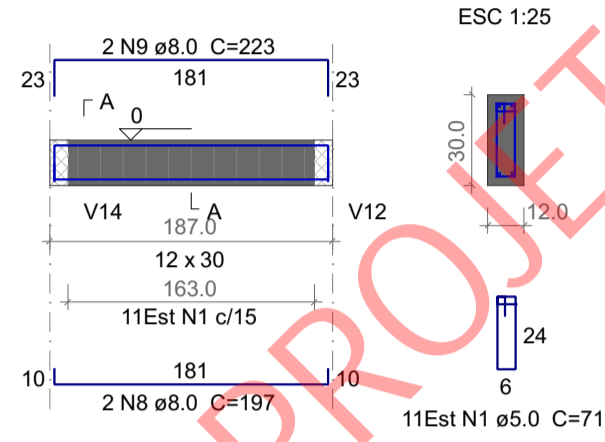
V28 (12 x 30)



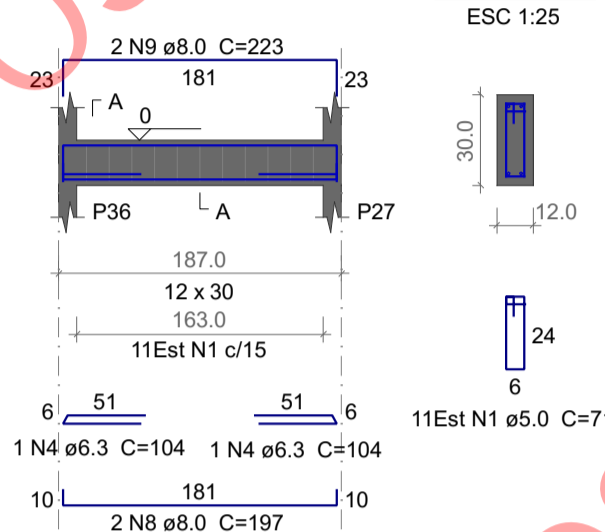
V29 (27 x 30)



V30 (12 x 30)



V31 (12 x 30)



Relação do aço

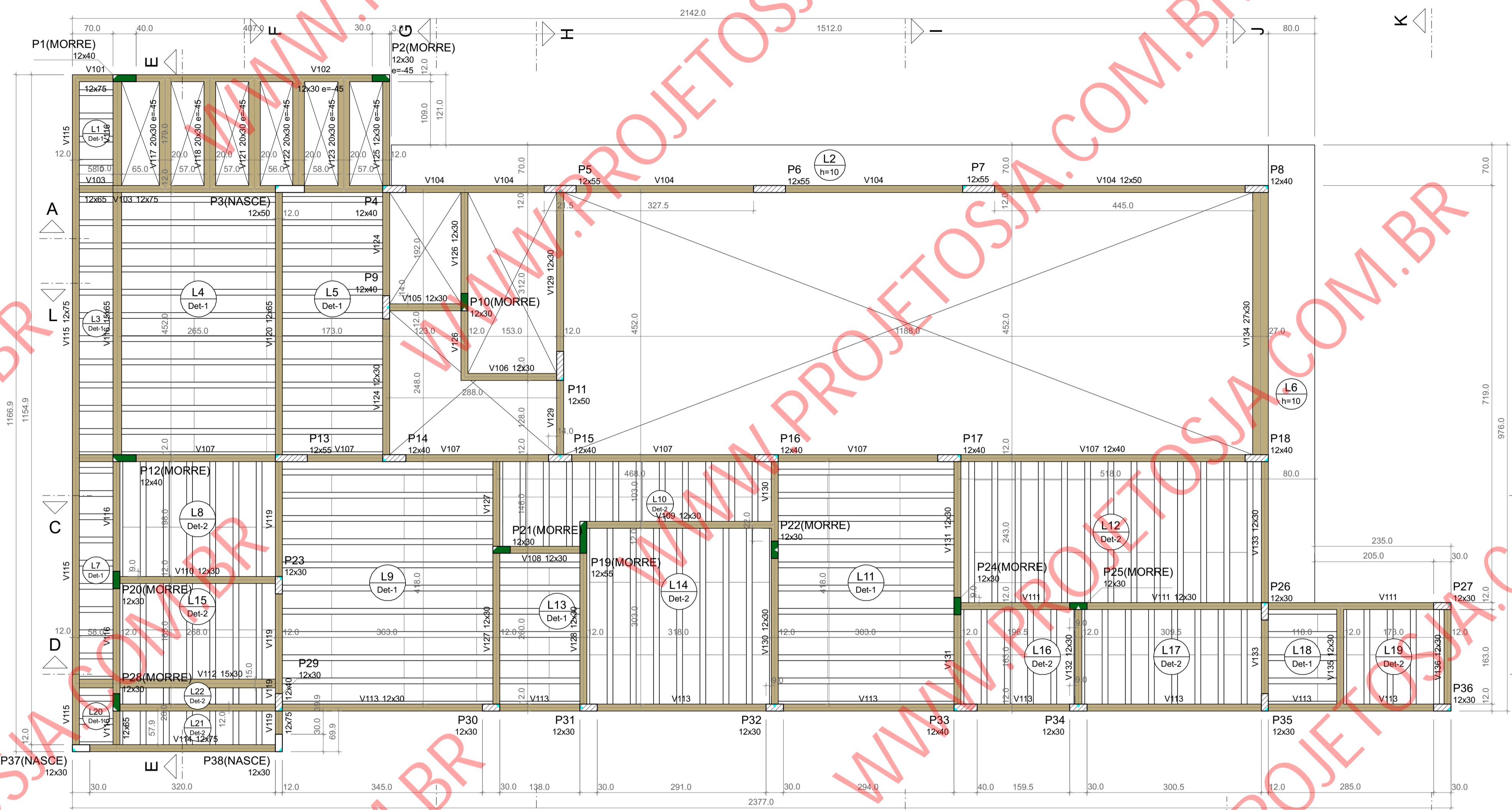
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	145	71	10295
	2	5.0	2	292	584
CA50	3	5.0	77	101	7777
	4	6.3	3	104	312
	5	6.3	4	121	484
	6	8.0	2	916	1832
	7	8.0	2	452	904
	8	8.0	6	197	1182
	9	8.0	6	223	1338
	10	8.0	2	314	628
	11	10.0	1	161	161
	12	10.0	2	941	1882
	13	10.0	4	477	1908
	14	10.0	2	504	1008
	15	10.0	2	213	426
	16	10.0	2	217	434
	17	10.0	2	489	978
	18	10.0	2	521	1042

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT	PESO + 10 % (kg)
CA50	6.3	8	1	12 m	2.1
	8.0	58.9	6	12 m	25.5
	10.0	78.4	8	12 m	53.2
CA60	5.0	186.6	-	rolo (170 kg)	31.6
PESO TOTAL (kg)					
CA50	80.8				
CA60	31.6				

Volume de concreto (C-25) = 1.47 m³  
 Área de forma = 22.79 m²





Nome	Tipo	Dados			Lajes		Sobrecarga (kgf/m²)		Localizada
		Altura (cm)	Elevação (cm)	Nível (cm)	Peso próprio (kgf/m²)	Adicional	Acidental		
L1	Vigota protendida	14	0	320	169	182	100	-	
L2	Maciça	10	0	320	250	79	10	-	
L3	Vigota protendida	14	0	320	169	182	100	-	
L4	Vigota protendida	14	0	320	169	182	100	-	
L5	Vigota protendida	14	0	320	169	182	100	-	
L6	Maciça	10	0	320	250	79	10	-	
L7	Vigota protendida	14	0	320	169	182	100	-	
L8	Vigota protendida	14	0	320	169	182	100	-	
L9	Vigota protendida	14	0	320	169	182	100	-	
L10	Vigota protendida	14	0	320	169	182	100	-	
L11	Vigota protendida	14	0	320	169	182	100	-	
L12	Vigota protendida	14	0	320	169	182	100	-	
L13	Vigota protendida	14	0	320	169	182	100	-	
L14	Vigota protendida	14	0	320	169	182	100	-	
L15	Vigota protendida	14	0	320	169	182	100	-	
L16	Vigota protendida	14	0	320	169	182	100	-	
L17	Vigota protendida	14	0	320	169	182	100	-	
L18	Vigota protendida	14	0	320	169	182	100	-	
L19	Vigota protendida	14	0	320	169	182	100	-	
L20	Vigota protendida	14	0	320	169	182	100	-	
L21	Vigota protendida	14	0	320	169	182	100	-	
L22	Vigota protendida	14	0	320	169	182	100	-	

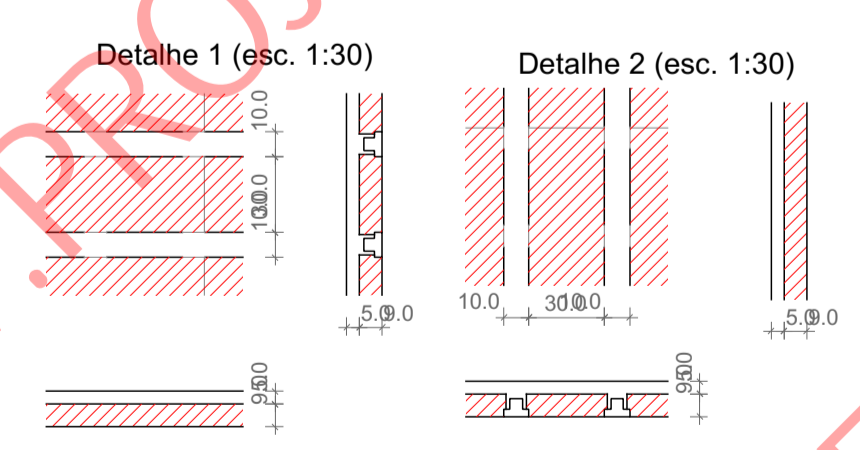
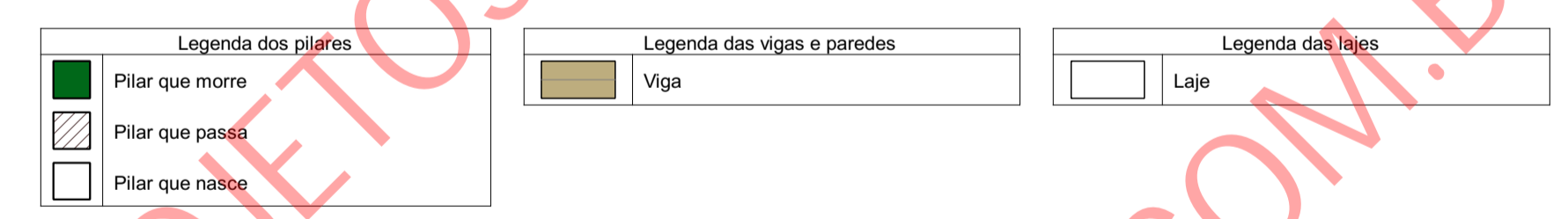
Blocos de enchimento				
Detalhe	Tipo	Nome	Dimensões (cm)	Quantidade
1/2	EPS Unidirecional	B9/30/125	9 30 125	282

Área de lajes			
Tipo	Altura (cm)	Bloco de Enchimento	Área (m²)
Maciça	10		18.34
Vigota protendida	14	B9/30/125	110.28

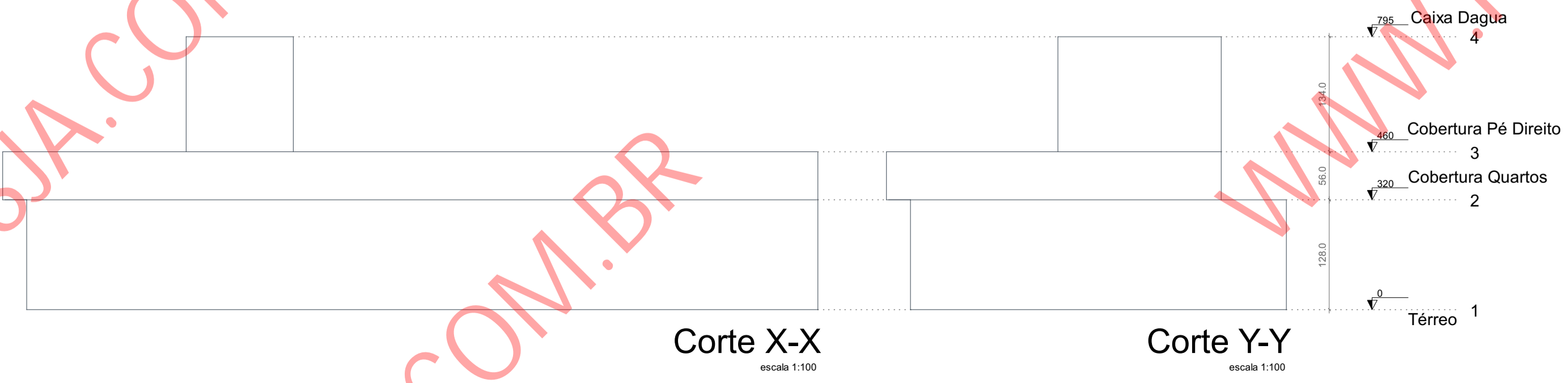
Características dos materiais			
fck (kgf/cm²)	Ecs (kgf/cm²)	ftc (kgf/cm²)	Abatimento (cm)
250	241500	26	5.00

Dimensão máxima do agregado = 19 mm

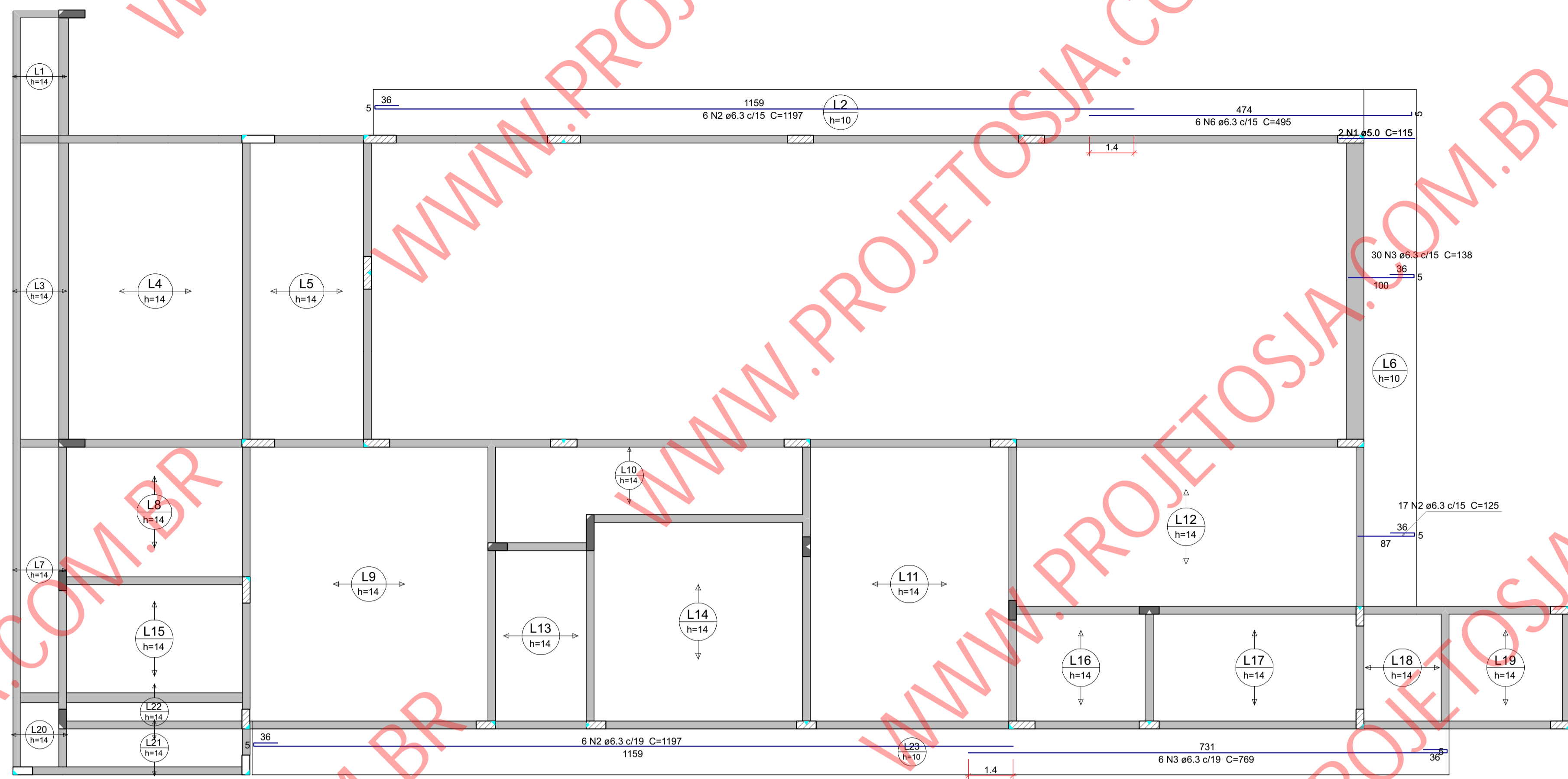
Pilares			Vigas		
Nome	Seção (cm)	Elevação (cm)	Nome	Seção (cm)	Elevação (cm)
P1	12x40	0 320	V101	12x75	0 320
P2	12x30	-45 275	V102	12x30	-45 275
P3	12x50	0 320	V103	12x65	0 320
P4	12x40	0 320	V104	12x75	0 320
P5	12x55	0 320	V105	12x30	0 320
P6	12x55	0 320	V106	12x50	0 320
P7	12x55	0 320	V107	12x40	0 320
P8	12x40	0 320	V108	12x30	0 320
P9	12x40	0 320	V109	12x30	0 320
P10	12x30	0 320	V110	12x30	0 320
P11	12x50	0 320	V111	12x30	0 320
P12	12x40	0 320	V112	15x30	0 320
P13	12x55	0 320	V113	12x30	0 320
P14	12x40	0 320	V114	12x75	0 320
P15	12x40	0 320	V115	12x75	0 320
P16	12x40	0 320	V116	12x65	0 320
P17	12x40	0 320	V117	20x30	-45 275
P18	12x40	0 320	V118	20x30	-45 275
P19	12x55	0 320	V119	12x75	0 320
P20	12x30	0 320	V120	12x40	0 320
P21	12x30	0 320	V121	20x30	-45 275
P22	12x30	0 320	V122	20x30	-45 275
P23	12x30	0 320	V123	20x30	-45 275
P24	12x30	0 320	V124	12x30	0 320
P25	12x30	0 320	V125	12x30	-45 275
P26	12x30	0 320	V126	12x30	0 320
P27	12x30	0 320	V127	12x30	0 320
P28	12x30	0 320	V128	12x30	0 320
P29	12x30	0 320	V129	12x30	0 320
P30	12x30	0 320	V130	12x30	0 320
P31	12x30	0 320	V131	12x30	0 320
P32	12x30	0 320	V132	12x30	0 320
P33	12x40	0 320	V133	12x30	0 320
P34	12x30	0 320	V134	27x30	0 320
P35	12x30	0 320	V135	12x30	0 320
P36	12x30	0 320	V136	12x30	0 320
P37	12x30	0 320			
P38	12x30	0 320			



Forma do pavimento Cobertura Quartos (Nível 320)  
escala 1:50

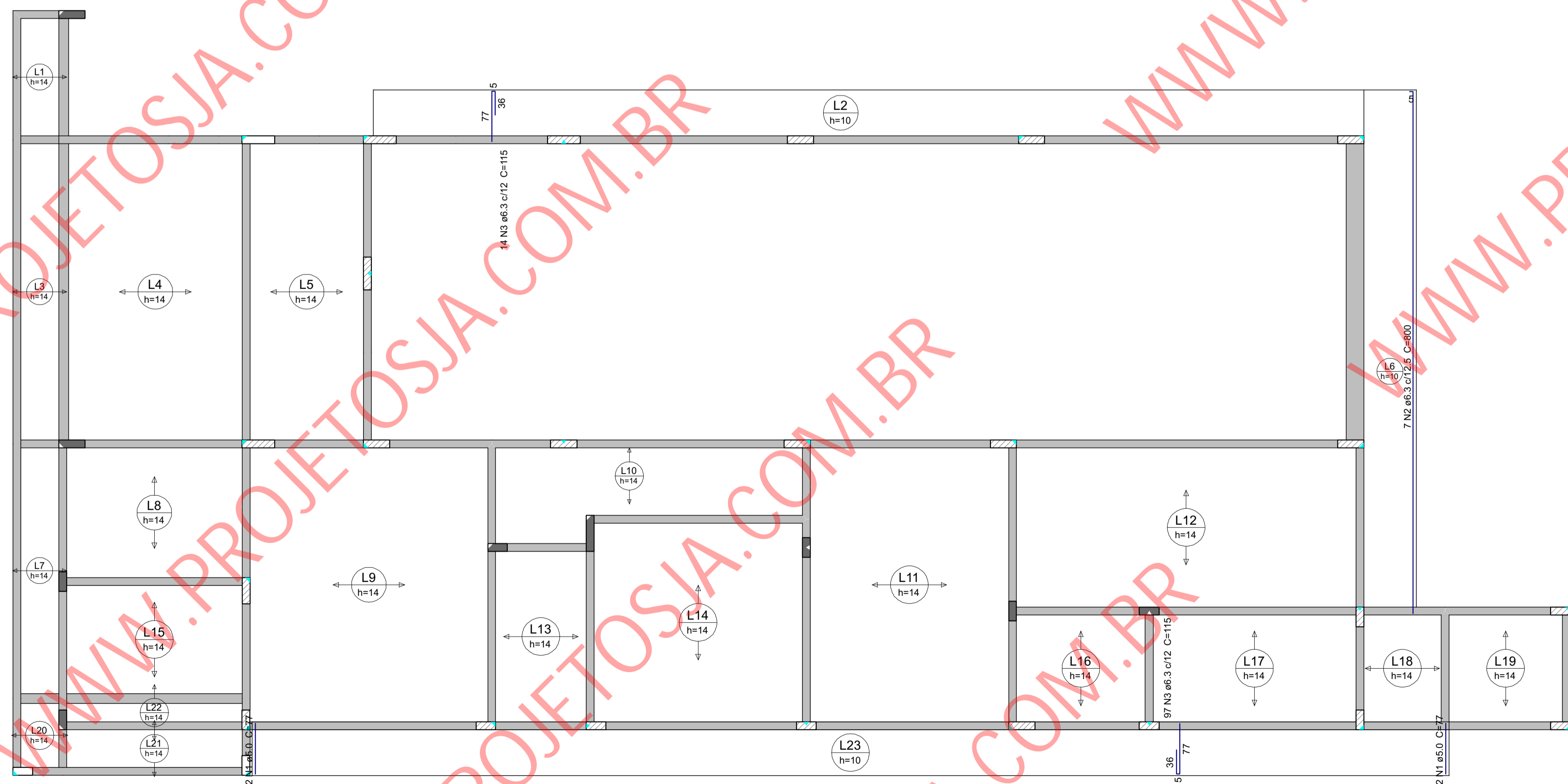






Armação positiva das lajes do pavimento Cobertura Quartos (Eixo X)

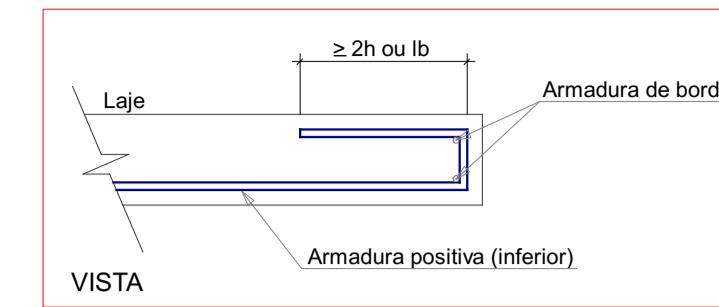
escala 1:50



Armação positiva das lajes do pavimento Cobertura Quartos (Eixo Y)

escala 1:50

DETALHE DA ARMADURA DE BORDO LIVRE DA LAJE



Relação do aço

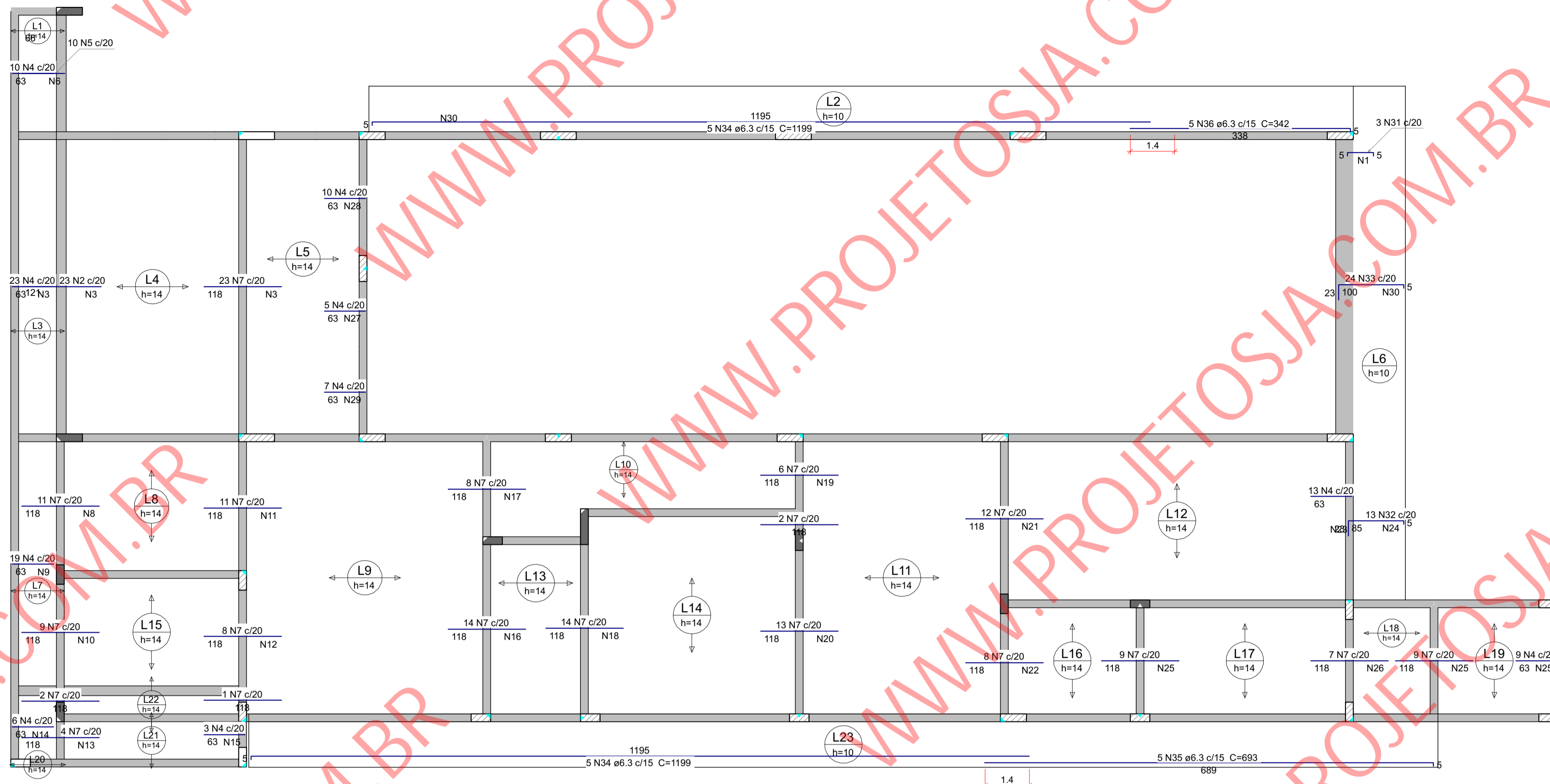
Positivos X		Positivos Y			
ACO	N	DIAM (mm)	QUANT	C.TOTAL (cm)	C.TOTAL (kg)
CA60	1	5.0	2	115	230
	1	5.0	2	115	230
CA50	2	6.3	4	77	308
	2	6.3	12	1407	14364
	3	6.3	6	138	4614
	2	6.3	17	125	2125
	3	6.3	30	188	4140
	6	6.3	6	495	2970
	2	6.3	6	800	5600
	3	6.3	11	115	12765

Resumo do aço

ACO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT (170 kg)	PESO + 10 % (kg)
CA50	6.3	165.8	43	12 m	125.4
CA60	5.0	7.7	-	rolo (170 kg)	1.3
PESO TOTAL (kg)					
CA50					125.4
CA60					1.3

Volume de concreto (C-25) = 8.84 m³  
Área de forma = 33.51 m²





Armação negativa das lajes do pavimento Cobertura Quartos (Eixo X)

escala 1:50

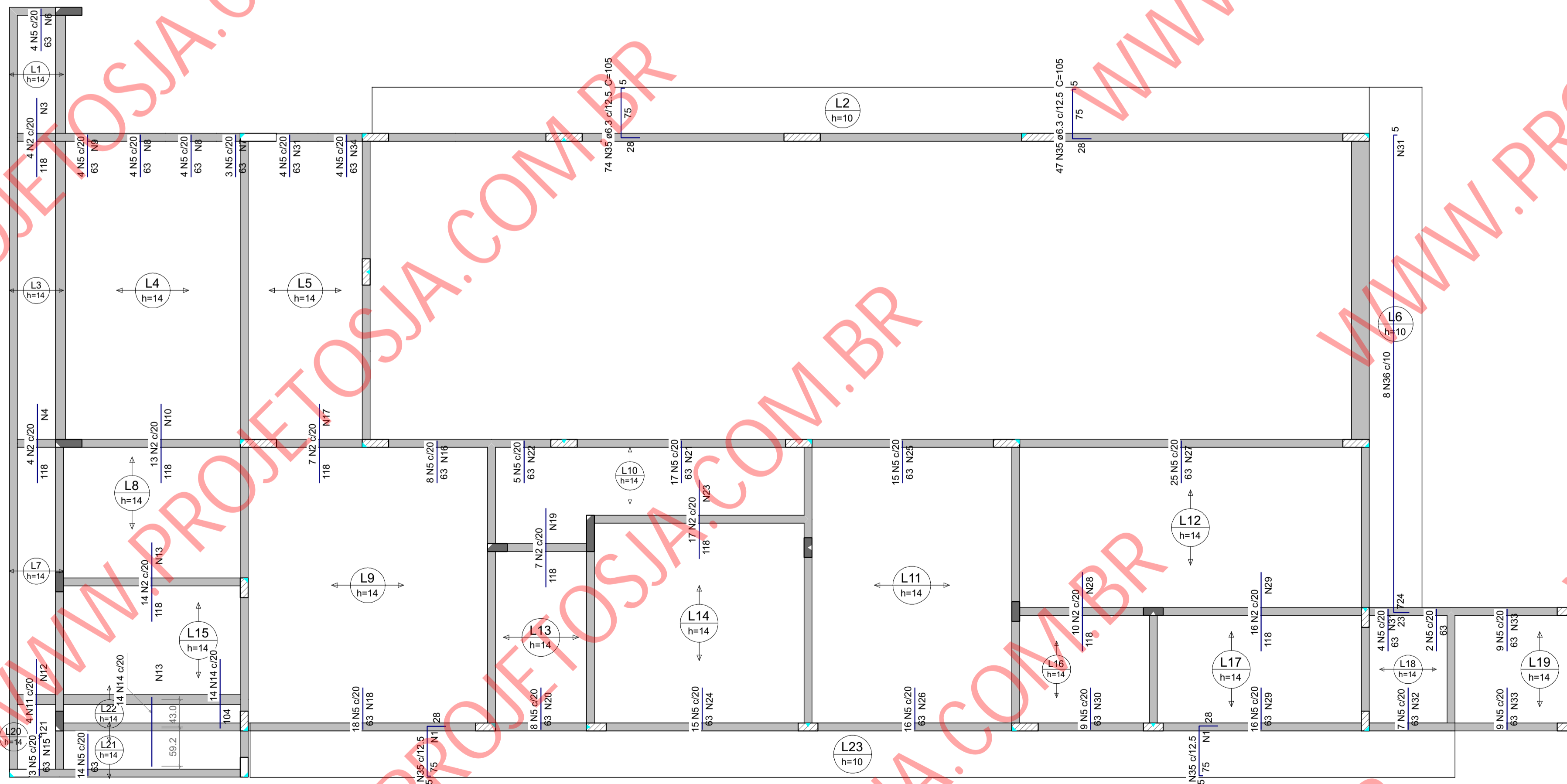
Armadura	Armadura de distribuição
N31	2 N1 ø5.0 c/20 C=48
N2	6 N3 ø5.0 c/20 C=464
N4	4 N3 ø5.0 c/20 C=464
N5	4 N6 ø5.0 c/20 C=191
N4	
N7	6 N3 ø5.0 c/20 C=464
N7	6 N8 ø5.0 c/20 C=210
N4	4 N9 ø5.0 c/20 C=389
N7	6 N10 ø5.0 c/20 C=179
N7	6 N11 ø5.0 c/20 C=216
N7	6 N12 ø5.0 c/20 C=167
N7	6 N13 ø5.0 c/20 C=79
N4	4 N14 ø5.0 c/20 C=111
N7	4 N15 ø5.0 c/20 C=70
N7	6 N16 ø5.0 c/20 C=272
N7	6 N17 ø5.0 c/20 C=158
N7	6 N18 ø5.0 c/20 C=275
N7	6 N19 ø5.0 c/20 C=115
N7	6 N20 ø5.0 c/20 C=266
N7	6 N21 ø5.0 c/20 C=249
N7	6 N22 ø5.0 c/20 C=189
N4	4 N23 ø5.0 c/20 C=258
N4	4 N24 ø5.0 c/20 C=255
N7	6 N25 ø5.0 c/20 C=175
N7	6 N26 ø5.0 c/20 C=145
N7	6 N25 ø5.0 c/20 C=175
N4	4 N25 ø5.0 c/20 C=178
N4	4 N27 ø5.0 c/20 C=109
N4	4 N28 ø5.0 c/20 C=193
N4	4 N29 ø5.0 c/20 C=140
N33	5 N30 ø5.0 c/20 C=470

Armadura	Armadura de distribuição
N35	4 N1 ø5.0 c/20 C=329
N2	6 N3 ø5.0 c/20 C=72
N2	6 N4 ø5.0 c/20 C=73
N5	4 N8 ø5.0 c/20 C=84
N5	4 N7 ø5.0 c/20 C=58
N5	4 N8 ø5.0 c/20 C=77
N5	4 N8 ø5.0 c/20 C=77
N5	4 N9 ø5.0 c/20 C=83
N2	6 N10 ø5.0 c/20 C=288
N11	6 N12 ø5.0 c/20 C=70
N2	6 N13 ø5.0 c/20 C=280
N14	6 N13 ø5.0 c/20 C=280
N5	4 N15 ø5.0 c/20 C=61
N14	
N5	4 N16 ø5.0 c/20 C=165
N2	6 N17 ø5.0 c/20 C=148
N5	4 N18 ø5.0 c/20 C=360
N2	6 N19 ø5.0 c/20 C=135
N5	4 N20 ø5.0 c/20 C=156
N5	4 N21 ø5.0 c/20 C=334
N5	4 N22 ø5.0 c/20 C=99
N2	6 N23 ø5.0 c/20 C=330
N5	4 N24 ø5.0 c/20 C=309
N5	4 N25 ø5.0 c/20 C=293
N5	4 N26 ø5.0 c/20 C=312
N5	4 N27 ø5.0 c/20 C=508
N2	6 N28 ø5.0 c/20 C=203
N2	6 N29 ø5.0 c/20 C=316
N5	4 N30 ø5.0 c/20 C=178
N5	4 N29 ø5.0 c/20 C=316
N5	4 N31 ø5.0 c/20 C=86
N36	37 N31 ø5.0 c/20 C=86
N5	4 N32 ø5.0 c/20 C=130
N5	4 N33 ø5.0 c/20 C=170
N5	4 N33 ø5.0 c/20 C=170
N5	4 N34 ø5.0 c/20 C=87
N5	4 N31 ø5.0 c/20 C=86

Relação do aço				
Negativos X		Negativos Y		
ACO	N	DIAM (mm)	QUANT	C.TOTAL (cm)
CA60	1	5.0	2	48
	2	5.0	27	121
	3	5.0	16	464
	4	5.0	332	63
	5	5.0	10	66
	6	5.0	4	191
	7	5.0	263	118
	8	5.0	6	210
	9	5.0	4	389
	10	5.0	6	179
	11	5.0	6	216
	12	5.0	6	167
	13	5.0	6	79
	14	5.0	4	111
	15	5.0	10	70
	16	5.0	6	111
	17	5.0	6	158
	18	5.0	6	275
	19	5.0	6	115
	20	5.0	6	266
	21	5.0	6	249
	22	5.0	6	169
	23	5.0	10	258
	24	5.0	5	255
	25	5.0	16	175
	26	5.0	6	145
	27	5.0	4	109
	28	5.0	4	193
	29	5.0	4	140
	30	5.0	10	470
	31	5.0	8	329
	32	5.0	6	72
	33	5.0	6	73
	34	5.0	4	84
	35	5.0	4	58
	36	5.0	4	77
	37	5.0	4	83
	38	5.0	12	280
	39	5.0	28	104
	40	5.0	4	61
	41	5.0	4	165
	42	5.0	6	148
	43	5.0	4	360
	44	5.0	6	135
	45	5.0	4	156
	46	5.0	4	334
	47	5.0	4	99
	48	5.0	6	330
	49	5.0	4	309
	50	5.0	4	293
	51	5.0	4	312
	52	5.0	4	508
	53	5.0	6	203
	54	5.0	10	316
	55	5.0	4	178
	56	5.0	45	86
	57	5.0	4	130
	58	5.0	8	170
	59	5.0	4	87
	60	5.0	3	47
	61	5.0	3	141
	62	5.0	13	110
	63	5.0	24	300
	64	5.0	10	1199
	65	5.0	5	693
	66	5.0	5	342
	67	5.0	268	105
	68	5.0	8	749

Resumo do aço

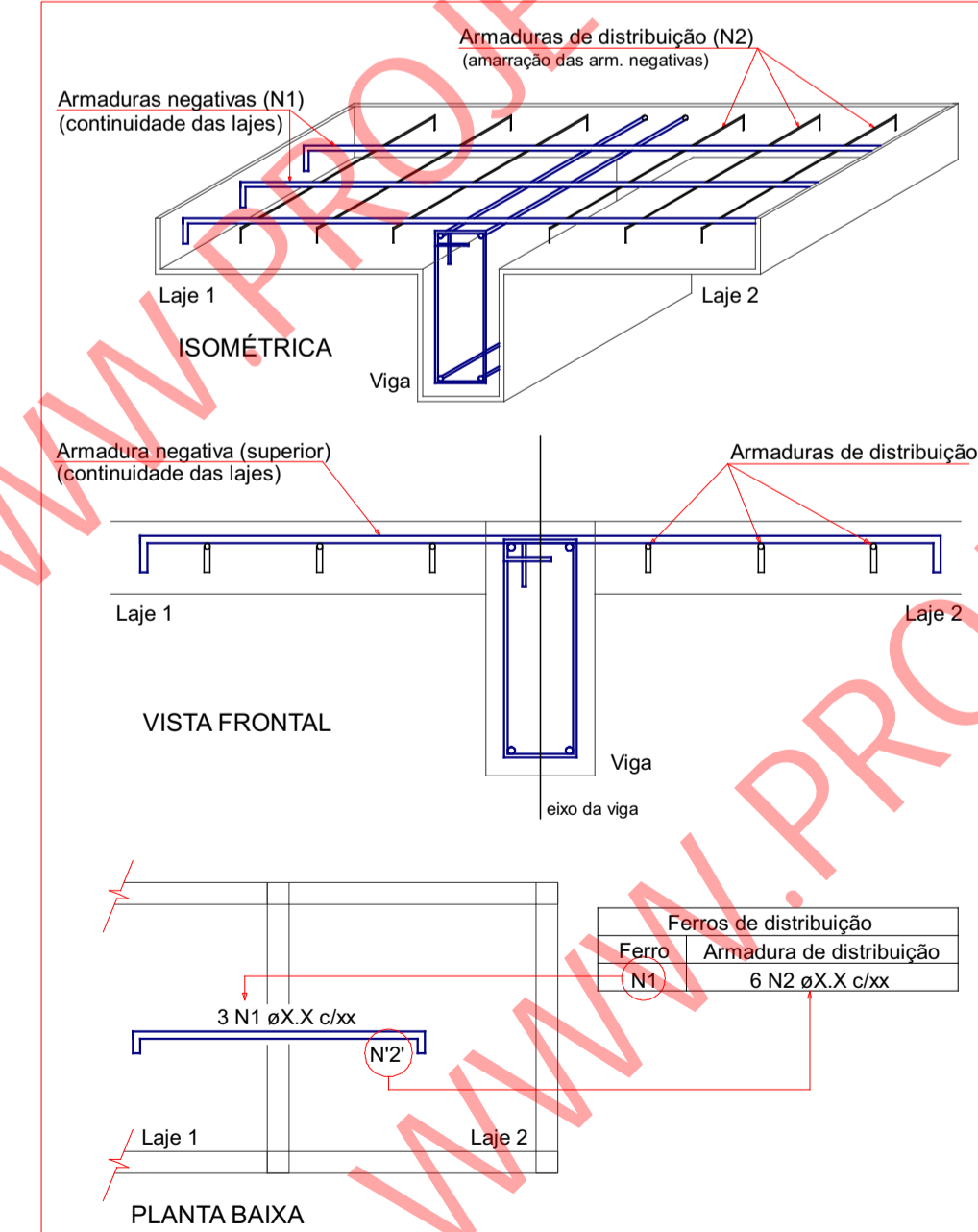
ACO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT	PESO + 10 % (kg)
CA50	6.3	558.7	52	12 m	150.4
CA60	5.0	1315.3	-	rolo (170 kg)	223
PESO TOTAL (kg)					
CA50					150.4
CA60					223



Armação negativa das lajes do pavimento Cobertura Quartos (Eixo Y)

escala 1:50

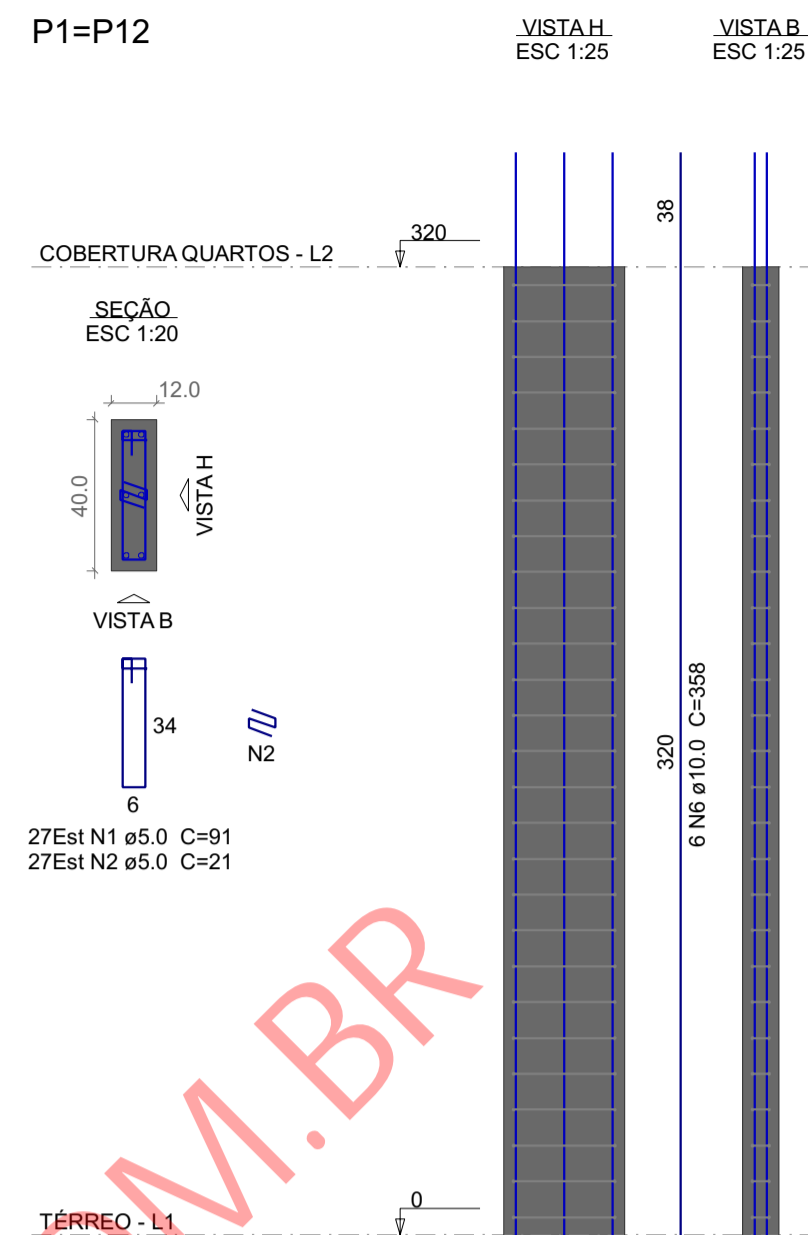
DETALHE DA ARMADURA SUPERIOR DE CONTINUIDADE DA LAJE E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



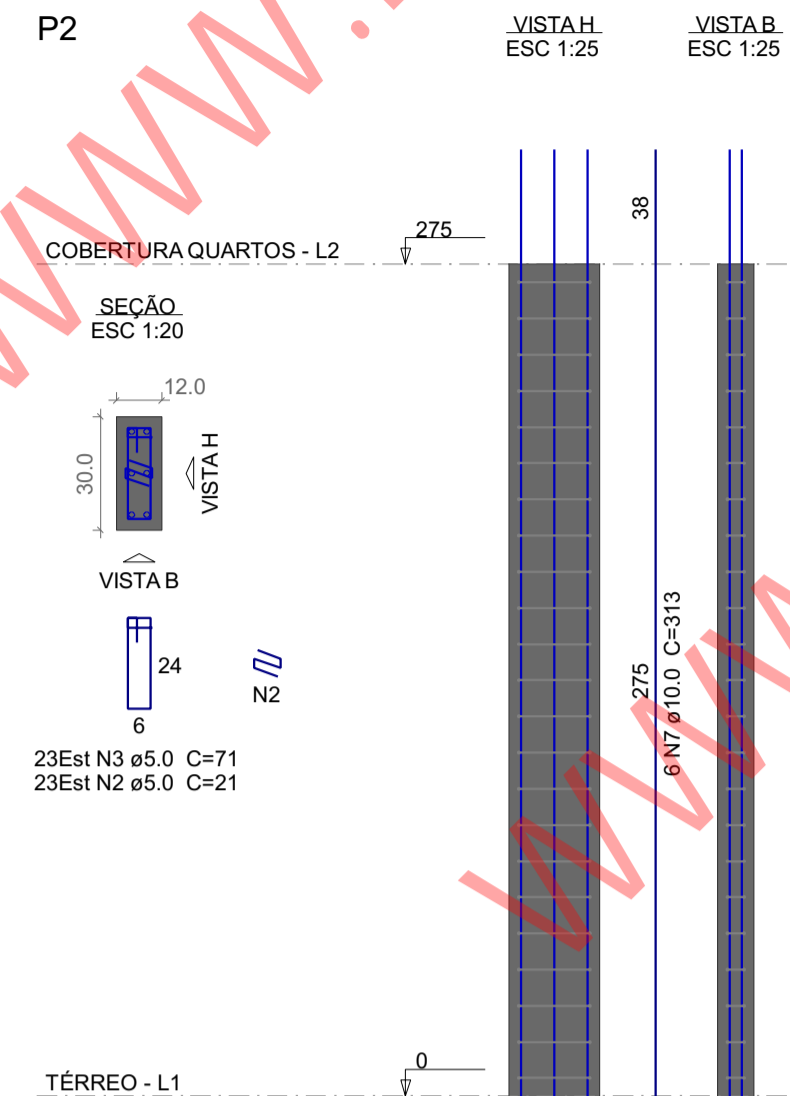
NOTA: A ARMADURA DE DISTRIBUIÇÃO DAS CONTINUIDADES DEVE SER ININTERRUPTA E COM TRASPASSE (CASO HAJA EMENDAS).



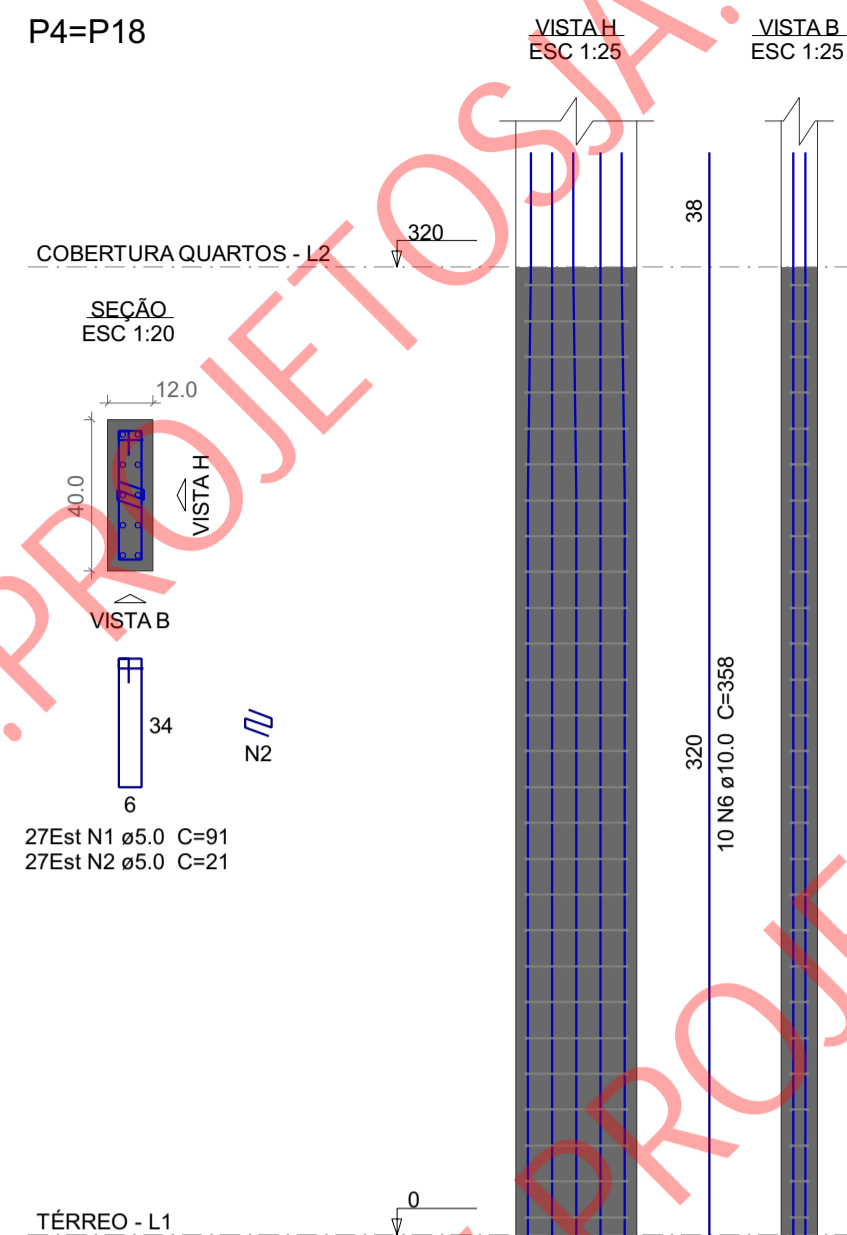
P1=P12



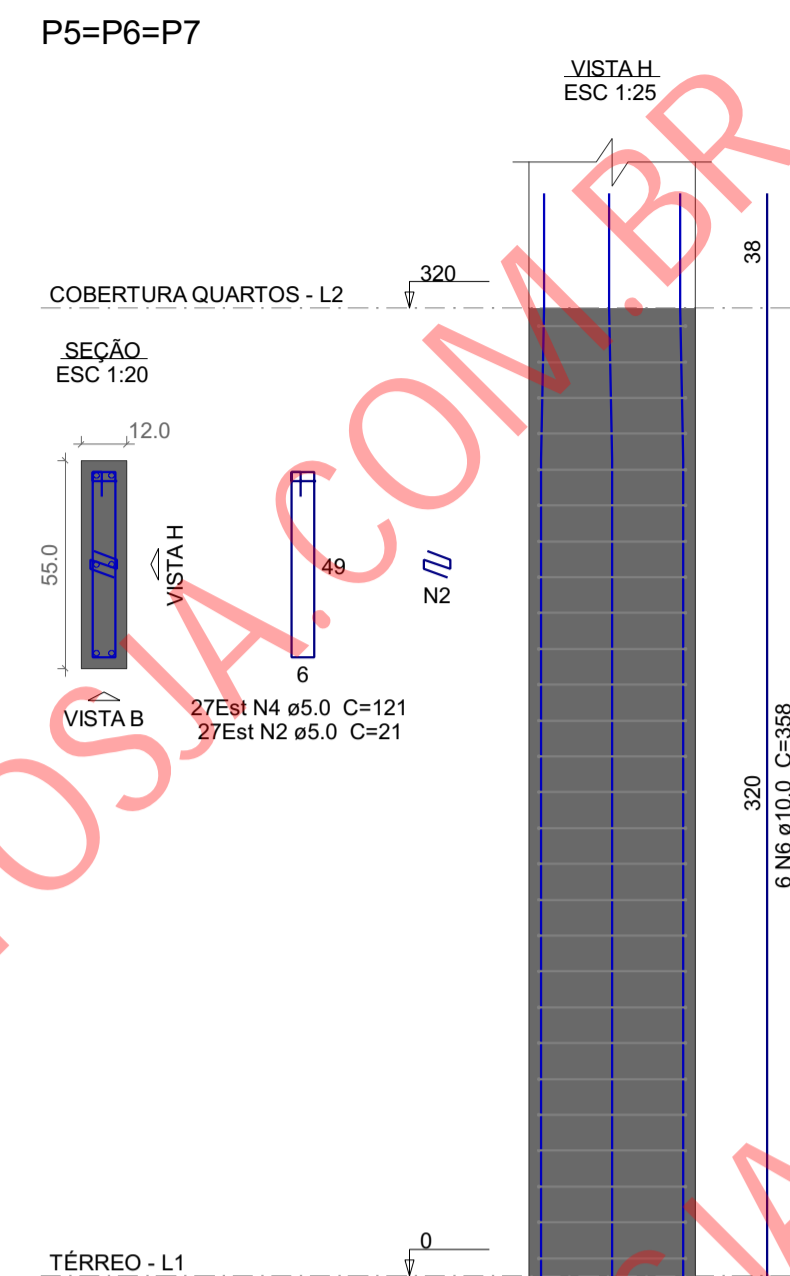
P2



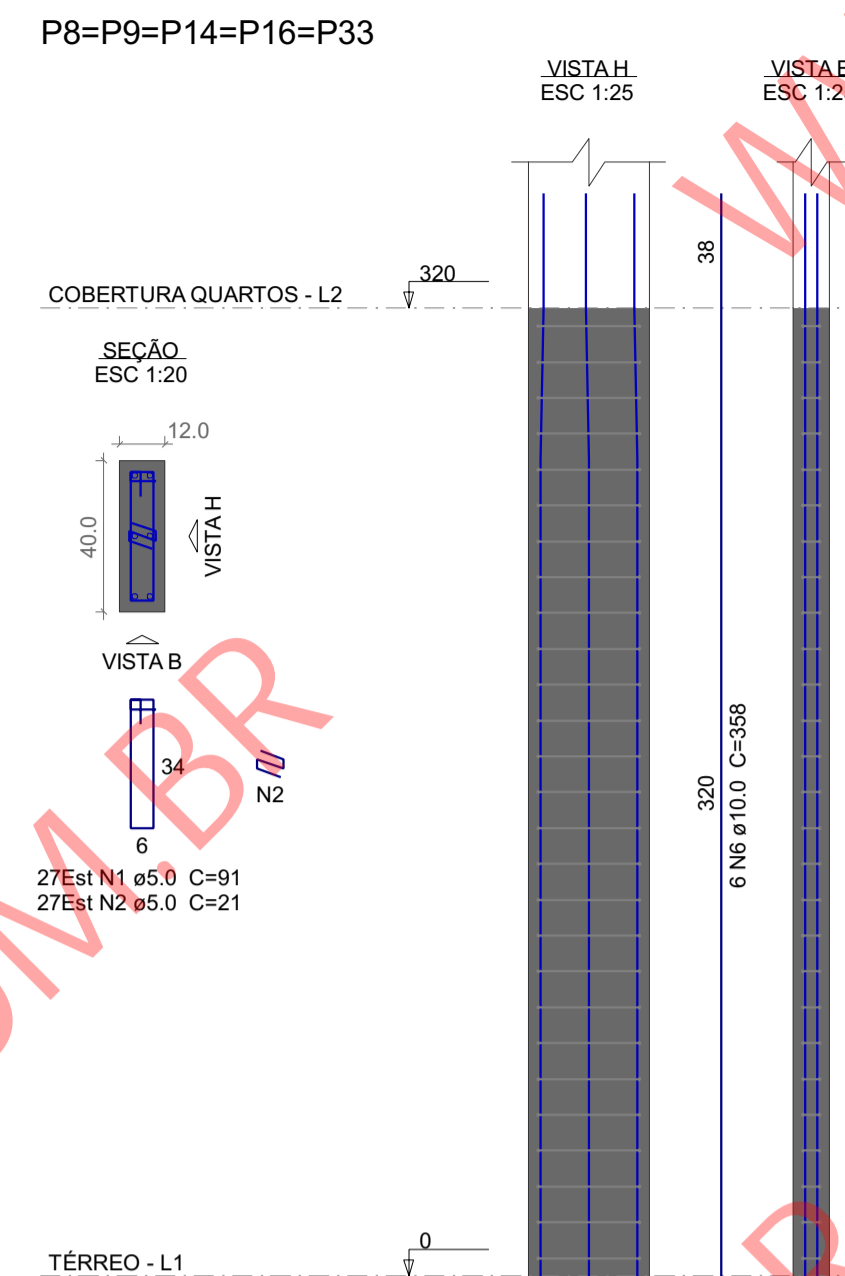
P4=P18



P5=P6=P7



P8=P9=P14=P16=P33



Relação do aço

2xP1	P2	2xP4
3xP5	5xP8	5xP10
P11	P13	P15
P17	P19	2xP20
6xP23	4xP26	

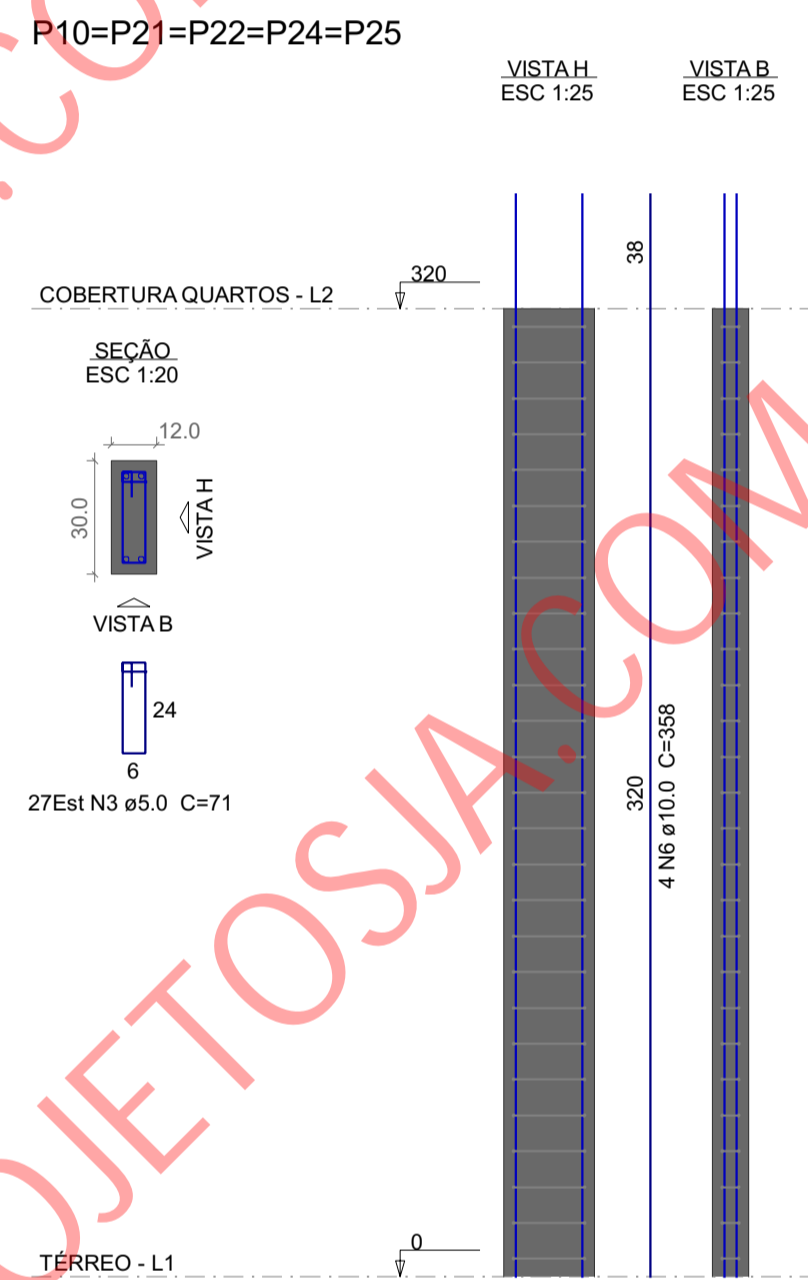
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	297	31	27027
	2	5.0	725	21	15225
	3	5.0	482	71	34222
	4	5.0	135	121	16335
	5	5.0	27	111	2997
CA50	6	10.0	196	358	70168
	7	10.0	6	313	1878
	8	12.5	6	94	564

Resumo do aço

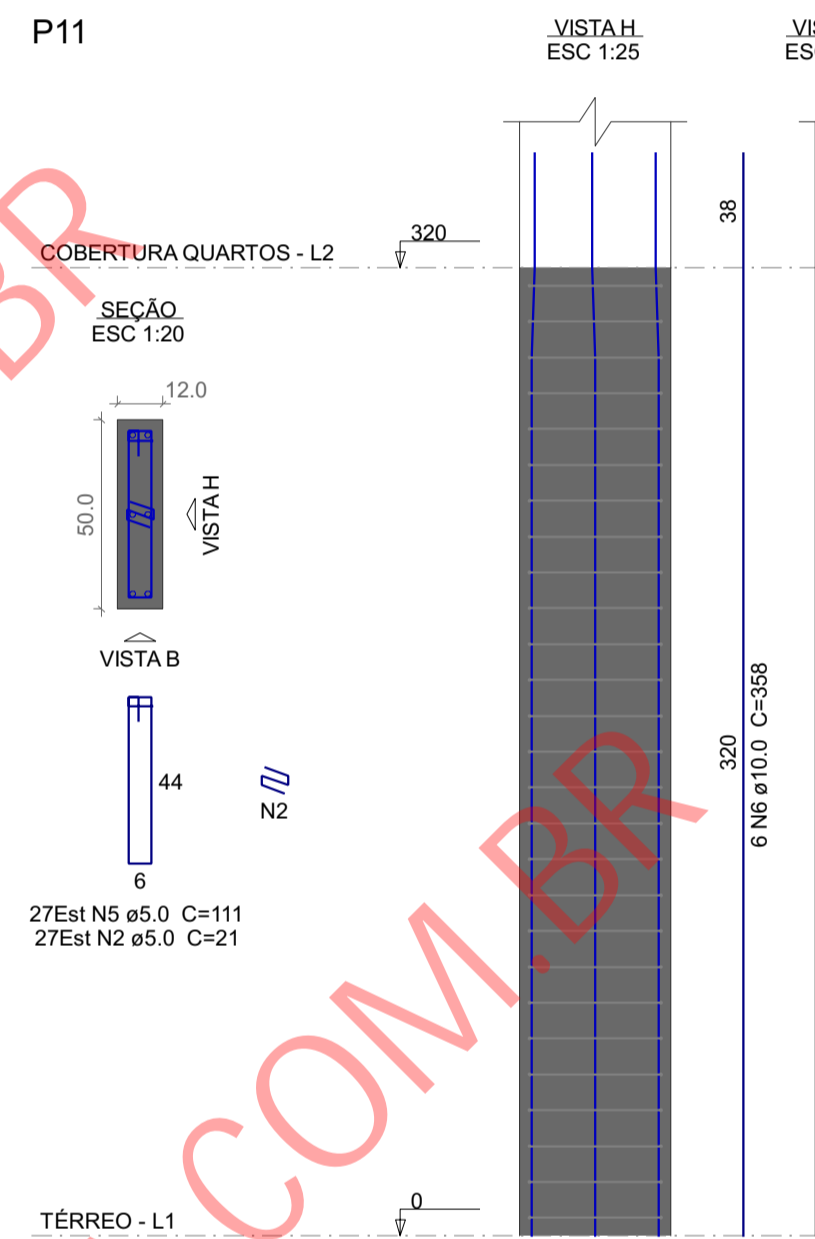
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT	PESO + 10 % (kg)
CA50	10.0	720.5	67	12 m	488.6
CA60	5.0	958.1	1	12 m	6
PESO TOTAL (kg)					494.6
CA50					162.4

Volume de concreto (C-25) = 5 m<sup>3</sup>  
 Área de forma = 110.02 m<sup>2</sup>

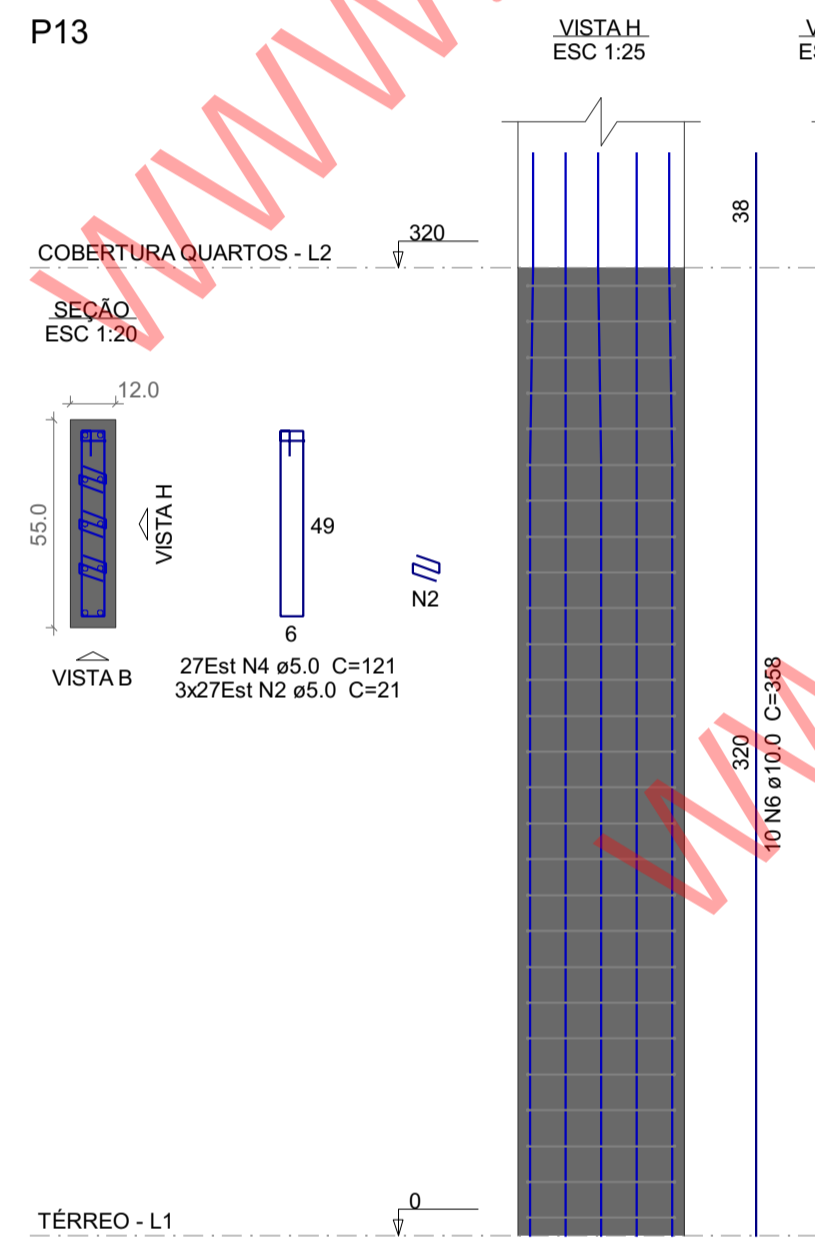
P10=P21=P22=P24=P25



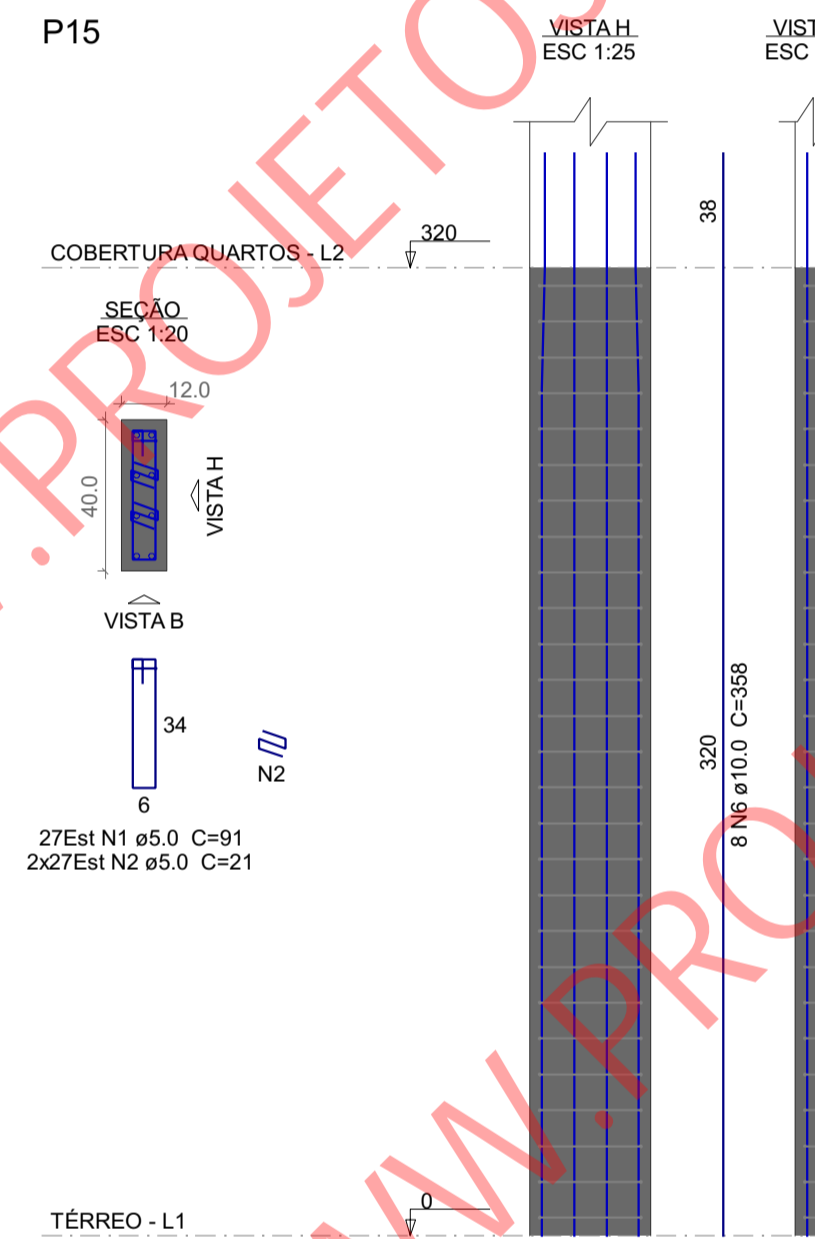
P11



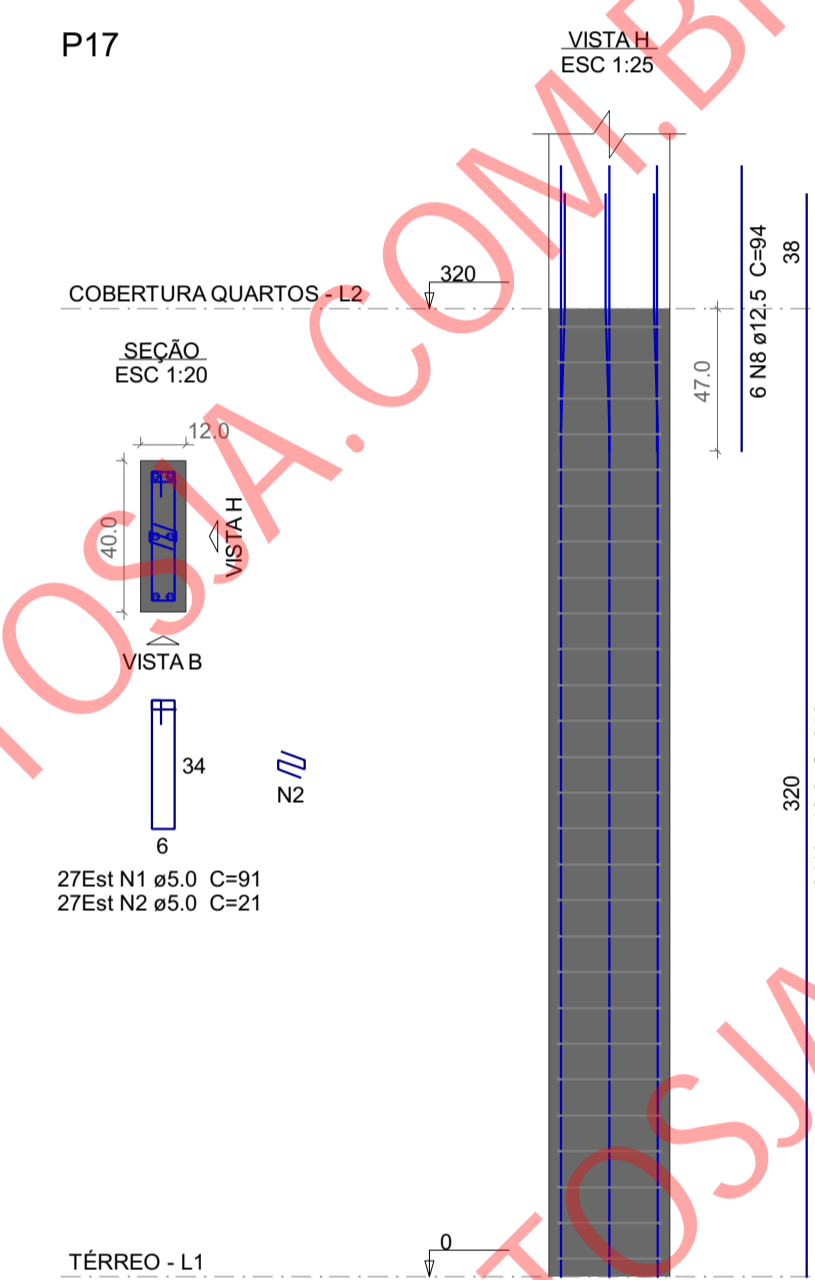
P13



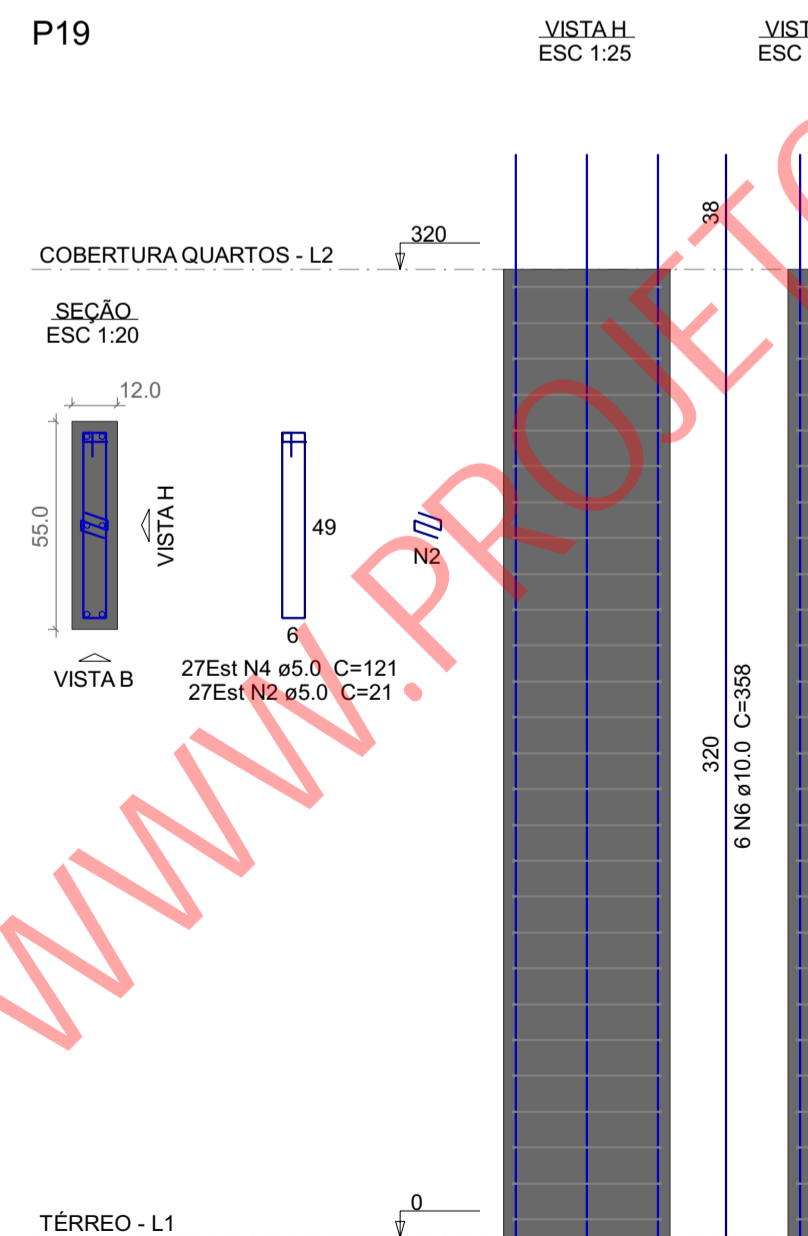
P15



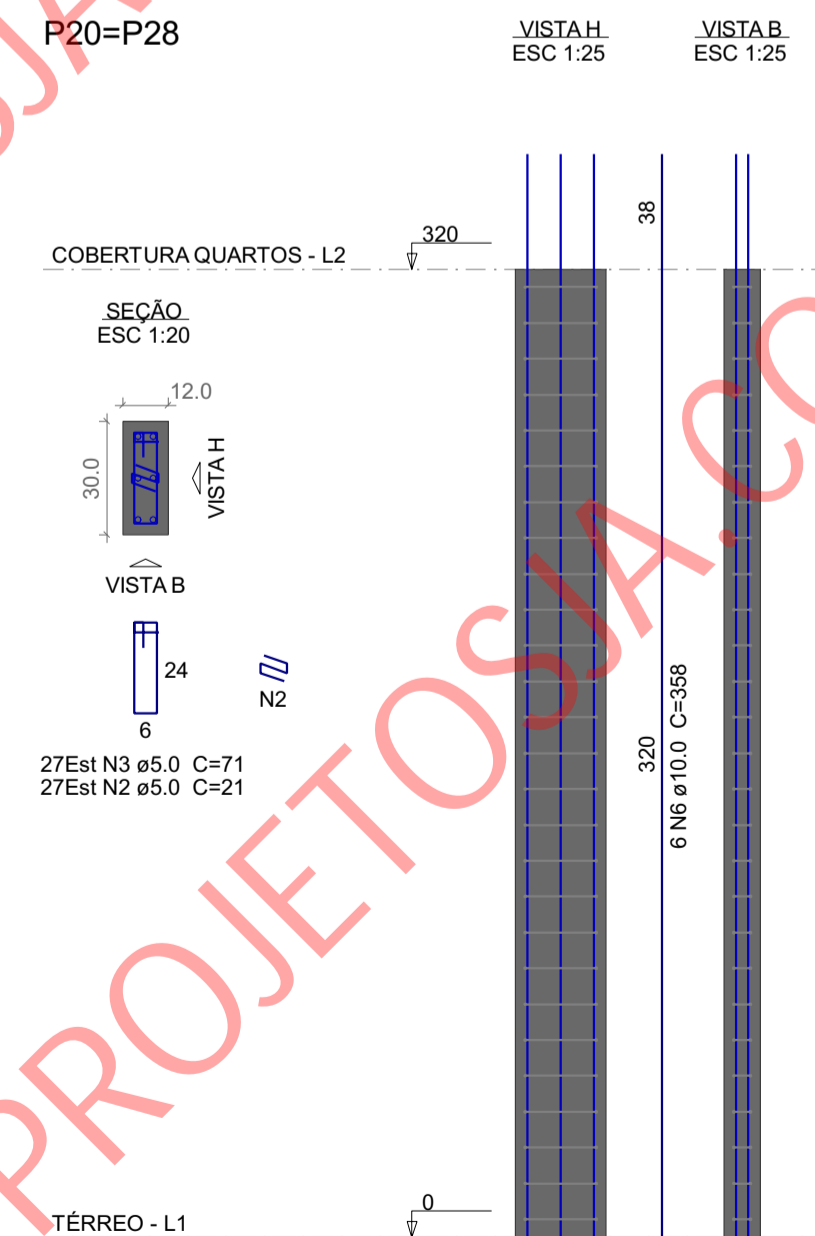
P17



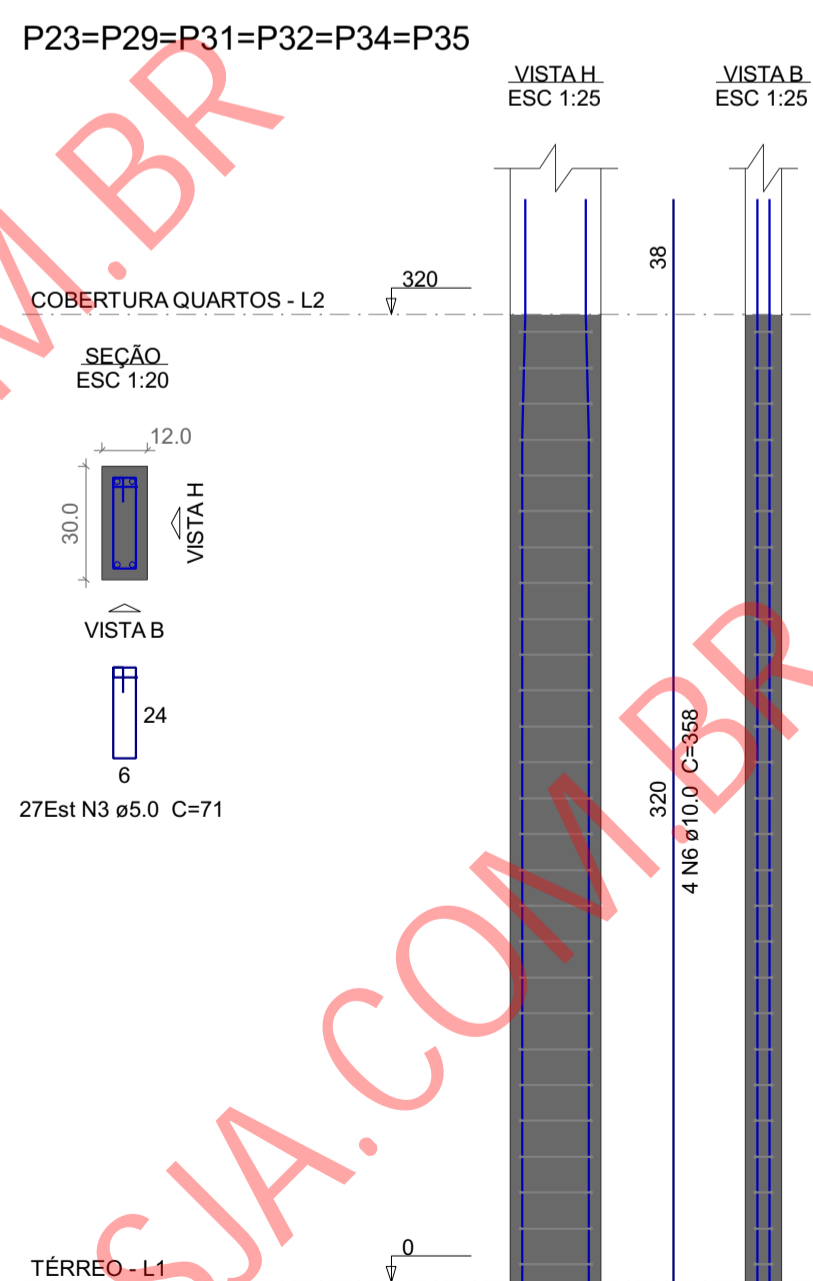
P19



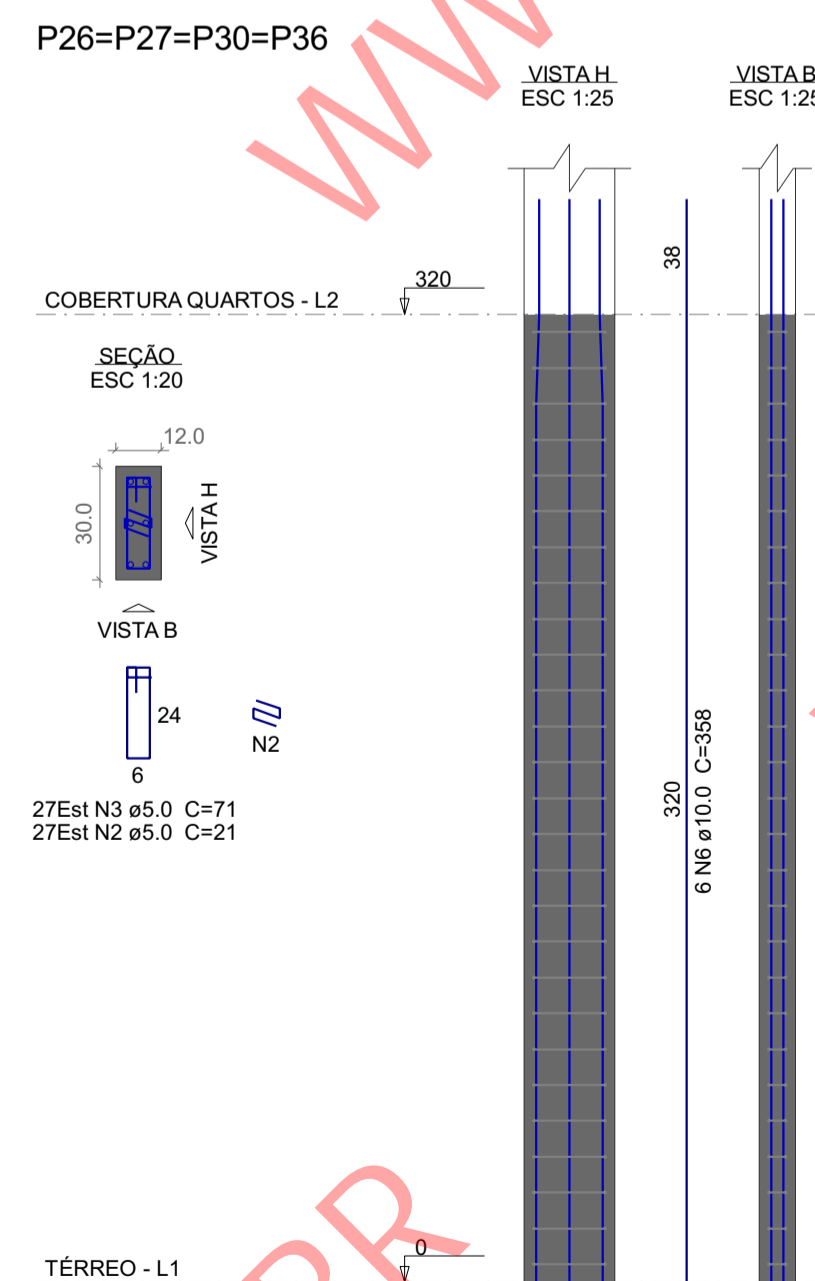
P20=P28



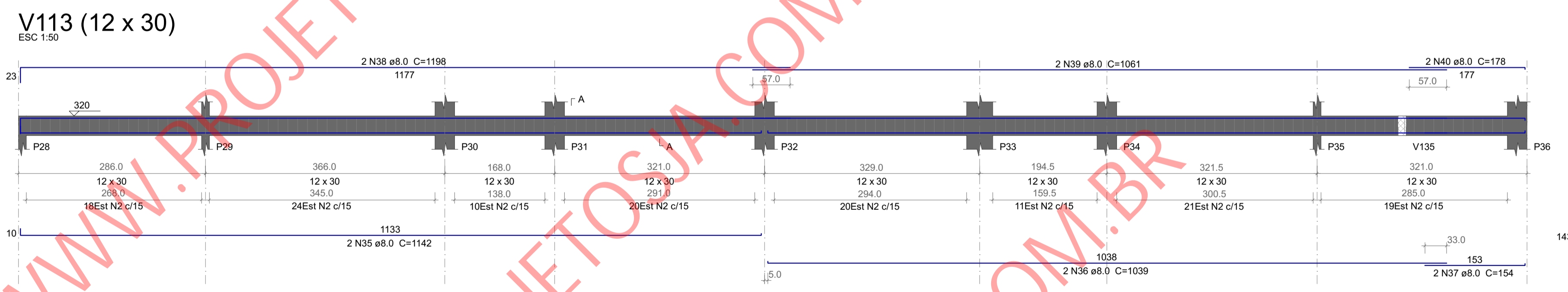
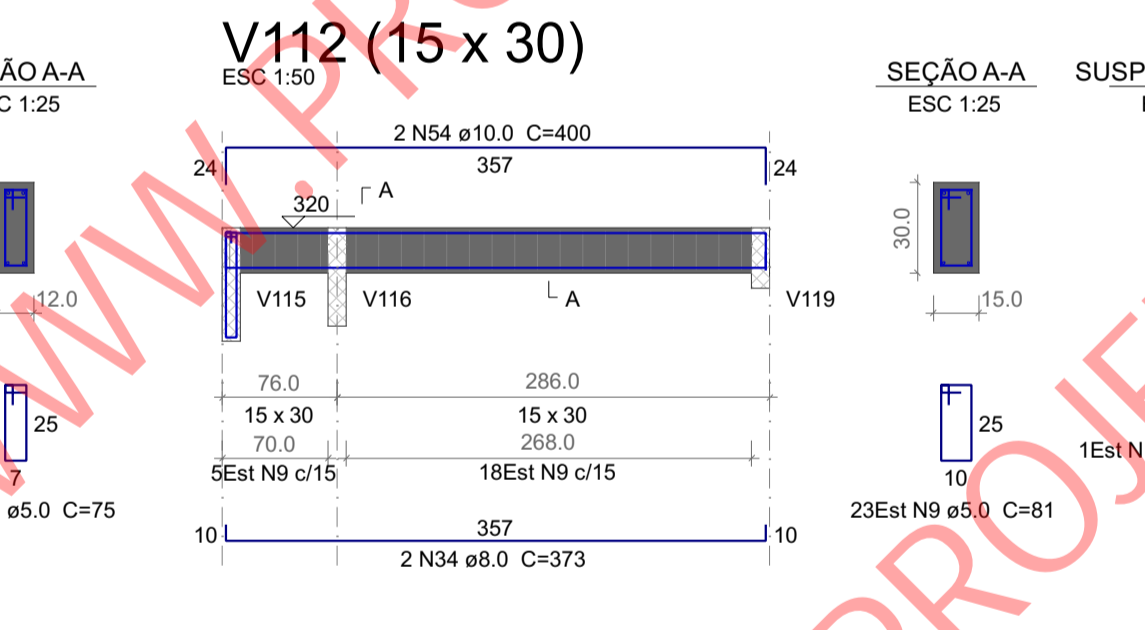
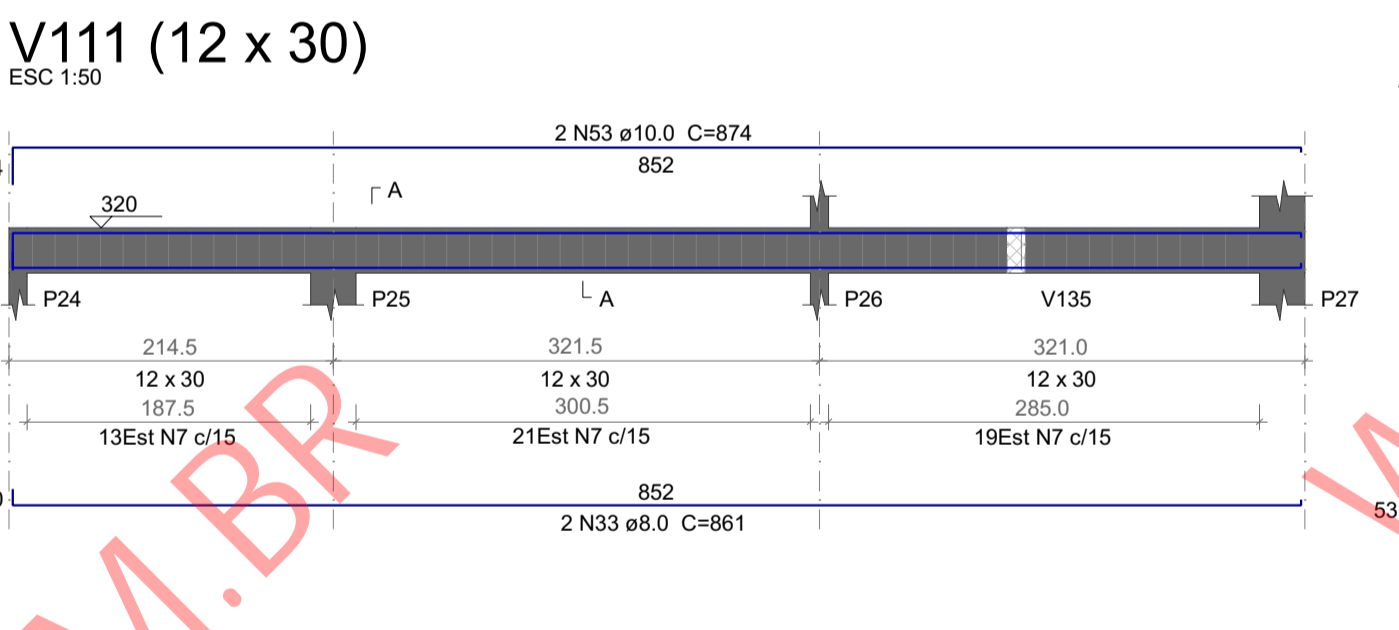
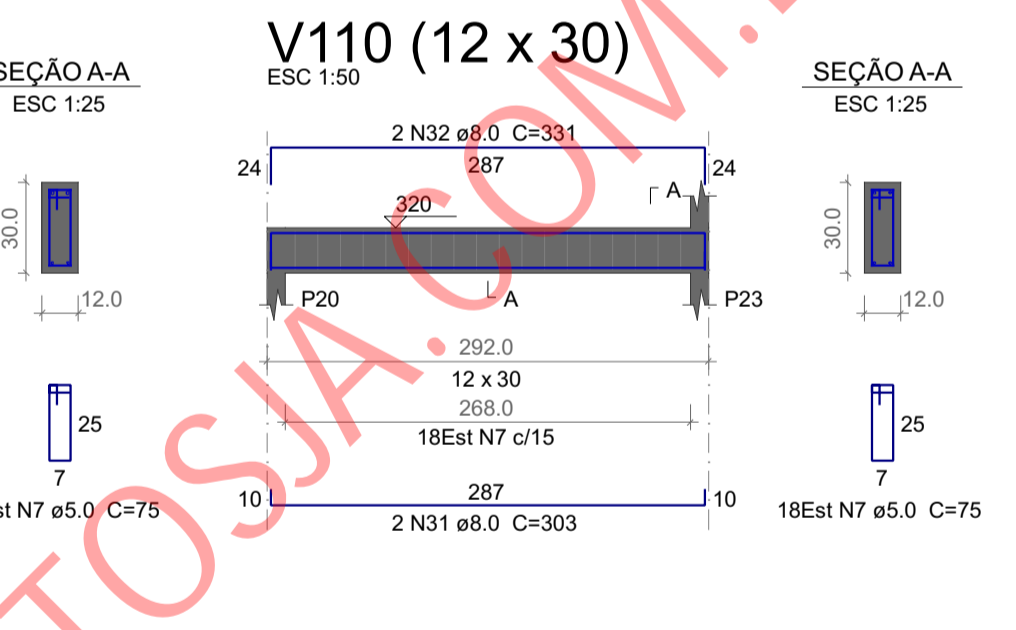
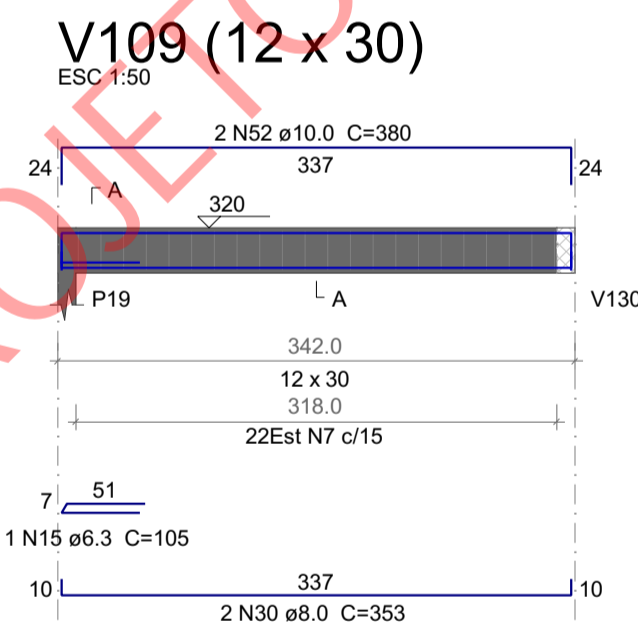
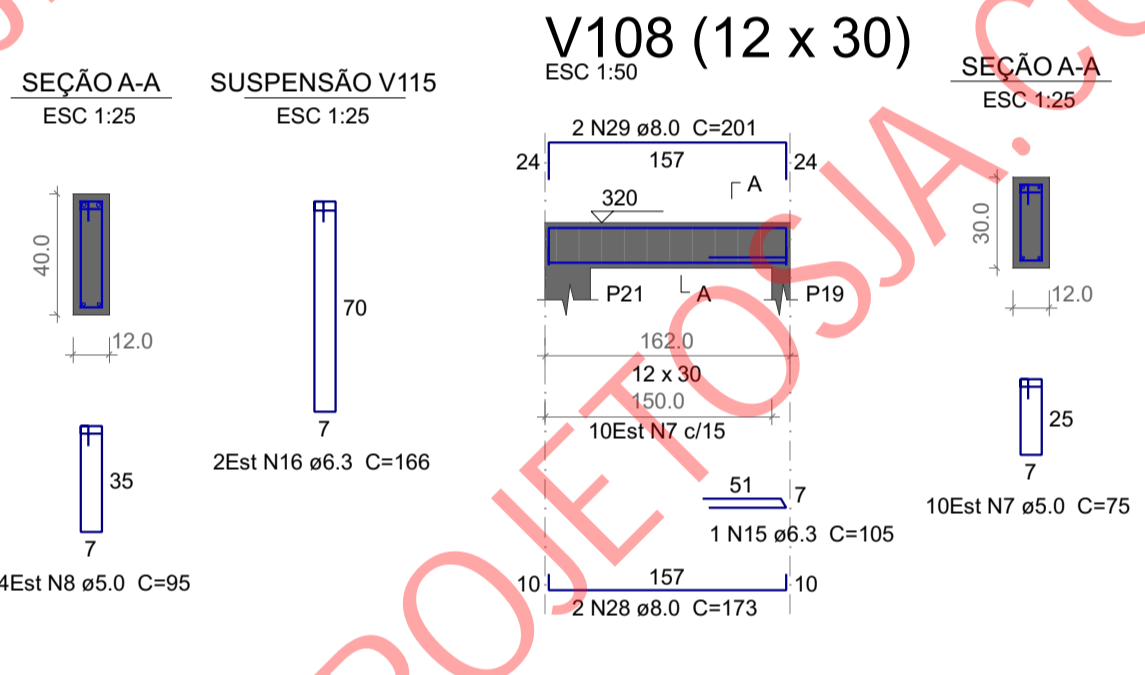
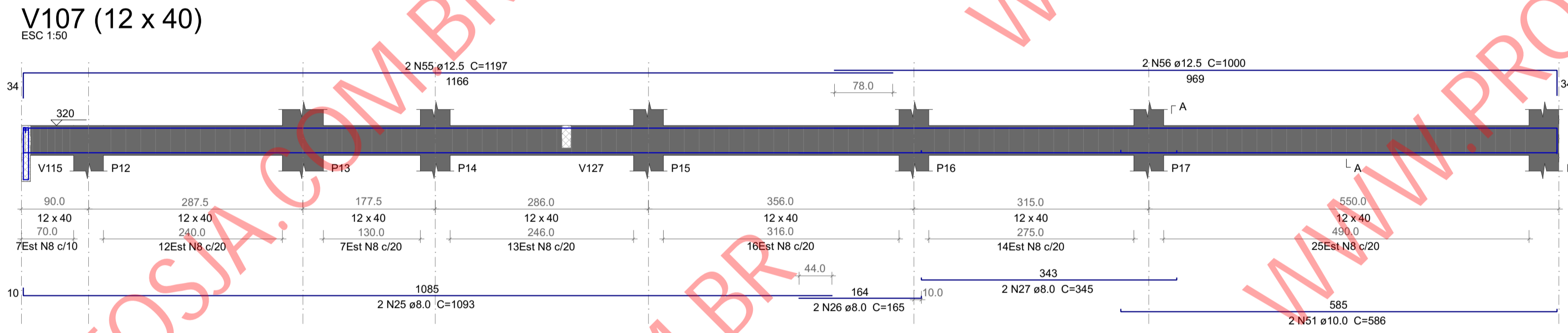
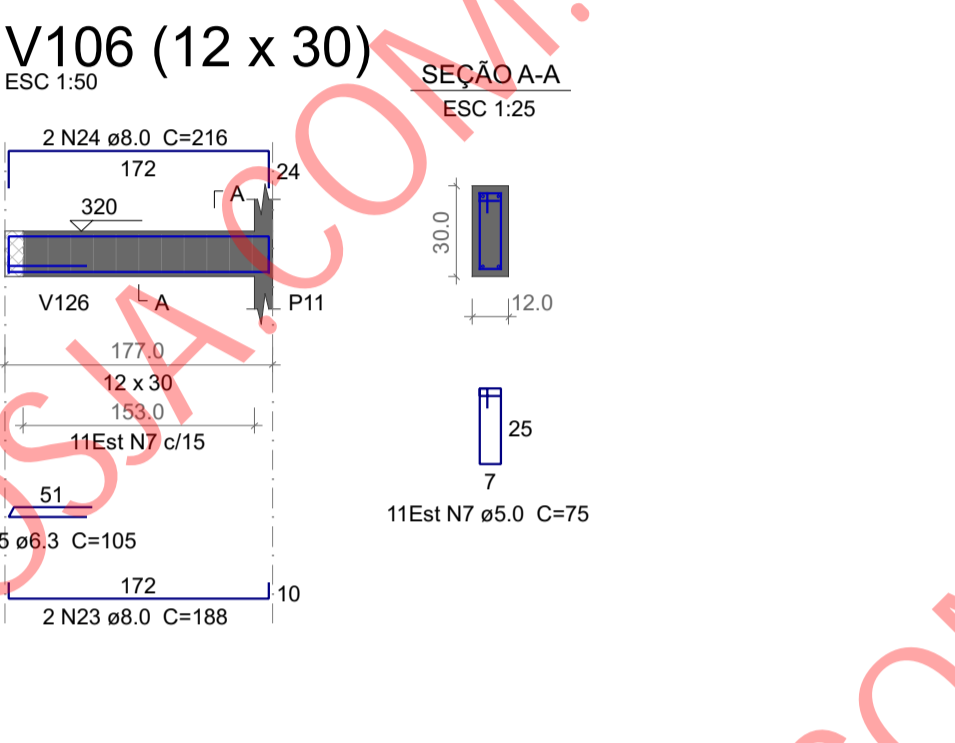
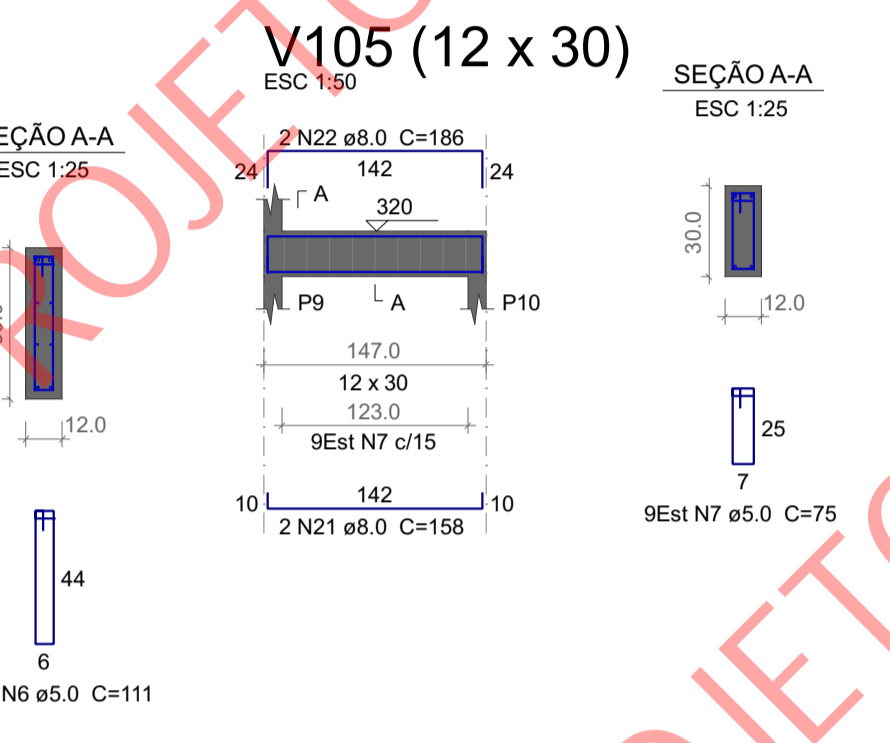
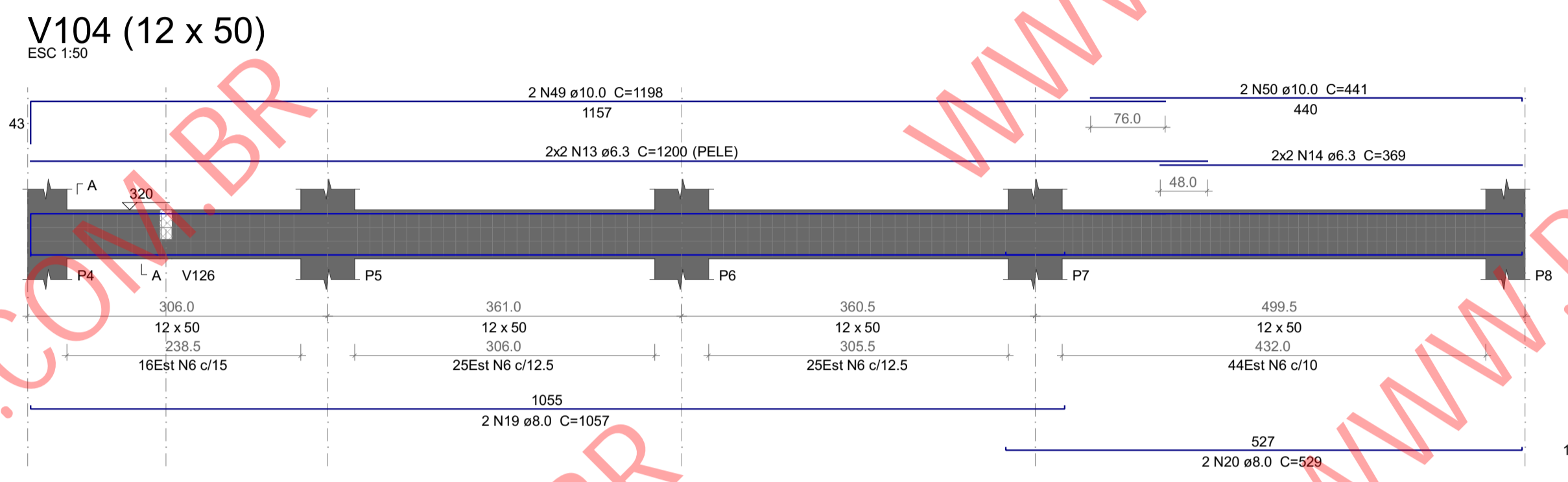
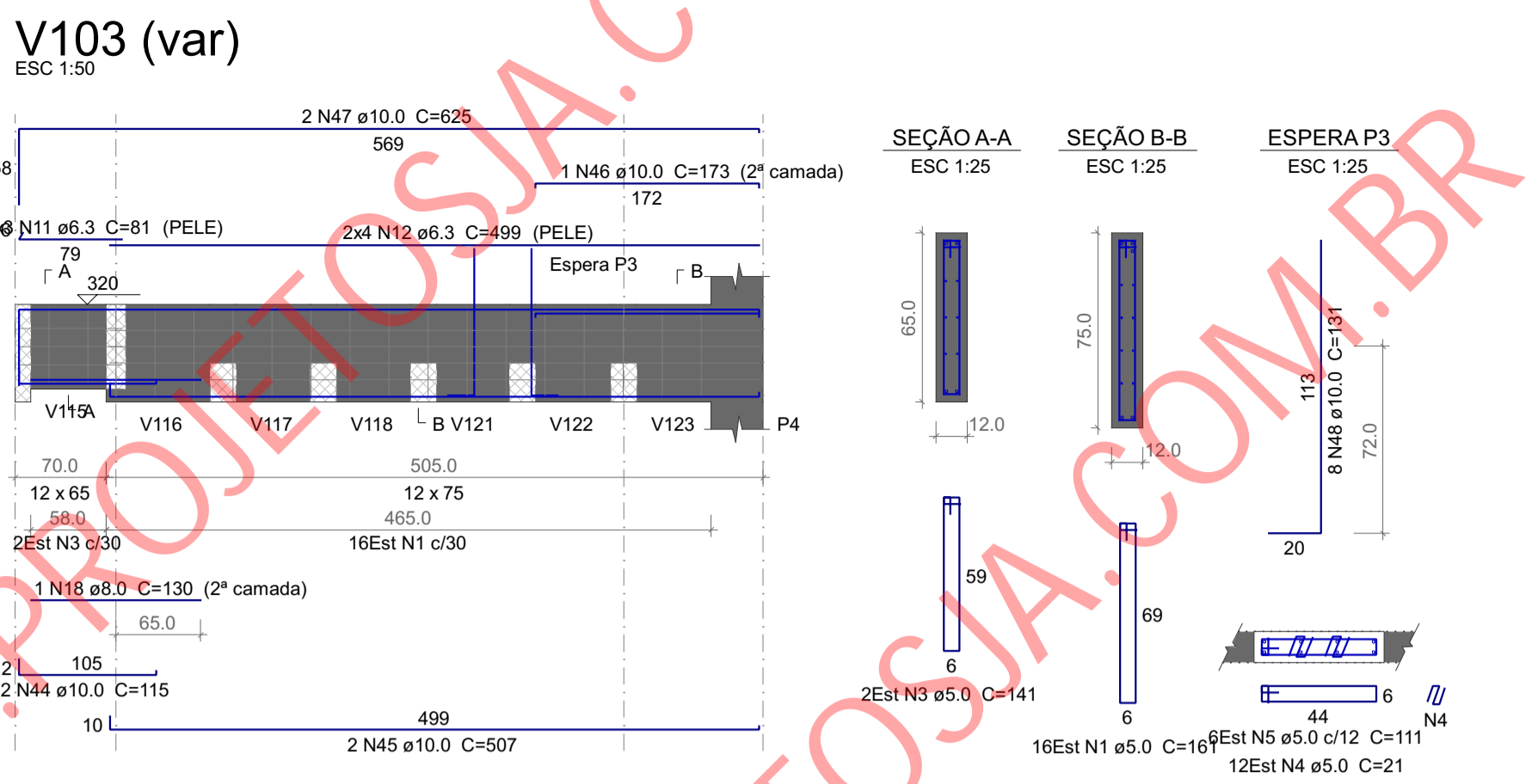
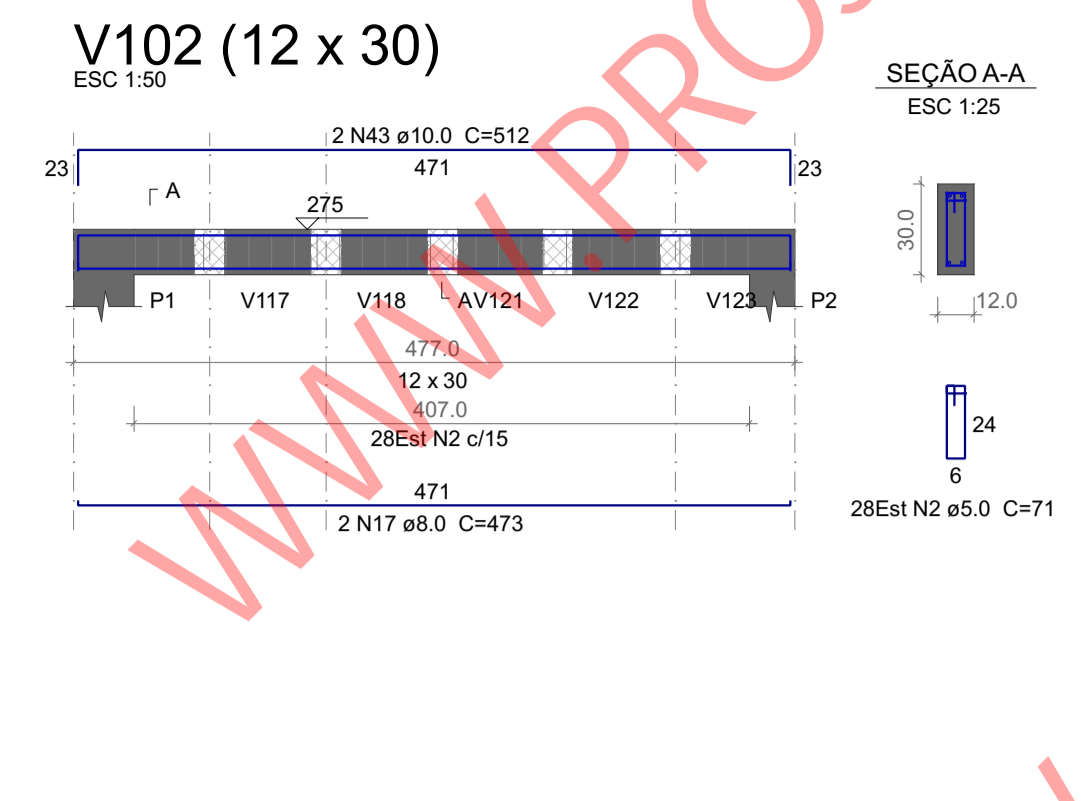
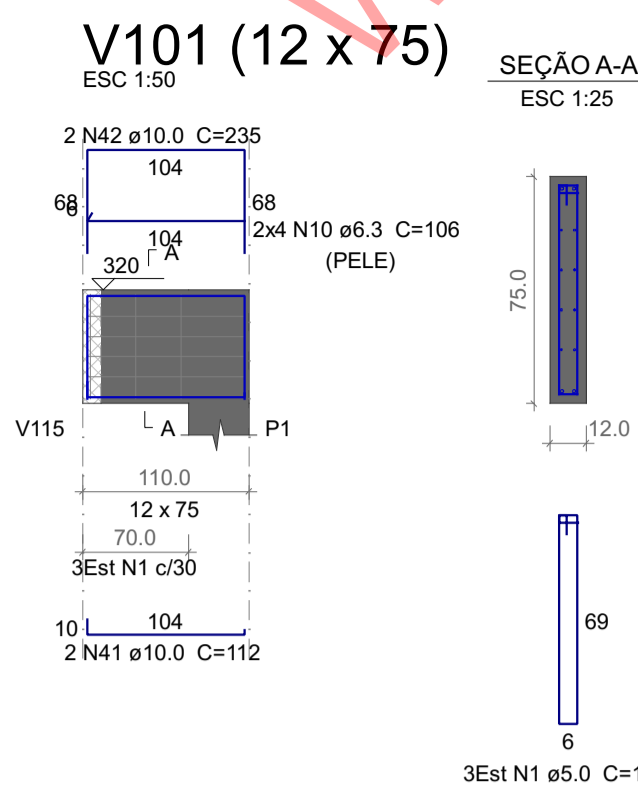
P23=P29=P31=P32=P34=P35



P26=P27=P30=P36







#### Relação do aço

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	19	161	3059
	2	5.0	171	71	12141
	3	5.0	2	141	282
	4	5.0	12	21	252
	5	5.0	6	111	666
	6	5.0	110	111	12210
	7	5.0	123	75	9225
	8	5.0	94	95	8930
	9	5.0	23	81	1863
	10	6.3	8	106	848
CA50	11	6.3	6	91	486
	12	6.3	8	499	3922
	13	6.3	4	1200	4800
	14	6.3	4	369	1476
	15	6.3	3	105	315
	16	6.3	3	166	498
	17	6.3	2	473	946
	18	6.3	1	130	130
	19	8.0	2	1057	2114
	20	8.0	2	529	1058
	21	8.0	2	158	316
	22	8.0	2	186	372
	23	8.0	2	188	376
	24	8.0	2	216	432
	25	8.0	2	1093	2186
	26	8.0	2	165	330
27	8.0	2	345	690	
28	8.0	2	173	346	
29	8.0	2	201	402	
30	8.0	2	353	706	
31	8.0	2	303	606	
32	8.0	2	331	662	
33	8.0	2	861	1722	
34	8.0	2	373	746	
35	8.0	2	1142	2284	
36	8.0	2	1039	2078	
37	8.0	2	154	308	
38	8.0	2	1198	2396	
39	8.0	2	1061	2122	
40	8.0	2	178	356	
41	10.0	2	112	224	
42	10.0	2	235	470	
43	10.0	2	512	1024	
44	10.0	2	115	230	
45	10.0	2	507	1014	
46	10.0	1	173	173	
47	10.0	2	625	1250	
48	10.0	8	131	1048	
49	10.0	2	1198	2396	
50	10.0	2	441	882	
51	10.0	2	586	1172	
52	10.0	2	380	760	
53	10.0	2	874	1748	
54	10.0	2	400	800	
55	12.5	2	1197	2394	
56	12.5	2	1000	2000	

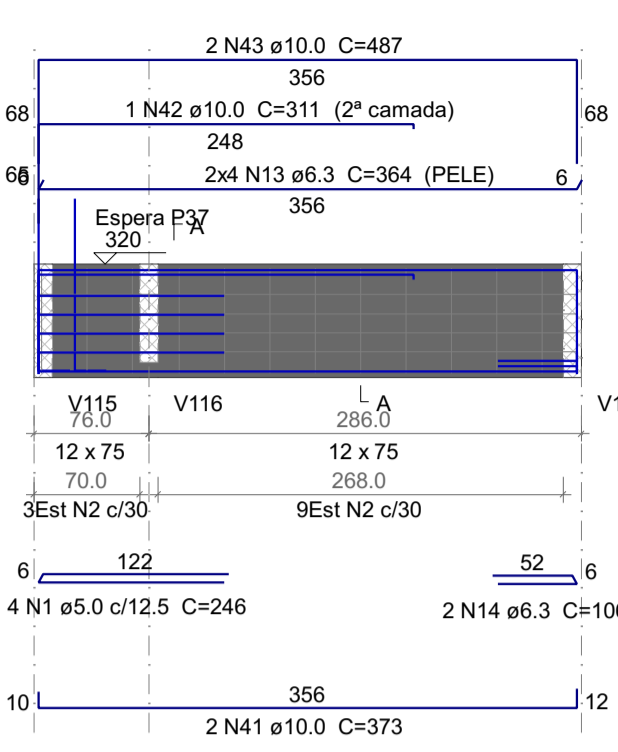
#### Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT	PESO + 10 % (kg)
CA50	6.3	124.2	12	12 m	33.4
	8.0	236.9	22	12 m	102.8
	10.0	132	13	12 m	89.5
	12.5	44	5	12 m	46.6
CA60	5.0	486.3	-	rolo (170 kg)	82.4
<b>PESO TOTAL (kg)</b>					
CA50		272.2			
CA60		82.4			

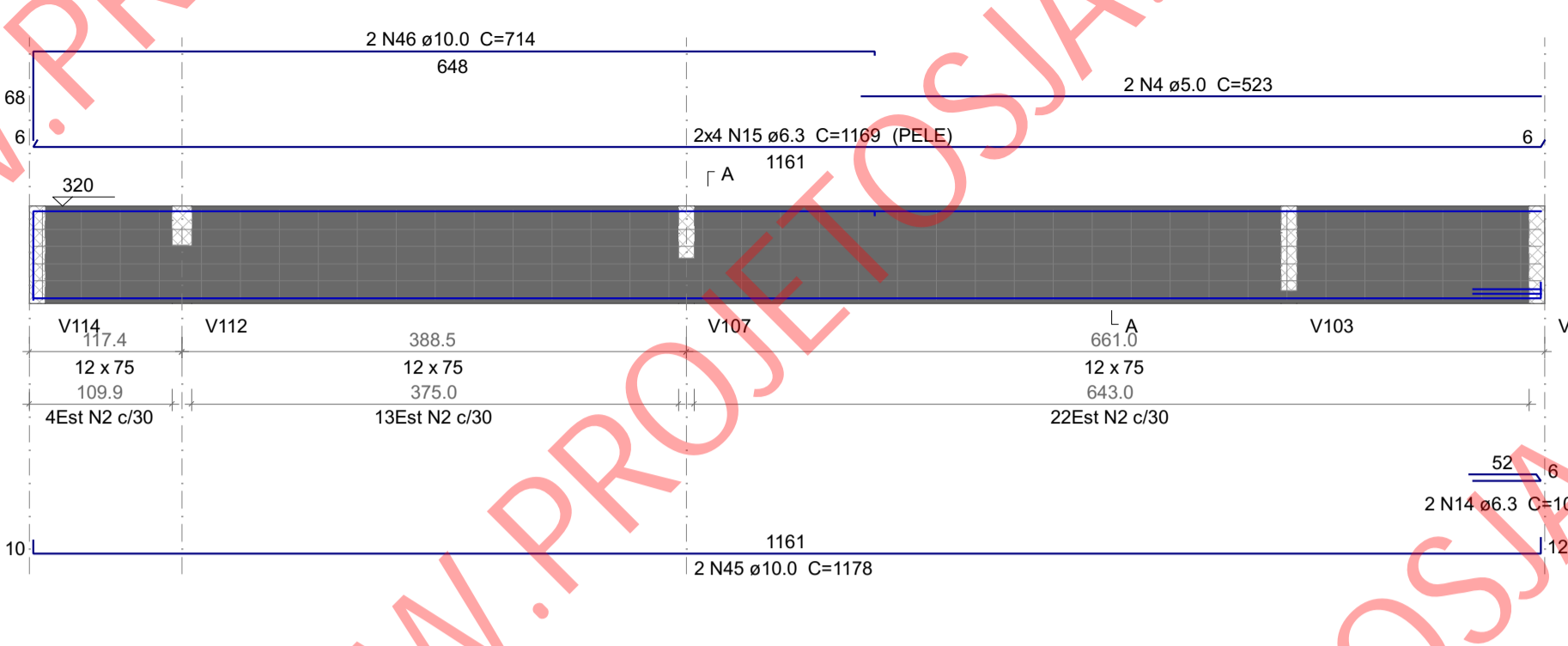
Volume de concreto (C-25) = 3.84 m³  
 Área de forma = 59.76 m²



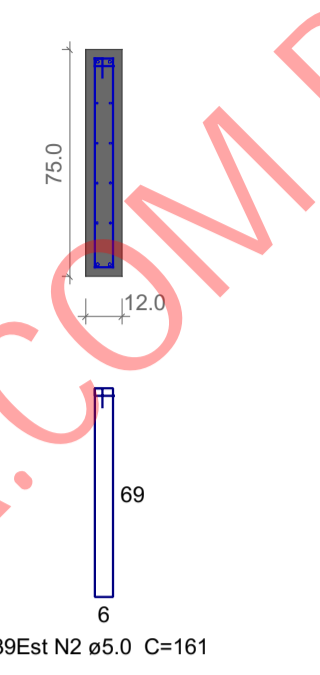
V114 (12 x 75)



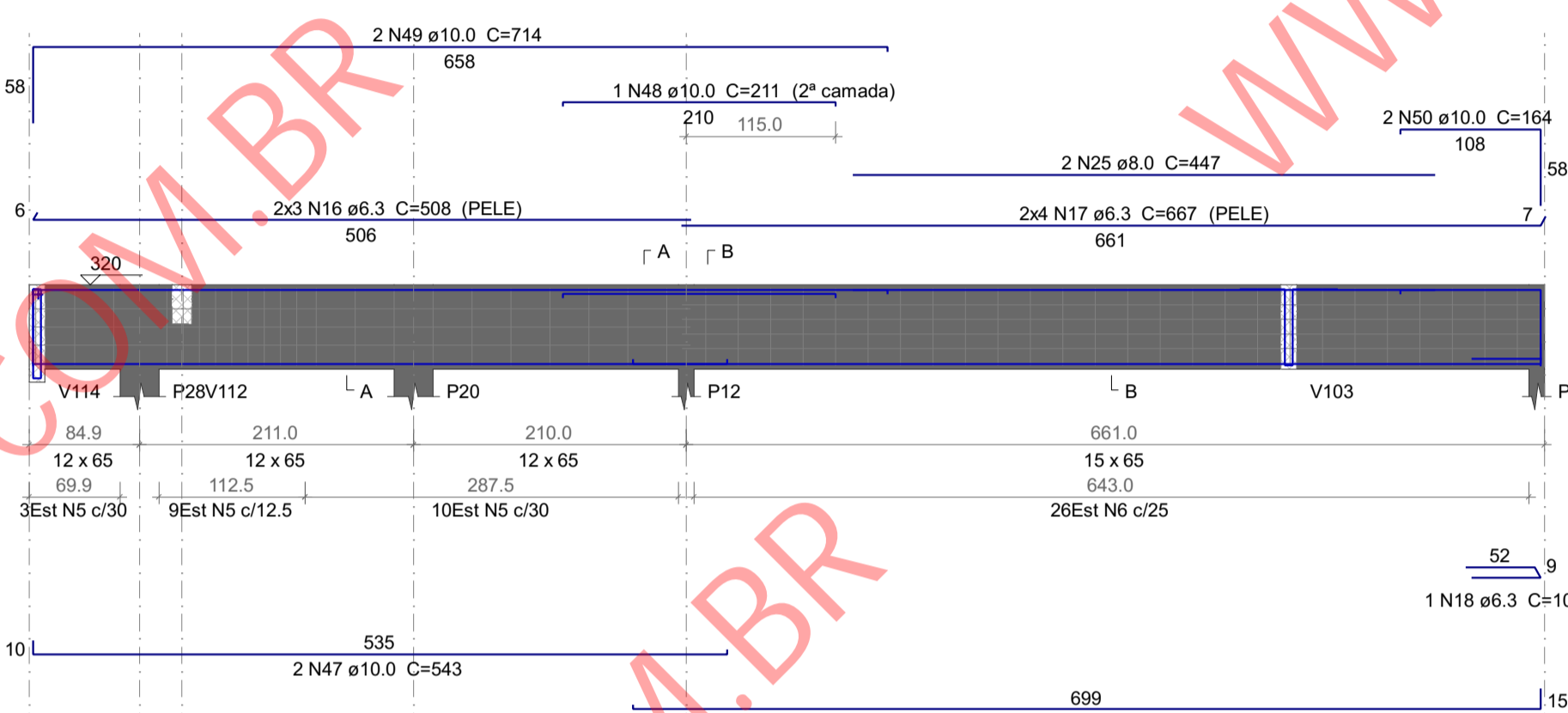
V115 (12 x 75)



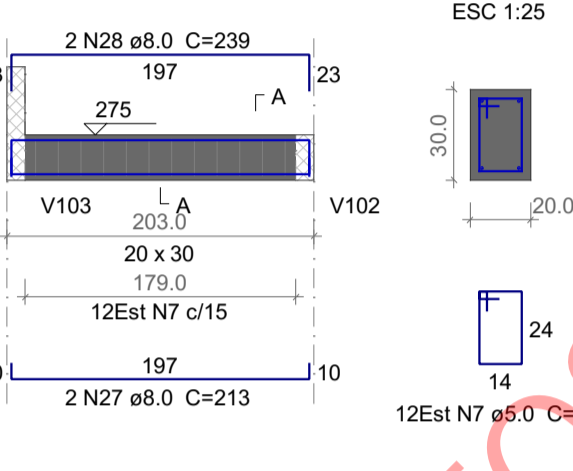
SEÇÃO A-A



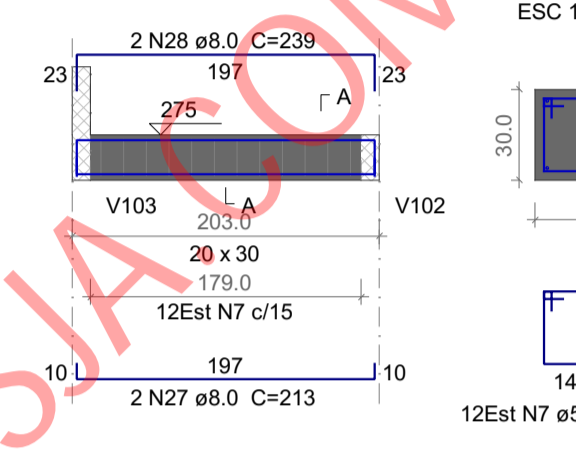
V116 (var)



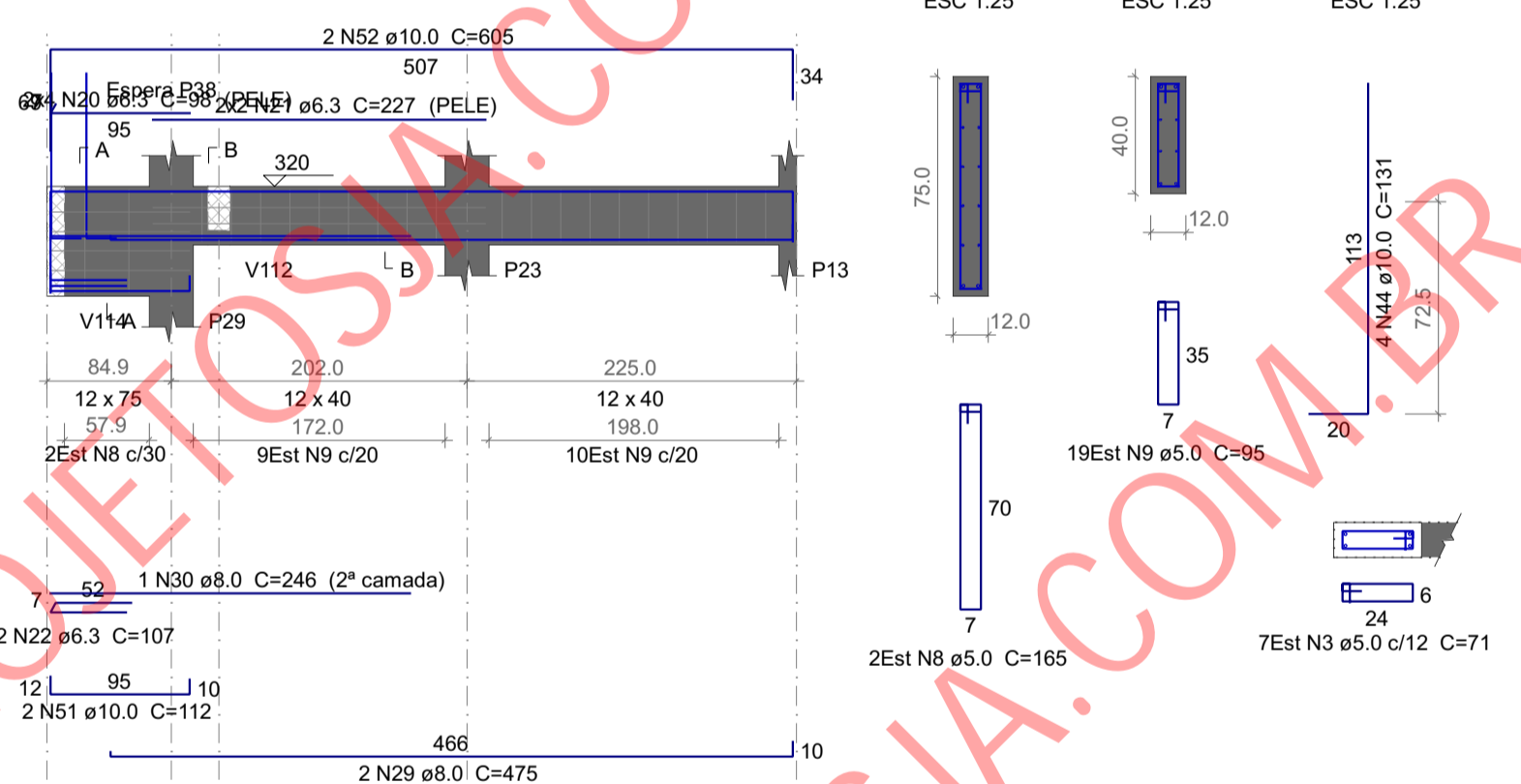
V117 (20 x 30)



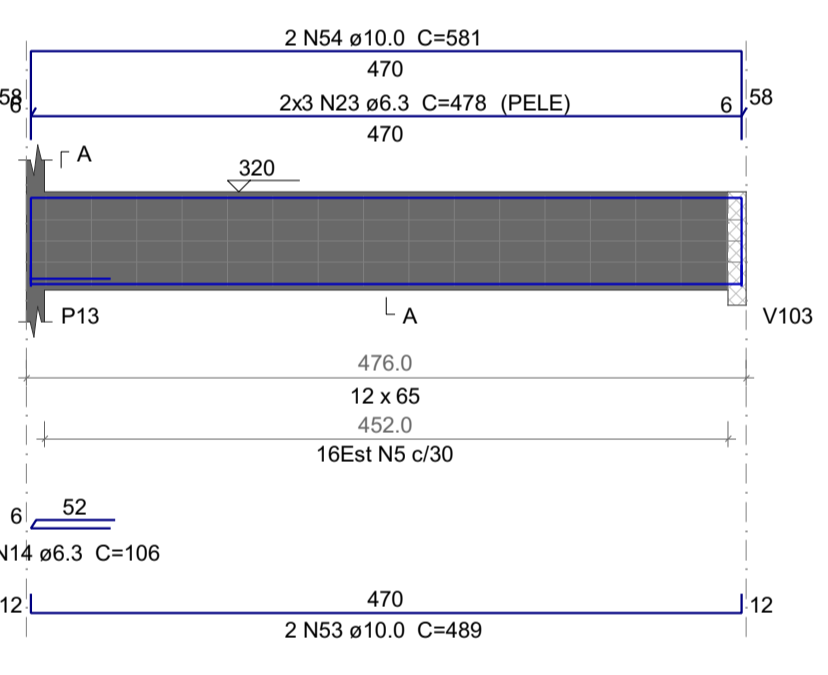
V118 (20 x 30)



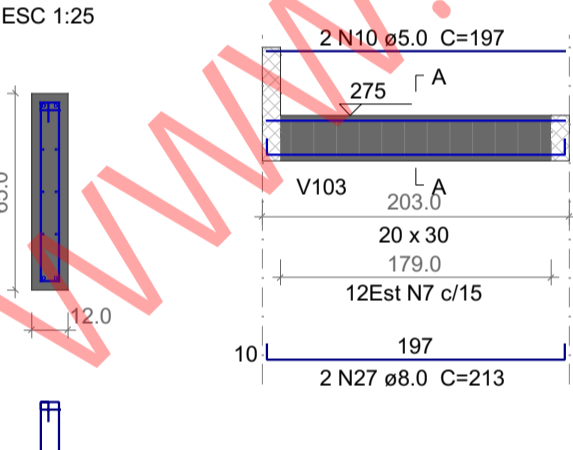
V119 (var)



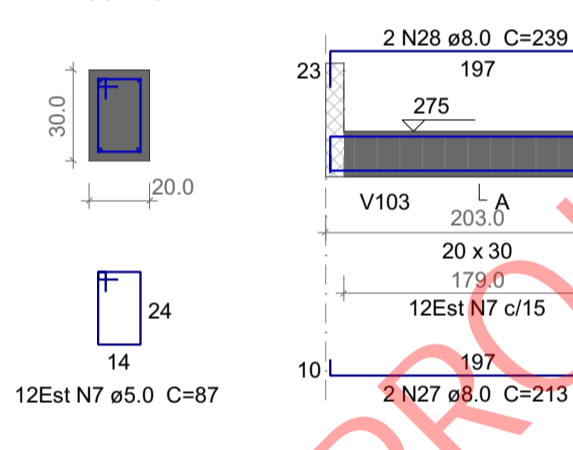
V120 (12 x 65)



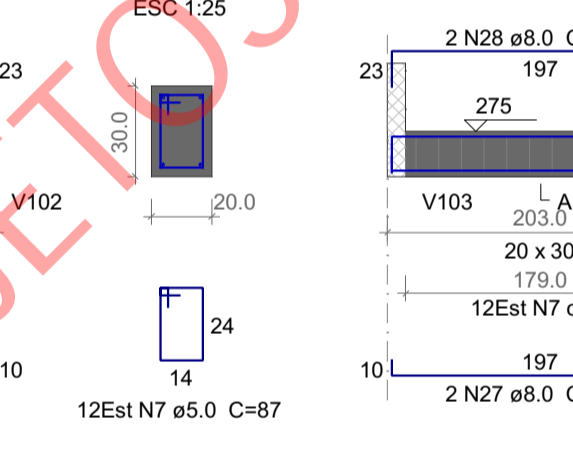
V121 (20 x 30)



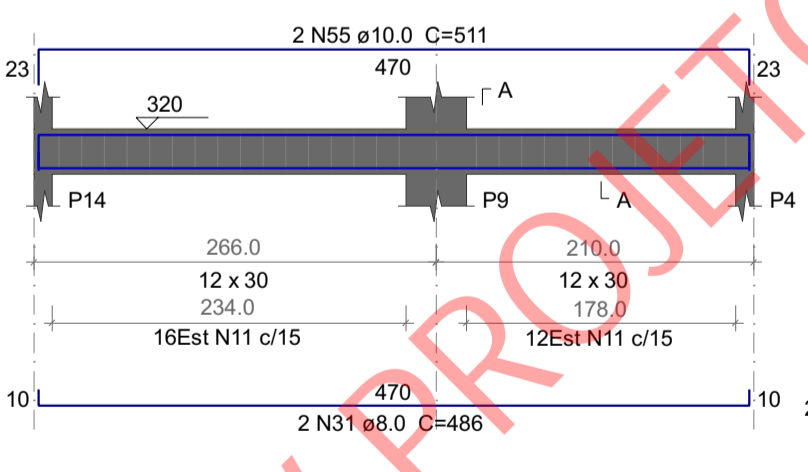
V122 (20 x 30)



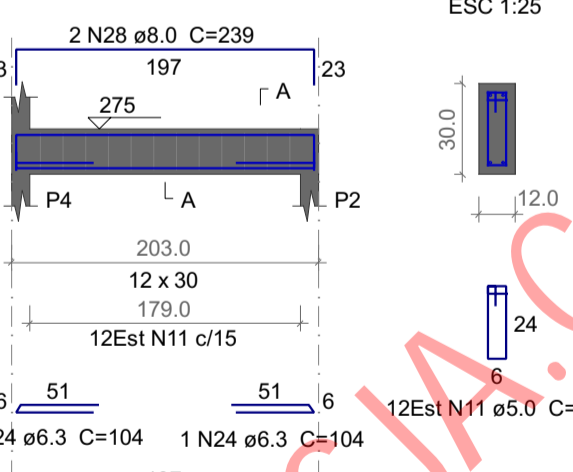
V123 (20 x 30)



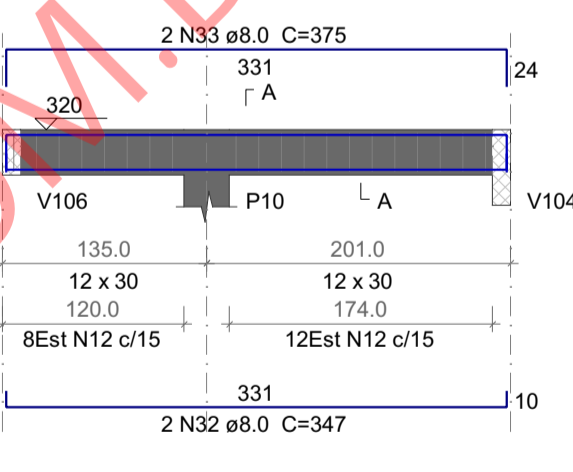
V124 (12 x 30)



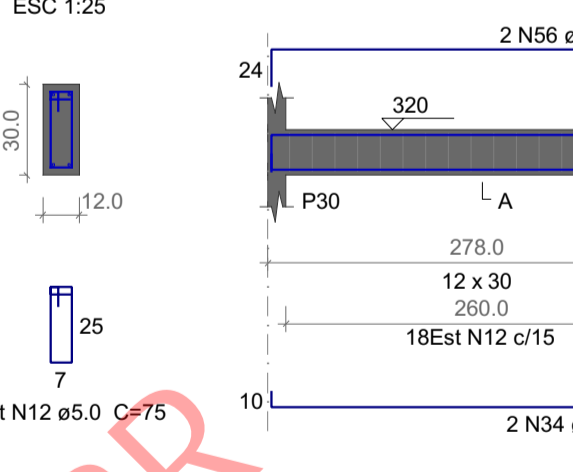
V125 (12 x 30)



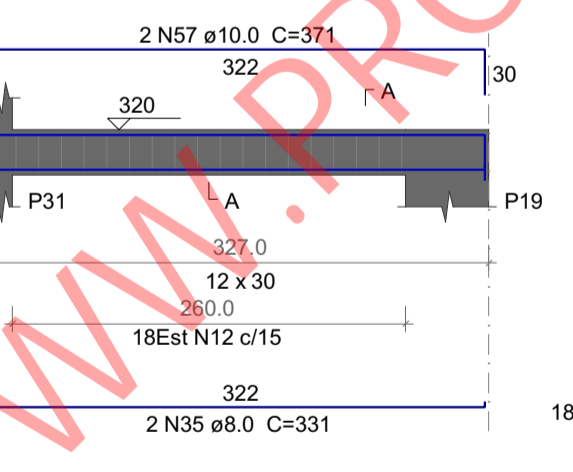
V126 (12 x 30)



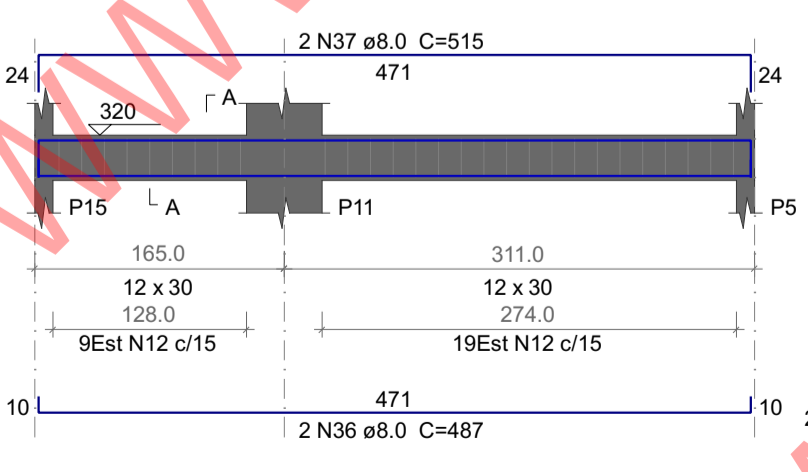
V127 (12 x 30)



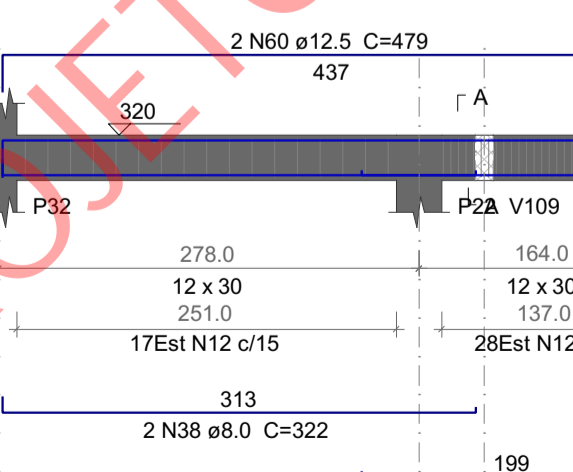
V128 (12 x 30)



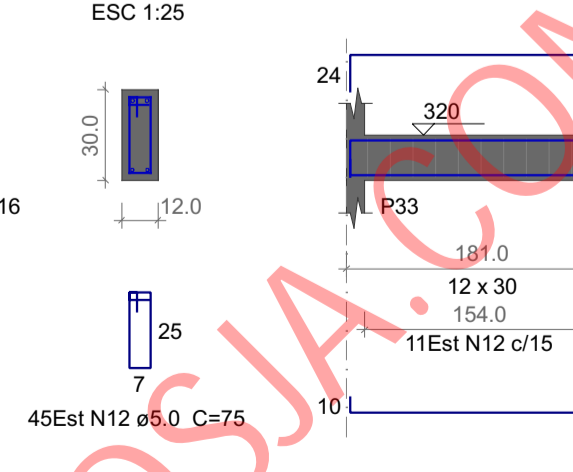
V129 (12 x 30)



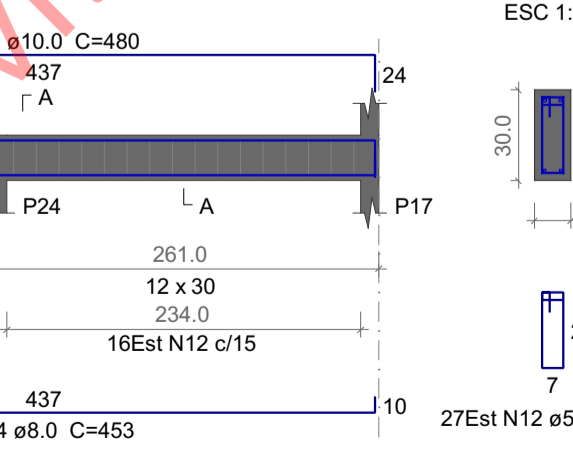
V130 (12 x 30)



V131 (12 x 30)



V132 (12 x 30)



Relação do aço

CAÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	4	246	984
CA60	2	5.0	51	161	8211
CA60	3	5.0	13	71	923
CA60	4	5.0	2	523	1046
CA60	5	5.0	38	141	5358
CA60	6	5.0	26	147	3822
CA60	7	5.0	60	87	5220
CA60	8	5.0	2	165	330
CA60	9	5.0	19	95	1805
CA60	10	5.0	2	197	394
CA60	11	5.0	40	71	2840
CA60	12	5.0	177	75	13275
CA50	13	6.3	8	364	2912
CA50	14	6.3	5	106	530
CA50	15	6.3	8	1169	9352
CA50	16	6.3	6	508	3048
CA50	17	6.3	8	667	5336
CA50	18	6.3	1	109	109
CA50	19	6.3	1	186	186
CA50	20	6.3	8	98	784
CA50	21	6.3	4	227	908
CA50	22	6.3	2	107	214
CA50	23	6.3	6	478	2868
CA50	24	6.3	2	104	208
CA50	25	8.0	2	447	894
CA50	26	8.0	1	162	162
CA50	27	8.0	12	213	2556
CA50	28	8.0	10	239	2390
CA50	29	8.0	2	475	950
CA50	30	8.0	1	246	246
CA50	31	8.0	2	486	972
CA50	32	8.0	2	347	694
CA50	33	8.0	2	375	750
CA50	34	8.0	4	453	1812
CA50	35	8.0	2	331	662
CA50	36	8.0	2	487	974
CA50	37	8.0	2	515	1030
CA50	38	8.0	2	322	644
CA50	39	8.0	2	198	396
CA50	40	8.0	2	226	452
CA50	41	10.0	2	373	746
CA50	42	10.0	1	311	311
CA50	43	10.0	2	487	974
CA50	44	10.0	8	131	1048
CA50	45	10.0	2	1178	2356
CA50	46	10.0	2	714	1428
CA50	47	10.0	2	543	1086
CA50	48	10.0	1	211	211
CA50	49	10.0	2	714	1428
CA50	50	10.0	2	164	328
CA50	51	10.0	2	112	224
CA50	52	10.0	2	605	1210
CA50	53	10.0	2	489	978
CA50	54	10.0	2	581	1162
CA50	55	10.0	2	511	1022
CA50	56	10.0	4	480	1920
CA50	57	10.0	2	371	742
CA50	58	10.0	2	209	418
CA50	59	12.5	2	711	1422
CA50	60	12.5	2	479	958

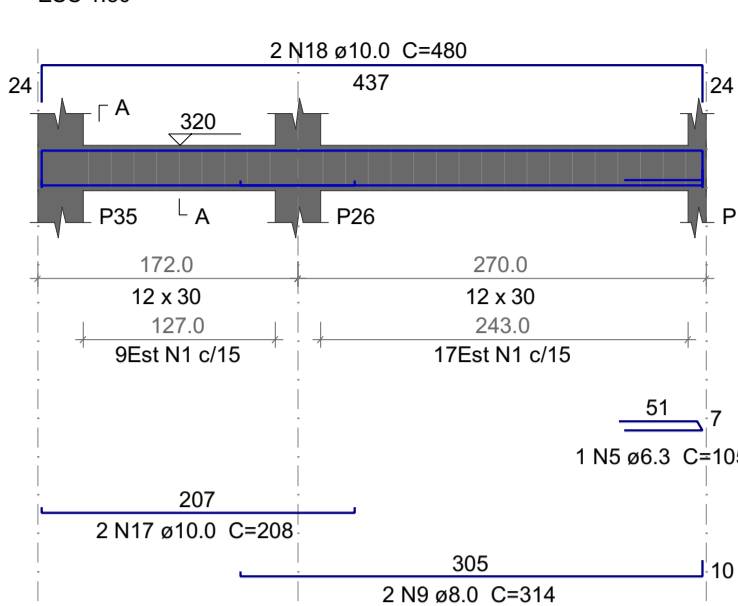
Resumo do aço

CAÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT	PESO + 10 % (kg)
CA50	8.0	264.8	25	12 m	71.2
CA50	10.0	155.9	15	12 m	67.6
CA50	10.0	176	17	12 m	119.3
CA50	12.5	23.8	3	12 m	25.2
CA50	5.0	442.1	-	rolo (170 kg)	75
PESO TOTAL (kg)					
CA50					283.4
CA60					75

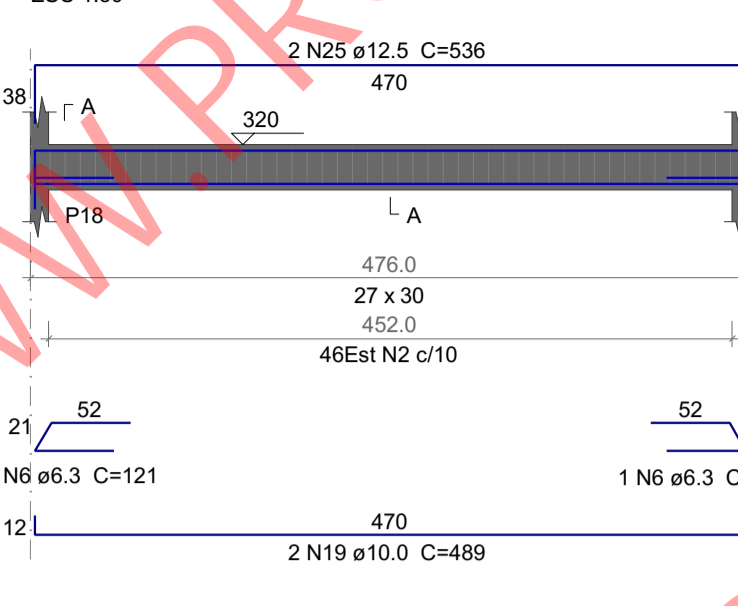
Volume de concreto (C-25) = 4.55 m³  
Área de forma = 67.19 m²



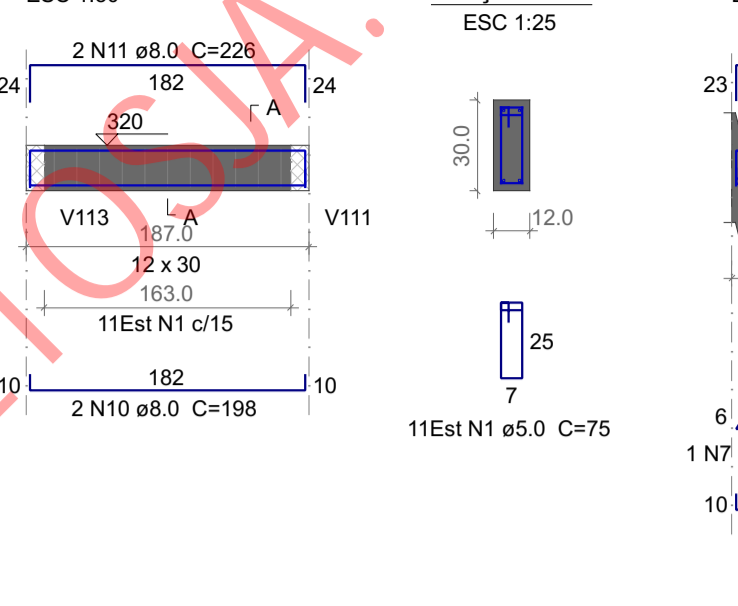
V133 (12 x 30)



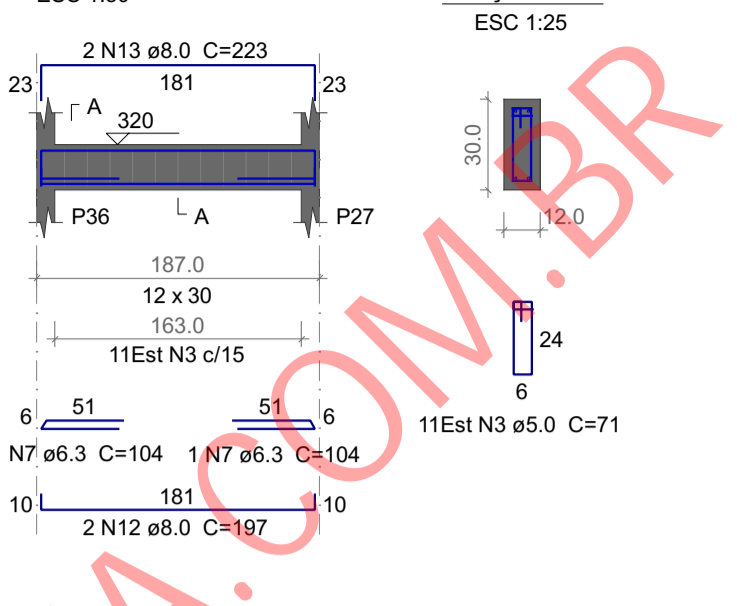
V134 (27 x 30)



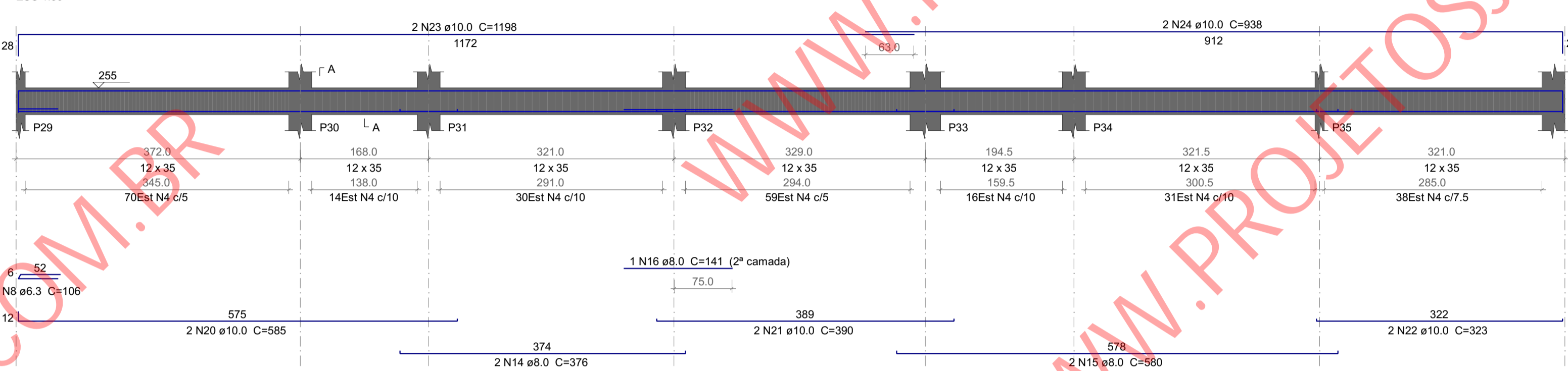
V135 (12 x 30)



V136 (12 x 30)



V137 (12 x 35)



Relação do aço

AÇO	N	DIAM (mm)	QUANT	C.TOTAL (cm)	
				C.UNIT	C.TOTAL
CA60	1	5.0	37	75	2775
	2	5.0	46	101	4646
	3	5.0	11	71	781
	4	5.0	258	81	20898
CA50	5	6.3	1	105	105
	6	6.3	2	121	242
	7	6.3	2	104	208
	8	6.3	1	106	106
	9	8.0	2	314	628
	10	8.0	2	198	396
	11	8.0	2	226	452
	12	8.0	2	197	394
	13	8.0	2	223	446
	14	8.0	2	376	752
	15	8.0	2	580	1160
	16	8.0	1	141	141
	17	10.0	2	208	416
	18	10.0	2	480	960
	19	10.0	2	489	978
20	10.0	2	585	1170	
21	10.0	2	390	780	
22	10.0	2	323	646	
23	10.0	2	1198	2396	
24	10.0	2	938	1876	
25	12.5	2	536	1072	

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT	PESO + 10 % (kg)
CA50	6.3	6.7	1	12 m	1.8
	8.0	43.7	5	12 m	18
	10.0	92.3	9	12 m	82.5
	12.5	10.8	1	12 m	11.4
CA60	5.0	291	-	rolo (170 kg)	49.3
<b>PESO TOTAL (kg)</b>					
CA50					94.6
CA60					49.3

Volume de concreto (C-25) = 1.38 m³  
Área de forma = 20.08 m²

Lajes								
Nome	Tipo	Altura (cm)	Dados		Sobrecarga (kgf/m²)			
			Elevação (cm)	Nível (cm)	Peso próprio (kgf/m²)	Adicional	Acidental	Localizada
L23	Maciça	10	0	230	250	79	10	-

Área de lajes			Vigas		
Tipo	Altura (cm)	Área (m²)	Nome	Seção (cm)	Nível (cm)
Maciça	10	12.83	V139	12x40	0
			V140	12x35	0

Características dos materiais			
fck (kgf/cm²)	Ecs (kgf/cm³)	fct (kgf/cm²)	Abatimento (cm)
250	241500	26	5.00

Dimensão máxima de agregação = 19 mm

Pilares		
Nome	Seção (cm)	Elevação (cm)
P1	12x40	0
P2	12x40	-45
P4	12x50	0
P5	12x50	0
P6	12x40	0
P7	12x40	0
P8	12x40	0
P9	12x50	0
P10	12x40	0
P11	12x50	0
P12	12x40	0
P13	12x50	0
P14	12x40	0
P15	12x40	0
P16	12x40	0
P17	12x40	0
P18	12x40	0
P19	12x55	0
P20	12x30	0
P21	12x30	0
P22	12x30	0
P23	12x40	0
P24	12x30	0
P25	12x30	0
P26	12x30	0
P27	12x30	0
P28	12x30	0
P29	12x30	0
P30	12x30	0
P31	12x30	0
P32	12x30	0
P33	12x40	0
P34	12x30	0
P35	12x30	0
P36	12x30	0

**Legenda dos pilares**

Pilar que passa

**Legenda das vigas e paredes**

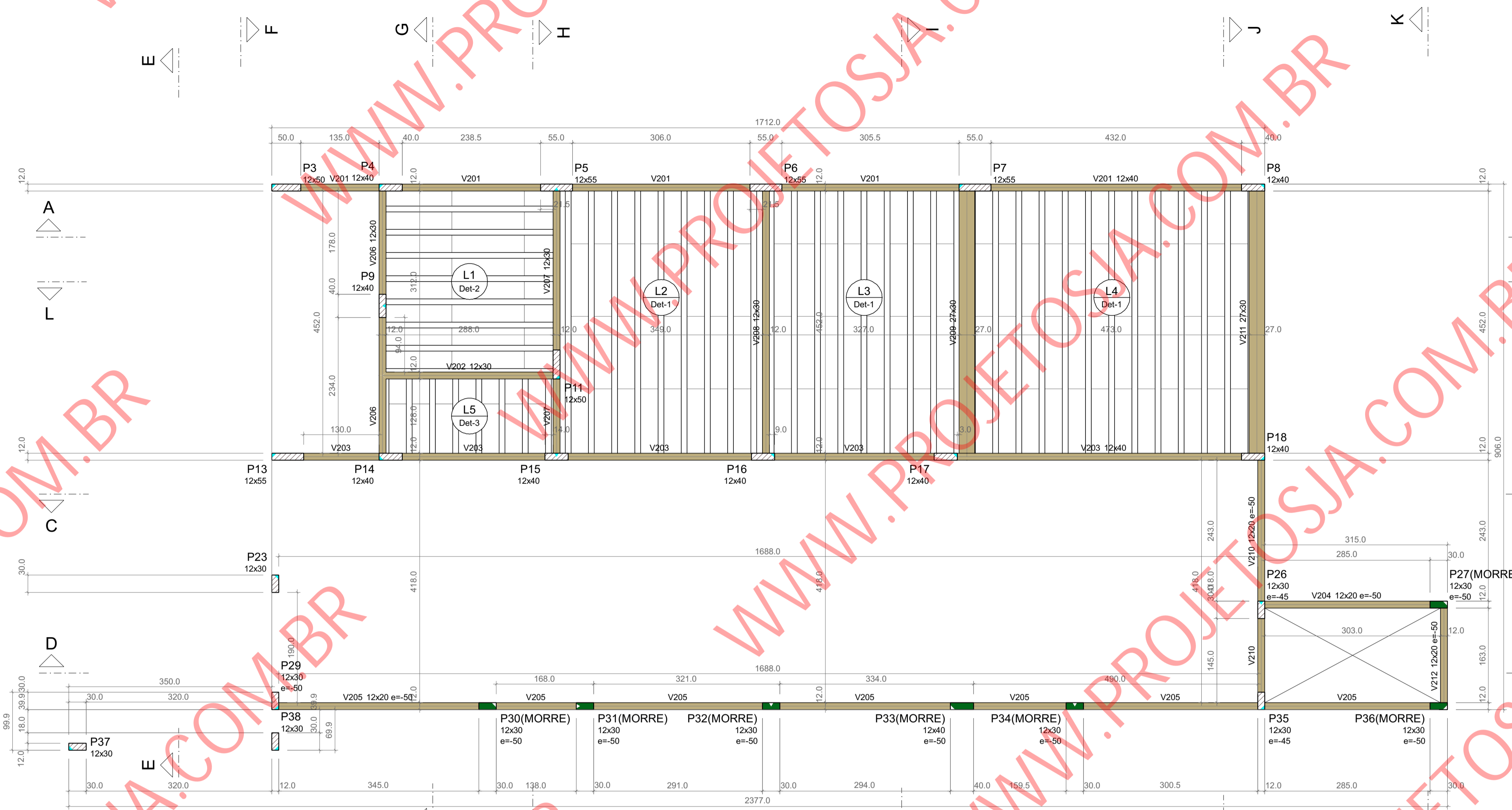
Viga

**Legenda das lajes**

Laje

Forma intermediária do pavimento Cobertura Quartos (Nível 230)  
escala 1:50





Lajes		Dados		Sobrecarga (kgf/m²)				
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Peso próprio (kgf/m²)	Adicional	Acidental	Localizada
L1	Vigota protendida	16	0	460	168	182	100	-
L2	Vigota protendida	16	0	460	168	164	150	-
L3	Vigota protendida	16	0	460	168	164	150	-
L4	Vigota protendida	16	0	460	168	164	150	-
L5	Vigota protendida	14	0	460	169	164	150	-

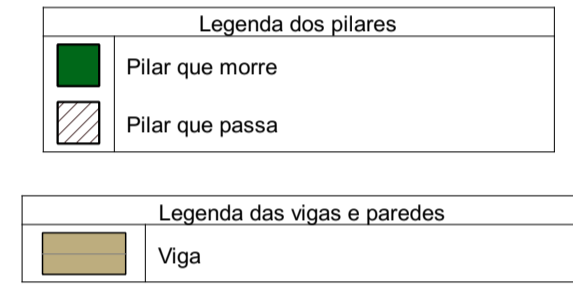
Blocos de enchimento				
Detalhe	Tipo	Nome	Dimensões (cm)	Quantidade
1/2	EPS Unidirecional	B12/30/125	12 30 125	138
3	EPS Unidirecional	B9/30/125	9 30 125	14

Área de lajes			
Tipo	Altura (cm)	Bloco de Enchimento	Área (m²)
Vigota protendida	14	B9/30/125	3,69
Vigota protendida	16	B12/30/125	60,92

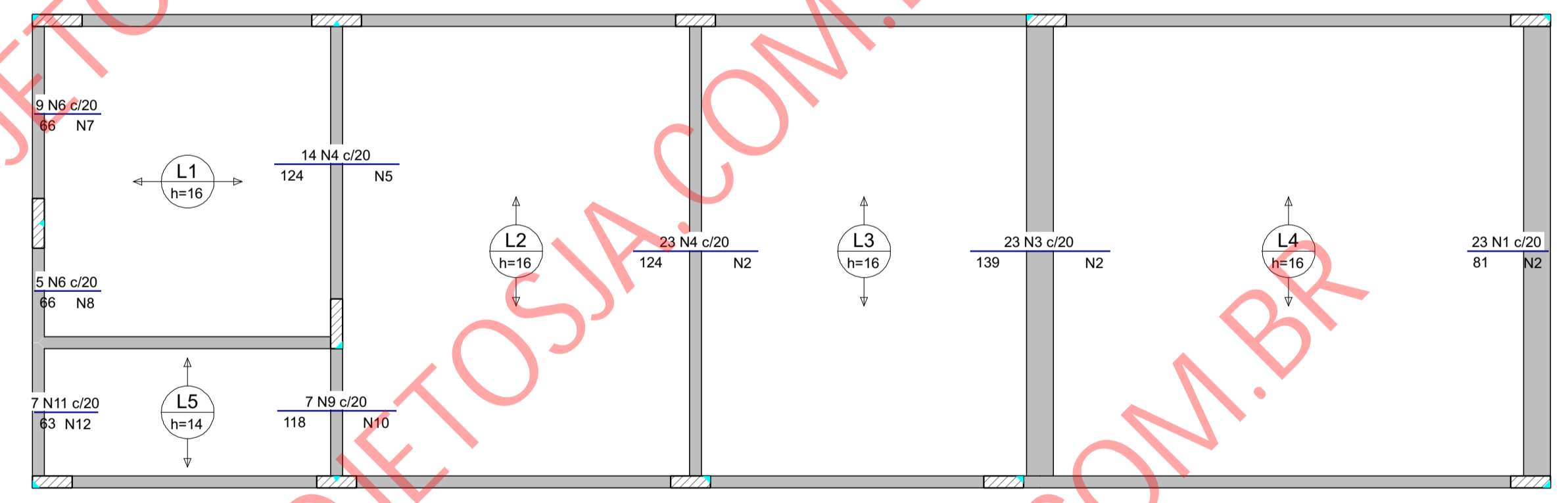
Características dos materiais			
fck (kgf/cm²)	fcd (kgf/cm²)	fcd (kgf/cm²)	Abatimento (cm)
250	241500	26	5,00

Dimensão máxima do agregado = 19 mm

Pilares			Vigas		
Nome	Seção (cm)	Elevação (cm)	Nome	Seção (cm)	Elevação (cm)
P3	12x50	0	V201	12x40	0
P4	12x40	0	V202	12x30	0
P5	12x55	0	V203	12x40	0
P6	12x55	0	V204	12x20	-50
P7	12x55	0	V205	12x20	-50
P8	12x40	0	V206	12x30	0
P9	12x40	0	V207	12x30	0
P11	12x50	0	V208	12x30	0
P13	12x55	0	V209	27x30	0
P14	12x40	0	V210	12x20	-50
P15	12x40	0	V211	27x30	0
P16	12x40	0	V212	12x20	-50
P17	12x40	0			
P18	12x40	0			
P23	12x30	0			
P26	12x30	-45			
P27	12x30	-50			
P29	12x30	-50			
P30	12x30	-50			
P31	12x30	-50			
P32	12x30	-50			
P33	12x40	-50			
P34	12x30	-50			
P35	12x30	-45			
P36	12x30	-50			
P37	12x30	0			
P38	12x30	0			

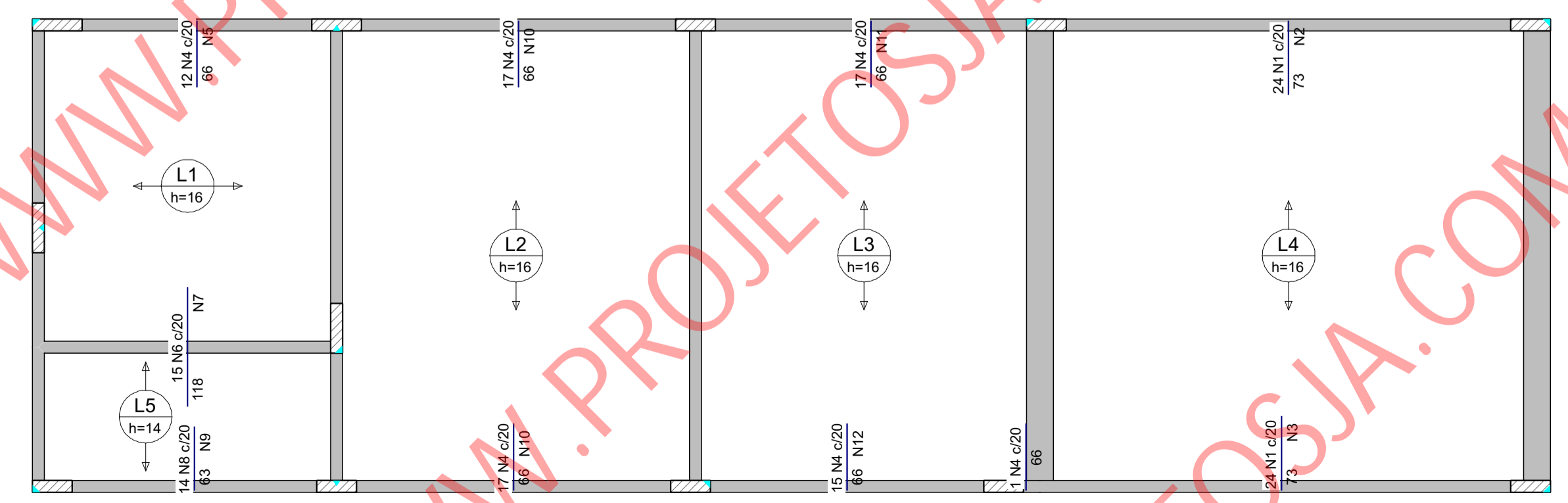


Forma do pavimento Cobertura Pé Direito (Nível 460) escala 1:50



Armaduras de distribuição	
Armadura	Armadura de distribuição
N1	4 N2 e5.0 c/20 C=464
N3	7 N2 e5.0 c/20 C=464
N4	7 N5 e5.0 c/20 C=289
N6	4 N7 e5.0 c/20 C=188
N6	4 N8 e5.0 c/20 C=104
N9	6 N10 e5.0 c/20 C=143
N11	4 N12 e5.0 c/20 C=140
N4	7 N2 e5.0 c/20 C=464

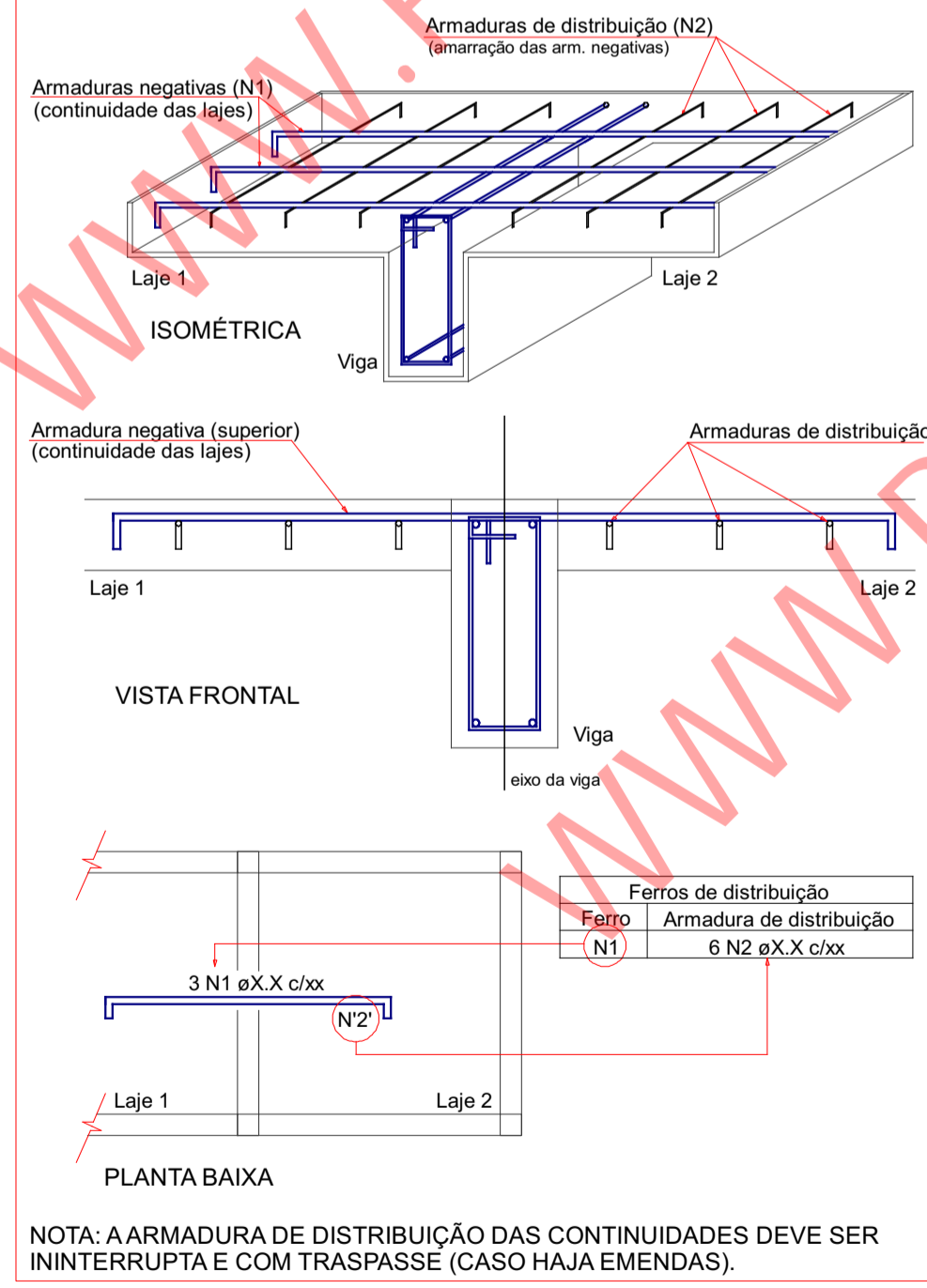
Armação negativa das lajes do pavimento Cobertura Pé Direito (Eixo X) escala 1:50



Armaduras de distribuição	
Armadura	Armadura de distribuição
N1	4 N2 e5.0 c/20 C=471
N1	4 N3 e5.0 c/20 C=486
N4	4 N5 e5.0 c/20 C=249
N6	6 N7 e5.0 c/20 C=300
N8	4 N9 e5.0 c/20 C=270
N4	4 N10 e5.0 c/20 C=340
N4	4 N10 e5.0 c/20 C=340
N4	4 N11 e5.0 c/20 C=337
N4	4 N12 e5.0 c/20 C=299

Armação negativa das lajes do pavimento Cobertura Pé Direito (Eixo Y) escala 1:50

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).

Relação do aço

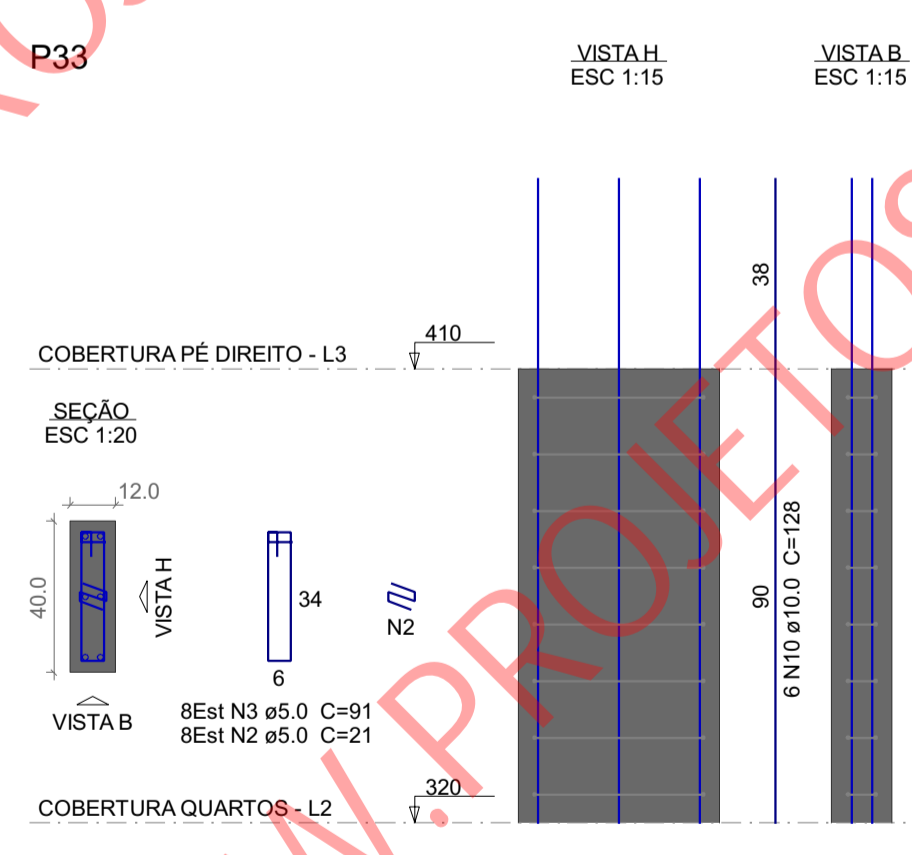
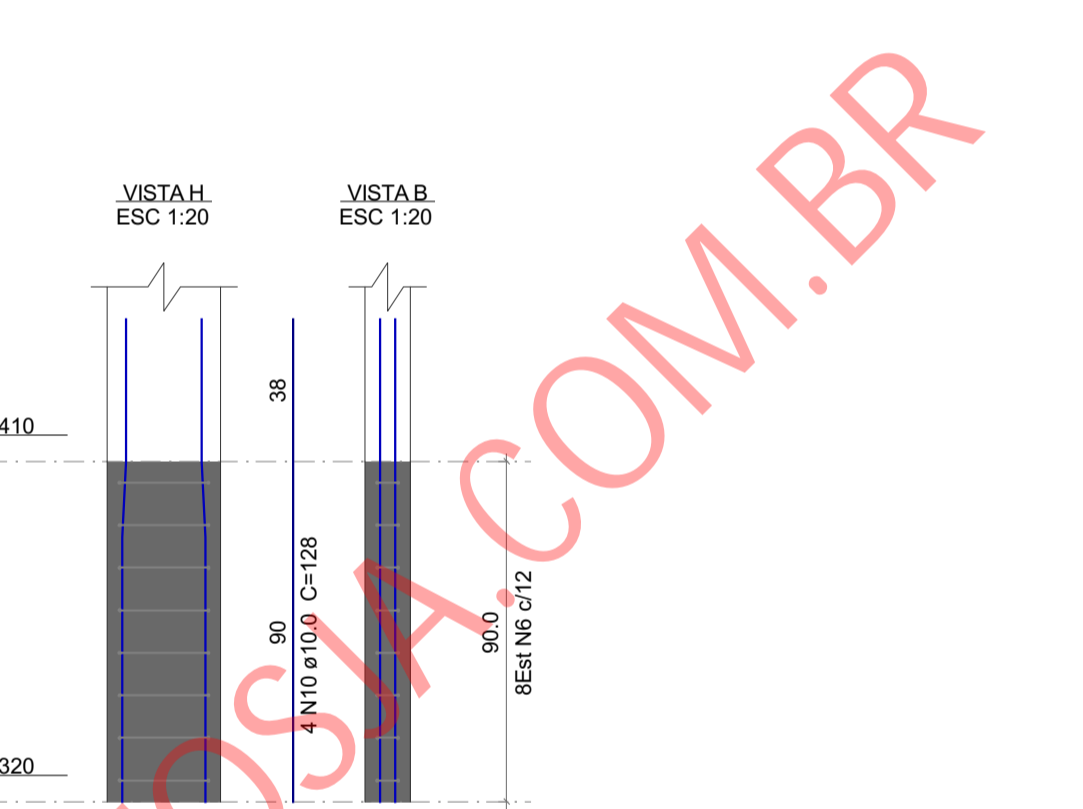
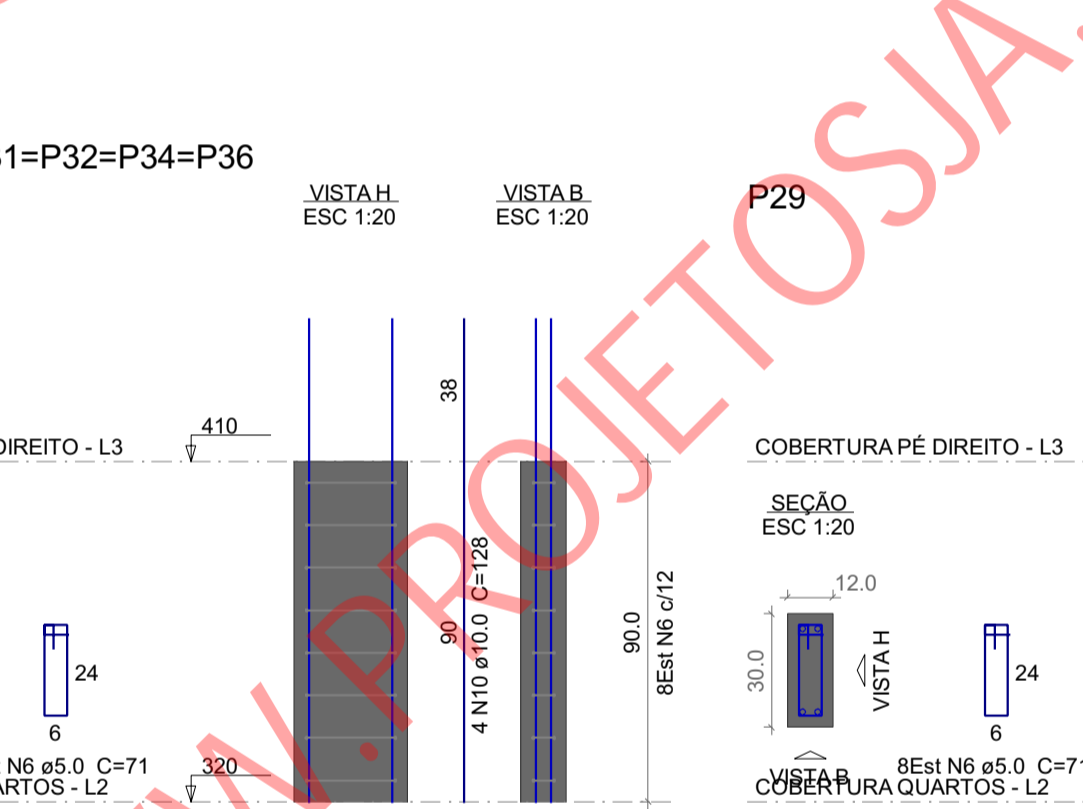
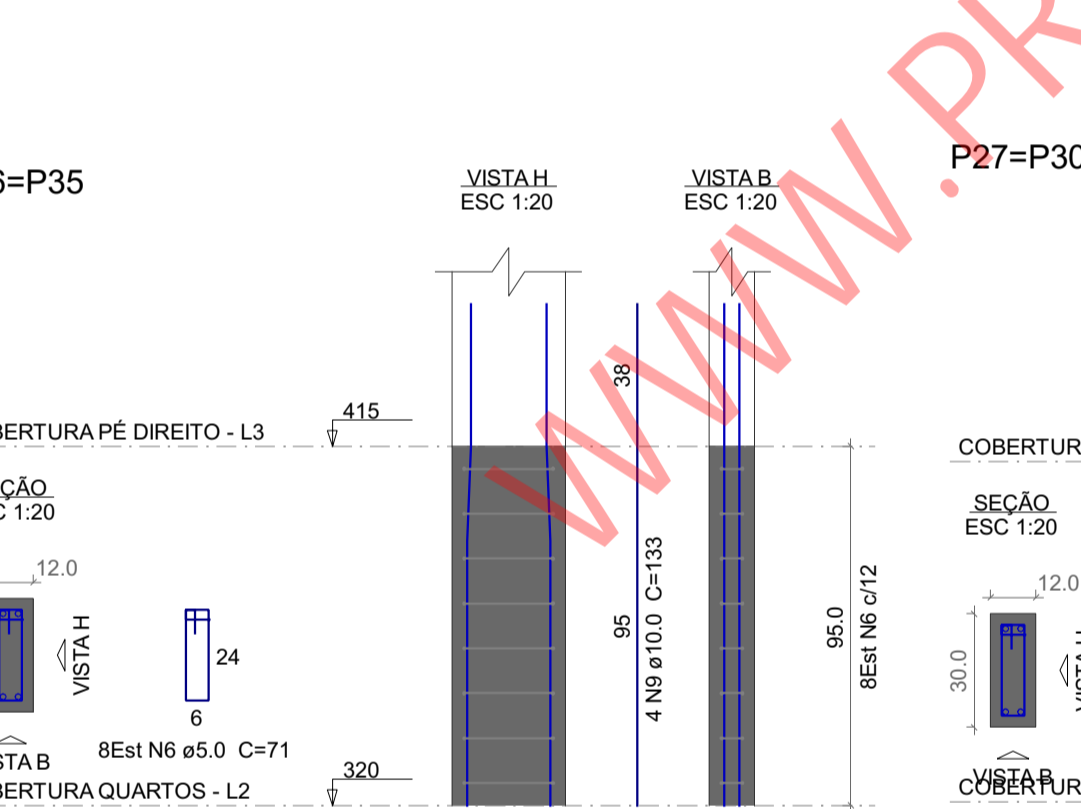
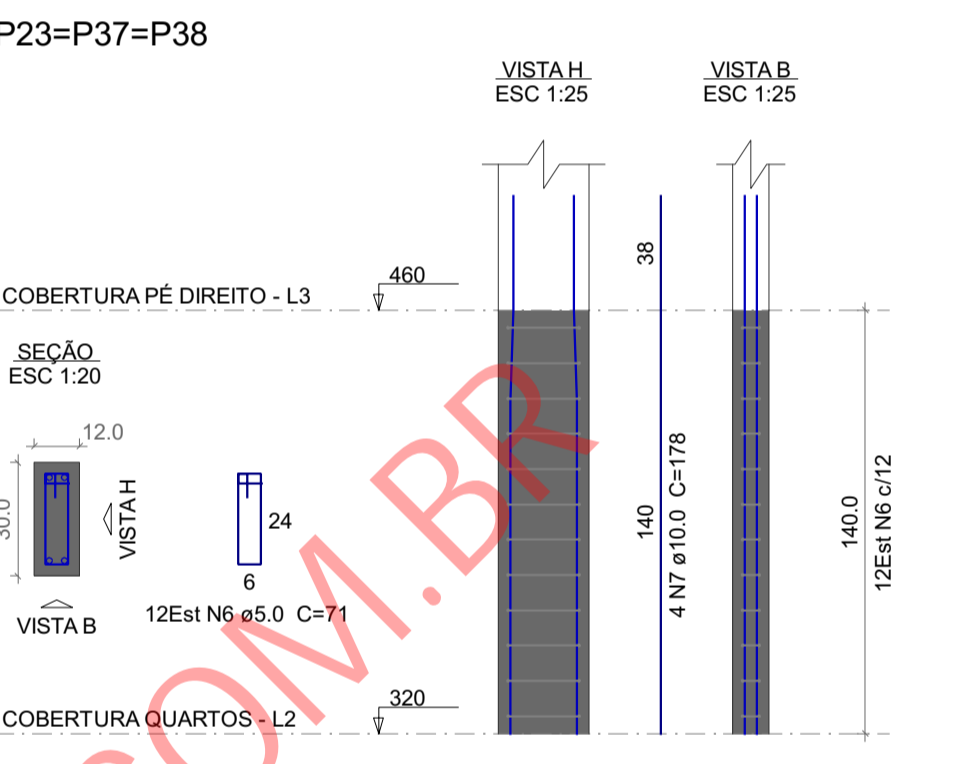
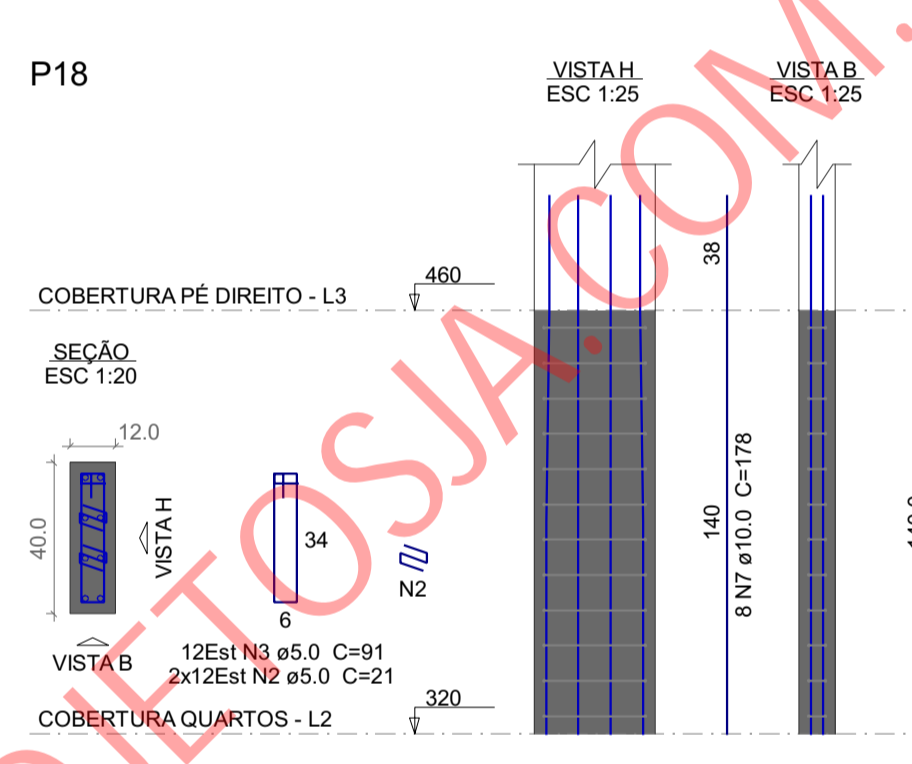
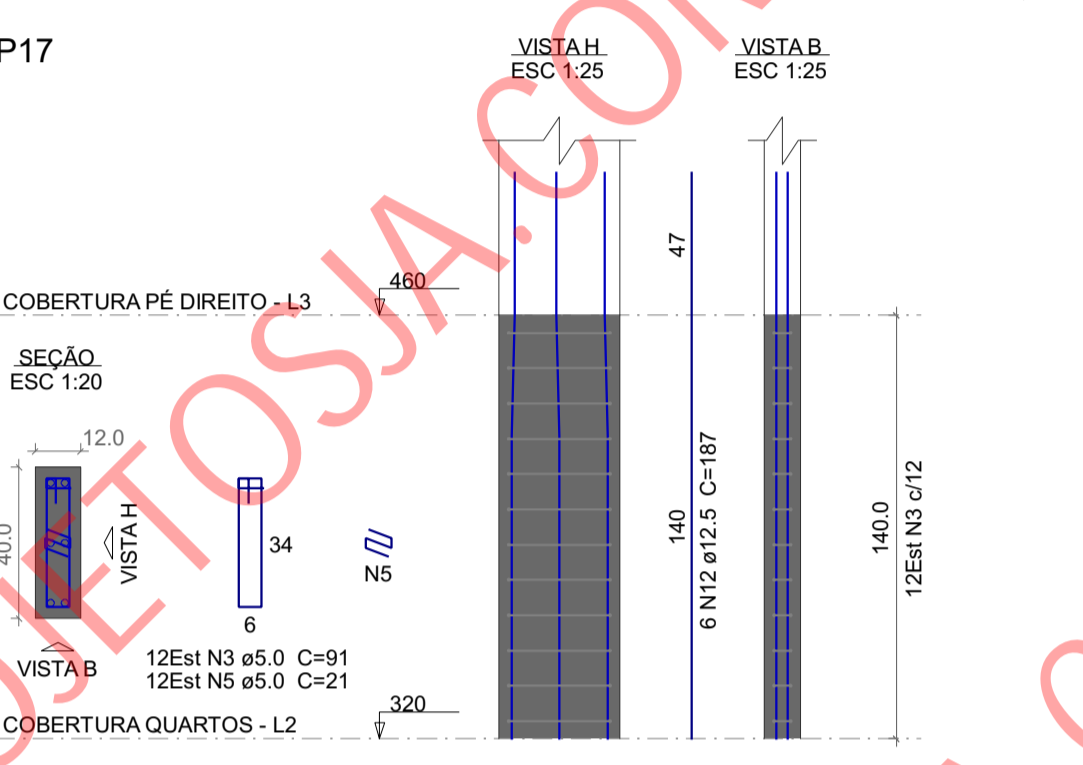
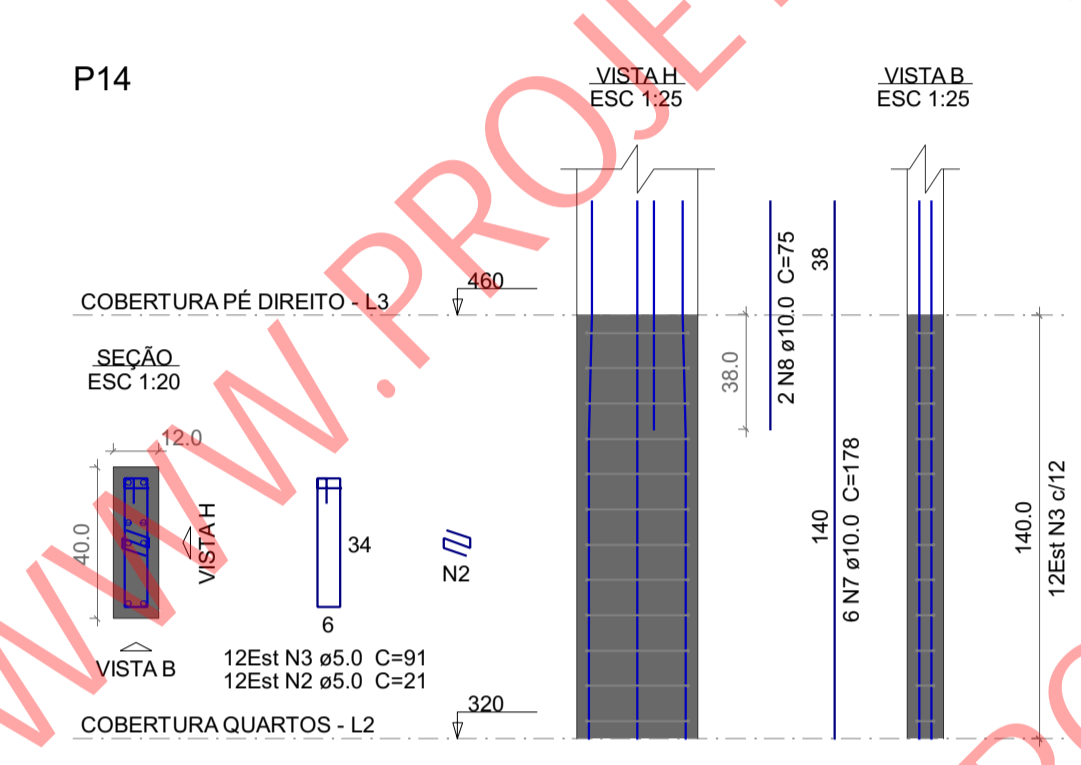
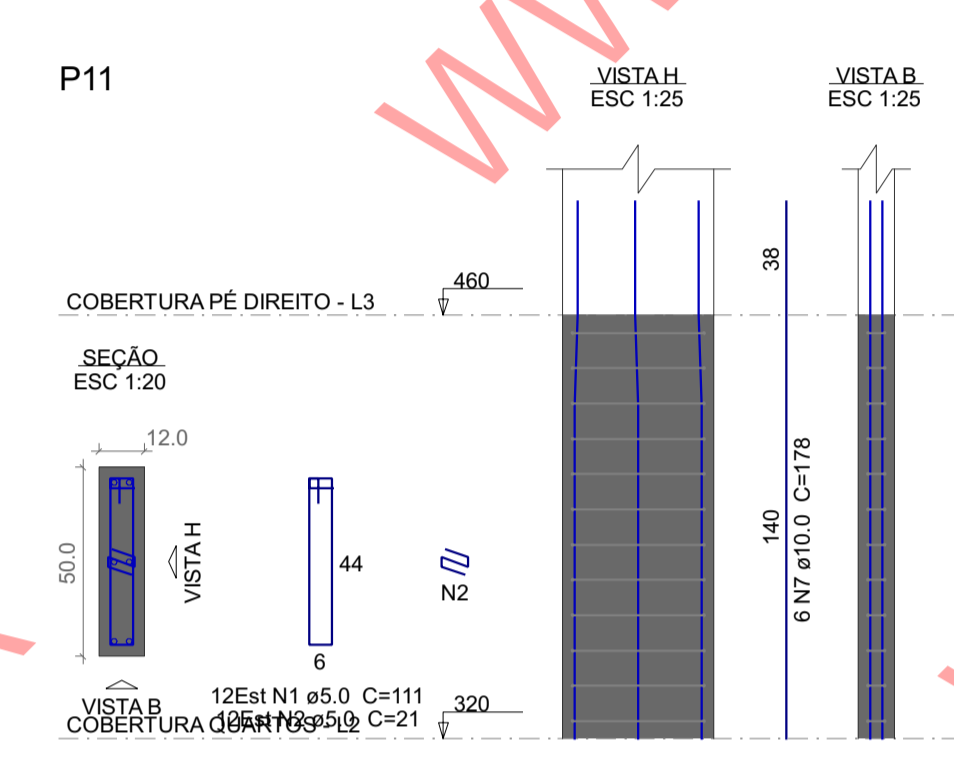
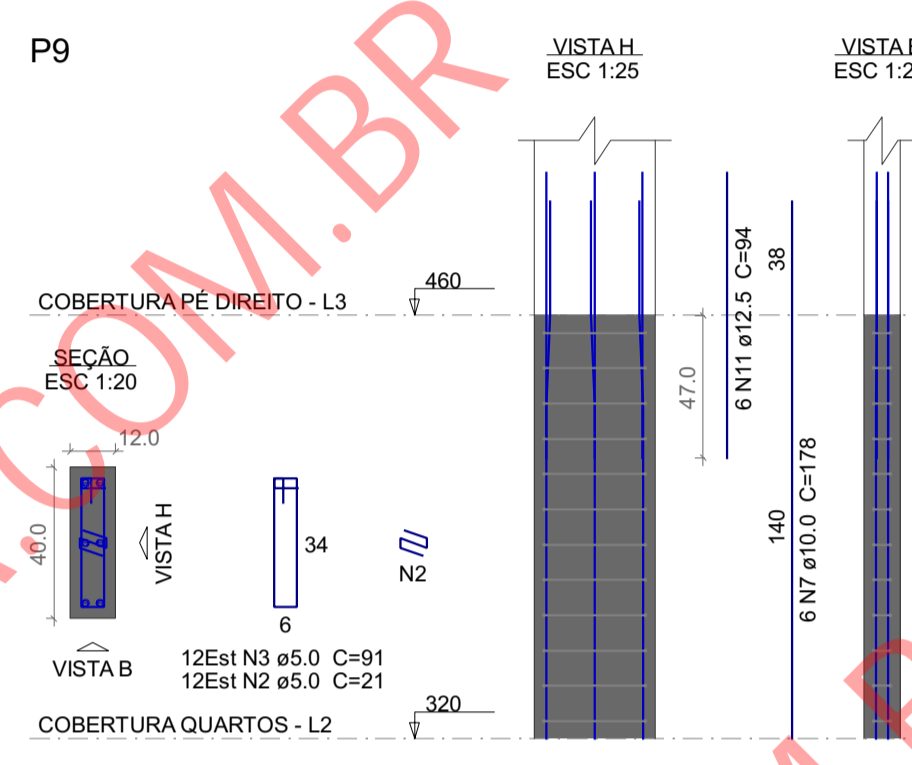
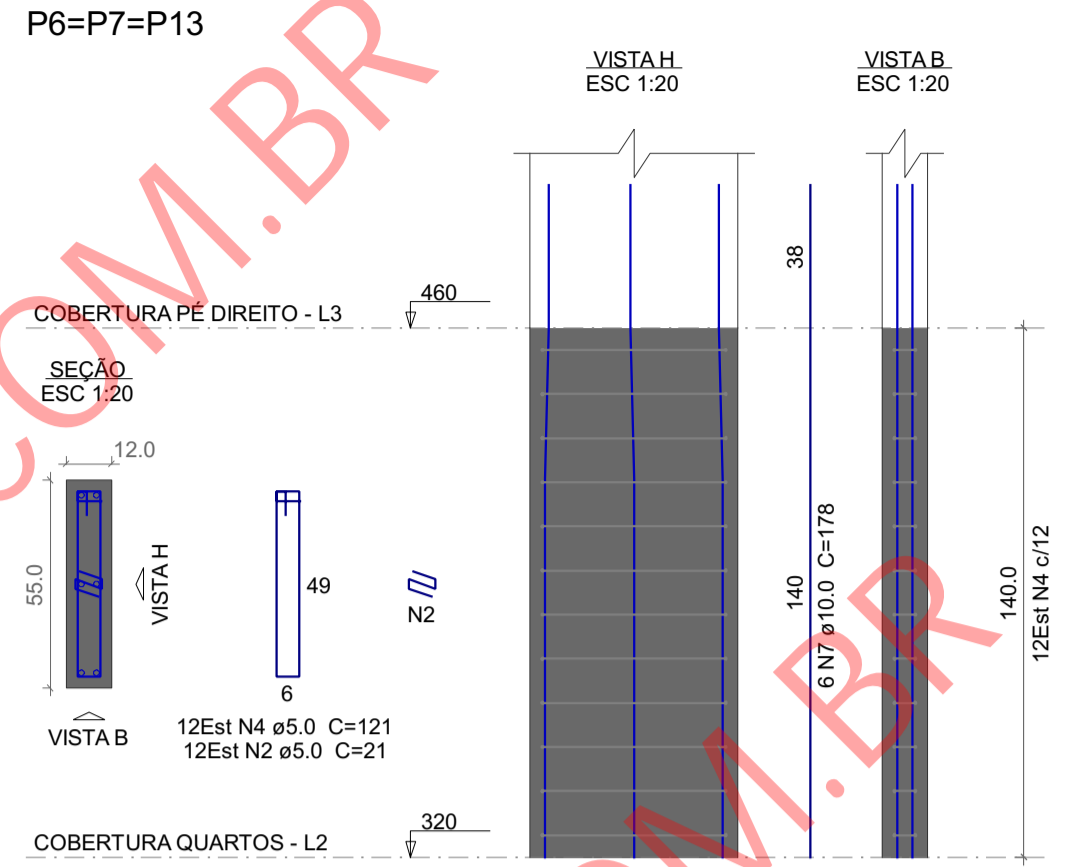
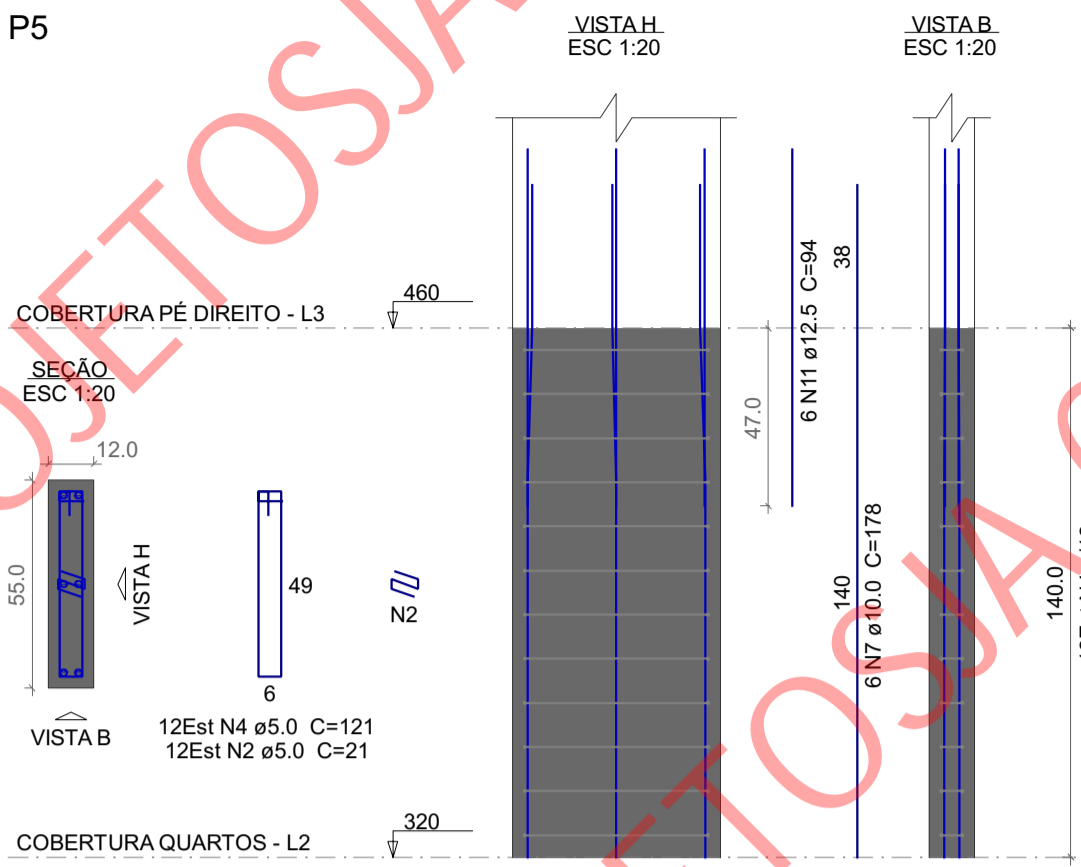
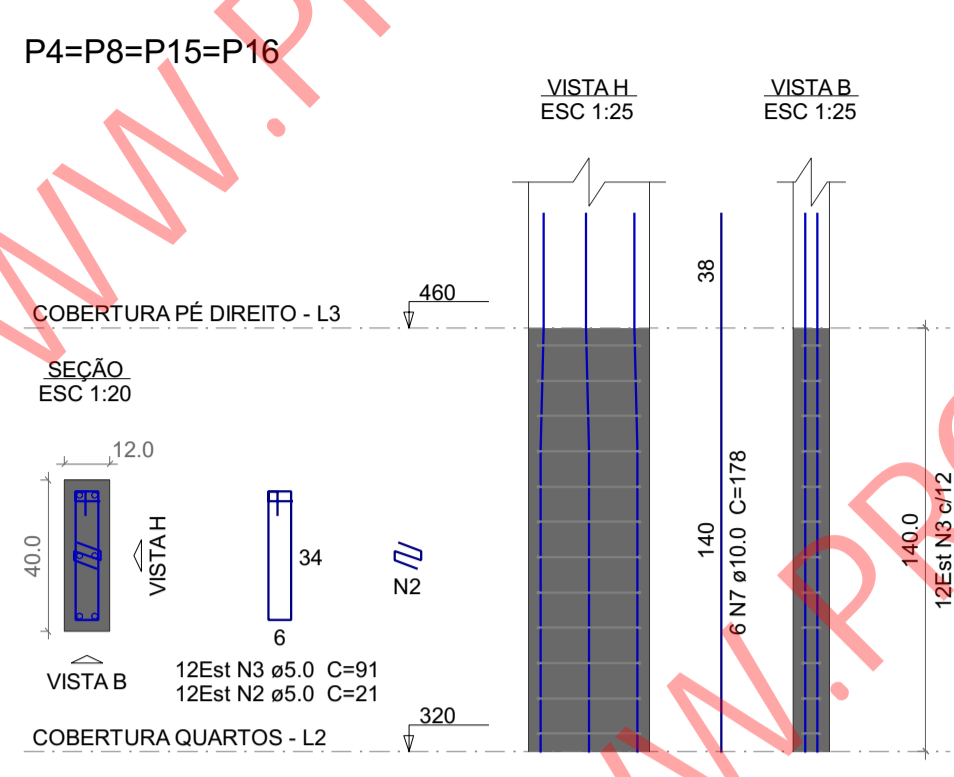
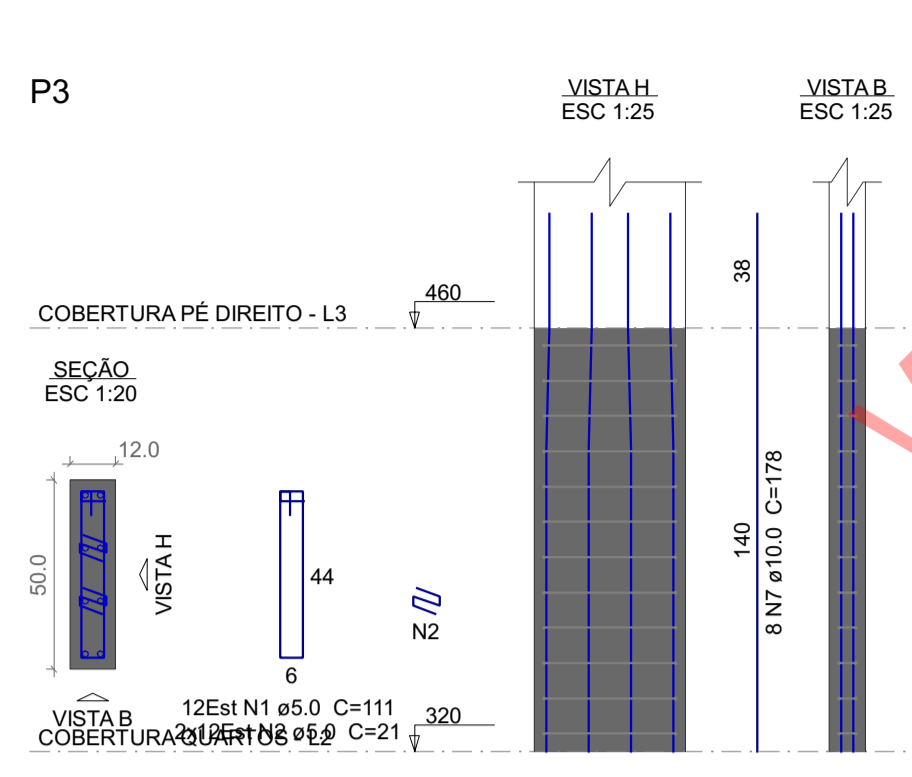
Negativos X		Negativos Y			
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	23	81	1863
	2	5,0	18	464	8352
	3	5,0	23	139	3197
	4	5,0	37	124	4588
	5	5,0	7	289	2023
	6	5,0	93	66	6138
	7	5,0	4	188	752
	8	5,0	4	104	416
	9	5,0	22	118	2596
	10	5,0	6	143	858
	11	5,0	21	63	1323
	12	5,0	4	140	560
	1	5,0	48	34	6138
	2	5,0	4	471	1884
	3	5,0	4	486	1944
	5	5,0	4	249	996
	7	5,0	6	300	1800
	9	5,0	4	270	1080
	10	5,0	8	340	2720
	11	5,0	4	337	1348
	12	5,0	4	299	1196

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	UNIT	PESO + 10% (kg)
CA60	5,0	491,4	-	rolo (170 kg)	83,3

Volume de concreto (C-25) = 3,48 m³





**Relação do aço**

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	24	111	2664
	2	5.0	188	21	3948
	3	5.0	104	91	9464
	4	5.0	48	121	5808
	5	5.0	12	21	252
	6	5.0	108	71	7668
CA50	7	10.0	94	178	16732
	8	10.0	2	75	150
	9	10.0	8	133	1064
	10	10.0	34	128	4352
	11	12.5	12	94	1128
	12	12.5	6	187	1122

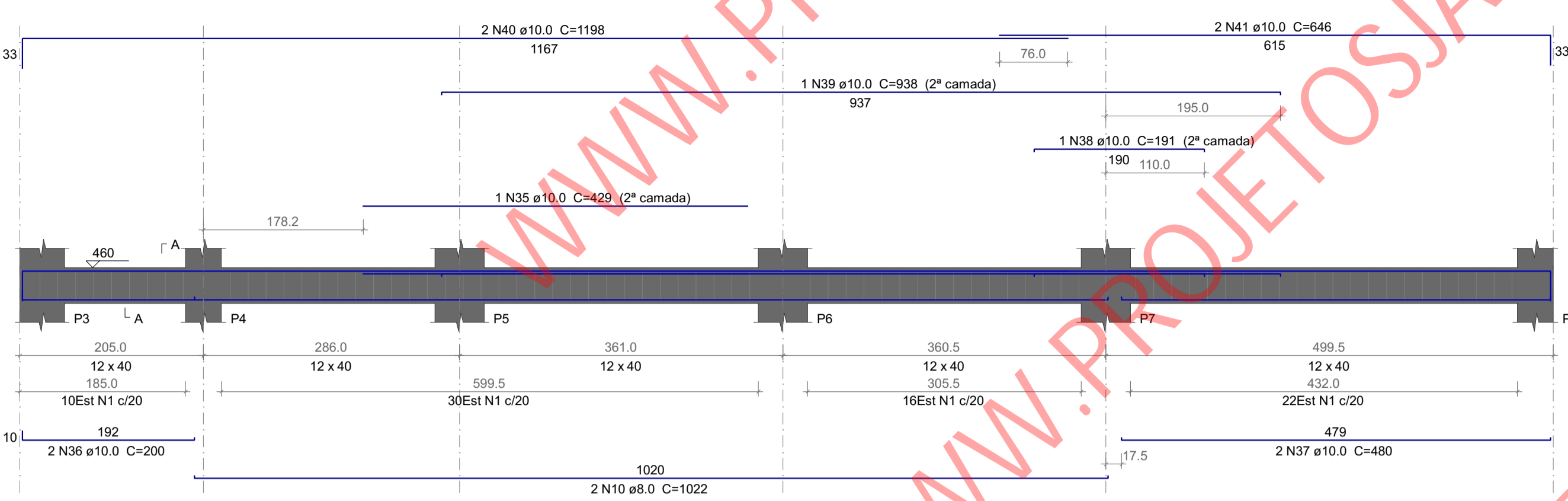
**Resumo do aço**

ACO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT (12 m)	PESO + 10 % (kg)
CA50	10.0	223	21	12 m	151.2
CA60	5.0	298.1	3	12 m	23.8
<b>PESO TOTAL (kg)</b>					
CA50					175.1
CA60					50.5

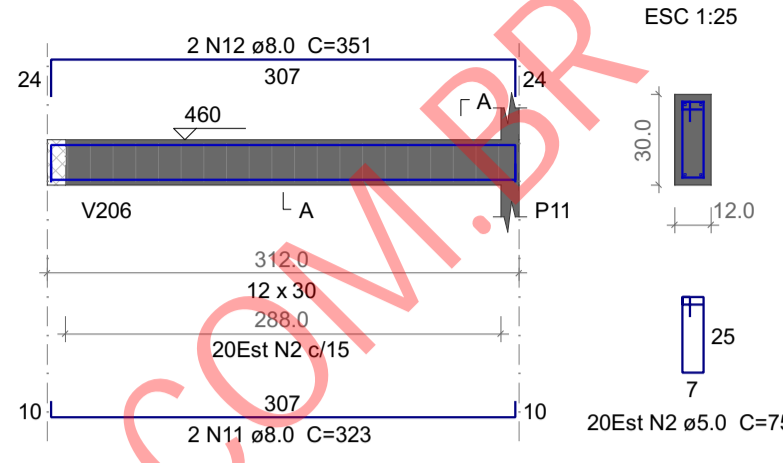
Volume de concreto (C-25) = 1.56 m³  
 Área de forma = 33.98 m²



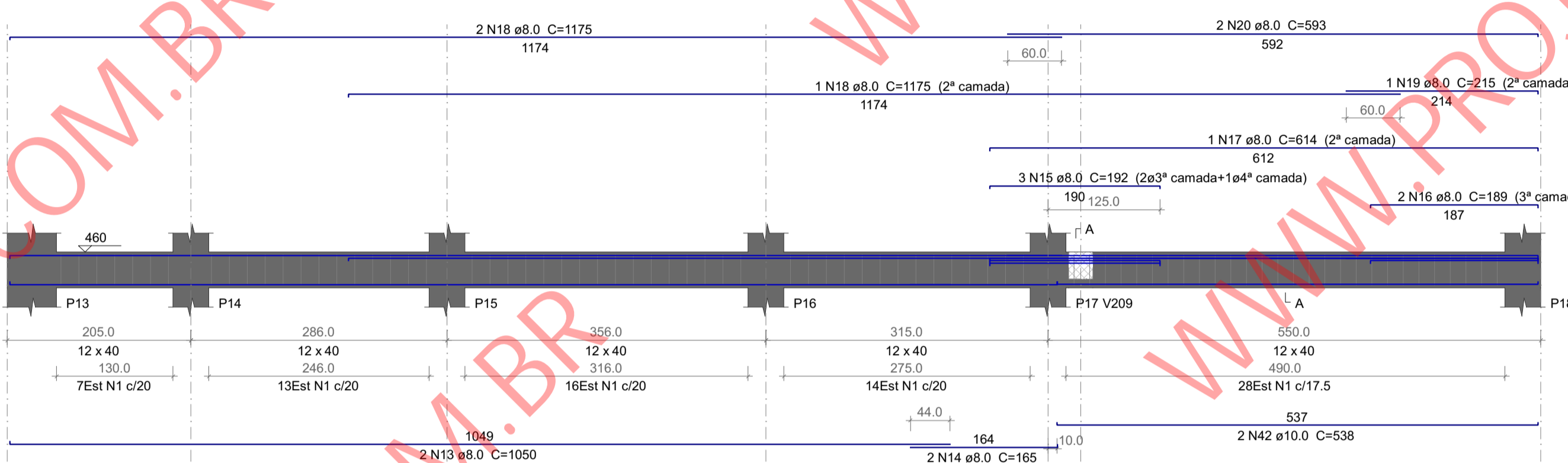
V201 (12 x 40)



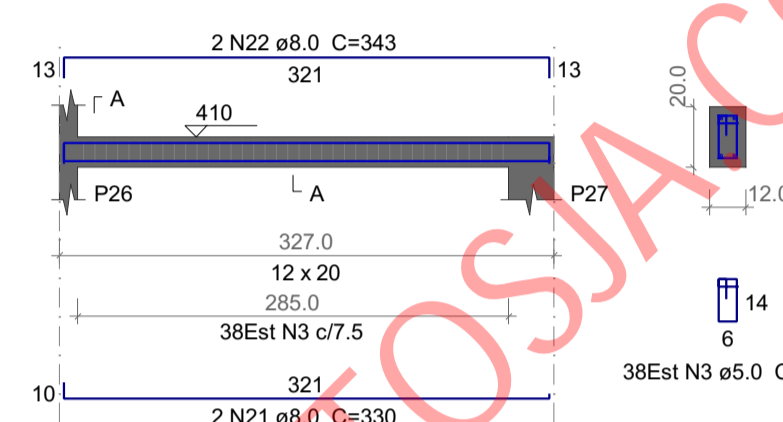
V202 (12 x 30)



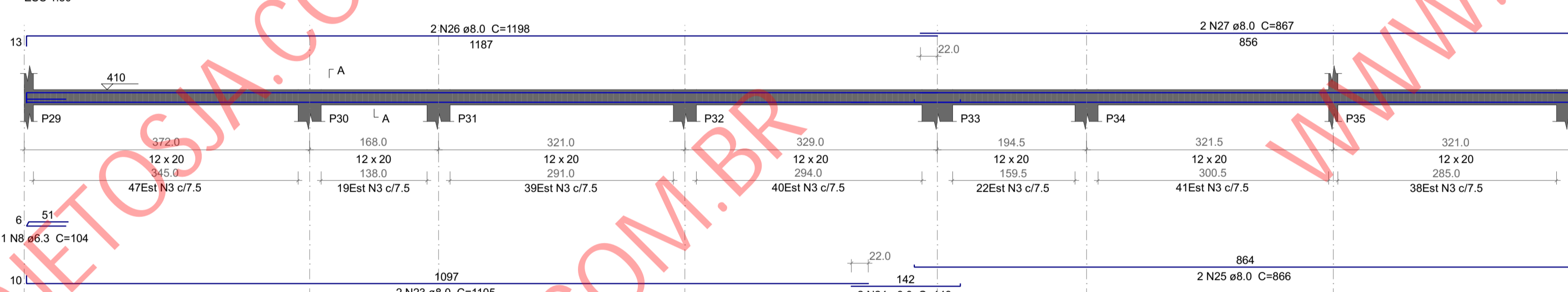
V203 (12 x 40)



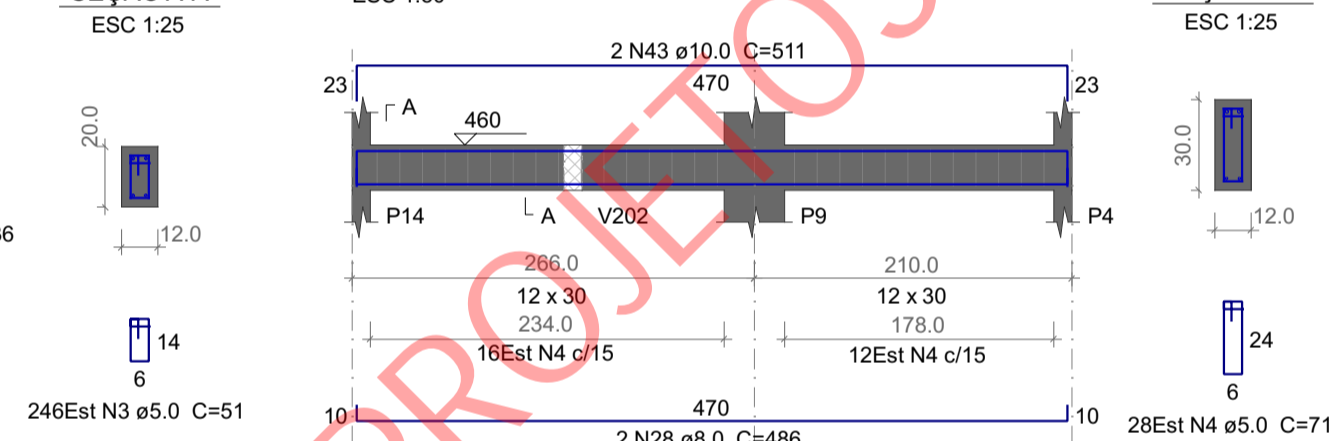
V204 (12 x 20)



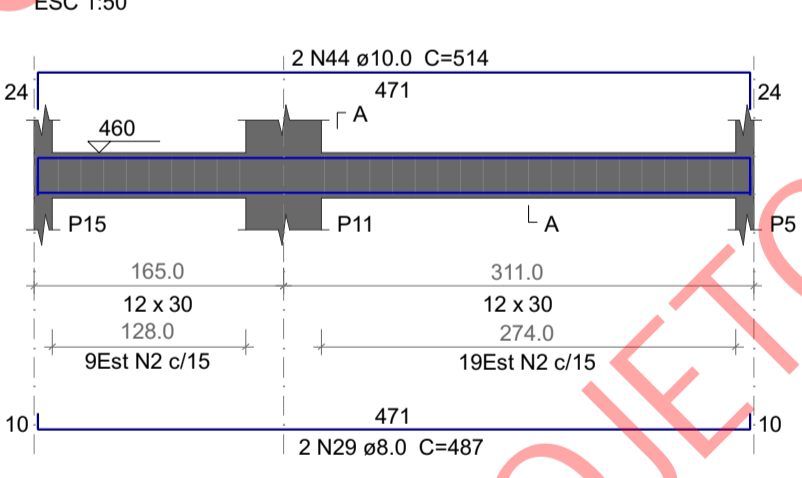
V205 (12 x 20)



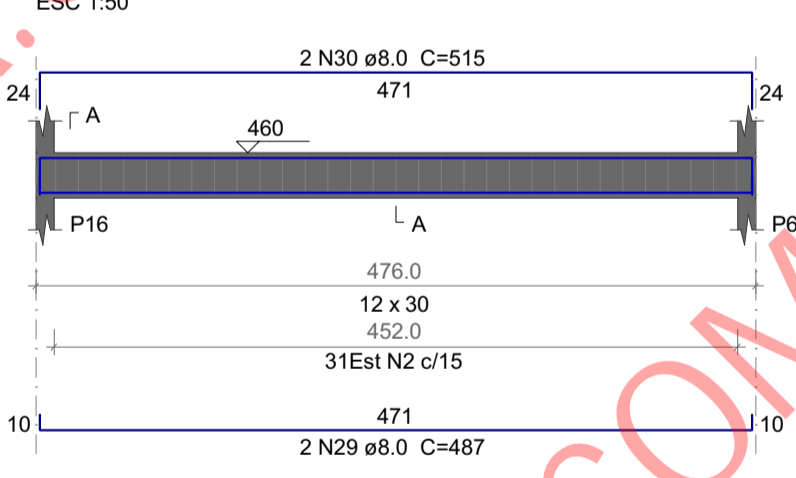
V206 (12 x 30)



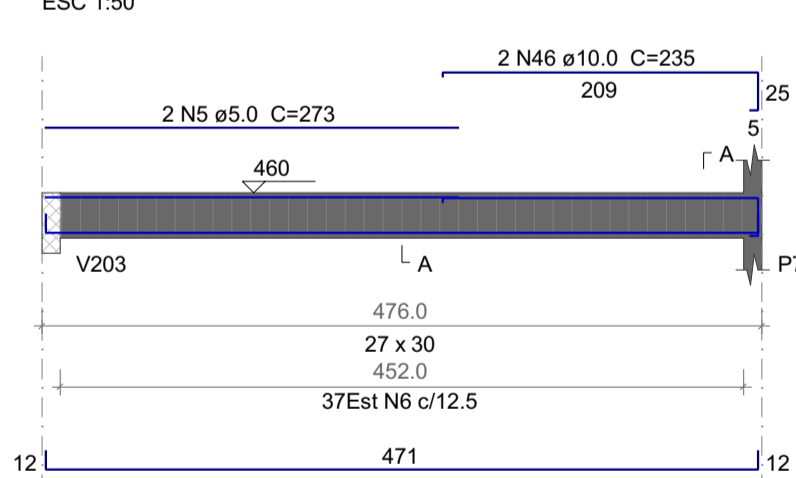
V207 (12 x 30)



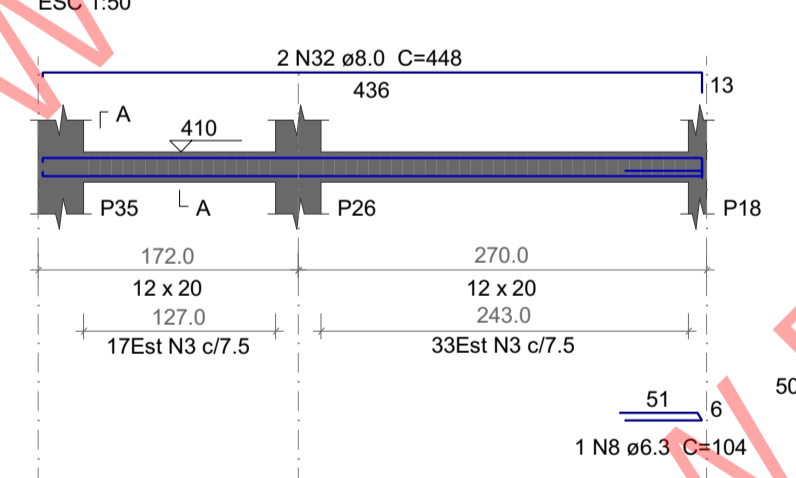
V208 (12 x 30)



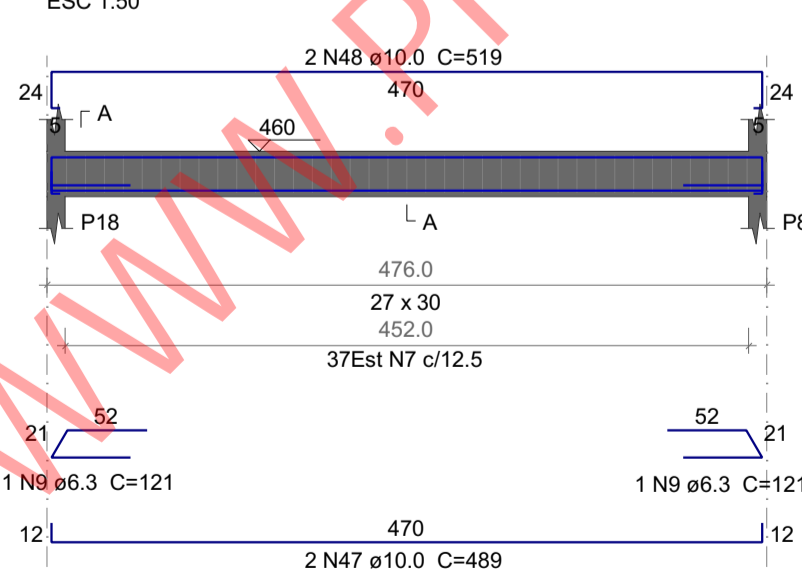
V209 (27 x 30)



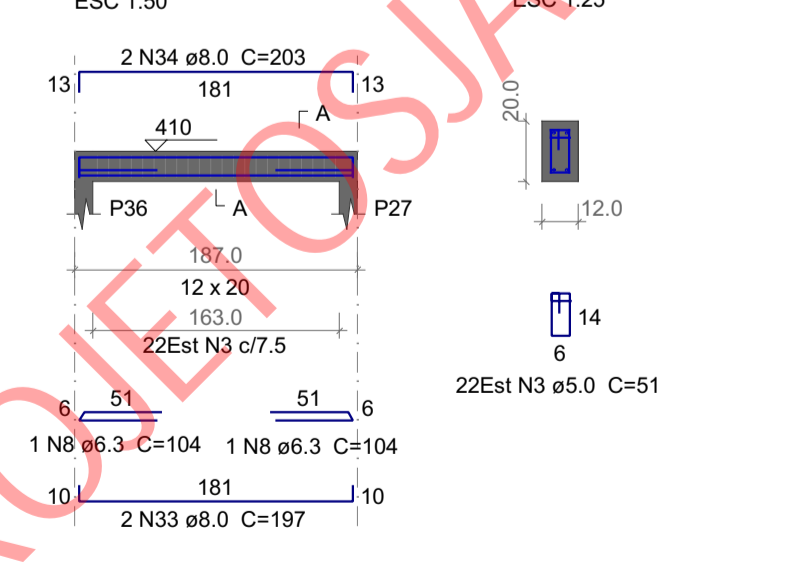
V210 (12 x 20)



V211 (27 x 30)



V212 (12 x 20)



Relação do aço

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	156	91	14196
CA60	2	5.0	79	75	5925
CA60	3	5.0	358	51	18156
CA60	4	5.0	28	71	1988
CA60	5	5.0	2	273	546
CA60	6	5.0	37	105	3885
CA60	7	5.0	37	101	3737
CA60	8	6.3	4	104	416
CA60	9	6.3	2	121	242
CA60	10	8.0	2	1022	2044
CA60	11	8.0	2	323	646
CA60	12	8.0	2	351	702
CA60	13	8.0	2	1050	2100
CA60	14	8.0	2	165	330
CA60	15	8.0	3	192	576
CA60	16	8.0	2	189	378
CA60	17	8.0	1	614	614
CA60	18	8.0	3	1175	3525
CA60	19	8.0	1	215	215
CA60	20	8.0	2	593	1186
CA60	21	8.0	2	330	660
CA60	22	8.0	2	343	686
CA60	23	8.0	2	1105	2210
CA60	24	8.0	2	143	286
CA60	25	8.0	2	866	1732
CA60	26	8.0	2	1198	2396
CA60	27	8.0	2	867	1734
CA60	28	8.0	2	486	972
CA60	29	8.0	4	487	1948
CA60	30	8.0	2	515	1030
CA60	31	8.0	2	445	890
CA60	32	8.0	2	448	896
CA60	33	8.0	2	197	394
CA60	34	8.0	2	203	406
CA60	35	10.0	1	429	429
CA60	36	10.0	2	200	400
CA60	37	10.0	2	480	960
CA60	38	10.0	1	191	191
CA60	39	10.0	1	938	938
CA60	40	10.0	2	1198	2396
CA60	41	10.0	2	646	1292
CA60	42	10.0	2	538	1076
CA60	43	10.0	2	511	1022
CA60	44	10.0	2	514	1028
CA60	45	10.0	2	490	980
CA60	46	10.0	2	235	470
CA60	47	10.0	2	489	978
CA60	48	10.0	2	519	1038

Resumo do aço

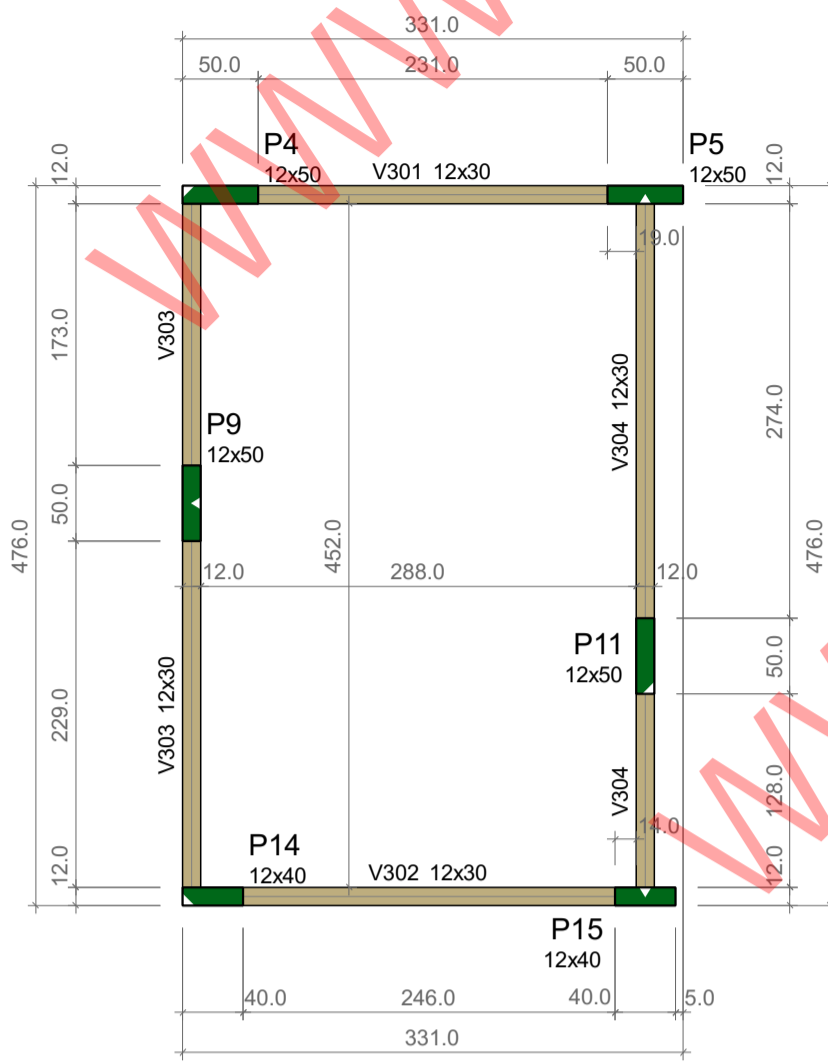
ACO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT	PESO + 10 % (kg)
CA50	6.3	6.6	1	12 m	1.8
CA50	8.0	285.6	27	12 m	123.9
CA60	10.0	132	13	12 m	89.5
CA60	5.0	484.4	-	rolo (170 kg)	82.1
PESO TOTAL (kg)					
CA50					215.2
CA60					82.1

Volume de concreto (C-25) = 3.31 m³  
Área de forma = 48.74 m²



Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V301	12x30	0	795
V302	12x30	0	795
V303	12x30	0	795
V304	12x30	0	795

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P4	12x50	0	795
P5	12x50	0	795
P9	12x50	0	795
P11	12x50	0	795
P14	12x40	0	795
P15	12x40	0	795



Blocos de enchimento						
Detalhe	Tipo	Nome	Dimensões (cm)	Quantidade		
			hb	bx	by	
1	EPS Unidirecional	B16/30/125	16	30	125	27

Lajes								
Dados					Sobrecarga (kgf/m²)			
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Peso próprio (kgf/m²)	Adicional	Acidental	
L1	Pré-moldada	20	0	595	199	95	150	1290

Área de lajes			
Tipo	Altura (cm)	Bloco de Enchimento	Área (m²)
Pré-moldada	20	B16/30/125	10,28

Características dos materiais			
fck (kgf/cm²)	Ecs (kgf/cm²)	fct (kgf/cm²)	Abatimento (cm)
250	241500	26	5,00

Dimensão máxima do agregado = 19 mm

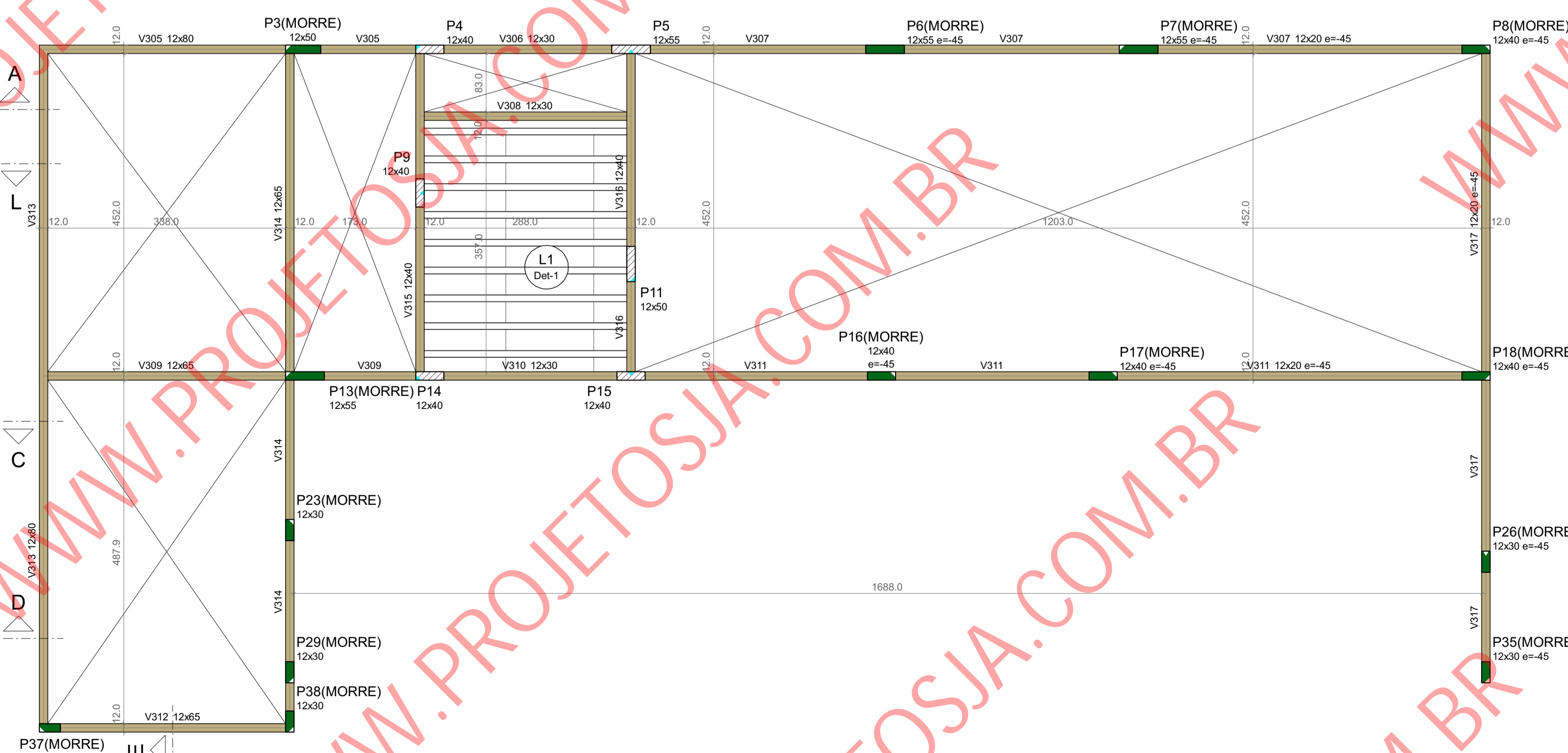
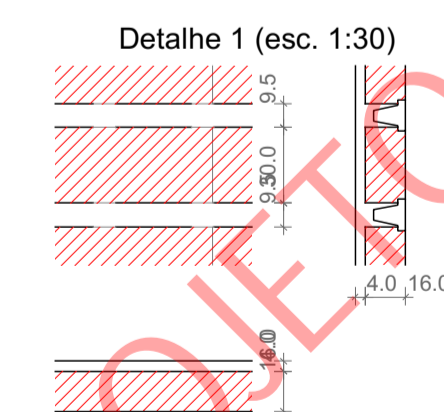
Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P3	12x50	0	595
P4	12x40	0	595
P5	12x55	0	595
P6	12x55	-45	550
P7	12x55	-45	550
P8	12x40	-45	550
P9	12x40	0	595
P11	12x50	0	595
P13	12x55	0	595
P14	12x40	0	595
P15	12x40	0	595
P16	12x40	-45	550
P17	12x40	-45	550
P18	12x40	-45	550
P23	12x30	0	595
P26	12x30	-45	550
P29	12x30	0	595
P35	12x30	-45	550
P37	12x30	0	595
P38	12x30	0	595

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V305	12x80	0	595
V306	12x30	0	595
V307	12x20	-45	550
V308	12x30	0	595
V309	12x65	0	595
V310	12x30	0	595
V311	12x20	-45	550
V312	12x65	0	595
V313	12x80	0	595
V314	12x65	0	595
V315	12x40	0	595
V316	12x40	0	595
V317	12x20	-45	550

Forma do pavimento Caixa Dagua (Nível 795)  
escala 1:50

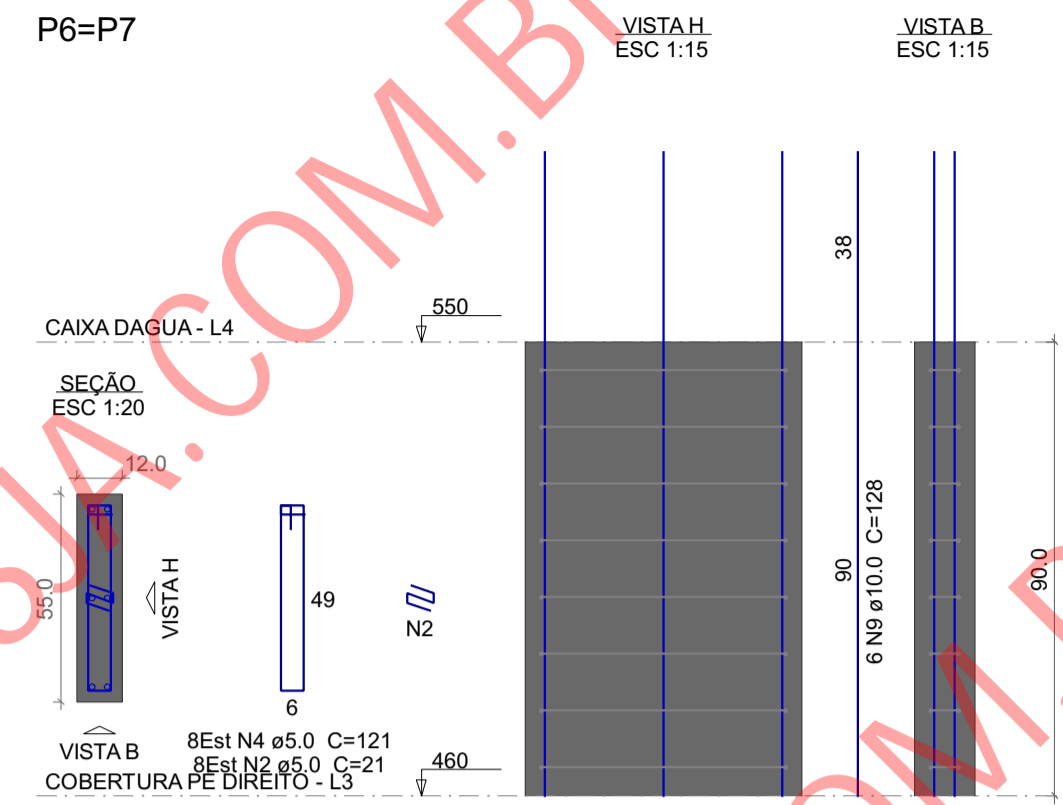
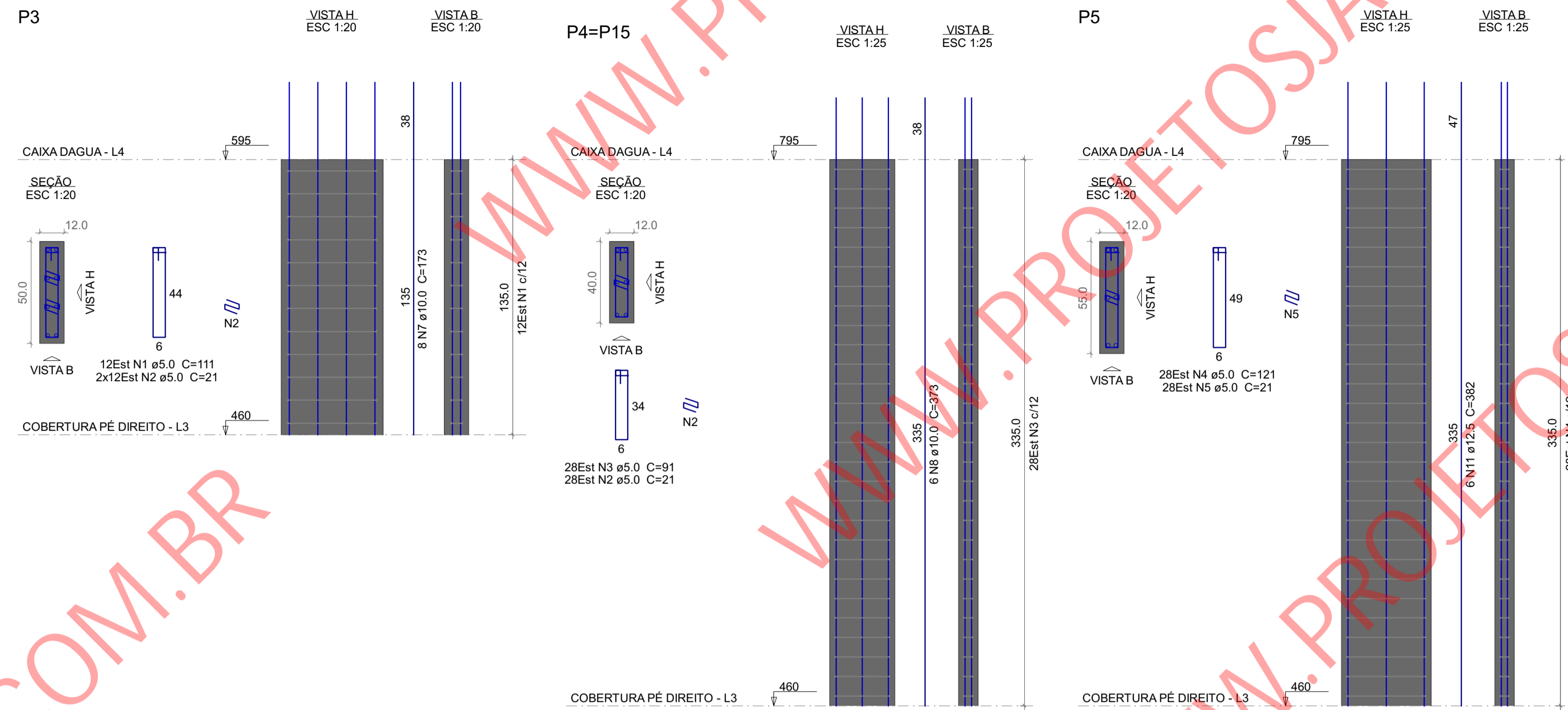
Legenda dos pilares	
	Pilar que morre
	Pilar que passa

Legenda das vigas e paredes	
	Viga



Forma intermediária do pavimento Caixa Dagua (Nível 595)  
escala 1:50





Relação do aço

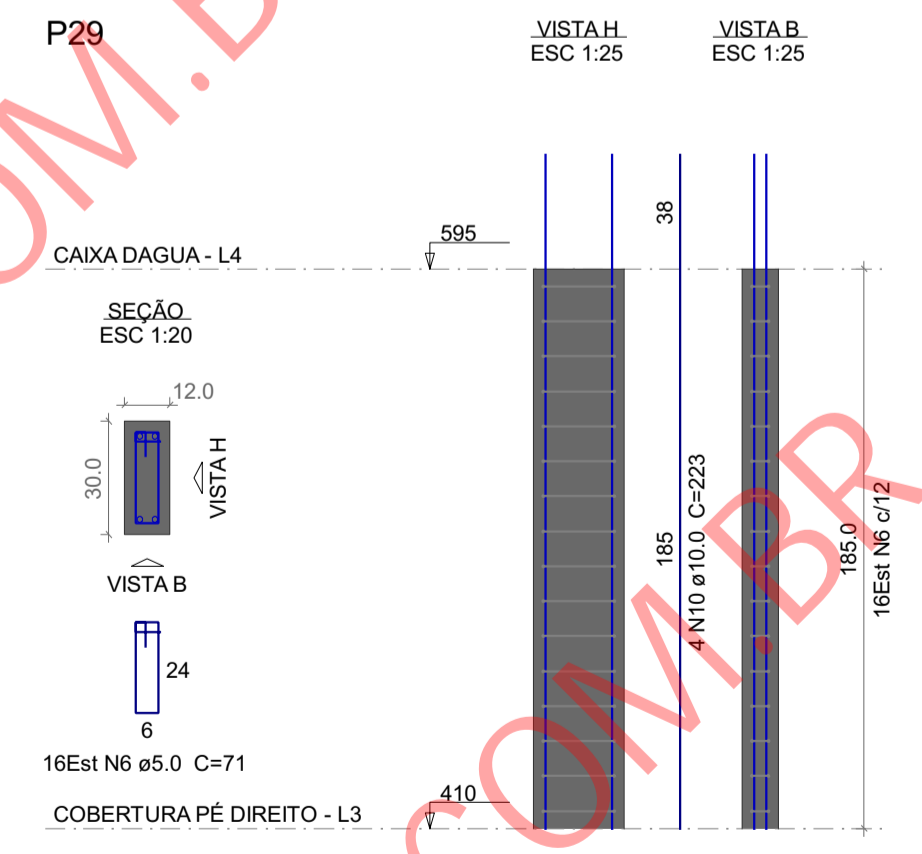
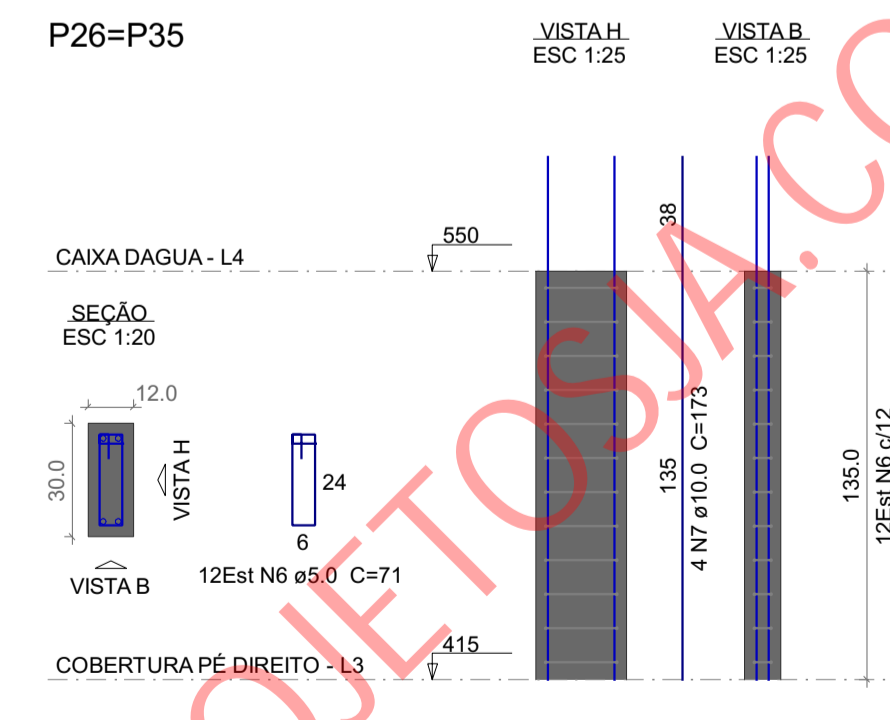
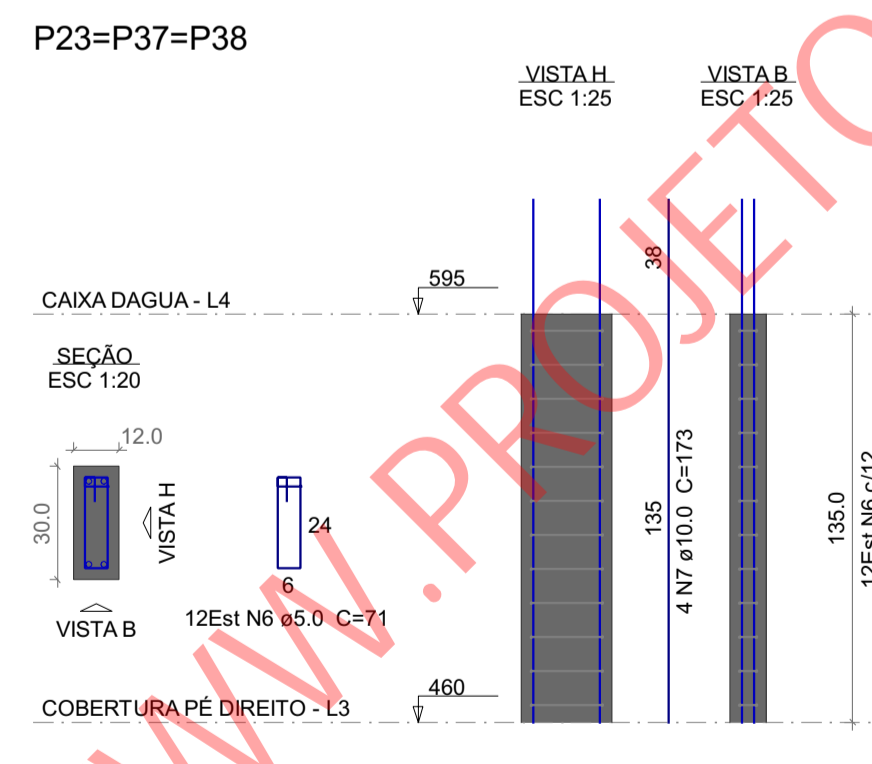
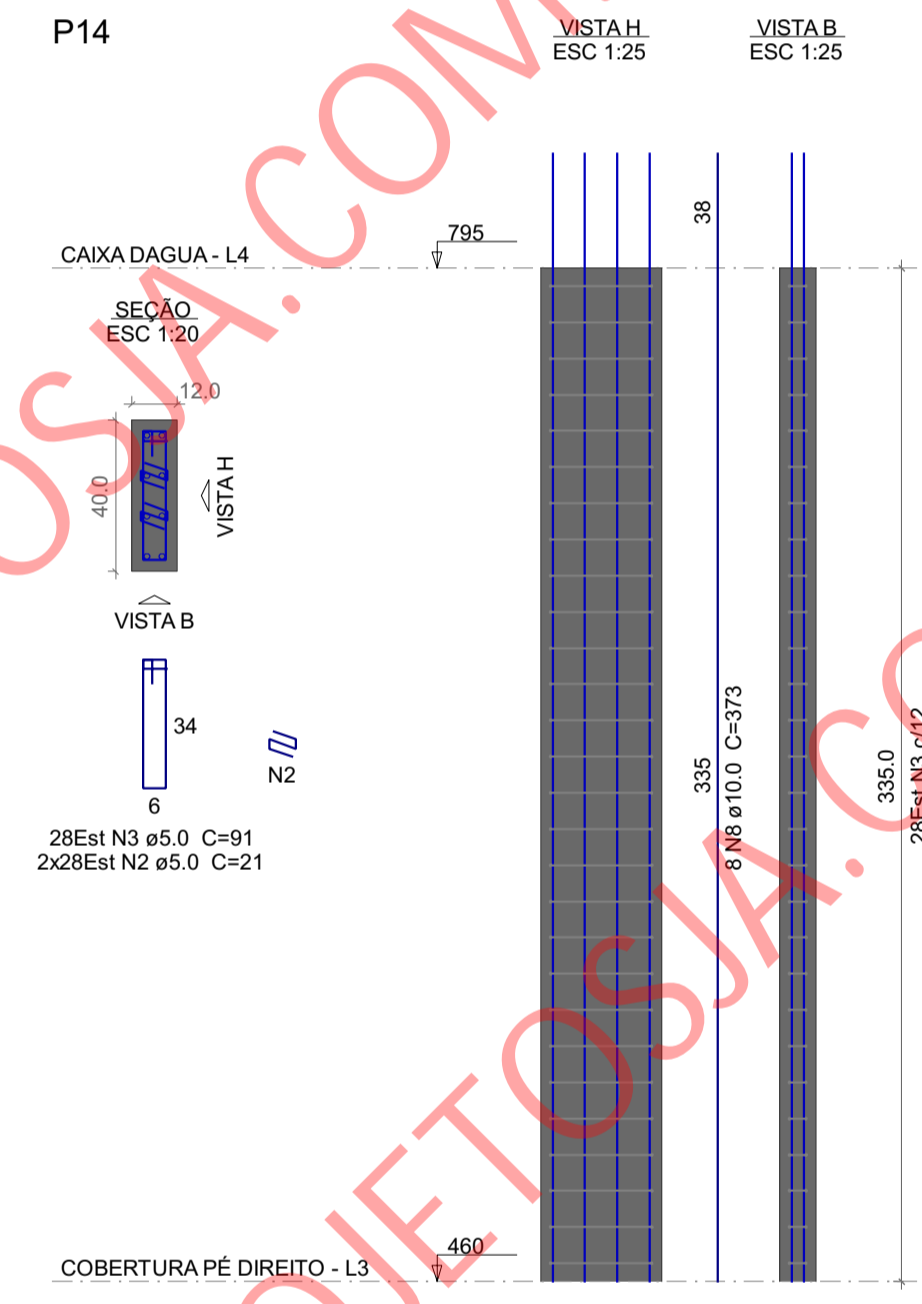
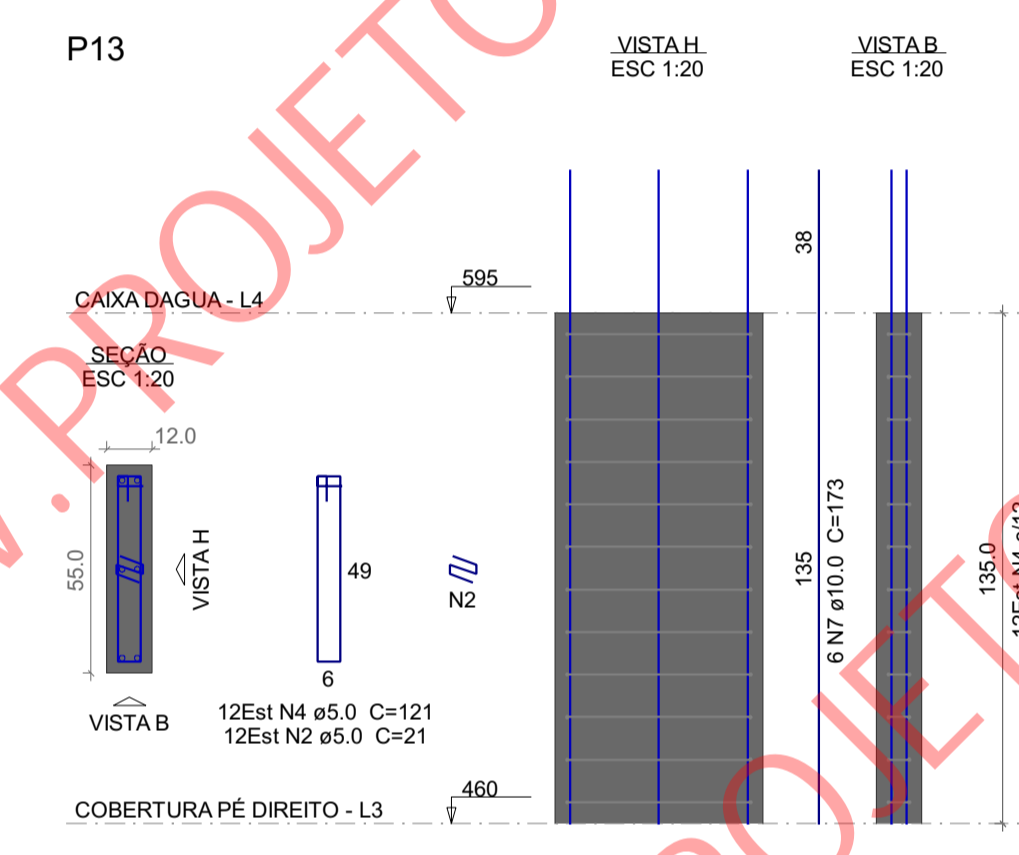
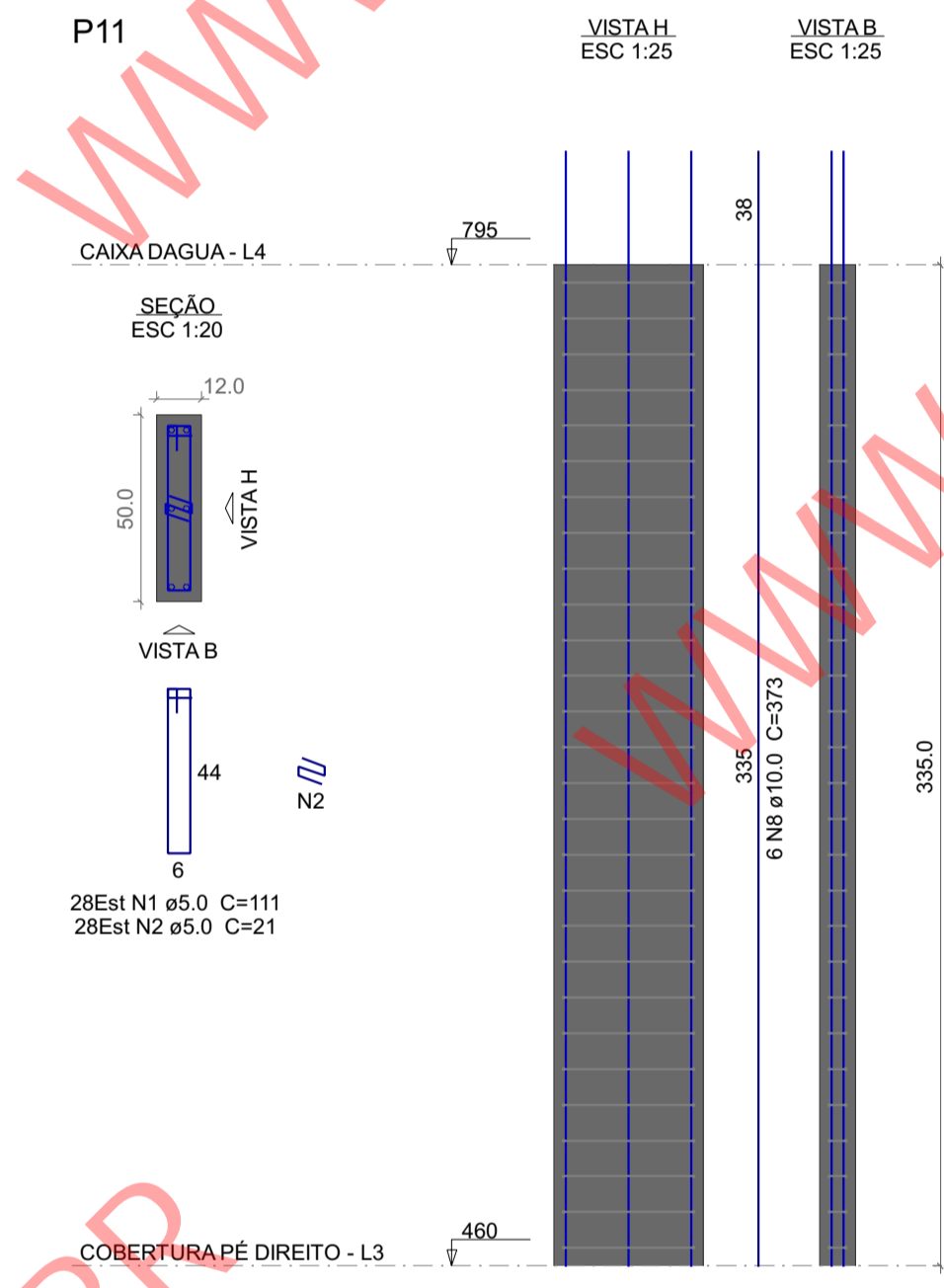
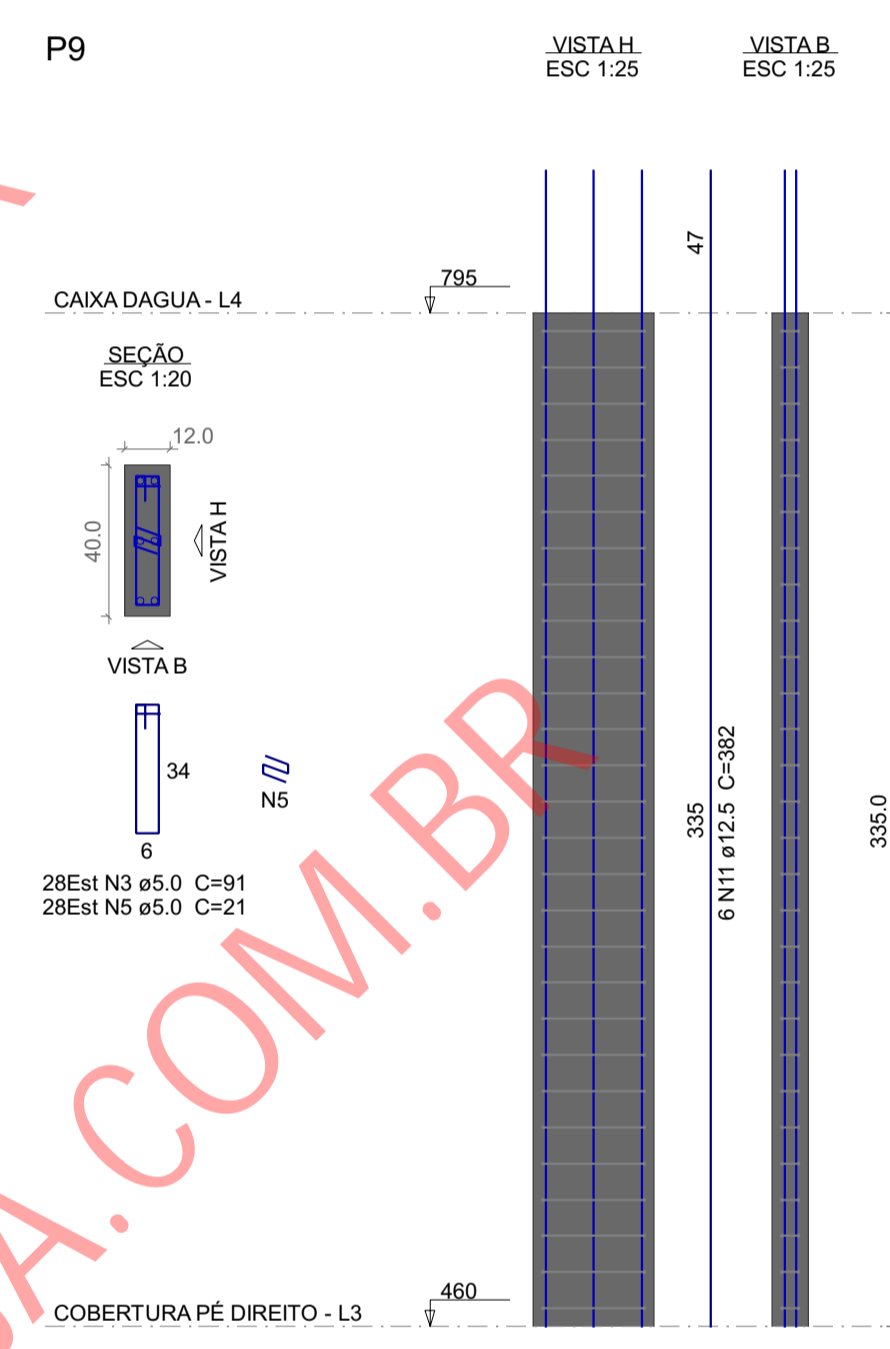
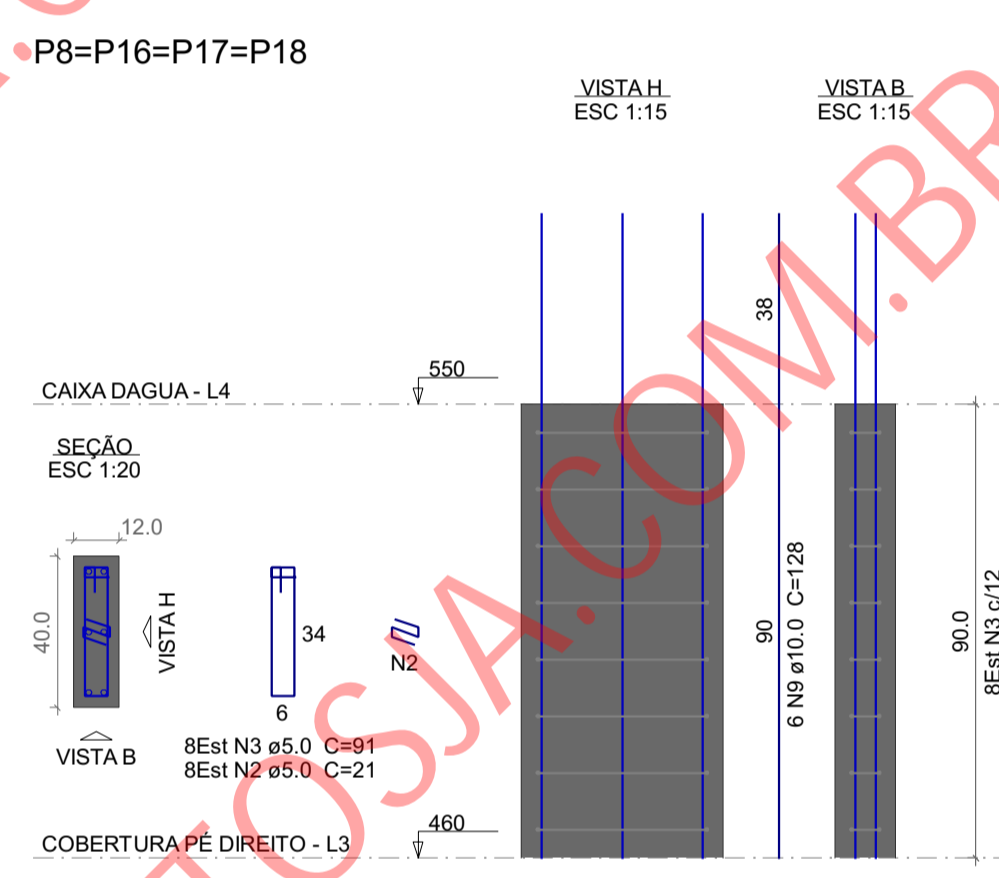
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	40	111	4440
	2	5.0	224	21	4704
	3	5.0	144	91	13104
	4	5.0	36	121	6776
	5	5.0	56	21	1176
CA50	6	5.0	76	71	5396
	7	10.0	34	173	5882
	8	10.0	26	373	9698
	9	10.0	36	128	4608
	10	10.0	4	223	892
	11	12.5	12	382	4584

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT	PESO + 10 % (kg)
CA50	10.0	210.8	20	12 m	143
CA60	12.5	45.9	5	12 m	48.6
				rolo (170 kg)	60.4

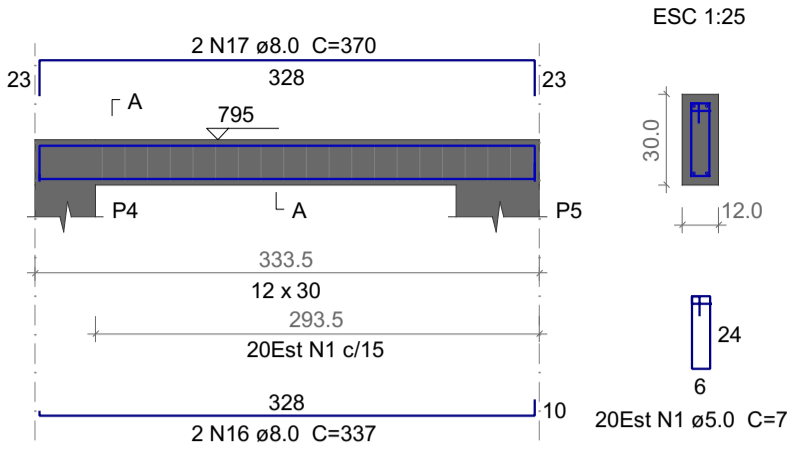
PESO TOTAL (kg)  
 CA50 191.5  
 CA60 60.4

Volume de concreto (C-25) = 1.84 m³  
 Área de forma = 39.44 m²

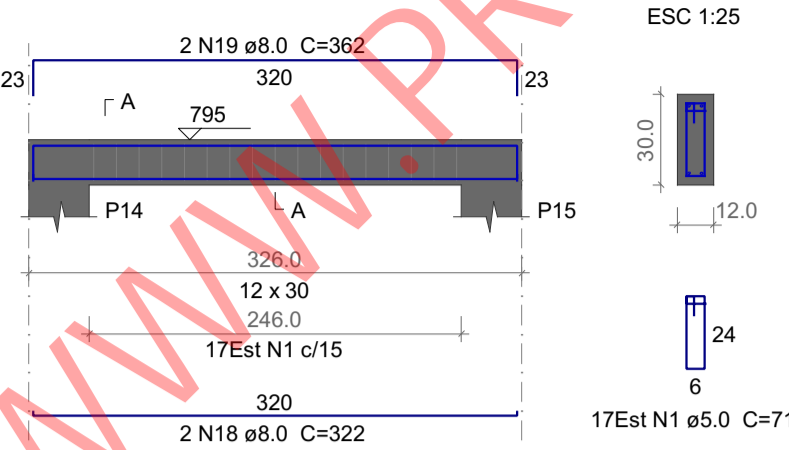




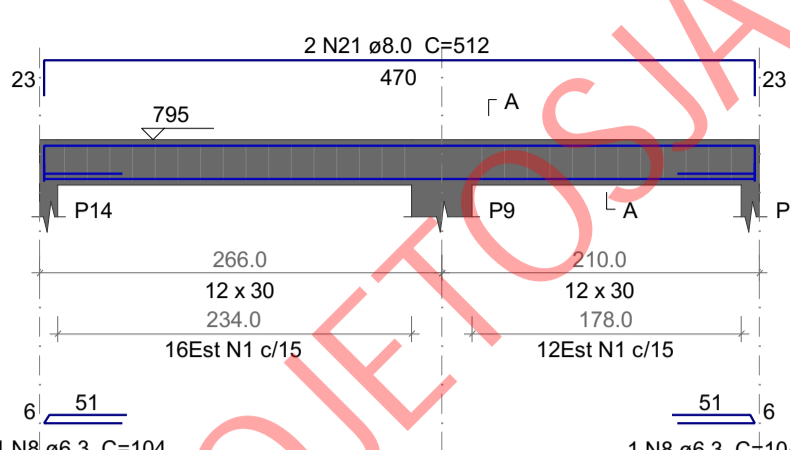
V301 (12 x 30)



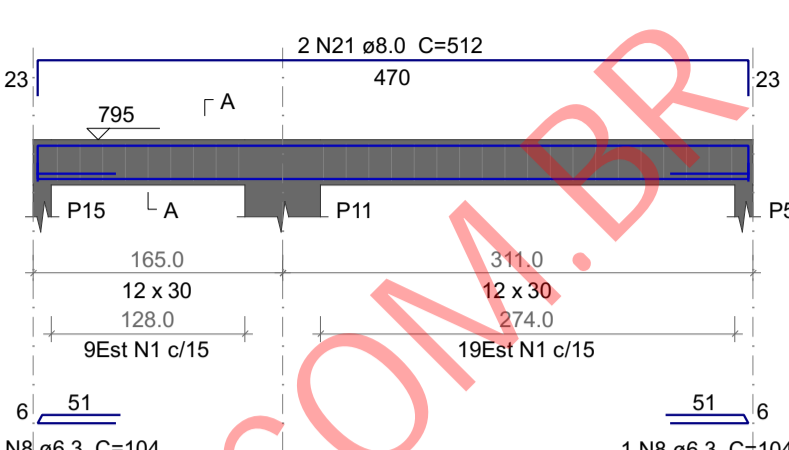
V302 (12 x 30)



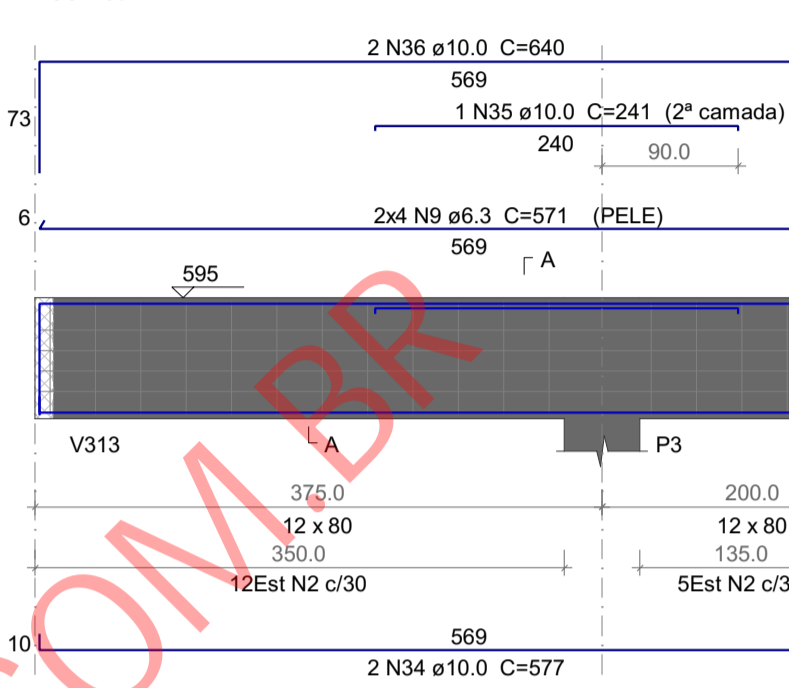
V303 (12 x 30)



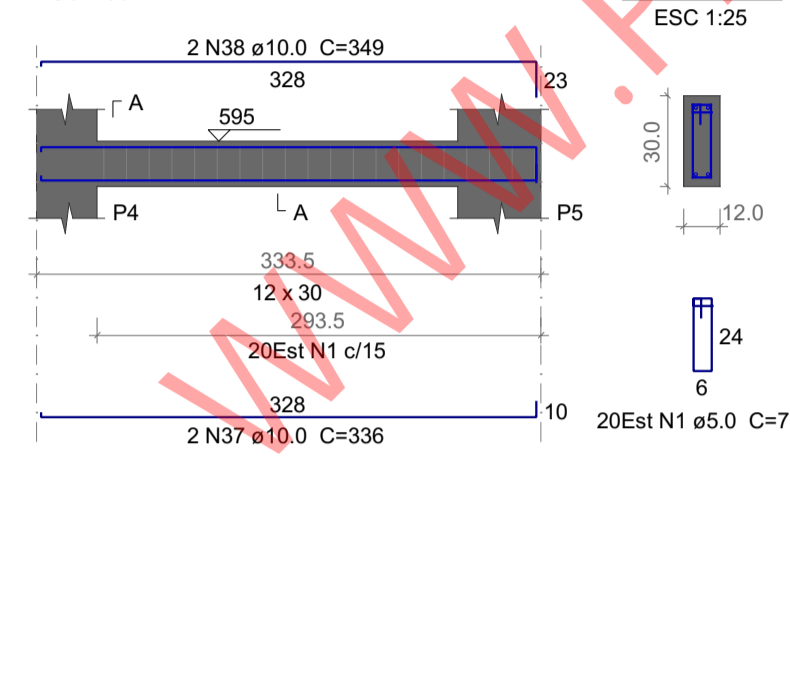
V304 (12 x 30)



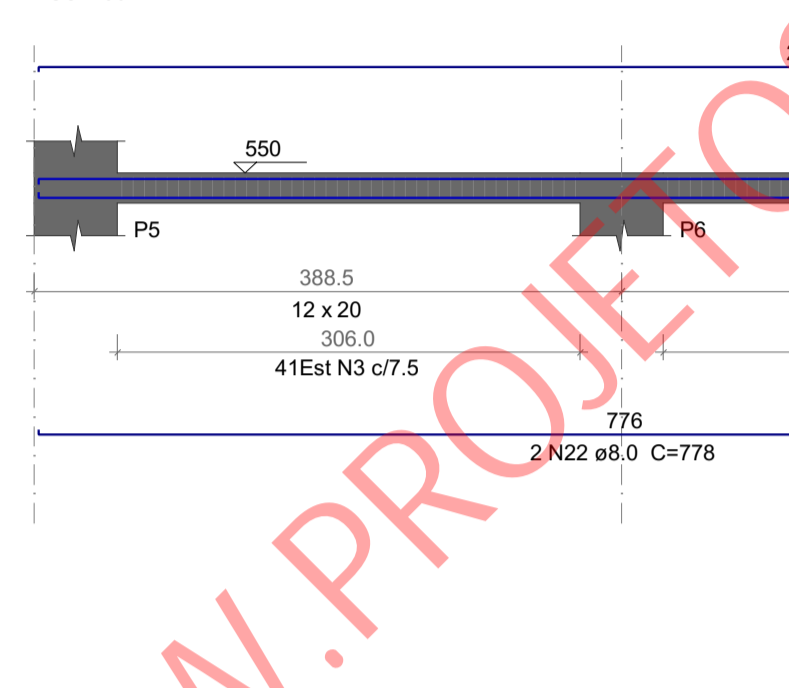
V305 (12 x 80)



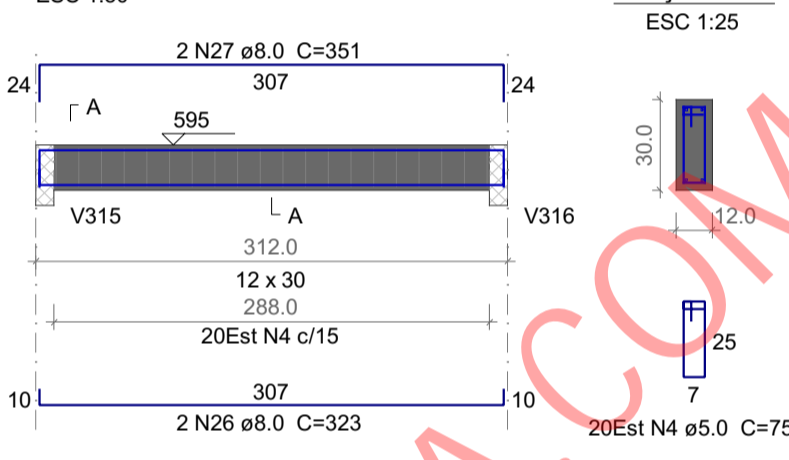
V306 (12 x 30)



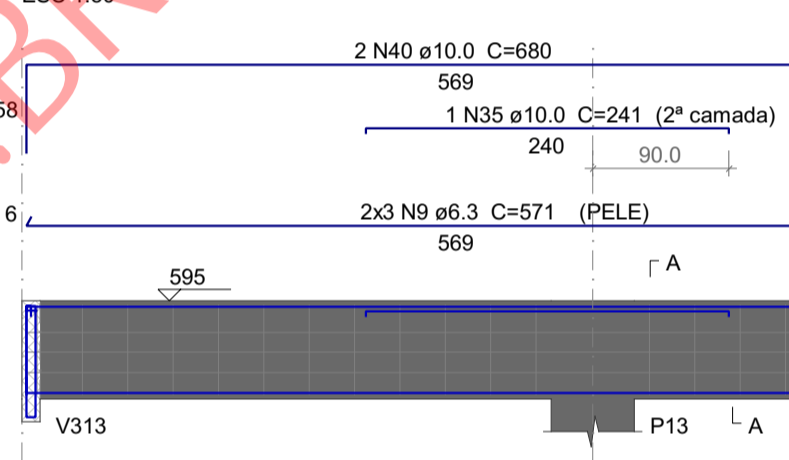
V307 (12 x 20)



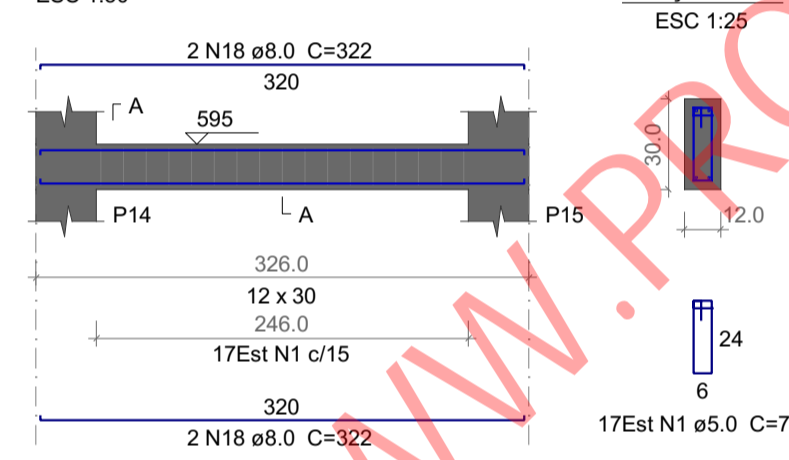
V308 (12 x 30)



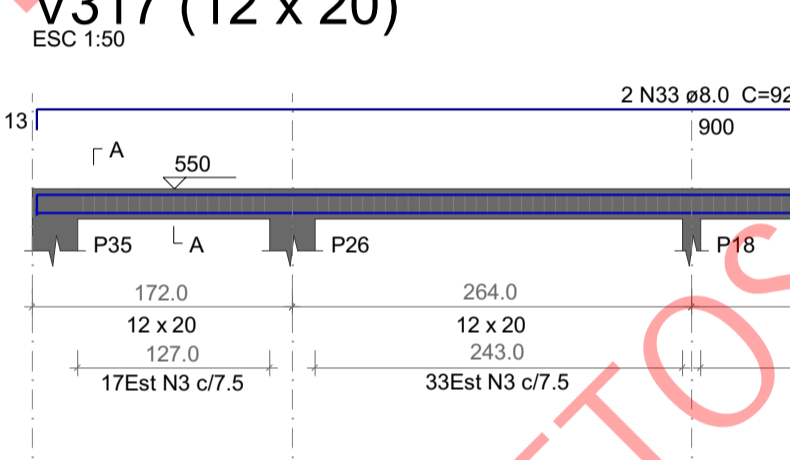
V309 (12 x 65)



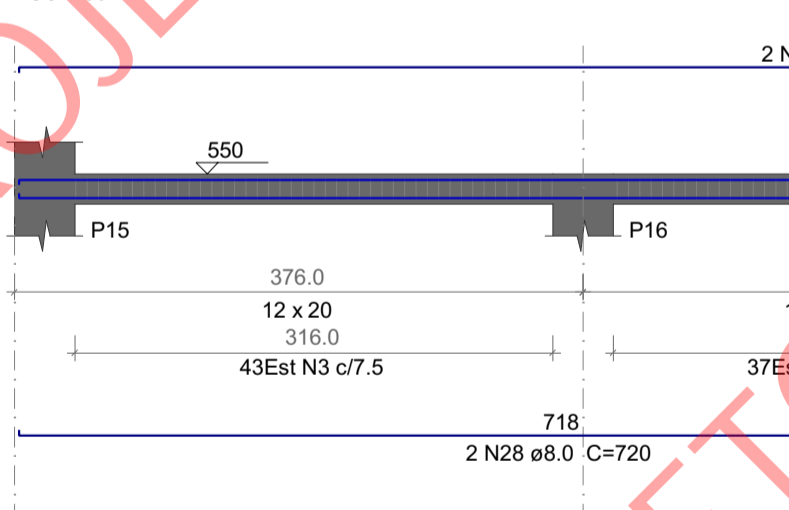
V310 (12 x 30)



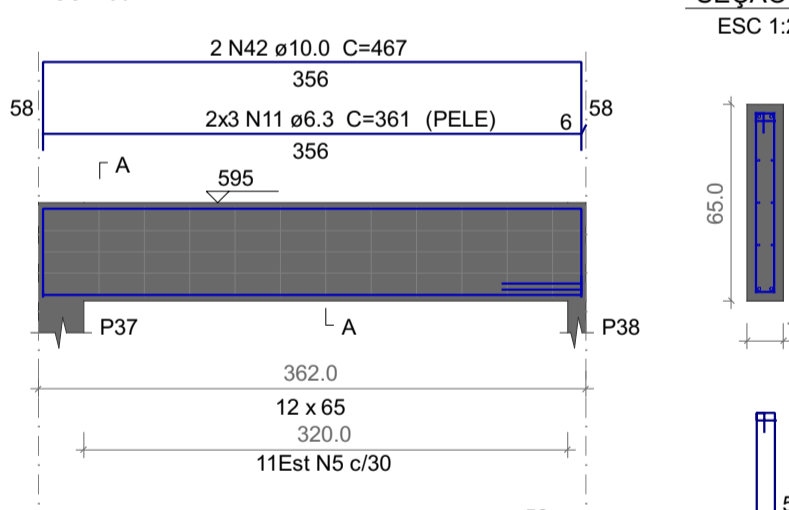
V317 (12 x 20)



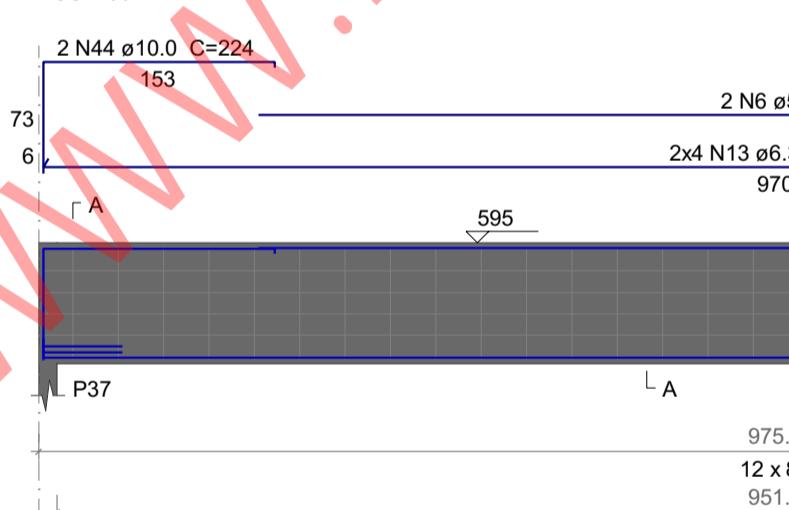
V311 (12 x 20)



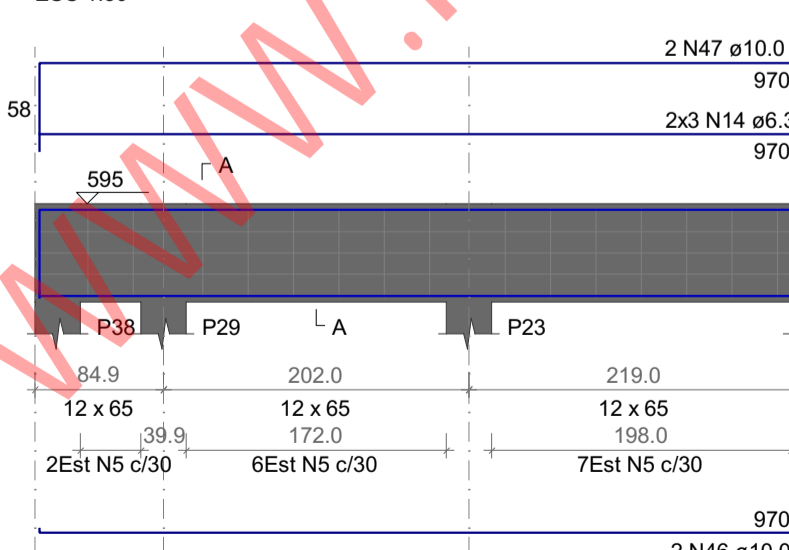
V312 (12 x 65)



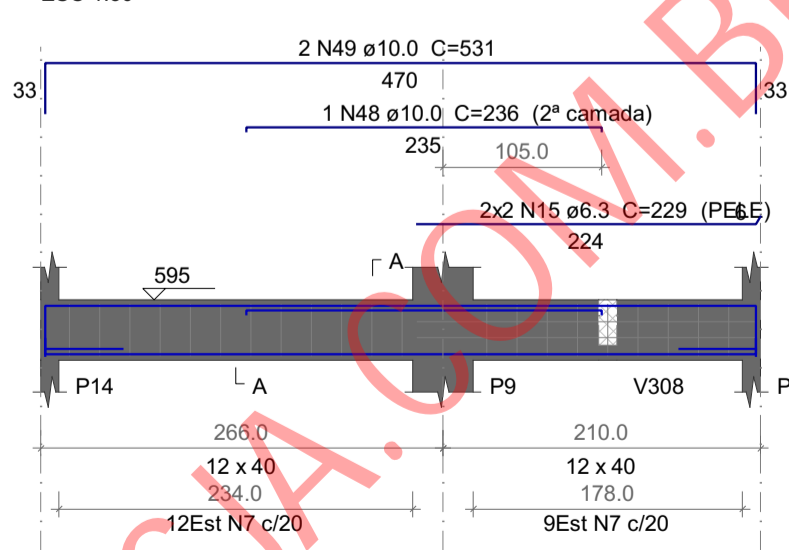
V313 (12 x 80)



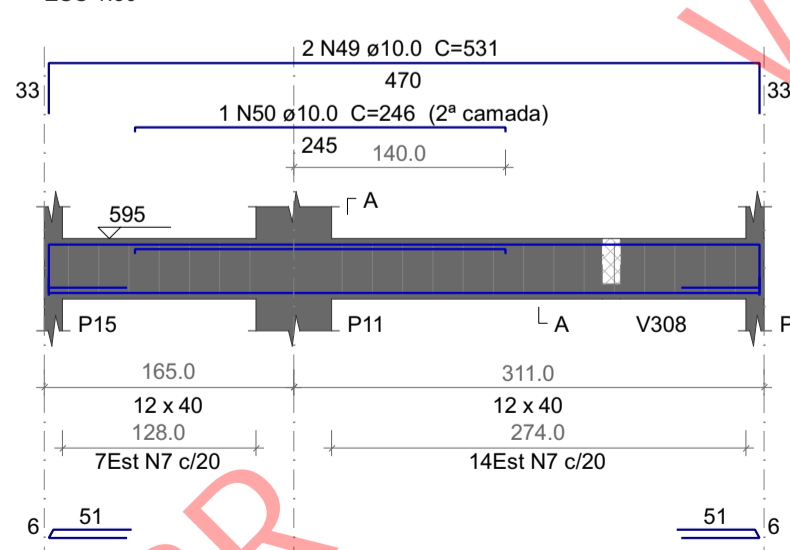
V314 (12 x 65)



V315 (12 x 40)



V316 (12 x 40)



Relação do aço

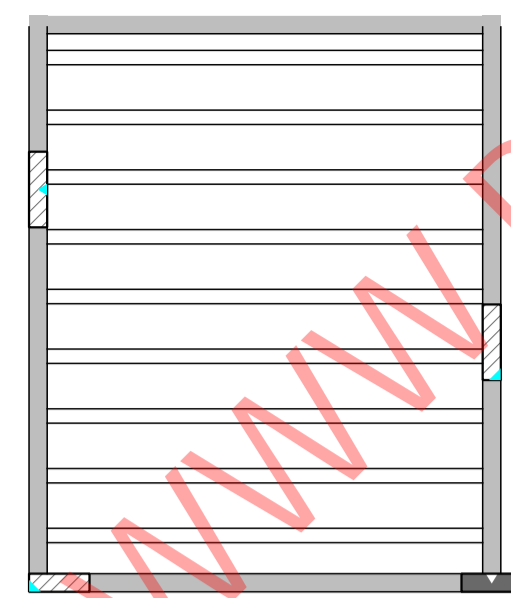
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	130	71	9230
	2	5.0	49	171	8379
	3	5.0	397	51	20247
	4	5.0	20	75	1500
	5	5.0	60	141	8460
	6	5.0	2	729	1458
	7	5.0	42	91	3822
CA50	8	6.3	9	104	936
	9	6.3	14	571	7994
	10	6.3	1	172	172
	11	6.3	6	361	2166
	12	6.3	6	106	636
	13	6.3	8	978	7824
	14	6.3	6	975	5850
	15	6.3	4	229	916
	16	8.0	2	337	674
	17	8.0	2	370	740
	18	8.0	6	322	1932
	19	8.0	2	362	724
	20	8.0	8	486	3888
	21	8.0	4	512	2048
	22	8.0	2	778	1556
	23	8.0	2	529	1058
	24	8.0	2	1124	2248
	25	8.0	2	167	334
	26	8.0	2	323	646
	27	8.0	2	351	702
	28	8.0	2	720	1440
	29	8.0	2	579	1158
	30	8.0	2	1116	2232
	31	8.0	2	153	306
	32	8.0	2	909	1818
	33	8.0	2	922	1844
	34	10.0	2	577	1154
	35	10.0	2	241	482
	36	10.0	2	640	1280
	37	10.0	2	336	672
	38	10.0	2	349	698
	39	10.0	2	584	1168
	40	10.0	2	680	1360
	41	10.0	2	366	732
	42	10.0	2	467	934
	43	10.0	2	989	1978
	44	10.0	2	224	448
	45	10.0	2	179	358
	46	10.0	2	980	1960
	47	10.0	2	1081	2162
	48	10.0	1	236	236
	49	10.0	4	531	2124
	50	10.0	1	246	246

Resumo do aço

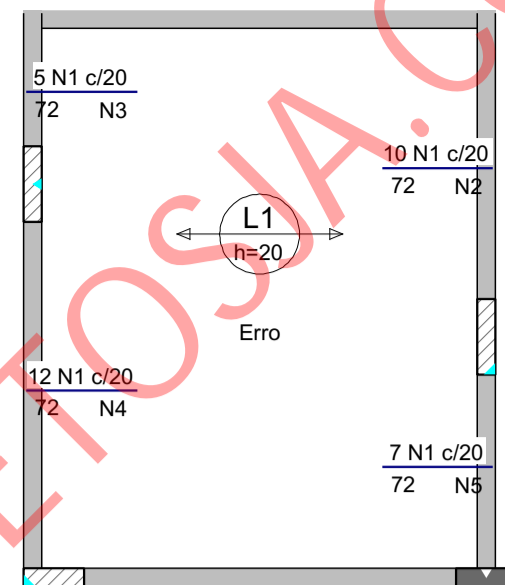
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10 % (Barras)	UNIT	PESO + 10 % (kg)
CA50	6.3	265	25	12 m	71.3
	8.0	253.5	24	12 m	110
	10.0	180	17	12 m	122
CA60	5.0	531	-	rolo (170 kg)	90
PESO TOTAL (kg)					
CA50		303.4			
CA60		90			

Volume de concreto (C-25) = 4.52 m³  
Área de forma = 83.67 m²



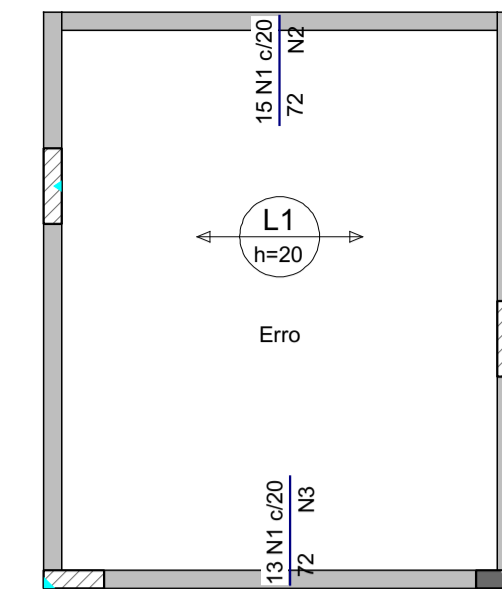


Planta de vigotas pré-moldadas  
escala 1:50



Armação negativa das lajes do pavimento Caixa Dagua (Eixo X)  
escala 1:50

Armaduras de distribuição	
Armadura	Armadura de distribuição
N1	4 N2 ø5.0 c/20 C=197
N1	4 N3 ø5.0 c/20 C=96
N1	4 N4 ø5.0 c/20 C=247
N1	4 N5 ø5.0 c/20 C=146



Armação negativa das lajes do pavimento Caixa Dagua (Eixo Y)  
escala 1:50

Armaduras de distribuição	
Armadura	Armadura de distribuição
N1	4 N2 ø5.0 c/20 C=300
N1	4 N3 ø5.0 c/20 C=284

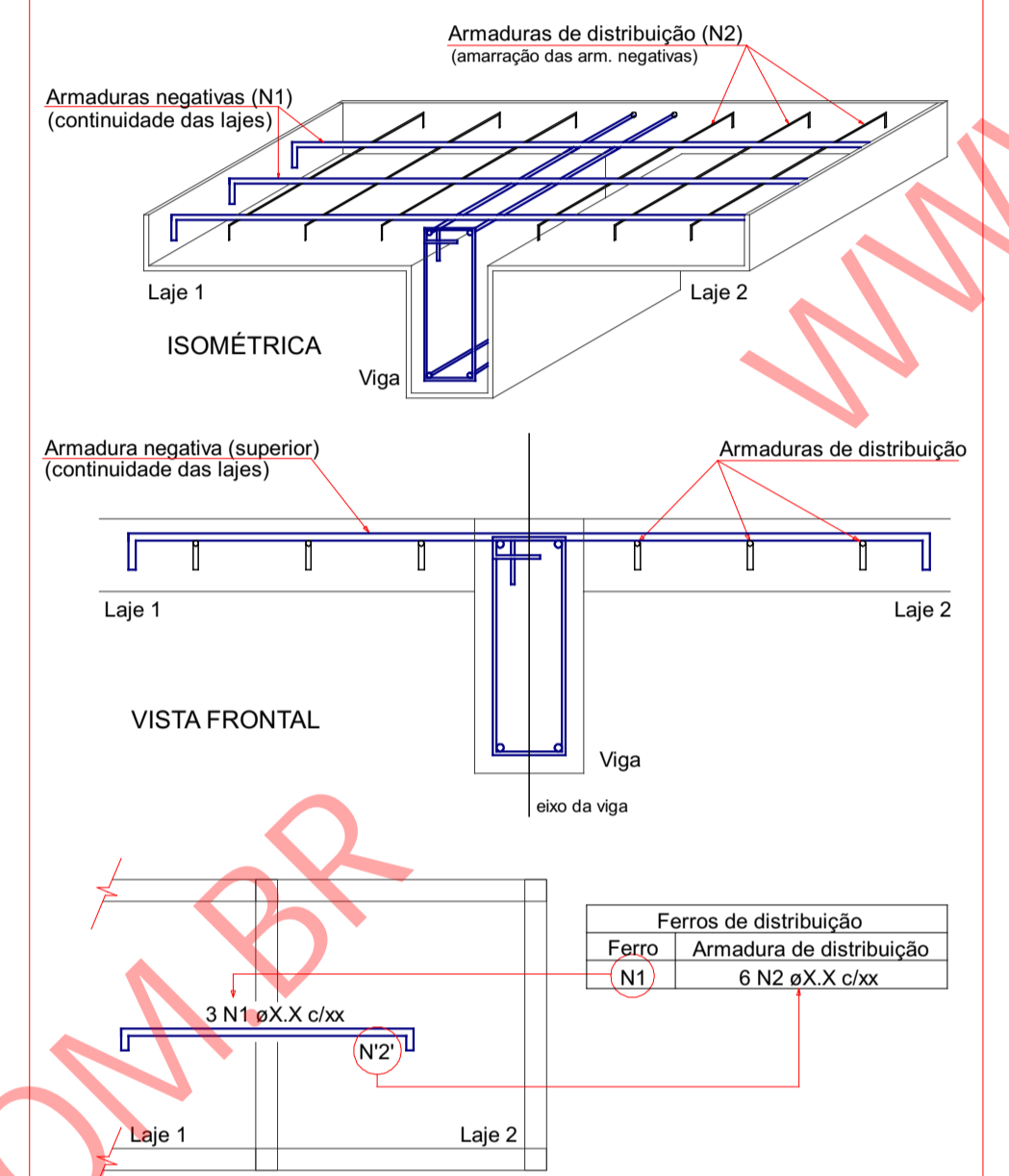
Relação do aço

Negativos X		Negativos Y		C.TOTAL (cm)	
AÇO	N	DIAM (mm)	QUANT		
CA60	1	5.0	62	72	4464
	2	5.0	4	197	788
	3	5.0	4	96	304
	4	5.0	4	247	988
	5	5.0	4	146	584
	2	5.0	4	300	1200
	3	5.0	4	284	1056

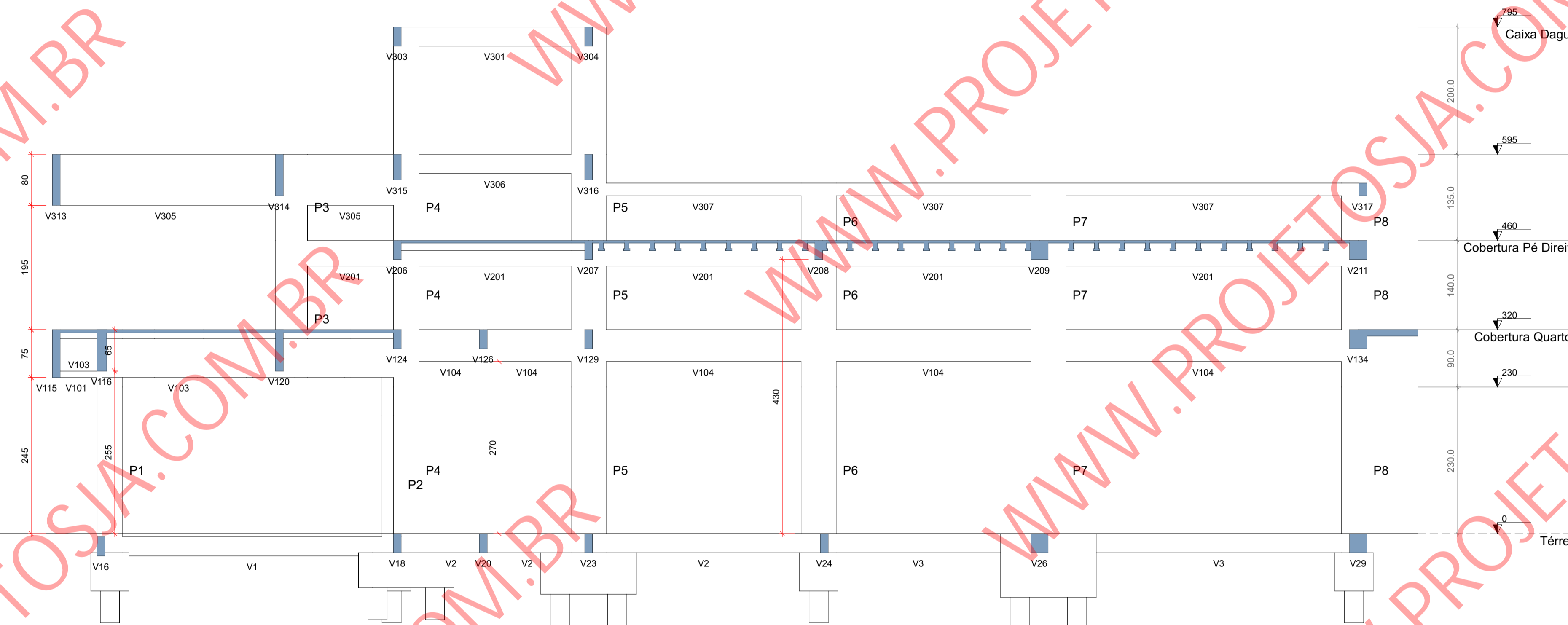
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT (Barras)	UNIT (170 kg)	PESO + 10% (kg)
CA60	5.0	94.7	-	-	16
PESO TOTAL (kg)					
CA60	16				

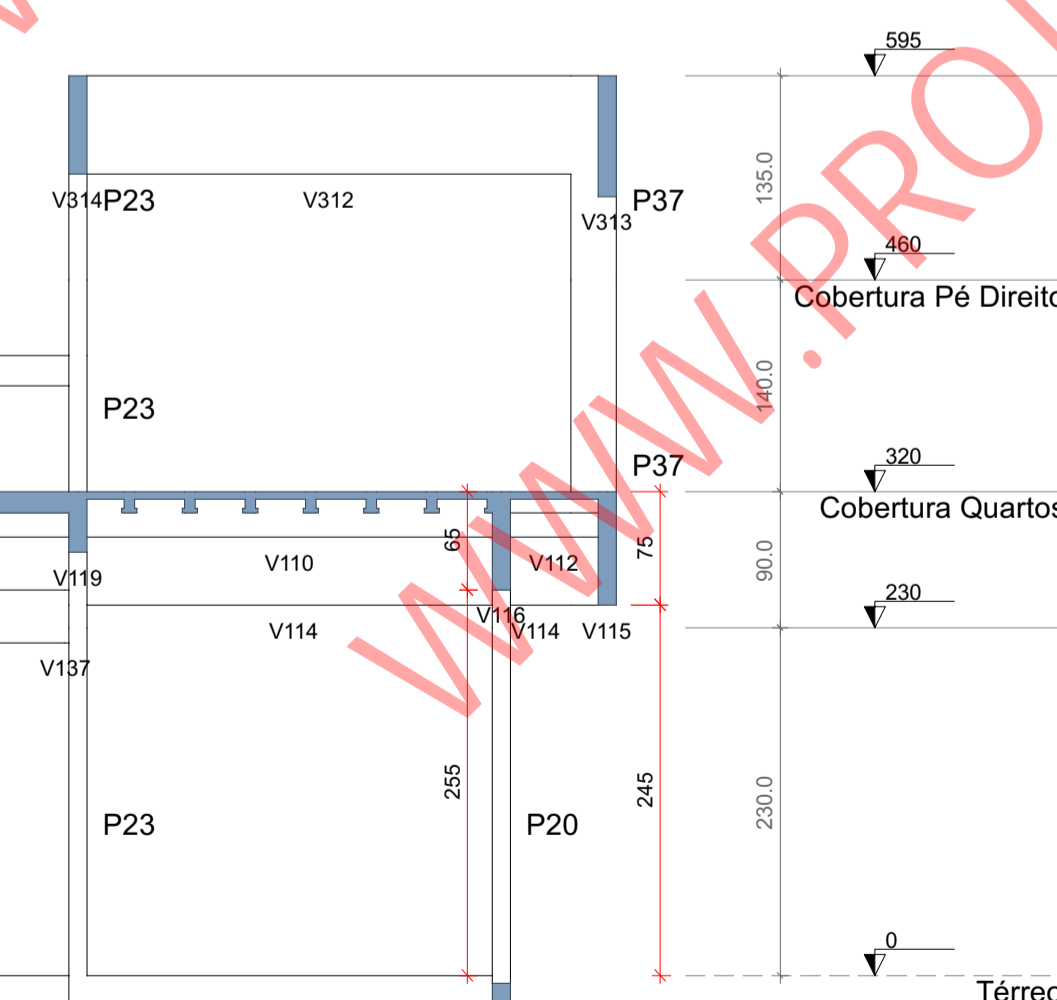
DETALHE DA ARMADURA SUPERIOR DE CONTINUIDADE DA LAJE E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



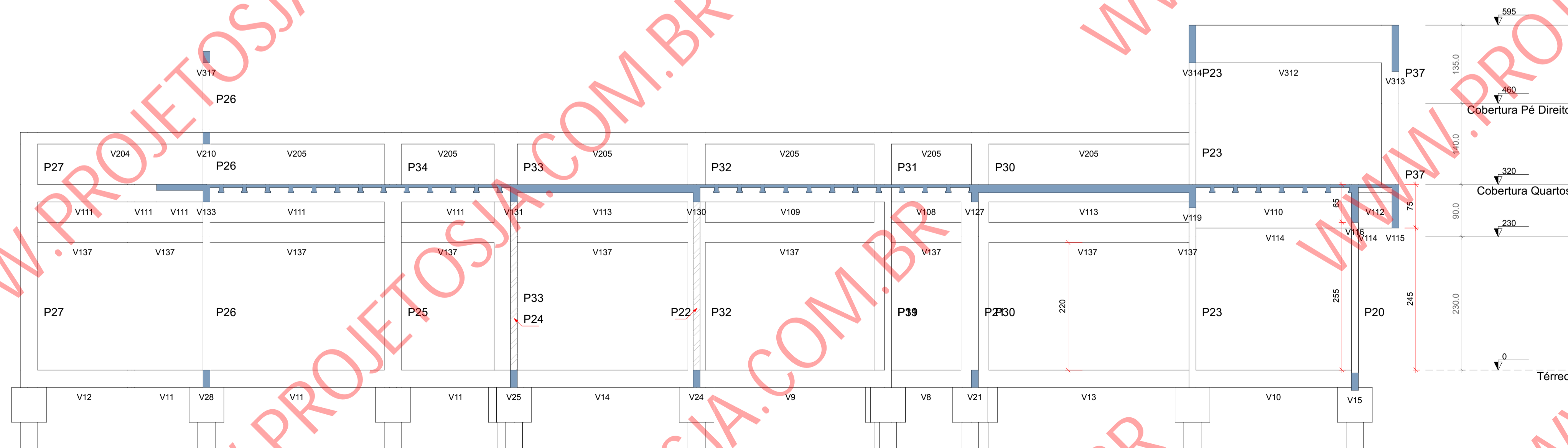
PLANTA BAIXA  
NOTA: A ARMADURA DE DISTRIBUIÇÃO DAS CONTINUIDADES DEVE SER ININTERRUPTA E COM TRASPASSE (CASO HAJA EMENDAS).



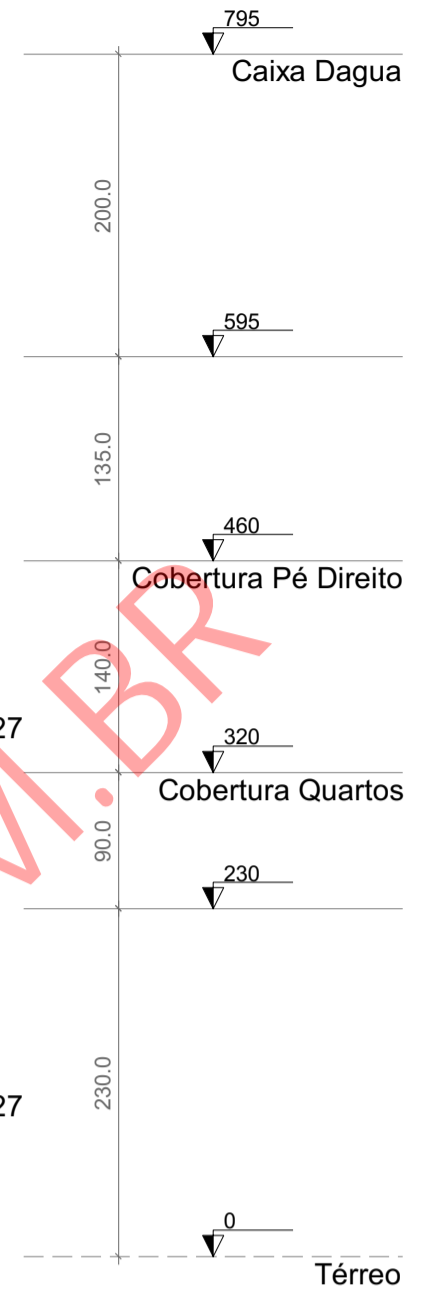
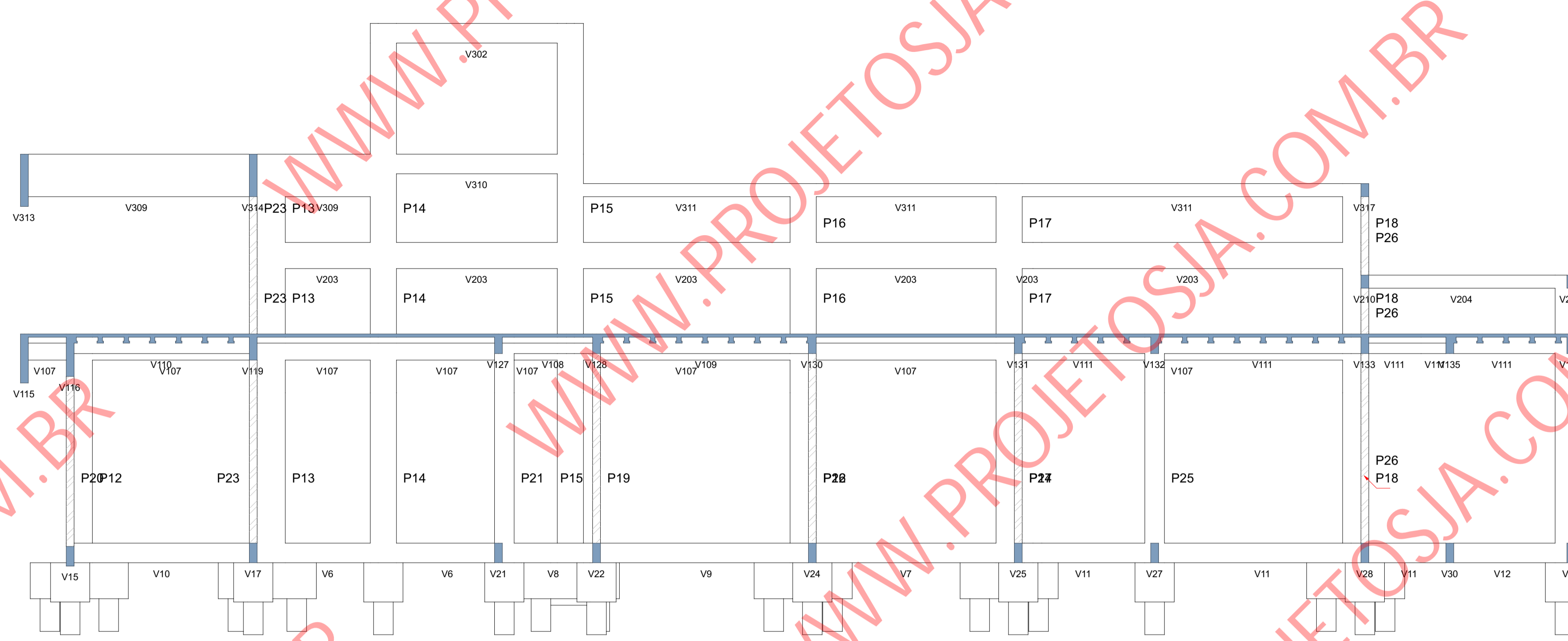
Corte A-A  
escala 1:50



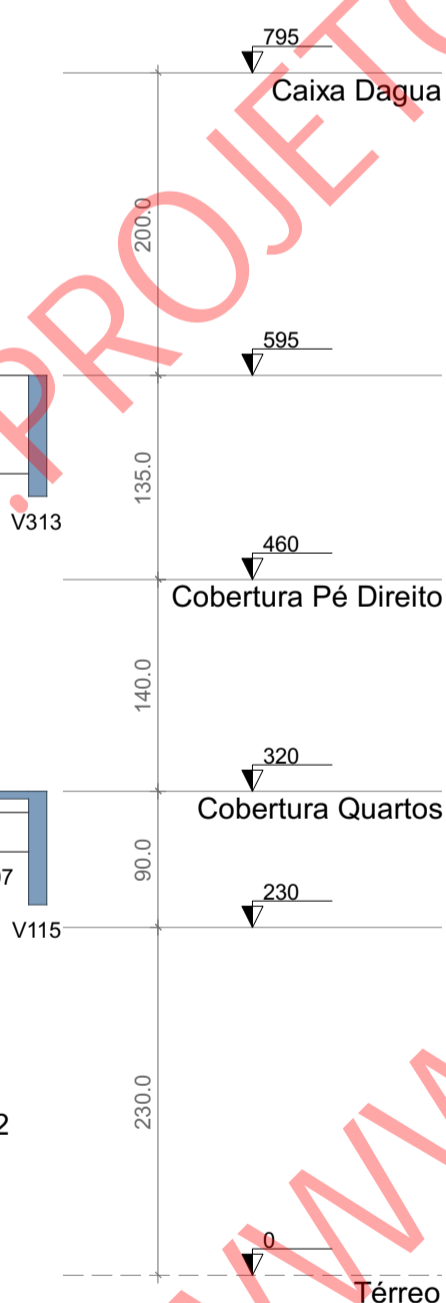
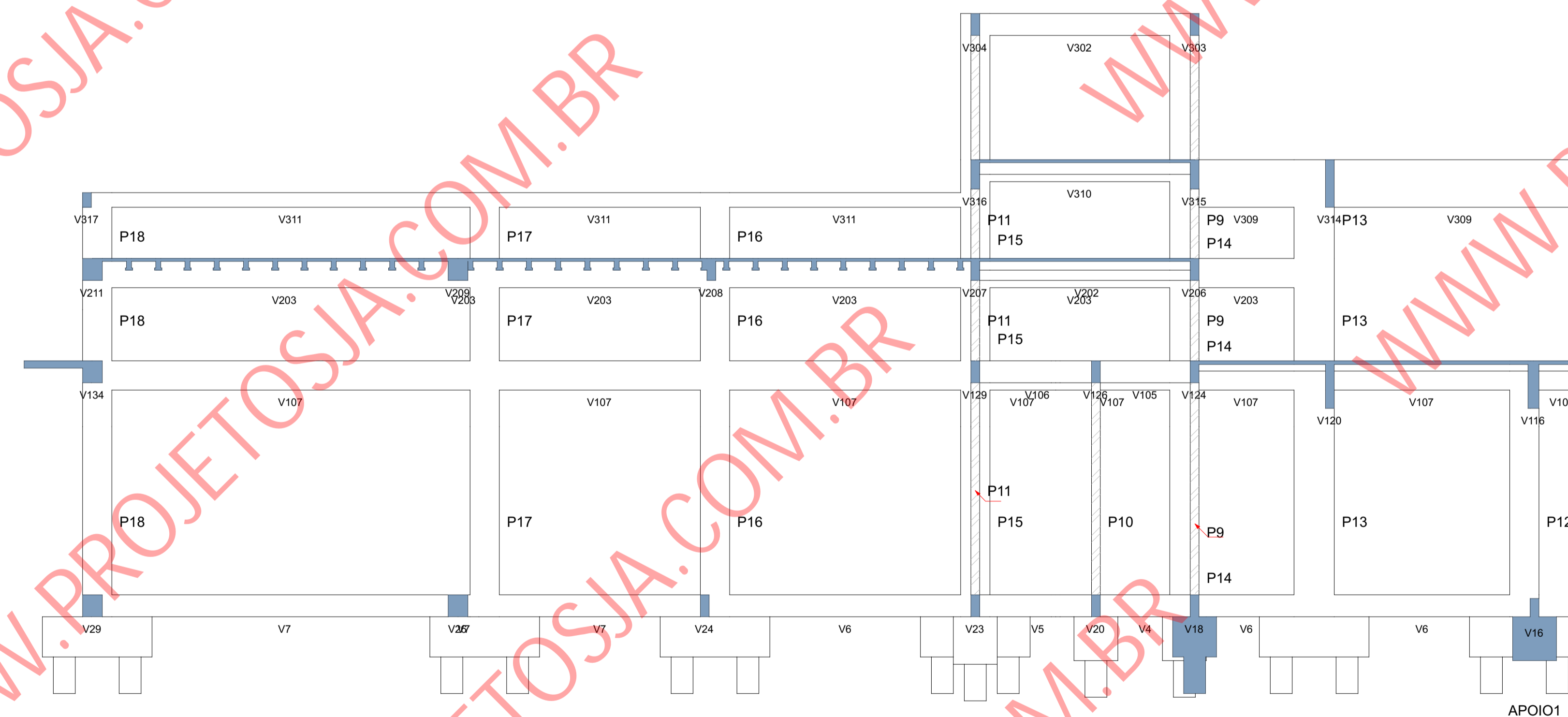
Corte C-C  
escala 1:50



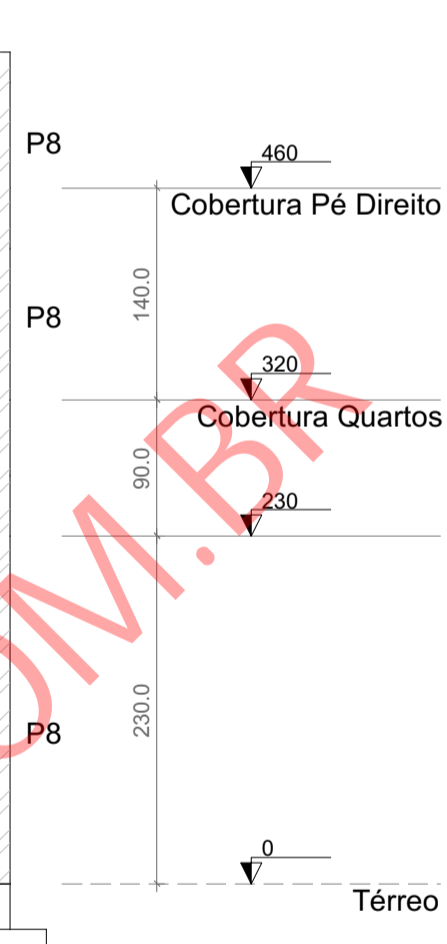
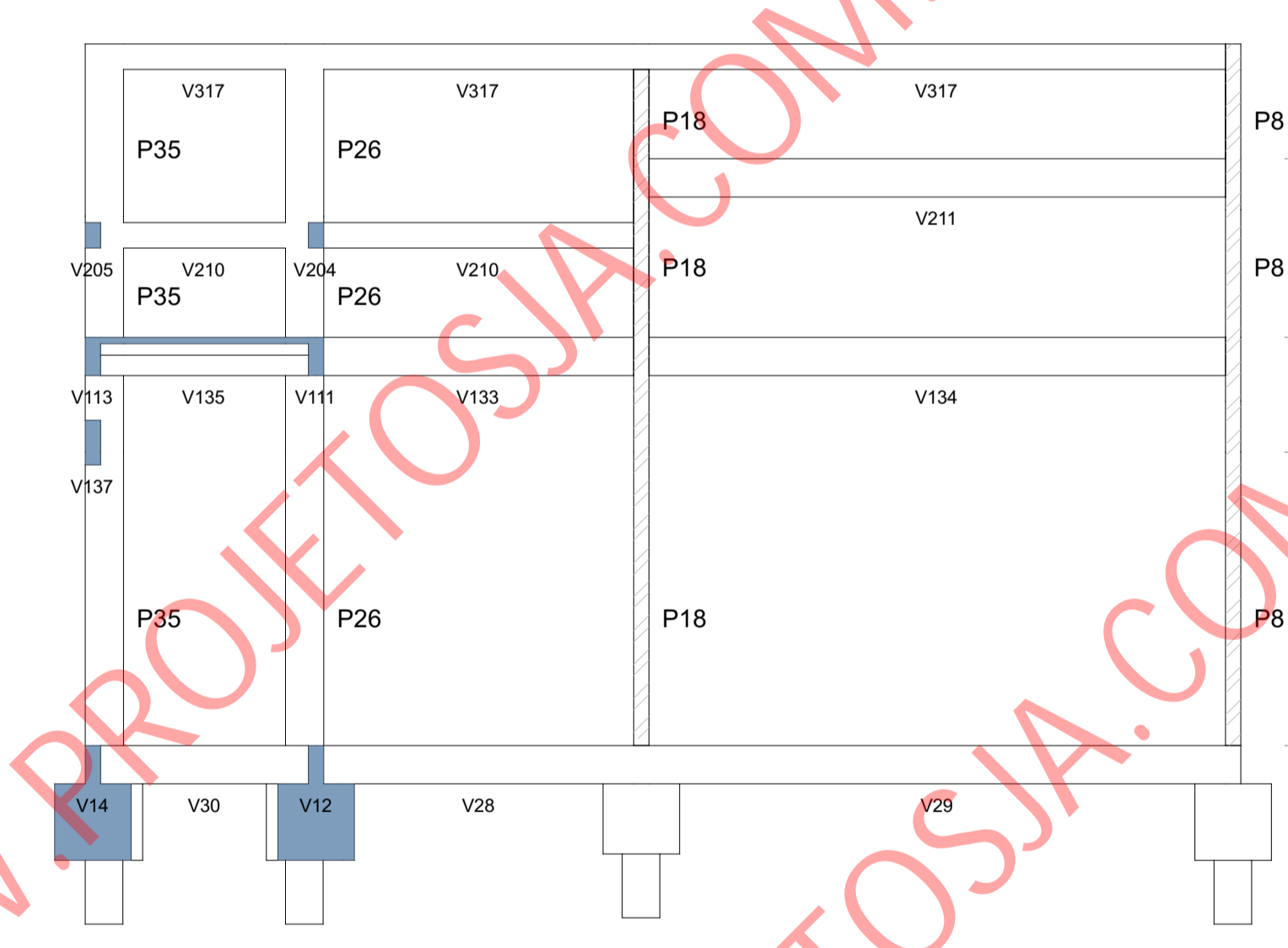




Corte D-D  
escala 1:50



Corte L-L  
escala 1:50



Corte K-K  
escala 1:50



