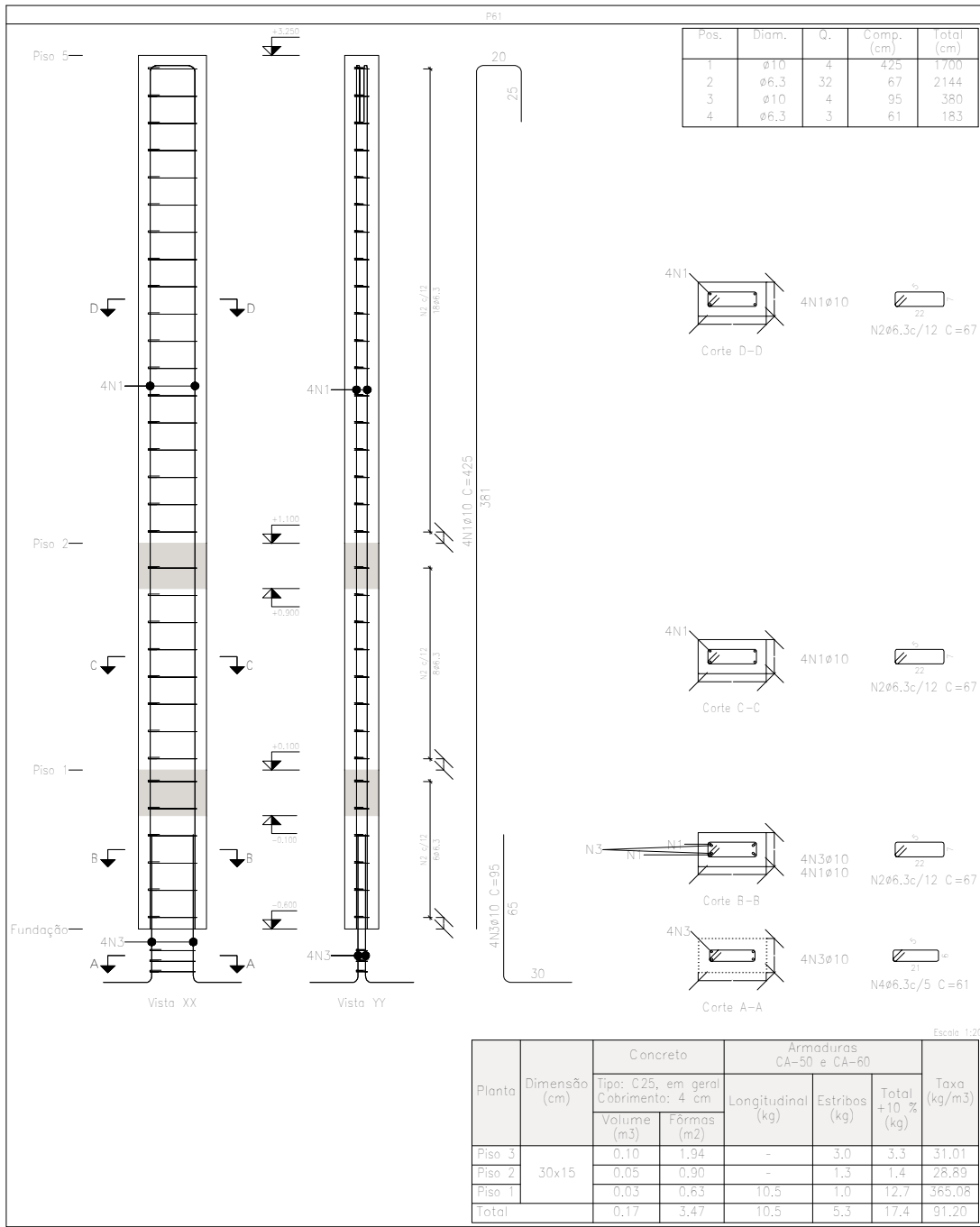
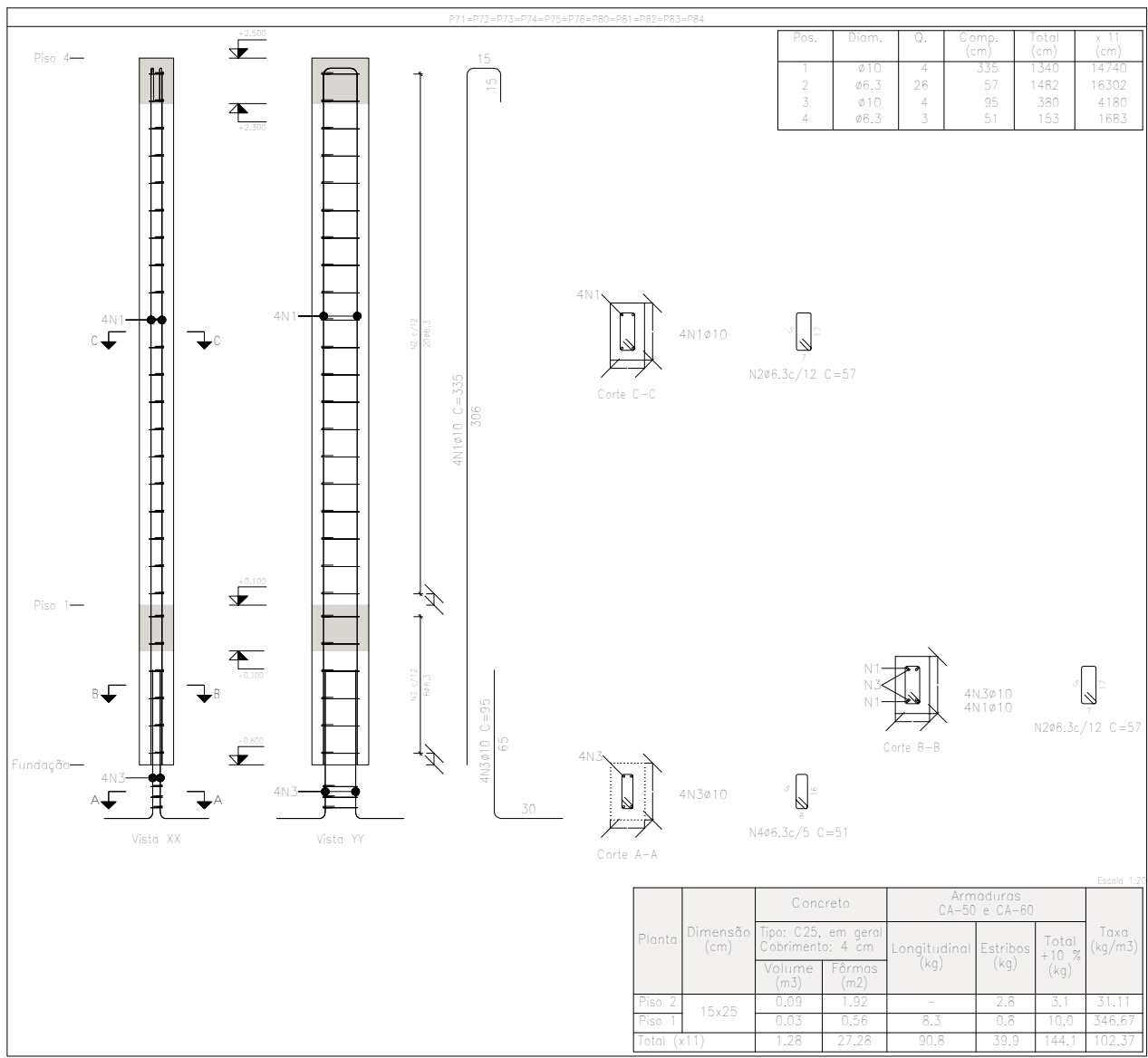


Elemento	Pos.	Diag.	Q.	Caricamento (eq/m)	Comp. (cm)	Totale (cm)	SA-S1 (vq)	SA-S2 (kg)
P1aP25	1	a10	4		425	1109	10,5	
	2	a10	4		425	1103	10,5	
	3	aB.3	3		67	881	7,1	
	4	aB.3	3		19	494	1,2	
	5	a10	4		85	340	2,1	
	6	a10	8		95	363	4,7	
	7	aB.3	3		59	117	0,4	
	Totale 1091 482 20,4							
	8	a10	4		115	449	2,3	
	9	aB.3	3		67	243	6,1	
P4	1	a10	4		420	1091	10,5	
	2	a10	4		95	399	2,3	
	3	aB.3	3		61	183	0,4	
	Totale 1115 167 13,2							
	4	a10	4		140	549	5,4	
	5	a10	9		66	594	3,7	
	6	a10	4		400	1070	9,5	
	7	aB.3	3		67	207	5,1	
	8	a12.5	5		100	420	1,9	
	9	aB.3	3		57	111	0,4	
P1aP25-P25-P1aP25 P1aP25-P25-P1aP25	1	a10	4		415	1078	10,2	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1038 120 10,0							
P10a-P22	1	a12.5	5		100	1680	9,2	
	2	a10	3		66	124	0,4	
	3	aB.3	21		67	1407	5,4	
	4	a12.5	5		100	420	1,9	
	5	aB.3	3		57	171	0,4	
	Totale 1076 112 12,4							
	6	a10	4		340	1300	8,4	
	7	a10	4		100	420	1,9	
	8	aB.3	3		67	2012	4,5	
	9	aB.3	11		19	109	0,5	
P13aP17aP28aP30	1	a10	4		95	370	5,5	
	2	aB.3	3		59	117	0,4	
	3	a10	4		340	1300	8,4	
	4	a10	4		100	420	1,9	
	5	aB.3	3		67	1470	4,1	
	6	aB.3	3		95	340	2,3	
Totale 1098 140 10,0								
P15P16P17P21P31 P32	1	a10	4		340	1300	8,4	
	2	aB.3	3		67	1470	4,1	
	3	a10	4		95	340	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P18aP20	1	a10	4		340	1300	8,4	
	2	aB.3	3		67	1470	4,1	
	3	a10	4		95	340	2,3	
	4	aB.3	3		61	183	0,4	
Totale 1098 140 10,0								
P27	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P33aP34aP35aP41 P42aP43aP44aP45 P46aP48aP49aP50 P51aP52aP53aP54 P55aP56aP57aP58 P59aP60aP62aP63 P64aP65aP66aP67 P68aP69aP70	1	a10	4		310	1240	7,6	
	2	aB.3	21		57	1254	5,1	
	3	a10	4		95	380	2,3	
	4	aB.3	3		51	155	0,4	
	Totale 1098 124 10,7							
P36aP38aP39aP40 P41aP42aP43aP44 P45aP46aP47aP48 P49aP50aP51aP52	1	a10	4		310	1240	7,6	
	2	aB.3	21		57	1254	5,1	
	3	a10	4		95	380	2,3	
	4	aB.3	3		51	155	0,4	
Totale 1098 124 10,7								
P37aP38aP39aP40 P41aP42aP43aP44 P45aP46aP47aP48 P49aP50aP51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P38aP39aP40 P41aP42aP43aP44 P45aP46aP47aP48 P49aP50aP51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P39aP40 P41aP42aP43aP44 P45aP46aP47aP48 P49aP50aP51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P40aP41 P42aP43aP44 P45aP46aP47aP48 P49aP50aP51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P41aP42 P43aP44 P45aP46aP47aP48 P49aP50aP51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P42aP43 P44aP45 P46aP47aP48 P49aP50aP51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P43aP44 P45aP46aP47aP48 P49aP50aP51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P44aP45 P46aP47aP48 P49aP50aP51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P45aP46 P47aP48 P49aP50aP51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P46aP47 P48aP49 P50aP51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P47aP48 P49aP50aP51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P48aP49 P50aP51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P49aP50 P51aP52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P50aP51 P52	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P51aP52 P53aP54 P55aP56aP57aP58 P59aP60aP62aP63 P64aP65aP66aP67 P68aP69aP70	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P52aP53 P54aP55 P56aP57aP58 P59aP60aP62aP63 P64aP65aP66aP67 P68aP69aP70	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P53aP54 P55aP56aP57aP58 P59aP60aP62aP63 P64aP65aP66aP67 P68aP69aP70	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P54aP55 P56aP57aP58 P59aP60aP62aP63 P64aP65aP66aP67 P68aP69aP70	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P55aP56 P57aP58 P59aP60aP62aP63 P64aP65aP66aP67 P68aP69aP70	1	a10	4		425	1109	10,5	
	2	aB.3	3		67	2144	5,3	
	3	a10	4		95	350	2,3	
	4	aB.3	3		61	183	0,4	
	Totale 1098 140 10,0							
P56aP57 P58aP59 P60aP62aP63 P64aP65aP66aP67 P68aP69aP70	1	a10	4		425	1109	10,5	

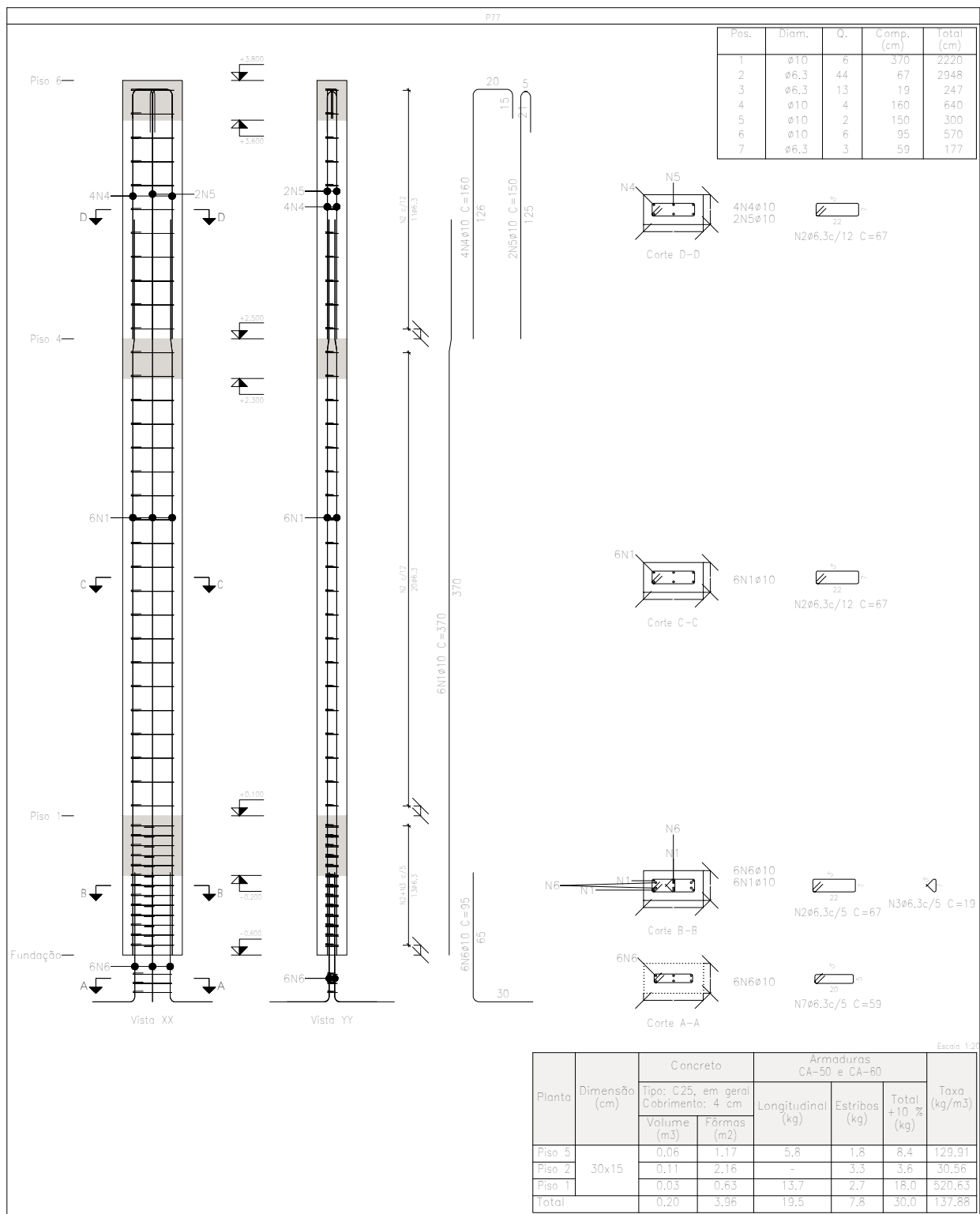
Módulo		Data	
		05/02/2028	
Local		Número de assento	
Campaio de aula			
Previdente			
Projeto Educacional – <i>Aluno Assente</i>		Assento Indicado	
Estrutura Rompente Trabalho Engenharia Civil Número do CREA: 1220500037		Data 05/02/2028	



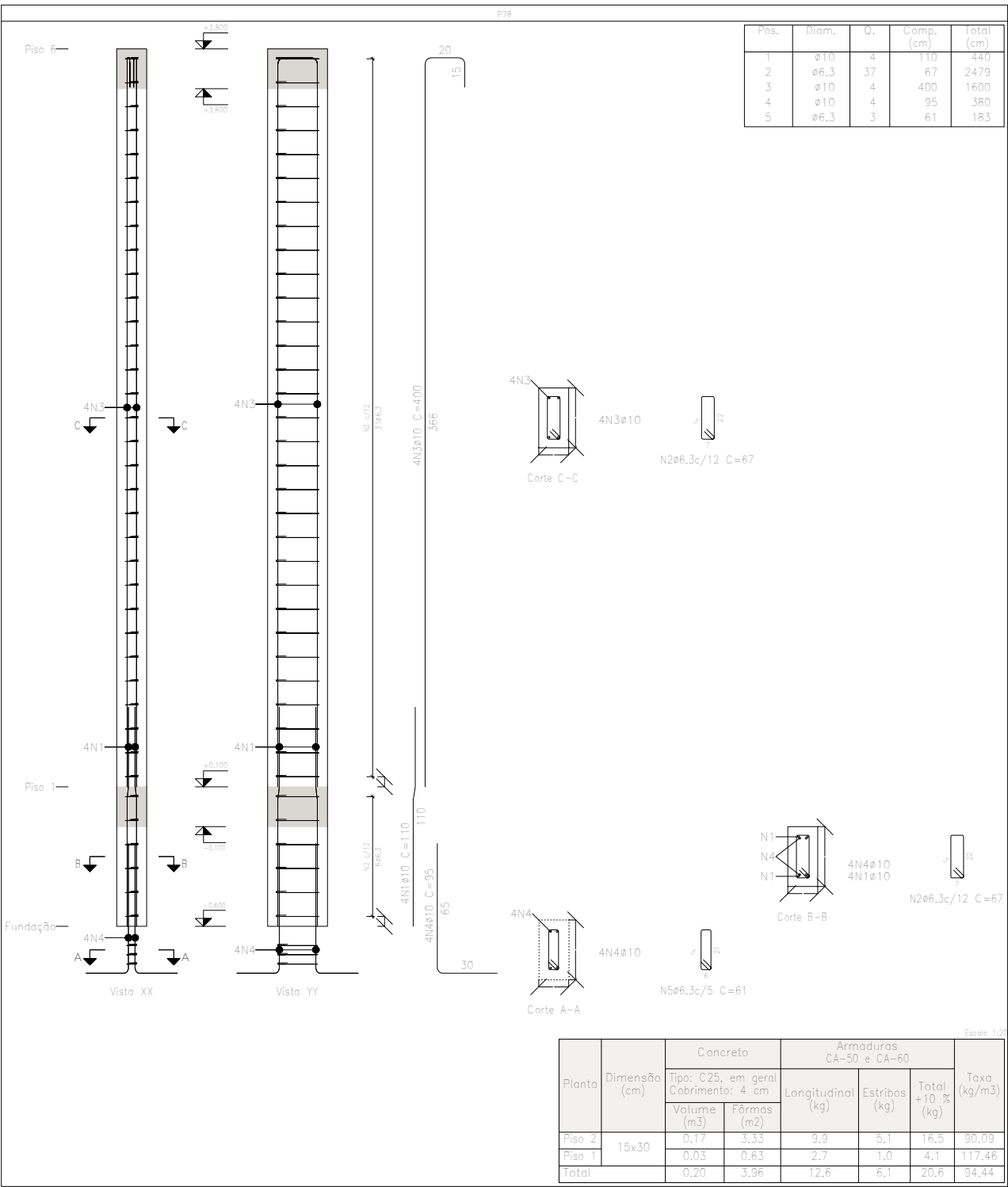
Pilares que nascem em fundação e chegam em Pisos 1 e 2
Concreto: C25, em geral
Aço das barras: CA-50 e CA-60
Aço das estribos: CA-50 e CA-60



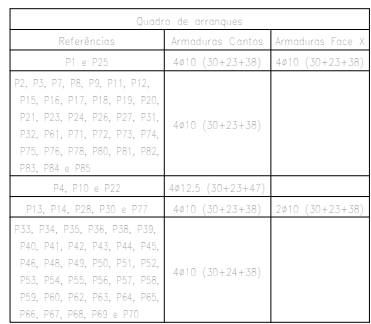
Elemento	Pis.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Tota (cm)	CA-50 (kg)	CA-60 (kg)
P61	1	#10	4		425	1700	10.3	
	2	#6.3	30		67	2144	5.1	
	3	#10	4		67	2144	5.1	
	4	#6.3	3		61	183	0.4	
						Totais		1052
P71+P72+P73+P74 P75+P76+P78+P81 P82+P83+P84	1	#10	4		320	1340	8.3	
	2	#6.3	24		57	1482	3.6	
	3	#10	4		50	380	2.3	
	4	#6.3	3		51	153	0.4	
						Totais		1075
P77	1	#10	4		370	2220	13.7	
	2	#6.3	24		67	2944	7.2	
	3	#6.3	13		19	247	0.8	
	4	#10	4		160	440	2.7	
	5	#10	10		120	250	1.6	
P78	1	#10	4		370	2220	13.7	
	2	#6.3	27		67	2473	6.1	
	3	#10	4		400	1600	9.8	
	4	#10	10		30	280	1.7	
	5	#6.3	3		61	183	0.4	
					Totais		1075	38.2
					#10:	79.8	0.0	
					#6.3:	184.4	0.0	
					Totais		264.2	0.0



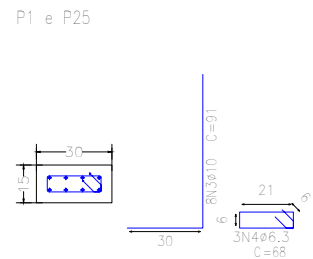
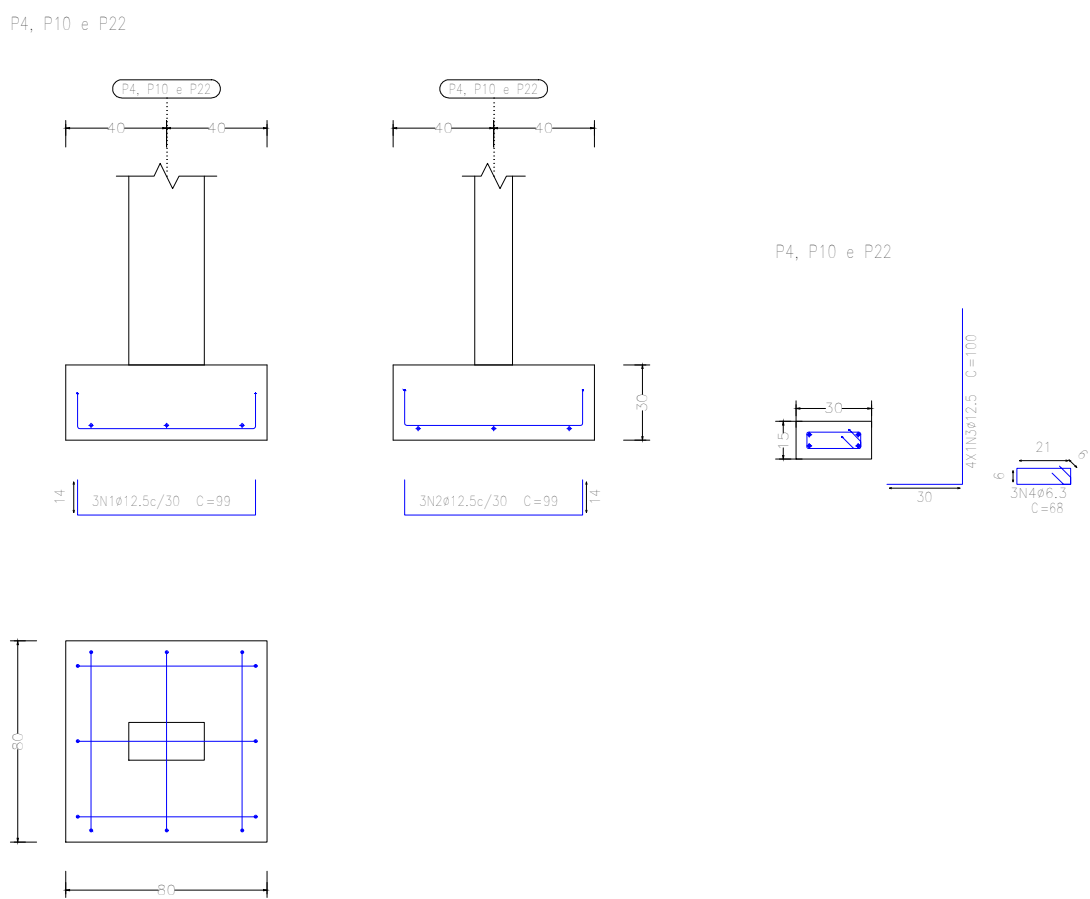
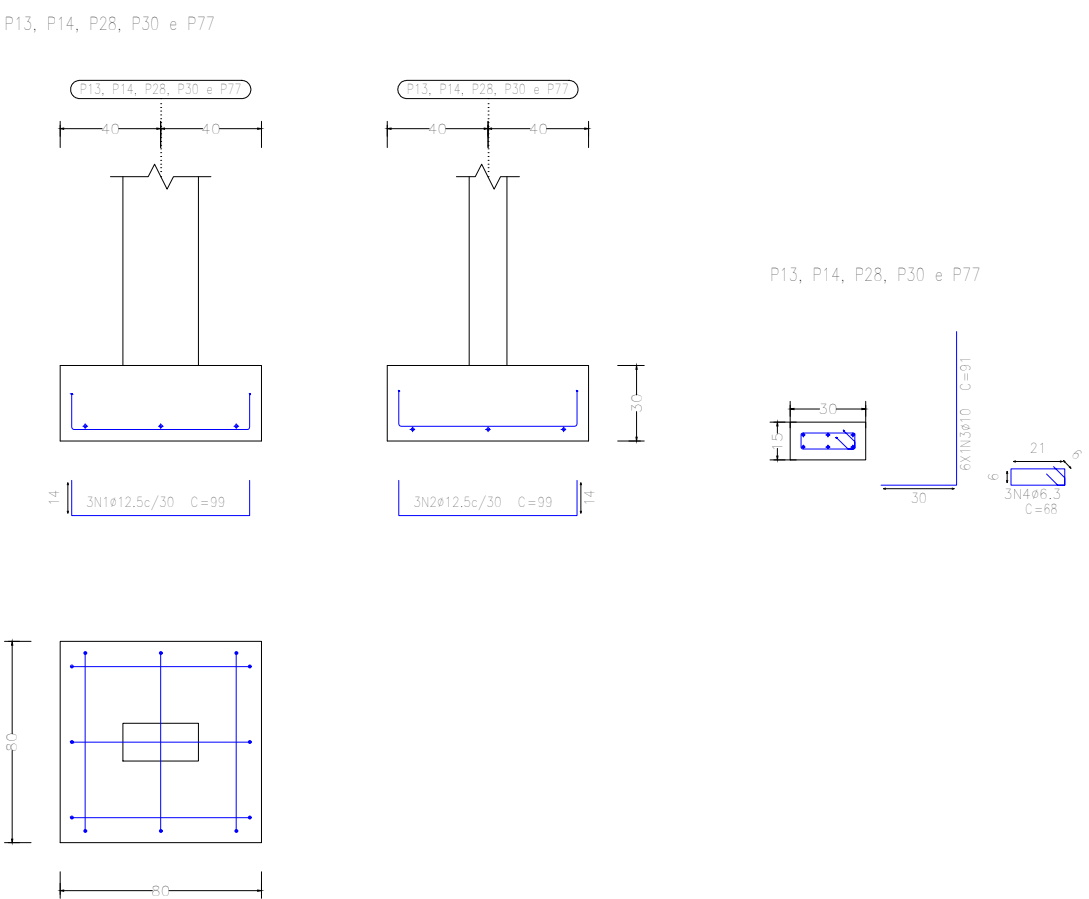
Resumo Aço Pilares	Comp. total (m)	Peso+10% (kg)	Total
CA-50 #6.3	1446.1	390	
#10	1492.4	1012	
#12.5	51.2	54	1456



Modelo	Data
Uso:	05/02/2024
Compo. de João	Numero de desenho
Procedimento	
Projeto Estrutural - Abrigo Antiaéreo	Indicador
Elaborado: Rommeltoni Taveira Elaborado: Cui Revisado: Cui	Rev.
05/02/2024	05/02/2024



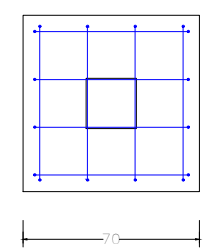
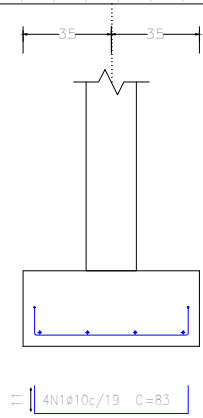
Fundação
Forma
Concreto: C25, em geral
Escala: 1:50



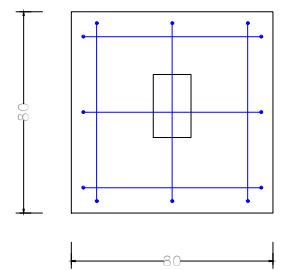
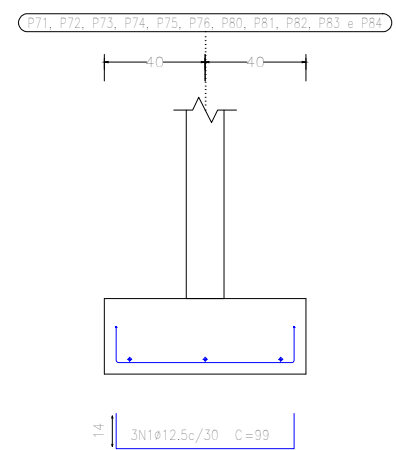
Aluno(a):		Data: 03/05/2016	
Local: Campus de Jão		Número da Questão:	
Professor:			
Fórmula Estrutural – Abnigo Alcan			
Questão: Rongonari Tronco Equilíbrio Cál Número da CREA: 1229503037		Data: 03/03/2014 Estado: Indicada	

P33, P34, P35, P36, P38, P39, P40, P41, P42, P43, P44, P45, P46, P48, P49, P50, P51, P52, P53, P54, P55, P56, P57, P58, P59, P60, P61, P63, P64, P65, P66, P67, P68, P69 e P70

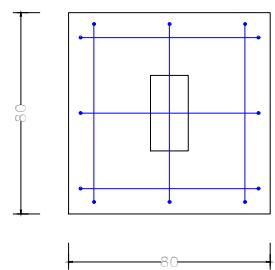
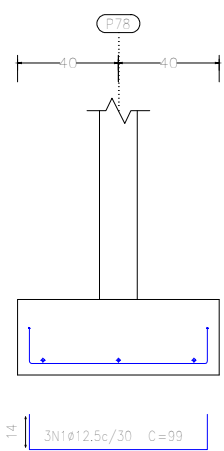
P33, P34, P35, P36, P38, P39, P40, P41, P42, P43, P44, P45, P46, P48, P49, P50, P51, P52, P53, P54, P55, P56, P57, P58, P59, P60, P61, P63, P64, P65, P66, P67, P68, P69 e P70



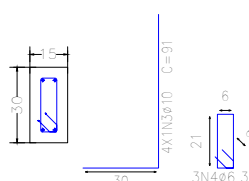
P71, P72, P73, P74, P75, P76, P80, P81, P82, P83 e P84



P78



P78



P71, P72, P73, P74, P75, P76, P80, P81, P82, P83 e P84

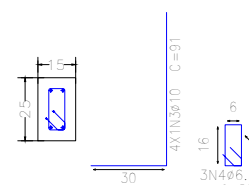
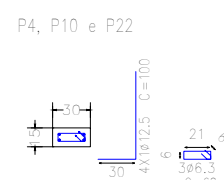
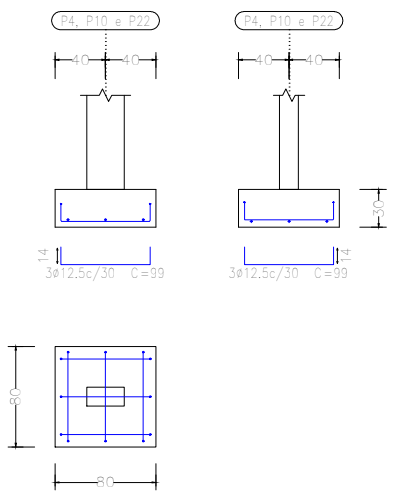
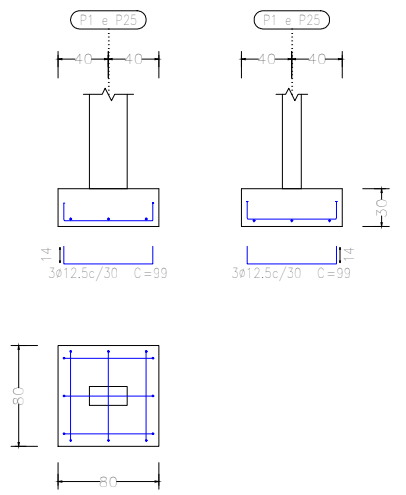


Tabela de dimensões		Tabela de dimensões	
Dimensão	Valor	Dimensão	Valor
P71, P72, P73, P74, P75, P76, P80, P81, P82, P83 e P84	300x100/10 C=50	P71, P72, P73, P74, P75, P76, P80, P81, P82, P83 e P84	300x100/10 C=50

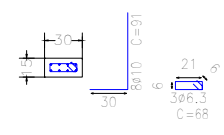
P4, P10 e P22



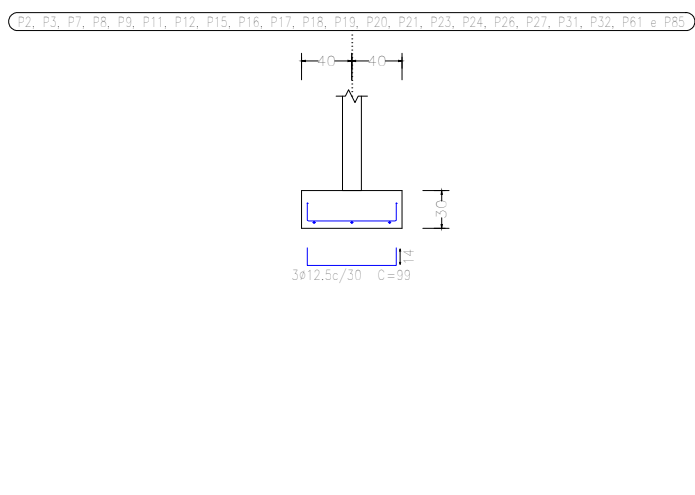
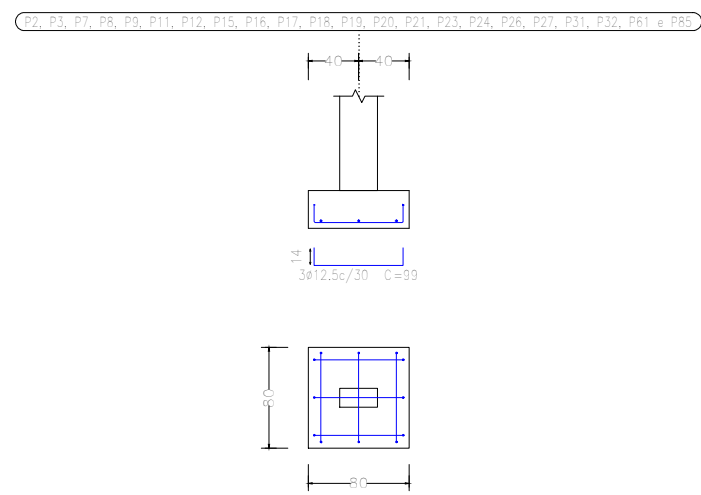
P1 e P25



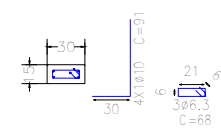
P1 e P25



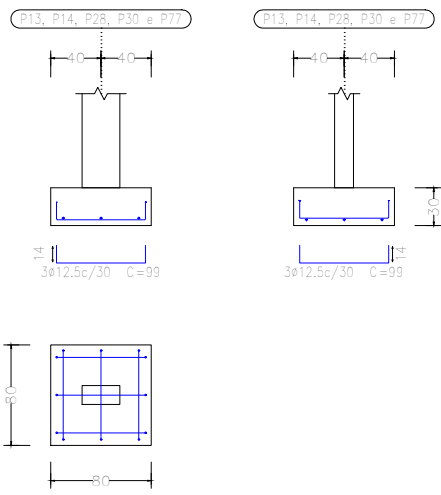
P2, P3, P7, P8, P9, P11, P12, P15, P16, P17, P18, P19, P20, P21, P23, P24, P26, P27, P31, P32, P41 e P85



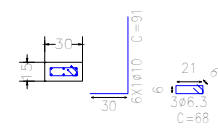
P2, P3, P7, P8, P9, P11, P12, P15, P16, P17, P18, P19, P20, P21, P23, P24, P26, P27, P31, P32, P41 e P85



P13, P14, P28, P30 e P77

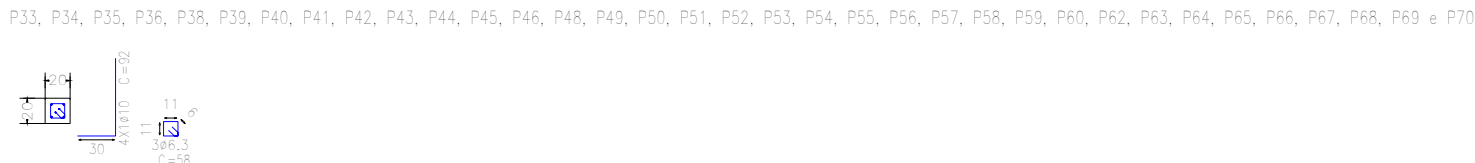
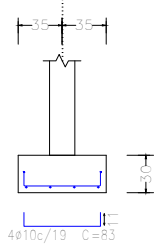
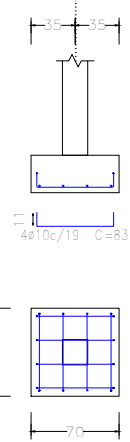


P13, P14, P28, P30 e P77



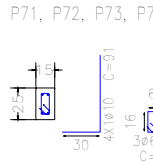
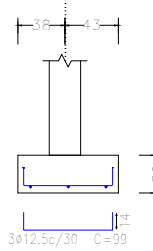
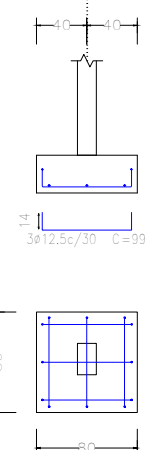
Modelo	Data
Uso	05/02/2024
Comprovações	Número de desenho
Projetista	
Trabalho Estrutural - Abrigo Animal	Indicador
Projetista Responsável Técnico	Assinatura
Engenheiro Civil	05/02/2024
Número do CREA	122503/037

P33, P34, P35, P36, P38, P39, P40, P41, P42, P43, P44, P45, P46, P48, P49, P50, P51, P52, P53, P54, P55, P56, P57, P58, P59, P60, P62, P63, P64, P65, P66, P67, P68, P69 e P70



P71, P72, P73, P74, P75, P76, P80, P81, P82, P83 e P84

P71, P72, P73, P74, P75, P76, P80, P81, P82, P83 e P84

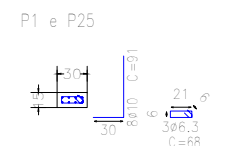
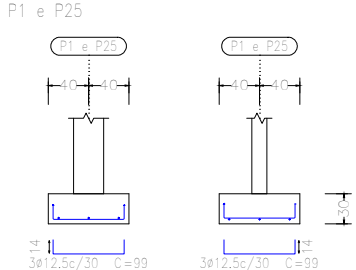


P71, P72, P73, P74, P75, P76, P80, P81, P82, P83 e P84

Função:
Instalação: função:
Condição: C35, em geral
Aço em função: CA-35 e CA-45
Tubo: 100

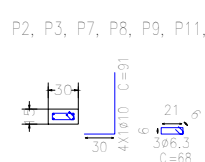
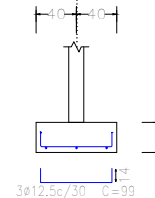
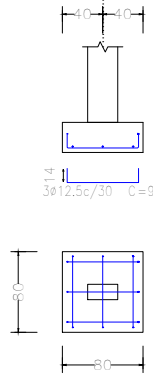
Função	Instalação	Condição	Aço em função	Tubo
P71, P72, P73, P74, P75, P76, P80, P81, P82, P83 e P84	Instalação	C35, em geral	CA-35 e CA-45	100

Função	Instalação	Condição	Aço em função	Tubo
P71, P72, P73, P74, P75, P76, P80, P81, P82, P83 e P84	Instalação	C35, em geral	CA-35 e CA-45	100

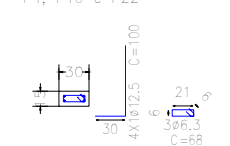
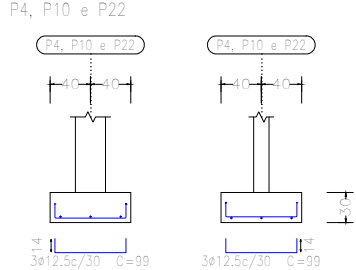


P2, P3, P7, P8, P9, P11, P12, P15, P16, P17, P18, P19, P20, P21, P23, P24, P26, P27, P31, P32, P61 e P85

P2, P3, P7, P8, P9, P11, P12, P15, P16, P17, P18, P19, P20, P21, P23, P24, P26, P27, P31, P32, P61 e P85

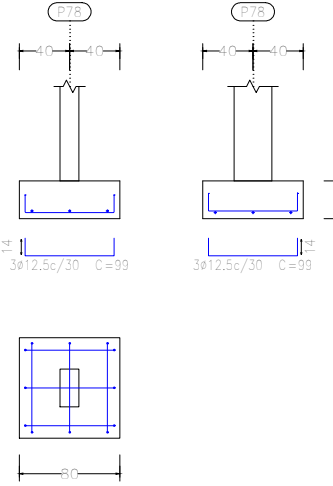


P2, P3, P7, P8, P9, P11, P12, P15, P16, P17, P18, P19, P20, P21, P23, P24, P26, P27, P31, P32, P61 e P85

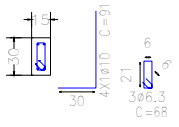


P4, P10 e P22

P78

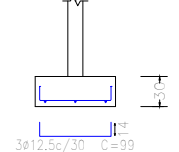
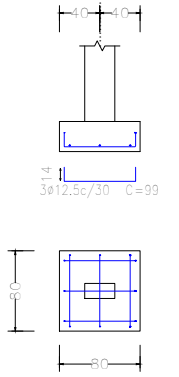


P78

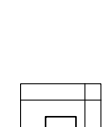
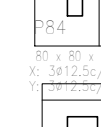
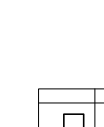
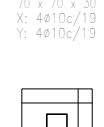
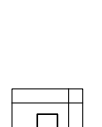
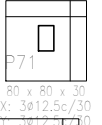
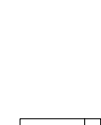
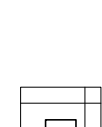
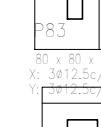
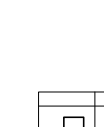
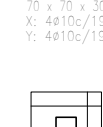
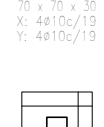
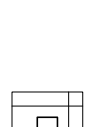
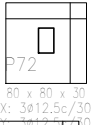
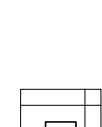
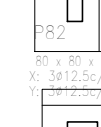
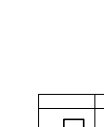
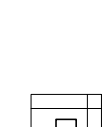
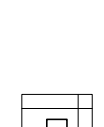
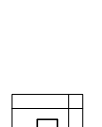
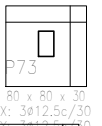
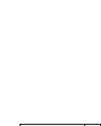
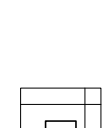
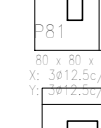
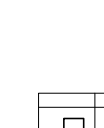
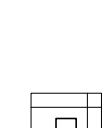
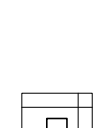
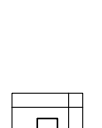
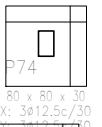
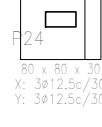
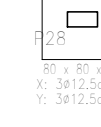
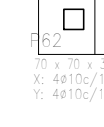
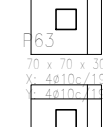
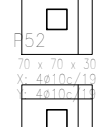
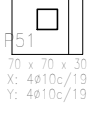
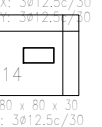
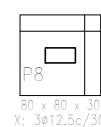
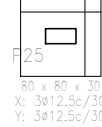
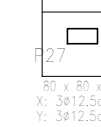
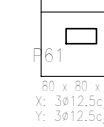
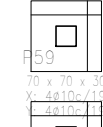
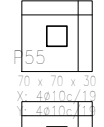
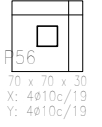
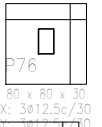
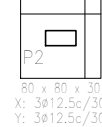
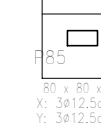
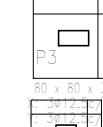
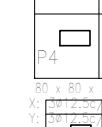
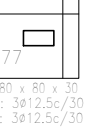
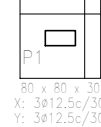


P13, P14, P28, P30 e P77

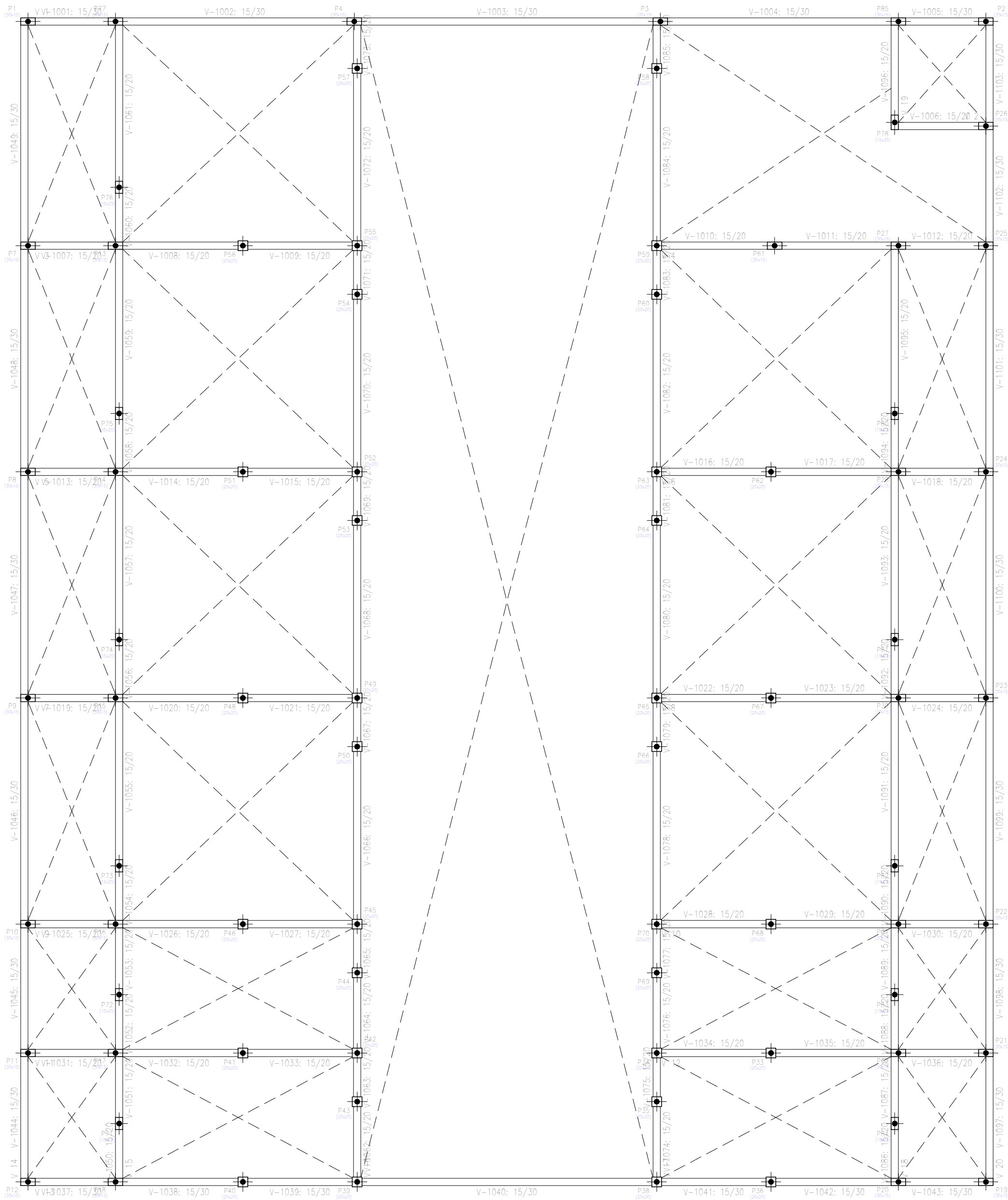
P13, P14, P28, P30 e P77



P13, P14, P28, P30 e P77

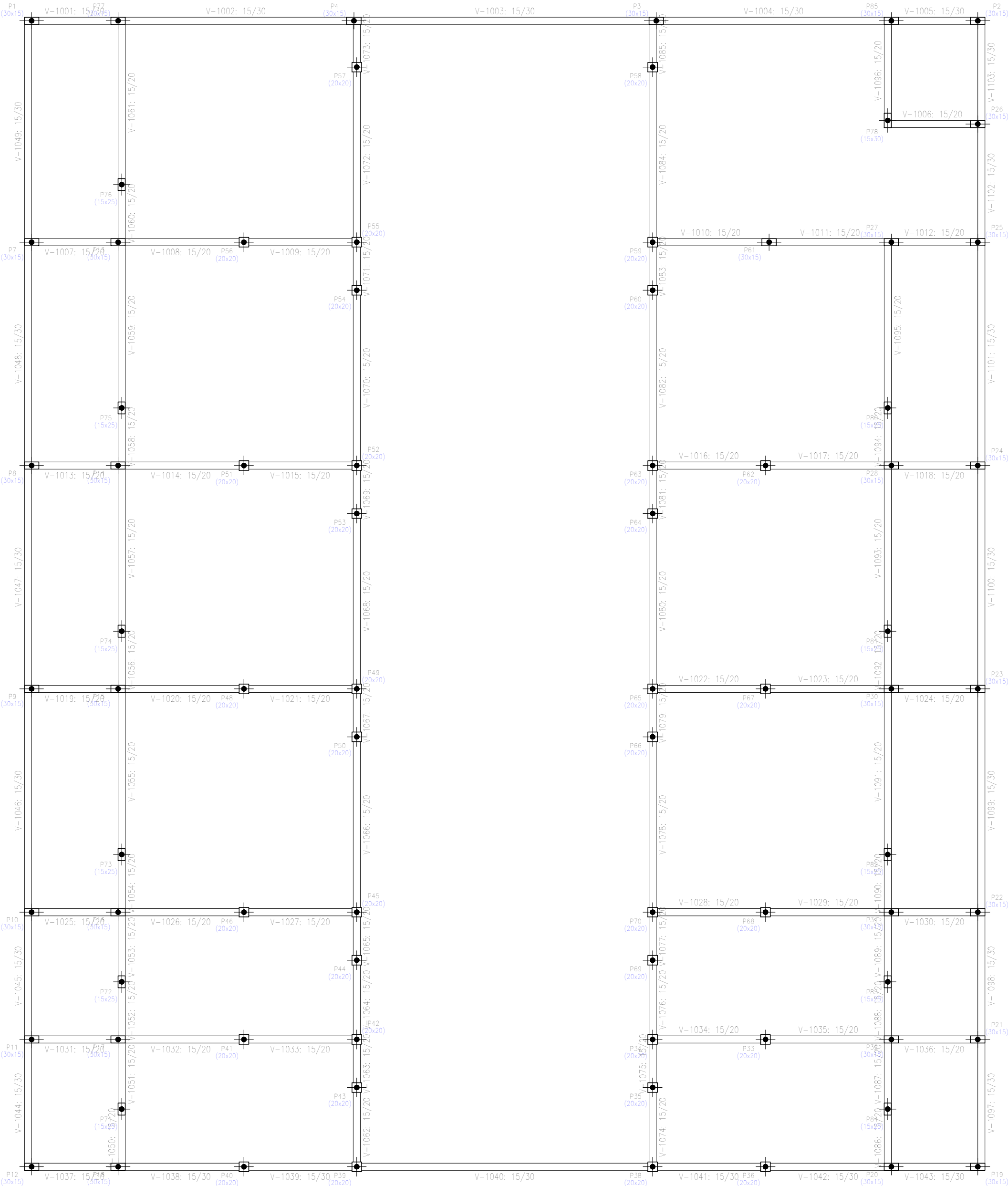


Modelo	Data
Uso:	05/02/2024
Compro de uso:	
Procedimento:	
Projeto Estrutural - Aberto Acima:	Indicador
Procedimento: Remoção de Material	Indicador
Engenheiro Civil	Indicador
Nome do Projeto	122503037



Plat 1
Planta
Concreto C25, em geral
Escala: 1:50

Plat 1
Fundação
Concreto C25, em geral
Escala: 1:50



Modelo		Data	
		05/02/2024	
Lugar		Número de desenho	
Comunidade do aluno			
Projetos			
Projeto Estrutural - Abrigo Animal		Faculdade	
		Indicada	
Elaborado: Engenheiro Técnico		Data	
Desenhado: Engenheiro Civil		05/02/2024	
Revisado: Engenheiro Civil			

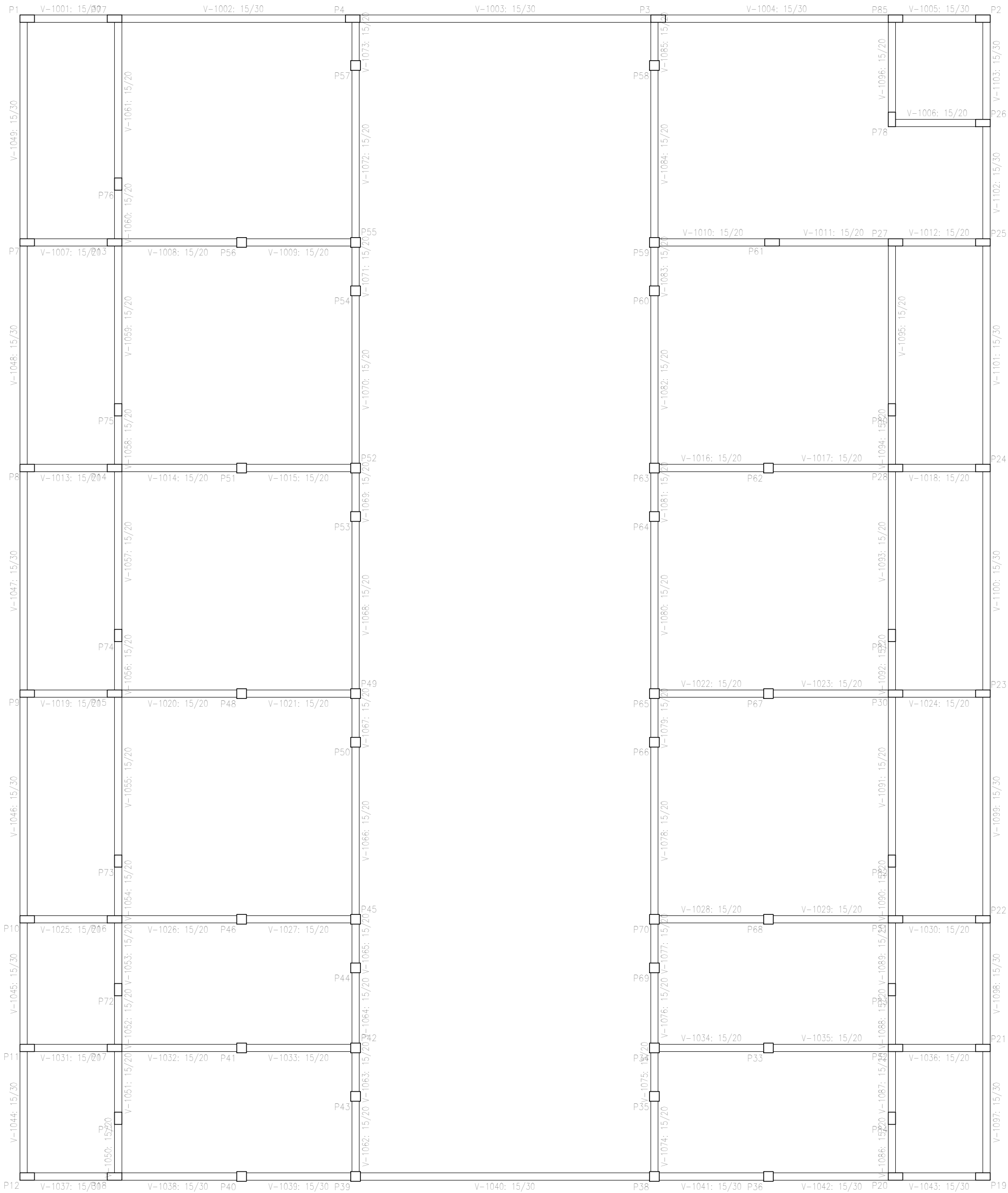
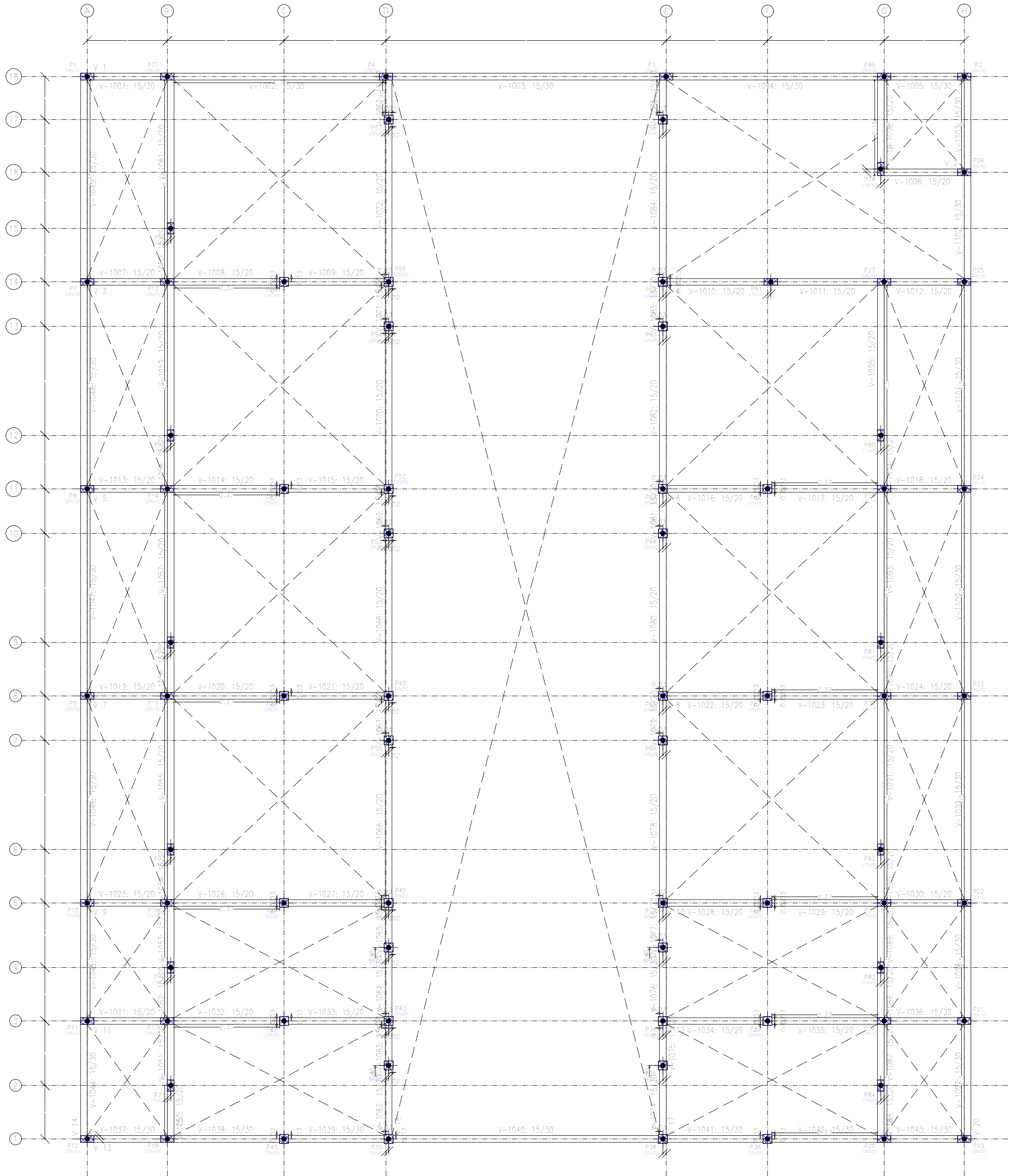


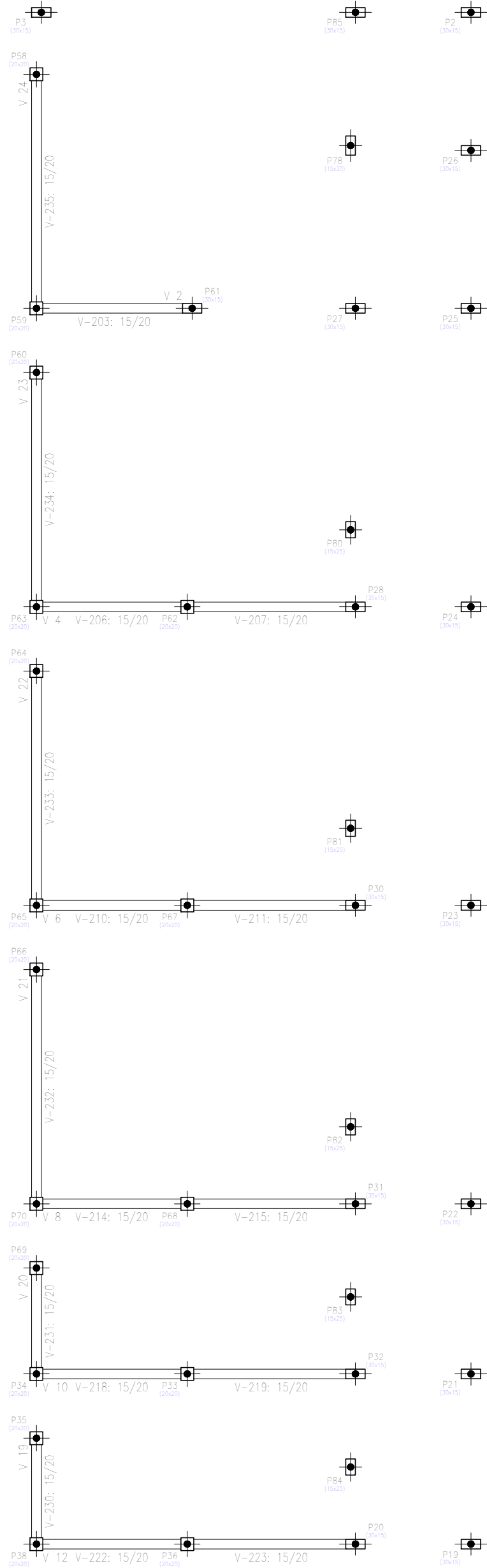
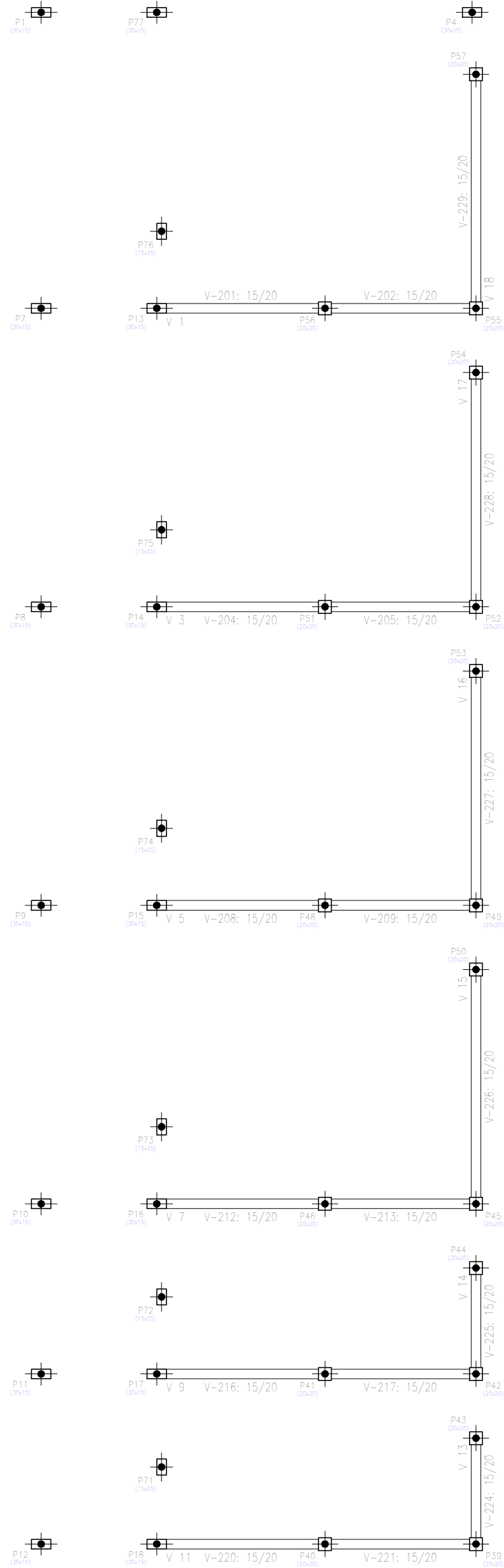
Fig. 1
Plan
Escala: 1:50

Fig. 1
Requisitos de dimensionamento
Cálculo: 1:50

Fig. 1				
Elemento	1001	1002	1003	1004
Comprimento (m)	10,00	10,00	10,00	10,00
Área (m²)	10,00	10,00	10,00	10,00
Volume (m³)	10,00	10,00	10,00	10,00
Massa (kg)	10,00	10,00	10,00	10,00
Força (kN)	10,00	10,00	10,00	10,00

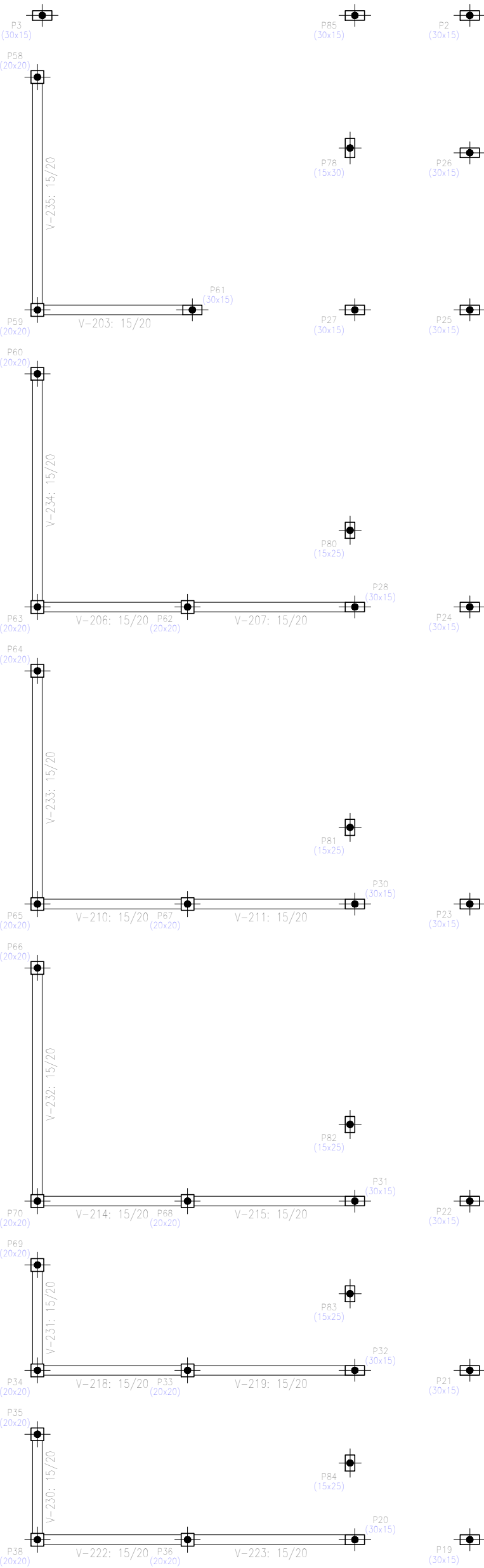
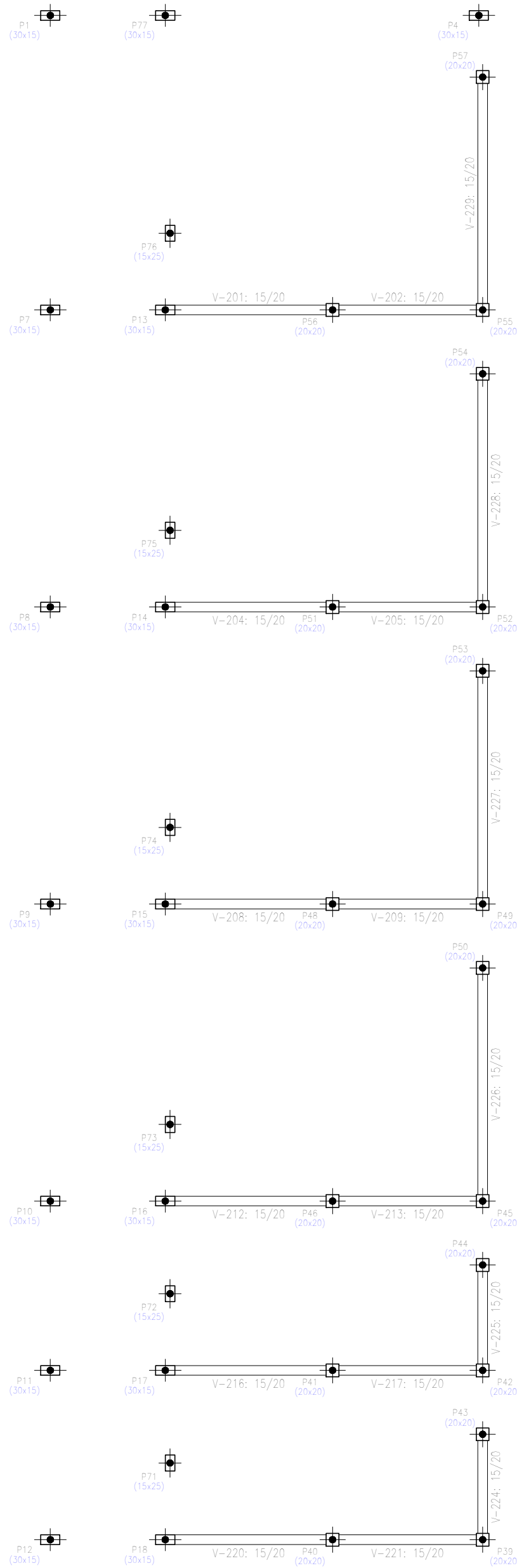


Modelo	Data: 05/02/2024	
Local	Número de desenho:	
Comprova de cálculo		
Projetista		
Projeto Estrutural - Aberto Arquiteto	Indicador	
Projeto Estrutural - Aberto Arquiteto	Data: 05/02/2024	
Projeto Estrutural - Aberto Arquiteto	Data: 05/02/2024	

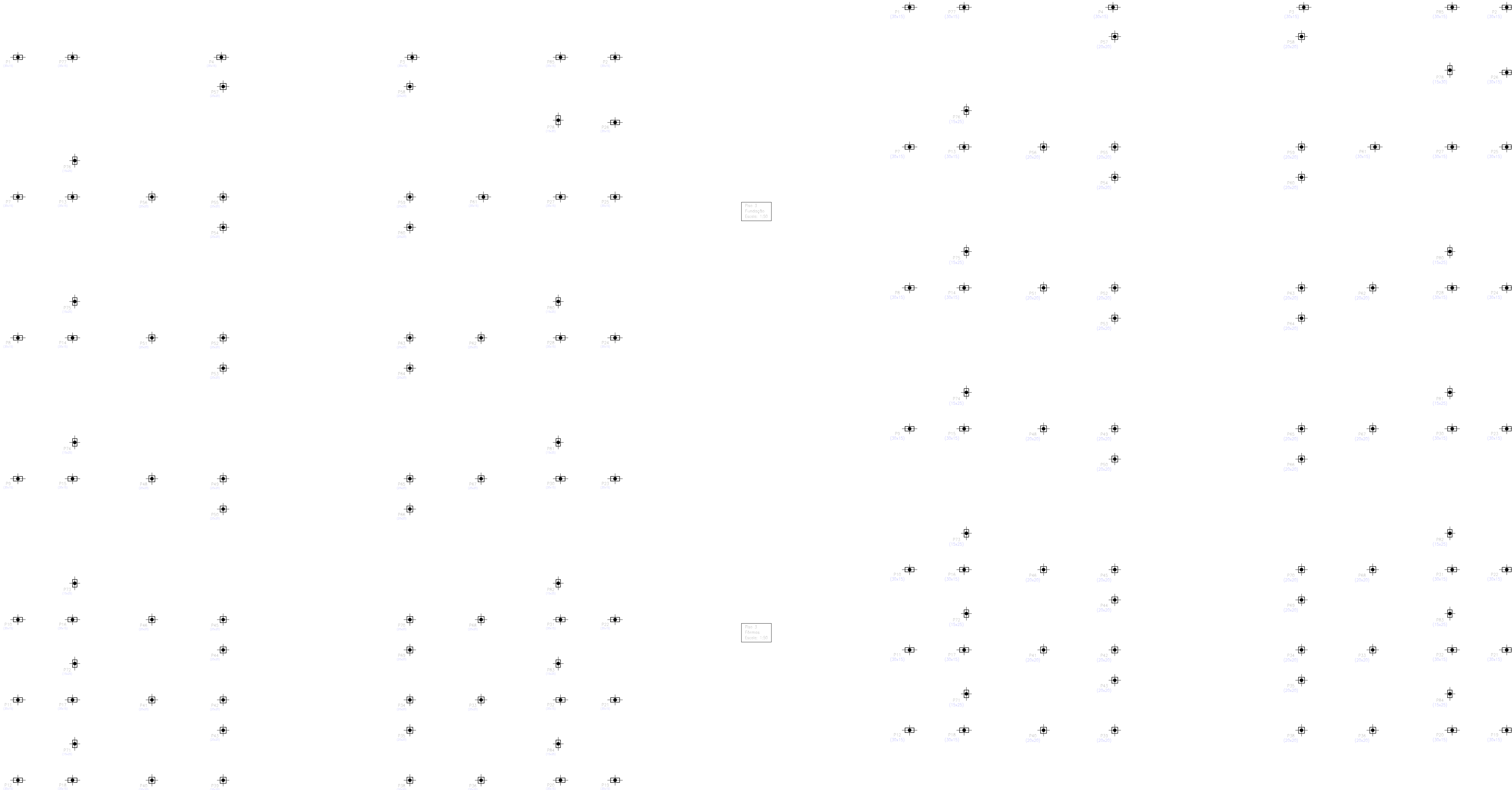


Plat. 2
Fundição
C25, em geral
Escala: 1:50

Plat. 2
Fundição
C25, em geral
Escala: 1:50



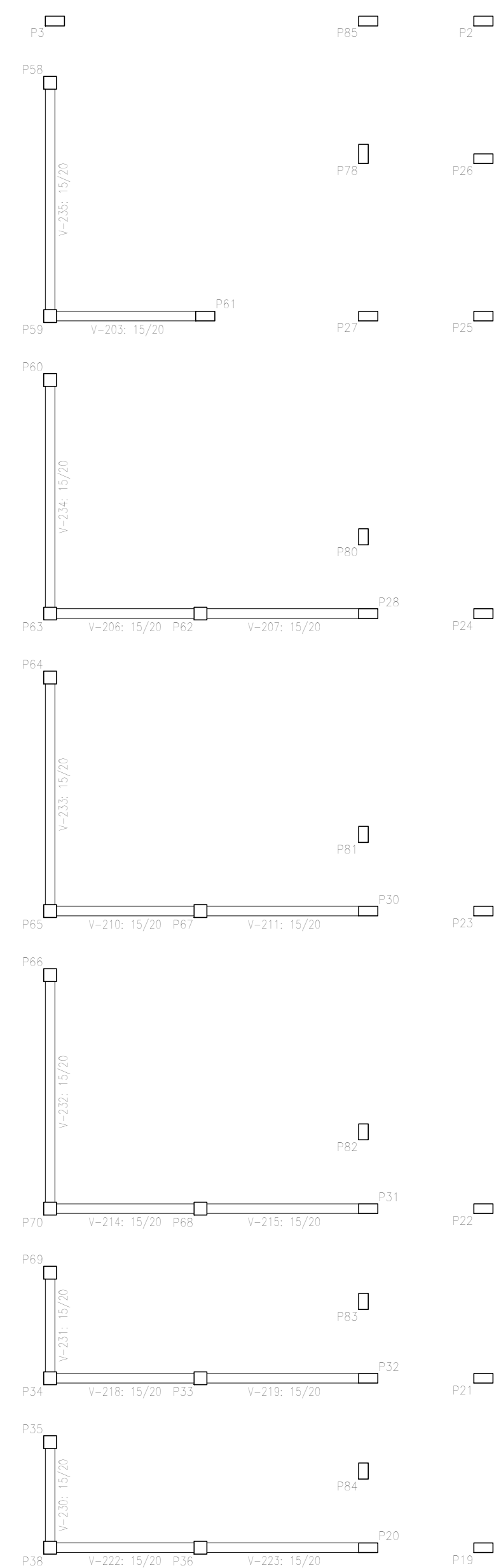
Modelo	Data: 05/02/2024	
Local:	Número de desenho:	
Comprova de obra		
Procedimento:	Indicador	
Projeto Estrutural - Abrigo Aéreo		
Elaborado: Engenheiro Técnico	Data: 05/02/2024	
Engenheiro Civil		
Número do PMA: 122010107		



Plano 3
Fundação
Escala: 1:50

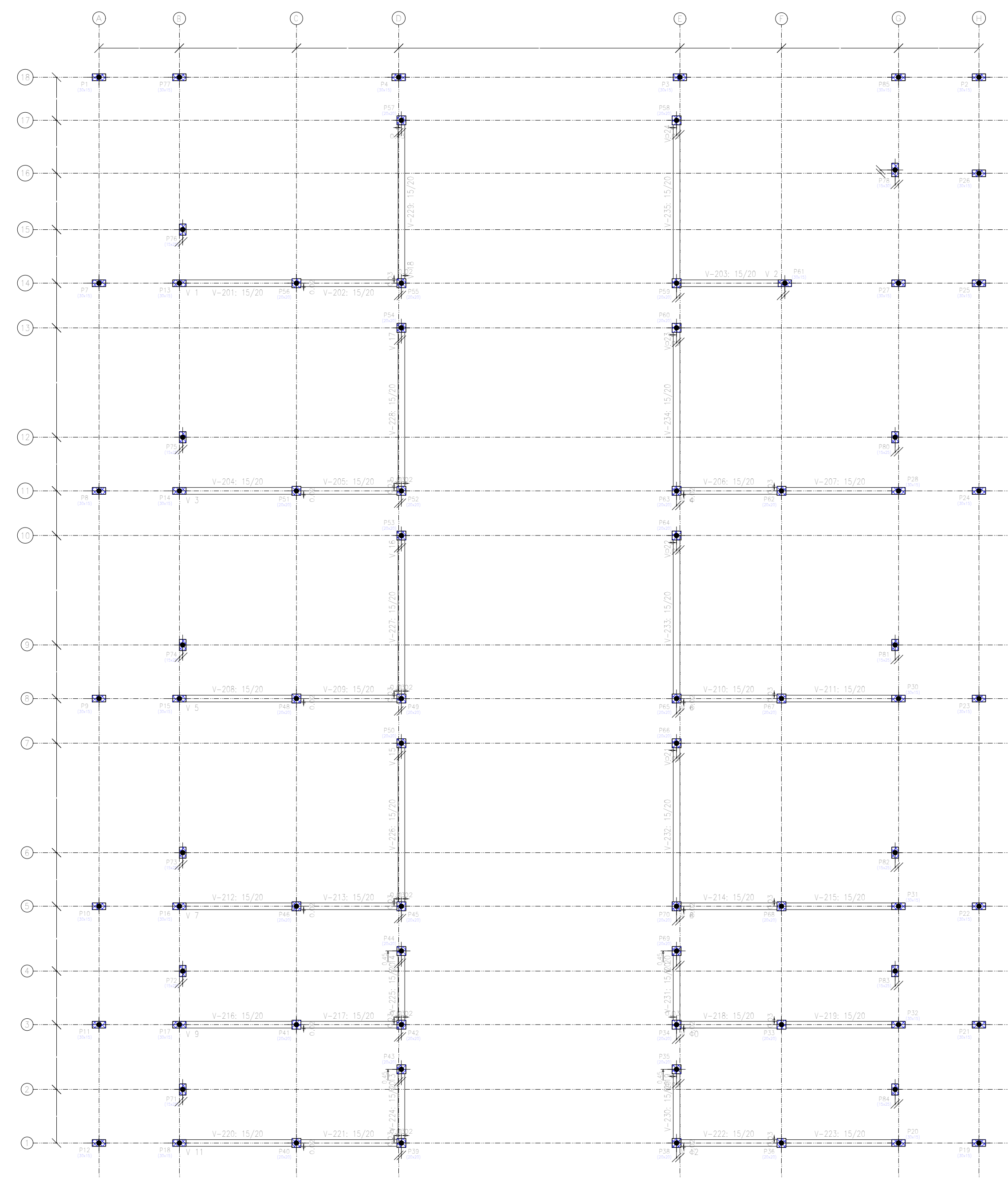
Plano 3
Formas
Escala: 1:50

Modelo	Data: 05/02/2024	
Local: Campus de Jaboá	Número de desenhos:	
Procedimento:		
Projeto Estrutural - Abrigo Animal	Assinatura: Indicada	Data: 05/02/2024
Elaborado: Rangelaine Travenço Engenheira Civil Número do CREA: 122507/0197	Assinatura:	



Elemento	Formas (m ²)	Superfície (m ²)	Volumen (m ³)	Barras (kg)
Vigas	34,11	12,79	2,960	390
Pilares	107,64	-	5,340	259
Total	-	12,79	8,300	649
Índices (por m ²)	-	-	0,316	40,34

Piso 2
Detalhamento fundação
Concreto: C25, em geral
Escala: 1:50



Modelo		Data: 05/02/2026	
Papel: Campo de Jôio		Número de desenhos:	
Promoção:			
Projeto Editorial - Arquivo Admin		Estado: Indicado	
Eduardo Rangelani Tassinari Experto Cul Número do CREA: 122505/03.17		Data: 05/02/2026	

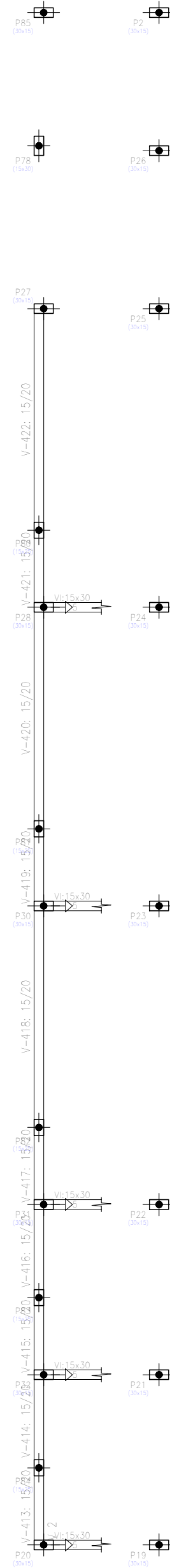
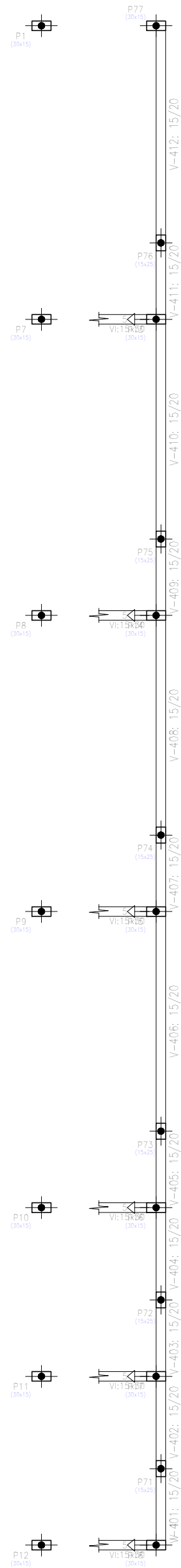
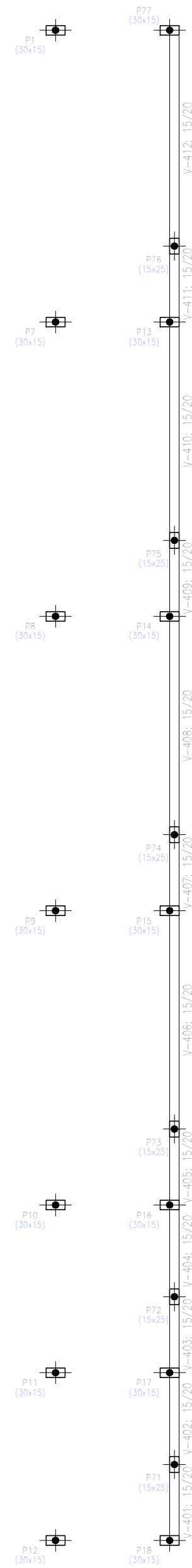


Fig. 4
Forma
Concret: C25, em geral
Escala: 1:50

Fig. 4
Fundação
Concret: C25, em geral
Escala: 1:50



Modelo	Data	
Local	05/02/2024	
Companhia de Água	Número de desenho	
Procedimento		
Projeto Estrutural - Aberto Acima	Indicado	
Engenheiro Responsável Técnico	Data	
Engenheiro Civil	05/02/2024	
Número do P.R.A.	122501017	

Fig. 4
Plano
Escala: 1:50

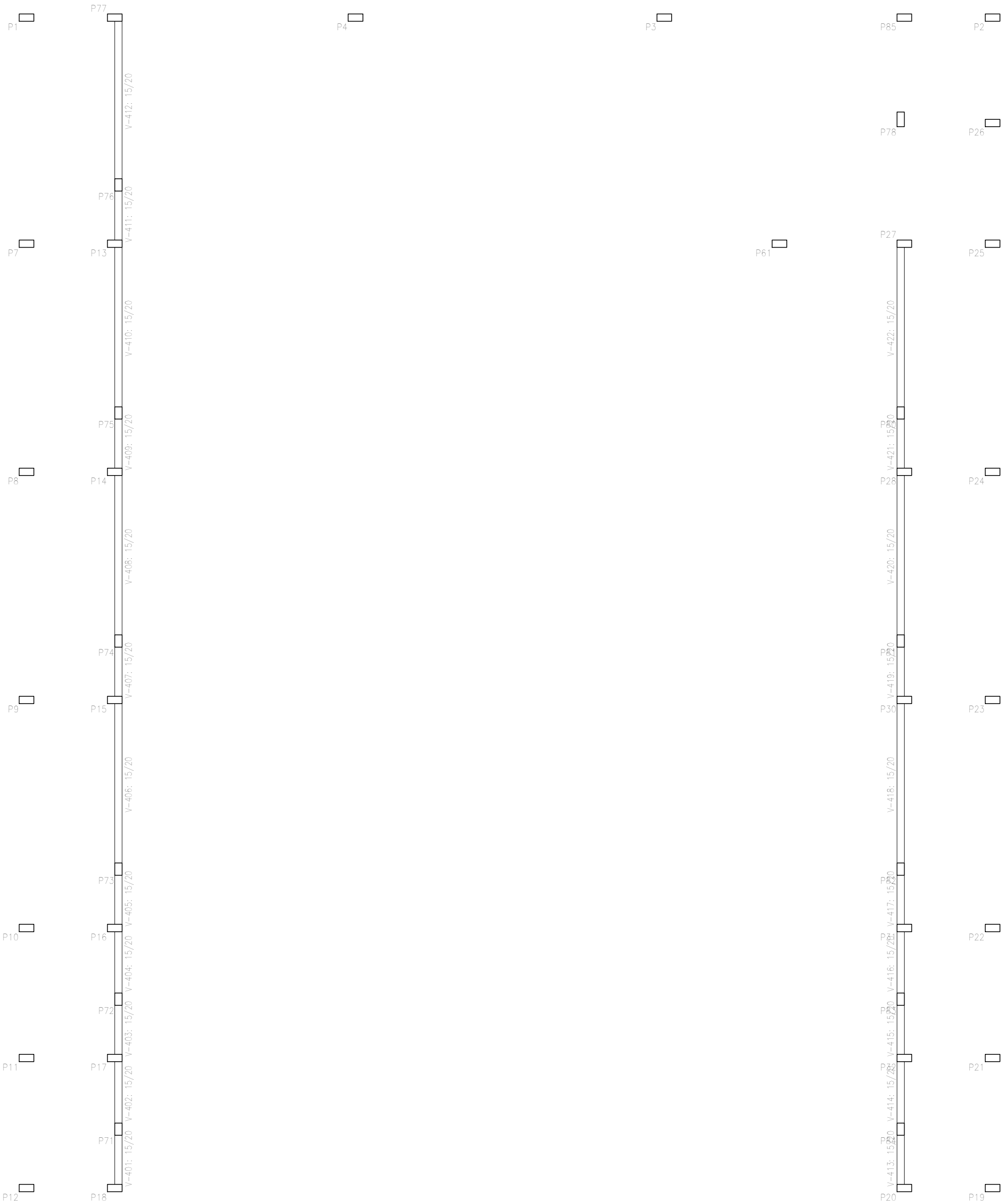
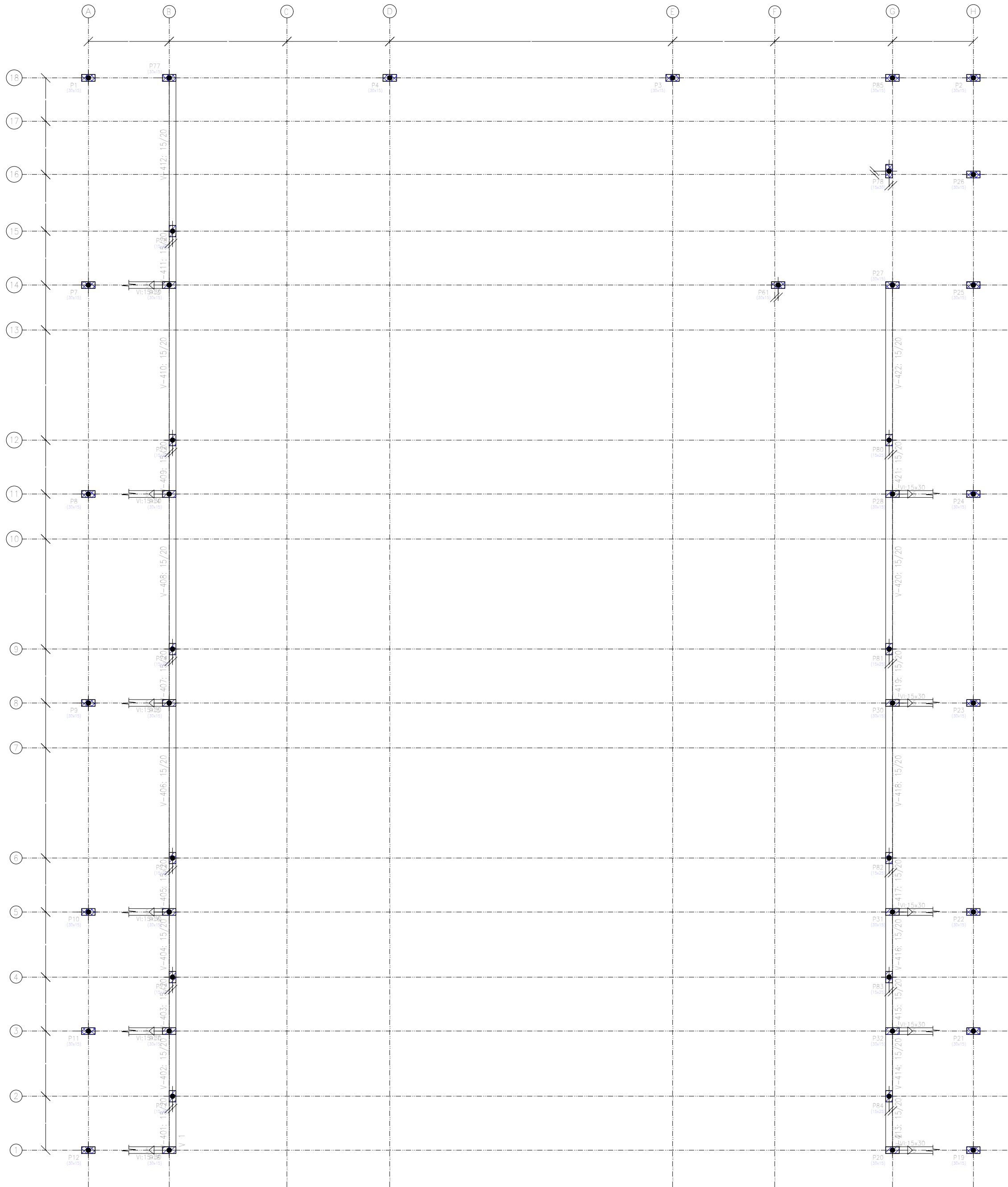
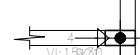
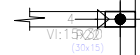
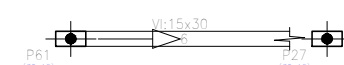
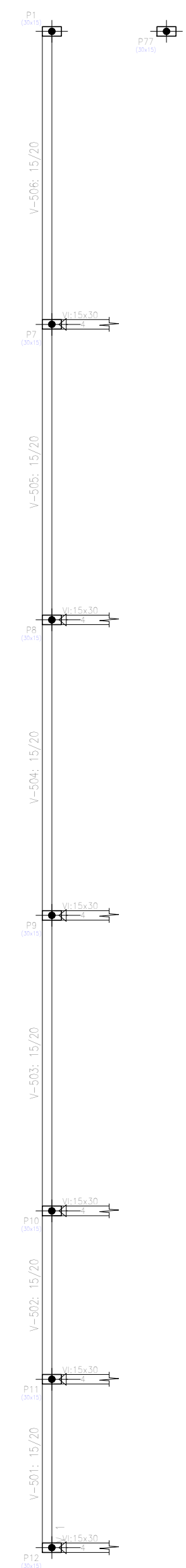


Fig. 4
Detalhamento das vigas
Concreto C25, em geral
Escala: 1:20

Fig. 4				
Elemento	100	150	200	250
100	100	150	200	250
150	100	150	200	250
200	100	150	200	250
250	100	150	200	250
300	100	150	200	250
350	100	150	200	250
400	100	150	200	250
450	100	150	200	250
500	100	150	200	250
550	100	150	200	250
600	100	150	200	250
650	100	150	200	250
700	100	150	200	250
750	100	150	200	250
800	100	150	200	250
850	100	150	200	250
900	100	150	200	250
950	100	150	200	250
1000	100	150	200	250



Modelo	Data: 05/02/2024	
Local: Campo de Jato	Número de desenho:	
Proceder:		
Projeto Estrutural - Aberto Aberto	Assinatura: Indicado	
Elaborado: Engenheiro Técnico	Data: 05/02/2024	
Elaborado: Engenheiro Civil	Data: 05/02/2024	
Revisado: Engenheiro Civil	Data: 05/02/2024	

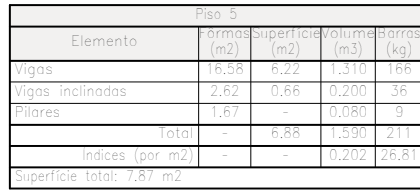


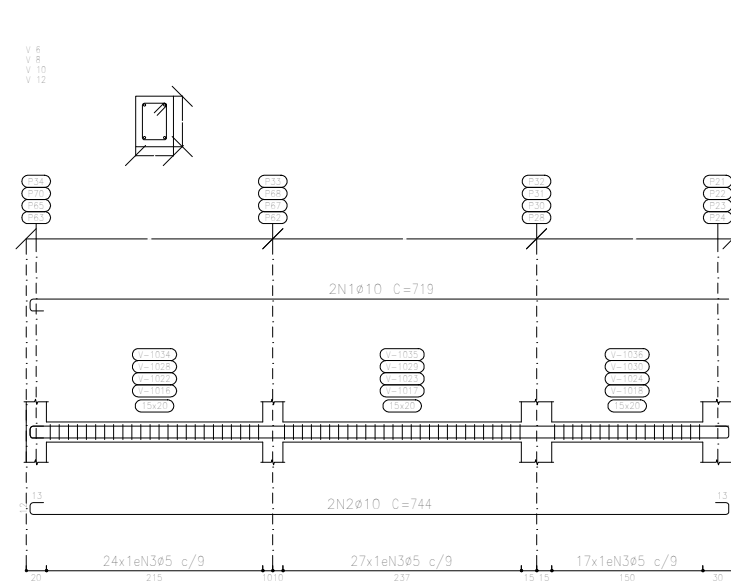
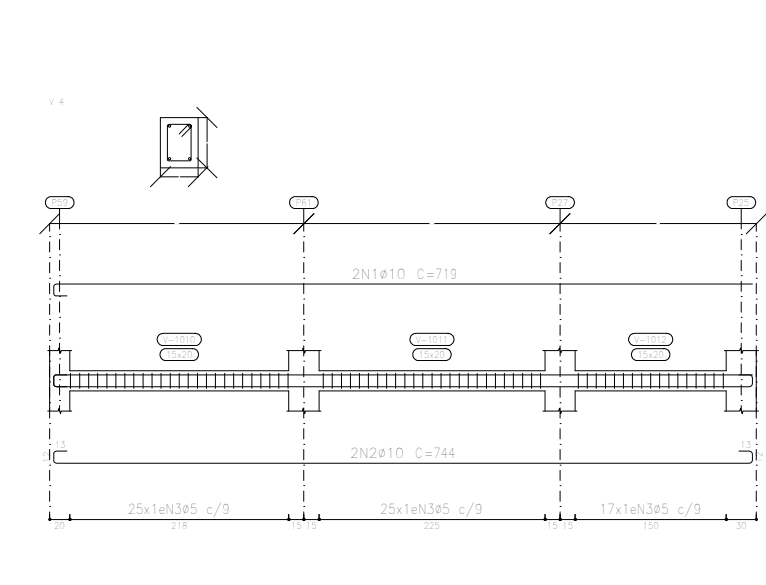
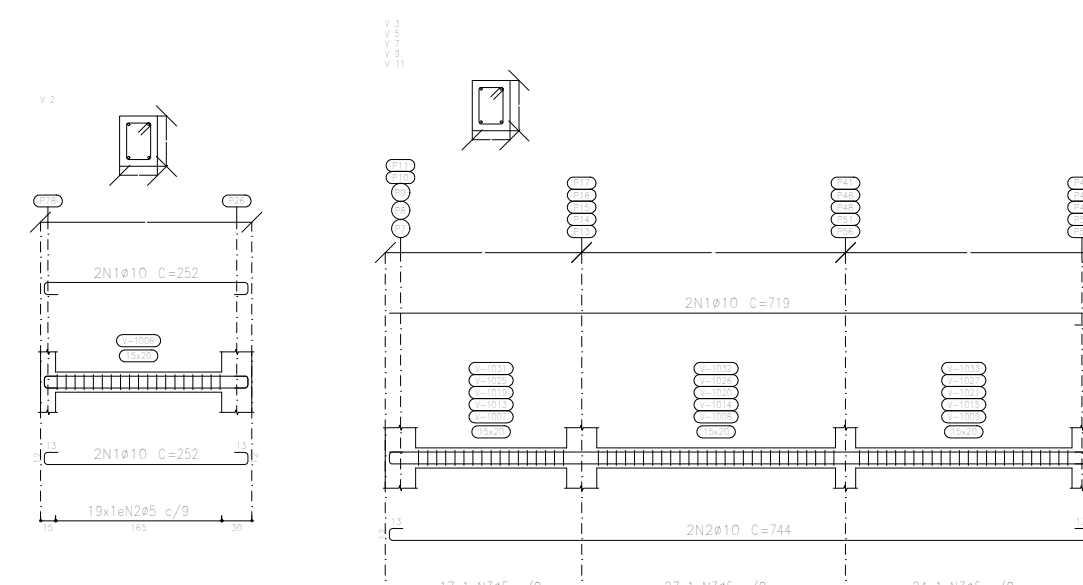
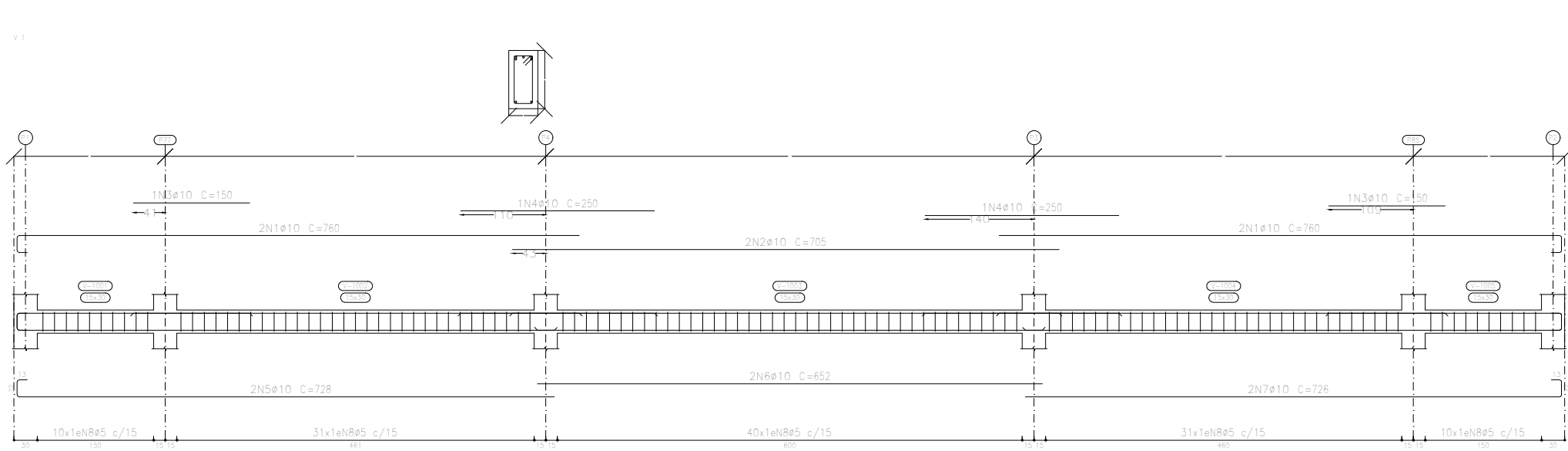
Piso 5
Fundação
Concreto: C25, em geral
Escala: 1:50

Piso 5
Fôrmas:
Concreto: C25, em geral
Escala: 1:50



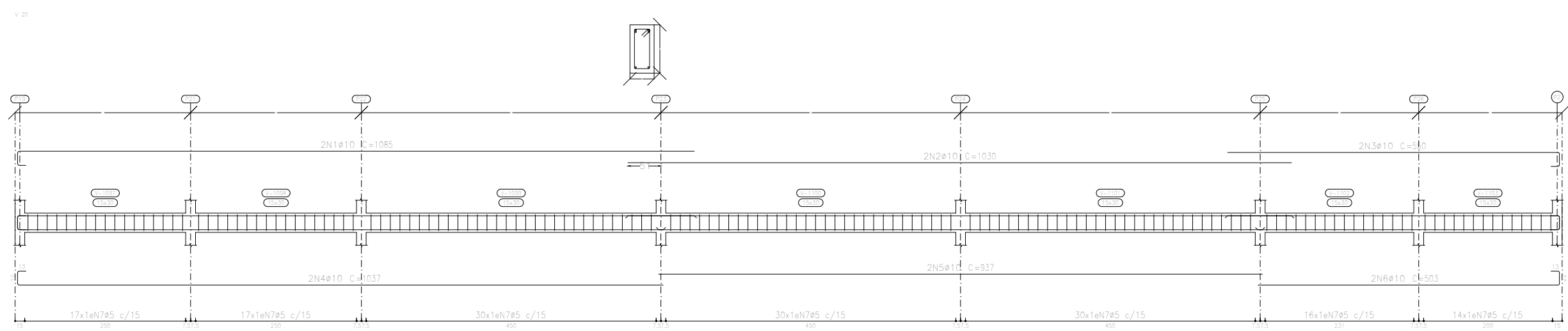
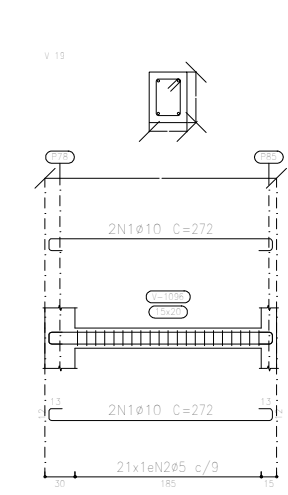
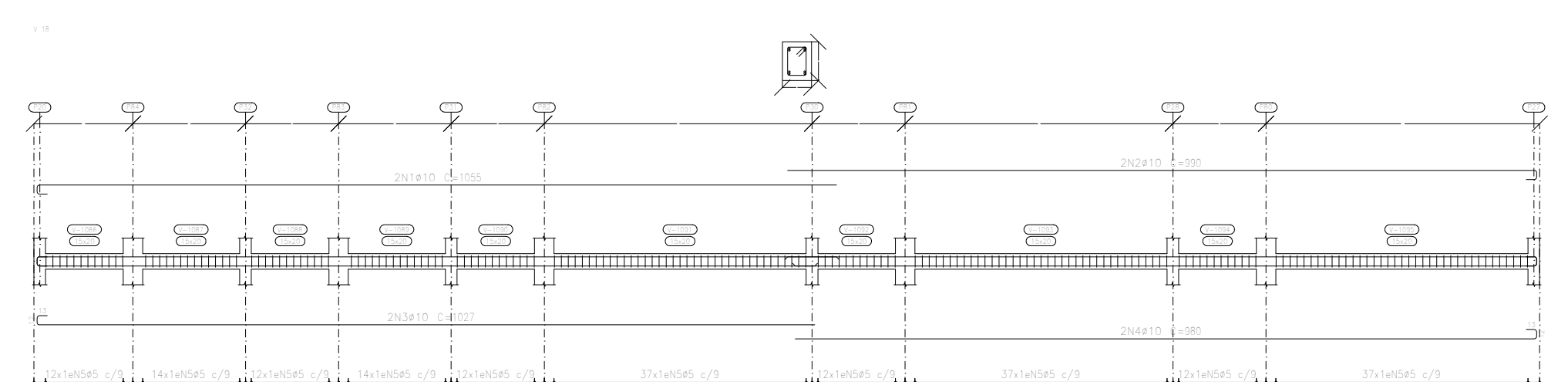
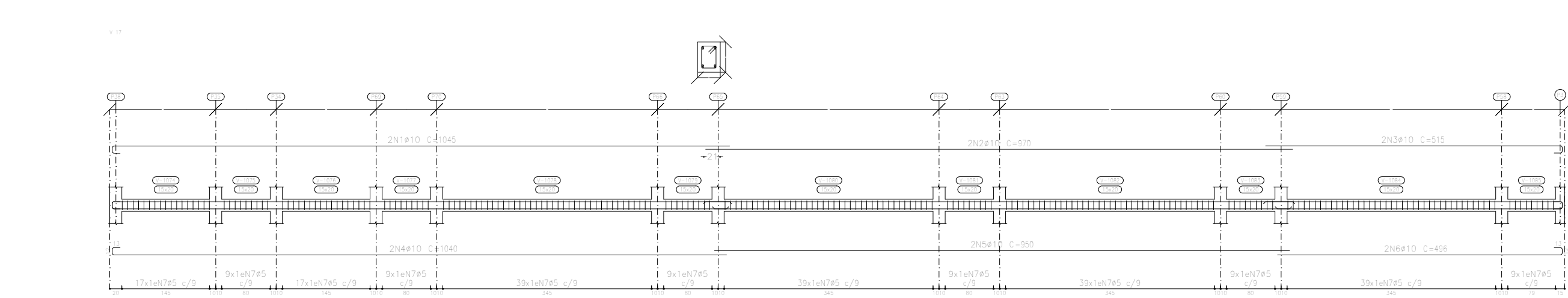
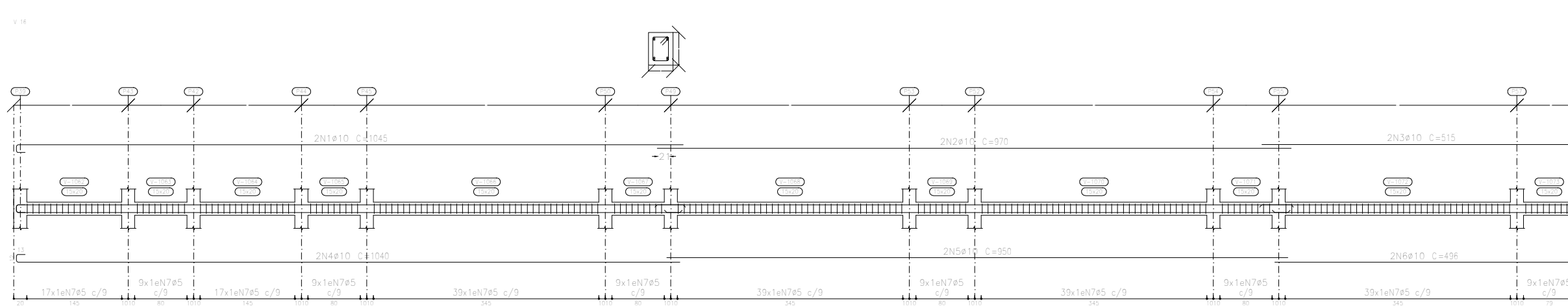
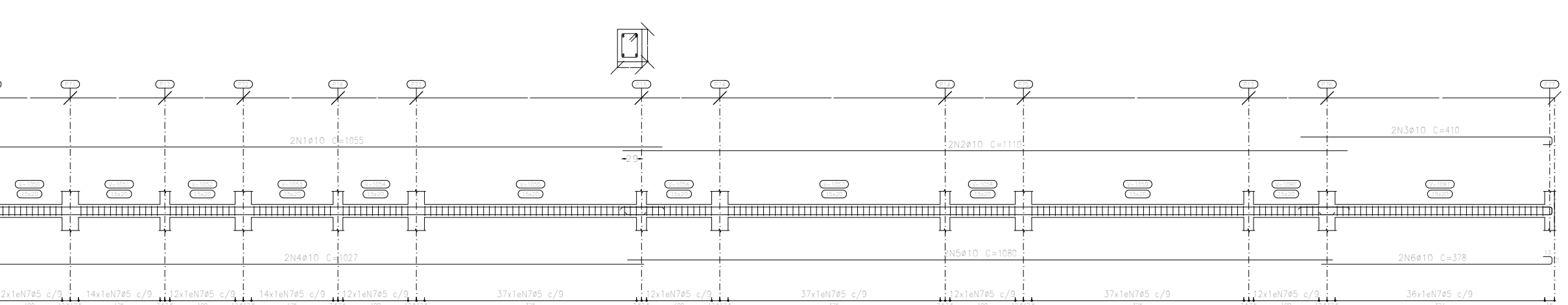
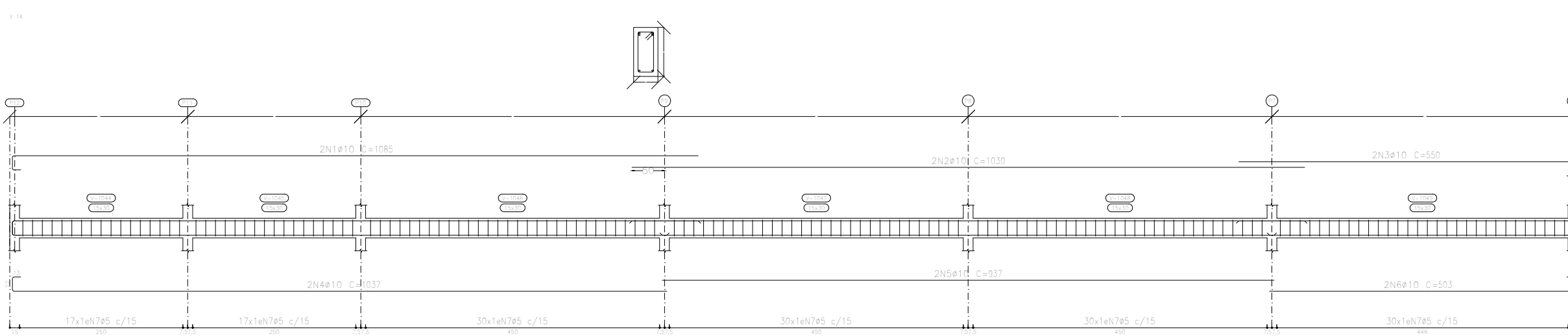
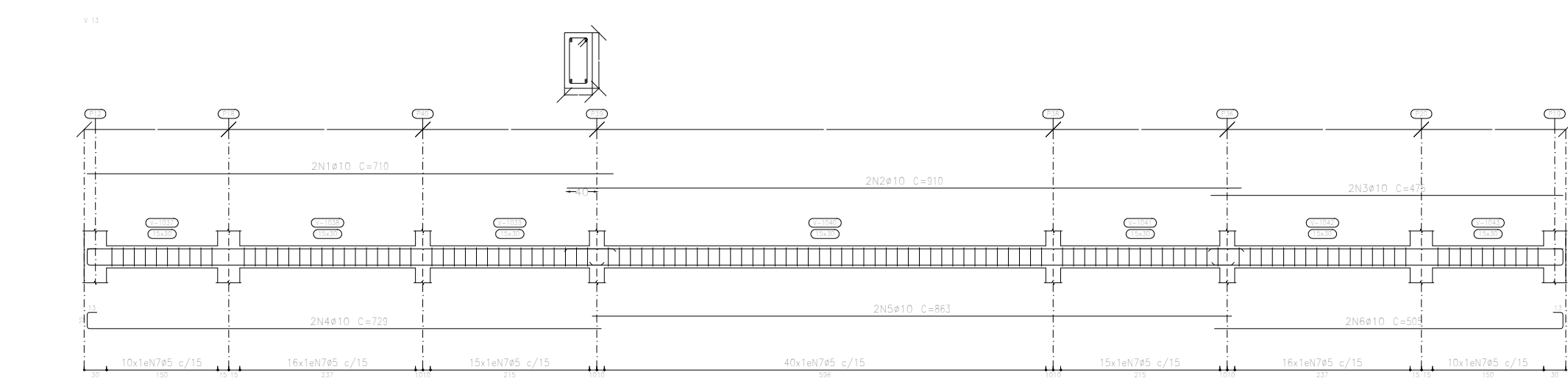
Módulo		Data: 05/05/2024	
Local:		Número de despacho:	
Código de <i>ATA</i>		Procedimento:	
Projeto <i>Estudo de</i> – <i>Atividade</i>		Escala Indicada	
Histórico: <i>Seminário</i> <i>Novos</i> <i>Engenheiro</i> <i>Cul</i> <i>Relatório</i> <i>de</i> <i>ORF</i> 123456789037		Data: 05/05/2024	





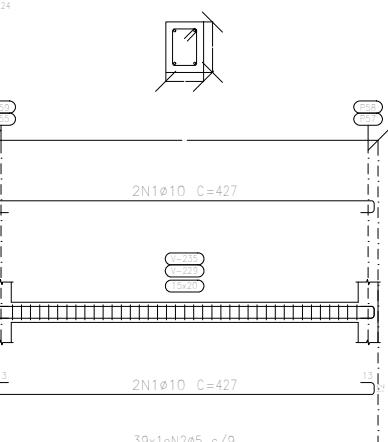
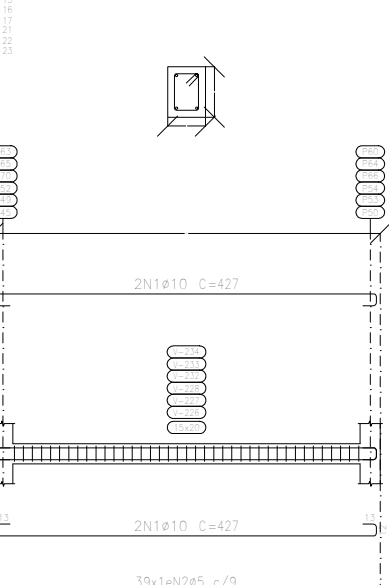
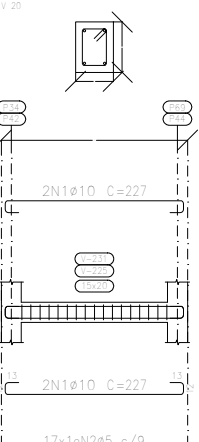
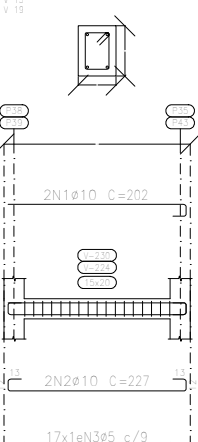
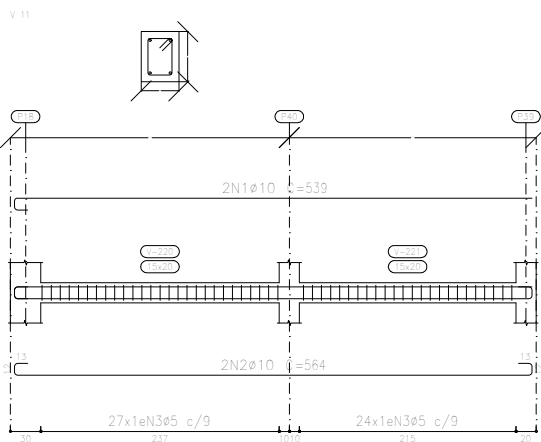
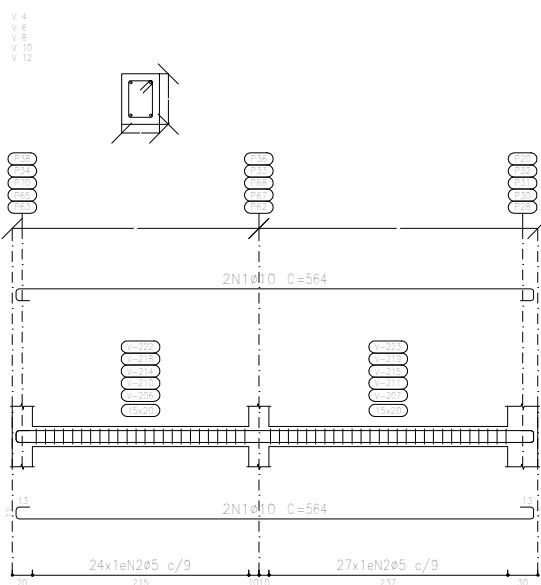
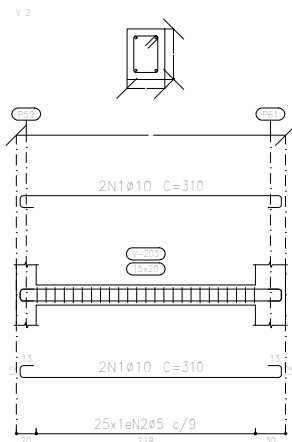
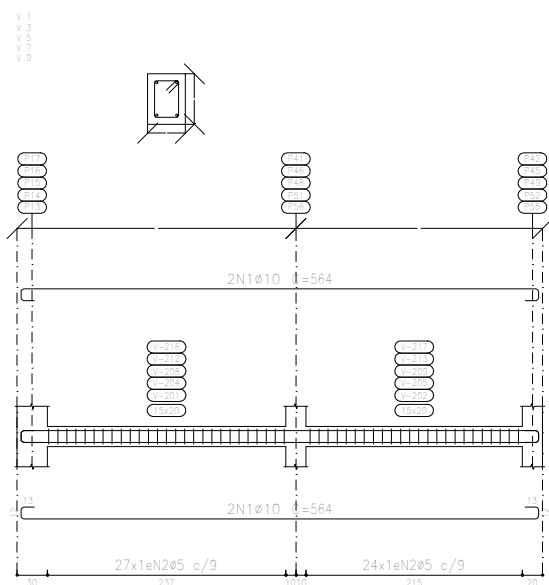
Piso
Desenho de vigas
Concreto: C25, em geral
Aço das barras: CA-50 e CA-60
Aço dos estribos: CA-50 e CA-60
Escala viga: 1:50
Escala seções: 1:20
Escala aberturas: 1:50

Resumo Aço	Comp. total (m)	Peso+10% (kg)	Total
CA-50 ø10	1080.6	732	732
CA-60 ø5	1380.3	240	240
Total			972



Modelo	Data
Uso	05/02/2028
Compo de aço	Numero de desenho
Proceder	
Projeto Estrutural - Aberto Acon	Indicador
Projeto Remanejado Projeto Engenharia Civil	05/02/2028
Numero do C.R.A.	122503037

Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V-1	1	ø10	1		160	3540	18.7	
	2	ø10	1		160	3540	18.7	
	3	ø10	1		160	3540	18.7	
	4	ø10	1		160	3540	18.7	
	5	ø10	1		160	3540	18.7	
	6	ø10	1		160	3540	18.7	
	7	ø10	1		160	3540	18.7	
	8	ø5	12		78	916		14.3
V-2	1	ø10	14		252	1058	8.2	
	2	ø5	12		58	1102		1.7
						1058	8.2	1.8
V-3	1	ø10	12		210	1428	8.5	
	2	ø10	12		744	1488	9.2	
	3	ø5	48		58	364		6.2
V-4	1	ø10	12		210	1428	8.5	
	2	ø5	48		58	364		6.2
						1058	10.5	19.2
V-5	1	ø10	12		210	1428	8.5	
	2	ø10	12		744	1488	9.2	
	3	ø5	48		58	364		6.2
V-13	1	ø10	12		210	1428	8.5	
	2	ø10	12		744	1488	9.2	
	3	ø10	12		744	1488	9.2	
	4	ø10	12		744	1488	9.2	
	5	ø10	12		744	1488	9.2	
	6	ø10	12		744	1488	9.2	
V-14	1	ø10	12		1080	2178	13.9	
	2	ø10	12		1030	2060	12.7	
	3	ø10	12		920	1108	6.8	
	4	ø10	12		1037	2074	12.8	
	5	ø10	12		920	1874	11.8	
	6	ø10	12		920	1058	6.2	
V-15	1	ø10	12		1058	2110	13.6	
	2	ø10	12		1110	2238	13.7	
	3	ø10	12		410	820	5.1	
	4	ø10	12		1020	2054	12.6	
	5	ø10	12		1080	2142	13.5	
	6	ø10	12		378	756	4.7	
V-16	1	ø10	12		1040	2090	12.8	
	2	ø10	12		870	1740	11.2	
	3	ø10	12		920	1874	11.8	
	4	ø10	12		1040	2090	12.8	
	5	ø10	12		920	1874	11.8	
	6	ø10	12		438	876	5.1	
V-17	1	ø10	12		1452	2904	18.0	
	2	ø10	12		920	1840	12.0	
	3	ø10	12		510	1020	6.5	
	4	ø10	12		1040	2090	12.8	
	5	ø10	12		920	1874	11.8	
	6	ø10	12		438	876	5.1	
V-18	1	ø10	12		1040	2090	12.8	
	2	ø10	12		920	1874	11.8	
	3	ø10	12		1027	2054	12.7	
	4	ø10	12		980	1960	12.1	
	5	ø5	120		58	11542		18.1
						1058	10.5	19.3
V-19	1	ø10	12		272	1088	6.7	
	2	ø5	31		58	1218		1.9
V-20	1	ø10	12		1880	2170	13.4	
	2	ø10	12		1080	2180	12.8	
	3	ø10	12		220	1100	6.8	
	4	ø10	12		1037	2074	12.8	
	5	ø10	12		837	1674	11.5	
	6	ø10	12		360	720	4.5	
V-21	1	ø5	120		78	12012		18.8
						1058	10.5	20.6
V-22	1	ø10	12		78	12012		18.8
						1058	10.5	20.6






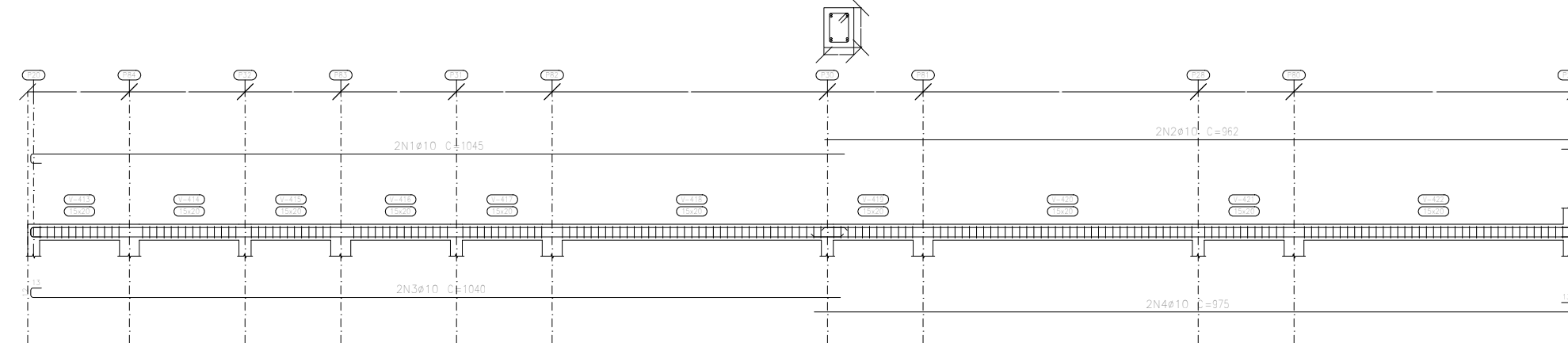
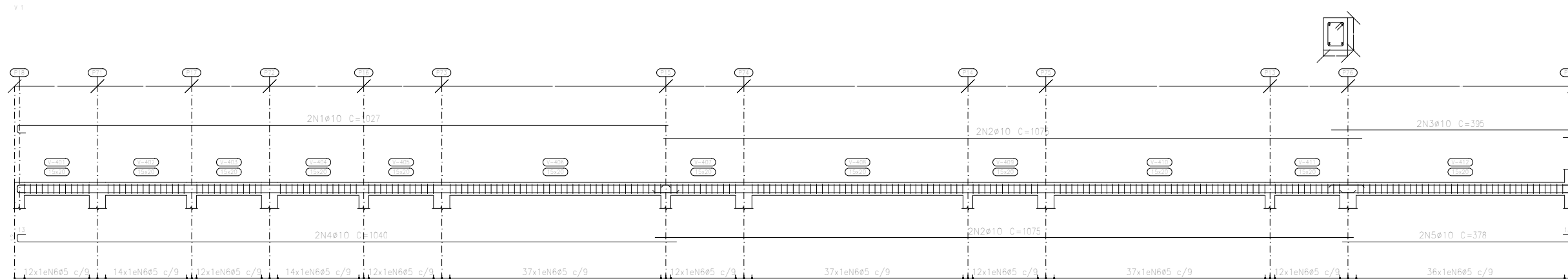
Piso 2
Desenho de vigas
Concreto: C25, em geral
Aço das barras: CA-50 e CA-60
Aço dos estribos: CA-50 e CA-60
Escala vigas 1:50
Escala seções 1:20
Escala aberturas 1:50

Resumo Aço	Comp. total (m)	Peso+10% (kg)	Total
CA-50	432.0	293	293
CA-60	560.3	97	97
Total			390

Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Tota (cm)	CA-50 (kg)	CA-60 (kg)
V 1-3m 3m 3m 3m	1	ø10			569	2256	12.3	
	2	ø5	51		58	2358		4.6
						Totais:1078	12.3	5.1
V 2	1	ø10	4		320	1240	7.0	
	2	ø5	20		58	1400		2.3
						Totais:1078	8.4	2.3
V 4m 3m 3m 10 V 12	1	ø10	4		569	2256	12.3	
	2	ø5	51		58	2358		4.6
						Totais:1078	12.3	5.1
V 11	1	ø10			539	1878	8.6	
	2	ø10			569	1128	7.0	
	3	ø5	51		58	2358		4.6
V 13-v 19	1	ø10			300	454	2.5	
	2	ø10			220	454	2.6	
	3	ø5	17		58	946		1.5
V 14-v 20	1	ø10			220	308	0.8	
	2	ø5	17		58	886		1.5
						Totais:1078	8.2	1.3
V 15-v 16-v 17-v 18 V 20-v 23	1	ø10			427	1398	10.5	
	2	ø5	33		58	2282		3.8
						Totais:1078	11.6	4.0
V 18-v 24	1	ø10	4		427	1398	10.5	
	2	ø5	33		58	2282		3.8
						Totais:1078	11.6	4.0
							ø5	97.4
							ø10	293.2
							Total	390.6

Modelo	Data	
	05/02/2028	
Local	Número de desenho	
Compro de João		
Proceder		
Projeto Estrutural - Abrigo Acima	Assinatura	Indicada
Projetado: Romualdo Taveira	Assinatura	
Engenheiro Civil	Assinatura	
Número do CREA	1225010197	

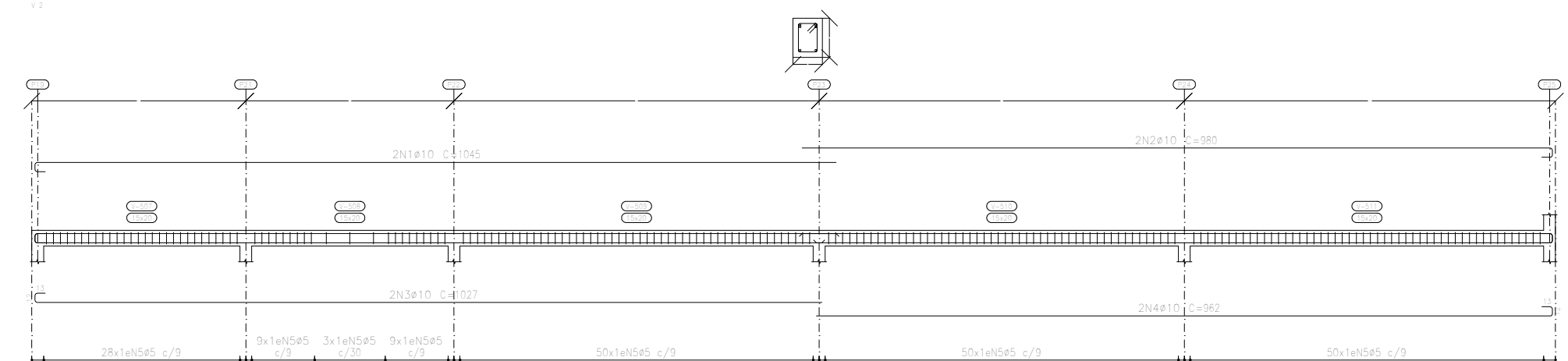
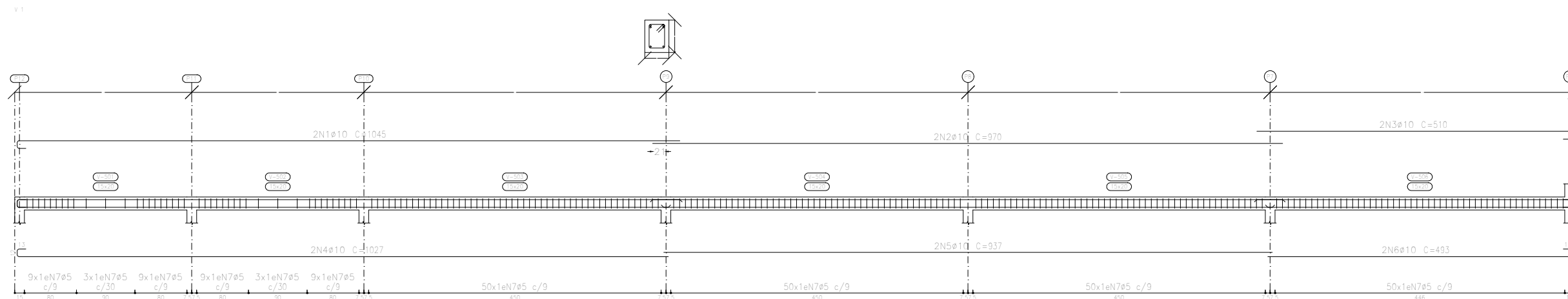
Elemento	Pos.	Diam.	Q.	Esquema	Comp. (cm)	Total (cm)	Vol. (cc)	ASA-600 (g)
F 1	1	ø10	4		1075	4390	28.5	
	2	ø10	4		125	597	4.3	
	3	ø10	4		1540	2080	12.4	
	4	ø10	4		178	47	0.8	
	5	ø10	4		58	1434	92.5	
	6	ø5	35					74.8
F 2	1	ø10	4		1075	4390	28.5	
	2	ø10	4		125	597	4.3	
	3	ø10	4		1540	2080	12.4	
	4	ø10	4		178	47	0.8	
	5	ø10	4		58	1434	92.5	
	6	ø5	100					18.1
					Total=1075		54.6	13.9
					ø5 = 100		0.8	0.8



Resumo Aço Desenho de vigas	Comp. total (m)	Peso+10% (kg)	Total
CA-50 $\phi 10$	180.2	122	122
CA-60 $\phi 5$	258.7	45	45
Total			167

Modelo		Data:
		05/02/2024
Assunto		Número da Despesa
Compra de 2000		
Previsão		
Projeto Educacional - Artigo 40º		Indicador Indicado
Educação Suplementar Infantil Experiência com Número de CREA: 1220503037		Data 05/02/2024

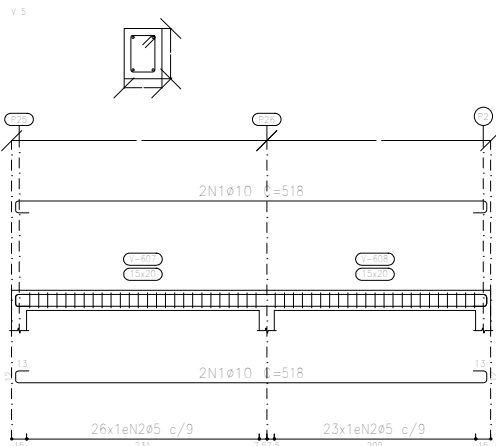
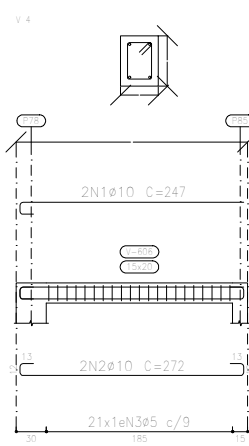
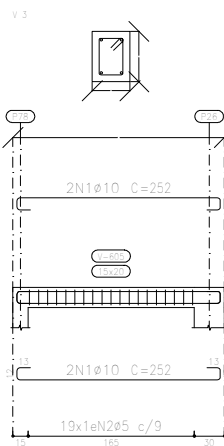
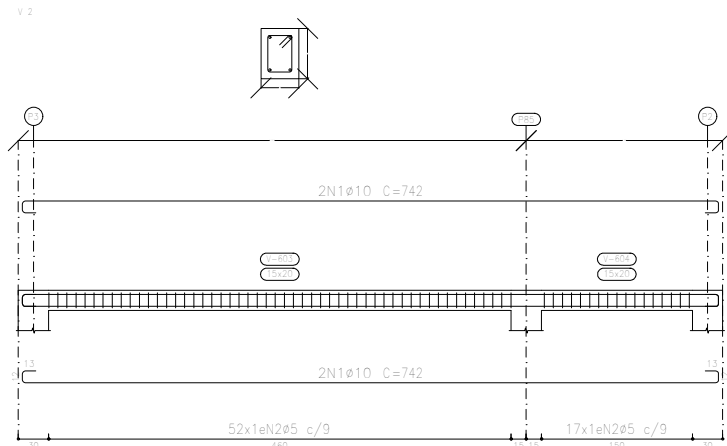
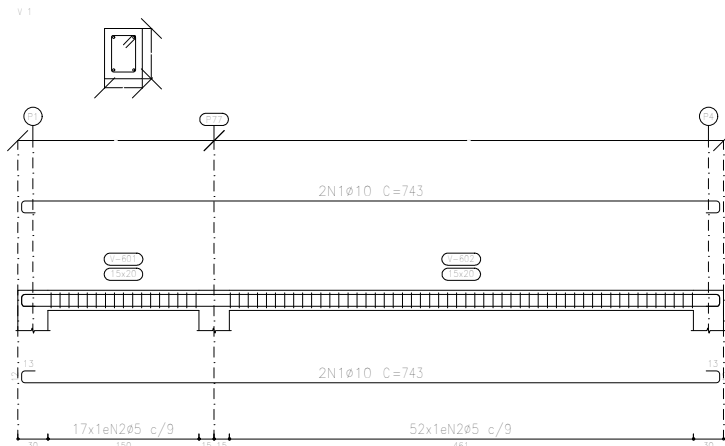
Elemento	Peso (ton)	Dim. Q (m)	Esquema (cm)	Comp. (cm)	Total (cm)	50% (kg)	2-40 (kg)	
V 1	1	±10		1545	2500	10,3		
	2	±10		570	1240	10,0		
	3	±10		570	1240	10,0		
	4	±10		1027	2054	10,7		
	5	±10		517	1874	10,5		
	6	±10		531	209	6,1		
	7	±5	240		58	140,56		20,0
V 2	1	±10		1545	2500	10,3	24,0	
	2	±10		580	1240	10,0		
	3	±10		580	1240	10,0		
	4	±10		1027	2054	10,7		
	5	±10		562	1524	11,0		
	6	±5	150		58	11542		18,1
						±10	54,8	10,3
						±10	40,0	44,1
						±10	122,3	44,1
						±10	122,3	44,1



Resumo Aço Desenho de vigas	Comp. total (m)	Peso+10% (kg)	Total
CA-50 $\phi 10$	179.9	122	122
CA-60 $\phi 5$	255.8	44	44
Total			166

Piso 5
Desenho de vigas
Concreto: C25, em geral
Aço das barras: CA-50 e CA-60
Aço das estribos: CA-50 e CA-60
Escala vigas 1:50
Escala seções 1:20
Escala aberturas 1:50

Modelo		Data: 05/01/2008	
Local: Campus de Jussara		Número de inscrição:	
Previdência:			
Título Eleitoral - Artigo 40 (Art)			
Eleitor: Karginson Ivoelli Logradouro: Cal. Número do CEP: 12200-003		Data: 05/01/2008	



Plano 6
Desenho de vigas
Concreto: C25, em geral
Aço das barras: CA-50 e CA-60
Aço dos estribos: CA-50 e CA-60
Escala vigas 1:50
Escala seções 1:20
Escala aberturas 1:50

Resumo Aço	Comp. total	Peso+10%	Total
Desenho de vigas	(m)	(kg)	
CA-50 ϕ 10	100,6	68	68
CA-60 ϕ 5	131,7	23	23
Total			91

Elemento	Pos.	Diam.	Q.	Esquema	Comp.	Tota	CA-50	CA-60
(cm)				(cm)	(cm)	(kg)	(kg)	(kg)
V 1	1	ϕ 10			363	2372	18,3	
	2	ϕ 5			58	4002		6,3
V 2	1	ϕ 10			362	2368	18,3	
	2	ϕ 5			58	4002		6,3
V 3	1	ϕ 10			352	1058	8,2	
	2	ϕ 5	1,0		58	1102		1,3
V 4	1	ϕ 10			347	434	3,0	
	2	ϕ 10			372	544	3,5	
	3	ϕ 5	3,1		58	1218		1,3
V 5	1	ϕ 10			518	2872	12,0	
	2	ϕ 5	4,5		58	2842		4,5
							CA-50	CA-60
							18,3	22,8
							68,3	6,3
							Total	91,1

Modelo	Data
Local	05/02/2028
Compro de Jato	
Proceder	
Projeto Estrutural - Abrigo Alcan	Indicada
Proceder Removido Tabela	05/02/2028
Edgarhara Cui	
Numero do C.A.A.	1225010197



Quantidades da obra

Notas:

Barras: Os valores indicados têm incluídas as perdas.

Superfície total: Foram deduzidas as aberturas de superfície maior que 0.00 m².

Fundação

Elemento	Fôrmas (m²)	Volume (m³)	Barras (kg)
Zapatas isoladas	71.64	13.593	687
Total	-	13.593	687

Piso 1

Elemento	Fôrmas (m²)	Superfície (m²)	Volume (m³)	Barras (kg)
Vigas	107.29	34.08	8.970	972
Pilares	31.04	-	1.550	858
Total	-	34.08	10.520	1830
Índices (por m²)	-	-	0.281	48.96
Superfície total: 37.38 m²				

Piso 2

Elemento	Fôrmas (m²)	Superfície (m²)	Volume (m³)	Barras (kg)
Vigas	34.11	12.79	2.960	390
Pilares	107.84	-	5.340	259
Total	-	12.79	8.300	649
Índices (por m²)	-	-	0.516	40.34
Superfície total: 16.09 m²				

Piso 3

Elemento	Fôrmas (m²)	Volume (m³)	Barras (kg)
Pilares	41.82	2.090	68
Total	-	2.090	68
Índices (por m²)	-	0.633	20.61
Superfície total: 3.30 m²			

Piso 4

Elemento	Fôrmas (m²)	Superfície (m²)	Volume (m³)	Barras (kg)
Vigas	15.48	5.80	1.310	167
Vigas inclinadas	12.87	3.22	0.970	183
Pilares	0.00	-	-	-
Total	-	9.02	2.280	350
Índices (por m²)	-	-	0.209	32.05
Superfície total: 10.92 m²				



Quantidades da obra

Piso 5

Elemento	Fôrmas (m ²)	Superfície (m ²)	Volume (m ³)	Barras (kg)
Vigas	16.58	6.22	1.310	166
Vigas inclinadas	2.62	0.66	0.200	36
Pilares	1.67	-	0.080	9
Total	-	6.88	1.590	211
Índices (por m²)	-	-	0.202	26.81
Superfície total: 7.87 m²				

Piso 6

Elemento	Fôrmas (m ²)	Superfície (m ²)	Volume (m ³)	Barras (kg)
Vigas	8.01	3.01	0.700	91
Pilares	0.64	-	0.030	6
Total	-	3.01	0.730	97
Índices (por m²)	-	-	0.214	28.45
Superfície total: 3.41 m²				

Total obra

Elemento	Fôrmas (m ²)	Volume (m ³)	Barras (kg)
Zapatas isoladas	71.64	13.590	687
Total	-	13.590	687

Elemento	Fôrmas (m ²)	Superfície (m ²)	Volume (m ³)	Barras (kg)
Vigas	181.47	61.90	15.250	1786
Vigas inclinadas	15.49	3.88	1.170	219
Pilares	183.01	-	9.090	1200
Total	-	65.78	25.510	3205
Índices (por m²)	-	-	0.323	40.59
Superfície total: 78.97 m²				



Quantidades de armadura, por diâmetro

Notas:

Peso: Os valores indicados têm incluídas as perdas.

Fundação

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Zapatas isoladas	CA-50	Ø6.3	147.36	36
		Ø10	526.82	325
		Ø12.5	273.36	263
		Total + 0%		624

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Resumo	CA-50	Ø6.3	147.36	36
		Ø10	526.82	325
		Ø12.5	273.36	263
		Total + 0%		624

Piso 1

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Vigas de concreto	CA-60	Ø5	1389.30	218
		Total + 0%		218
	CA-50	Ø10	1080.53	666
		Total + 0%		666
Pilares em concreto	CA-50	Ø6.3	326.10	80
		Ø10	1074.26	662
		Ø12.5	39.20	38
		Total + 0%		780

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Resumo	CA-60	Ø5	1389.30	218
		Total + 0%		218
	CA-50	Ø6.3	326.10	80
		Ø10	2154.79	1328
		Ø12.5	39.20	38
		Total + 0%		1446



Quantidades de armadura, por diâmetro

Piso 2

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Vigas de concreto	CA-60	Ø5	560.28	88
		Total + 0%		88
	CA-50	Ø10	431.96	266
		Total + 0%		266
Pilares em concreto	CA-50	Ø6.3	720.50	176
		Ø10	96.00	59
		Total + 0%		235

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Resumo	CA-60	Ø5	560.28	88
		Total + 0%		88
	CA-50	Ø6.3	720.50	176
		Ø10	527.96	325
		Total + 0%		501

Piso 3

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Pilares em concreto	CA-50	Ø6.3	252.73	62
		Total + 0%		62

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Resumo	CA-50	Ø6.3	252.73	62
		Total + 0%		62

Piso 4

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Vigas de concreto	CA-60	Ø5	258.68	41
		Total + 0%		41
	CA-50	Ø10	180.24	111
		Total + 0%		111
Vigas inclinadas	CA-50	Ø6.3	290.40	71
		Ø12.5	99.20	96
		Total + 0%		167



Quantidades de armadura, por diâmetro

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Resumo	CA-60	Ø5	258.68	41
		Total + 0%		41
	CA-50	Ø6.3	290.40	71
		Ø10	180.24	111
		Ø12.5	99.20	96
		Total + 0%		278

Piso 5

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Vigas de concreto	CA-60	Ø5	255.78	40
		Total + 0%		40
	CA-50	Ø10	179.92	111
		Total + 0%		111
Vigas inclinadas	CA-50	Ø6.3	58.40	14
		Ø12.5	18.68	18
		Total + 0%		32
Pilares em concreto	CA-50	Ø6.3	11.39	3
		Ø10	9.40	6
		Total + 0%		9

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Resumo	CA-60	Ø5	255.78	40
		Total + 0%		40
	CA-50	Ø6.3	69.79	17
		Ø10	189.32	117
		Ø12.5	18.68	18
		Total + 0%		152

Piso 6

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Vigas de concreto	CA-60	Ø5	131.66	21
		Total + 0%		21
	CA-50	Ø10	100.56	62
		Total + 0%		62
Pilares em concreto	CA-50	Ø6.3	5.36	1
		Ø10	6.80	4
		Total + 0%		5



Quantidades de armadura, por diâmetro

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Resumo	CA-60	Ø5	131.66	21
		Total + 0%		21
	CA-50	Ø6.3	5.36	1
		Ø10	107.36	66
		Total + 0%		67

Total obra

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Zapatas isoladas	CA-50	Ø6.3	147.36	36
		Ø10	526.82	325
		Ø12.5	273.36	263
		Total + 0%		624
Vigas de concreto	CA-60	Ø5	2595.70	408
		Total + 0%		408
	CA-50	Ø10	1973.21	1216
		Total + 0%		1216
Vigas inclinadas	CA-50	Ø6.3	348.80	85
		Ø12.5	117.88	114
		Total + 0%		199
Pilares em concreto	CA-50	Ø6.3	1316.08	322
		Ø10	1186.46	731
		Ø12.5	39.20	38
		Total + 0%		1091

	Tipo de aço	Referência	Comprimento (m)	Peso (kg)
Resumo	CA-50	Ø6.3	1812.24	443
		Ø10	3686.49	2272
		Ø12.5	430.44	415
		Total + 0%		3130
	CA-60	Ø5	2595.70	408
		Total + 0%		408



* Não medidos: Elementos de fundação.

Grupo de Pisos Número 1: Piso 1

Número Pisos Iguais: 1

Superfície total: 37.38 m²

Superfície total pavto: 0.00 m²

Superfície em planta de vigas, vigas de borda e cortinas: 34.08 m²

Superfície lateral de vigas, vigas de borda e cortinas: 107.29 m²

Concreto total em vigas: 8.97 m³

Vigas: 8.97 m³

Volume total lajes: 0.00 m³

Grupo de Pisos Número 2: Piso 2

Número Pisos Iguais: 1

Superfície total: 16.09 m²

Superfície total pavto: 0.00 m²

Superfície em planta de vigas, vigas de borda e cortinas: 12.79 m²

Superfície lateral de vigas, vigas de borda e cortinas: 34.11 m²

Concreto total em vigas: 2.96 m³

Vigas: 2.96 m³

Volume total lajes: 0.00 m³

Grupo de Pisos Número 3: Piso 3

Número Pisos Iguais: 1

Superfície total: 3.30 m²

Superfície total pavto: 0.00 m²

Superfície em planta de vigas, vigas de borda e cortinas: 0.00 m²

Concreto total em vigas: 0.00 m³

Volume total lajes: 0.00 m³

Grupo de Pisos Número 4: Piso 4

Número Pisos Iguais: 1

Superfície total: 10.92 m²

Superfície total pavto: 0.00 m²

Superfície em planta de vigas, vigas de borda e cortinas: 5.80 m²

Superfície lateral de vigas, vigas de borda e cortinas: 15.48 m²

Superfície em planta de vigas inclinadas: 3.22 m²

Superfície lateral de vigas inclinadas: 12.87 m²

Concreto total em vigas: 1.31 m³

Vigas: 1.31 m³

Concreto em vigas inclinadas: 0.97 m³

Volume total lajes: 0.00 m³

Grupo de Pisos Número 5: Piso 5

Número Pisos Iguais: 1

Superfície total: 7.87 m²

Superfície total pavto: 0.00 m²

Superfície em planta de vigas, vigas de borda e cortinas: 6.22 m²

Superfície lateral de vigas, vigas de borda e cortinas: 16.58 m²

Superfície em planta de vigas inclinadas: 0.66 m²

Superfície lateral de vigas inclinadas: 2.62 m²

Concreto total em vigas: 1.31 m³

Vigas: 1.31 m³

Concreto em vigas inclinadas: 0.20 m³

Volume total lajes: 0.00 m³



Quantitativos de superfícies e volumes

Modelo

Data: 05/02/26

Grupo de Pisos Número 6: Piso 6

Número Pisos Iguais: 1

Superfície total: 3.41 m²

Superfície total pavimento: 0.00 m²

Superfície em planta de vigas, vigas de borda e cortinas: 3.01 m²

Superfície lateral de vigas, vigas de borda e cortinas: 8.01 m²

Concreto total em vigas: 0.70 m³

Vigas: 0.70 m³

Volume total lajes: 0.00 m³



Quantitativos de superfícies e volumes

Modelo

Data: 05/02/26

* Não medidos: Elementos de fundação.

Resumo total obra

Superfície total: 78.97 m²

Superfície total pavto: 0.00 m²

Superfície em planta de vigas, vigas de borda e cortinas: 61.90 m²

Superfície lateral de vigas, vigas de borda e cortinas: 181.47 m²

Superfície em planta de vigas inclinadas: 3.88 m²

Superfície lateral de vigas inclinadas: 15.49 m²

Concreto total em vigas: 15.25 m³

Vigas: 15.25 m³

Concreto em vigas inclinadas: 1.17 m³

Volume total lajes: 0.00 m³