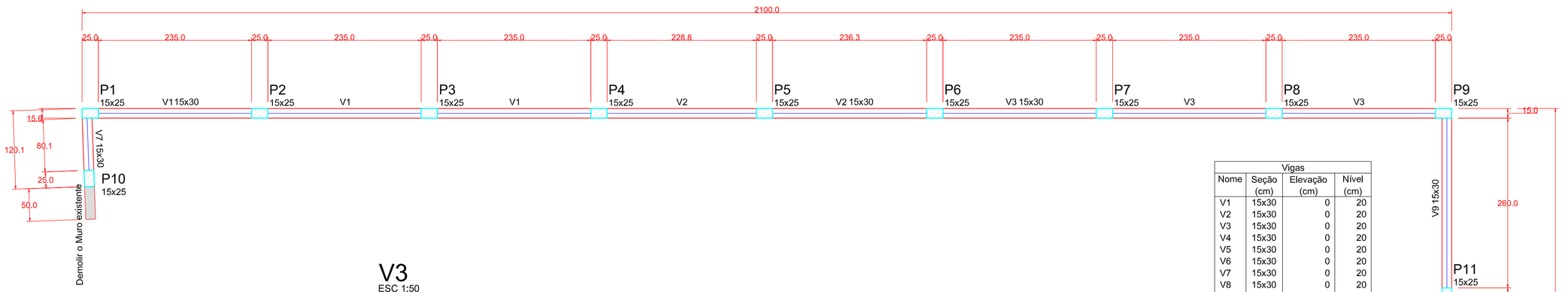
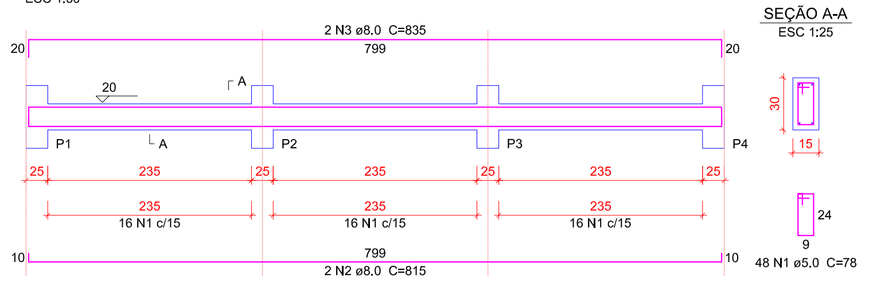


Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x30	0	20
V2	15x30	0	20
V3	15x30	0	20
V4	15x30	0	20
V5	15x30	0	20
V6	15x30	0	20
V7	15x30	0	20
V8	15x30	0	20
V9	15x30	0	20

Características dos materiais	
fck (kgf/cm²)	Ecs (kgf/cm²)
250	238000

Dimensão máxima do agregado = 19 mm

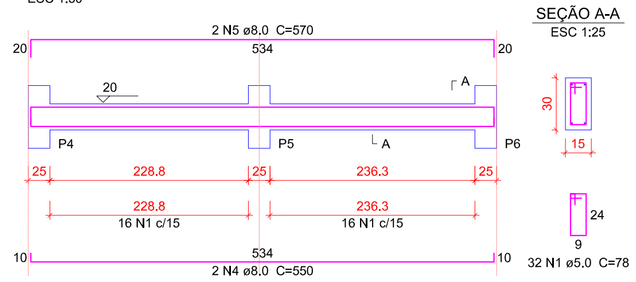
V1
ESC 1:50



SEÇÃO A-A
ESC 1:25

48 N1 ø5.0 C=78

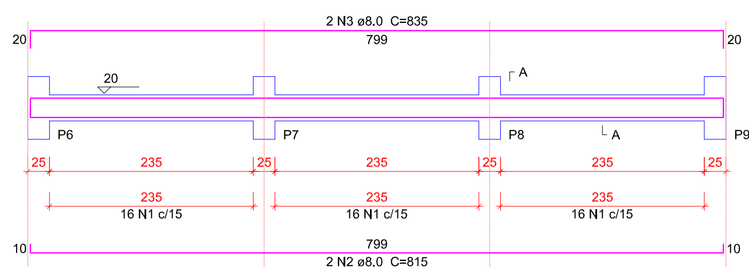
V2
ESC 1:50



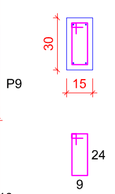
SEÇÃO A-A
ESC 1:25

32 N1 ø5.0 C=78

V3
ESC 1:50

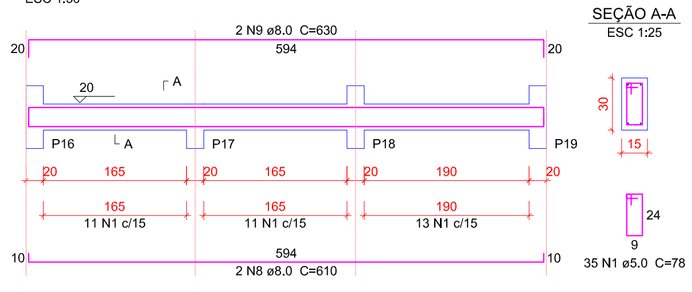


SEÇÃO A-A
ESC 1:25



48 N1 ø5.0 C=78

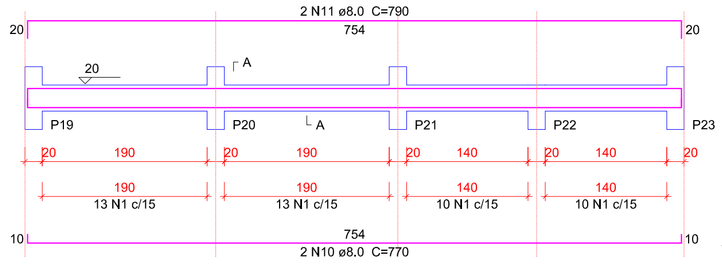
V4
ESC 1:50



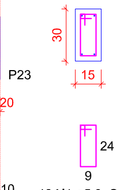
SEÇÃO A-A
ESC 1:25

35 N1 ø5.0 C=78

V5
ESC 1:50

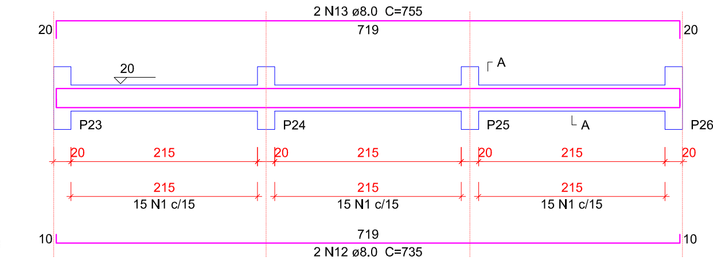


SEÇÃO A-A
ESC 1:25

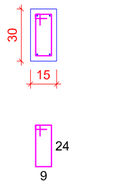


46 N1 ø5.0 C=78

V6
ESC 1:50

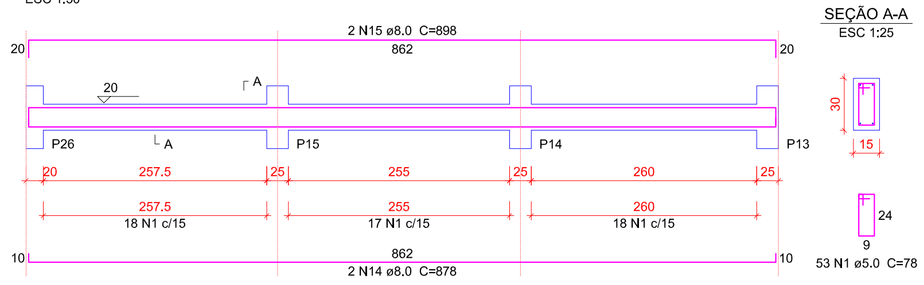


SEÇÃO A-A
ESC 1:25



45 N1 ø5.0 C=78

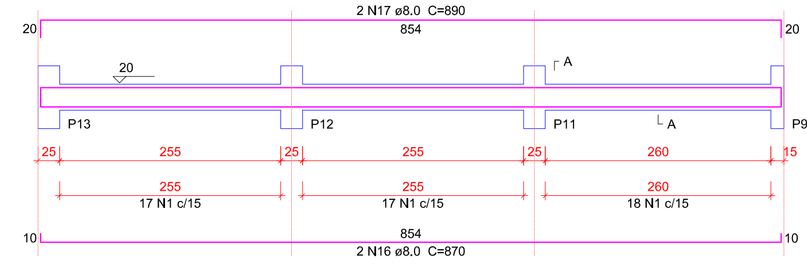
V8
ESC 1:50



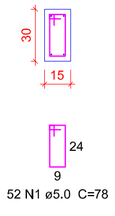
SEÇÃO A-A
ESC 1:25

53 N1 ø5.0 C=78

V9
ESC 1:50

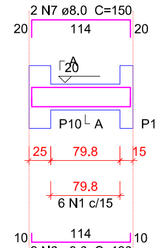


SEÇÃO A-A
ESC 1:25

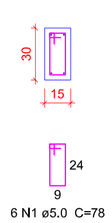


52 N1 ø5.0 C=78

V7
ESC 1:50



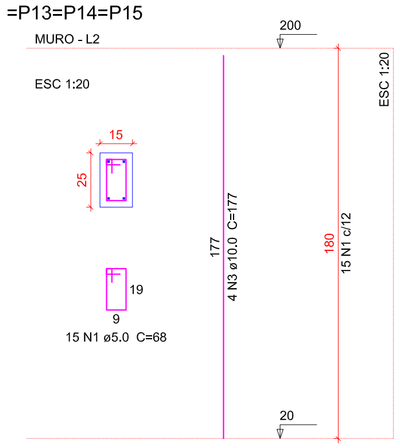
SEÇÃO A-A
ESC 1:25



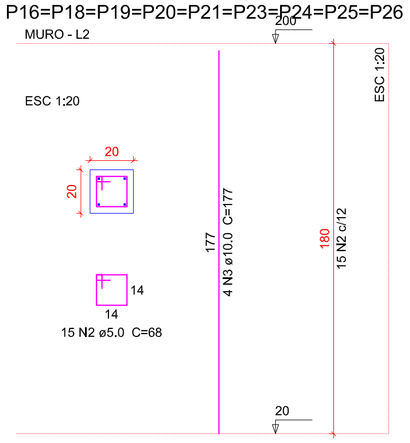
6 N1 ø5.0 C=78

Vigas Baldrame escala 1:50

P1=P2=P3=P4=P5=P6=P7=P8=P9=P10=P11=P12 =P13=P14=P15



P16=P18=P19=P20=P21=P23=P24=P25=P26



Pilares escala 1:50

Relação do aço

15xP1 9xP16

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	225	68	15300
	2	5.0	135	68	9180
CA50	3	10.0	96	177	16992

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	10.0	170	115.2
CA60	5.0	244.8	41.5
PESO TOTAL (kg)			
CA50	115.2		
CA60	41.5		

Volume de concreto (C-25) = 1,66 m³
Área de forma = 34,56 m²

Relação do aço

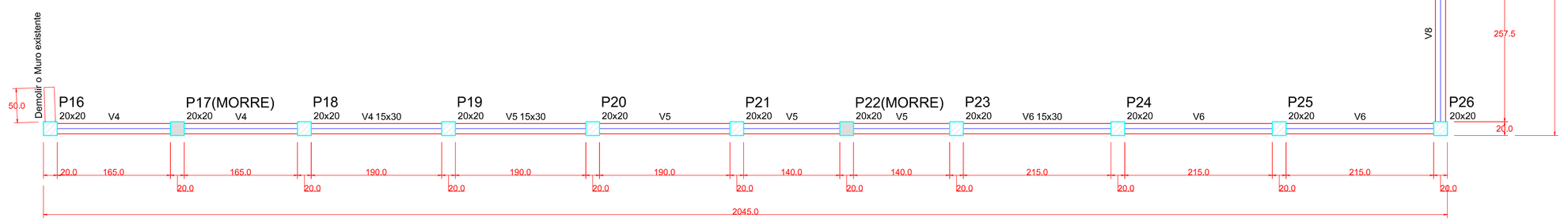
V1 V2 V3
V4 V5 V6
V7 V8 V9

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	365	78	28470
CA50	2	8.0	4	815	3260
	3	8.0	4	835	3340
	4	8.0	2	550	1100
	5	8.0	2	570	1140
	6	8.0	2	130	260
	7	8.0	2	150	300
	8	8.0	2	610	1220
	9	8.0	2	630	1260
	10	8.0	2	770	1540
	11	8.0	2	790	1580
	12	8.0	2	735	1470
	13	8.0	2	755	1510
	14	8.0	2	878	1756
	15	8.0	2	898	1796
	16	8.0	2	870	1740
	17	8.0	2	890	1780

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8.0	250,6	108.7
CA60	5.0	284,7	48.3
PESO TOTAL (kg)			
CA50	108.7		
CA60	48.3		

Volume de concreto (C-25) = 2.74 m³
Área de forma = 45.62 m²



Forma das Vigas Baldrame escala 1:50

PREFEITURA MUNICIPAL DE PARANAGUÁ
SECRETARIA MUNICIPAL DE PLANEJAMENTO E GESTÃO
ADMINISTRAÇÃO MARCELO ELIAS ROQUE

TÍTULO	PROJETO ESTRUTURAL
OBRA	SEDE ADMINISTRATIVA ILHA DOS VALADARES
CONTEÚDO	FORMA E VIGA BALDRAME E PILARES DO MURO
AUTOR DO PROJETO	RUY JOSÉ RIBEIRO CREA PR-18.036/D
PROPRIETÁRIO	MUNICÍPIO DE PARANAGUÁ PREFEITO MARCELO ELIAS ROQUE
DATA	MARÇO/2019
ESCALA	INDICADA
DESENHO	Ruy
ÁREA	135,83m²
PRANCHA	07/07