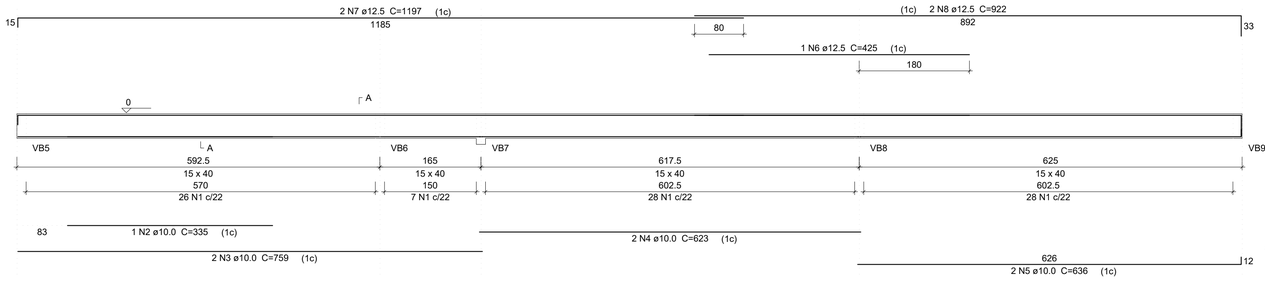
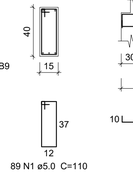
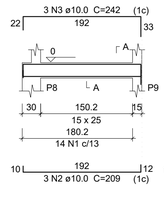
VB1
ESC 1:50



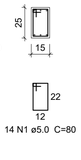
SEÇÃO A-A
ESC 1:25



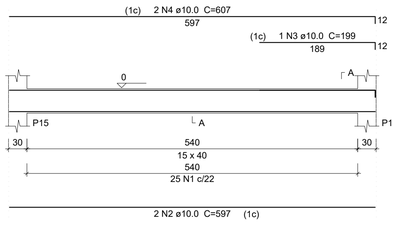
VB2
ESC 1:50



SEÇÃO A-A
ESC 1:25

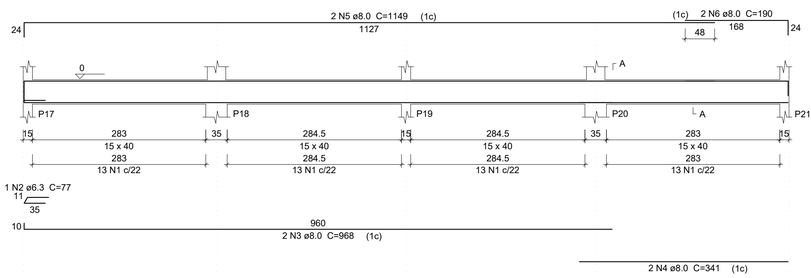


VB3
ESC 1:50



SEÇÃO A-A
ESC 1:25

VB4
ESC 1:50



SEÇÃO A-A
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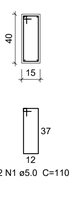
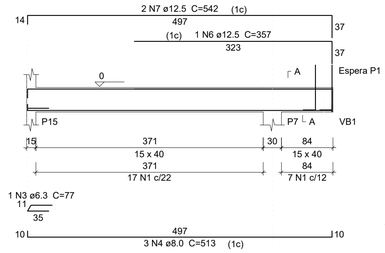
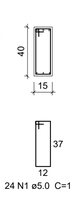


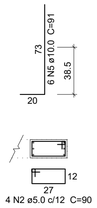
VB5
ESC 1:50



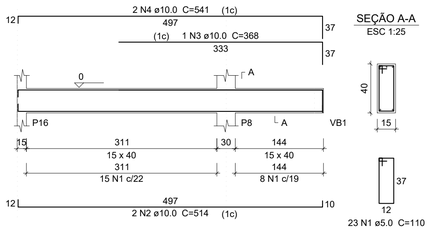
SEÇÃO A-A
ESC 1:25



ESPERA P1
ESC 1:25

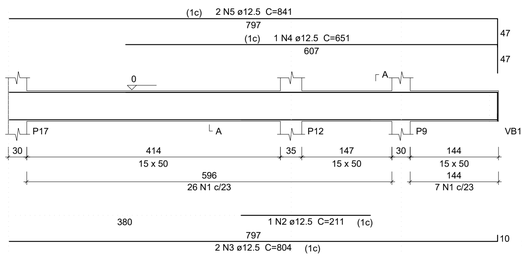


VB6
ESC 1:50

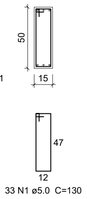


SEÇÃO A-A
ESC 1:25

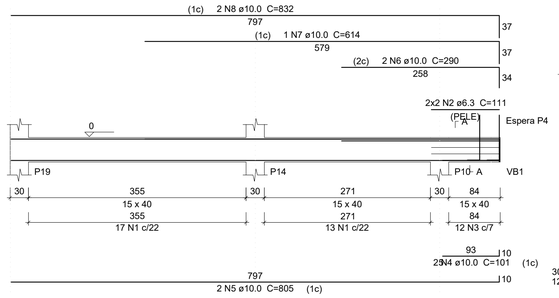
VB7
ESC 1:50



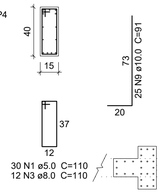
SEÇÃO A-A
ESC 1:25



VB8
ESC 1:50

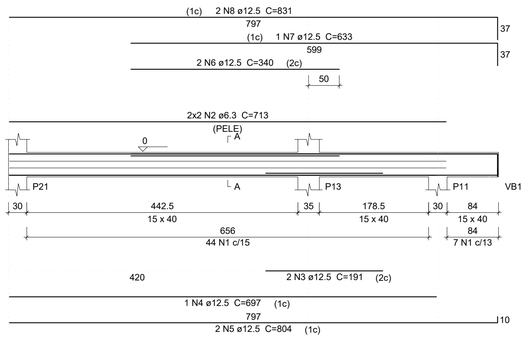


SEÇÃO A-A
ESC 1:25

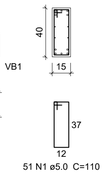


ESPERA P4
ESC 1:25

VB9
ESC 1:50



SEÇÃO A-A
ESC 1:25



Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
VB1	15x40	0	0
VB2	15x25	0	0
VB3	15x40	0	0
VB4	15x40	0	0
VB5	15x40	0	0
VB6	15x40	0	0
VB7	15x50	0	0
VB8	15x40	0	0
VB9	15x40	0	0

Características dos materiais

Elemento	fck (kgf/cm²)	Ecs (kgf/cm²)
Vigas	300	260716
Pilares	300	260716
Sapatas	250	238000

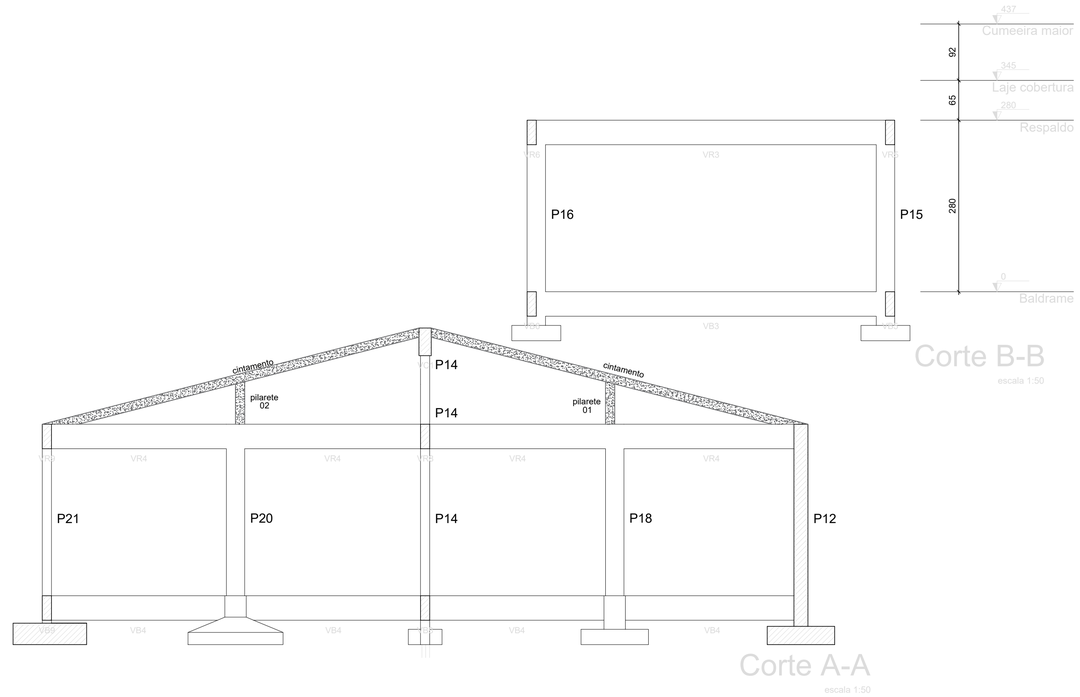
Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	34.5	9.3
	8.0	81.6	35.4
	10.0	183	124.1
	12.5	159.2	168.7
CA60	5.0	381.1	64.6
PESO TOTAL			
CA50	337.5		
CA60	64.6		

Vol. de concreto total (C-30) = 4.54 m³
Área de forma total = 71.74 m²

Relação do aço

ELEMENTO	AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
VB1	CA60	1	5.0	89	110	9790
	CA50	2	10.0	1	335	335
	CA50	3	10.0	2	759	1518
	CA50	4	10.0	2	623	1246
	CA50	5	10.0	2	636	1272
	CA50	6	12.5	1	425	425
	CA50	7	12.5	2	1197	2394
	CA50	8	12.5	2	922	1844
VB2	CA60	1	5.0	14	80	1120
	CA50	2	10.0	3	209	627
	CA50	3	10.0	3	242	726
VB3	CA60	1	5.0	25	110	2750
	CA50	2	10.0	2	597	1194
	CA50	3	10.0	1	199	199
	CA50	4	10.0	2	607	1214
VB4	CA60	1	5.0	52	110	5720
	CA50	2	6.3	1	77	77
	CA50	3	8.0	2	968	1936
	CA50	4	8.0	2	341	682
	CA50	5	8.0	2	1149	2298
	CA50	6	8.0	2	190	380
VB5	CA60	1	5.0	24	110	2640
	CA60	2	5.0	4	90	360
	CA50	3	6.3	1	77	77
	CA50	4	8.0	3	513	1539
	CA50	5	10.0	6	91	546
	CA50	6	12.5	1	357	357
	CA50	7	12.5	2	542	1084
VB6	CA60	1	5.0	23	110	2530
	CA50	2	10.0	2	514	1028
	CA50	3	10.0	1	368	368
	CA50	4	10.0	2	541	1082
VB7	CA60	1	5.0	33	130	4290
	CA50	2	12.5	1	211	211
	CA50	3	12.5	2	804	1608
	CA50	4	12.5	1	651	651
	CA50	5	12.5	2	841	1682
VB8	CA60	1	5.0	30	110	3300
	CA50	2	6.3	4	111	444
	CA50	3	8.0	12	110	1320
	CA50	4	10.0	2	101	202
	CA50	5	10.0	2	805	1610
	CA50	6	10.0	2	290	580
	CA50	7	10.0	1	614	614
	CA50	8	10.0	2	832	1664
	CA50	9	10.0	25	91	2275
VB9	CA60	1	5.0	51	110	5610
	CA50	2	6.3	4	713	2852
	CA50	3	12.5	2	191	382
	CA50	4	12.5	1	697	697
	CA50	5	12.5	2	804	1608
	CA50	6	12.5	2	340	680
	CA50	7	12.5	1	633	633
	CA50	8	12.5	2	831	1662



ESTRUTURA DE CONCRETO

Anotações

Documento assinado digitalmente
JULIANO DE LIMA
Data: 12/09/2025 17:00:06-0300
Verifique em https://validar.iti.gov.br

JULIANO DE LIMA
Engenheiro Civil | CREA/SC 147.428-0
Responsável Técnico

TRANS GABRIELLI LTDA
Engenharia e Transportes
CREA/SC 150.789-5

Proprietário
MUNICIPIO DE MARMELEIRO/PR

Projeto
Ampliação Salas de Aula Escola Municipal Perseverança

Área
132,61m²

Endereço
Rua das Grápias nº160, Bairro Araucária, Marmeleiro - PR

Conteúdo da prancha
ESTRUTURA DE CONCRETO ARMADO
-Detalhes das Vigas do Pavimento "Baldrame"
-Corte A-A da Estrutura
-Corte B-B da Estrutura

Data
Junho/2020

Escala
Indicada

Prancha
EC01
de 05

Responsável Técnico
JULIANO DE LIMA
Engenheiro Civil - CREA/SC 147.428-0

Proprietário
MUNICÍPIO DE MARMELEIRO - PR
CNPJ:76.205.665/0001-01
Jaimir Darci Gomes da Rosa - Prefeito