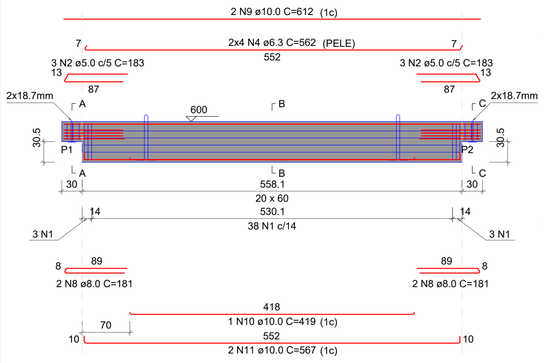
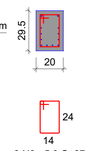
V1 (20 x 60)

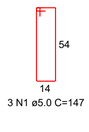
ESC 1:50



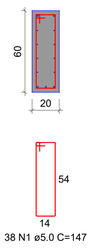
SEÇÃO A-A
ESC 1:25



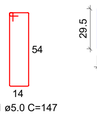
SUSPENSÃO A-A
ESC 1:25



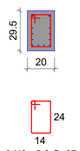
SEÇÃO B-B
ESC 1:25



SUSPENSÃO C-C
ESC 1:25



SEÇÃO C-C
ESC 1:25



Relação das alças de içamento				
Qtde.	Aço	ø (mm)	C. Anc. (cm)	C. Unit. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V1	CA60	1	5.0	44	147	6468
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	4	6.3	8	562	4496
	CA50	8	8.0	4	181	724
	CA50	9	10.0	2	612	1224
	CA50	10	10.0	1	419	419
	CA50	11	10.0	2	567	1134

RESUMO DO AÇO

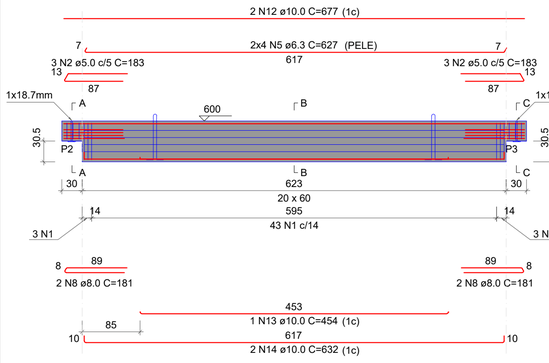
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	45	5	12.1
	8.0	7.2	1	3.1
	10.0	27.8	3	18.8
CA60	5.0	80.9	8	13.7

PESO TOTAL (kg)	
CA50	34.1
CA60	13.7

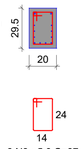
Volume de concreto (C-40) = 0.71 m³
Peso total da peça = 1762.89 kg
Área de forma = 0.00 m²

V2 (20 x 60)

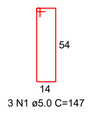
ESC 1:50



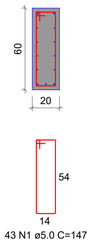
SEÇÃO A-A
ESC 1:25



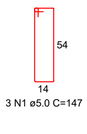
SUSPENSÃO A-A
ESC 1:25



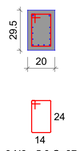
SEÇÃO B-B
ESC 1:25



SUSPENSÃO C-C
ESC 1:25



SEÇÃO C-C
ESC 1:25



Relação das alças de içamento				
Qtde.	Aço	ø (mm)	C. Anc. (cm)	C. Unit. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V2	CA60	1	5.0	49	147	7203
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	5	6.3	8	627	5016
	CA50	6	8.0	4	181	724
	CA50	12	10.0	2	677	1354
	CA50	13	10.0	1	454	454
	CA50	14	10.0	2	632	1264

RESUMO DO AÇO

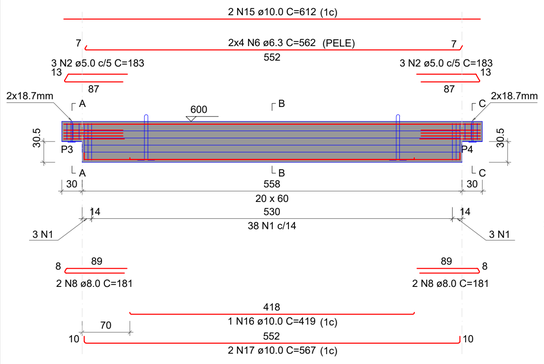
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	50.2	5	13.5
	8.0	7.2	1	3.1
	10.0	30.7	3	20.8
CA60	5.0	88.2	9	15

PESO TOTAL (kg)	
CA50	37.5
CA60	15

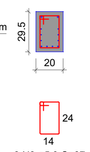
Volume de concreto (C-40) = 0.78 m³
Peso total da peça = 1957.50 kg
Área de forma = 0.00 m²

V3 (20 x 60)

ESC 1:50



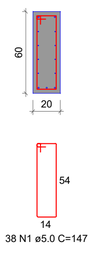
SEÇÃO A-A
ESC 1:25



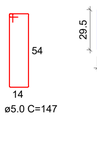
SUSPENSÃO A-A
ESC 1:25



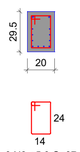
SEÇÃO B-B
ESC 1:25



SUSPENSÃO C-C
ESC 1:25



SEÇÃO C-C
ESC 1:25



Relação das alças de içamento				
Qtde.	Aço	ø (mm)	C. Anc. (cm)	C. Unit. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V3	CA60	1	5.0	44	147	6468
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	6	6.3	8	562	4496
	CA50	8	8.0	4	181	724
	CA50	15	10.0	2	612	1224
	CA50	16	10.0	1	419	419
	CA50	17	10.0	2	567	1134

RESUMO DO AÇO

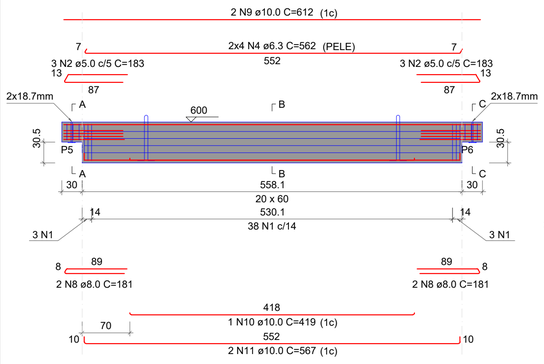
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	45	5	12.1
	8.0	7.2	1	3.1
	10.0	27.8	3	18.8
CA60	5.0	80.9	8	13.7

PESO TOTAL (kg)	
CA50	34.1
CA60	13.7

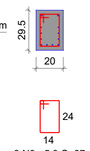
Volume de concreto (C-40) = 0.70 m³
Peso total da peça = 1762.50 kg
Área de forma = 0.00 m²

V4 (20 x 60)

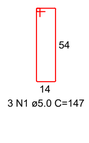
ESC 1:50



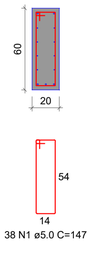
SEÇÃO A-A
ESC 1:25



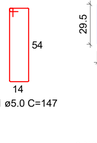
SUSPENSÃO A-A
ESC 1:25



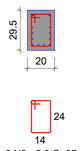
SEÇÃO B-B
ESC 1:25



SUSPENSÃO C-C
ESC 1:25



SEÇÃO C-C
ESC 1:25



Relação das alças de içamento				
Qtde.	Aço	ø (mm)	C. Anc. (cm)	C. Unit. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V4	CA60	1	5.0	44	147	6468
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	4	6.3	8	562	4496
	CA50	8	8.0	4	181	724
	CA50	9	10.0	2	612	1224
	CA50	10	10.0	1	419	419
	CA50	11	10.0	2	567	1134

RESUMO DO AÇO

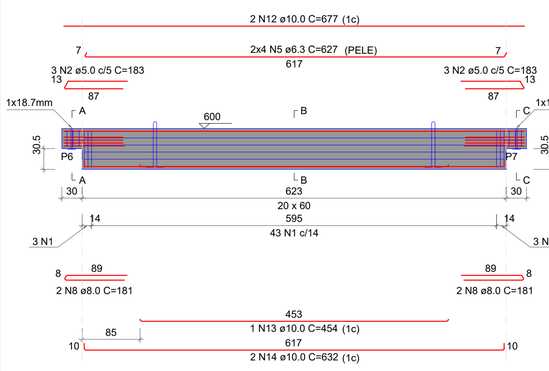
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	45	5	12.1
	8.0	7.2	1	3.1
	10.0	27.8	3	18.8
CA60	5.0	80.9	8	13.7

PESO TOTAL (kg)	
CA50	34.1
CA60	13.7

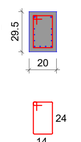
Volume de concreto (C-40) = 0.71 m³
Peso total da peça = 1762.89 kg
Área de forma = 0.00 m²

V5 (20 x 60)

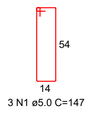
ESC 1:50



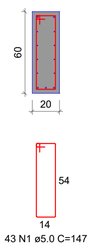
SEÇÃO A-A
ESC 1:25



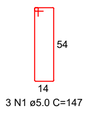
SUSPENSÃO A-A
ESC 1:25



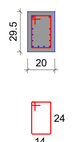
SEÇÃO B-B
ESC 1:25



SUSPENSÃO C-C
ESC 1:25



SEÇÃO C-C
ESC 1:25



Relação das alças de içamento				
Qtde.	Aço	ø (mm)	C. Anc. (cm)	C. Unit. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V5	CA60	1	5.0	49	147	7203
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	5	6.3	8	627	5016
	CA50	12	10.0	2	677	1354
	CA50	13	10.0	1	454	454
	CA50	14	10.0	2	632	1264

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	50.2	5	13.5
	8.0	7.2	1	3.1
	10.0	30.7	3	20.8
CA60	5.0	88.2	9	15

PESO TOTAL (kg)	
CA50	37.5
CA60	15

Volume de concreto (C-40) = 0.78 m³
Peso total da peça = 1957.50 kg
Área de forma = 0.00 m²

RELAÇÃO DO AÇO

V1 V2 V3
V4 V5 V6
V7 V8

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	364	147	53508
	2	5.0	48	183	8784
	3	5.0	48	87	4176
CA50	4	6.3	16	562	8992
	5	6.3	16	627	10032
	6	6.3	16	562	8992
	7	6.3	16	567	9072
	8	8.0	32	181	5792
	9	10.0	4	612	2448
	10	10.0	2	419	838
	11	10.0	4	567	2268
	12	10.0	4	677	2708
	13	10.0	2	454	908
	14	10.0	4	632	2528
	15	10.0	4	612	2448
	16	10.0	2	419	838
	17	10.0	4	567	2268
	18	10.0	4	617	2468
	19	10.0	2	424	848
	20	10.0	4	572	2288

RESUMO DO AÇO

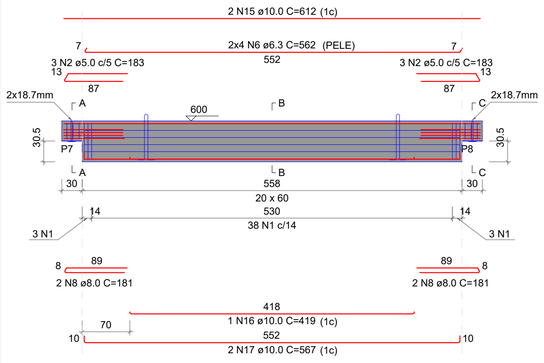
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	370.9	34	99.8
	8.0	57.9	6	25.1
	10.0	228.6	21	155
CA60	5.0	664.7	61	112.7

PESO TOTAL (kg)	
CA50	280
CA60	112.7

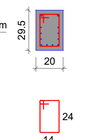
Volume de concreto (C-40) = 5.81 m³
Área de forma = 0.00 m²

V6 (20 x 60)

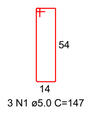
ESC 1:50



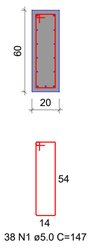
SEÇÃO A-A
ESC 1:25



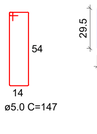
SUSPENSÃO A-A
ESC 1:25



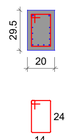
SEÇÃO B-B
ESC 1:25



SUSPENSÃO C-C
ESC 1:25



SEÇÃO C-C
ESC 1:25



Relação das alças de içamento				
Qtde.	Aço	ø (mm)	C. Anc. (cm)	C. Unit. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V6	CA60	1	5.0	44	147	6468
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	8	8.0	4	181	724
	CA50	15	10.0	2	612	1224
	CA50	16	10.0	1	419	419
	CA50	17	10.0	2	567	1134

RESUMO DO AÇO

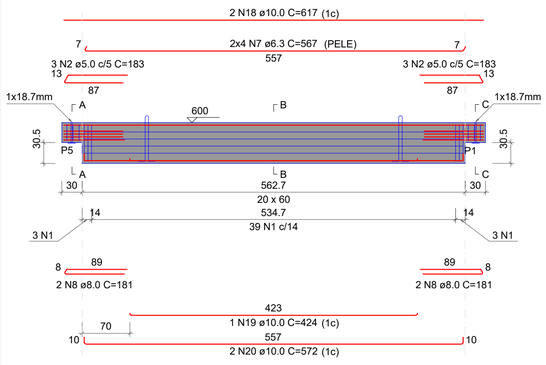
AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	45	5	12.1
	8.0	7.2	1	3.1
	10.0	27.8	3	18.8
CA60	5.0	80.9	8	13.7

PESO TOTAL (kg)	
CA50	34.1
CA60	13.7

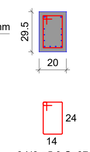
Volume de concreto (C-40) = 0.70 m³
Peso total da peça = 1762.50 kg
Área de forma = 0.00 m²

V7 (20 x 60)

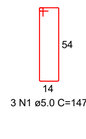
ESC 1:50



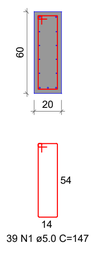
SEÇÃO A-A
ESC 1:25



SUSPENSÃO A-A
ESC 1:25



SEÇÃO B-B
ESC 1:25



SUSPENSÃO C-C
ESC 1:25

SEÇÃO C-C
ESC 1:25

Relação das alças de içamento				
Qtde.	Aço	ø (mm)	C. Anc. (cm)	C. Unit. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V7	CA60	1	5.0	45	147	6615
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	7	6.3	8	567	4536
	CA50	8	8.0	4	181	724
	CA50	18	10.0	2	617	1234
	CA50	19	10.0	1	424	424
	CA50	20	10.0	2	572	1144

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	45.4	5	12.2
	8.0	7.2	1	3.1
	10.0	28	3	19
CA60	5.0	82.4	8	14

PESO TOTAL (kg)	
CA50	34.4
CA60	14

Volume de concreto (C-40) = 0.71 m³
Peso total da peça = 1776.57 kg
Área de forma = 0.00 m²

V8 (20 x 60)

ESC 1:50

SEÇÃO A-A
ESC 1:25

SUSPENSÃO A-A
ESC 1:25

SEÇÃO B-B
ESC 1:25

SUSPENSÃO C-C
ESC 1:25

SEÇÃO C-C
ESC 1:25

Relação das alças de içamento				
Qtde.	Aço	ø (mm)	C. Anc. (cm)	C. Unit. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V8	CA60	1	5.0	45	147	6615
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	8	8.0	4	181	724
	CA50	18	10.0	2	617	1234
	CA50	19	10.0	1	424	424
	CA50	20	10.0	2	572	1144

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	45.4	5	12.2
	8.0	7.2	1	3.1
	10.0	28	3	19
CA60	5.0	82.4	8	14

PESO TOTAL (kg)	
CA50	34.4
CA60	14

Volume de concreto (C-40) = 0.71 m³
Peso total da peça = 1776.57 kg
Área de forma = 0.00 m²

Revisão/Data

ENGEPROSUL ENGENHARIA LTDA
CNPJ: 51.296.229/0001-56
FORQUILHINHA | SC
CREA/SC: 225308-7

RESPONSÁVEL TÉCNICO
JONATAN CARDOSO DE OLIVEIRA -CREA/SC:143410-3
FONE: (51) 92007-1762 | (51)99558-8739

ESTRUTURAL

PROJETO ESTRUTURAL

GOVERNO MUNICIPAL DE CAMPO BOM/RS

SECRETARIA MUNICIPAL DE OBRAS

Obra PAVILHÃO 08

Local RUA NILO PEÇANHA, Nº 715, BAIRRO N (VILA RICA) - CAMPO BOM/RS, CEP 93700-000
QUADRA 29 - LOTE GLEBA 3 - MATRÍCULAS Nº31.396 E 31.397

PROPRIETÁRIO : Município de Campo Bom/RS - CNPJ: 90.832.619/0001-55

DESCRIMINAÇÃO : VIGAS PM PAVIMENTO COBERTURA

RESPONSÁVEL TÉCNICO

JONATAN CARDOSO DE OLIVEIRA
CREA/SC:143410-3

JOSÉ LADISLAU FERREIRA NETO
CAU/RS: A 147969-5

ESC : INDICADA

PRANCHA

E06

PROPRIETÁRIO :
Município de Campo Bom/RS
CNPJ: 90.832.619/0001-55