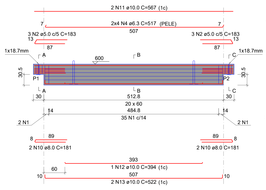
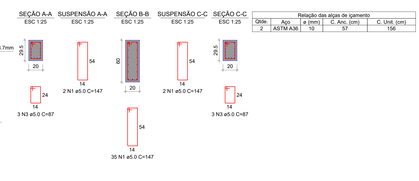
V1 (20 x 60)
ESC 1:50





Qtde.	Aço	a (mm)	C. Anc. (cm)	C. Und. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

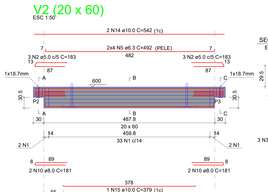
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V1	CA60	1	5.0	39	147	5733
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	4	6.3	8	517	4136
	CA50	10	8.0	4	181	724
	CA50	11	10.0	2	567	1134
	CA50	12	10.0	1	394	394
	CA50	13	10.0	2	522	1044

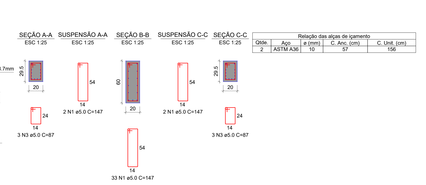
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	41.4	4	11.1
	8.0	7.2	1	3.1
	10.0	25.7	3	17.4
CA60	5.0	73.5	7	12.5
PESO TOTAL (kg)				
CA50	31.7			
CA60	12.5			

Volume de concreto (C-40) = 0.65 m³
Peso total da peça = 1626.93 kg
Área de forma = 0.00 m²

V2 (20 x 60)
ESC 1:50





Qtde.	Aço	a (mm)	C. Anc. (cm)	C. Und. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

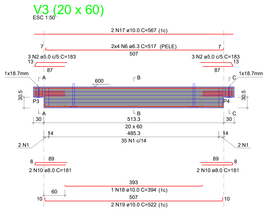
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V2	CA60	1	5.0	37	147	5439
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	5	6.3	8	492	3936
	CA50	10	8.0	4	181	724
	CA50	14	10.0	2	542	1084
	CA50	15	10.0	1	379	379
	CA50	16	10.0	2	497	994

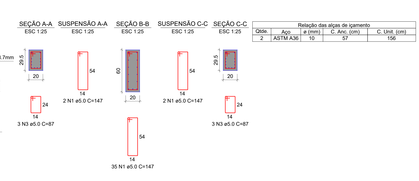
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	39.4	4	10.6
	8.0	7.2	1	3.1
	10.0	24.6	3	16.7
CA60	5.0	70.6	7	12
PESO TOTAL (kg)				
CA50	30.4			
CA60	12			

Volume de concreto (C-40) = 0.62 m³
Peso total da peça = 1551.93 kg
Área de forma = 0.00 m²

V3 (20 x 60)
ESC 1:50





Qtde.	Aço	a (mm)	C. Anc. (cm)	C. Und. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

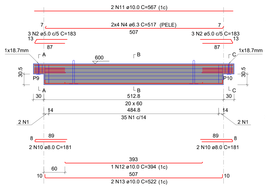
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V3	CA60	1	5.0	39	147	5733
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	6	6.3	8	517	4136
	CA50	10	8.0	4	181	724
	CA50	11	10.0	2	567	1134
	CA50	18	10.0	1	394	394
	CA50	19	10.0	2	522	1044

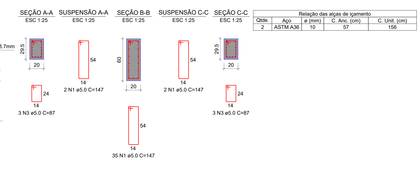
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	41.4	4	11.1
	8.0	7.2	1	3.1
	10.0	25.7	3	17.4
CA60	5.0	73.5	7	12.5
PESO TOTAL (kg)				
CA50	31.7			
CA60	12.5			

Volume de concreto (C-40) = 0.65 m³
Peso total da peça = 1628.46 kg
Área de forma = 0.00 m²

V4 (20 x 60)
ESC 1:50





Qtde.	Aço	a (mm)	C. Anc. (cm)	C. Und. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

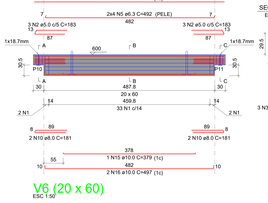
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V4	CA60	1	5.0	39	147	5733
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	4	6.3	8	517	4136
	CA50	10	8.0	4	181	724
	CA50	11	10.0	2	567	1134
	CA50	12	10.0	1	394	394
	CA50	13	10.0	2	522	1044

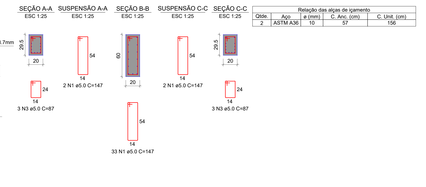
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	41.4	4	11.1
	8.0	7.2	1	3.1
	10.0	25.7	3	17.4
CA60	5.0	73.5	7	12.5
PESO TOTAL (kg)				
CA50	31.7			
CA60	12.5			

Volume de concreto (C-40) = 0.65 m³
Peso total da peça = 1628.93 kg
Área de forma = 0.00 m²

V5 (20 x 60)
ESC 1:50





Qtde.	Aço	a (mm)	C. Anc. (cm)	C. Und. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

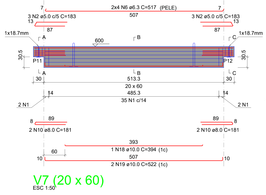
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V5	CA60	1	5.0	37	147	5439
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	5	6.3	8	492	3936
	CA50	10	8.0	4	181	724
	CA50	14	10.0	2	542	1084
	CA50	15	10.0	1	379	379
	CA50	16	10.0	2	497	994

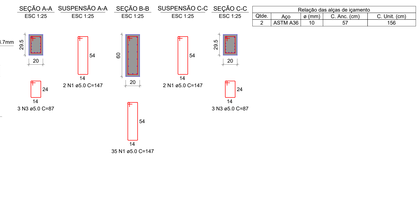
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	39.4	4	10.6
	8.0	7.2	1	3.1
	10.0	24.6	3	16.7
CA60	5.0	70.6	7	12
PESO TOTAL (kg)				
CA50	30.4			
CA60	12			

Volume de concreto (C-40) = 0.62 m³
Peso total da peça = 1551.93 kg
Área de forma = 0.00 m²

V6 (20 x 60)
ESC 1:50





Qtde.	Aço	a (mm)	C. Anc. (cm)	C. Und. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

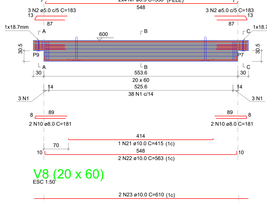
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V6	CA60	1	5.0	39	147	5733
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	6	6.3	8	517	4136
	CA50	10	8.0	4	181	724
	CA50	17	10.0	2	567	1134
	CA50	18	10.0	1	394	394
	CA50	19	10.0	2	522	1044

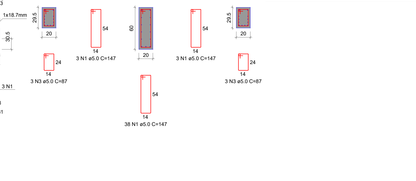
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	41.4	4	11.1
	8.0	7.2	1	3.1
	10.0	25.7	3	17.4
CA60	5.0	73.5	7	12.5
PESO TOTAL (kg)				
CA50	31.7			
CA60	12.5			

Volume de concreto (C-40) = 0.65 m³
Peso total da peça = 1628.46 kg
Área de forma = 0.00 m²

V7 (20 x 60)
ESC 1:50





Qtde.	Aço	a (mm)	C. Anc. (cm)	C. Und. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

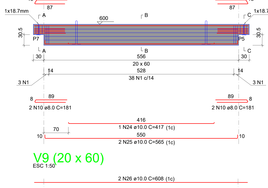
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V7	CA60	1	5.0	44	147	6468
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	7	6.3	8	558	4464
	CA50	10	8.0	4	181	724
	CA50	20	10.0	2	608	1216
	CA50	21	10.0	1	415	415
	CA50	22	10.0	2	563	1126

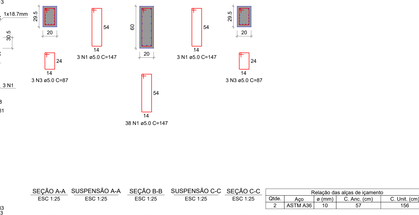
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	44.6	5	12
	8.0	7.2	1	3.1
	10.0	27.6	3	18.7
CA60	5.0	80.9	8	13.7
PESO TOTAL (kg)				
CA50	33.9			
CA60	13.7			

Volume de concreto (C-40) = 0.70 m³
Peso total da peça = 1749.42 kg
Área de forma = 0.00 m²

V8 (20 x 60)
ESC 1:50





Qtde.	Aço	a (mm)	C. Anc. (cm)	C. Und. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

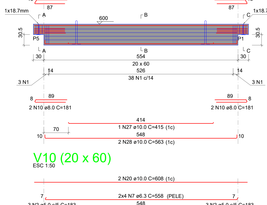
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V8	CA60	1	5.0	44	147	6468
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	8	6.3	8	560	4480
	CA50	10	8.0	4	181	724
	CA50	23	10.0	2	610	1220
	CA50	24	10.0	1	417	417
	CA50	25	10.0	2	565	1130

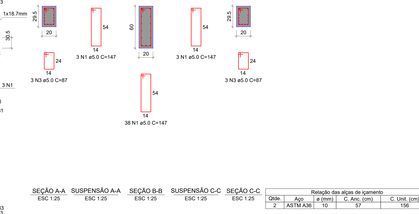
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	44.8	5	12.1
	8.0	7.2	1	3.1
	10.0	27.6	3	18.7
CA60	5.0	80.9	8	13.7
PESO TOTAL (kg)				
CA50	34			
CA60	13.7			

Volume de concreto (C-40) = 0.70 m³
Peso total da peça = 1750.50 kg
Área de forma = 0.00 m²

V9 (20 x 60)
ESC 1:50





Qtde.	Aço	a (mm)	C. Anc. (cm)	C. Und. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

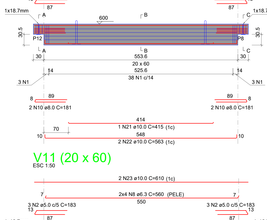
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V9	CA60	1	5.0	44	147	6468
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	9	6.3	8	558	4464
	CA50	10	8.0	4	181	724
	CA50	26	10.0	2	608	1216
	CA50	27	10.0	1	415	415
	CA50	28	10.0	2	563	1126

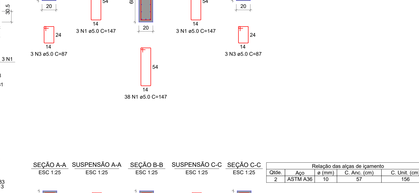
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	44.6	5	12
	8.0	7.2	1	3.1
	10.0	27.6	3	18.7
CA60	5.0	80.9	8	13.7
PESO TOTAL (kg)				
CA50	33.9			
CA60	13.7			

Volume de concreto (C-40) = 0.70 m³
Peso total da peça = 1749.42 kg
Área de forma = 0.00 m²

V10 (20 x 60)
ESC 1:50





Qtde.	Aço	a (mm)	C. Anc. (cm)	C. Und. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

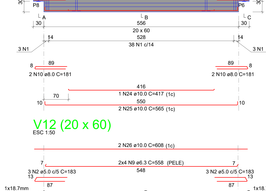
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V10	CA60	1	5.0	44	147	6468
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	7	6.3	8	558	4464
	CA50	10	8.0	4	181	724
	CA50	20	10.0	2	608	1216
	CA50	21	10.0	1	415	415
	CA50	22	10.0	2	563	1126

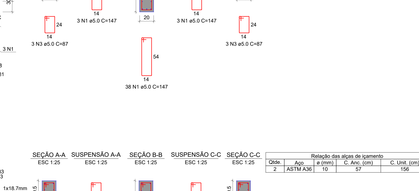
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	44.6	5	12
	8.0	7.2	1	3.1
	10.0	27.6	3	18.7
CA60	5.0	80.9	8	13.7
PESO TOTAL (kg)				
CA50	33.9			
CA60	13.7			

Volume de concreto (C-40) = 0.70 m³
Peso total da peça = 1749.42 kg
Área de forma = 0.00 m²

V11 (20 x 60)
ESC 1:50





Qtde.	Aço	a (mm)	C. Anc. (cm)	C. Und. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

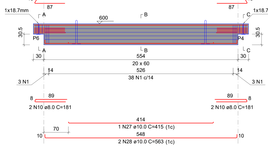
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V11	CA60	1	5.0	44	147	6468
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	8	6.3	8	560	4480
	CA50	10	8.0	4	181	724
	CA50	23	10.0	2	610	1220
	CA50	24	10.0	1	417	417
	CA50	25	10.0	2	565	1130

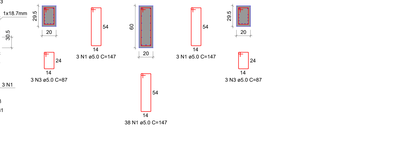
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	44.8	5	12.1
	8.0	7.2	1	3.1
	10.0	27.6	3	18.7
CA60	5.0	80.9	8	13.7
PESO TOTAL (kg)				
CA50	34			
CA60	13.7			

Volume de concreto (C-40) = 0.70 m³
Peso total da peça = 1750.50 kg
Área de forma = 0.00 m²

V12 (20 x 60)
ESC 1:50





Qtde.	Aço	a (mm)	C. Anc. (cm)	C. Und. (cm)
2	ASTM A36	10	57	156

RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V12	CA60	1	5.0	44	147	6468
	CA60	2	5.0	6	183	1098
	CA60	3	5.0	6	87	522
	CA50	9	6.3	8	558	4464
	CA50	10	8.0	4	181	724
	CA50	26	10.0	2	608	1216
	CA50	27	10.0	1	415	415
	CA50	28	10.0	2	563	1126

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	44.6	5	12
	8.0	7.2	1	3.1
	10.0	27.6	3	18.7
CA60	5.0	80.9	8	13.7
PESO TOTAL (kg)				
CA50	33.9			
CA60	13.7			

Volume de concreto (C-40) = 0.70 m³
Peso total da peça = 1750.50 kg
Área de forma = 0.00 m²

RELAÇÃO DO AÇO

V1	V2	V3
V4	V5	V6
V7	V8	V9
V10	V11	V12

AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	494	147	72618
	2	5.0	72	183	13176
	3	5.0	72	87	6264
CA50	4	6.3	16	517	8272
	5	6.3	16	492	7872
	6	6.3	16	517	8272
	7	6.3	16	558	8928
	8	6.3	16	560	8960
	9	6.3	16	558	8928
	10	8.0	48	181	8688
	11	10.0	4	567	2268
	12	10.0	2	394	788
	13	10.0	2	522	1044
	14	10.0	4	542	2168
	15	10.0	2	379	758
	16	10.0	4	497	1988
	17	10.0	4	567	2268
	18	10.0	2	394	788
	19	10.0	4	522	2088
	20	10.0	4	608	2432
	21	10.0	2	415	830
	22	10.0	4	563	2252
	23	10.0	4	610	2440
	24	10.0	4	417	1668
	25	10.0	4	565	2260
	26	10.0	4	608	2432
	27	10.0	2	415	830
	28	10.0	4	563	2252

RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	QUANT + 10% (Barras)	PESO + 10% (kg)
CA50	6.3	512.3	47	137.9
	8.0	66.9	6	37.7
	10.0	317.6	30	215.4
CA60	5.0	920.6	85	156.1
PESO TOTAL (kg)				
CA50	391			
CA60	156.1			

Volume de concreto (C-40) = 8.05 m³
Área de forma = 0.00 m²

Revisão/Data

ENGEPROSUL ENGENHARIA LTDA
CNPJ: 51.206.229/0001-56
FORQUILHINHA | SC
CREA/SC: 225308-7
RESPONSÁVEL TÉCNICO
JONATAN CARDOSO DE OLIVEIRA -CREA/SC:143410-3
FONE: (51) 92007-1762 | (51)99550-8739

PROJETO ESTRUTURAL

GOVERNO MUNICIPAL DE CAMPO BOM/RS

SECRETARIA MUNICIPAL DE OBRAS

Local - Obra: PAVILHÃO 04

RUA NILO PEÇANHA, Nº 715, BAIRRO N.(VILA RICA) - CAMPO BOM/RS, CEP 93700-000
QUADRA 29 - LOTE GLEBA 3 - MATRICULAS Nº 31.596 E 31.397

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

DISCRIMINAÇÃO - VIGAS PM PAVIMENTO COBERTURA

RESPONSÁVEL TÉCNICO

ESTRUTURAL

JONATAN CARDOSO DE OLIVEIRA
CREA/SC:143410-3

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

ESC : INDICADA

PRANCHA

E05

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