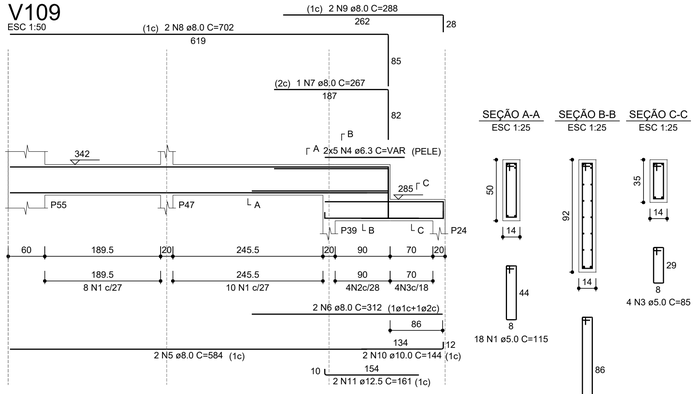
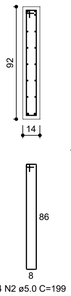
V109
ESC 1:50



SEÇÃO A-A
ESC 1:25

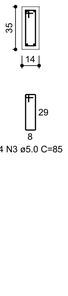
18 N1 ø5.0 C=115

SEÇÃO B-B
ESC 1:25



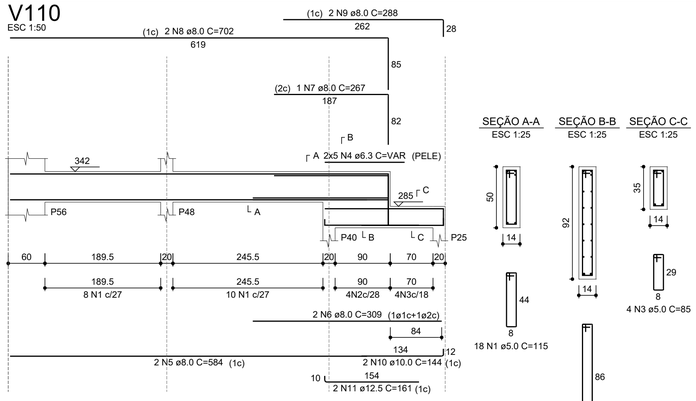
4 N2 ø5.0 C=199

SEÇÃO C-C
ESC 1:25

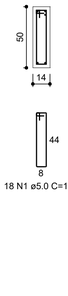


4 N3 ø5.0 C=85

V110
ESC 1:50

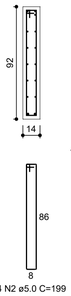


SEÇÃO A-A
ESC 1:25



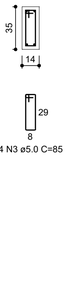
18 N1 ø5.0 C=115

SEÇÃO B-B
ESC 1:25



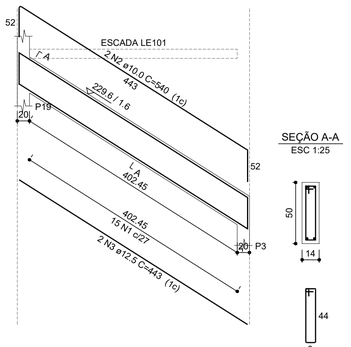
4 N2 ø5.0 C=199

SEÇÃO C-C
ESC 1:25

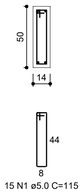


4 N3 ø5.0 C=85

V120
ESC 1:50



SEÇÃO A-A
ESC 1:25

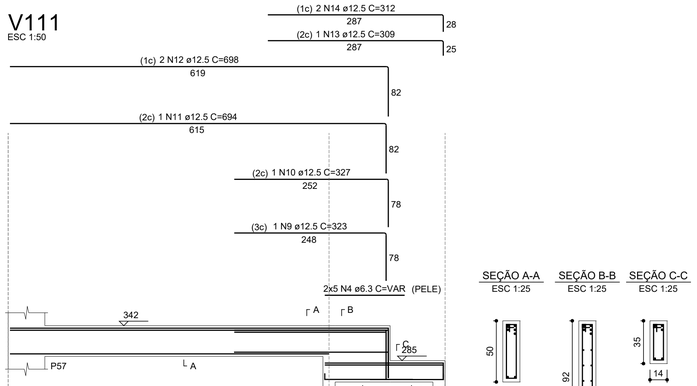


15 N1 ø5.0 C=115

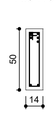
RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
V109	CA60	1	5.0	18	115	2070
	CA60	2	5.0	4	199	796
	CA60	3	5.0	4	85	340
	CA50	4	6.3	10	VAR	VAR
	CA50	5	8.0	2	584	1168
	CA50	6	8.0	2	312	624
	CA50	7	8.0	1	267	267
	CA50	8	8.0	2	702	1404
	CA50	9	8.0	2	288	576
	CA50	10	10.0	2	144	288
	CA50	11	12.5	2	161	322
V110	CA60	1	5.0	18	115	2070
	CA60	2	5.0	4	199	796
	CA60	3	5.0	4	85	340
	CA50	4	6.3	10	VAR	VAR
	CA50	5	8.0	2	584	1168
	CA50	6	8.0	2	309	618
	CA50	7	8.0	1	267	267
	CA50	8	8.0	2	702	1404
	CA50	9	8.0	2	288	576
	CA50	10	10.0	2	144	288
	CA50	11	12.5	2	161	322
V111	CA60	1	5.0	17	115	1955
	CA60	2	5.0	7	199	1393
	CA60	3	5.0	5	85	425
	CA50	4	6.3	10	VAR	VAR
	CA50	5	8.0	1	342	342
	CA50	6	10.0	2	522	1044
	CA50	7	10.0	2	128	256
	CA50	8	12.5	2	151	302
	CA50	9	12.5	1	323	323
	CA50	10	12.5	1	327	327
	CA50	11	12.5	1	694	694
	CA50	12	12.5	2	698	1396
	CA50	13	12.5	1	309	309
	CA50	14	12.5	2	312	624
V112	CA60	1	5.0	17	115	1955
	CA60	2	5.0	7	199	1393
	CA60	3	5.0	7	85	595
	CA50	4	6.3	10	VAR	VAR
	CA50	5	8.0	2	363	726
	CA50	6	10.0	2	522	1044
	CA50	7	12.5	2	223	446
	CA50	8	12.5	1	328	328
	CA50	9	12.5	1	332	332
	CA50	10	12.5	1	694	694
	CA50	11	12.5	2	698	1396
	CA50	12	12.5	1	339	339
	CA50	13	12.5	2	342	684
V113	CA60	1	5.0	17	115	1955
	CA60	2	5.0	7	199	1393
	CA60	3	5.0	5	85	425
	CA50	4	6.3	10	VAR	VAR
	CA50	5	8.0	1	344	344
	CA50	6	10.0	2	522	1044
	CA50	7	10.0	2	128	256
	CA50	8	12.5	2	151	302
	CA50	9	12.5	1	323	323
	CA50	10	12.5	1	327	327
	CA50	11	12.5	1	694	694
	CA50	12	12.5	2	698	1396
	CA50	13	12.5	1	314	314
	CA50	14	12.5	2	317	634
V114	CA60	1	5.0	17	115	1955
	CA60	2	5.0	7	199	1393
	CA60	3	5.0	5	85	425
	CA50	4	6.3	10	VAR	VAR
	CA50	5	8.0	1	364	364
	CA50	6	10.0	2	522	1044
	CA50	7	10.0	2	129	258
	CA50	8	12.5	2	151	302
	CA50	9	12.5	1	293	293
	CA50	10	12.5	1	297	297
	CA50	11	12.5	1	694	694
	CA50	12	12.5	2	698	1396
	CA50	13	12.5	1	314	314
	CA50	14	12.5	2	317	634
V120	CA60	1	5.0	15	115	1725
	CA50	2	10.0	2	540	1080
	CA50	3	12.5	2	443	886
V121	CA60	1	5.0	15	115	1725
	CA50	2	10.0	2	540	1080
	CA50	3	12.5	2	443	886
V122	CA60	1	5.0	15	115	1725
	CA60	2	5.0	2	323	646
	CA50	3	8.0	2	76	152
	CA50	4	8.0	2	118	236
	CA50	5	12.5	2	443	886

V111
ESC 1:50

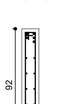


SEÇÃO A-A
ESC 1:25



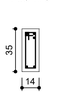
17 N1 ø5.0 C=115

SEÇÃO B-B
ESC 1:25



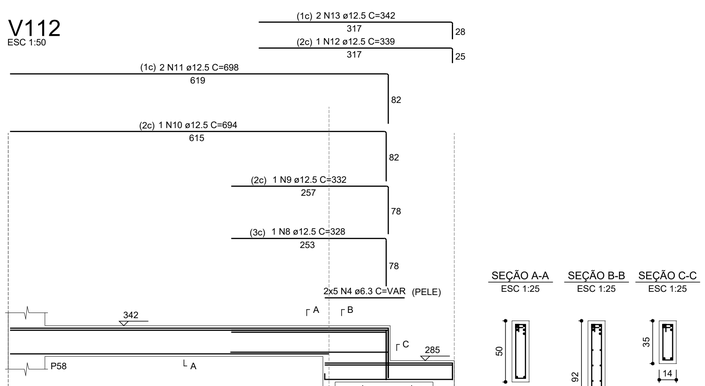
7 N2 ø5.0 C=199

SEÇÃO C-C
ESC 1:25

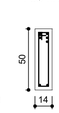


5 N3 ø5.0 C=85

V112
ESC 1:50

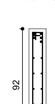


SEÇÃO A-A
ESC 1:25



17 N1 ø5.0 C=115

SEÇÃO B-B
ESC 1:25

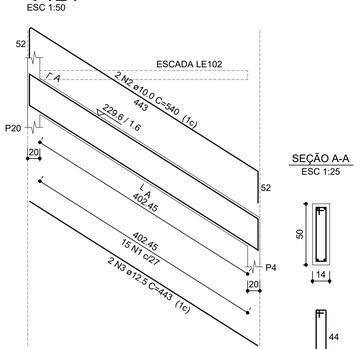


7 N2 ø5.0 C=199

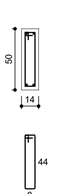
SEÇÃO C-C
ESC 1:25

7 N3 ø5.0 C=85

V121
ESC 1:50



SEÇÃO A-A
ESC 1:25



15 N1 ø5.0 C=115

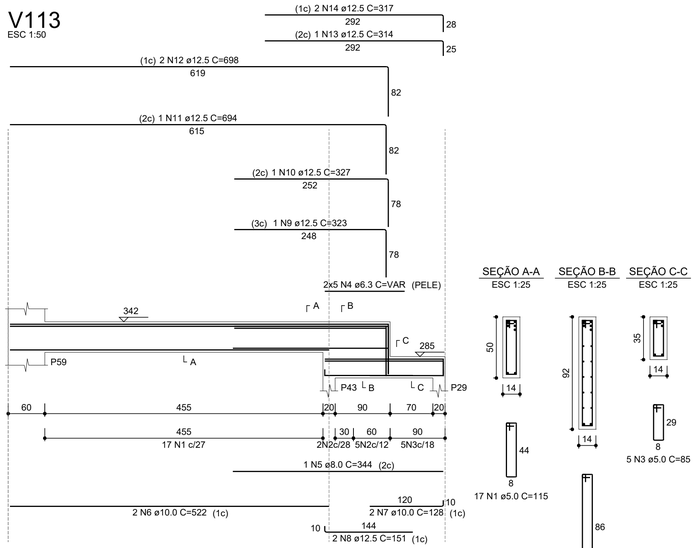
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 0% (kg)
CA50	6.3	78.6	19.2
	8.0	102.4	40.4
	10.0	76.8	47.4
	12.5	194.2	187
CA60	5.0	274.9	42.4

PESO TOTAL (kg)	
CA50	294
CA60	42.4

Volume de concreto (C-25) = 3.64 m³
Área de forma = 49.24 m²

V113
ESC 1:50



SEÇÃO A-A
ESC 1:25

17 N1 ø5.0 C=115

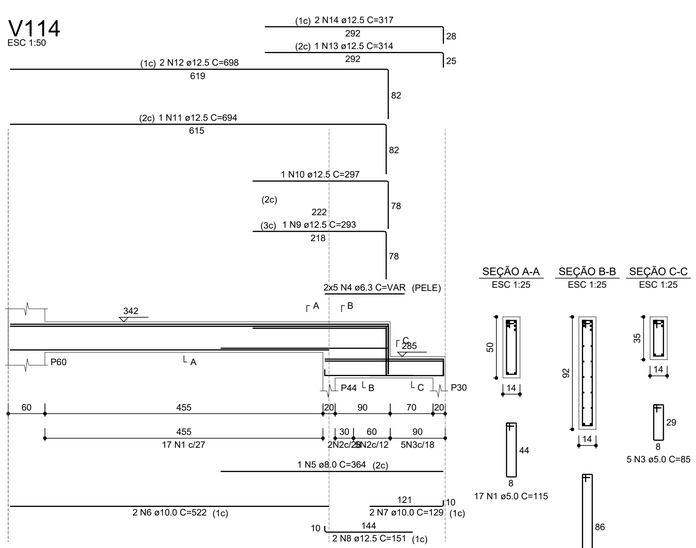
SEÇÃO B-B
ESC 1:25

7 N2 ø5.0 C=199

SEÇÃO C-C
ESC 1:25

5 N3 ø5.0 C=85

V114
ESC 1:50



SEÇÃO A-A
ESC 1:25

17 N1 ø5.0 C=115

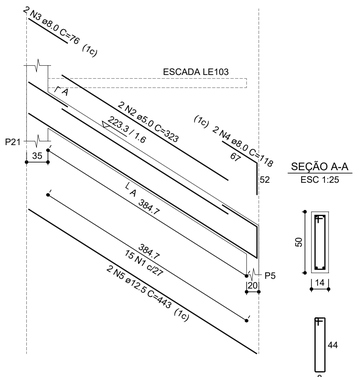
SEÇÃO B-B
ESC 1:25

7 N2 ø5.0 C=199

SEÇÃO C-C
ESC 1:25

5 N3 ø5.0 C=85

V122
ESC 1:50



SEÇÃO A-A
ESC 1:25

15 N1 ø5.0 C=115

NOTAS

1 - A LOCAÇÃO DA OBRA DEVERÁ SER CONFIRMADA PELA CONSTRUTORA;

2 - MEDIDAS EM CENTÍMETROS;

3 - CONFERIR MEDIDAS NA OBRA;

4 - CONCRETO ESTRUTURAL: Fck ≥ 25MPa, Eci=28000MPa E FATOR ÁGUA CIMENTO = 0,55.

REVISÕES

Nº	DISCRIMINAÇÃO	DATA	VERIFICAÇÃO
0	ENTREGA INICIAL P/ CLIENTE	05/07/2023	S. HAMMINE

HAMMINE ENGENHARIA LTDA.
CNPJ: 30.274.683/0001-45

PREFEITURA MUNICIPAL DE VISTA ALEGRE DO ALTO
Praça Dr. Emílio Henrique Ower Sandolth, 278 - Centro
Telefone: (16) 3277-8300
E-mail: pmvaa@vistaalegredoalto.sp.gov.br

OBRA:	CONSTRUÇÃO DE ARQUIBANCADA DO ESTÁDIO MUNICIPAL
LOCAL:	RUA ETELVINO DE SOUZA, Nº 130 - VISTA ALEGRE DO ALTO
OBJETO:	PROJETO DE ESTRUTURA DE CONCRETO ARMADO
ASSUNTO:	DETALHAMENTO DAS ARMADURAS DAS VIGAS V109 A V114 E V120 A V122

ESCALA: INDICADA
DATA: JULHO/2023
DESENHO: IGOR FERREIRA
FOLHA: ECA-07/15

Prefeitura Municipal de Vista Alegre do Alto
CNPJ: 52.854.775/0001-28

Said Abou Hammine Filho
ENGENHEIRO CIVIL - CREA-SP: 506.301.169-7
A.R.T. Nº: 28027230230970780