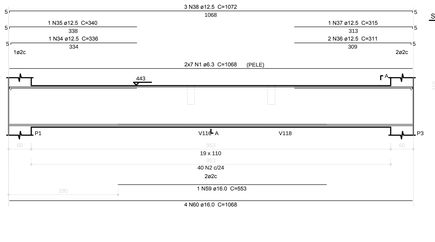
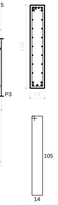
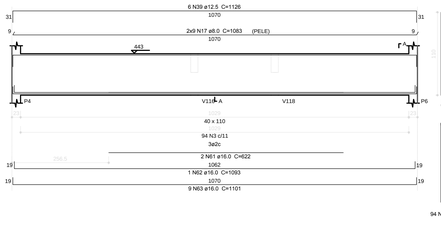
V101
ESC 1:50



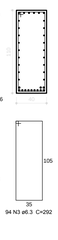
SEÇÃO A-A
ESC 1:25



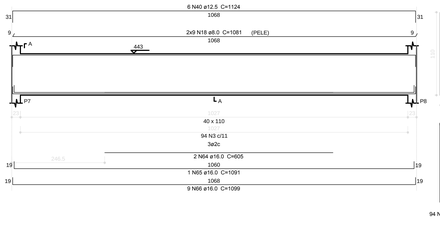
V102
ESC 1:50



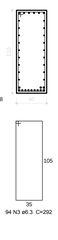
SEÇÃO A-A
ESC 1:25



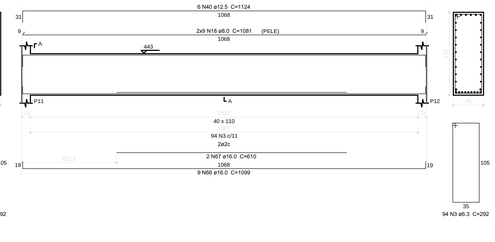
V103
ESC 1:50



SEÇÃO A-A
ESC 1:25

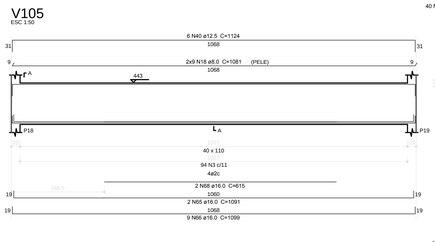


V104
ESC 1:50

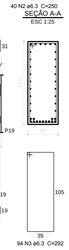


SEÇÃO A-A
ESC 1:25

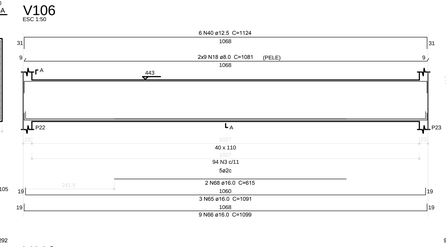
V105
ESC 1:50



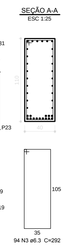
SEÇÃO A-A
ESC 1:25



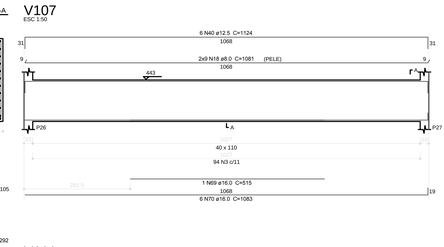
V106
ESC 1:50



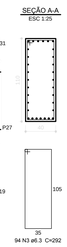
SEÇÃO A-A
ESC 1:25



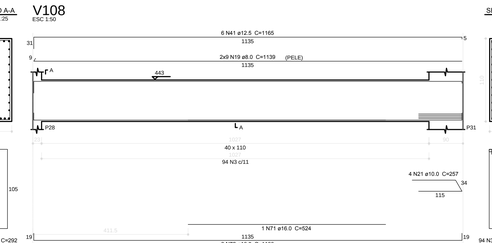
V107
ESC 1:50



SEÇÃO A-A
ESC 1:25

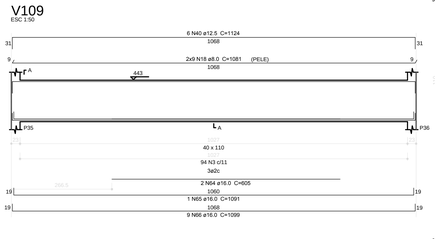


V108
ESC 1:50

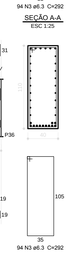


SEÇÃO A-A
ESC 1:25

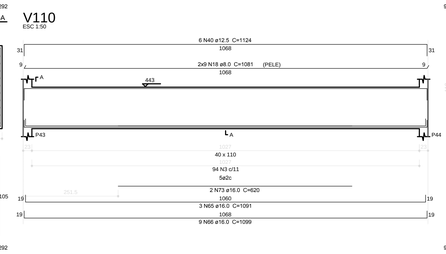
V109
ESC 1:50



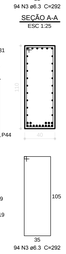
SEÇÃO A-A
ESC 1:25



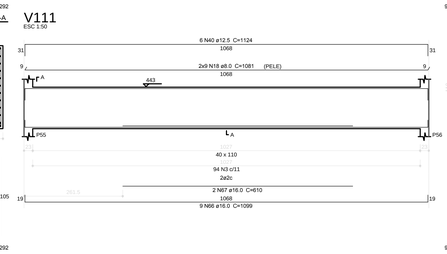
V110
ESC 1:50



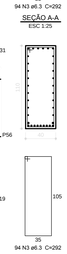
SEÇÃO A-A
ESC 1:25



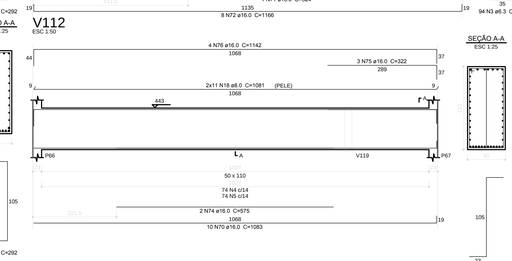
V111
ESC 1:50



SEÇÃO A-A
ESC 1:25



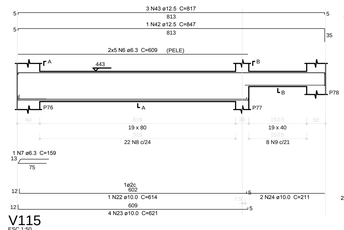
V112
ESC 1:50



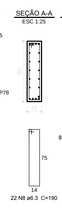
SEÇÃO A-A
ESC 1:25



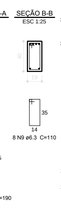
V113
ESC 1:50



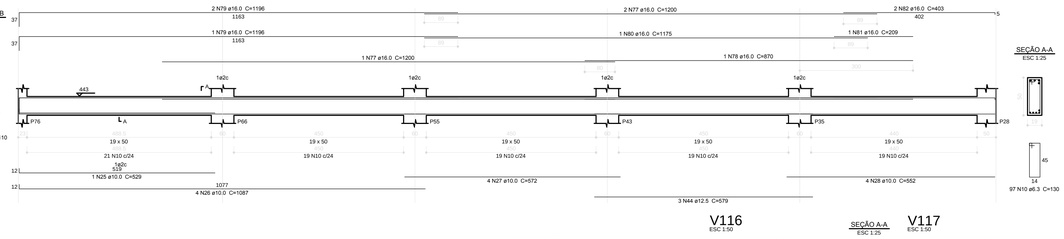
SEÇÃO A-A
ESC 1:25



SEÇÃO B-B
ESC 1:25

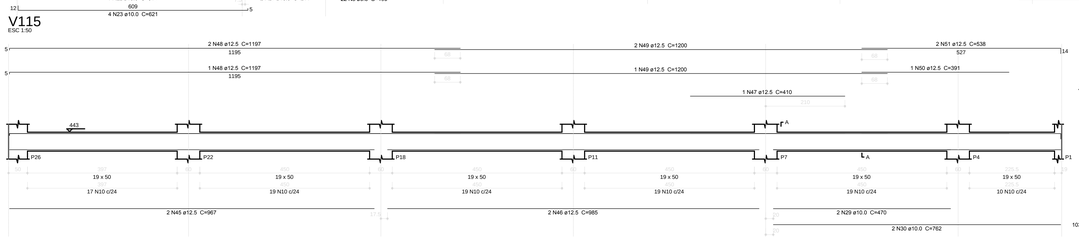


V114
ESC 1:50

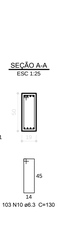


SEÇÃO A-A
ESC 1:25

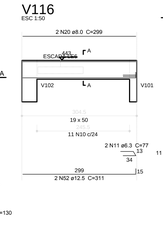
V115
ESC 1:50



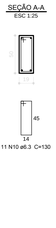
SEÇÃO A-A
ESC 1:25



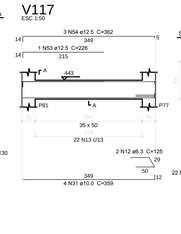
V116
ESC 1:50



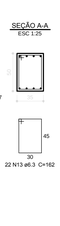
SEÇÃO A-A
ESC 1:25



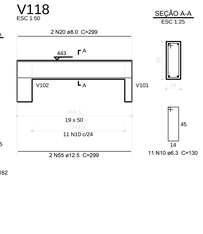
V117
ESC 1:50



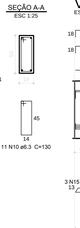
SEÇÃO A-A
ESC 1:25



V118
ESC 1:50

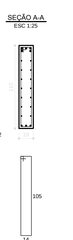


SEÇÃO A-A
ESC 1:25



V119
ESC 1:50

SEÇÃO A-A
ESC 1:25



V120
ESC 1:50

SEÇÃO A-A
ESC 1:25

Relação do aço

V101	V102	V103	
V104	V105	V106	
V107	V108	V109	
V110	V111	V112	
V113	V114	V115	
V116	V117	V118	
V119	V120		

AÇO	N	DIAM (mm)	QUANT. (Barras)	UNIT (cm)	C.TOTAL (cm)
CA50	1	6.3	14	1068	14952
	2	6.3	62	250	15500
	3	6.3	940	292	274480
	4	6.3	74	312	23088
	5	6.3	74	148	10952
	6	6.3	10	609	6090
	7	6.3	1	159	159
	8	6.3	22	190	4180
	9	6.3	8	110	880
	10	6.3	298	130	38740
	11	6.3	2	77	154
	12	6.3	2	125	250
	13	6.3	22	162	3564
	14	6.3	14	560	7840
	15	6.3	3	119	357
	16	6.3	1	139	139
	17	8.0	18	1083	19494
	18	8.0	166	1081	179446
	19	8.0	18	1139	20502
	20	8.0	4	299	1196
	21	10.0	4	257	1028
	22	10.0	1	614	614
	23	10.0	4	621	2484
	24	10.0	2	211	422
	25	10.0	1	529	529
	26	10.0	4	1087	4348
	27	10.0	4	572	2288
	28	10.0	4	552	2208
	29	10.0	6	470	2820
	30	10.0	2	762	1524
	31	10.0	4	359	1436
	32	10.0	1	297	297
	33	10.0	4	300	1200
	34	12.5	1	336	336
	35	12.5	1	340	340
	36	12.5	2	311	622
	37	12.5	1	315	315
	38	12.5	3	1072	3216
	39	12.5	6	1126	6756
	40	12.5	46	1124	53952
	41	12.5	6	1165	6990
	42	12.5	1	947	947
	43	12.5	3	817	2451
	44	12.5	3	579	1737
	45	12.5	2	967	1934
	46	12.5	2	985	1970
	47	12.5	1	410	410
	48	12.5	3	1197	3591
	49	12.5	3	1200	3600
	50	12.5	1	391	391
	51	12.5	2	538	1076
	52	12.5	2	311	622
	53	12.5	1	226	226
	54	12.5	3	362	1086
	55	12.5	2	299	598
	56	12.5	3	574	1722
	57	12.5	2	1032	2064
	58	12.5	2	272	544
	59	16.0	1	553	553
	60	16.0	4	1068	4272
	61	16.0	2	622	1244
	62	16.0	1	1093	1093
	63	16.0	9	1101	9909
	64	16.0	4	605	2420
	65	16.0	10	1091	10910
	66	16.0	63	1099	69237
	67	16.0	4	610	2440
	68	16.0	4	615	2460
	69	16.0	1	515	515
	70	16.0	16	1083	17328
	71	16.0	1	524	524
	72	16.0	8	1166	9328
	73	16.0	2	620	1240
	74	16.0	2	575	1150
	75	16.0	3	322	966
	76	16.0	4	1142	4568
	77	16.0	3	1200	3600
	78	16.0	1	870	870
	79	16.0	3	1196	3588
	80	16.0	1	1175	1175
	81	16.0	1	209	209
	82	16.0	2	403	806
	83	16.0	2	432	864
	84	16.0	3	676	2028
	85	16.0	1	1129	1129
	86	16.0	1	199	199
	87	16.0	1	419	419
	88	16.0	2	1196	2392
	89	16.0	2	990	1980

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	4013.3	1090.3
	8.0	2206.4	957.7
	10.0	212	143.8
	12.5	974	1032.1
	16.0	1594.2	2767.7
PESO TOTAL (kg)			
CA50	5981.5		

Volume de concreto (C-40) = 66.19 m³
Área de forma = 462.46 m²

MINISTÉRIO DA EDUCAÇÃO
UNIVERSIDADE FEDERAL DE LAVRAS

PROJETO

TÍTULO:
PROJETO EXECUTIVO - ENGENHARIAS

CONTEÚDO:
PROJETO DE ESTRUTURA
VIGAS: V101 À V120

AUTOR DO PROJETO:
MARIUS OLIVEIRA COSTA CREA 90786/D

EXECUÇÃO DE OBRA:

APROVAÇÃO DO LAYOUT (PROF. RESPONSÁVEL):

DATA:	REVISÃO DATA:	PROJETO:
03/09/2018		ESTRUTURA
ESCALA:	ÁREA: (m²)	FOLHA:
INDICADA	4772,00 m²	16/40