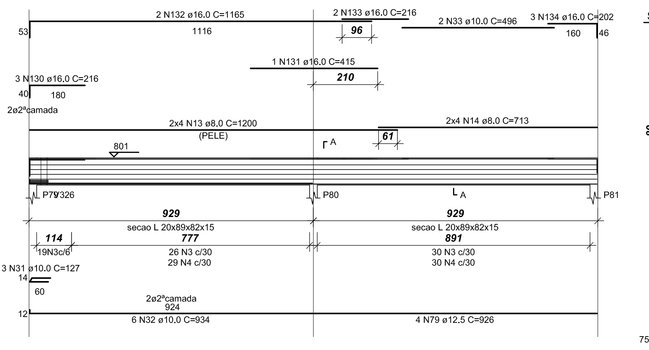
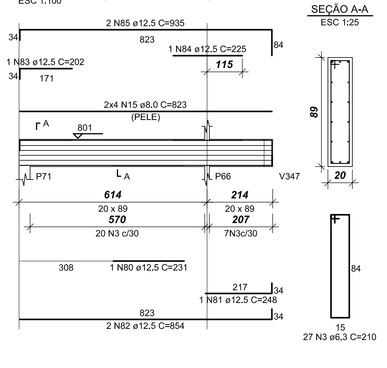
V322 (seção L 20x89x82x15)

ESC 1:100



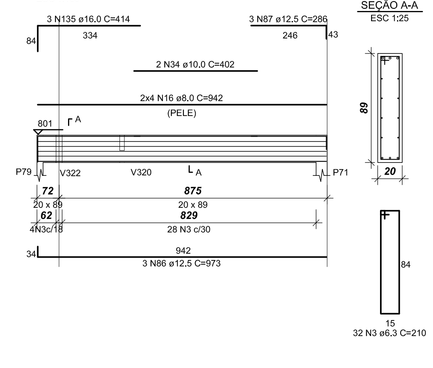
V325 (20 x 89)

ESC 1:100



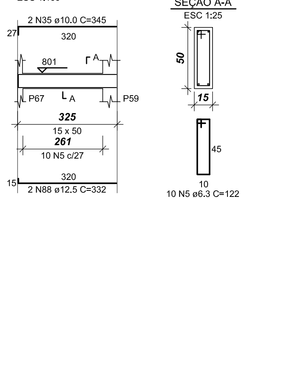
V326 (20 x 89)

ESC 1:100



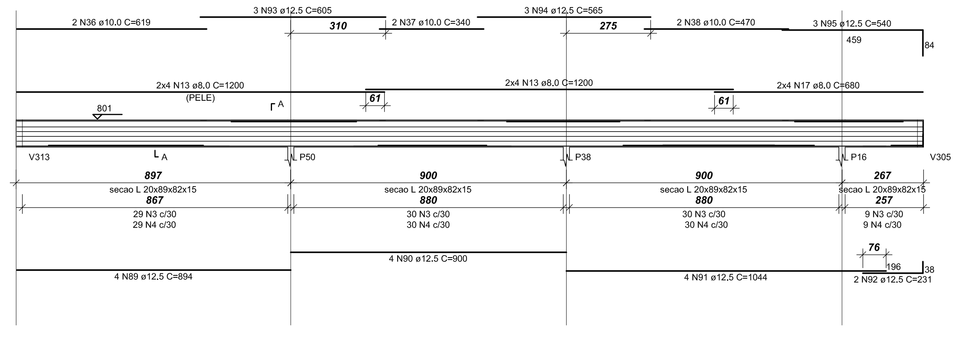
V327 (15 x 50)

ESC 1:100



V328 (seção L 20x89x82x15)

ESC 1:100

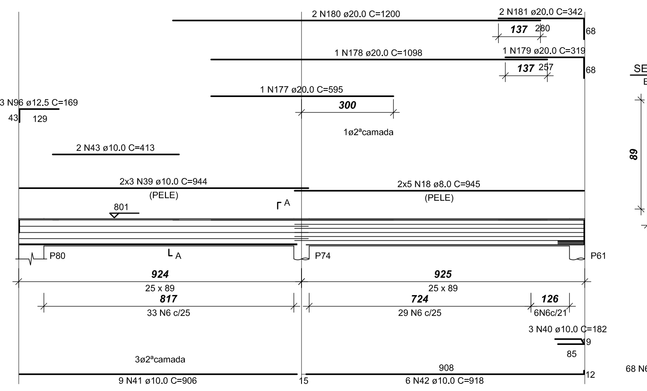


RELAÇÃO DO AÇO

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
60	1	5,0	10	var	11290
50	3	6,3	356	210	74760
	4	6,3	270	120	32400
	5	6,3	146	122	17812
	6	6,3	476	220	104720
	7	6,3	67	246	21402
	8	6,3	67	312	20904
	9	6,3	5	221	1105
	10	6,3	50	200	10000
	11	6,3	10	792	7920
	12	6,3	87	192	16704
	13	8,0	124	1200	148800
	14	8,0	8	713	5704
	15	8,0	8	823	6584
	16	8,0	8	942	7536
	17	8,0	8	680	5440
	18	8,0	24	945	22680
	19	8,0	20	467	9340
	20	8,0	14	943	13202
	21	8,0	8	977	7816
	22	8,0	10	227	2270
	23	8,0	8	944	7552
	24	8,0	10	466	4660
	25	8,0	10	703	7030
	26	8,0	6	792	4752
	27	8,0	8	939	7512
	28	8,0	8	827	6616
	29	8,0	8	180	1440
	30	8,0	8	182	1456
	31	10,0	6	127	762
	32	10,0	6	934	5604
	33	10,0	2	496	992
	34	10,0	2	402	804
	35	10,0	2	345	690
	36	10,0	2	619	1238
	37	10,0	2	340	680
	38	10,0	2	470	940
	39	10,0	6	944	5664
	40	10,0	3	182	546
	41	10,0	11	906	9966
	42	10,0	6	918	5508
	43	10,0	4	243	972
	44	10,0	2	498	996
	45	10,0	4	470	1880
	46	10,0	2	425	850
	47	10,0	2	400	800
	48	10,0	2	403	806
	49	10,0	1	467	467
	50	10,0	2	792	1584
	51	10,0	2	392	784
	52	10,0	2	438	876
	53	10,0	2	482	964
	54	10,0	2	154	462
	55	10,0	12	1200	14400
	56	10,0	4	483	2898
	57	10,0	2	544	1088
	58	10,0	2	360	1080
	59	10,0	2	872	1744
	60	10,0	2	908	2724
	61	10,0	3	264	792
	62	10,0	2	474	948
	63	10,0	2	317	634
	64	10,0	2	342	684
	65	10,0	2	445	890
	66	10,0	2	505	1010
	67	10,0	2	382	764
	68	10,0	2	357	714
	69	10,0	2	423	846
	70	10,0	2	472	944
	71	10,0	2	199	398
	72	10,0	2	180	360
	73	10,0	4	201	804
	74	10,0	2	182	364
	75	10,0	2	433	866
	76	10,0	2	472	944
	77	10,0	2	480	960
	78	10,0	2	440	880
	79	12,5	4	926	3704
	80	12,5	1	231	231
	81	12,5	1	248	248
	82	12,5	1	854	1708
	83	12,5	1	202	202
	84	12,5	1	225	225
	85	12,5	2	935	1870
	86	12,5	3	973	2919
	87	12,5	3	286	858
	88	12,5	2	332	664
	89	12,5	4	894	3576
	90	12,5	4	900	3600
	91	12,5	4	1044	4176
	92	12,5	2	231	462
	93	12,5	3	605	1815
	94	12,5	3	565	1695
	95	12,5	3	540	1620
	96	12,5	3	169	507
	97	12,5	5	910	4550
	98	12,5	1	415	415
	99	12,5	11	875	9625
	100	12,5	1	530	530
	101	12,5	2	410	820
	102	12,5	2	630	1260
	103	12,5	1	430	430
	104	12,5	3	977	2931
	105	12,5	3	320	960
	106	12,5	1	453	453
	107	12,5	2	944	1888
	108	12,5	2	939	1878
	109	12,5	4	258	1032
	110	12,5	2	253	506
	111	12,5	8	921	7368
	112	12,5	2	792	1584
	113	12,5	2	263	526
	114	12,5	4	948	3792
	115	12,5	3	858	2574
	116	12,5	1	245	245
	117	12,5	1	179	179
	118	12,5	2	939	1878
	119	12,5	1	480	480
	120	12,5	1	920	1840
	121	12,5	1	127	127
	122	12,5	2	287	574
	123	12,5	3	237	711
	124	12,5	1	450	450
	125	12,5	2	931	1862
	126	12,5	1	147	147
	127	12,5	2	352	704
	128	12,5	3	202	606
	129	12,5	3	216	648
	130	16,0	1	415	415
	131	16,0	1	1165	2330
	132	16,0	2	216	432
	133	16,0	2	202	606
	134	16,0	3	414	1242
	135	16,0	3	459	1377
	136	16,0	2	1124	2248
	137	16,0	2	241	723
	138	16,0	2	437	874
	139	16,0	2	958	1916
	140	16,0	8	882	7056
	141	16,0	8	929	7432
	142	16,0	8	386	3088
	143	16,0	5	560	2800
	144	16,0	5	550	2750
	145	16,0	3	610	1830
	146	16,0	2	1196	2392
	147	16,0	13	1200	15600
	148	16,0	10	510	5100
	149	16,0	2	1020	2040
	150	16,0	7	927	6489
	151	16,0	2	400	800
	152	16,0	2	535	1070
	153	16,0	2	510	1020
	154	16,0	3	585	1755
	155	16,0	1	304	304
	156	16,0	2	1196	2392
	157	16,0	2	493	986
	158	16,0	3	346	1038
	159	16,0	1	480	480
	160	16,0	2	960	1920
	161	16,0	2	595	1190
	162	16,0	2	460	920
	163	16,0	2	580	1740
	164	16,0	1	1181	1181
	165	16,0	1	365	365
	166	16,0	2	1196	2392
	167	16,0	2	504	1008
	168	16,0	4	1196	4784
	169	16,0	4	871	3484
	170	16,0	1	270	270
	171	16,0	2	260	520
	172	16,0	2	1071	2142
	173	16,0	2	260	520
	174	16,0	3	275	825
	175	16,0	2	361	722
	176	16,0	2	434	868
	177	20,0	1	595	595
	178	20,0	1	1098	1098
	179	20,0	2	319	638
	180	20,0	2	1200	2400
	181	20,0	2	342	684

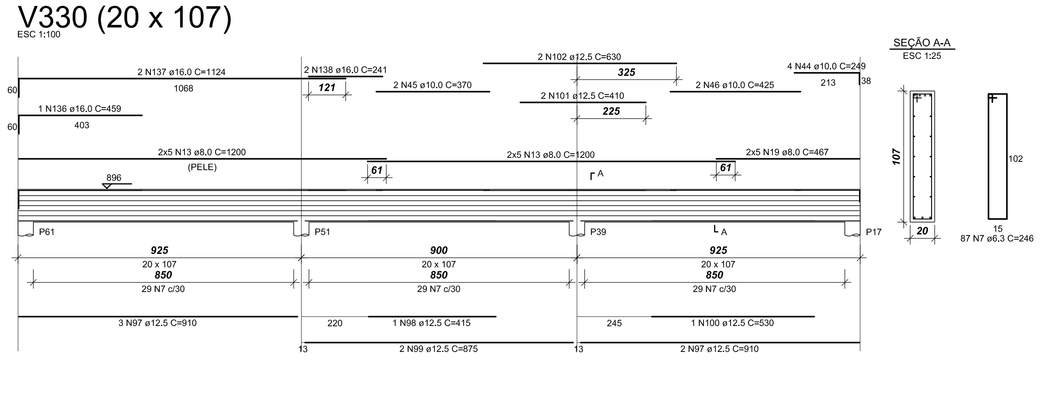
V329 (25 x 89)

ESC 1:100



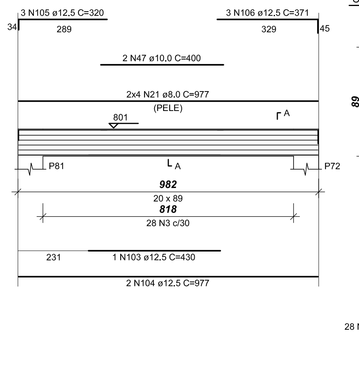
V330 (20 x 107)

ESC 1:100



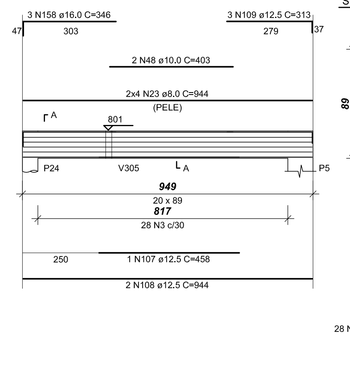
V332 (20 x 89)

ESC 1:100



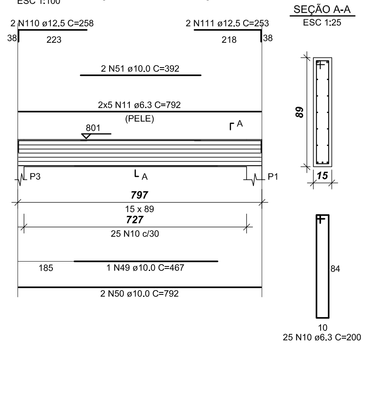
V334 (20 x 89)

ESC 1:100



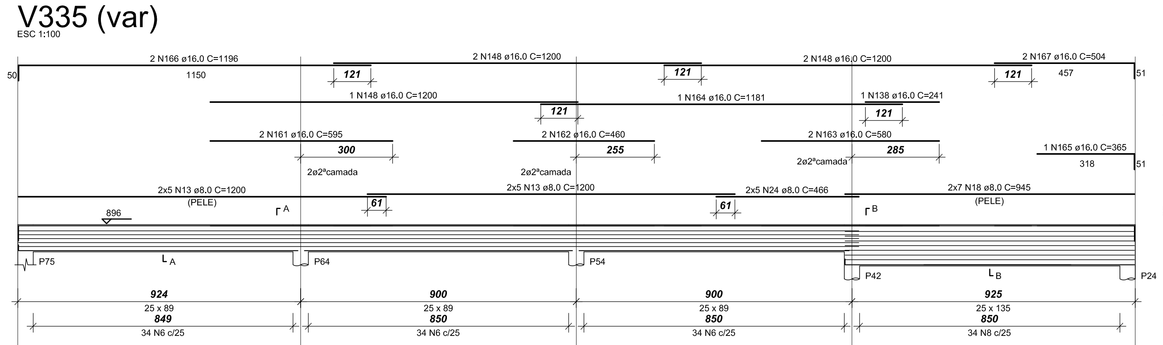
V336 (15 x 89)

ESC 1:100



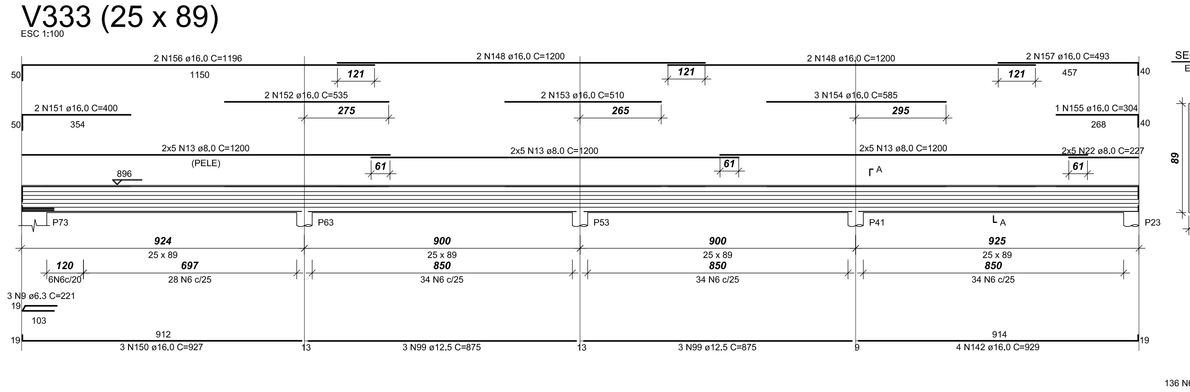
V331 (var)

ESC 1:100



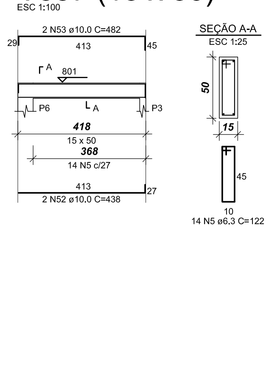
V333 (25 x 89)

ESC 1:100



V337 (15 x 50)

ESC 1:100

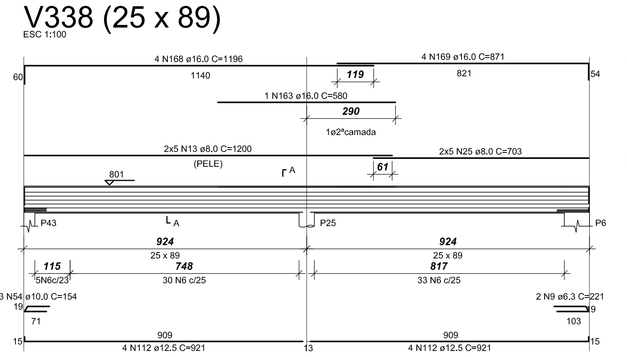


V335 (var)

ESC 1:100

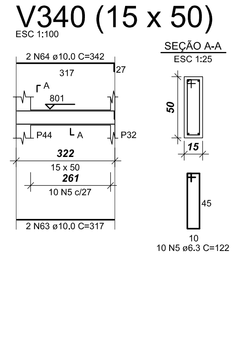
V338 (25 x 89)

ESC 1:100



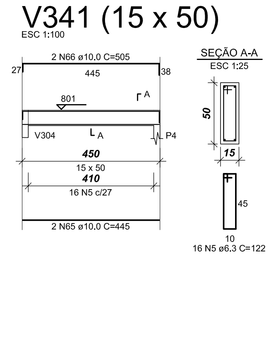
V340 (15 x 50)

ESC 1:100



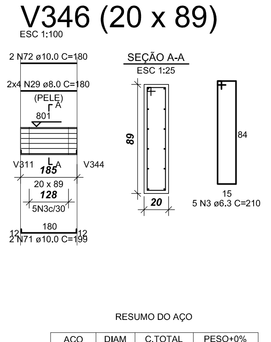
V341 (15 x 50)

ESC 1:100



V346 (20 x 89)

ESC 1:100



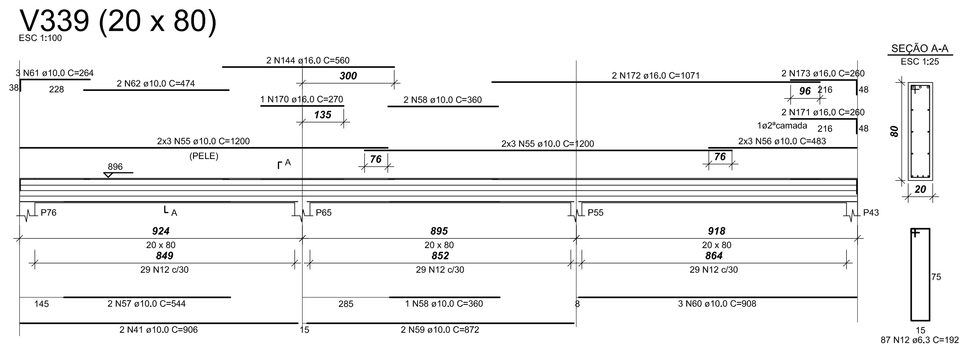
RESUMO DO AÇO

AÇO	DIAM	C.TOTAL (m)	PESO+0% (kg)
CA50	6,3	3073,9	753,4
	8,0	2703,9	1068,5
	10,0	812,9	501,3
	12,5	822,2	792,5
	16,0	922,8	1457,9
	20,0	51,0	125,8
CA60	5,0	112,9	17,5
PESO TOTAL			
CA50	4699,4		
CA60	17,5		

Vol. de concreto total (C-25) =69,27 m³
Área de forma total = 692,85 m²

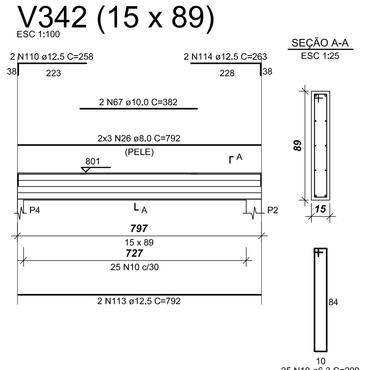
V339 (20 x 80)

ESC 1:100



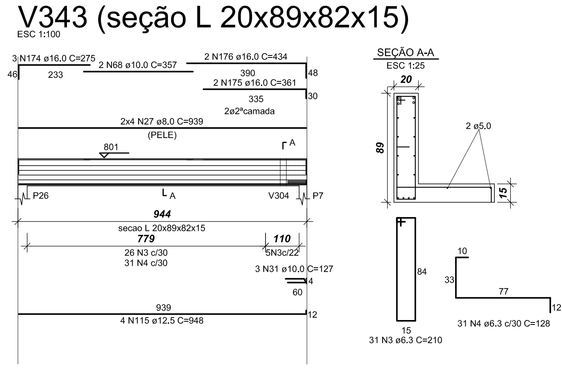
V342 (15 x 89)

ESC 1:100



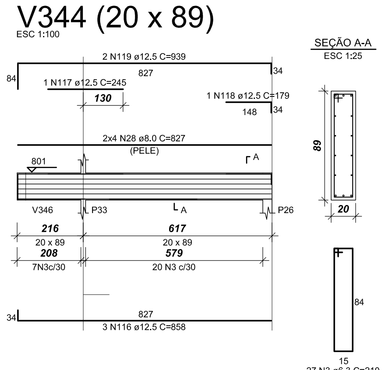
V343 (seção L 20x89x82x15)

ESC 1:100



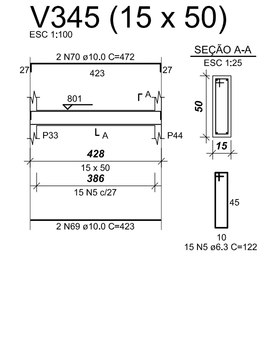
V344 (20 x 89)

ESC 1:100



V345 (15 x 50)

ESC 1:100



V322 V325 V326
V327 V328
V330 V331 V332
V333 V334 V335
V336 V337 V338
V339 V340 V341
V342 V343 V344
V345 V346 V347
V348 V349 V350

01	11.06.2013		PROJETO ESTRUTURAL	
Nº:	DATA:	RESPONSÁVEL:	DESCRIÇÃO DA REVISÃO:	

AS BUILT ENGENHARIA DE PROJETOS LTDA
Rua Jovino do Rosário, 1564 - Boa Vista
CEP 82560-435 - Curitiba - Paraná
asbuiltprojetos@gmail.com - (41)3088-4949

FASE:
PROJETO ESTRUTURAL

CONFERIR MEDIDAS NA OBRA

OBRA:
BIBLIOTECA
CAMPUS JANAÚBA

PROPRIETÁRIO: UNIVERSIDADE FEDERAL DOS VALES DO JEQUITINHONHA E MUCURI
CNPJ: 16.886.315/0001-57

PRANCHA:
FERRAGEM DAS VIGAS:
VIGAS DA COBERTURA (2)

AUTOR PROJETO:
CARLOS HENRIQUE DE SOUZA GONÇALVES
CREA 79820/D - Pr

ESCALA: INDICADA
DESENHO: EQUIPE

VERSÃO: VERSAO 1
DATA: 28/06/2013
ÁREA CONSTRUÍDA: 4.127,32 m²
FOLHA: EST 21/26

ARQUIVO: