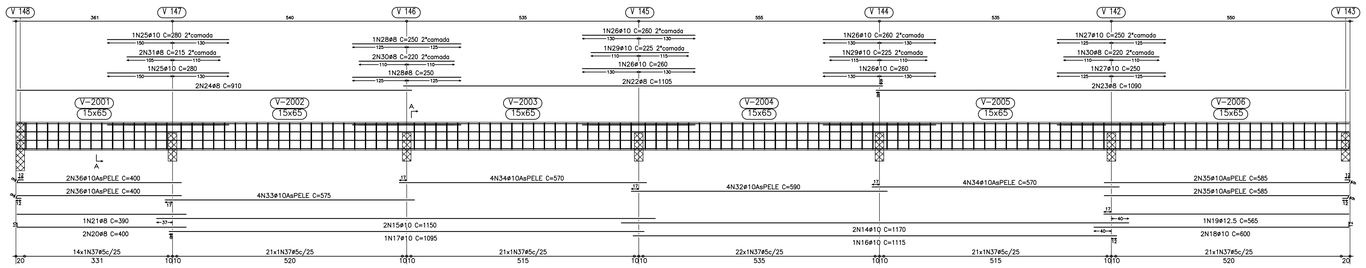
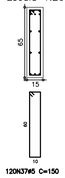
V 101
Escala 1:50

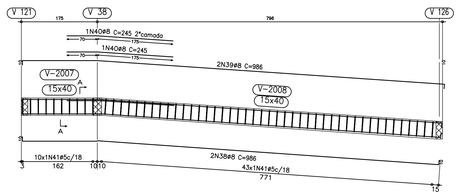


Corte A
Escala 1:20

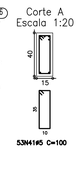


120K37ø5 C=150

V 102
Escala 1:50

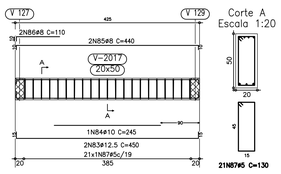


Corte A
Escala 1:20

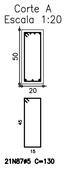


53N41ø5 C=100

V 107
Escala 1:50

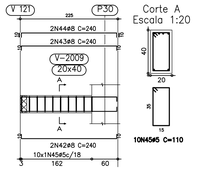


Corte A
Escala 1:20



21N87ø5 C=130

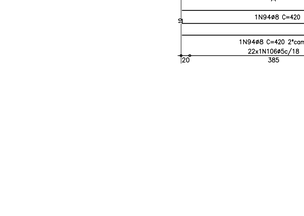
V 103
Escala 1:50



Corte A
Escala 1:20

10N45ø5 C=110

V 104
Escala 1:50



Corte A
Escala 1:20

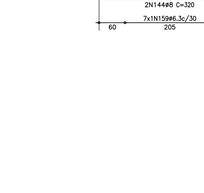
31N52ø5 C=110

V 108
Escala 1:50

Corte A
Escala 1:20

13N92ø5 C=110

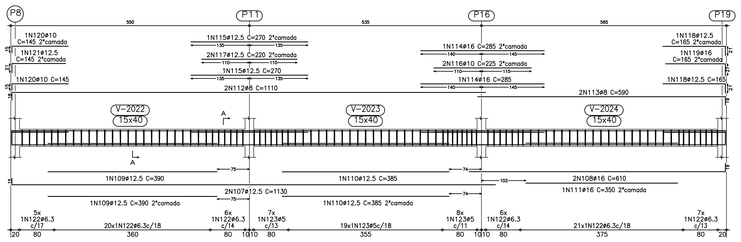
V 105
Escala 1:50



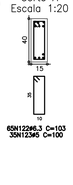
Corte A
Escala 1:20

12N57ø5 C=110

V 110
Escala 1:50

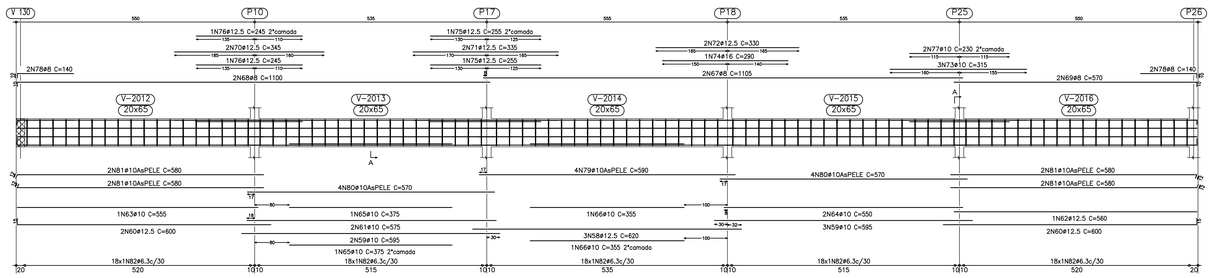


Corte A
Escala 1:20

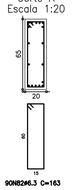


65N122ø6.3 C=103
30N123ø5 C=100

V 106
Escala 1:50

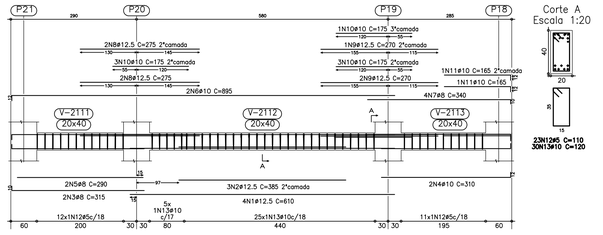


Corte A
Escala 1:20



90N82ø6.3 C=163

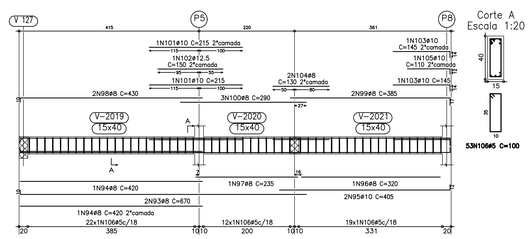
V 152
Escala 1:50



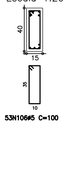
Corte A
Escala 1:20

23N12ø5 C=110
30N13ø10 C=120

V 109
Escala 1:50

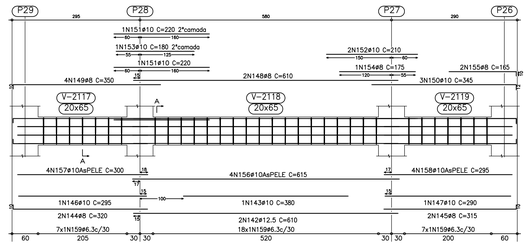


Corte A
Escala 1:20

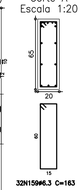


53N106ø5 C=100

V 154
Escala 1:50



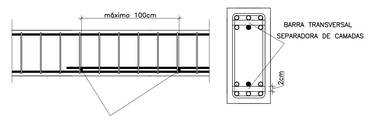
Corte A
Escala 1:20



32N159ø6.3 C=163

Nota:

Planta de referência: Prancha 14/64



BARRA TRANSVERSAL SEPARADORA DE CAMADAS
Ø20.0mm
COMPRIMENTOS
10cm: PARA VIGAS COM LARGURA =15cm
15cm: PARA VIGAS COM LARGURA =20cm

DETALHE TÍPICO DA FIXAÇÃO DAS BARRAS FLUTUANTES DE 2ª CAMADA

VIGAS COM CASO DE BARRAS FLUTUANTES:

V101, V110, V152

Resumo Aço FIXAÇÃO DAS ARMADURAS DE 2ª CAMADA	Comp. total (m)	Peso+10% (kg)	Total
CA-50-A ø20	8.37	22.7	22.7
Total			22.7

Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50-A (kg)	CA-60-B (kg)
V 154	142	ø12.5	2		610		610	1220	12.0	
	143	ø10	1		380		380	380	2.4	
	144	ø8	2	10	310		320	640	2.5	
	145	ø8	2		305	10	315	630	2.5	
	146	ø10	1		295		295	295	1.9	
	147	ø10	1		290		290	290	1.8	
	148	ø8	2	10	610		610	1220	4.8	
	149	ø8	4	10	340		350	1400	5.5	
	150	ø10	3		333	12	345	1035	6.5	
	151	ø10	2		220		220	440	2.8	
	152	ø10	2		210		210	420	2.6	
	153	ø10	1		180		180	180	1.1	
	154	ø8	1		175		175	175	0.7	
	155	ø8	2		155	10	165	330	1.3	
	156	ø10	4		615		615	2460	15.4	
	157	ø10	4		300		300	1200	7.5	
	158	ø10	4		295		295	1180	7.4	
	159	ø6.3	32				163	5216	12.9	
								Total+10%	100.8	
								ø5:	0.0	76.7
								ø6.3:	72.3	0.0
								ø8:	195.8	0.0
								ø10:	332.4	0.0
								ø12.5:	244.8	0.0
								ø16:	44.9	0.0
								Total:	990.2	76.7

Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50-A (kg)	CA-60-B (kg)
V 152	1	ø12.5	4		610		610	2440	23.9	
	2	ø12.5	3		385		385	1155	11.3	
	3	ø8	2	10	305		315	630	2.5	
	4	ø10	2		298	12	310	620	3.9	
	5	ø8	2		290		290	580	2.3	
	6	ø10	2	12	883		895	1790	11.2	
	7	ø8	4		330	10	340	1360	5.3	
	8	ø12.5	4		275		275	1100	10.8	
	9	ø12.5	3		270		270	810	7.9	
	10	ø10	1		175		175	1225	7.7	
	11	ø10	2		153	12	165	330	2.1	
	12	ø5	23				110	2530		4.0
	13	ø10	30				120	3600	22.6	
								Total+10%	122.7	4.4

Elemento	Pos.	Diam.	Q.	Dob. (cm)	Reta (cm)	Dob. (cm)	Comp. (cm)	Total (cm)	CA-50-A (kg)	CA-60-B (kg)
V 101	14	ø10	2		1170		1170	2340	14.7	
	15	ø10	2		1150		1150	2300	14.4	
	16	ø10	1		1115		1115	1115	7.0	
	17	ø10	1		1095		1095	1095	6.9	
	18	ø10	2		588	12	600	1200	7.5	
	19	ø12.5	1		565		565	565	5.5	
	20	ø8	2	10	380		400	800	3.1	
	21	ø8	1		390		390	390	1.5	
	22	ø8	2		1105		1105	2210	8.7	
	23	ø8	2		1090		1090	2180	8.6	
	24	ø8	2		910		910	1820	7.1	
	25	ø10	4		280		280	560	3.5	
	26	ø10	4		260		260	1040	6.5	
	27	ø10	2		250		250	500	3.1	
	28	ø8	2		250		250	500	2.0	
	29	ø10	2		225		225	450	2.8	
	30	ø8	3		220		220	660	2.6	
	31	ø8	2		215		220	440	1.7	
	32	ø10	4		590		590	2360	14.8	
	33	ø10	4		575		575	2300	14.4	
	34	ø10	8		570		570	4560	28.6	
	35	ø10	4		564	21	585	2340	14.7	
	36	ø10	4	21	379		400	1600	10.0	
	37	ø5	120				150	18000		28.3
								Total+10%	208.7	31.1
V 102	38	ø8	2	10	966	10	986	1972	7.7	
	39	ø8	2	10	966	10	986	1972	7.7	
	40	ø8	2		245		245	490	1.9	
	41	ø5	53				100	5300		8.3
								Total+10%	19.0	9.1
V 103	42	ø8	2	10	220	10	240	480	1.9	
	43	ø8	2	10	220	10	240	480	1.9	
	44	ø8	2	10	220	10	240	480	1.9	
	45	ø5	10				110	1100		1.7
								Total+10%	6.3	1.9
V 104	46	ø12.5	2	15	586	15	616	1232	12.1	
	47	ø10	1		345		345	345	2.2	
	48	ø8	2	18	586	18	622	1244	4.9	
	49	ø10	2	14	136		150	300	1.9	
	50	ø8	2		135	10	145	290	1.1	
	51	ø8	3	10	125		140	420	1.6	
	52	ø5	31				110	3410		5.4
								Total+10%	26.2	5.9
V 105	53	ø8	2	10	235	10	255	510	2.0	
	54	ø8	1		235		235	235	0.9	
	55	ø8	2	10	235	10	255	510	2.0	
	56	ø8	2	10	60		70	140	0.5	
	57	ø5	12				110	1320		2.1
								Total+10%	5.9	2.3
V 106	58	ø12.5	3		620		620	1860	18.3	
	59	ø10	3		595		595	2975	18.7	
	60	ø12.5	4		585	15	600	2400	23.6	
	61	ø10	2		575		575	1150	7.2	
	62	ø12.5	1		560		560	560	5.5	
	63	ø10	1		555		555	555	3.5	
	64	ø10	2		550		550	1100	6.9	
	65	ø10	2		375		375	750	4.7	
	66	ø10	2		355		355	710	4.5	
	67	ø8	2		1105		1105	2210	8.7	
	68	ø8	2	10	1090		1100	2200	8.6	
	69	ø8	2		560	10	570	1140	4.5	
	70	ø12.5	2		345		345	690	6.8	
	71	ø12.5	2		335		335	670	6.6	
	72	ø12.5	2		330		330	660	6.5	
	73	ø10	3		315		315	945	5.9	
	74	ø16	1		290		290	290	4.6	
	75	ø12.5	2		255		255	510	5.0	
	76	ø12.5	2		245		245	490	4.8	
	77	ø8	2		230		230	460	1.8	
	78	ø8	4		130	10	140	560	2.2	
	79	ø10	4		590		590	2360	14.8	
	80	ø10	8		570		570	4560	28.6	
	81	ø10	8		568	12	580	4640	29.1	
	82	ø6.3	90				163	14670	36.3	
								Total+10%	295.7	
V 107	83	ø12.5	2	15	420	15	450	900	8.8	
	84	ø10	1		245		245	245	1.5	
	85	ø8	2	10	420	10	440	880	3.5	
	86	ø8	2	10	100		110	220	0.9	
	87	ø5	21				130	2730		4.3
								Total+10%	16.2	4.7
V 108	88	ø8	2	10	235	10	255	510	2.0	
	89	ø8	1		210		210	210	0.8	
	90	ø8	2	10	235	10	255	510	2.0	
	91	ø8	2	10	235	10	255	510	2.0	
	92	ø5	13				110	1430		2.2
								Total+10%	7.5	2.4
V 109	93	ø8	2	10	660		670	1340	5.3	
	94	ø8	2		420		420	840	3.3	
	95	ø10	2		393	12	405	810	5.1	
	96	ø8	1		320		320	320	1.3	
	97	ø8	1		235		235	235	0.9	
	98	ø8	2	10	420		430	860	3.4	
	99	ø8	2		368	17	385	770	3.0	
	100	ø8	3		290		290	870	3.4	
	101	ø10	2		215		220	430	2.7	
	102	ø12.5	1		150		150	150	1.5	
	103	ø10	2		131	14	145	290	1.8	
	104	ø8	2		130		130	260	1.0	
	105	ø10	1		98	12	110	110	0.7	
	106	ø5	53				100	5300		8.3
								Total+10%	36.7	9.1
V 110	107	ø12.5	2	15	1115		1130	2260	22.2	
	108	ø16	2		591	19	610	1220	19.2	
	109	ø12.5	2		390		390	780	7.7	
	110	ø12.5	2		385		385	770	7.6	
	111	ø16	1		350		350	350	5.5	
	112	ø8	2	18	1092		1110	2220	8.7	
	113	ø8	2		571	19	590	1180	4.6	
	114	ø16	2		285		285	570	8.9	
	115	ø12.5	2		270		270	540	5.3	
	116	ø10	2		225		225	450	2.8	
	117	ø12.5	2		220		220	440	4.3	
	118	ø12.5	2		144	21	165	330	3.2	
	119	ø16	1		138	27	165	165	2.6	
	120	ø10	2	15	130		145	290	1.8	
	121	ø12.5	1	21	124		145	145	1.4	
	122	ø6.3	65				103	6695	16.6	
	123	ø5	34				100	3400		5.3
								Total+10%	134.6	5.8

AVALIAÇÃO DA QUALIDADE DA ESTRUTURA

RECEBIMENTO PROVISÓRIO	ACEITAÇÃO DEFINITIVA PRANCHA REVISADA
AVALIADOR/CREA: BRUNO SILVEIRA MARTINS – 148751/D	RT DO PROJETO ORIGINAL.: KÊNIO ÁVILA FERNANDES AVALIADOR BRUNO SILVEIRA MARTINS – 148751/D

REVISÃO	DESCRIÇÃO	DATA
00	EMISSÃO INICIAL	15/09/17
01	REVISÃO MP	06/06/18
02	NADA A REVISAR	
03	NADA A REVISAR	
04	REVISÃO CONSTRUTORA	03/07/18
05	NADA A REVISAR	
06	NADA A REVISAR	
07	LICIT RESIDUAL: SOMENTE NUMERAÇÃO SEM REVISÃO PROJETO	05/05/21
	REVISÕES	

MINISTÉRIO PÚBLICO DO ESTADO DE MINAS GERAIS
SEDE DAS PROMOTORIAS DE JUSTIÇA DE PATOS DE MINAS

ENDEREÇO:	ÁREA TERRENO:
AVENIDA ANGRA DOS REIS, S/N – BAIRRO COPACABANA PATOS DE MINAS – MG	10.293,06m² ÁREA CONSTRUÍDA: 2.860,04m²
PROPRIETÁRIO:	CNPJ:
PROCURADORIA GERAL DE JUSTIÇA DO ESTADO DE MINAS GERAIS	20.971.057/0001-45

PROJETO DE ESTRUTURA DE CONCRETO ARMADO

EMPRESA:	CNPJ:
PRIMEIRA ENGENHARIA LTDA	14.920.928/0001-07
RESPONSÁVEIS TÉCNICOS: KÊNIO ÁVILA FERNANDES	CREA: MG-70.918/D
CONTEÚDO: DETALHAMENTO DE VIGAS – 1° PAVIMENTO	DATA: 15/09/17 FOLHA: 41/64 ESCALA: INDICADA