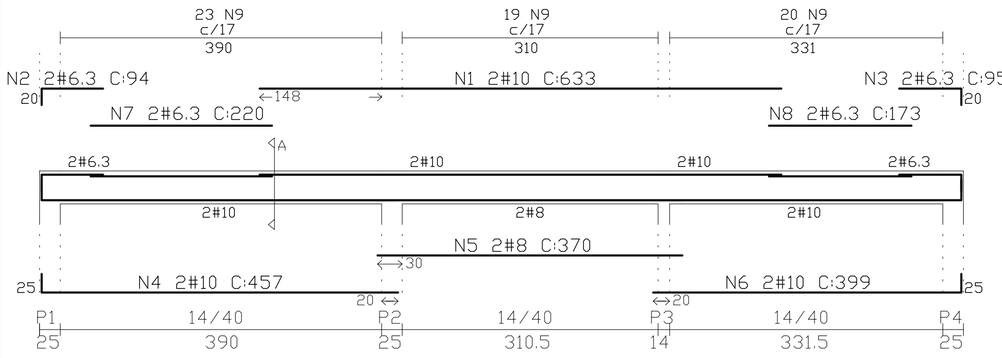
VC1-14/40



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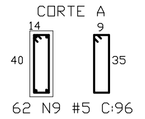
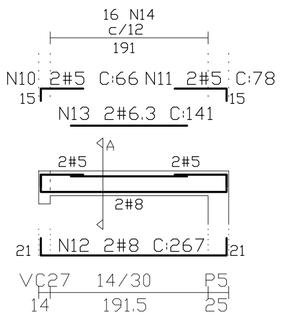


62 N9 #5 C:96

VC1-14/40				
N	#	Q	UNI	TOTAL
1	10	2	633	1266
2	6.3	2	94	188
3	6.3	2	95	190
4	10	2	457	914
5	8	2	370	740
6	10	2	399	798
7	6.3	2	220	440
8	6.3	2	173	346
9	5	62	96	5952

ACO	#	TOTAL	PESO
60B	5	5952	10
50B	6.3	1164	3
50B	8	740	3
50B	10	2978	19

VC2-14/30



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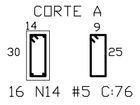
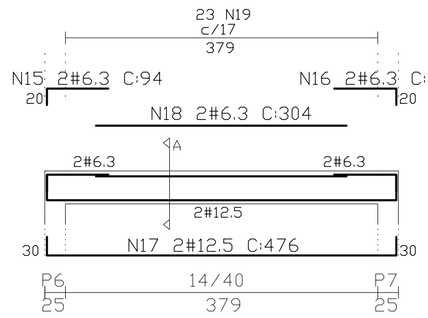


16 N14 #5 C:76

VC2-14/30				
N	#	Q	UNI	TOTAL
10	5	2	66	132
11	5	2	78	156
12	8	2	267	534
13	6.3	2	141	282
14	5	16	76	1216

ACO	#	TOTAL	PESO
60B	5	1504	3
50B	6.3	282	1
50B	8	534	3

VC3-14/40



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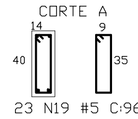
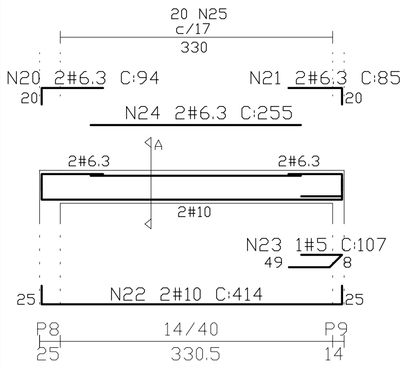


23 N19 #5 C:96

VC3-14/40				
N	#	Q	UNI	TOTAL
15	6.3	2	94	188
16	6.3	2	95	190
17	12.5	2	476	952
18	6.3	2	304	608
19	5	23	96	2208

ACO	#	TOTAL	PESO
60B	5	2208	4
50B	6.3	986	3
50B	12.5	952	10

VC4-14/40



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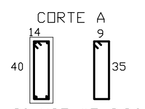
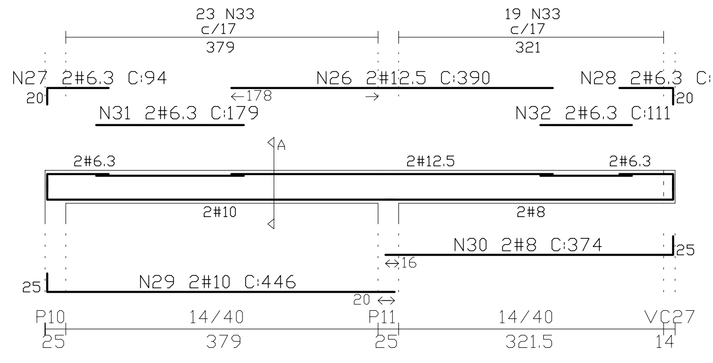


20 N25 #5 C:96

VC4-14/40				
N	#	Q	UNI	TOTAL
20	6.3	2	94	188
21	6.3	2	85	170
22	10	2	414	828
23	5	1	107	107
24	6.3	2	255	510
25	5	20	96	1920

ACO	#	TOTAL	PESO
60B	5	2027	4
50B	6.3	868	3
50B	10	828	6

VC5-14/40



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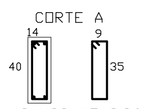
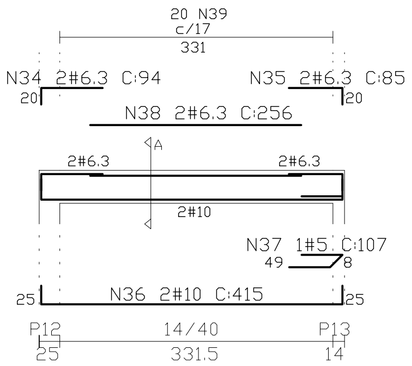


42 N33 #5 C:96

VC5-14/40				
N	#	Q	UNI	TOTAL
26	12.5	2	390	780
27	6.3	2	94	188
28	6.3	2	85	170
29	10	2	446	892
30	8	2	374	748
31	6.3	2	179	358
32	6.3	2	111	222
33	5	42	96	4032

ACO	#	TOTAL	PESO
60B	5	4032	7
50B	6.3	938	3
50B	8	748	3
50B	10	892	6
50B	12.5	780	8

VC6-14/40=8=10=11=13



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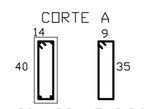


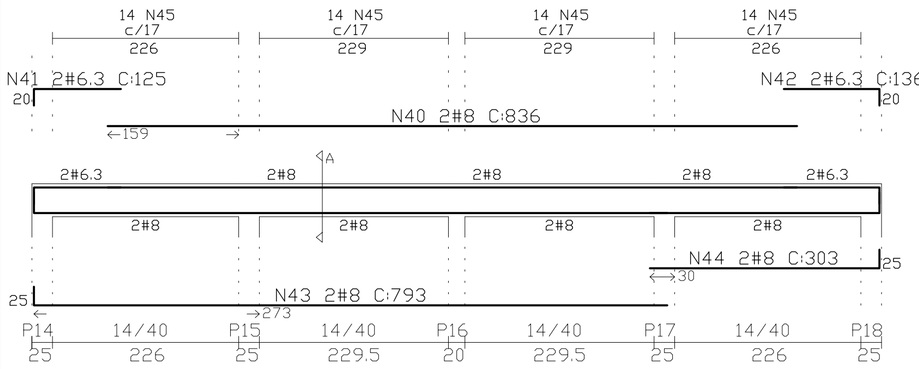
20 N39 #5 C:96

VC6-14/40=8=10=11=13				
N	#	Q	UNI	TOTAL
34	6.3	2	94	188
35	6.3	2	85	170
36	10	2	415	830
37	5	1	107	107
38	6.3	2	256	512
39	5	20	96	1920

ACO	#	TOTAL	PESO
60B	5	2027	4
50B	6.3	870	3
50B	10	830	6

REPETIR 5 VEZES

VC7-14/40



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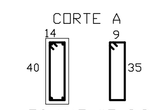
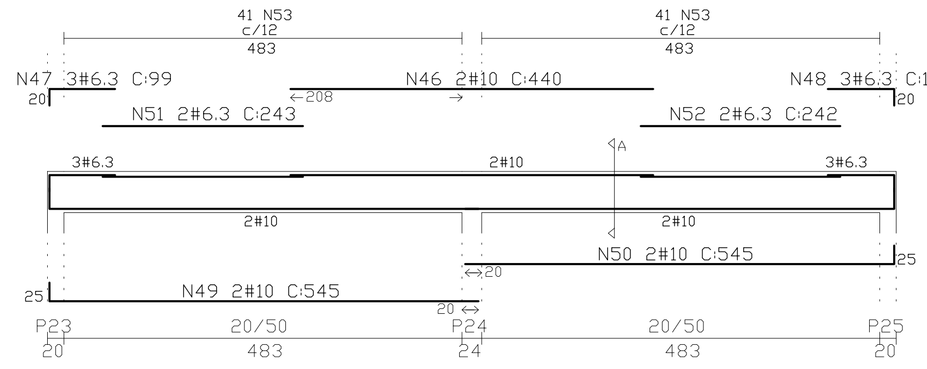


56 N45 #5 C:96

VC7-14/40				
N	#	Q	UNI	TOTAL
40	8	2	836	1672
41	6.3	2	125	250
42	6.3	2	136	272
43	8	2	793	1586
44	8	2	303	606
45	5	56	96	5376

ACO	#	TOTAL	PESO
60B	5	5376	9
50B	6.3	522	2
50B	8	3864	16

VC9=VC12-20/50



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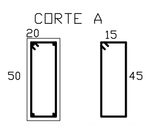
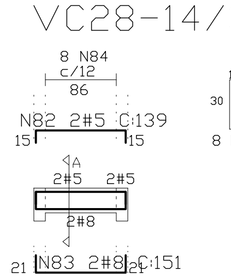


82 N53 #5 C:128

VC9=VC12-20/50				
N	#	Q	UNI	TOTAL
46	10	2	440	880
47	6.3	3	99	297
48	6.3	3	100	300
49	10	2	545	1090
50	10	2	545	1090
51	6.3	2	243	486
52	6.3	2	242	484
53	5	82	128	10496

ACO	#	TOTAL	PESO
60B	5	10496	17
50B	6.3	1567	4
50B	10	3060	20

VC28-14/30



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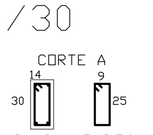
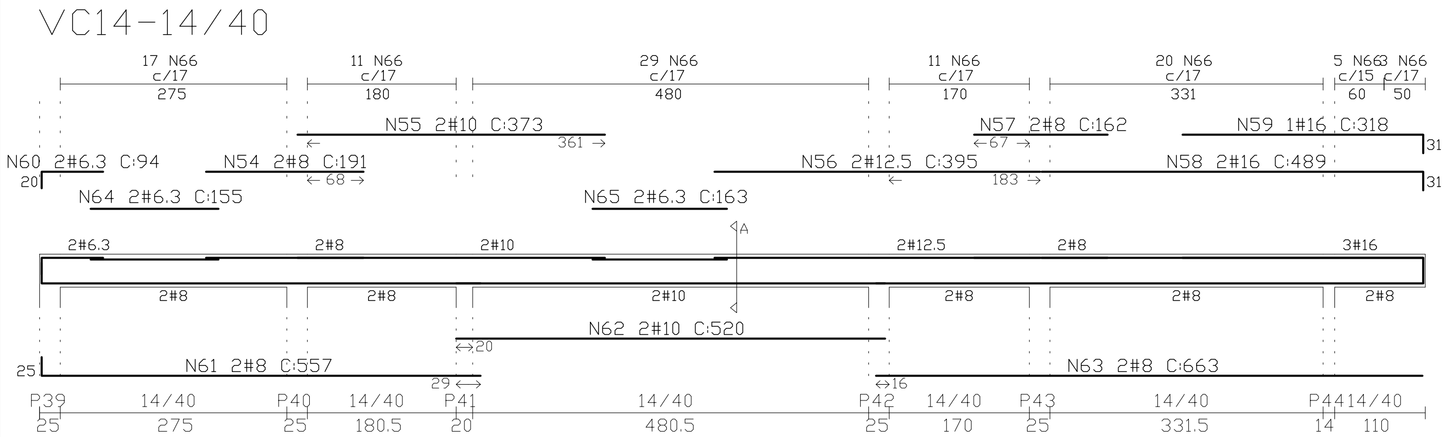


8 N84 #5 C:76

VC28-14/30				
N	#	Q	UNI	TOTAL
82	5	2	139	278
83	8	2	151	302
84	5	8	76	608

ACO	#	TOTAL	PESO
60B	5	886	2
50B	8	302	2

VC14-14/40



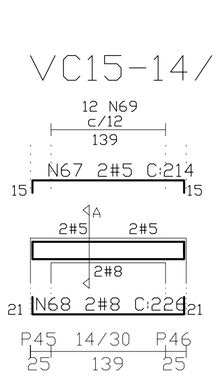
CORTE A

96 N66 #6.3 C:98

VC14-14/40				
N	#	Q	UNI	TOTAL
54	8	2	191	382
55	10	2	373	746
56	12.5	2	395	790
57	8	2	162	324
58	16	2	489	978
59	16	1	318	318
60	6.3	2	94	188
61	8	2	557	1114
62	10	2	520	1040
63	8	2	663	1326
64	6.3	2	155	310
65	6.3	2	163	326
66	6.3	96	98	9408

ACO	#	TOTAL	PESO
50B	6.3	10232	26
50B	8	3146	13
50B	10	1786	12
50B	12.5	790	8
50B	16	1296	21

VC15-14/30



CORTE A

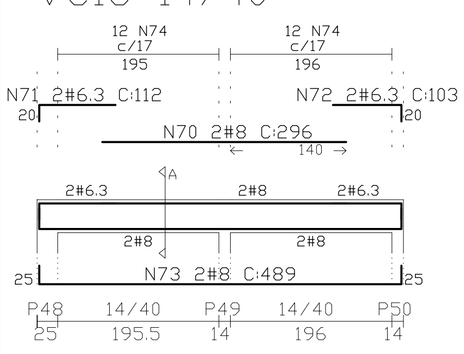
12 N69 #5 C:76

VC15-14/30				
N	#	Q	UNI	TOTAL
67	5	2	214	428
68	8	2	226	452
69	5	12	76	912

ACO	#	TOTAL	PESO
60B	5	1340	3
50B	8	452	2

VOLUME DE CONCRETO PARA VIGAS E LAJES DE COBERTURA
45,90 m3

VC16-14/40



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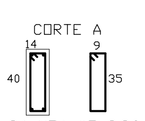
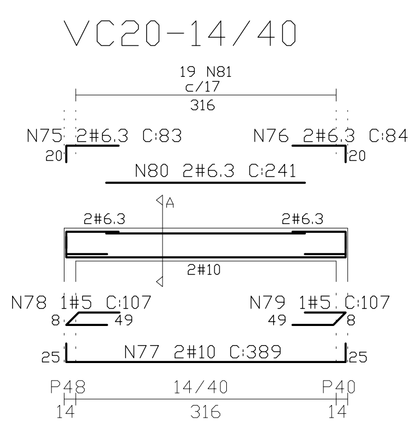


24 N74 #5 C:96

VC16-14/40				
N	#	Q	UNI	TOTAL
70	8	2	296	592
71	6.3	2	112	224
72	6.3	2	103	206
73	8	2	489	978
74	5	24	96	2304

ACO	#	TOTAL	PESO
60B	5	2304	4
50B	6.3	430	2
50B	8	1570	7

VC20-14/40



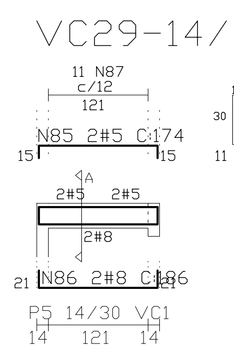
CORTE A

19 N81 #5 C:96

VC20-14/40				
N	#	Q	UNI	TOTAL
75	6.3	2	83	166
76	6.3	2	84	168
77	10	2	389	778
78	5	1	107	107
79	5	1	107	107
80	6.3	2	241	482
81	5	19	96	1824

ACO	#	TOTAL	PESO
60B	5	2038	4
50B	6.3	816	3
50B	10	778	5

VC29-14/30



CORTE A

11 N87 #5 C:76

VC29-14/30				
N	#	Q	UNI	TOTAL
85	5	2	174	348
86	8	2	186	372
87	5	11	76	836

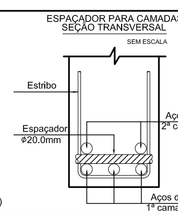
ACO	#	TOTAL	PESO
60B	5	1184	2
50B	8	372	2

DIÂMETRO (D) DOS PINOS DE DOBRAMENTO PARA GANCHOS
SEM ESCALA

BITOLA (Φ)	CA50	CA60
<20mm	5xΦ	6xΦ
≥20mm	8xΦ	—
estribo ≤10mm	3xΦ	3xΦ

NBR-6118:2003 (itens 9.4.2.3 e 9.4.6.1)

ESPAÇADOR PARA CAMADAS SEÇÃO TRANSVERSAL
SEM ESCALA



Notas:

01 NBR6118:2003 – Classe de Agressividade Ambiental = II – ambiente interno protegido.
02 NBR6118:2003 – Concreto com fck=25MPa – Aço CA-50 e CA-60.
03 NBR6118:2003 – Cobrimentos: 5,0cm(Estacas e Blocos), 3,0cm (vigas baldrame e de travamento).
04 Unidades: diâmetro do aço em milímetro; espaçamento e comprimento em metros

05 Conferir medidas no local

OBSERVAÇÃO:

EXECUTAR VERGAS E CONTRAVERGAS EM CONCRETO ARMADO fck 25 MPa EM TODOS OS VÃOS DE JANELAS E PORTAS (VER CADERNO DE ESPECIFICAÇÕES).

RESUMO DO AÇO PARA AS VIGAS DA COBERTURA

AÇO	BITOLA (mm)	COMPRIMENTO (m)	PESO
50A	6,3	309	77
50A	8	299	119
50A	10	450	284
50A	12,5	194	194
50A	16	13	21
60A	5	1490	309
PESO TOTAL 50A =		1004 kg	
PESO TOTAL 60A =		309 kg	

TÓPICOS PARA VERIFICAÇÃO:

–COBERTURA DAS ARMADURAS
COMO ESTABELECIDO PELA NBR 6118 PARA GARANTIR A UNIFORMIDADE DA COBERTURA DEVE–SE UTILIZAR ESPAÇADORES A BASE DE CIMENTO, EVITANDO A CONCENTRAÇÃO DOS MESMOS EM LINHA RETA, POIS PODERÃO OCORRER FISSURAS NO CONCRETO.
–ESTANQUEIDADE
OBSERVAR A CONDIÇÃO DE AS FORMAS NÃO APRESENTAREM JUNTAS ABERTAS DE MODO A OCORRER A FUGA DA NATA DO CONCRETO.
–LIMPEZA
ANTES DO INICIO DA CONCRETAGEM DEVE–SE PROCEDER A LIMPEZA DAS FORMAS, DE MODO A NÃO APRESENTAREM ELEMENTOS COMO TERRA, AREIA, SERRAGEM, ELEMENTOS PLÁSTICOS COMO PEDAÇOS DE PVC, ELEMENTOS METÁLICOS COMO PREGOS OU PEDAÇOS DE VERGALHÕES, SERRAGEM E OUTROS.
DEVE–SE SEMPRE PROCEDER A LIMPEZA DAS FORMAS DE MODO ADEQUADO, EVITANDO QUE AS SUPERFICIES DE CONCRETO APRESENTEM MATERIAIS ESTRANHOS.
–EXECUÇÃO DA ESTRUTURA:
ATENDER AS PRESCRIÇÕES DA NBR 6118/2003 – PROJETO E EXECUÇÃO DE ESTRUTURAS DE CONCRETO.

–VERIFICAR MEDIDAS NA OBRA.

NOTAS:

–CONCRETO fck 25 MPa
–AÇO CA 50A e CA60
–NÃO SERÁ PERMITIDO NENHUMA TUBULAÇÃO DE ÁGUA E ESGOTO DENTRO DOS ELEMENTOS ESTRUTURAIS, EXCETO AS PREVISTAS EM PROJETO.
–EFETUAR A LIMPEZA E UMIDECER AS FORMAS ANTES DO LANÇAMENTO DO CONCRETO.

REVISÃO	OBSERVAÇÃO	VISTO	DATA
3			
2			
1			

PROPRIETÁRIO:
PREFEITURA MUNICIPAL DE BANDEIRANTES - PR.

OBRA:
PROJETO ESTRUTURAL PARA UM CENTRO DE FISIOTERAPIA
RUA SÃO PAULO, ESQUINA COM A RUA PREFEITO RAFAEL ANTONACCI

CONTEUDO:
DETALHAMENTO VIGAS DA COBERTURA
VIGAS 1 , 2 , 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 , 15, 16, 20, 28 e 29.

ROMULO RAMALHO FARIAS:04950606905
Assinado de forma digital por ROMULO RAMALHO FARIAS:04950606905
Dados: 2025.06.04 13:12:11 -03'00'
RESPONSAVEL TECNICO

JAELSON RAMALHO MATTA:48666157968
Assinado de forma digital por JAELSON RAMALHO MATTA:48666157968
Dados: 2025.06.05 13:27:48 -03'00'
PREFEITURA MUNICIPAL DE BANDEIRANTES

PRANCHA Nº 05

Desenho	Revisão	Escala (s)	Unidade(s)	Data	PROJETO Nº
FRANCISCO	FCM	INDICADAS	metros	20/07/2020	PEST-2020-01