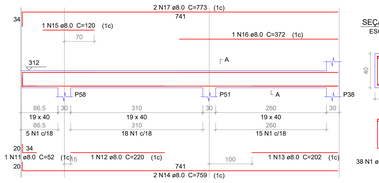
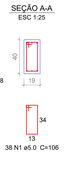
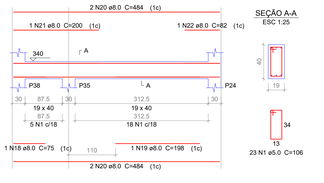
VT08
ESC 1:50



SEÇÃO A-A
ESC 1:25

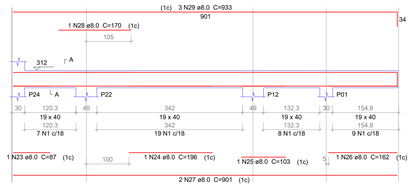


VT09-INV
ESC 1:50

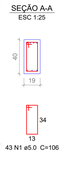


SEÇÃO A-A
ESC 1:25

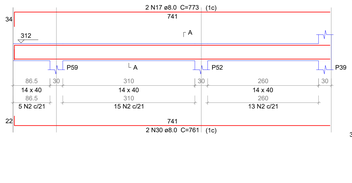
VT10
ESC 1:50



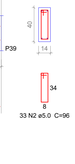
SEÇÃO A-A
ESC 1:25



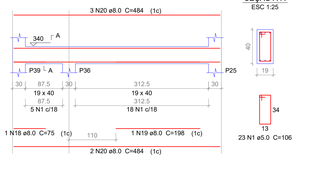
VT11
ESC 1:50



SEÇÃO A-A
ESC 1:25

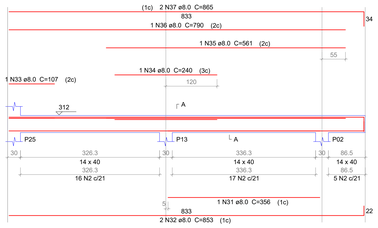


VT12-INV
ESC 1:50

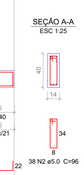


SEÇÃO A-A
ESC 1:25

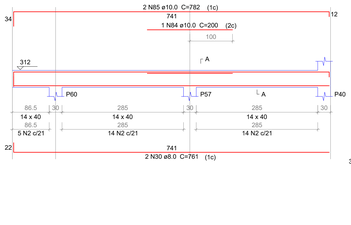
VT13
ESC 1:50



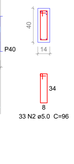
SEÇÃO A-A
ESC 1:25



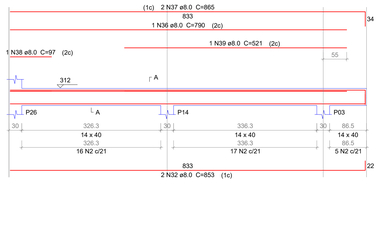
VT14
ESC 1:50



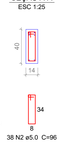
SEÇÃO A-A
ESC 1:25



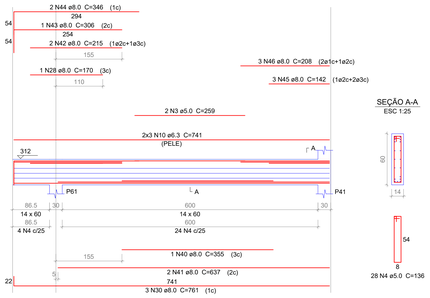
VT15
ESC 1:50



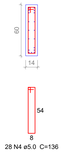
SEÇÃO A-A
ESC 1:25



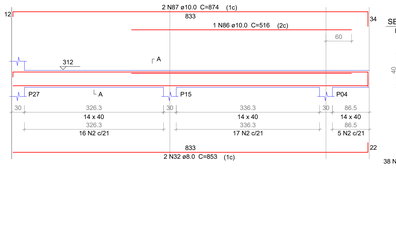
VT16
ESC 1:50



SEÇÃO A-A
ESC 1:25

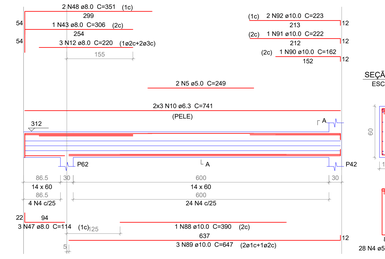


VT17
ESC 1:50

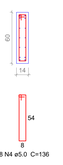


SEÇÃO A-A
ESC 1:25

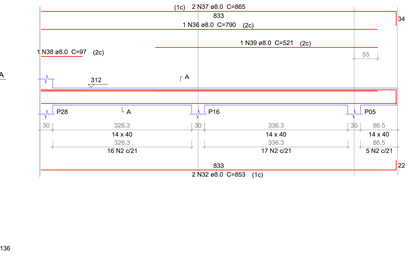
VT18
ESC 1:50



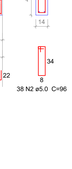
SEÇÃO A-A
ESC 1:25



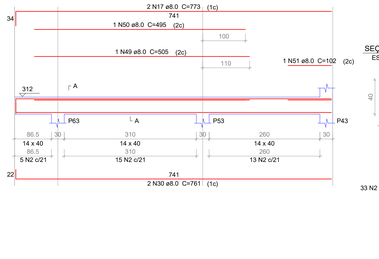
VT19
ESC 1:50



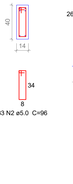
SEÇÃO A-A
ESC 1:25



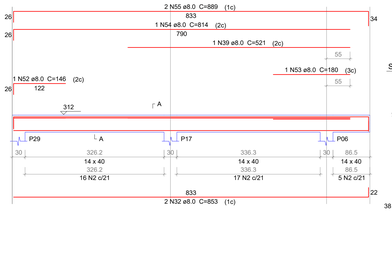
VT20
ESC 1:50



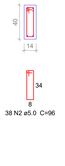
SEÇÃO A-A
ESC 1:25



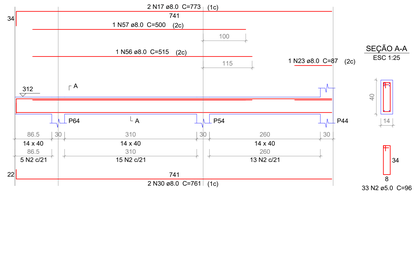
VT21
ESC 1:50



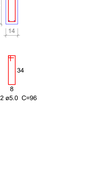
SEÇÃO A-A
ESC 1:25



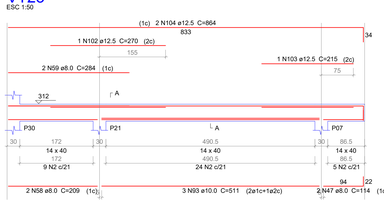
VT22
ESC 1:50



SEÇÃO A-A
ESC 1:25

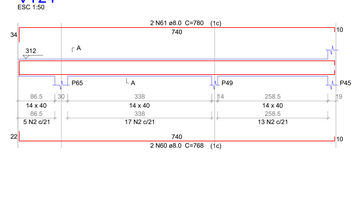


VT23
ESC 1:50

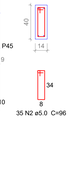


SEÇÃO A-A
ESC 1:25

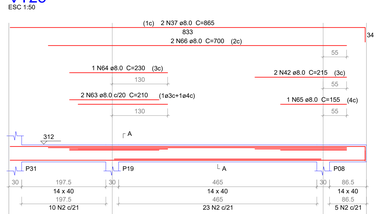
VT24
ESC 1:50



SEÇÃO A-A
ESC 1:25

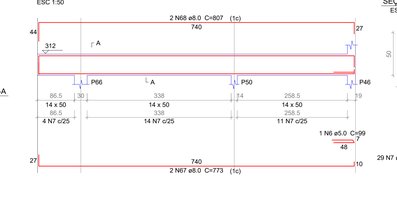


VT25
ESC 1:50

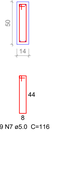


SEÇÃO A-A
ESC 1:25

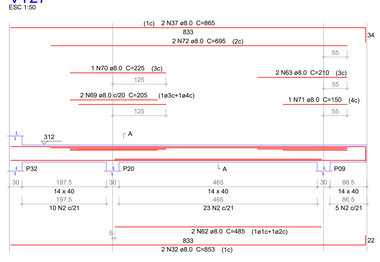
VT26
ESC 1:50



SEÇÃO A-A
ESC 1:25

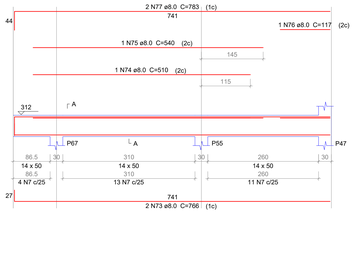


VT27
ESC 1:50



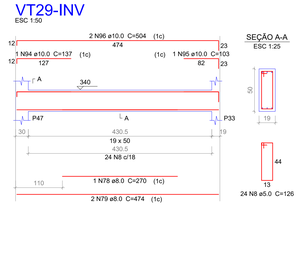
SEÇÃO A-A
ESC 1:25

VT28
ESC 1:50



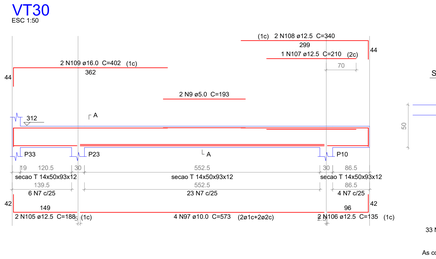
SEÇÃO A-A
ESC 1:25

VT29-INV
ESC 1:50

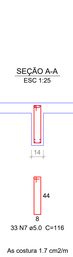


SEÇÃO A-A
ESC 1:25

VT30
ESC 1:50



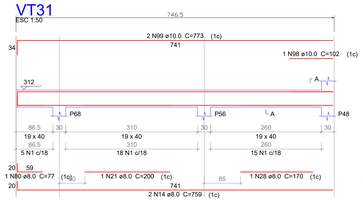
SEÇÃO A-A
ESC 1:25



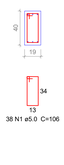
As costura 1.7 cm2/m

SEÇÃO A-A
ESC 1:25

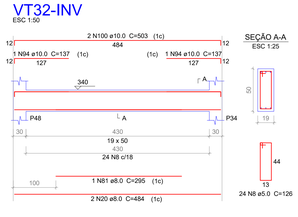
VT31
ESC 1:50



SEÇÃO A-A
ESC 1:25

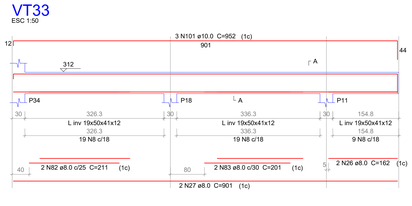


VT32-INV
ESC 1:50

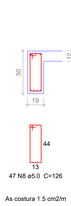


SEÇÃO A-A
ESC 1:25

VT33
ESC 1:50



SEÇÃO A-A
ESC 1:25



As costura 1.5 cm2/m

Relação do aço

VT08	VT09-INV	VT10	
VT11	VT12-INV	VT13	
VT14	VT15	VT16	
VT17	VT18	VT19	
VT20	VT21	VT22	
VT23	VT24	VT25	
VT26	VT27	VT28	
VT29-INV	VT30	VT31	
VT32-INV	VT33		

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	165	106	17490
	2	5.0	471	96	45216
	3	5.0	2	259	518
	4	5.0	56	136	7616
	5	5.0	2	249	498
	6	5.0	1	99	99
	7	5.0	90	116	10440
	8	5.0	95	126	11970
	9	5.0	2	193	386
CA50	10	6.3	12	741	8892
	11	8.0	1	52	52
	12	8.0	4	220	880
	13	8.0	1	202	202
	14	8.0	4	759	3036
	15	8.0	1	120	120
	16	8.0	1	372	372
	17	8.0	8	773	6184
	18	8.0	2	75	150
	19	8.0	2	198	396
	20	8.0	11	484	5324
	21	8.0	2	200	400
	22	8.0	1	82	82
	23	8.0	2	87	174
	24	8.0	1	196	196
	25	8.0	1	103	103
	26	8.0	3	162	486
	27	8.0	4	901	3604
	28	8.0	3	170	510
	29	8.0	3	933	2799
	30	8.0	11	797	8371
	31	8.0	1	356	356
	32	8.0	14	853	11942
	33	8.0	1	107	107
	34	8.0	1	240	240
	35	8.0	1	561	561
	36	8.0	3	790	2370
	37	8.0	10	865	8650
	38	8.0	2	97	194
	39	8.0	3	521	1563
	40	8.0	1	355	355
	41	8.0	2	637	1274
	42	8.0	4	215	860
	43	8.0	2	306	612
	44	8.0	2	346	692
	45	8.0	3	142	426
	46	8.0	3	208	624
	47	8.0	5	114	570
	48	8.0	2	351	702
	49	8.0	1	505	505
	50	8.0	1	495	495
	51	8.0	1	102	102
	52	8.0	1	146	146
	53	8.0	1	180	180
	54	8.0	1	814	814
	55	8.0	2	889	1778
	56	8.0	1	515	515
	57	8.0	1	500	500
	58	8.0	2	209	418
	59	8.0	2	284	568
	60	8.0	2	768	1536
	61	8.0	2	780	1560
	62	8.0	4	485	1940
	63	8.0	4	210	840
	64	8.0	1	230	230
	65	8.0	1	155	155
	66	8.0	2	700	1400
	67	8.0	2	773	1546
	68	8.0	2	807	1614
	69	8.0	2	205	410
	70	8.0	1	225	225
	71	8.0	1	150	150
	72	8.0	2	695	1390
	73	8.0	2	766	1532
	74	8.0	1	510	510
	75	8.0	1	540	540
	76	8.0	1	117	117
	77	8.0	2	783	1566
	78	8.0	1	270	270
	79	8.0	2	474	948
	80	8.0	1	77	77
	81	8.0	1	295	295
	82	8.0	2	211	422
	83	8.0	2	201	402
	84	10.0	1	200	200
	85	10.0	2	782	1564
	86	10.0	1	516	516
	87	10.0	2	874	1748
	88	10.0	1	390	390
	89	10.0	3	647	1941
	90	10.0	1	162	162
	91	10.0	1	222	222
	92	10.0	2	223	446
	93	10.0	3	511	1533
	94	10.0	3	137	411
	95	10.0	1	103	103
	96	10.0	2	504	1008
	97	10.0	4	573	2292
	98	10.0	1	102	102
	99	10.0	2	773	1546
	100	10.0	2	503	1006
	101	10.0	3	952	2856
	102	12.5	1	270	270
	103	12.5	1	215	215
	104	12.5	2	864	1728
	105	12.5	2	188	376
	106	12.5	2	135	270
	107	12.5	1	210	210
	108	12.5	2	340	680
	109	16.0	2	402	804

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	89	23.9
	8.0	912.4	396
	10.0	180.5	122.4
	12.5	37.5	39.7
	16.0	8.1	14
CA60	5.0	942.4	159.8
PESO TOTAL (kg)			
CA50	596		
CA60	159.8		

Volume de concreto (C-30) = 15.63 m³
Área de forma = 222.4 m²

Prefeitura Municipal de São Carlos
Secretaria Municipal de Habitação e Desenvolvimento Urbano

umpler engenharia

Construção CEMEI Água Vermelha - Padrão (FDE - 150 alunos)

Endereço:	**Av. Dr. Ernesto Pereira Lopes, s/n - Distrito de Água Vermelha**
Município - UF:	**São Carlos, SP.**
Proprietário:	**Prefeitura Municipal de São Carlos**
Código:	*CEMEI-ÁGUA-VERMELHA_ESTRUTURA_FOLHA-10-22_REV.00*
Responsável Técnico:	**Engenheiro Julio Cesar Ortiz Moran**

Julio Cesar Ortiz Moran
Responsável Técnico
CREA: 5063043210

PROJETO EXECUTIVO
ESTRUTURA

Conteúdo (Descrição):
VIGAS PAVIMENTO TÉRREO 02

Projetar:	*ESTRUTURAL*
Revisão:	***00***
Escalas:	**Indicadas**
Data:	**Abril / 2021**
Folha:	**10/22**