

Forma do pavimento NÍVEL 000 (Nível 0)

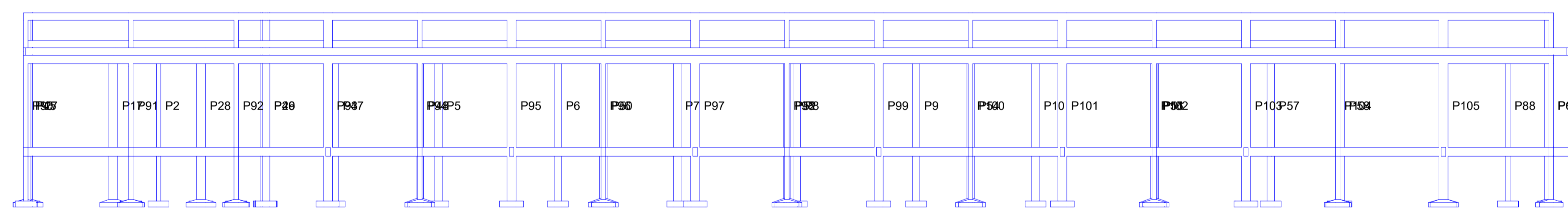
escala 1:100

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x30	0	0
V2	15x30	0	0
V3	15x30	0	0
V4	15x30	0	0
V5	15x30	0	0
V6	15x30	0	0
V7	15x30	0	0
V8	15x30	0	0
V9	15x30	0	0
V10	15x30	0	0
V11	15x30	0	0
V12	15x30	0	0
V13	15x30	0	0
V14	15x30	0	0
V15	15x30	0	0
V16	15x30	0	0
V17	15x30	0	0
V18	15x30	0	0
V19	15x30	0	0
V20	15x30	0	0
V21	15x30	0	0
V22	15x30	0	0
V23	15x30	0	0
V24	15x30	0	0
V25	15x30	0	0
V26	15x30	0	0
V27	15x30	0	0
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V29	15x30	0	0
V30	15x30	0	0
V31	15x30	0	0
V32	15x30	0	0
V33	15x30	0	0
V34	15x30	0	0
V35	15x30	0	0
V36	15x30	0	0
V37	15x30	0	0
V38	15x30	0	0

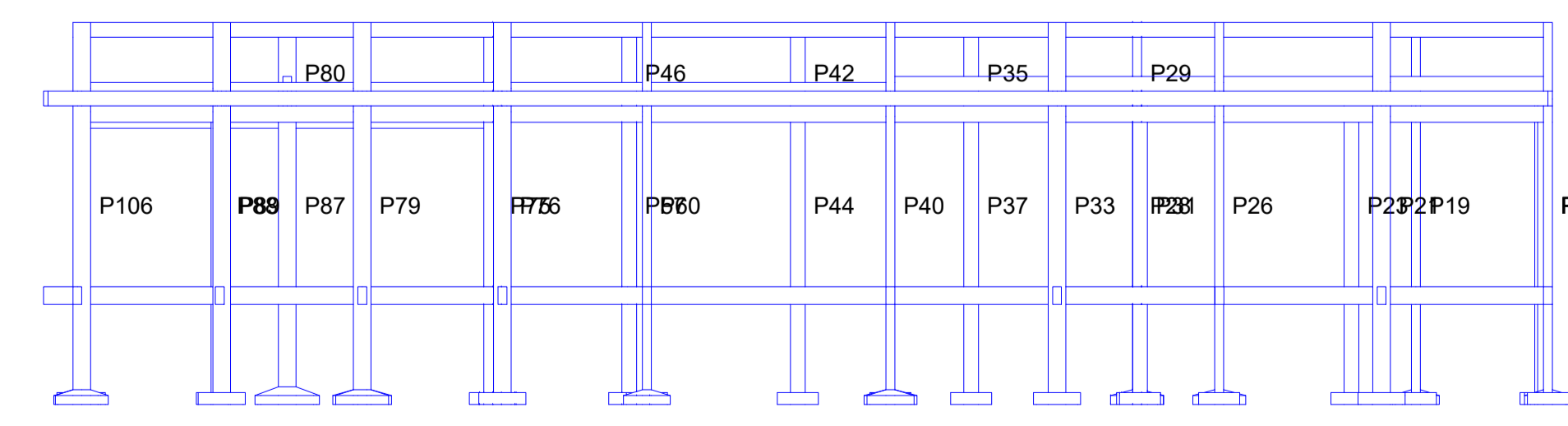
Características dos materiais		
Elemento	fk (kgf/cm²)	Ecs (kgf/cm³)
Vigas	260	241500
Pilares	250	241500
Sapatas	250	241500

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	15x30	0	0
P2	15x30	0	0
P3	15x30	0	0
P4	25x25	0	0
P5	25x25	0	0
P6	15x30	0	0
P7	25x25	0	0
P8	25x25	0	0
P9	25x25	0	0
P10	25x25	0	0
P11	25x25	0	0
P12	25x25	0	0
P13	15x30	0	0
P14	15x30	0	0
P15	15x30	0	0
P16	15x30	0	0
P17	15x30	0	0
P18	15x30	0	0
P19	15x30	0	0
P20	15x30	0	0
P21	15x30	0	0
P22	25x25	0	0
P23	25x25	0	0
P24	15x30	0	0
P25	15x30	0	0
P26	15x30	0	0
P27	15x30	0	0
P28	15x30	0	0
P29	15x30	0	0
P30	25x25	0	0
P31	25x25	0	0
P32	15x30	0	0
P33	15x30	0	0
P34	25x25	0	0
P35	25x25	0	0
P36	25x25	0	0
P37	25x25	0	0
P38	15x30	0	0
P39	15x30	0	0
P40	15x30	0	0
P41	25x25	0	0
P42	25x25	0	0
P43	25x25	0	0
P44	25x25	0	0
P45	25x25	0	0
P46	25x25	0	0
P47	25x25	0	0
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P72	15x30	0	0
P73	15x30	0	0
P74	15x30	0	0
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P79	15x30	0	0
P80	15x30	0	0
P81	15x30	0	0
P82	15x30	0	0
P83	15x30	0	0
P84	15x30	0	0
P85	15x30	0	0
P86	15x30	0	0
P87	15x30	0	0
P88	15x30	0	0
P89	15x30	0	0
P90	15x30	0	0
P91	15x30	0	0
P92	15x30	0	0
P93	15x30	0	0
P94	15x30	0	0
P95	15x30	0	0
P96	15x30	0	0
P97	15x30	0	0
P98	15x30	0	0
P99	15x30	0	0
P100	15x30	0	0
P101	15x30	0	0
P102	15x30	0	0
P103	15x30	0	0
P104	15x30	0	0
P105	15x30	0	0
P106	15x30	0	0

COR	ESP. PENNA
01	0.70
02	0.50
03	0.30
04	0.40
05	0.70
06	0.20
07	0.20
08	0.08
09	0.10
1	10%
13	15%



Corte A-A
escala 1:100



Corte B-B
escala 1:100

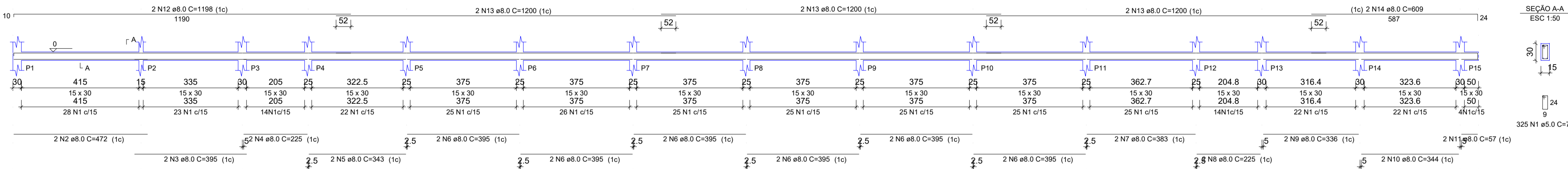
Legenda dos pilares		Legenda das vigas e paredes	
	Pilar que passa		Viga



02			
01			
Nº	DATA	REVISÃO	DESENHO APROVAÇÃO
PROJETO: PROJETO ESTRUTURAL C.E.I. SONHO INFANTIL			
CLIENTE: MUNICÍPIO DE MARCO			
LOCAL: SEDE			
CONTEÚDO:			
1 Forma Nivel 000			
2 Cortes A-A e B-B			
<small>AV. PREFEITO GUIDO OSTENHO, S/N CENTRO - MARCO - CE - 82500-000 FONE: 3661-2210 / 3634-3415 WWW.MARCO.CE.GOV.BR CNPJ: 07.546.318/0001-77</small>			
ESCALA:	DESENHO:	PRANCHA:	
INDICADA	INFRAESTRUTURA	DATA:	02/10
			AGOSTO/2023

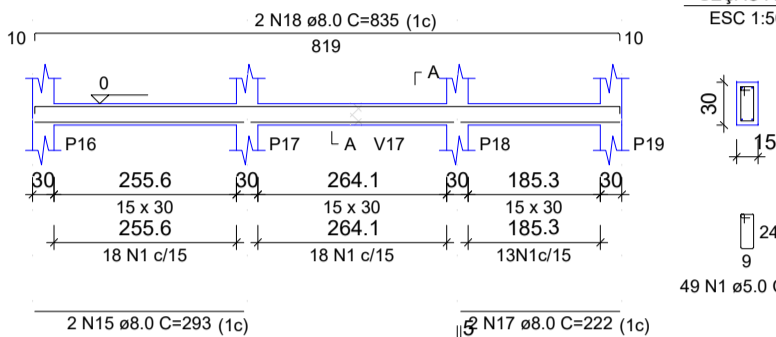
V1

ESC 1:100



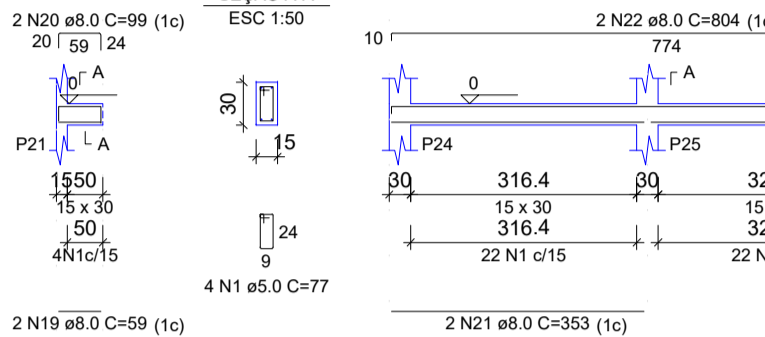
V2

ESC 1:100



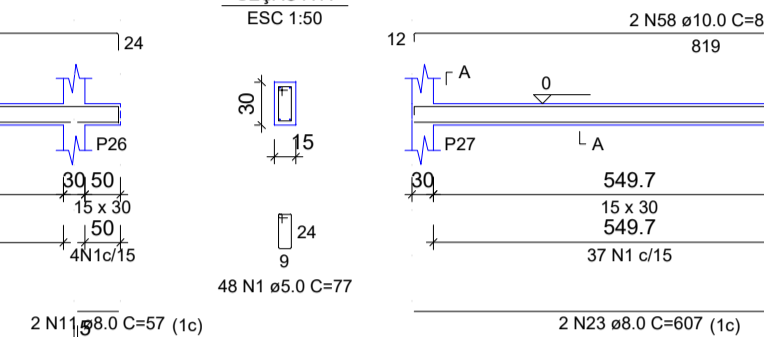
V3

ESC 1:100



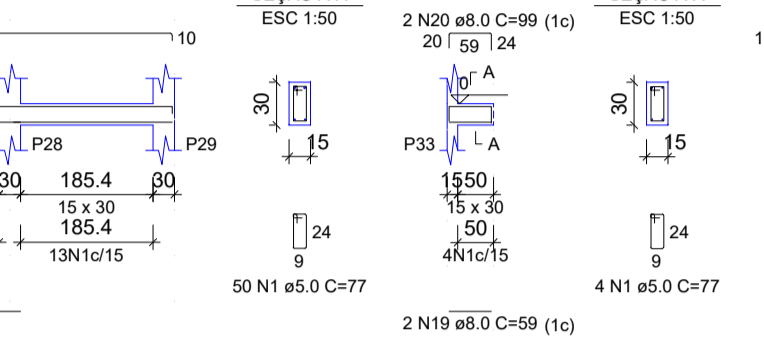
V4

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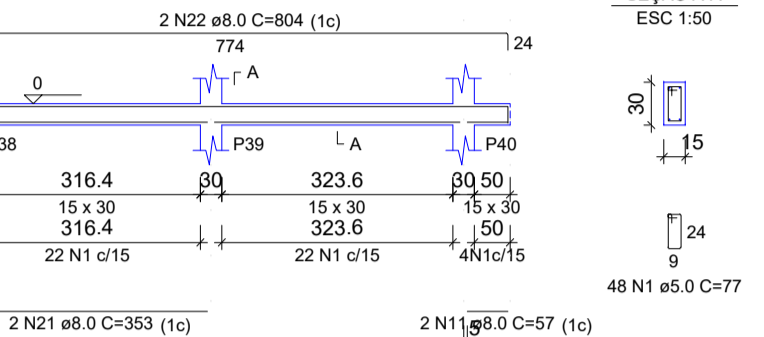
V5

ESC 1:100



V6

ESC 1:100



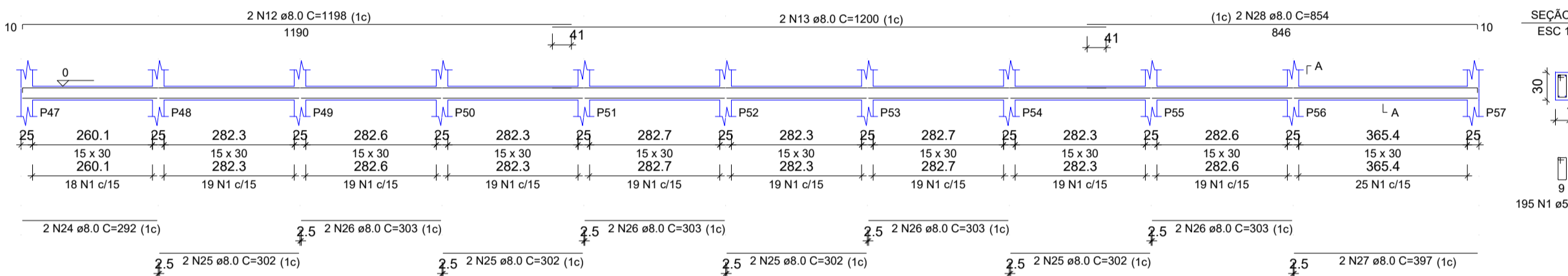
V7

ESC 1:100



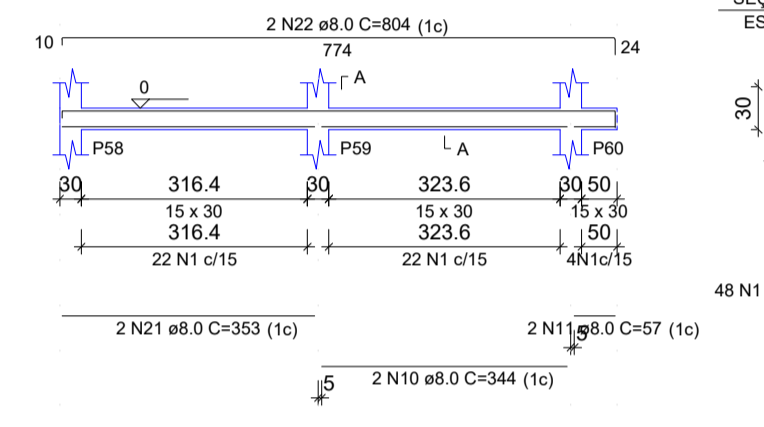
V8

ESC 1:100



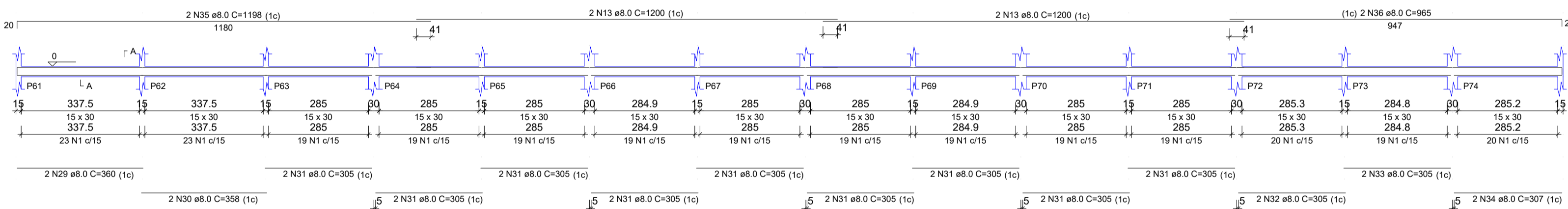
V9

ESC 1:100



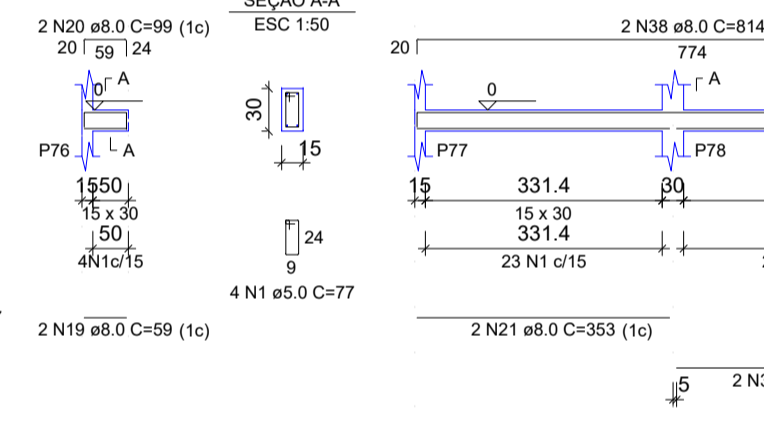
V10

ESC 1:100



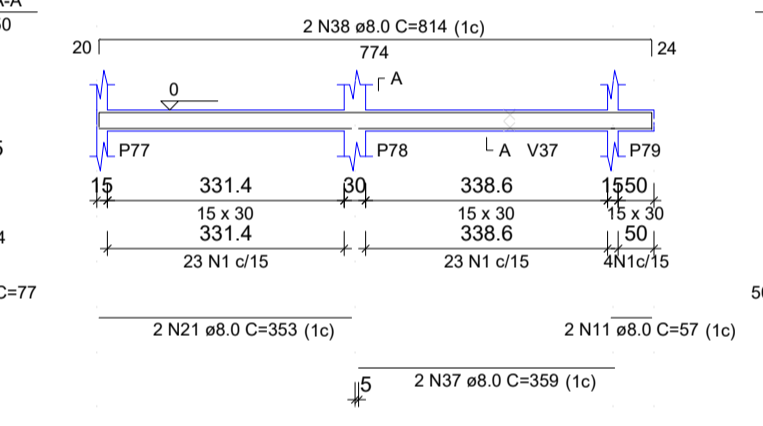
V11

ESC 1:100



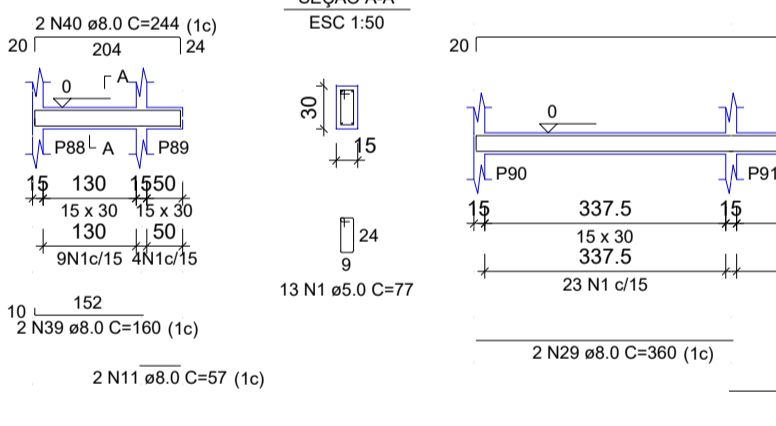
V12

ESC 1:100



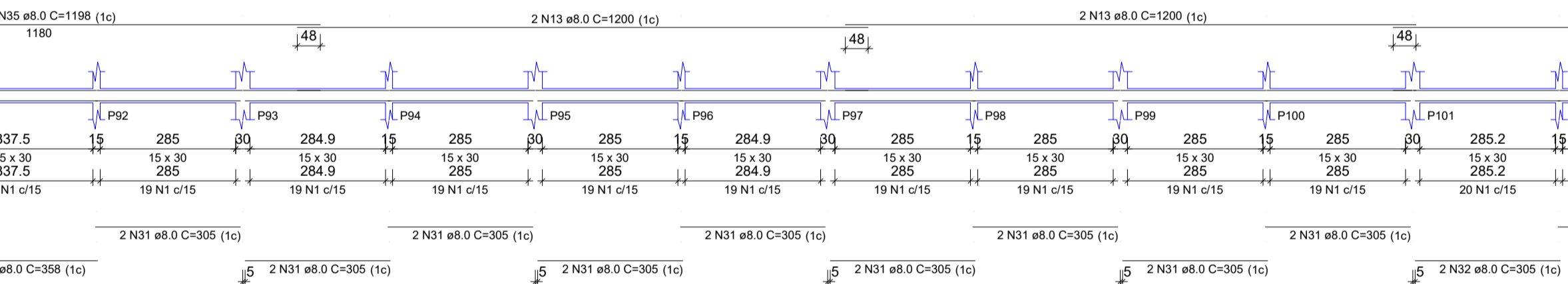
V13

ESC 1:100



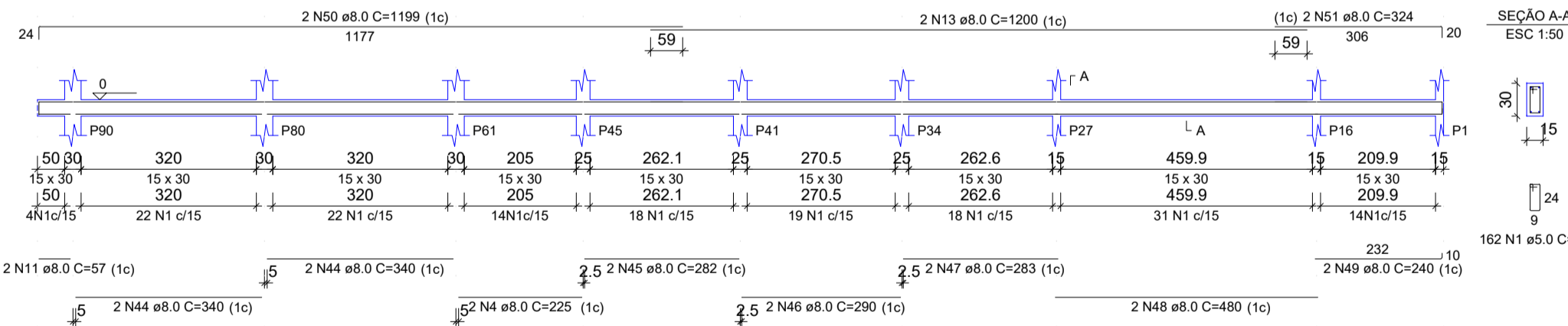
V14

ESC 1:100



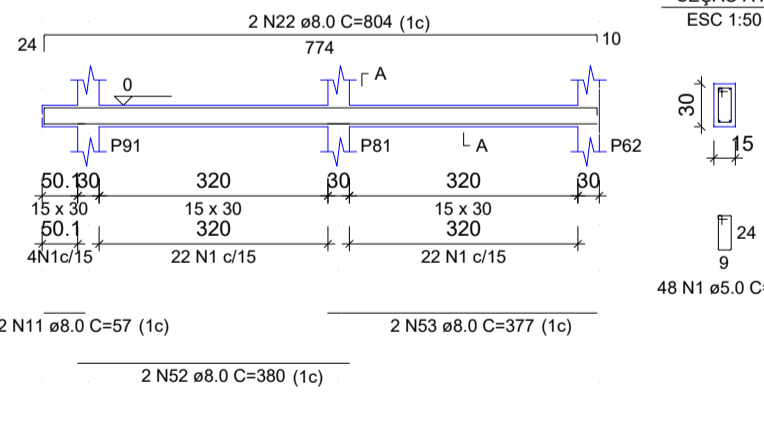
V15

ESC 1:100



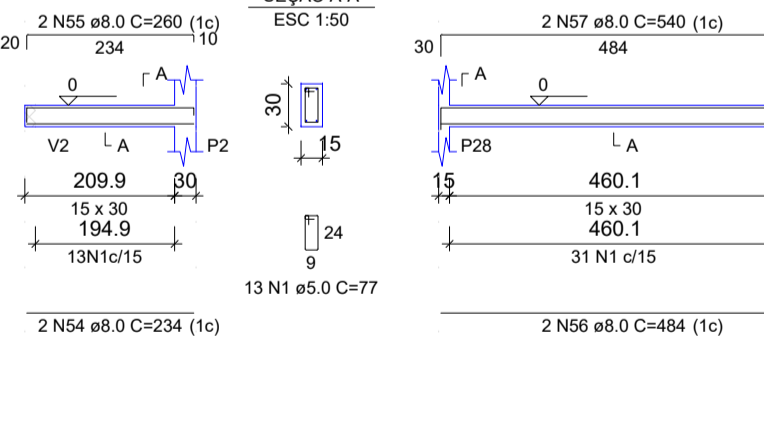
V16

ESC 1:100



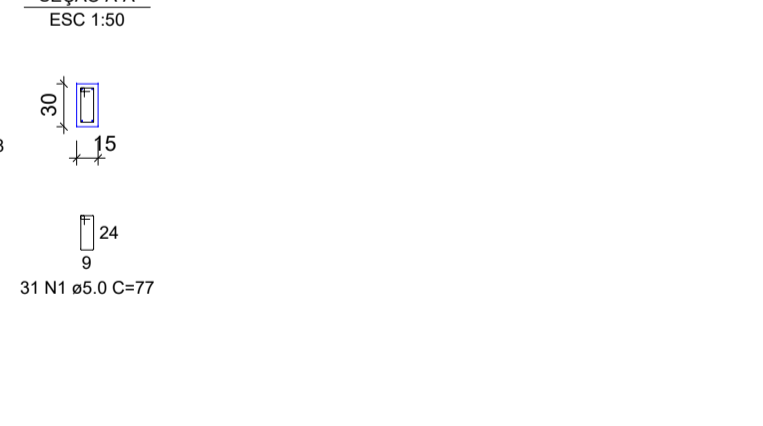
V17

ESC 1:100



V18

ESC 1:100



RELAÇÃO DO AÇO

CAO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)
CA01	1	5.0	1684	77	130438
CA02	2	8.0	2	472	944
CA03	3	8.0	4	395	790
CA04	4	8.0	2	225	900
CA05	5	8.0	2	343	686
CA06	6	8.0	12	255	4212
CA07	7	8.0	2	383	766
CA08	8	8.0	2	255	510
CA09	9	8.0	2	336	672
CA10	10	8.0	2	344	688
CA11	11	8.0	18	57	1026
CA12	12	8.0	4	1198	4792
CA13	13	8.0	20	1200	24000
CA14	14	8.0	2	609	1218
CA15	15	8.0	2	259	518
CA16	16	8.0	2	284	568
CA17	17	8.0	2	222	444
CA18	18	8.0	2	835	1670
CA19	19	8.0	6	59	354
CA20	20	8.0	6	99	594
CA21	21	8.0	8	353	2824
CA22	22	8.0	8	804	6432
CA23	23	8.0	2	607	1214
CA24	24	8.0	2	292	584
CA25	25	8.0	8	302	2416
CA26	26	8.0	6	303	2424
CA27	27	8.0	2	397	794
CA28	28	8.0	2	554	1108
CA29	29	8.0	4	360	1440
CA30	30	8.0	4	358	1432
CA31	31	8.0	30	305	10950
CA32	32	8.0	4	305	1220
CA33	33	8.0	4	305	1220
CA34	34	8.0	2	307	614
CA35	35	8.0	4	1198	4792
CA36	36	8.0	2	965	1930
CA37	37	8.0	4	359	1436
CA38	38	8.0	2	814	1628
CA39	39	8.0	2	160	320
CA40	40	8.0	2	244	488
CA41	41	8.0	2	305	610
CA42	42	8.0	2	351	702
CA43	43	8.0	2	603	1206
CA44	44	8.0	4	340	1360
CA45	45	8.0	2	282	564
CA46	46	8.0	2	282	564
CA47	47	8.0	2	283	566
CA48	48	8.0	2	480	960
CA49	49	8.0	2	240	480
CA50	50	8.0	2	1199	2398
CA51	51	8.0	2	324	648
CA52	52	8.0	2	380	760
CA53	53	8.0	2	377	754
CA54	54	8.0	2	234	468
CA55	55	8.0	2	260	520
CA56	56	8.0	2	484	968
CA57	57	8.0	2	540	1080
CA58	58	10.0	2	638	1276

RESUMO DO AÇO

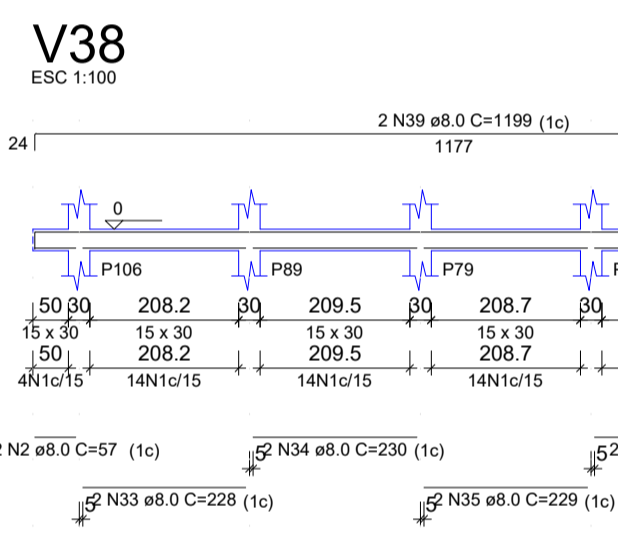
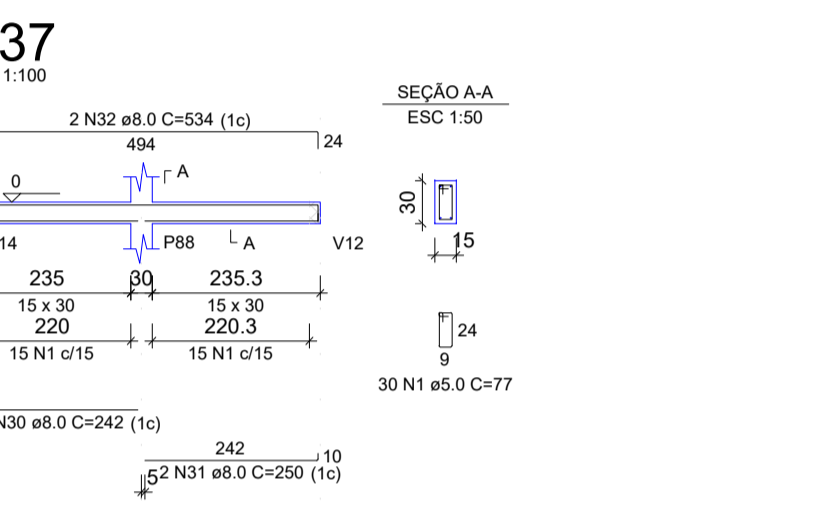
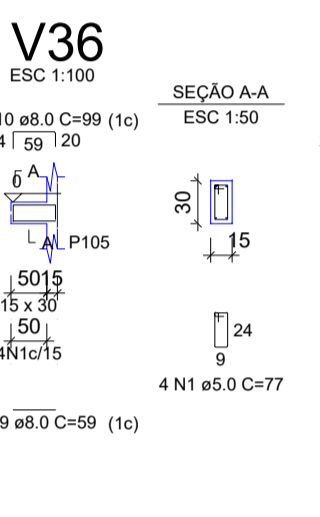
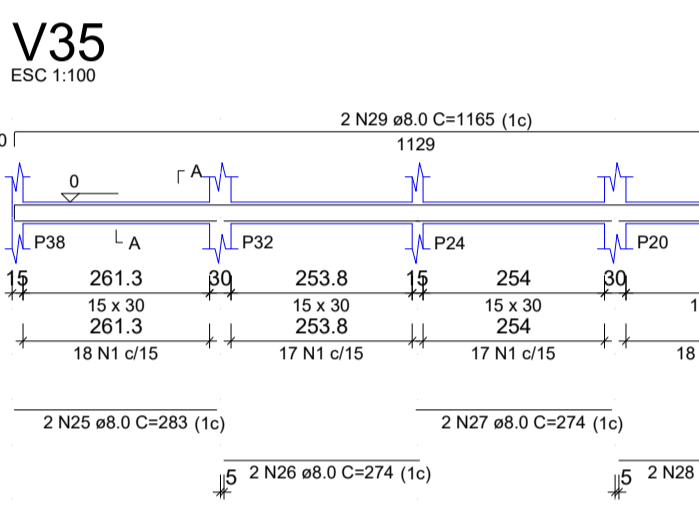
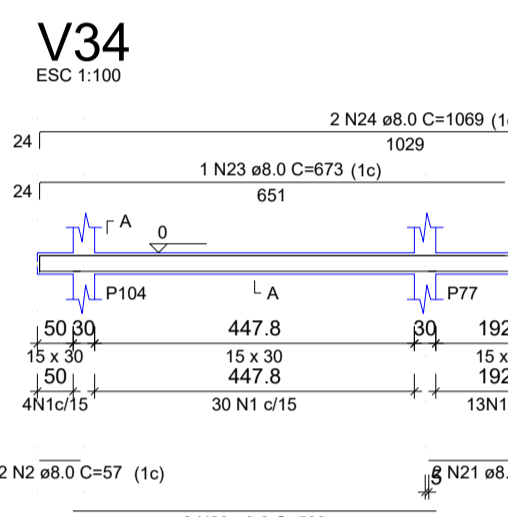
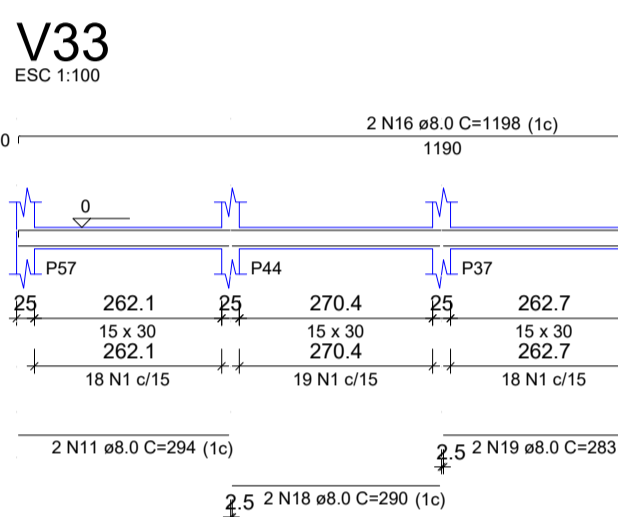
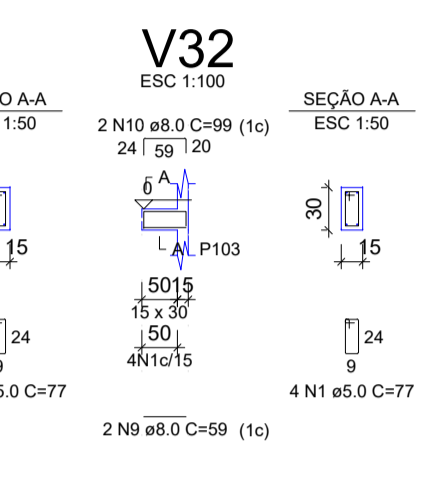
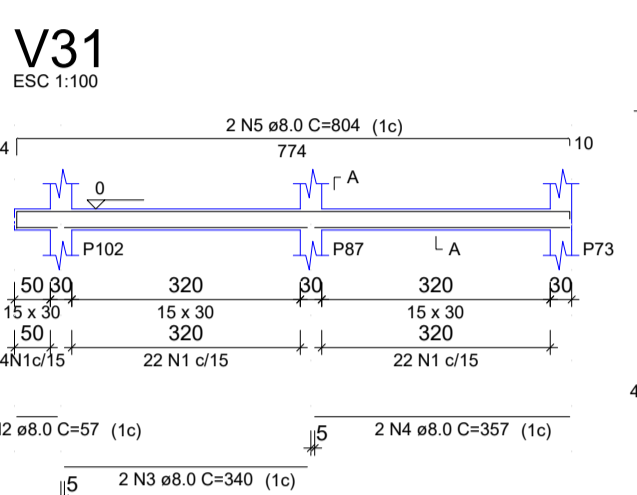
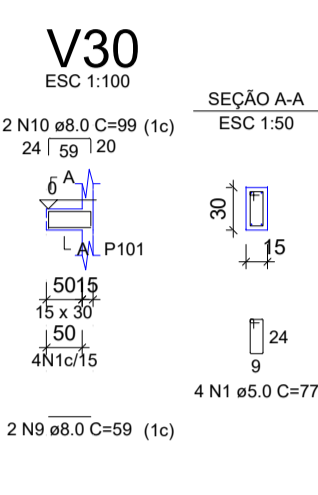
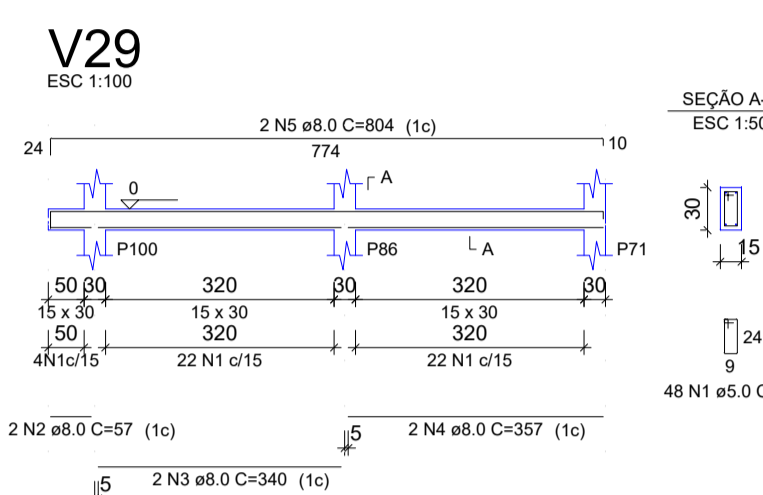
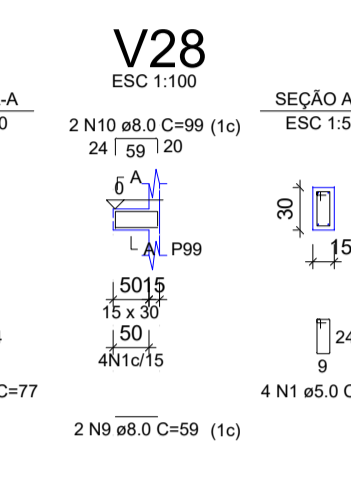
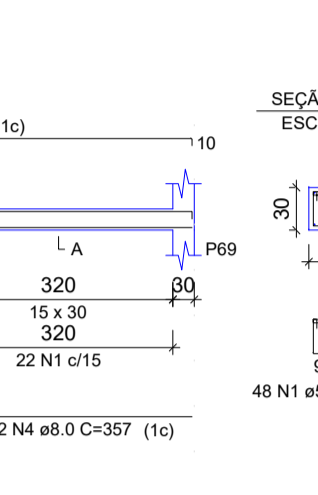
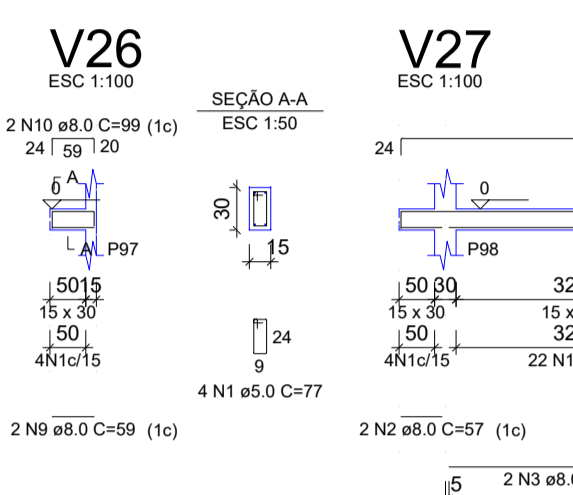
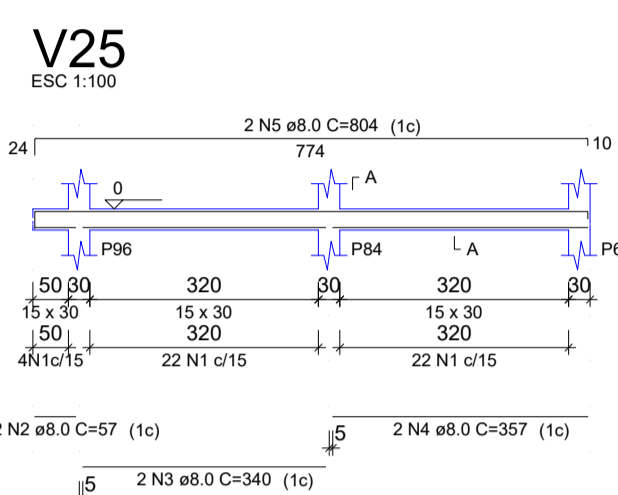
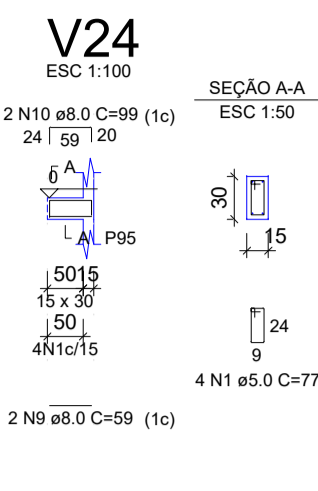
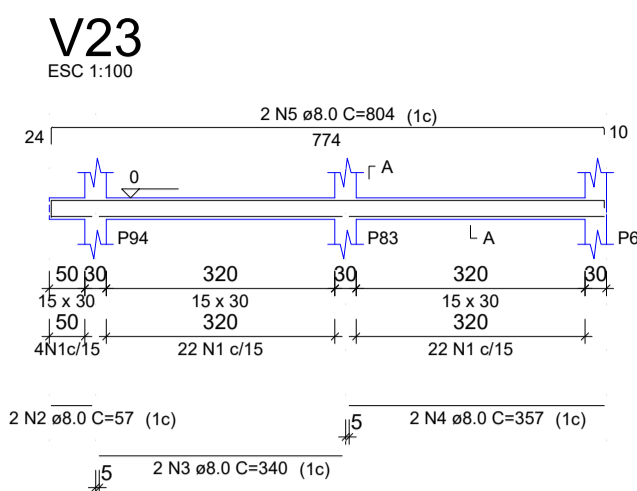
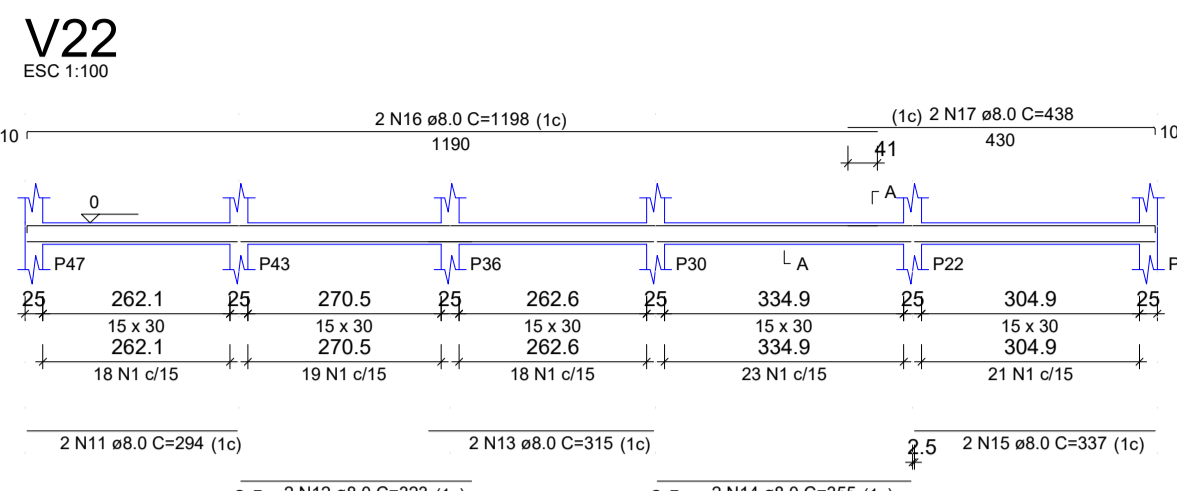
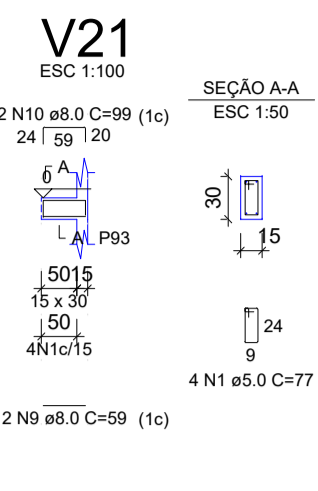
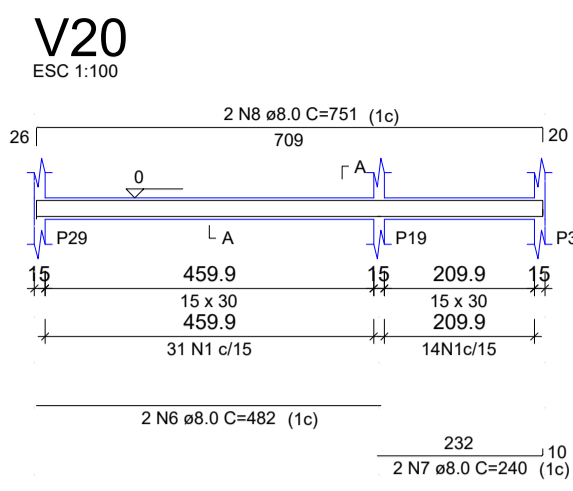
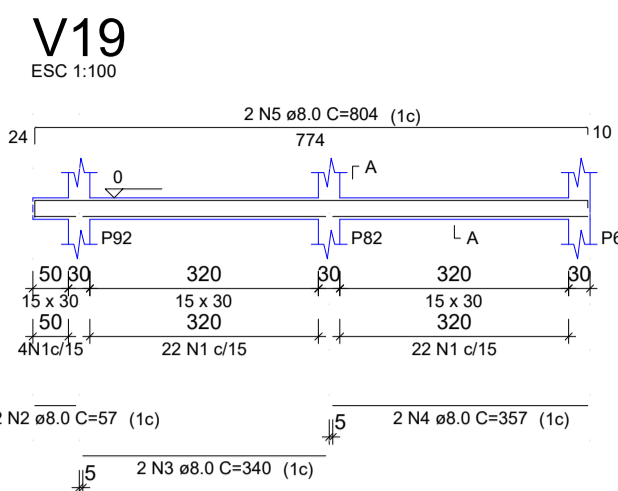
CAO	DIAM (mm)	C TOTAL (m)	PESO + 10% (kg)
CA50	8.0	1089.2	472.7
CA60	8.0	16.7	11.3
CA60	8.0	1304.4	221.2

PESO TOTAL (kg)
 CA50 484.1
 CA60 221.2
 Volume de concreto (C-25) = 11.22 m³
 Área de forma = 187.07 m²

COR	ESP. PENNA
01	0.70
02	0.50
03	0.30
04	0.40
05	0.70
06	0.20
07	0.20
08	0.08
09	0.10
11	1.06
13	1.56



02			
01			
Nº	DATA	REVISÃO	DESENHO APROVAÇÃO
PROJETO: PROJETO ESTRUTURAL C.E.I. SONHO INFANTIL			
CLIENTE: MUNICÍPIO DE MARCO			
LOCAL: SEDE			
CONTEÚDO: 1 Detalhamento das Vigas Nível 000			
 <p>AV. PREFEITO GUIDO OSTERHO, S/N CENTRO - MARCO - CE - 82500-000 BR 365-1210 BR 364-1415 www.marco.ce.gov.br CNPJ: 07.546.310/0001-77</p>			
ESCALA:	DESENHO:	PRANCHA:	
INDICADA	INFRAESTRUTURA		03/10
MARCO/2022/23			



VER	N	DIAM (mm)	QUANT	C.LINHT (cm)	C.TOTAL (cm)
V19	1	5.0	880	77	6760
V22	2	8.0	16	97	912
V25	3	8.0	12	340	4080
V28	4	8.0	12	337	4044
V31	5	8.0	12	804	9648
V34	6	8.0	2	482	964
V37	7	8.0	2	240	480
	8	8.0	2	751	1502
	9	8.0	14	59	826
	10	8.0	14	99	1386
	11	8.0	4	294	1176
	12	8.0	2	323	646
	13	8.0	2	315	630
	14	8.0	4	355	1420
	15	8.0	4	337	1348
	16	8.0	4	1198	4792
	17	8.0	4	438	1752
	18	8.0	2	290	580
	19	8.0	2	285	566
	20	8.0	2	508	1016
	21	8.0	2	212	424
	22	8.0	2	262	524
	23	8.0	1	673	673
	24	8.0	2	1069	2138
	25	8.0	2	283	566
	26	8.0	4	274	1096
	27	8.0	4	274	1096
	28	8.0	4	285	1132
	29	8.0	2	1165	2330
	30	8.0	2	242	484
	31	8.0	2	250	500
	32	8.0	2	534	1068
	33	8.0	2	230	460
	34	8.0	2	230	460
	35	8.0	2	229	458
	36	8.0	2	244	488
	37	8.0	2	420	840
	38	8.0	2	281	562
	39	8.0	2	1190	2380
	40	8.0	2	1200	2400
	41	8.0	2	294	588

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	586.9	254.7
CA60	5.0	677.6	114.9
PESO TOTAL (kg)			
CA50		254.7	
CA60		114.9	

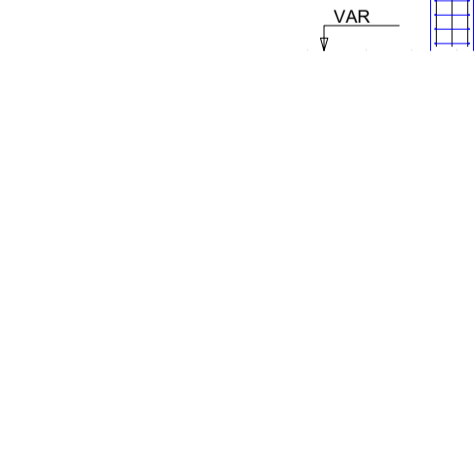
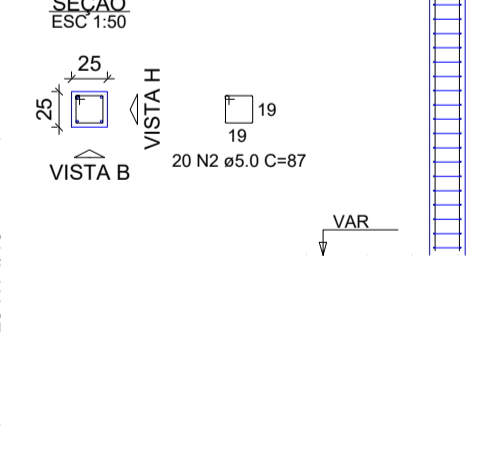
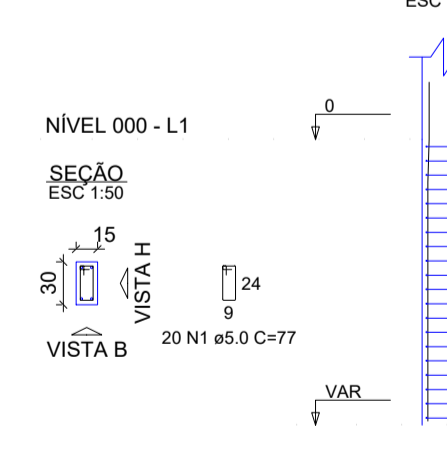
Volume de concreto (C-25) = 5.75 m³
Área de forma = 95.81 m²

CDR	ESP. PENIA
01	0.70
02	0.50
03	0.30
04	0.40
05	0.70
06	0.20
07	0.20
08	0.08
09	0.10
10	1.00
11	1.00
12	1.00
13	1.00

P1=P2=P3=P13=P15=P16=
=P17=P19=P20=P21=P24=
=P26=P29=P32=P33=P38=
=P40=P58=P59=P60=P61=
=P62=P63=P64=P65=P66=
=P67=P68=P69=P70=P71=
=P72=P73=P74=P75=P76=
=P77=P79=P80=P81=P88=
=P89=P90=P91=P92=P93=
=P94=P95=P96=P97=P98=
=P99=P100=P101=P102=
=P103=P104=P105=P106

P4=P5=P6=P7=P8=P9=P10=
=P11=P12=P22=P23=P30=
=P31=P34=P35=P36=P37=
=P41=P42=P43=P44=P45=
=P46=P47=P48=P49=P50=
=P51=P52=P53=P54=P55=
=P56=P57

P14=P18=P39=P84=P85=P86
P25=P83



AÇO	N	DIAM (mm)	QUANT	C.LINHT (cm)	C.TOTAL (cm)
50xP1	1	5.0	1424	15	10380
2xP25	2	5.0	160	15	1920
P78	3	5.0	140	24	3360
CA50	4	10.0	412	VAR	VAR
CA60	5	10.0	4	VAR	VAR
CA60	6	12.5	4	VAR	VAR
CA60	7	12.5	32	VAR	VAR

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	1054.8	715.4
CA60	5.0	1723.1	80.7
PESO TOTAL (kg)			
CA50		805.1	
CA60		292.1	

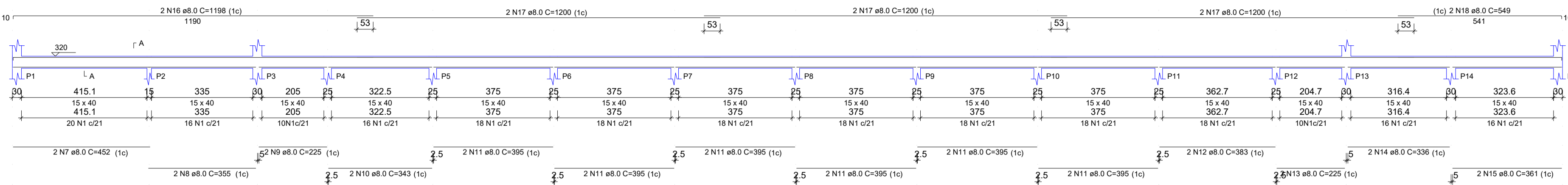
Volume de concreto (C-25) = 9.63 m³
Área de forma = 177.26 m²

02	REVISÃO	DESENHO	APROVAÇÃO
01			
Nº	DATA		
PROJETO: PROJETO ESTRUTURAL C.E.I. SONHO INFANTIL			
CLIENTE: MUNICÍPIO DE MARCO			
LOCAL: SEDE			
CONTEÚDO: <ol style="list-style-type: none"> 1 Detalhamento das Vigas Nível 000 2 Detalhamento dos Pilares Nível 000 			
			
AV. PREFEITO GUIDO OSTENHO, S/N CENTRO - MARCO - CE - 85304-000 FONE: (354) 3210-183 / 3634-1415 WWW.MARCO.CE.GOV.BR CEP: 87.546-316/909147			
ESCALA:	DESENHO:	PRANCHA:	
INDICADA	INFRAESTRUTURA		
DATA:	AGOSTO/2023		



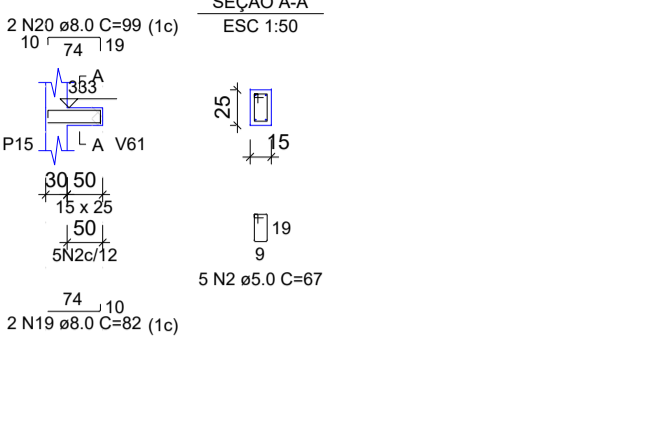
V1

ESC 1:100



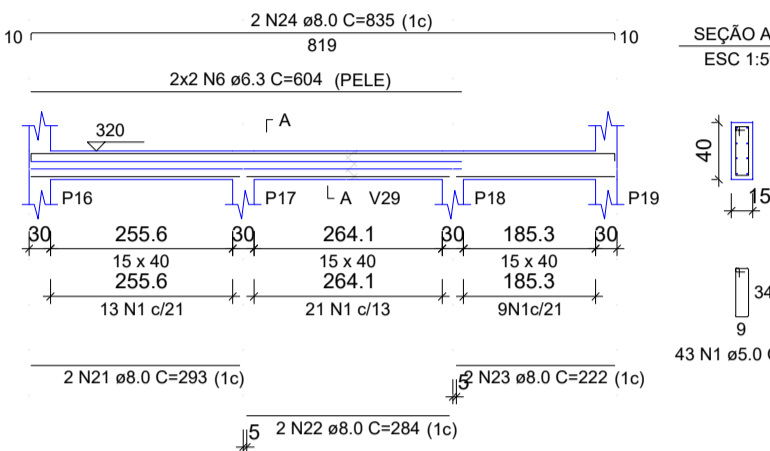
V2

ESC 1:100



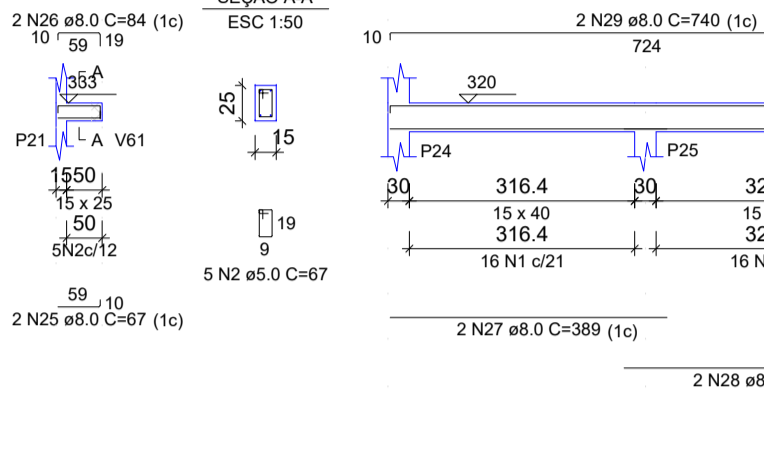
V3

ESC 1:100



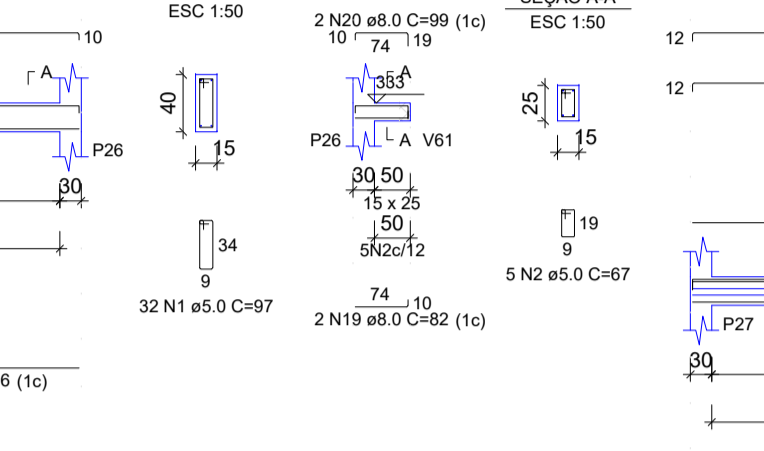
V4

ESC 1:100



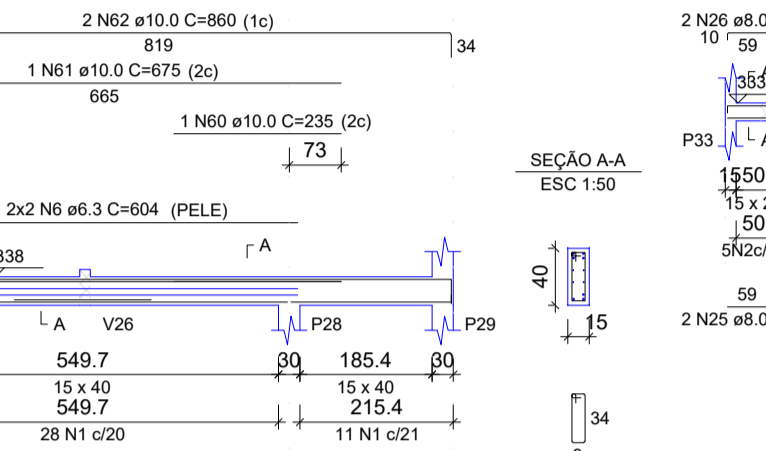
V5

ESC 1:100



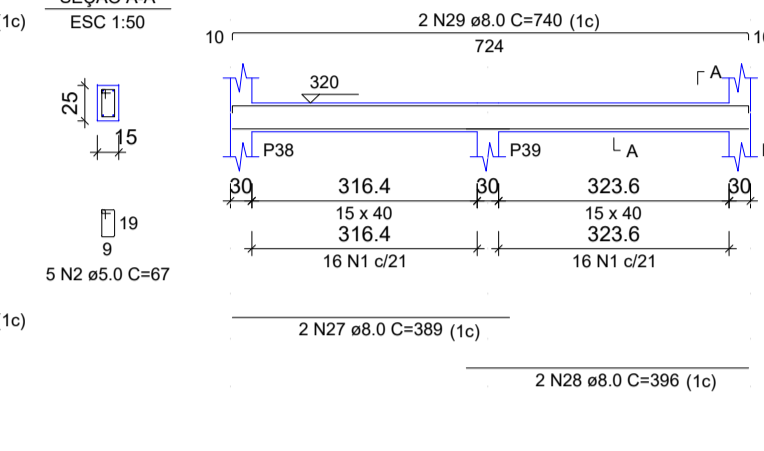
V6

ESC 1:100



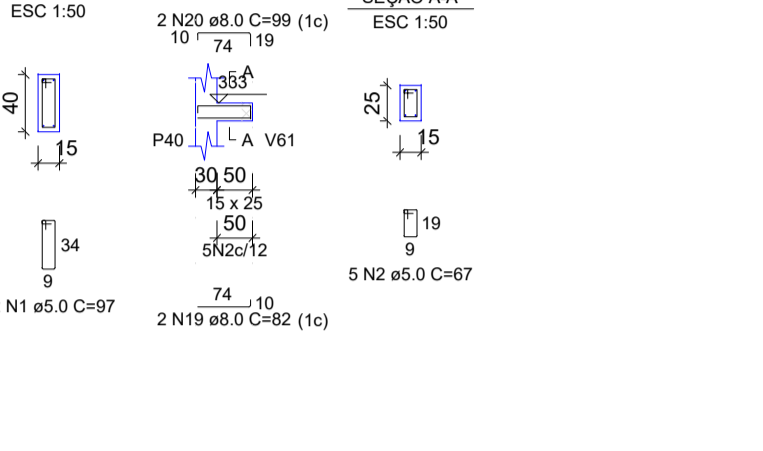
V7

ESC 1:100



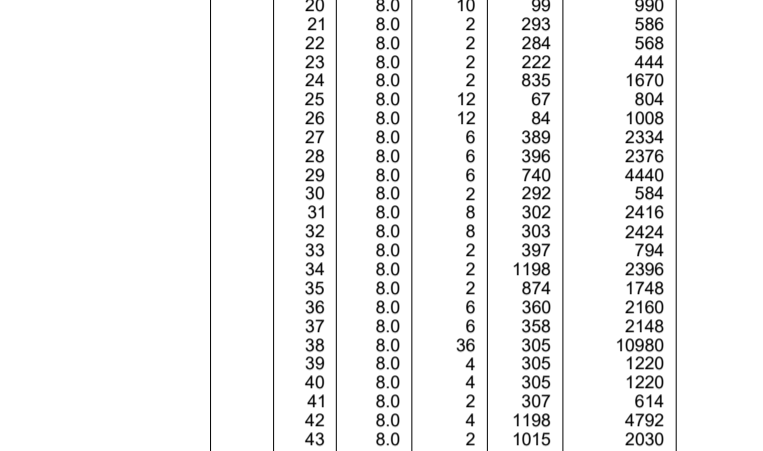
V8

ESC 1:100



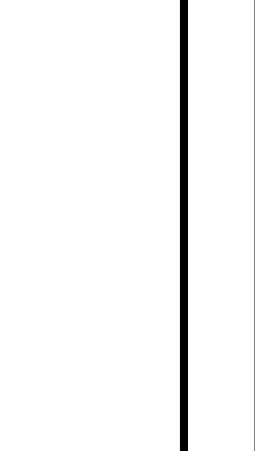
V9

ESC 1:100



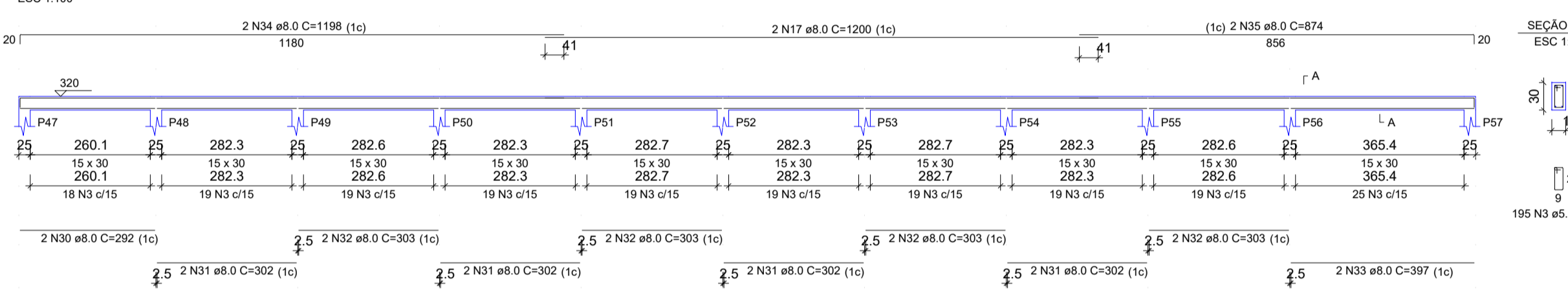
V10

ESC 1:100



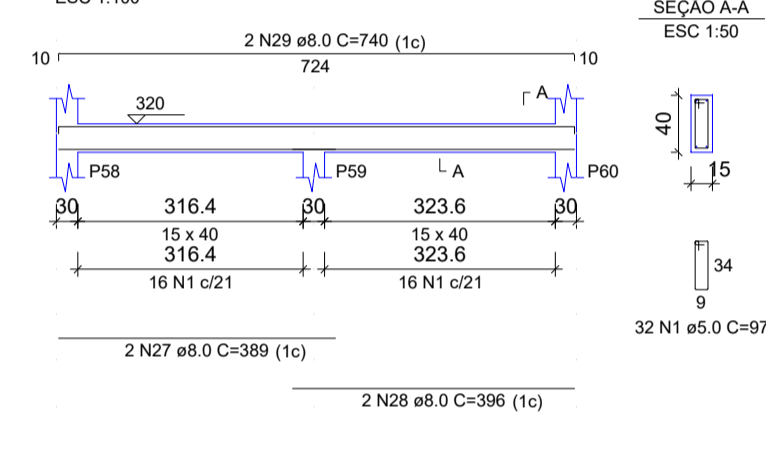
V11

ESC 1:100



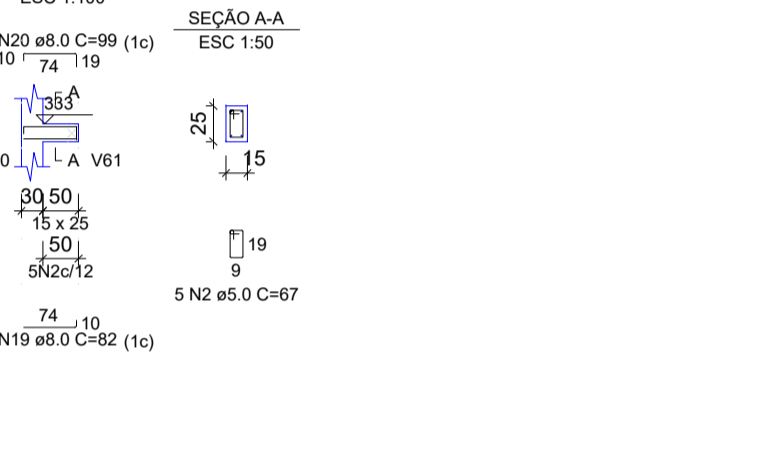
V12

ESC 1:100



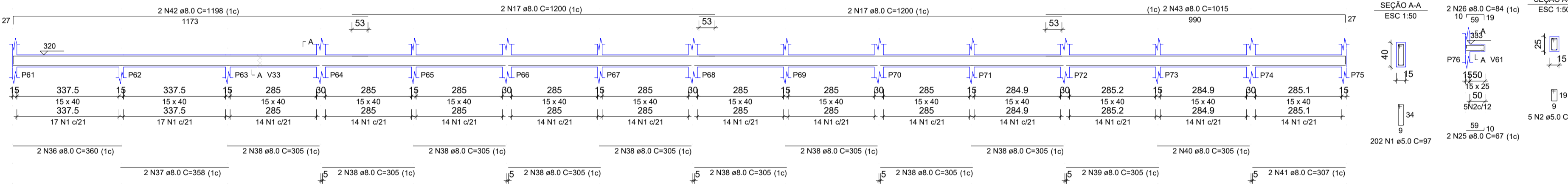
V13

ESC 1:100



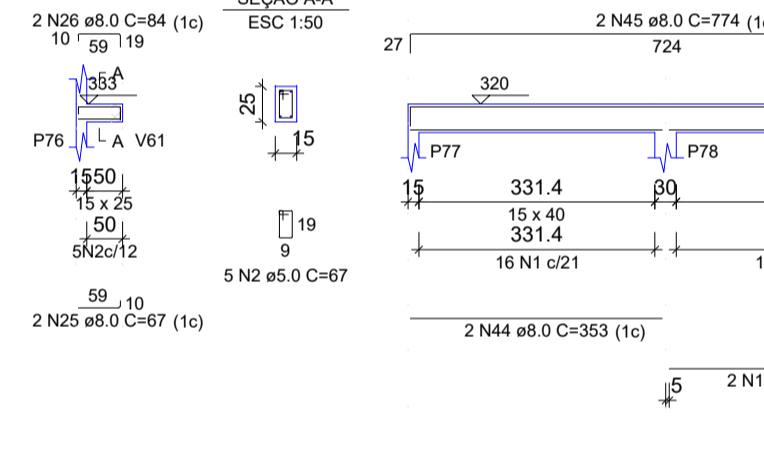
V14

ESC 1:100



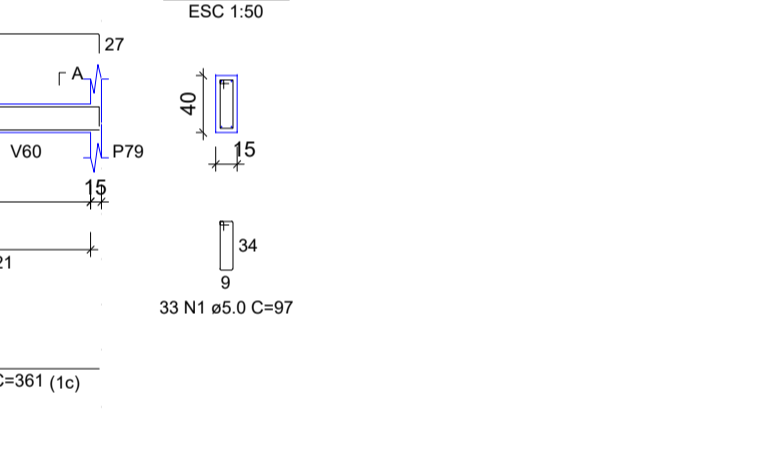
V15

ESC 1:100



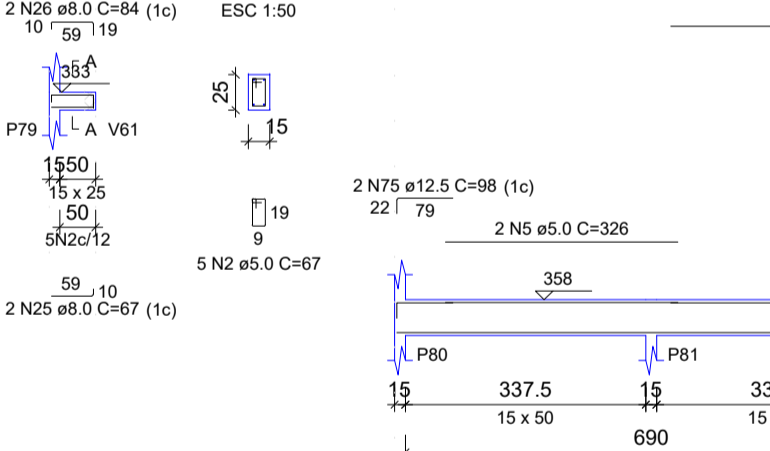
V16

ESC 1:100



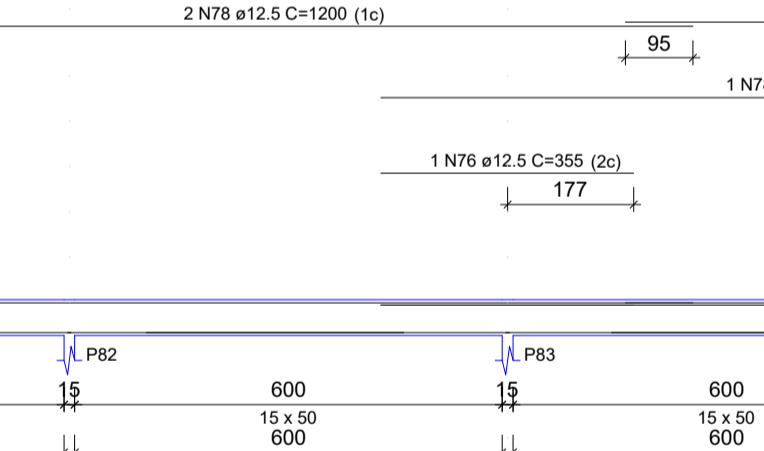
V17

ESC 1:100



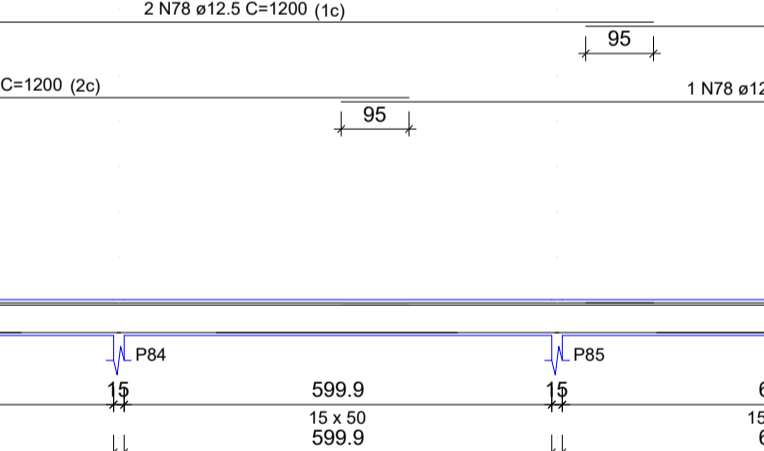
V18

ESC 1:100



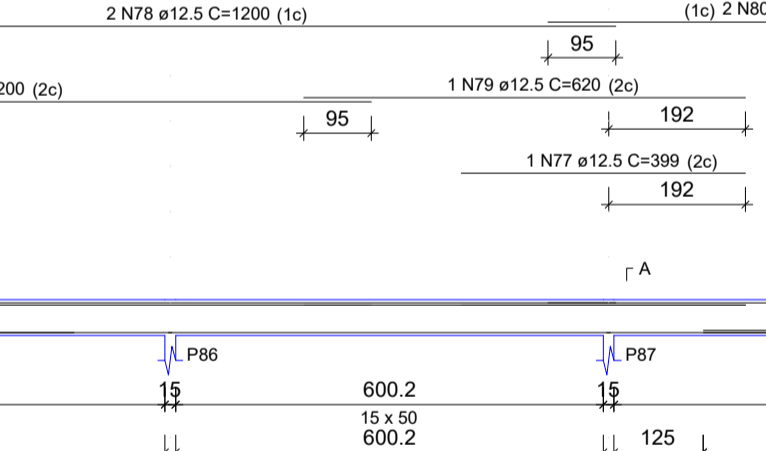
V19

ESC 1:100



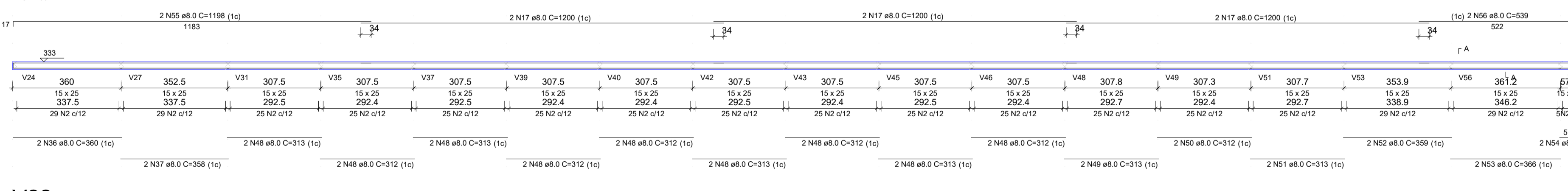
V20

ESC 1:100



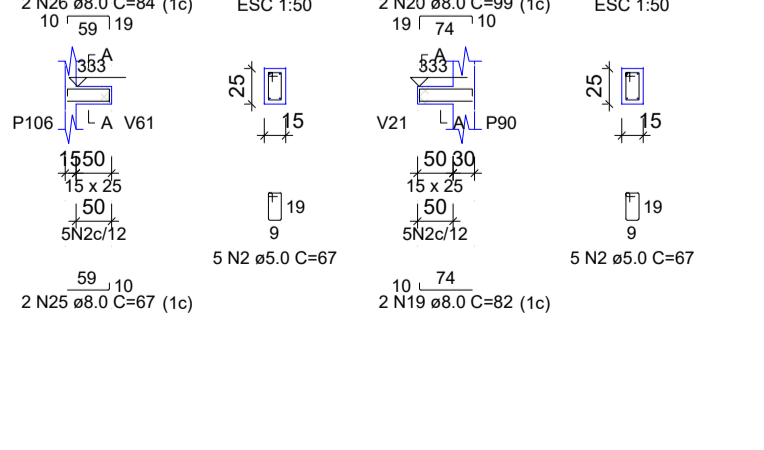
V21

ESC 1:100



V23

ESC 1:100



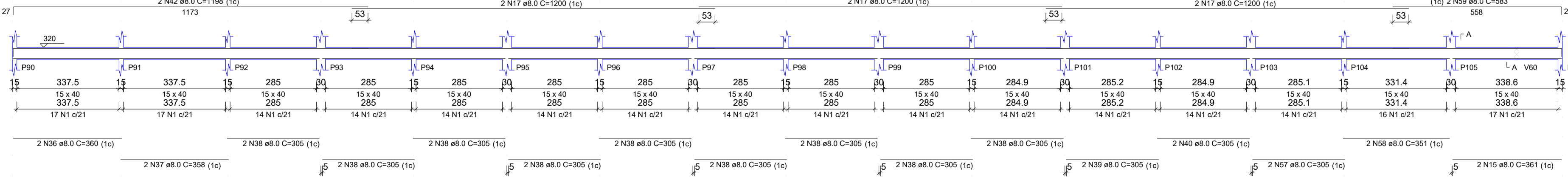
V24

ESC 1:100



V22

ESC 1:100



RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	CLUNIT (cm)	C.TOTAL (cm)
CA50	1	5.0	885	97	85845
V4	1	5.0	476	57	27252
V5	1	5.0	195	77	15015
V6	4	5.0	171	117	20007
V7	5	5.0	2	336	672
V8	6	5.0	6	336	2016
V9	7	5.0	2	452	904
V10	8	5.0	2	355	710
V11	9	5.0	8	235	1880
V12	10	5.0	2	343	686
V13	11	5.0	12	385	4620
V14	12	5.0	2	383	766
V15	13	5.0	2	336	672
V16	14	5.0	2	336	672
V17	15	5.0	2	351	702
V18	16	5.0	2	1198	2396
V19	17	5.0	24	1200	28800
V20	18	5.0	2	548	1096
V21	19	5.0	10	82	820
V22	20	5.0	2	59	118
V23	21	5.0	2	293	586
V24	22	5.0	2	293	586
V25	23	5.0	2	222	444
V26	24	5.0	2	127	254
V27	25	5.0	12	67	804
V28	26	5.0	13	56	728
V29	27	5.0	6	396	2376
V30	28	5.0	6	396	2376
V31	29	5.0	2	440	880
V32	30	5.0	2	292	584
V33	31	5.0	8	302	2416
V34	32	5.0	8	303	2424
V35	33	5.0	2	336	672
V36	34	5.0	2	1198	2396
V37	35	5.0	6	250	1500
V38	36	5.0	6	358	2148
V39	37	5.0	36	305	10980
V40	38	5.0	4	305	1220
V41	39	5.0	2	353	706
V42	40	5.0	2	307	614
V43	41	5.0	2	1198	2396
V44	42	5.0	2	1015	2030
V45	43	5.0	2	774	1548
V46	44	5.0	2	162	324
V47	45	5.0	2	211	422
V48	46	5.0	18	313	5634
V49	47	5.0	2	313	626
V50	48	5.0	2	312	624
V51	49	5.0	2	313	626
V52	50	5.0	2	359	718
V53	51	5.0	2	366	732
V54	52	5.0	2	365	730
V55	53	5.0	2	1198	2396
V56	54	5.0	2	539	1078
V57	55	5.0	2	305	610
V58	56	5.0	2	305	610
V59	57	5.0	2	583	1166
V60	58	5.0	1	235	470
V61	59	5.0	2	583	1166
V62	60	5.0	1	337	674
V63	61	5.0	1	675	1350
V64	62	5.0	1	680	1360
V65	63	5.0	2	712	1424
V66	64	5.0	1	361	722
V67	65	5.0	8	620	4960
V68	66	5.0	1	332	664
V69	67	5.0	1	338	676
V70	68	5.0	1	340	680
V71	69	5.0	2	620	1240
V72	70	5.0	2	461	922
V73	71	5.0	2	652	1304
V74	72	5.0	1	192	384
V75	73	5.0	2	569	1138
V76	74	5.0	2	232	464
V77	75	5.0	2	98	196
V78	76	5.0	2	355	710
V79	77	5.0	1	399	798
V80	78	5.0	6	1200	9600
V81	79	5.0	1	620	1240
V82	80	5.0	2	724	1448

RESUMO DO AÇO

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	5.0	48.3	13
CA50	8.0	1134.4	492.4
CA50	10.0	138.1	52.7
CA50	12.5	144.5	153.1
CA50	5.0	1534.1	260.1
PESO TOTAL			922.3
CA50			762.2
CA60			260.1

Volume de concreto (C-25) = 17.42 m³
Área de forma = 232.91 m²



02

01

REVISÃO

PROJETO: PROJETO ESTRUTURAL C.E.I. SONHO INFANTIL

CLIENTE: MUNICÍPIO DE MARCO

LOCAL: SEDE

CONTEÚDO: 1 Detalhamento das Vigas Nível 320

ESCALA: INDICADA

DESENHO: INFRAESTRUTURA

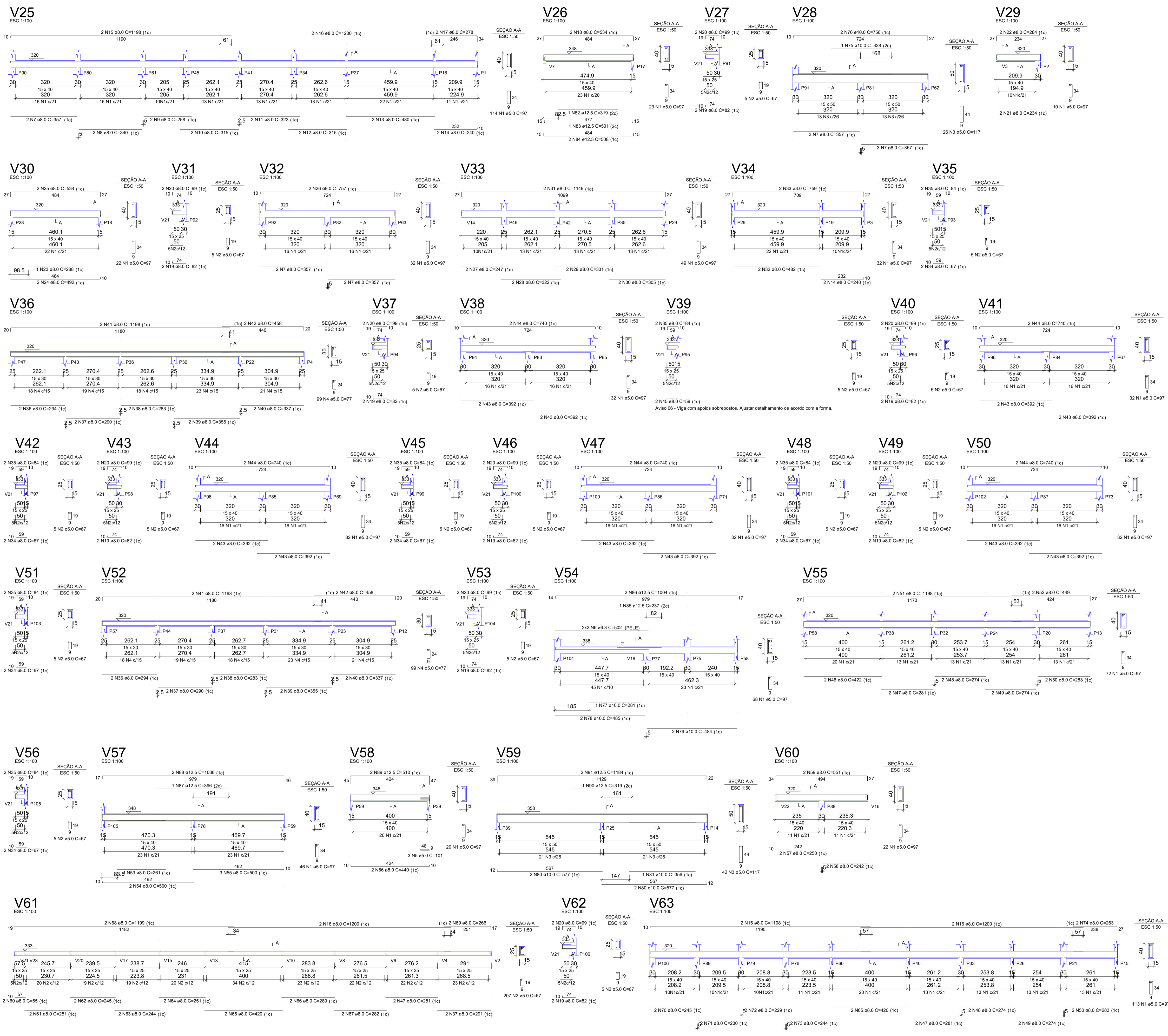
PRANCHA: 06/10

AGOSTO/2023

MUNICÍPIO DE MARCO

AV. PREFEITO GUIDO ESTERHO, S/N
CENTRO - MARCO - CE - 62360-000
BR 364.1110 | BR 364.1415
www.marco.ce.gov.br
CNPJ: 07.568.516/0001-47

COR	ESP. PENNA
01	0.70
02	0.50
03	0.30
04	0.40
05	0.20
06	0.20
07	0.20
08	0.08
09	0.10
10	1.02
11	1.02
12	1.02



RELAÇÃO DO AÇO

ACO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA50	1	5.0	783	67	7961
	2	5.0	287	67	19229
	3	5.0	68	117	7965
	4	5.0	198	77	15248
	5	5.0	3	101	303
	6	6.3	4	502	2008
	8	8.0	12	357	4284
	9	8.0	2	258	516
	10	8.0	2	315	630
	11	8.0	2	323	646
	12	8.0	2	315	630
	13	8.0	2	480	960
	14	8.0	4	340	960
	15	8.0	4	1198	4792
	16	8.0	6	1200	7200
	17	8.0	2	276	552
	18	8.0	2	534	1068
	19	8.0	18	82	1476
	20	8.0	18	99	1782
	21	8.0	2	324	648
	22	8.0	2	284	568
	23	8.0	2	288	576
	24	8.0	2	492	984
	25	8.0	2	534	1068
	26	8.0	2	247	494
	27	8.0	2	322	644
	28	8.0	2	331	662
	29	8.0	2	305	610
	30	8.0	2	1149	2298
	31	8.0	2	462	924
	32	8.0	2	759	1518
	33	8.0	12	67	804
	34	8.0	12	84	1008
	35	8.0	14	84	1176
	36	8.0	4	294	1176
	37	8.0	6	290	1740
	38	8.0	4	283	1132
	39	8.0	4	355	1420
	40	8.0	4	337	1348
	41	8.0	4	1198	4792
	42	8.0	4	458	1832
	43	8.0	20	392	7840
	44	8.0	2	740	1480
	45	8.0	2	59	118
	46	8.0	2	82	164
	47	8.0	6	281	1686
	48	8.0	4	422	1688
	49	8.0	4	274	1096
	50	8.0	4	203	812
	51	8.0	2	1198	2396
	52	8.0	2	449	898
	53	8.0	1	261	261
	54	8.0	2	500	1000
	55	8.0	2	500	1000
	56	8.0	2	440	880
	57	8.0	2	250	500
	58	8.0	2	242	484
	59	8.0	2	511	1022
	60	8.0	2	65	130
	61	8.0	2	251	502
	62	8.0	2	450	900
	63	8.0	2	244	488
	64	8.0	2	251	502
	65	8.0	4	420	1680
	66	8.0	2	289	578
	67	8.0	2	282	564
	68	8.0	2	1199	2398
	69	8.0	2	286	572
	70	8.0	2	245	490
	71	8.0	6	290	1740
	72	8.0	2	229	458
	73	8.0	2	244	488
	74	8.0	2	283	566
	75	10.0	1	328	328
	76	10.0	2	756	1512
	77	10.0	1	281	281
	78	10.0	2	485	970
	79	10.0	2	484	968
	80	10.0	4	577	2308
	81	10.0	1	356	356
	82	12.5	1	319	319
	83	12.5	1	501	501
	84	12.5	1	508	508
	85	12.5	1	237	237
	86	12.5	2	1604	3208
	87	12.5	1	396	396
	88	12.5	2	1036	2072
	89	12.5	2	510	1020
	90	12.5	1	319	319
	91	12.5	2	1194	2388

RESUMO DO AÇO

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	20.1	5.4
	8.0	942	408.9
	10.0	67.2	45.6
	12.5	102.6	108.7
	5.0	1198.9	201.2
PESO TOTAL (kg)			589.8
CA50			291.2

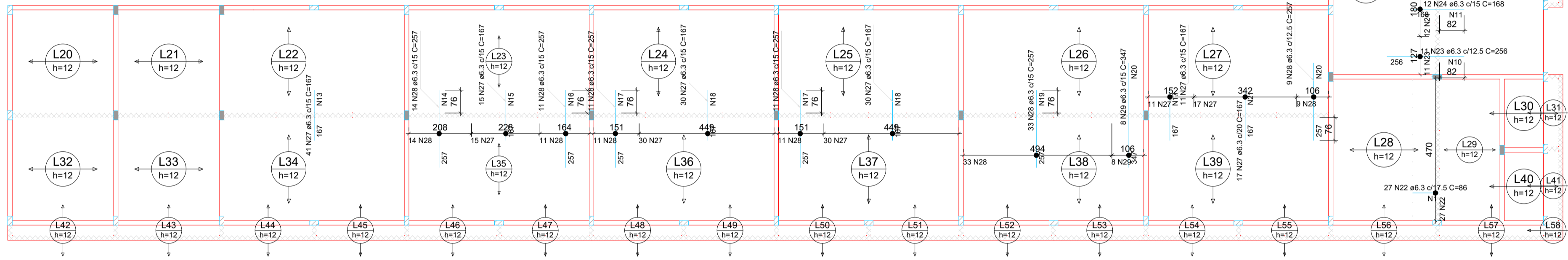
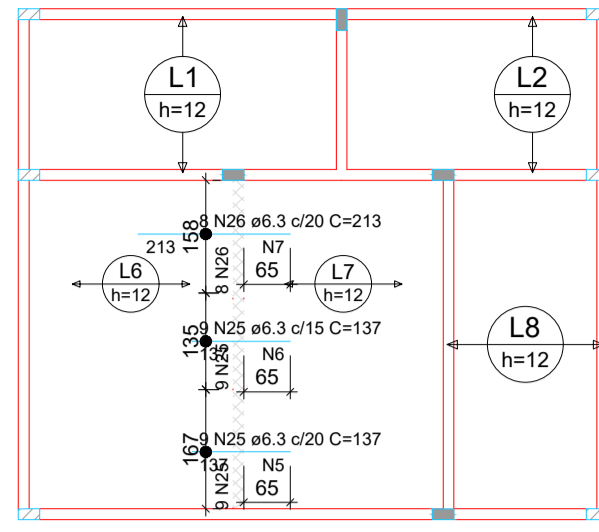
Volume de concreto (C-25) = 13.10 m³
 Área de forma = 173.14 m²



02				
01				
00				
№	DATA	REVISÃO	DESENHO	APROVAÇÃO
PROJETO: PROJETO ESTRUTURAL C.E.I. SONHO INFANTIL CLIENTE: MUNICÍPIO DE MARCO LOCAL: SEDE CONTEÚDO: 1 Detalhamento das Vigas Nível 320				
ESCALA: INDICADA		DESENHO: INFRAESTRUTURA		PRANCHA: 07/10
DATA: AGOSTO/2023				

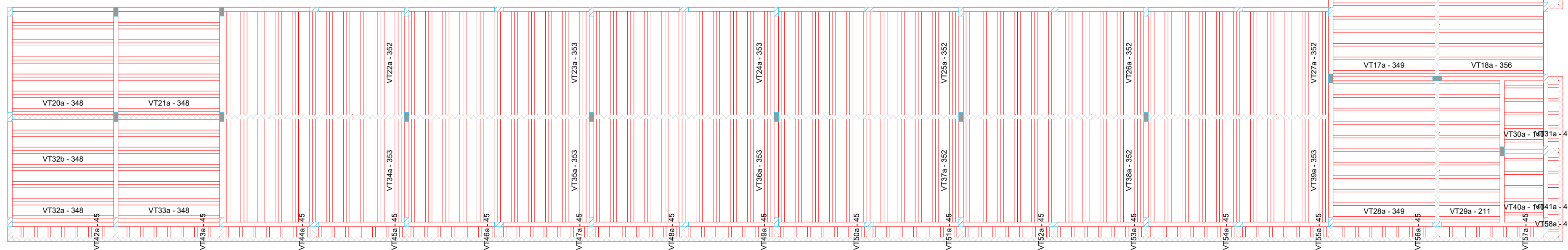
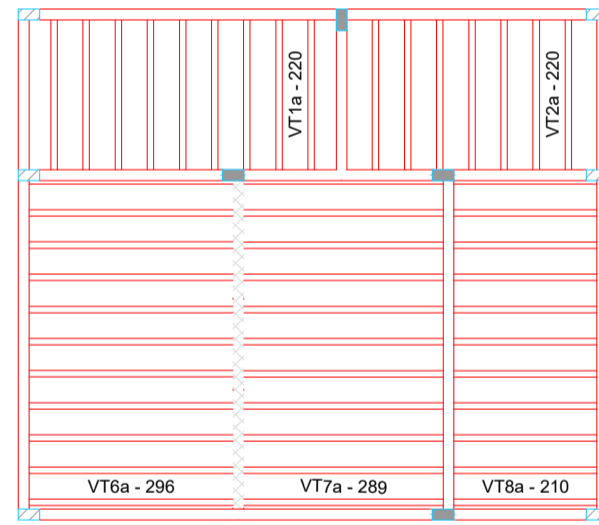


AV. PREFEITO GUIDO OSTENHO, S/N
 CENTRO - MARCO - CE - 84500-000
 FONE: (41) 3541-1210 / 3541-1415
 WWW.MARCO.CE.GOV.BR
 CNPJ: 07.546.316/0001-77



Armação negativa das lajes do pavimento NÍVEL 320

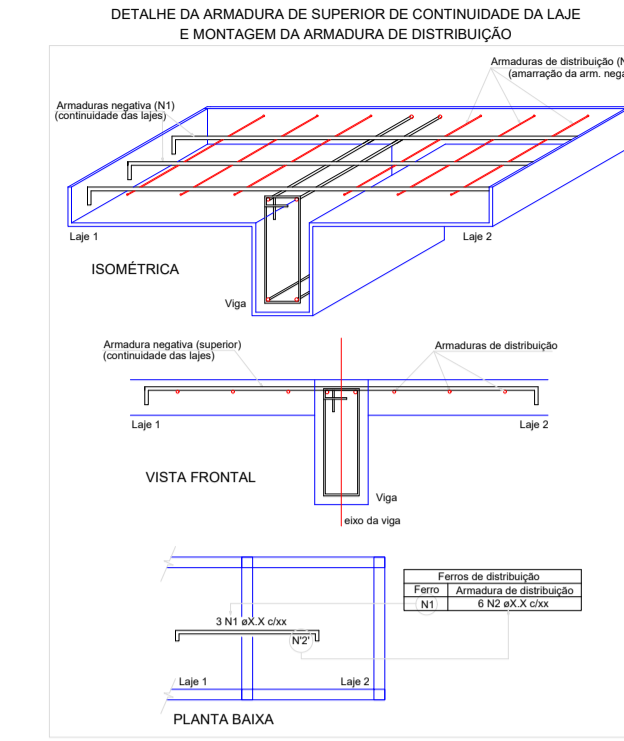
escala 1:100



Planta de vigotas pré-moldadas

escala 1:100

Armaduras de distribuição	
Armadura	Armadura de distribuição
N22	5 N1 ø5.0 c/20 C=470
N23	13 N2 ø5.0 c/20 C=172
N24	9 N3 ø5.0 c/20 C=270
N25	13 N4 ø5.0 c/20 C=118
N26	7 N5 ø5.0 c/20 C=174
N27	7 N6 ø5.0 c/20 C=135
N28	11 N7 ø5.0 c/20 C=165
N29	13 N8 ø5.0 c/20 C=560
N30	13 N9 ø5.0 c/20 C=415
N31	13 N10 ø5.0 c/20 C=134
N32	9 N11 ø5.0 c/20 C=180
N33	13 N12 ø5.0 c/20 C=170
N34	9 N13 ø5.0 c/20 C=114
N35	13 N14 ø5.0 c/20 C=216
N36	9 N15 ø5.0 c/20 C=228
N37	9 N16 ø5.0 c/20 C=159
N38	13 N17 ø5.0 c/20 C=456
N39	9 N18 ø5.0 c/20 C=456
N40	13 N19 ø5.0 c/20 C=501
N41	13 N20 ø5.0 c/20 C=114
N42	9 N21 ø5.0 c/20 C=342
N43	13 N22 ø5.0 c/20 C=114



RELAÇÃO DO AÇO					
Negativos					
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	5	470	2350
	2	5.0	13	172	2236
	3	5.0	9	270	2430
	4	5.0	13	118	1534
	5	5.0	7	174	1218
	6	5.0	7	135	945
	7	5.0	11	165	1815
	8	5.0	13	560	7280
	9	5.0	13	415	5395
	10	5.0	13	134	1742
	11	5.0	9	180	1620
	12	5.0	13	170	2210
	13	5.0	9	114	1026
	14	5.0	13	216	2808
	15	5.0	9	159	1431
	16	5.0	13	171	2223
	17	5.0	35	169	5915
	18	5.0	18	456	8208
	19	5.0	13	501	6513
	20	5.0	31	114	3534
CA50	21	5.0	9	342	3078
	22	6.3	27	86	2322
	23	6.3	111	256	28416
	24	6.3	27	168	4536
	25	6.3	18	137	2466
	26	6.3	8	213	1704
	27	6.3	144	167	24048
	28	6.3	89	257	22873
	29	6.3	6	347	2082

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO = 10% (kg)
CA50	5.0	891.4	239.9
CA60	5.0	702.9	119.2
PESO TOTAL (kg)			
CA50			239.9
CA60			119.2

Volume de concreto (C-25) = 33.06 m³
Área de forma = 0.00 m²

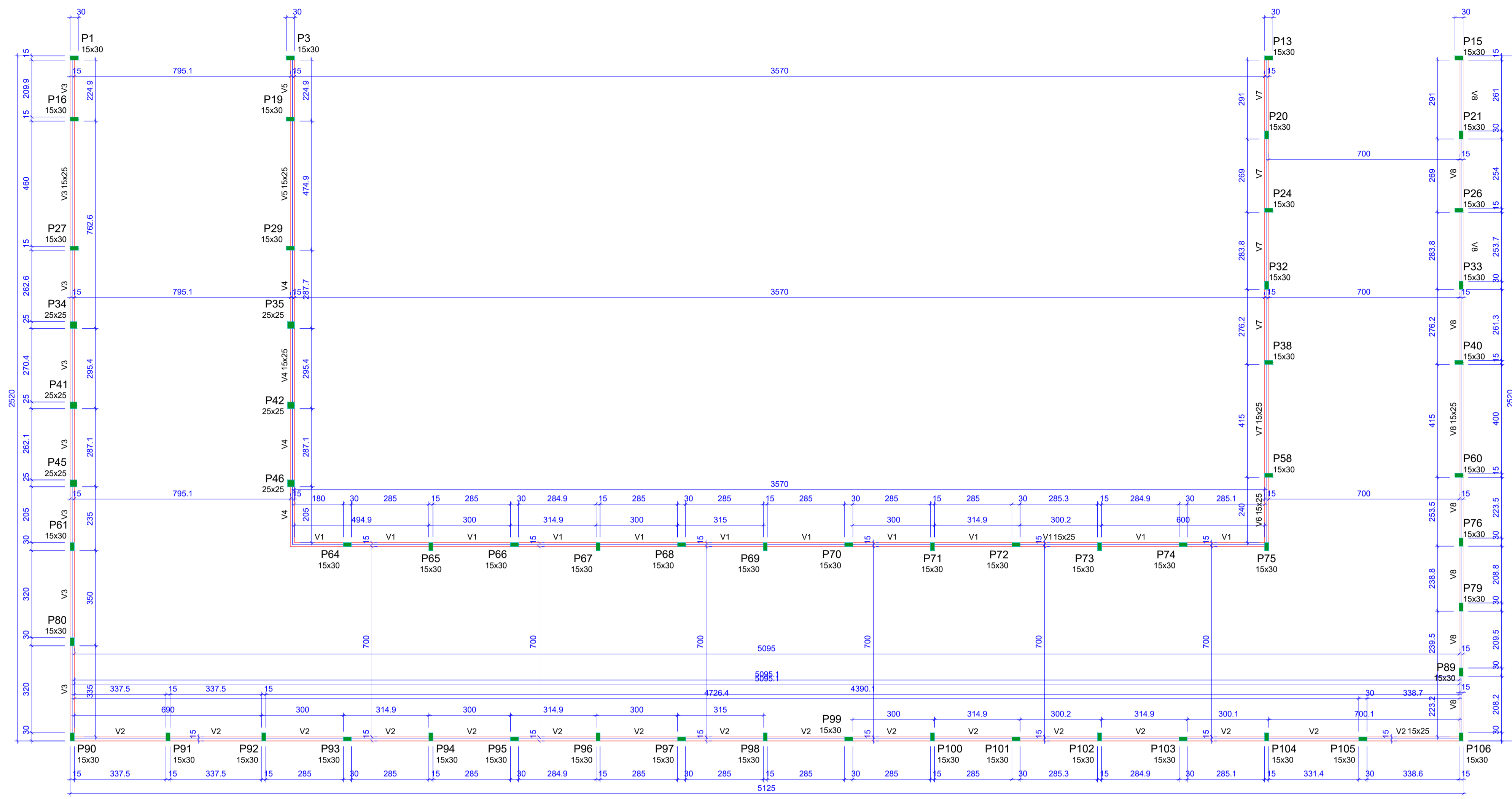
CDR	ESP. PENA
01	0.70
02	0.50
03	0.30
04	0.40
05	0.70
06	0.20
07	0.20
08	0.08
09	0.10
1	1.00
13	15%



DATA	REVISÃO	DESENHO	APROVAÇÃO
	PROJETO:	PROJETO ESTRUTURAL C.E.I. SONHO INFANTIL	
	CLIENTE:	MUNICÍPIO DE MARCO	
	LOCAL:	SEDE	
	CONTEÚDO:	1 Armação neg. das lajes do Nível 320 2 Planta de vigotas pré-moldadas 3 Vigotas pré-moldadas	
ESCALA:	DESENHO:	PRANCHAS:	
INDICADA	INFRAESTRUTURA	DATA:	08/10
			AGOSTO/2023



AV. PREFEITO GUIDO OSTERHO, S/N
CENTRO - MARCO - CE - 83500-000
FONE: 3664.1210 / 36.364.1415
WWW.MARCO.CE.GOV.BR
CNPJ: 07.546.516/000147



Forma do pavimento NÍVEL 450
escala 1:100

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x25	0	450
V2	15x25	0	450
V3	15x25	0	450
V4	15x25	0	450
V5	15x25	0	450
V6	15x25	0	450
V7	15x25	0	450
V8	15x25	0	450

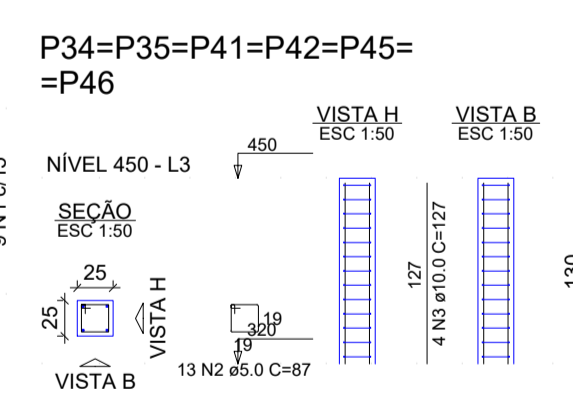
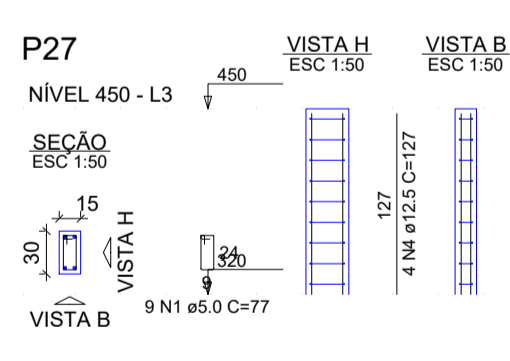
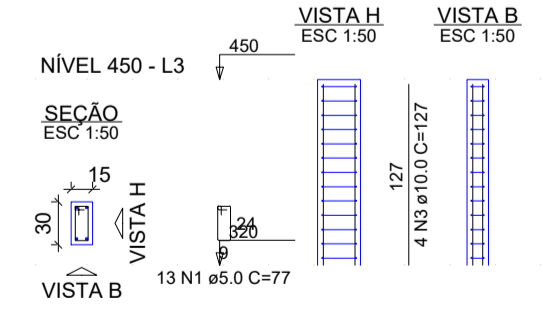
Características dos materiais			
Elemento	15x	25x	Esc (kgf/cm²)
Vigas	250		241500
Pilares	250		241500

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	15x30	0	450
P3	15x30	0	450
P13	15x30	0	450
P15	15x30	0	450
P16	15x30	0	450
P19	15x30	0	450
P20	15x30	0	450
P21	15x30	0	450
P24	15x30	0	450
P26	15x30	0	450
P27	15x30	0	450
P29	15x30	0	450
P32	15x30	0	450
P33	15x30	0	450
P34	25x25	0	450
P35	25x25	0	450
P38	15x30	0	450
P40	15x30	0	450
P41	25x25	0	450
P42	25x25	0	450
P45	25x25	0	450
P46	25x25	0	450
P58	15x30	0	450
P60	15x30	0	450
P61	15x30	0	450
P64	15x30	0	450
P65	15x30	0	450
P66	15x30	0	450
P67	15x30	0	450
P68	15x30	0	450
P69	15x30	0	450
P70	15x30	0	450
P71	15x30	0	450
P72	15x30	0	450
P73	15x30	0	450
P74	15x30	0	450
P75	15x30	0	450
P76	15x30	0	450
P77	15x30	0	450
P79	15x30	0	450
P89	15x30	0	450
P90	15x30	0	450
P91	15x30	0	450
P92	15x30	0	450
P93	15x30	0	450
P94	15x30	0	450
P95	15x30	0	450
P96	15x30	0	450
P97	15x30	0	450
P98	15x30	0	450
P99	15x30	0	450
P100	15x30	0	450
P101	15x30	0	450
P102	15x30	0	450
P103	15x30	0	450
P104	15x30	0	450
P105	15x30	0	450
P106	15x30	0	450

Legenda dos pilares		Legenda das vigas e paredes	
	Pilar que morre		Viga

CDR	ESP. PENIA
01	0.70
02	0.50
03	0.30
04	0.40
05	0.70
06	0.20
07	0.20
08	0.08
09	0.10
11	1.0%
13	15%

P1=P3=P13=P15=P16=P19=
 =P20=P21=P24=P26=P29=
 =P32=P33=P38=P40=P58=
 =P60=P61=P64=P65=P66=
 =P67=P68=P69=P70=P71=
 =P72=P73=P74=P75=P76=
 =P79=P80=P89=P90=P91=
 =P92=P93=P94=P95=P96=
 =P97=P98=P99=P100=P101=
 =P102=P103=P104=P105=
 =P106



RELAÇÃO DO AÇO					
51xP1	P27	6xP34			
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	672	77	51744
CA50	2	5.0	73	67	6786
CA50	3	10.0	228	127	28856
CA50	4	12.5	4	127	508

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	288.6	198.4
CA50	12.5	5.1	5.4
CA50	5.0	585.3	99.2
PESO TOTAL (kg)			
CA50	201.8		
CA60	99.2		

Volume de concreto (C=40) = 3.53 m³
 Área de forma = 68.64 m²



02					
01					
Nº	DATA	REVISÃO	DESENHO	APROVAÇÃO	
PROJETO: PROJETO ESTRUTURAL C.E.I. SONHO INFANTIL CLIENTE: MUNICÍPIO DE MARCO LOCAL: SEDE CONTEÚDO: 1 Forma do pavimento Nível 450 2 Detalhamento dos Pilares Nível 450					
 AV. PREFEITO GUIDO OSTENHO, S/N CENTRO - MARCO - CE - 82500-000 BR 365-1210 BR 364-1415 www.marco.ce.gov.br CNPJ: 07.546.140/000147					
ESCALA:	INDICADA	DESENHO:	INFRAESTRUTURA	PRANCHA:	
		DATA:	AGOSTO/2023		09/10