

Nome	Seção	Lado B (cm)	Lado H (cm)	h0 / h1 / h2 (cm)	df (cm)
P1	15x24	80	70	25	25
P2	15x24	80	70	25	25
P3	15x24	80	70	25	25
P4	15x24	80	70	25	25
P5	19x19	80	80	25	25
P6	15x24	80	70	25	25
P7	19x19	80	80	25	25
P8	19x19	80	80	25	25
P9	19x19	80	80	25	25
P10	19x19	80	80	25	25
P11	15x24	80	70	25	25
P12	15x24	80	70	25	25
P13	19x19	80	80	25	25
P14	19x19	80	80	25	25
P15	15x24	80	70	25	25
P16	15x24	80	70	25	25
P17	19x19	80	80	25	25
P18	19x19	80	80	25	25
P19	15x24	80	70	25	25
P20	19x19	80	80	25	25
P21	19x19	80	80	25	25
P22	15x24	80	70	25	25
P23	19x19	80	80	25	25
P24	15x24	80	70	25	25
P25	19x19	80	80	25	25
P26	15x24	80	70	25	25
P27	19x19	80	80	25	25
P28	19x19	80	80	25	25
P29	15x24	80	70	25	25
P30	15x24	80	70	25	25
P31	19x19	80	80	25	25
P32	19x19	80	80	25	25
P33	19x19	80	80	25	25
P34	19x19	80	80	25	25
P35	15x24	80	70	25	25
P36	19x19	80	80	25	25
P37	15x24	80	70	25	25
P38	15x24	80	70	25	25
P39	15x24	80	70	25	25
P40	15x24	80	70	25	25

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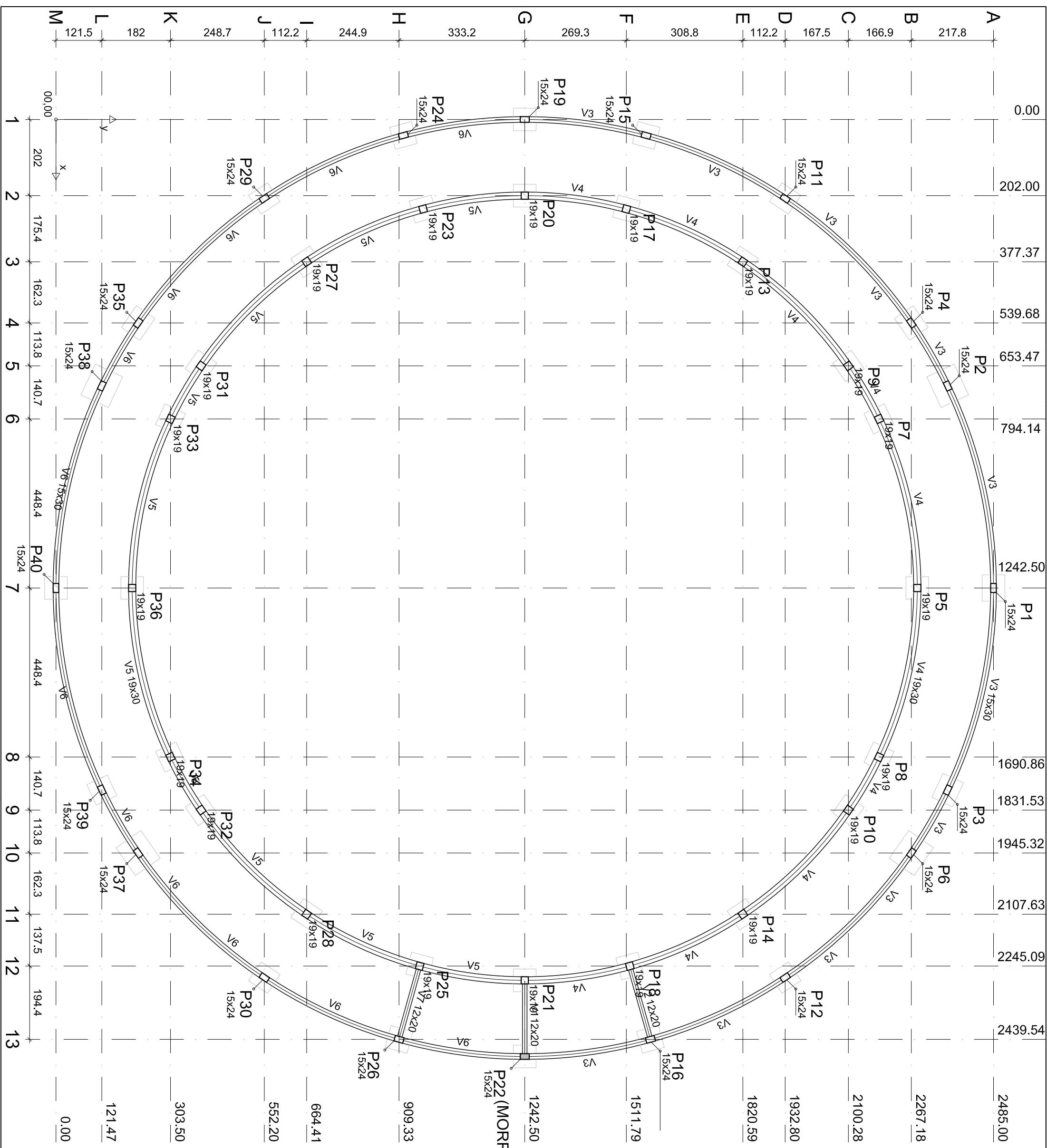
PLANTA DE LOCAÇÃO
 escala 1:100

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	FORMA DE LOCAÇÃO - ESTRUTURA DE ACESSO A SANTA		

DATA	MAIO/18	ESCALA	1/100
01-09			





Características dos materiais	
fck (kgf/cm ²)	Ecs (kgf/cm ²)
250	238000

Legenda dos Pilares	
	Pilar que morre
	Pilar que passa
	Pilar que nasce
	Pilar com mudança de seção

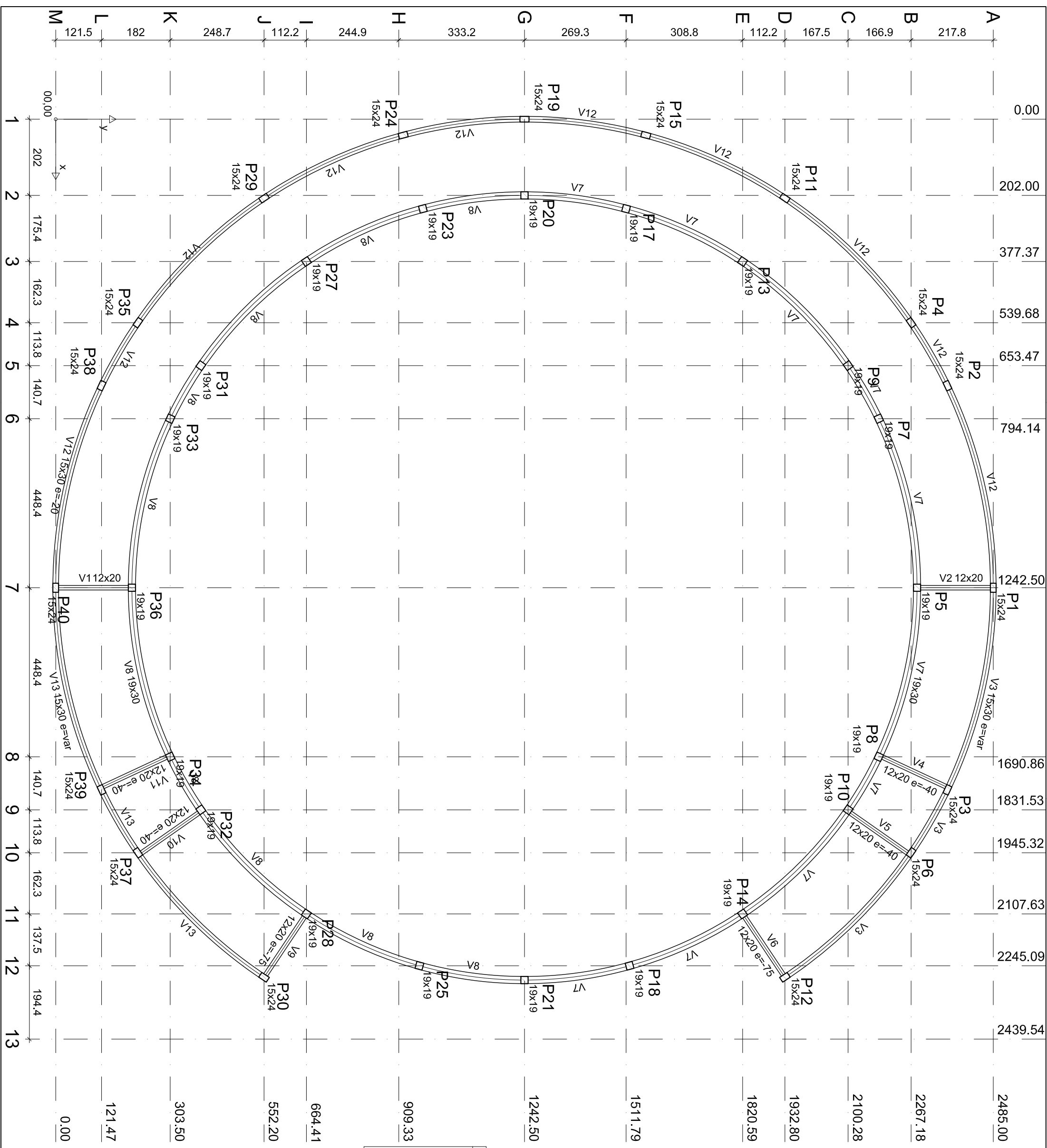
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FORMA DO TERREO
 escala 1:100

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS	DATA	MAIO/18	ESCALA	1/100
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES	02-09			
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ	CONTEÚDO					





Características dos materiais

fck (kgf/cm ²)	Ecs (kgf/cm ²)
250	238000

Legenda dos Pilares

	Pilar que morre
	Pilar que passa
	Pilar que nasce
	Pilar com mudança de seção

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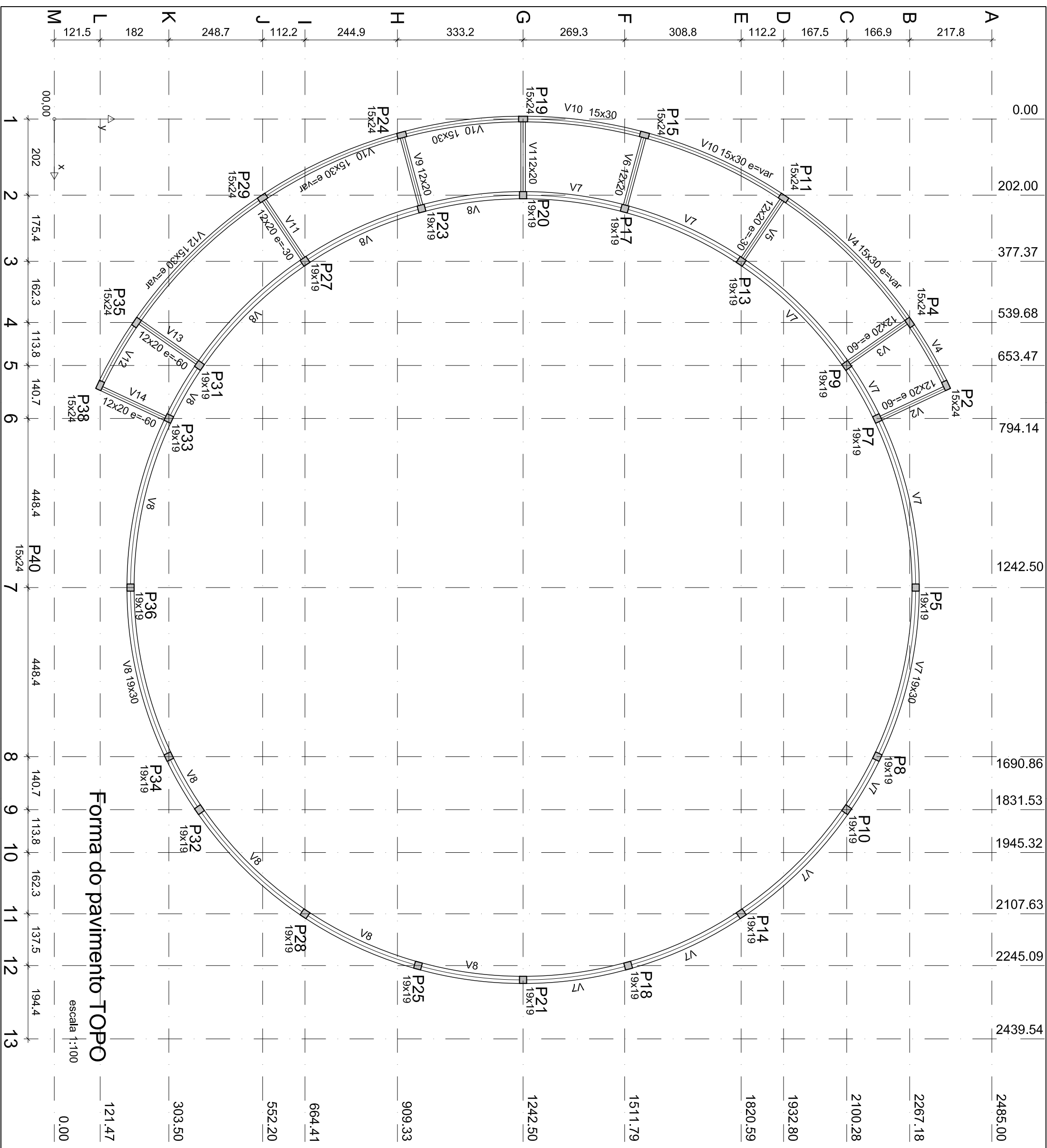
FORMA DO PAV. MEIO
 escala 1:100

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	FORMA DO PAV. MEIO (H=1,00m) - ESTRUTURA DE ACESSO A SANTA		

DATA	MAIO/18	ESCALA	1/100
03-09			





Forma do pavimento TOPO

escala 1:100

Legenda dos Pilares	
	Pilar que morre
	Pilar que passa
	Pilar que nasce
	Pilar com mudança de seção

Características dos materiais	
fck (kgf/cm ²)	Ecs (kgf/cm ²)
250	238000

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ESTRUTURA

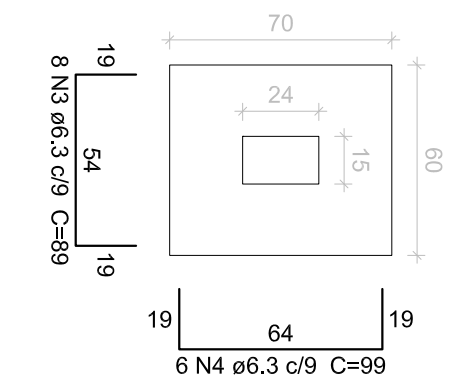
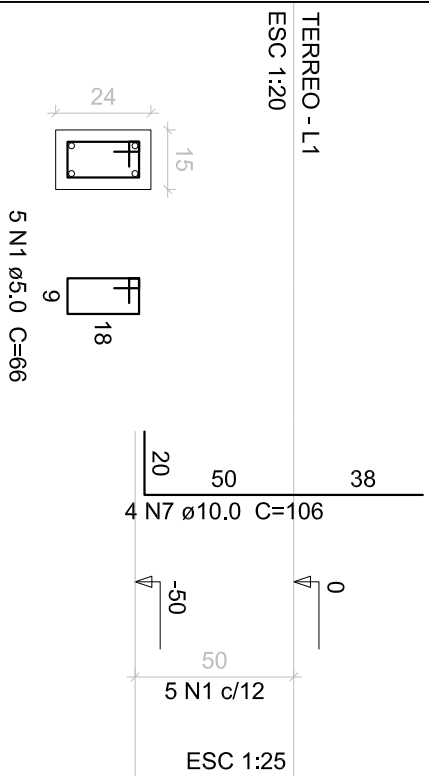
PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	FORMA DO PAV. TOPO (H=2,00m) - ESTRUTURA DE ACESSO A SANTA		

DATA	MAIO/18	ESCALA	1/100
04-09			

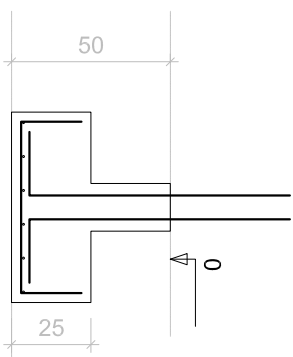


P1=P3=P4=P35

S1=S3=S4=S35
PLANTA
ESC 1:25



CORTE
ESC 1:25



Relação do aço

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	100	66	6600
CA60	2	5.0	100	64	6400
CA60	3	6.3	448	89	39872
CA60	4	6.3	24	99	2376
CA60	5	6.3	40	109	4360
CA60	6	6.3	36	119	4284
CA60	7	10.0	148	106	15688
CA60	8	10.0	12	65	780

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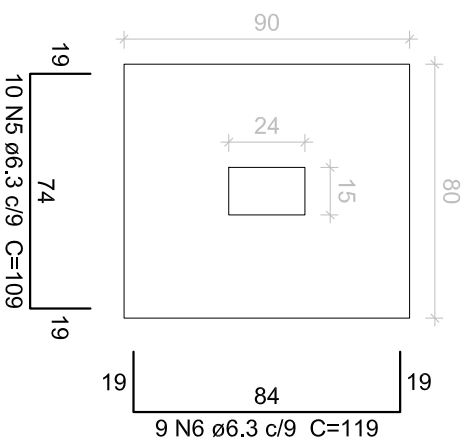
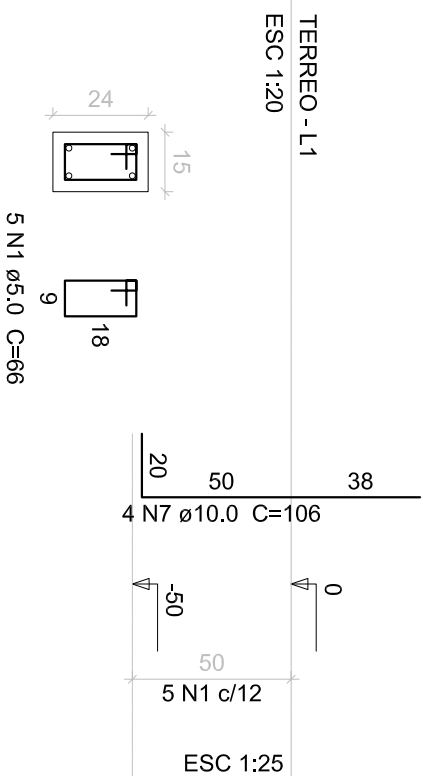
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	509	137
CA60	10.0	164.7	111.7
CA60	5.0	130	22
PESO TOTAL (kg)			
CA50		248.7	
CA60		22	

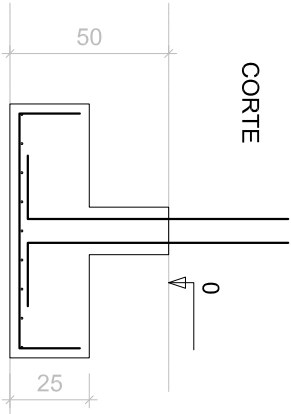
Volume de concreto (C-25) = 4,74 m³
Área de forma = 40,6 m²

P2=P6=P37=P38

S2=S6=S37=S38
PLANTA
ESC 1:25

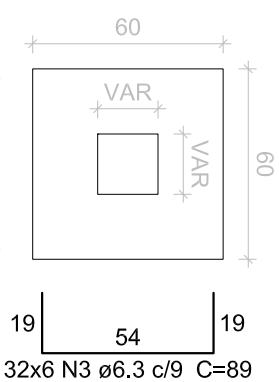
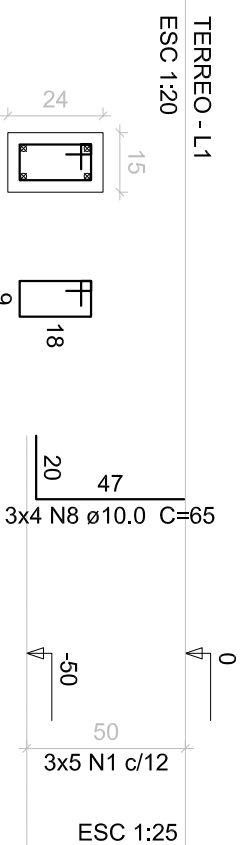


CORTE
ESC 1:25



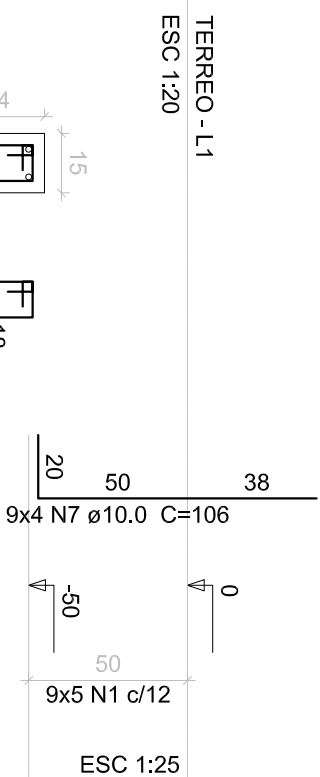
P16=P22=P26

S5=S7=S8=S9=S10=S11=S12=S13=S14=S15=S16
=S17=S18=S19=S20=S21=S22=S23=S24=S25
=S26=S27=S28=S29=S30=S31=S32=S33=S34
=S36=S39=S40
PLANTA
ESC 1:25

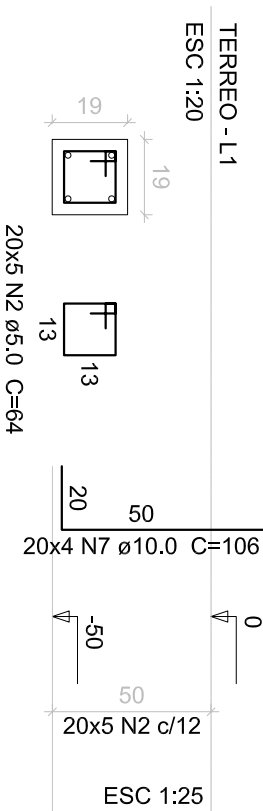


CORTE
ESC 1:25

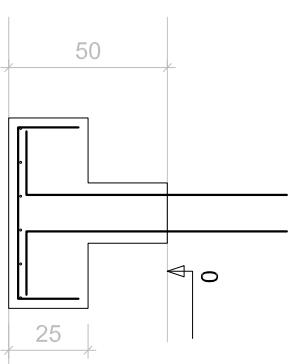
P11=P12=P15=P19=P24=P29=P30=P39=P40



P5=P7=P8=P9=P10=P13=P14=P17=P18=P20=P21
=P23=P25=P27=P28=P31=P32=P33=P34=P36



Solo com capacidade de suporte > 4,00 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600,00 kgf/m³



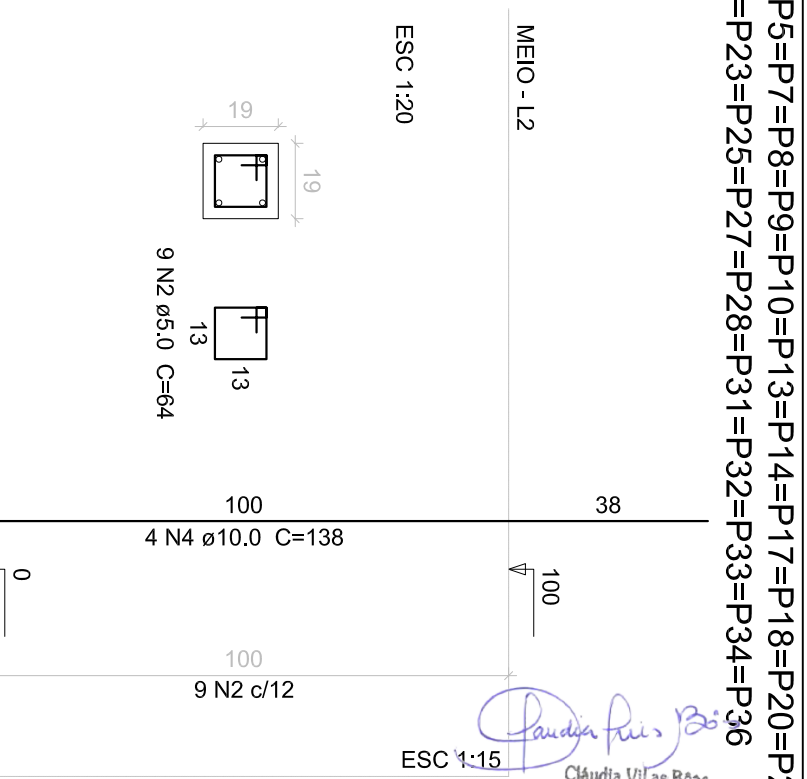
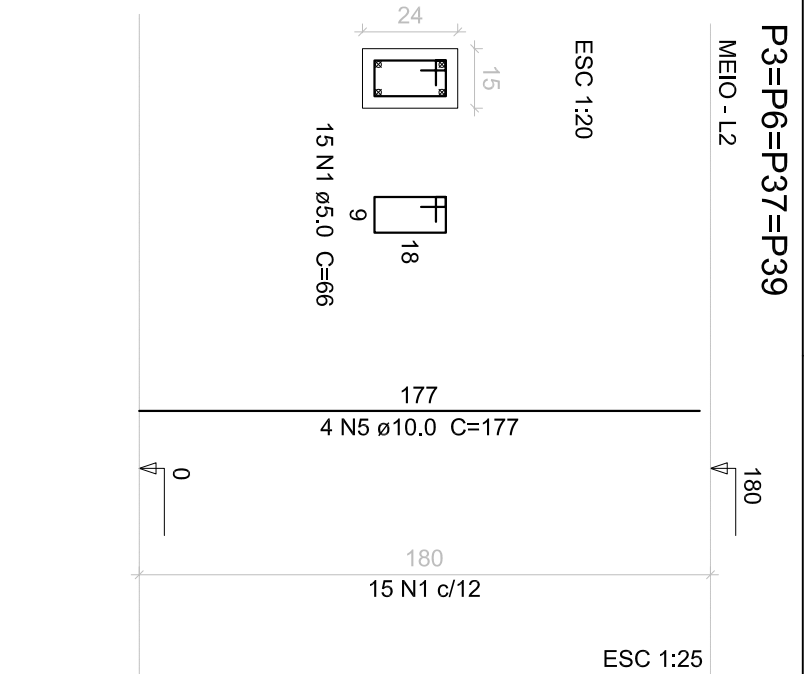
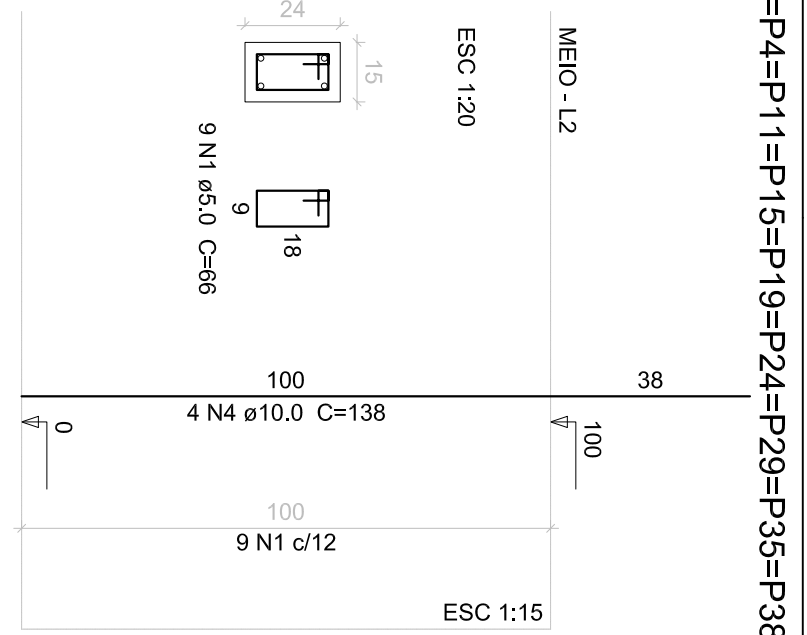
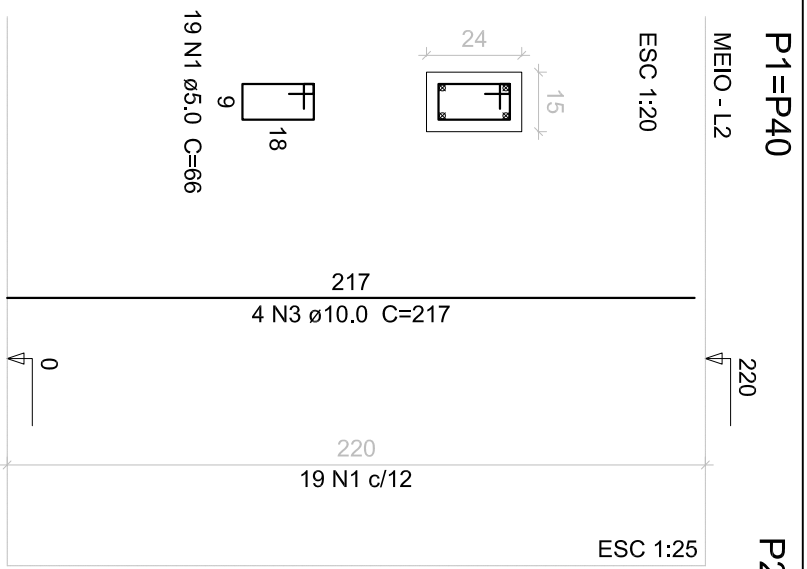
ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	FUNDAÇÕES - ESTRUTURA DE ACESSO A SANTA		

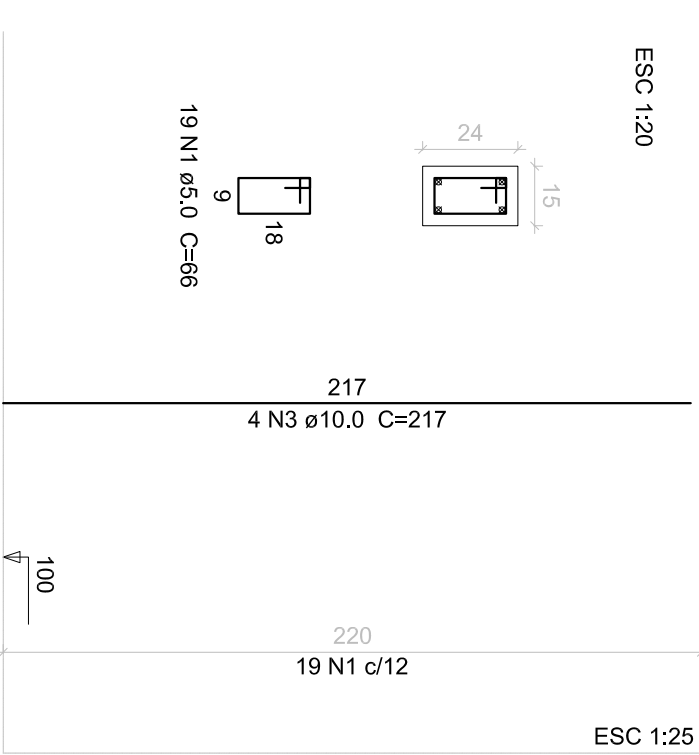
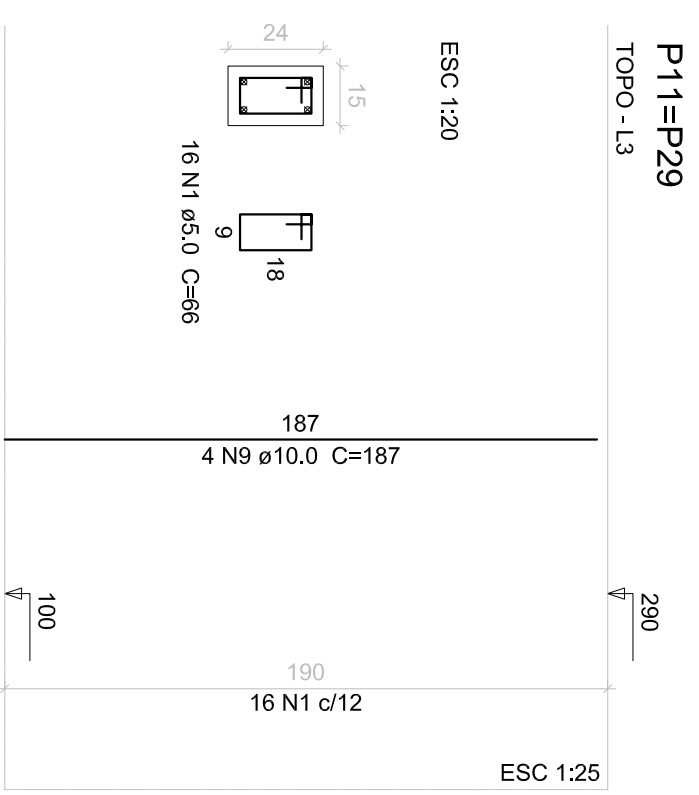
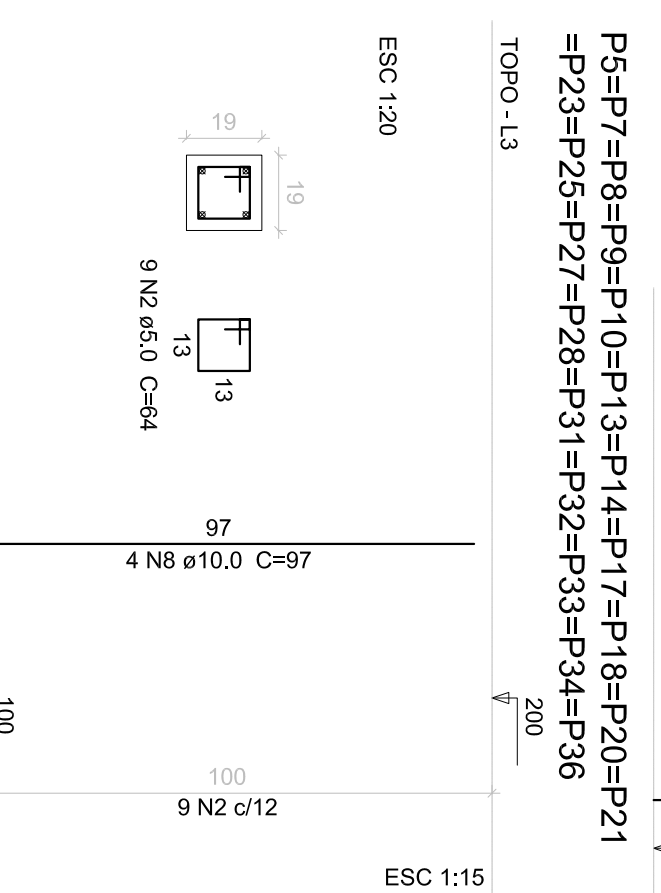
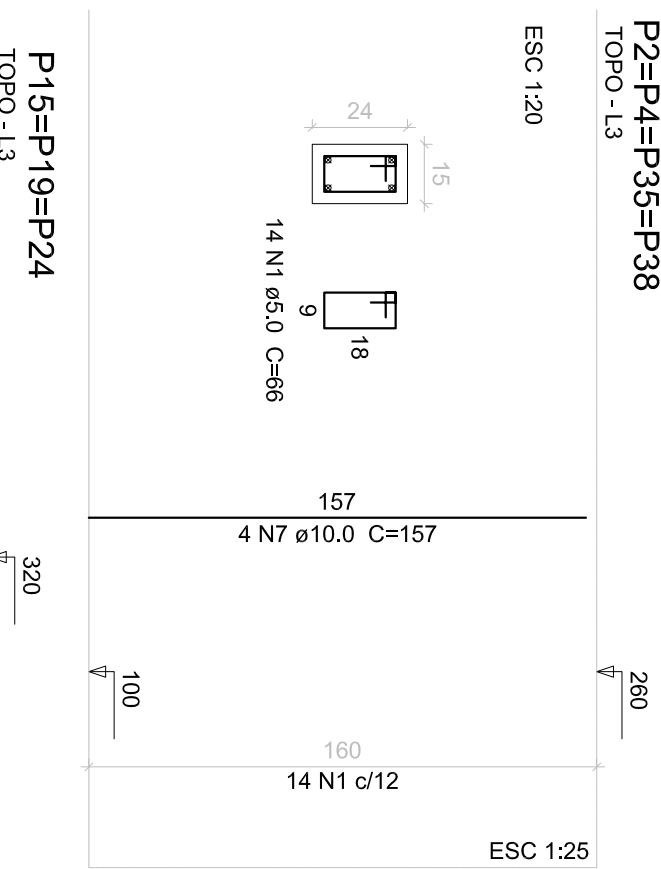
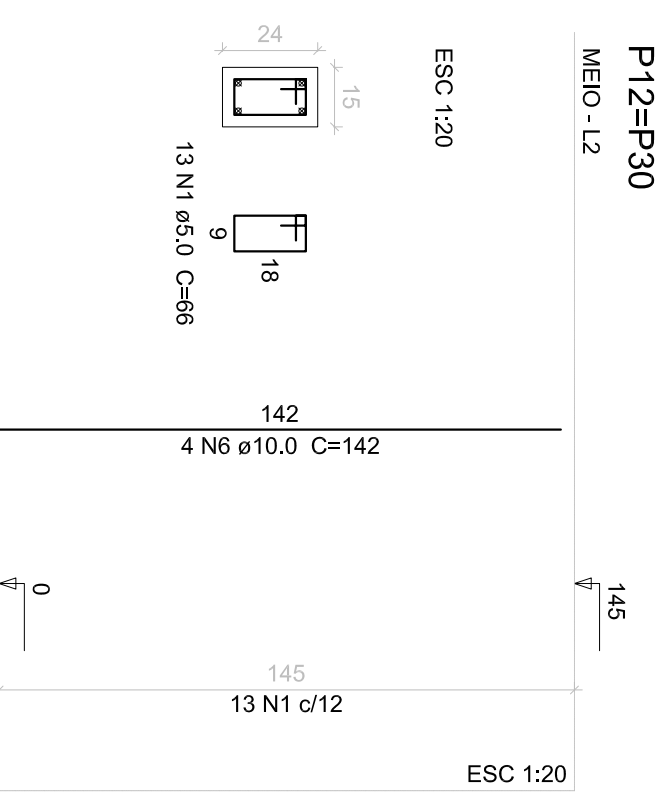
DATA MAIO/18 ESCALA INDICADA

05-09





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Relação do aço

MEIO:	TOPO:
2xP1 4xP3 2xP12	4xP2 2xP11
9xP2 20xP5	20xP5 3xP15

Resumo do aço

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)	AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA60	1	5,0	350	66	23100	CA50	10,0	360,9	244,7
CA60	2	5,0	360	64	23040	CA60	5,0	461,4	78,2
CA50	3	10,0	20	217	4340	PESO TOTAL (kg)			
CA50	4	10,0	116	138	16008	CA50	244,7		
CA50	5	10,0	16	177	2832	CA60	78,2		
CA50	6	10,0	8	142	1136	Volume de concreto (C-25) = 2,89 m³			
CA50	7	10,0	16	157	2512	Área de forma = 61,83 m²			
CA50	8	10,0	80	97	7760				
CA50	9	10,0	8	187	1496				

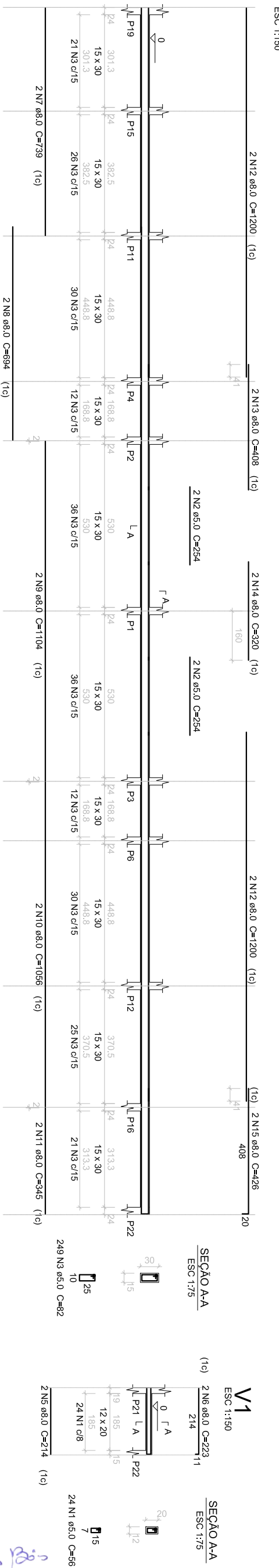
ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	ARMAÇÃO DOS PILARES - ESTRUTURA DE ACESSO A SANTA		

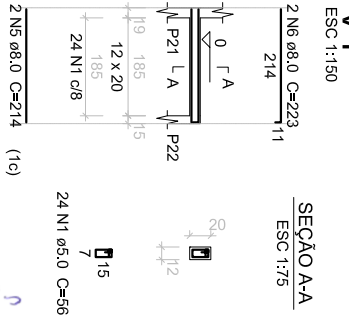
DATA	MAIO/18	ESCALA	INDICADA
06-09			



V3 (CURVA)



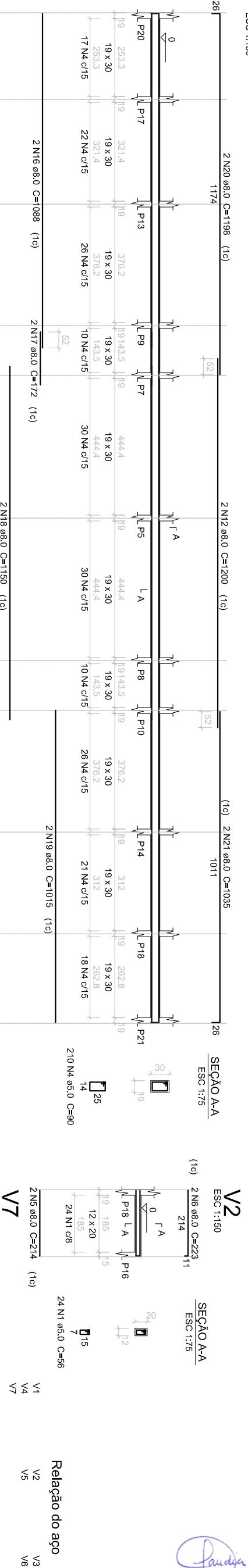
V1



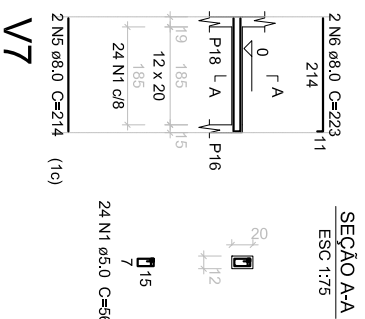
DATA MAIO/18 ESCALA INDICADA

07-09

V4 (CURVA)

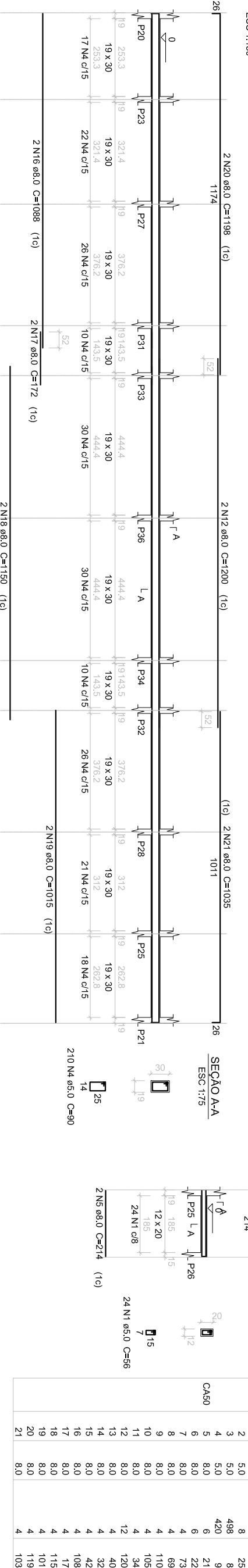


V2

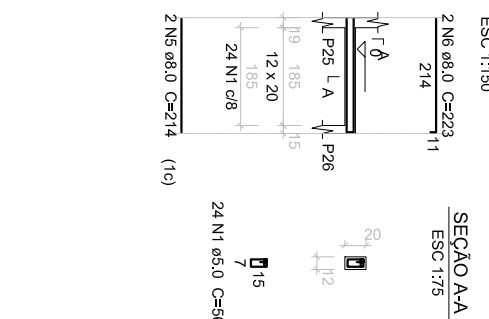


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V5 (CURVA)



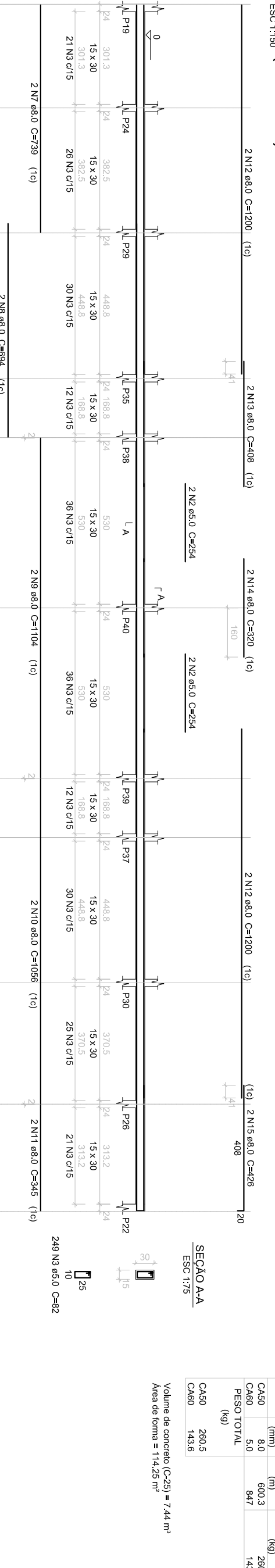
V7



Relação do aço

DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
1	72	56	4032
2	8	254	2032
3	498	82	40836
4	420	90	37800
5	6	214	1284
6	6	223	1338
7	4	739	2956
8	4	694	2776
9	4	1104	4416
10	4	1056	4224
11	4	345	1380
12	12	1200	14400
13	4	408	1632
14	4	320	1280
15	4	426	1704
16	4	1088	4352
17	4	1172	4608
18	4	1750	6996
19	4	1015	4060
20	4	1198	4792
21	4	1035	4140

V6 (CURVA)



Resumo do aço

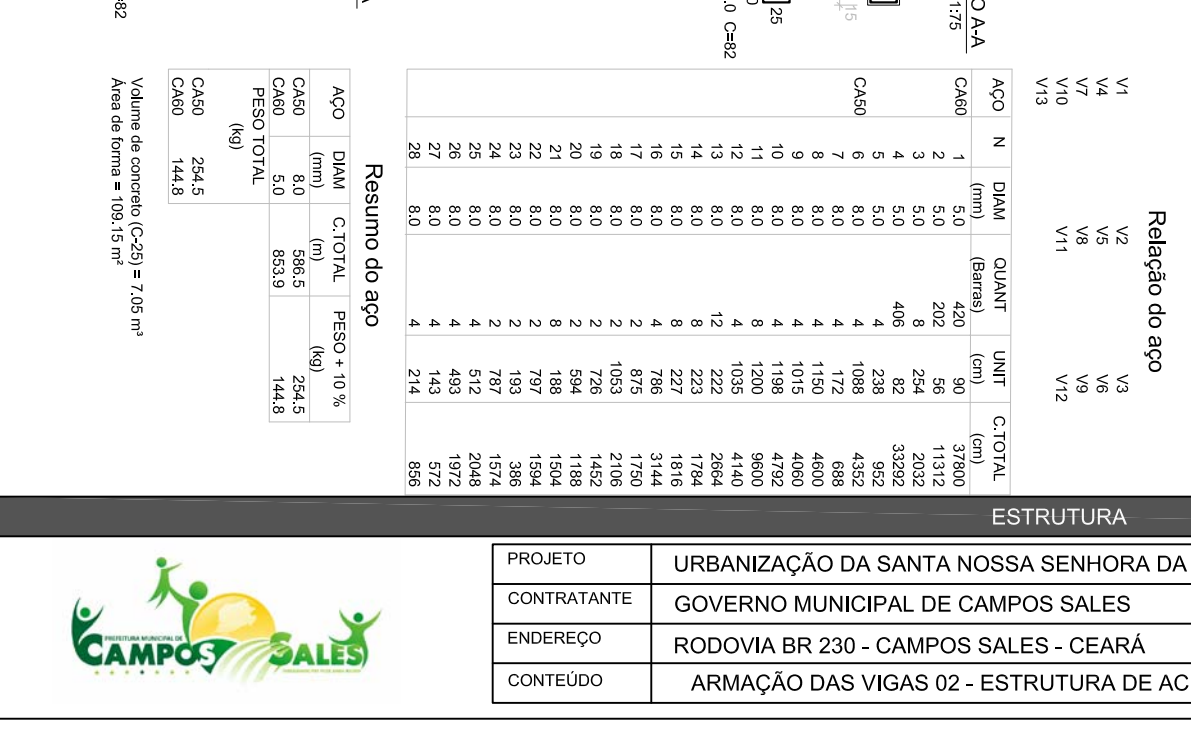
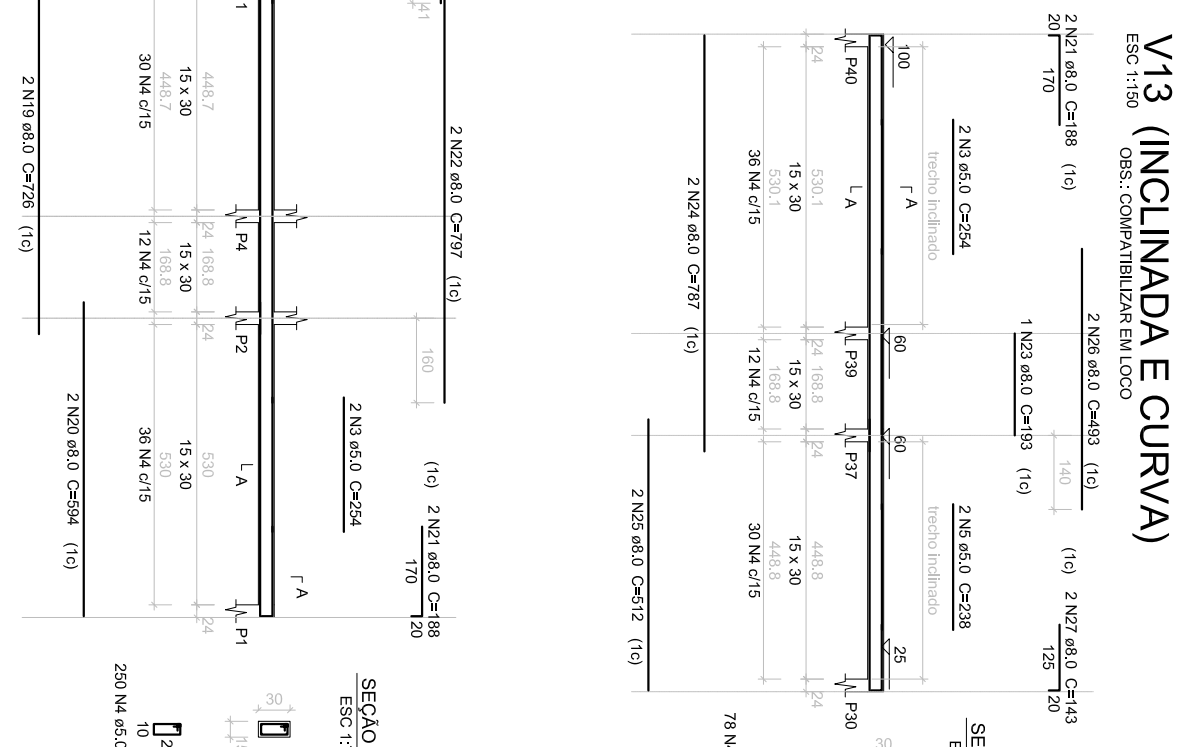
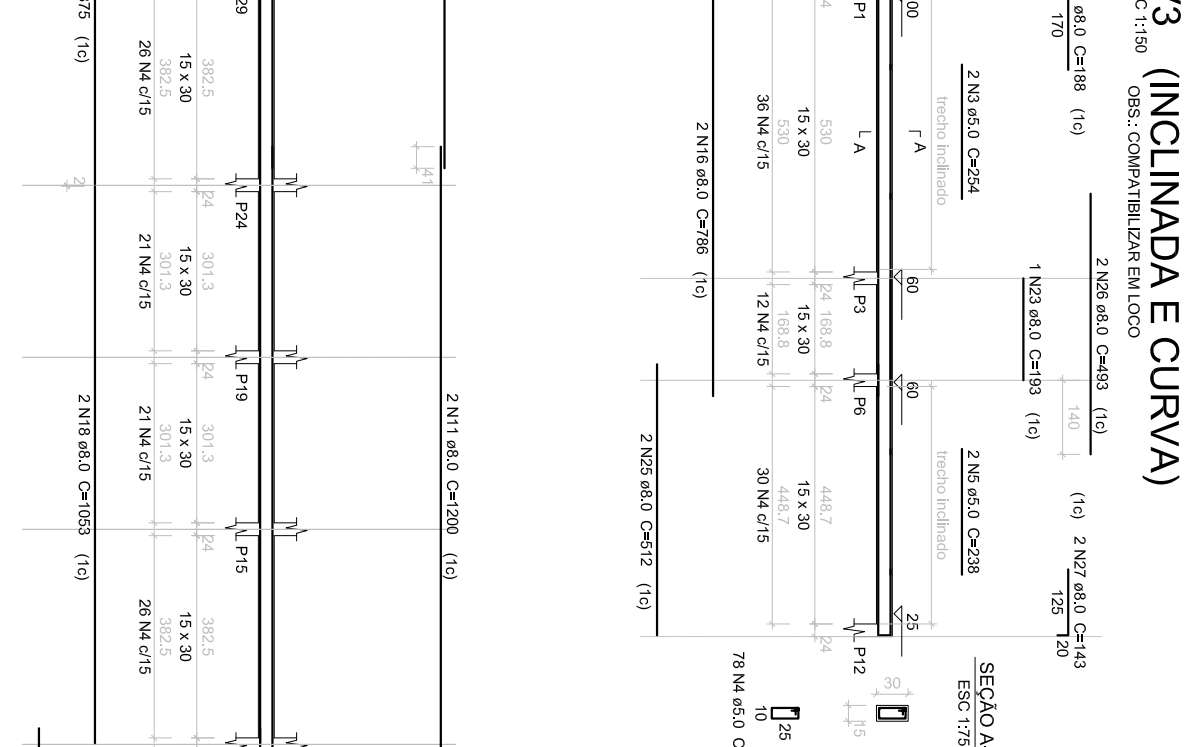
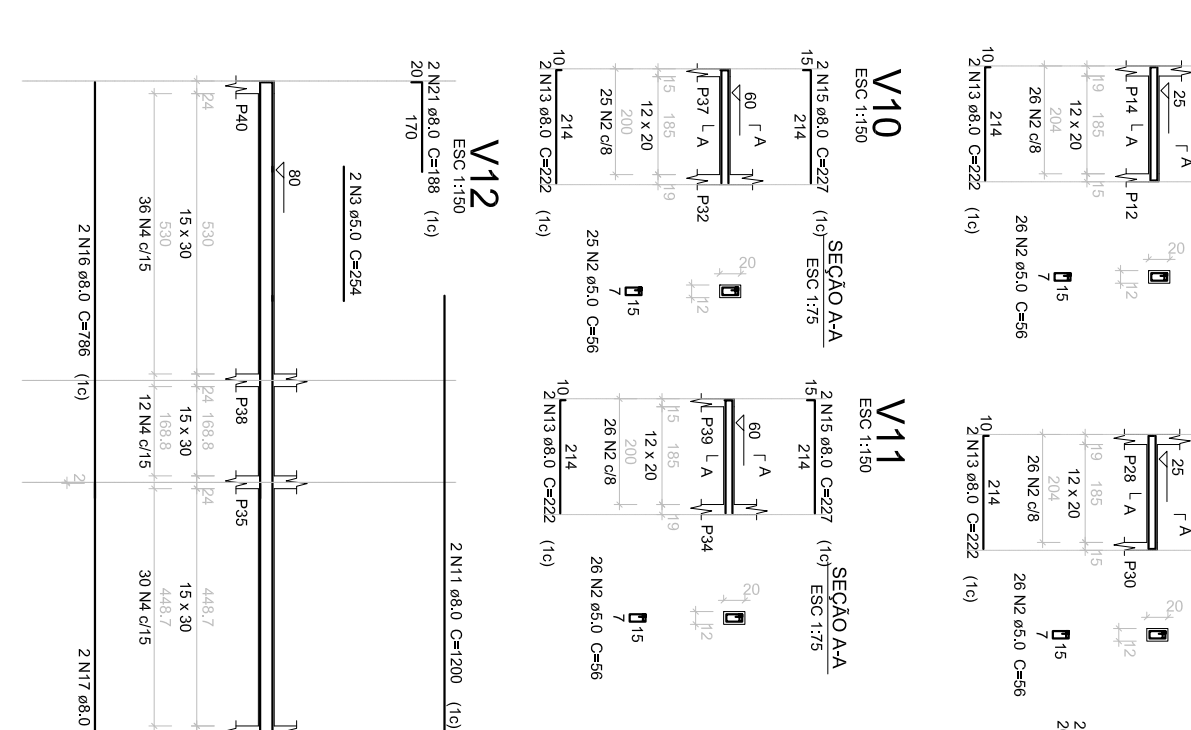
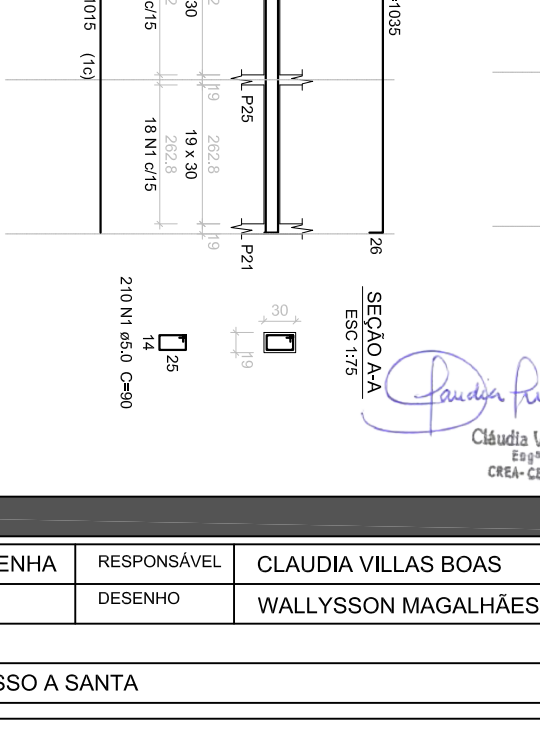
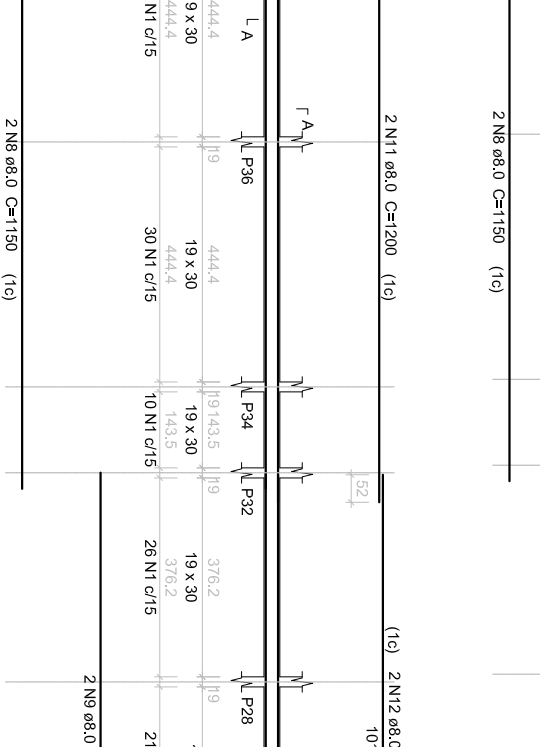
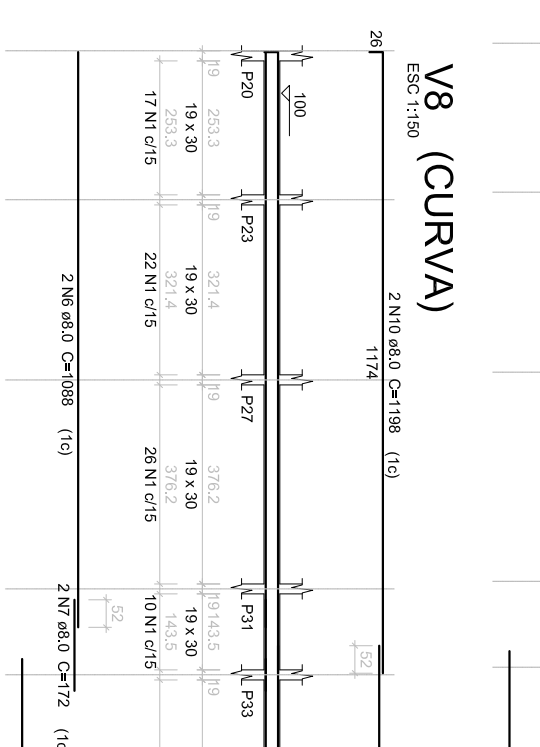
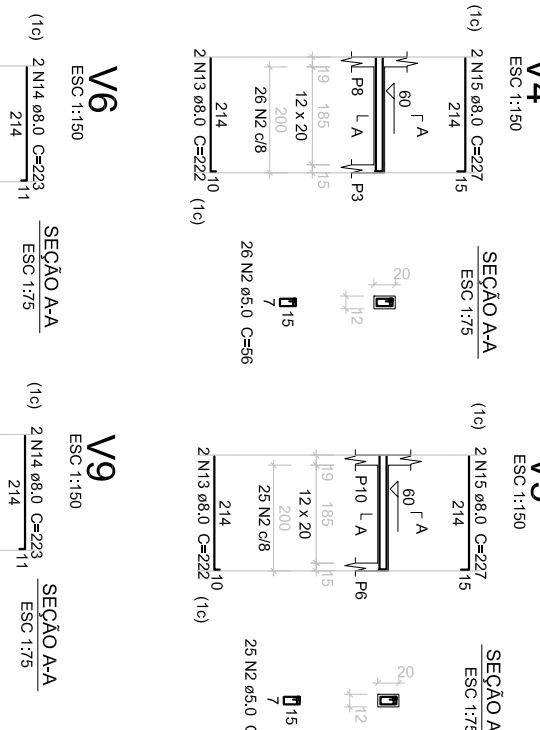
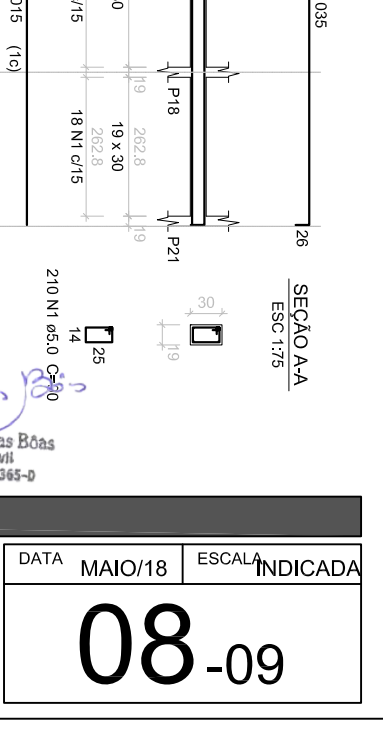
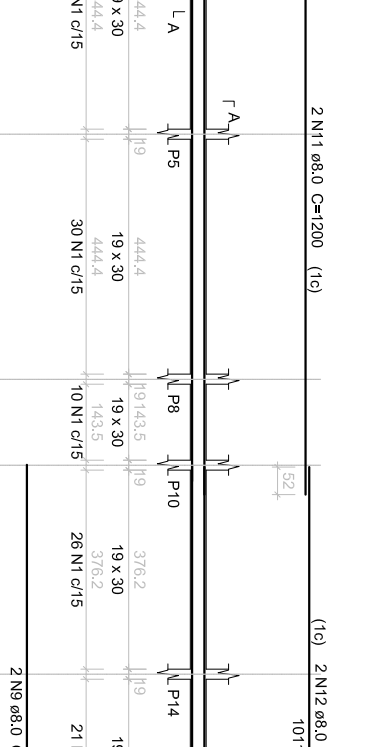
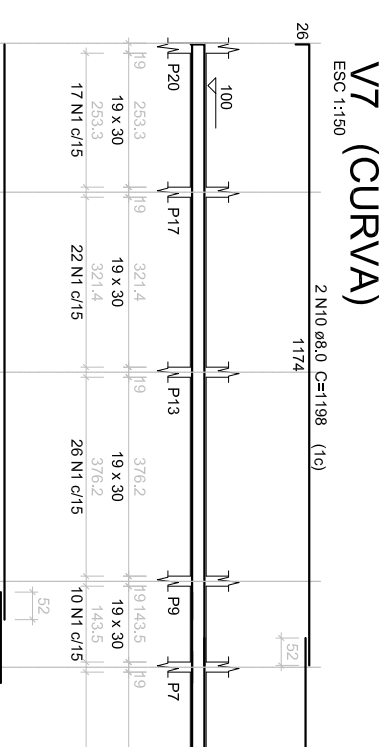
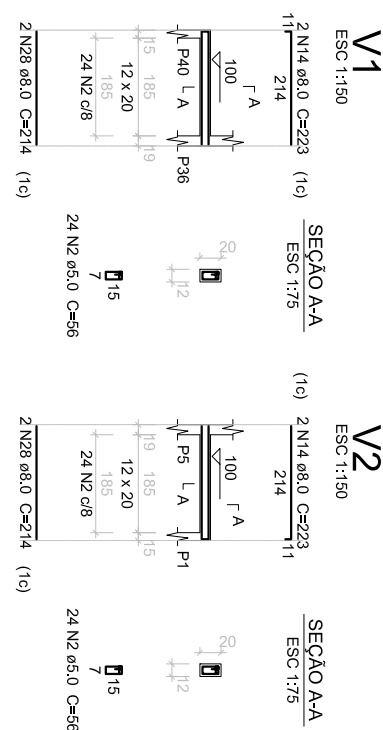
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8,0	600,3	260,5
CA60	5,0	947	143,6
PESO TOTAL			404,1
CA50	260,5		
CA60	143,6		

Volume de concreto (C-25) = 7,44 m³
Área de forma = 114,25 m²

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	ARMAÇÃO DAS VIGAS 01 - ESTRUTURA DE ACESSO A SANTA		





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Relação do aço

ACO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	420	90	37800
	2	5,0	202	56	11312
	3	5,0	8	254	2032
	4	5,0	406	82	33292
	5	5,0	4	238	952
	6	8,0	4	1088	4352
	7	8,0	4	1172	4688
	8	8,0	4	1150	4600
	9	8,0	4	1015	4060
	10	8,0	4	1198	4792
	11	8,0	8	1200	9600
	12	8,0	4	1035	4140
	13	8,0	12	222	2664
	14	8,0	8	223	2664
	15	8,0	8	227	1816
	16	8,0	4	786	3144
	17	8,0	2	875	1750
	18	8,0	2	1053	2106
	19	8,0	2	726	1452
	20	8,0	2	594	1188
	21	8,0	8	188	1504
	22	8,0	2	797	1594
	23	8,0	2	193	386
	24	8,0	2	787	1574
	25	8,0	4	512	2048
	26	8,0	4	493	1972
	27	8,0	4	143	572
	28	8,0	4	214	856

Resumo do aço

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8,0	586,5	254,5
CA60	5,0	853,9	144,8
PESO TOTAL (kg)			400,3
CA50			254,5
CA60			144,8

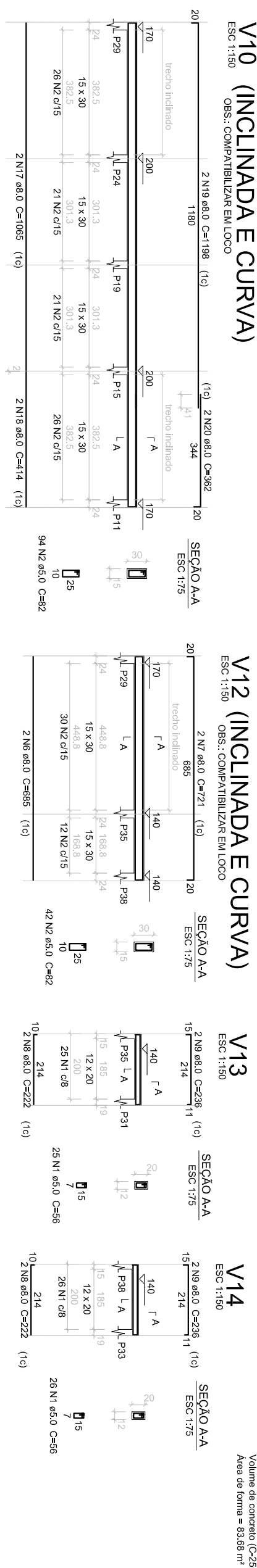
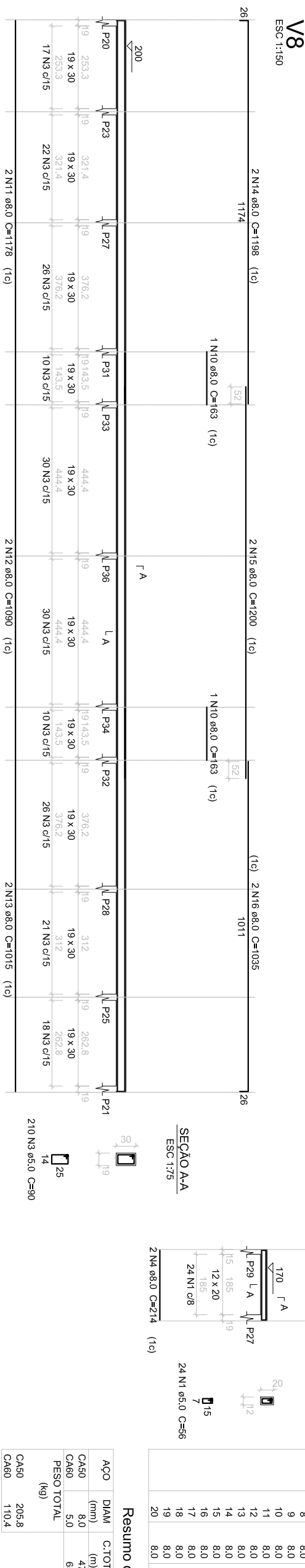
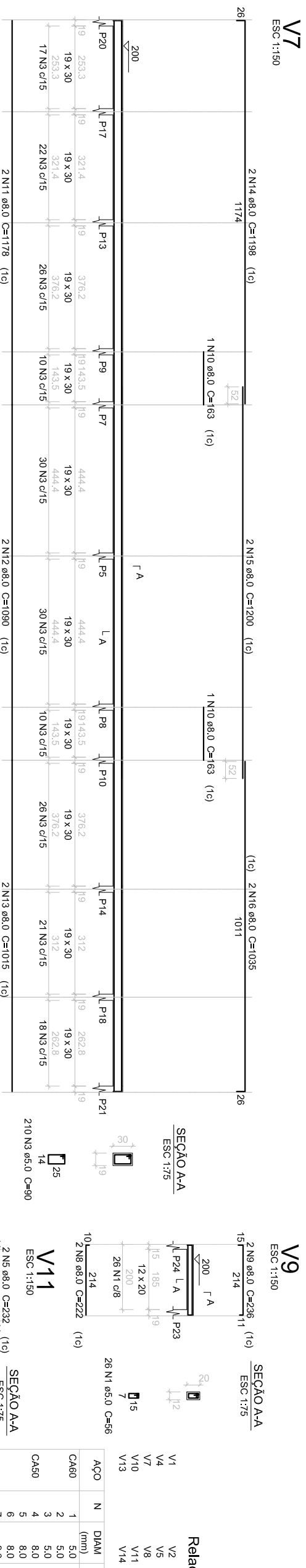
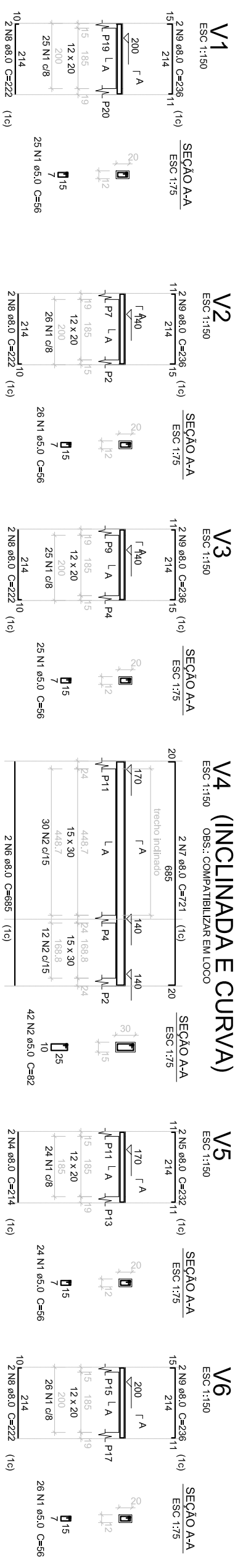
Volume de concreto (C-25) = 7,05 m³
Área de forma = 109,15 m²

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS	DATA	MAIO/18	ESCALA	INDICADA
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES	08-09			
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ						
CONTEÚDO	ARMAÇÃO DAS VIGAS 02 - ESTRUTURA DE ACESSO A SANTA						



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Relação do aço

ACO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	227	56	12712
CA50	2	5,0	178	82	14596
CA80	3	5,0	420	90	37800
CA50	4	8,0	4	214	856
	5	8,0	4	232	928
	6	8,0	4	685	2740
	7	8,0	4	721	2884
	8	8,0	14	222	3108
	9	8,0	14	236	3304
	10	8,0	4	163	652
	11	8,0	4	1178	4712
	12	8,0	4	1090	4360
	13	8,0	4	1015	4060
	14	8,0	4	1198	4792
	15	8,0	4	1200	4800
	16	8,0	4	1035	4140
	17	8,0	2	1065	2130
	18	8,0	2	414	828
	19	8,0	2	1198	2396
	20	8,0	2	362	724

Resumo do aço

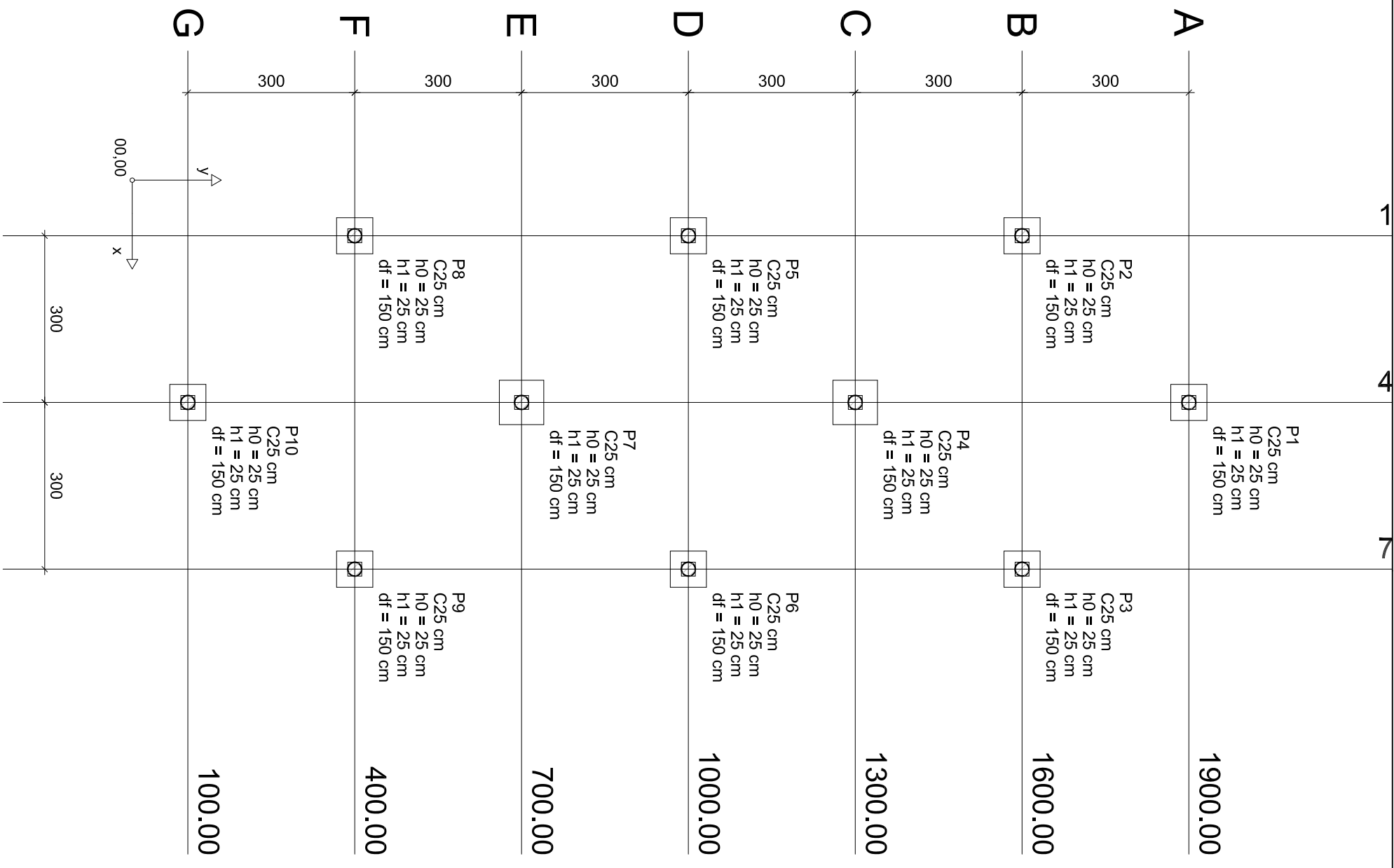
ACO	DIAM (mm)	C-TOTAL (m)	PESO + 10 % (kg)
CA50	8,0	474,2	205,8
CA80	5,0	651,1	110,4
PESO TOTAL (kg)			
CA50	205,8		
CA80	110,4		

Volume de concreto (C-25) = 5,51 m³
 Área de forma = 83,68 m²

ESTRUTURA

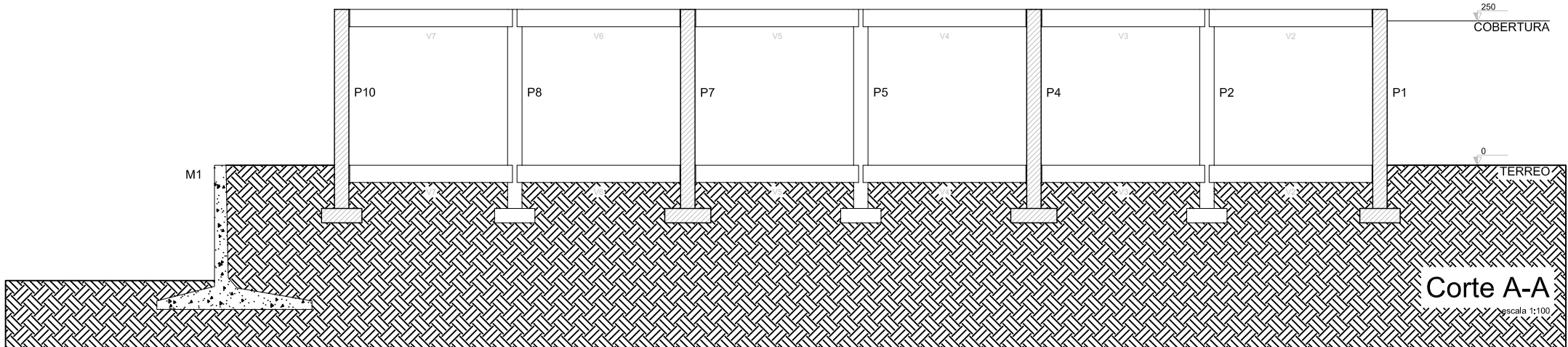
PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS	DATA	MAIO/18	ESCALA	INDICADA
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES	<div style="font-size: 48px; font-weight: bold;">09-09</div>			
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ						
CONTEÚDO	ARMAÇÃO DAS VIGAS 03 - ESTRUTURA DE ACESSO A SANTA						





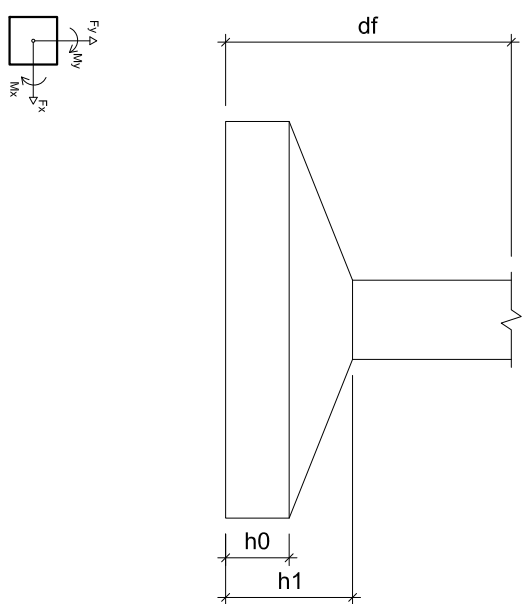
Planta de locação

escala 1:100



Corte A-A

escala 1:100



Pilar					
Nome	Seção (cm)	X (cm)	Y (cm)	Carga Máx. (tf)	Carga Min. (tf)
P1	C25	400,00	1900,00	5,9	4,7
P2	C25	100,00	1600,00	5,9	4,2
P3	C25	700,00	1600,00	5,9	4,2
P4	C25	400,00	1300,00	10,5	8,2
P5	C25	100,00	1000,00	5,6	4,0
P6	C25	700,00	1000,00	5,6	4,0
P7	C25	400,00	700,00	10,5	8,2
P8	C25	100,00	400,00	5,9	4,2
P9	C25	700,00	400,00	5,9	4,2
P10	C25	400,00	100,00	5,9	4,7

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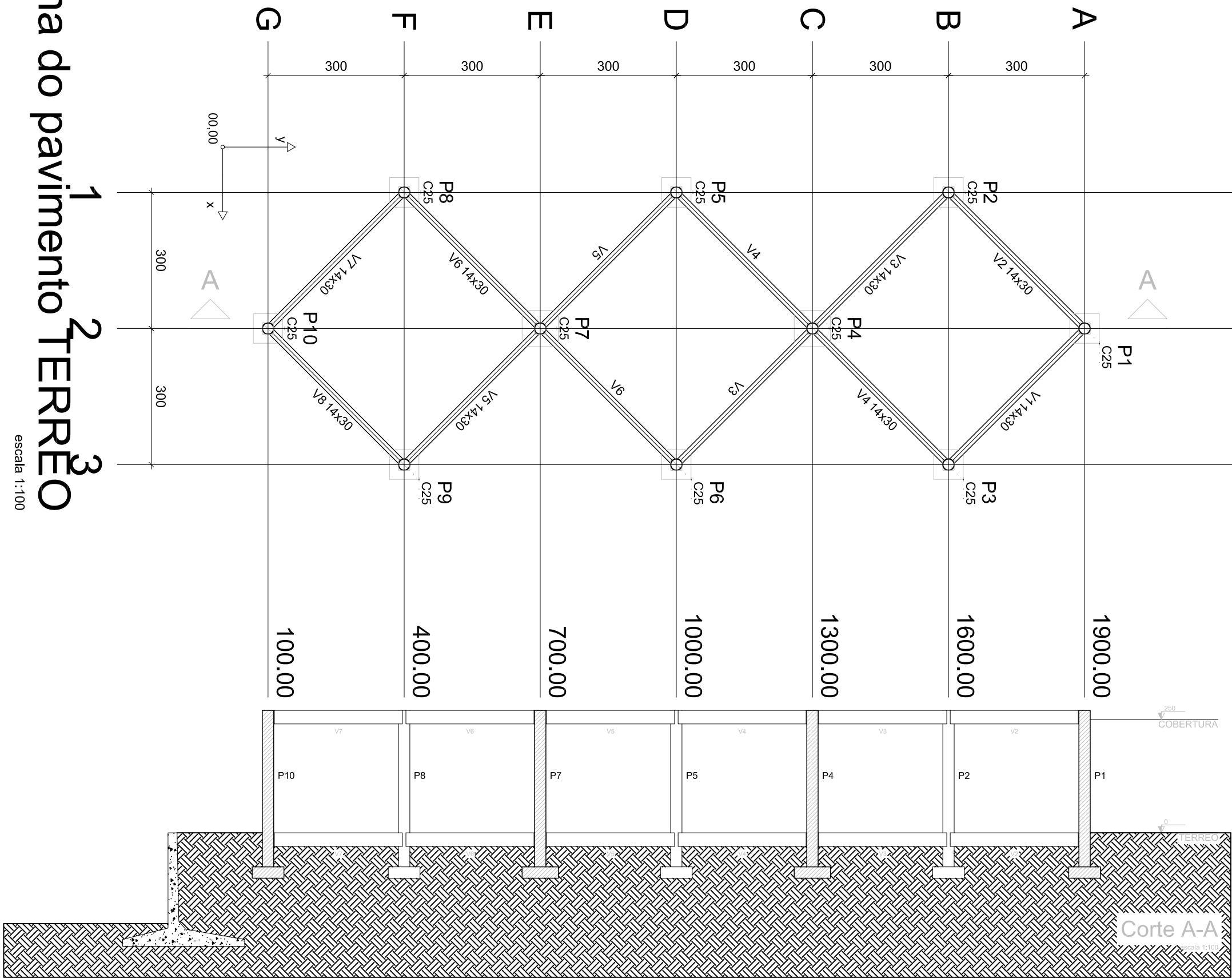
ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	PLANTA DE LOCAÇÃO - MONUMENTO CENTRAL		

DATA	MAIO/18	ESCALA	1/100
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01-13





Forma do pavimento 1 2 3 TERRÇO

escala 1:100

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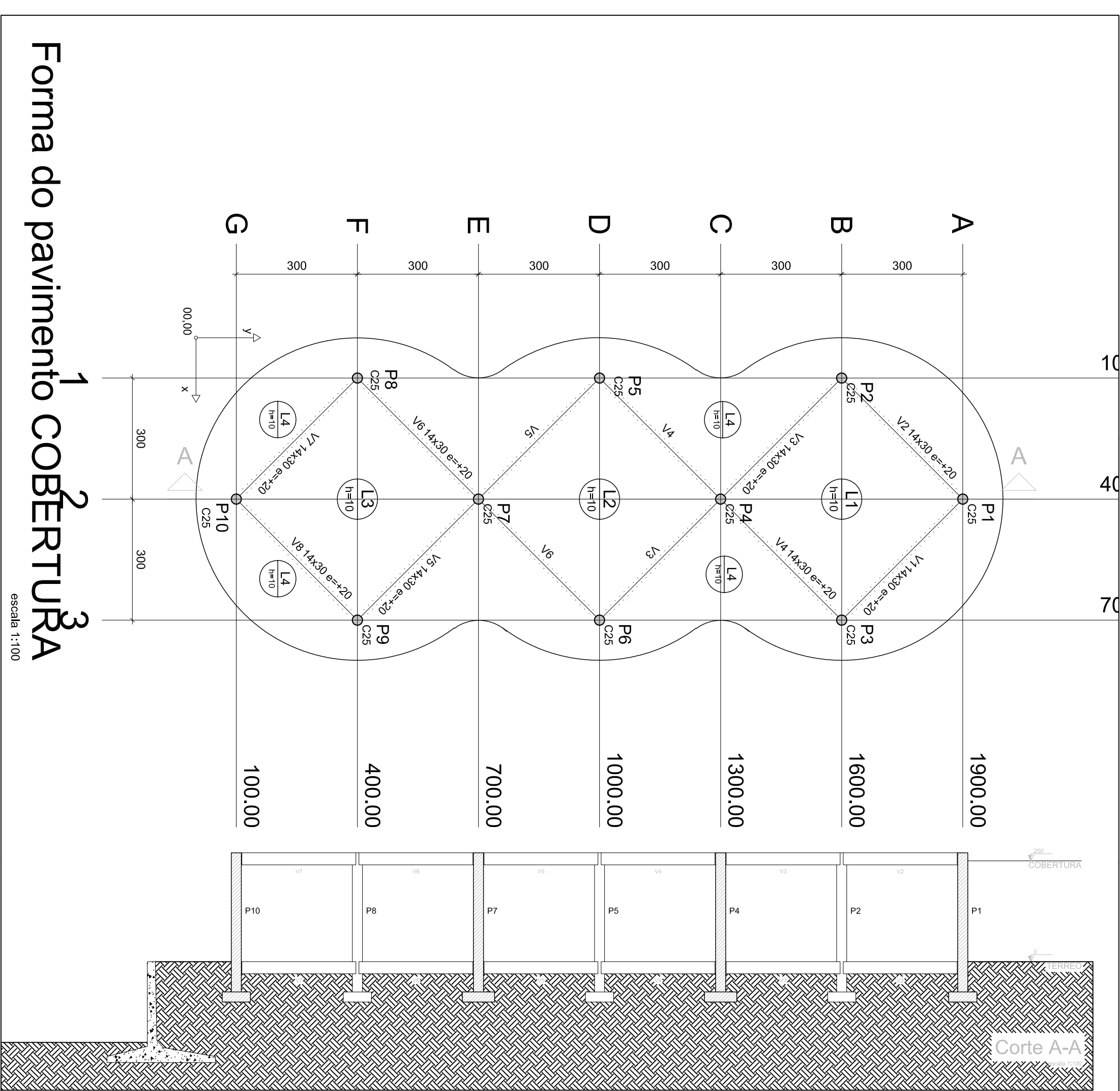
ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	FORMA DO TÉRREO - MONUMENTO CENTRAL		

DATA MAIO/18 ESCALA 1/100

02-13





Forma do pavimento COBERTURA

escala 1:100

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ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	FORMA DA COBERTURA - MONUMENTO CENTRAL		

DATA MAIO/18 ESCALA 1/100

03-13



S1=S2=S3=S5=S6=S8=S9=S10
 PLANTA
 ESC 1:25

CORTE
 ESC 1:25

Relação do aço

8xS1

2xS4

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	130	69	8970
CA60	2	6.3	112	94	10528
CA60	3	6.3	36	109	3924
CA60	4	10.0	68	206	14008

Resumo do aço

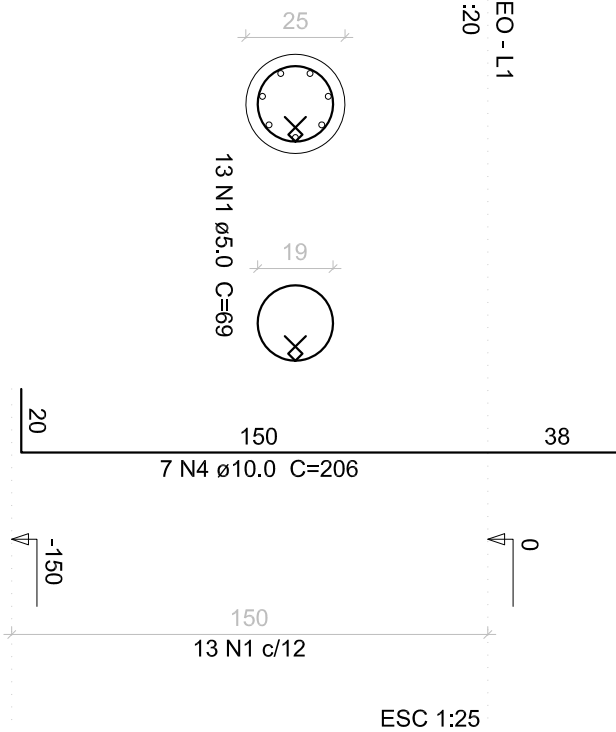
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA60	6.3	144.6	38.9
CA60	10.0	140.1	95
CA60	5.0	89.7	15.2
PESO TOTAL (kg)			
CA50	133.9		
CA60	15.2		

Volume de concreto (C-25) = 1.9 m³
 Área de forma = 18.58 m²

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P1=P2=P3=P5=P6=P8=P9=P10

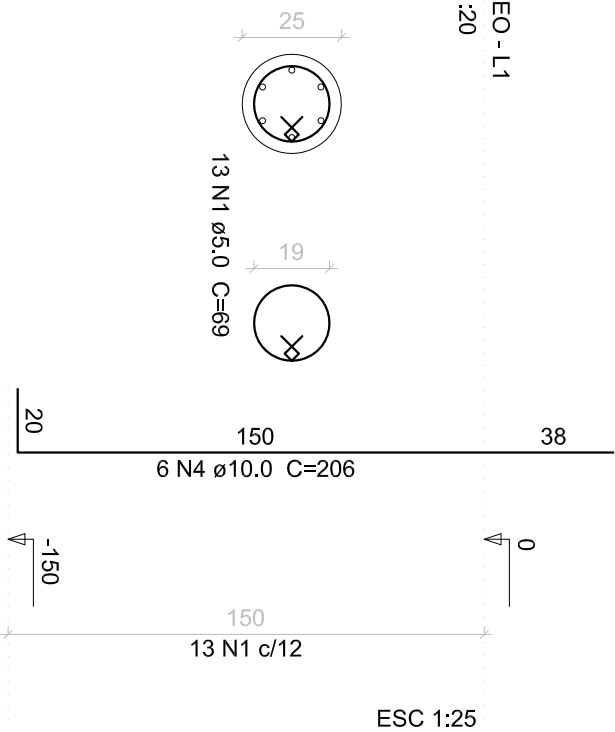
TERREO - L1
 ESC 1:20



ESC 1:25

P4=P7

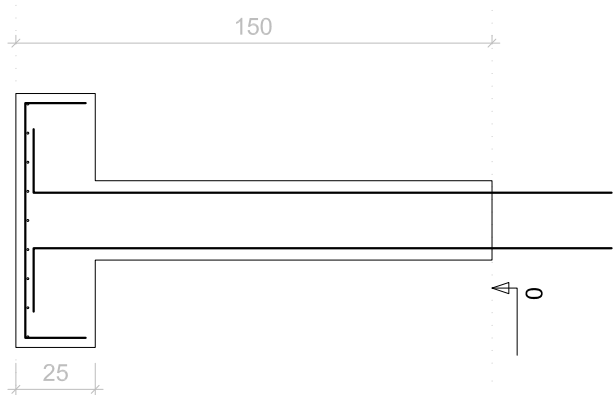
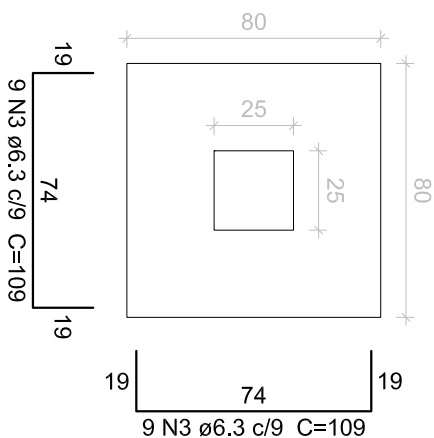
TERREO - L1
 ESC 1:20



ESC 1:25

S4=S7
 PLANTA
 ESC 1:25

CORTE
 ESC 1:25



ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	FUNDAÇÕES - MONUMENTO CENTRAL		

DATA MAIO/18 ESCALA INDICADA

04-13

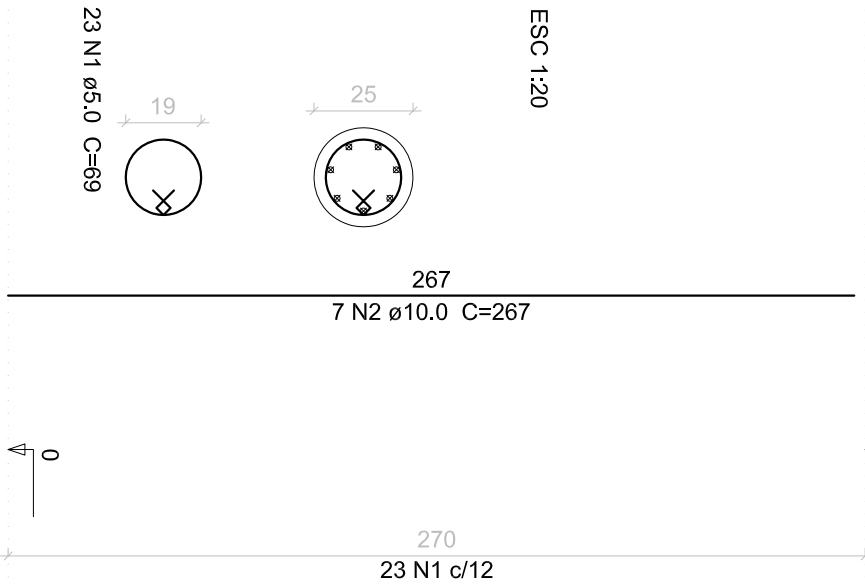


P1=P2=P3=P5=P6=P8=P9=P10

P4=P7

COBERTURA - L2

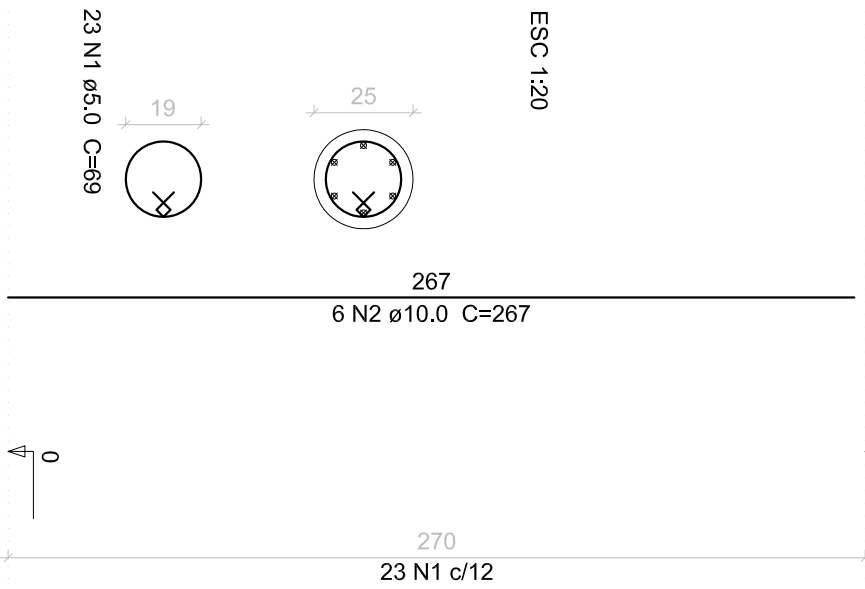
270



ESC 1:25

COBERTURA - L2

270



ESC 1:25

8xP1

2xP4

Relação do aço

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	230	69	15870
CA50	2	10.0	68	267	18156

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	181.6	123.1
CA60	5.0	158.7	26.9
PESO TOTAL (kg)			
CA50			123.1
CA60			26.9

Volume de concreto (C-25) = 1,33 m³
 Área de forma = 21,21 m²

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ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	ARMAÇÃO DOS PILARES - MONUMENTO CENTRAL		

DATA	MAIO/18	ESCALA	INDICADA
05-13			



Relação do aço

ACO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	216	80	17280
CA50	2	8.0	4	444	1776
CA50	3	8.0	12	869	10428
CA60	4	10.0	4	444	1776

Resumo do aço

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8.0	122.1	53
CA60	10.0	17.8	12
CA60	5.0	172.8	29.3
PESO TOTAL (kg)			
CA50			65
CA60			29.3

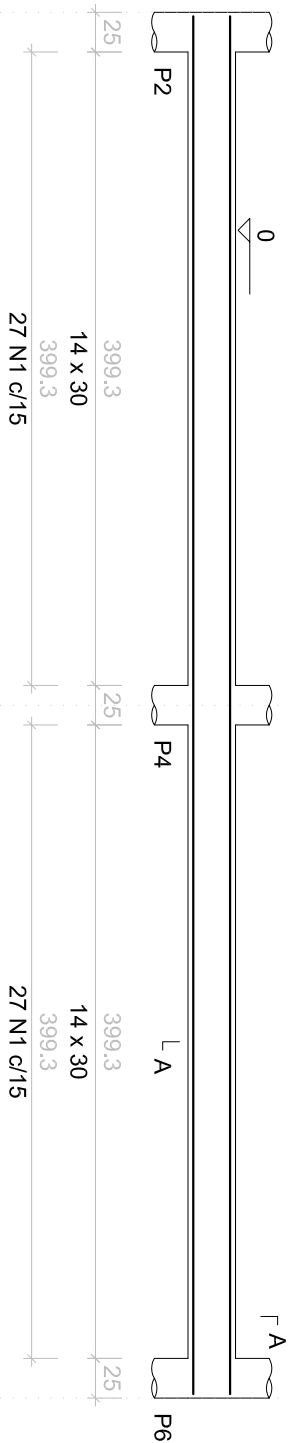
Volume de concreto (C-25) = 1,48 m³
Área de forma = 26,04 m²

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V3

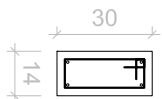
ESC 1:50

2 N3 ø8.0 C=869 (1c)



SEÇÃO A-A

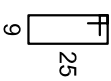
ESC 1:25



54 N1 ø5.0 C=80

SEÇÃO A-A

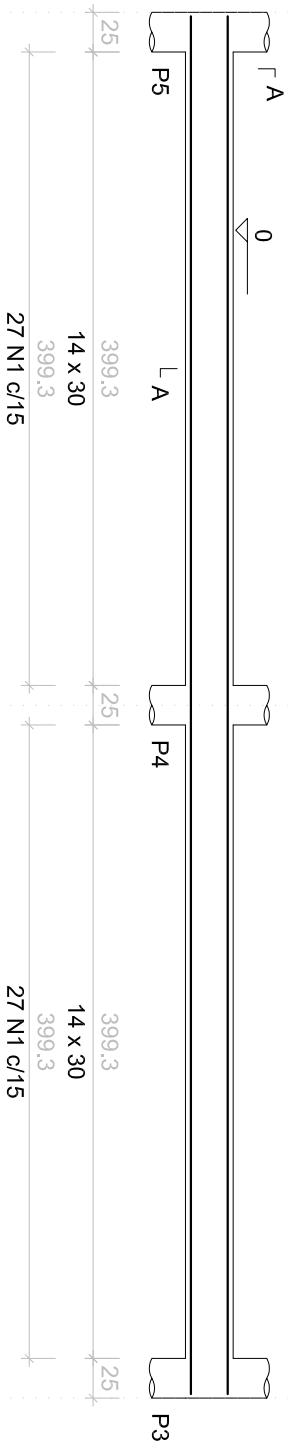
ESC 1:25



V4

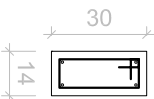
ESC 1:50

2 N3 ø8.0 C=869 (1c)



SEÇÃO A-A

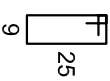
ESC 1:25



54 N1 ø5.0 C=80

SEÇÃO A-A

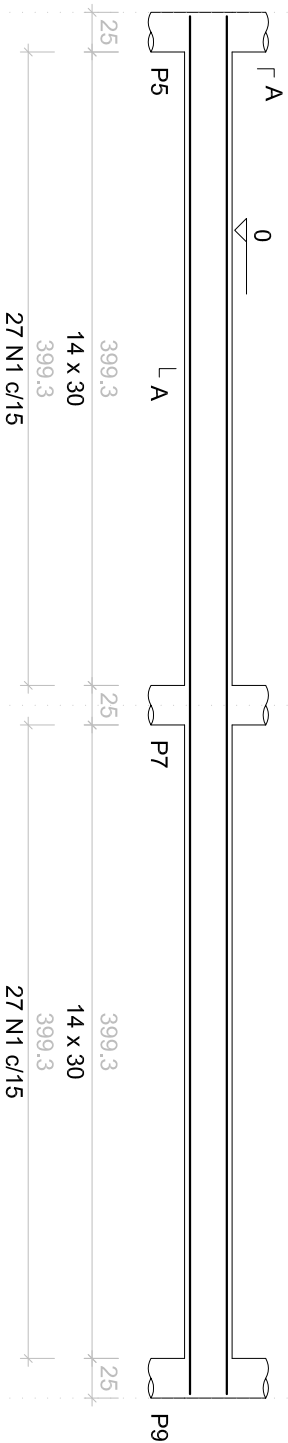
ESC 1:25



V5

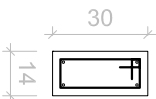
ESC 1:50

2 N3 ø8.0 C=869 (1c)



SEÇÃO A-A

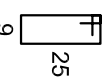
ESC 1:25



54 N1 ø5.0 C=80

SEÇÃO A-A

ESC 1:25



V1

V2

V3

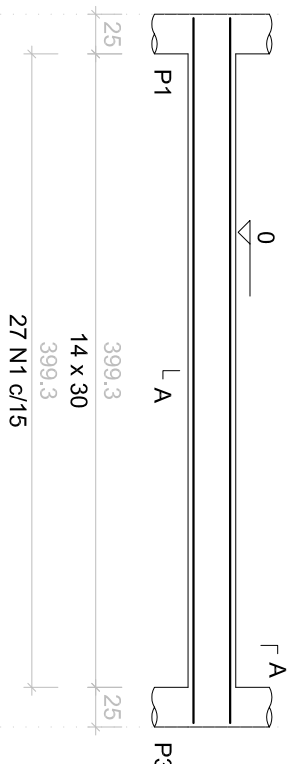
V4

V5

V1

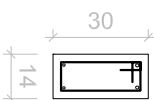
ESC 1:50

2 N4 ø10.0 C=444 (1c)



SEÇÃO A-A

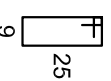
ESC 1:25



27 N1 ø5.0 C=80

SEÇÃO A-A

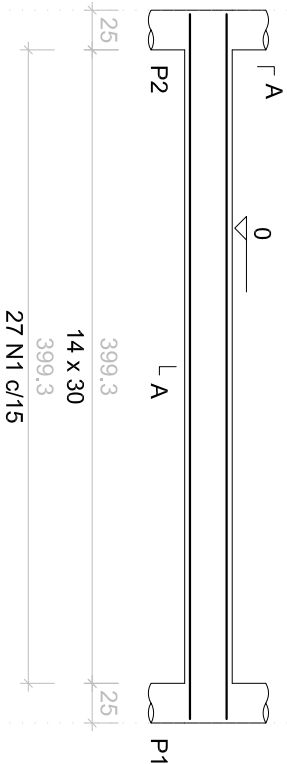
ESC 1:25



V2

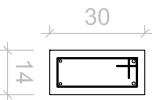
ESC 1:50

2 N4 ø10.0 C=444 (1c)



SEÇÃO A-A

ESC 1:25



27 N1 ø5.0 C=80

2 N2 ø8.0 C=444 (1c)

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	ARMAÇÃO DAS VIGAS DO TÉRREO 01 - MONUMENTO CENTRAL		

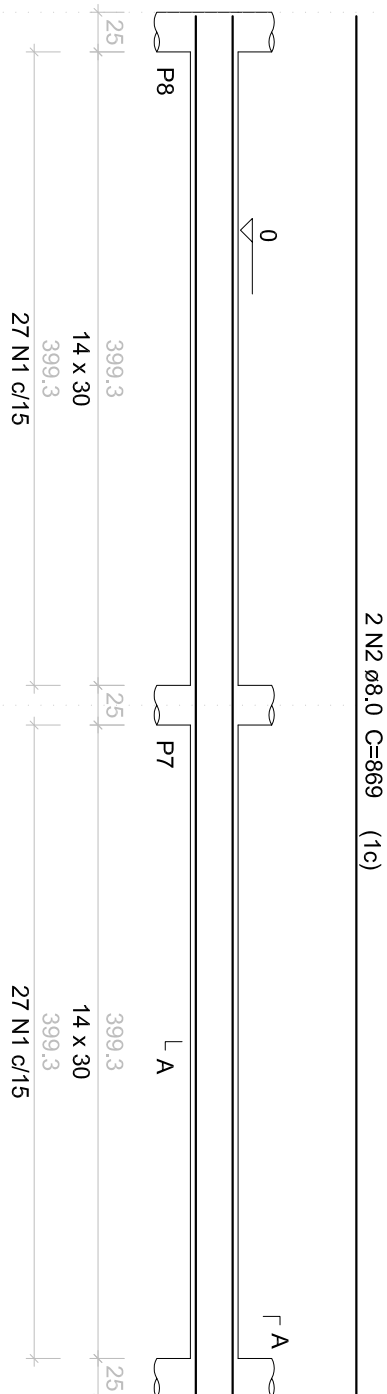
DATA MAIO/18 ESCALA INDICADA

06-13



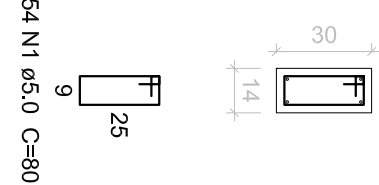
V6

ESC 1:50



SEÇÃO A-A

ESC 1:25



V6

V7

V8

Relação do aço

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	108	80	8640
CA50	2	8,0	4	869	3476
	3	8,0	4	444	1776
	4	10,0	4	444	1776

Resumo do aço

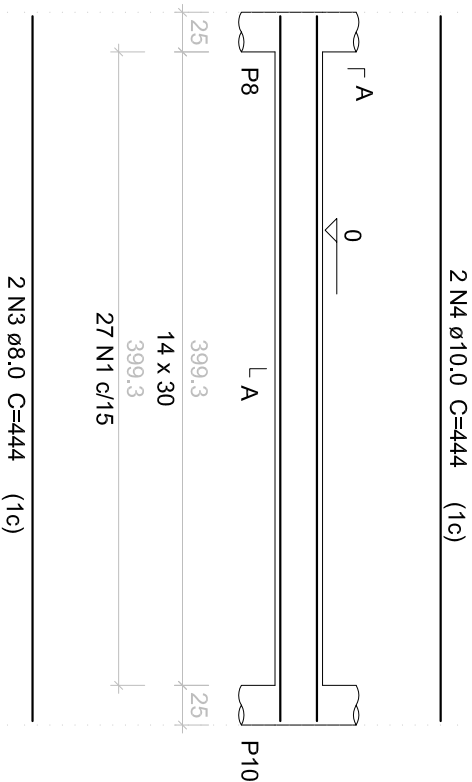
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8,0	52,6	22,8
CA60	10,0	17,8	12
CA60	5,0	86,4	14,6
PESO TOTAL (kg)			
CA50			34,8
CA60			14,6

Volume de concreto (C-25) = 0,74 m³
Área de forma = 13,11 m²

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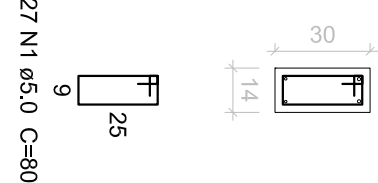
V7

ESC 1:50



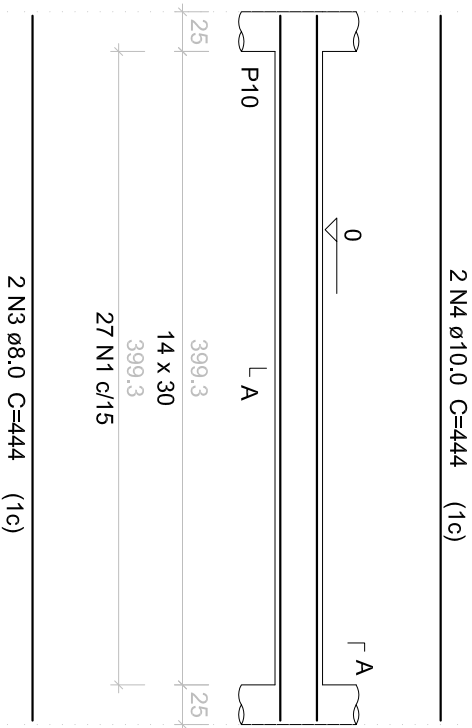
SEÇÃO A-A

ESC 1:25



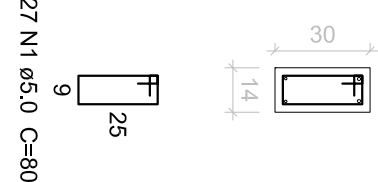
V8

ESC 1:50



SEÇÃO A-A

ESC 1:25



ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	ARMAÇÃO DAS VIGAS DO TÉRREO 02 - MONUMENTO CENTRAL		

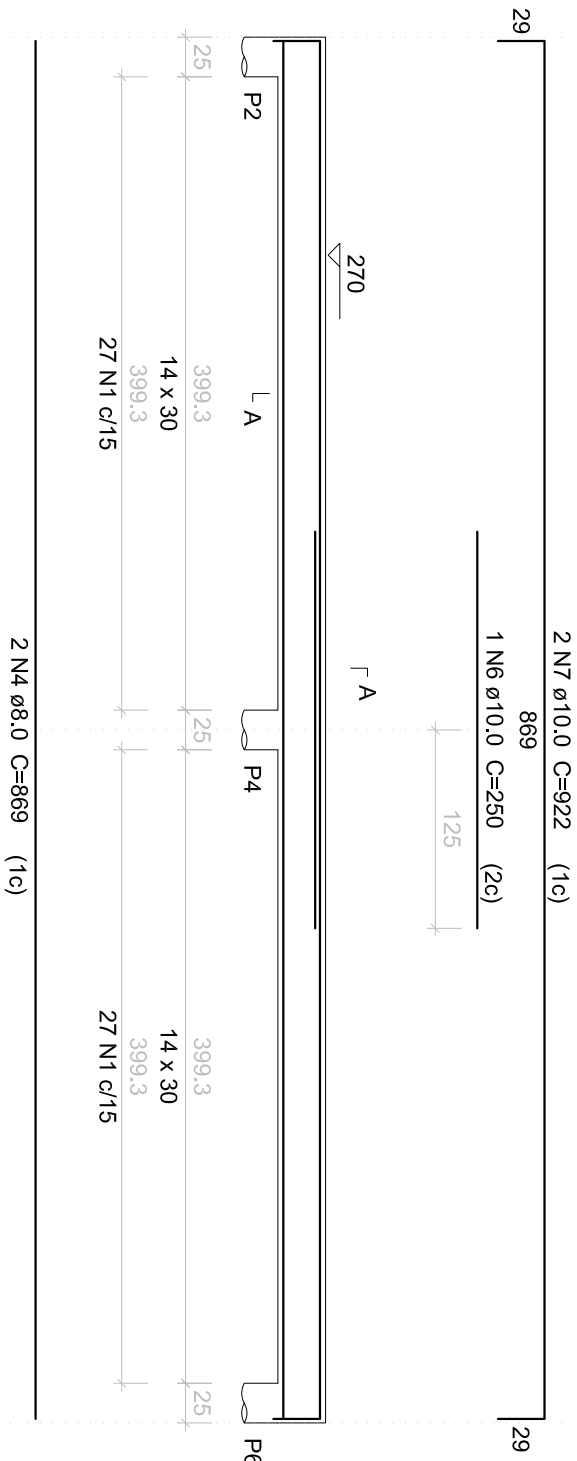
DATA MAIO/18 ESCALA INDICADA

07-13

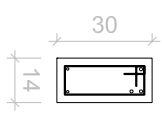


V3

ESC 1:50



SEÇÃO A-A
ESC 1:25



54 N1 Ø5.0 C=80

Relação do aço

V1 V2 V3
V4 V5

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	216	80	17280
CA60	2	8.0	2	264	528
CA60	3	8.0	4	460	1840
	4	8.0	6	869	5214
	5	10.0	4	510	2040
	6	10.0	3	250	750
	7	10.0	6	922	5532

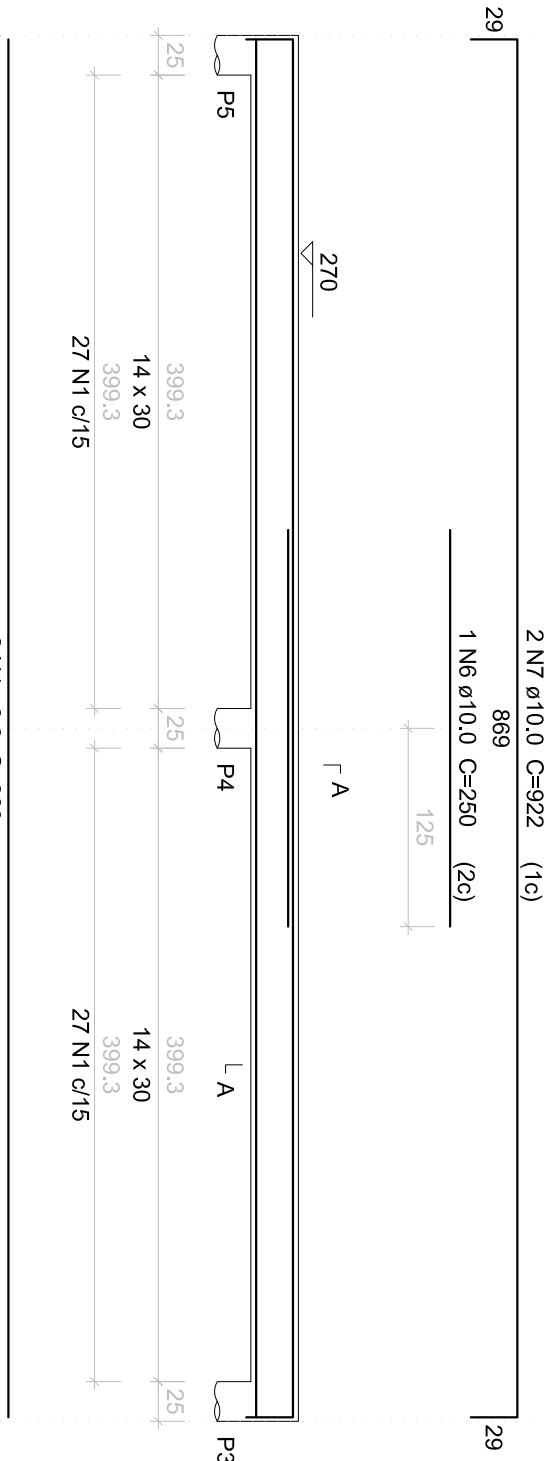
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	75.9	32.9
CA50	10.0	83.3	56.4
CA60	5.0	172.8	29.3
PESO TOTAL (kg)			
CA50	89.3		
CA60	29.3		

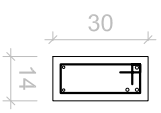
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V4

ESC 1:50



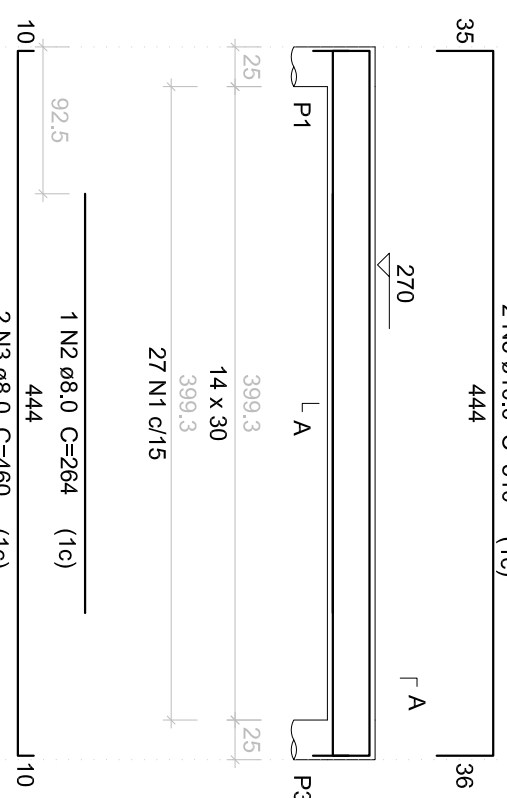
SEÇÃO A-A
ESC 1:25



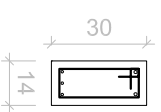
54 N1 Ø5.0 C=80

V1

ESC 1:50



SEÇÃO A-A
ESC 1:25

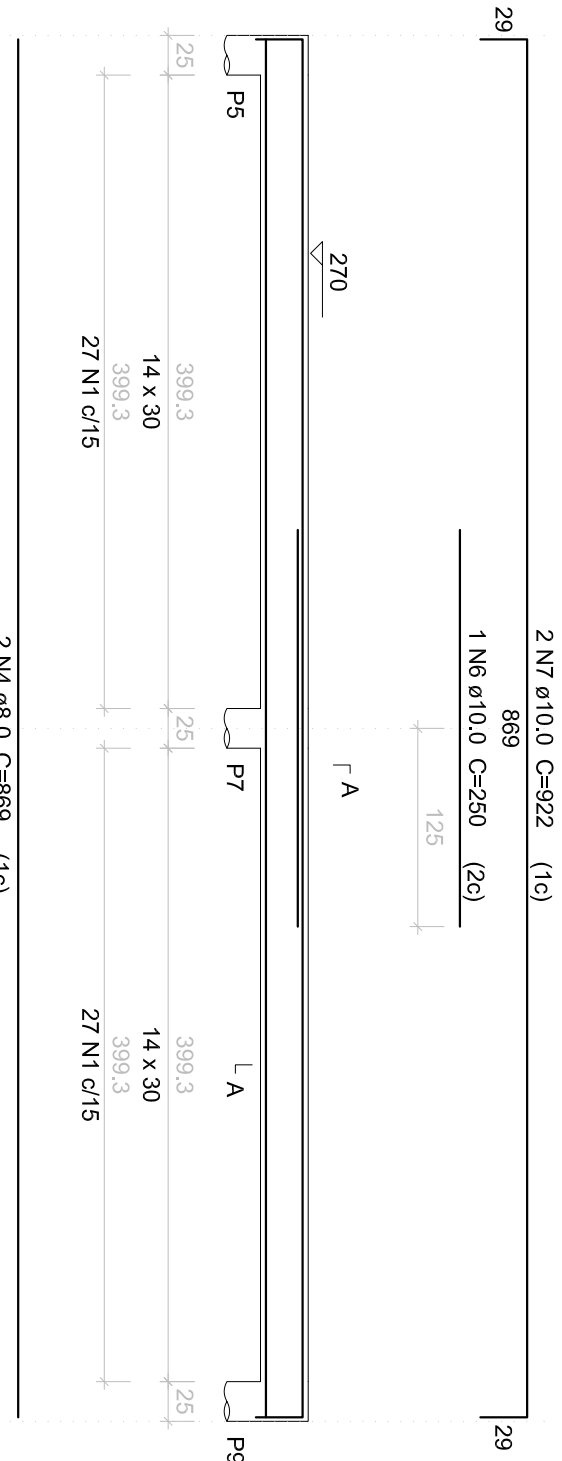


27 N1 Ø5.0 C=80

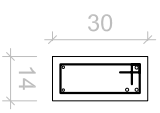
Volume de concreto (C-25) = 1,48 m³
Área de forma = 26,04 m²

V5

ESC 1:50



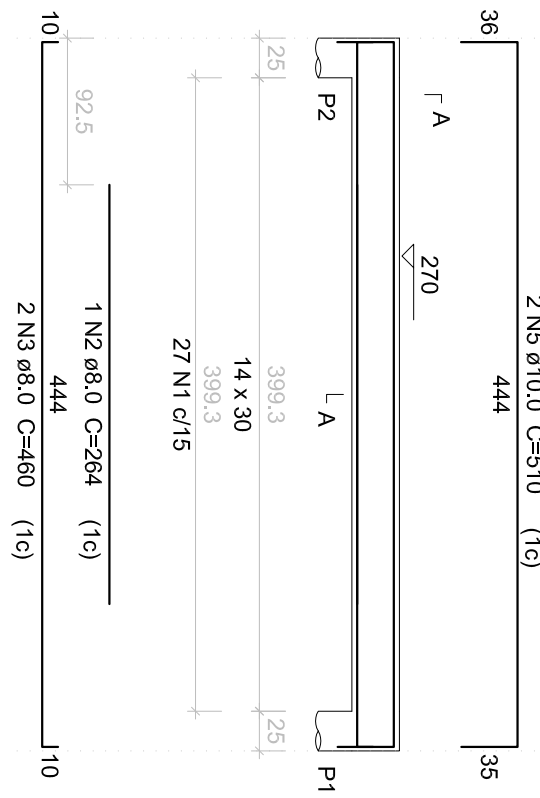
SEÇÃO A-A
ESC 1:25



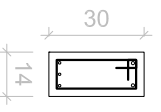
54 N1 Ø5.0 C=80

V2

ESC 1:50



SEÇÃO A-A
ESC 1:25



27 N1 Ø5.0 C=80

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	ARMAÇÃO DAS VIGAS DA COBERTURA 01 - MONUMENTO CENTRAL		

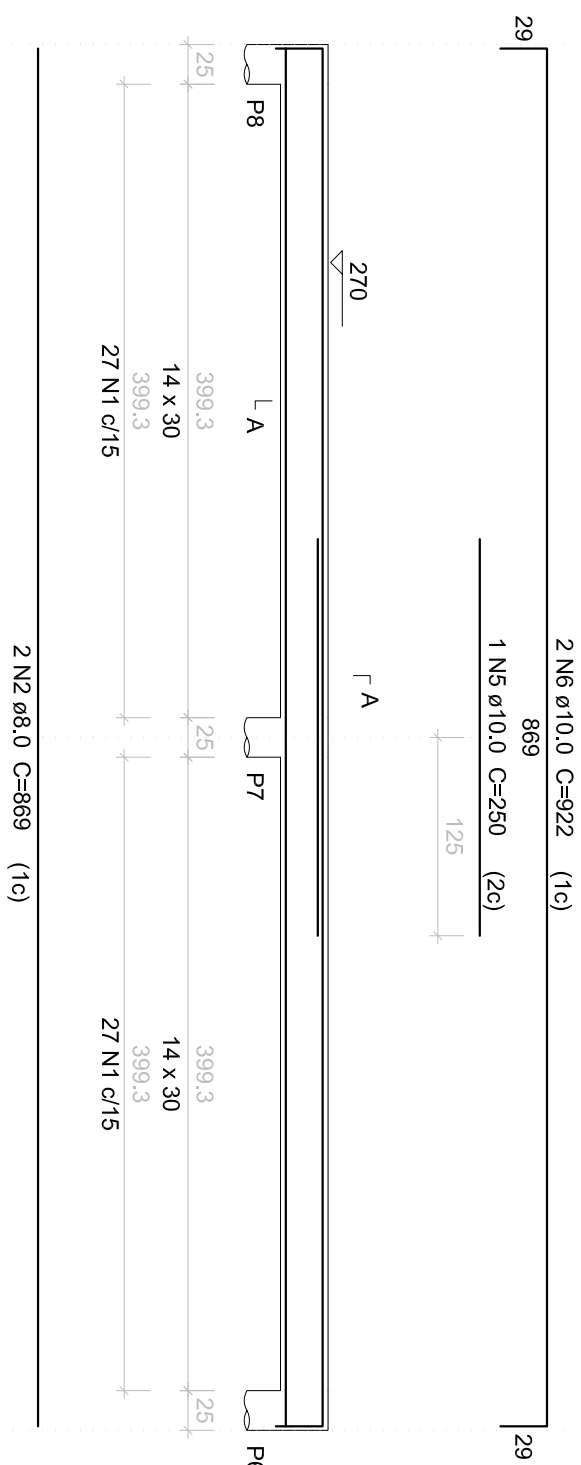
DATA MAIO/18 ESCALA INDICADA

08-13



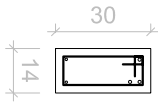
V6

ESC 1:50



2 N6 ϕ 10,0 C=922 (1c)
869
1 N5 ϕ 10,0 C=250 (2c)
125

SEÇÃO A-A
ESC 1:25



2 N2 ϕ 8,0 C=869 (1c)

54 N1 ϕ 5,0 C=80

V6

V7

V8

Relação do aço

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	108	80	8640
CA50	2	8,0	2	869	1738
CA50	3	8,0	2	264	528
	4	8,0	4	460	1840
	5	10,0	1	250	250
	6	10,0	2	922	1844
	7	10,0	4	510	2040

Resumo do aço

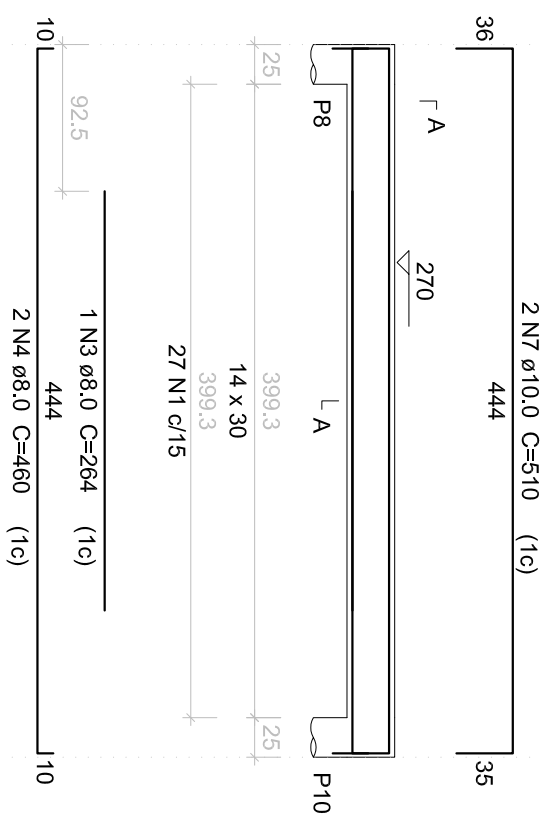
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8,0	41,1	17,8
CA60	10,0	41,4	28
PESO TOTAL (kg)	5,0	86,4	14,6
CA50	45,9		
CA60	14,6		

Volume de concreto (C-25) = 0,74 m³
Área de forma = 13,11 m²

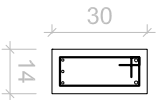
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V7

ESC 1:50



SEÇÃO A-A
ESC 1:25

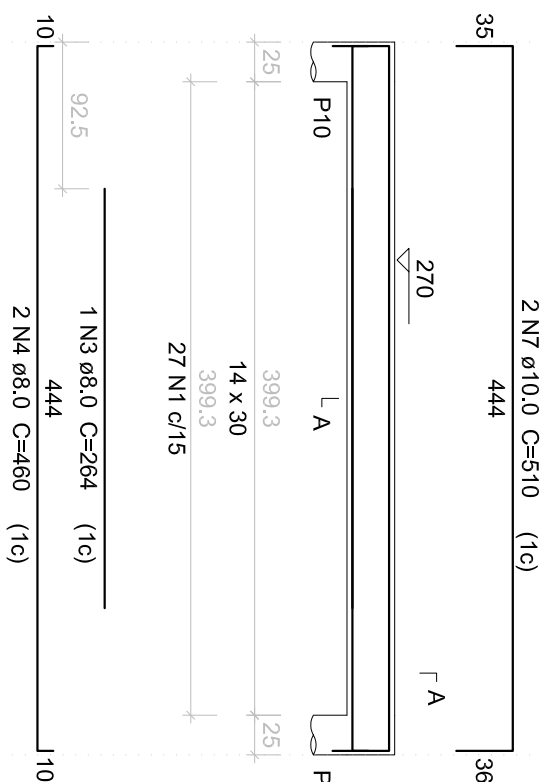


2 N7 ϕ 10,0 C=510 (1c)
444
1 N3 ϕ 8,0 C=264 (1c)
444
2 N4 ϕ 8,0 C=460 (1c)
10

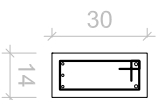
27 N1 ϕ 5,0 C=80

V8

ESC 1:50



SEÇÃO A-A
ESC 1:25



2 N7 ϕ 10,0 C=510 (1c)
444
1 N3 ϕ 8,0 C=264 (1c)
444
2 N4 ϕ 8,0 C=460 (1c)
10

27 N1 ϕ 5,0 C=80

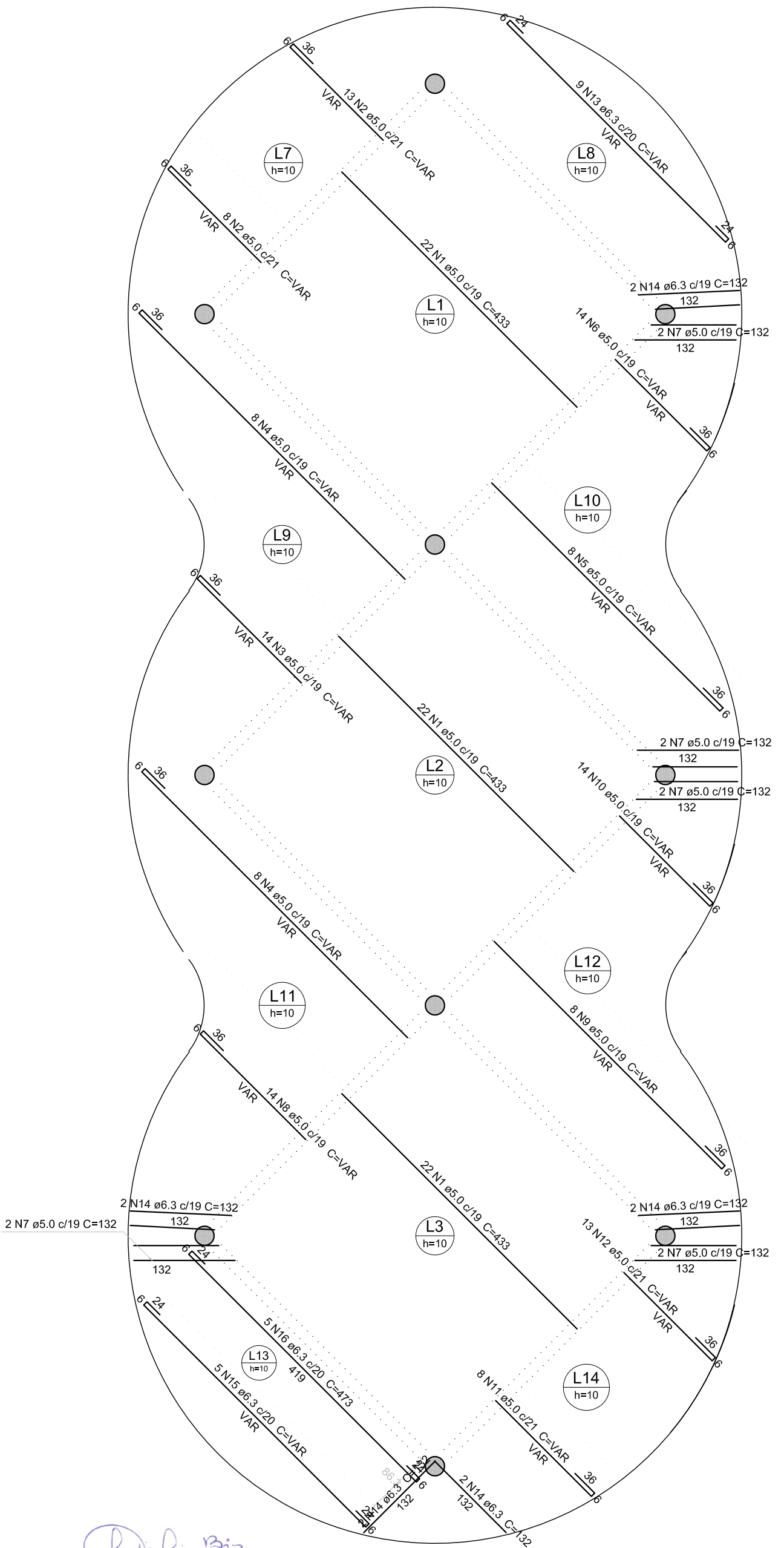
ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	ARMAÇÃO DAS VIGAS DA COBERTURA 01 - MONUMENTO CENTRAL		

DATA MAIO/18 ESCALA INDICADA

09-13






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Armação positiva das lajes do pavimento COBERTURA (Eixo X)

escala 1:62,5

Relação do aço

Positivos X

ACO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	66	433	28578
	2	5,0	VAR	VAR	VAR
	3	5,0	14	VAR	VAR
	4	5,0	16	VAR	VAR
	5	5,0	8	VAR	VAR
	6	5,0	14	VAR	VAR
	7	5,0	10	132	1320
	8	5,0	14	VAR	VAR
	9	5,0	8	VAR	VAR
	10	5,0	14	VAR	VAR
	11	5,0	8	VAR	VAR
	12	5,0	13	VAR	VAR
	13	6,3	9	VAR	VAR
	14	6,3	10	132	1320
	15	6,3	5	VAR	VAR
	16	6,3	5	473	2365

Resumo do aço

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6,3	101,1	27,2
CA60	5,0	658,6	111,7
PESO TOTAL (kg)			
CA50	27,2		
CA60	111,7		

Volume de concreto (C-25) = 12,23 m³
 Área de forma = 127,96 m²

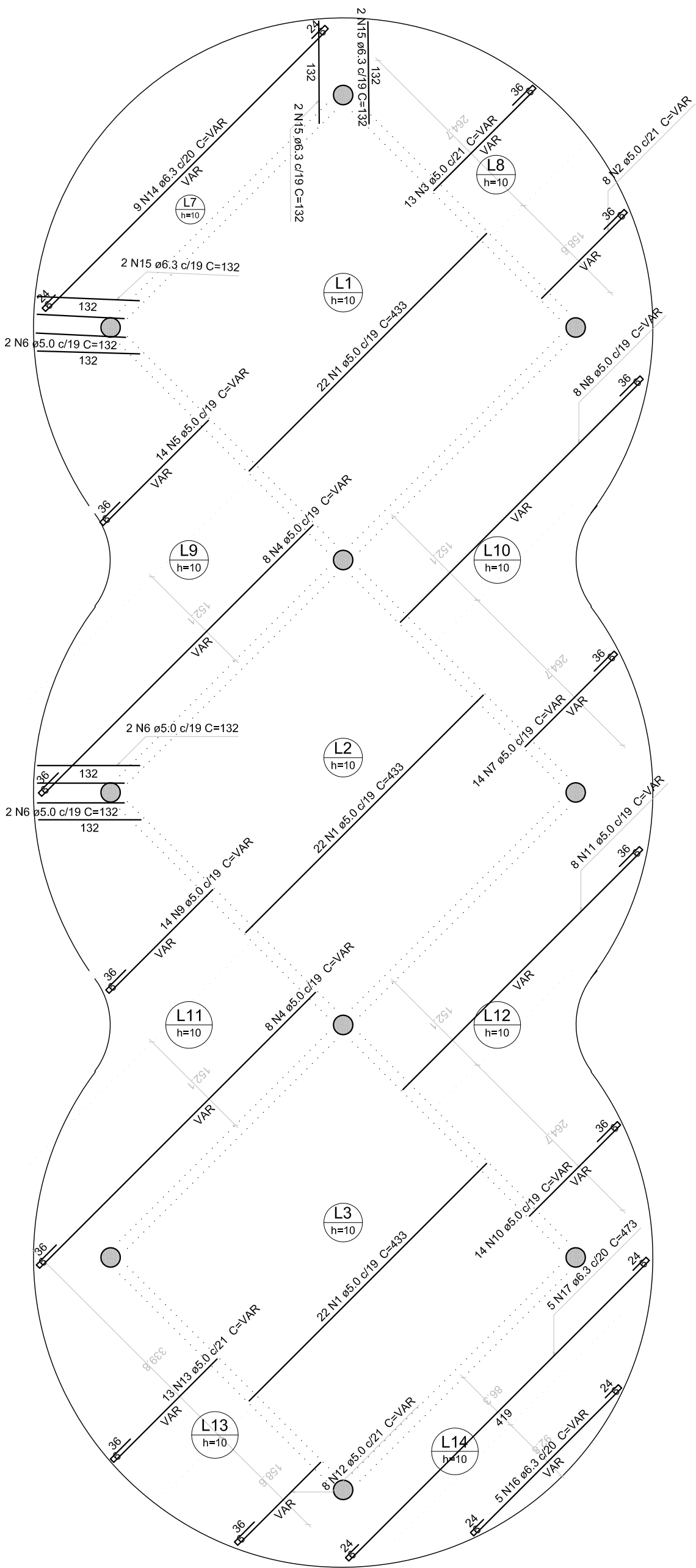
ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	ARMADURA POSITIVA X - MONUMENTO CENTRAL		

DATA MAIO/18 ESCALA INDICADA

10-13





Armação positiva das lajes do pavimento COBERTURA (Eixo Y)

escala 1:50

Relação do aço

Positivos Y

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C:TOTAL (cm)
CA60	1	5.0	66	433	28578
	2	5.0	8	VAR	VAR
	3	5.0	13	VAR	VAR
	4	5.0	16	VAR	VAR
	5	5.0	14	VAR	VAR
	6	5.0	6	132	792
	7	5.0	14	VAR	VAR
	8	5.0	8	VAR	VAR
	9	5.0	14	VAR	VAR
	10	5.0	8	VAR	VAR
	11	5.0	14	VAR	VAR
	12	5.0	8	VAR	VAR
	13	5.0	13	VAR	VAR
	14	6.3	9	VAR	792
	15	6.3	6	VAR	473
	16	6.3	5	VAR	2365
	17	6.3	5	VAR	2365

Resumo do aço

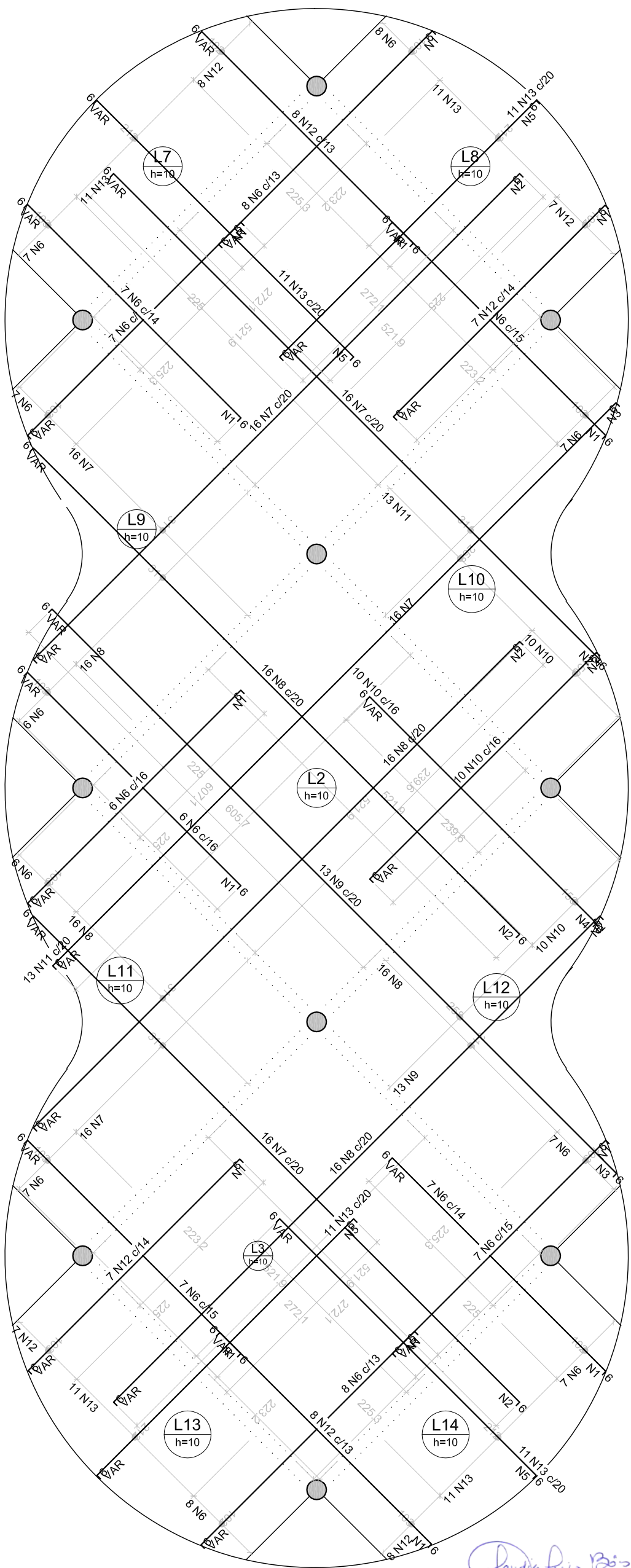
AÇO	DIAM (mm)	C:TOTAL (m)	PESO + 10% (kg)
CA50	6.3	90.4	24.3
CA60	5.0	655.3	111.1
PESO TOTAL (kg)			
CA50	24.3		
CA60	111.1		

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ESTRUTURA

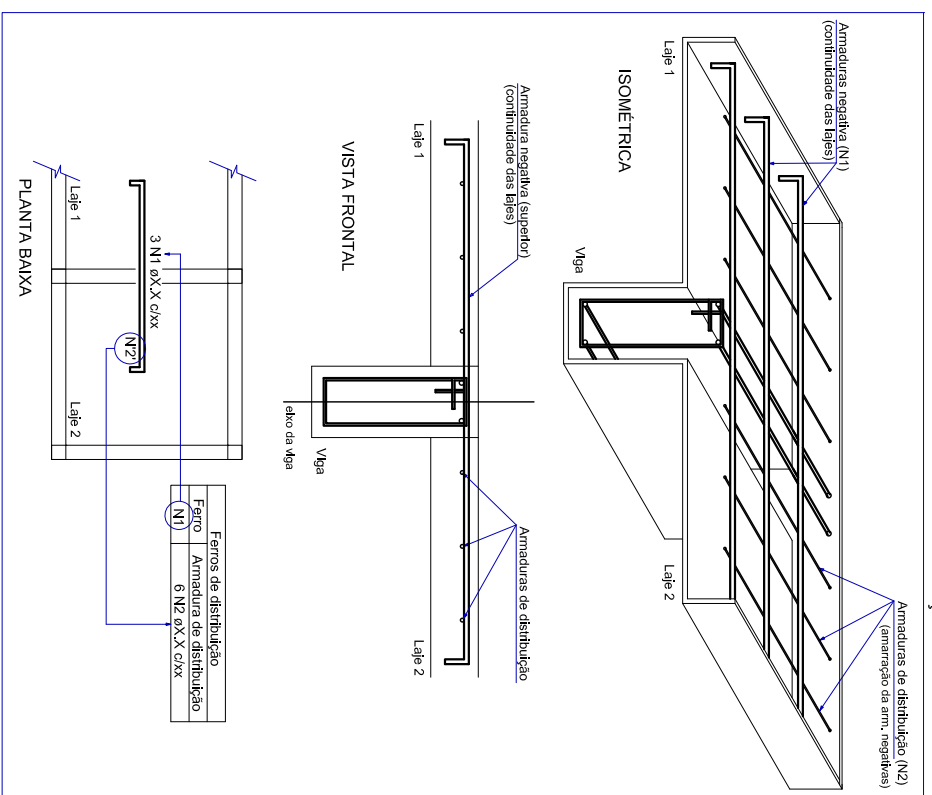
PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS	DATA	MAIO/18	ESCALA	INDICADA
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES	<h1>11-13</h1>			
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ						
CONTEÚDO	ARMADURA POSITIVA Y - MONUMENTO CENTRAL						





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DETALHE DA ARMADURA DE SUPERIOR DE CONTINUIDADE DA LAJE
 E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



Armação negativa das lajes do pavimento COBERTURA

escala 1:50

Ferro	Armadura de distribuição
N6	20 N1 Ø6.3 c/20 C=VAR
N7	44 N2 Ø6.3 c/20 C=VAR
N7	44 N2 Ø6.3 c/20 C=VAR
N7	20 N1 Ø6.3 c/20 C=VAR
N6	20 N1 Ø6.3 c/20 C=VAR
N8	44 N2 Ø6.3 c/20 C=VAR
N8	20 N1 Ø6.3 c/20 C=VAR
N6	44 N2 Ø6.3 c/20 C=VAR
N8	44 N2 Ø6.3 c/20 C=VAR
N9	52 N3 Ø6.3 c/20 C=VAR
N10	21 N4 Ø6.3 c/20 C=VAR
N11	51 N3 Ø6.3 c/20 C=VAR
N10	21 N4 Ø6.3 c/20 C=VAR
N6	20 N1 Ø6.3 c/20 C=VAR
N7	44 N2 Ø6.3 c/20 C=VAR
N12	24 N5 Ø6.3 c/20 C=VAR
N13	20 N1 Ø6.3 c/20 C=VAR
N6	44 N2 Ø6.3 c/20 C=VAR
N8	20 N1 Ø6.3 c/20 C=VAR
N6	20 N1 Ø6.3 c/20 C=VAR

Ferro	Armadura de distribuição
N6	20 N1 Ø6.3 c/20 C=VAR
N13	24 N5 Ø6.3 c/20 C=VAR
N12	20 N1 Ø6.3 c/20 C=VAR
N6	20 N1 Ø6.3 c/20 C=VAR
N13	24 N5 Ø6.3 c/20 C=VAR
N12	20 N1 Ø6.3 c/20 C=VAR

Relação do aço

ACO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CAS0	1	6.3	280	VAR	VAR
	2	6.3	264	VAR	VAR
	3	6.3	103	VAR	VAR
	4	6.3	42	VAR	VAR
	5	6.3	96	VAR	VAR
	6	8.0	70	VAR	VAR
	7	8.0	48	VAR	VAR
	8	8.0	48	VAR	VAR
	9	8.0	13	VAR	VAR
	10	8.0	20	VAR	VAR
	11	8.0	13	VAR	VAR
	12	8.0	30	VAR	VAR
	13	8.0	44	VAR	VAR

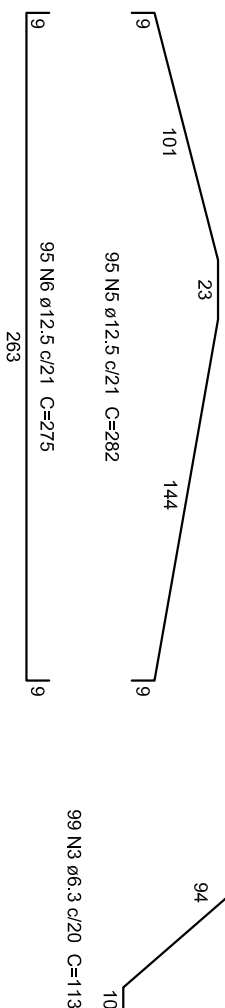
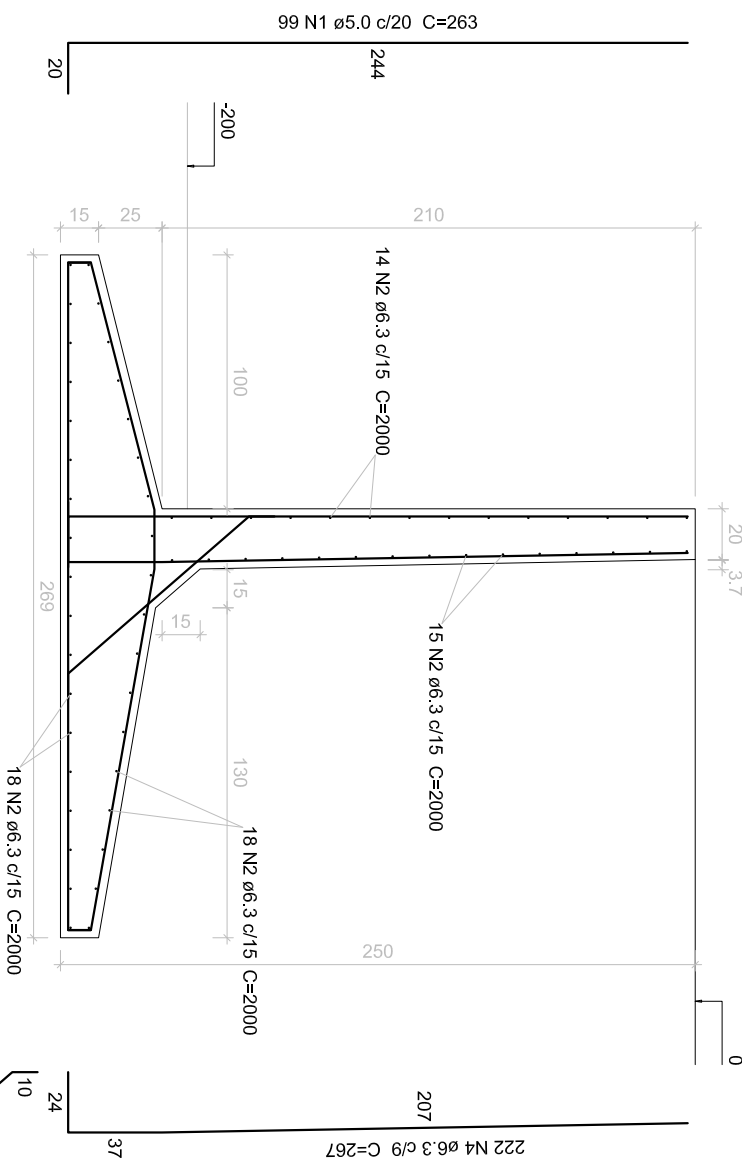
Resumo do aço

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CAS0	6.3	1658.9	446.5
	8.0	1807.8	784.6
PESO TOTAL (kg)			
CAS0		1231.2	

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS	DATA	MAIO/18	ESCALA	INDICADA
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES	<h1>12-13</h1>			
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ	CONTEÚDO					





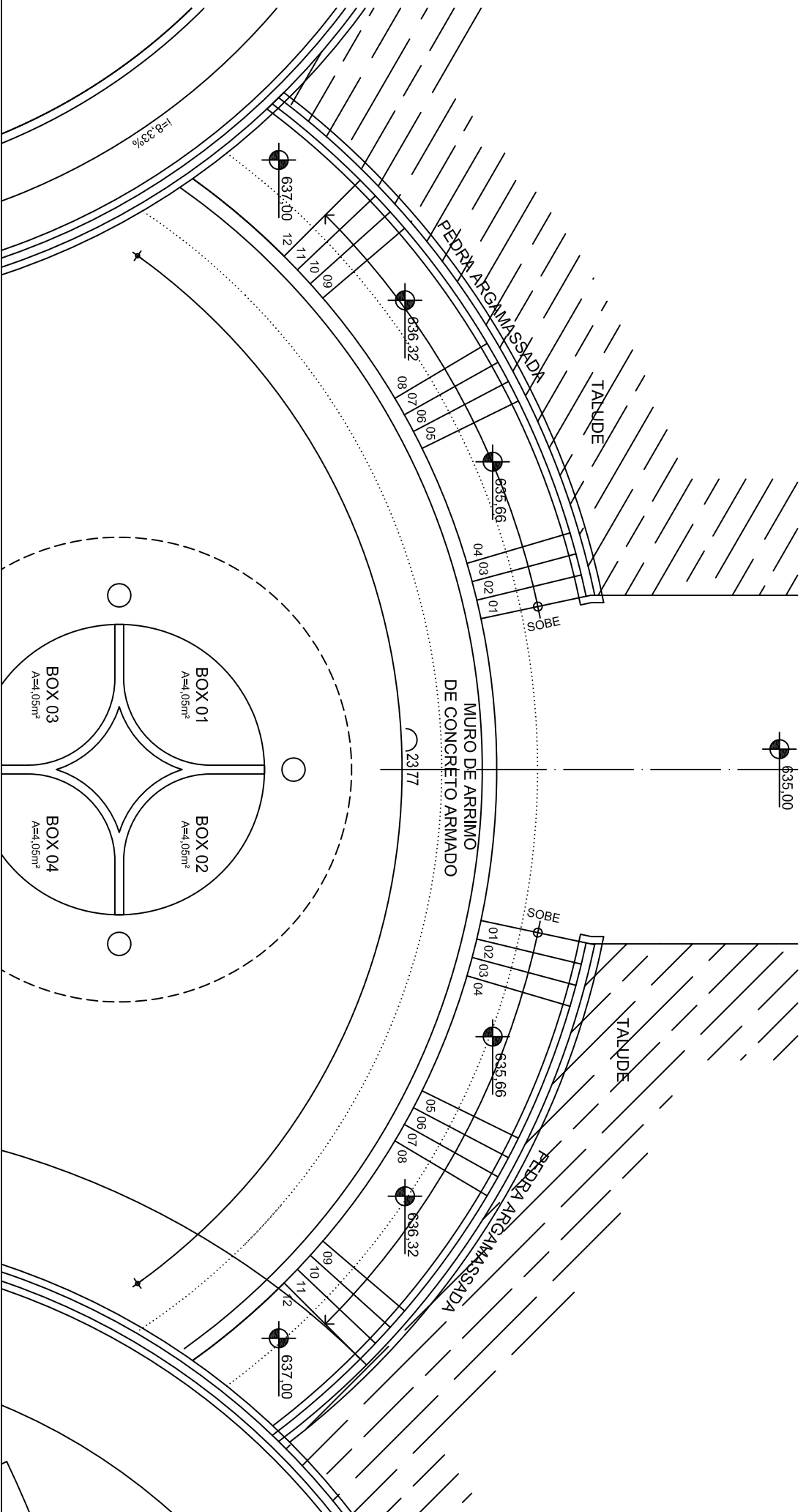
Relação do aço

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C:TOTAL (cm)
CA60	1	5,0	99	263	26037
CA50	2	6,3	65	2000	130000
CA50	3	6,3	99	113	11187
CA50	4	6,3	222	267	59274
CA50	5	12,5	95	282	26790
CA50	6	12,5	95	275	26125

Resumo do aço

AÇO	DIAM (mm)	C:TOTAL (m)	PESO + 10 % (kg)
CA50	6,3	2004,7	539,6
CA60	12,5	529,2	560,7
CA60	5,0	260,4	44,1
PESO TOTAL (kg)			1144,4
CA50	1100,3		44,1
CA60	44,1		44,1

Volume de concreto (C-25) = 24,86 m³
Área de forma = 196,47 m²



ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CLIENTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	DETALHE MURO DE ARRIMO		

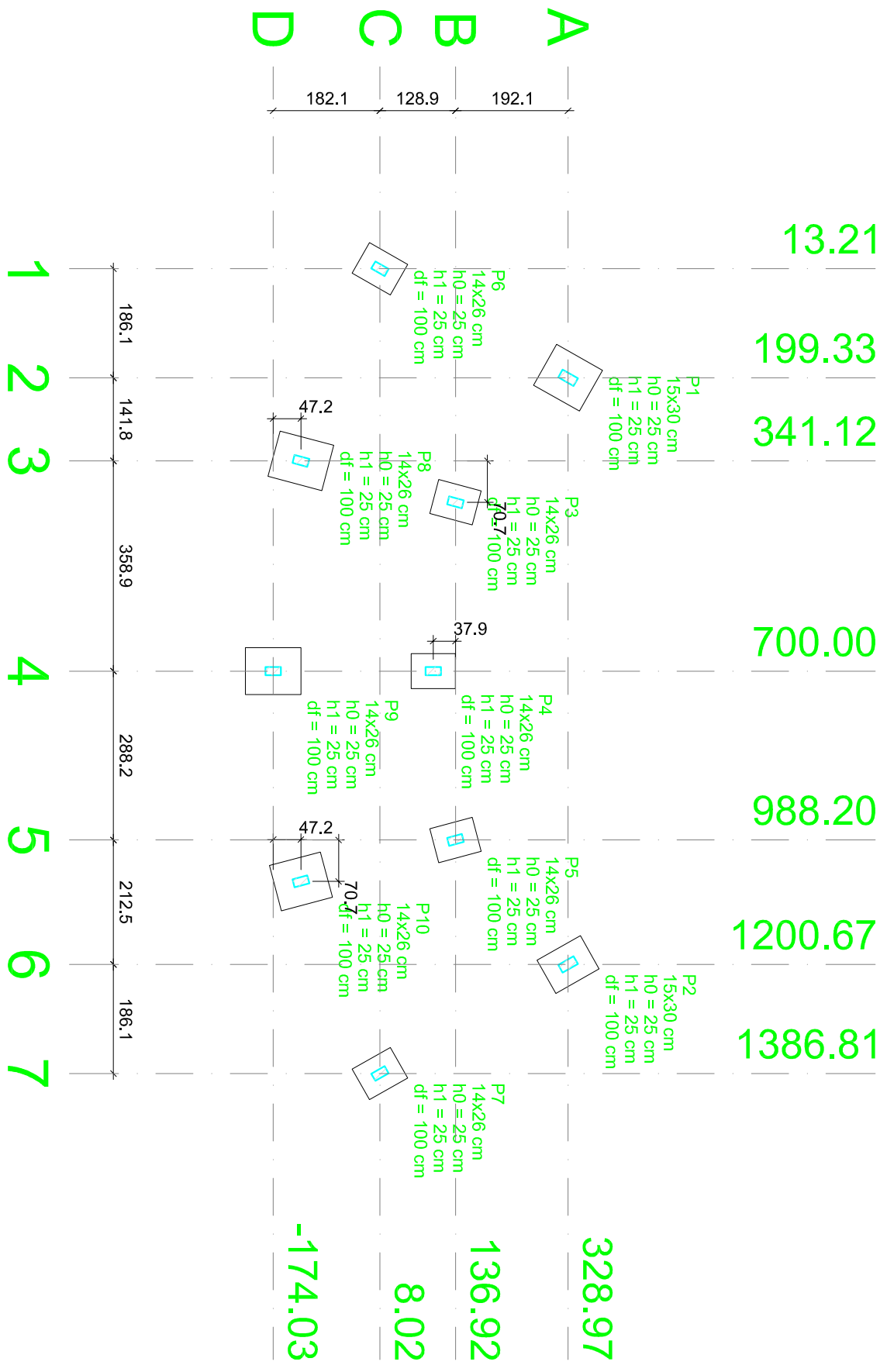
DATA	MAIO/18	ESCALA	INDICADA
13-13			

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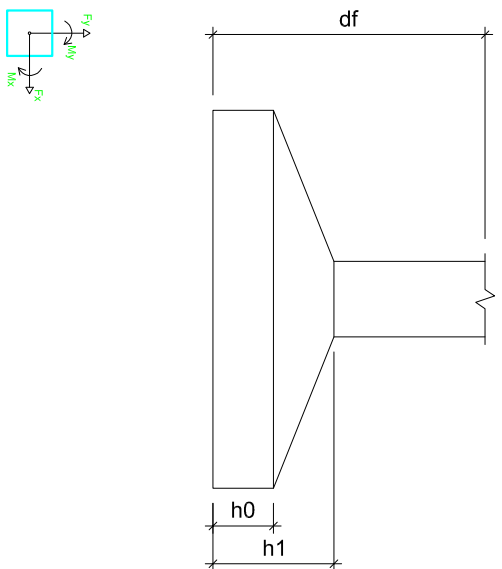


Planta de locação

escala 1:100



Pilar	Nome	Seção (cm)	Lado B (cm)	Lado H (cm)	Fundação		df (cm)
					h0 / ha (cm)	h1 / hb (cm)	
P1	P1	15x30	80	90	25	25	100
P2	P2	15x30	65	85	25	25	100
P3	P3	14x26	60	75	25	25	100
P4	P4	14x26	60	75	25	25	100
P5	P5	14x26	60	75	25	25	100
P6	P6	14x26	60	75	25	25	100
P7	P7	14x26	60	75	25	25	100
P8	P8	14x26	80	95	25	25	100
P9	P9	14x26	80	95	25	25	100
P10	P10	14x26	80	90	25	25	100



ESTRUTURA

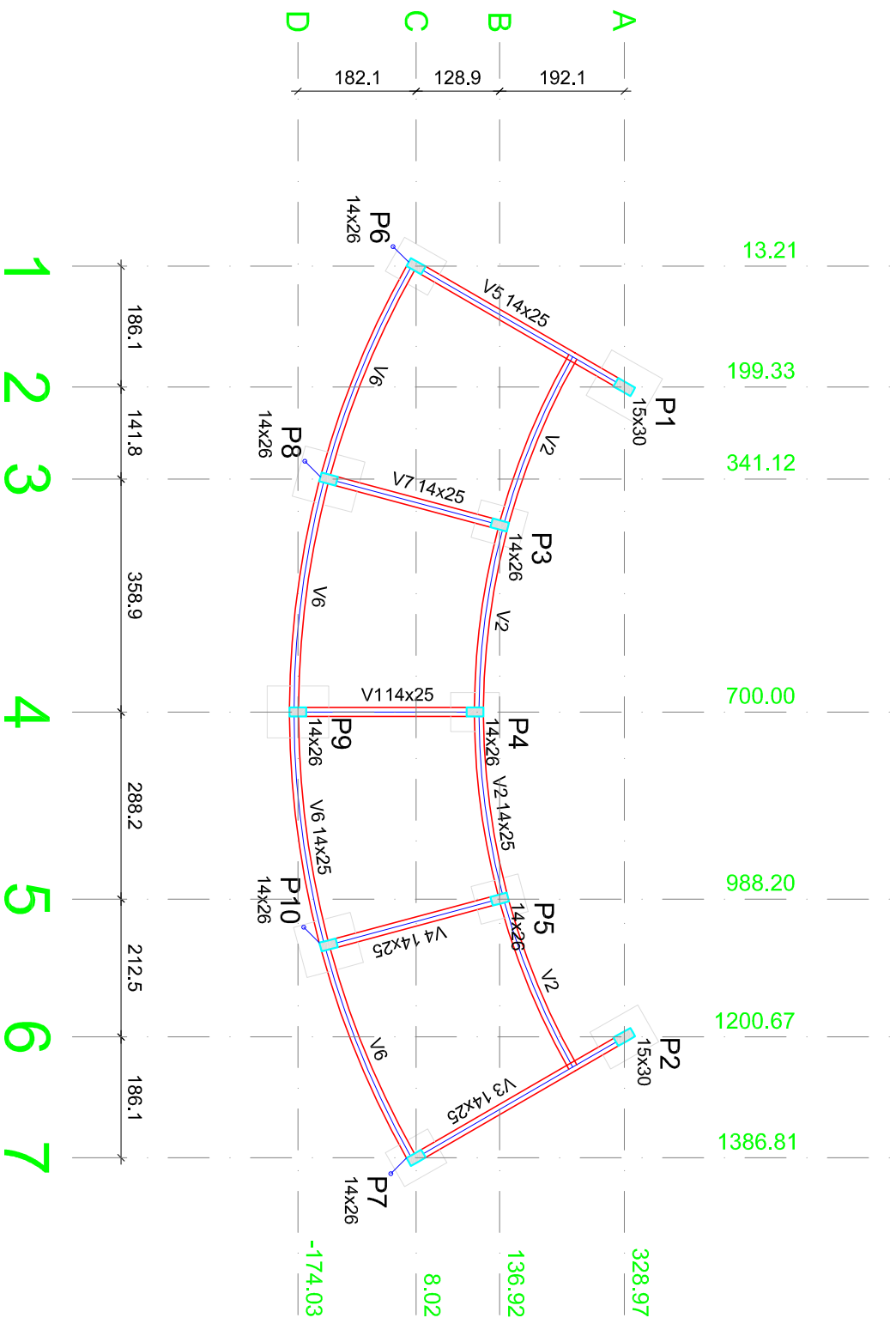
PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	PLANTA DE LOCAÇÃO - ALTAR		

DATA MAIO/18 ESCALA 1/100

01-11

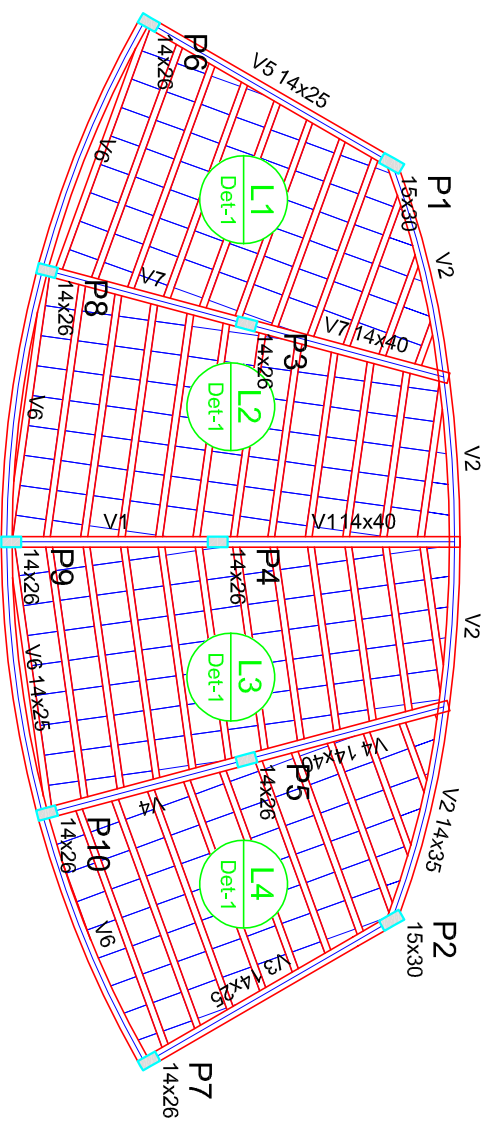


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Forma do pavimento TÉRREO

escala 1:100



Forma do pavimento COBERTURA

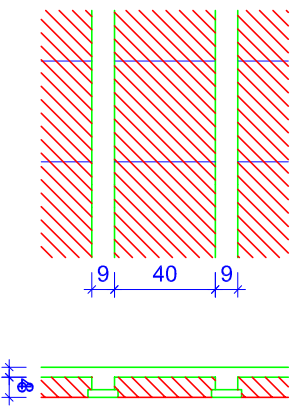
escala 1:100

Características dos materiais	
fck (kgf/cm ²)	Ecs (kgf/cm ²)
250	238000

Legenda dos Pilares	
	Pilar que morre
	Pilar que passa
	Pilar que nasce
	Pilar com mudança de seção

Detalhe	Tipo	Nome	Dimensões (cm)			Quantidade
			hb	bx	by	
1	EPS Unidirecional	B8/40/40	8	40	40	309

Detalhe 1 (esc. 1:30)



Características dos materiais	
fck (kgf/cm ²)	Ecs (kgf/cm ²)
250	238000

Legenda dos Pilares	
	Pilar que morre
	Pilar que passa
	Pilar que nasce
	Pilar com mudança de seção

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	FORMA DO TÉRREO E DA COBERTURA - ALTAR		

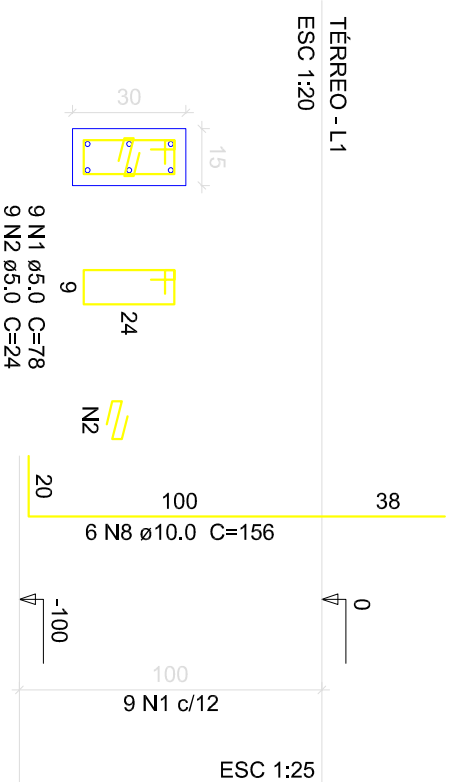
DATA MAIO/18 ESCALA 1/100

02-11

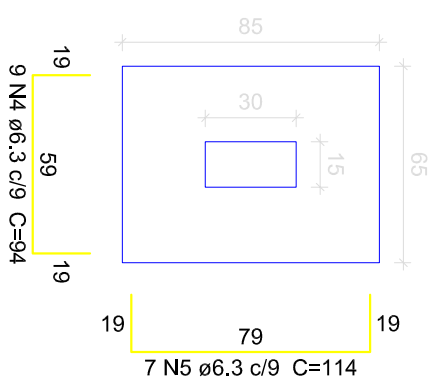


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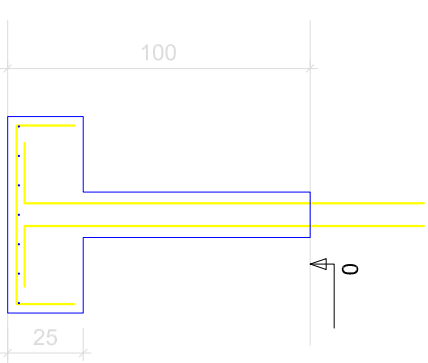
P2



S2
PLANTA
ESC 1:25



CORTE
ESC 1:25



S2
5xS6
Relação do aço

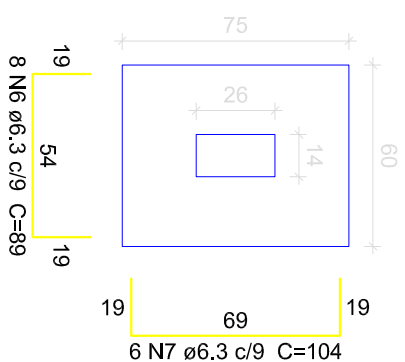
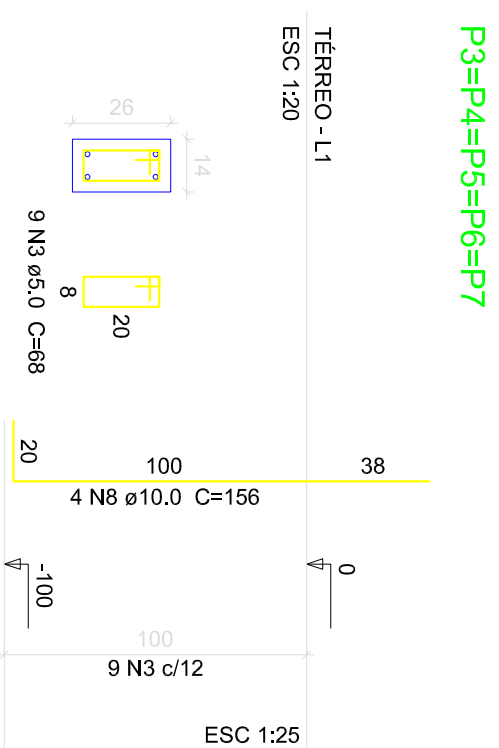
AÇO	N	DIAM (mm)	C.TOTAL (m)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	83.3	9	78	702
	2	5.0		9	24	216
	3	5.0		45	68	3060
CA50	4	6.3	40.6	9	94	846
	5	6.3		7	114	798
	6	6.3		40	89	3560
	7	6.3		30	104	3120
	8	10.0		26	156	4056

Resumo do aço

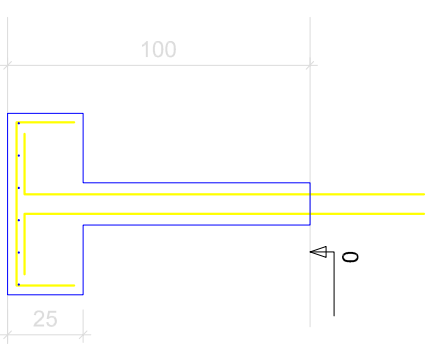
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	83.3	22.4
CA60	10.0	40.6	27.5
PESO TOTAL (kg)			6.7
CA50	49.9		
CA60	6.7		

Volume de concreto (C-25) = 0,93 m³
Área de forma = 9,03 m²

S3=S4=S5=S6=S7
PLANTA
ESC 1:25



CORTE
ESC 1:25



Solo com capacidade de suporte > 2.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600,00 kgf/m³

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	FUNDAÇÕES 01 - ALTAR		

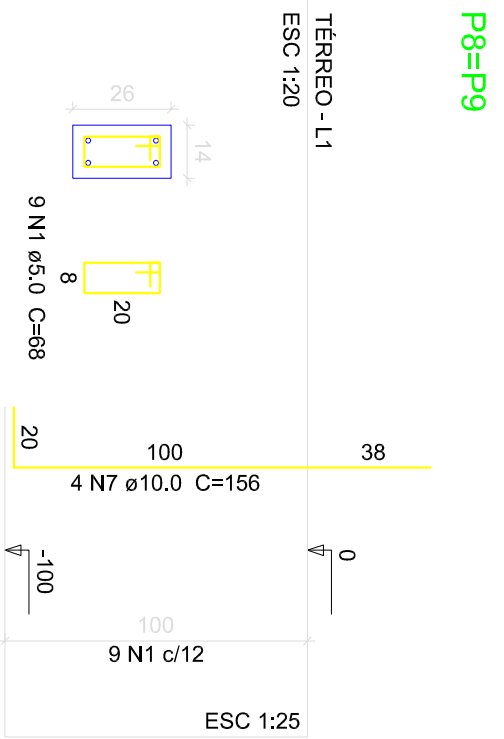
DATA MAIO/18 ESCALA INDICADA

03-11

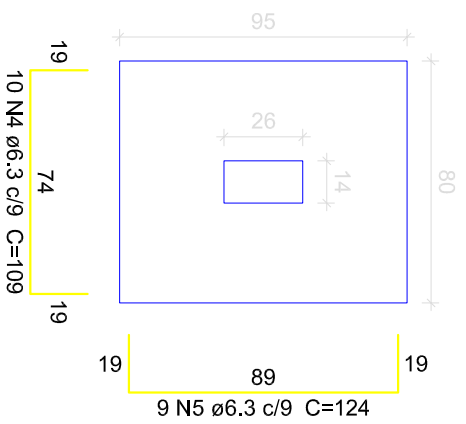


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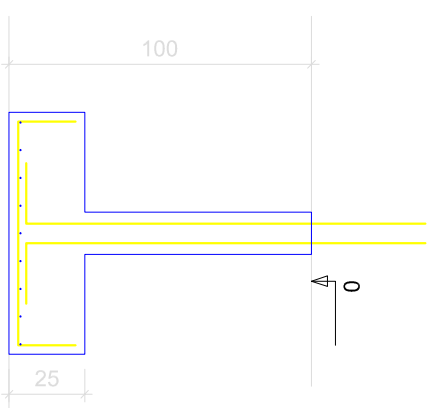
S8=S9
PLANTA
ESC 1:25



Solo com capacidade de suporte > 2.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³



CORTE
ESC 1:25



Relação do aço
2xS9 S10

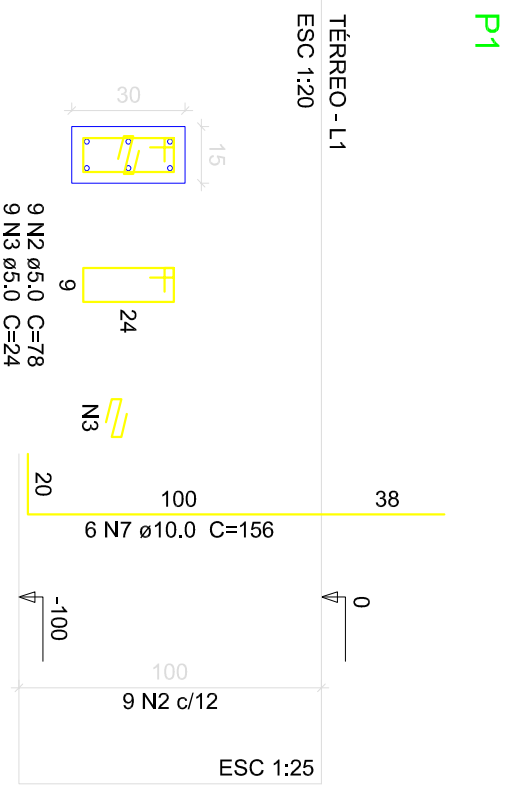
ACO	N	DIAM (mm)	C.TOTAL (m)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	5.0	27	68	1836
CA60	2	5.0	5.0	9	78	702
CA60	3	5.0	5.0	9	24	216
CA50	4	6.3	6.3	40	109	4360
CA50	5	6.3	6.3	18	124	2232
CA50	6	6.3	6.3	18	119	2142
CA50	7	10.0	10.0	18	156	2808

Resumo do aço

ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	87.4	23.5
CA50	10.0	28.1	19
CA60	5.0	27.6	4.7
PESO TOTAL (kg)			
CA50	42.6		
CA60	4.7		

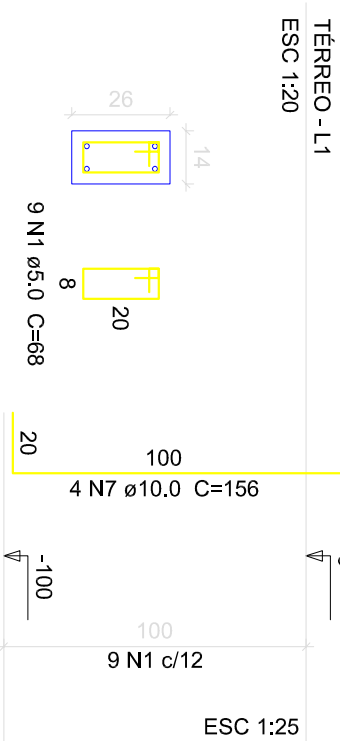
Volume de concreto (C-25) = 0.89 m³
Área de forma = 6.75 m²

S1=S10
PLANTA
ESC 1:25

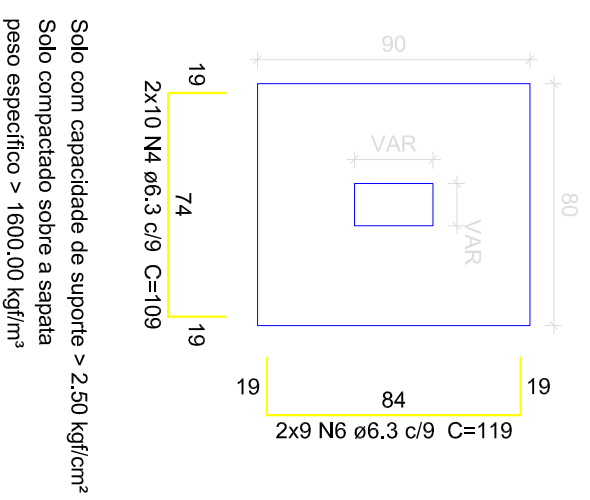


P1

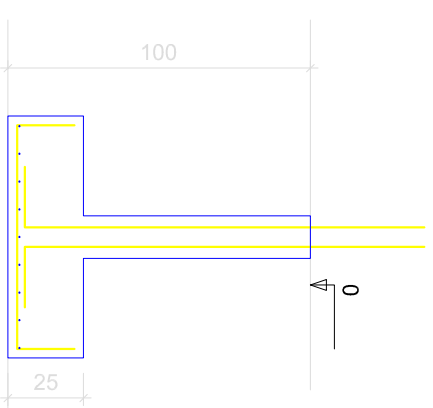
P10



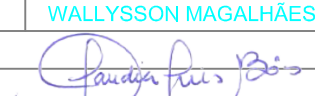
CORTE
ESC 1:25



Solo com capacidade de suporte > 2.50 kgf/cm²
Solo compactado sobre a sapata
peso específico > 1600.00 kgf/m³

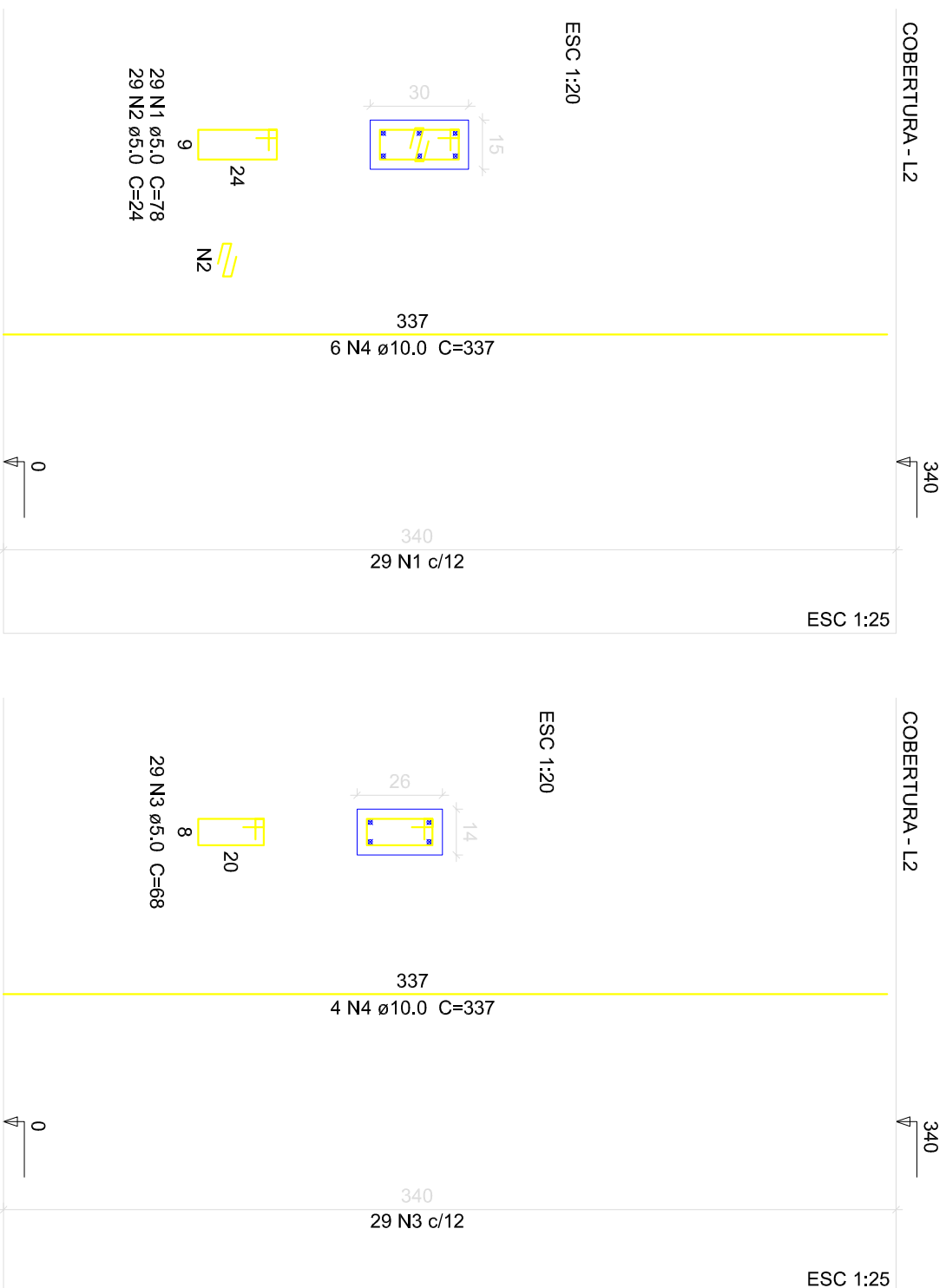


ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS	DATA	MAIO/18	ESCALA	INDICADA
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES	 Cláudia Villas Boas Engª Civil CREA-CE 14365-D			
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ						
CONTEÚDO	FUNDAÇÕES 02 - ALTAR						

P1=P2

P3=P4=P5=P6=P7=P8=P9=P10



Relação do aço

2xP1	8xP3				
AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	58	78	4524
	2	5.0	58	24	1392
	3	5.0	232	68	15776
CA50	4	10.0	44	337	14828

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	148.3	104.6
CA60	5.0	215.9	36.5
PESO TOTAL (kg)			
CA50	104.6		
CA60	36.5		

Volume de concreto (C-25) = 1.3 m³
 Área de forma = 25.83 m²

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	ARMAÇÃO DOS PILARES - ALTAR		

DATA MAIO/18 ESCALA INDICADA

05-11



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Relação do aço

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	213	70	14910
CA60	2	8,0	12	294	3528
CA60	3	8,0	2	1153	2306
CA60	4	8,0	2	1181	2362
CA60	5	8,0	8	394	3402

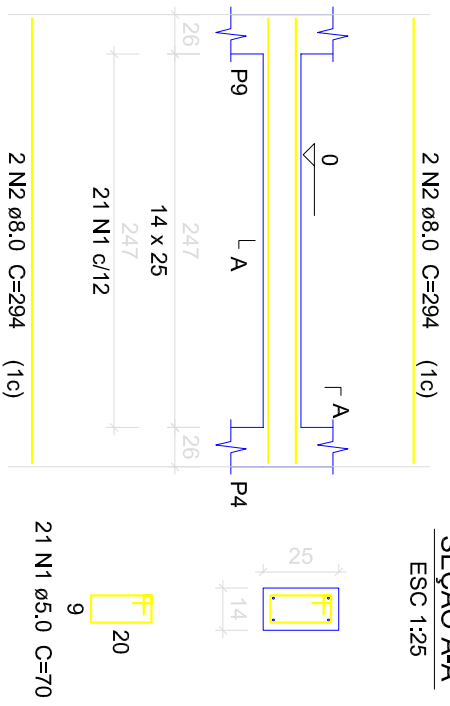
Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA60	8,0	113,5	49,3
CA60	5,0	149,1	25,3
PESO TOTAL (kg)			
CA50			49,3
CA60			25,3

Volume de concreto (C-25) = 1 m³
Área de forma = 18,26 m²

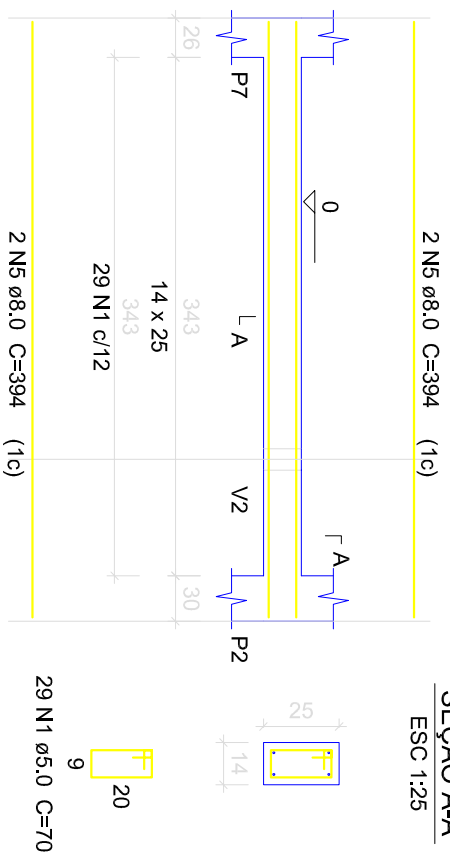
V1

ESC 1:50



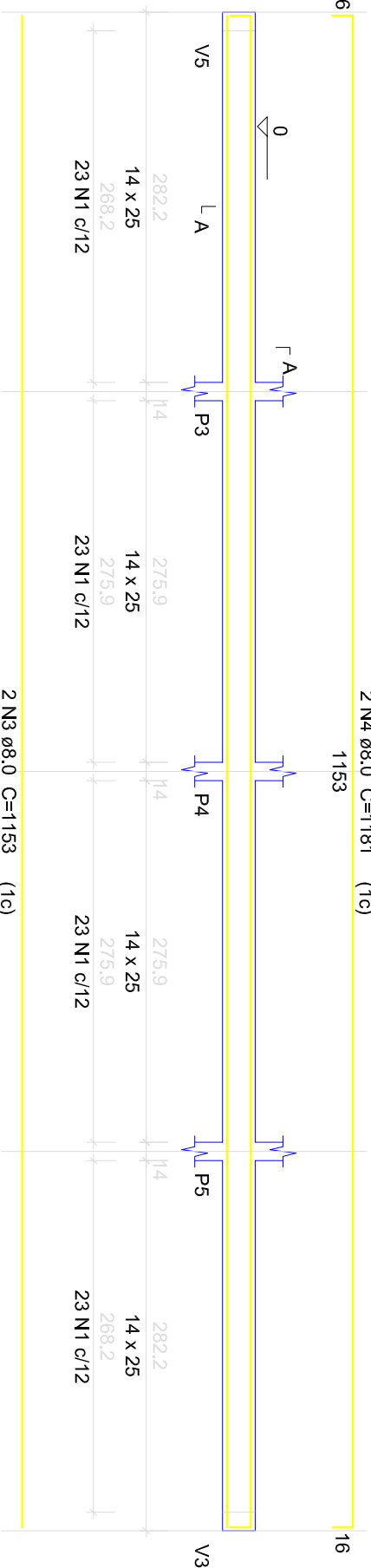
V3

ESC 1:50



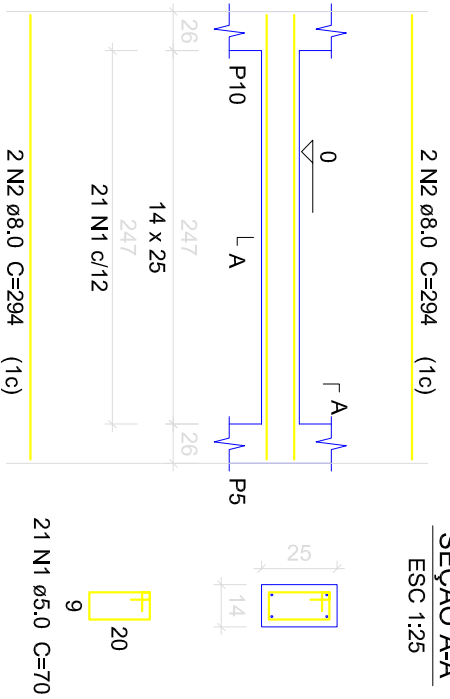
V2

ESC 1:50



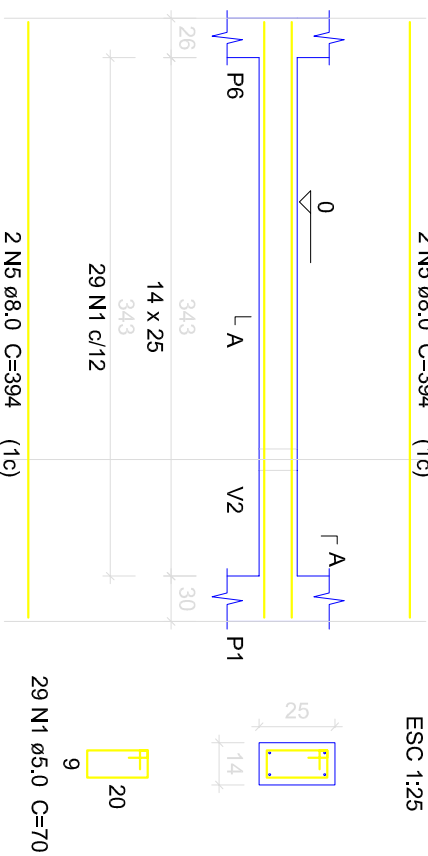
V4

ESC 1:50



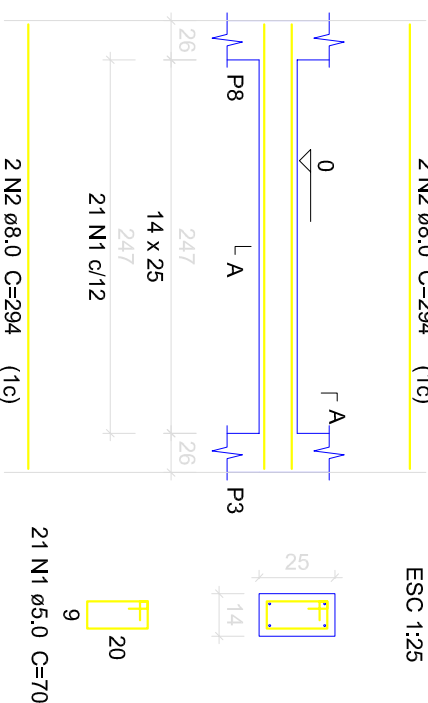
V5

ESC 1:50



V7

ESC 1:50



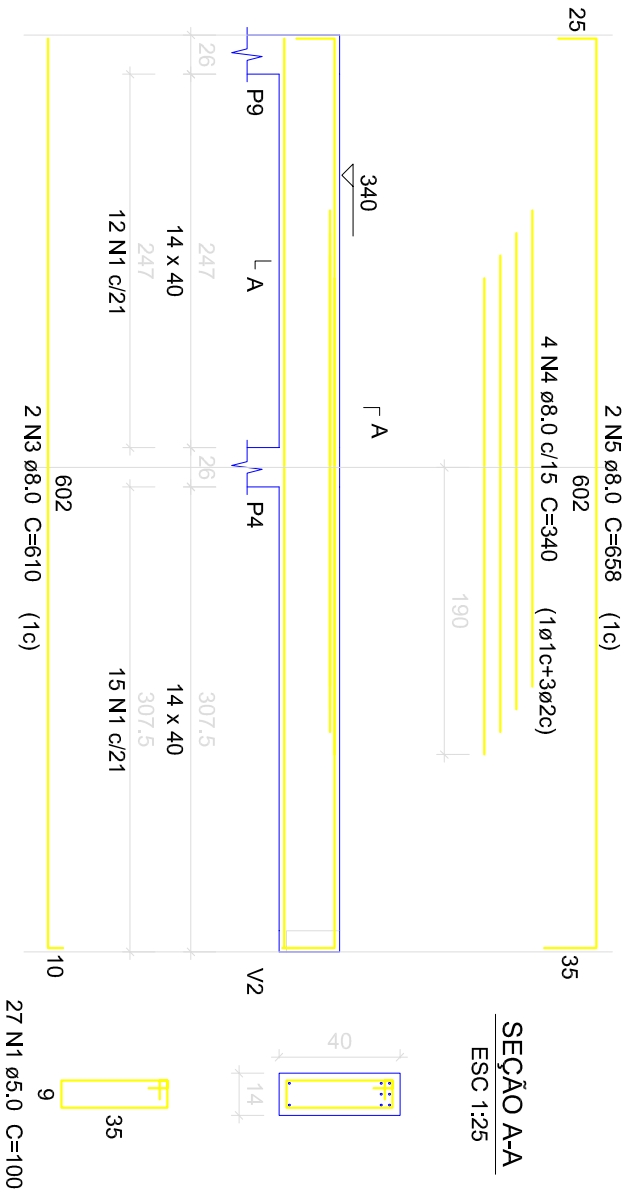
ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS	DATA	MAIO/18	ESCALA	INDICADA
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES	06-11			
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ						
CONTEÚDO	ARMAÇÃO DAS VIGAS 01 - ALTAR						

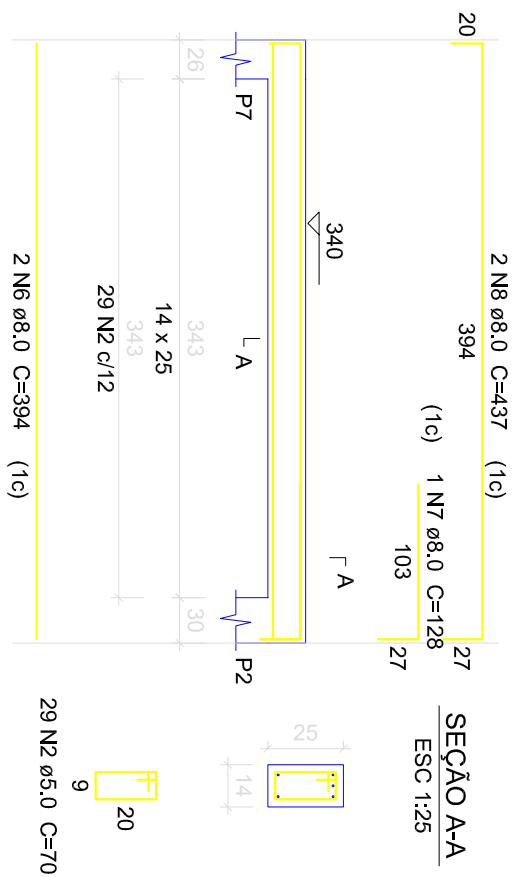


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V1
ESC 1:50



V3
ESC 1:50



Relação do aço

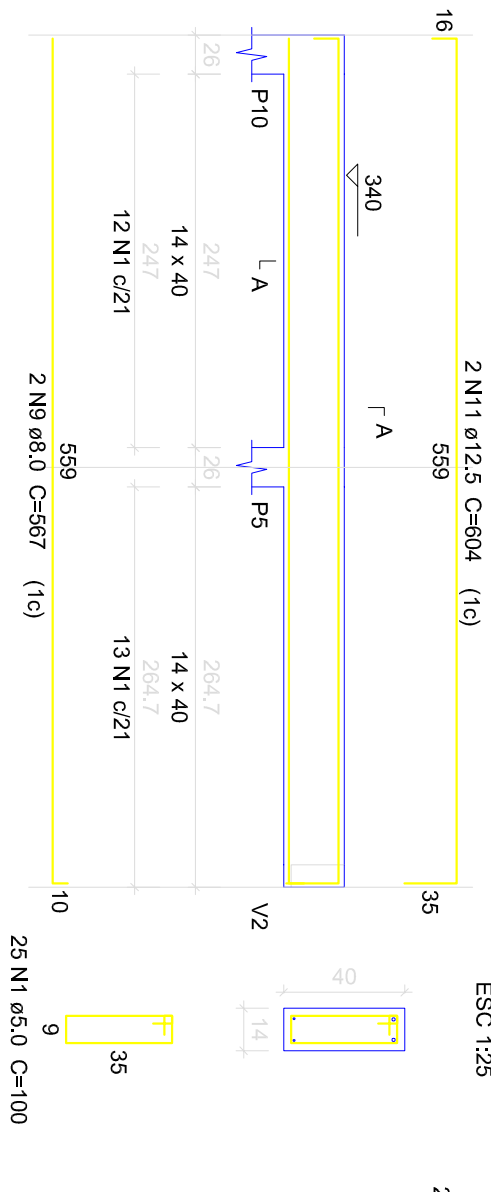
AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	77	100	7700
CA60	2	5,0	58	70	4060
CA50	3	8,0	2	610	1220
CA50	4	8,0	4	340	1260
CA50	5	8,0	2	658	1316
CA50	6	8,0	4	394	1576
CA50	7	8,0	1	128	128
CA50	8	8,0	4	437	1748
CA50	9	8,0	4	567	2268
CA60	10	8,0	1	138	138
CA60	11	12,5	4	604	2416

Resumo do aço

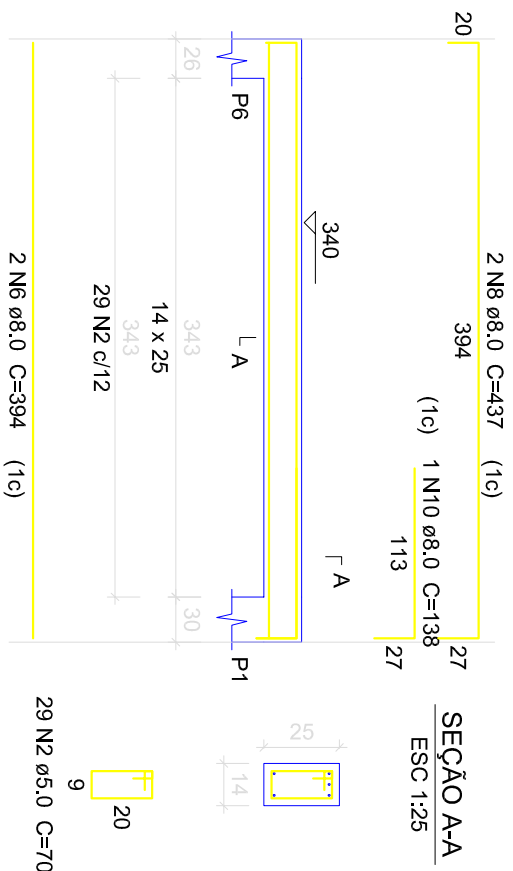
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8,0	96,6	41,9
CA60	12,5	24,2	25,6
CA60	5,0	117,6	19,9
PESO TOTAL (kg)			
CA50	67,5		
CA60	19,9		

Volume de concreto (C-25) = 1,25 m³
Area de forma = 21,41 m²

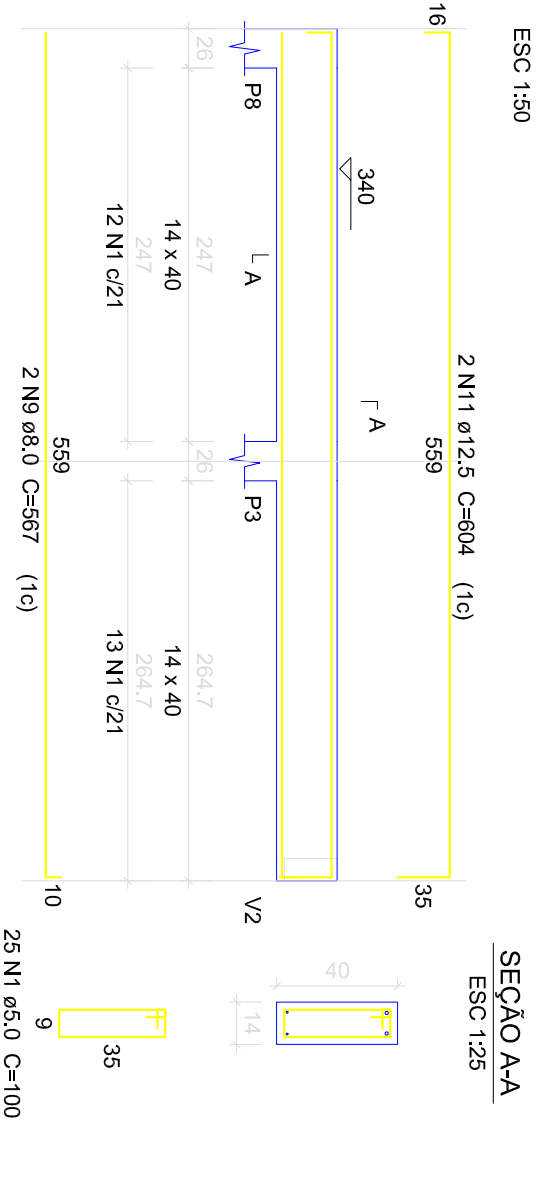
V4
ESC 1:50



V5
ESC 1:50



V7
ESC 1:50

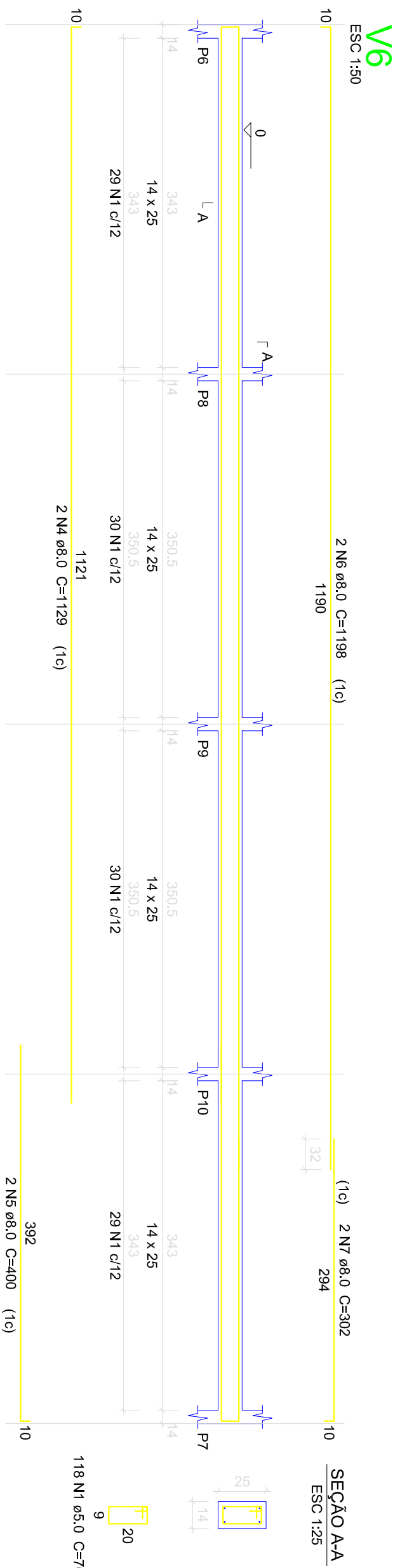


ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS	DATA	MAIO/18	ESCALA	INDICADA
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES	<div style="font-size: 2em; font-weight: bold;">07-11</div>			
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ						
CONTEÚDO	ARMAÇÃO DAS VIGAS 02 - ALTAR						



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COBERTURA: V2
 TERREIRO: V6

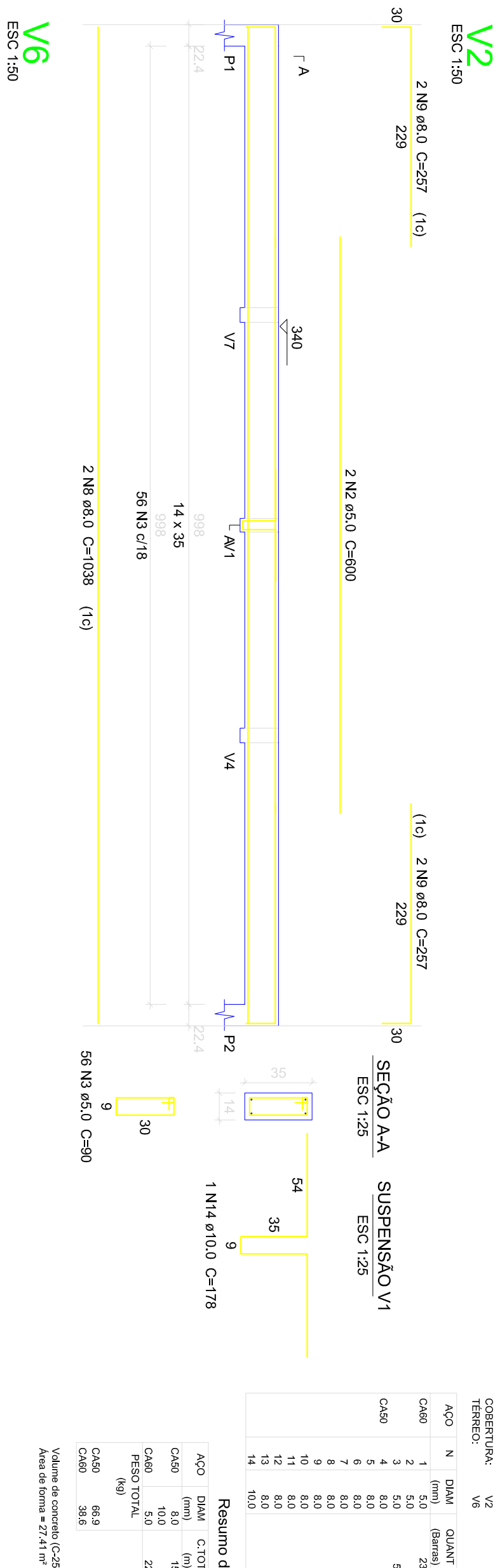
Relação do aço

ACO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	236	70	16520
	2	5,0	2	600	1200
	3	5,0	56	90	5040
	4	8,0	2	1129	2258
	5	8,0	2	400	800
	6	8,0	2	1198	2396
	7	8,0	2	302	604
	8	8,0	2	1038	2076
	9	8,0	4	257	1028
	10	8,0	2	302	604
	11	8,0	2	1102	2204
	12	8,0	2	373	746
	13	8,0	2	1198	2396
	14	10,0	1	314	628
				178	178

Resumo do aço

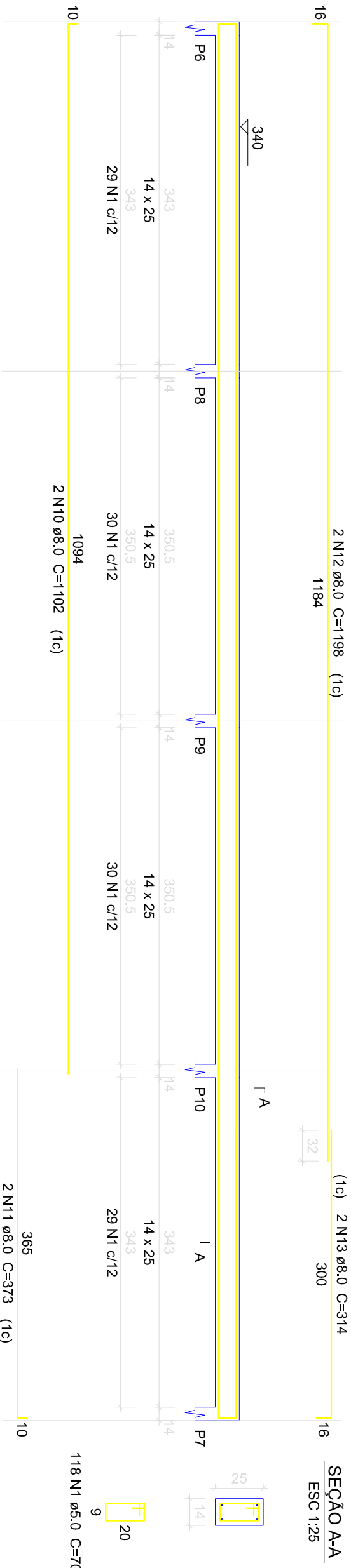
ACO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8,0	151,4	65,7
CA60	10,0	1,8	1,2
CA60	5,0	227,6	38,6
PESO TOTAL (kg)			
CA50	66,9		
CA60	38,6		

Volume de concreto (C-25) = 1,53 m³
 Area de forma = 27,41 m²



V6
 ESC 1:50

SEÇÃO A-A
 ESC 1:25



V2
 ESC 1:50

SEÇÃO A-A
 ESC 1:25

ESTRUTURA

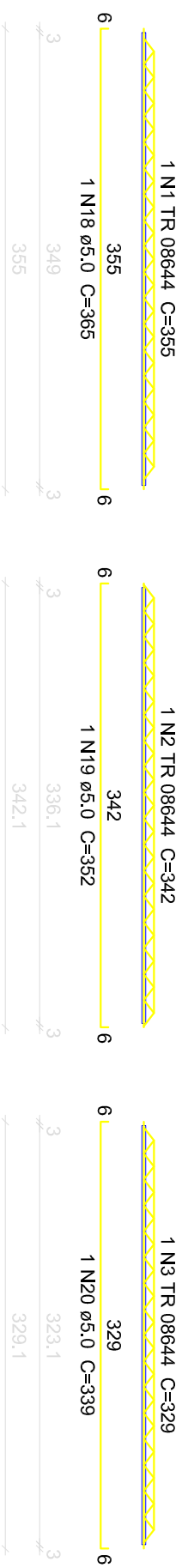
PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	ARMAÇÃO DAS VIGAS 03 - ALTAR		

DATA MAIO/18 ESCALA INDICADA
08-11

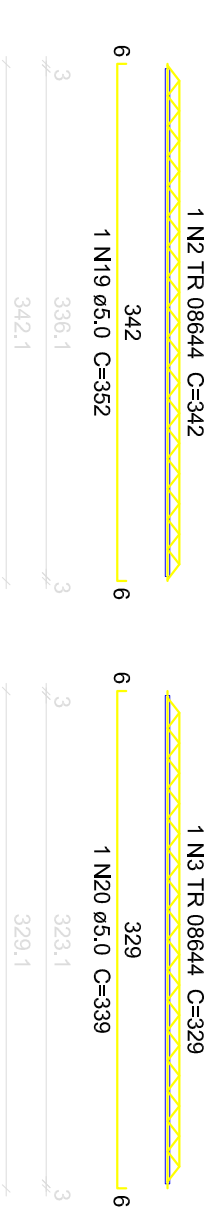
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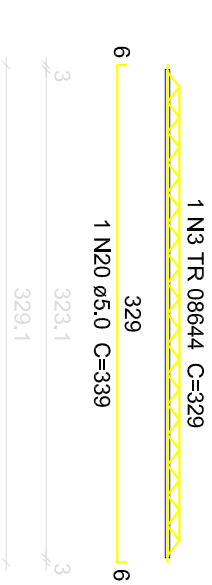
VT1a (1 unidades)
(L1)
ESC 1:50



VT1b (1 unidades)
(L1)
ESC 1:50



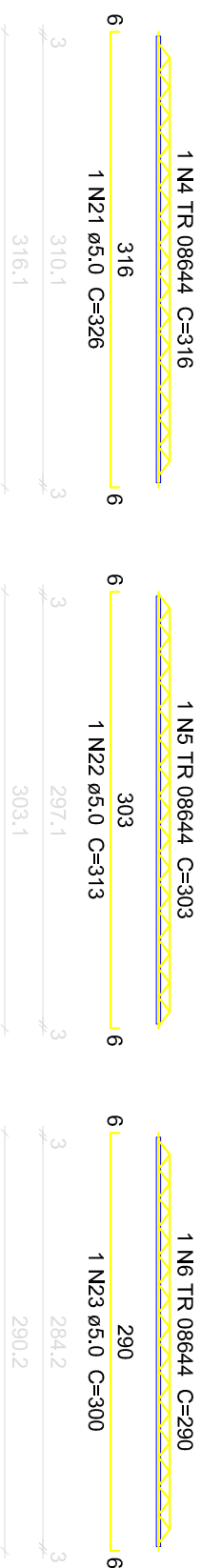
VT1c (1 unidades)
(L1)
ESC 1:50



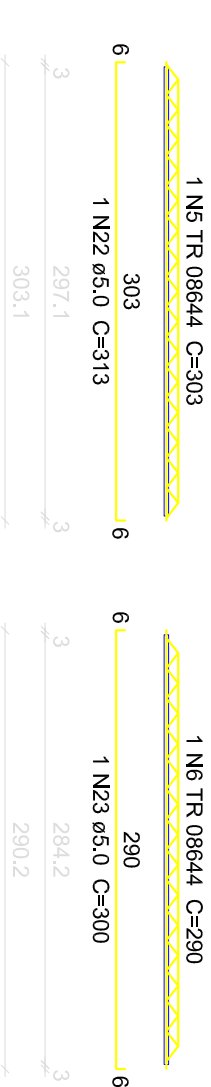
Relação do aço

VT1a	VT1b	VT1c
VT1d	VT1e	VT1f
VT1g	VT1h	VT1i
VT1j	VT1k	VT2a
VT2b	VT2c	VT2d
VT2e	VT2f	

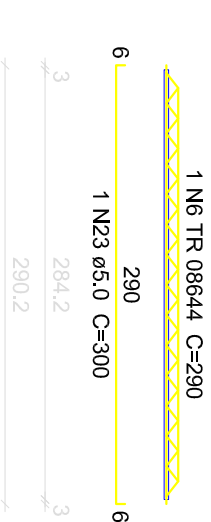
VT1d (1 unidades)
(L1)
ESC 1:50



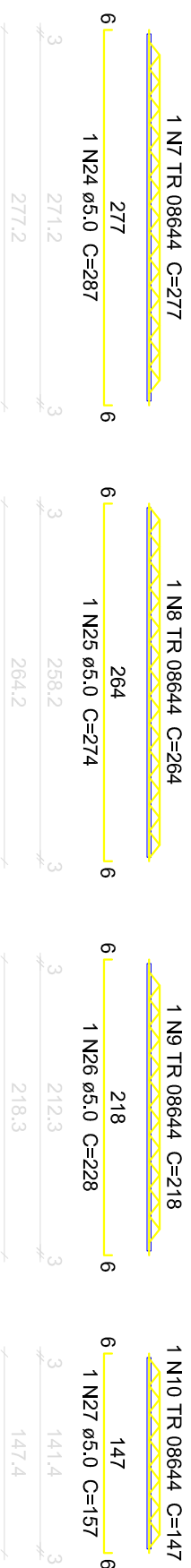
VT1e (1 unidades)
(L1)
ESC 1:50



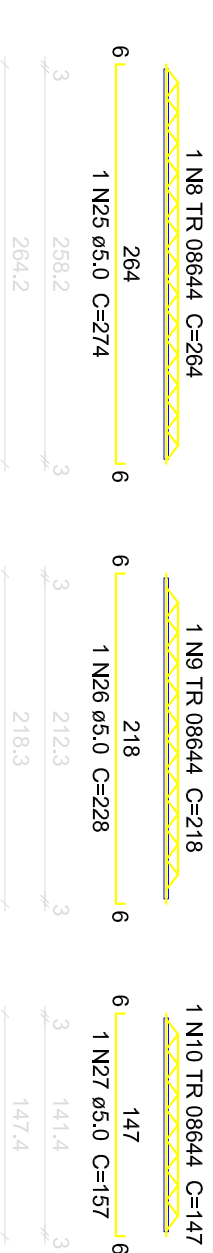
VT1f (1 unidades)
(L1)
ESC 1:50



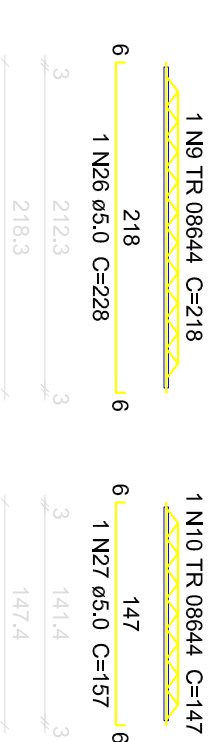
VT1g (1 unidades)
(L1)
ESC 1:50



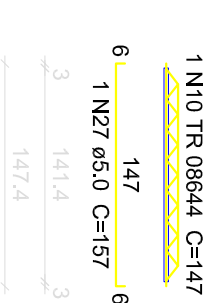
VT1h (1 unidades)
(L1)
ESC 1:50



VT1i (1 unidades)
(L1)
ESC 1:50



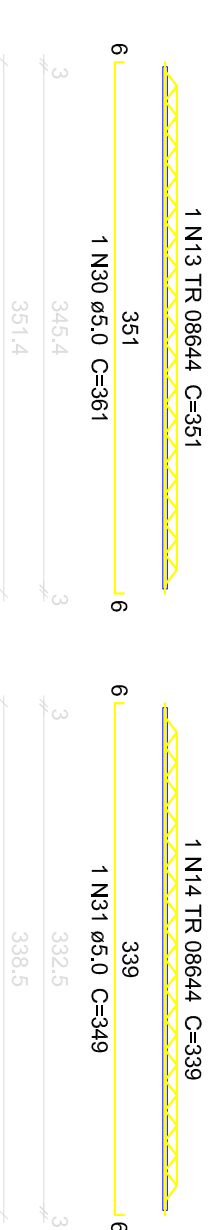
VT1j (1 unidades)
(L1)
ESC 1:50



VT2a (1 unidades)
(L2)
ESC 1:50



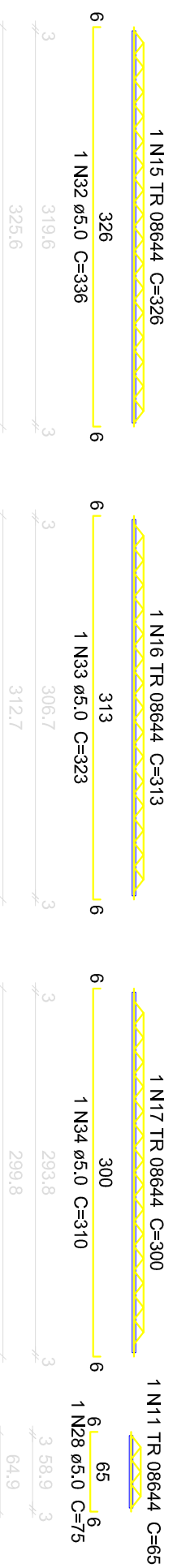
VT2b (1 unidades)
(L2)
ESC 1:50



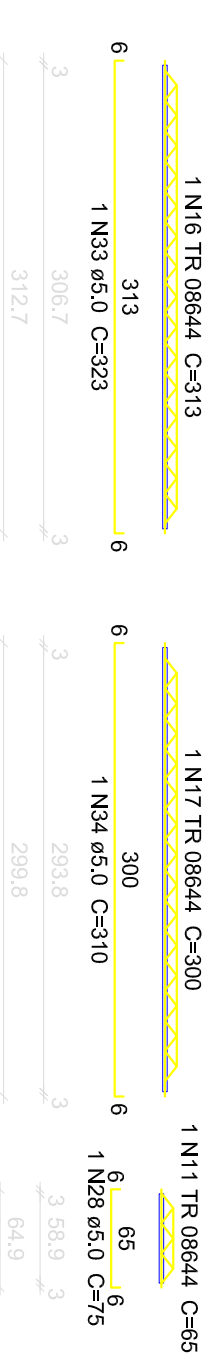
VT2c (1 unidades)
(L2)
ESC 1:50



VT2d (1 unidades)
(L2)
ESC 1:50



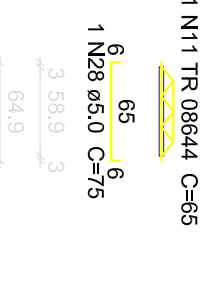
VT2e (1 unidades)
(L2)
ESC 1:50



VT2f (1 unidades)
(L2)
ESC 1:50



VT1k (1 unidades)
(L1)
ESC 1:50



Resumo do aço

AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C.TOTAL (cm)
CA60	1	TR 08644	1	355	355
	2	TR 08644	1	342	342
	3	TR 08644	1	329	329
	4	TR 08644	1	316	316
	5	TR 08644	1	303	303
	6	TR 08644	1	290	290
	7	TR 08644	1	277	277
	8	TR 08644	1	264	264
	9	TR 08644	1	248	248
	10	TR 08644	1	147	147
	11	TR 08644	1	65	65
	12	TR 08644	1	364	364
	13	TR 08644	1	351	351
	14	TR 08644	1	339	339
	15	TR 08644	1	326	326
	16	TR 08644	1	313	313
	17	TR 08644	1	300	300
	18		1	365	365
	19		1	352	352
	20		1	339	339
	21		1	326	326
	22		1	313	313
	23		1	300	300
	24		1	287	287
	25		1	274	274
	26		1	228	228
	27		1	157	157
	28		1	75	75
	29		1	374	374
	30		1	361	361
	31		1	349	349
	32		1	336	336
	33		1	323	323
	34		1	310	310

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10 % (kg)
CA60	TR 08644	49	39.6
	5.0	50.7	8.6
PESO TOTAL (kg)			
CA60		48.2	

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ		
CONTEÚDO	ARMAÇÃO DAS VIGOTAS DAS LAJES 01 - ALTAR		

DATA	MAIO/18	ESCALA	INDICADA

09-11



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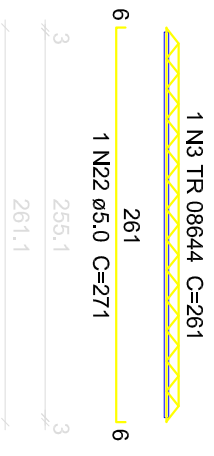
VT2g (1 unidades)
(L2)
ESC 1:50



VT2h (1 unidades)
(L2)
ESC 1:50



VT2i (1 unidades)
(L2)
ESC 1:50



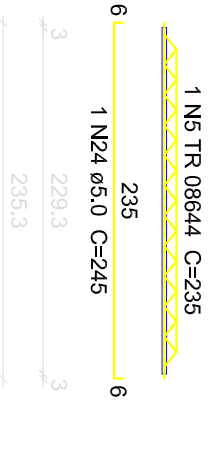
VT2j (1 unidades)
(L2)
ESC 1:50



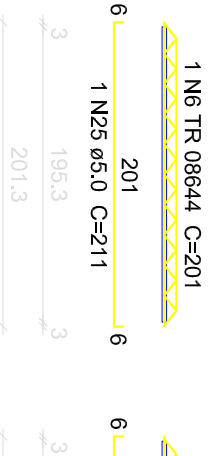
Relação do aço

VT2g	VT2h	VT2i
VT2j	VT2k	VT2l
VT3a	VT3b	VT3c
VT3d	VT3e	VT3f
VT3g	VT3h	VT3i
VT3j	VT3k	VT3l
VT4a		VT3i

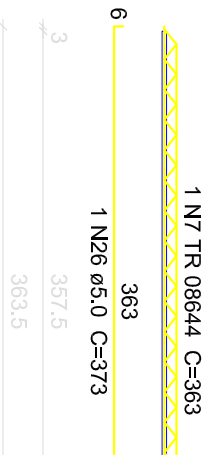
VT2k (1 unidades)
(L2)
ESC 1:50



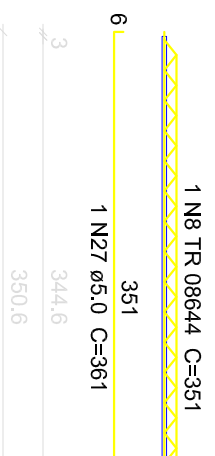
VT2l (1 unidades)
(L2)
ESC 1:50



VT3a (1 unidades)
(L3)
ESC 1:50



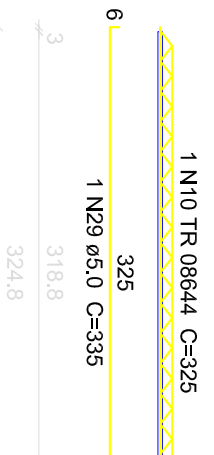
VT3b (1 unidades)
(L3)
ESC 1:50



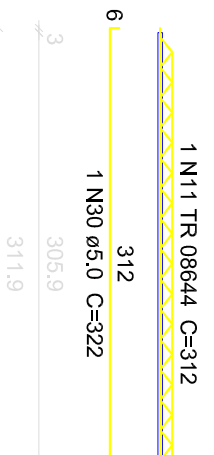
VT3c (1 unidades)
(L3)
ESC 1:50



VT3d (1 unidades)
(L3)
ESC 1:50



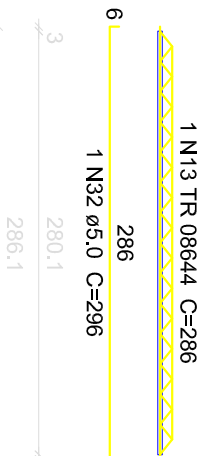
VT3e (1 unidades)
(L3)
ESC 1:50



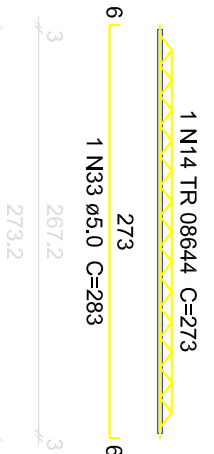
VT3f (1 unidades)
(L3)
ESC 1:50



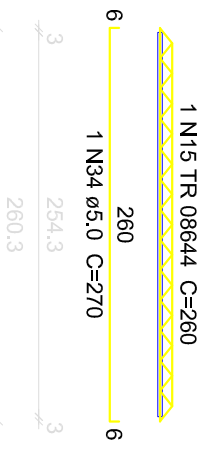
VT3g (1 unidades)
(L3)
ESC 1:50



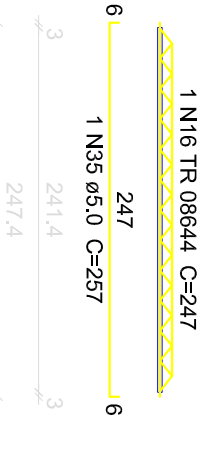
VT3h (1 unidades)
(L3)
ESC 1:50



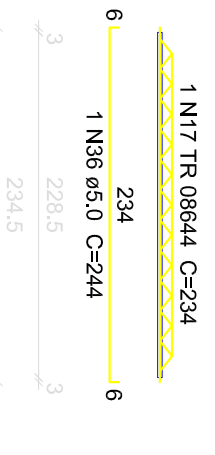
VT3i (1 unidades)
(L3)
ESC 1:50



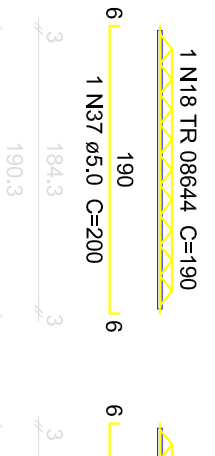
VT3j (1 unidades)
(L3)
ESC 1:50



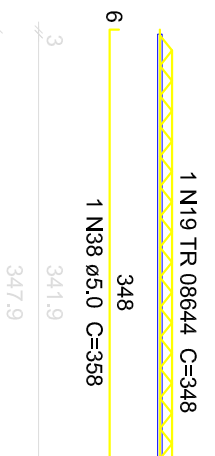
VT3k (1 unidades)
(L3)
ESC 1:50



VT3l (1 unidades)
(L3)
ESC 1:50



VT4a (1 unidades)
(L4)
ESC 1:50



AÇO	N	DIAM (mm)	QUANT (Barras)	UNIT (cm)	C-TOTAL (cm)
CA60	1	TR 08644	1	287	287
	2	TR 08644	1	274	274
	3	TR 08644	1	261	261
	4	TR 08644	1	248	248
	5	TR 08644	1	235	235
	6	TR 08644	1	201	201
	7	TR 08644	1	363	363
	8	TR 08644	1	351	351
	9	TR 08644	1	338	338
	10	TR 08644	1	325	325
	11	TR 08644	1	312	312
	12	TR 08644	1	299	299
	13	TR 08644	1	286	286
	14	TR 08644	1	273	273
	15	TR 08644	1	260	260
	16	TR 08644	1	247	247
	17	TR 08644	1	234	234
	18	TR 08644	1	190	190
	19	TR 08644	1	348	348
	20	TR 08644	1	297	297
	21	5.0	1	284	284
	22	5.0	1	271	271
	23	5.0	1	258	258
	24	5.0	1	245	245
	25	5.0	1	211	211
	26	5.0	1	373	373
	27	5.0	1	361	361
	28	5.0	1	348	348
	29	5.0	1	335	335
	30	5.0	1	322	322
	31	5.0	1	309	309
	32	5.0	1	296	296
	33	5.0	1	283	283
	34	5.0	1	270	270
	35	5.0	1	257	257
	36	5.0	1	244	244
	37	5.0	1	200	200
	38	5.0	1	358	358

Resumo do aço

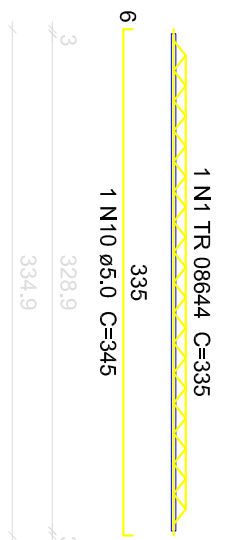
AÇO	DIAM (mm)	C-TOTAL (m)	PESO + 10% (kg)
CA60	TR 08644	53.4	43.1
CA60	5.0	55.3	9.4
PESO TOTAL (kg)			
CA60		52.5	

ESTRUTURA

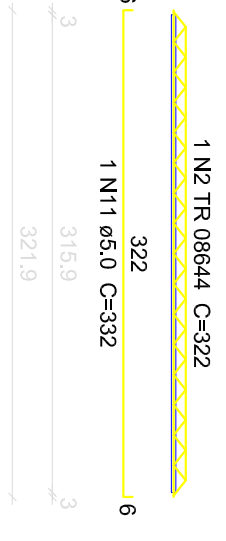
PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS	DATA	MAIO/18	ESCALA	INDICADA
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES	<p style="margin: 0 auto;">Cláudia Villas Boas Engª Civil CREA-CE 14365-D</p>			
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ						
CONTEÚDO	ARMAÇÃO DAS VIGOTAS DAS LAJES 02 - ALTAR						



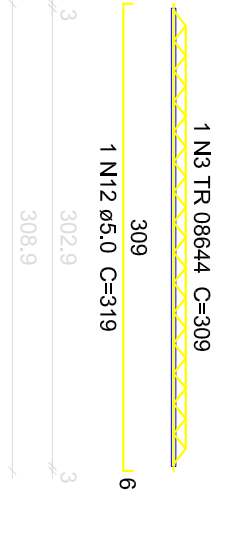
VT4b (1 unidades)
(L4)
ESC 1:50



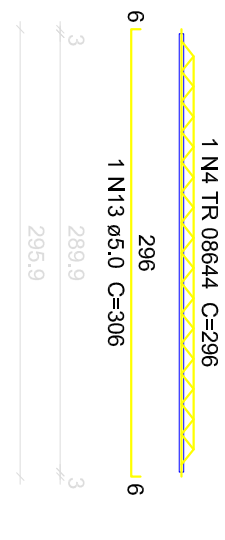
VT4c (1 unidades)
(L4)
ESC 1:50



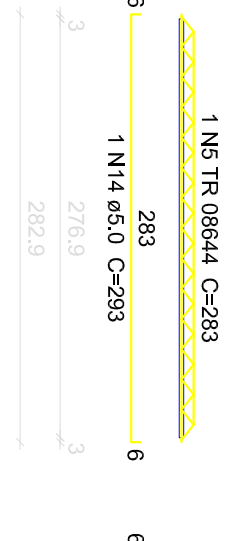
VT4d (1 unidades)
(L4)
ESC 1:50



VT4e (1 unidades)
(L4)
ESC 1:50



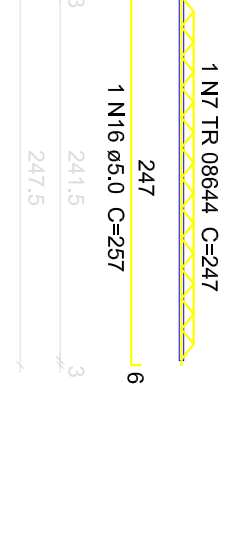
VT4f (1 unidades)
(L4)
ESC 1:50



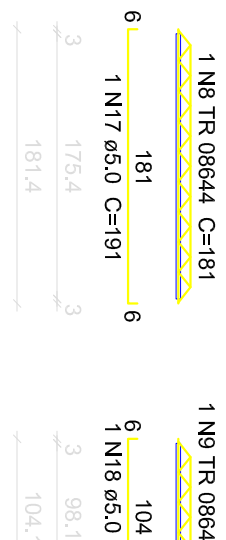
VT4g (1 unidades)
(L4)
ESC 1:50



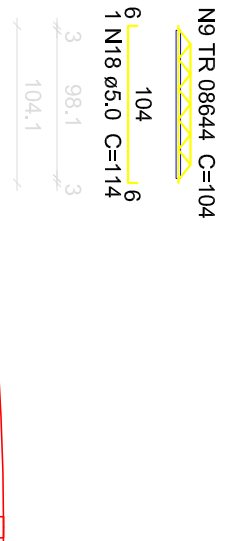
VT4h (1 unidades)
(L4)
ESC 1:50



VT4i (1 unidades)
(L4)
ESC 1:50

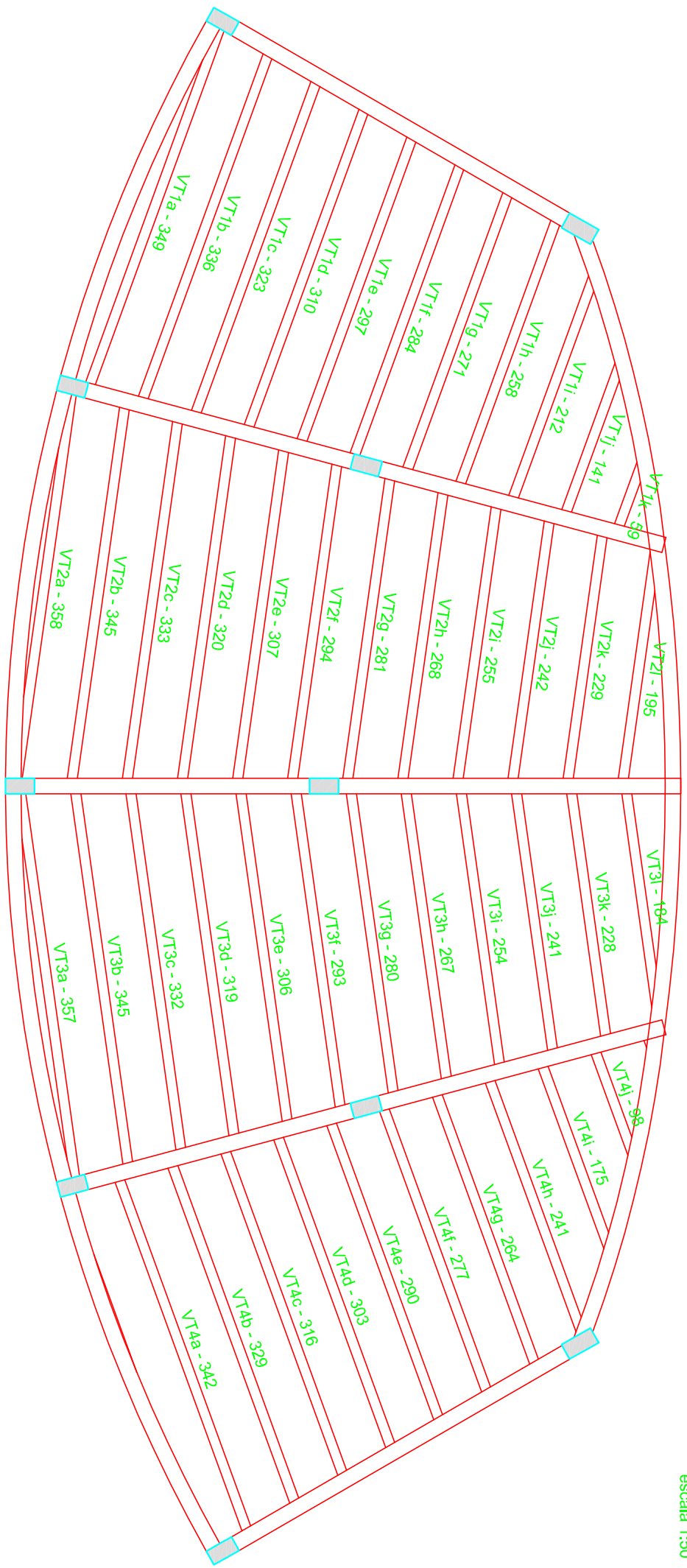


VT4j (1 unidades)
(L4)
ESC 1:50



Planta de vigotas pré-moldadas

escala 1:50



Cláudia Villas Boas
Cláudia Villas Boas
Engª Civil
CREA-CE 14365-D

Relação do aço

VT4b	VT4c	VT4d
VT4e	VT4f	VT4g
VT4h	VT4i	VT4j
CA60	CA60	CA60
1	2	3
2	3	4
3	4	5
4	5	6
5	6	7
6	7	8
7	8	9
8	9	10
9	10	11
10	11	12
11	12	13
12	13	14
13	14	15
14	15	16
15	16	17
16	17	18
17	18	
18		
TR 08644	TR 08644	TR 08644
1	1	1
322	309	306
309	296	283
296	270	247
270	247	181
247	181	104
181	104	345
104	345	332
345	332	319
332	319	306
319	306	293
306	293	280
293	280	257
280	257	191
257	191	114
191	114	
114		

Resumo do aço

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA60	TR 08644	23.5	19
	5.0	24.4	4.1
PESO TOTAL (kg)			23.1

ESTRUTURA

PROJETO	URBANIZAÇÃO DA SANTA NOSSA SENHORA DA PENHA	RESPONSÁVEL	CLAUDIA VILLAS BOAS	DATA	MAIO/18	ESCALA	INDICADA
CONTRATANTE	GOVERNO MUNICIPAL DE CAMPOS SALES	DESENHO	WALLYSSON MAGALHÃES	<div style="font-size: 48px; font-weight: bold;">11-11</div>			
ENDEREÇO	RODOVIA BR 230 - CAMPOS SALES - CEARÁ						
CONTEÚDO	ARMAÇÃO DAS VIGOTAS DAS LAJES 03 E PLANTA DAS VIGOTAS - ALTAR						

