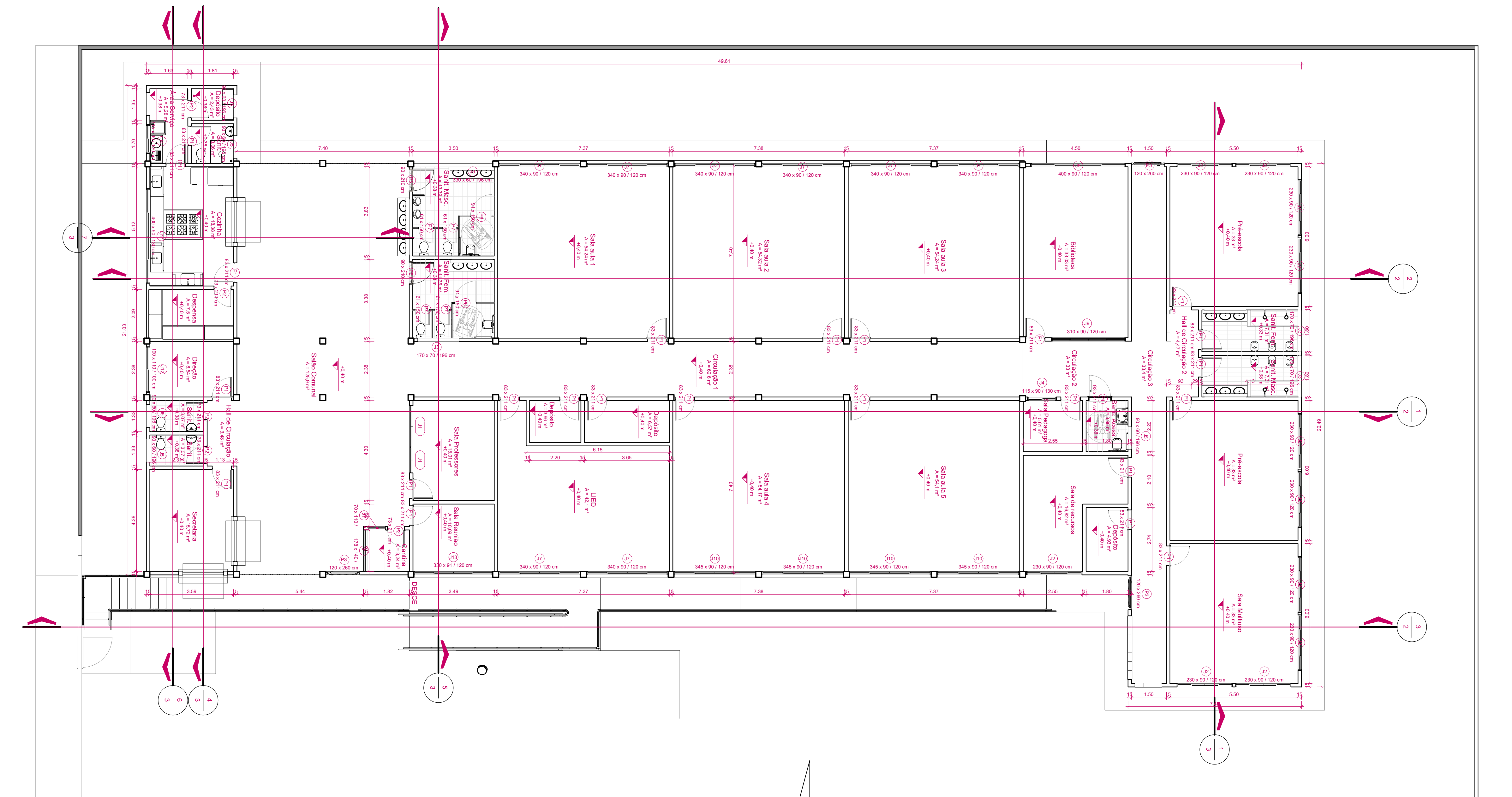
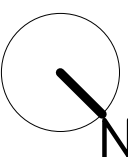




PLANTA BAIXA
ESCALA 1:100

ESQUADRIAS / JANELAS					
INDICADOR	UND.	DIMENSÕES (cm)		PEITORIL	ÁREA (m²)
		LARGURA	ALTURA		
J01	2	1,82	1,10	1,11	4,00
J02	2	0,80	1,00	1,21	1,60
J03	1	0,70	1,10	1,00	0,77
J03	1	1,10	1,40	1,00	1,54
J03	1	1,78	1,40	1,00	2,49
J03	1	1,80	1,40	1,00	2,52
J04	3	1,70	0,70	1,96	3,58
J05	11	2,30	0,90	1,20	22,84
J06	2	1,15	0,90	1,30	2,08
J07	5	0,90	0,60	1,96	2,72
J08	1	3,30	0,60	1,96	1,99
J09	8	3,40	0,90	1,20	24,55
J10	1	3,10	0,90	1,20	2,80
J11	1	4,00	0,90	1,30	3,61
J12	1	1,90	1,10	1,00	2,10
J13	1	3,30	0,91	1,20	3,01
J14	4	3,45	0,90	1,20	12,45
J15	1	4,00	0,90	1,20	3,61
TOTAL	47				98,26

ESQUADRIAS / PORTAS				
INDICADOR	UND.	DIMENSÕES (cm)		ÁREA (m²)
		LARGURA	ALTURA	
P1	24	0,83	2,11	42,03
P2	5	0,73	2,11	7,70
P3	3	1,20	2,60	9,36
P4	1	0,93	2,11	1,96
P5	2	0,90	2,10	3,78
P6	2	0,91	1,50	2,74
P7	4	0,61	1,50	3,67
P8	1	1,58	2,09	3,30
PORTÃO	1	1,30	2,20	2,85
SOLEIRA ACESSÍVEL	1	0,19	0,02	0,00
SOLEIRA RAMPADA	24	0,18	0,00	0,00
TOTAL	73			77,40



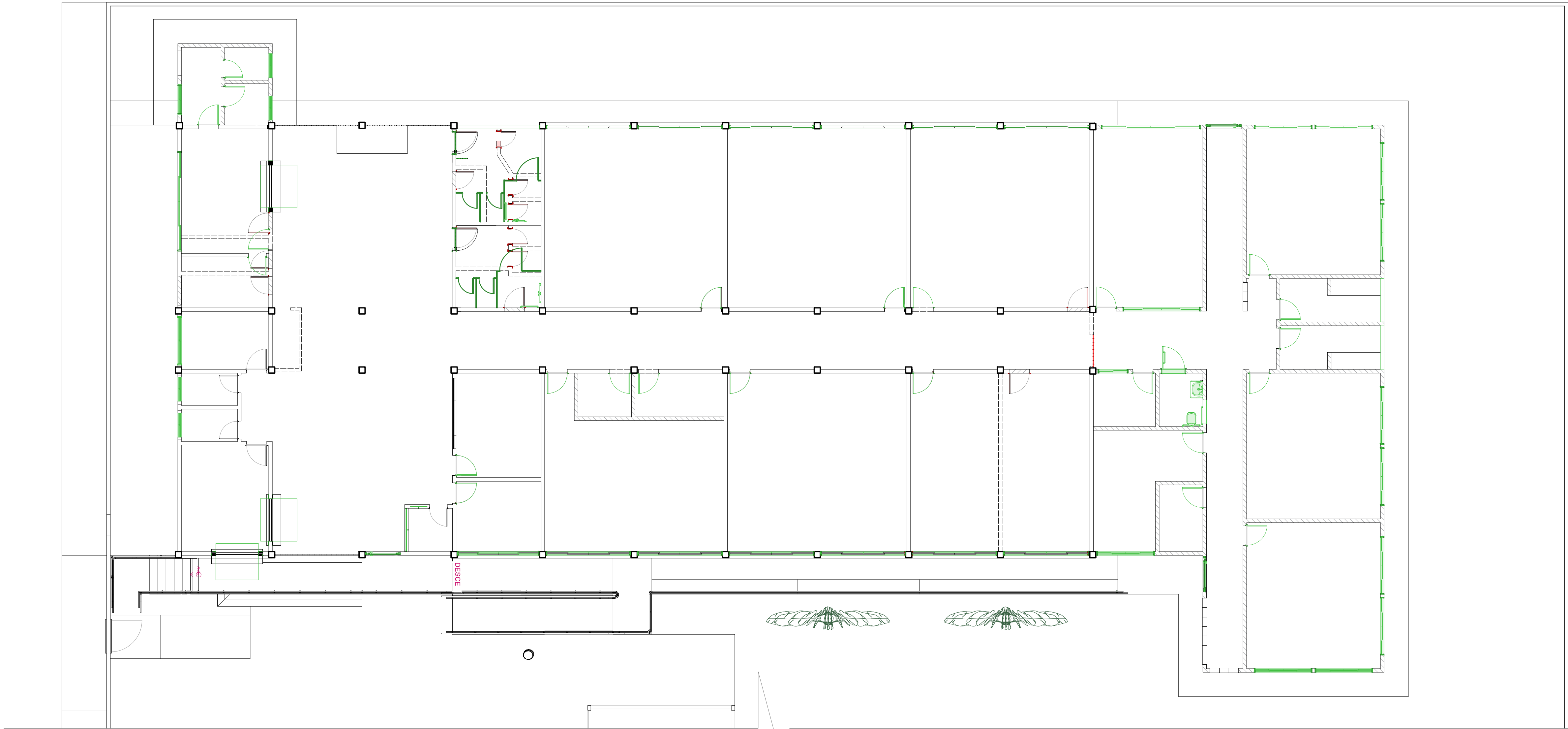
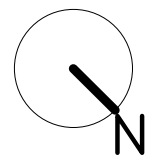
PREFEITURA MUNICIPAL DE SÃO MATEUS
ADM 2021/2024

SECRETARIA MUNICIPAL DE EDUCAÇÃO

TÍTULO: PROJETO ARQUITETÔNICO DE REFORMA E AMPLIAÇÃO |
ESCOLA MUNICIPAL DE ENSINO FUNDAMENTAL "SANTA TEREZINHA"

LOCAL: TERRENO URBANO - RUA HERMES VALADARES, 170, SANTA TEREZA, SÃO MATEUS – ES

PROPRIETÁRIO MUNICÍPIO DE SÃO MATEUS, ESTADO DO ESPIRITO SANTO	RESP. TÉCNICO ENG. CIVIL:	DESENHO:
CONTEÚDO: PLANTA DE LEVANTAMENTO	DATA: 10/2024	REVISÃO: 00
	FOLHA 01/05	ESCALA: INDICADA



PLANTA DEMOLIÇÃO E CONSTRUÇÃO

ESCALA 1:100

LEGENDA DE DEMOLIÇÃO E CONSTRUÇÃO	
REPRESENTAÇÃO	DESCRIÇÃO
	PARTES EXISTENTES A CONSERVAR
	PARTES A SEREM DEMOLIDAS
	PARTES NOVAS A SEREM CONSTRUÍDAS



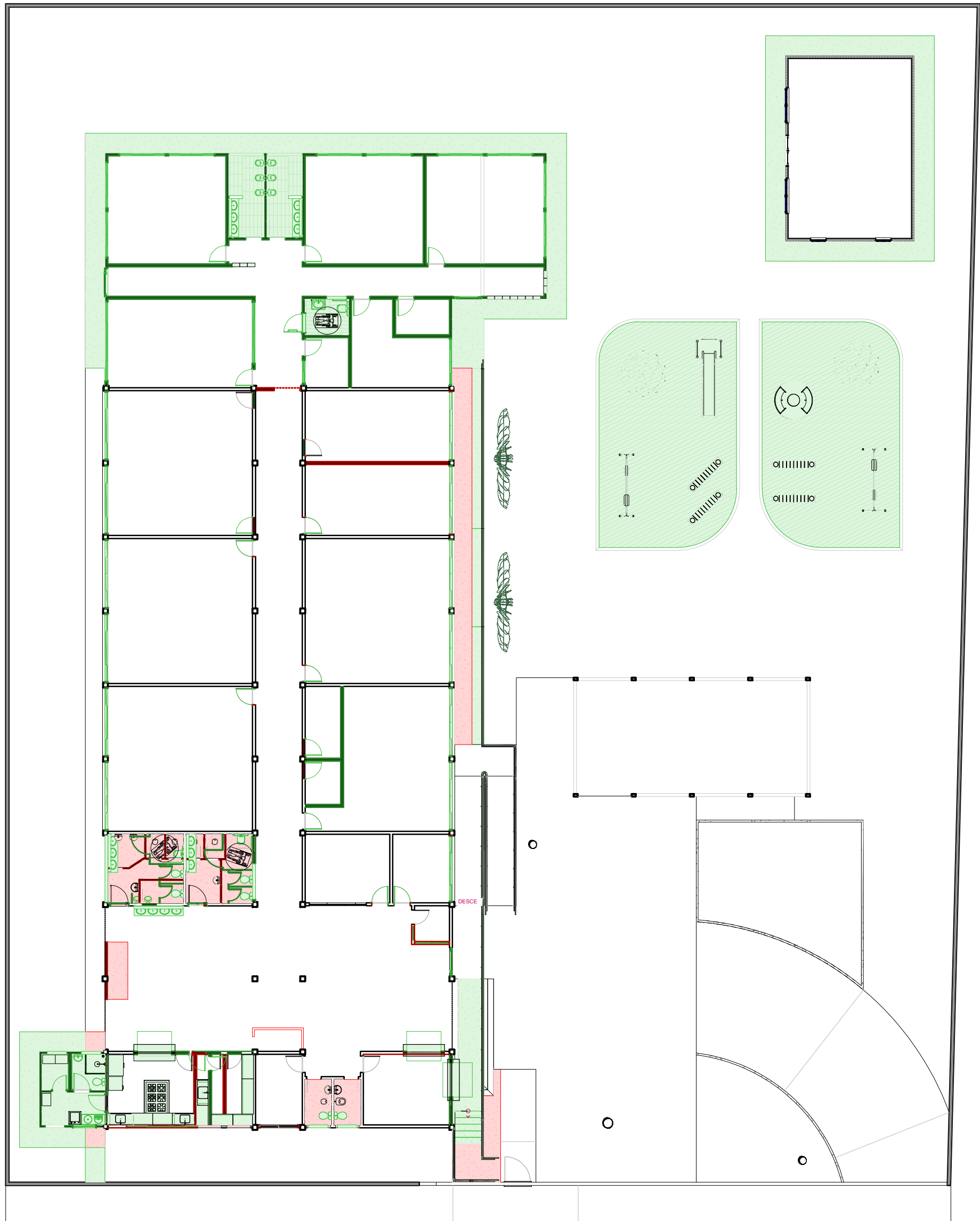
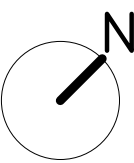
PREFEITURA MUNICIPAL DE SÃO MATEUS
ADM 2021/2024

SECRETARIA MUNICIPAL DE EDUCAÇÃO

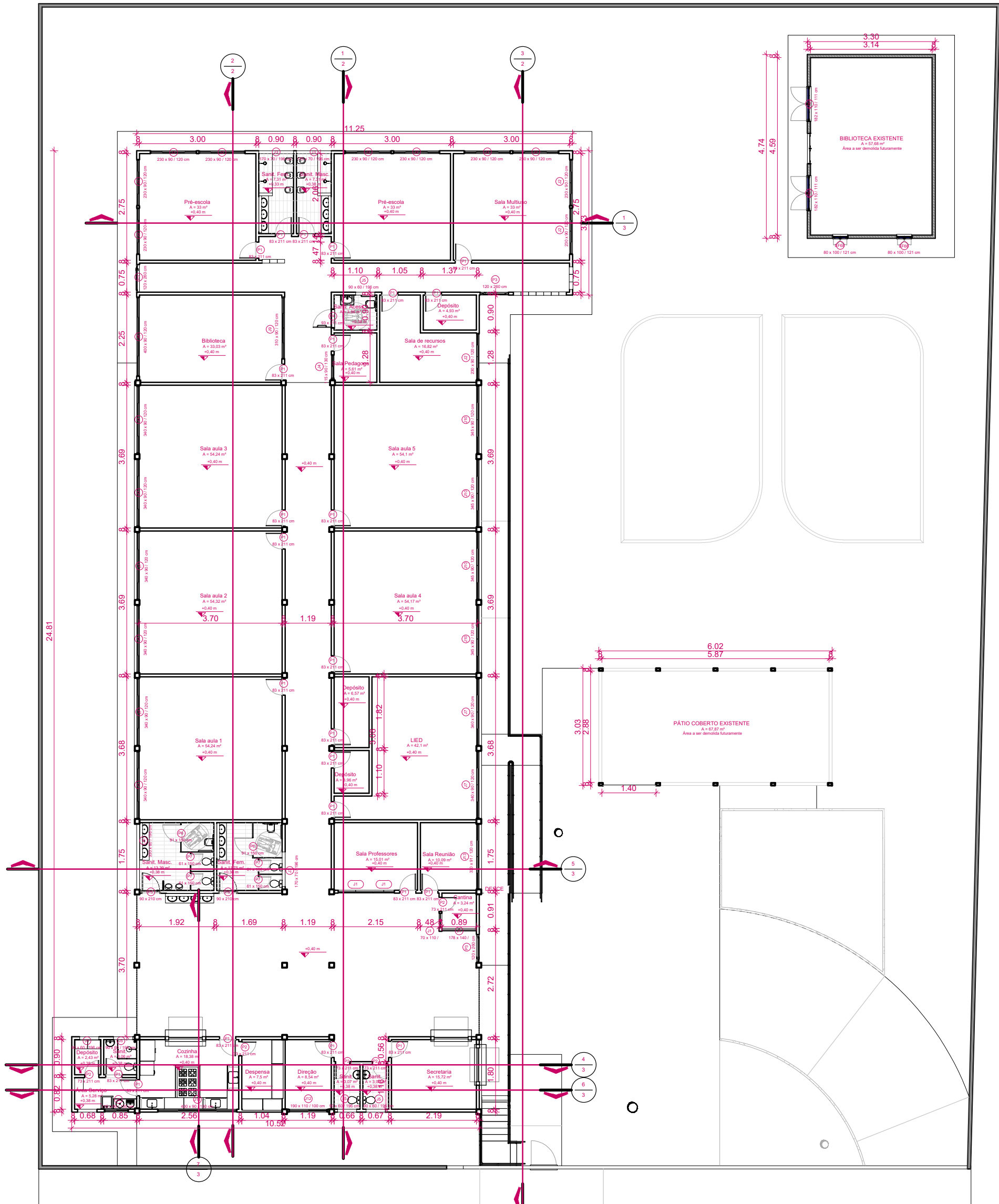
TÍTULO: PROJETO ARQUITETÔNICO DE REFORMA E AMPLIAÇÃO |
ESCOLA MUNICIPAL DE ENSINO FUNDAMETAL "SANTA TEREZINHA"

LOCAL: TERRENO URBANO - RUA HERMES VALADARES, 170, SANTA TEREZA, SÃO MATEUS – ES

PROPRIETÁRIO MUNICÍPIO DE SÃO MATEUS, ESTADO DO ESPIRITO SANTO	RESP. TÉCNICO ENG. CIVIL:		DESENHO:	
	DATA: 10/2024	REVISÃO: 00	FOLHA 02/05	ESCALA: INDICADA
CONTEÚDO: PLANTA DE LEVANTAMENTO				

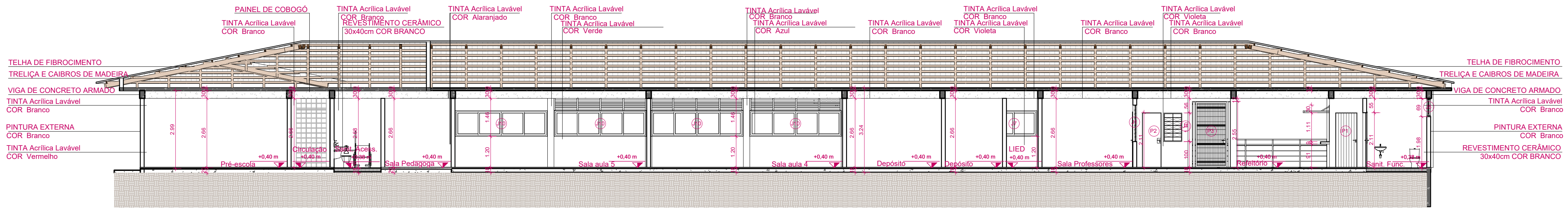


PLANTA DEMOLIÇÃO E CONSTRUÇÃO
ESCALA 1:200

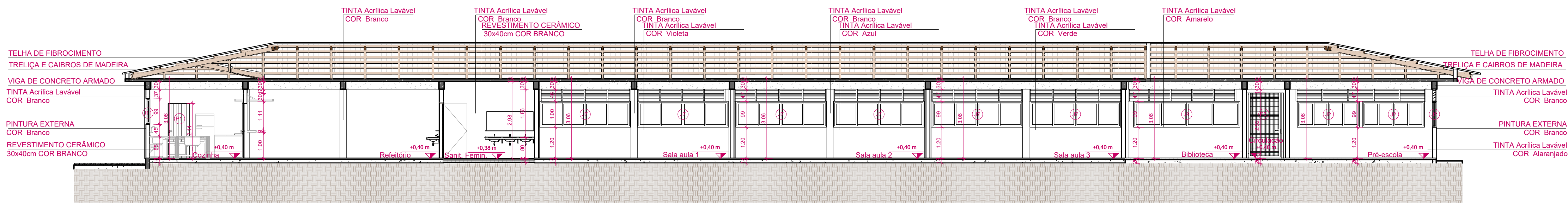


PLANTA BAIXA
ESCALA 1:200

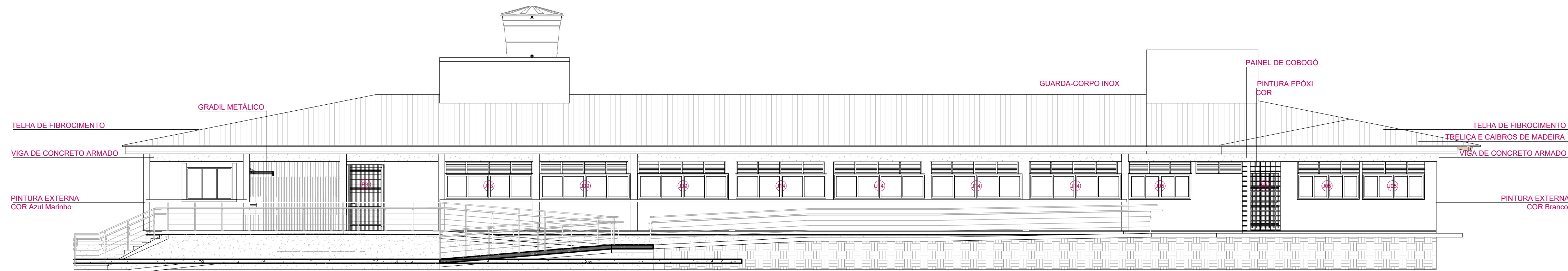
 PREFEITURA MUNICIPAL DE SÃO MATEUS ADM 2021/2024 SECRETARIA MUNICIPAL DE EDUCAÇÃO				
TÍTULO: PROJETO ARQUITETÔNICO DE REFORMA E AMPLIAÇÃO ESCOLA MUNICIPAL DE ENSINO FUNDAMENTAL "SANTA TEREZINHA"				
LOCAL: TERRENO URBANO - RUA HERMES VALADARES, 170, SANTA TEREZA, SÃO MATEUS – ES				
PROPRIETÁRIO MUNICÍPIO DE SÃO MATEUS, ESTADO DO ESPIRITO SANTO	RESP. TÉCNICO ENG. CIVIL:		DESENHO:	
CONTEÚDO: PLANTA DE LEVANTAMENTO	DATA: 10/2024	REVISÃO: 00	FOLHA 03/05	ESCALA: INDICADA



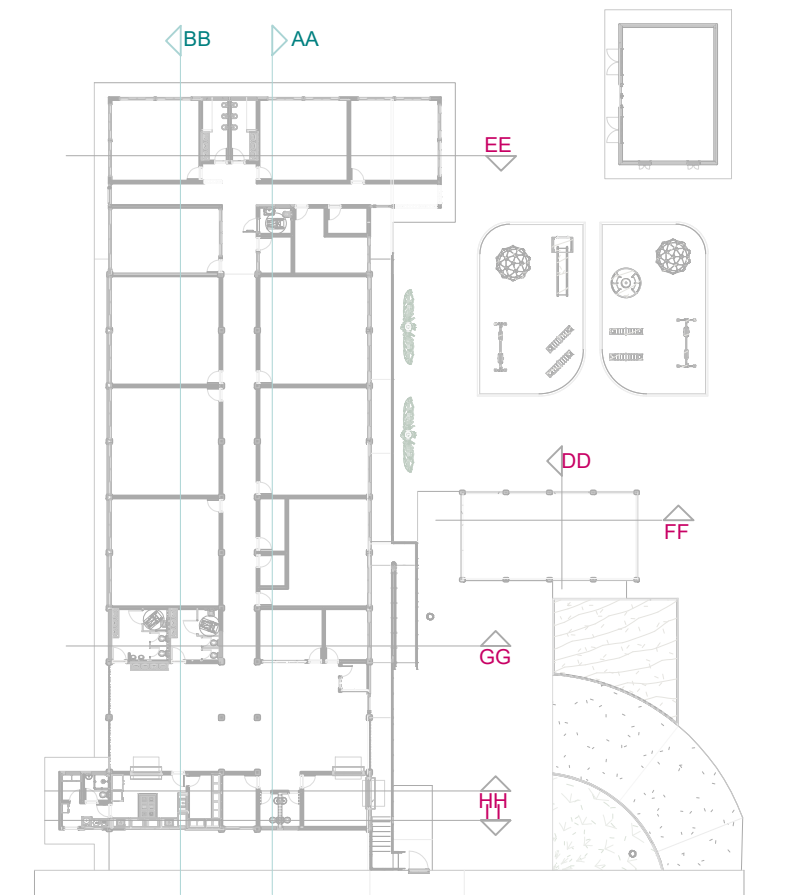
CORTE AA
ESCALA 1:200



CORTE BB
ESCALA 1:200

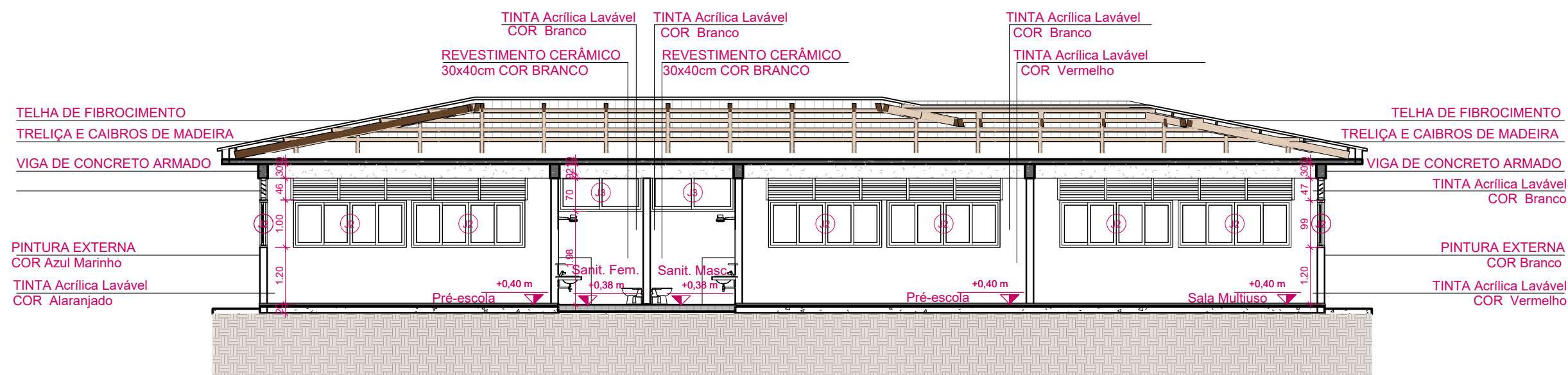


FACHADA NORTE
ESCALA 1:200

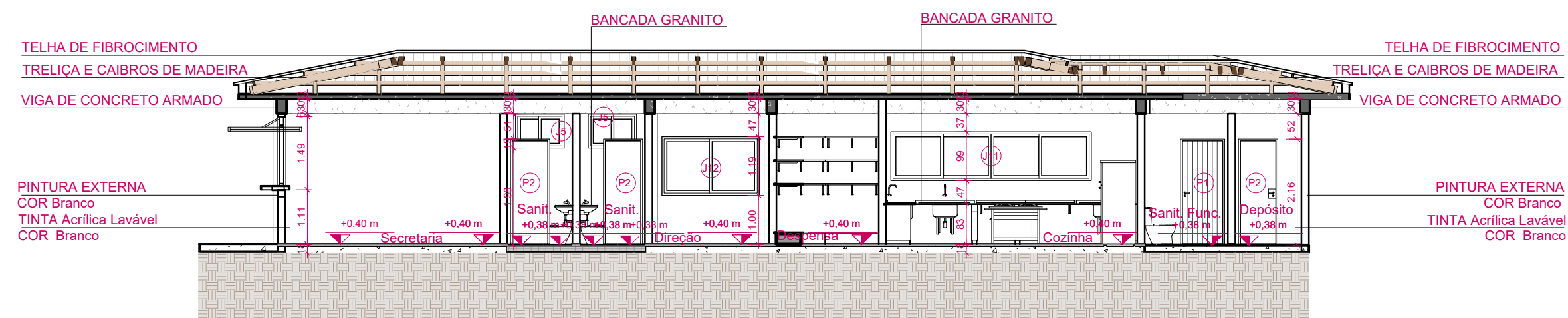


CROQUI DE REFERÊNCIA
ESCALA 1:500

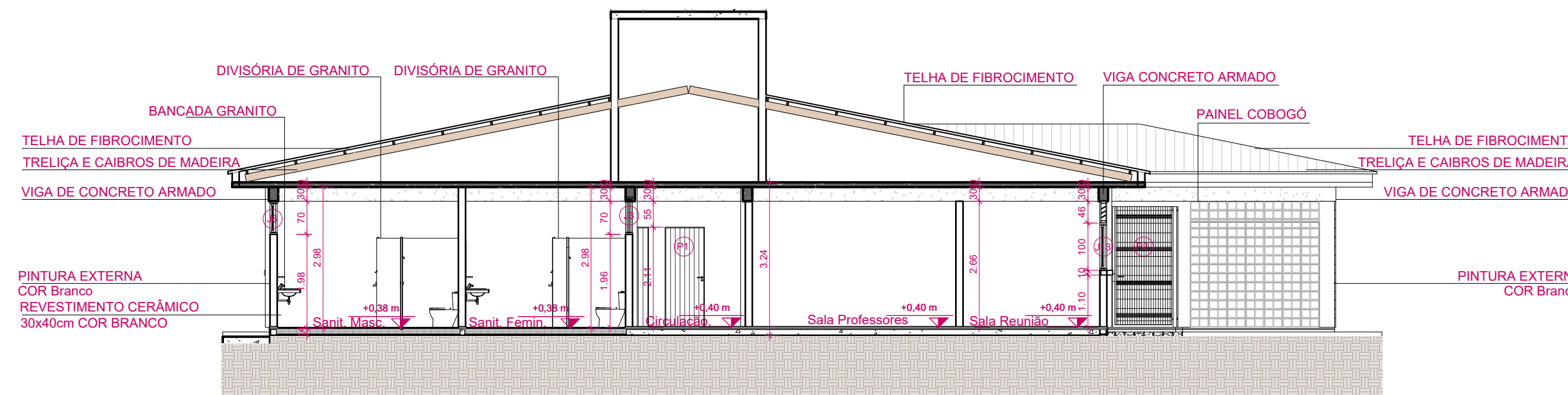
 PREFEITURA MUNICIPAL DE SÃO MATEUS ADM 2021/2024 SECRETARIA MUNICIPAL DE EDUCAÇÃO				
TÍTULO:		PROJETO ARQUITETÔNICO DE REFORMA E AMPLIAÇÃO ESCOLA MUNICIPAL DE ENSINO FUNDAMENTAL "SANTA TEREZINHA"		
LOCAL:		TERRENO URBANO - RUA HERMES VALADARES, 170, SANTA TEREZA, SÃO MATEUS – ES		
PROPRIETÁRIO MUNICÍPIO DE SÃO MATEUS, ESTADO DO ESPIRITO SANTO		RESP. TÉCNICO ENG. CIVIL:		DESENHO:
CONTEÚDO: PLANTA DE LEVANTAMENTO		DATA: 10/2024	REVISÃO: 00	FOLHA 04/05 ESCALA: INDICADA



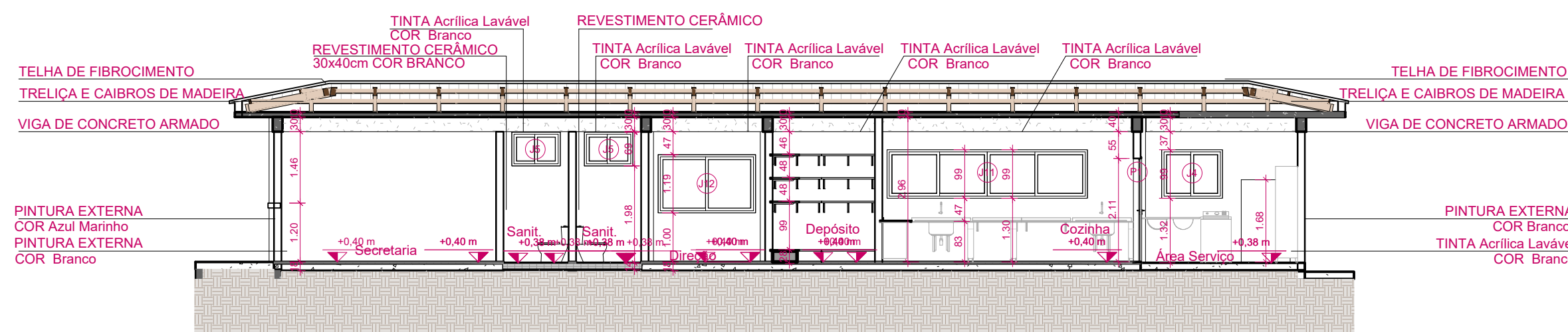
CORTE CC
ESCALA 1:200



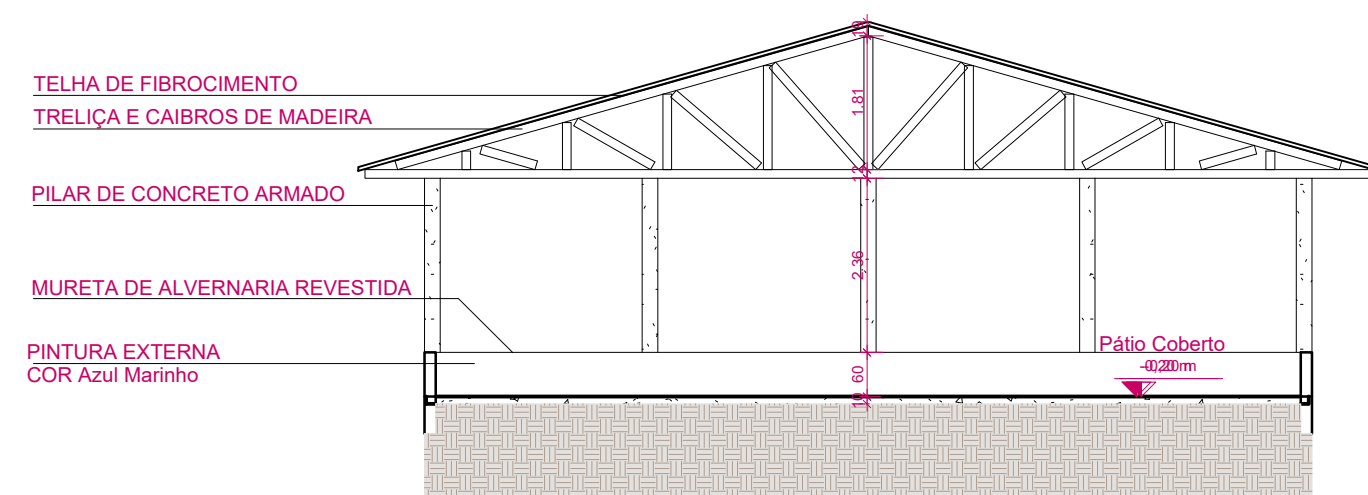
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ESCALA 1:200



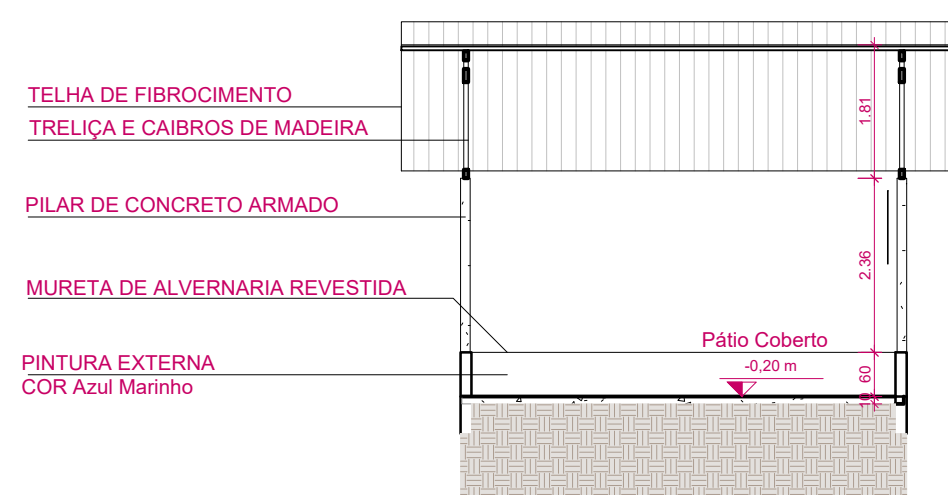
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ESCALA 1:200



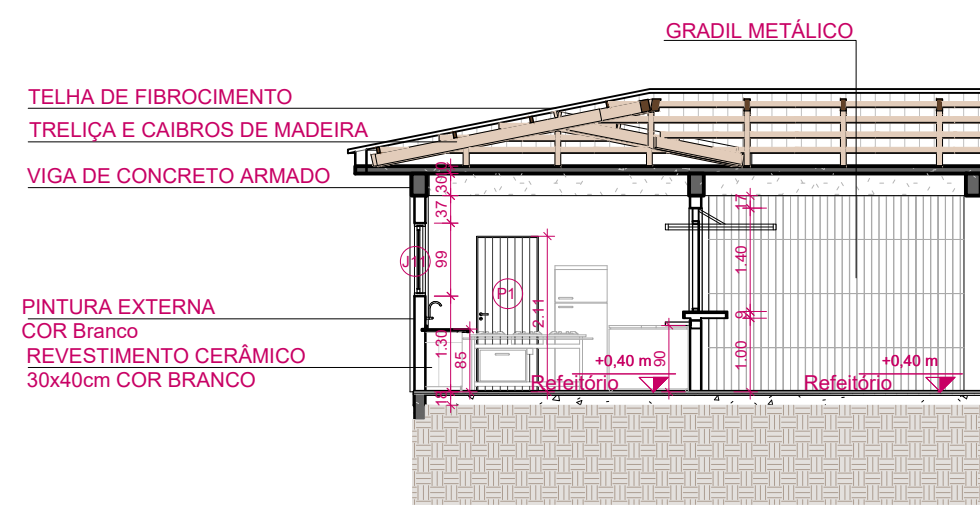
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ESCALA 1:200



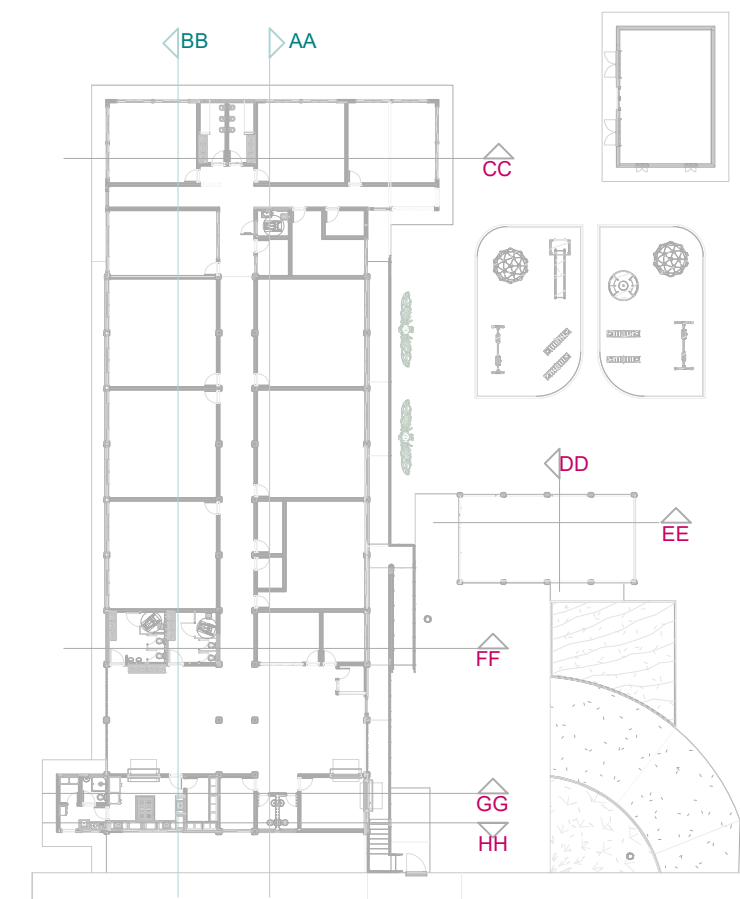
CORTE EE
ESCALA 1:200



CORTE DD
ESCALA 1:200

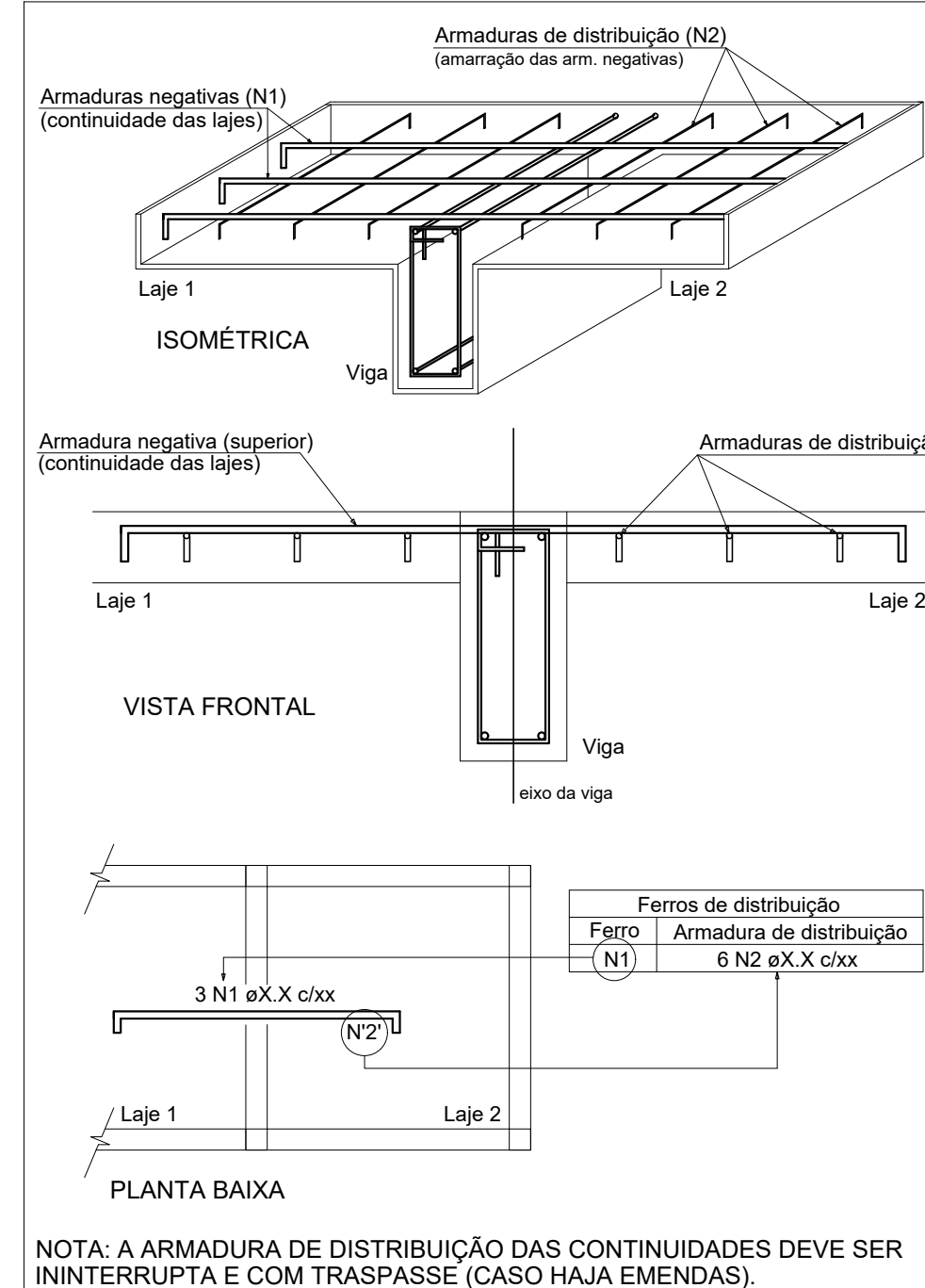
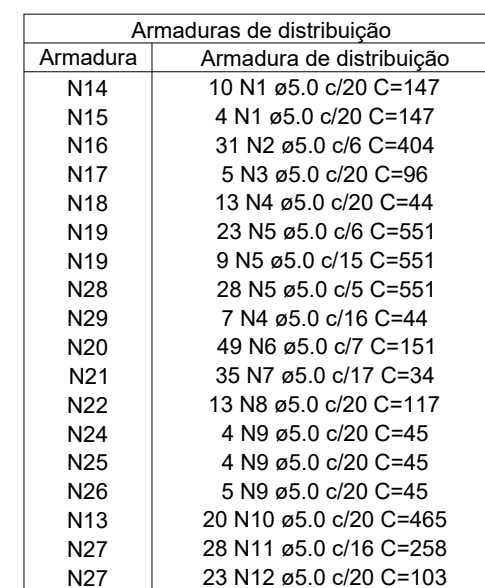


CORTE BB
ESCALA 1:200



CROQUI DE REFERÊNCIA
ESCALA 1:500

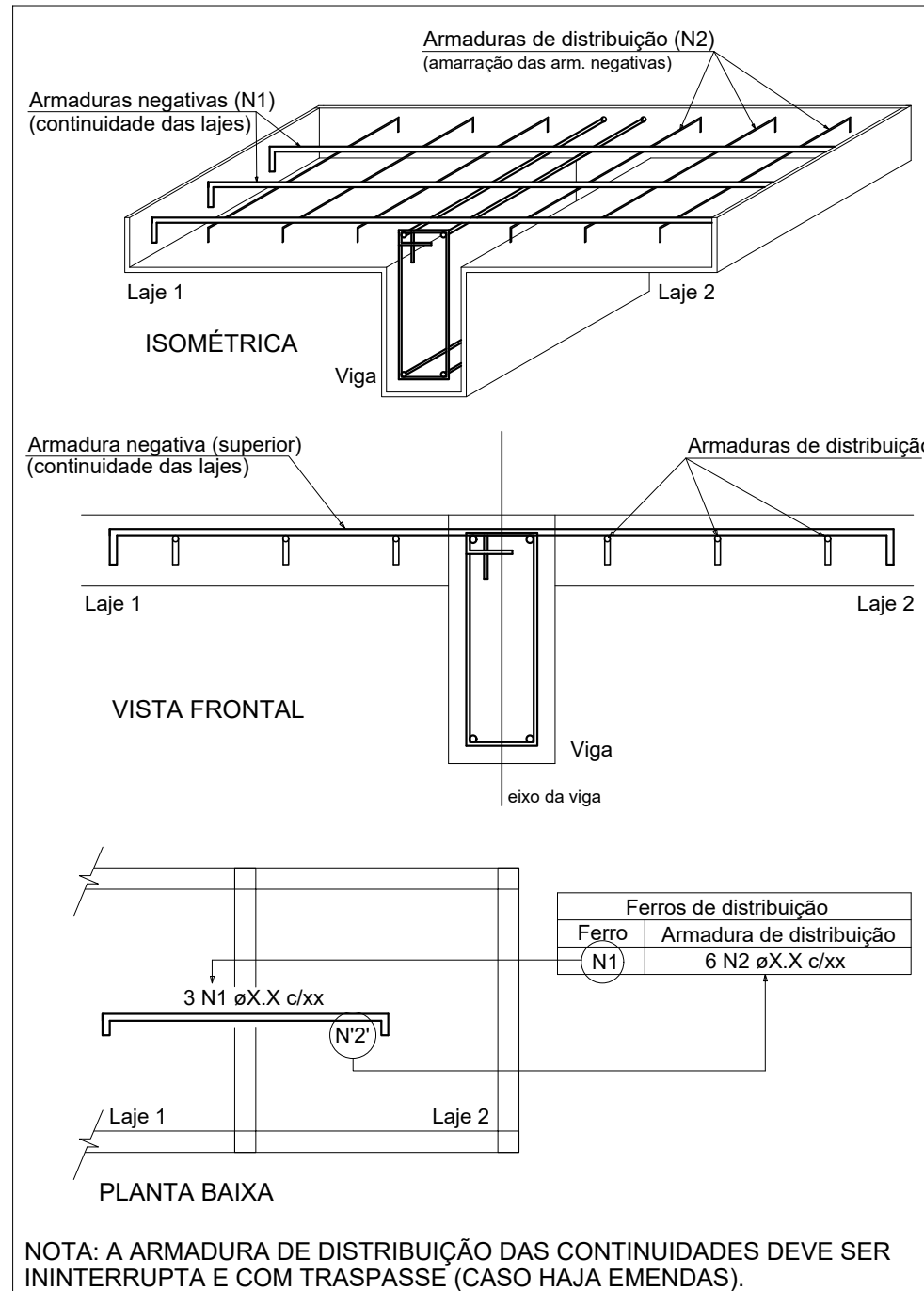
 PREFEITURA MUNICIPAL DE SÃO MATEUS ADM 2021/2024 SECRETARIA MUNICIPAL DE EDUCAÇÃO				
TÍTULO: PROJETO ARQUITETÔNICO DE REFORMA E AMPLIAÇÃO ESCOLA MUNICIPAL DE ENSINO FUNDAMENTAL "SANTA TEREZINHA"				
LOCAL: TERRENO URBANO - RUA HERMES VALADARES, 170, SANTA TEREZA, SÃO MATEUS – ES				
PROPRIETÁRIO MUNICÍPIO DE SÃO MATEUS, ESTADO DO ESPIRITO SANTO	RESP. TÉCNICO ENG. CIVIL:		DESENHO:	
CONTEÚDO: PLANTA DE LEVANTAMENTO	DATA: 10/2024	REVISÃO: 00	FOLHA 05/05	ESCALA: INDICADA



RELAÇÃO DO AÇO						
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
Negativos X	CASO 2	1	50	14	147	2058
	CASO 2	2	50	31	404	12524
	CASO 2	3	50	31	404	12524
	CASO 4	5	20	44	880	17600
	CASO 4	6	20	51	1020	20400
	CASO 4	6	50	49	151	7569
	CASO 4	8	50	34	110	5500
	CASO 4	8	50	13	117	1170
	CASO 4	11	50	17	85	4250
	CASO 4	10	50	20	465	9300
	CASO 4	12	50	20	465	9300
	CASO 4	13	80	41	103	2609
	CASO 4	15	100	10	60	1500
	CASO 4	14	100	20	207	2070
	CASO 4	15	100	10	107	1070
Negativos Y	CASO 4	16	100	81	191	15471
	CASO 4	17	100	37	58	1700
	CASO 4	18	100	3	258	774
	CASO 4	19	100	10	107	1070
	CASO 4	20	100	26	852	9152
	CASO 4	21	100	26	852	9152
	CASO 4	22	100	7	253	1771
	CASO 4	23	100	14	416	1416
	CASO 4	24	100	3	85	261
	CASO 4	25	100	3	85	261
	CASO 4	26	100	3	103	309
	CASO 4	27	100	3	103	309
	CASO 4	28	125	79	113	11370
	CASO 4	29	125	79	113	11370
	CASO 4	30	50	27	990	20760
	CASO 4	31	50	27	990	20760
	CASO 4	32	50	4	42	168
	CASO 4	33	50	4	42	168
	CASO 4	34	50	31	1348	4464
	CASO 4	35	50	31	1348	4464
	CASO 4	36	50	50	242	8954
	CASO 4	37	50	50	242	8954
	CASO 4	38	50	9	303	2727
	CASO 4	39	50	9	303	2727
	CASO 4	40	50	19	504	9576
CASO 4	41	50	19	504	9576	
CASO 4	42	50	13	389	5057	
CASO 4	43	50	13	389	5057	
CASO 4	44	80	39	568	9994	
CASO 4	45	100	8	82	820	
CASO 4	46	100	3	88	264	
CASO 4	47	125	5	146	1460	
CASO 4	48	125	4	88	532	
CASO 4	49	125	5	146	1460	
CASO 4	50	125	5	191	273	
CASO 4	51	125	5	202	2525	
CASO 4	52	125	11	279	3069	
CASO 4	53	125	10	246	2460	
CASO 4	54	125	15	306	2190	
CASO 4	55	125	5	194	1940	

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

Armaduras de distribuição	
Armadura	Armadura de distribuição
N47	27 N30 a5.0 o C=990
N49	9 N31 a5.0 o C12 =447
N46	4 N32 a5.0 o C20 =C42
N50	6 N33 a5.0 o C16 =C43
N51	31 N34 a5.0 o C8 =C144
N52	17 N35 a5.0 o C8 =C227
N53	37 N36 a5.0 o C8 =C242
N54	19 N37 a5.0 o C16 =C161
N55	9 N38 a5.0 o C16 =C303
N56	19 N39 a5.0 o C16 =C151
N57	19 N40 a5.0 o C16 =C504
N51	21 N41 a5.0 o C12 =C111
N44	13 N42 a5.0 o C19 =C389
N55	30 N43 a5.0 o C10 =C749



Technical drawing of a building floor plan showing a rectangular layout with seven rooms labeled L1 through L7. Each room contains a circular symbol with a number and 'h=12'. Dimensions and room numbers are provided for each room. A central corridor is labeled L4. A dimension of 73 is indicated for the central corridor. The drawing is a black and white line drawing with a grid system.

Room L1: 28 N5 a10.0 c20 C=1018

Room L2: 40 N2 a8.0 c14 C=629

Room L3: 43 N6 a10.0 c13 C=626

Room L4: 8 N7 a10.0 c19 C=1158

Room L5: 33 N3 a8.0 c14 C=623

Room L6: 27 N1 a6.3 c17 C=597

Room L7: 23 N4 a8.0 c20 C=757

Central Corridor L4: 73

The floor plan shows a grid of rooms. The rooms are labeled as follows:

- L1** (h=12): 77 N13 a 12.5 a 13 C-573
- L2** (h=12): 52 N11 a 20.0 a 19 C-573
- L3** (h=12): 30 N11 a 10.0 a 20 C-573
- L4** (h=12): 119 N16 a 5.0 a 18 C-123
- L5** (h=12): 46 N10 a 5.0 a 15 C-473
- L6** (h=12): 24 N10 a 5.0 a 18 C-473
- L7** (h=12): 44 N12 a 10.0 a 17 C-473

The plan also includes a central corridor and several smaller rooms or storage areas.

escala 1:50

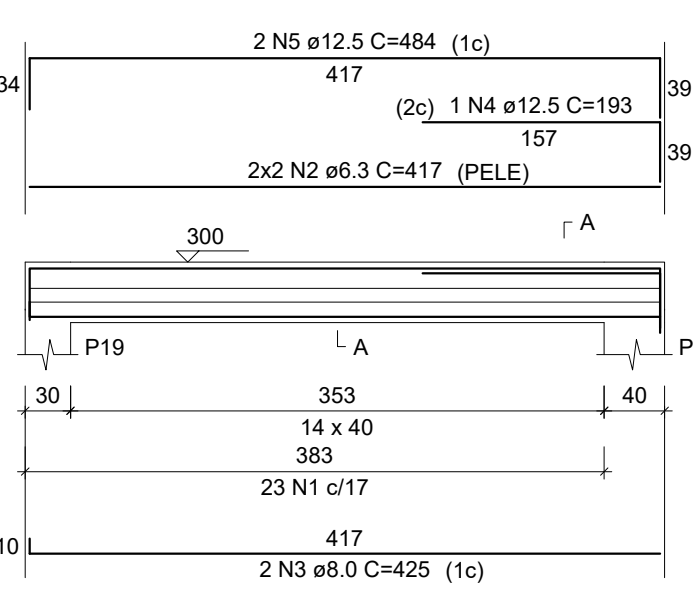
RELAÇÃO DO AÇO						
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C TOTAL (cm)	
Positivos X	CASO 1	6	6,3	27	3077	
	CASO 2	2	8,0	40	629	
	CASO 3	3	8,0	33	629	
	CASO 4	4	8,0	23	707	
	CASO 5	5	10,0	28	1018	
	CASO 6	10	8,0	43	628	
Positivos Y	CASO 7	7	10,0	8	1157	
	CASO 8	8	10,0	8	1158	
	CASO 9	5	13,0	17	2817	
	CASO 10	10	8,0	64	473	
	CASO 11	11	10,0	62	573	
	CASO 12	10	14	44	473	
		13	12,5	77	573	44121

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	6.3	107.2	28.9
	8.0	934	405.4
	10.0	1302.8	863.5
	12.5	441.2	467.5
CA60	5.0	240.5	40.8
PESO TOTAL (kg)			
CA50	1785.3		
CA60	40.8		

Volume de concreto (C-25) = 27.74 m³
Área de forma = 231.18 m²

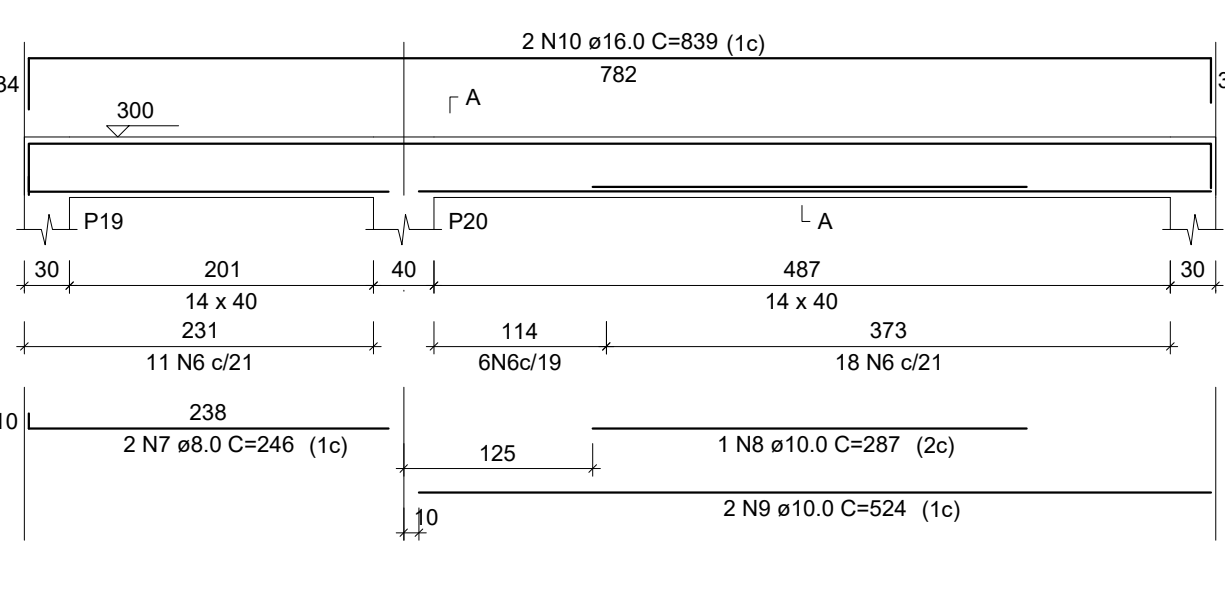
V9

ESC 1:50



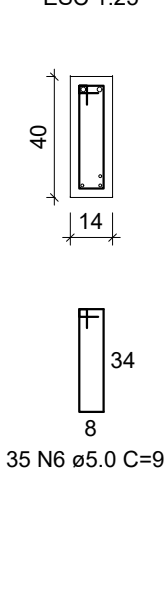
V10

ESC 1:50



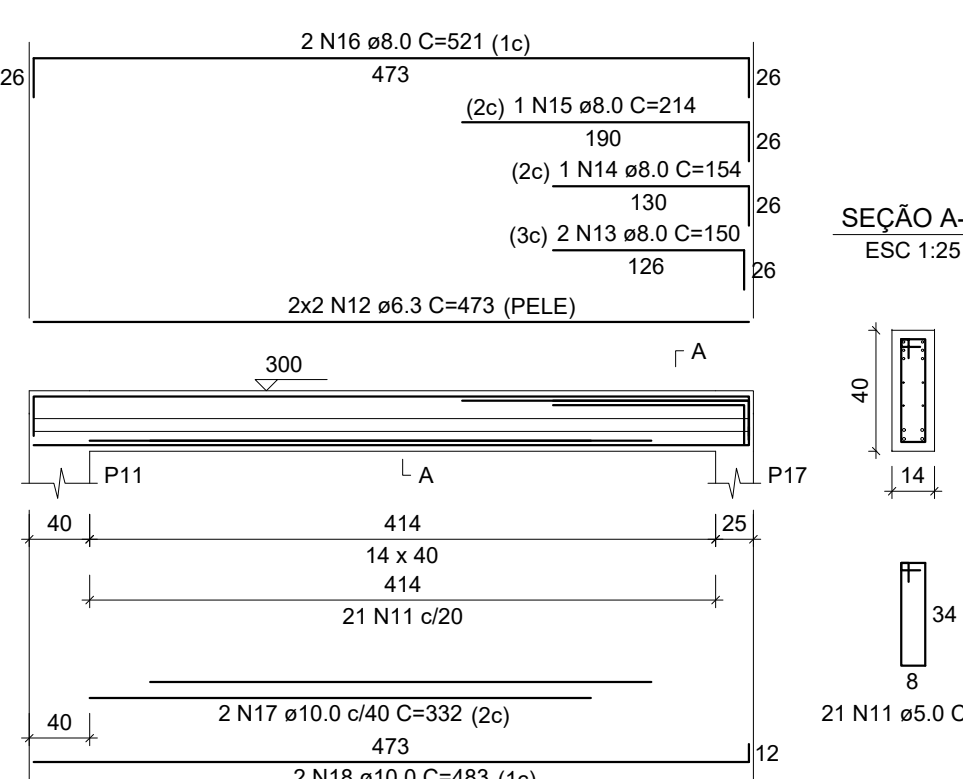
SEÇÃO A-A

ESC 1:25



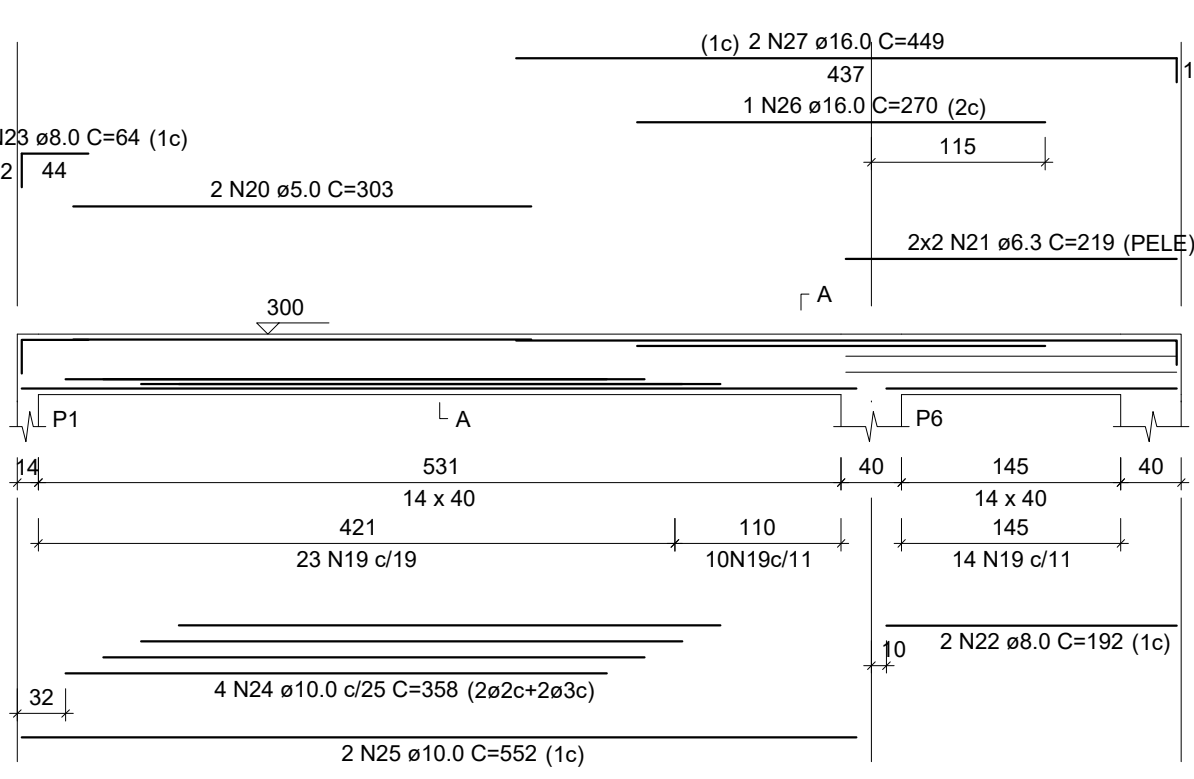
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ESC 1:50



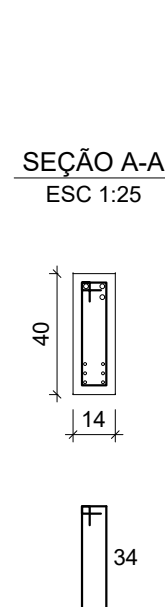
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ESC 1:50



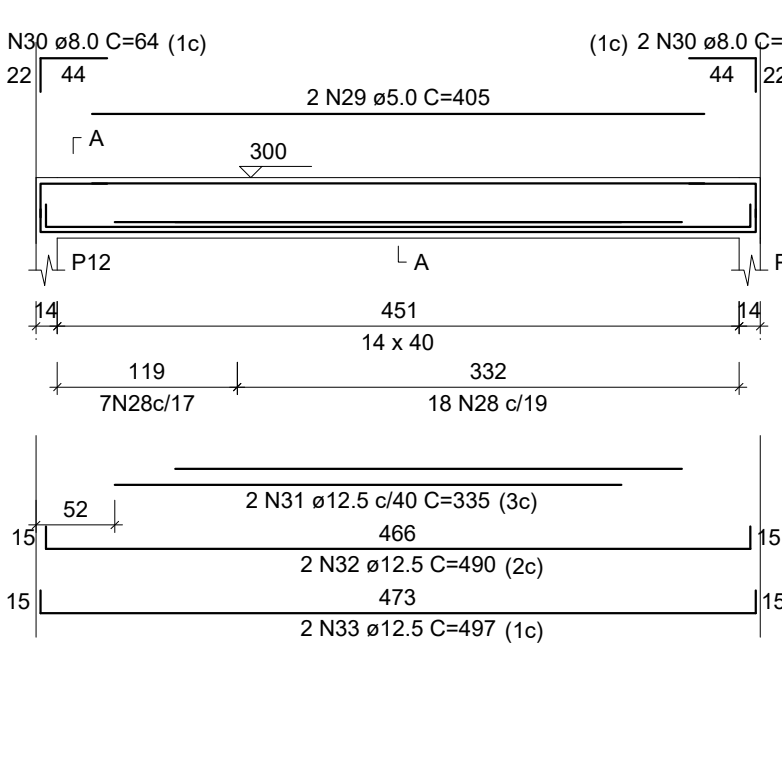
SEÇÃO A-A

ESC 1:25



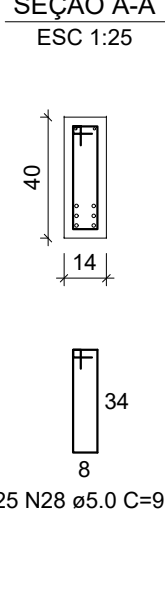
V13

ESC 1:50



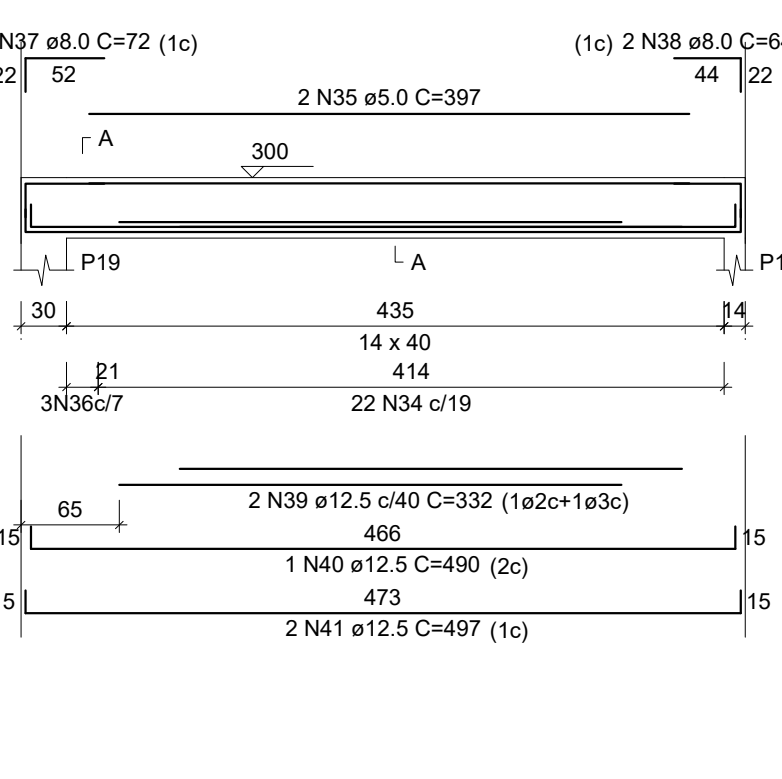
SEÇÃO A-A

ESC 1:25



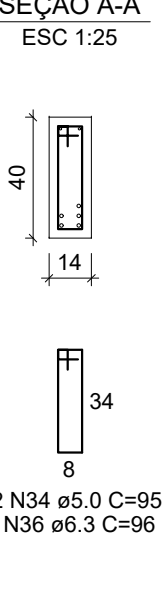
V14

ESC 1:50



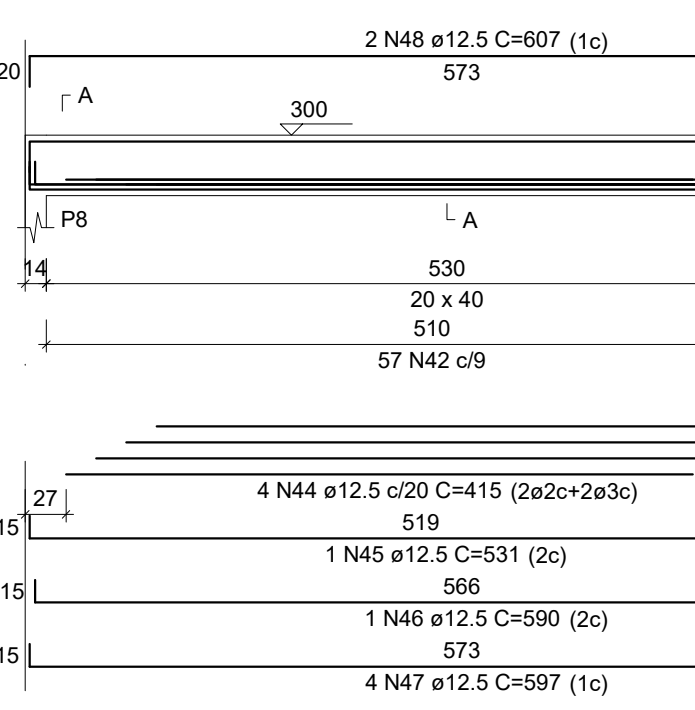
SEÇÃO A-A

ESC 1:25



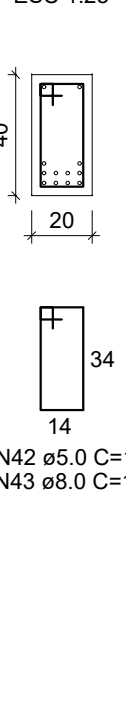
V15

ESC 1:50



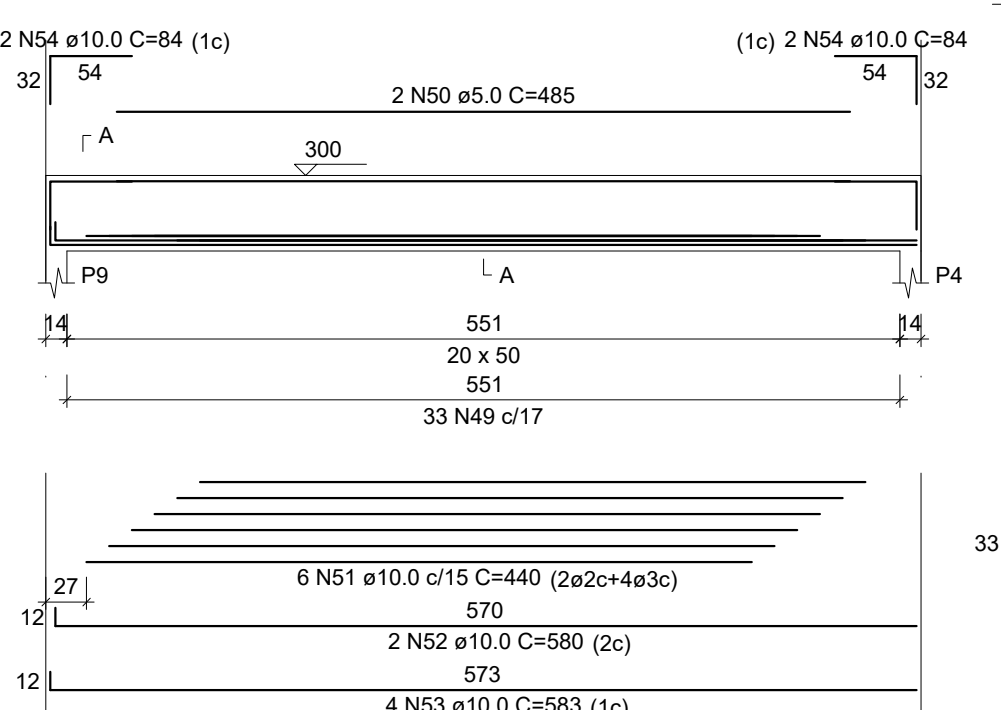
SEÇÃO A-A

ESC 1:25



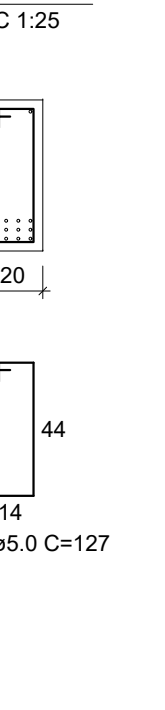
V16

ESC 1:50



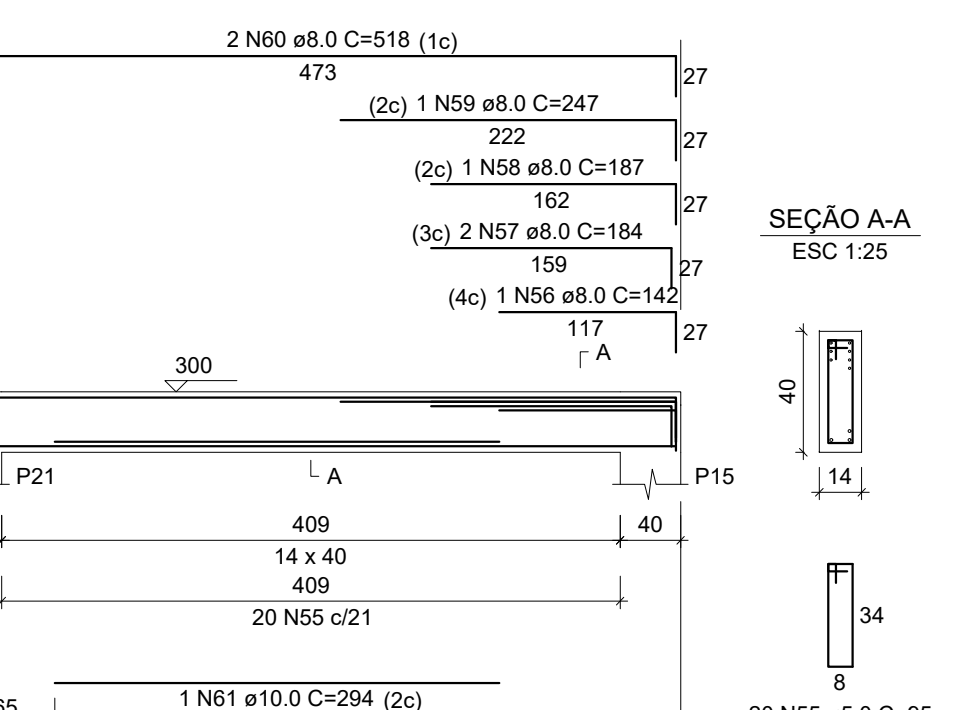
SEÇÃO A-A

ESC 1:25



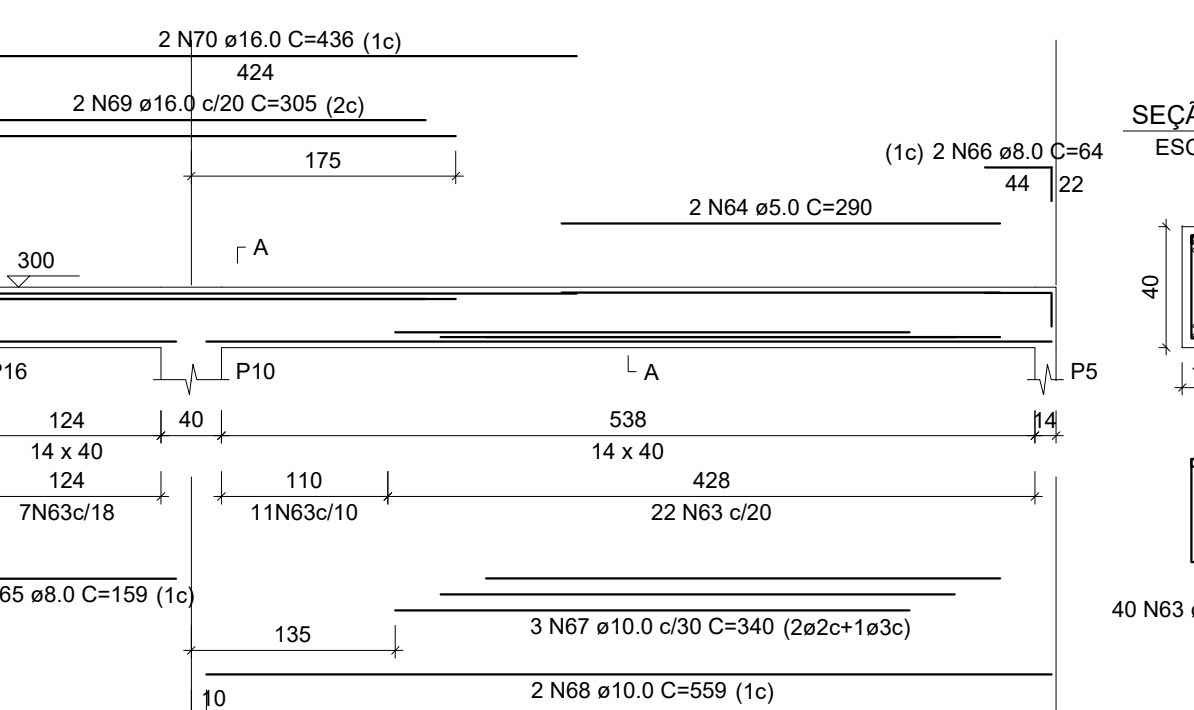
V17

ESC 1:50



V18

ESC 1:50



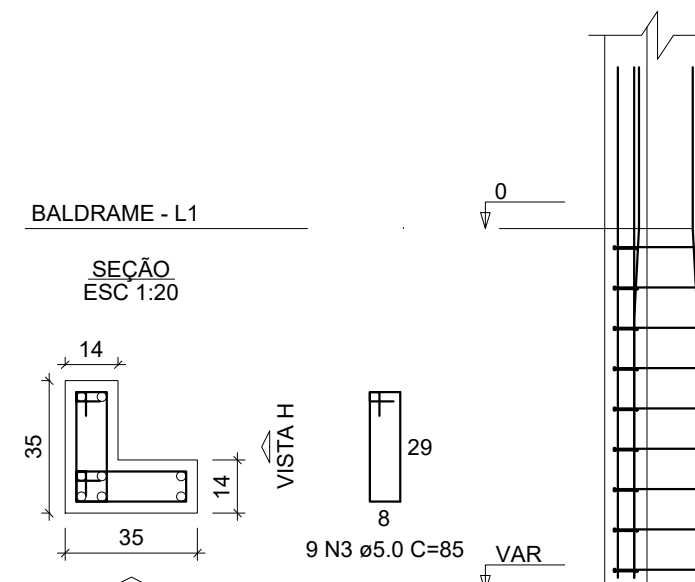
SEÇÃO A-A

ESC 1:25



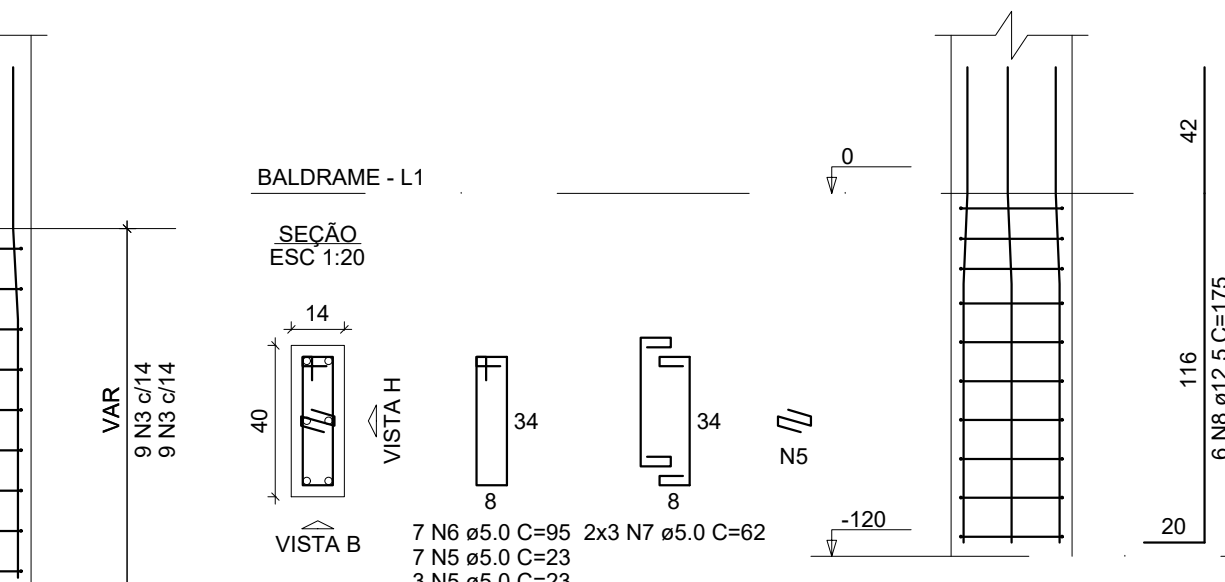
P2=P3

ESC 1:25



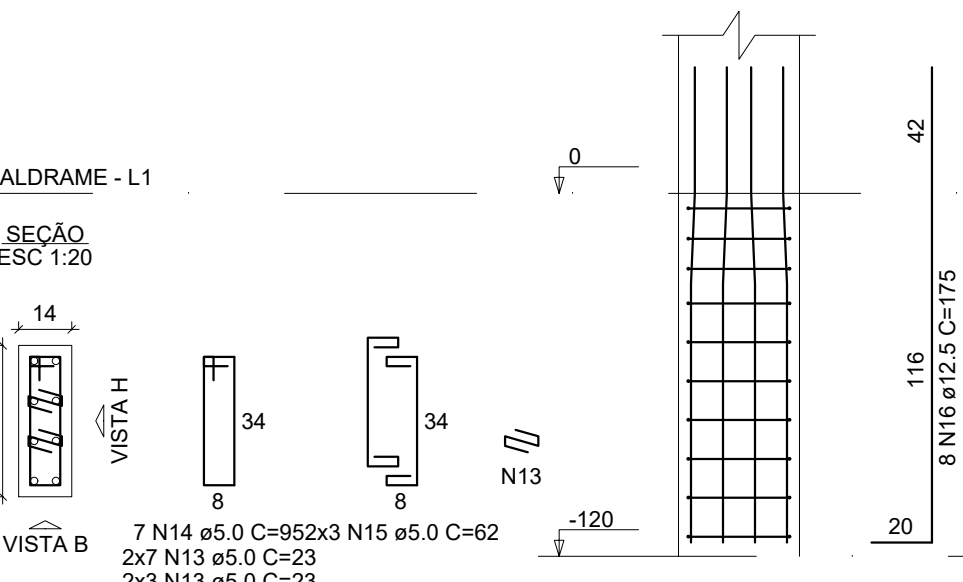
P15

ESC 1:25



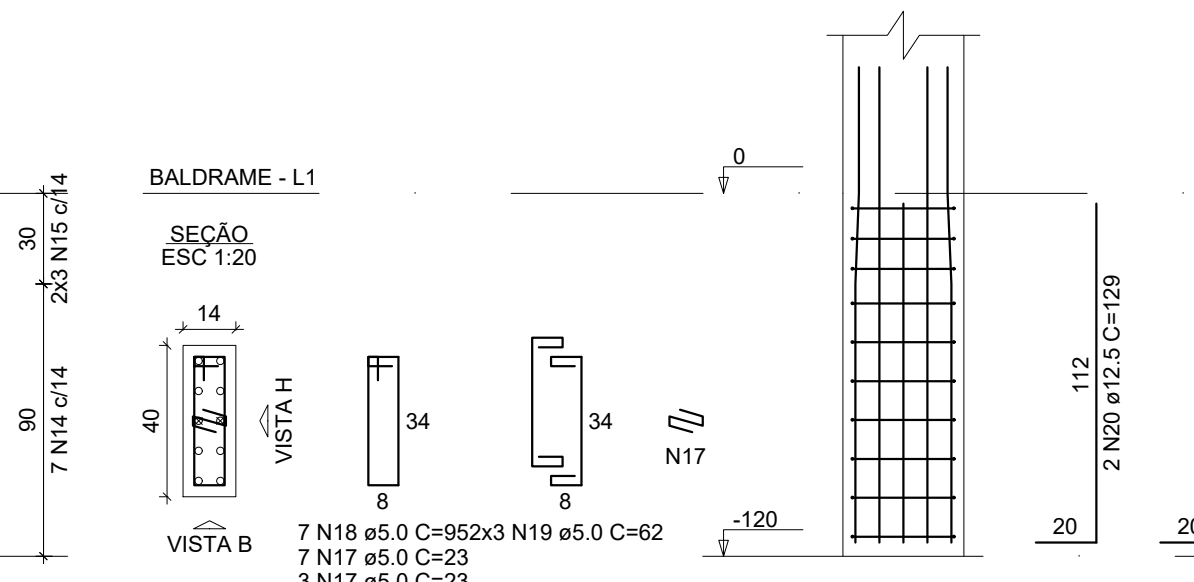
P5=P1

ESC 1:25



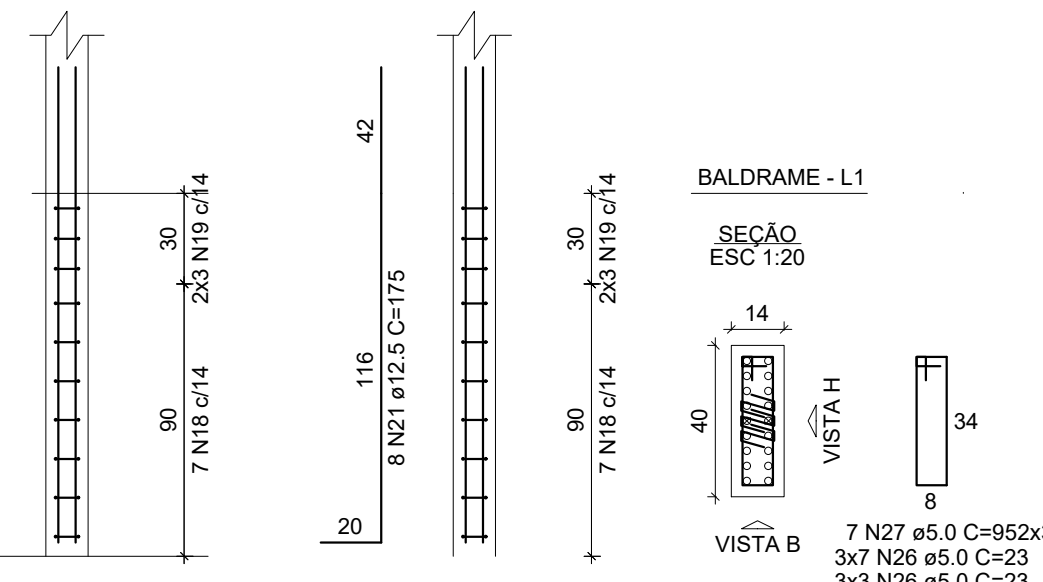
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ESC 1:25



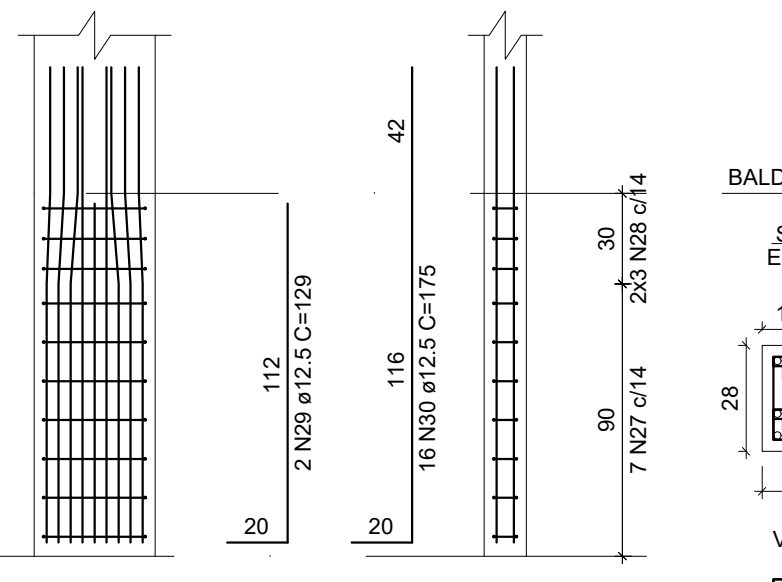
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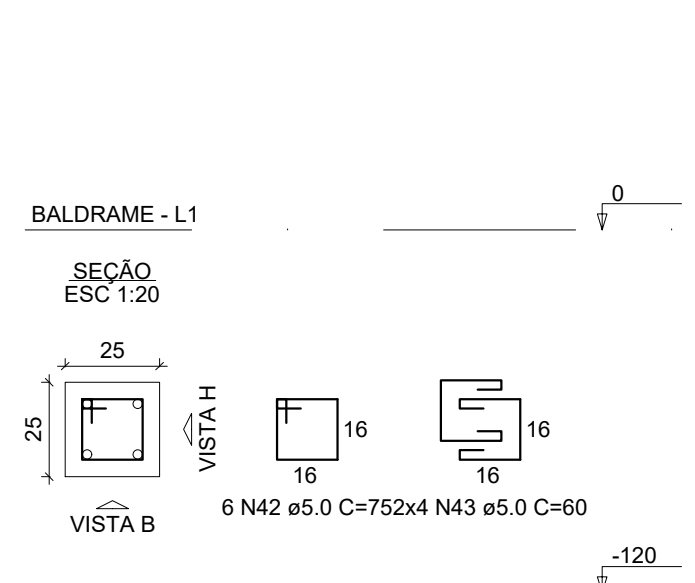
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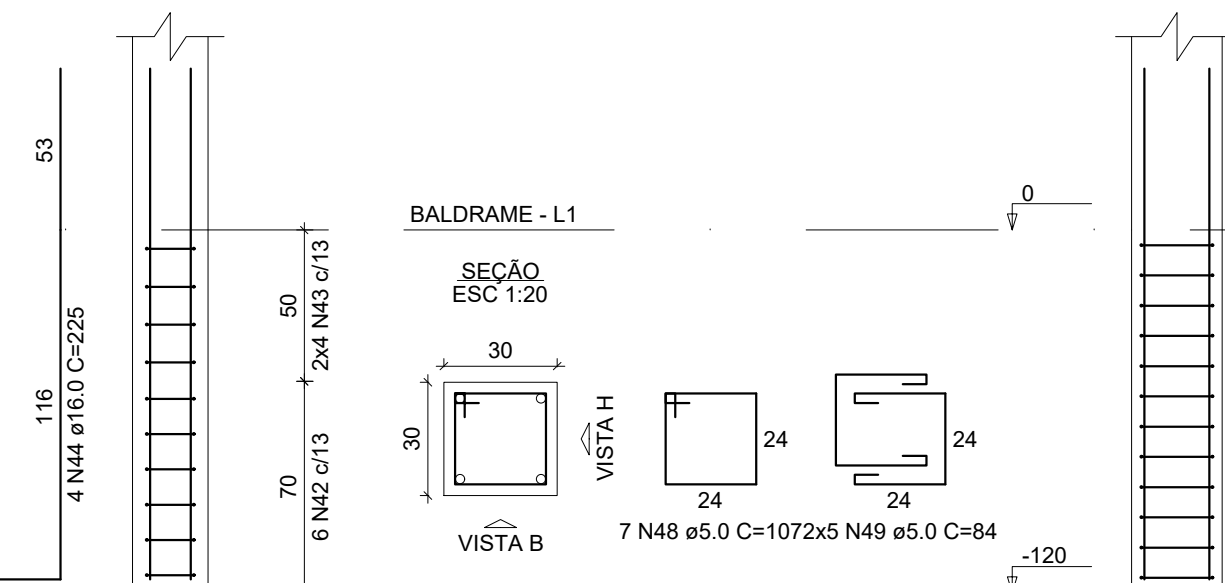
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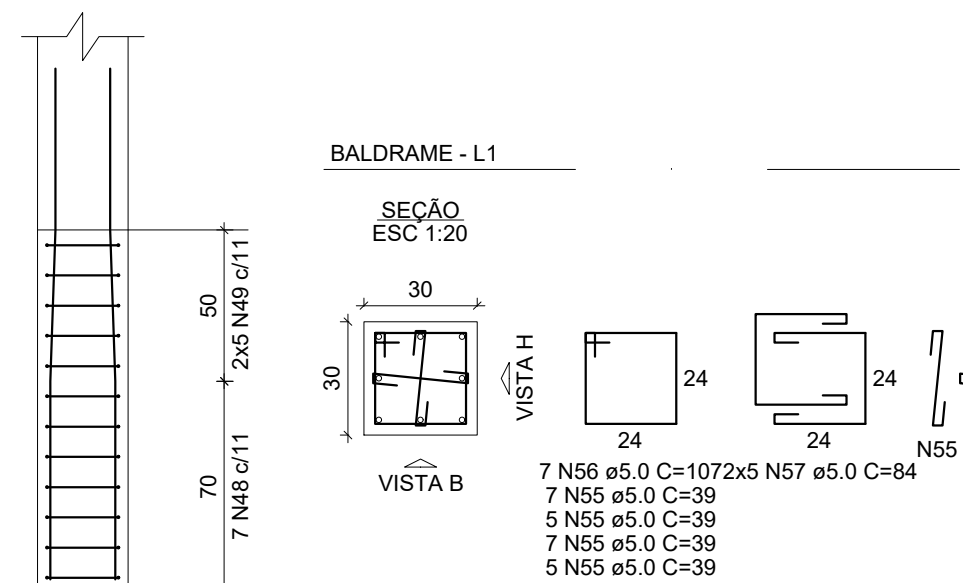
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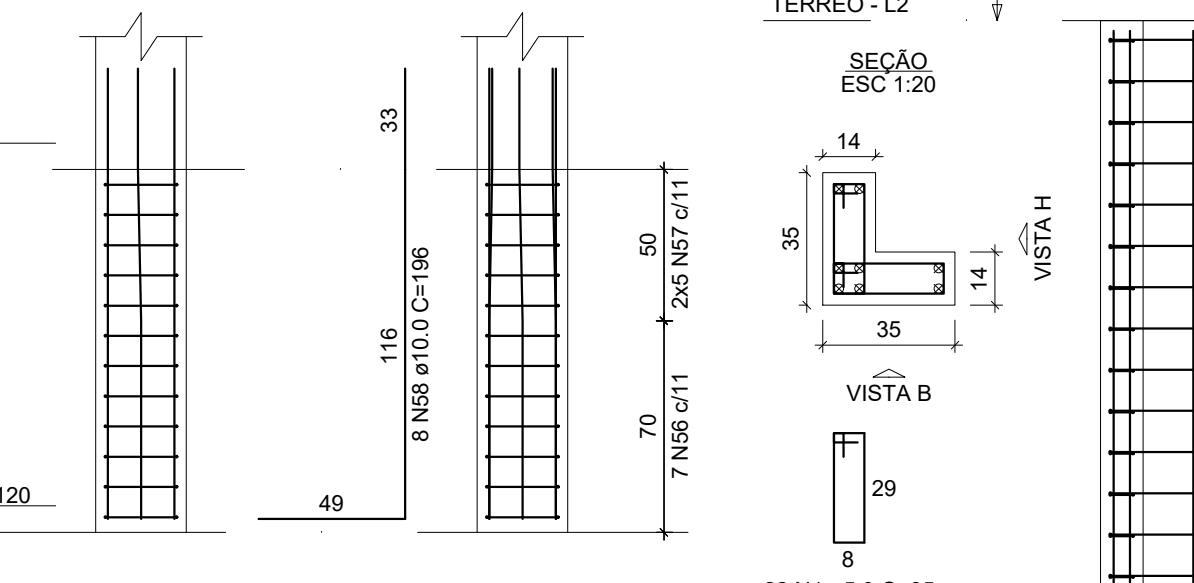
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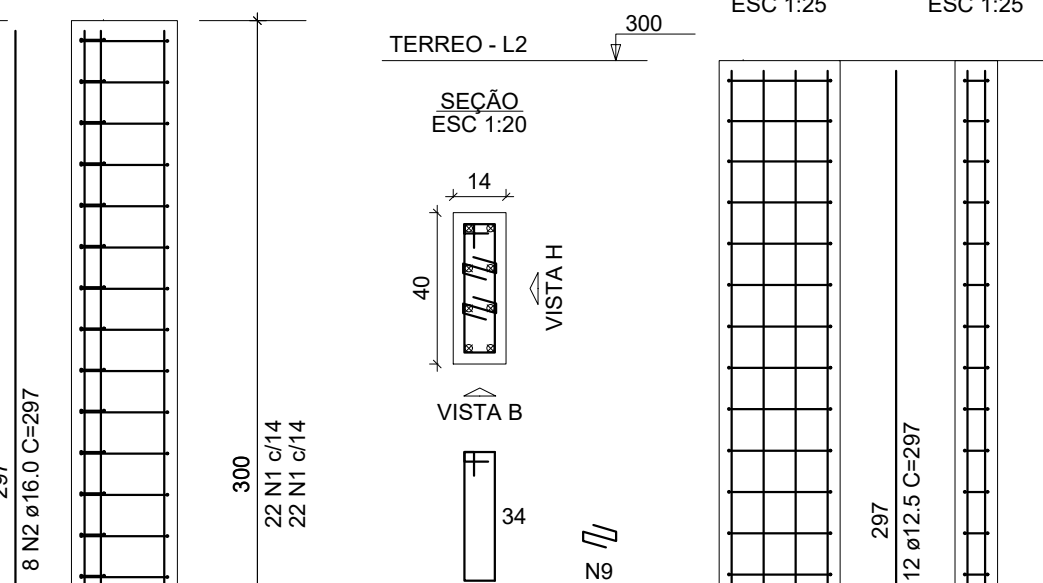
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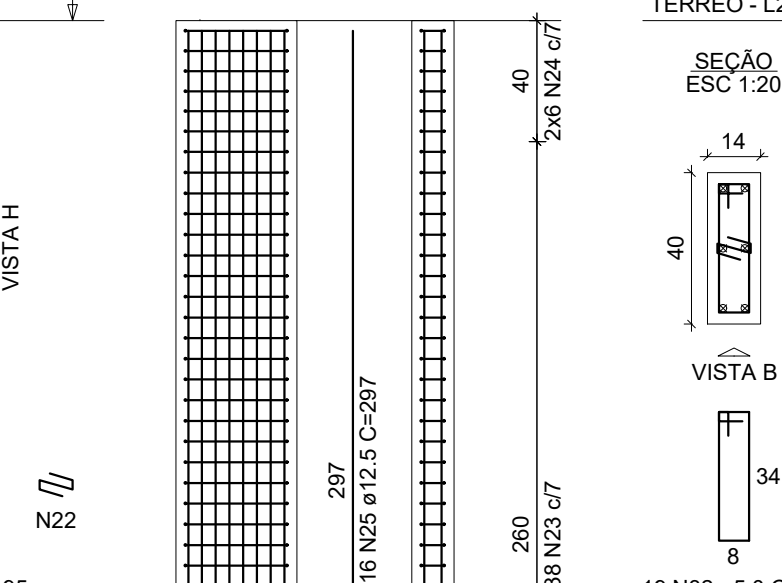
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ESC 1:25



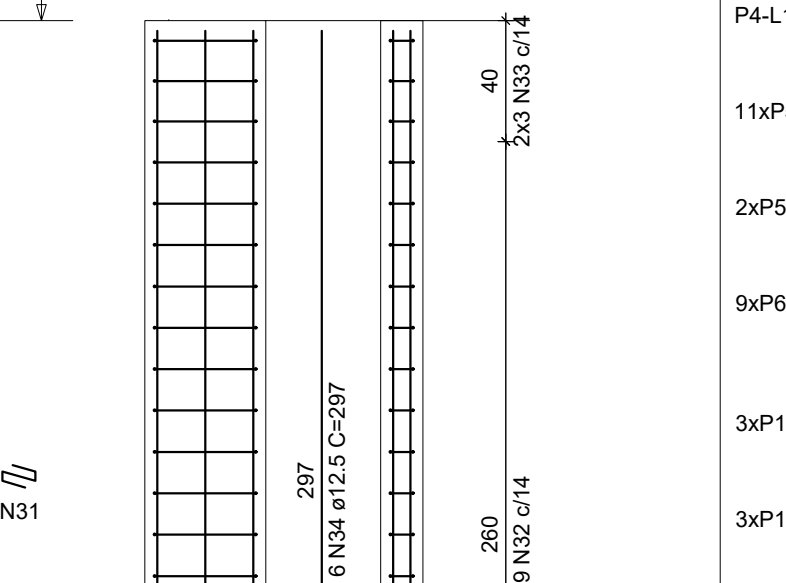
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ESC 1:25



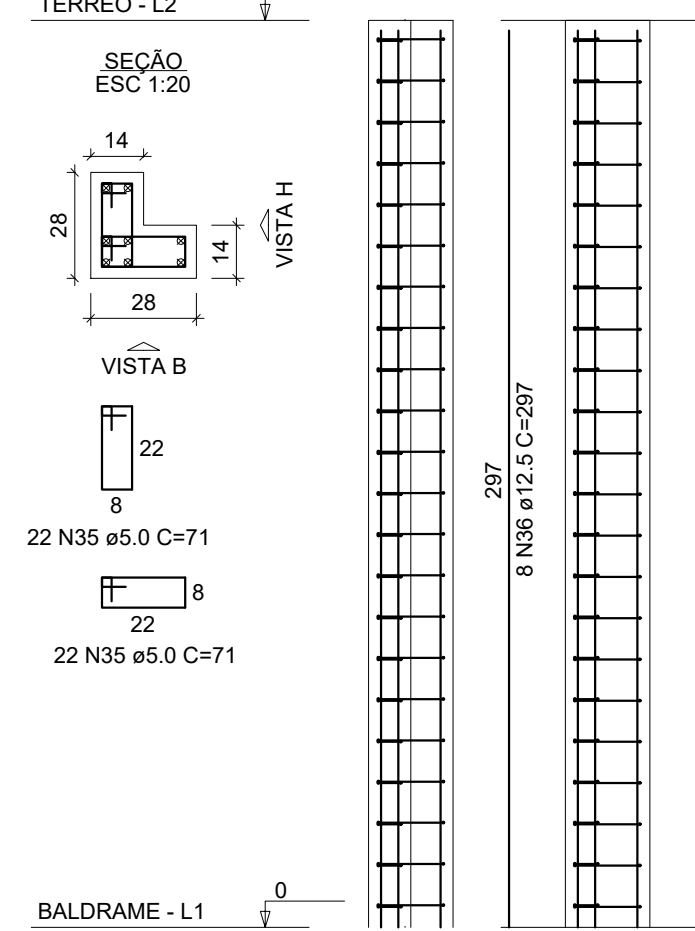
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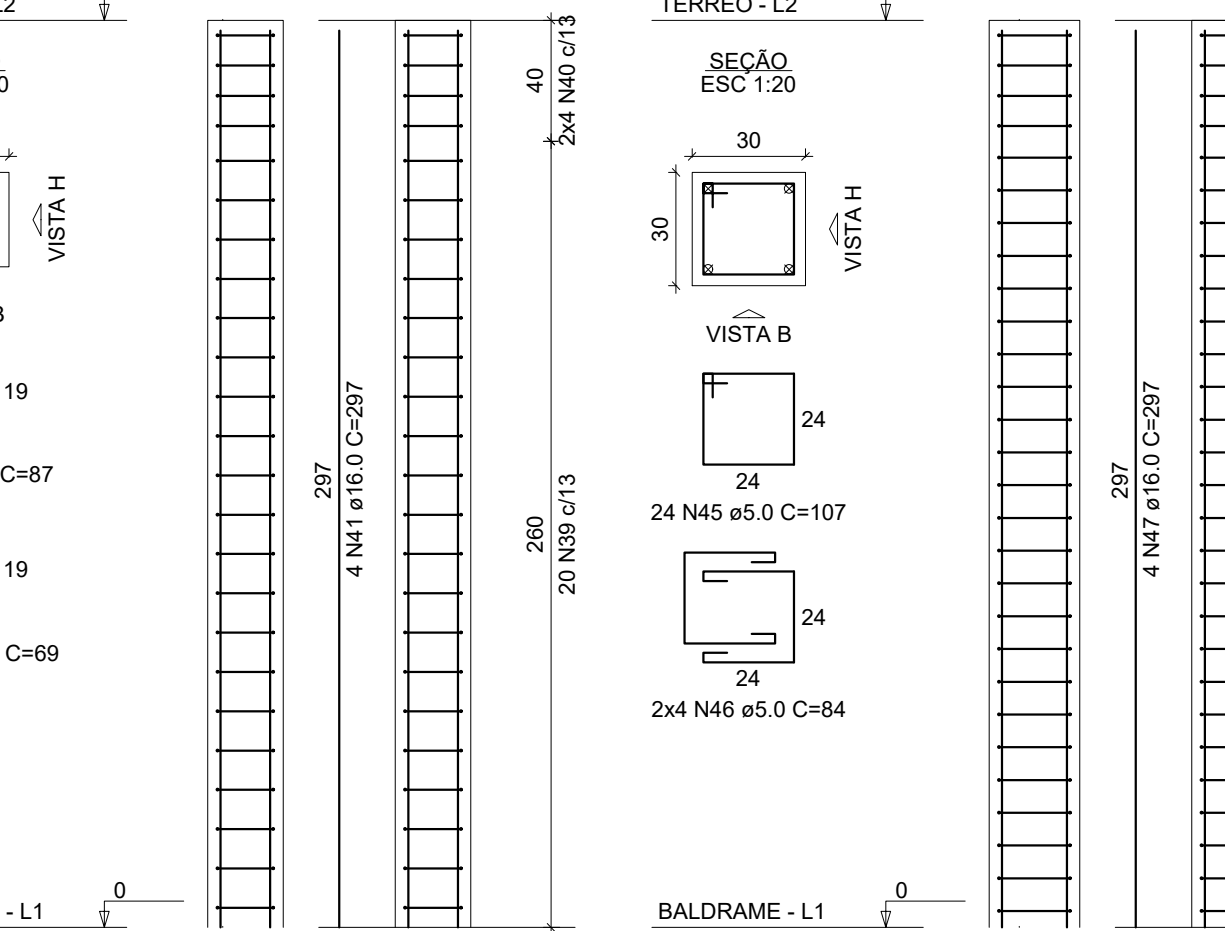
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ESC 1:25



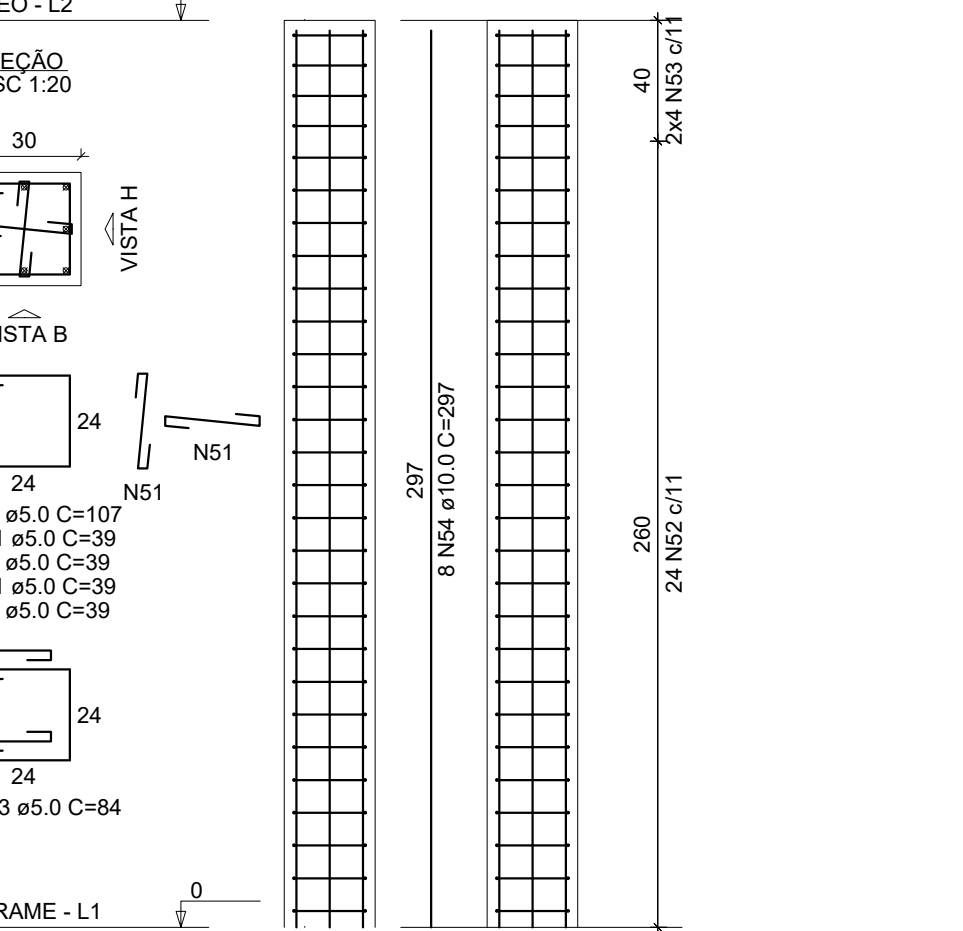
P17

ESC 1:25



P19

ESC 1:25



P21

ESC 1:25



RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)
V9	CA60	1	5,0	23	95	2185
	CA50	3	8,0	2	425	850
	CA60	2	12,5	1	150	150
V10	CA50	5	12,5	35	484	988
	CA60	8	10,0	2	246	492
	CA50	9	10,0	2	839	1678
V11	CA60	11	5,0	21	95	1995
	CA50	13	8,0	2	150	300
	CA60	12	6,3	1	154	154
	CA50	15	8,0	1	214	214
	CA60	16	10,0	2	332	664
V12	CA60	19	5,0	47	95	4465
	CA50	20	8,0	2	150	300
	CA60	21	6,3	4	219	876
	CA50	22	8,0	2	150	300
	CA60	23	8,0	2	64	128
	CA50	24	10,0	2	355	710
	CA60	25	10,0	2	552	1104
	CA50	26	10,0	2	270	540
	CA60	27	16,0	2	449	898
	CA50	28	5,0	23	95	2175
	CA60	29	5,0	2	405	810
	CA50	30	8,0	2	64	128
	CA60	31	12,5	2	335	670
	CA50	32	12,5	2	450	900
V13	CA60	34	5,0	22	95	2090
	CA50	35	5,0	2	397	794
	CA60	36	6,3	2	142	284
	CA50	37	8,0	2	72	144
	CA60	38	8,0	2	128	256
	CA50	39	12,5	2	332	664
	CA60	40	12,5	2	407	814
V14	CA60	42	5,0	4	107	428
	CA50	43	8,0	11	108	1188
	CA60	44	12,5	4	415	1660
	CA50	45	12,5	1	531	531
	CA60	46	12,5	4	590	2360
	CA50	47	12,5	4	697	2788
	CA60	48	5,0	33	127	4191
	CA50	49	5,0	2	580	1160
	CA60	50	10,0	6	440	2640
	CA50	51	10,0	4	583	2332
	CA60	52	10,0	84	338	28392
	CA50	53	5,0	20	95	1900
	CA60	54	5,0	2	142	284
	CA50	55	8,0	2	184	368
	CA60	56	8,0	1	247	247
	CA50	57	8,0	2	518	1036
	CA60	58	10,0	1	294	294
	CA50	59	10,0	2	946	1892
	CA60	60	5,0	40	95	3800
	CA50	61	5,0	2	200	400
	CA60	62	5,0	2	159	318
	CA50	63	5,0	2	64	128
	CA60	64	10,0	3	340	1020
	CA50	65	10,0	2	559	1118
	CA60	66	16,0	2	305	610
	CA50	67	16,0	2	438	876

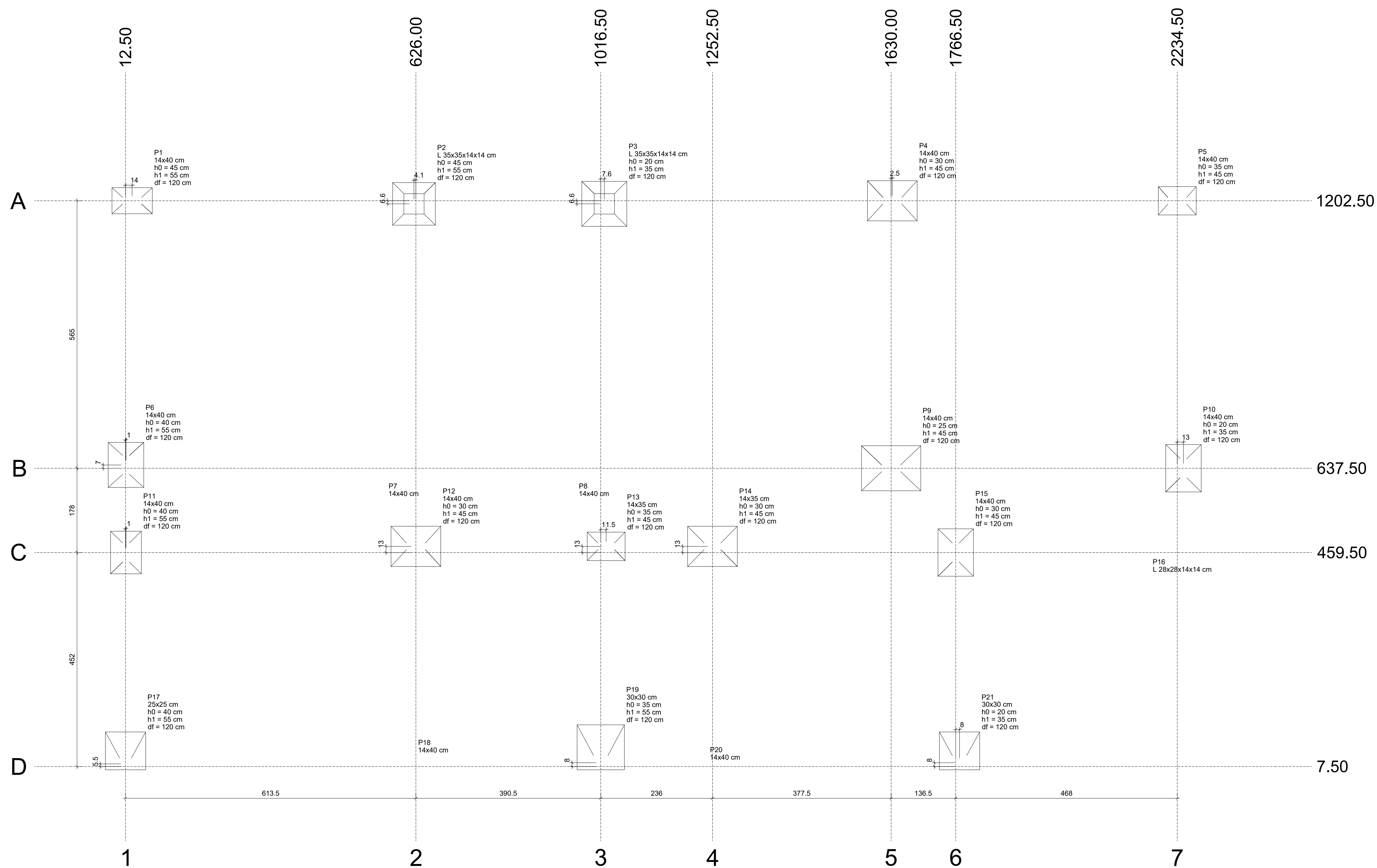
RESUMO DO AÇO

AÇO	DIAM (mm)	C TOTAL (m)	PESO + 10% (kg)
CA50	6,3	47,2	12,7
	8,0	77,1	33,4
	10,0	153,5	104,1
	12,5	123,4	130,7
	16,0	43,3	75,1
CA60	5,0	381,9	61,4
PESO TOTAL (kg)			356,1
CA50			356,1
CA60			61,4

Volume de concreto (C-30) = 3,64 m³
Área de forma = 58,36 m²

RELAÇÃO DO AÇO

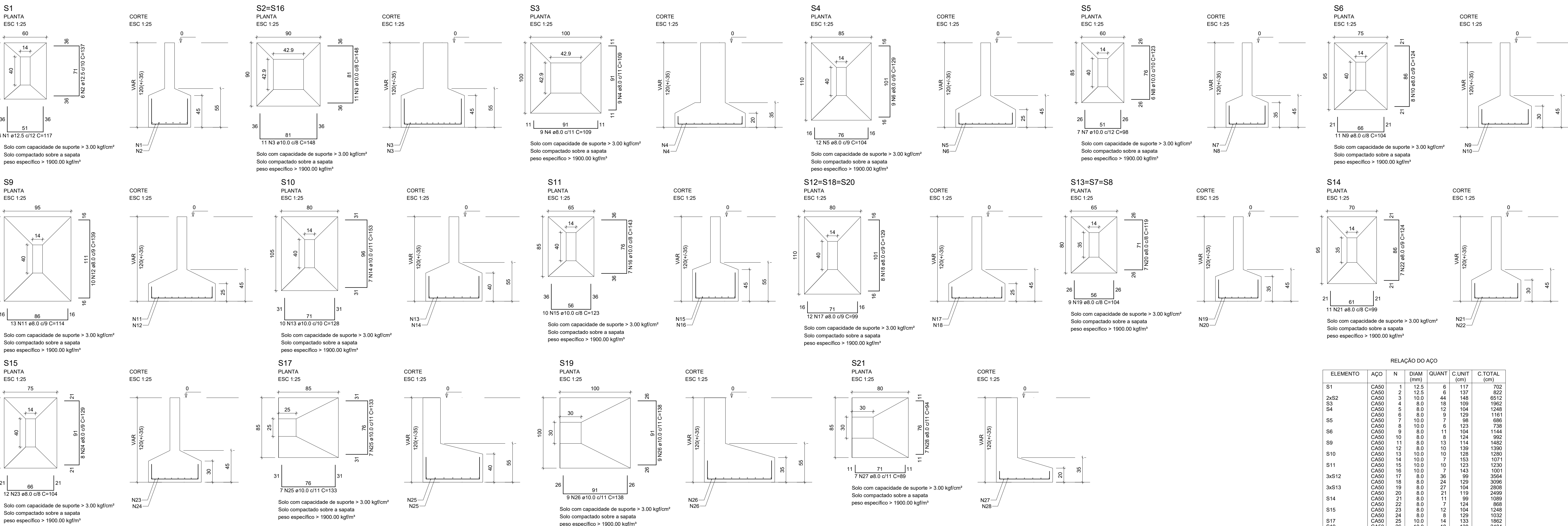
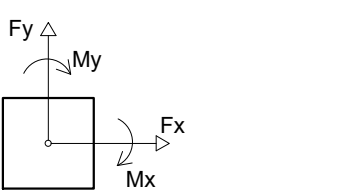
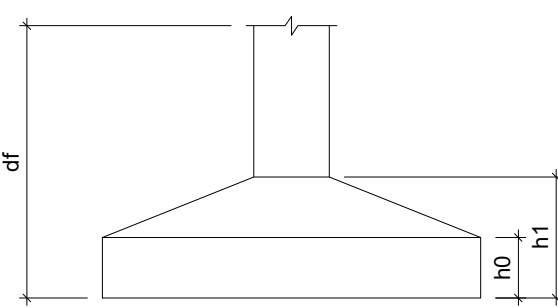
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)
2xP2-L2	CA60	1	5,0	88	95	7460
	CA50	2	16,0	18	297	4752
2xP2-L1	CA60	3	5,0	38	95	3605
	CA50	4	16,0	18	297	4752
P4-L1	CA60	5	5,0	10	23	230
	CA50	6	5,0	7	95	665
11xP5-L2	CA60	7	5,0	2	95	190
	CA60	8	12,5	6	175	1050
	CA50	9	12,5	48	23	1113
	CA60	10	5,0	209	95	19855
2xP5-L1	CA50	11	5,0	60	23	1380
	CA60	12	12,5	88	297	26136
	CA50	13	5,0	40	95	3800
	CA60	14	5,0	14	95	1330
8xP6-L1	CA50	15	12,5	12	82	984
	CA60	16	15	125	16	175
	CA50	17	5,0	90	95	8550
	CA60	18	5,0	63	95	5985
3xP12-L2	CA50	19	12,5	12	82	984
	CA60	20	12,5	18	129	2322
	CA50	21	12,5	114	95	10830
	CA60	22	5,0	254	23	6072
3xP12-L1	CA50	23	5,0	36	62	2232
	CA60	24	5,0	14	297	14256
	CA50	25	5,0	90	23	2070
	CA60	26	5,0	21	95	1995
P15-L2	CA50	27	5,0	21	95	1995
	CA60	28	5,0	18	62	1116
	CA50	29	12,5	8	129	774
	CA60	30	12,5	48	175	8400
P16-L2	CA50	31	5,0	22	23	506
	CA60	32	5,0	19	95	1805
	CA50	33	5,0	6	62	372
	CA60	34	12,5	4	175	699
P16-L1	CA50	35	5,0	44	71	3122
	CA60	36	5,0	18	62	1116
	CA50	37	5,0	18	18	324
	CA60	38	5,0	9	175	1575
P17-L2	CA50	39	5,0	20	87	1740
	CA60	40	5,0	10	95	950
	CA50	41	16,0	4	297	1188
	CA60	42	16,0	8	297	2376
P17-L1	CA50	43	5,0	8	60	480
	CA60	44	16,0	8	297	2376
	CA50	45	5,0	24	107	2568
	CA60	46	5,0	12	95	1140
P19-L1	CA50	47	16,0	4	297	1188
	CA60	48	16,0	8	297	2376
	CA50	49	5,0	16	84	1344
	CA60	50	16,0	10	297	2970
P21-L2	CA50	51	5,0	56	30	1680
	CA60	52	5,0	28	95	2660
	CA50	53	5,0	8	64	512
	CA60	54	10,0	8	95	760
P21-L1	CA50	55	5,0	24	39	936
	CA60	56	10,0	10	95	950
	CA50	57	5,0	10	64	640
	CA60	58	10,0	10	95	950



Planta de localização
escala 1:50

Nome	Seção (cm)	X (cm)	Y (cm)	Carga Máx. (t)	Carga Mín. (t)	Pilar				Fundação				Lado B (cm)	Lado H (cm)	h0 / h1 (cm)	df (cm)
						Mx Máximo (kgf.m)		My Máximo (kgf.m)		Fx Máximo (t)		Fy Máximo (t)					
						Positivo	Negativo	Positivo	Negativo	Positivo	Negativo	Positivo	Negativo				
P1	14x40	26.50	1202.50	11.1	10.1	0	0	0	0	0	0	0	0	85	45	55	120
P2	L 35x35x14x14	626.50	1202.50	17.6	16.1	0	0	0	0	-1.0	-0.1	0.7	0.0	95	45	85	120
P3	L 35x35x14x14	1017.50	1202.50	18.2	17.5	0	0	0	0	0.3	0.0	1.9	0.0	95	45	20	35
P4	14x40	1632.47	1202.50	22.1	20.1	0	0	0	0	0.0	-0.8	1.0	0.0	95	105	20	35
P5	14x40	2234.50	1202.50	10.7	9.7	0	0	0	0	1.0	0.0	0.8	0.0	60	80	35	45
P6	14x40	13.50	644.50	17.3	12.8	0	0	0	0	0.0	-0.7	0.0	-2.4	75	95	40	85
P7	14x40	626.50	637.50	28.7	25.0	0	0	0	0	0.5	0.0	0.0	-1.7	0	0	0	120
P8	14x40	1030.50	637.50	22.9	20.7	0	0	0	0	2.2	0.0	0.0	-1.5	0	0	0	120
P9	14x40	1630.00	637.50	29.3	26.6	0	0	0	0	0.0	-2.0	0.0	-1.1	95	125	25	45
P10	14x40	2247.50	637.50	16.3	11.7	0	0	0	0	1.1	0.0	0.0	-2.2	75	100	20	35
P11	14x40	13.50	459.50	13.8	9.6	0	0	0	0	0.0	-0.6	0.1	-1.9	65	80	40	65
P12	14x40	626.00	472.50	19.9	17.9	0	0	0	0	0.0	-0.8	0.0	-0.4	85	105	30	45
P13	14x35	1030.50	472.50	11.4	10.1	0	0	0	0	0.5	0.0	0.3	-0.2	60	80	35	45
P14	14x35	1252.50	472.50	19.2	17.1	0	0	0	0	0.0	-0.9	0.0	-0.5	85	105	30	45
P15	14x40	1766.50	459.50	17.9	16.3	0	0	0	0	0.3	0.0	0.7	0.0	75	100	30	45
P16	L 28x28x14x14	2247.50	472.50	6.8	0.0	0	0	0	0	0.4	0.0	0.0	-1.3	0	0	0	120
P17	25x25	12.50	13.00	9.7	8.7	0	-1700	0	0	0.1	0.0	1.0	0.0	80	85	40	85
P18	14x40	626.50	7.50	17.4	15.30	0	-5100	0	0	1.1	0.0	1.8	0.0	95	125	30	95
P19	30x30	1016.50	15.50	13.6	12.1	0	-2600	0	0	0.5	-0.2	0.0	-0.6	95	100	35	55
P20	14x40	1252.50	7.50	12.7	11.4	0	-2700	0	0	0.0	-1.3	1.4	0.0	80	110	35	55
P21	30x30	1774.50	15.50	9.5	8.4	0	-1200	0	0	0.3	0.0	0.3	-0.4	80	85	20	35
P22																	

Os esforços indicados nesta tabela são os valores máximos obtidos pela envoltória de todas as combinações definidas para as fundações. Para análises complementares, deve-se consultar o relatório de esforços de fundação, que apresenta os valores calculados para cada combinação.



RELAÇÃO DO AÇO						
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.U.MET (cm)	C.TOTAL (cm)
S1	CA50	1	12.5	6	117	702
S2	CA50	2	12.5	6	137	822
2xS2	CA50	4	10.0	44	148	6512
S3	CA50	8	8.0	18	109	1962
S4	CA50	6	8.0	12	104	1248
S5	CA50	6	8.0	9	120	1161
S6	CA50	7	10.0	7	98	686
S7	CA50	8	10.0	6	123	738
S8	CA50	9	8.0	11	104	1144
S9	CA50	10	8.0	8	124	992
S10	CA50	11	8.0	13	114	1482
S11	CA50	12	8.0	10	139	1390
S12	CA50	13	10.0	10	123	1230
S13	CA50	14	10.0	7	143	1001
S14	CA50	15	10.0	10	123	1230
S15	CA50	16	8.0	36	99	3064
S16	CA50	17	8.0	21	119	2499
S17	CA50	18	8.0	24	129	3096
S18	CA50	19	8.0	27	104	2808
S19	CA50	20	8.0	21	119	2499
S20	CA50	21	8.0	11	99	1089
S21	CA50	22	8.0	7	124	868
S22	CA50	23	8.0	12	104	1248
S23	CA50	24	8.0	8	129	1032
S24	CA50	25	10.0	14	133	1862
S25	CA50	26	10.0	16	138	2448
S26	CA50	27	8.0	7	89	623
S27	CA50	28	8.0	7	84	608

RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	288.6	116.8
	10.0	198.6	114.4
	12.5	15.2	18.1
PESO TOTAL (kg)			
CA50		247.1	

Volume de concreto (C-25) = 6.17 m³
Área de forma = 24.03 m²



PREFEITURA MUNICIPAL DE SÃO MATEUS
ADM 2012/2024

SECRETARIA MUNICIPAL DE EDUCAÇÃO

PROJETO ESTRUTURAL DE REFORMA E AMPLIAÇÃO

ESCOLA MUNICIPAL DE ENSINO FUNDAMENTAL "SANTA TEREZINHA"

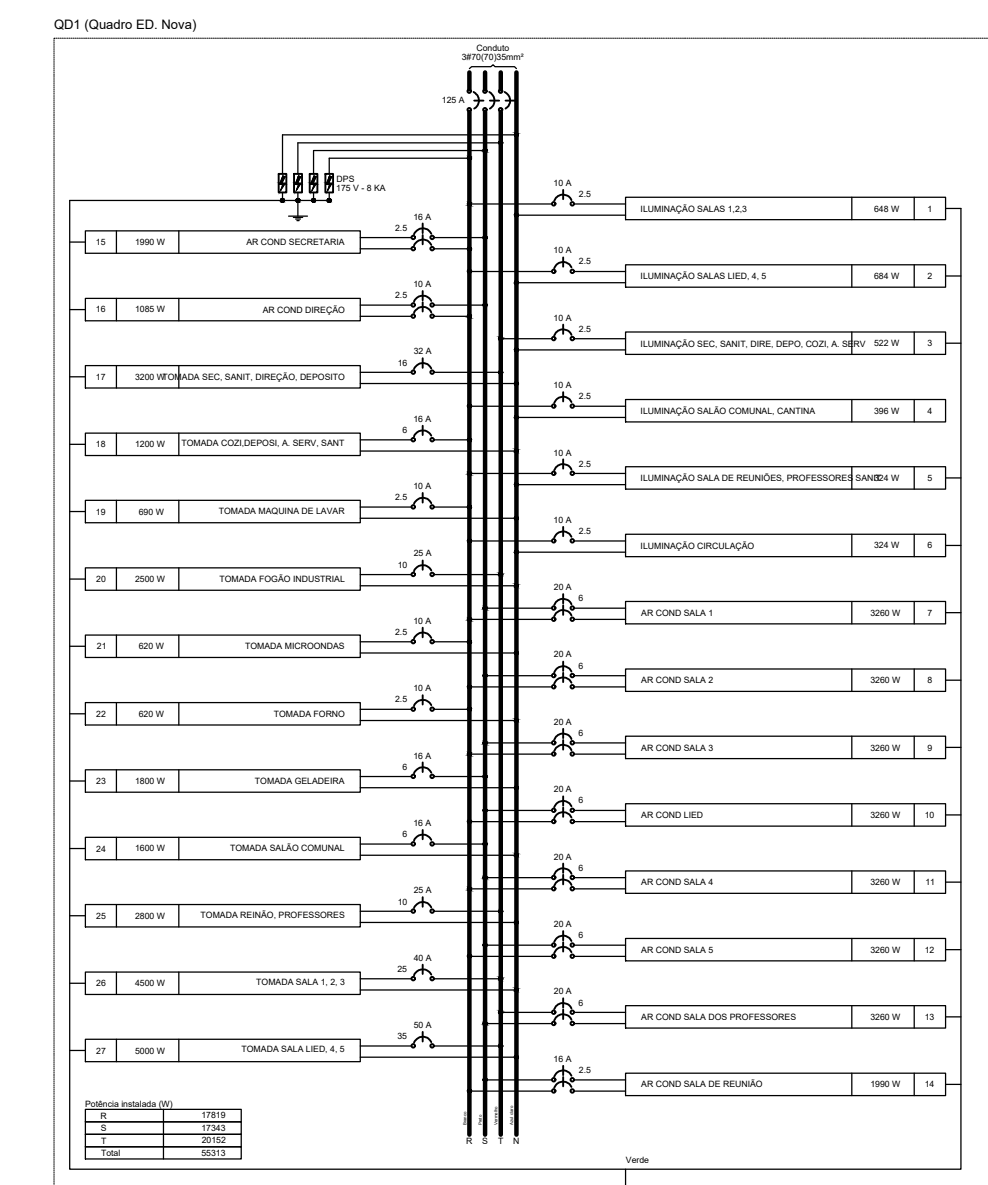
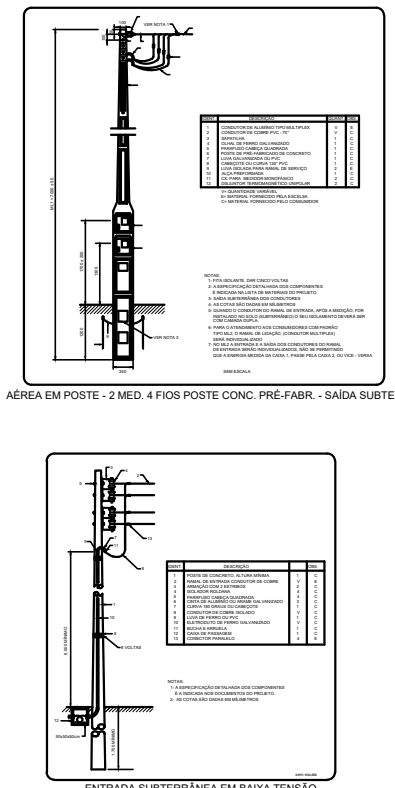
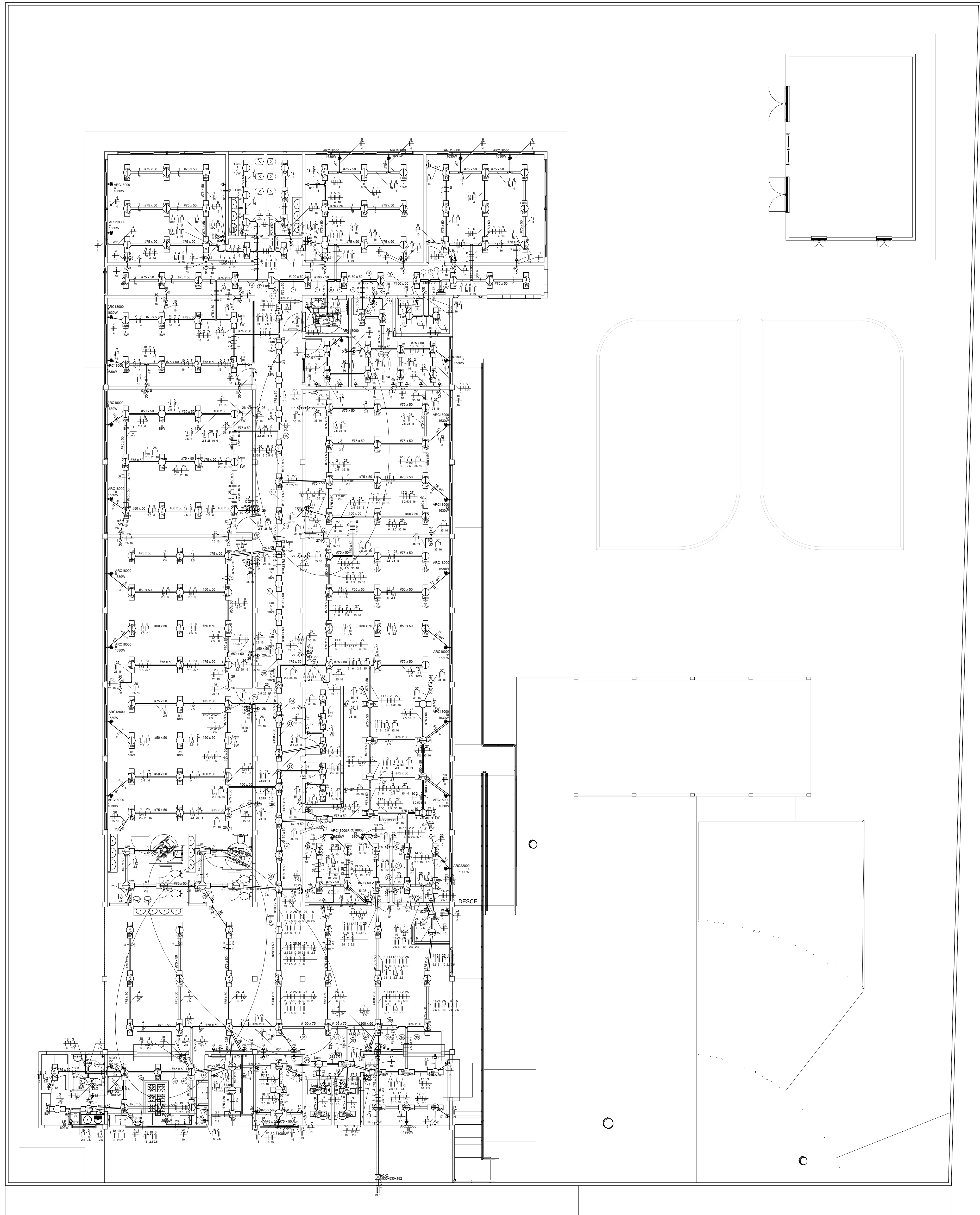
TERMO DE EMPENHO

TERMO DE EMPENHO

TERMO DE EMPENHO

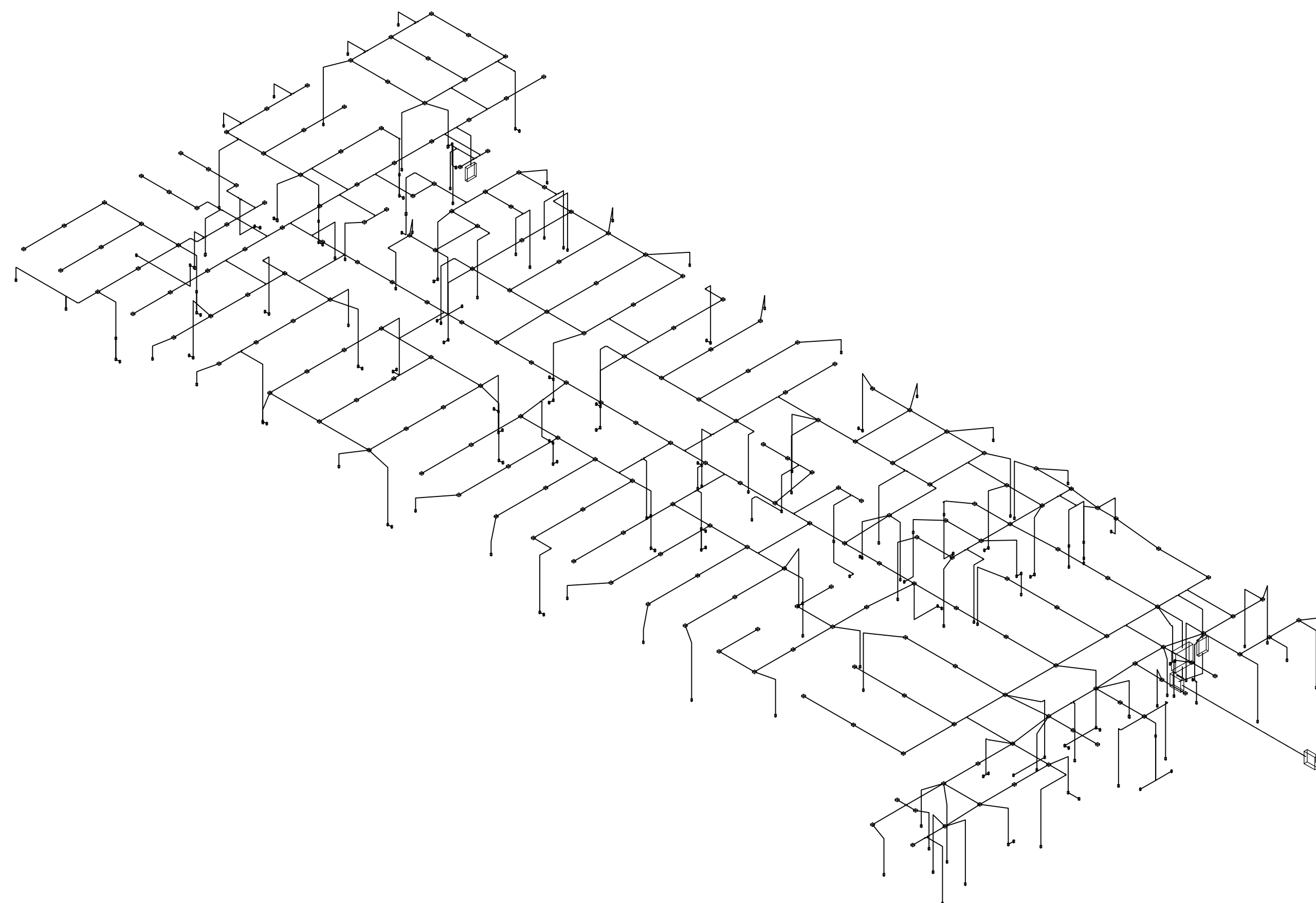
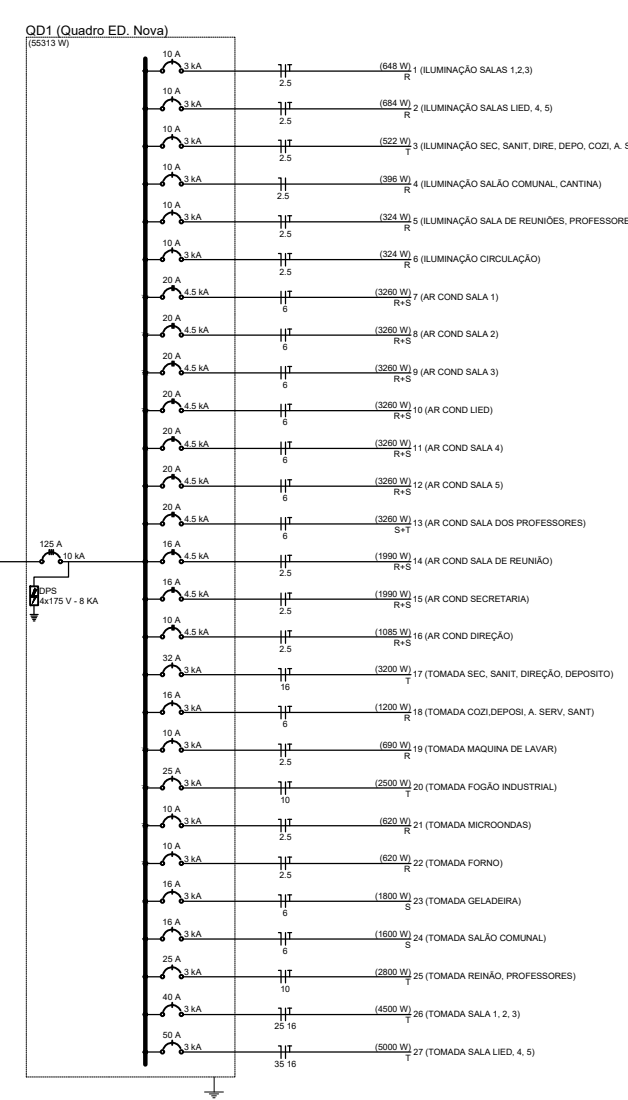
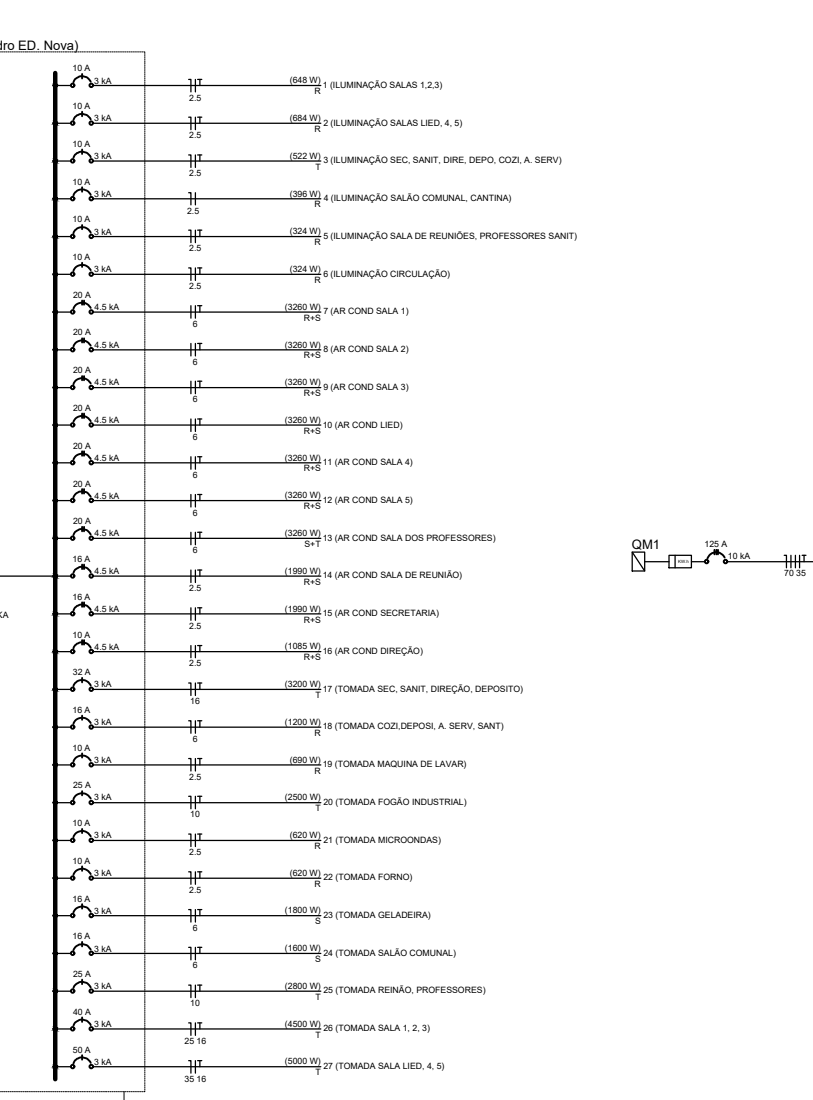
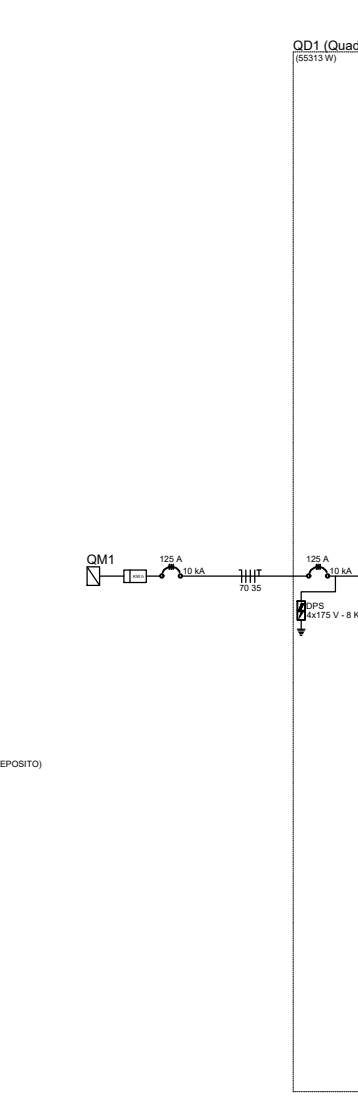
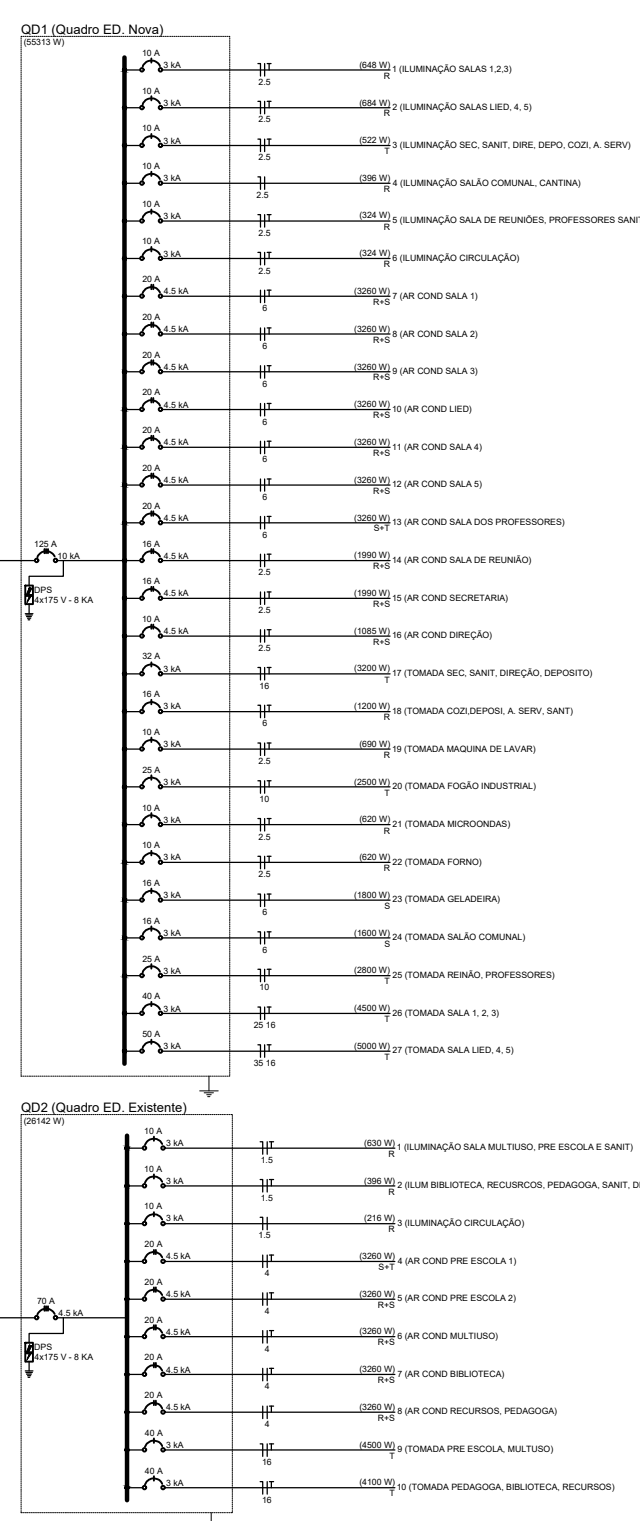
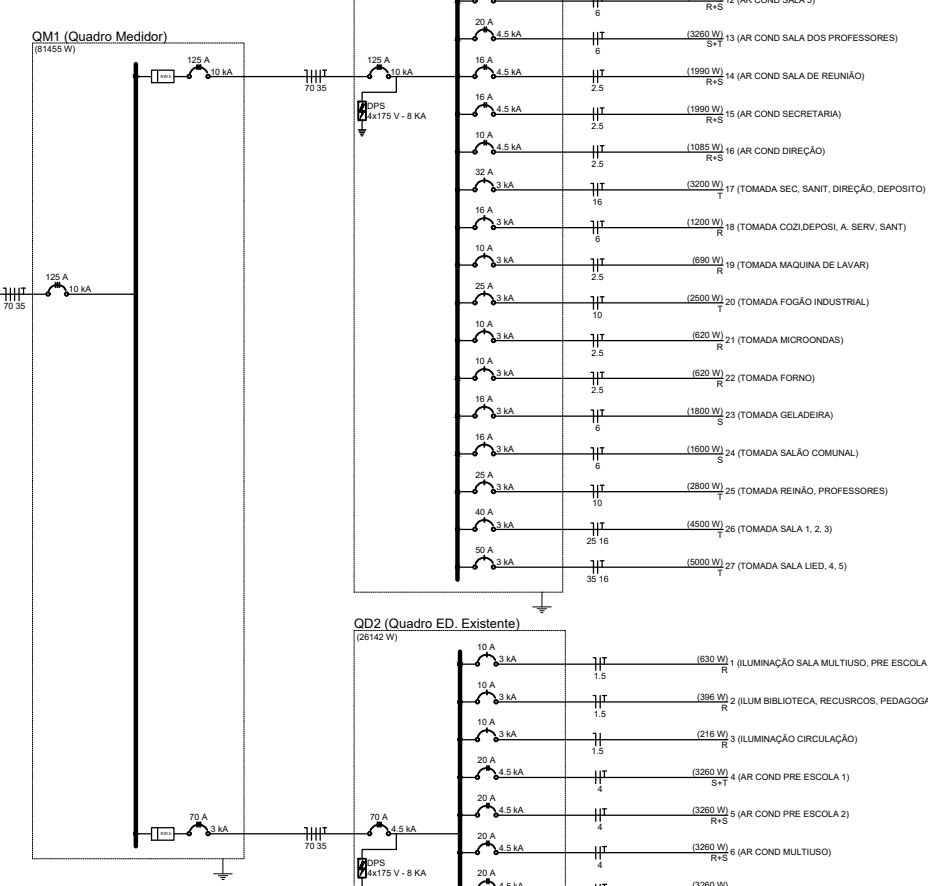
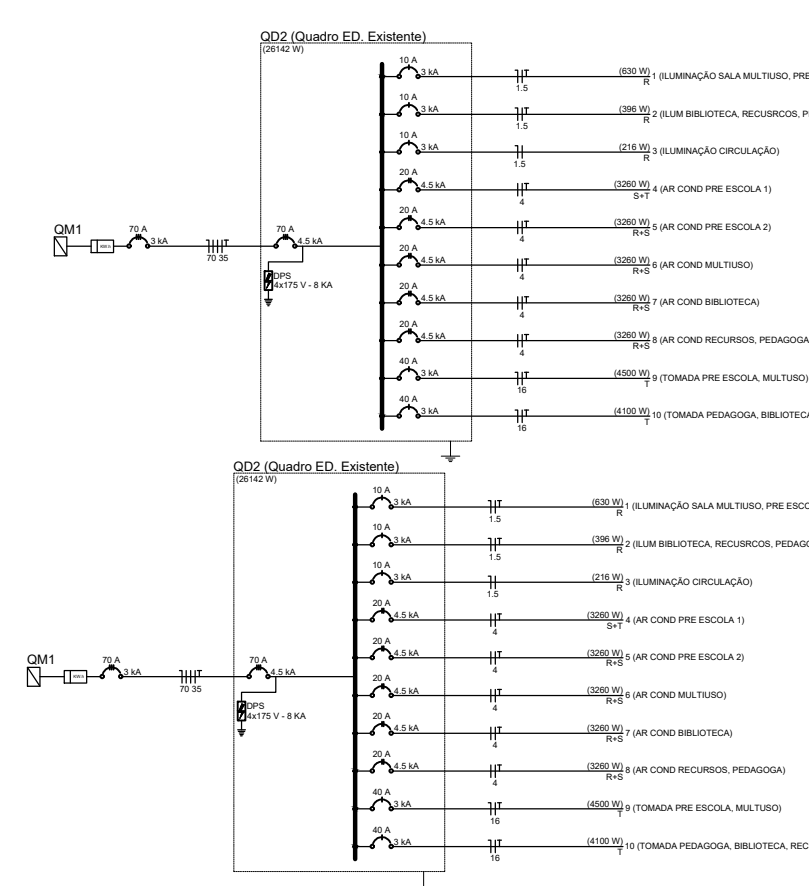
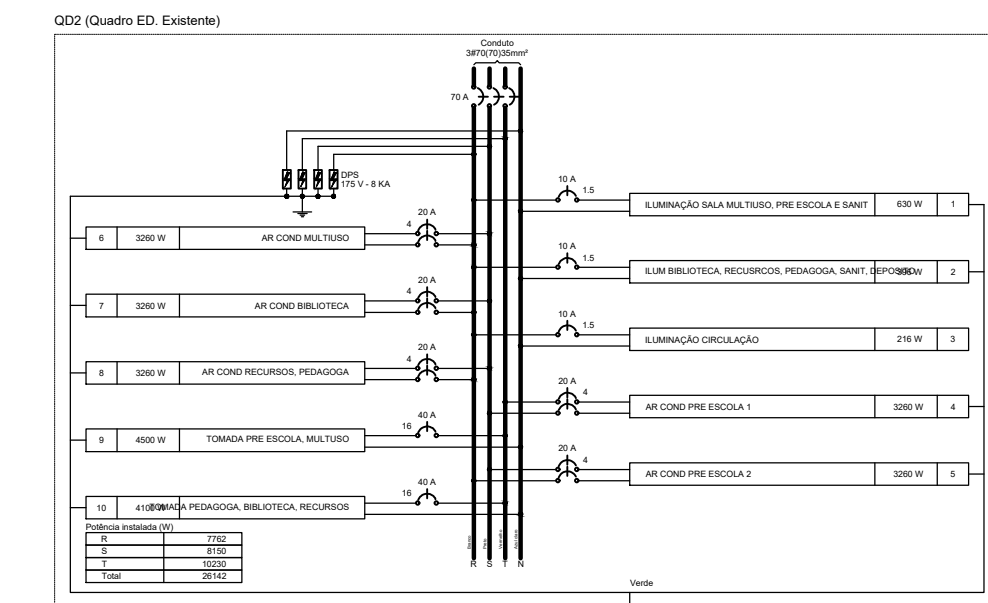
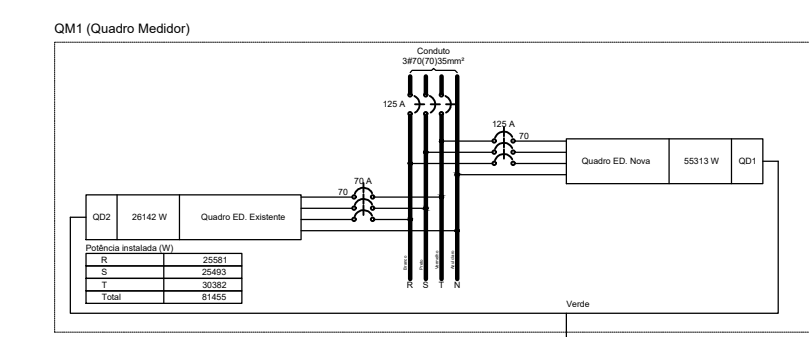
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TERMO DE EMPENHO



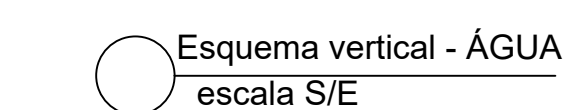
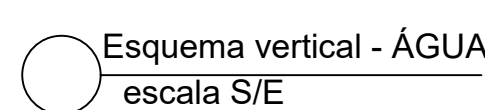
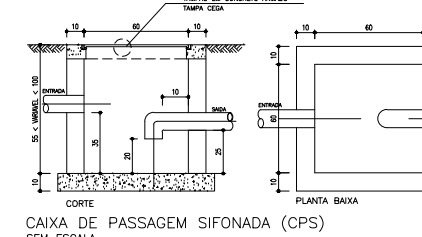
Quantidade	Descrição	Frequência	Tempo	Pot. total	Pot. 10	Pot. 5	Pot. 1	Demanda Total	Demanda R	Demanda S	Demanda T	Apaga (ou) Contato
001	Quarto ED Nova	3F-10/1	300000 V	55113	17810	17383	20102	56816	16384	16622	13848	75 135
002	Quarto ED Externo	3F-10/1	300000 V	25142	7762	8150	11226	26523	8584	8286	8551	75 135

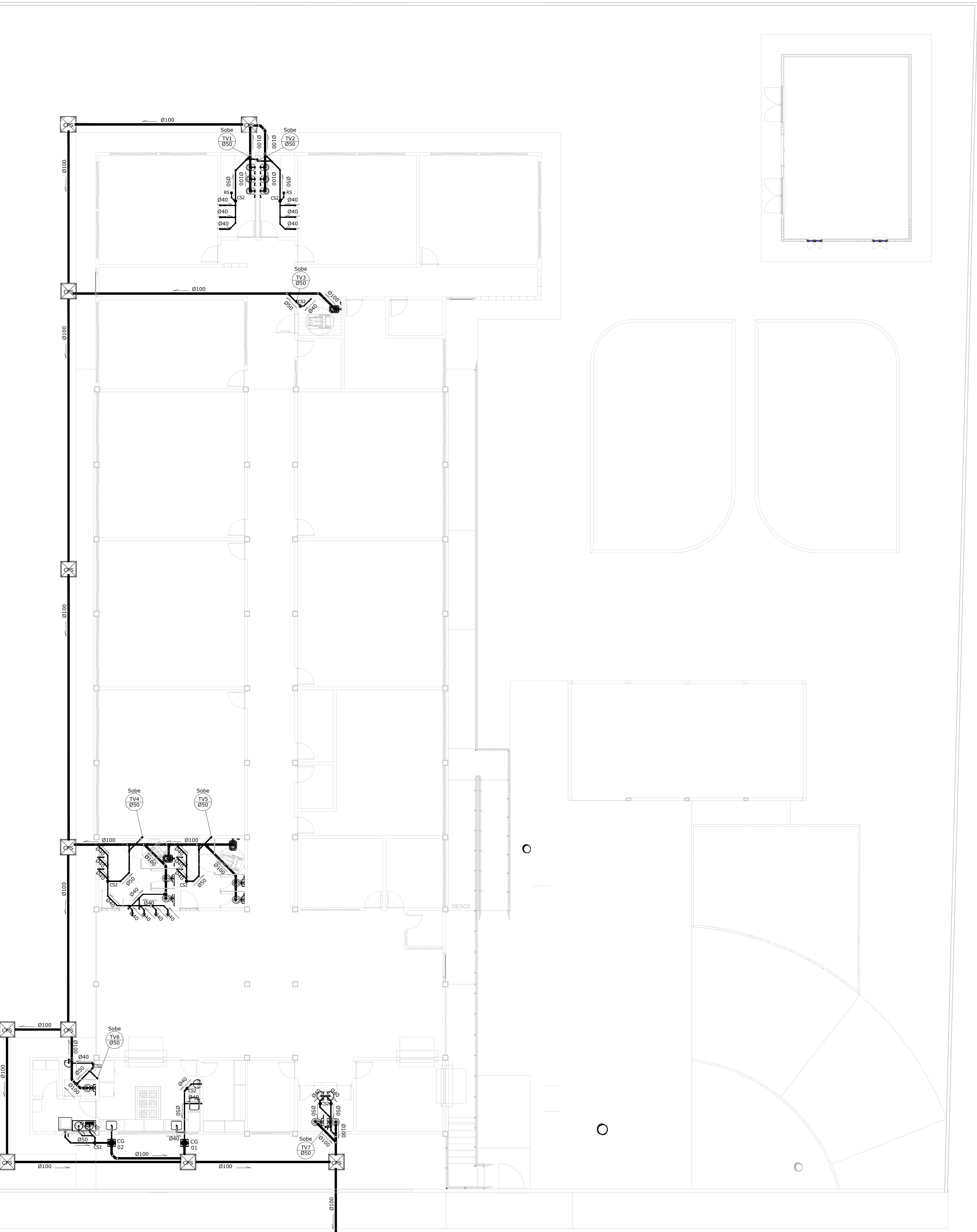
Quantidade	Descrição	Frequência	Tempo	Pot. total	Pot. 10	Pot. 5	Pot. 1	Demanda Total	Demanda R	Demanda S	Demanda T	Apaga (ou) Contato
001	Quarto ED Nova	3F-10/1	300000 V	55113	17810	17383	20102	56816	16384	16622	13848	75 135
002	Quarto ED Externo	3F-10/1	300000 V	25142	7762	8150	11226	26523	8584	8286	8551	75 135



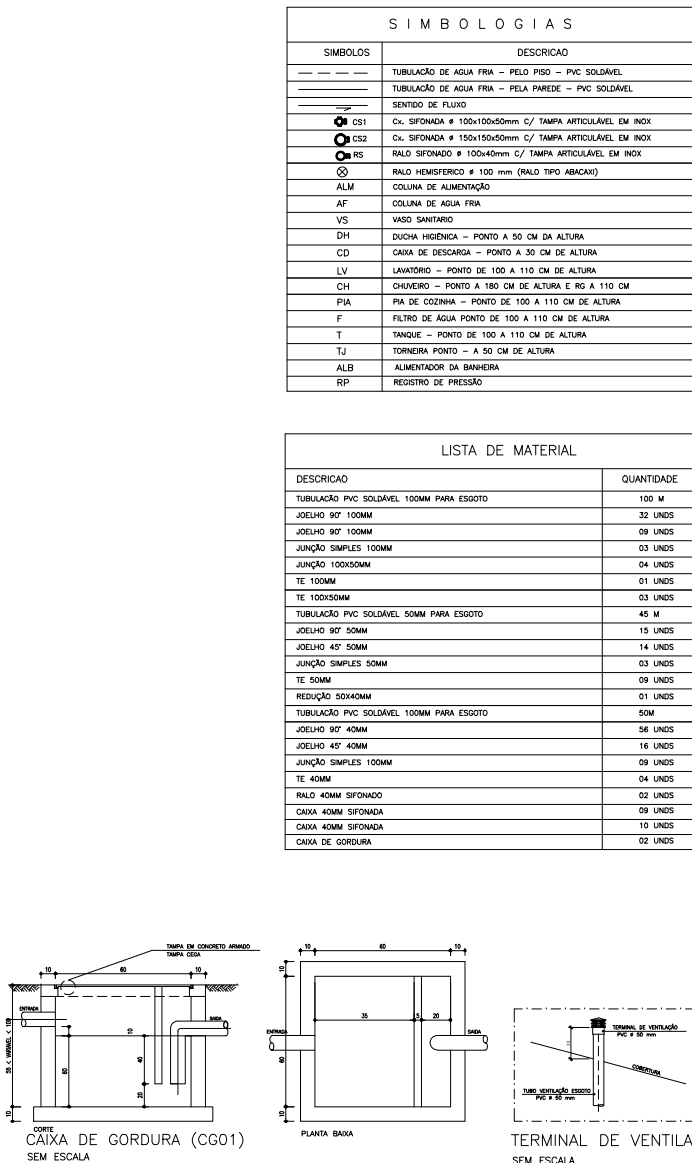
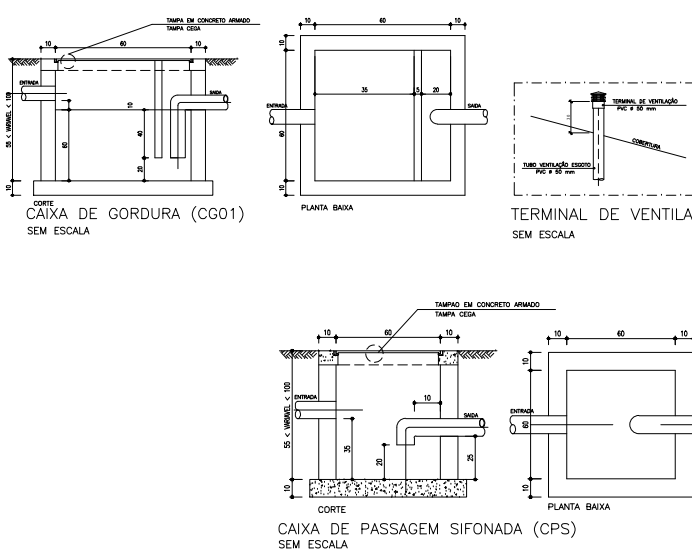
ESQUEMA ISOMÉTRICO DE FIAÇÃO
ESCALA : 1/25

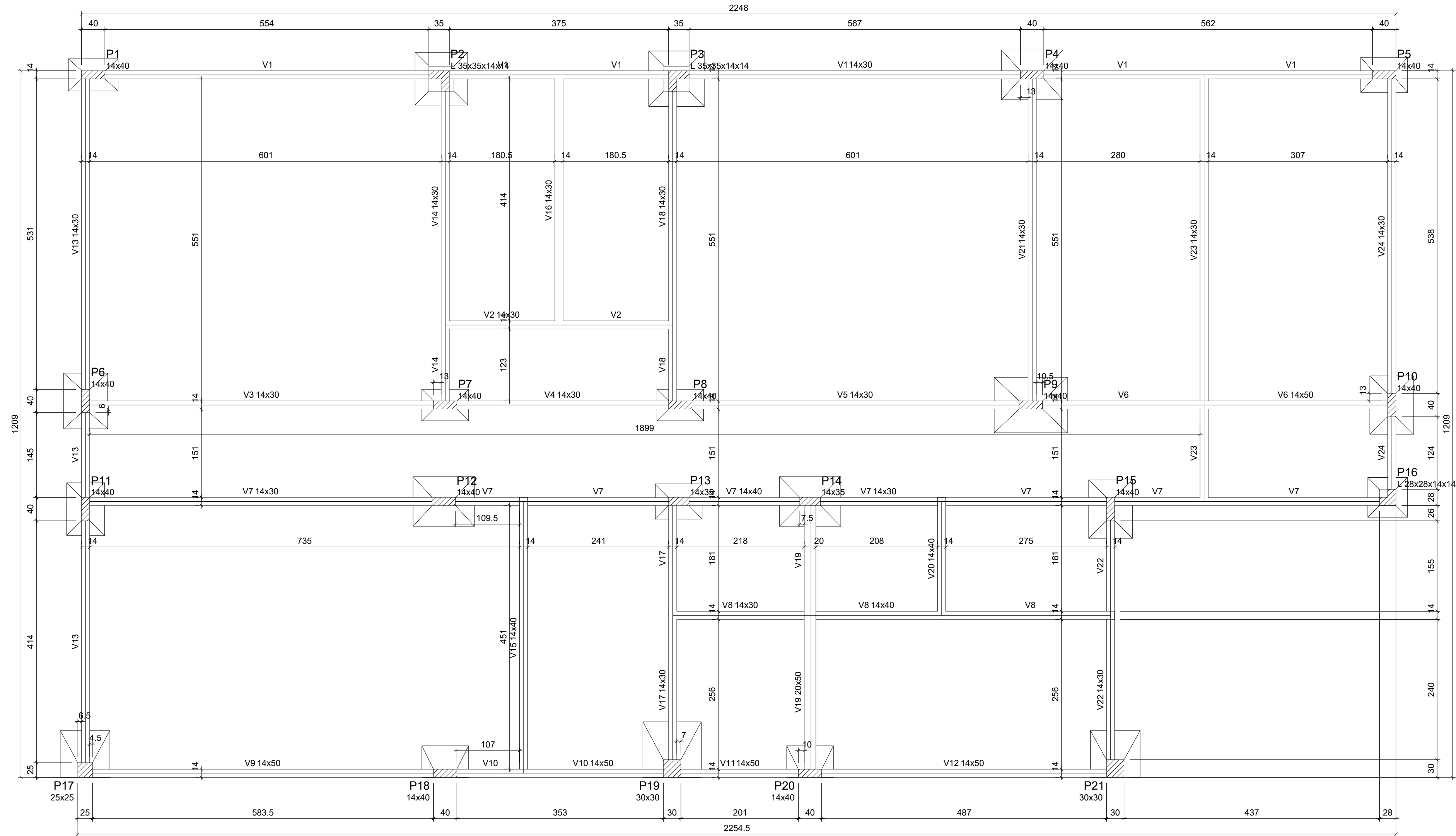
Quantidade	Descrição	Frequência	Tempo	Pot. total	Pot. 10	Pot. 5	Pot. 1	Demanda Total	Demanda R	Demanda S	Demanda T	Apaga (ou) Contato
001	Quarto ED Nova	3F-10/1	300000 V	55113	17810	17383	20102	56816	16384	16622	13848	75 135
002	Quarto ED Externo	3F-10/1	300000 V	25142	7762	8150	11226	26523	8584	8286	8551	75 135

[illegible]



ESCALA : 1/25

[illegible][illegible]



Forma do pavimento BALDRAME (Nível 0)

escala 1:50

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	14x30	0	0
V2	14x30	0	0
V3	14x30	0	0
V4	14x30	0	0
V5	14x30	0	0
V6	14x50	0	0
V7	14x30	0	0
V8	14x30	0	0
V9	14x50	0	0
V10	14x50	0	0
V11	14x50	0	0
V12	14x50	0	0
V13	14x30	0	0
V14	14x30	0	0
V15	14x40	0	0
V16	14x30	0	0
V17	14x30	0	0
V18	14x30	0	0
V19	20x50	0	0
V20	14x40	0	0
V21	14x30	0	0
V22	14x30	0	0
V23	14x30	0	0
V24	14x30	0	0

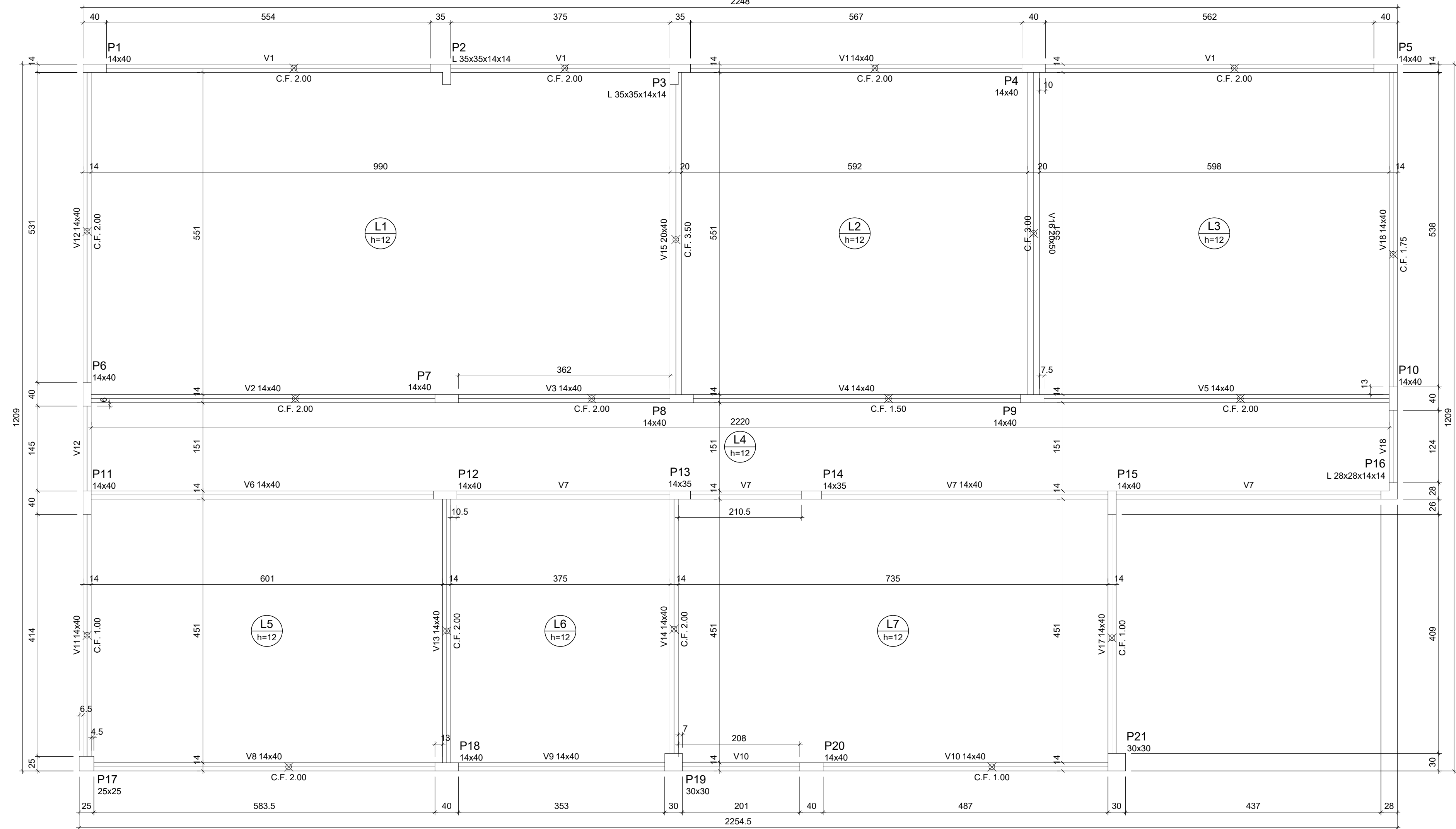
Características dos materiais		
Elemento	fck (kgf/cm²)	Ecs (kgf/cm³)
Vigas	300	268384
Pilares	300	268384
Solapas	250	241500

Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	14x40	0	0
P2	L 35x35x14x14	0	0
P3	L 35x35x14x14	0	0
P4	14x40	0	0
P5	14x40	0	0
P6	14x40	0	0
P7	14x40	0	0
P8	14x40	0	0
P9	14x40	0	0
P10	14x40	0	0
P11	14x40	0	0
P12	14x40	0	0
P13	14x35	0	0
P14	14x35	0	0
P15	14x40	0	0
P16	L 28x28x14x14	0	0
P17	25x25	0	0
P18	14x40	0	0
P19	30x30	0	0
P20	14x40	0	0
P21	30x30	0	0

Legenda dos pilares	
	Pilar que passa
	Pilar com mudança de seção

Legenda das vigas e paredes	
	Viga



Forma do pavimento TERREO (Nível 300)

escala 1:50

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	14x40	0	300
V2	14x40	0	300
V3	14x40	0	300
V4	14x40	0	300
V5	14x40	0	300
V6	14x40	0	300
V7	14x40	0	300
V8	14x40	0	300
V9	14x40	0	300
V10	14x40	0	300
V11	14x40	0	300
V12	14x40	0	300
V13	14x40	0	300
V14	14x40	0	300
V15	20x40	0	300
V16	20x50	0	300
V17	14x40	0	300
V18	14x40	0	300

Lajes						
Dados				Sobrecarga (kgf/m²)		
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Peso próprio (kgf/m²)	Adicional Acidental Localizada
L1	Marcia	12	0	300	300	350 100 -
L2	Marcia	12	0	300	300	350 100 -
L3	Marcia	12	0	300	300	250 100 -
L4	Marcia	12	0	300	300	350 100 -
L5	Marcia	12	0	300	300	350 100 -
L6	Marcia	12	0	300	300	350 100 -
L7	Marcia	12	0	300	300	350 100 -

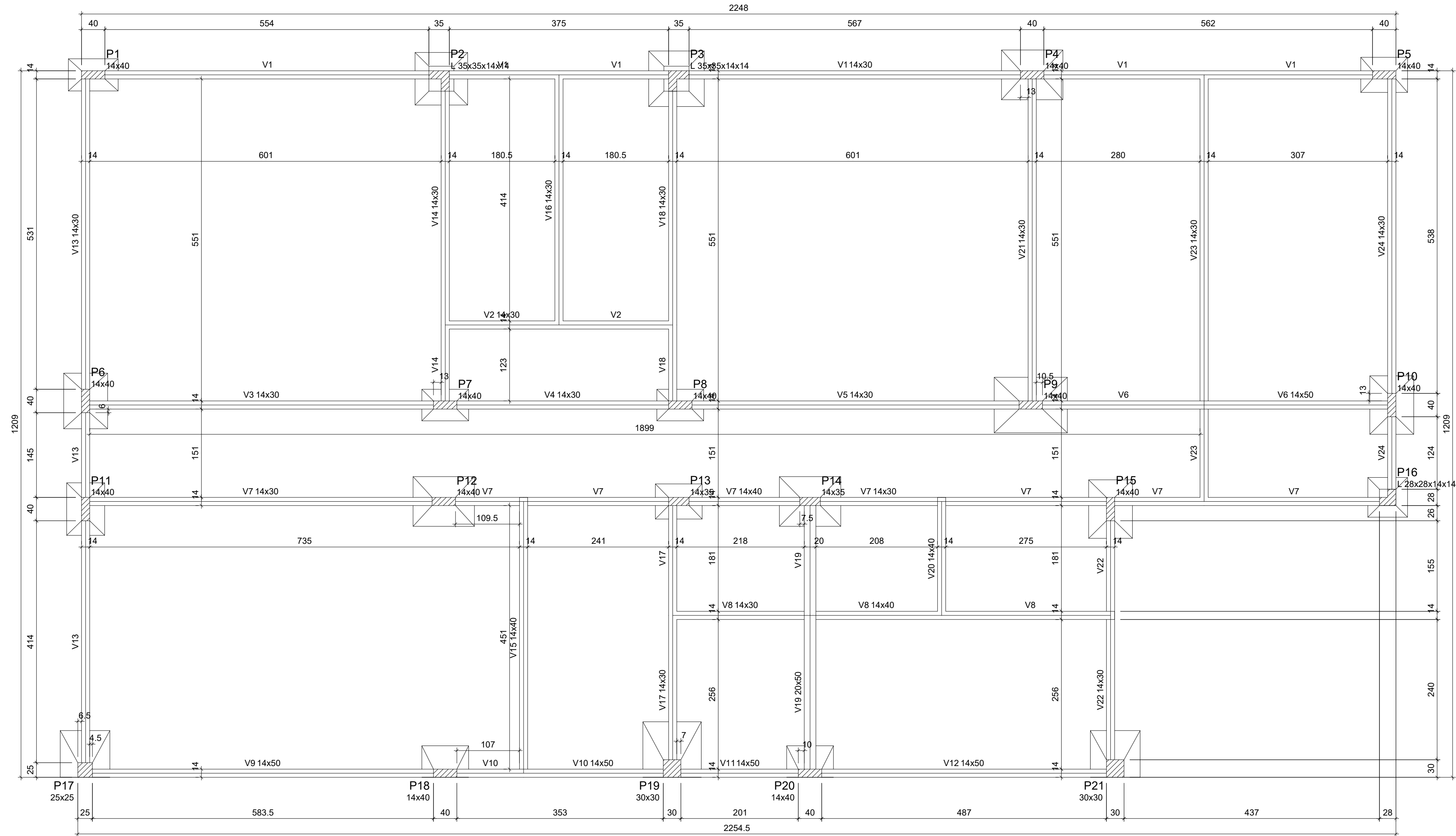
Características dos materiais		
Elemento	fck (kgf/cm²)	Ecs (kgf/cm³)
Vigas	300	268384
Pilares	300	268384
Lajes	250	241500

Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	14x40	0	300
P2	L 35x35x14x14	0	300
P3	L 35x35x14x14	0	300
P4	14x40	0	300
P5	14x40	0	300
P6	14x40	0	300
P7	14x40	0	300
P8	14x40	0	300
P9	14x40	0	300
P10	14x40	0	300
P11	14x40	0	300
P12	14x40	0	300
P13	14x35	0	300
P14	14x35	0	300
P15	14x40	0	300
P16	L 28x28x14x14	0	300
P17	25x25	0	300
P18	14x40	0	300
P19	30x30	0	300
P20	14x40	0	300
P21	30x30	0	300

Legenda dos pilares	
	Pilar que morre

Legenda das vigas e paredes	
	Viga



Forma do pavimento BALDRAME (Nível 0)

escala 1:50

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	14x30	0	0
V2	14x30	0	0
V3	14x30	0	0
V4	14x30	0	0
V5	14x30	0	0
V6	14x50	0	0
V7	14x30	0	0
V8	14x30	0	0
V9	14x50	0	0
V10	14x50	0	0
V11	14x50	0	0
V12	14x50	0	0
V13	14x30	0	0
V14	14x30	0	0
V15	14x40	0	0
V16	14x30	0	0
V17	14x30	0	0
V18	14x30	0	0
V19	20x50	0	0
V20	14x40	0	0
V21	14x30	0	0
V22	14x30	0	0
V23	14x30	0	0
V24	14x30	0	0

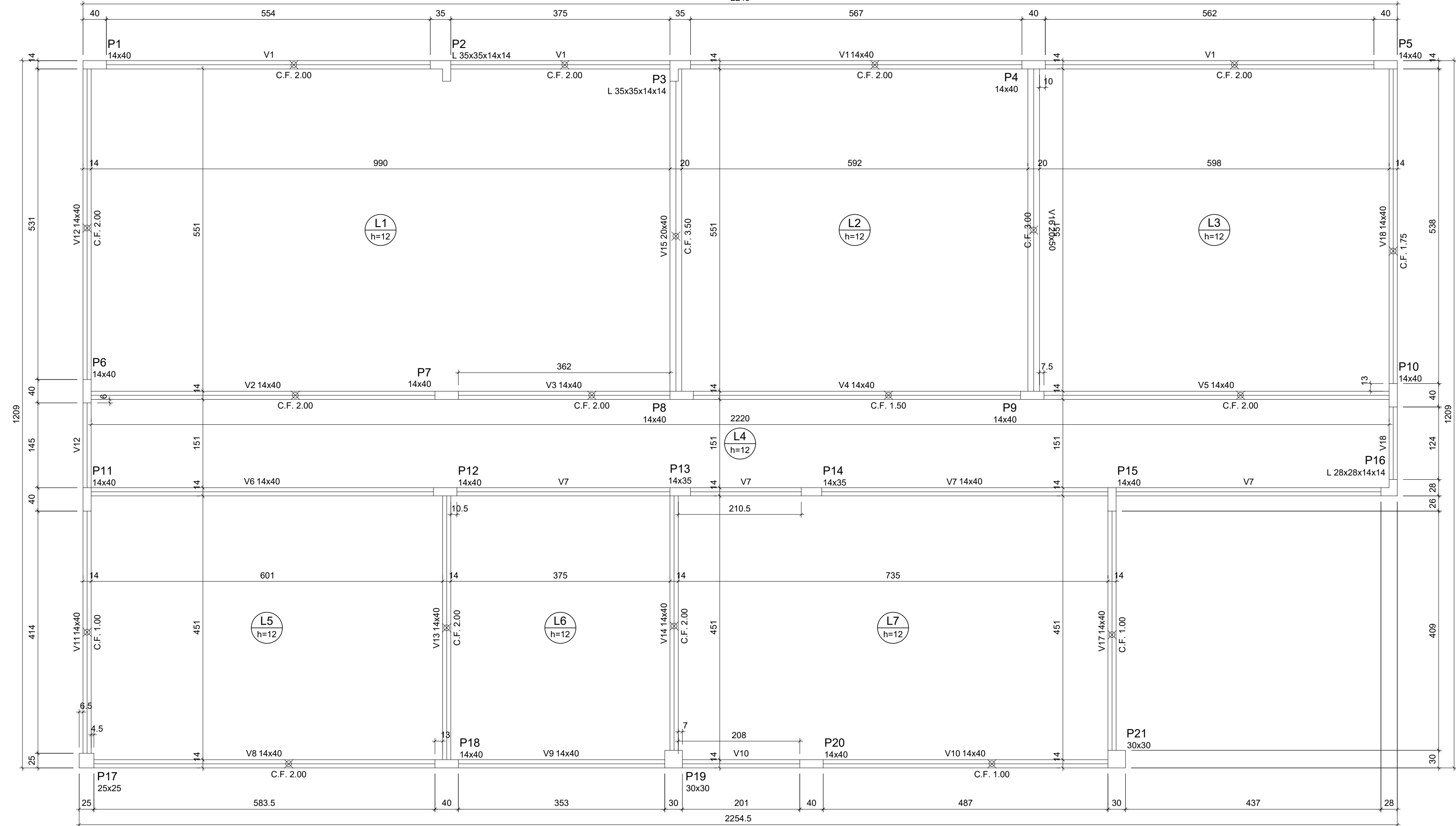
Características dos materiais		
Elemento	fck (kgf/cm²)	Ecs (kgf/cm³)
Vigas	300	268384
Pilares	300	268384
Solapas	250	241500

Dimensão máxima do agregado = 19 mm

Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	14x40	0	0
P2	L 35x35x14x14	0	0
P3	L 35x35x14x14	0	0
P4	14x40	0	0
P5	14x40	0	0
P6	14x40	0	0
P7	14x40	0	0
P8	14x40	0	0
P9	14x40	0	0
P10	14x40	0	0
P11	14x40	0	0
P12	14x40	0	0
P13	14x35	0	0
P14	14x35	0	0
P15	14x40	0	0
P16	L 28x28x14x14	0	0
P17	25x25	0	0
P18	14x40	0	0
P19	30x30	0	0
P20	14x40	0	0
P21	30x30	0	0

Legenda dos pilares	
	Pilar que passa
	Pilar com mudança de seção

Legenda das vigas e paredes	
	Viga



Forma do pavimento TERREO (Nível 300)

escala 1:50

Vigas			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	14x40	0	300
V2	14x40	0	300
V3	14x40	0	300
V4	14x40	0	300
V5	14x40	0	300
V6	14x40	0	300
V7	14x40	0	300
V8	14x40	0	300
V9	14x40	0	300
V10	14x40	0	300
V11	14x40	0	300
V12	14x40	0	300
V13	14x40	0	300
V14	14x40	0	300
V15	20x40	0	300
V16	20x50	0	300
V17	14x40	0	300
V18	14x40	0	300

Lajes						
Dados			Sobrecarga (kgf/m²)			
Nome	Tipo	Altura (cm)	Elevação (cm)	Nível (cm)	Peso próprio (kgf/m²)	Adicional Acidental Localizada
L1	Marcia	12	0	300	300	350 100 -
L2	Marcia	12	0	300	300	350 100 -
L3	Marcia	12	0	300	300	250 100 -
L4	Marcia	12	0	300	300	350 100 -
L5	Marcia	12	0	300	300	350 100 -
L6	Marcia	12	0	300	300	350 100 -
L7	Marcia	12	0	300	300	350 100 -

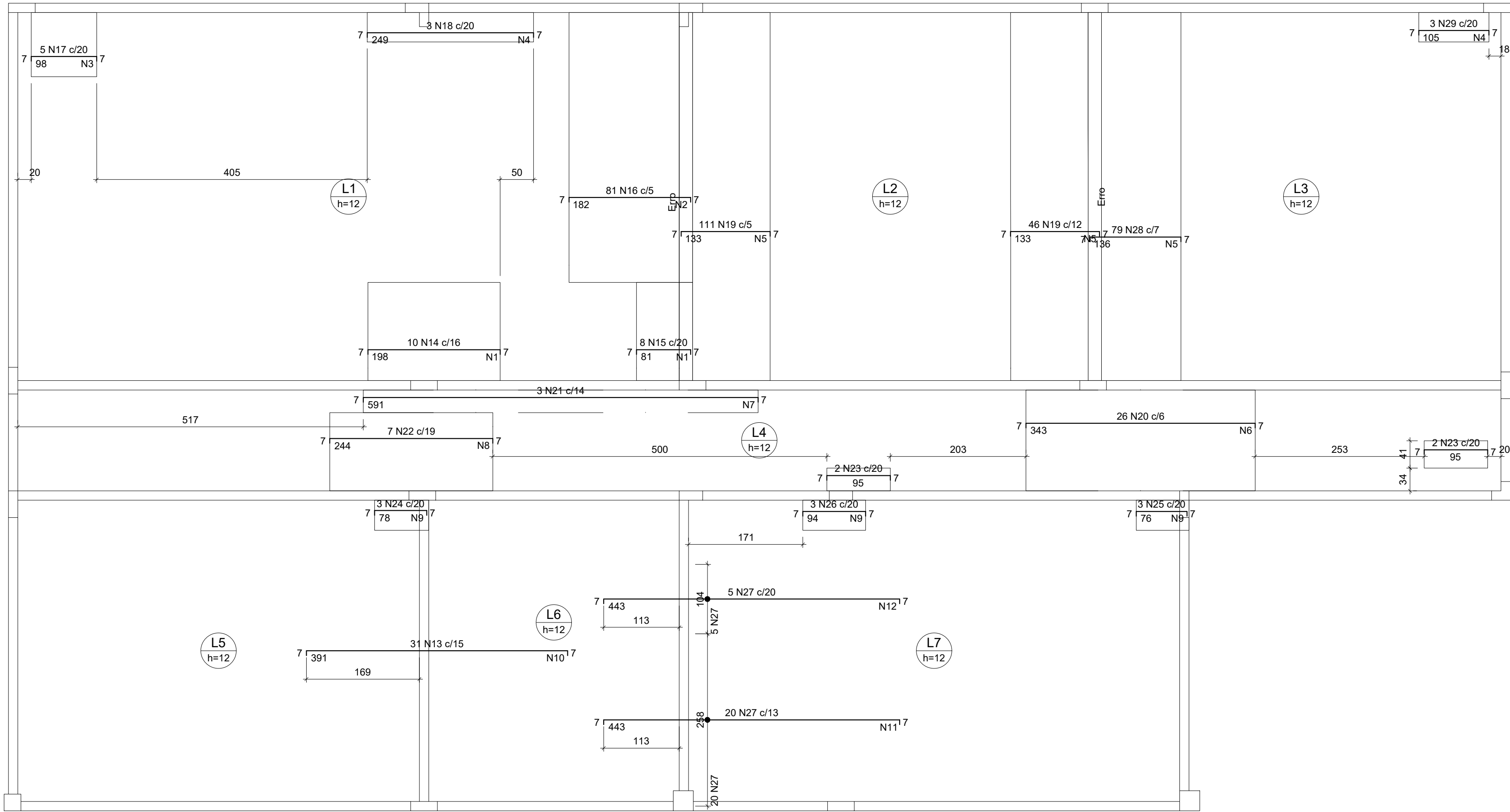
Características dos materiais		
Elemento	fck (kgf/cm²)	Ecs (kgf/cm³)
Vigas	300	268384
Pilares	300	268384
Lajes	250	241500

Dimensão máxima do agregado = 19 mm

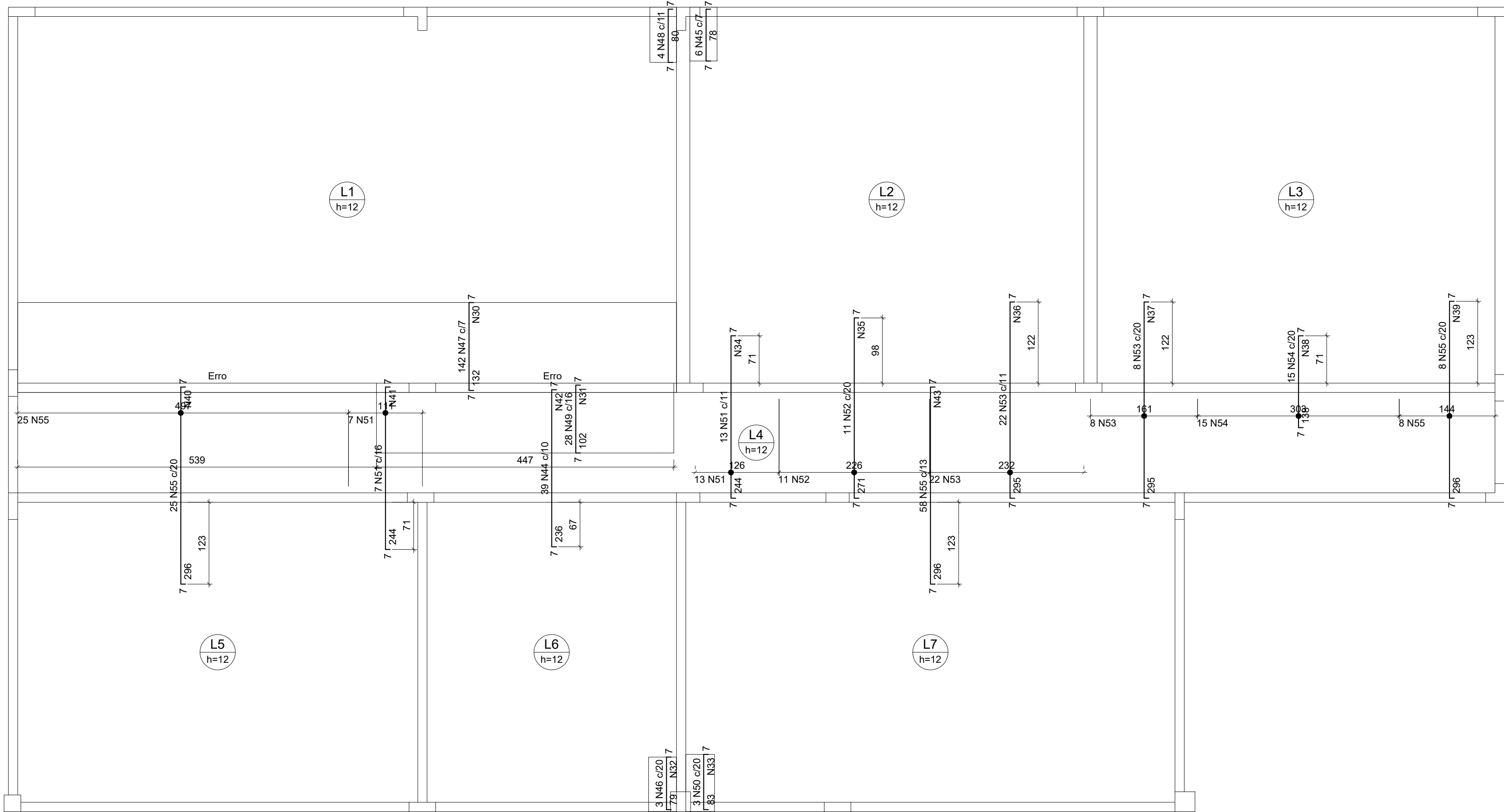
Pilares			
Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	14x40	0	300
P2	L 35x35x14x14	0	300
P3	L 35x35x14x14	0	300
P4	14x40	0	300
P5	14x40	0	300
P6	14x40	0	300
P7	14x40	0	300
P8	14x40	0	300
P9	14x40	0	300
P10	14x40	0	300
P11	14x40	0	300
P12	14x40	0	300
P13	14x35	0	300
P14	14x35	0	300
P15	14x40	0	300
P16	L 28x28x14x14	0	300
P17	25x25	0	300
P18	14x40	0	300
P19	30x30	0	300
P20	14x40	0	300
P21	30x30	0	300

Legenda dos pilares	
	Pilar que morre

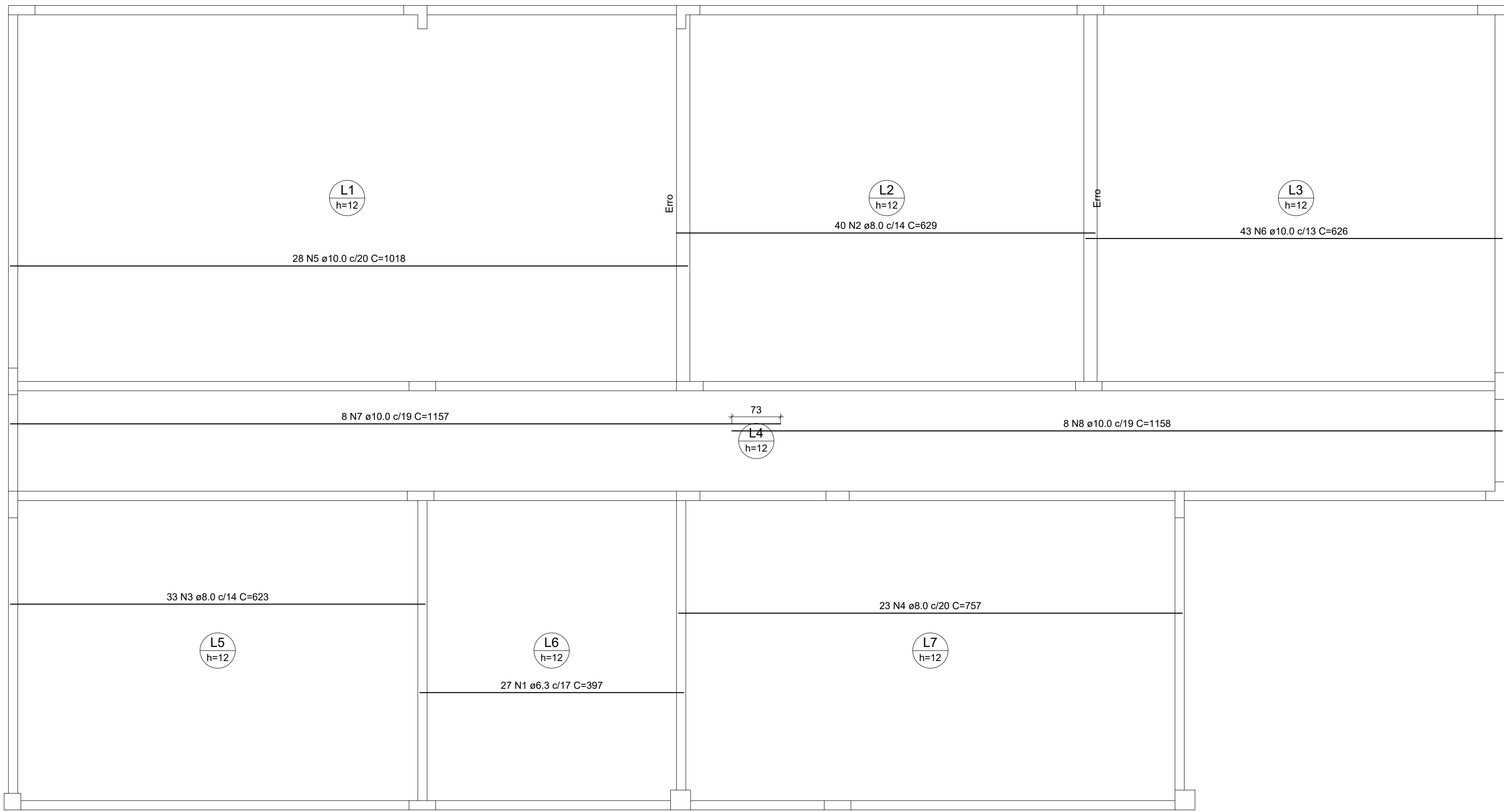
Legenda das vigas e paredes	
	Viga



Armação negativa das lajes do pavimento TERREO (Eixo X)



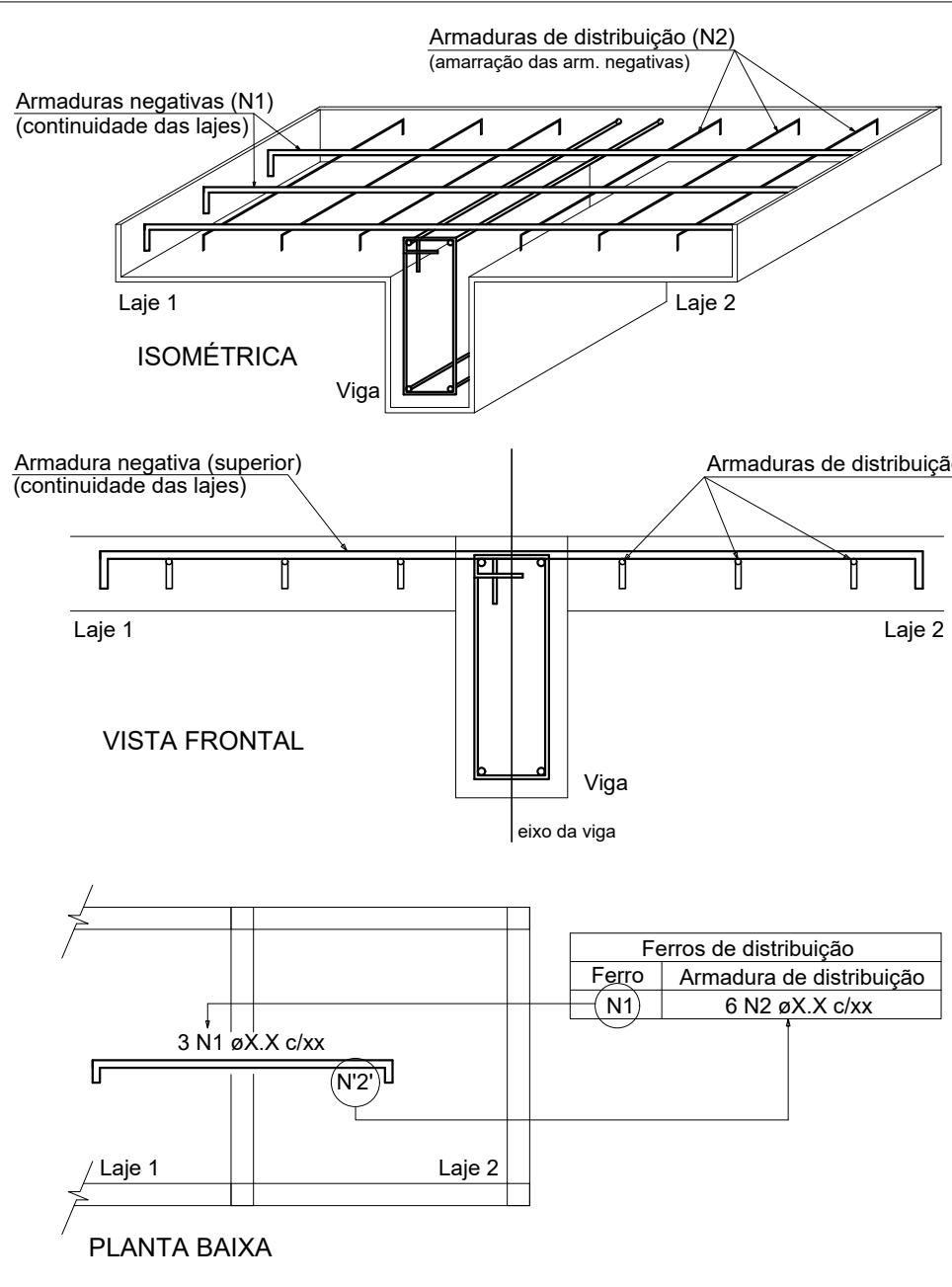
Armação negativa das lajes do pavimento TERREO (Eixo Y)



Armação positiva das lajes do pavimento TERREO (Eixo X)

Armaduras de distribuição	
Armadura	Armadura de distribuição
N14	10 N1 ø5.0 c/20 C=147
N15	4 N1 ø5.0 c/20 C=147
N16	31 N2 ø5.0 c/8 C=404
N17	5 N3 ø5.0 c/20 C=96
N18	13 N4 ø5.0 c/20 C=44
N19	23 N5 ø5.0 c/6 C=551
N19	9 N5 ø5.0 c/15 C=551
N28	28 N5 ø5.0 c/5 C=551
N29	7 N4 ø5.0 c/16 C=44
N20	40 N6 ø5.0 c/7 C=151
N21	35 N7 ø5.0 c/17 C=34
N22	13 N8 ø5.0 c/20 C=117
N24	4 N8 ø5.0 c/20 C=45
N25	4 N9 ø5.0 c/20 C=45
N26	5 N9 ø5.0 c/20 C=45
N13	20 N10 ø5.0 c/20 C=465
N27	28 N11 ø5.0 c/16 C=208
N27	23 N12 ø5.0 c/20 C=103

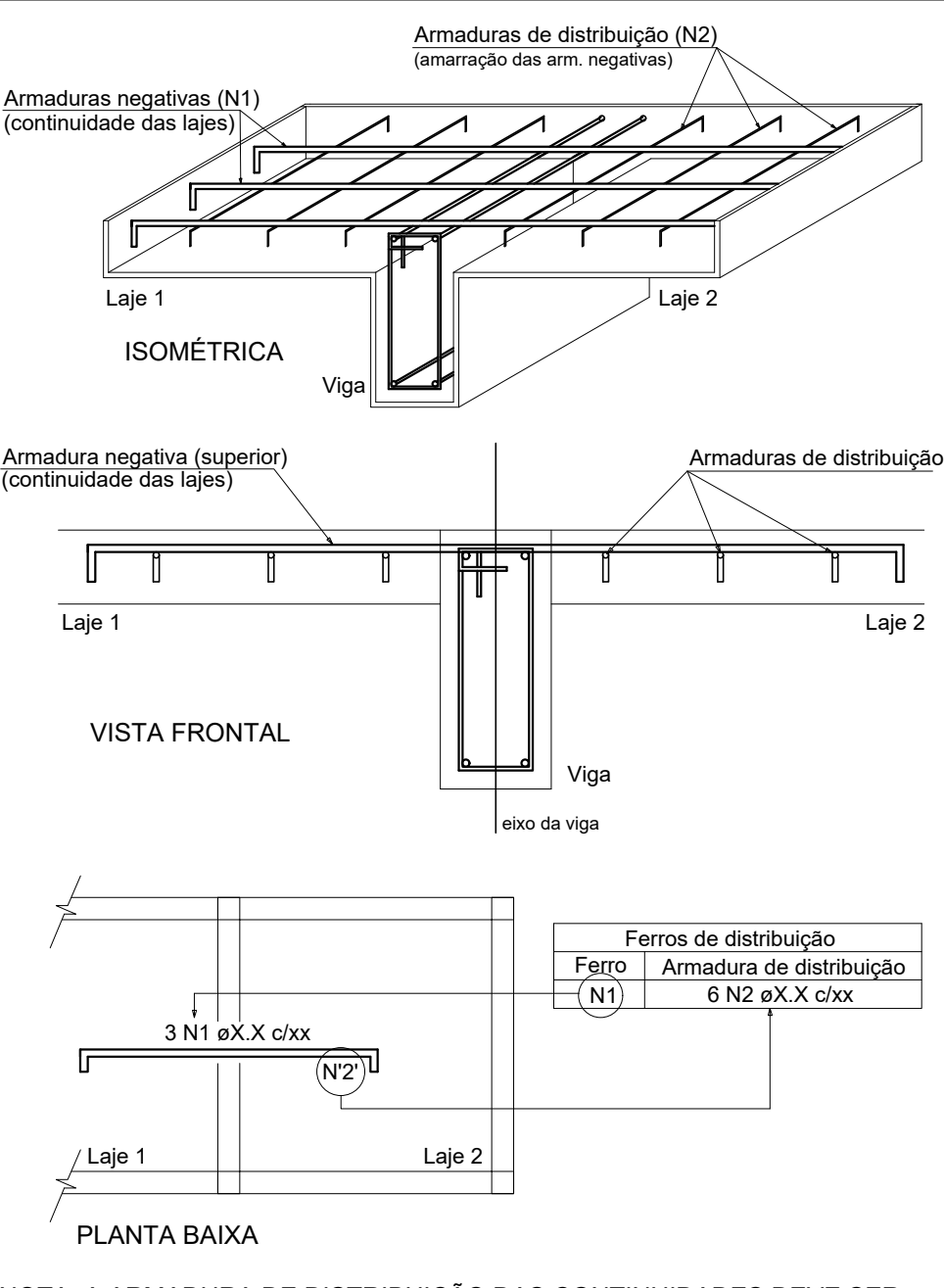
DETALHE DA ARMADURA SUPERIOR DE CONTINUIDADE DA LAJE E MONTAGEM DA ARMADURA DE DISTRIBUIÇÃO



NOTA: A ARMADURA DE DISTRIBUIÇÃO DAS CONTINUIDADES DEVE SER ININTERRUPTA E COM TRASPASSÉ (CASO HAJA EMENDAS).

Armaduras de distribuição	
Armadura	Armadura de distribuição
N47	27 N30 ø5.0 c/5 C=980
N48	9 N31 ø5.0 c/12 C=447
N46	4 N32 ø5.0 c/20 C=42
N50	6 N33 ø5.0 c/16 C=43
N51	31 N34 ø5.0 c/8 C=144
N52	17 N35 ø5.0 c/16 C=227
N53	37 N36 ø5.0 c/8 C=242
N53	19 N37 ø5.0 c/16 C=161
N54	9 N38 ø5.0 c/16 C=303
N55	19 N39 ø5.0 c/16 C=151
N55	19 N40 ø5.0 c/16 C=504
N51	27 N41 ø5.0 c/12 C=111
N44	13 N42 ø5.0 c/19 C=389
N55	30 N43 ø5.0 c/10 C=749

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



NOTA: A ARMADURA DE DISTRIBUIÇÃO DAS CONTINUIDADES DEVE SER ININTERRUPTA E COM TRASPASSÉ (CASO HAJA EMENDAS).

RELAÇÃO DO AÇO						
ELEMENTO	AÇO	N	DIAM (mm)	QUANT (cm)	C UNIT (cm)	C TOTAL (cm)
Negativos X	CA50	1	5.0	14	147	2058
	CA50	2	5.0	31	404	12524
	CA50	3	5.0	5	96	480
	CA50	4	5.0	20	44	880
	CA50	5	5.0	60	551	33060
	CA50	6	5.0	49	151	7399
	CA50	7	5.0	35	34	1190
	CA50	8	5.0	13	117	1521
	CA50	9	5.0	13	45	585
	CA50	10	5.0	20	465	9300
	CA50	11	5.0	39	258	12234
	CA50	12	5.0	23	103	2369
	CA50	13	5.0	31	451	12431
	CA50	14	10.0	10	207	2070
	CA50	15	10.0	8	90	720
	CA50	16	10.0	81	191	15471
	CA50	17	10.0	5	107	535
	CA50	18	10.0	3	228	774
	CA50	19	10.0	167	142	22944
	CA50	20	10.0	26	352	9152
	CA50	21	10.0	3	600	1800
	CA50	22	10.0	7	253	1771
	CA50	23	10.0	4	104	416
	CA50	24	10.0	3	87	261
	CA50	25	10.0	3	85	255
	CA50	26	10.0	3	103	309
	CA50	27	10.0	25	452	11300
	CA50	28	12.5	79	144	11376
	CA50	29	12.5	3	113	339
	CA50	30	5.0	27	990	26730
	CA50	31	5.0	9	447	4023
	CA50	32	5.0	4	42	168
	CA50	33	5.0	6	43	258
	CA50	34	5.0	31	144	4464
	CA50	35	5.0	17	227	3859
	CA50	36	5.0	37	242	8954
	CA50	37	5.0	19	161	3059
	CA50	38	5.0	9	303	2727
	CA50	39	5.0	19	151	2869
	CA50	40	5.0	19	504	9576
	CA50	41	5.0	21	111	2331
	CA50	42	5.0	13	389	5037
	CA50	43	5.0	30	749	22470
	CA50	44	8.0	39	246	9594
	CA50	45	10.0	6	87	522
	CA50	46	10.0	3	88	264
	CA50	47	12.5	142	140	19980
	CA50	48	12.5	4	88	352
	CA50	49	12.5	29	110	3190
	CA50	50	12.5	3	91	273
	CA50	51	12.5	30	252	5240
	CA50	52	12.5	11	279	3069
	CA50	53	12.5	30	303	9090
	CA50	54	12.5	15	146	2190
	CA50	55	12.5	91	304	27654
Negativos Y	CA50	1	5.0	14	147	2058
	CA50	2	5.0	31	404	12524
	CA50	3	5.0	5	96	480
	CA50	4	5.0	20	44	880
	CA50	5	5.0	60	551	33060
	CA50	6	5.0	49	151	7399
	CA50	7	5.0	35	34	1190
	CA50	8	5.0	13	117	1521
	CA50	9	5.0	13	45	585
	CA50	10	5.0	20	465	9300
	CA50	11	5.0	39	258	12234
	CA50	12	5.0	23	103	2369
	CA50	13	5.0	31	451	12431
	CA50	14	10.0	10	207	2070
	CA50	15	10.0	8	90	720
	CA50	16	10.0	81	191	15471
	CA50	17	10.0	5	107	535
	CA50	18	10.0	3	228	774
	CA50	19	10.0	167	142	22944
	CA50	20	10.0	26	352	9152
	CA50	21	10.0	3	600	1800
	CA50	22	10.0	7	253	1771
	CA50	23	10.0	4	104	416
	CA50	24	10.0	3	87	261
	CA50	25	10.0	3	85	255
	CA50	26	10.0	3	103	309
	CA50	27	10.0	25	452	11300
	CA50	28	12.5	79	144	11376
	CA50	29	12.5	3	113	339
	CA50	30	5.0	27	990	26730
	CA50	31	5.0	9	447	4023
	CA50	32	5.0	4	42	168
	CA50	33	5.0	6	43	258
	CA50	34	5.0	31	144	4464
	CA50	35	5.0	17	227	3859
	CA50	36	5.0	37	242	8954
	CA50	37	5.0	19	161	3059
	CA50	38	5.0	9	303	2727
	CA50	39	5.0	19	151	2869
	CA50	40	5.0	19	504	9576
	CA50	41	5.0	21	111	2331
	CA50	42	5.0	13	389	5037
	CA50	43	5.0	30	749	22470
	CA50	44	8.0	39	246	9594
	CA50	45	10.0	6	87	522
	CA50	46	10.0	3	88	264
	CA50	47	12.5	142	140	19980
	CA50	48	12.5	4	88	352
	CA50	49	12.5	29	110	3190
	CA50	50	12.5	3	91	273
	CA50	51	12.5	30	252	5240
	CA50	52	12.5	11	279	3069
	CA50	53	12.5	30	303	9090
	CA50	54	12.5	15	146	2190
	CA50	55	12.5	91	304	27654

RESUMO DO AÇO

AÇO	DIAM (mm)	C TOTAL (m)	PESO + 10% (kg)
CA50	8.0	220.3	85.6
CA50	10.0	679.1	469.1
CA50	12.5	823.5	872.7
CA50	5.0	1751.4	296.1

PESO TOTAL (kg)
CA50 1428.9
CA50 296.9

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

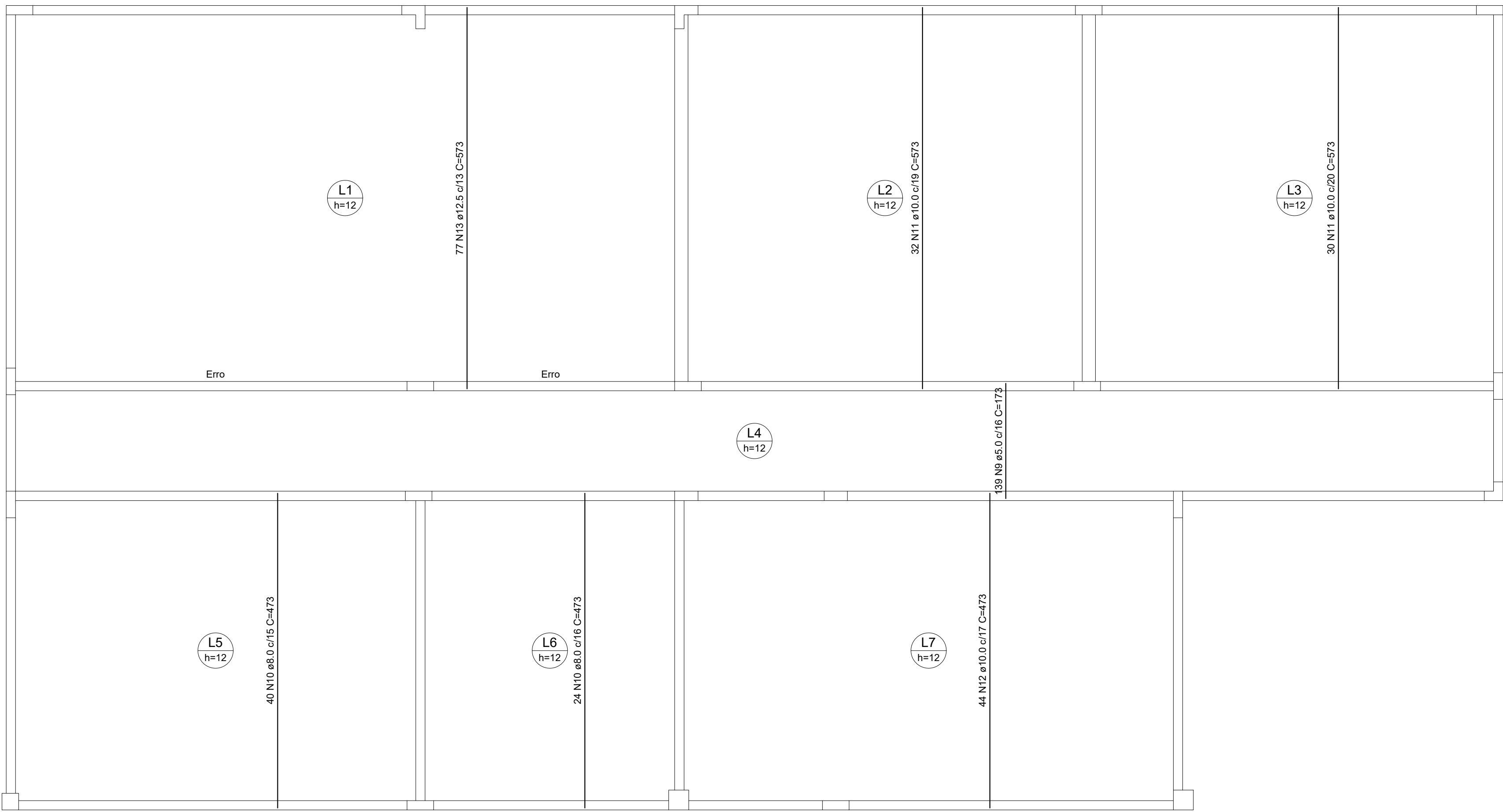
RELAÇÃO DO AÇO						
ELEMENTO	AÇO	N	DIAM (mm)	QUANT (cm)	C UNIT (cm)	C TOTAL (cm)
Positivos X	CA50	1	6.3	27	397	10719
	CA50	2	8.0	40	629	25160
	CA50	3	8.0	33	623	20559
	CA50	4	8.0	23	757	17411
	CA50	5	10.0	28	1018	28504
	CA50	6	10.0	43	626	26916
	CA50	7	10.0	8	1157	9256
	CA50	8	10.0	8	1158	9264
	CA50	9	5.0	139	173	24047
	CA50	10	8.0	64	473	30272
Positivos Y	CA50	11	10.0	62	573	35536
	CA50	12	10.0	44	473	20872
	CA50	13	12.5	77	573	44121

RESUMO DO AÇO

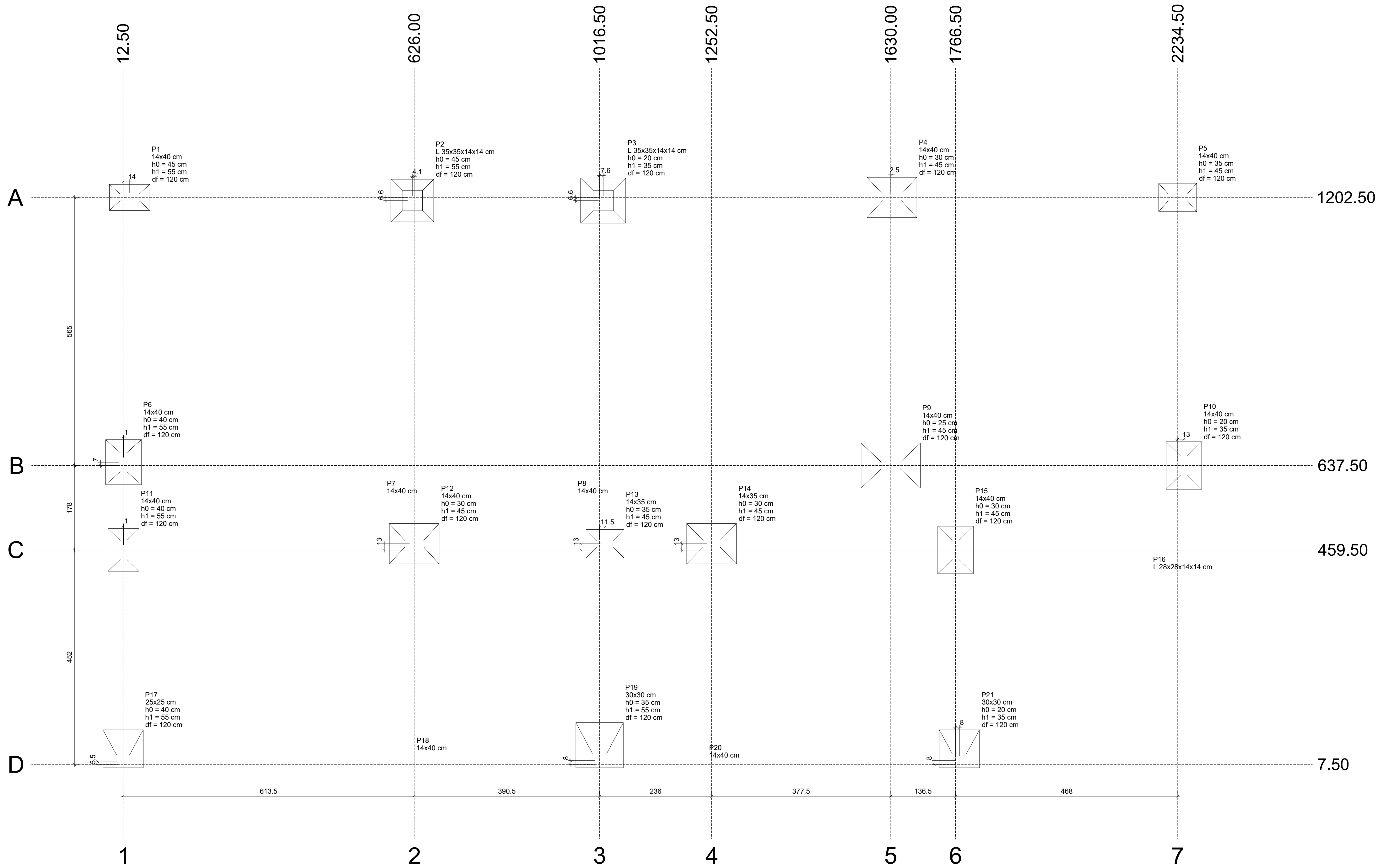
AÇO	DIAM (mm)	C TOTAL (m)	PESO + 10% (kg)
CA50	6.3	107.2	28.9
CA50	8.0	934	465.4
CA50	10.0	1302.8	863.5
CA50	12.5	441.2	467.5
CA50	5.0	240.5	40.8

PESO TOTAL (kg)
CA50 1785.3
CA50 40.8

Volume de concreto (C-25) = 27.74 m³
Área de forma = 231.16 m²



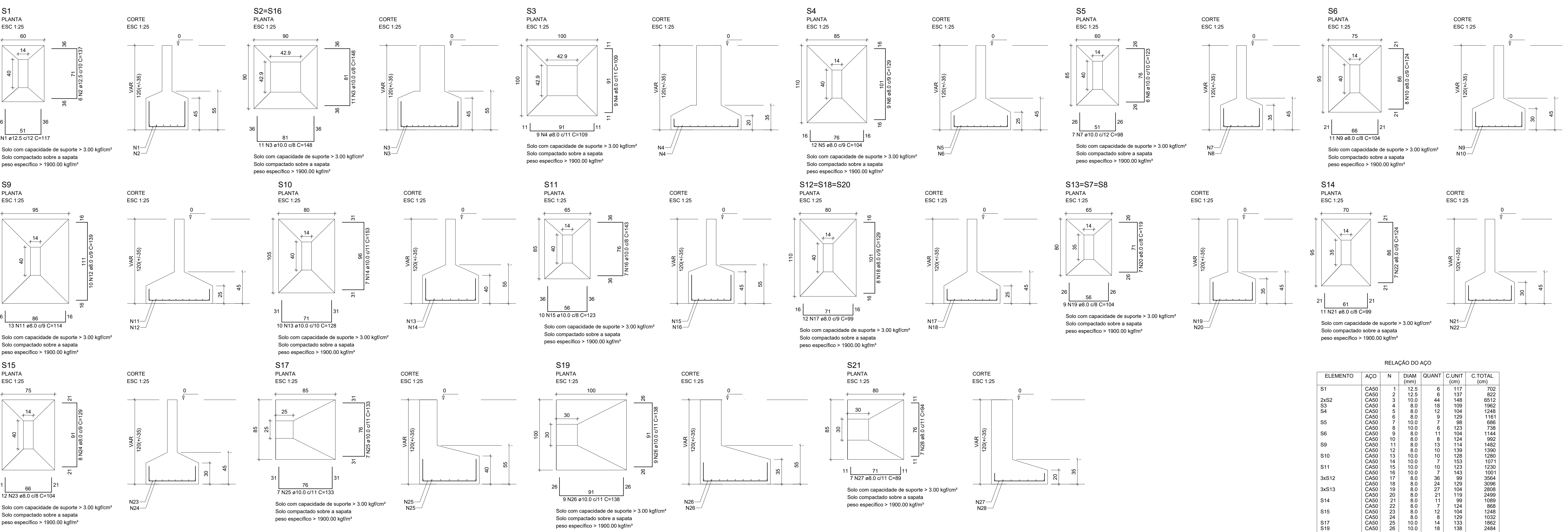
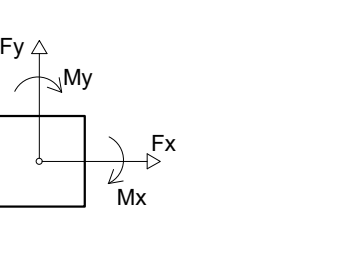
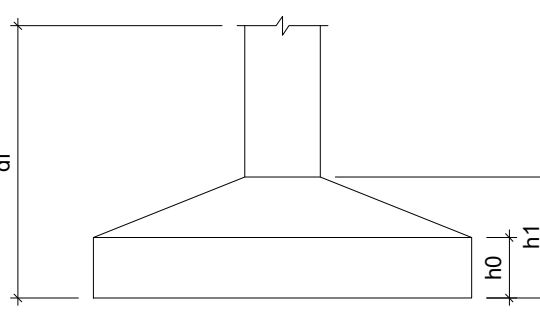
Armação positiva das lajes do pavimento TERREO (Eixo Y)



Planta de localização
escala 1:50

Nome	Seção (cm)	X (cm)	Y (cm)	Carga Máx. (t)	Carga Mín. (t)	Pilar				Fundação				Lado B (cm)	Lado H (cm)	h0 / ha (cm)	h1 / hb (cm)	df (cm)
						Mx Máximo (kgf.m)		My Máximo (kgf.m)		Fx Máximo (t)		Fy Máximo (t)						
						Positivo	Negativo	Positivo	Negativo	Positivo	Negativo	Positivo	Negativo					
P1	14x40	26.50	1202.50	11.1	10.1	0	0	0	0	0.1	-0.1	0.7	0.0	55	85	45	55	120
P2	L 35x35x14x14	626.50	1202.50	17.6	16.1	0	0	0	0	-1.0	1.4	0.0	90	95	45	55	120	
P3	L 35x35x14x14	1017.50	1202.50	18.2	17.5	0	0	0	0	0.3	0.0	1.9	0.0	95	95	20	35	120
P4	14x40	1632.47	1202.50	22.1	20.1	0	0	0	0	-0.8	1.0	0.0	85	105	30	45	120	
P5	14x40	2234.50	1202.50	10.7	9.7	0	0	0	0	1.5	0.0	0.8	0.0	60	80	35	45	120
P6	14x40	13.50	644.50	17.3	12.8	0	0	0	0	-0.7	0.0	-2.4	75	95	40	55	120	
P7	14x40	626.50	637.50	28.7	25.0	0	0	0	0	0.5	0.0	0.0	-1.7	0	0	0	0	120
P8	14x40	1030.50	637.50	22.9	20.7	0	0	0	0	2.2	0.0	0.0	-1.5	0	0	0	0	120
P9	14x40	1630.00	637.50	29.3	26.6	0	0	0	0	0.0	-2.0	0.0	-1.1	95	125	25	45	120
P10	14x40	2247.50	637.50	16.3	11.7	0	0	0	0	1.1	0.0	0.0	-2.2	75	100	20	35	120
P11	14x40	13.50	459.50	13.8	9.6	0	0	0	0	0.0	-0.6	0.1	-1.9	65	80	40	55	120
P12	14x40	626.00	472.50	19.9	17.9	0	0	0	0	0.0	-0.8	0.0	-0.4	85	105	30	45	120
P13	14x35	1030.50	472.50	11.4	10.1	0	0	0	0	0.5	0.0	0.3	-0.2	80	80	35	45	120
P14	14x35	1252.50	472.50	19.2	17.1	0	0	0	0	0.0	-0.9	0.0	-0.5	85	105	30	45	120
P15	14x40	1766.50	459.50	17.9	16.3	0	0	0	0	0.3	0.0	0.7	0.0	75	100	30	45	120
P16	L 28x28x14x14	2247.50	472.50	6.8	0.0	0	0	0	0	0.4	0.0	0.0	-1.3	0	0	0	0	120
P17	25x25	12.50	13.00	9.7	8.7	0	-1700	0	0	0.1	0.0	1.0	0.0	80	85	40	55	120
P18	14x40	626.50	7.50	17.4	15.30	0	-5100	0	0	1.1	0.0	1.8	0.0	95	125	30	55	120
P19	30x30	1016.50	15.50	13.6	12.1	0	-2650	0	0	0.5	-0.2	0.0	-0.6	95	100	35	55	120
P20	14x40	1252.50	7.50	12.7	11.4	0	-2700	0	0	0.0	-1.3	1.4	0.0	80	110	35	55	120
P21	30x30	1774.50	15.50	9.5	8.4	0	-1200	0	0	0.3	0.0	0.3	-0.4	80	85	20	35	120

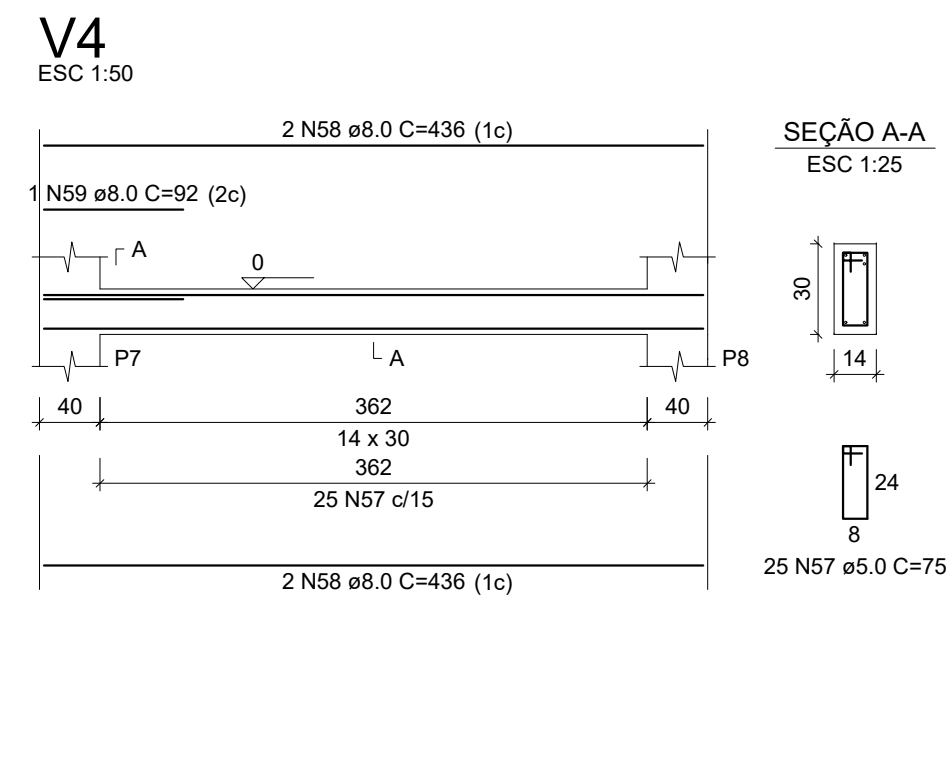
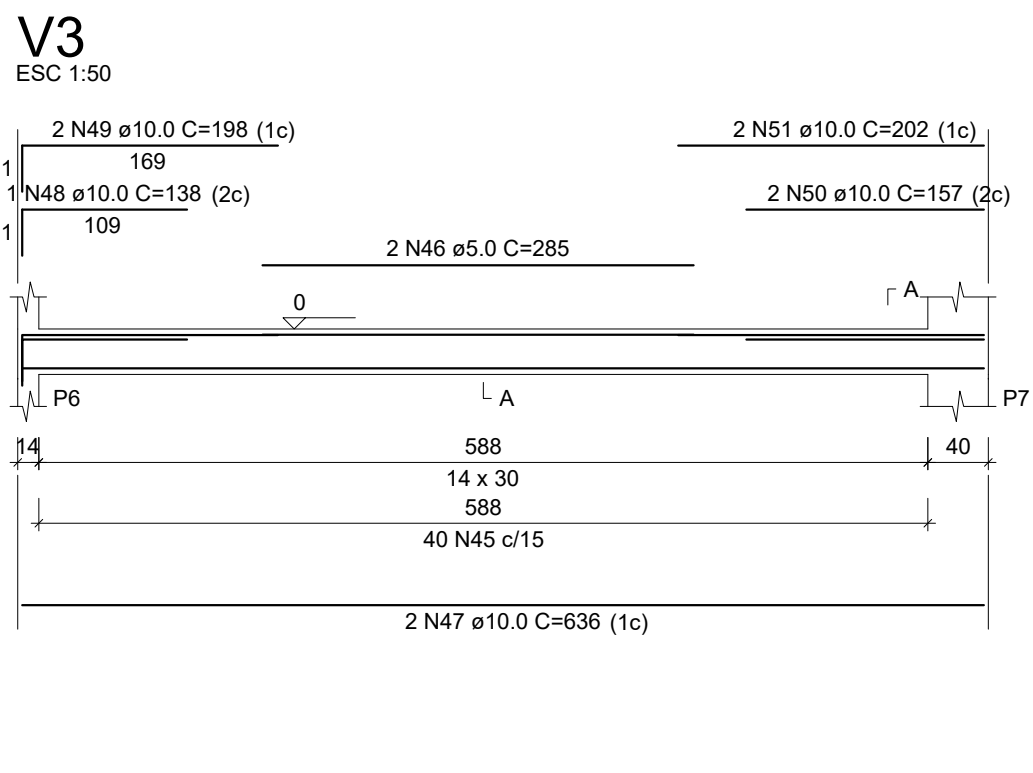
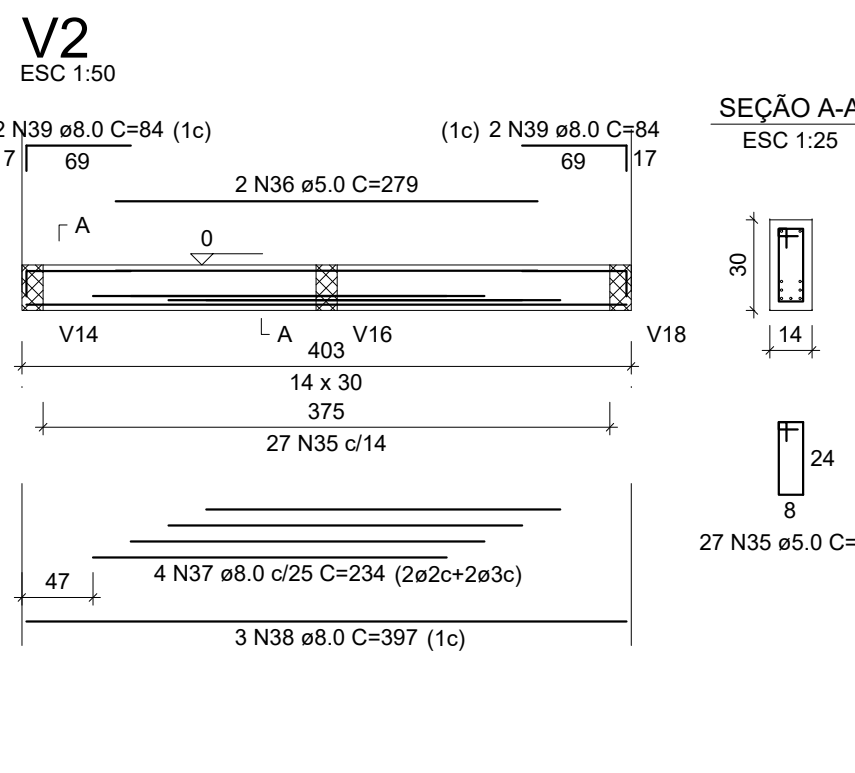
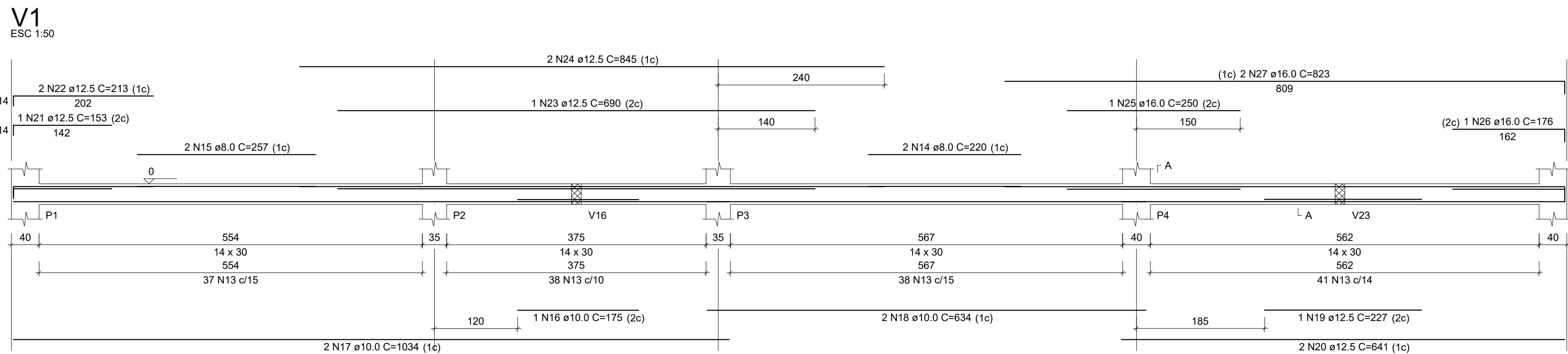
Os esforços indicados nesta tabela são os valores máximos obtidos pela envoltória de todas as combinações definidas para as fundações. Para análises complementares, deve-se consultar o relatório de esforços de fundação, que apresenta os valores calculados para cada combinação.



RELAÇÃO DO AÇO									
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C.U.MET (cm)	C.TOTAL (cm)			
S1	CA50	1	12.5	6	117	702			
S2	CA50	2	12.5	6	137	822			
2xS2	CA50	4	10.0	44	148	6512			
S3	CA50	8	8.0	18	109	1962			
S4	CA50	8	8.0	12	104	1248			
S5	CA50	6	8.0	9	120	1161			
S6	CA50	7	10.0	7	98	698			
S7	CA50	8	10.0	6	123	738			
S8	CA50	9	8.0	11	104	1144			
S9	CA50	10	8.0	10	139	862			
S10	CA50	11	8.0	13	114	1482			
S11	CA50	12	8.0	10	128	1280			
S12	CA50	13	10.0	10	123	1230			
S13	CA50	14	10.0	7	143	1001			
S14	CA50	15	10.0	10	123	1230			
S15	CA50	16	8.0	36	99	3064			
S16	CA50	18	8.0	21	119	2499			
S17	CA50	19	8.0	27	104	2808			
S18	CA50	20	8.0	21	119	2499			
S19	CA50	21	8.0	11	99	1089			
S20	CA50	22	8.0	7	124	868			
S21	CA50	23	8.0	12	104	1248			
S22	CA50	24	8.0	8	120	1032			
S23	CA50	25	10.0	14	133	1862			
S24	CA50	26	10.0	16	138	2448			
S25	CA50	27	8.0	7	89	623			
S26	CA50	28	8.0	7	84	608			

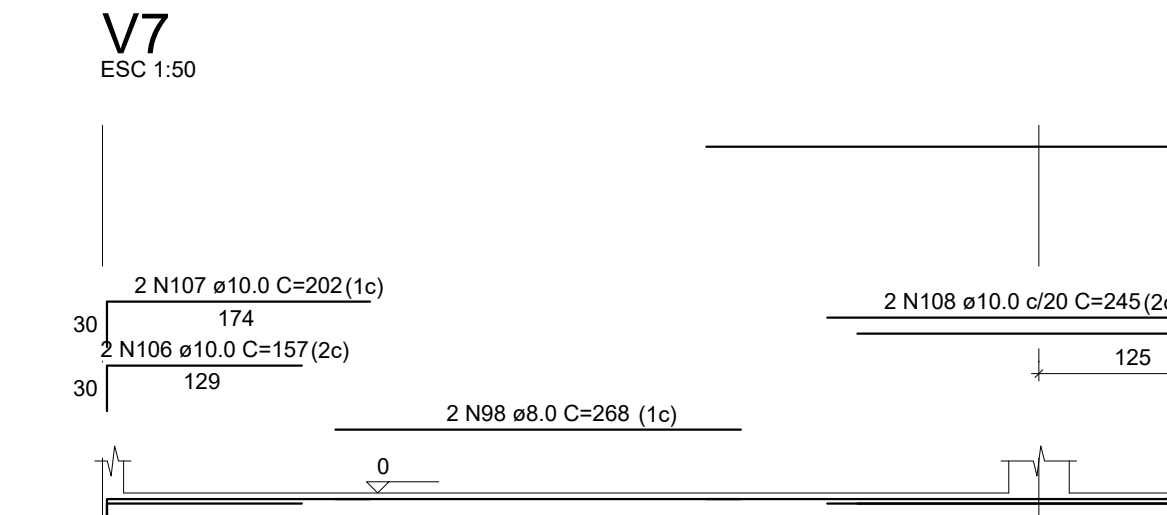
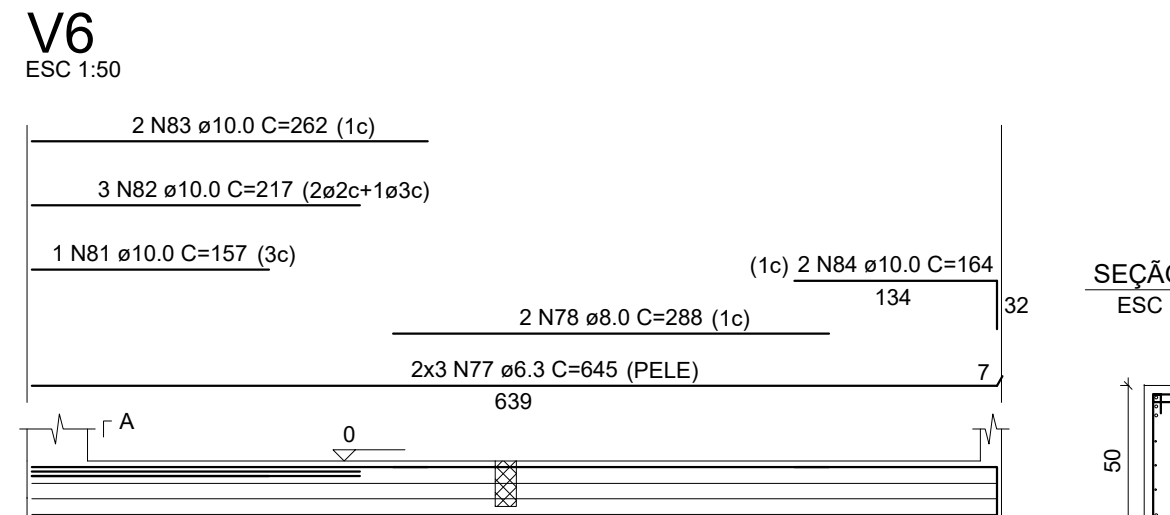
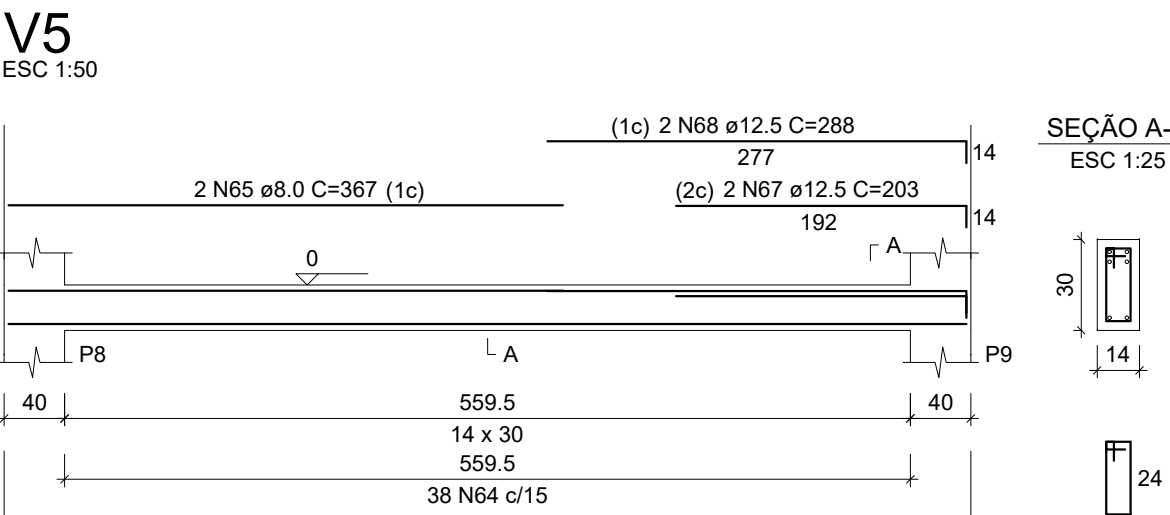
RESUMO DO AÇO			
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	288.6	116.8
CA50	10.0	198.6	114.4
CA50	12.5	15.2	18.1
PESO TOTAL (kg)			
CA50		247.1	

Volume de concreto (C-25) = 6.17 m³
Área de forma = 24.03 m²



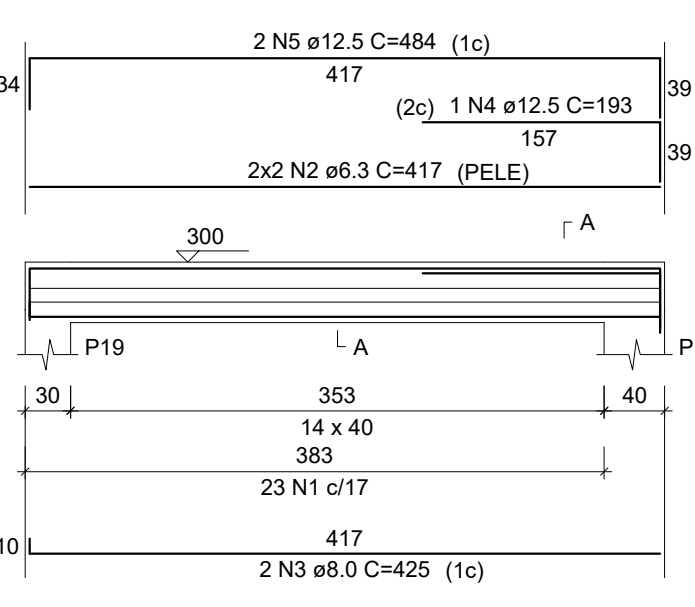
RELAÇÃO DO AÇO

ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)
V1+L2	CA50	1	5.0	85	1300	109
	CA50	2	10.0	1	282	282
	CA50	10	10.0	3	659	1977
	CA50	4	10.0	1	272	272
	CA50	10	10.0	1	601	601
	CA50	6	12.5	2	1002	2004
	CA50	16	10.0	2	330	660
	CA50	8	16.0	1	295	295
	CA50	9	16.0	1	213	213
	CA50	10	16.0	2	1196	2392
V1+L1	CA50	11	16.0	2	1952	3904
	CA50	12	16.0	2	268	536
	CA50	14	8.0	2	220	440
	CA50	14	8.0	2	257	514
	CA50	16	10.0	1	175	175
	CA50	17	10.0	2	1034	2068
	CA50	18	10.0	2	634	1268
	CA50	18	12.5	2	227	454
	CA50	20	12.5	2	641	1282
	CA50	21	12.5	2	153	306
V2+L2	CA50	22	12.5	2	213	426
	CA50	23	12.5	2	660	1320
	CA50	24	12.5	2	845	1690
	CA50	25	16.0	1	176	176
	CA50	26	16.0	1	176	176
	CA50	27	16.0	2	823	1646
	CA50	28	5.0	52	95	4940
	CA50	29	5.0	2	305	610
	CA50	30	8.0	2	64	128
	CA50	31	12.5	3	360	1080
V2+L1	CA50	32	12.5	2	860	1720
	CA50	33	10.0	1	233	233
	CA50	34	20.0	2	313	626
	CA50	35	5.0	27	75	2025
	CA50	36	5.0	2	279	558
	CA50	38	8.0	3	307	921
	CA50	39	8.0	4	84	336
	CA50	40	5.0	20	95	1900
	CA50	41	5.0	3	142	426
	CA50	42	8.0	2	444	888
V3+L1	CA50	43	12.5	2	219	438
	CA50	44	12.5	2	501	1002
	CA50	45	5.0	40	75	3000
	CA50	46	5.0	2	285	570
	CA50	47	10.0	1	658	658
	CA50	48	10.0	1	138	138
	CA50	49	10.0	1	198	198
	CA50	50	10.0	2	157	314
	CA50	51	10.0	2	221	442
	CA50	52	5.0	32	95	3040
V4+L2	CA50	53	5.0	25	75	1875
	CA50	54	10.0	3	634	1902
	CA50	55	10.0	2	221	442
	CA50	56	16.0	2	727	1454
	CA50	57	5.0	25	75	1875
	CA50	58	8.0	4	436	1744
	CA50	59	8.0	10	62	620
	CA50	60	5.0	32	95	3040
	CA50	61	5.0	2	679	1358
	CA50	62	12.5	4	476	1912
V5+L1	CA50	63	12.5	2	651	1302
	CA50	64	5.0	38	75	2850
	CA50	66	12.5	2	634	1268
	CA50	67	12.5	34	95	3230
	CA50	68	12.5	2	288	576
	CA50	69	5.0	2	177	354
	CA50	70	5.0	2	238	476
	CA50	71	10.0	1	177	177
	CA50	72	10.0	2	180	360
	CA50	73	12.5	2	358	716
V6+L1	CA50	74	12.5	2	646	1292
	CA50	75	10.0	2	650	1300
	CA50	76	5.0	25	115	2875
	CA50	77	5.0	6	84	504
	CA50	78	8.0	2	288	576
	CA50	79	10.0	1	157	157
	CA50	80	10.0	2	639	1278
	CA50	81	10.0	1	127	127
	CA50	82	10.0	3	217	651
	CA50	83	10.0	2	262	524
V7+L1	CA50	84	10.0	2	164	328
	CA50	85	10.0	1	75	75
	CA50	86	5.0	1	142	142
	CA50	87	5.0	1	289	289
	CA50	88	8.0	2	1169	2338
	CA50	89	8.0	2	488	976
	CA50	91	12.5	2	199	398
	CA50	92	12.5	2	235	470
	CA50	93	12.5	2	285	570
	CA50	94	12.5	2	1197	2394
V8+L1	CA50	95	5.0	129	75	9675
	CA50	96	5.0	10	62	620
	CA50	98	8.0	2	268	536
	CA50	99	8.0	1	187	187
	CA50	100	8.0	2	385	770
	CA50	101	8.0	2	270	540
	CA50	102	8.0	2	505	1010
	CA50	103	8.0	1	361	361
	CA50	104	10.0	2	640	1280
	CA50	105	10.0	1	566	566
V9+L1	CA50	106	10.0	2	157	314
	CA50	107	10.0	2	202	404
	CA50	108	10.0	2	245	490
	CA50	109	10.0	1	155	155
	CA50	110	10.0	1	455	455
	CA50	111	10.0	1	165	165
	CA50	112	10.0	2	1200	2400
	CA50	113	10.0	2	723	1446
	CA50	114	10.0	2	163	326
	CA50	115	5.0	39	95	3705
V10+L1	CA50	116	6.3	4	643	2572
	CA50	117	8.0	1	818	818
	CA50	118	12.5	2	217	434
	CA50	119	10.0	1	221	221
	CA50	120	12.5	1	302	302
	CA50	121	10.0	2	239	478
	CA50	122	16.0	2	643	1286
	CA50	123	5.0	15	75	1125
	CA50	124	5.0	25	95	2375
	CA50	125	8.0	2	478	956
V11+L1	CA50	126	8.0	1	354	354
	CA50	127	8.0	2	533	1066
	CA50	128	8.0	2	792	1584
	CA50	129	10.0	1	533	533
	CA50	130	5.0	24	115	2760
	CA50	131	8.0	2	137	274
	CA50	132	10.0	2	643	1286
	CA50	133	10.0	1	137	137
	CA50	134	10.0	2	202	404
	CA50	135	5.0	89	115	6785
V12+L1	CA50	136	6.3	6	417	2502
	CA50	137	8.0	1	134	134
	CA50	138	8.0	2	117	234
	CA50	139	8.0	2	417	834
	CA50	140	12.5	2	417	834
	CA50	141	5.0	9	115	1035
	CA50	142	6.3	6	265	1590
	CA50	143	8.0	1	137	137
	CA50	144	8.0	5	265	1325
	CA50	145	5.0	20	115	2300
V13+L1	CA50	146	5.0	4	951	3804
	CA50	148	8.0	1	82	82
	CA50	149	8.0	1	142	142
	CA50	150	5.0	75	75	5625
	CA50	151	8.0	3	469	1407
	CA50	152	8.0	1	293	293
	CA50	153	8.0	1	566	566
	CA50	154	10.0	2	153	306
	CA50	155	10.0	2	252	504
	CA50	156	12.5	1	150	150
V14+L1	CA50	157	12.5	2	400	800
	CA50	158	12.5	2	1113	2226
	CA50	159	5.0	2	232	464
	CA50	160	5.0	53	75	3975
	CA50	161	8.0	2	296	592
	CA50	162	8.0	1	578	578
	CA50	163	8.0	2	361	722
	CA50	164	12.5	1	183	183
	CA50	165	12.5	1	616	616
	CA50	167	12.5	1	623	623
V15+L1	CA50	168	5.0	22	95	2090
	CA50	169	8.0	1	270	270
	CA50	170	8.0	3	489	1467
	CA50	171	8.0	1	513	513
	CA50	172	5.0	28	75	2100
	CA50	173	5.0	2	377	754
	CA50	174	8.0	2	298	596
	CA50	175	8.0	2	444	888
	CA50	176	8.0	2	84	168
	CA50	177	5.0	29	75	2175
V16+L1	CA50	178	8.0	1	247	247
	CA50	179	8.0	2	481	962
	CA50	180	12.5	1	148	148
	CA50	181	8.0	2	280	560
	CA50	182	5.0	49	75	3675
	CA50	183	8.0	1	561	561
	CA50	184	8.0	1	578	578
	CA50	185	8.0	1	981	981
	CA50	186	16.0	1	199	199
	CA50	187	16.0	1	637	637
V17+L1	CA50	188	5.0	27	127	3429
	CA50	189	8.0	1	105	105
	CA50	190	8.0	1	165	165
	CA50	191	8.0	2	410	820
	CA50	192	10.0	1	200	200
	CA50	193	10.0	4	462	1848
	CA50	194	10.0	2	124	248
	CA50	195	10.0	1	85	85
	CA50	196	5.0	1	90	90
	CA50	197	8.0	2	438	876
V20+L1	CA50	198	5.0	75	2775	3150
	CA50	199	5.0	2	280	560
	CA50	200	5.0	2	280	560
	CA50	201	10.0	2	573	1146
	CA50	202	10.0	1	139	139
	CA50	203	10.0	2	184	368
	CA50	204	12.5	1	196	196
	CA50	205	5.0	28	75	2100
	CA50	206	10.0	1	189	189
	CA50	207	10.0	1	473	473
V23+L1	CA50	208	10.0	1	163	163
	CA50	209	12.5	1	514	514
	CA50	210	12.5	1	521	521
	CA50	211	5.0	48	75	3600
	CA50	212	5.0	2	345	690
	CA50	213	8.0	1	180	180
	CA50	214	8.0	2	70	140
	CA50	215	10.0	1	330	330
	CA50	216	10.0	2	572	1144
	CA50	217	12.5	2	370	740
V24+L1	CA50	218	5.0	45	75	3375
	CA50	219	5.0	2	220	440
	CA50	220	8.0	1	290	290
	CA50	221	8.0	1	130	130
	CA50	222	8.0	1	204	204
	CA50	223	8.0	1	178	178
	CA50	224	8.0	1	101	101
	CA50	225	8.0	2	184	368
	CA50	226	12.5	2	415	830
	CA50	228	12.5	2	415	830



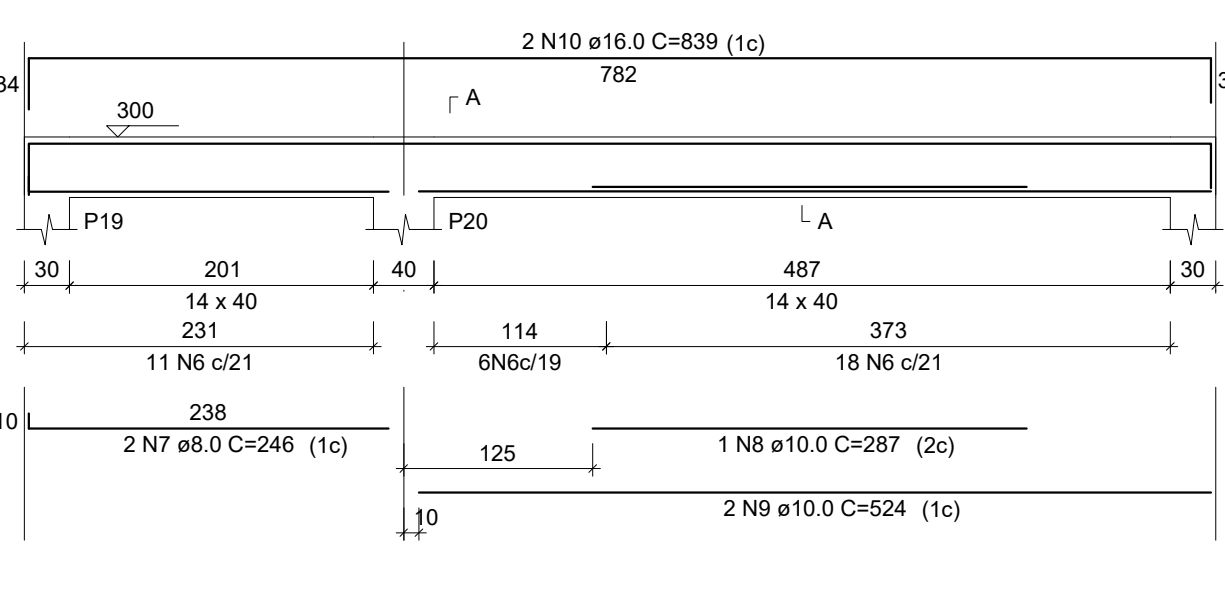
V9

ESC 1:50



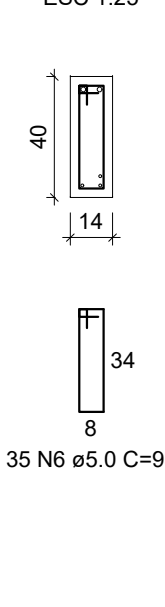
V10

ESC 1:50



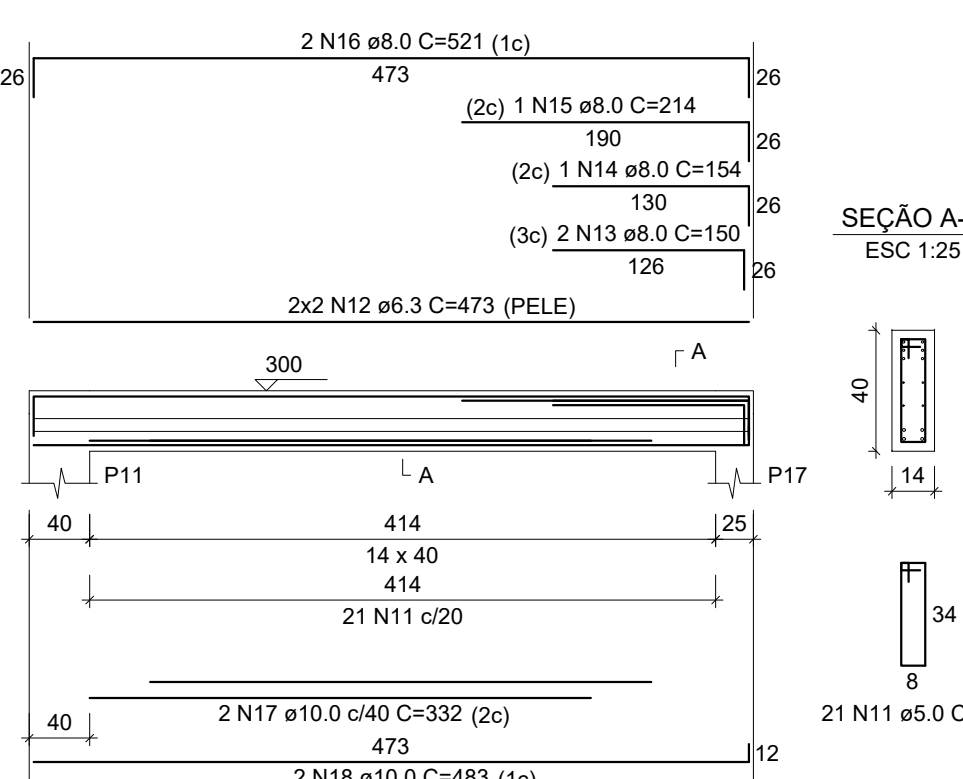
SEÇÃO A-A

ESC 1:25



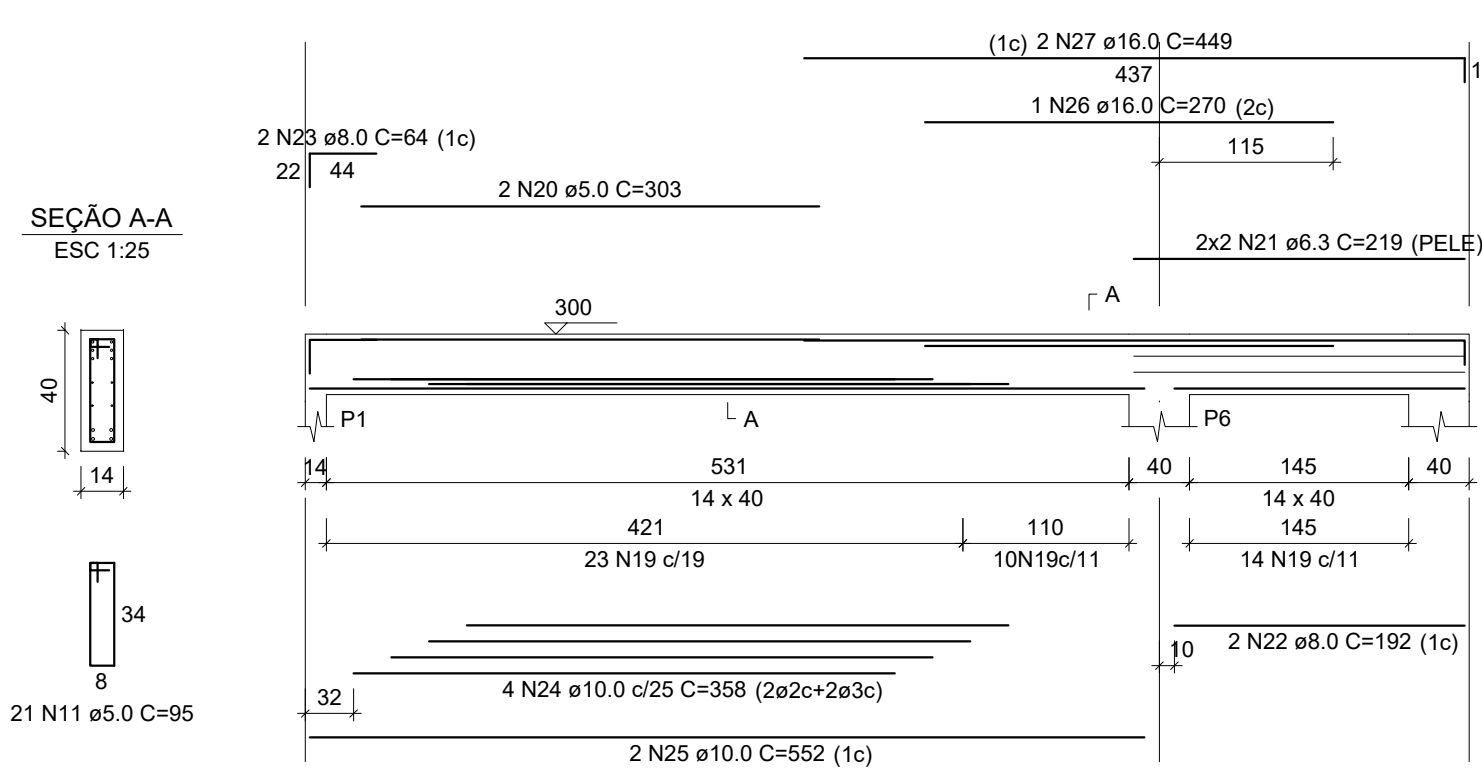
V11

ESC 1:50



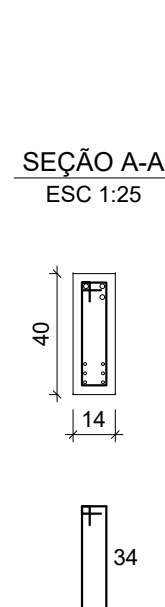
V12

ESC 1:50



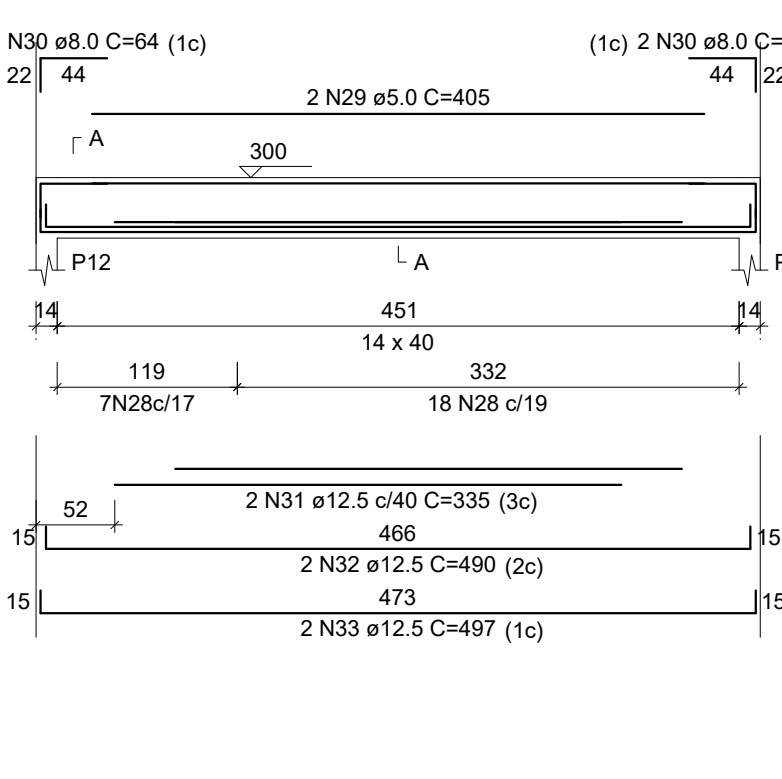
SEÇÃO A-A

ESC 1:25



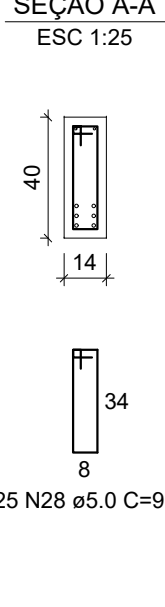
V13

ESC 1:50



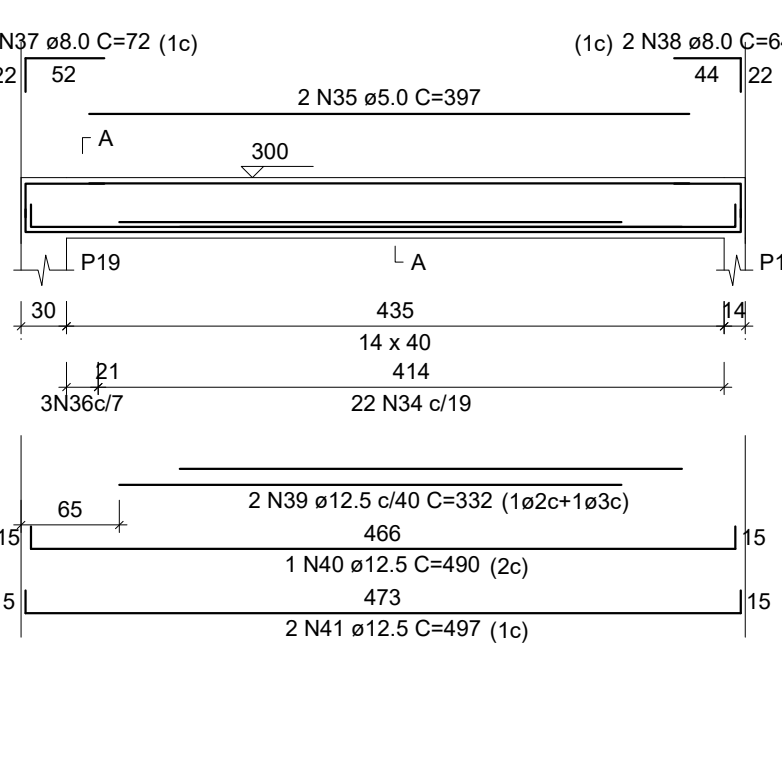
SEÇÃO A-A

ESC 1:25



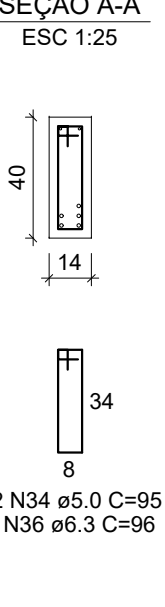
V14

ESC 1:50



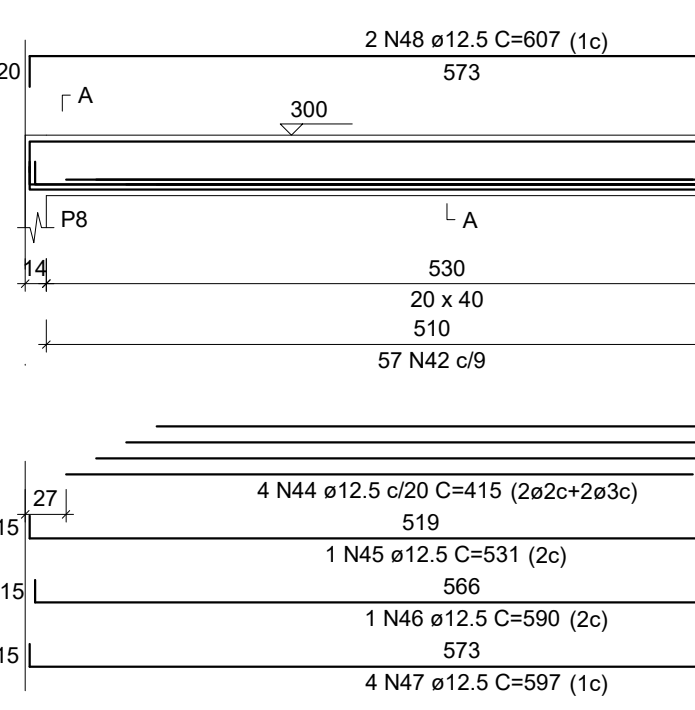
SEÇÃO A-A

ESC 1:25



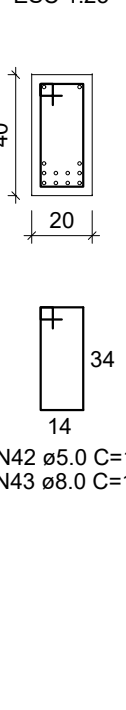
V15

ESC 1:50



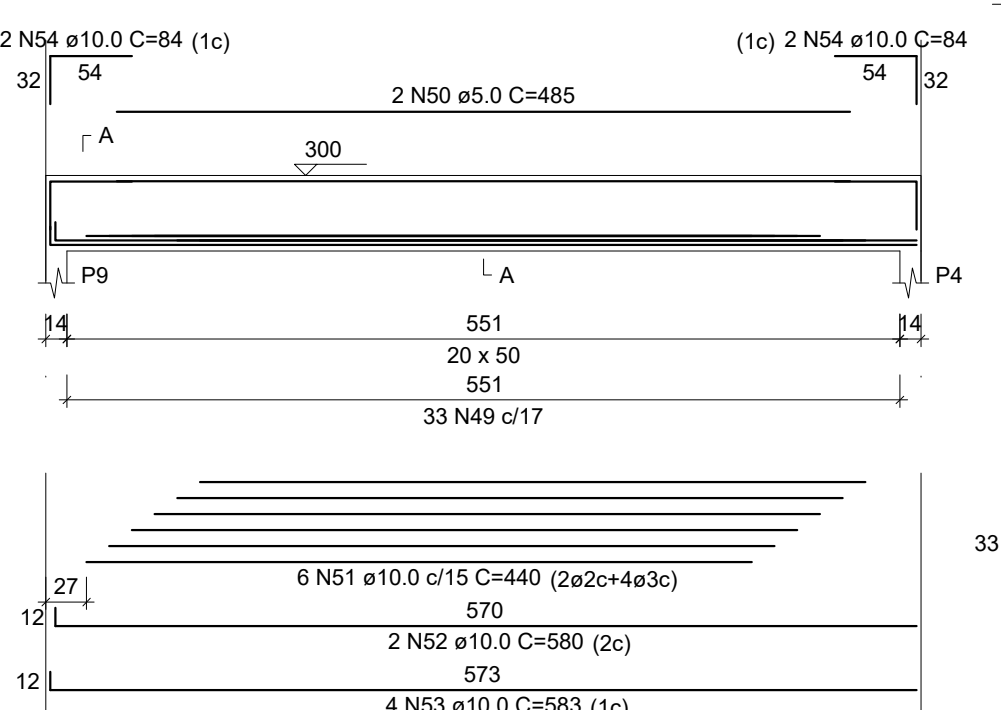
SEÇÃO A-A

ESC 1:25



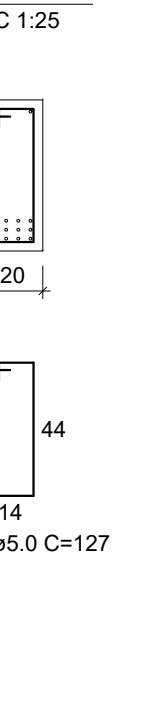
V16

ESC 1:50



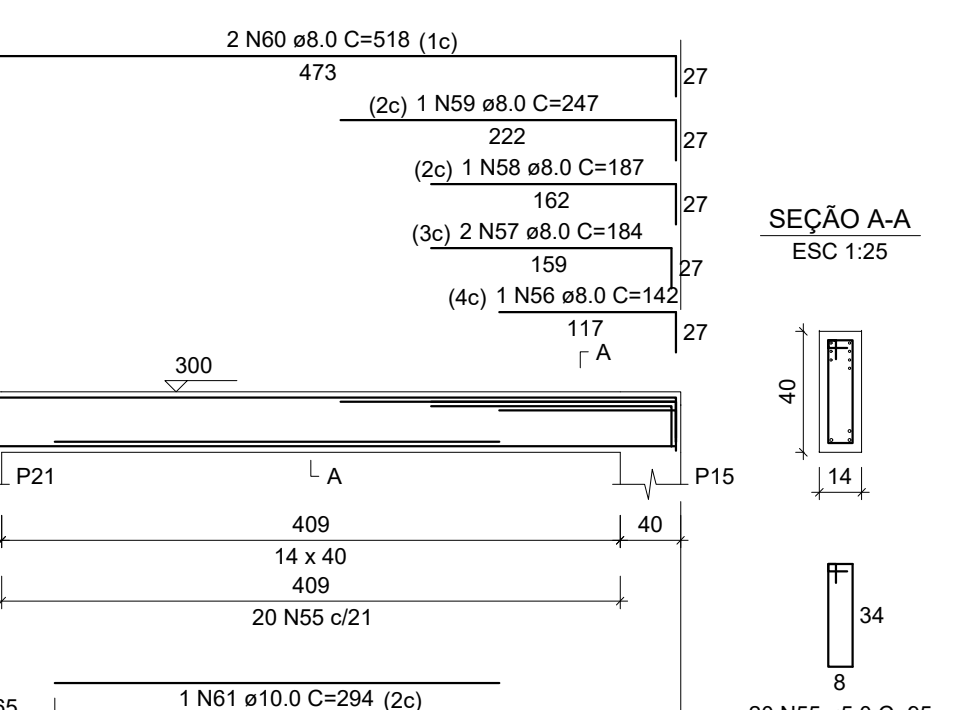
SEÇÃO A-A

ESC 1:25



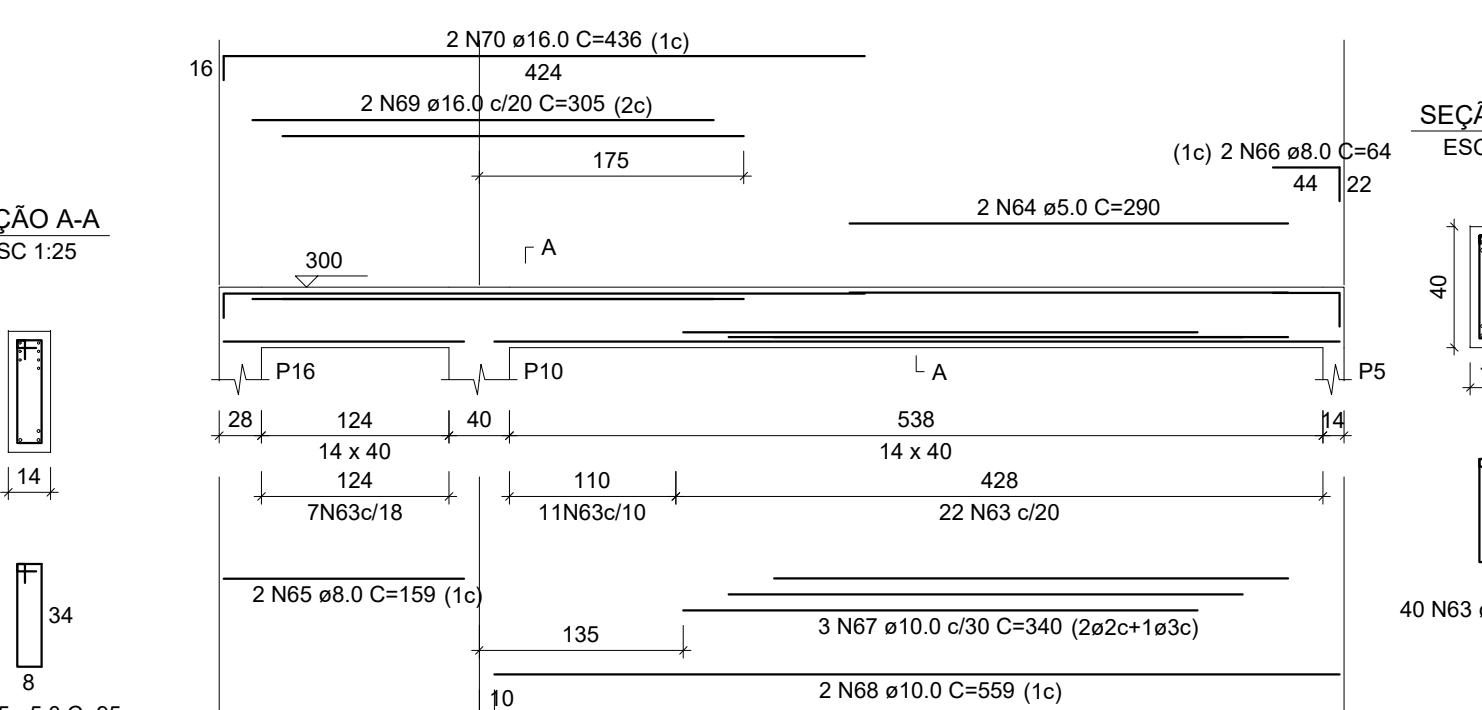
V17

ESC 1:50



V18

ESC 1:50



SEÇÃO A-A

ESC 1:25

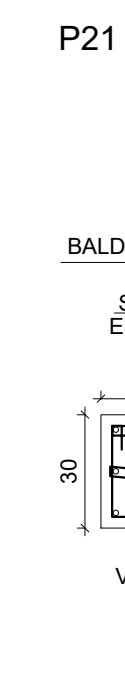
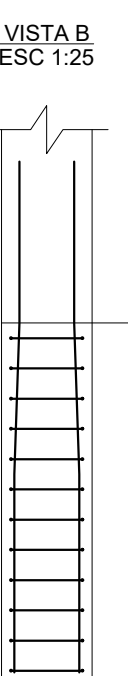
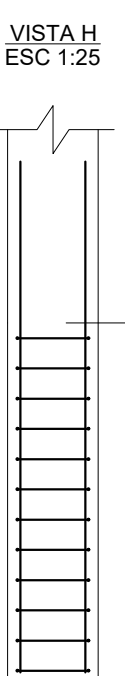
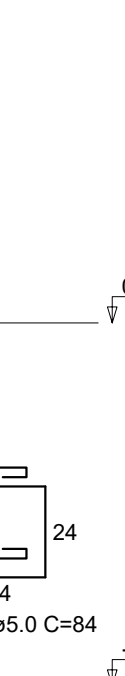
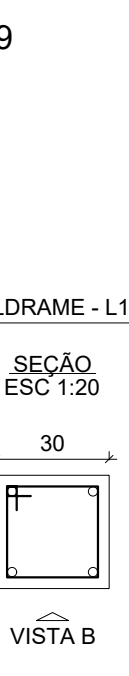
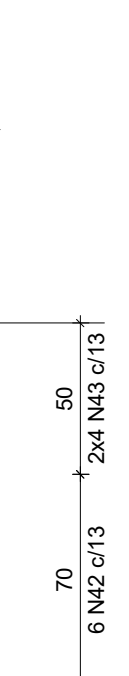
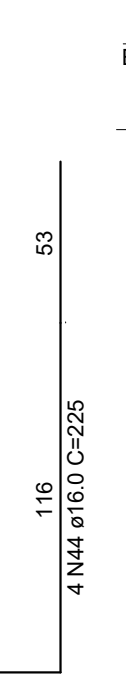
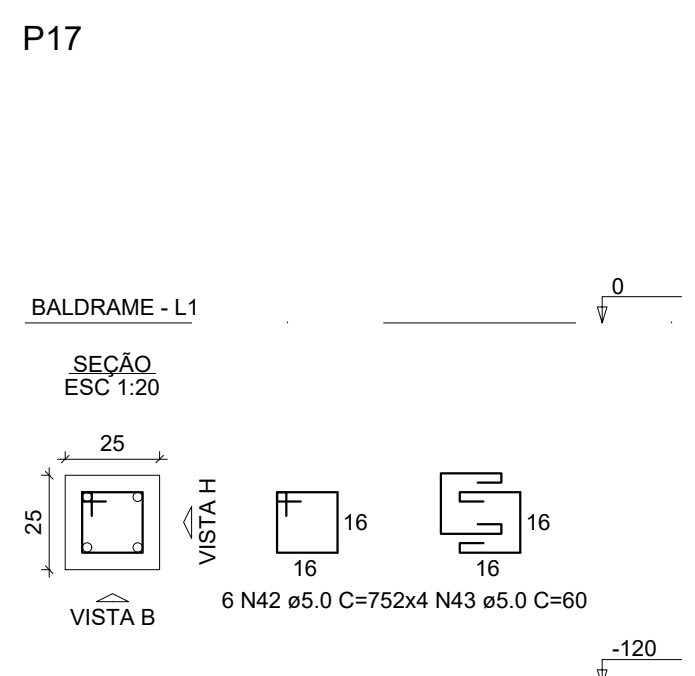
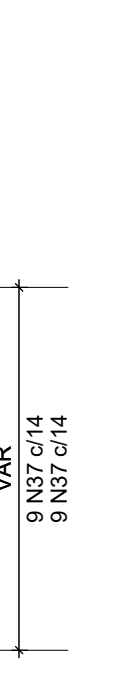
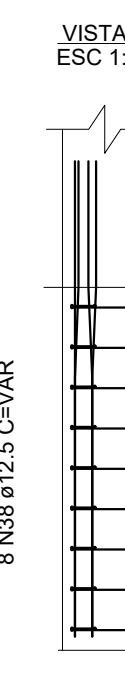
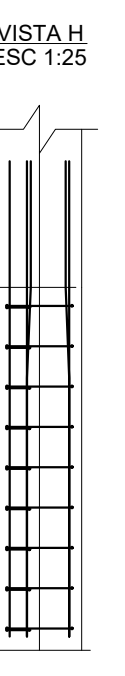
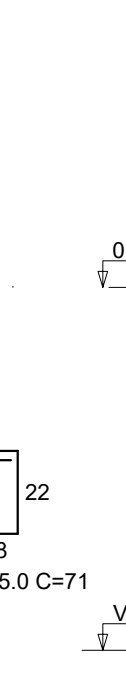
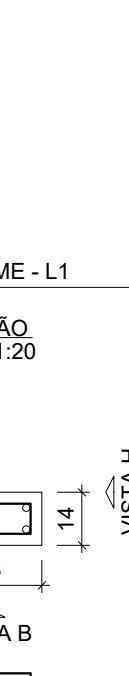
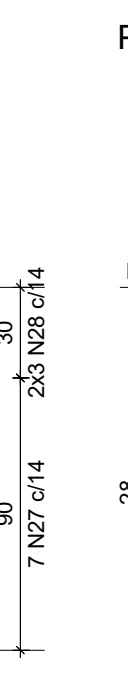
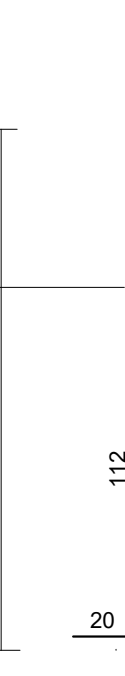
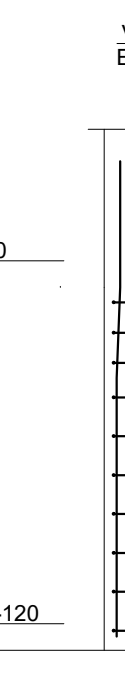
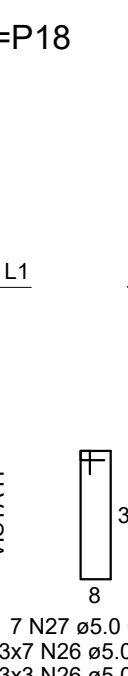
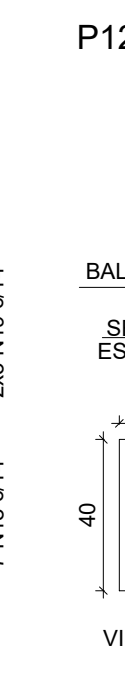
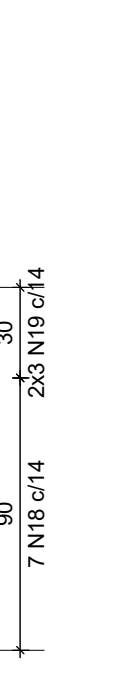
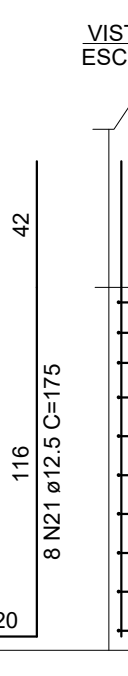
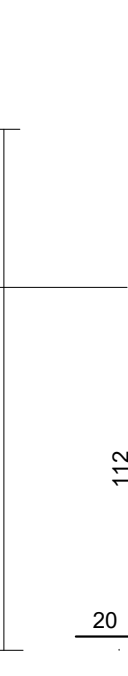
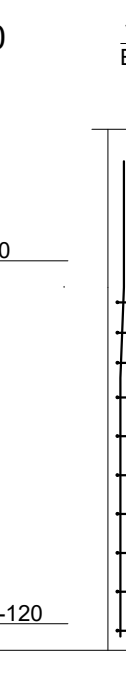
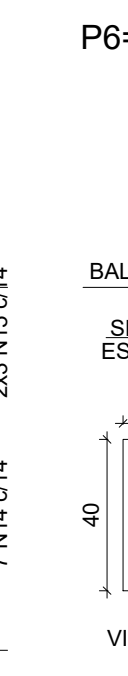
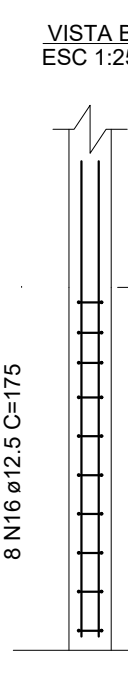
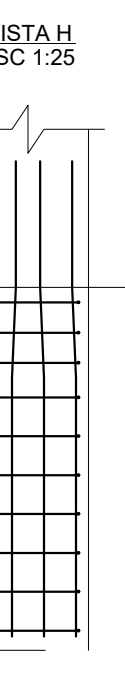
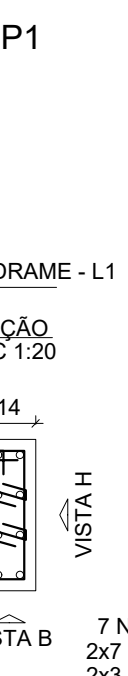
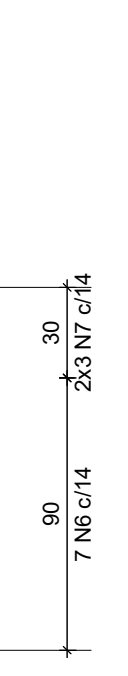
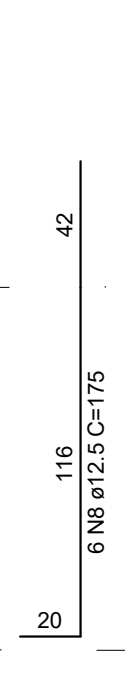
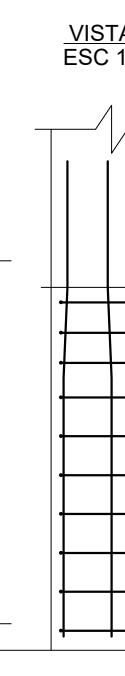
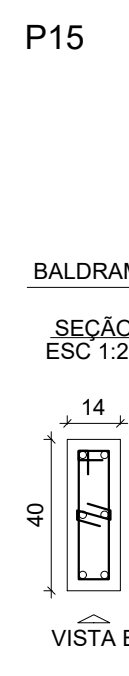
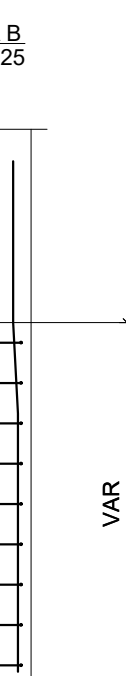
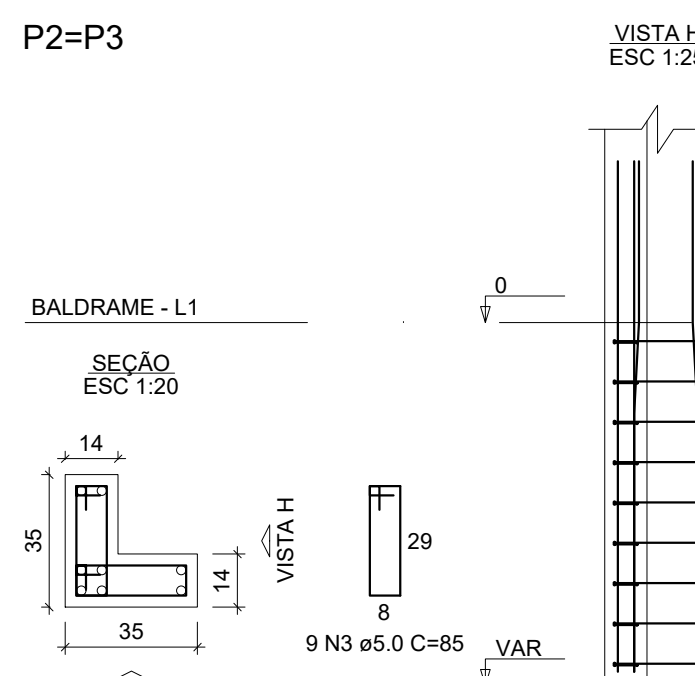


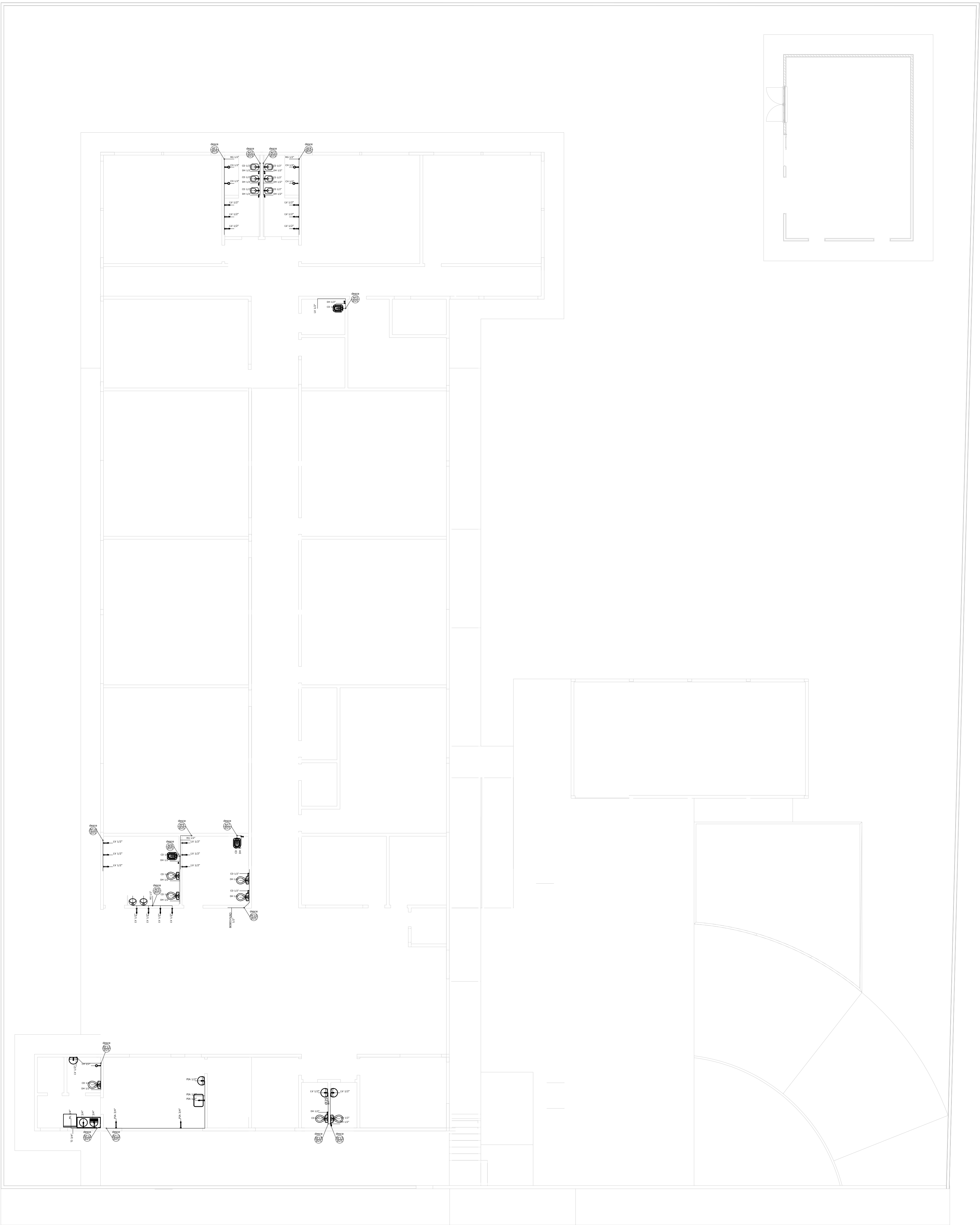
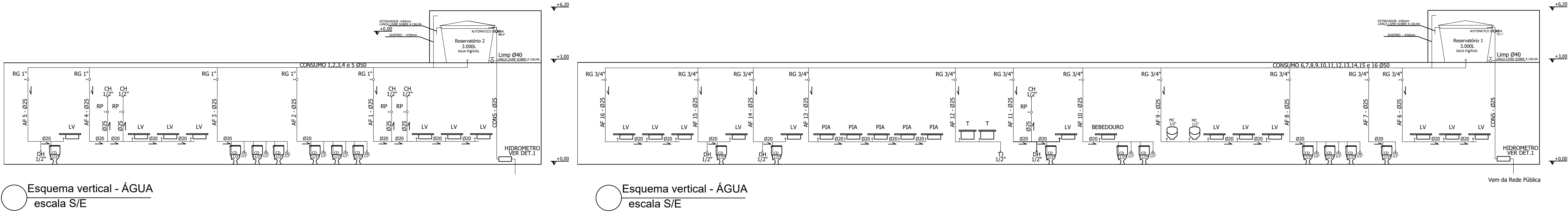
RELAÇÃO DO AÇO						
ELEMENTO	ACO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)
V9	CA60	1	5.0	23	95	2185
	CA50	3	8.0	2	425	850
	CA60	2	12.5	1	150	150
V10	CA50	5	12.5	35	484	988
	CA60	8	10.0	2	246	492
	CA50	9	10.0	2	246	492
	CA50	10	10.0	2	246	492
	CA50	11	5.0	21	95	1995
V11	CA60	11	5.0	21	95	1995
	CA50	13	8.0	2	150	300
	CA50	12	8.0	2	150	300
	CA50	15	8.0	1	214	214
	CA50	16	10.0	2	332	664
	CA50	17	10.0	2	332	664
	CA50	18	10.0	2	332	664
	CA50	19	5.0	47	95	4465
	CA50	20	5.0	47	95	4465
	CA50	21	6.3	4	219	876
	CA50	22	6.3	4	219	876
	CA50	23	8.0	2	150	300
	CA50	24	8.0	2	150	300
	CA50	25	10.0	2	332	664
	CA50	26	10.0	2	332	664
	CA50	27	10.0	2	332	664
	CA50	28	10.0	2	332	664
	CA50	29	5.0	2	405	810
	CA50	30	5.0	2	405	810
	CA50	31	12.5	2	335	670
	CA50	32	12.5	2	335	670
	CA50	33	12.5	2	335	670
	CA50	34	5.0	22	95	2090
	CA50	35	5.0	2	397	794
	CA50	36	5.0	2	397	794
	CA50	37	8.0	2	144	288
	CA50	38	8.0	2	144	288
	CA50	39	12.5	2	332	664
	CA50	40	12.5	2	332	664
	CA50	41	12.5	2	332	664
	CA50	42	12.5	2	332	664
	CA50	43	8.0	11	108	1188
	CA50	44	12.5	4	415	1660
	CA50	45	12.5	4	415	1660
	CA50	46	12.5	4	415	1660
	CA50	47	12.5	4	415	1660
	CA50	48	5.0	33	127	4191
	CA50	49	5.0	33	127	4191
	CA50	50	10.0	6	440	2640
	CA50	51	10.0	6	440	2640
	CA50	52	10.0	6	440	2640
	CA50	53	10.0	6	440	2640
	CA50	54	10.0	6	440	2640
	CA50	55	5.0	20	95	1900
	CA50	56	5.0	20	95	1900
	CA50	57	8.0	2	184	368
	CA50	58	8.0	2	184	368
	CA50	59	8.0	2	184	368
	CA50	60	8.0	2	184	368
	CA50	61	10.0	1	294	294
	CA50	62	10.0	1	294	294
	CA50	63	5.0	40	95	3800
	CA50	64	5.0	40	95	3800
	CA50	65	8.0	2	159	318
	CA50	66	8.0	2	159	318
	CA50	67	10.0	3	340	1020
	CA50	68	10.0	3	340	1020
	CA50	69	10.0	3	340	1020
	CA50	70	16.0	2	305	610
	CA50	71	16.0	2	305	610

RESUMO DO AÇO

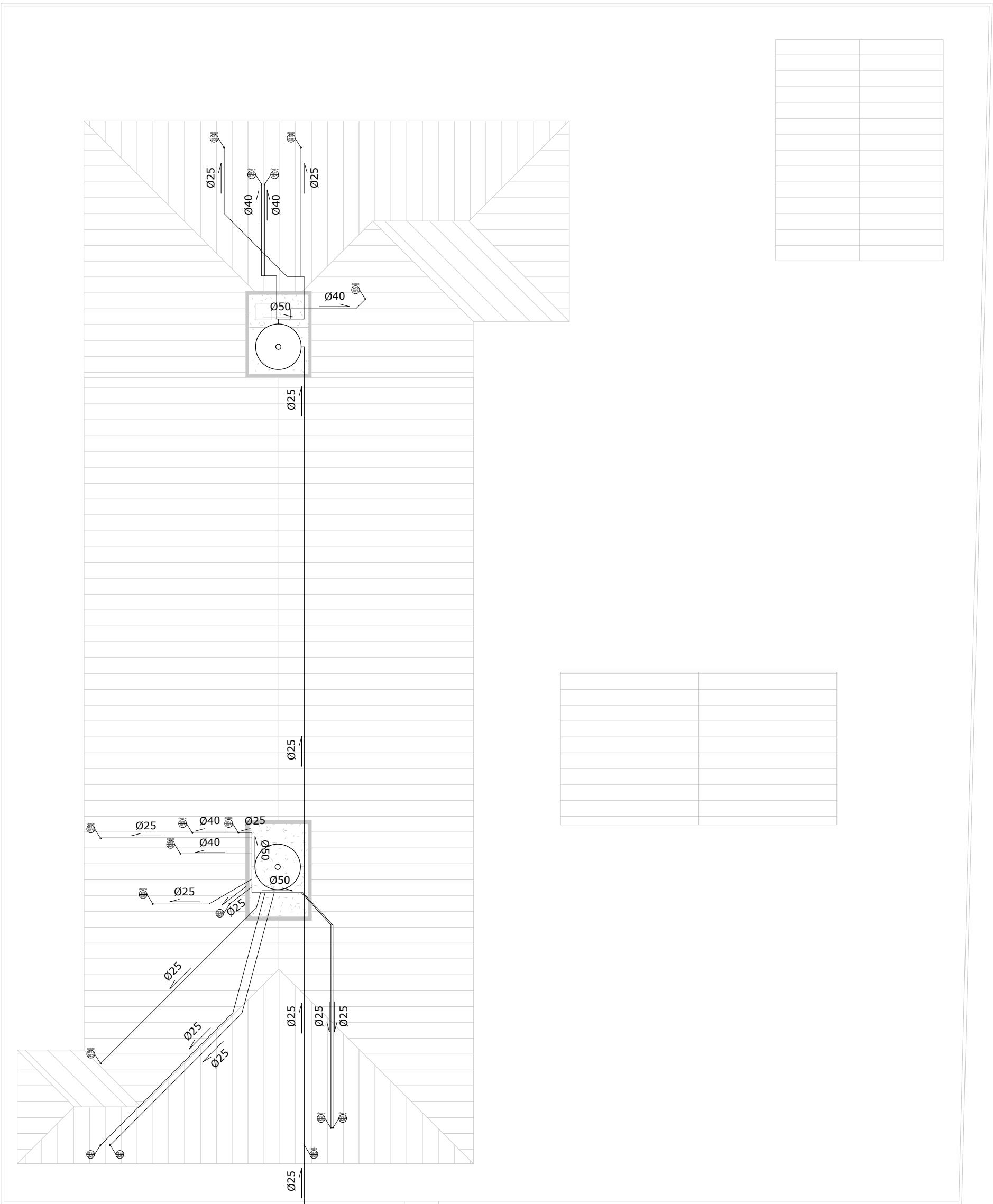
ACO	DIAM (mm)	C TOTAL (m)	PESO + 10% (kg)
CA50	6.3	47.2	12.7
	8.0	77.1	33.4
	10.0	153.5	104.1
	12.5	123.4	135.7
	16.0	43.3	75.1
CA60	5.0	381.9	61.4
PESO TOTAL (kg)			
CA50		356.1	
CA60		61.4	

Volume de concreto (C-30) = 3.64 m³
Área de forma = 56.36 m²

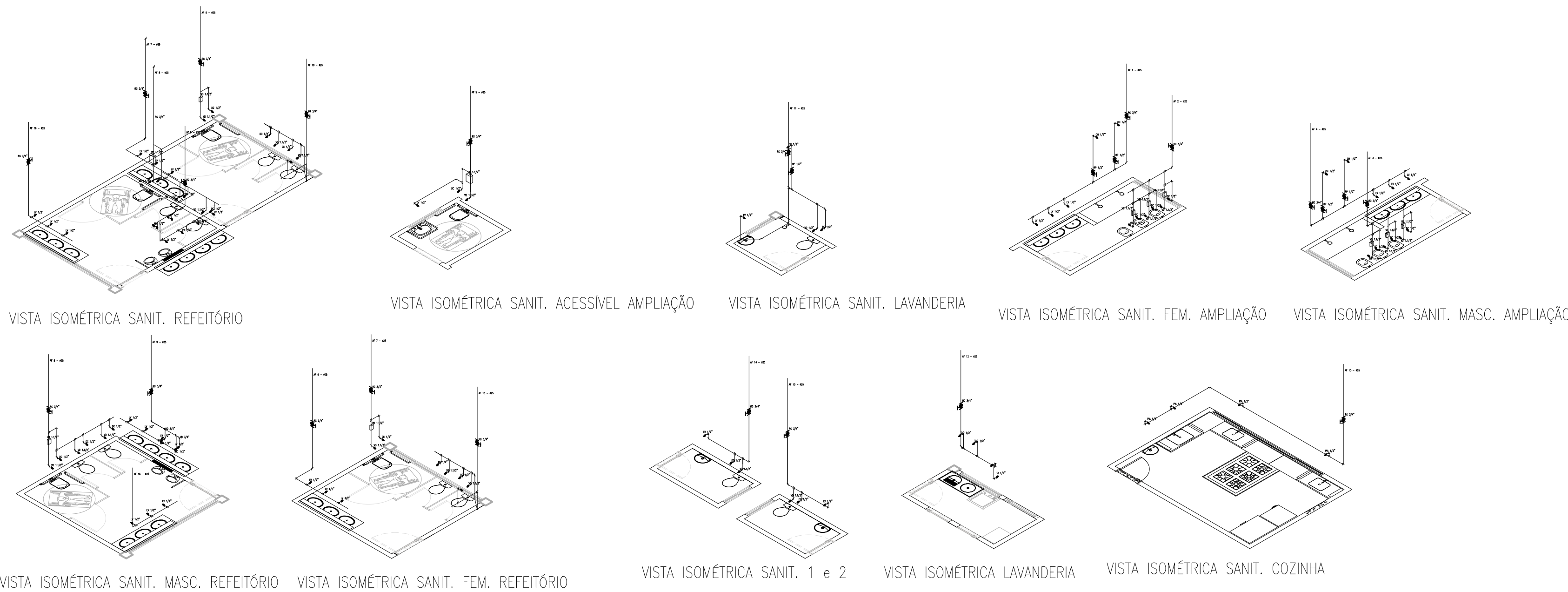




PLANTA ÁGUA FRIA
ESCALA : 1/10

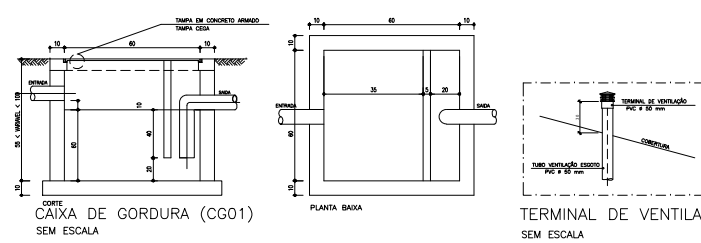


PLANTA DE COBERTURA
ESCALA : 1/20

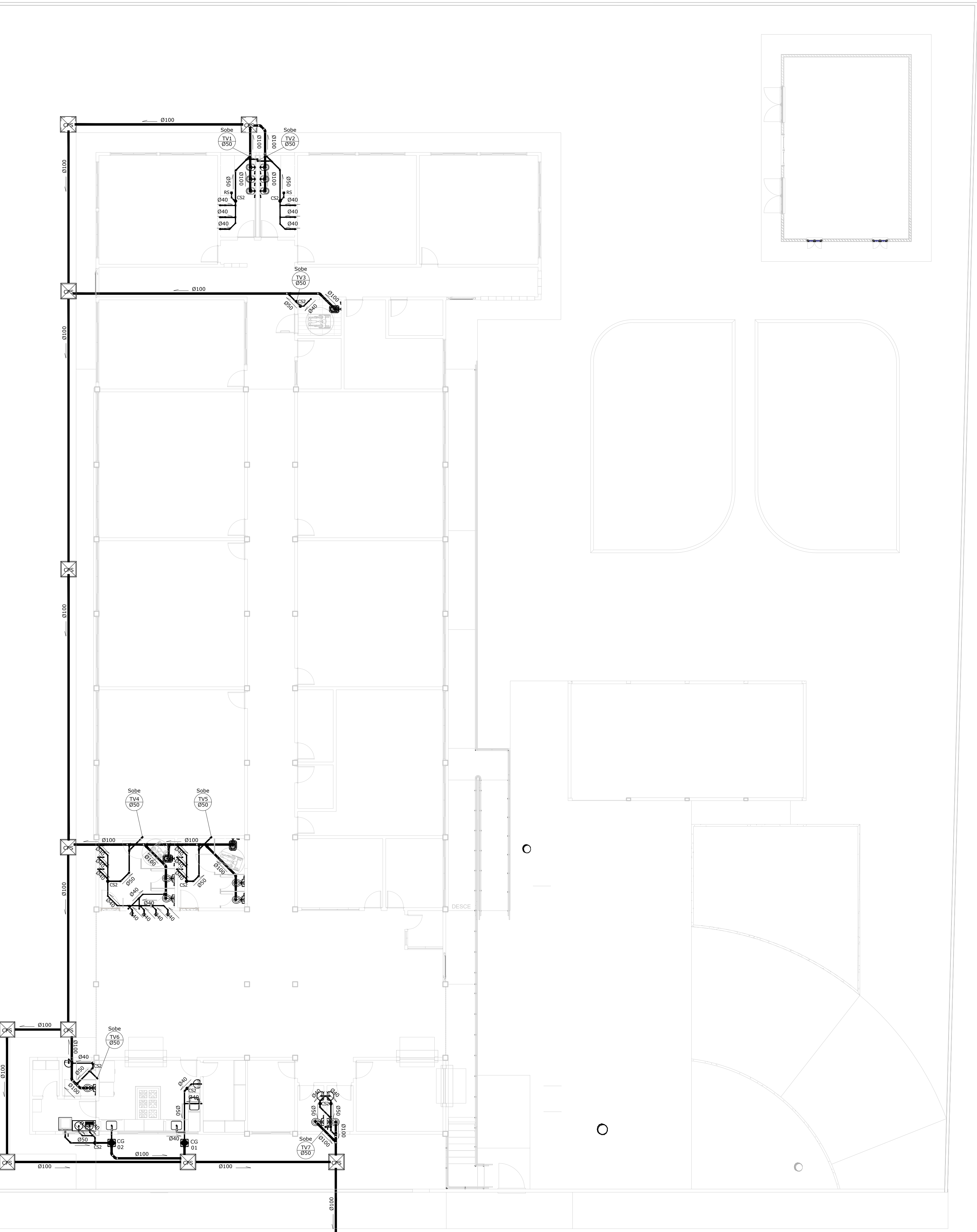


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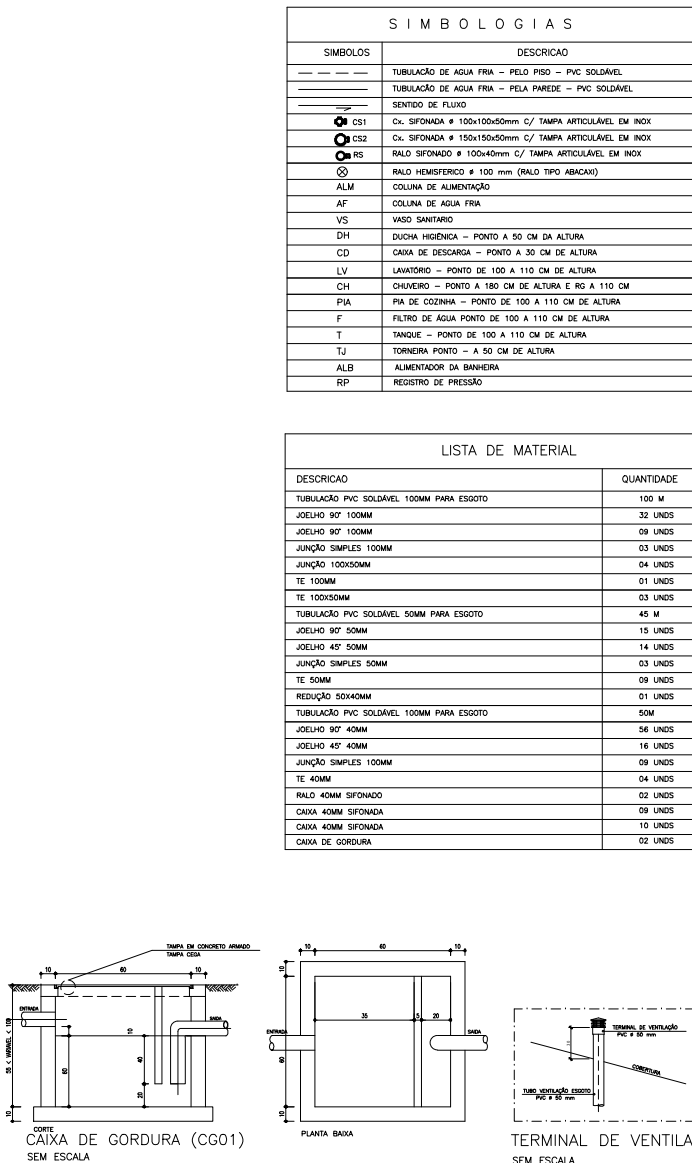
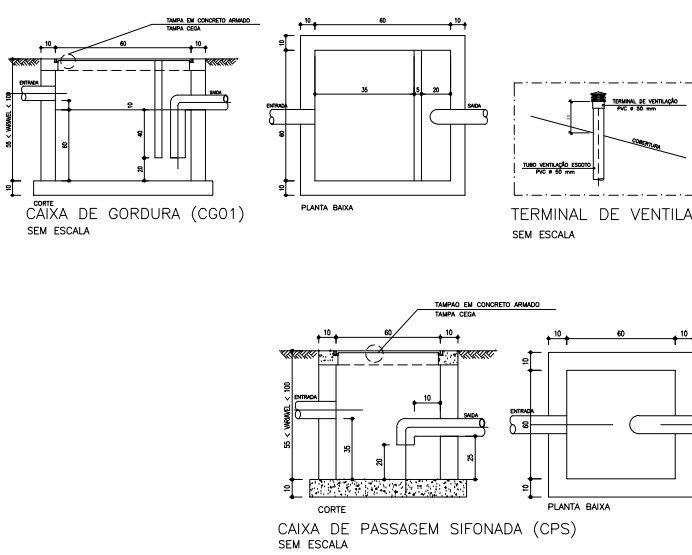
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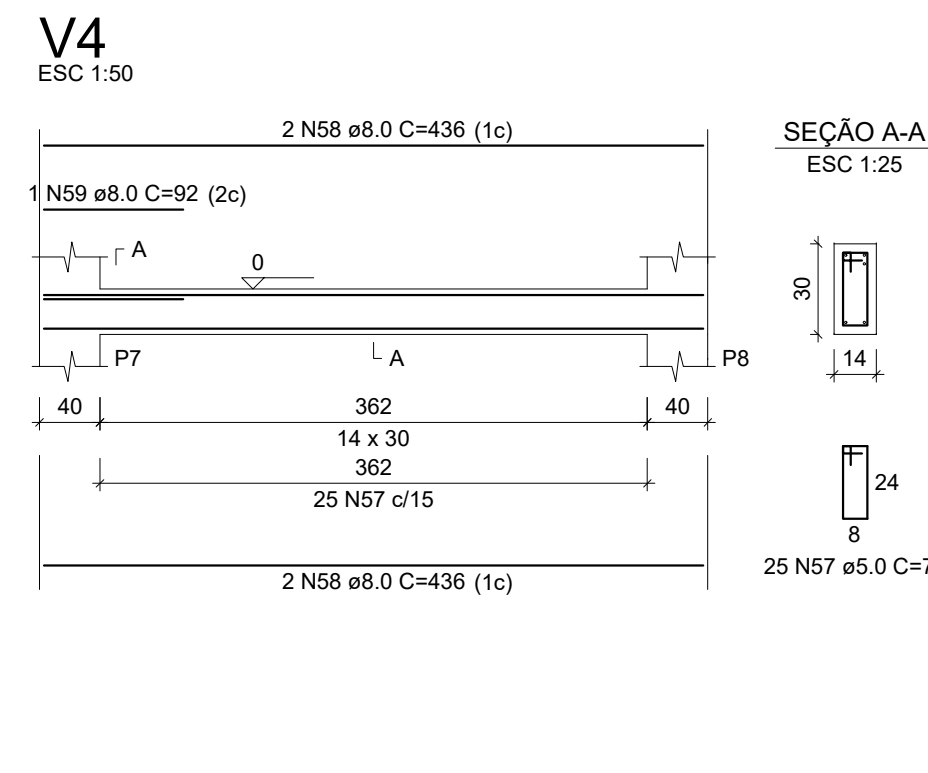
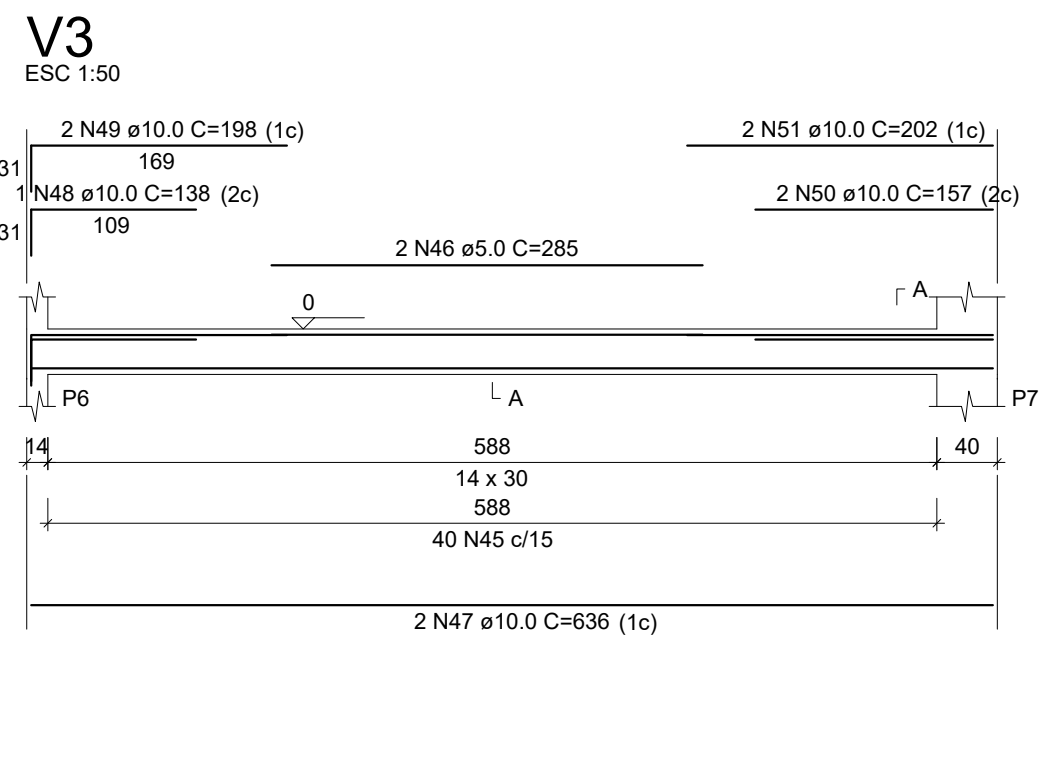
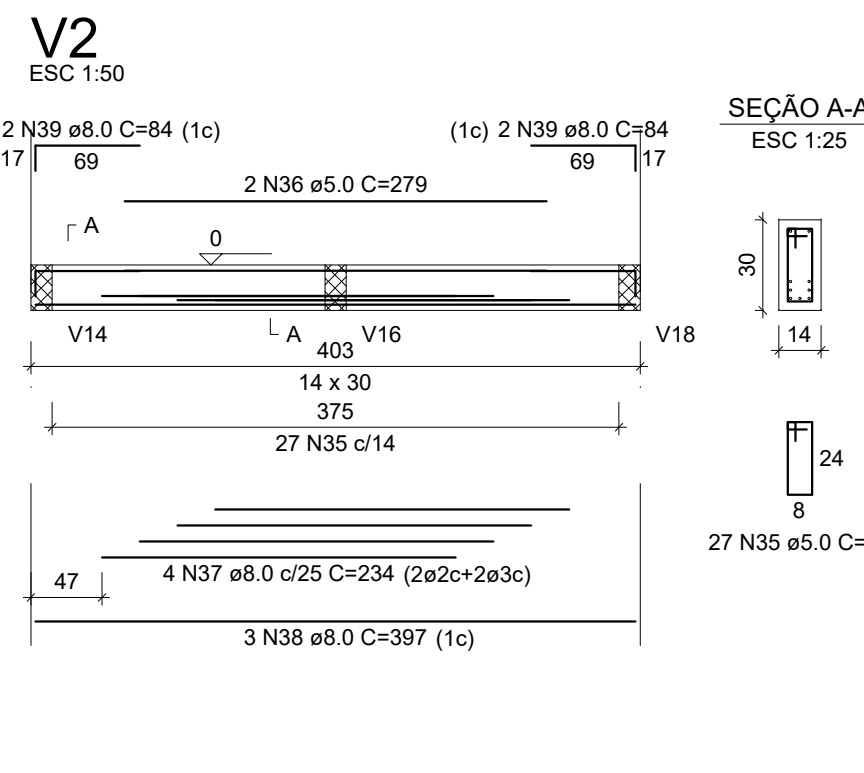
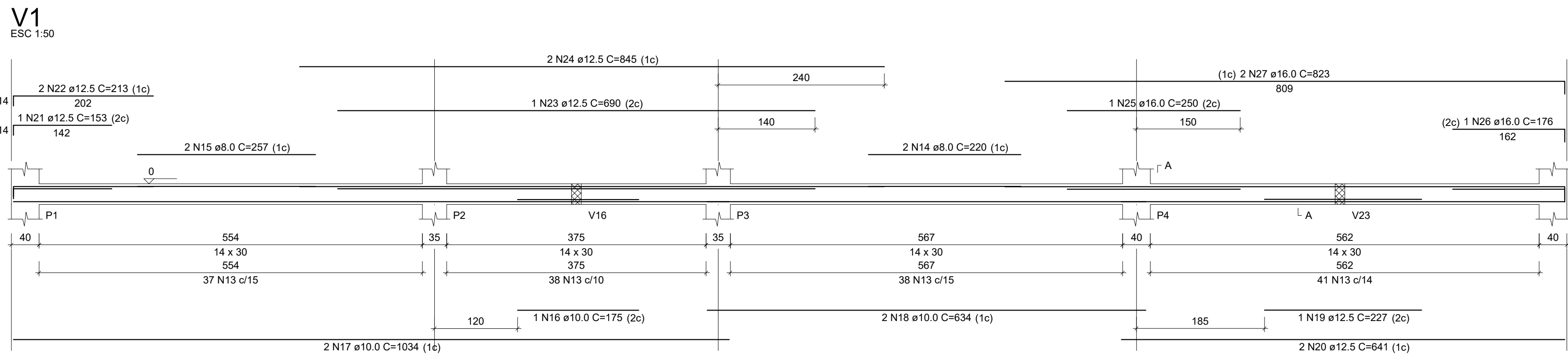


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ESCALA : 1/25

[illegible]



RELAÇÃO DO AÇO						
ELEMENTO	AÇO	N	DIAM (mm)	QUANT	C UNIT (cm)	C TOTAL (cm)
V1+L2	CA50	1	5.0	140	85	13300
	CA50	2	10.0	1	282	282
	CA50	3	10.0	3	609	1827
	CA50	4	10.0	1	272	272
	CA50	5	10.0	3	801	1803
	CA50	6	12.5	2	1002	2004
	CA50	7	16.0	2	330	660
	CA50	8	16.0	1	295	295
	CA50	9	16.0	1	213	213
	CA50	10	16.0	2	1196	2392
V1+L1	CA50	11	16.0	2	1082	2164
	CA50	12	16.0	2	268	536
	CA50	13	5.0	154	75	11550
	CA50	14	8.0	2	220	440
	CA50	15	8.0	2	257	514
	CA50	16	10.0	1	175	175
	CA50	17	10.0	2	1034	2068
	CA50	18	10.0	2	634	1268
	CA50	19	12.5	1	227	227
	CA50	20	12.5	2	641	1282
V2+L2	CA50	21	12.5	1	153	153
	CA50	22	12.5	2	213	426
	CA50	23	12.5	2	660	1320
	CA50	24	12.5	2	845	1690
	CA50	25	16.0	1	176	176
	CA50	26	16.0	1	176	176
	CA50	27	16.0	2	823	1646
	CA50	28	5.0	52	95	4940
	CA50	29	5.0	2	305	610
	CA50	30	8.0	2	64	128
V2+L1	CA50	31	12.5	3	360	1080
	CA50	32	12.5	2	860	1720
	CA50	33	10.0	1	233	233
	CA50	34	20.0	2	313	626
	CA50	35	5.0	27	75	2025
	CA50	36	5.0	2	279	558
	CA50	38	8.0	3	307	919
	CA50	39	8.0	4	84	336
	CA50	40	5.0	20	95	1900
	CA50	41	5.0	3	142	426
V3+L2	CA50	42	8.0	2	444	888
	CA50	43	12.5	2	219	438
	CA50	44	12.5	2	501	1002
	CA50	45	5.0	40	75	3000
	CA50	46	5.0	2	285	570
	CA50	47	10.0	1	658	658
	CA50	48	10.0	1	138	138
	CA50	49	10.0	1	198	198
	CA50	50	10.0	2	157	314
	CA50	51	10.0	2	221	442
V3+L1	CA50	52	5.0	32	95	3040
	CA50	53	5.0	2	221	442
	CA50	54	10.0	3	634	1902
	CA50	55	5.0	25	75	1875
	CA50	56	16.0	2	727	1454
	CA50	57	5.0	2	75	150
	CA50	58	8.0	4	436	1744
	CA50	59	8.0	10	62	620
	CA50	60	5.0	32	95	3040
	CA50	61	5.0	2	679	1358
V4+L2	CA50	62	12.5	4	476	1912
	CA50	63	12.5	2	651	1302
	CA50	64	5.0	38	75	2850
	CA50	66	12.5	2	634	1268
	CA50	67	12.5	34	95	3230
	CA50	68	12.5	2	288	576
	CA50	69	5.0	2	238	476
	CA50	70	5.0	2	177	354
	CA50	71	10.0	1	177	177
	CA50	72	10.0	2	180	360
V4+L1	CA50	73	12.5	2	358	716
	CA50	74	12.5	2	646	1292
	CA50	75	10.0	2	325	650
	CA50	76	5.0	25	115	2875
	CA50	77	5.0	2	285	570
	CA50	78	8.0	4	436	1744
	CA50	79	8.0	10	62	620
	CA50	80	5.0	32	95	3040
	CA50	81	5.0	2	679	1358
	CA50	82	12.5	4	476	1912
V5+L2	CA50	83	12.5	2	651	1302
	CA50	84	5.0	39	75	2925
	CA50	85	5.0	2	285	570
	CA50	86	16.0	2	727	1454
	CA50	87	5.0	2	75	150
	CA50	88	8.0	4	436	1744
	CA50	89	8.0	10	62	620
	CA50	90	5.0	32	95	3040
	CA50	91	5.0	2	679	1358
	CA50	92	12.5	4	476	1912
V5+L1	CA50	93	12.5	2	651	1302
	CA50	94	5.0	39	75	2925
	CA50	95	5.0	2	285	570
	CA50	96	16.0	2	727	1454
	CA50	97	5.0	2	75	150
	CA50	98	8.0	4	436	1744
	CA50	99	8.0	10	62	620
	CA50	100	5.0	32	95	3040
	CA50	101	5.0	2	679	1358
	CA50	102	12.5	4	476	1912
V6+L2	CA50	103	12.5	2	651	1302
	CA50	104	5.0	39	75	2925
	CA50	105	5.0	2	285	570
	CA50	106	16.0	2	727	1454
	CA50	107	5.0	2	75	150
	CA50	108	8.0	4	436	1744
	CA50	109	8.0	10	62	620
	CA50	110	5.0	32	95	3040
	CA50	111	5.0	2	679	1358
	CA50	112	12.5	4	476	1912
V6+L1	CA50	113	12.5	2	651	1302
	CA50	114	5.0	39	75	2925
	CA50	115	5.0	2	285	570
	CA50	116	16.0	2	727	1454
	CA50	117	5.0	2	75	150
	CA50	118	8.0	4	436	1744
	CA50	119	8.0	10	62	620
	CA50	120	5.0	32	95	3040
	CA50	121	5.0	2	679	1358
	CA50	122	12.5	4	476	1912
V7+L2	CA50	123	12.5	2	651	1302
	CA50	124	5.0	39	75	2925
	CA50	125	5.0	2	285	570
	CA50	126	16.0	2	727	1454
	CA50	127	5.0	2	75	150
	CA50	128	8.0	4	436	1744
	CA50	129	8.0	10	62	620
	CA50	130	5.0	32	95	3040
	CA50	131	5.0	2	679	1358
	CA50	132	12.5	4	476	1912
V7+L1	CA50	133	12.5	2	651	1302
	CA50	134	5.0	39	75	2925
	CA50	135	5.0	2	285	570
	CA50	136	16.0	2	727	1454
	CA50	137	5.0	2	75	150
	CA50	138	8.0	4	436	1744
	CA50	139	8.0	10	62	620
	CA50	140	5.0	32	95	3040
	CA50	141	5.0	2	679	1358
	CA50	142	12.5	4	476	1912
V8+L2	CA50	143	12.5	2	651	1302
	CA50	144	5.0	39	75	2925
	CA50	145	5.0	2	285	570
	CA50	146	16.0	2	727	1454
	CA50	147	5.0	2	75	150
	CA50	148	8.0	4	436	1744
	CA50	149	8.0	10	62	620
	CA50	150	5.0	32	95	3040
	CA50	151	5.0	2	679	1358
	CA50	152	12.5	4	476	1912
V8+L1	CA50	153	12.5	2	651	1302
	CA50	154	5.0	39	75	2925
	CA50	155	5.0	2	285	570
	CA50	156	16.0	2	727	1454
	CA50	157	5.0	2	75	150
	CA50	158	8.0	4	436	1744
	CA50	159	8.0	10	62	620
	CA50	160	5.0	32	95	3040
	CA50	161	5.0	2	679	1358
	CA50	162	12.5	4	476	1912
V9+L2	CA50	163	12.5	2	651	1302
	CA50	164	5.0	39	75	2925
	CA50	165	5.0	2	285	570
	CA50	166	16.0	2	727	1454
	CA50	167	5.0	2	75	150
	CA50	168	8.0	4	436	1744
	CA50	169	8.0	10	62	620
	CA50	170	5.0	32	95	3040
	CA50	171	5.0	2	679	1358
	CA50	172	12.5	4	476	1912
V9+L1	CA50	173	12.5	2	651	1302
	CA50	174	5.0	39	75	2925
	CA50	175	5.0	2	285	570
	CA50	176	16.0	2	727	1454
	CA50	177	5.0	2	75	150
	CA50	178	8.0	4	436	1744
	CA50	179	8.0	10	62	620
	CA50	180	5.0	32	95	3040
	CA50	181	5.0	2	679	1358
	CA50	182	12.5	4	476	1912
V10+L2	CA50	183	12.5	2	651	1302
	CA50	184	5.0	39	75	2925
	CA50	185	5.0	2	285	570
	CA50	186	16.0	2	727	1454
	CA50	187	5.0	2	75	150
	CA50	188	8.0	4	436	1744
	CA50	189	8.0	10	62	620
	CA50	190	5.0	32	95	3040
	CA50	191	5.0	2	679	1358
	CA50	192	12.5	4	476	1912
V10+L1	CA50	193	12.5	2	651	1302
	CA50	194	5.0	39	75	2925
	CA50	195	5.0	2	285	570
	CA50	196	16.0	2	727	1454
	CA50	197	5.0	2	75	150
	CA50	198	8.0	4	436	1744
	CA50	199	8.0	10	62	620
	CA50	200	5.0	32	95	3040
	CA50	201	5.0	2	679	1358
	CA50	202	12.5	4	476	1912
V11+L2	CA50	203	12.5	2	651	1302
	CA50	204	5.0	39	75	2925
	CA50	205	5.0	2	285	570
	CA50	206	16.0	2	727	1454
	CA50	207	5.0	2	75	150
	CA50	208	8.0	4	436	1744
	CA50	209	8.0	10	62	620
	CA50	210	5.0	32	95	3040
	CA50	211	5.0	2	679	1358
	CA50	212	12.5	4	476	1912
V11+L1	CA50	213	12.5	2	651	1302
	CA50	214	5.0	39	75	2925
	CA50	215	5.0	2	285	570
	CA50	216	16.0	2	727	1454
	CA50	217	5.0	2	75	150
	CA50	218	8.0	4	436	1744
	CA50	219	8.0	10	62	620
	CA50	220	5.0	32	95	3040
	CA50	221	5.0	2	679	1358
	CA50	222	12.5	4	476	1912
V12+L2	CA50	223	12.5	2	651	1302
	CA50	224	5.0	39	75	2925
	CA50	225	5.0	2	285	570
	CA50	226	16.0	2	727	1454
	CA50	227	5.0	2	75	150
	CA50	228	8.0	4	436	1744
	CA50	229	8.0	10	62	620
	CA50	230	5.0	32	95	3040
	CA50	231	5.0	2	679	1358
	CA50	232	12.5	4	476	1912
V12+L1	CA50	233	12.5	2	651	1302
	CA50	234	5.0	39	75	2925
	CA50	235	5.0	2	285	570
	CA50	236	16.0	2	727	1454
	CA50	237	5.0	2	75	150
	CA50	238	8.0	4	436	1744
	CA50	239	8.0	10	62	6

