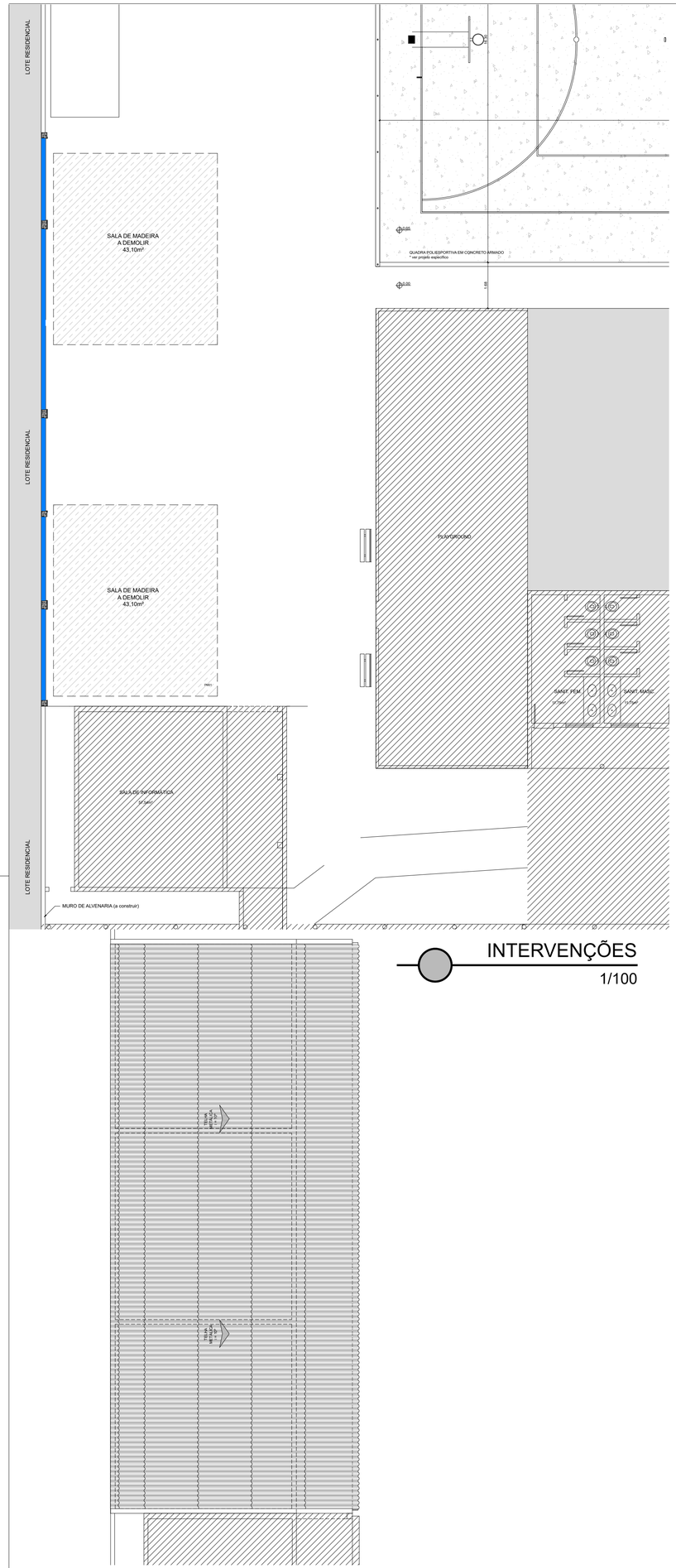
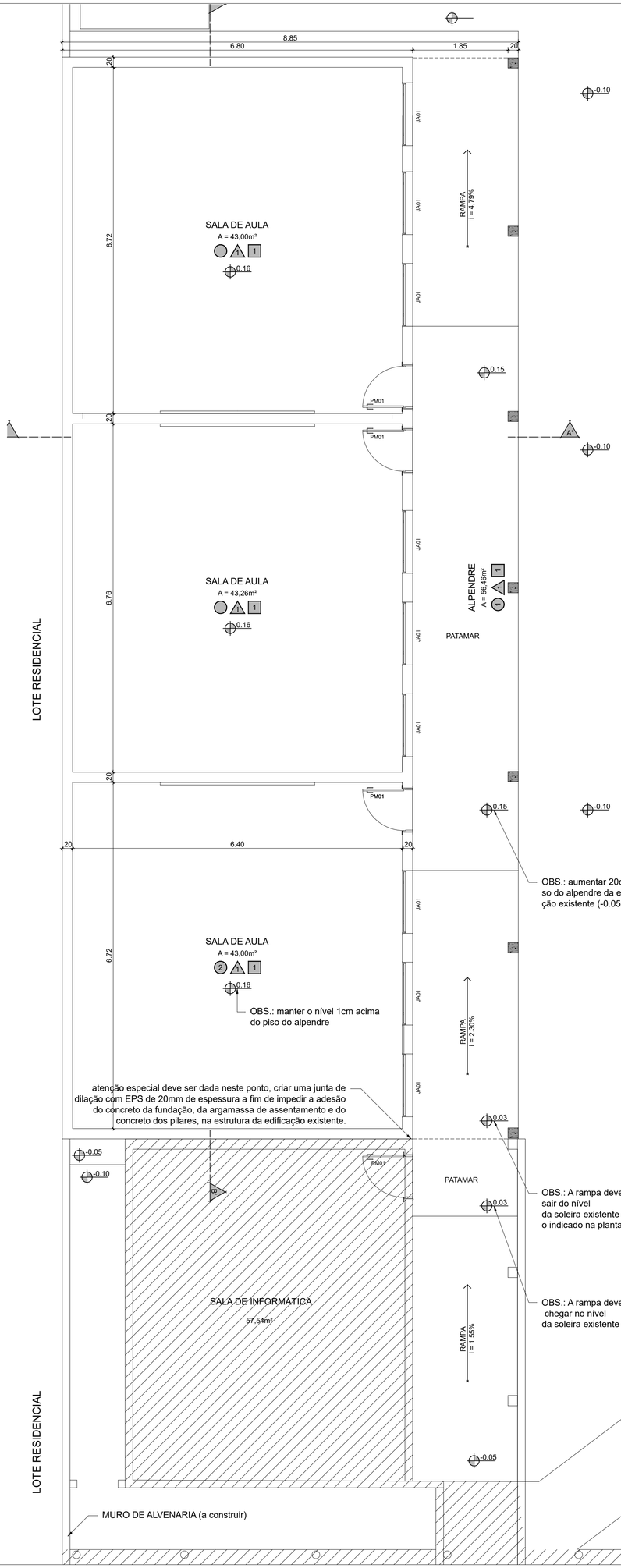


INTERVENÇÕES
1/100

COBERTURA
1/100



PLANTA-BAIXA
1/50

TABELA ESQUADRIAS							
CÓDIGO	MATERIAL	TIPO	DIMENSÃO	FUNCIONAMENTO	COR	VIDRO	QUANTIDADE
PM01	madeira	angelim	folha 0,80m	abrir	Azul	-	3
JA01	alumínio	linha 25	1,20X1,10/1,10	basculante	Branca	canelado	9

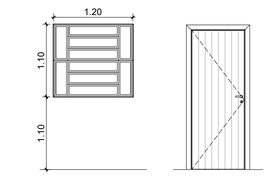


TABELA ACABAMENTOS	
Nº	PISO
1	concreto alisado
2	Porcelanato
Nº	PAREDES
1	reboco de argamassa convencional
2	
Nº	TETO
1	reboco de argamassa convencional
2	

LEGENDA

- ÁREA DA ESCOLA SEM INTERVENÇÃO
- LOTE RESIDENCIAL
- SALA DE MADEIRA (a demolir)
- MURO A DEMOLIR (ver mais informações no Memorial Descritivo)

PREFEITURA MUNICIPAL DO RIO GRANDE

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EMEF DOLORES GARCIA
PROJETO DE AMPLIAÇÃO - 3 SALAS

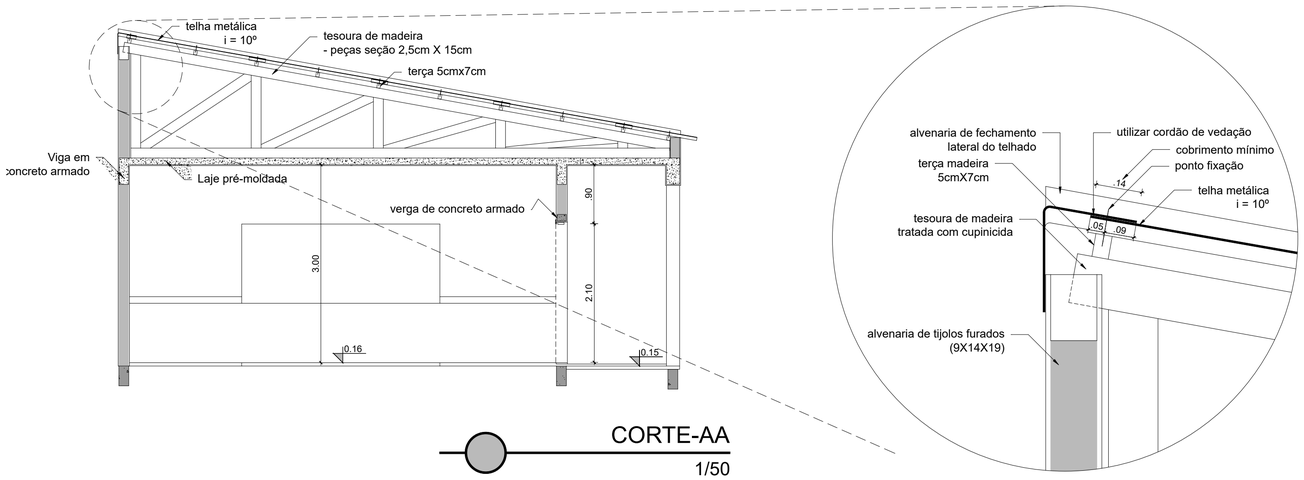
EMEF DOLORES GARCIA
PLANTA DE INTERVENÇÕES
PLANTA BAIXA
PLANTA DE COBERTURA

GPPE
06.2026

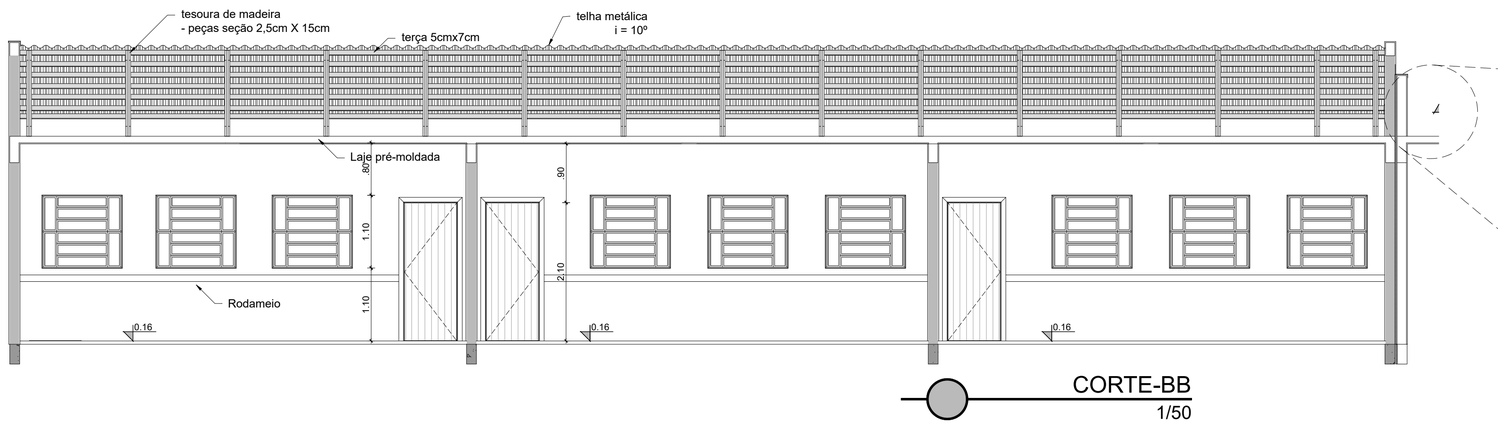
GIOVANA CORVO DA TRINDADE
CHEFE DE GABINETE DE PROGRAMAS E PROJETOS ESPECIAIS

CATIA CILENE DO PINHO PORTELLA
Engª Civil - CREA-195518

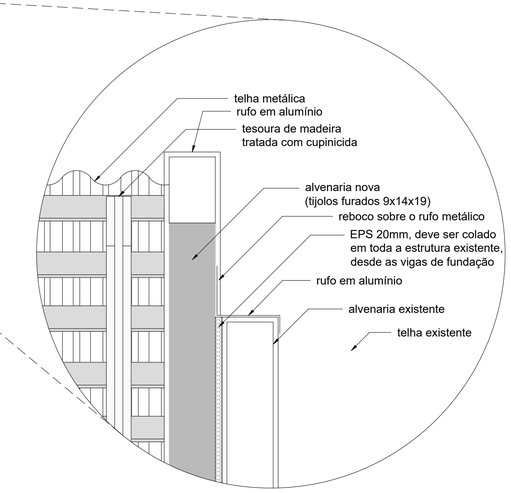
01/02
ESCALA:INDICADA

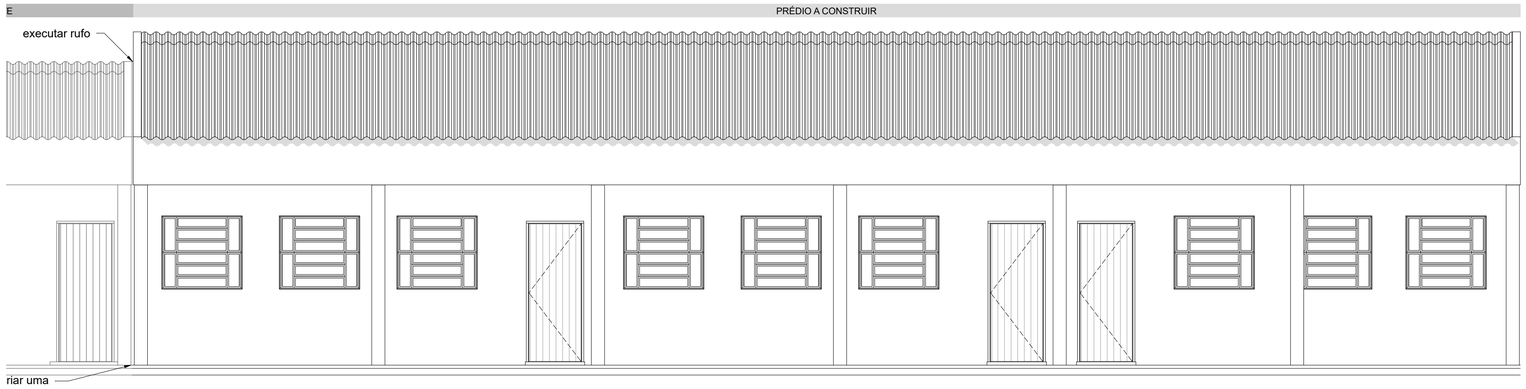


CORTE-AA
1/50



CORTE-BB
1/50





FACHADA
1/50



CROQUI-ESQUEMÁTICO

PREFEITURA MUNICIPAL DO RIO GRANDE

GABINETE DE PROGRAMAS E PROJETOS ESPECIAIS

EMEF DOLORES GARCIA
PROJETO DE AMPLIAÇÃO - 3 SALAS

EMEF DOLORES GARCIA
CORTE AA"
CORTE BB"
FACHADA
CROQUI ESQUEMÁTICO

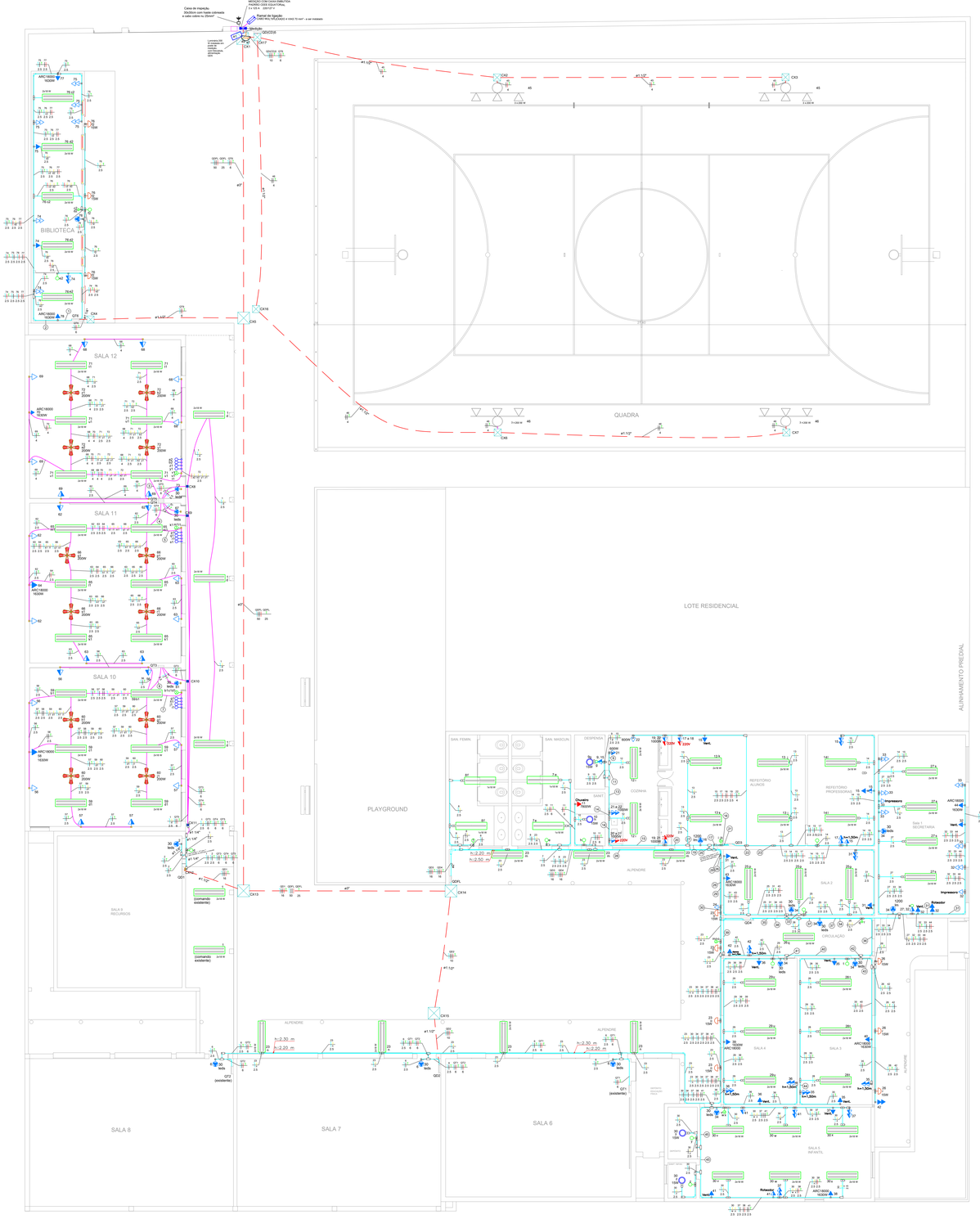
GPPE
06.2026

GIOVANA CORVO DA TRINDADE
CHEFE DE GABINETE DE PROGRAMAS E PROJETOS ESPECIAIS

CATIA CILENE DO PINHO PORTELLA
Engª Civil - CREA-195518

02/02

ESCALA 1:50



Legenda – Térreo

	Arrandela 15W – Instalação aparente
	Caixa 4x4" embutida na parede
	Caixa de passagem embutida em laje 10 x 10 cm
	Caixa de passagem no piso – 30x30 cm
	Caixa de passagem subterrânea – 50x50 cm
	Condulete C
	Condulete E
	Condulete LB
	Condulete LL
	Condulete LR
	Condulete T
	Condulete TB
	Curva 90°
	Entrada de serviço
	Interruptor simples 1 tecla em condulete E
	Interruptor simples 2 teclas em condulete E
	Interruptor simples 3 teclas – embutido
	Interruptor simples 3 teclas em condulete E
	Interruptor simples com tomada média em condulete E
1x18 W	Luminária 1 x 18 W (18 W) – LED
2x18 W	Luminária 2 x 18 W (36 W) – LED
3 x 200 W	Luminária LED (3 x 200 W, 3 x 18000 lm) em poste 7 m
	Luminária LED 15W
	Quadro de distribuição
	Quadro de medição
	Tomada alta dupla em condulete E
	Tomada alta em condulete E
	Tomada alta embutida em alvenaria
	Tomada baixa dupla em condulete E
	Tomada baixa em condulete E
	Tomada baixa embutida em alvenaria
	Tomada de comando para ventilador de teto
	Tomada de emergência a 2,20 m
	Tomada de emergência em condulete E
	Tomada média dupla em condulete E
	Tomada média em condulete E
	Tomada média embutida em alvenaria
	Ventilador de teto de 200 W

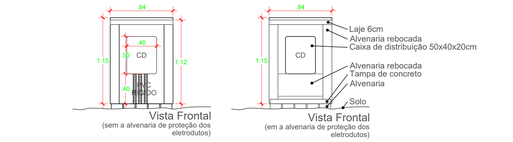
Legenda de condutos – Térreo

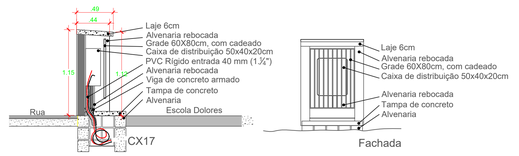
Elétrica (Embutido)	
	Teto
	Alta
	Média
	Baixa
	Piso
Elétrica (Aparente)	
	Direta
	Teto
	Alta
	Média
	Baixa
Elétrica (Subterrâneo)	
	Piso

NOTAS

1- As instalações elétricas deverão ser executadas conforme a NBR-5410/2004
2- A entrada de energia deverá seguir os padrões da CEEE Equatorial - NT001 Rev09/25
3- Eletrodutos não cotados serão de ø1" de secção
4- Seção mínima dos condutores será de 2,5mm²
5- Todos condutores deverão ser de cobre com isolamento em PVC antichama, classe de isolação 750V (circuitos terminais) e 1000V (circuitos alimentadores - QDG's, QT6 e iluminação da quadra esportiva)
6- O condutor de proteção (fio terra) deve estar presente em todos os circuitos, desde o quadro geral até os pontos terminais
7- Está previsto dispositivo diferencial residual (DR) para o quadro QD5
8- A medição e o QDFL serão equipadas com dispositivo de proteção contra surto - 40KA/175V e 20KA/175V respectivamente
9- As tomadas seguirão o padrão brasileiro (ABNT NBR 14136), possuir contato de aterramento (2P+T)
10- As tomadas para luz de emergência serão instaladas a 2,20 m do piso.
11- As tomadas baixas estarão a 0,30 m do piso, as médias 1,20 m e as altas 2,20 m.
12- As luminárias de sobrepor terão sua alimentação a partir de rabichos cabo PP com saída de condulete E tampa perfurada.

Nicho Quadro QD5





OBS.:
- cota de topo da caixa de alvenaria, a ser executada no solo, alinhada com o canteiro existente
- executar a laje de cobertura com balanço em relação à alvenaria em osso, de forma que o reboco das laterais termine arrematado sob a laje.
- executar a laje de cobertura com balanço frontal mínimo de 5cm

Legenda de fiação – Térreo – Parte 1

1	74 75 76 77 78 2.5 2.5 2.5 2.5 2.5
2	74 75 76 77 g2 2.5 2.5 2.5 2.5
3	68 69 70 71 72 4 4 4 2.5 2.5
4	62 63 64 65 66 2.5 2.5 2.5 2.5 2.5
5	65 66 s1 l1 in1 g1 g1 l1 s1 2.5
6	56 57 58 59 60 2.5 2.5 2.5 2.5 2.5
7	59 60 s1 s1 g1 g1 s1 l1 g1 2.5 2.5
9	21 4
11	12 21 2.5 4
13	9 12 15 21 2.5 2.5 2.5 4
14	9 12 15 21 22 2.5 2.5 2.5 4 4
15	9 12 15 20 21 22 2.5 2.5 2.5 2.5 4 4
16	QD3 16 16
17	7 8 9 10 11 12 2.5 2.5 2.5 2.5 6 2.5 13 15 16 19 20 21 2.5 2.5 2.5 2.5 2.5 4 22 23 24 4 2.5 2.5
19	9 12 13 15 19 20 2.5 2.5 2.5 2.5 2.5 2.5 21 22 4 4

Legenda de fiação – Térreo – Parte 2

20	9 12 15 19 20 21 2.5 2.5 2.5 2.5 2.5 4 22 4
21	7 8 9 10 11 12 2.5 2.5 2.5 2.5 6 2.5 13 15 16 19 20 21 2.5 2.5 2.5 2.5 2.5 4 22 23 24 4 2.5 2.5
22	13 14 15 17 18 19 2.5 2.5 2.5 2.5 2.5 2.5 25 4
23	13 14 15 17 2.5 2.5 2.5 2.5
25	7 8 10 11 23 24 2.5 2.5 2.5 6 2.5 2.5
26	23 24 in 2.5 2.5
27	7 8 10 11 23 2.5 2.5 2.5 6 2.5
28	7 8 10 11 23 in 2.5 2.5 2.5 6 2.5
29	QD4 16 16
30	23 in 2.5
31	32 33 44 2.5 2.5 2.5
33	25 31 2.5 2.5
34	27 32 33 34 44 2.5 2.5 2.5 2.5 2.5
35	25 27 31 32 33 34 43 44 2.5 2.5 2.5 2.5 2.5 2.5 2.5

Legenda de fiação – Térreo – Parte 3

36	26 28 29 34 35 36 2.5 2.5 2.5 2.5 2.5 2.5 39 40 42 2.5 2.5 2.5
37	26 28 29 34 35 36 l1 2.5 2.5 2.5 2.5 2.5 2.5 39 40 42 2.5 2.5 2.5
38	26 28 29 34 35 36 2.5 2.5 2.5 2.5 2.5 2.5 39 40 42 2.5 2.5 2.5
39	30 34 37 38 41 2.5 2.5 2.5 2.5 2.5
40	29 34 36 39 42 2.5 2.5 2.5 2.5 2.5
41	29 34 36 39 in 2.5 2.5 2.5 2.5
42	26 28 34 35 40 42 2.5 2.5 2.5 2.5 2.5 2.5
43	28 35 40 42 2.5 2.5 2.5 2.5
44	35 in 2.5
45	30 37 38 41 l1 w w s 2.5 2.5 2.5 2.5

Entrada de energia

PREFEITURA MUNICIPAL DO RIO GRANDE

GABINETE DE PROGRAMAS E PROJETOS ESPECIAIS

ESCOLA DOLORES GARCIA

Rua Darci Cunha Mattos, 351 - Parque Guanabara

REFORMA ELÉTRICA

PROJETO ELÉTRICO DE BAIXA TENSAO

Planta baixa elétrica

GPPE 07.2026

Giovana Corvo da Trindade
CHEFE DO GABINETE DE PROGRAMAS E PROJETOS ESPECIAIS

Denison Farias Leite
CREA RS094765

Documento assinado digitalmente
DENISON FARIAS LEITE
Data: 09/07/2026 14:51:42-0300
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01/05

ESCALA 1/75

Quadro de Cargas (Medição) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
QD(CD)5		3F+N+T	220/127 V	10423	9585	R+S+T	2700	3630	3255	0.92	30.8	10	66.0
QDFL		3F+N+T	220/127 V	55659	51395	R+S+T	15825	18371	17199	0.92	113.0	50	175.0
TOTAL				66081	60980	R+S+T	18525	22001	20454				

Quadro de Cargas (QDFL) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
QD1		3F+N+T	220/127 V	12288	10918	R+S+T	3610	3646	3662	0.89	30.1	16	88.0
QD2		3F+N+T	220/127 V	6863	6830	R+S+T	2115	2315	2400	1.00	19.5	10	66.0
QD4		3F+N+T	220/127 V	16267	14645	R+S+T	4660	4910	5075	0.90	39.4	16	68.0
QD3		3F+N+T	220/127 V	20240	19002	R+S+T	5440	7500	6062	0.94	59.3	16	68.0
TOTAL				55659	51395	R+S+T	15825	18371	17199				

Quadro de Cargas (QD1) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
QT5		2F+N+T	220/127 V	3992	3546	R+T	1715		1831	0.89	15.9	6	36.0
QT4		2F+N+T	220/127 V	3992	3546	S+T		1715	1831	0.89	15.9	6	36.0
QT3		2F+N+T	220/127 V	3992	3546	R+S	1715	1831		0.89	15.9	6	36.0
1	Iluminação alpendre	F+N	127 V	200	180	R	180			0.90	1.6	2.5	24.0
2	Iluminação emergência	F+N+T	127 V	111	100	S		100		0.90	0.9	2.5	24.0
TOTAL				12288	10918	R+S+T	3610	3646	3662				

Quadro de Cargas (QD2) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
QT2		2F+N+T	220/127 V	1800	1800	S+T		600	1200	1.00	9.4	6	36.0
QT1		2F+N+T	220/127 V	1800	1800	S+T		600	1200	1.00	9.4	6	36.0
3	Ar condicionado	F+F+T	220 V	1630	1630	R+S	815	815		1.00	7.4	2.5	24.0
4	Tomadas	F+N+T	127 V	1000	1000	R	1000			1.00	7.9	2.5	24.0
5	Iluminação	F+N+T	127 V	300	300	R	300			1.00	2.4	2.5	24.0
6	Iluminação emergência	F+N+T	127 V	333	300	S		300		0.90	2.6	2.5	24.0
TOTAL				6863	6830	R+S+T	2115	2315	2400				

Quadro de Cargas (QD3) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
7	Iluminação sanitário masculino	F+N	127 V	40	36	R	36			0.90	0.3	2.5	24.0
8	Iluminação sanitário feminino	F+N	127 V	40	36	R	36			0.90	0.3	2.5	24.0
9	Iluminação despensa	F+N	127 V	17	15	R	15			0.90	0.1	2.5	24.0
10	Iluminação sanitário corredor	F+N	127 V	17	15	R	15			0.90	0.1	2.5	24.0
11	Chuveiro sanitário	F+F+T	220 V	7800	7800	S+T		3900	3900	1.00	35.5	6	41.0
12	Iluminação cozinha	F+N	127 V	80	72	R	72			0.90	0.6	2.5	24.0
13	Iluminação refeitório alunos	F+N	127 V	160	144	R	144			0.90	1.3	2.5	24.0
14	Iluminação refeitório professoras	F+N	127 V	80	72	R	72			0.90	0.6	2.5	24.0
15	Tomada Grupo 1	F+N+T	127 V	778	700	R	700			0.90	6.1	2.5	24.0
16	Tomadas de emergência	F+N+T	127 V	111	100	R	100			0.90	0.9	2.5	24.0
17	Tomadas Grupo 2	F+N+T	127 V	333	300	T			300	0.90	2.6	2.5	24.0
18	Tomadas 220 V Refeitórios	F+F+T	220 V	111	100	R+T	50		50	0.90	0.5	2.5	24.0
19	Tomadas 220 V Cozinha Geral	F+F+T	220 V	2222	2000	R+T	1000		1000	0.90	10.1	2.5	24.0
20	Tomada 220 V Cozinha Bancada	F+F+T	220 V	1111	1000	R+T	500		500	0.90	5.1	2.5	24.0
21	Tomadas Cozinha Grupo 1	F+N+T	127 V	4000	3600	S		3600		0.90	31.5	4	32.0
22	Tomadas Cozinha Grupo 2	F+N+T	127 V	2889	2600	R	2600			0.90	22.7	4	32.0
23	Iluminação Alpendre	F+N+T	127 V	340	312	T			312	0.92	2.7	2.5	24.0
24	Tomadas externas	F+N+T	127 V	111	100	R	100			0.90	0.9	2.5	24.0
TOTAL				20240	19002	R+S+T	5440	7500	6062				

Quadro de Cargas (QD4) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
25	Iluminação Sala 2	F+N	127 V	120	108	R	108			0.90	0.9	2.5	24.0
26	Iluminação Circulação	F+N+T	127 V	85	81	R	81			0.95	0.7	2.5	24.0
27	Iluminação Sala 1	F+N	127 V	160	144	R	144			0.90	1.3	2.5	24.0
28	Iluminação Sala 3	F+N	127 V	120	108	R	108			0.90	0.9	2.5	24.0
29	Iluminação Sala 4	F+N	127 V	120	108	R	108			0.90	0.9	2.5	24.0
30	Iluminação Sala 5	F+N	127 V	273	246	R	246			0.90	2.2	2.5	24.0
31	Tomadas Sala 2	F+N+T	127 V	444	400	R	400			0.90	3.5	2.5	24.0
32	Tomadas Sala 1 Grupo 1	F+N+T	127 V	1111	1000	T			1000	0.90	8.7	2.5	24.0
33	Tomadas Sala 2 Grupo 2	F+N+T	127 V	1000	900	S		900		0.90	7.9	2.5	24.0
34	Tomadas de emergência	F+N+T	127 V	778	700	R	700			0.90	6.1	2.5	24.0
35	Tomadas Sala 3	F+N+T	127 V	667	600	R	600			0.90	5.2	2.5	24.0
36	Tomadas Sala 4	F+N+T	127 V	667	600	R	600			0.90	5.2	2.5	24.0
37	Tomadas Sala 5 Grupo 1	F+N+T	127 V	556	500	S		500		0.90	4.4	2.5	24.0
38	Ar condicionado Sala 5	F+F+T	220 V	1811	1630	S+T		815	815	0.90	8.2	2.5	24.0
39	Ar condicionado Sala 4	F+F+T	220 V	1811	1630	S+T		815	815	0.90	8.2	2.5	24.0
40	Ar condicionado Sala 3	F+F+T	220 V	1811	1630	S+T		815	815	0.90	8.2	2.5	24.0
41	Tomadas Sala 5 Grupo 2	F+F+T	220 V	556	500	R+S	250	250		0.90	2.5	2.5	24.0
42	Tomadas externas	F+N+T	127 V	556	500	R	500			0.90	4.4	2.5	24.0
43	Tomada 220 V Sala 2	F+F+T	220 V	1811	1630	S+T		815	815	0.90	8.2	2.5	24.0
44	Ar condicionado Sala 1	F+F+T	220 V	1811	1630	R+T	815		815	0.90	8.2	2.5	24.0
TOTAL				16267	14645	R+S+T	4660	4910	5075				

Quadro de Cargas (QD(CD)5) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
QT6		2F+N+T	220/127 V	5756	5185	S+T		2530	2655	0.90	21.3	6	48.0
45	Iluminação quadra 1	F+F+T	220 V	1333	1200	R+T	600		600	0.90	6.1	4	42.0
46	Iluminação quadra 2	F+F+T	220 V	1333	1200	R+S	600	600		0.90	6.1	4	42.0
47	Reserva	F+F+T	220 V	1000	1000	R+S	500	500		1.00	4.5	4	42.0
48	Reserva	F+N+T	127 V	1000	1000	R	1000			1.00	7.9	4	32.0
TOTAL				10423	9585	R+S+T	2700	3630	3255				

Quadro de Cargas (QT1) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
49	Fase R	F+N+T	127 V	600	600	T			600	1.00	4.7	2.5	24.0
50	Fase S	F+N+T	127 V	600	600	S		600		1.00	4.7	2.5	24.0
51	Fase T	F+N+T	127 V	600	600	T			600	1.00	4.7	2.5	24.0
TOTAL				1800	1800	S+T	0	600	1200				

Quadro de Cargas (QT2) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
52	Fase T	F+N+T	127 V	600	600	T			600	1.00	4.7	2.5	24.0
53	Fase S	F+N+T	127 V	600	600	S		600		1.00	4.7	2.5	24.0
54	Fase R	F+N+T	127 V	600	600	T			600	1.00	4.7	2.5	24.0
TOTAL				1800	1800	S+T	0	600	1200				

Quadro de Cargas (QT3) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
55	Tomadas Grupo 1	F+N+T	127 V	444	400	R	400			0.90	3.5	2.5	24.0
56	Tomadas Grupo 2	F+N+T	127 V	444	400	R	400			0.90	3.5	2.5	24.0
57	Ar condicionado	F+F+T	220 V	1811	1630	R+S	815	815		0.90	8.2	2.5	24.0
58	Iluminação	F+N	127 V	240	216	S		216		0.90	1.9	2.5	24.0
59	Ventiladores	F+N+T	127 V	941	800	S		800		0.85	7.4	2.5	24.0
60	Iluminação (emergência)	F+N+T	127 V	111	100	R	100			0.90	0.9	2.5	24.0
TOTAL				3992	3546	R+S	1715	1831	0				

Quadro de Cargas (QT4) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
61	Tomadas Grupo 1	F+N+T	127 V	444	400	S		400		0.90	3.5	2.5	24.0
62	Tomadas Grupo 2	F+N+T	127 V	444	400	S		400		0.90	3.5	2.5	24.0
63	Ar condicionado	F+F+T	220 V	1811	1630	S+T		815	815	0.90	8.2	2.5	24.0
64	Iluminação	F+N	127 V	240	216	T			216	0.90	1.9	2.5	24.0
65	Ventiladores	F+N+T	127 V	941	800	T			800	0.85	7.4	2.5	24.0
66	Iluminação (emergência)	F+N+T	127 V	111	100	S		100		0.90	0.9	2.5	24.0
TOTAL				3992	3546	S+T	0	1715	1831				

Quadro de Cargas (QT5) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
67	Tomadas Grupo 1	F+N+T	127 V	444	400	R	400			0.90	3.5	4	32.0
68	Tomadas Grupo 2	F+N+T	127 V	444	400	R	400			0.90	3.5	4	32.0
69	Ar condicionado	F+F+T	220 V	1811	1630	R+T	815		815	0.90	8.2	4	32.0
70	Iluminação	F+N	127 V	240	216	T			216	0.90	1.9	2.5	24.0
71	Ventiladores	F+N+T	127 V	941	800	T			800	0.85	7.4	2.5	24.0
72	Iluminação (emergência)	F+N+T	127 V	111	100	R	100			0.90	0.9	2.5	24.0
TOTAL				3992	3546	R+T	1715	0	1831				

Quadro de Cargas (QT6) – Térreo

Circuito	Descrição	Esquema	Tensão (V)	Pot. total. (VA)	Pot. total. (W)	Fases	Pot. – R (W)	Pot. – S (W)	Pot. – T (W)	FP	Ip (A)	Seção (mm^2)	Ic (A)
73	Tomadas Grupo 1	F+N+T	127 V	778	700	T			700	0.90	6.1	2.5	24.0
74	Tomadas Grupo 2	F+N+T	127 V	1000	900	S		900		0.90	7.9	2.5	24.0
75	Iluminação	F+N+T	127 V	356	325	T			325	0.91	2.8	2.5	24.0
76	Ar condicionado 1	F+F+T	220 V	1811	1630	S+T		815	815	0.90	8.2	2.5	24.0
77	Ar condicionado 2	F+F+T	220 V	1811	1630	S+T		815	815	0.90	8.2	2.5	24.0
TOTAL				5756	5185	S+T	0	2530	2655				

Quadro de Demanda (Medição) – Térreo

Tipo de carga	Potência instalada (kVA)	Fator de demanda (%)	Demanda (kVA)
Ar condicionado	17.93	51.00	9.14
Chuveiros	3.50	80.00	2.80
	4.30	80.00	3.44
Iluminação e TUG's (Escolas e semelhantes)	12.00	100.00	12.00
	28.35	50.00	14.18
		TOTAL	41.56

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ESCOLA DOLORES GARCIA

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REFORMA ELÉTRICA

PROJETO ELÉTRICO DE BAIXA TENSAO

Quadro de cargas

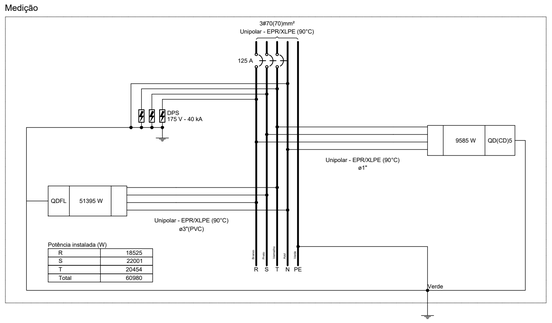
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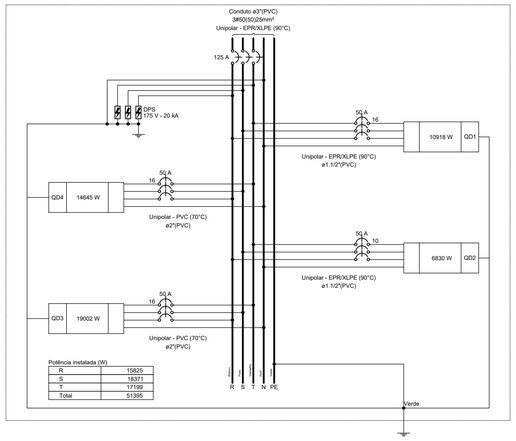
Denison Farias Leite
CREA RS094765

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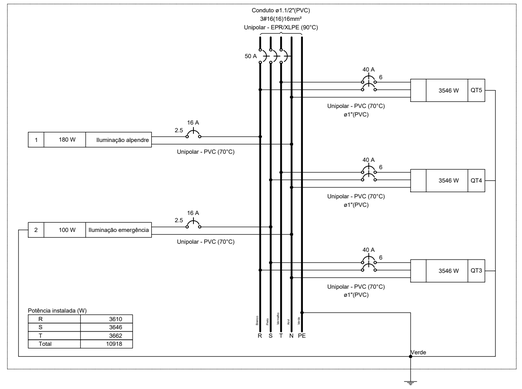
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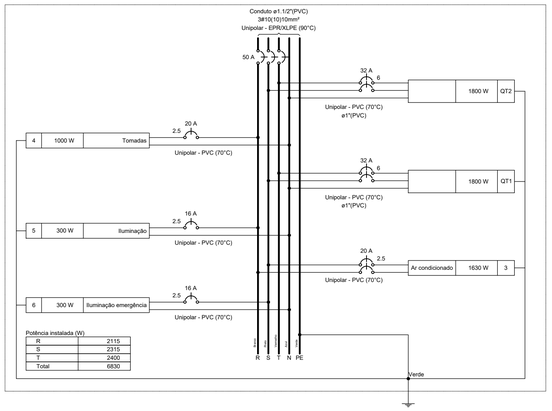
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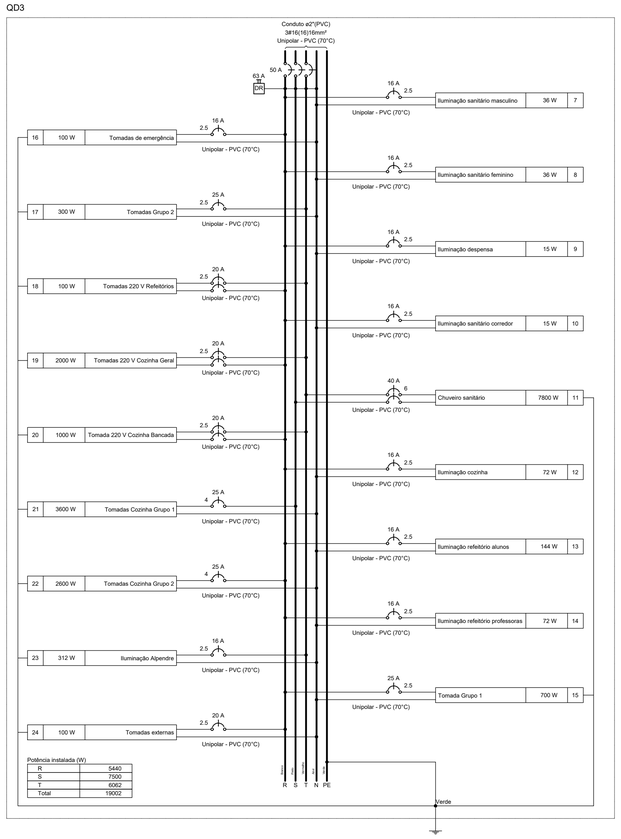
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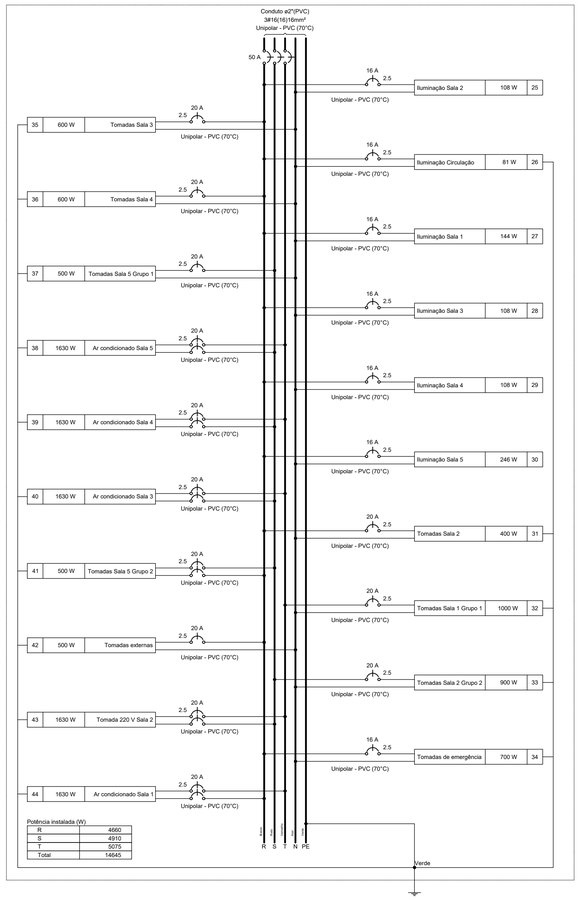
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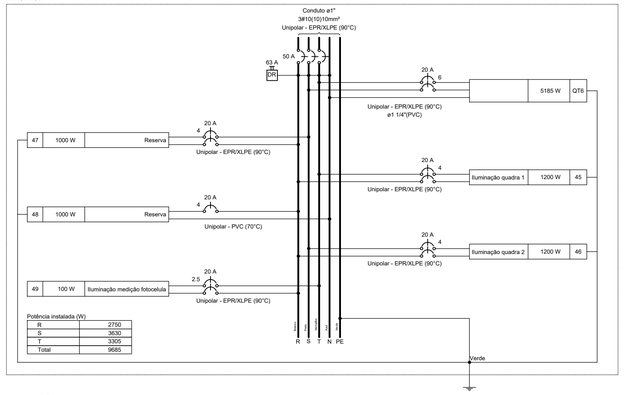
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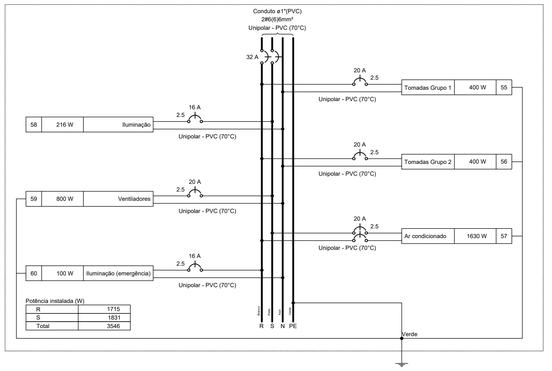
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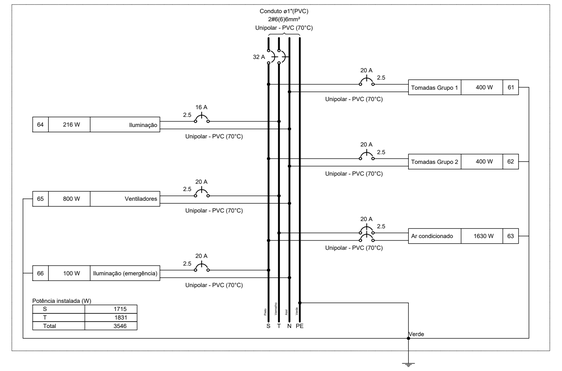
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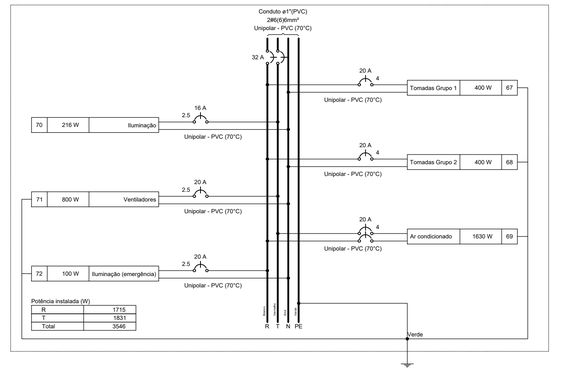
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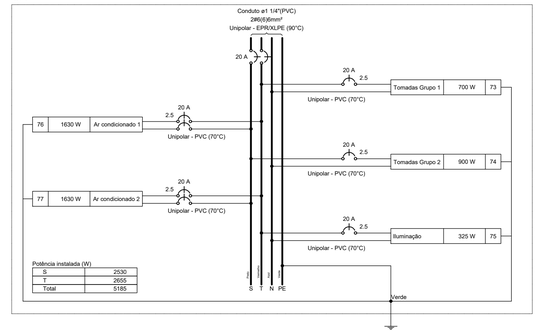
QT4



QT5



QT6



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REFORMA ELÉTRICA

PROJETO ELÉTRICO DE BAIXA TENSAO

Diagrama multifilar

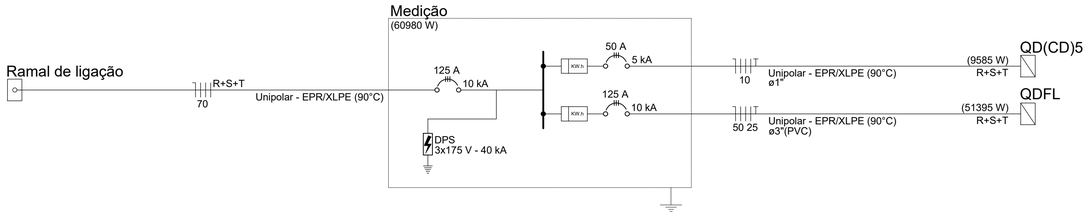
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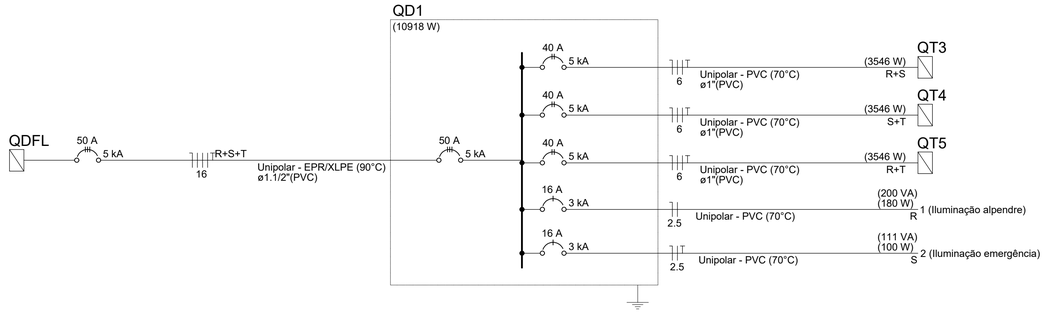
Giovana Corvo da Trindade
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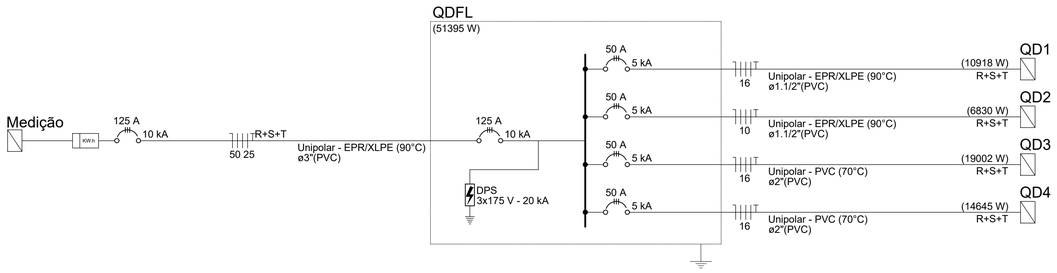
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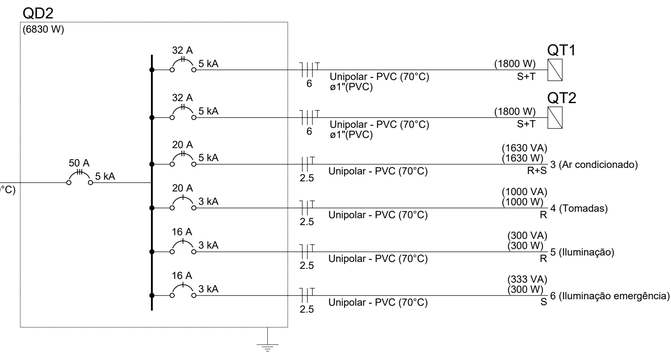
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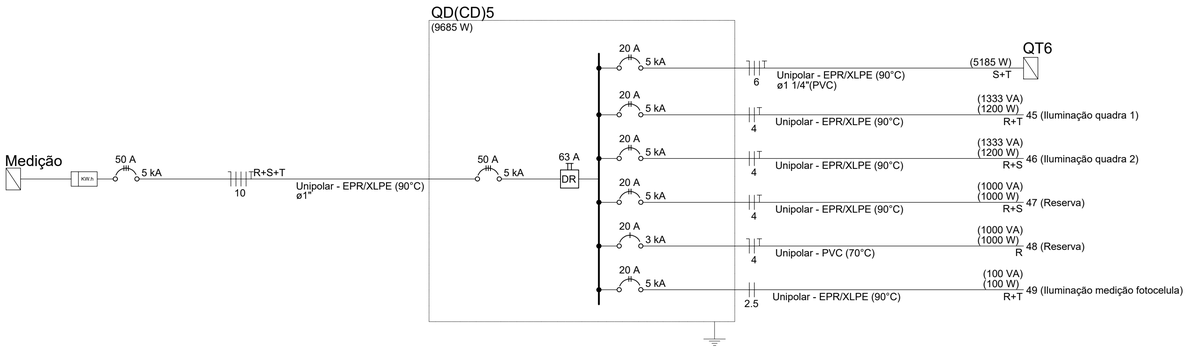
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REFORMA ELÉTRICA

PROJETO ELÉTRICO DE BAIXA TENSAO

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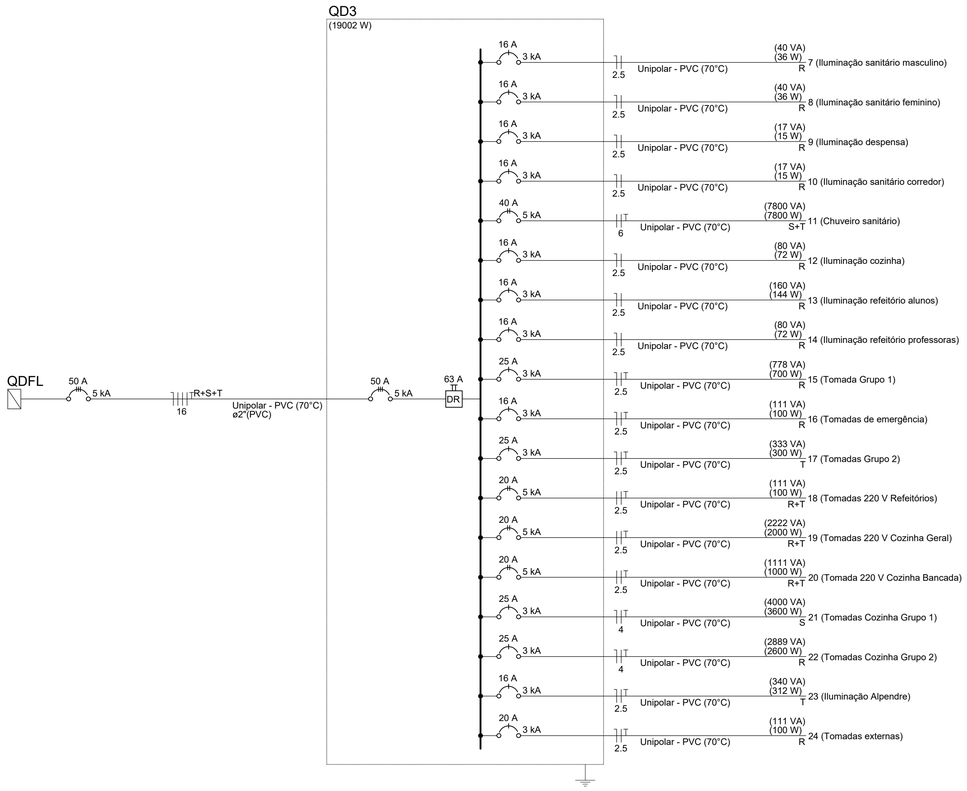
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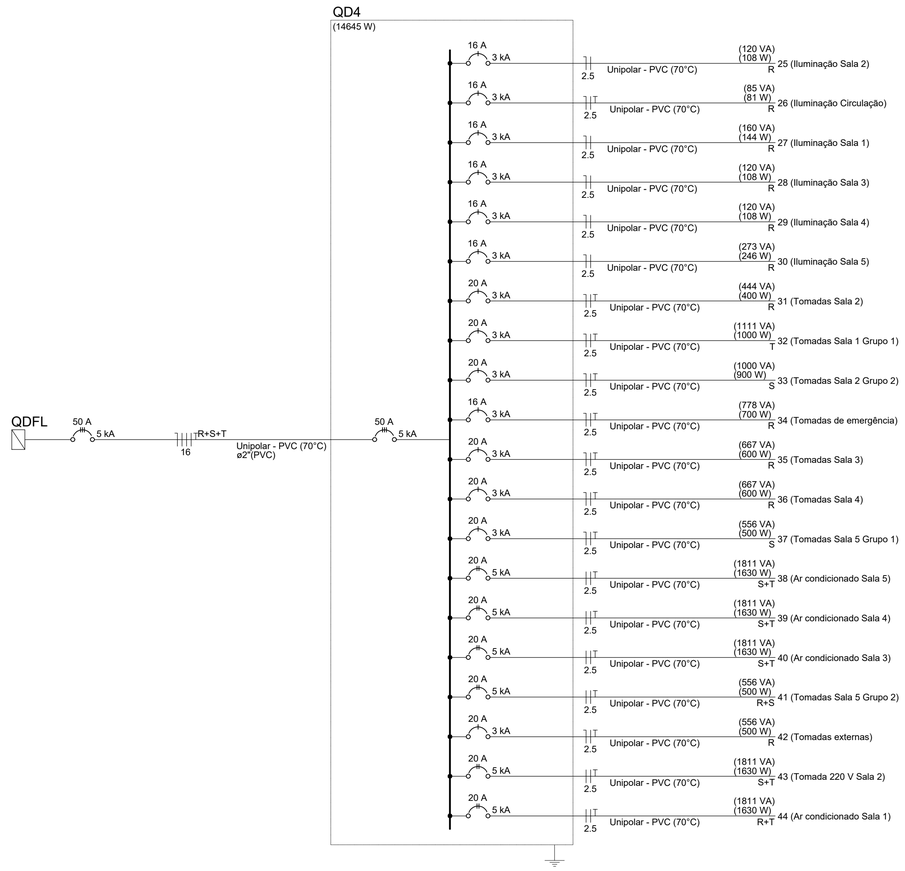
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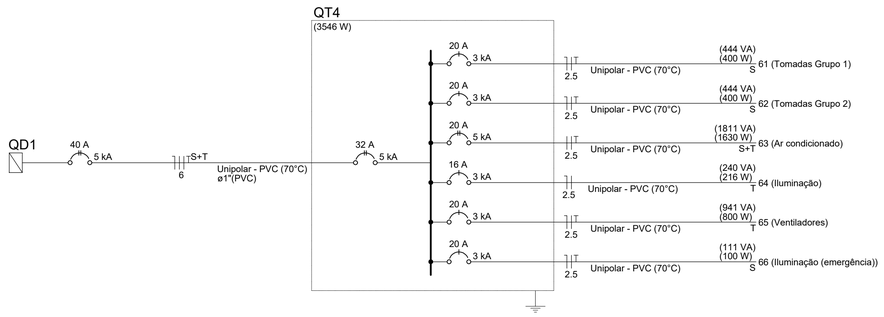
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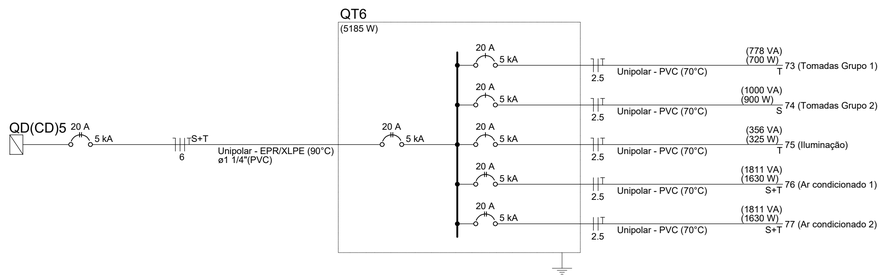
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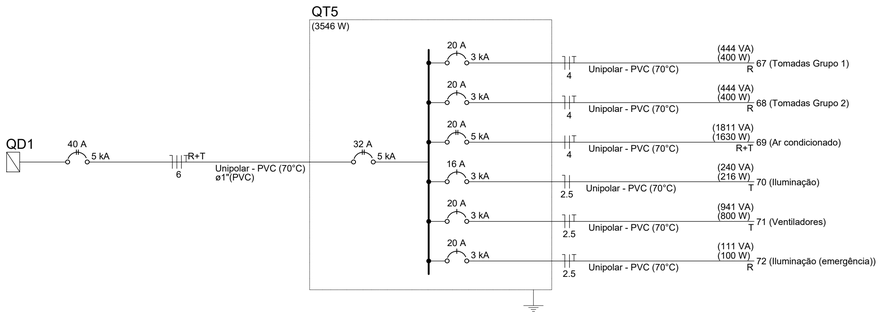
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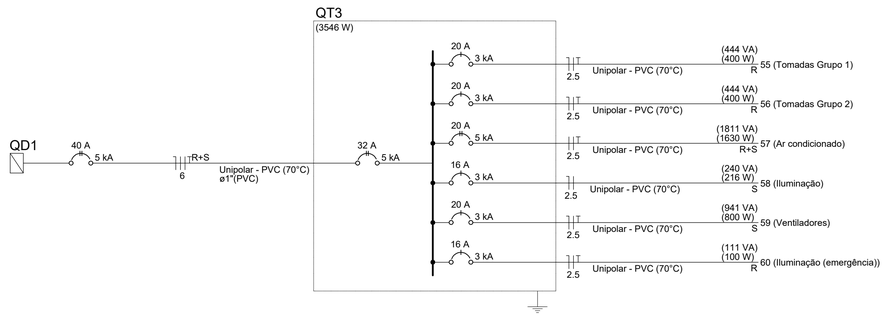












PREFEITURA MUNICIPAL DO RIO GRANDE

GABINETE DE PROGRAMAS E PROJETOS ESPECIAIS

ESCOLA DOLORES GARCIA

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REFORMA ELÉTRICA

PROJETO ELÉTRICO DE BAIXA TENSAO

Diagrama unifilar

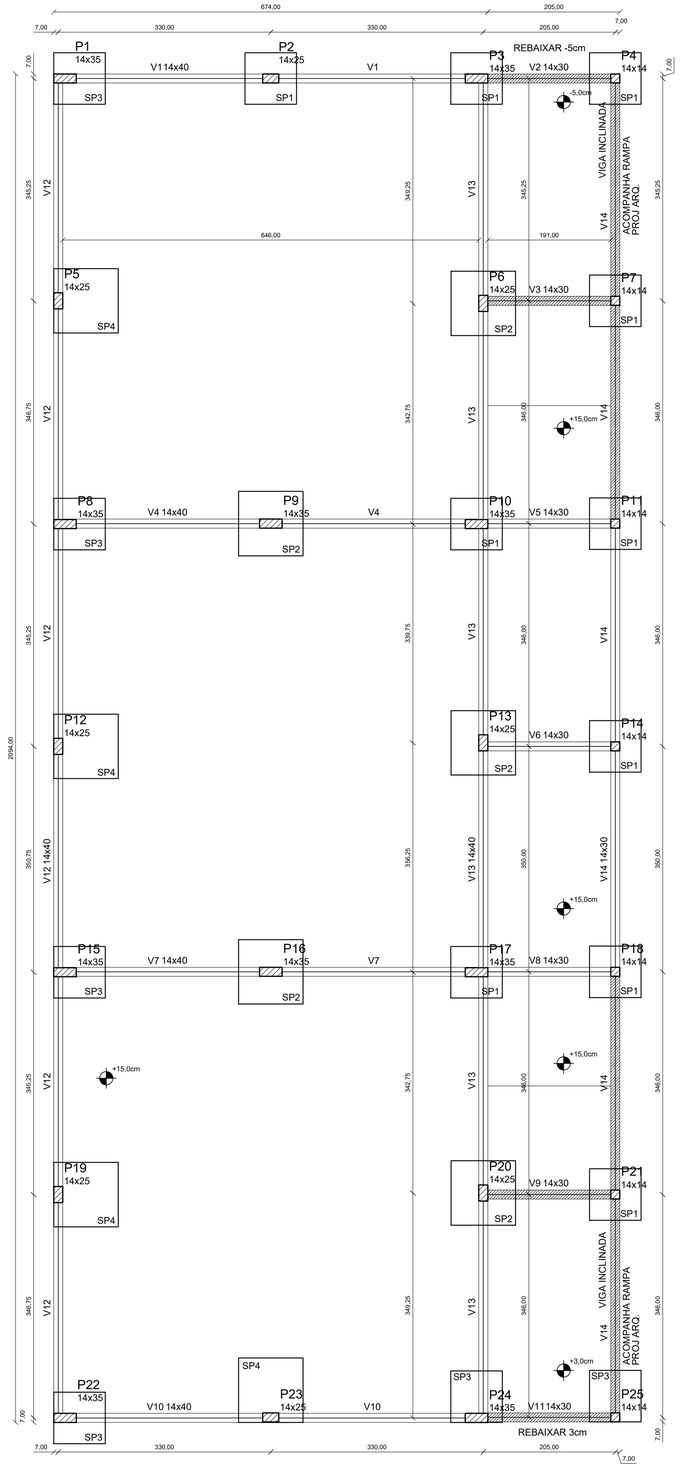
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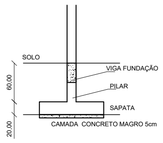
05/05



- ATENTAR NA ESCAVAÇÃO PARA A FUNDAÇÃO LINDEIRA
- INSTALAR JUNTA DE DILATAÇÃO COM ISOPOR

*ATENTAR PARA OS NÍVEIS DO PROJETO ARQUITETÔNICO

Forma do pavimento BALDRAME

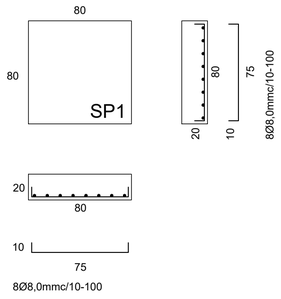


Fck 30MPa
Dimensão máxima do agregado = 19 mm

Legenda dos pilares
Pilar que passa

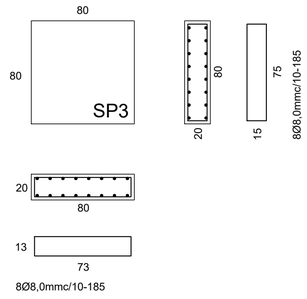
Fck 30MPa

SP01 80X80X20cm



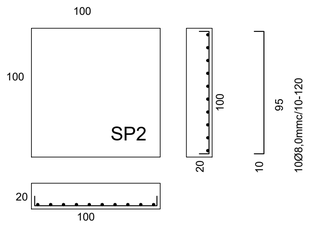
8Ø8,0mmc/10-100

SP03 80X80X20cm
DIVISA



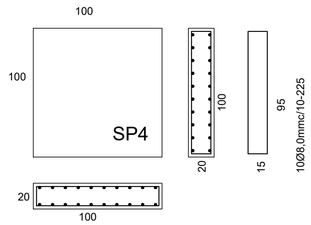
8Ø8,0mmc/10-185

SP02 100X100X20cm



10Ø8,0mmc/10-120

SP04 100X100X20cm
DIVISA



10Ø8,0mmc/10-225

RESUMO MATERIAIS

Ø8,0mm -277,04kg
concreto Fck 30MPa - 4,23m³

PREFEITURA MUNICIPAL DO RIO GRANDE
GABINETE DE PROGRAMAS E PROJETOS ESPECIAIS

EMEF Dolores Garcia
PROJETO ESTRUTURAL

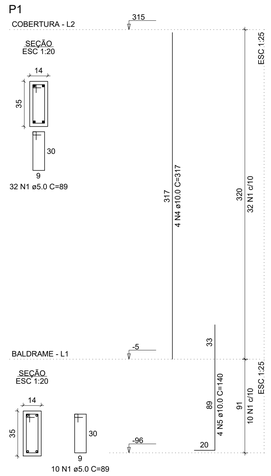
FORMAS E ARMAÇÃO DAS FUNDAÇÕES

GPPE 06.2026

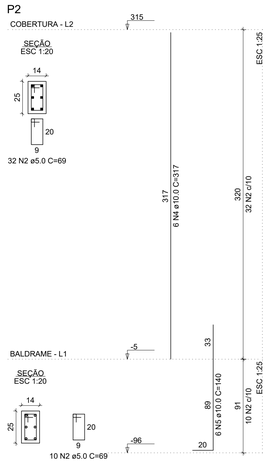
PAULO CESAR FERRARI PIRES
Eng Civil - CREA-RS 139940

01

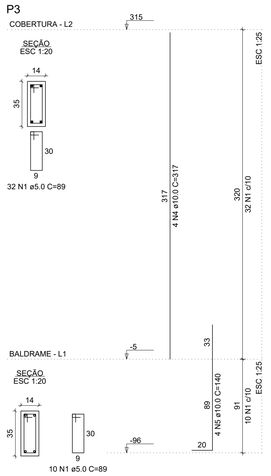
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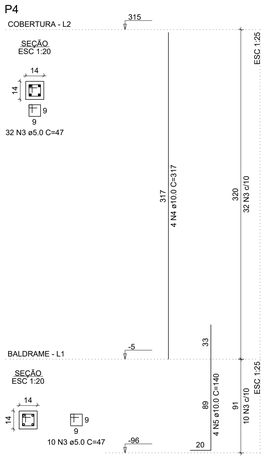
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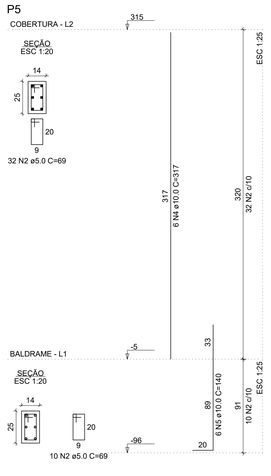
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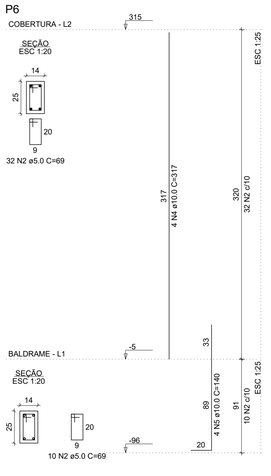
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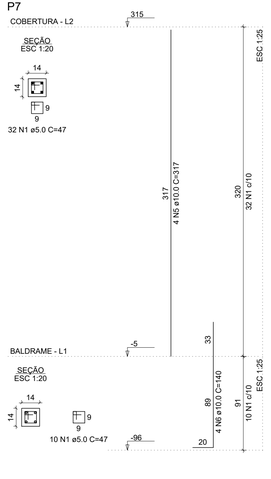
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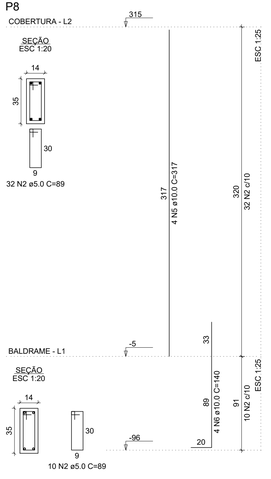
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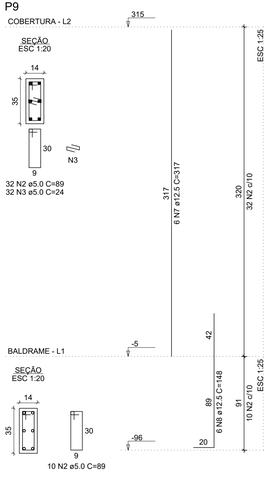
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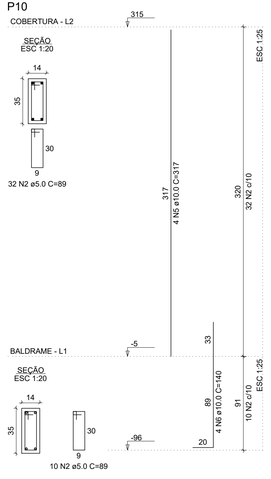
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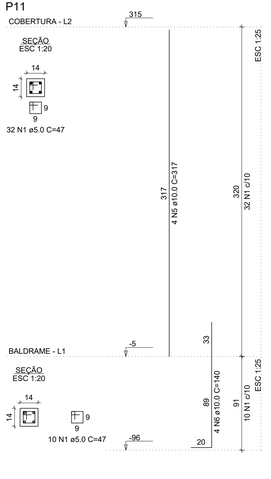
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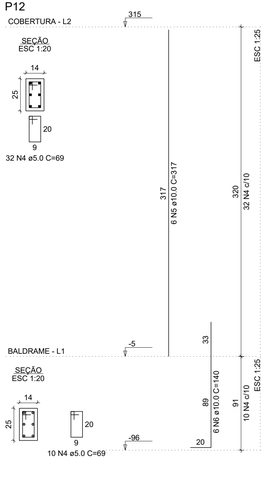
P10



P11



P12



PREFEITURA MUNICIPAL DO RIO GRANDE

GABINETE DE PROGRAMAS E PROJETOS ESPECIAIS

EMEF Dolores Garcia

PROJETO ESTRUTURAL

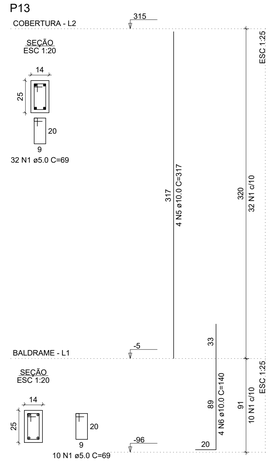
GPPE 06.2026

ARMAÇÃO PILARES 01

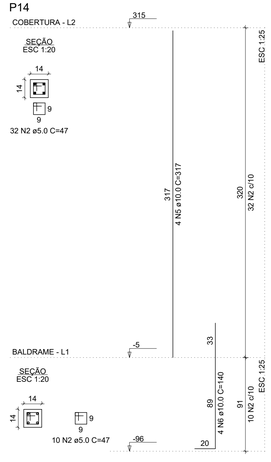
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02

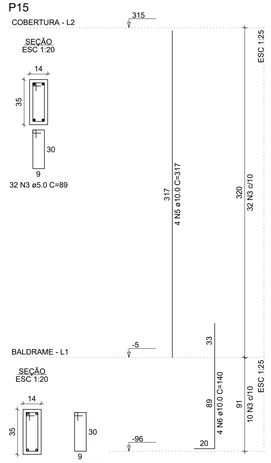
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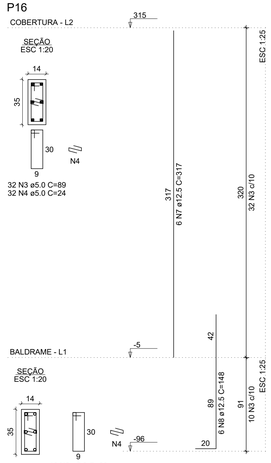
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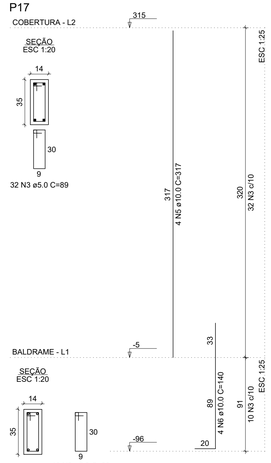
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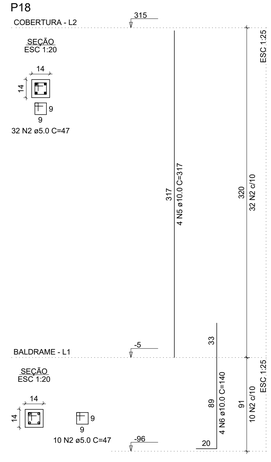
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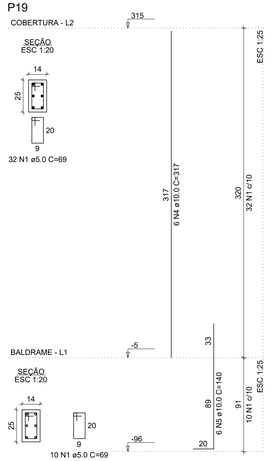
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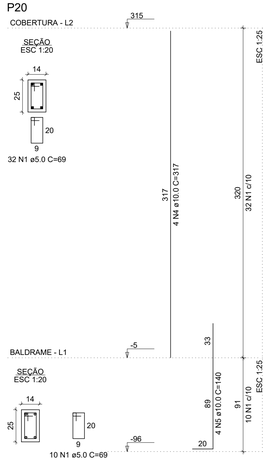
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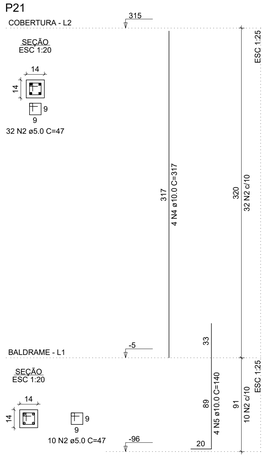
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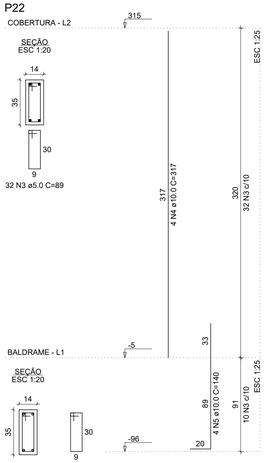
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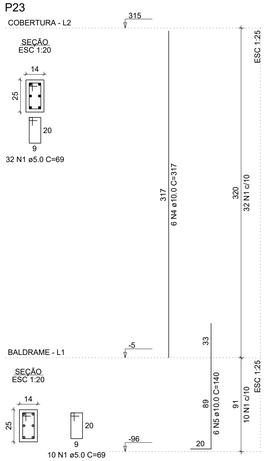
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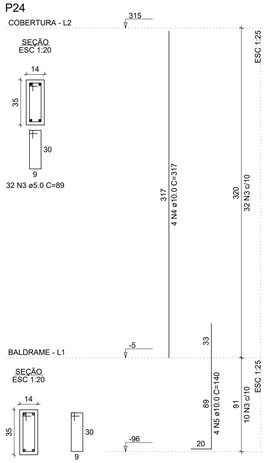
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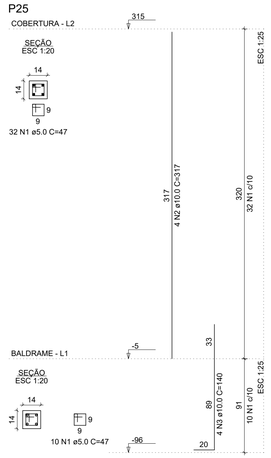
P23



P24



P25



PREFEITURA MUNICIPAL DO RIO GRANDE
GABINETE DE PROGRAMAS E PROJETOS ESPECIAIS

EMEF Dolores Garcia
PROJETO ESTRUTURAL

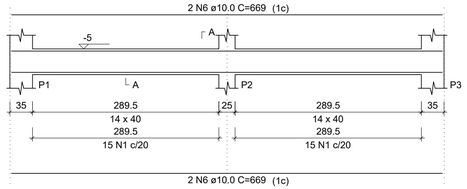
GPPE 06.2026

ARMAÇÃO DOS PILARES 02

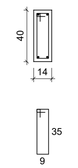
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03

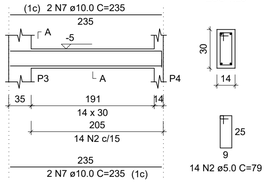
V1
ESC 1:50



SEÇÃO A-A
ESC 1:25

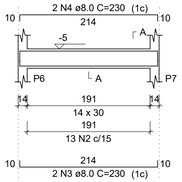


V2
ESC 1:50

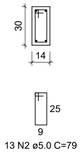


SEÇÃO A-A
ESC 1:25

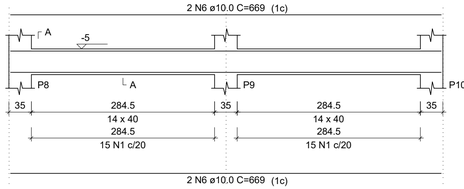
V3
ESC 1:50



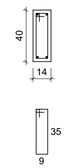
SEÇÃO A-A
ESC 1:25



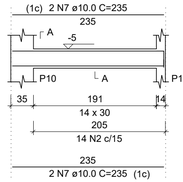
V4
ESC 1:50



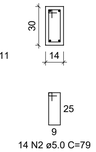
SEÇÃO A-A
ESC 1:25



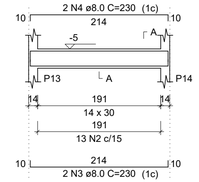
V5
ESC 1:50



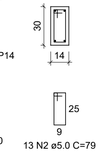
SEÇÃO A-A
ESC 1:25



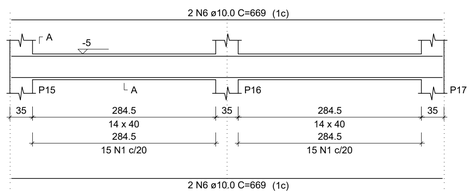
V6
ESC 1:50



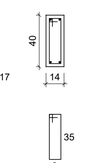
SEÇÃO A-A
ESC 1:25



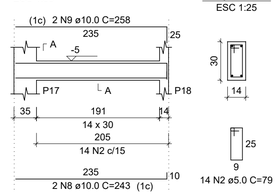
V7
ESC 1:50



SEÇÃO A-A
ESC 1:25

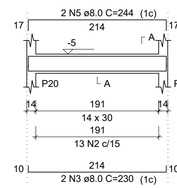


V8
ESC 1:50

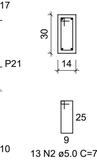


SEÇÃO A-A
ESC 1:25

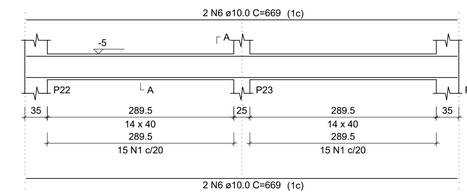
V9
ESC 1:50



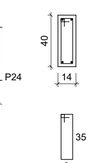
SEÇÃO A-A
ESC 1:25



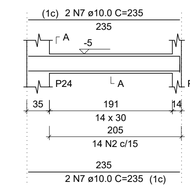
V10
ESC 1:50



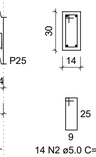
SEÇÃO A-A
ESC 1:25



V11
ESC 1:50



SEÇÃO A-A
ESC 1:25



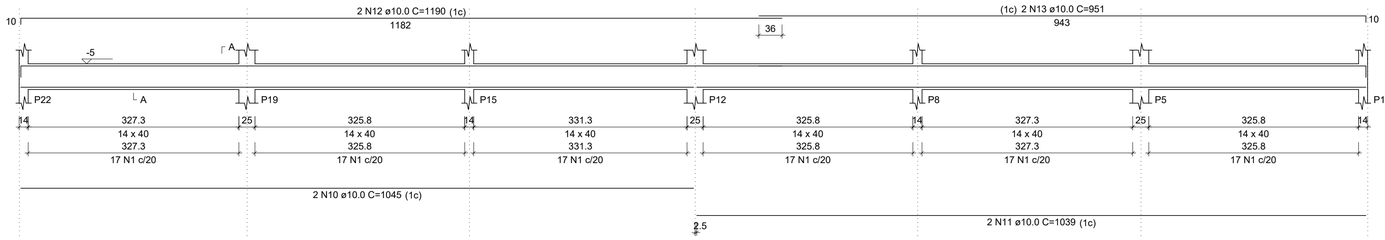
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	27.9	12.1
	10.0	398.9	270.5
CA60	5.0	504.8	85.6

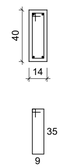
PESO TOTAL (kg)	
CA50	282.6
CA60	85.6

Volume de concreto (C-30) = 5.41 m³
Área de forma = 92.17 m²

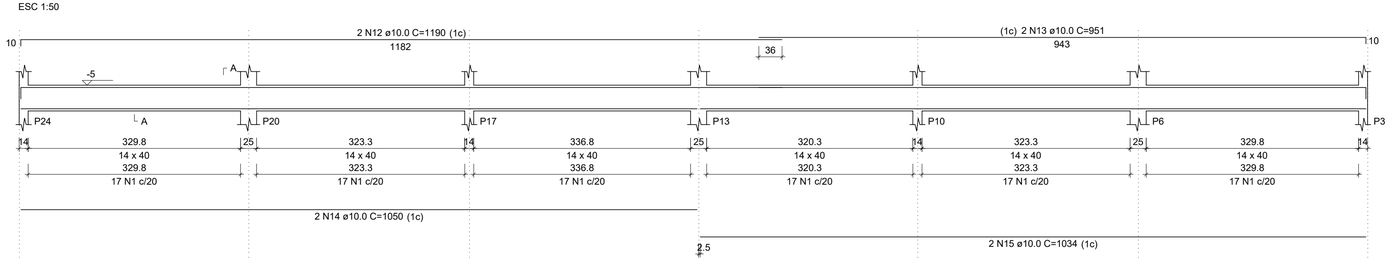
V12
ESC 1:50



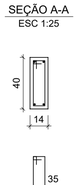
SEÇÃO A-A
ESC 1:25



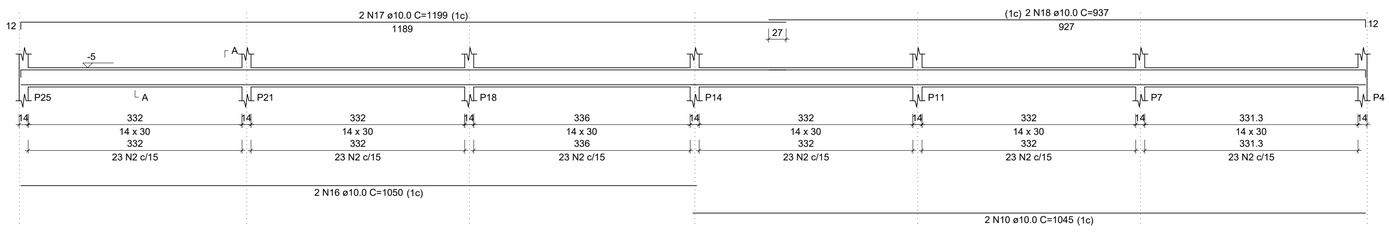
V13
ESC 1:50



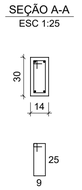
SEÇÃO A-A
ESC 1:25



V14
ESC 1:50



SEÇÃO A-A
ESC 1:25



PREFEITURA MUNICIPAL DO RIO GRANDE
GABINETE DE PROGRAMAS E PROJETOS ESPECIAIS

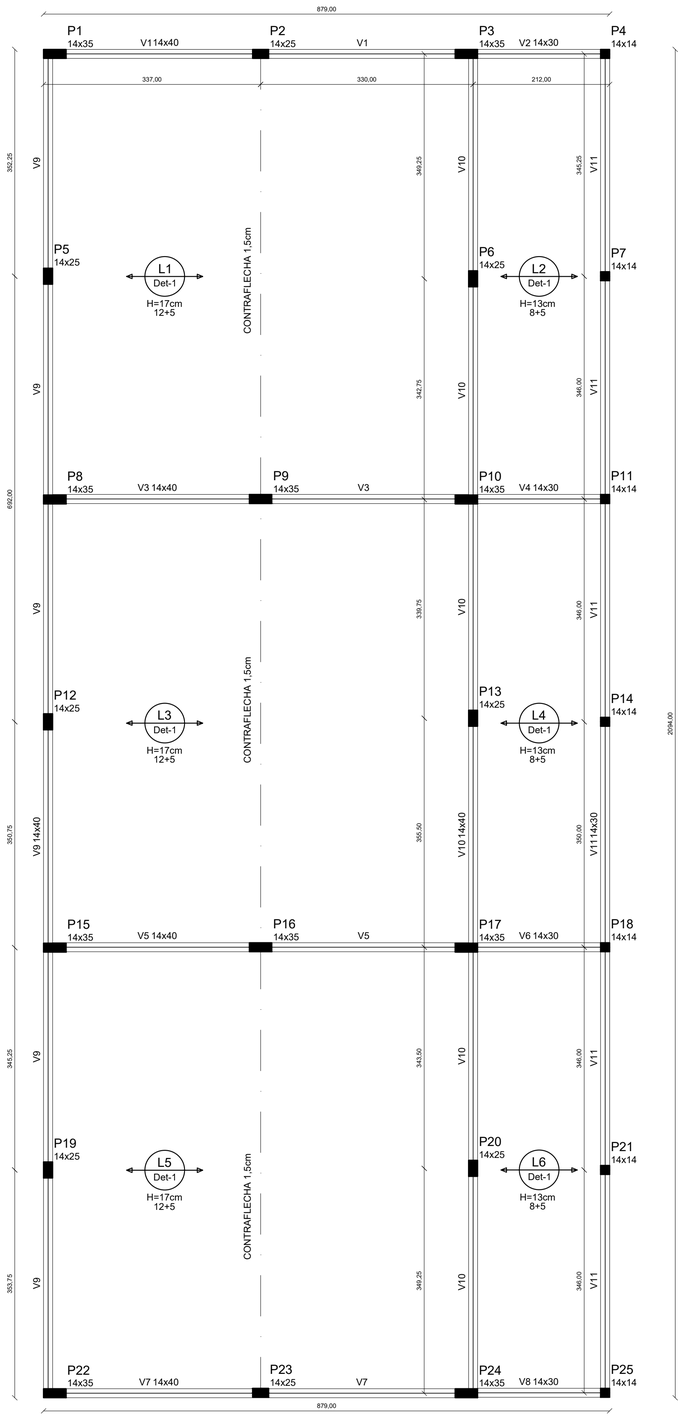
EMEF Dolores Garcia
PROJETO ESTRUTURAL

GPPE 06.2026

ARMAÇÃO DAS VIGAS DE FUNDAÇÕES

PAULO CESAR FERRARI PIRES
Eng Civil - CREA-RS 139940

04



Forma do pavimento COBERTURA

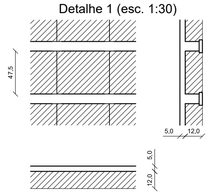
Características dos materiais

fck (MPa)
30

Dimensão máxima do agregado = 19 mm

Legenda dos pilares	
■	Pilar que morre

Detalhe 1 (esc. 1:30)



UTILIZAR LAJE VIGOTA PROTENDIDA 12+5cm L01/L03/L05
UTILIZAR LAJE VIGOTA PROTENDIDA 8+5cm L02/L04/L06

PREFEITURA MUNICIPAL DO RIO GRANDE
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EMEF Dolores Garcia
PROJETO ESTRUTURAL

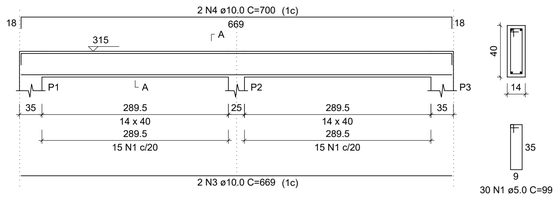
GPPE 06.2026

FORMAS E ARMAÇÃO DA COBERTURA

PAULO CESAR FERRARI PIRES
Eng Civil - CREA-RS 139940

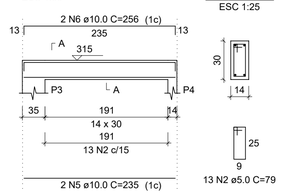
05

V1
ESC 1:50



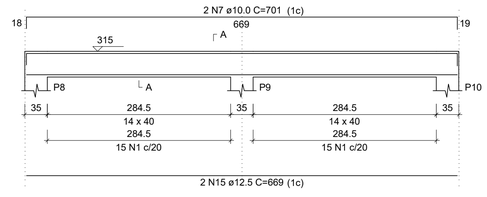
SEÇÃO A-A
ESC 1:25

V2
ESC 1:50

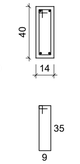


SEÇÃO A-A
ESC 1:25

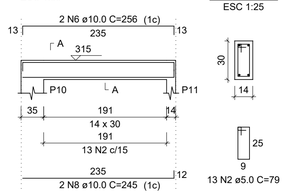
V3
ESC 1:50



SEÇÃO A-A
ESC 1:25

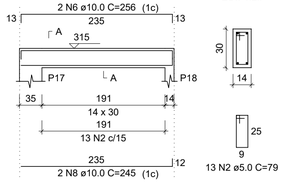


V4
ESC 1:50



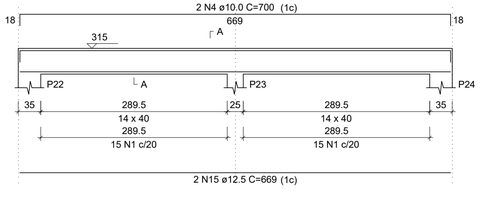
SEÇÃO A-A
ESC 1:25

V6
ESC 1:50

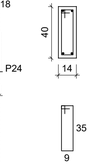


SEÇÃO A-A
ESC 1:25

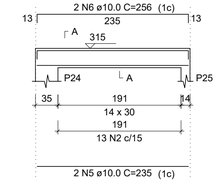
V7
ESC 1:50



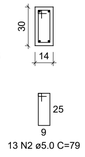
SEÇÃO A-A
ESC 1:25



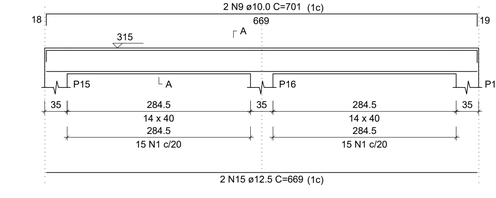
V8
ESC 1:50



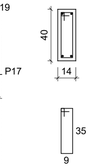
SEÇÃO A-A
ESC 1:25



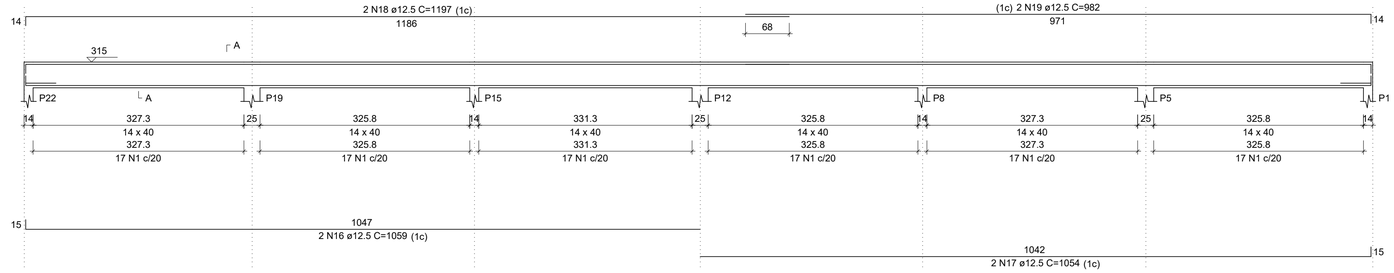
V5
ESC 1:50



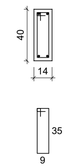
SEÇÃO A-A
ESC 1:25



V9
ESC 1:50



SEÇÃO A-A
ESC 1:25



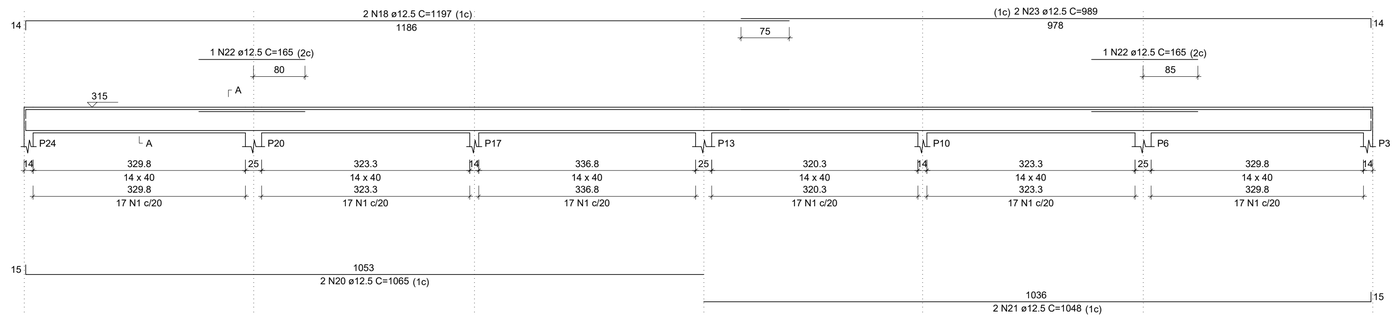
RESUMO DO AÇO

AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	10.0	195.5	132.6
	12.5	215.3	228.1
CA60	5.0	470.9	79.8

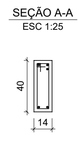
PESO TOTAL (kg)	
CA50	360.7
CA60	79.8

Volume de concreto (C-30) = 5.14 m³
Área de forma = 87.30 m²

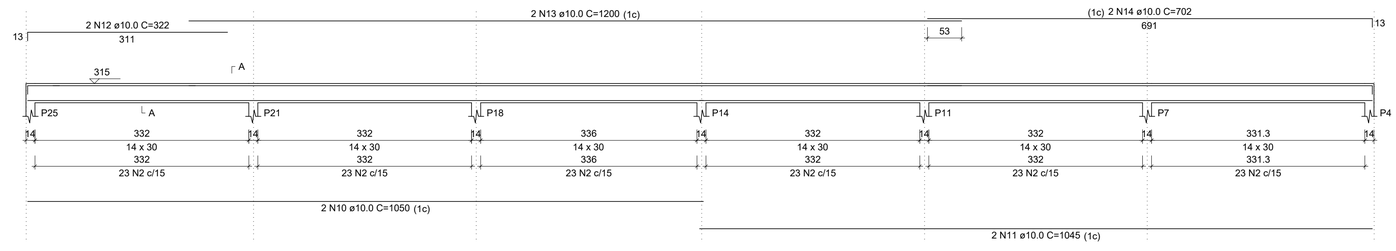
V10
ESC 1:50



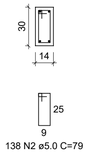
SEÇÃO A-A
ESC 1:25



V11
ESC 1:50



SEÇÃO A-A
ESC 1:25



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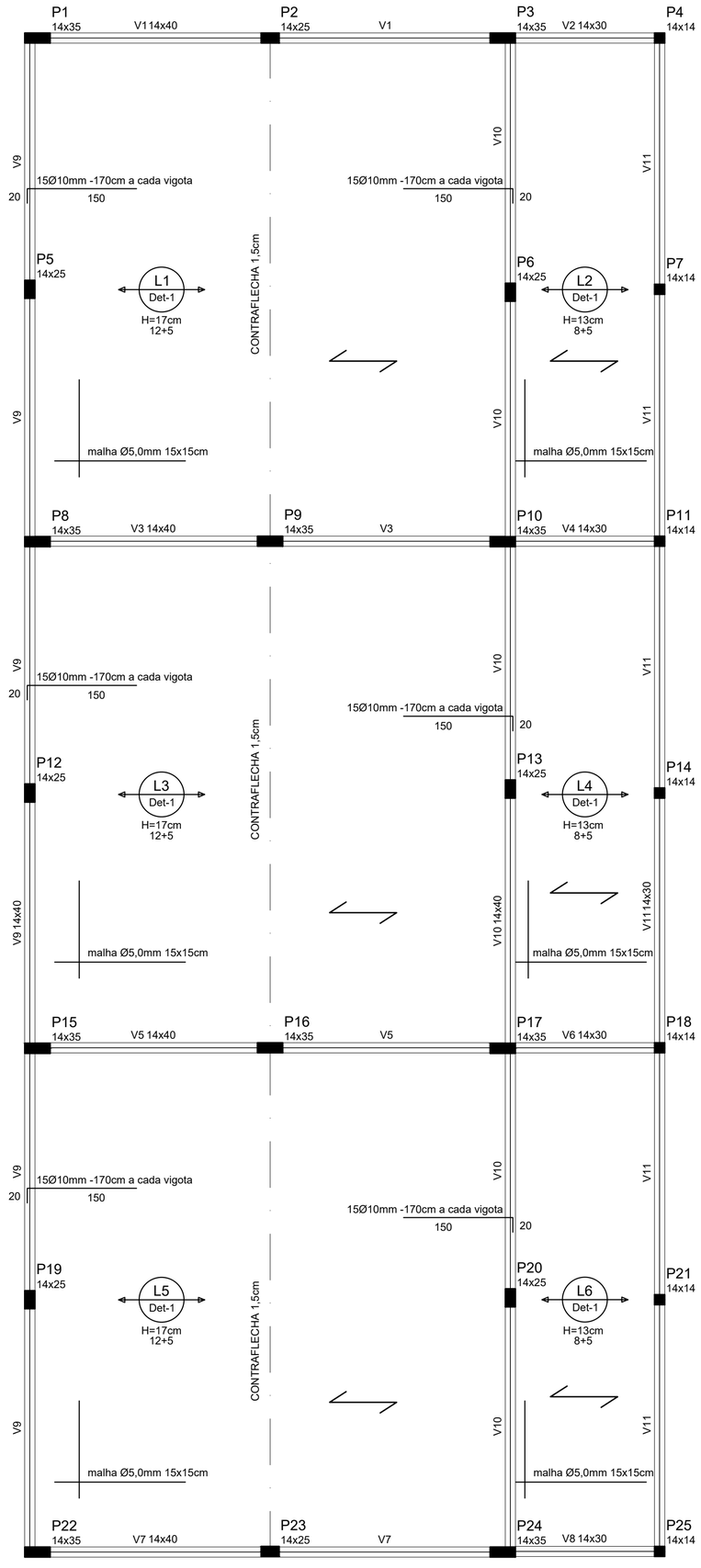
EMEF Dolores Garcia
PROJETO ESTRUTURAL

GPPE 06.2026

ARMAÇÃO DAS VIGAS DA COBERTURA

PAULO CESAR FERRARI PIRES
Eng Civil - CREA-RS 139940

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PLANTA ARMAÇÃO DAS LAJES

RESUMO MATERIAIS

Ø5,0mm - 408,72kg
Ø10,0mm -103,84 kg
concreto Fck 30MPa - 15,74m³
A laje vigota 8cm - 50,0m²
A laje vigota 12cm - 140,0m²

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ARMAÇÃO DAS LAJES DA COBERTURA

PAULO CESAR FERRARI PIRES
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