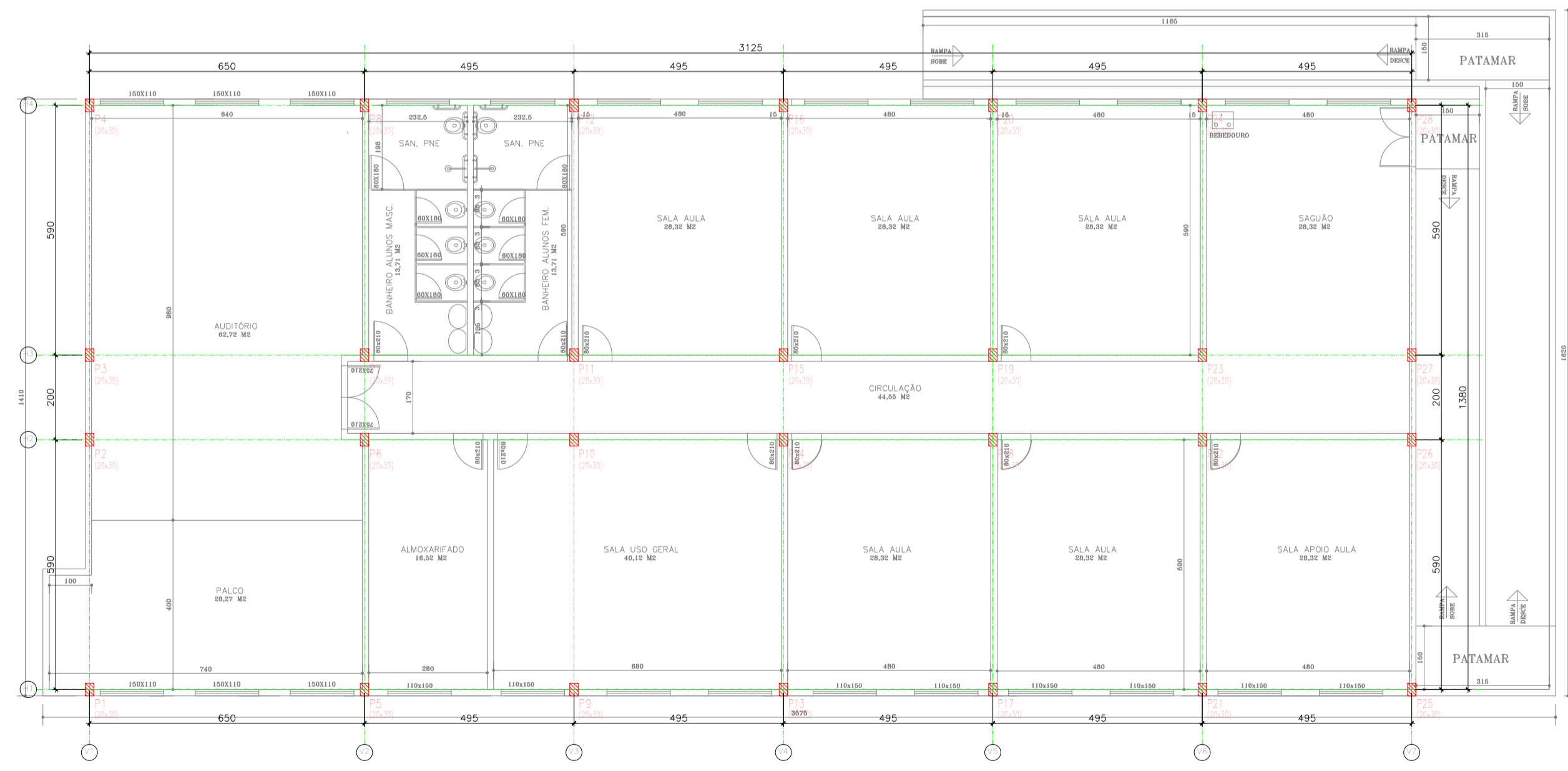
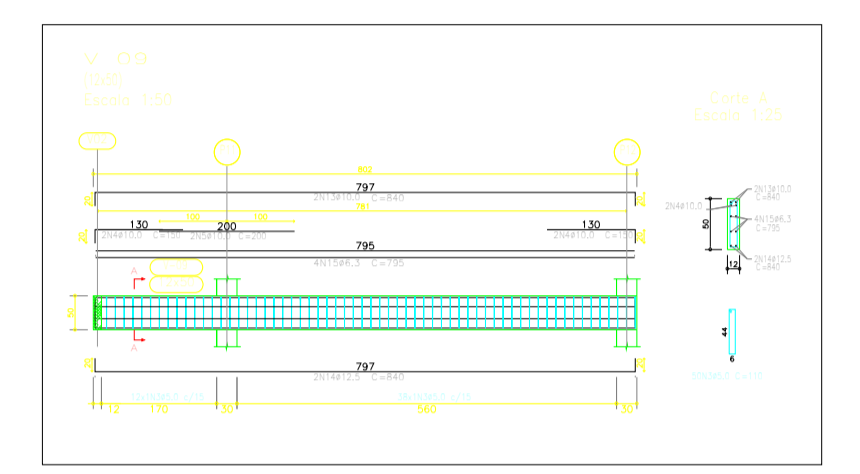
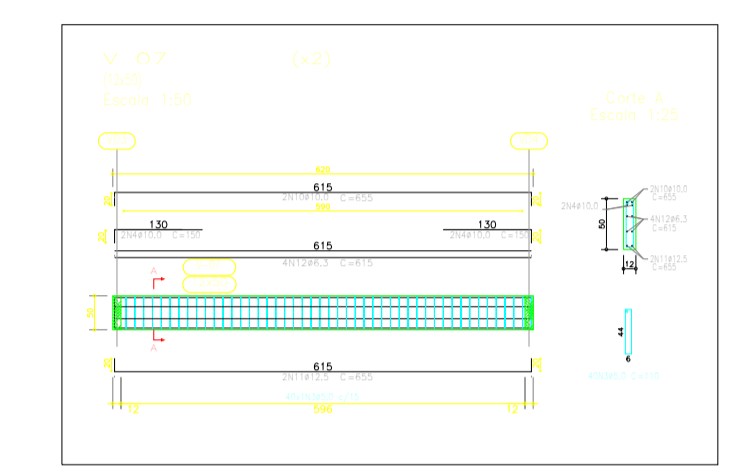
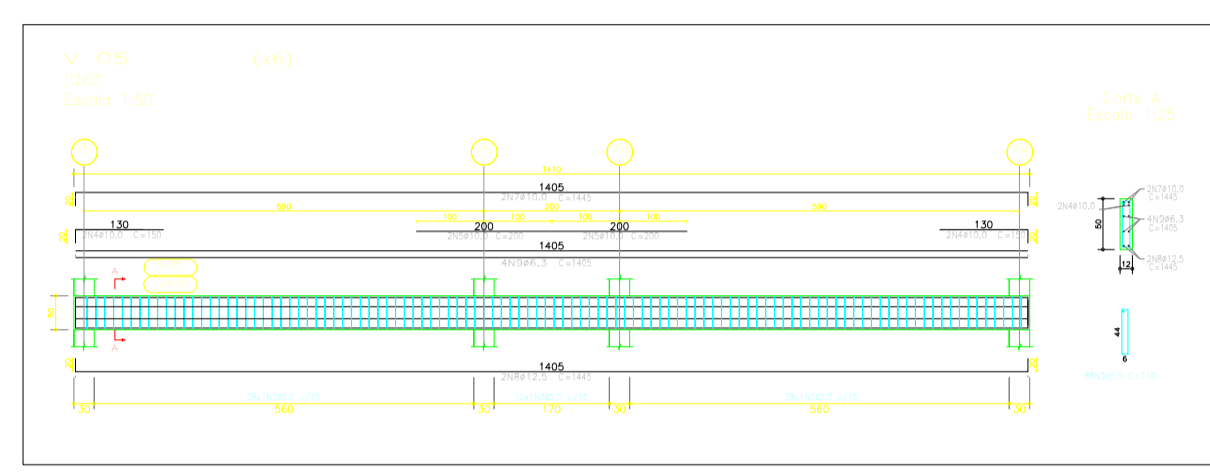
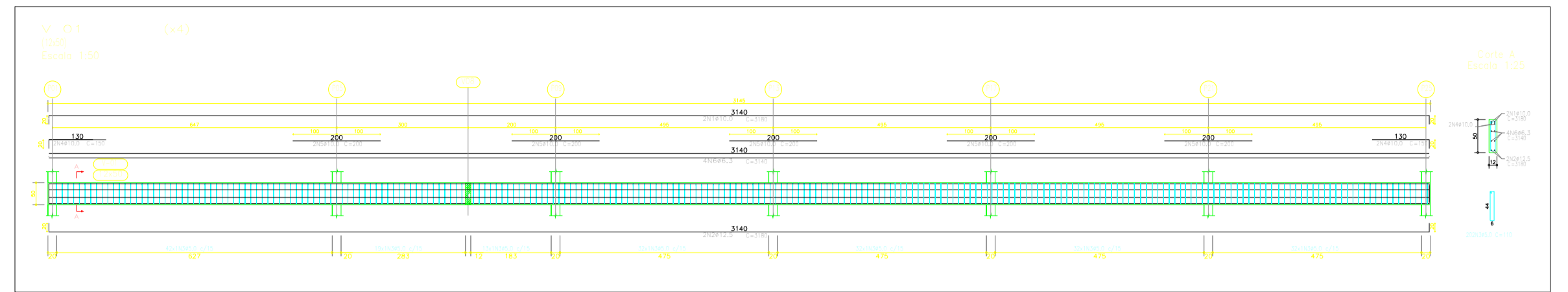


**PLANTA FÔRMA VIGAMENTO - 1º PAVT**  
 ESCALA= 1/50  
 AREA= 436,34M<sup>2</sup>



**LOCAÇÃO DOS PILARES - 1º PAVT**  
 ESCALA= 1/50  
 AREA= 436,34M<sup>2</sup>



**QUADRO DE FERRAGENS VIGAMENTO**

Elemento	Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
V1	1	#10,0	2	3180	6360
	2	#10,0	2	3180	6360
	3	#10,0	4	1500	6000
	4	#10,0	4	1500	6000
	5	# 5,0	110	22220	22220
V2	1	#10,0	2	3180	6360
	2	#10,0	2	3180	6360
	3	#10,0	4	1500	6000
	4	#10,0	4	1500	6000
	5	# 5,0	110	22220	22220
V3	1	#10,0	2	3180	6360
	2	#10,0	2	3180	6360
	3	#10,0	4	1500	6000
	4	#10,0	4	1500	6000
	5	# 5,0	110	22220	22220
V4	1	#10,0	2	3180	6360
	2	#10,0	2	3180	6360
	3	#10,0	4	1500	6000
	4	#10,0	4	1500	6000
	5	# 5,0	110	22220	22220
V5	1	#10,0	2	3180	6360
	2	#10,0	2	3180	6360
	3	#10,0	4	1500	6000
	4	#10,0	4	1500	6000
	5	# 5,0	110	22220	22220
V6	1	#10,0	2	3180	6360
	2	#10,0	2	3180	6360
	3	#10,0	4	1500	6000
	4	#10,0	4	1500	6000
	5	# 5,0	110	22220	22220

**QUADRO DE FERRAGENS VIGAMENTO**

Elemento	Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
V7	1	#10,0	2	650	1300
	2	#10,0	2	650	1300
	3	# 5,0	40	1100	4400
	4	#10,0	4	1500	6000
	5	#10,0	2	2000	4000
V8	1	#10,0	2	650	1300
	2	#10,0	2	650	1300
	3	# 5,0	40	1100	4400
	4	#10,0	4	1500	6000
	5	#10,0	2	2000	4000
V9	1	#10,0	2	840	1680
	2	#10,0	2	840	1680
	3	# 5,0	40	1100	4400
	4	#10,0	4	1500	6000
	5	#10,0	2	2000	4000
V10	1	#10,0	2	1440	2880
	2	#10,0	2	1440	2880
	3	# 5,0	50	1100	5500
	4	#10,0	4	2000	8000
	5	#10,0	2	2000	4000
V11	1	#10,0	2	1440	2880
	2	#10,0	2	1440	2880
	3	# 5,0	50	1100	5500
	4	#10,0	4	2000	8000
	5	#10,0	2	2000	4000
V12	1	#10,0	2	1440	2880
	2	#10,0	2	1440	2880
	3	# 5,0	50	1100	5500
	4	#10,0	4	1500	6000
	5	#10,0	2	2000	4000
V13	1	#10,0	2	1440	2880
	2	#10,0	2	1440	2880
	3	# 5,0	50	1100	5500
	4	#10,0	4	2000	8000
	5	#10,0	2	2000	4000

Resumo Aço VIGAMENTO	Comp. total (m)	Peso+10% (kg)	Total
CA-50-A #12,5	554,00	48,3kg	42 (vrs)
CA-50-A #10,0	488,00	28,3kg	33 (vrs)
CA-60-A # 6,3	324,00	28,3kg	77 (vrs)
CA-60-A # 5,0	1.302,00	24,3kg	116 (vrs)
<b>Total</b>			<b>1.214,85</b>

**TABELA Kg/m VERGALHÃO CA-50**

BITOLA (pol.)	BITOLA (mm)	PESO (kg/M)
5/0	5,0	0,154
1/4"	6,3	0,245
5/16"	8,0	0,395
3/8"	10,0	0,617
1/2"	12,5	0,963
5/8"	16,0	1,578

- OB:**
- 1 - CONCRETO COM RESISTÊNCIA 30 MPA;
  - 2 - FAZER ARRASAMENTO NAS ESTACAS APENAS 3 DIAS APÓS CONCRETAGEM;
  - 3 - SE O CONCRETO FOR VIRADO EM OBRA FATOR AC MENOR OU IGUAL A 0,55.

**QUADRO DE FERRAGENS PILAR 1º PAVIMENTO**

Elemento	Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
P01	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P02	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P03	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P04	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P05	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P06	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P07	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P08	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P09	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P10	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P11	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P12	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P13	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P14	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870

**QUADRO DE FERRAGENS PILAR 1º PAVIMENTO**

Elemento	Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
P15	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P16	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P17	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P18	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P19	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P20	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P21	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P22	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P23	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P24	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P25	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P26	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P27	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870
P28	1	#10,0	4	320	1280
	2	# 5,0	20	85	1870

Resumo Aço PEAR 2º PAVIMENTO	Comp. total (m)	Peso+10% (kg)	Total
CA-50-A #10,0	540,00	33,3kg	45 (vrs)
CA-60-A # 5,0	528,00	8,1kg	44 (vrs)
<b>Total</b>			<b>414,43</b>

**TABELA Kg/m VERGALHÃO CA-50**

BITOLA (pol.)	BITOLA (mm)	PESO (kg/M)
5,0	5,0	0,154
1/4"	6,3	0,245
5/16"	8,0	0,395
3/8"	10,0	0,617
1/2"	12,5	0,963
5/8"	16,0	1,578

**PREFEITURA MUNICIPAL DE ATÍLIO VIVACQUA - ES**

SECRETARIA MUNICIPAL DE OBRAS

PROJETO PARA AMPLIAÇÃO E REFORMA DA ESCOLA DA "EMEB ISABEL COSTA BAPTISTA"

LOCAL: AVENIDA CAROLINA FRAGA, BAIRRO NOSSA S<sup>ra</sup>. APARECIDA, S/N, ATÍLIO VIVACQUA-ES

CONTEUDO: LOCAÇÃO DOS PILARES - 1º PAVT  
 PLANTA FÔRMA VIGAMENTO - 1º PAVT  
 DETALHAMENTO DOS PILARES/VIGAMENTO  
 QUADRO DE FERRAGENS

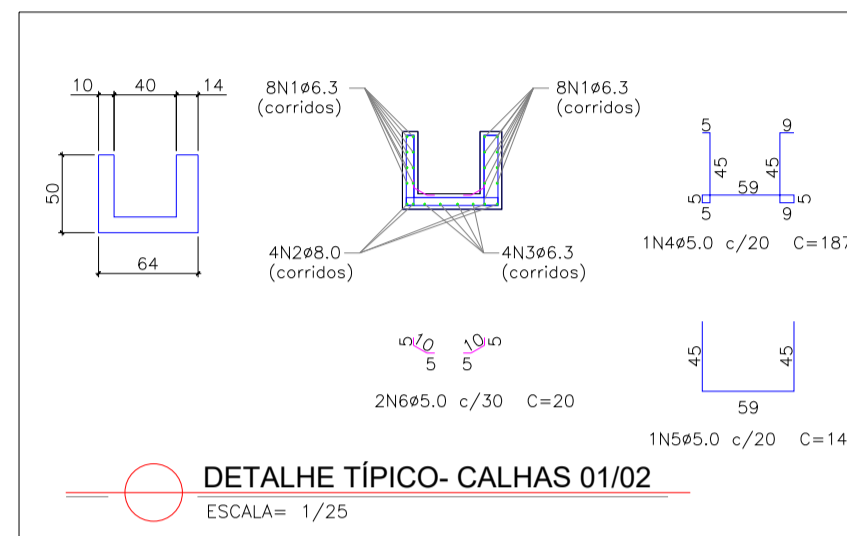
DESENHO:

FOLHA: 1/2

ADMINISTRAÇÃO: JOSMAR MACHADO FERNANDES  
 PREFEITO MUNICIPAL

RESPONSÁVEL TÉCNICO: LUCAS RODRIGUES RAMOS  
 ENGENHEIRO CIVIL

**CALHA 01/02**



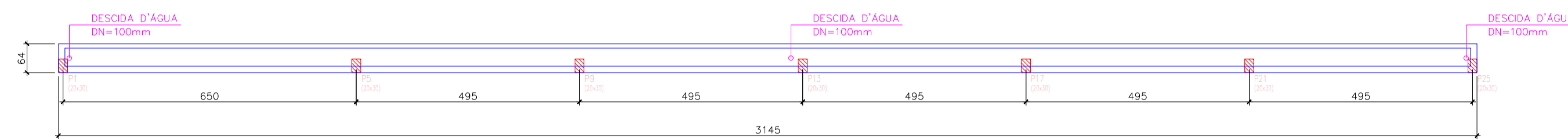
**QUADRO DE FERRAGENS CALHAS DE CONCRETO**

Elemento	Pos.	Diam.	Q.	Comp. (cm)	Total (cm)
CALHA 01	1	8.3	16	3140	50240
	2	8.0	4	3140	12560
	3	8.3	4	3140	12560
	4	5.0	210	187	35270
	5	5.0	210	149	31290
	6	5.0	105	40	4200
CALHA 02	1	8.3	16	3140	50240
	2	8.0	4	3140	12560
	3	8.3	4	3140	12560
	4	5.0	210	187	35270
	5	5.0	210	149	31290
	6	5.0	105	40	4200

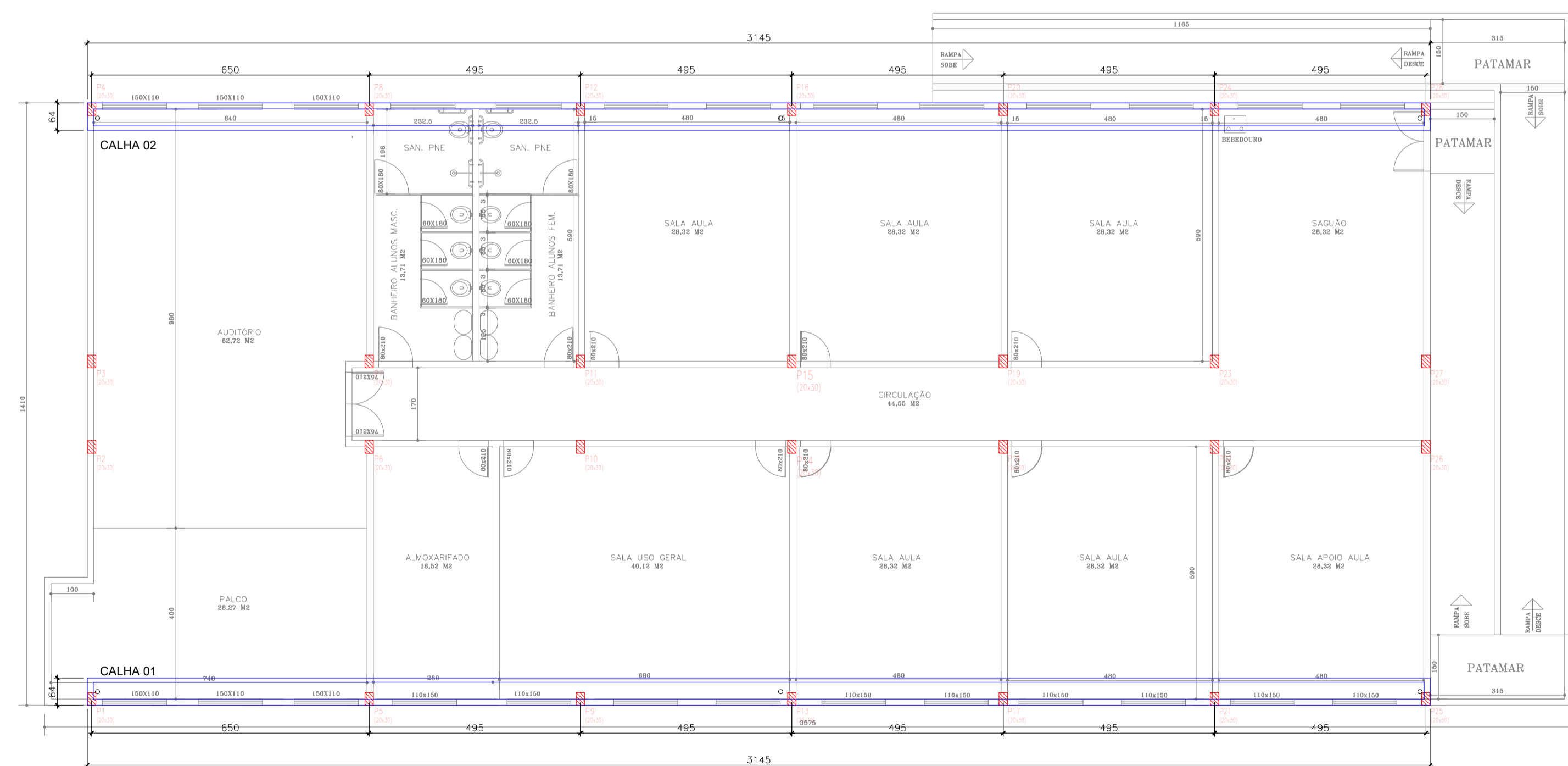
Resumo Aço VIGAMENTO	Comp. total (m)	Peso+10% (kg)	Total
CA-50-A φ 8.0	252,00	95,54g 21 (varas)	
CA-60-A φ 6.3	1.240,00	398,70g 105 (varas)	
CA-60-A φ 5.0	1.500,00	211,20g 125 (varas)	
<b>Total</b>			<b>639,24</b>

**TABELA Kg/m VERGALHÃO CA-50**

BITOLA (esp.)	BITOLA (mm)	PESO (Kg/M)
5.0	5.0	0,154
1/4"	6.3	0,245
5/16"	8.0	0,395
3/8"	10.0	0,617
1/2"	12.5	0,963
5/8"	16.0	1,578



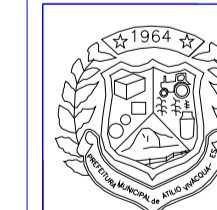
**PLANTA DE FÔRMA - CALHA EM CONCRETO**  
ESCALA= 1/50



**LOCAÇÃO CALHA EM CONCRETO - 1º PAVTº**  
ESCALA= 1/50

OBS:

- 1 - CONCRETO COM RESISTÊNCIA 30 MPA;
- 2 - FAZER ARRASAMENTO NAS ESTACAS APENAS 3 DIAS APÓS CONCRETAGEM;
- 3 - SE O CONCRETO FOR VIRADO EM OBRA FATOR AC MENOR OU IGUAL A 0,55.



**PREFEITURA MUNICIPAL DE ATÍLIO VIVACQUA - ES**

SECRETARIA MUNICIPAL DE OBRAS

PROJETO PARA AMPLIAÇÃO E REFORMA DA ESCOLA DA "EMEB ISABEL COSTA BAPTISTA"

LOCAL: AVENIDA CAROLINA FRAGA, BAIRRO NOSSA Srª. APARECIDA, S/N, ATÍLIO VIVACQUA-ES

CONTEUDO: LOCAÇÃO CALHA EM CONCRETO - 1º PAVTº  
PLANTA DE FÔRMA - CALHA EM CONCRETO  
DETALHE TÍPICO- CALHAS 01/02  
QUADRO DE FERRAGENS

DESENHO:

FOLHA:

2/2

ADMINISTRAÇÃO:

JOSEMAR MACHADO FERNANDES  
PREFEITO MUNICIPAL

RESPONSÁVEL TÉCNICO:

LUCAS RODRIGUES RAMOS  
ENGENHEIRO CIVIL