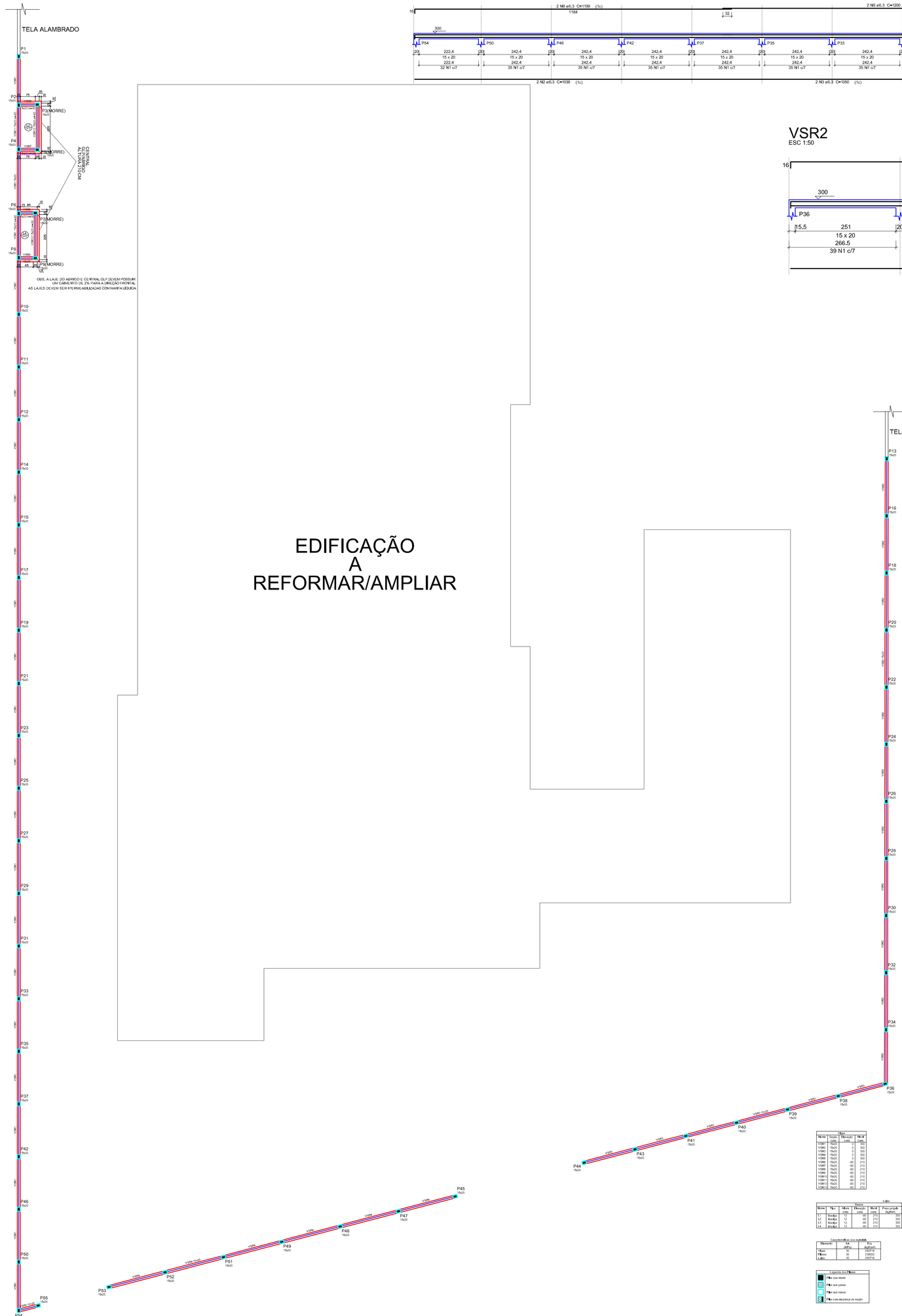
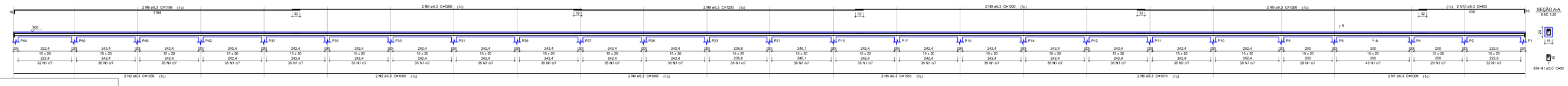
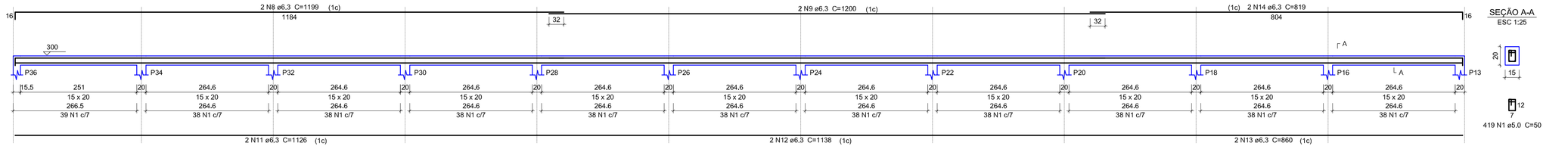
DETALHAMENTO VIGAS RESPALDO MURO/ VIGAS CENTRAL GLP/ ABRIGO DE RESÍDUOS



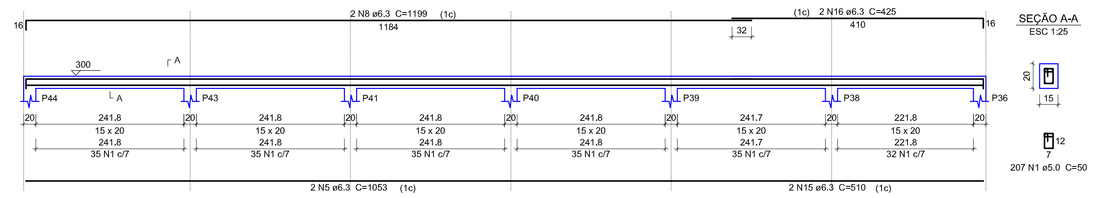
VSR1
ESC 1:75



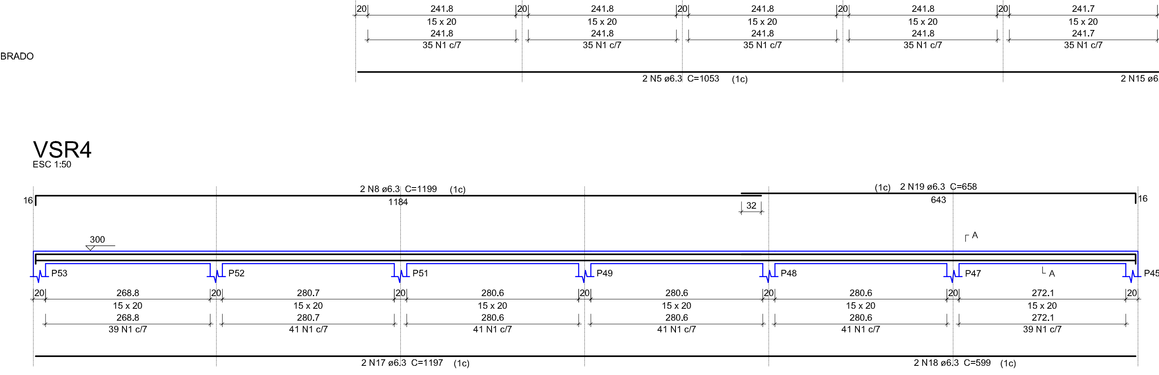
VSR2
ESC 1:50



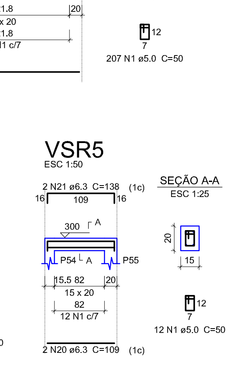
VSR3
ESC 1:50



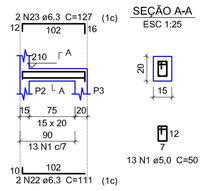
VSR4
ESC 1:50



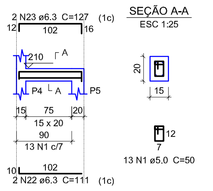
VSR5
ESC 1:50



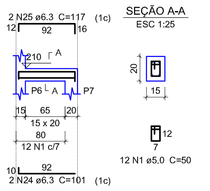
VSR6
ESC 1:50



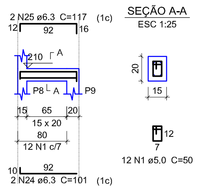
VSR7
ESC 1:50



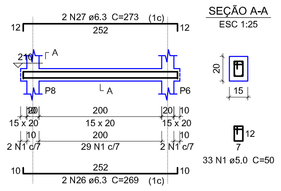
VSR8
ESC 1:50



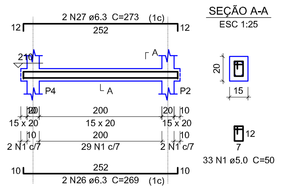
VSR9
ESC 1:50



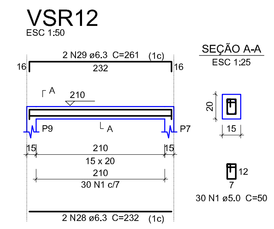
VSR10
ESC 1:50



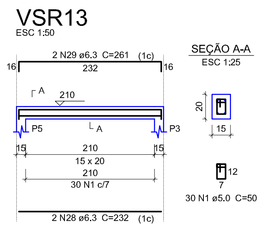
VSR11
ESC 1:50

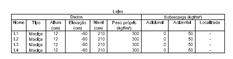


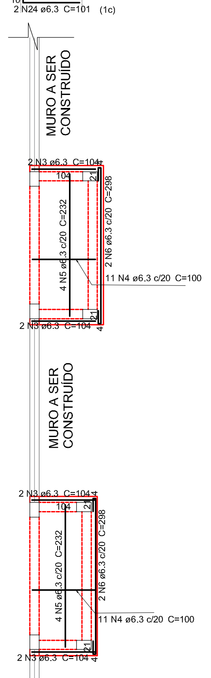
VSR12
ESC 1:50



VSR13
ESC 1:50







Relação do aço

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA50	5	6.3	8	232	1856
	4	6.3	22	100	2200
	3	6.3	8	268	2144

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	62	16.71
PESO TOTAL			
CA50	16.71		

Vol. de concreto total (C-30) = 0.60 m³
Área de forma total = 5.98 m²

ARMAÇÃO POSITIVA LAJES CENTRAL GLP/ ABRIGO DE RESÍDUOS
ESCALA 1:50

Relação do aço

VSR1 VSR2 VSR3
VSR4 VSR5 VSR6
VSR7 VSR8 VSR9
VSR10 VSR11 VSR12
VSR13

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	1890	50	94500
CA50	2	6.3	2	1036	2072
	3	6.3	2	1050	2100
	4	6.3	2	1046	2092
	5	6.3	4	1053	4212
	6	6.3	2	1070	2140
	7	6.3	2	1009	2018
	8	6.3	8	1199	9592
	9	6.3	10	1200	12000
	10	6.3	2	453	906
	11	6.3	2	1126	2252
	12	6.3	2	1138	2276
	13	6.3	2	860	1720
	14	6.3	2	819	1638
	15	6.3	2	510	1020
	16	6.3	2	425	850
	17	6.3	2	1197	2394
	18	6.3	2	599	1198
	19	6.3	2	658	1316
	20	6.3	2	109	218
	21	6.3	2	138	276
	22	6.3	4	111	444
	23	6.3	4	127	508
	24	6.3	4	101	404
	25	6.3	4	117	468
	26	6.3	4	269	1076
	27	6.3	4	273	1092
	28	6.3	4	232	928
	29	6.3	4	261	1044

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	6.3	582.6	156.8
CA60	5.0	945	160.2
PESO TOTAL			
CA50	156.8		
CA60	160.2		

Vol. de concreto total (C-30) = 4.29 m³
Área de forma total = 78.73 m²

NOTAS

A. Confrontar medidas do projeto estrutural com projeto arquitetônico
B. Executar passagem de tubulação de água, esgoto e eletricidade
C. Molhar as formas antes da concretagem
D. Conservar úmida as peças concretadas durante o tempo de cura
E. Executar limpeza de formas ou partes da estrutura em contato com o concretagem
F. Usar apoio do tipo caranguejo para manter armaduras negativas em posição durante a concretagem

COBRIMENTO DAS ARMADURAS

ELEMENTOS ESTRUTURAIS	COBRIMENTO NOMINAL
Pilares	4,0 cm
Vigas	4,0 cm
Lajes	3,5 cm
Sapatas	4,0 cm
CLASSE DE AGRESSIVIDADE	III (FORTE) - CONTROLE RIGOROSO DAS DIMENSÕES

CARACTERÍSTICAS DO CONCRETO

Classe de Resistência	C-30
Módulo de Elasticidade	280 tf/cm²
Fator a/c	< 0,55

ENGEON ENGENHARIA
(45) engeonengenharia@gmail.com
9 9906-6801

ESCOLA MUNICIPAL
PROFESSORA MARIA TRINDADE DA SILVA

PROJETO ESTRUTURAL

PROJETO: ENGENHEIRO CIVIL JEFFERSON MACIEL VALGANOVER CREA/PR 19.637/D
EXECUÇÃO:

PROPRIETÁRIO: PREFEITURA MUNICIPAL DE PARANAGUA CNPJ: 76.017.458/0001-15

ESCALA: INDICADA
DATA: OUTUBRO/2018
DESENHO: MATHEUS L. SANTOS
CONTEÚDO: PLANTA DE FORMA DO RESPALDO DO MURO; PLANTA DE FORMA CENTRAL GLP/ABRIGO; VIGAS DE RESPALDO MURO, CENTRAL GLP/ ABRIGO; ARMADURAS POSITIVAS LAJES CENTRAL GLP/ABRIGO
LOCAL: AVENIDA SENADOR ATILIO FONTANA – PARQUE SÃO JOÃO PARANAGUA – PR
CATEGORIA: INSTITUCIONAL
PRANCHA: 10/10