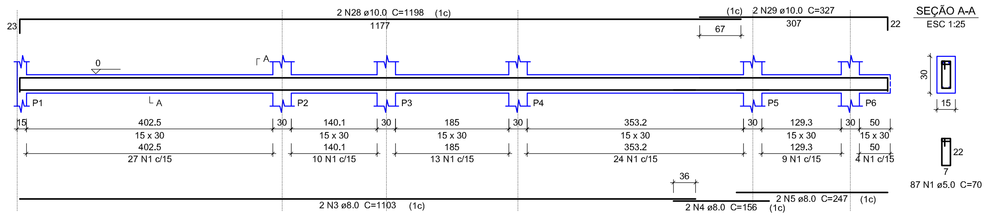
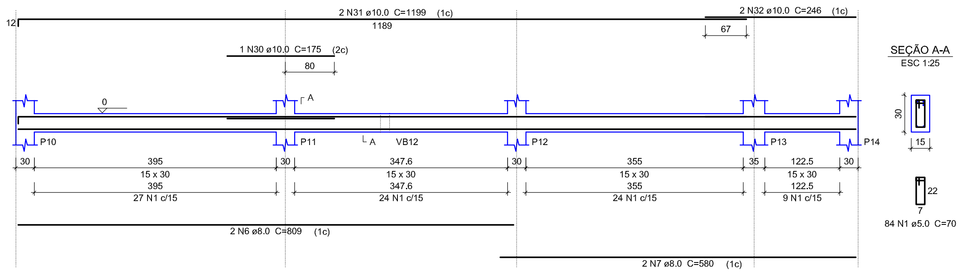
DETALHAMENTO VIGAS BALDRAMES AMPLIAÇÃO

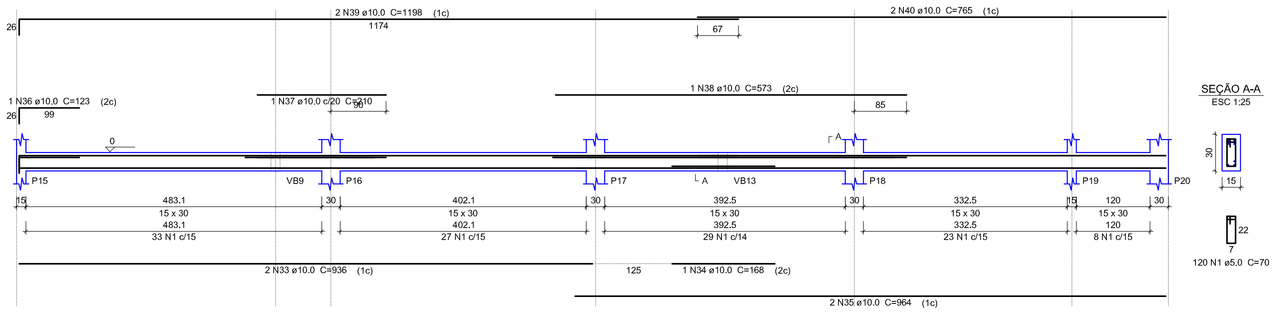
VB1
ESC 1:50



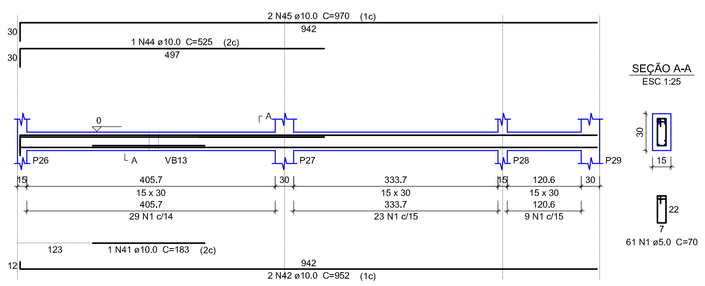
VB2
ESC 1:50



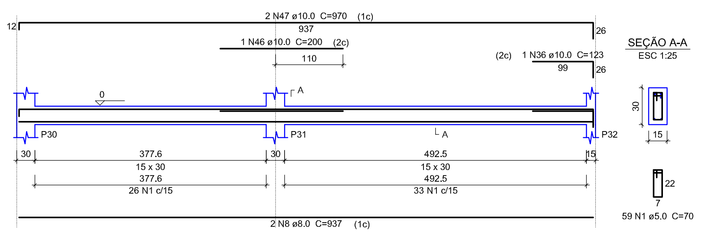
VB3
ESC 1:50



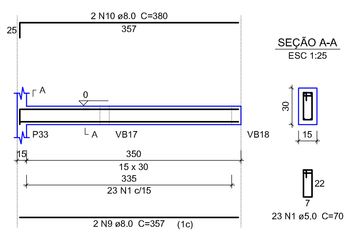
VB4
ESC 1:50



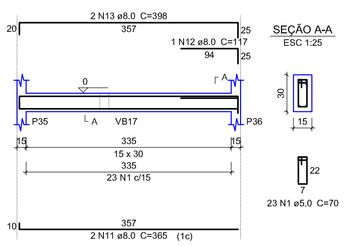
VB5
ESC 1:50



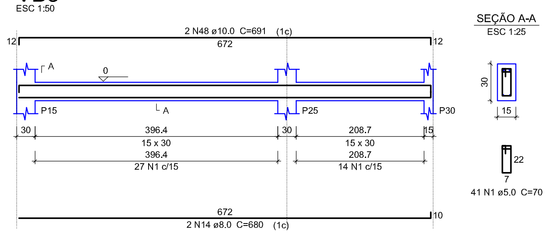
VB6
ESC 1:50



VB7
ESC 1:50



VB8
ESC 1:50



Relação do aço VIGAS BALDRAMES AMPLIAÇÃO

VB1	VB2	VB3
VB4	VB5	VB6
VB7	VB8	VB9
VB10	VB11	VB12
VB13	VB14	VB15
VB16	VB17	VB18
VB19		

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	817	70	57190
	2	5,0	2	235	470
CA50	3	8,0	2	1103	2206
	4	8,0	2	156	312
	5	8,0	2	247	494
	6	8,0	2	809	1618
	7	8,0	2	580	1160
	8	8,0	2	937	1874
	9	8,0	2	357	714
	10	8,0	2	380	760
	11	8,0	2	365	730
	12	8,0	1	117	117
	13	8,0	2	398	796
	14	8,0	4	680	2720
	15	8,0	2	672	1344
	16	8,0	1	145	145
	17	8,0	2	691	1382
	18	8,0	2	530	1060
	19	8,0	2	509	1018
	20	8,0	2	538	1076
	21	8,0	1	135	135
	22	8,0	2	557	1114
	23	8,0	4	92	368
	24	8,0	2	485	970
	25	8,0	2	100	200
	26	8,0	2	128	256
	27	8,0	4	127	508
	28	10,0	2	1198	2396
	29	10,0	2	327	654
	30	10,0	2	175	350
	31	10,0	2	1199	2398
	32	10,0	2	246	492
	33	10,0	2	936	1872
	34	10,0	1	168	168
	35	10,0	2	964	1928
	36	10,0	2	123	246
	37	10,0	1	210	210
	38	10,0	1	573	573
	39	10,0	2	1198	2396
	40	10,0	2	765	1530
	41	10,0	1	183	183
	42	10,0	2	952	1904
	43	10,0	1	205	205
	44	10,0	1	525	525
	45	10,0	2	970	1940
	46	10,0	1	200	200
	47	10,0	2	970	1940
	48	10,0	2	691	1382
	49	10,0	2	693	1386
	50	10,0	2	1067	2134
	51	10,0	2	1103	2206
	52	10,0	2	548	1096
	53	10,0	7	477	3339
	54	10,0	2	502	1004

Relação do aço VIGAS BALDRAMES REFORMA INTERNA

VB20	VB21	VB22
VB23	VB24	

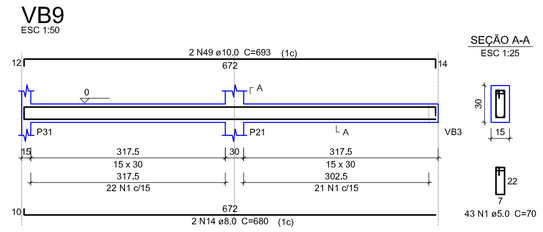
AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5,0	91	70	6370
CA50	2	8,0	2	477	954
	3	8,0	2	509	1018
	4	8,0	2	119	238
	5	8,0	2	151	302
	6	8,0	2	262	524
	7	8,0	2	294	588
	8	8,0	2	108	216
	9	8,0	2	140	280
	11	8,0	2	316	632
	12	8,0	2	280	560

Resumo de Materiais TOTAL VIGAS BALDRAMES

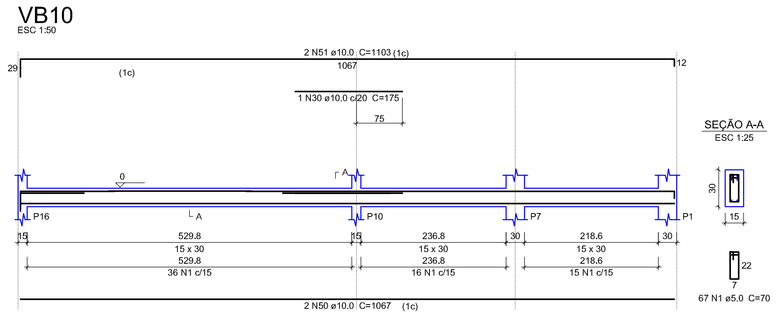
AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8,0	283,96	124
	10,0	399,1	244
CA60	5,0	569	97
PESO TOTAL			
CA50	368		
CA60	97		

Vol. de concreto total (C-30) = 6,8 m³
Área de forma total = 110,02 m²

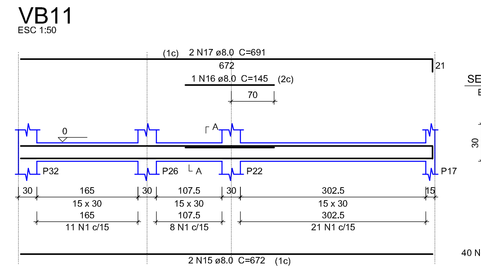
VB9
ESC 1:50



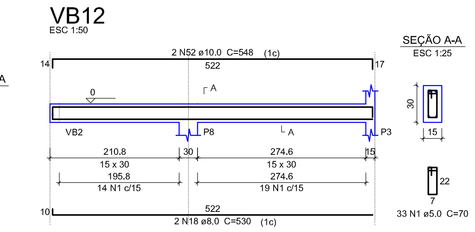
VB10
ESC 1:50



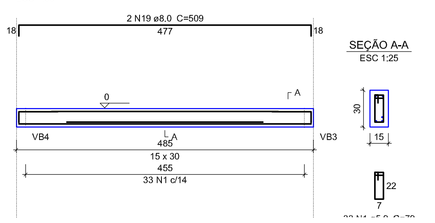
VB11
ESC 1:50



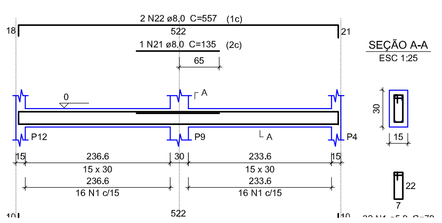
VB12
ESC 1:50



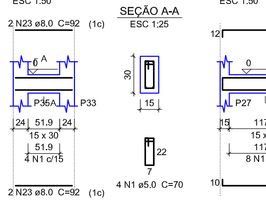
VB13
ESC 1:50



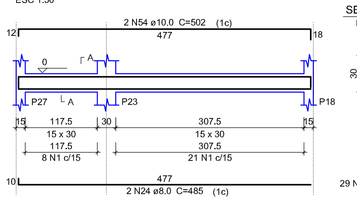
VB14
ESC 1:50



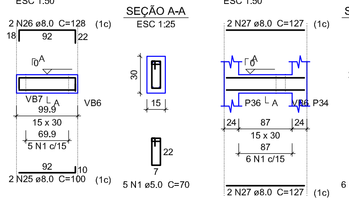
VB15
ESC 1:50



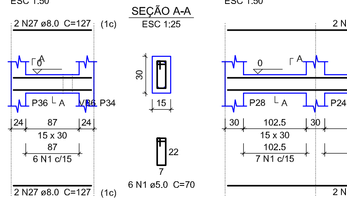
VB16
ESC 1:50



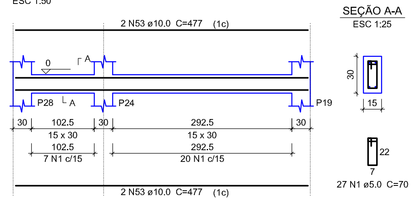
VB17
ESC 1:50



VB18
ESC 1:50



VB19
ESC 1:50



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 a 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 DIMENSBES

CARACTERÍSTICAS DO CONCRETO

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

ENGEON ENGENHARIA
(48) engeoneng@gmail.com
9996-6601

CMEI
MILENA BONFIM

PROJETO ESTRUTURAL

PROJETO
ENGENHEIRO CIVIL
JEFFERSON MACIEL VALDANOVER CREA/PR 19.637/D

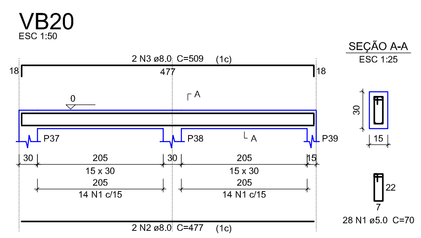
EXECUÇÃO

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

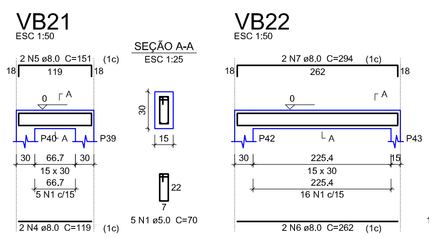
ESCALA: INDICADA
CONTEÚDO: DETALHAMENTO VIGAS BALDRAMES
CATEGORIA: INSTITUCIONAL
DATA: OUTUBRO/2018
PRANCHA: 03/09
DESENHO: MATHEUS L. SANTOS
LOCAL: RUA: MANOEL CORRÊA, 237 – OCEANIA PARANAGUÁ – PR

DETALHAMENTO VIGAS BALDRAMES REFORMA INTERNA

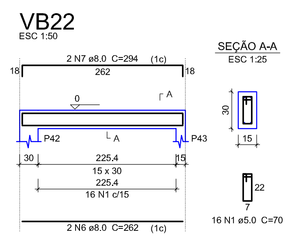
VB20
ESC 1:50



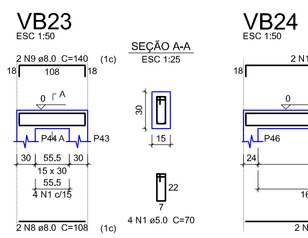
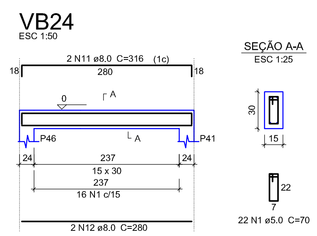
VB21
ESC 1:50



VB22
ESC 1:50



VB23
ESC 1:50



VB24
ESC 1:50