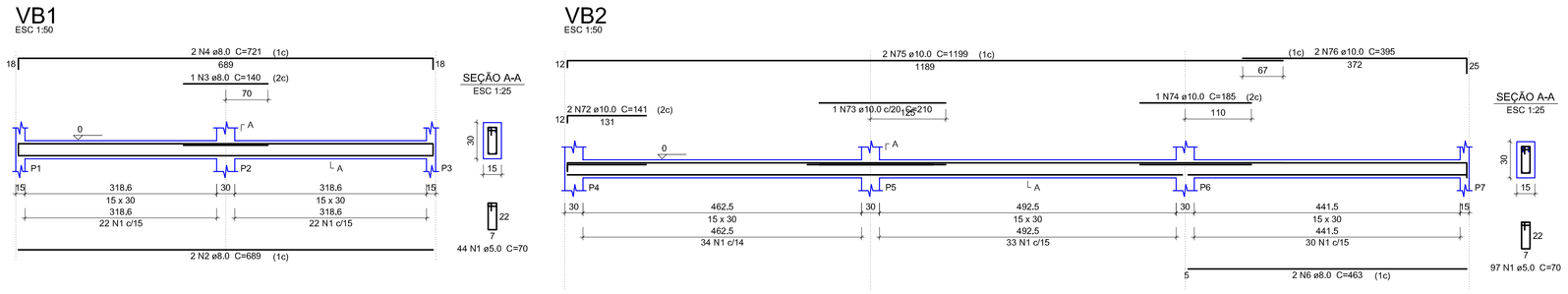
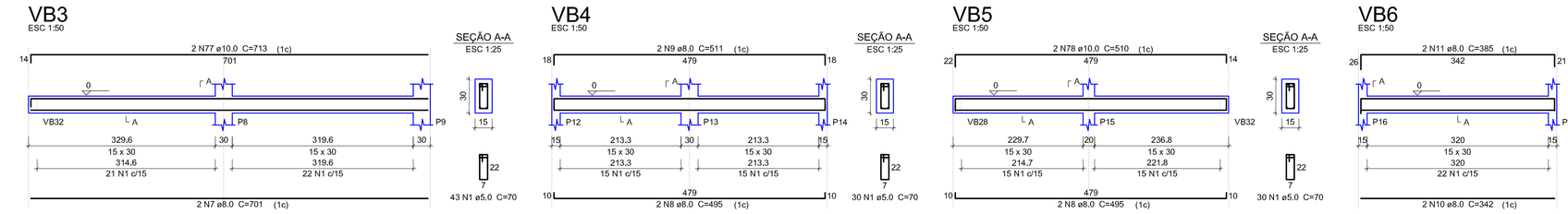
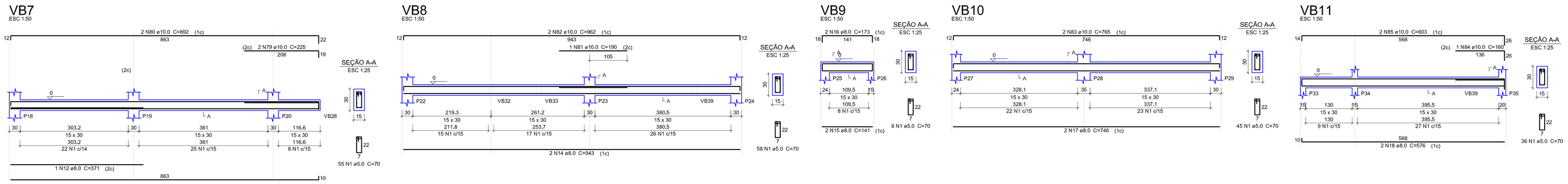
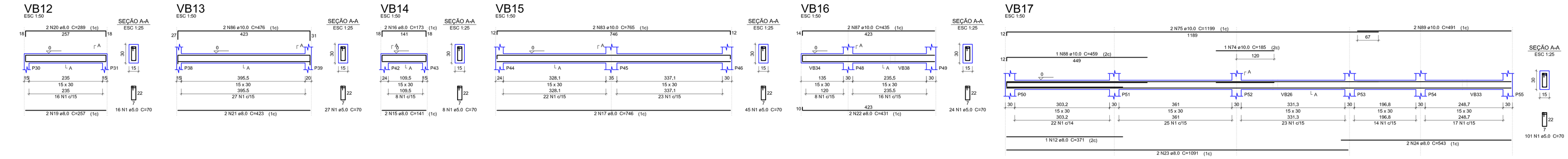
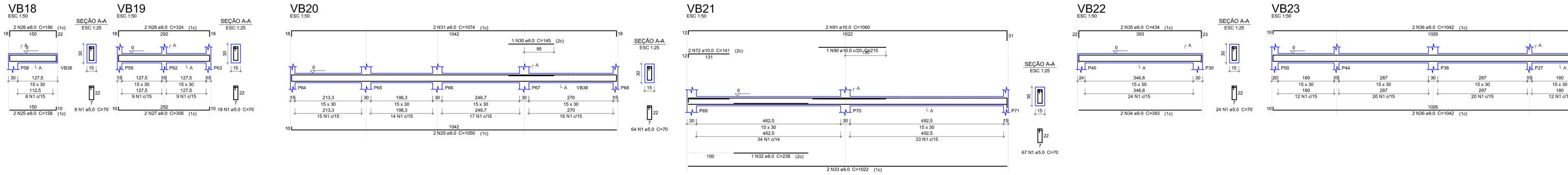
VIGAS BALDRAMES AMPLIAÇÃO

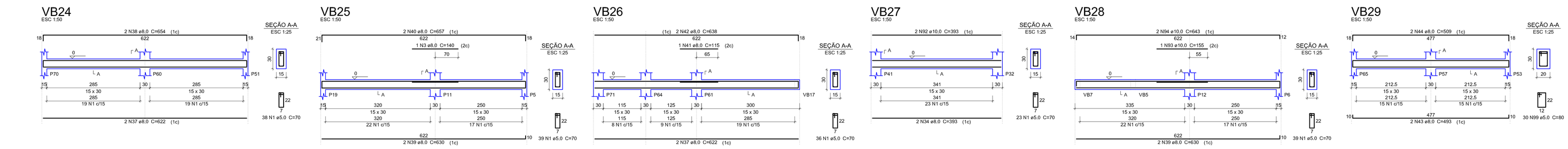


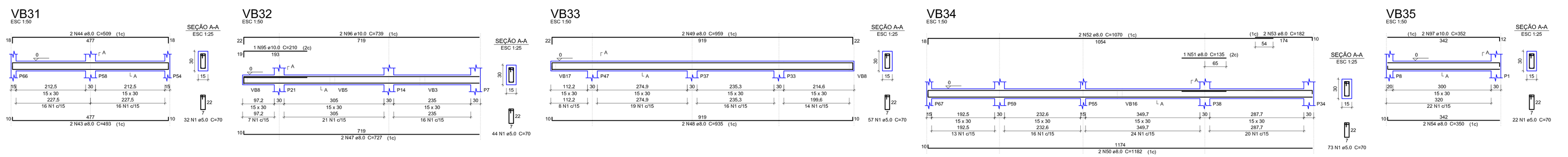


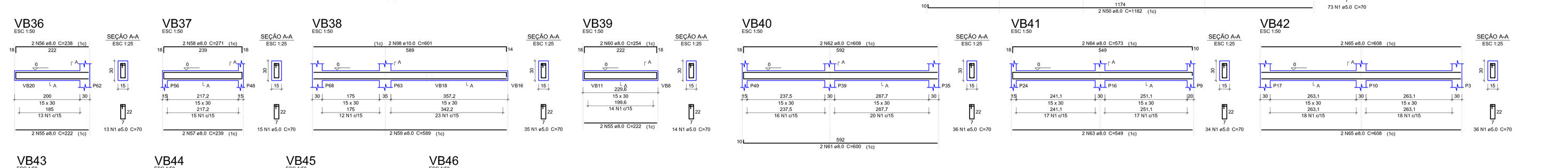


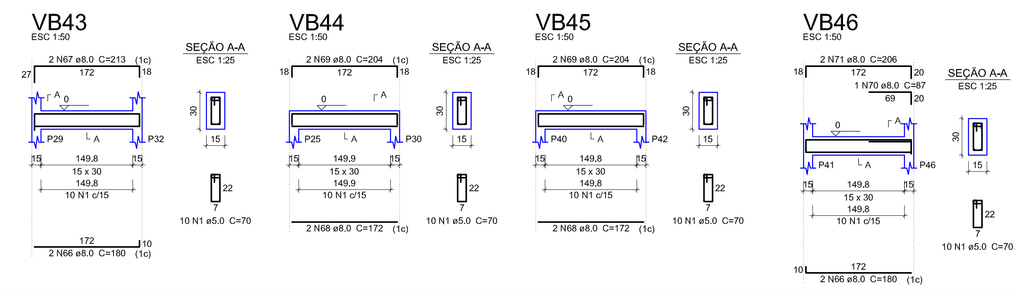












Relação do aço

VB1	VB2	VB3
VB4	VB5	VB6
VB7	VB8	VB9
VB10	VB11	VB12
VB13	VB14	VB15
VB16	VB17	VB18
VB19	VB20	VB21
VB22	VB23	VB24
VB25	VB26	VB27
VB28	VB29	VB30
VB31	VB32	VB33
VB34	VB35	VB36
VB37	VB38	VB39
VB40	VB41	VB42
VB43	VB44	VB45
VB46		

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	1576	70	110320
	99	5.0	30	80	2400
CA50	2	8.0	2	689	1378
	3	8.0	2	140	280
	4	8.0	2	721	1442
	5	8.0	2	1021	2042
	6	8.0	2	463	926
	7	8.0	2	701	1402
	8	8.0	4	495	1980
	9	8.0	2	511	1022
	10	8.0	2	342	684
	11	8.0	2	385	770
	12	8.0	2	371	742
	13	8.0	2	871	1742
	14	8.0	2	943	1886
	15	8.0	4	141	564
	16	8.0	4	173	692
	17	8.0	4	746	2984
	18	8.0	2	576	1152
	19	8.0	2	257	514
	20	8.0	2	289	578
	21	8.0	2	423	846
	22	8.0	2	431	862
	23	8.0	2	1091	2182
	24	8.0	2	543	1086
	25	8.0	2	158	316
	26	8.0	2	186	372
	27	8.0	2	308	616
	28	8.0	2	324	648
	29	8.0	2	1050	2100
	30	8.0	1	145	145
	31	8.0	2	1074	2148
	32	8.0	1	238	238
	33	8.0	2	1022	2044
	34	8.0	4	393	1572
	35	8.0	2	434	868
	36	8.0	4	1042	4168
	37	8.0	4	622	2488
	38	8.0	2	654	1308
	39	8.0	4	630	2520
	40	8.0	2	657	1314
	41	8.0	1	115	115
	42	8.0	2	638	1276
	43	8.0	4	493	1972
	44	8.0	4	509	2036
	45	8.0	2	282	564
	46	8.0	2	298	596
	47	8.0	2	727	1454
	48	8.0	2	935	1870
	49	8.0	2	959	1918
	50	8.0	2	1182	2364
	51	8.0	1	135	135
	52	8.0	2	1070	2140
	53	8.0	2	182	364
	54	8.0	2	350	700
	55	8.0	4	222	888
	56	8.0	2	238	476
	57	8.0	2	239	478
	58	8.0	2	271	542
	59	8.0	2	589	1178
	60	8.0	2	254	508
	61	8.0	2	600	1200
	62	8.0	2	608	1216
	63	8.0	2	549	1098
	64	8.0	2	573	1146
	65	8.0	4	608	2432
	66	8.0	4	180	720
	67	8.0	2	213	426
	68	8.0	4	172	688
	69	8.0	4	204	816
	70	8.0	1	87	87
	71	8.0	2	206	412
	72	10.0	4	141	564
	73	10.0	1	210	210
	74	10.0	2	185	370
	75	10.0	4	1199	4796
	76	10.0	2	395	790
	77	10.0	2	713	1426
	78	10.0	2	510	1020
	79	10.0	2	225	450
	80	10.0	2	892	1784
	81	10.0	1	190	190
	82	10.0	2	962	1924
	83	10.0	4	765	3060
	84	10.0	1	160	160
	85	10.0	2	603	1206
	86	10.0	2	476	952
	87	10.0	2	435	870
	88	10.0	1	459	459
	89	10.0	2	491	982
	90	10.0	1	215	215
	91	10.0	2	1060	2120
	92	10.0	2	393	786
	93	10.0	1	155	155
	94	10.0	2	643	1286
	95	10.0	1	210	210
	96	10.0	2	739	1478
	97	10.0	2	352	704
	98	10.0	2	601	1202

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 DIMENSÕES

CARACTERÍSTICAS DO CONCRETO

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

ENGEON ENGENHARIA
(045) engeonengenharia@gmail.com 9906-6601

CMEI
NOSSA SENHORA DOS NAVEGANTES

PROJETO ESTRUTURAL

PROJETO: ENGENHEIRO CIVIL JEFFERSON MACIEL VALCANOVER CREA/PR 19.637/D

EXECUÇÃO:

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

ESCALA: INDICADA	CONTEÚDO: VIGAS BALDRAMES	CATEGORIA: INSTITUCIONAL
DATA: OUTUBRO/2018		PRANCHA: 04/19
DESENHO: MATHEUS L. SANTOS	LOCAL: ILHA DOS VALASMIRES - VILA BELA PARANAGUÁ - PR	