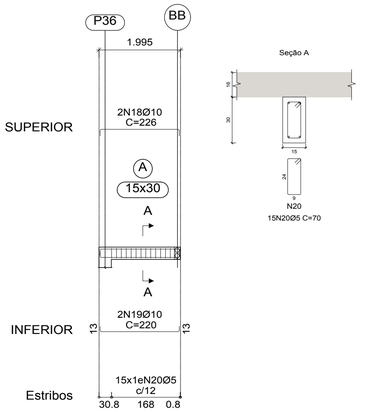
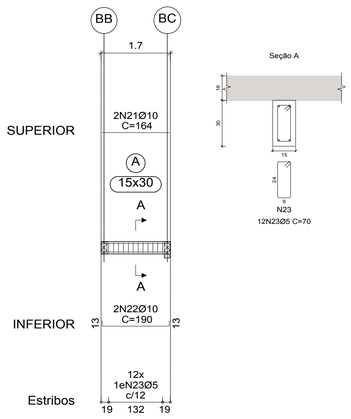
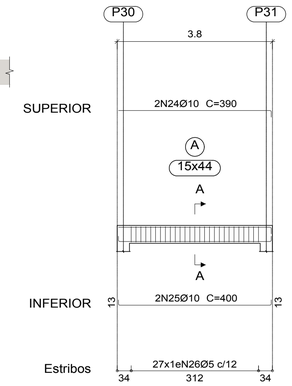
V 12

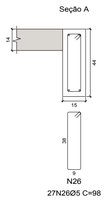


V 13

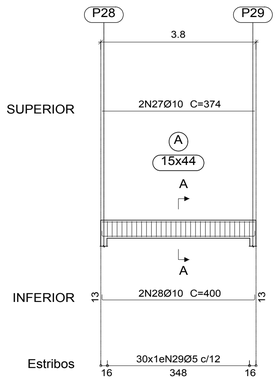


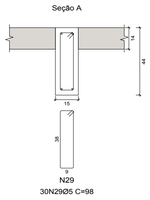
V 14



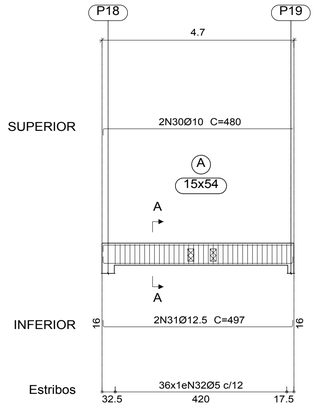


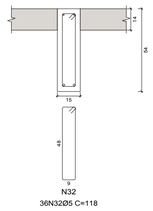
V 15



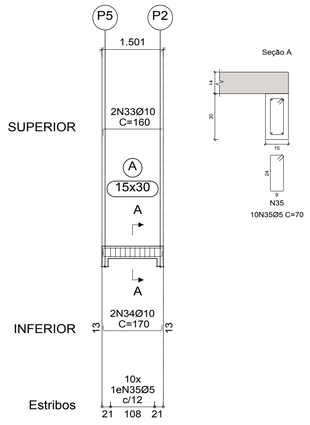


V 16

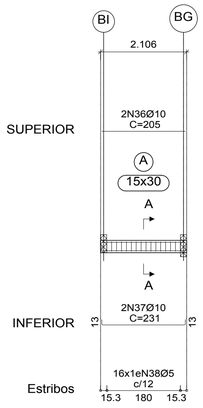


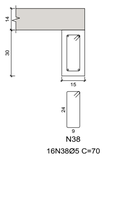


V 17

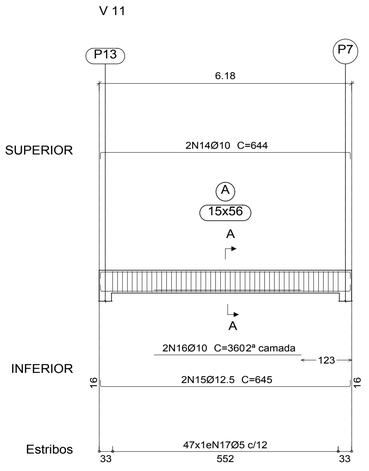


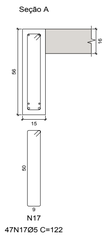
V 18





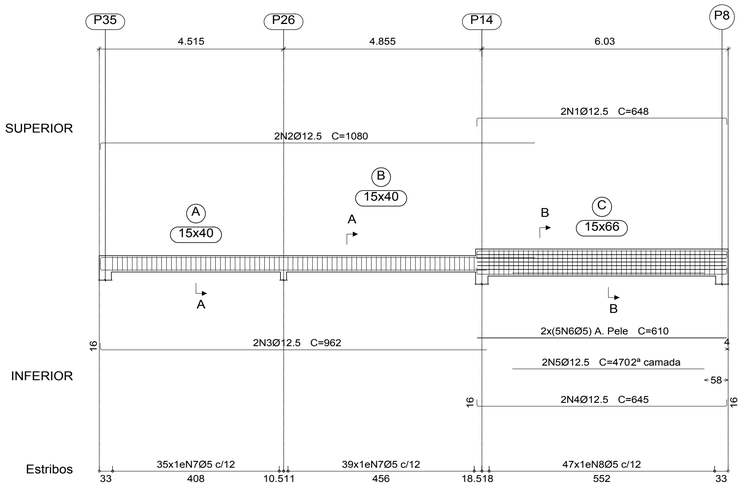
V 11

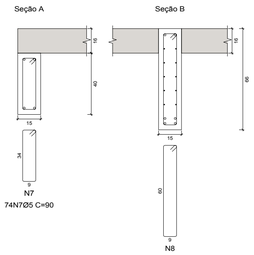




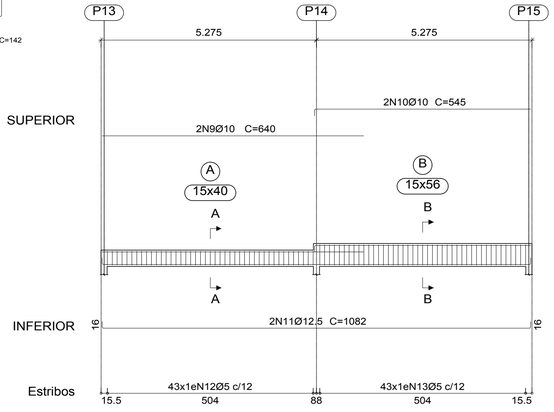
Elemento	Pos.	Diam.	Q.	Esquema (cm)	Comp. (cm)	Total (cm)	CA-50 (kg)	CA-60 (kg)
V 9	1	Ø12.5	2	20 612 20	648	1296	12.5	
	2	Ø12.5	2	20 1054 20	1080	2160	20.8	
	3	Ø12.5	2	20 946	962	1924	18.5	
	4	Ø12.5	2	20 612 20	645	1290	12.4	
	5	Ø12.5	2	470	470	940	9.1	
	6	Ø5	10	610	610	6100		9.6
	7	Ø5	74	4 38 9	91	6734		10.6
	8	Ø5	47	4 60 9	143	6721		10.6
					Total+10%:		80.6	33.9
V 10	9	Ø10	2	640	640	1280	7.9	
	10	Ø10	2	20 529	545	1090	6.7	
	11	Ø12.5	2	20 1049 20	1082	2164	20.8	
	12	Ø5	43	4 38 9	91	3913		6.1
	13	Ø5	43	4 50 9	123	5289		8.3
					Total+10%:		38.9	15.8
V 11	14	Ø10	2	612	644	1288	7.9	
	15	Ø12.5	2	20 612 20	645	1290	12.4	
	16	Ø10	2	360	360	720	4.4	
	17	Ø5	47	4 50 9	123	5781		9.1
					Total+10%:		27.2	10.0
V 12	18	Ø10	2	20 194 20	226	452	2.8	
	19	Ø10	2	20 194 20	220	440	2.7	
	20	Ø5	15	4 24 9	71	1065		1.7
					Total+10%:		6.1	1.9
V 13	21	Ø10	2	164	164	328	2.0	
	22	Ø10	2	20 164 20	190	380	2.3	
	23	Ø5	12	4 24 9	71	852		1.3
					Total+10%:		4.7	1.4
V 14	24	Ø10	2	374	390	780	4.8	
	25	Ø10	2	20 374 20	400	800	4.9	
	26	Ø5	27	4 38 9	99	2673		4.2
					Total+10%:		10.7	4.6
V 15	27	Ø10	2	374	374	748	4.6	
	28	Ø10	2	20 374 20	400	800	4.9	
	29	Ø5	30	4 38 9	99	2970		4.7
					Total+10%:		10.5	5.2
V 16	30	Ø10	2	20 464 20	480	960	5.9	
	31	Ø12.5	2	20 464 20	497	994	9.6	
	32	Ø5	36	4 48 9	119	4284		6.7
					Total+10%:		17.1	7.4
V 17	33	Ø10	2	20 144 20	160	320	2.0	
	34	Ø10	2	20 144 20	170	340	2.1	
	35	Ø5	10	4 24 9	71	710		1.1
					Total+10%:		4.5	1.2
V 18	36	Ø10	2	205	205	410	2.5	
	37	Ø10	2	20 205 20	231	462	2.8	
	38	Ø5	16	4 24 9	71	1136		1.8
					Total+10%:		5.8	2.0
					Ø5:		0.0	83.4
					Ø10:		78.4	0.0
					Ø12.5:		127.7	0.0
					Total:		206.1	83.4

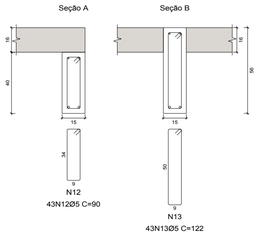
V 9





V 10





1º PAVIMENTO
Desenho de vigas
Concreto: C25, em geral
Aço das barras: CA-50 e CA-60
Aço dos estribos: CA-50 e CA-60
Escala vigas 1:75
Escala seções 1:20
Escala aberturas 1:20

PRIMEIRA ENGENHARIA
Construindo projetos inteligentes!

PREFEITURA MUNICIPAL DE ARAÇUAÍ
SECRETARIA MUNICIPAL DE DESENVOLVIMENTO URBANO

TERRENO

LOGRADOURO: RUA FLORIANO PEIXTO, 499
BAIRRO: ESPLANADA
CIDADE: ARAÇUAI - MG
CEP: 39.600-000
LOTE:
QUADRA:
VISTO:

RESPONSÁVEL TÉCNICO: KENIO AVILA FERNANDES:76881067 15
Assinado de forma digital por KENIO AVILA FERNANDES:76881067615 Dados: 2023.01.20 14:46:17 -03'00'
PRIMEIRA ENGENHARIA LTDA
KÊNIO ÁVILA FERNANDES
CNPJ: 14.920.928/0001-07
CREA MG: 70918/D

PROPRIETÁRIO (A): TADEU BARBOSA DE OLIVEIRA:72565594615
Assinado de forma digital por TADEU BARBOSA DE OLIVEIRA:72565594615 Dados: 2026.08.10 08:36:45 -03'00'
PREFEITURA MUNICIPAL DE ARAÇUAI
CNPJ: 17.963.083/0001-17
ÁREAS:

PROJETO

DETALHES: INDICADAS
ESCALAS: INDICADAS
TÍTULO: PROJETO ESTRUTURAL ESCOLA MUNICIPAL BRINCANDO E APRENDENDO I (AMPLIAÇÃO)
USO: PÚBLICO
DATA: JANEIRO 2023
FOLHA: 08