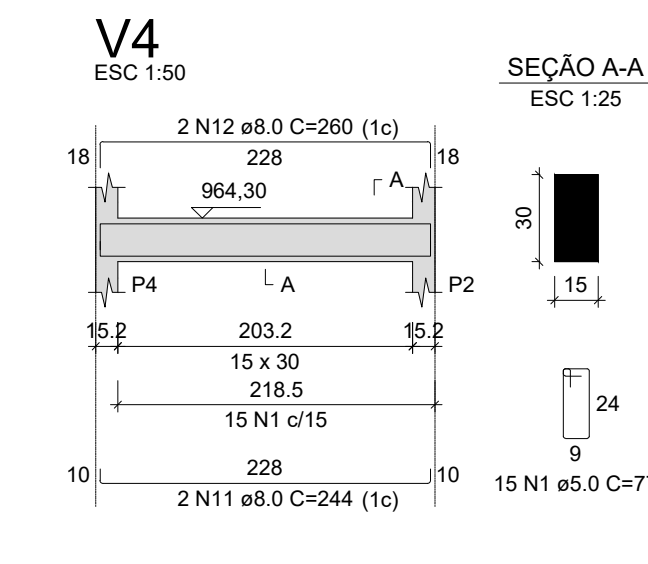
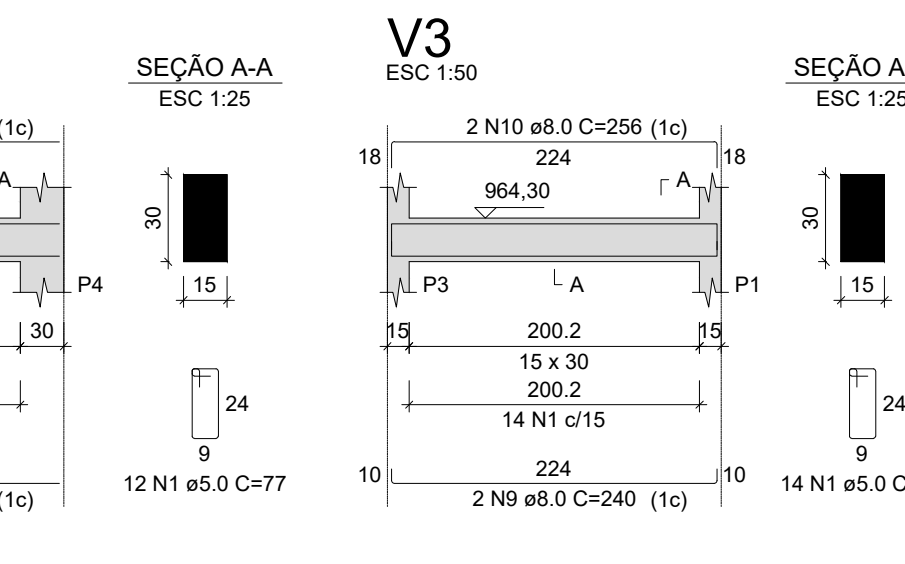
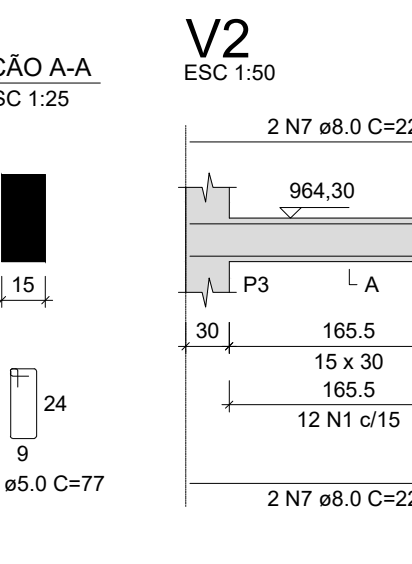
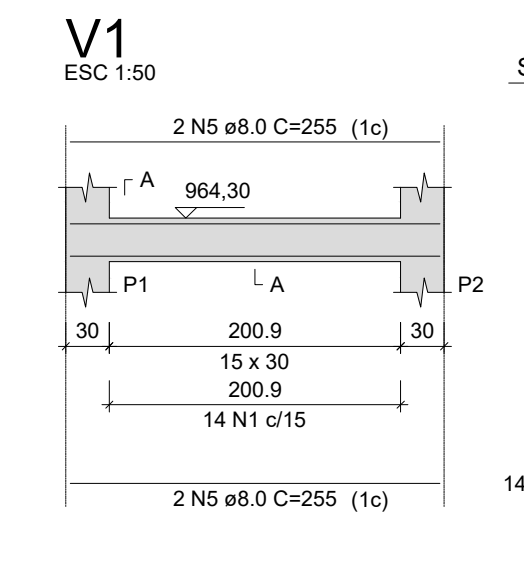
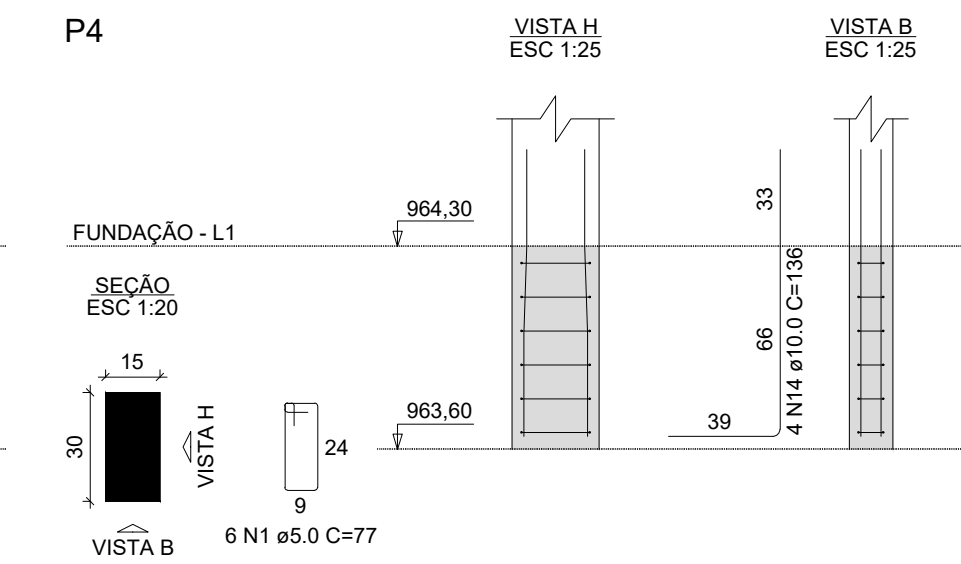
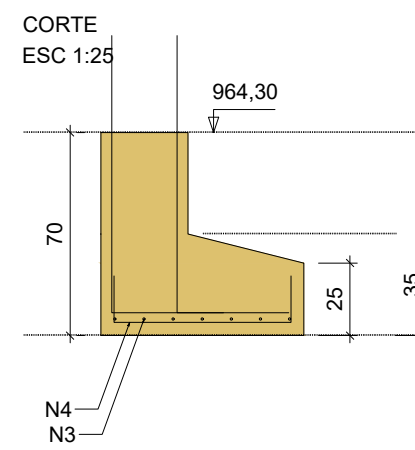
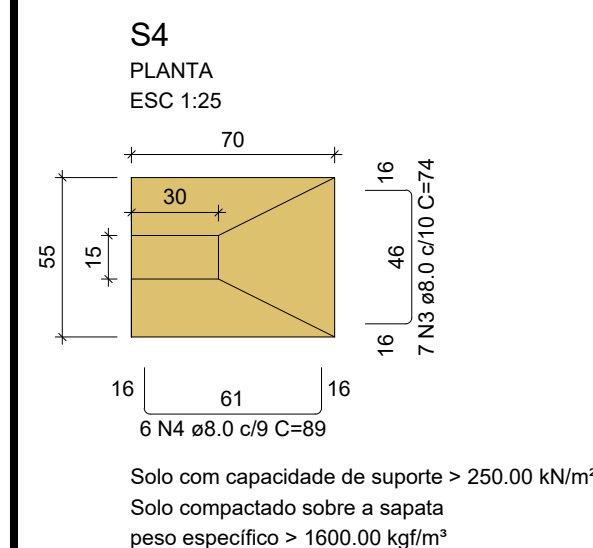


RELAÇÃO DO AÇO

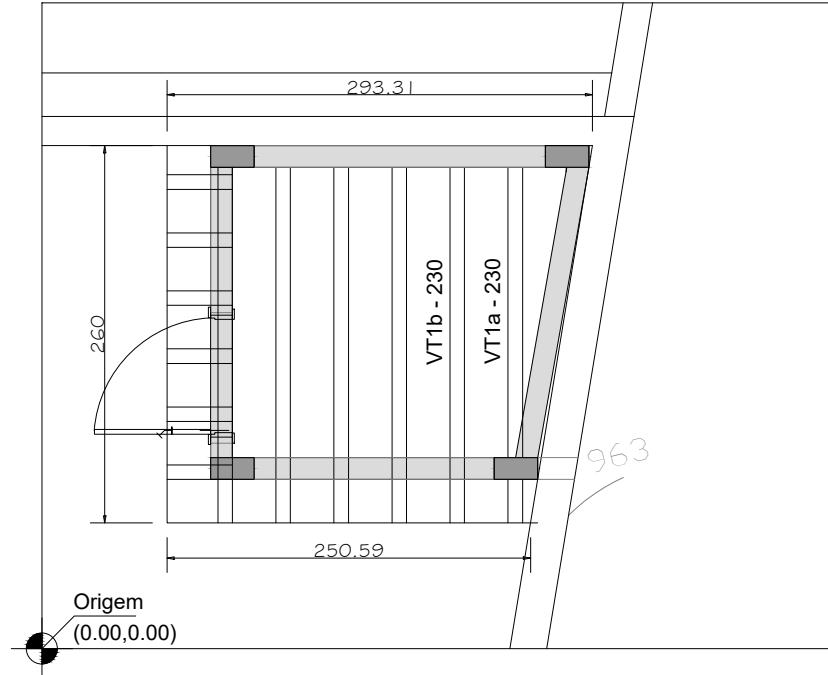
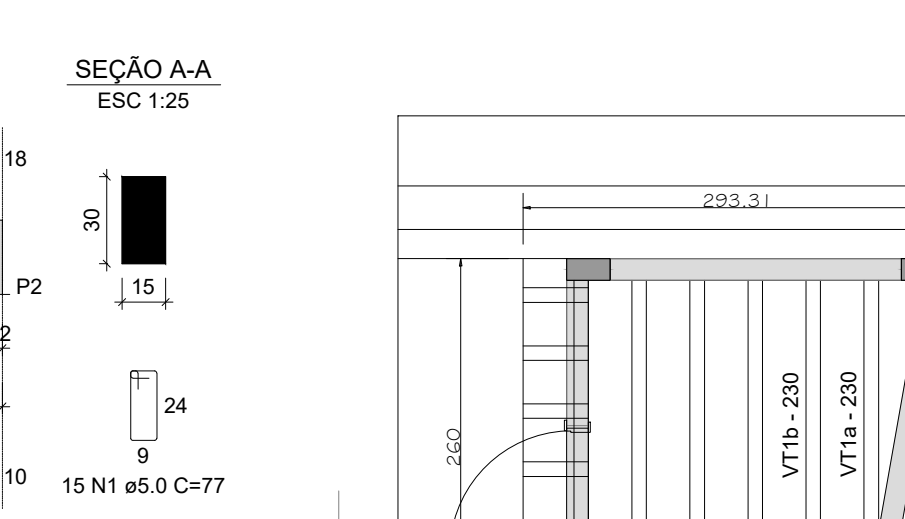
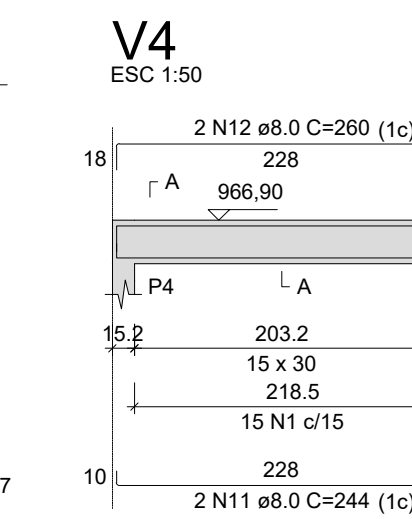
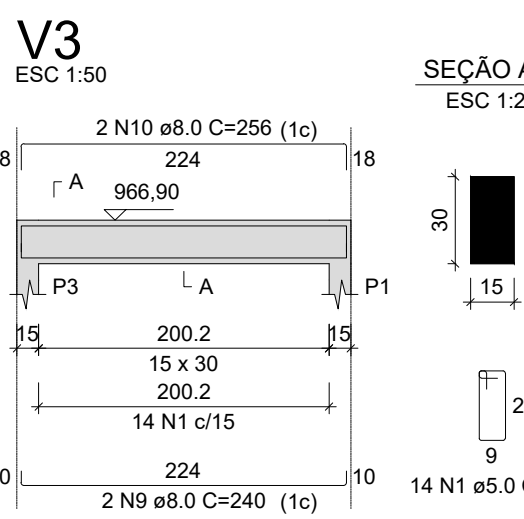
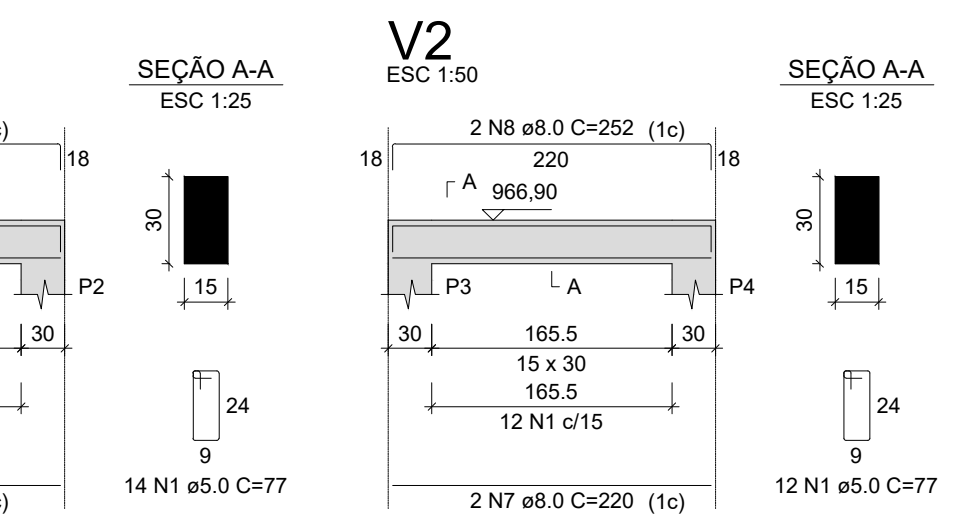
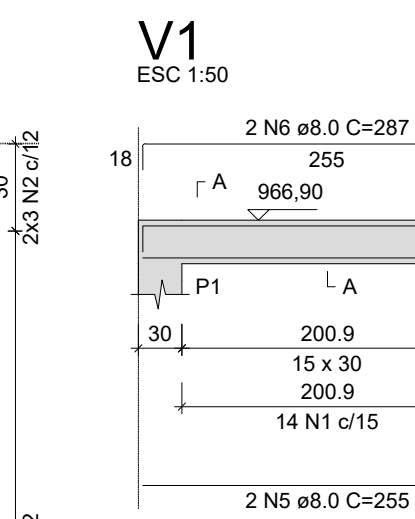
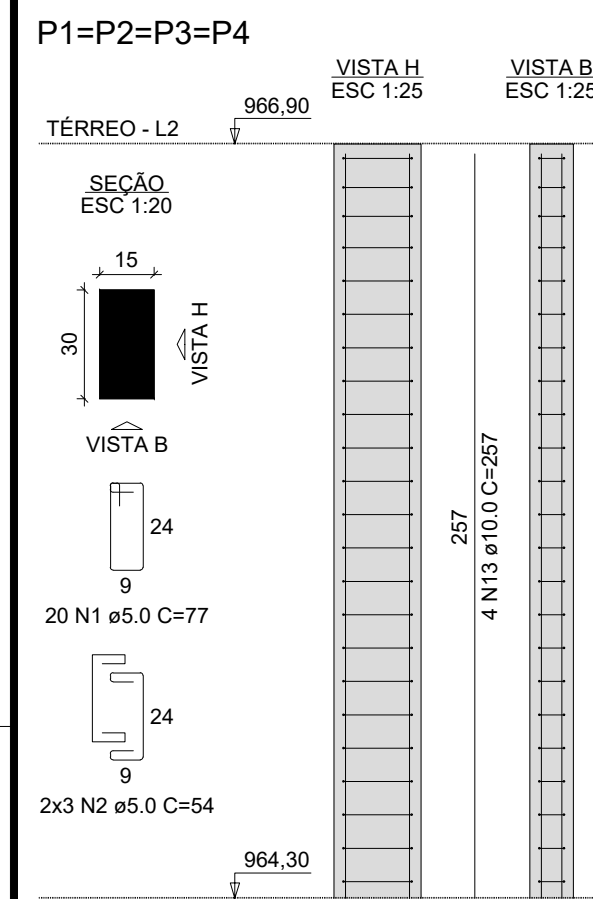
AÇO	N	DIAM (mm)	QUANT	C.UNIT (cm)	C.TOTAL (cm)
4xP1-L2	1	5.0	214	77	16478
P4-L1	2	5.0	24	54	1296
S4-L1	3	8.0	28	74	2072
V2-L2	4	8.0	24	89	2136
V3-L1	5	8.0	6	255	1530
	6	8.0	2	287	574
	7	8.0	6	220	1320
	8	8.0	2	252	504
	9	8.0	4	240	960
	10	8.0	4	256	1024
	11	8.0	4	244	976
	12	8.0	4	260	1040
	13	10.0	16	257	4112
	14	10.0	12	136	1632
	15	10.0	4	117	468



RESUMO DO AÇO

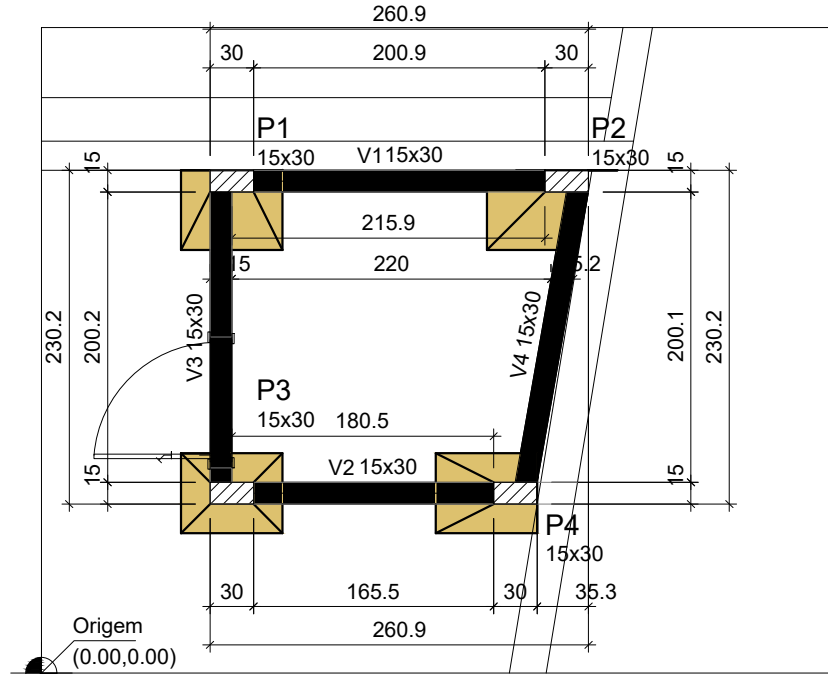
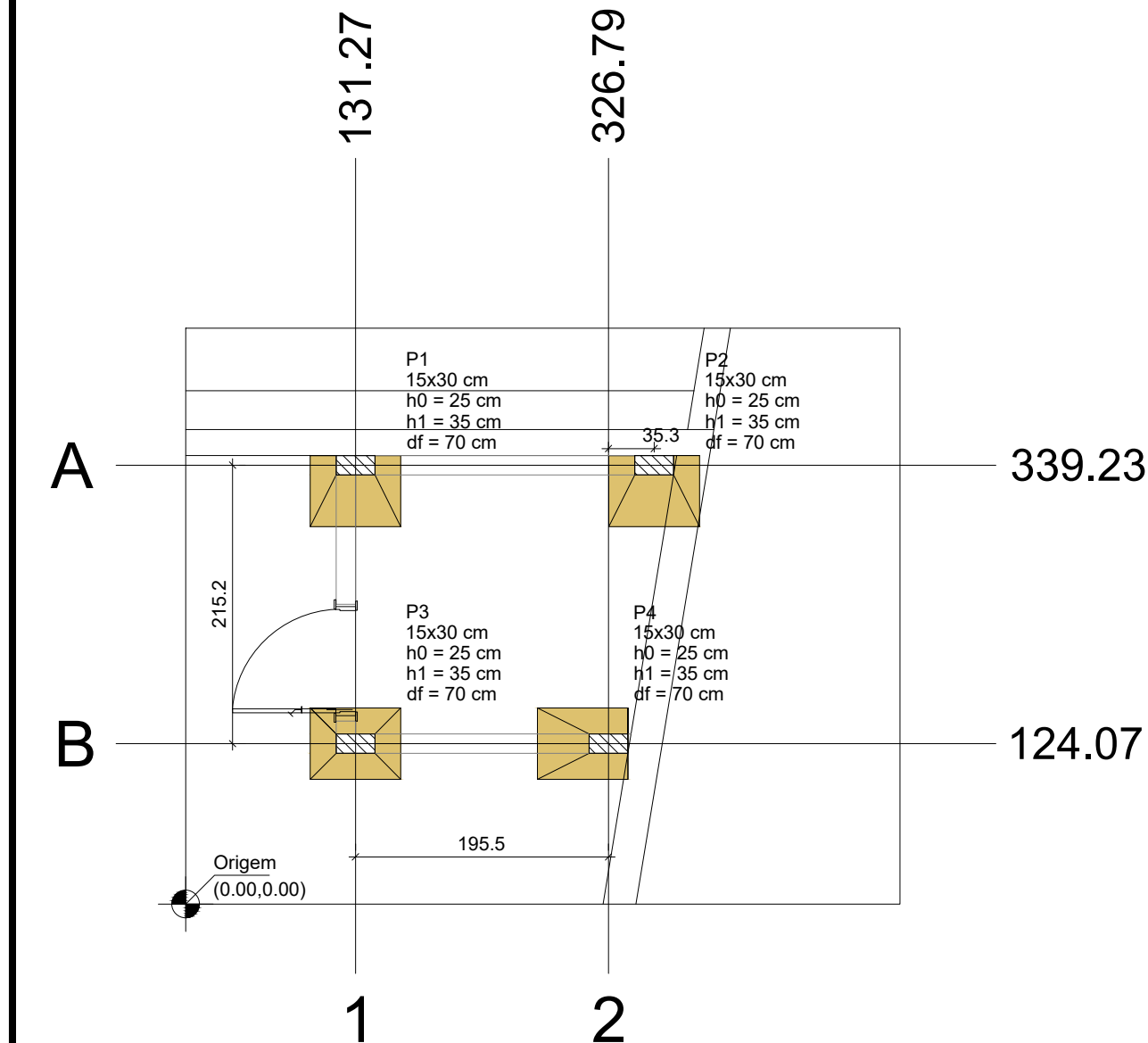
AÇO	DIAM (mm)	C.TOTAL (m)	PESO + 10% (kg)
CA50	8.0	121.4	52.7
CA60	10.0	82.1	42.1
	5.0	177.7	30.1
PESO TOTAL (kg)			
CA50		94.8	
CA60		30.1	

Volume de concreto fck 3,0kN/cm² (C-30) = 2.20 m³
Área de forma = 23.97 m²



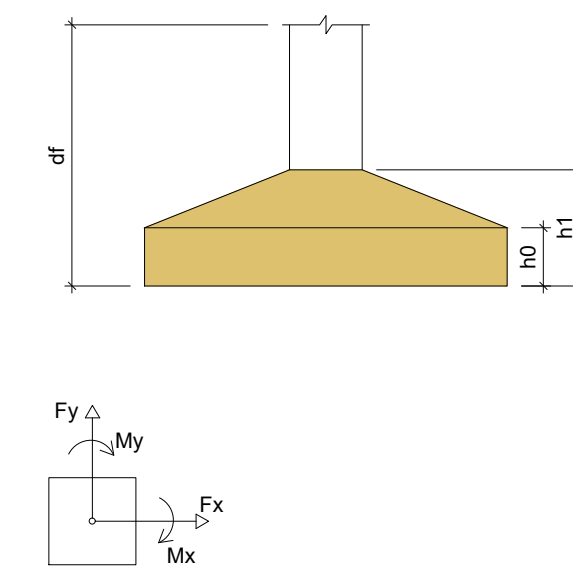
Armação positiva das lajes do pav. Térreo

escala 1:50



Nome	Seção (cm)	X (cm)	Y (cm)	Posição	Carga Máx. (tf)	Carga Min. (tf)	Pilar				Fundação			
							Mx Máximo (kgf.m)	My Máximo (kgf.m)	Fx Máximo (tf)	Fy Máximo (tf)	Nome	Lado B (cm)	h0 / ha (cm)	h1 / hb (cm)
P1	15x30	131.27	339.23	A-1	1.8	0.9	0	0	0	0	S1	55	70	25
P2	15x30	362.12	339.22	A-2	1.6	0.8	0	0	0	0	S2	55	70	25
P3	15x30	131.27	124.07	B-1	1.6	0.9	0	0	0	0	S3	55	70	25
P4	15x30	326.79	124.07	B-2	1.7	0.8	0	0	0	0	S4	70	55	25

Locação no eixo X		Locação no eixo Y	
Coordenadas (cm)	Nome	Coordenadas (cm)	Nome
131.27	P1, P3	339.23	P1
326.79	P4	339.22	P2
362.12	P2	124.07	P3, P4



Vigas

Nome	Seção (cm)	Elevação (cm)	Nível (cm)
V1	15x30	0	964.30
V2	15x30	0	964.30
V3	15x30	0	964.30
V4	15x30	0	964.30

Características dos materiais

fck (kN/cm²)	Ecs (kN/cm²)
3	2684

Dimensão máxima do agregado = 19 mm

Pilares

Nome	Seção (cm)	Elevação (cm)	Nível (cm)
P1	15x30	0	964.30
P2	15x30	0	964.30
P3	15x30	0	964.30
P4	15x30	0	964.30

Legenda dos pilares

	Pilar que passa
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Legenda das vigas e paredes

	Viga
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06	21/11/22	EMISSION INICIAL	ATACIZIO
REVISÃO	DATA	DESCRIÇÃO	RESP.
EMPRESA		MARKA ARQUITETURA E ENGENHARIA LTDA RUA PROFESSOR ABREYARD, 279, SALA 9 CENTRO, SETE LAGOAS/MG apoio@markaprojetos.com.br (31) 3177-4235 www.markaprojetos.com.br	ESPECIALIDADE ESTRUTURAL FASE DO PROJETO EXECUTIVO
EMPENHAMENTO - OBRA		ESCOLA MUNICIPAL BELVEDERE RUA JOSÉ COELHO, RUA CANADA E RUA SÉRGIO JACOWLEWSKI S. SIDERÚRGICO - CONSELHEIRO LAFAIETE/MG	RESPONSÁVEL PROJETO JOSE ATACIZIO DA FE ENR. CIVIL CREA/MG 87.669/D COORDENADOR PROJETO KARINE INARDY PROJETISTA JOSE ATACIZIO DA FE
ASSUNTO		PROJETO DE ESTRUTURAS DE CONCRETO PROJETO ESTRUTURAL CASA DE BOMBAS	ESCALA INDICADA DATA 21/11/2022 ARQUIVO 064-EST-CASA DE BOMBA-BELVEDERE-ROB