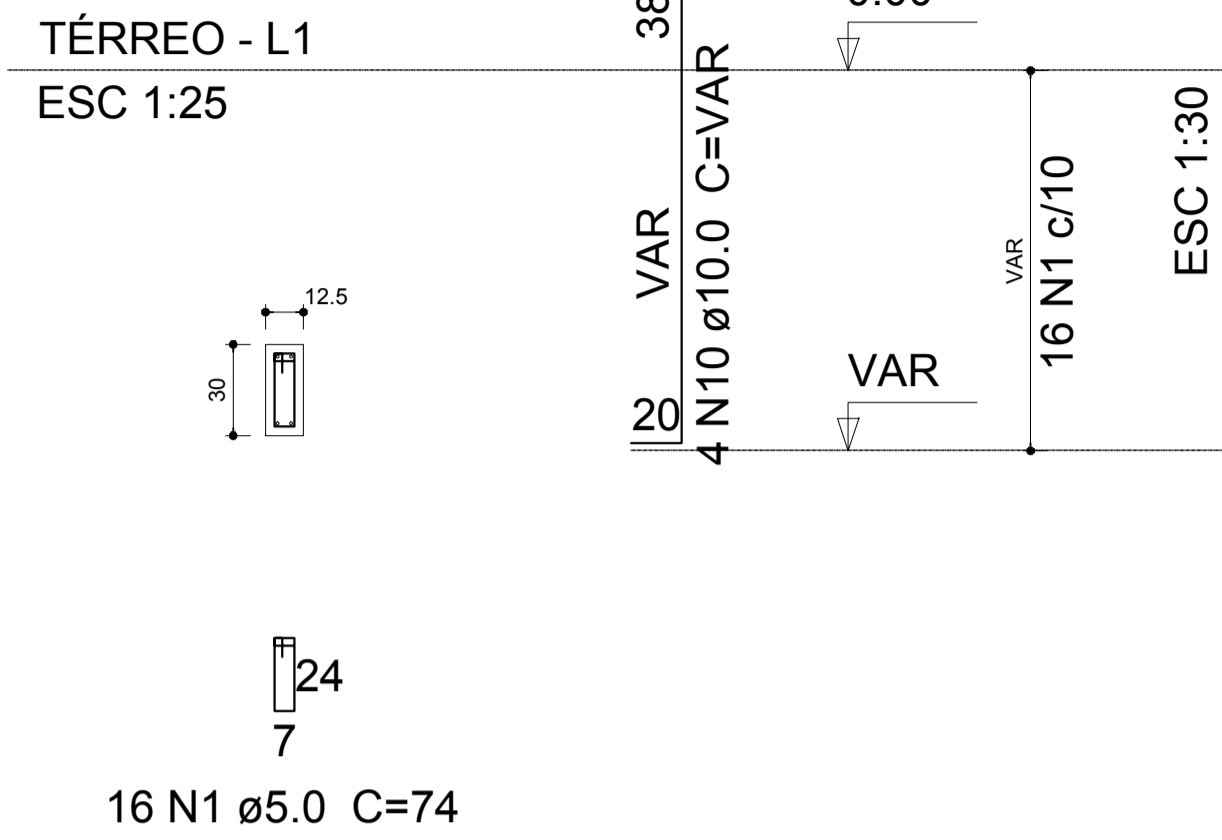
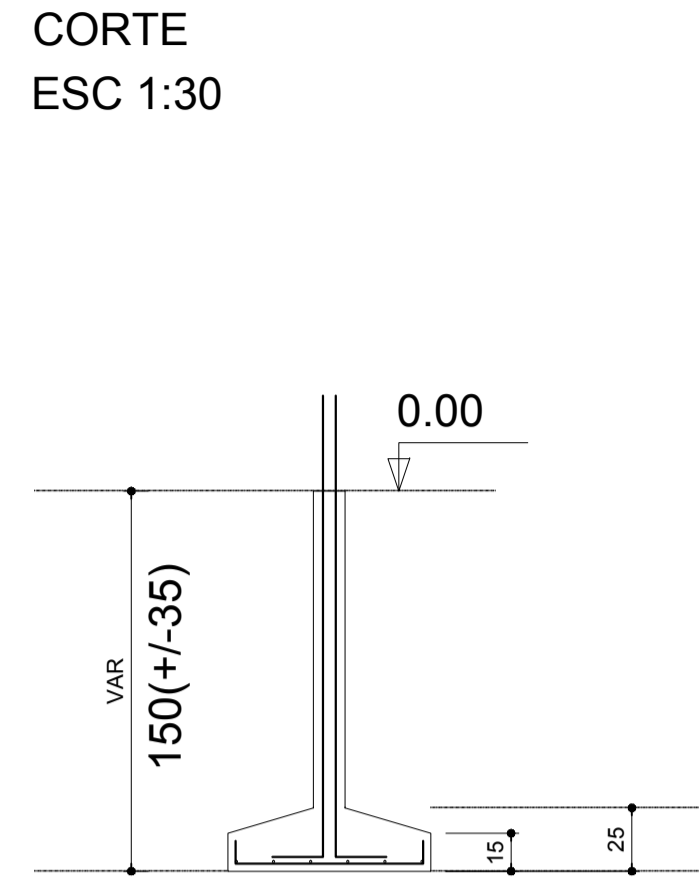
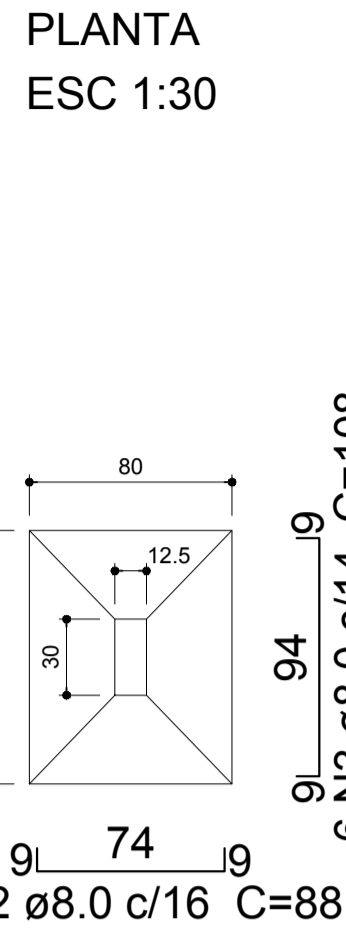


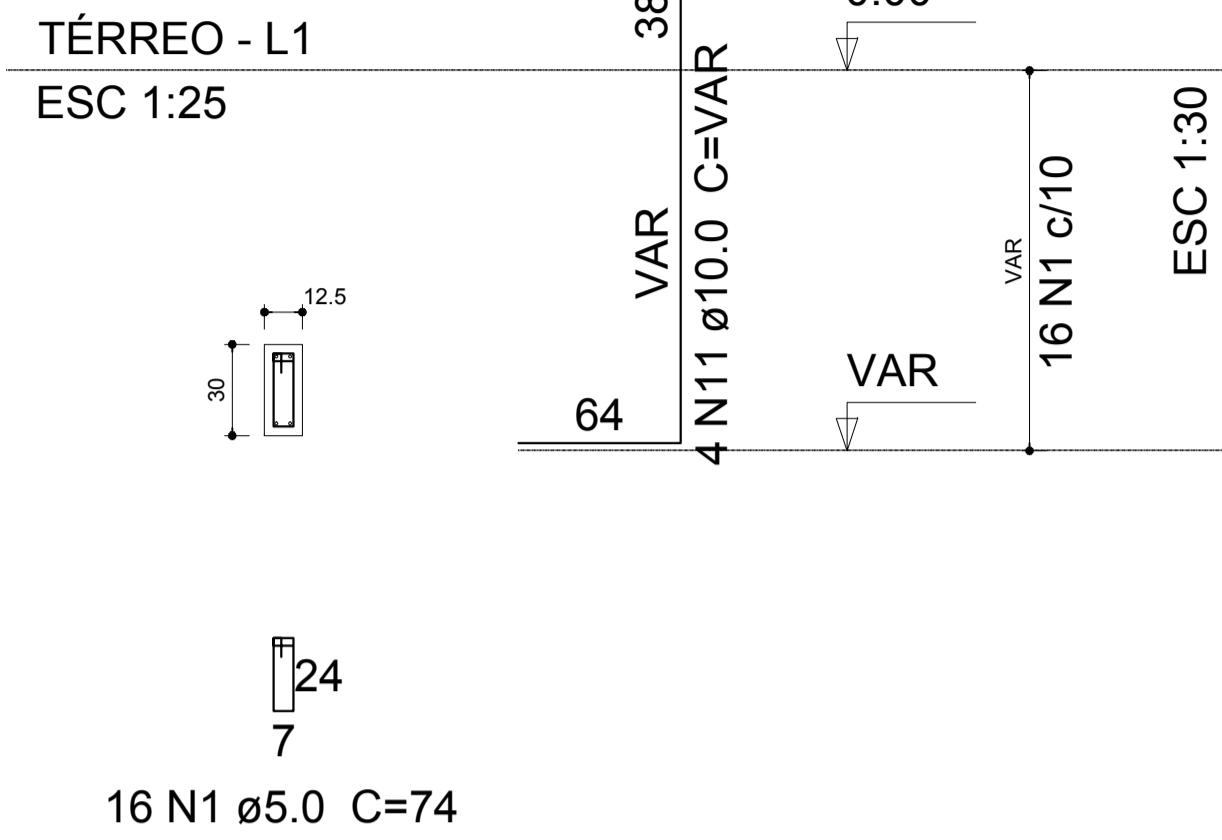
P14



S14



P21=P39



Relação do aço

P14	2xP21	P22
P31	P36	S14
S22	S31	2xS39

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	96	74	7104
CA50	2	8.0	6	88	528
	3	8.0	6	108	648
	4	8.0	12	93	1116
	5	8.0	14	73	1022
	6	8.0	9	98	882
	7	8.0	8	118	944
	8	8.0	6	108	648
	9	8.0	8	88	704
	10	10.0	4	VAR	VAR
	11	10.0	12	VAR	VAR
	12	10.0	4	VAR	VAR
	13	10.0	4	VAR	VAR

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO + 10 % (kg)
CA50	8.0	65	28.2
	10.0	57.9	39.2
CA60	5.0	71.1	12

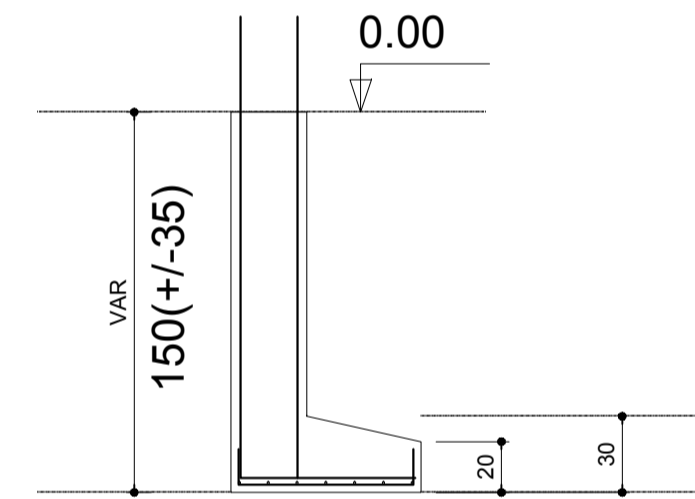
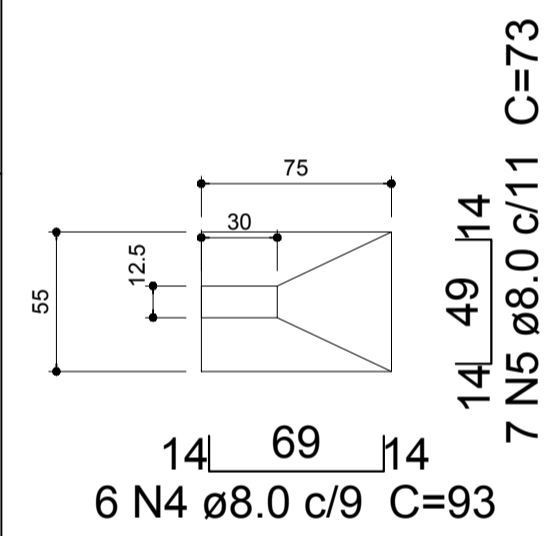
PESO TOTAL	
CA50	67.4
CA60	12

Vol. de concreto total (C-25) = 1.04 m³
Área de forma total = 11.04 m²

S21=S39

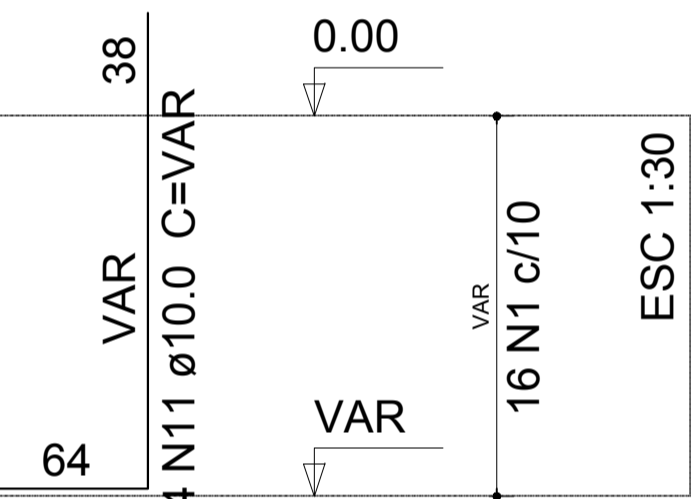
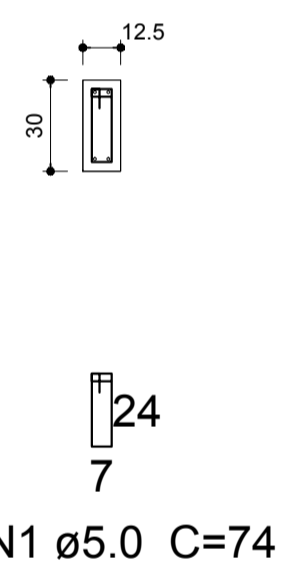
PLANTA
ESC 1:30

CORTE
ESC 1:30



P22

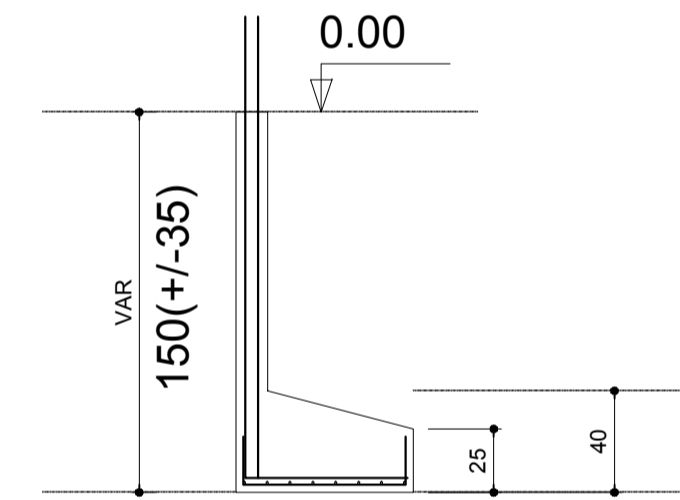
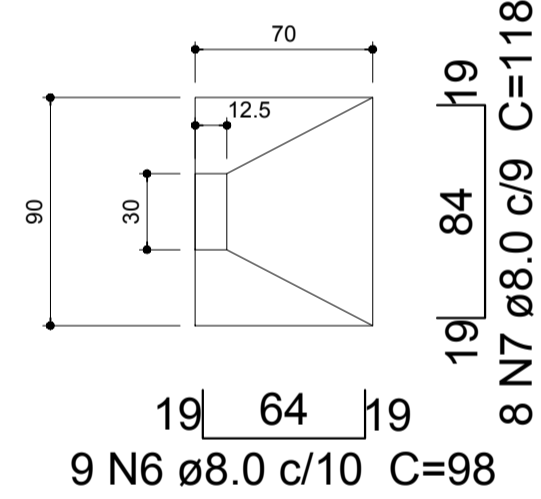
TÉRREO - L1
ESC 1:25



S22

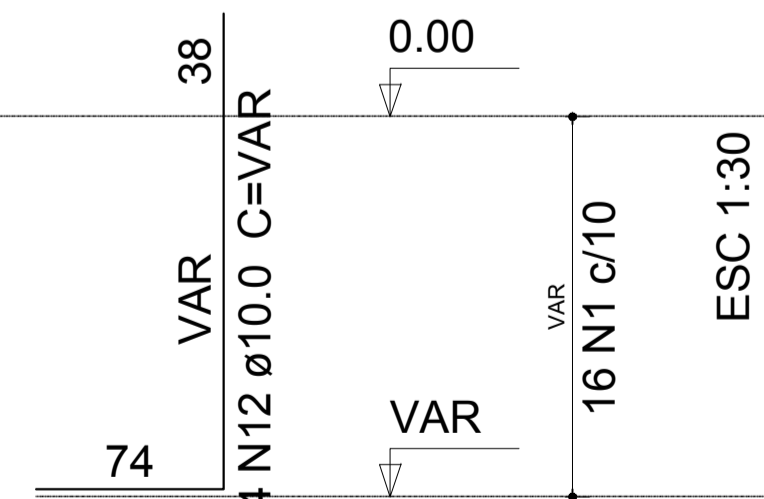
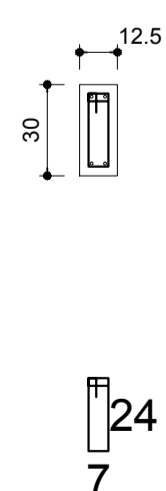
PLANTA
ESC 1:30

CORTE
ESC 1:30



P31

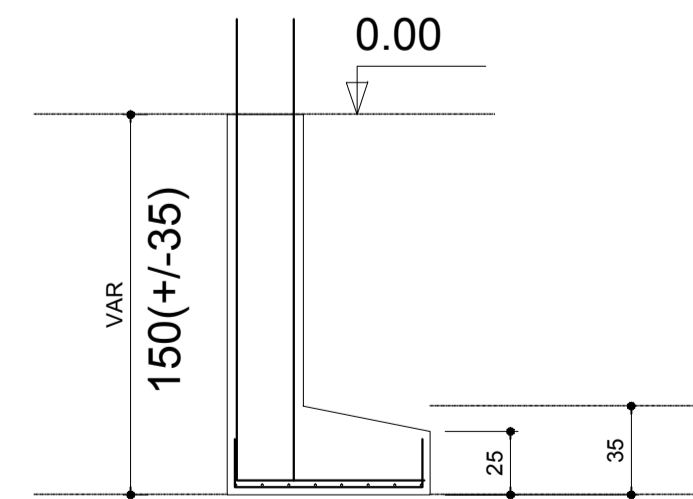
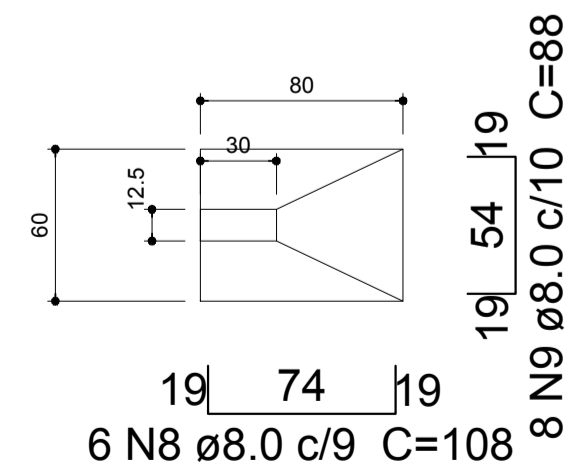
TÉRREO - L1
ESC 1:25



S31

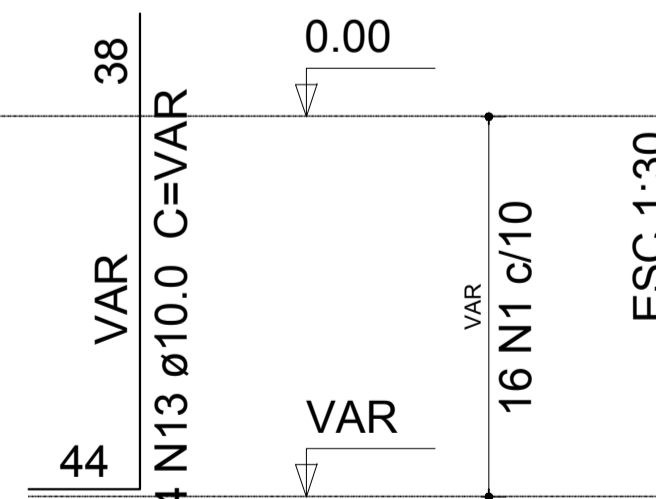
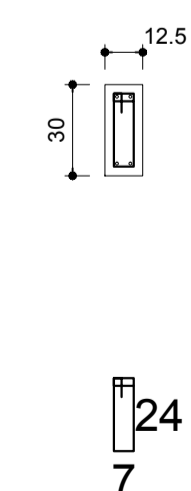
PLANTA
ESC 1:30

CORTE
ESC 1:30



P36

TÉRREO - L1
ESC 1:25



PREFEITURA MUNICIPAL DE PARANAGUÁ
ADMINISTRAÇÃO DR. EDISON DE OLIVEIRA KERSTEN
SECRETARIA MUNICIPAL DE OBRAS PÚBLICAS

TÍTULO: PROJETO DE ESTRUTURA DE CONCRETO ARMADO
OBRA: REFORMA E AMPLIAÇÃO CMEI - ZULEIDE PINTO ROSA
CONTEÚDO: - FUNDAÇÃO -

PROPRIETÁRIO: PREFEITURA MUNICIPAL DE PARANAGUÁ
AUTOR DO PROJETO: DEBORA TEMPORÃO DE AGUIAR RAMOS
CREA: PR-25647-D

DATA: Julho/2016
ESCALA: indicada
DESENHO: Debora
ÁREA AMPL: 163.95m²
ÁREA TOTAL: 399.63m²
PRANCHA: 04/15