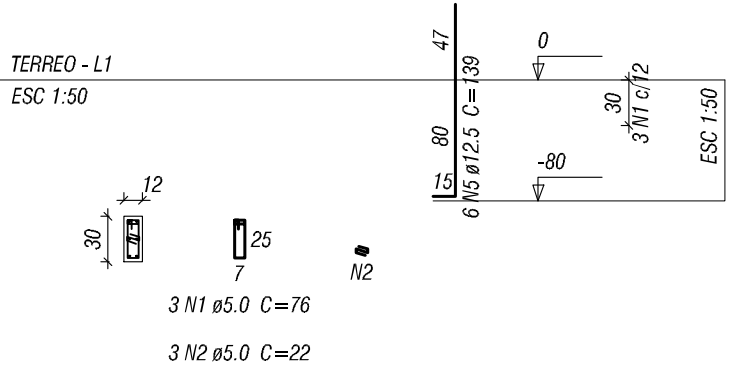
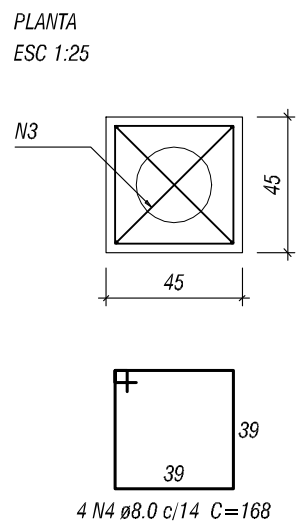


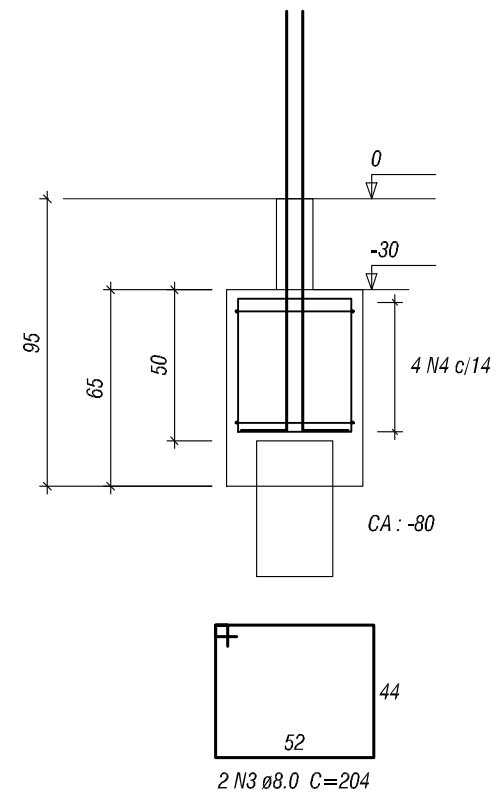
P25=P27=P29



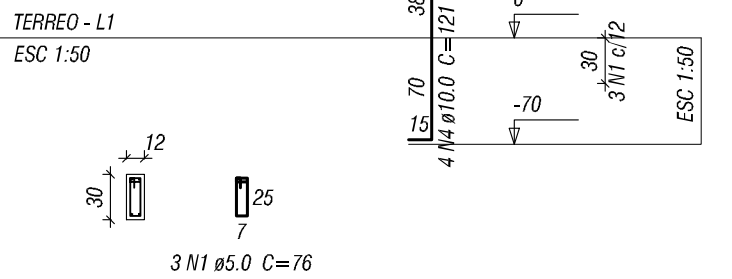
B25=B27=B29  
1ø25



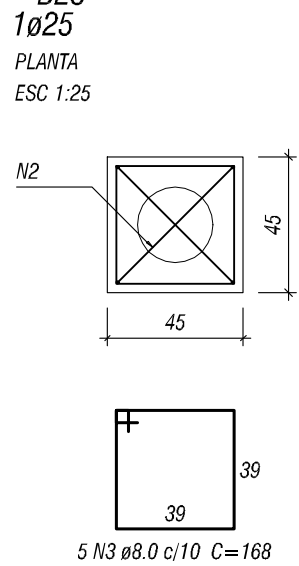
CORTE  
ESC 1:25



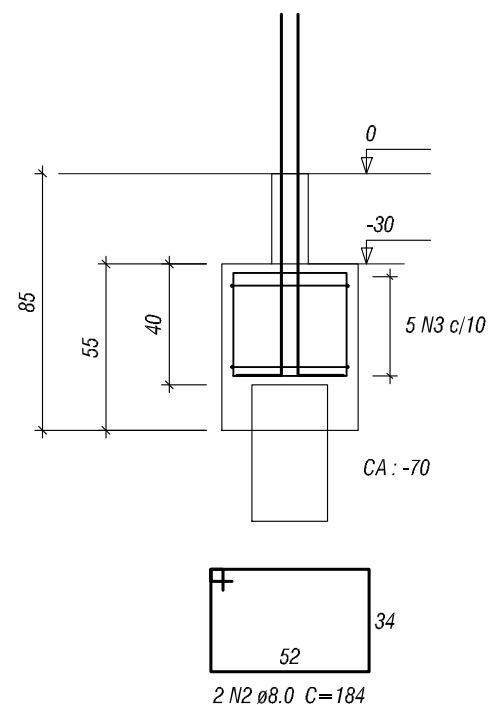
P1=P2=P3=P4=P5=P6=P7=P8=P9=P10=P14=P15  
=P16=P17=P18=P19=P20=P21=P22=P23=P26  
=P28



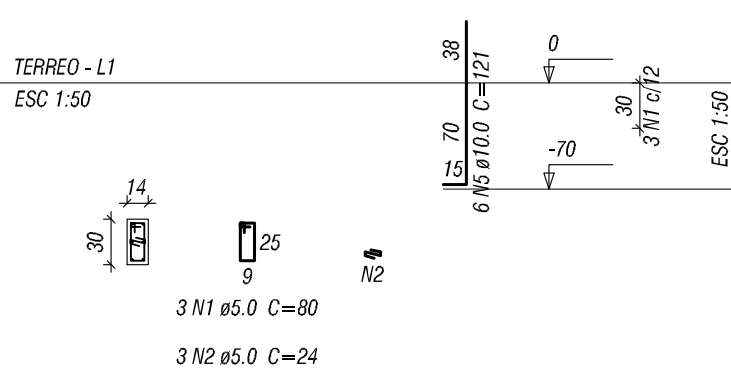
B1=B2=B3=B4=B5=B6=B7=B8=B9=B10=B14=B15  
=B16=B17=B18=B19=B20=B21=B22=B23=B26  
=B28



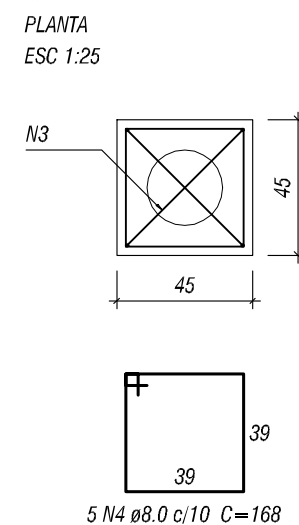
CORTE  
ESC 1:25



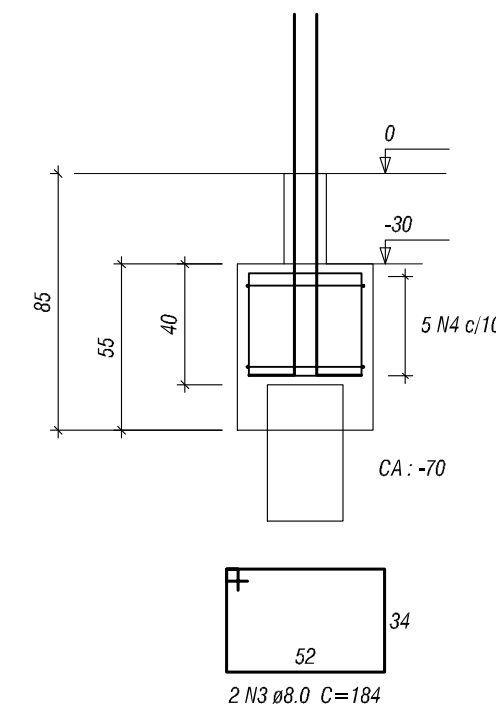
P11



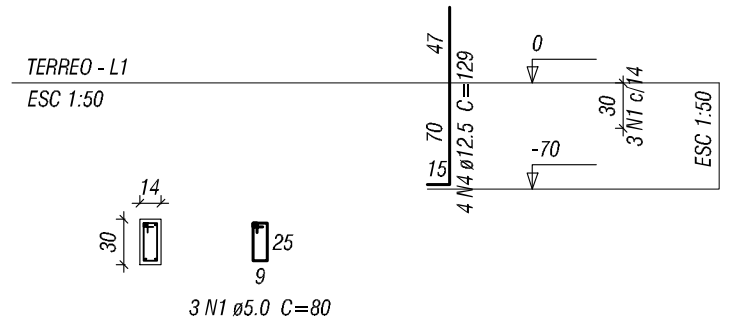
B11  
1ø25



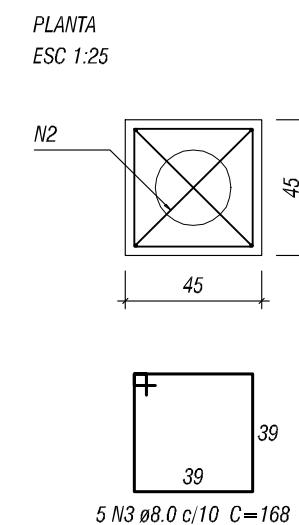
CORTE  
ESC 1:25



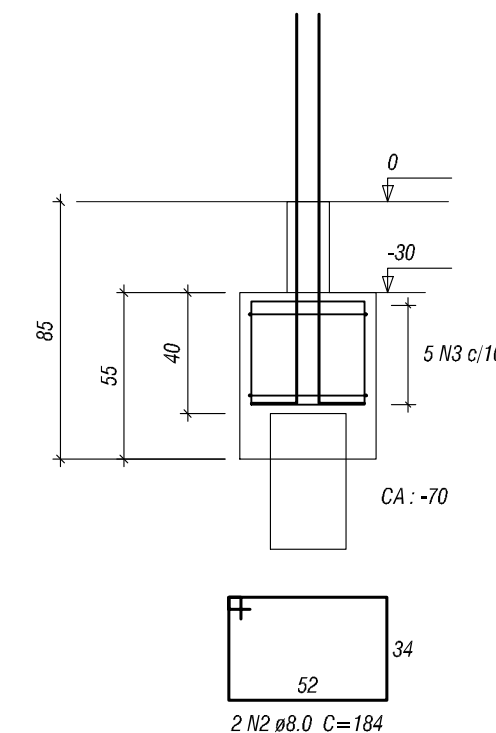
P12=P13



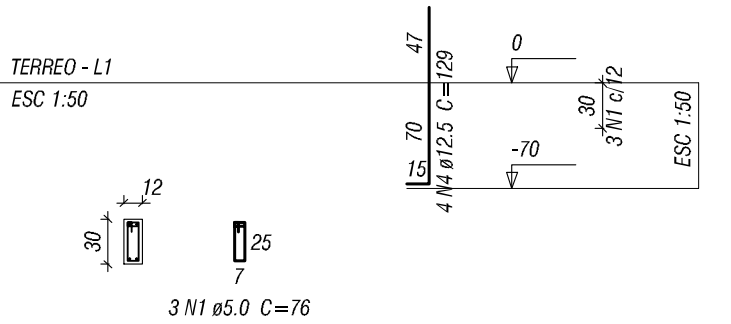
B12=B13  
1ø25



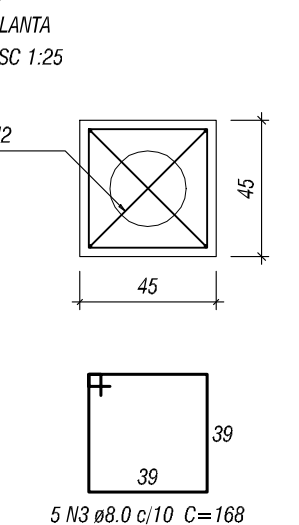
CORTE  
ESC 1:25



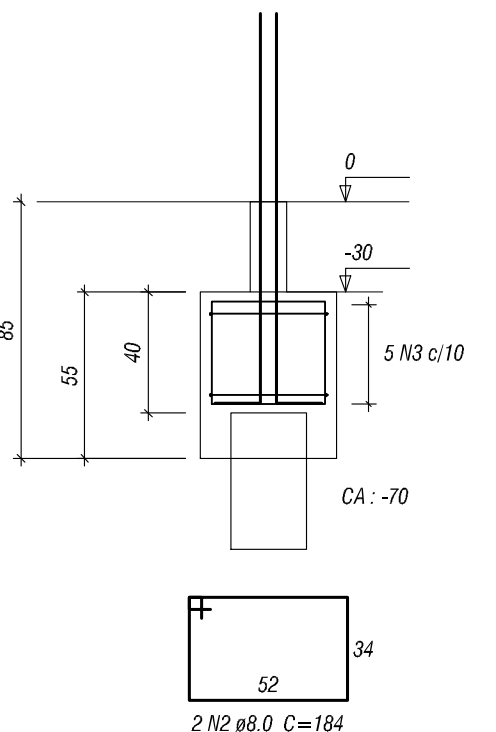
P24



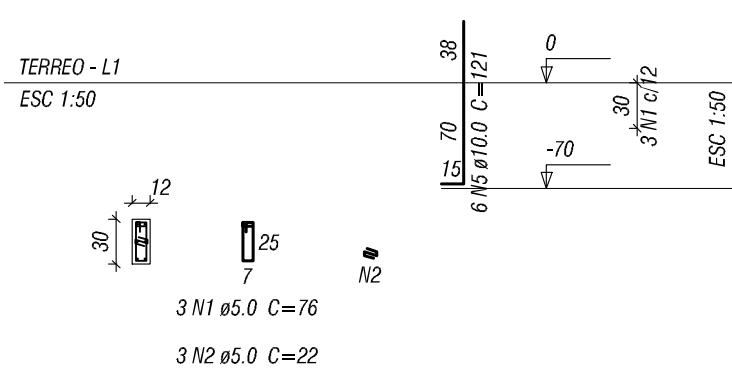
B24  
1ø25



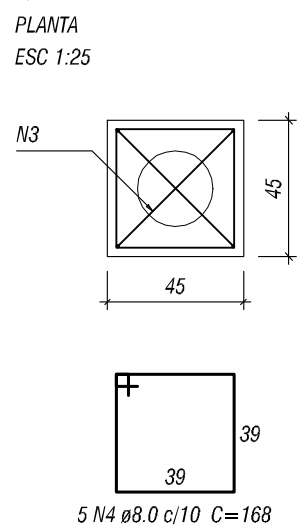
CORTE  
ESC 1:25



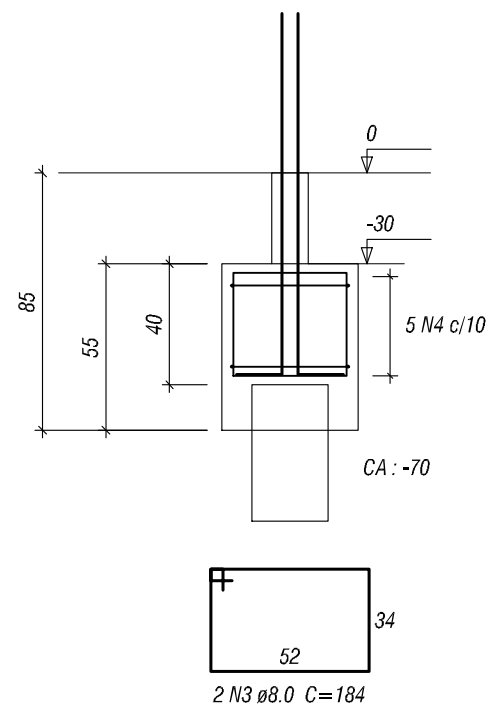
P30



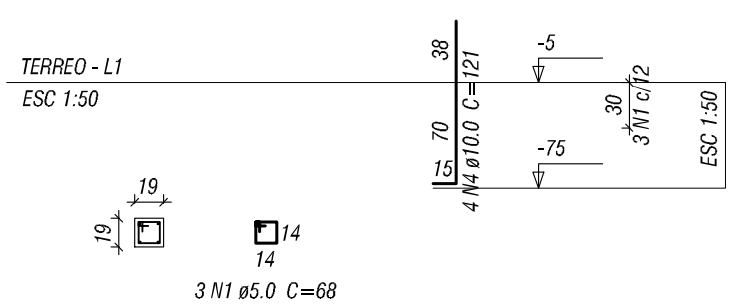
B30  
1ø25



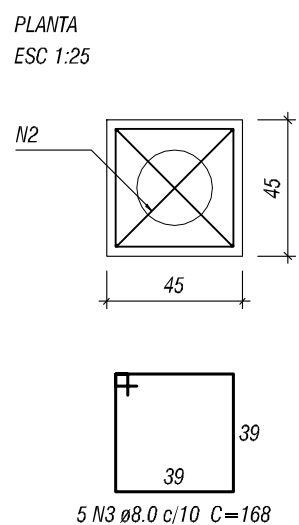
CORTE  
ESC 1:25



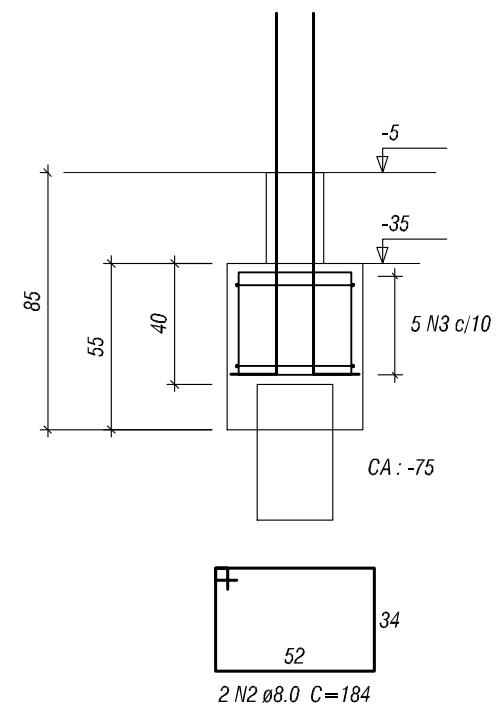
P31=P32=P33=P34=P35=P36=P37



B31=B32=B33=B34=B35=B36=B37  
1ø25



CORTE  
ESC 1:25



Relação do aço

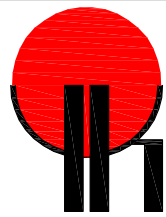
ELEMENTO	AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
B11	CA60	1	5.0	3	80	240
	CA60	2	5.0	3	24	72
	CA50	3	8.0	2	184	368
	CA50	4	8.0	5	168	840
	CA50	5	10.0	6	121	726
2x813	CA60	1	5.0	6	80	480
	CA50	2	8.0	4	184	736
	CA50	3	8.0	10	168	1680
	CA50	4	12.5	8	129	1032
	CA60	1	5.0	3	76	228
B24	CA50	2	8.0	2	184	368
	CA50	3	8.0	5	168	840
	CA50	4	12.5	4	129	516
	CA60	1	5.0	66	76	5016
	CA50	2	8.0	44	184	8096
22x828	CA50	3	8.0	110	168	18480
	CA50	4	10.0	88	121	10648
	CA60	1	5.0	9	76	684
	CA60	2	5.0	9	22	198
	CA50	3	8.0	6	204	1224
3x829	CA50	4	8.0	12	168	2016
	CA50	5	12.5	18	139	2502
	CA60	1	5.0	3	76	228
	CA60	2	5.0	3	22	66
	CA50	3	8.0	2	184	368
B30	CA50	4	8.0	5	168	840
	CA50	5	10.0	6	121	726
	CA60	1	5.0	21	68	1428
	CA50	2	8.0	14	184	2576
	CA50	3	8.0	35	168	5880
7x837	CA50	4	10.0	28	121	3388

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO (kg)
CA50	8.0	443.2	174.8
	10.0	154.9	95.5
	12.5	40.5	39
CA60	5.0	88.4	13.3
PESO TOTAL			
CA50		309.4	
CA60		13.3	

Vol. de concreto total (C-25) = 4.87 m³  
Área de forma total = 58.87 m²

CONTROLE DAS REVISÕES:		
REVISÃO	DATA	DESCRIÇÃO



**ENGENHARIA**

Engenharia de Estruturas e Engenharia de Segurança do Trabalho

Excelência em projetos estruturais de concreto armado, concreto protendido, concreto pré-moldado, estruturas metálicas e alvenaria estrutural

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Fone/Fax: (41) 3026-8993 - e-mail: yk@ykengeharia.com.br - Visite nosso site! http://www.ykengeharia.com.br

PROJETO:

**ESTRUTURAL EM CONCRETO ARMADO**

CLIENTE:

**UENP - UNIVERS. EST. DO NORTE DO PARANÁ**

OBRA:

PARA CONSTRUÇÃO DE UMA EDIFICAÇÃO DE ENSINO - CASA DO VISITANTE INTERNACIONAL

LOCAL:

Alameda Padre Magno, nº 841 - Nova Jacarezinho - Jacarezinho - Paraná

REFERÊNCIA(S):

DETALHES DOS BLOCOS DE FUNDAÇÃO

REVISÃO:

R-00

PRANCHA:

02

RESPONSÁVEL TÉCNICO:

Engº Esp. Yutaka Mario Kobayashi Júnior  
CREA PR-89.748/D

DATA CRIAÇÃO:

20/11/2013

DATA DA REVISÃO:

N/C

ART Nº:

20134714220

PROJETO Nº:

P-304

ESCALAS:

INDICADAS