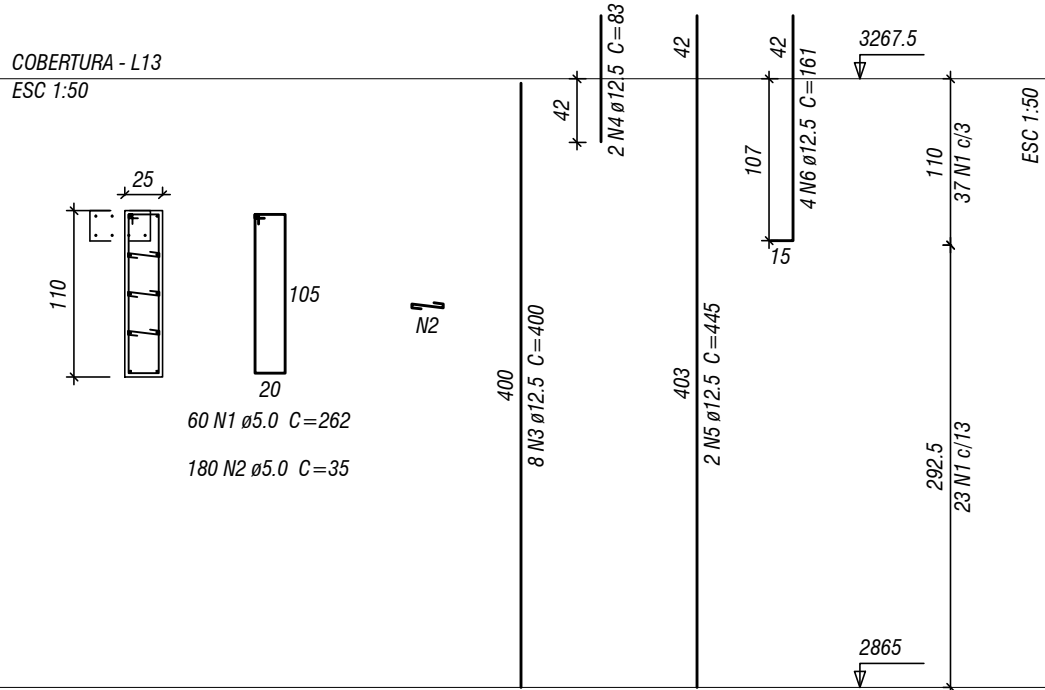
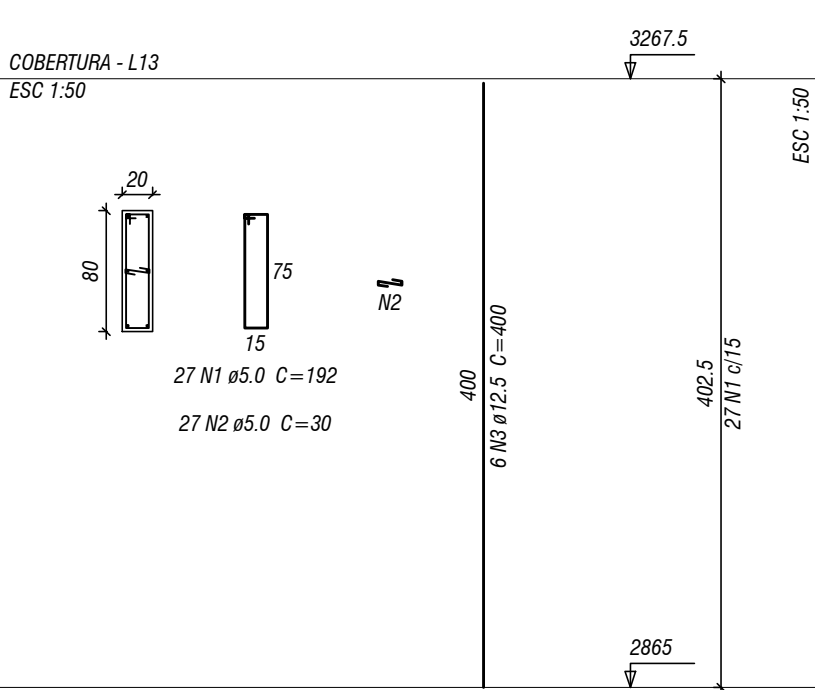


PENAS PARA PROTEÇM									
COR	PENA N°	ESP.	COR	PENA N°	ESP.				
1 (red)	7	0,15	8	7	0,10				
2 (yellow)	7	0,27	15	7	0,10				
3 (green)	7	0,10	141	7	0,60				
4 (cyan)	7	0,30	151	7	0,60				
5 (blue)	7	0,60	161	7	0,60				
6 (magenta)	7	0,40	demora	7	0,22				
7 (white)	7	0,22							

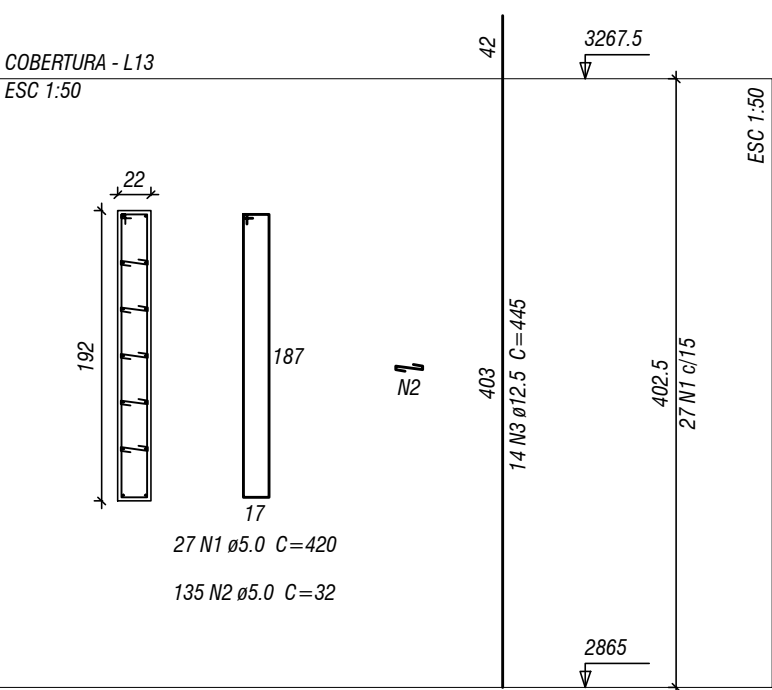
P11



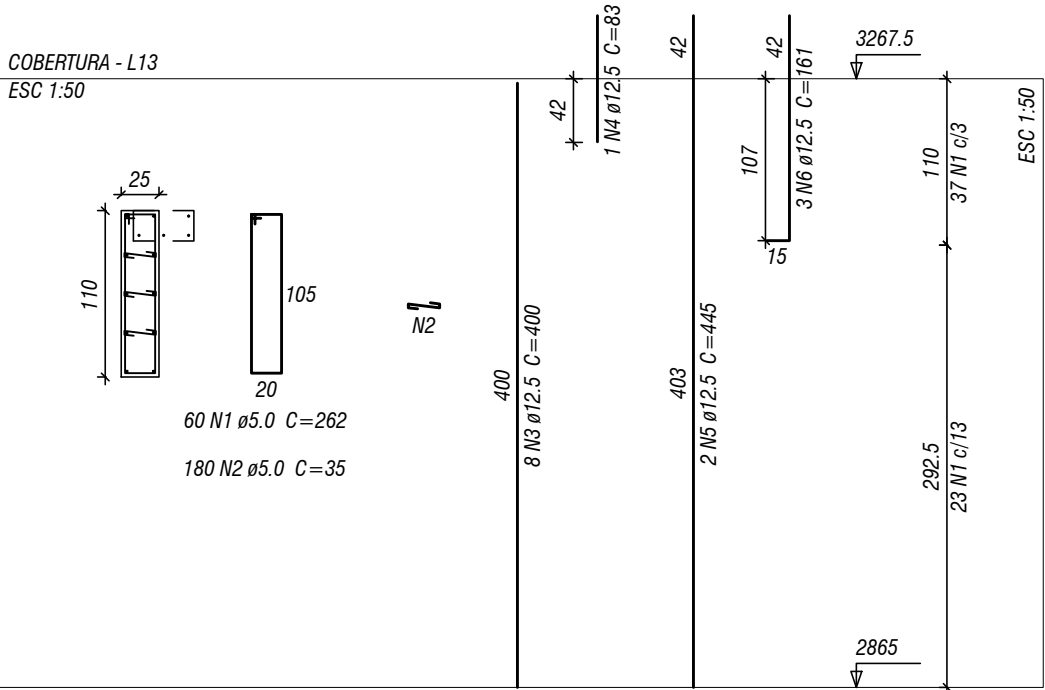
P12=P16=P40=P48=P49



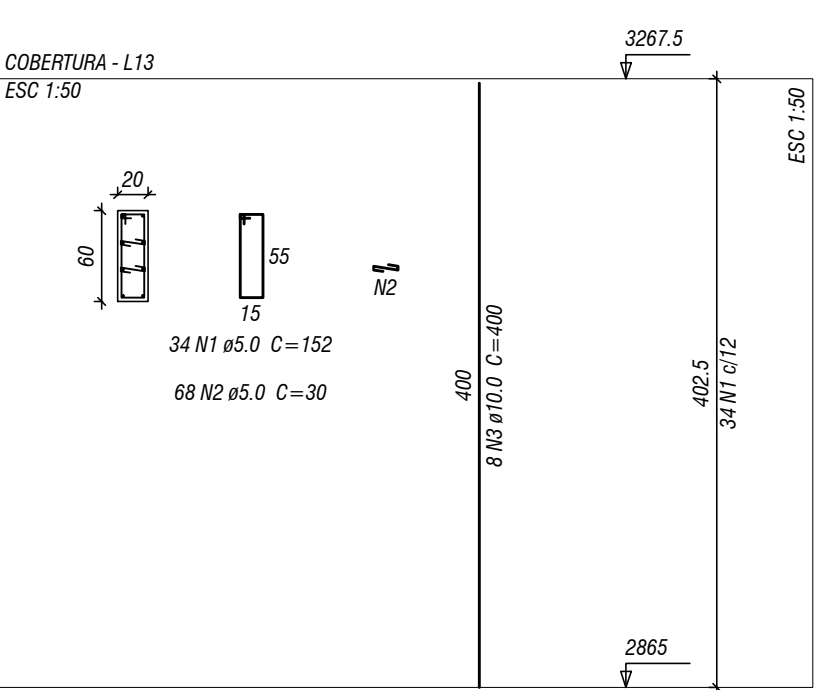
P13=P17



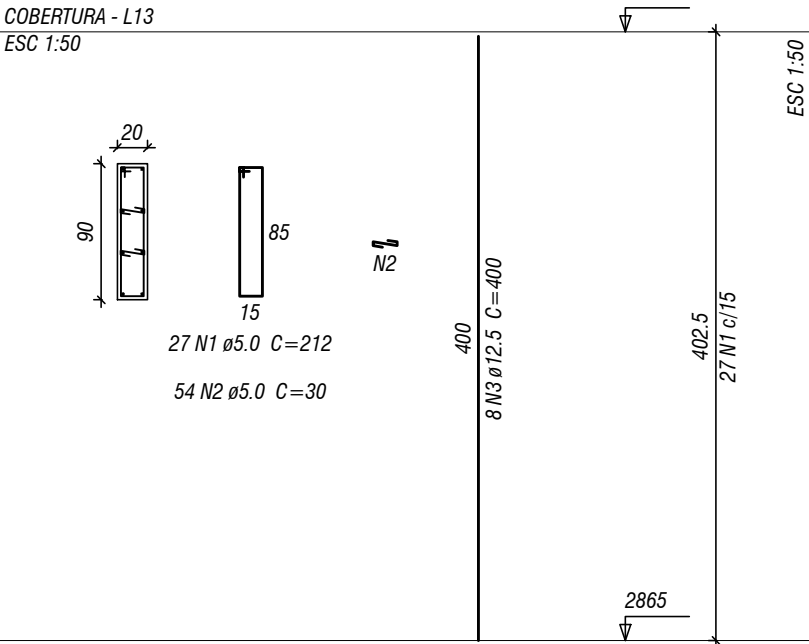
P15



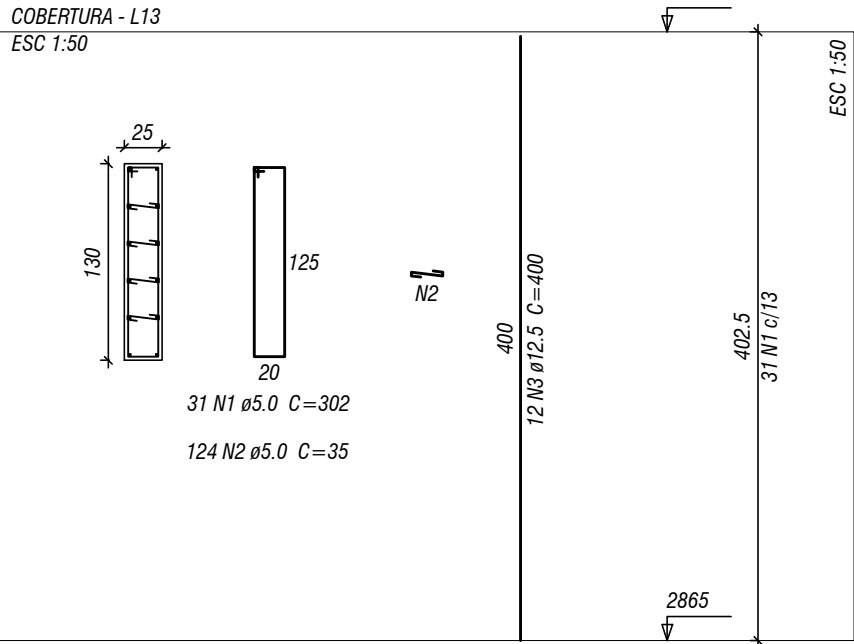
P19



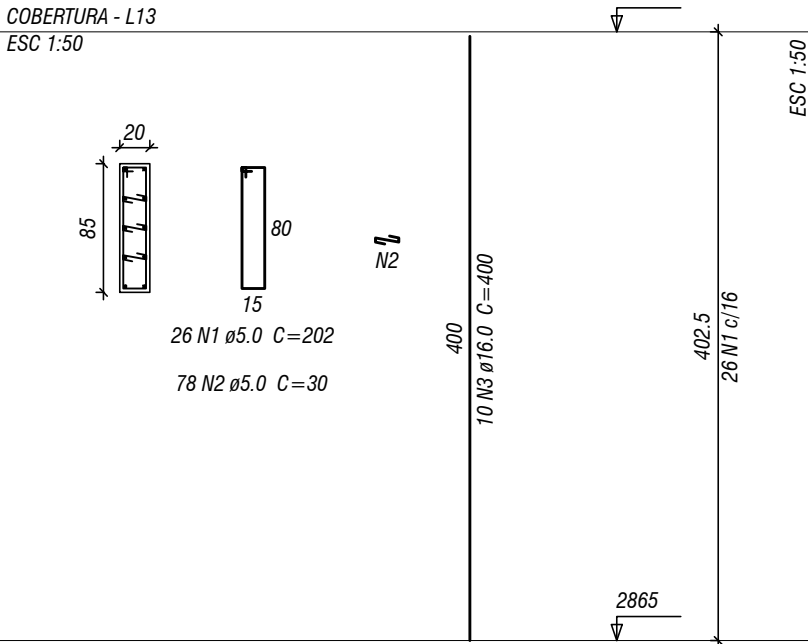
P21



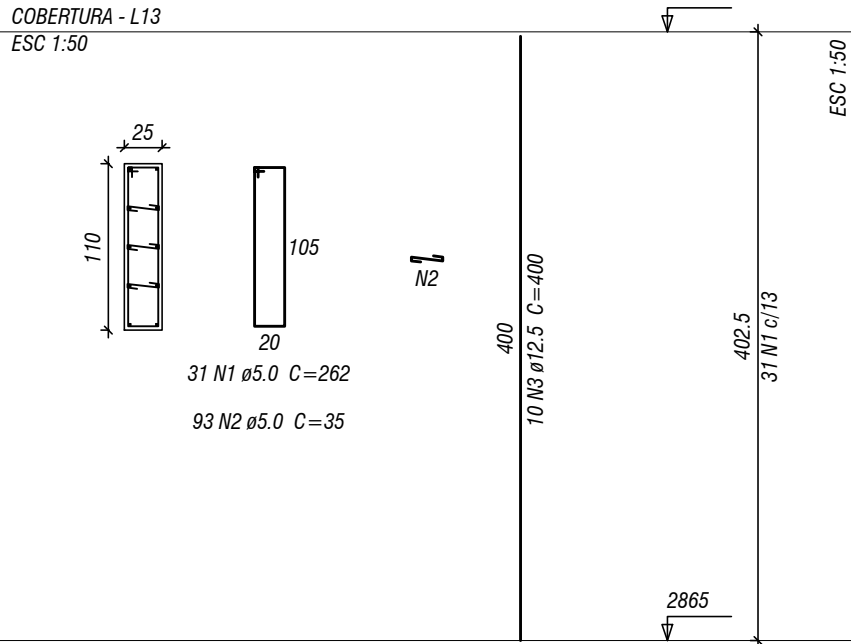
P26=P27



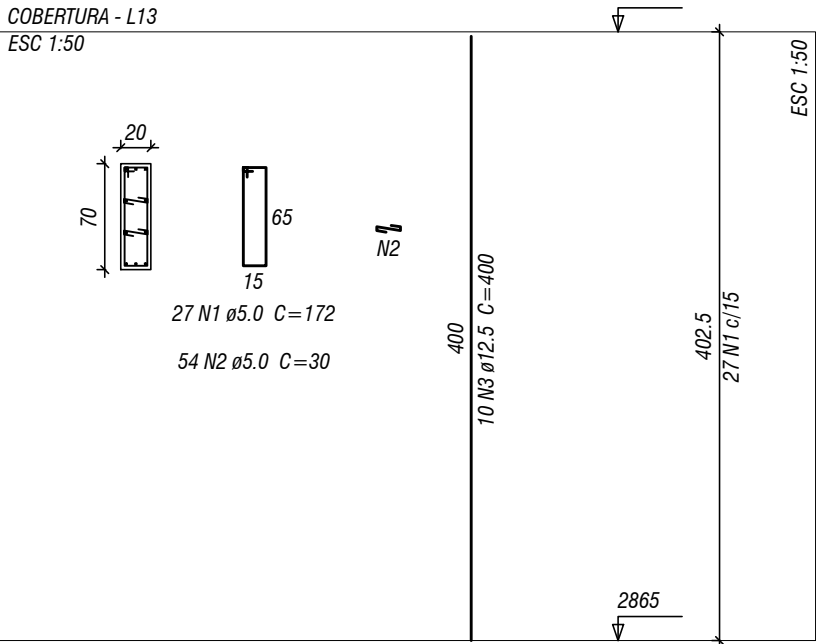
P37



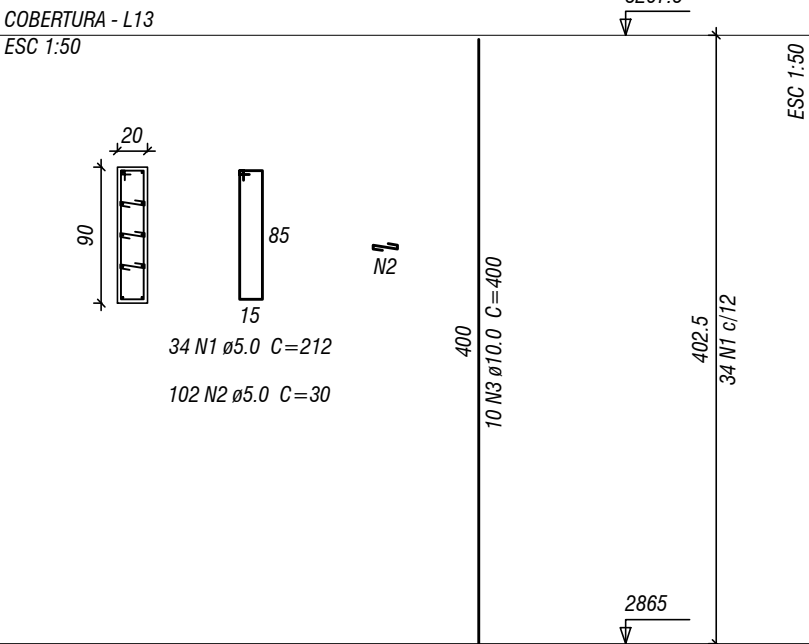
P4=P6=P20=P22



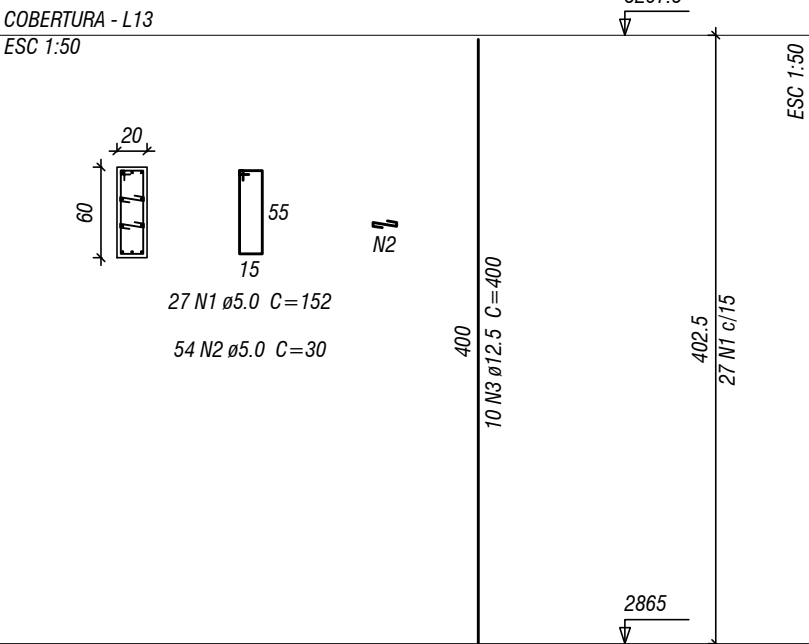
P41



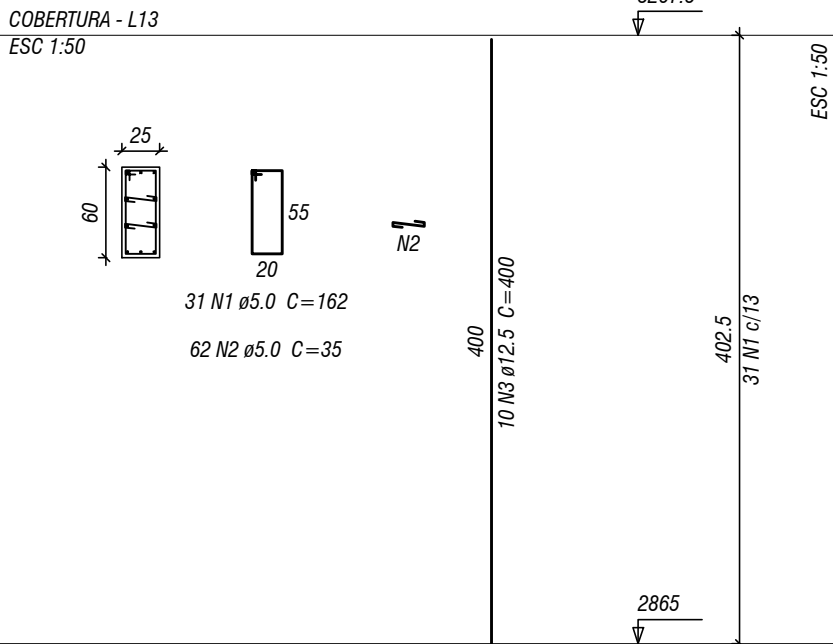
P44



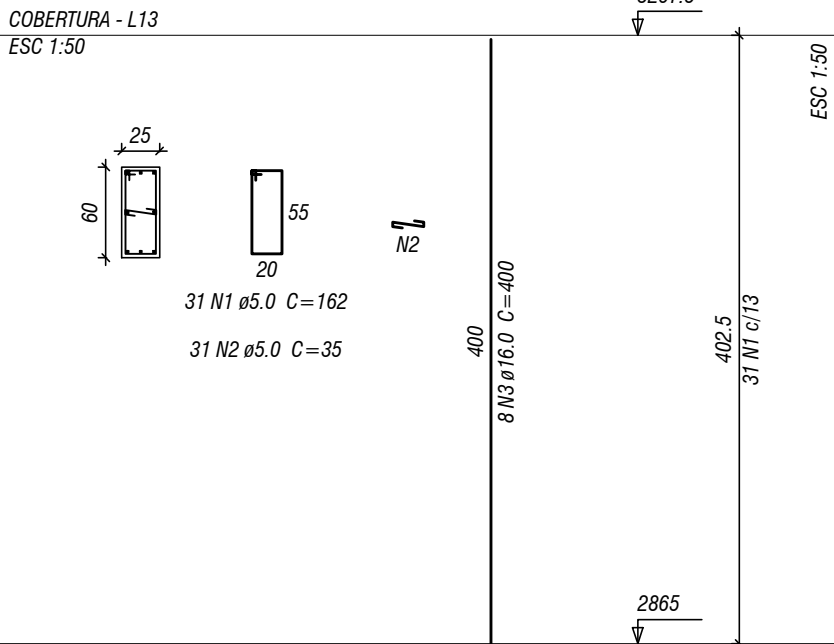
P45



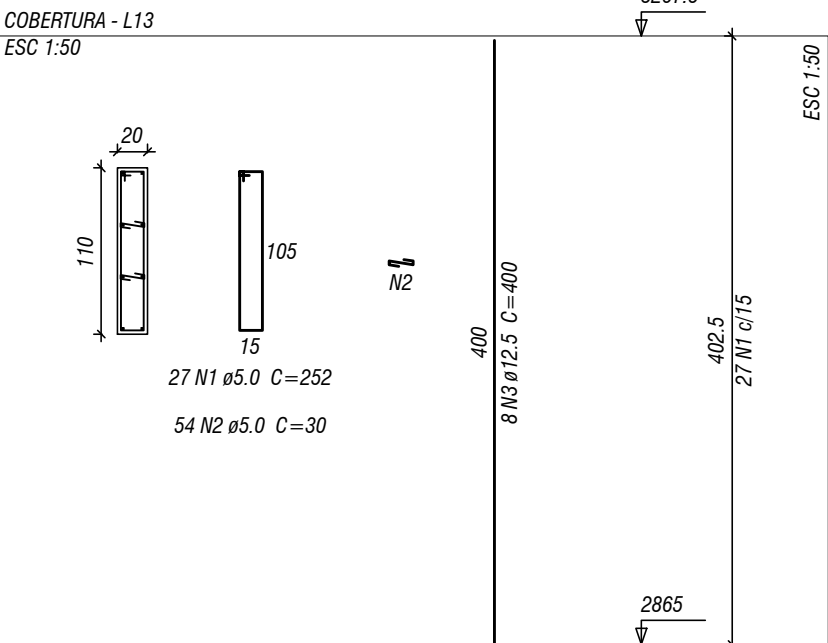
P46



P47



P8



Relação do aço						
ELEMENTO	AÇO	N	DIAM	O	UNIT	C.TOTAL
					(mm)	(mm)
4xP4	CA60	1	5.0	124	262	32488
	CA50	2	5.0	372	35	13020
	CA50	3	12.5	40	400	16000
P8	CA60	1	5.0	27	252	6804
	CA60	2	5.0	54	30	1620
	CA50	3	12.5	8	400	3200
	CA60	1	5.0	60	262	15720
	CA60	2	5.0	35	35	6300
	CA50	3	12.5	8	400	3200
	CA50	4	12.5	2	63	166
	CA50	5	12.5	2	445	890
	CA50	6	12.5	4	161	644
5xP12	CA60	1	5.0	135	192	25920
	CA60	2	5.0	135	30	4050
	CA50	3	12.5	30	400	12000
	CA60	1	5.0	54	420	22680
2xP13	CA60	2	5.0	270	32	8640
	CA50	3	12.5	28	445	12460
	CA60	1	5.0	60	262	15720
	CA60	2	5.0	180	35	6300
	CA50	3	12.5	8	400	3200
	CA50	4	12.5	1	63	63
	CA50	5	12.5	2	445	890
	CA50	6	12.5	3	161	483
P19	CA60	1	5.0	34	152	5168
	CA60	2	5.0	68	30	2040
	CA50	3	10.0	8	400	3200
	CA60	1	5.0	27	212	5724
	CA60	2	5.0	54	30	1620
	CA50	3	12.5	8	400	3200
2xP26	CA60	1	5.0	62	302	18724
	CA60	2	5.0	248	35	8680
	CA50	3	12.5	24	400	9600
	CA60	1	5.0	26	202	5252
	CA60	2	5.0	78	30	2340
	CA50	3	16.0	10	400	4000
	CA60	1	5.0	27	172	4644
	CA60	2	5.0	54	30	1620
	CA50	3	12.5	10	400	4000
	CA60	1	5.0	34	212	7208
	CA60	2	5.0	102	30	3060
	CA50	3	10.0	10	400	4000
P41	CA60	1	5.0	27	152	4104
	CA60	2	5.0	54	30	1620
	CA50	3	12.5	10	400	4000
	CA60	1	5.0	31	162	5022
	CA60	2	5.0	62	35	2170
	CA50	3	12.5	10	400	4000
	CA60	1	5.0	31	162	5022
	CA60	2	5.0	31	35	1085
	CA50	3	16.0	8	400	3200

Resumo do aço			
AÇO	DIAM	C.TOTAL	PESO
		(m)	(kg)
CA50	10.0	72	444.4
	12.5	780.2	751.6
	16.0	72	113.6
	5.0	2443.7	376.7
PESO TOTAL			
CA50	909.6		
CA60	376.7		

Vol. de concreto total (C-30) = 21.63 m³
Área de forma total = 235.3 m²

CONTROLE DAS REVISÕES:		
REVISÃO	DATA	DESCRIÇÃO

ENGENHARIA

Engenharia de Estruturas e Engenharia de Segurança do Trabalho

Excelência em Projetos Estruturais de Concreto Armado, Protendido, Pré-Moldado, Estruturas Metálicas e Alvenaria Estrutural

Avenida Pinguim, Nº 304 | Sala 01 | Gleba Ribeirão Pinguim | Maringá - Paraná | CEP: 87065-675

Fone/Fax: (44) 3026-8993 - e-mail: yk@ykengenharia.com.br - Visite nosso site! http://www.ykengenharia.com.br

PROJETO: ESTRUTURAL EM CONCRETO ARMADO

CLIENTE:

RODRIGO KOJO

OBRA:

Para Construção de Uma Edificação Residencial Coletiva - Edifício Jardins de France

LOCAL:

Rua Francisco Glicério, nº 1.033 - Zona 07 - Maringá - Paraná

REFERÊNCIA(S):

Detalhes dos Pilares do Tipo 8

RESPONSÁVEL TÉCNICO:

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

REVISÃO:

R-00

DATA CRIAÇÃO:

09/04/2013

DATA DA REVISÃO:

N/C

PROJETO Nº:

P-181

PRANCHA:

51

68

ESCALAS:

INDICADAS