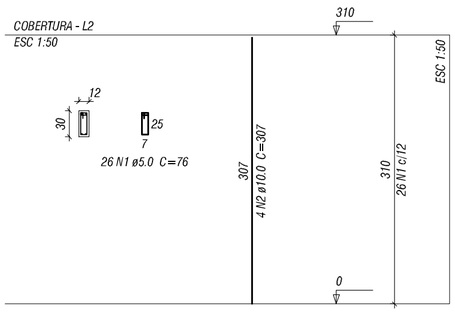
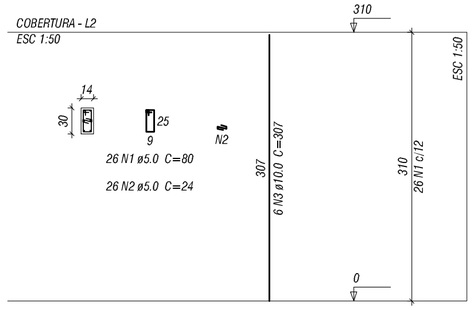
P1=P2=P3=P4=P5=P6=P7=P8=P9=P10=P14=P15 =P16=P17=P18=P19=P20=P21=P22=P23



P11



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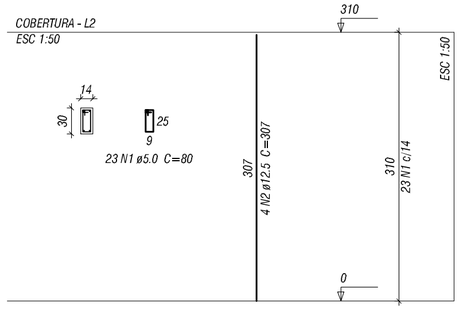
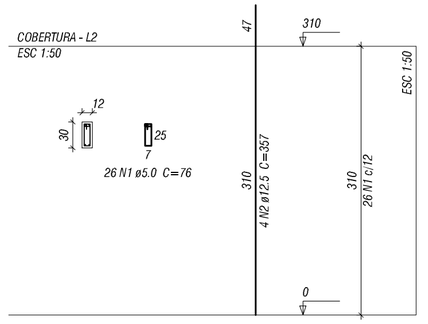


P24



Relação do aço

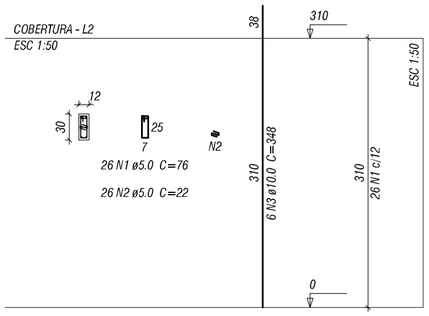
ELEMENTO	AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
20xP1	CA60	1	5.0	520	76	39520
	CA50	2	10.0	80	307	24560
P11	CA60	1	5.0	26	80	2080
	CA60	2	5.0	26	24	624
	CA50	3	10.0	6	307	1842
2xP12	CA60	1	5.0	46	80	3680
	CA50	2	12.5	8	307	2456
P24	CA60	1	5.0	26	76	1976
	CA50	2	12.5	4	357	1428
3xP25	CA60	1	5.0	78	76	5928
	CA60	2	5.0	78	22	1716
	CA50	3	12.5	6	307	1842
	CA50	4	12.5	12	357	4284
2xP26	CA60	1	5.0	52	76	3952
	CA50	2	10.0	8	348	2784
P30	CA60	1	5.0	26	76	1976
	CA60	2	5.0	26	22	572
	CA50	3	10.0	6	348	2088
7xP31	CA60	1	5.0	140	68	9520
	CA50	2	10.0	28	237	6496

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO (kg)
CA50	10.0	377.7	232.9
	12.5	100.1	96.4
CA60	5.0	715.5	110.3
PESO TOTAL			
CA50	329.3		
CA60	110.3		

Vol. de concreto total (C-25) = 4 m³
Área de forma total = 90.99 m²

P30



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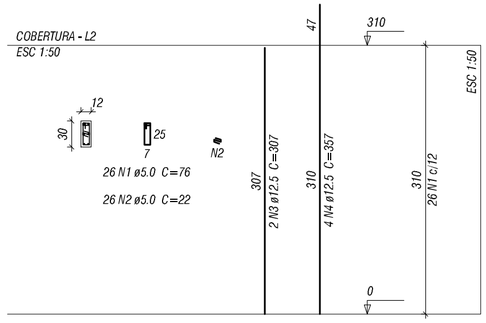

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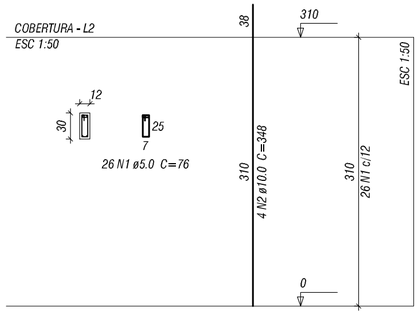
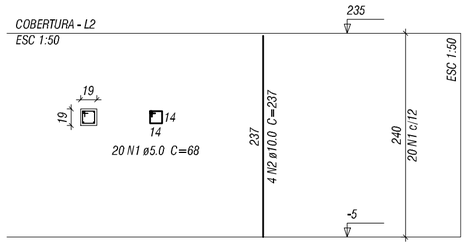


P31=P32=P33=P34=P35=P36=P37



Relação do aço

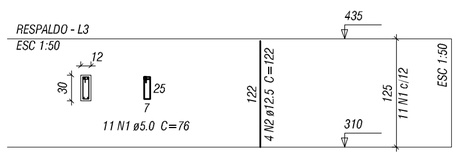
ELEMENTO	AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
P24	CA60	1	5.0	11	76	836
	CA50	2	12.5	4	122	488
5xP25	CA60	1	5.0	55	76	4180
	CA50	2	10.0	20	122	2440
P30	CA60	1	5.0	11	76	836
	CA60	2	5.0	11	22	242
	CA50	3	10.0	6	122	732
4xP38	CA60	1	5.0	32	76	2432
	CA50	2	10.0	16	92	1472
2xP42	CA60	1	5.0	16	76	1216
	CA60	2	5.0	16	22	352
	CA50	3	10.0	12	92	1104
2xP44	CA60	1	5.0	30	76	2280
	CA50	2	10.0	8	172	1376

Resumo do aço

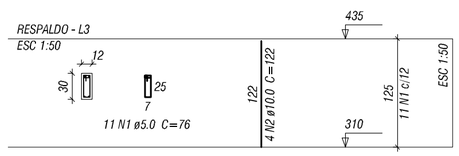
AÇO	DIAM	C.TOTAL (m)	PESO (kg)
CA50	10.0	71.3	43.9
	12.5	4.9	4.7
CA60	5.0	123.8	19.1
PESO TOTAL			
CA50	48.6		
CA60	19.1		

Vol. de concreto total (C-25) = 0.65 m³
Área de forma total = 15.08 m²

P24



P25=P26=P27=P28=P29



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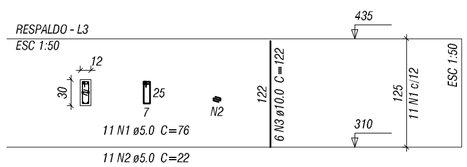

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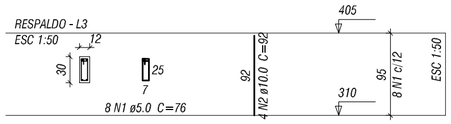

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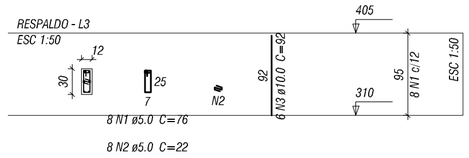

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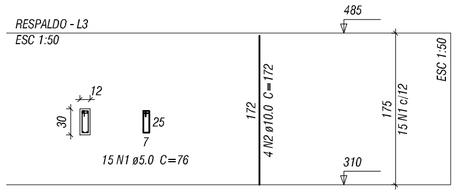

PENAS PARA PLOTAGEM

COR	PENA Nº	ESP.
1 (red)	7	0,10
2 (yellow)	7	0,10
3 (green)	7	0,27
4 (cyan)	7	0,10
5 (blue)	7	0,60
6 (magenta)	7	0,40
7 (white)	7	0,22

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

Rua Tupã, 1903 - Sala 03 - Jd. Itália - Maringá - Paraná - CEP: 87060-510

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:

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 PILARES DO TÉRREO
DETALHES DOS PILARES DA COBERTURA

REVISÃO: **R-00**

PRANCHA: **06/09**

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