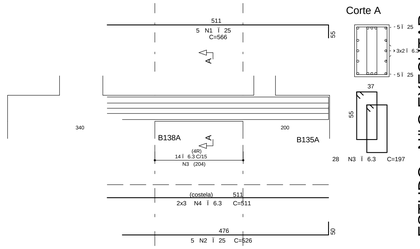
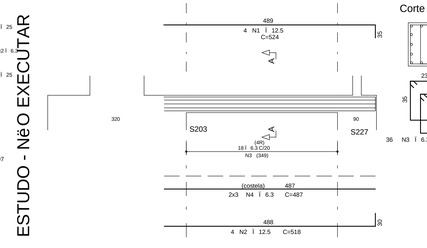
ESTUDO - NëO EXECUTAR

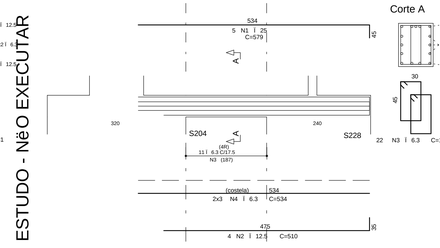
## VB101 60/60



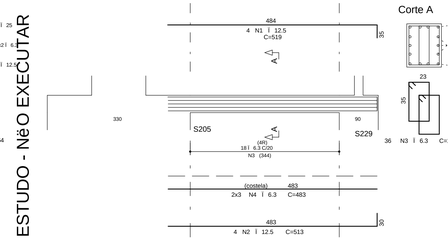

## VB102 40/40




## VB103 50/50



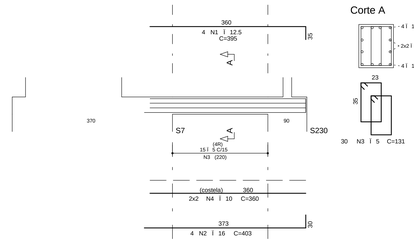

## VB104 40/40



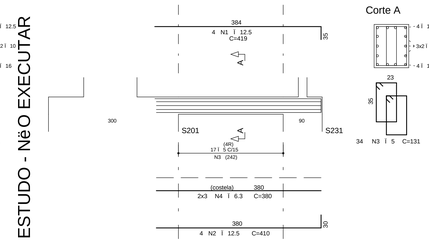

| RESUMO A6 O CA 50-60 | | | |
|---|---|---|---|
| A6 O | BIT (mm) | COMPR (m) | PESO (kg) |
| 60B | 5 | 84 | 13 |
| 50A | 6.3 | 481 | 120 |
| 50A | 8 | 652 | 261 |
| 50A | 10 | 855 | 538 |
| 50A | 12.5 | 686 | 680 |
| 50A | 16 | 344 | 550 |
| 50A | 20 | 188 | 470 |
| 50A | 25 | 605 | 2489 |
| Peso Total 60B = | | | 13 kg |
| Peso Total 50A = | | | 5125 kg |

| | A6 O | POS | BIT (mm) | QUANT | COMPRIMENTO UNIT (cm) | COMPRIMENTO TOTAL (cm) |
|---|---|---|---|---|---|---|
| VB101 | 50A | 1 | 25 | 5 | 566 | 2830 |
| | 50A | 2 | 25 | 5 | 526 | 2630 |
| | 50A | 3 | 6.3 | 28 | 197 | 5516 |
| | 50A | 4 | 6.3 | 6 | 511 | 3066 |
| VB102 | 50A | 1 | 12.5 | 4 | 524 | 2096 |
| | 50A | 2 | 12.5 | 4 | 518 | 2072 |
| | 50A | 3 | 6.3 | 36 | 131 | 4716 |
| | 50A | 4 | 6.3 | 6 | 487 | 2922 |
| VB103 | 50A | 1 | 25 | 5 | 579 | 2895 |
| | 50A | 2 | 12.5 | 4 | 510 | 2040 |
| | 50A | 3 | 6.3 | 22 | 164 | 3608 |
| | 50A | 4 | 6.3 | 6 | 534 | 3204 |
| VB104 | 50A | 1 | 12.5 | 4 | 519 | 2076 |
| | 50A | 2 | 12.5 | 4 | 513 | 2052 |
| | 50A | 3 | 6.3 | 36 | 131 | 4716 |
| | 50A | 4 | 6.3 | 6 | 483 | 2898 |
| VB105 | 50A | 1 | 12.5 | 4 | 395 | 1580 |
| | 50A | 2 | 16 | 4 | 403 | 1612 |
| | 60B | 3 | 5 | 30 | 131 | 3930 |
| | 50A | 4 | 10 | 4 | 360 | 1440 |
| VB106 | 50A | 1 | 12.5 | 4 | 419 | 1676 |
| | 50A | 2 | 12.5 | 4 | 410 | 1640 |
| | 60B | 3 | 5 | 34 | 131 | 4454 |
| | 50A | 4 | 6.3 | 6 | 380 | 2280 |
| VB107 | 50A | 1 | 25 | 5 | 576 | 2880 |
| | 50A | 2 | 12.5 | 5 | 507 | 2535 |
| | 50A | 3 | 6.3 | 26 | 197 | 5122 |
| | 50A | 4 | 6.3 | 6 | 531 | 3186 |
| VB108 | 50A | 1 | 25 | 5 | 583 | 2915 |
| | 50A | 2 | 12.5 | 5 | 509 | 2545 |
| | 50A | 3 | 6.3 | 22 | 164 | 3608 |
| | 50A | 4 | 6.3 | 6 | 538 | 3228 |
| VB109 | 50A | 1 | 20 | 6 | 701 | 4206 |
| | 50A | 2 | 20 | 6 | 671 | 4026 |
| | 50A | 3 | 8 | 46 | 159 | 7314 |
| | 50A | 4 | 8 | 7 | 251 | 1757 |
| | 50A | 5 | 8 | 7 | 123 | 861 |
| | 50A | 6 | 8 | 4 | 178 | 712 |
| VB110 | 50A | 1 | 25 | 5 | 678 | 3390 |
| | 50A | 2 | 16 | 4 | 640 | 2560 |
| | 50A | 3 | 8 | 4 | 210 | 840 |
| | 50A | 4 | 10 | 8 | 246 | 1968 |
| | 50A | 5 | 8 | 66 | 239 | 15774 |
| | 50A | 6 | 10 | 3 | 385 | 1155 |
| | 50A | 7 | 10 | 6 | 198 | 1188 |
| | 50A | 8 | 8 | 8 | 140 | 1120 |
| VB111 | 50A | 1 | 25 | 19 | 720 | 13680 |
| | 50A | 2 | 20 | 10 | 664 | 6640 |
| | 50A | 3 | 8 | 6 | 255 | 1530 |
| | 50A | 4 | 10 | 14 | 295 | 4130 |
| | 50A | 5 | 10 | 64 | 397 | 25408 |
| | 50A | 6 | 12.5 | 6 | 660 | 3960 |
| | 50A | 7 | 12.5 | 24 | 275 | 6600 |
| | 50A | 8 | 16 | 16 | 751 | 12016 |
| VB112 | 50A | 1 | 25 | 18 | 729 | 13122 |
| | 50A | 2 | 16 | 10 | 643 | 6430 |
| | 50A | 3 | 10 | 20 | 275 | 5500 |
| | 50A | 4 | 8 | 88 | 373 | 32824 |
| | 50A | 5 | 12.5 | 6 | 590 | 3540 |
| | 50A | 6 | 12.5 | 24 | 285 | 6840 |
| | 50A | 7 | 12.5 | 22 | 649 | 14278 |
| VB113 | 50A | 1 | 25 | 26 | 697 | 18122 |
| | 50A | 2 | 20 | 6 | 657 | 3942 |
| | 50A | 3 | 8 | 6 | 310 | 2480 |
| | 50A | 4 | 10 | 6 | 346 | 2076 |
| | 50A | 5 | 10 | 92 | 463 | 42596 |
| | 50A | 6 | 12.5 | 6 | 860 | 5160 |
| | 50A | 7 | 12.5 | 30 | 265 | 7950 |
| | 50A | 8 | 16 | 18 | 653 | 11754 |

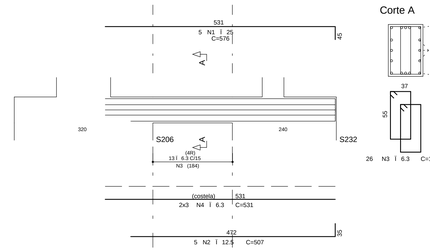
## VB105 40/40



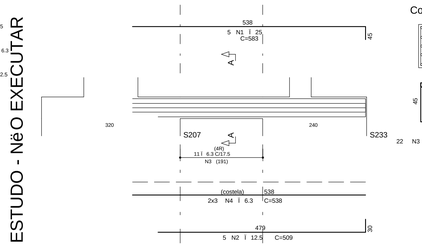

## VB106 40/40



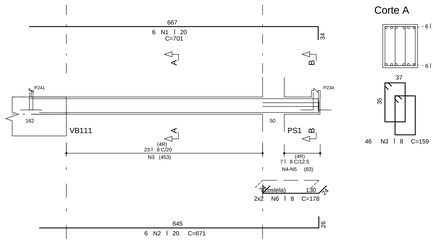

## VB107 60/60



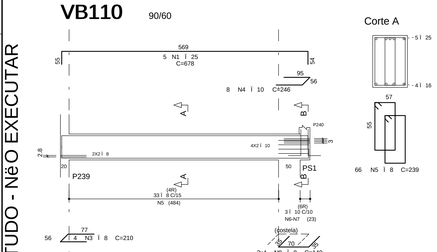

## VB108 50/50



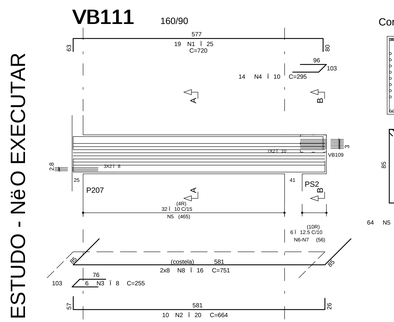

## VB109 60/40



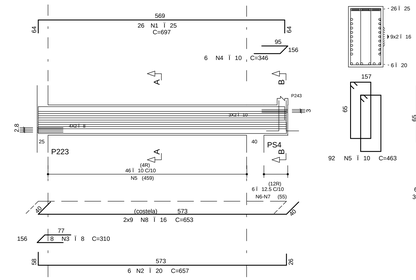

## VB110 90/60



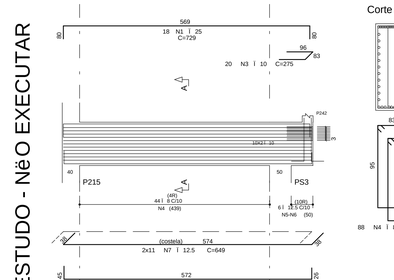

## VB111 160/90

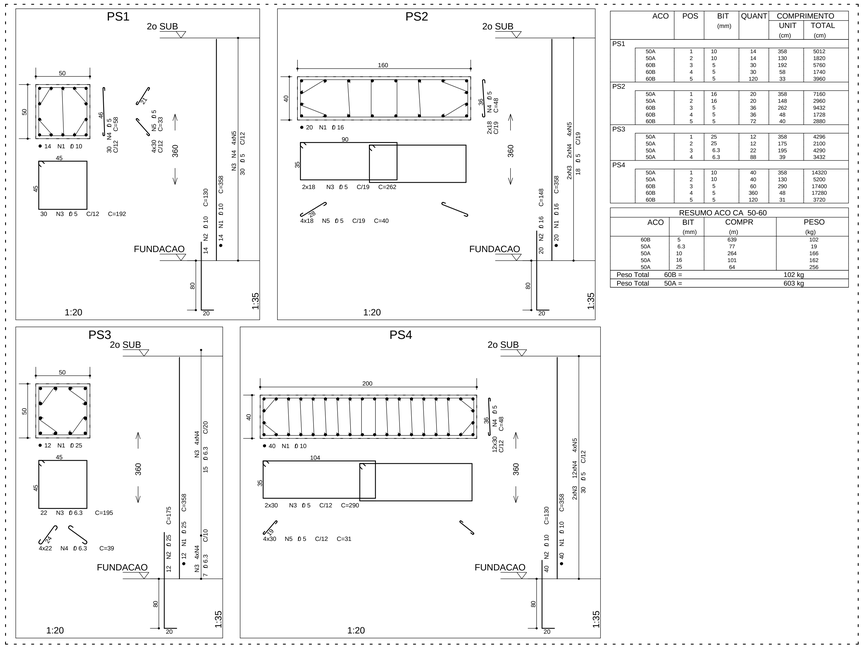



## VB113 240/70




## VB112 130/100




| | ACO | POS | BIT (mm) | QUANT | COMPRIMENTO UNIT (cm) | COMPRIMENTO TOTAL (cm) |
|---|---|---|---|---|---|---|
| PS1 | 50A | 1 | 10 | 14 | 358 | 5012 |
| | 50A | 2 | 10 | 14 | 130 | 1820 |
| | 60B | 3 | 5 | 30 | 192 | 5760 |
| | 60B | 4 | 5 | 30 | 58 | 1740 |
| | 60B | 5 | 5 | 120 | 33 | 3960 |
| PS2 | 50A | 1 | 16 | 20 | 358 | 7160 |
| | 50A | 2 | 16 | 20 | 148 | 2960 |
| | 60B | 3 | 5 | 36 | 262 | 9432 |
| | 60B | 4 | 5 | 36 | 48 | 1728 |
| | 60B | 5 | 5 | 72 | 40 | 2880 |
| PS3 | 50A | 1 | 25 | 12 | 358 | 4296 |
| | 50A | 2 | 25 | 12 | 175 | 2100 |
| | 50A | 3 | 6.3 | 22 | 195 | 4290 |
| | 50A | 4 | 6.3 | 88 | 39 | 3432 |
| PS4 | 50A | 1 | 10 | 40 | 358 | 14320 |
| | 50A | 2 | 10 | 40 | 130 | 5200 |
| | 60B | 3 | 5 | 60 | 290 | 17400 |
| | 60B | 4 | 5 | 360 | 48 | 17280 |
| | 60B | 5 | 5 | 120 | 31 | 3720 |

| RESUMO ACO CA 50-60 | | | |
|---|---|---|---|
| ACO | BIT (mm) | COMPR (m) | PESO (kg) |
| 60B | 5 | 639 | 102 |
| 50A | 6.3 | 77 | 19 |
| 50A | 10 | 264 | 166 |
| 50A | 16 | 101 | 162 |
| 50A | 25 | 64 | 256 |
| Peso Total 60B = | | | 102 kg |
| Peso Total 50A = | | | 603 kg |

COBRIMENTO DA ARMADURA:

- LAJES = 2,0 cm
- VIGAS E PILARES = 2,5 cm
- BLOCOS,BALDRAMES E CONTENCOES (FACE EM CONTATO COM A TERRA) = 3,0 cm

1. ESSES COBRIMENTOS DEVERAO SER GARANTIDOS COM O USO DE ESPACADORES DO PASTILHAS.

COBRIMENTOS ESPECIFICOS EM CONTRARIO AOS VALORES INDICADOS ACIMA, ESTAO INDICADOS NOS DESENHOS DE FORMAS DOS PAVIMENTOS.

NORMAS UTILIZADAS:

NBR-6118/2003 - PROJETO E EXECUCAO DE OBRAS DE CONCRETO ARMADO
NBR-6120/1980 - CARGAS PARA O CALCULO DE ESTRUTURAS DE EDIFICACOES

FCK= 35 MPa

EC = 28 GPa (MODULO DE ELASTICIDADE SECANTE AOS 28 DIAS).

A/C = 0,65 (FATOR AGUA CIMENTO)

| REV | DATA | DESCRICAO |
|---|---|---|
| 1 | 21/08/2014 | NUMERACAO FINAL |
| 0 | 06/02/2012 | EMISSAO INICIAL |


Simetria Engenharia
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simetria@simetria.eng.br


PROJETO ESTRUTURAL

CLIENTE: GENT INCORPORADORA LTDA
OBRA: ED. RESIDENCIAL/COMERCIAL PAINEIRAS — No OBRA: XXX
ENDERECO OBRA: RUA 30 NORTE LOTE 03 - RUA DAS PAINEIRAS - AGUAS CLARAS DF
DESCRICAO: ARMACAO DAS VIGAS DO 2o SUBSOLO E PILARES DE SUSTENTACAO DAS ALAVANCAS TORRE 2 - JUNTA B — DESENHO No: BL2 036-085

| DESENHISTA | DATA | ESCALA | UNIDADE | No PROJ. SIMETRIA |
|---|---|---|---|---|
| TQSc THIAGO | 06/02/2012 | 1:50 | CM | 478 |

ARQUIVO PLT: 478 -EST-BL2- 036-085 -R01 -VIG.PLT

PROPRIETARIO: RESPONSAVEL TECNICO

RESPONSAVEL TECNICO PELO PROJETO ESTRUTURAL

SIMETRIA ENGENHARIA E PROJETOS S/C LTDA
CREA 2705/RF


SIMETRIA ENGENHARIA DE PROJETOS S/C LTDA PLT ETQSWIN/478 - CODIGO/PROJ:478 - TORRE 2 - JUNTA B/02 20 SUBSOLO/VIGAS/VIGAS.PLT 21/08/2014 16:21:03