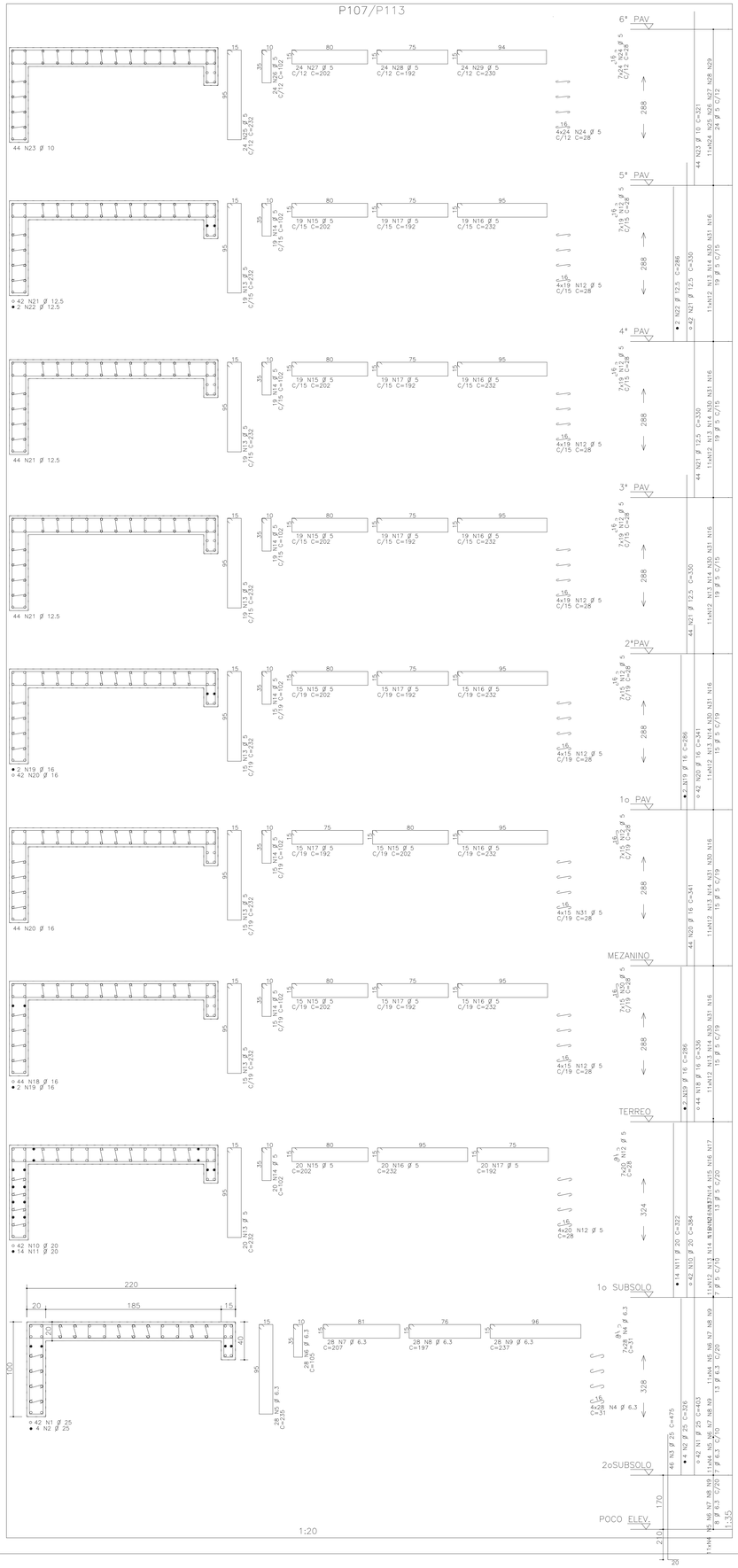


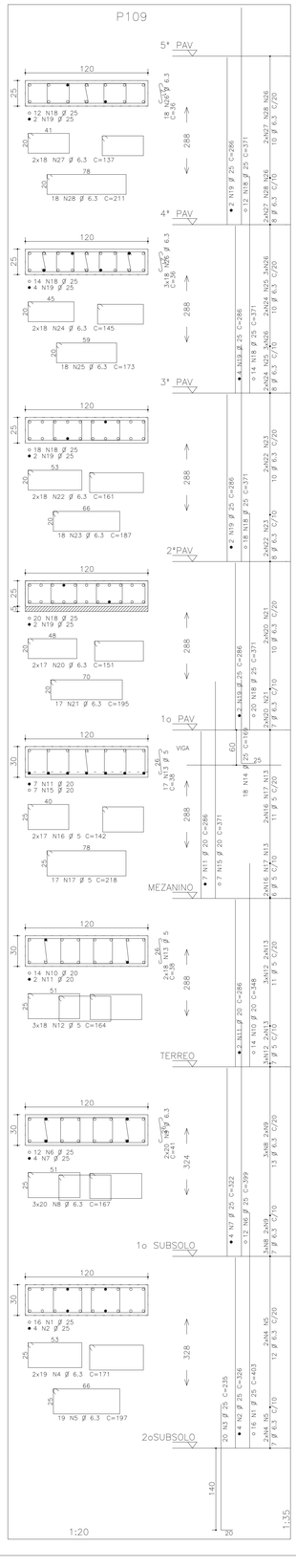


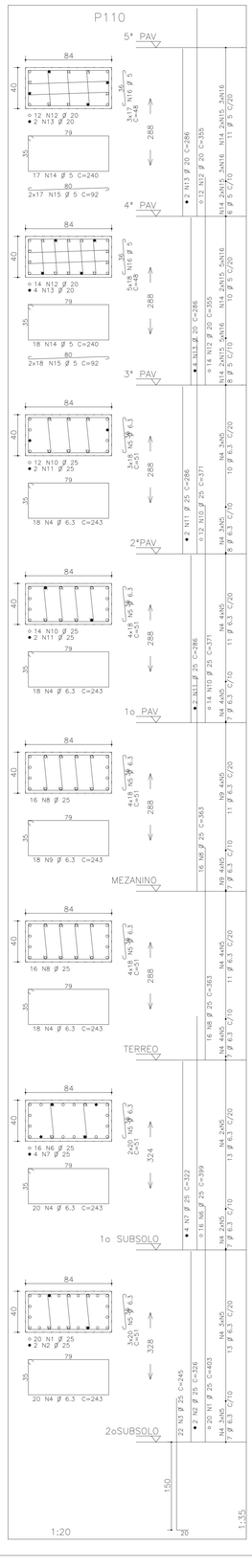


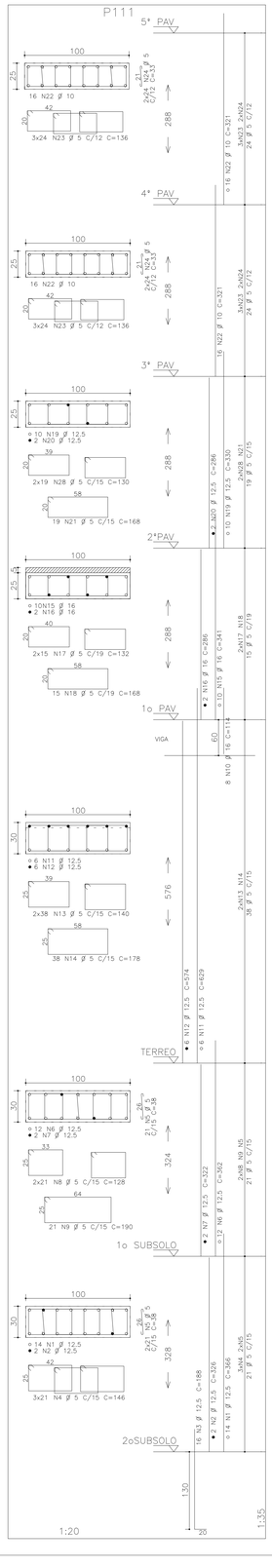


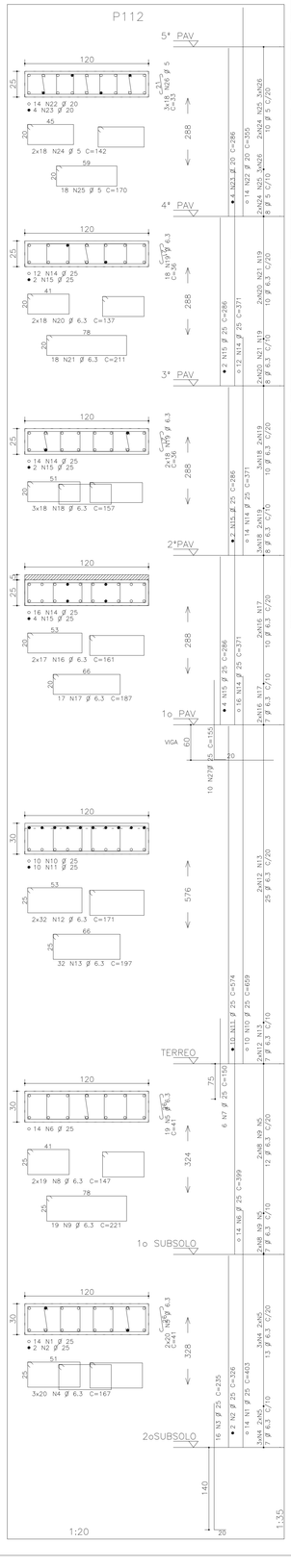


| RESUMO ACO CA 50-60 | | | |
|---|---|---|---|
| ACO | BIT (mm) | COMPR (m) | PESO (kgf) |
| 60B | 5 | 3969 | 795 |
| 50A | 10 | 2358 | 945 |
| 50A | 6.3 | 385 | 241 |
| 50A | 12.5 | 1118 | 1118 |
| 50A | 16 | 954 | 1526 |
| 50A | 20 | 684 | 1709 |
| 50A | 25 | 1208 | 3019 |
| Peso Total 60B = | | | 795 kg |
| Peso Total 50A = | | | 14045 kg |

PAVIMENTO: 1o SUBSOLO

| RESUMO ACO CA 50-60 | | | |
|---|---|---|---|
| ACO | BIT (mm) | COMPR (m) | PESO (kgf) |
| 60B | 5 | 108 | 17 |
| 50A | 6.3 | 1039 | 260 |
| 50A | 12.5 | 82 | 82 |
| 50A | 25 | 1168 | 4675 |
| Peso Total 60B = | | | 17 kg |
| Peso Total 50A = | | | 5018 kg |

PAVIMENTO: TERREO

| RESUMO ACO CA 50-60 | | | |
|---|---|---|---|
| ACO | BIT (mm) | COMPR (m) | PESO (kgf) |
| 60B | 5 | 33 | 33 |
| 50A | 12.5 | 50 | 50 |
| 50A | 20 | 413 | 1032 |
| 50A | 25 | 200 | 800 |
| Peso Total 60B = | | | 33 kg |
| Peso Total 50A = | | | 1964 kg |

PAVIMENTO: MEZANINO

| RESUMO ACO CA 50-60 | | | |
|---|---|---|---|
| ACO | BIT (mm) | COMPR (m) | PESO (kgf) |
| 60B | 5 | 105 | 105 |
| 50A | 6.3 | 253 | 63 |
| 50A | 12.5 | 50 | 50 |
| 50A | 16 | 316 | 506 |
| 50A | 20 | 54 | 136 |
| 50A | 25 | 197 | 788 |
| Peso Total 60B = | | | 105 kg |
| Peso Total 50A = | | | 1565 kg |

PAVIMENTO: 1o PAV

| RESUMO ACO CA 50-60 | | | |
|---|---|---|---|
| ACO | BIT (mm) | COMPR (m) | PESO (kgf) |
| 60B | 5 | 472 | 76 |
| 50A | 6.3 | 80 | 20 |
| 50A | 16 | 300 | 480 |
| 50A | 20 | 46 | 114 |
| 50A | 25 | 89 | 354 |
| Peso Total 60B = | | | 76 kg |
| Peso Total 50A = | | | 969 kg |

PAVIMENTO: 2°PAV

| RESUMO ACO CA 50-60 | | | |
|---|---|---|---|
| ACO | BIT (mm) | COMPR (m) | PESO (kgf) |
| 60B | 5 | 345 | 71 |
| 50A | 6.3 | 251 | 63 |
| 50A | 16 | 338 | 540 |
| 50A | 20 | 208 | 514 |
| Peso Total 60B = | | | 71 kg |
| Peso Total 50A = | | | 1437 kg |

PAVIMENTO: 3° PAV

| RESUMO ACO CA 50-60 | | | |
|---|---|---|---|
| ACO | BIT (mm) | COMPR (m) | PESO (kgf) |
| 60B | 5 | 563 | 90 |
| 50A | 6.3 | 261 | 65 |
| 50A | 12.5 | 329 | 329 |
| 50A | 25 | 180 | 732 |
| Peso Total 60B = | | | 90 kg |
| Peso Total 50A = | | | 1116 kg |

PAVIMENTO: 4° PAV

| RESUMO ACO CA 50-60 | | | |
|---|---|---|---|
| ACO | BIT (mm) | COMPR (m) | PESO (kgf) |
| 60B | 5 | 715 | 114 |
| 50A | 6.3 | 197 | 49 |
| 50A | 12.5 | 290 | 290 |
| 50A | 16 | 61 | 153 |
| 50A | 25 | 114 | 454 |
| Peso Total 60B = | | | 114 kg |
| Peso Total 50A = | | | 979 kg |

PAVIMENTO: 5° PAV

| RESUMO ACO CA 50-60 | | | |
|---|---|---|---|
| ACO | BIT (mm) | COMPR (m) | PESO (kgf) |
| 60B | 5 | 792 | 127 |
| 50A | 6.3 | 94 | 23 |
| 50A | 10 | 51 | 51 |
| 50A | 12.5 | 282 | 282 |
| 50A | 16 | 109 | 274 |
| 50A | 25 | 50 | 201 |
| Peso Total 60B = | | | 127 kg |
| Peso Total 50A = | | | 819 kg |

PAVIMENTO: 6° PAV

| RESUMO ACO CA 50-60 | | | |
|---|---|---|---|
| ACO | BIT (mm) | COMPR (m) | PESO (kgf) |
| 60B | 5 | 606 | 97 |
| 50A | 16 | 282 | 178 |
| Peso Total 60B = | | | 97 kg |
| Peso Total 50A = | | | 178 kg |

| ACO | POS | BIT (mm) | QUANT | COMPRIMENTO UNIT (cm) | COMPRIMENTO TOTAL (cm) |
|---|---|---|---|---|---|
| P107 (X2) | | | | | |
| 50A | 1 | 25 | 84 | 403 | 33852 |
| 50A | 2 | 25 | 8 | 326 | 2608 |
| 50A | 3 | 25 | 92 | 475 | 43700 |
| 50A | 4 | 6.3 | 56 | 63 | 3528 |
| 50A | 5 | 6.3 | 56 | 235 | 13160 |
| 50A | 6 | 6.3 | 56 | 105 | 5880 |
| 50A | 7 | 6.3 | 56 | 207 | 11592 |
| 50A | 8 | 6.3 | 56 | 197 | 11032 |
| 50A | 9 | 6.3 | 56 | 195 | 10920 |
| 50A | 10 | 20 | 84 | 384 | 32256 |
| 50A | 11 | 20 | 28 | 322 | 9016 |
| 50A | 12 | 5 | 244 | 332 | 80968 |
| 60B | 13 | 5 | 244 | 232 | 56608 |
| 60B | 14 | 5 | 244 | 202 | 49288 |
| 60B | 15 | 5 | 244 | 202 | 49288 |
| 60B | 16 | 5 | 244 | 232 | 56608 |
| 60B | 17 | 5 | 244 | 232 | 56608 |
| 50A | 18 | 16 | 88 | 336 | 29568 |
| 50A | 19 | 16 | 8 | 286 | 2288 |
| 50A | 20 | 16 | 172 | 341 | 58652 |
| 50A | 21 | 12.5 | 260 | 330 | 85800 |
| 50A | 22 | 10 | 8 | 286 | 2288 |
| 50A | 23 | 10 | 66 | 331 | 21846 |
| 60B | 24 | 5 | 528 | 28 | 14784 |
| 60B | 25 | 5 | 48 | 102 | 4896 |
| 60B | 26 | 5 | 48 | 202 | 9696 |
| 60B | 27 | 5 | 48 | 192 | 9216 |
| 60B | 28 | 5 | 48 | 230 | 11040 |
| 60B | 29 | 5 | 48 | 70 | 3360 |
| 60B | 30 | 5 | 102 | 28 | 2856 |
| 60B | 31 | 5 | 102 | 28 | 3380 |
| P109 | | | | | |
| 50A | 1 | 25 | 16 | 28 | 448 |
| 50A | 2 | 25 | 4 | 336 | 1304 |
| 50A | 3 | 25 | 16 | 28 | 448 |
| 50A | 4 | 6.3 | 36 | 171 | 6498 |
| 50A | 5 | 6.3 | 19 | 197 | 3743 |
| 50A | 6 | 6.3 | 19 | 322 | 6118 |
| 50A | 7 | 25 | 4 | 322 | 1288 |
| 50A | 8 | 6.3 | 40 | 171 | 6840 |
| 50A | 9 | 6.3 | 40 | 41 | 1640 |
| 50A | 10 | 20 | 14 | 348 | 4872 |
| 50A | 11 | 20 | 9 | 286 | 2574 |
| 60B | 12 | 5 | 54 | 164 | 8856 |
| 50A | 13 | 25 | 54 | 286 | 15444 |
| 50A | 14 | 25 | 18 | 189 | 3402 |
| 50A | 15 | 20 | 7 | 371 | 2597 |
| 50A | 16 | 25 | 18 | 286 | 5148 |
| 50A | 17 | 25 | 11 | 218 | 2398 |
| 50A | 18 | 25 | 64 | 371 | 23744 |
| 50A | 19 | 25 | 10 | 286 | 2860 |
| 50A | 20 | 6.3 | 34 | 151 | 5134 |
| 50A | 21 | 6.3 | 36 | 151 | 5436 |
| 50A | 22 | 6.3 | 36 | 161 | 5796 |
| 50A | 23 | 6.3 | 18 | 187 | 3366 |
| 50A | 24 | 6.3 | 36 | 145 | 5220 |
| 50A | 25 | 6.3 | 18 | 173 | 3114 |
| 50A | 26 | 6.3 | 36 | 161 | 5796 |
| 50A | 27 | 6.3 | 36 | 137 | 4932 |
| 50A | 28 | 6.3 | 18 | 211 | 3798 |
| P110 | | | | | |
| 50A | 1 | 25 | 20 | 403 | 8060 |
| 50A | 2 | 25 | 8 | 326 | 2608 |
| 50A | 3 | 25 | 22 | 245 | 5390 |
| 50A | 4 | 6.3 | 94 | 243 | 22842 |
| 50A | 5 | 6.3 | 94 | 161 | 15134 |
| 50A | 6 | 25 | 16 | 399 | 6384 |
| 50A | 7 | 25 | 4 | 322 | 1288 |
| 50A | 8 | 12.5 | 42 | 363 | 15246 |
| 50A | 9 | 6.3 | 18 | 243 | 4374 |
| 50A | 10 | 25 | 16 | 286 | 4576 |
| 50A | 11 | 25 | 4 | 286 | 1144 |
| 50A | 12 | 20 | 26 | 355 | 9230 |
| 50A | 13 | 25 | 6 | 286 | 1716 |
| 60B | 14 | 5 | 35 | 240 | 8400 |
| 60B | 15 | 5 | 141 | 48 | 6768 |
| 60B | 16 | 5 | 141 | 48 | 6768 |
| P111 | | | | | |
| 50A | 1 | 12.5 | 14 | 366 | 5124 |
| 50A | 2 | 12.5 | 2 | 326 | 652 |
| 60B | 3 | 5 | 63 | 146 | 9198 |
| 60B | 4 | 5 | 63 | 146 | 9198 |
| 60B | 5 | 5 | 63 | 38 | 2394 |
| 50A | 6 | 12.5 | 12 | 362 | 4344 |
| 50A | 7 | 12.5 | 2 | 322 | 644 |
| 60B | 8 | 5 | 42 | 128 | 5376 |
| 60B | 9 | 5 | 21 | 190 | 3990 |
| 50A | 10 | 16 | 8 | 114 | 912 |
| 50A | 11 | 12.5 | 6 | 574 | 3444 |
| 50A | 12 | 12.5 | 6 | 574 | 3444 |
| 60B | 13 | 5 | 76 | 140 | 10640 |
| 60B | 14 | 5 | 38 | 178 | 6764 |
| 50A | 15 | 16 | 10 | 241 | 3410 |
| 50A | 16 | 16 | 8 | 286 | 2288 |
| 50A | 17 | 5 | 30 | 133 | 3990 |
| 60B | 18 | 5 | 15 | 168 | 2520 |
| 50A | 19 | 12.5 | 10 | 330 | 4125 |
| 50A | 20 | 12.5 | 2 | 286 | 572 |
| 50A | 21 | 25 | 10 | 330 | 3300 |
| 50A | 22 | 12.5 | 32 | 321 | 10272 |
| 60B | 23 | 5 | 144 | 136 | 19584 |
| 60B | 24 | 5 | 36 | 142 | 5112 |
| 60B | 25 | 5 | 36 | 131 | 4716 |
| P112 | | | | | |
| 50A | 1 | 25 | 4 | 403 | 1612 |
| 50A | 2 | 25 | 2 | 326 | 652 |
| 50A | 3 | 6.3 | 63 | 147 | 9261 |
| 50A | 4 | 6.3 | 63 | 187 | 11781 |
| 50A | 5 | 6.3 | 59 | 41 | 2419 |
| 50A | 6 | 25 | 6 | 399 | 2394 |
| 50A | 7 | 25 | 6 | 150 | 900 |
| 50A | 8 | 6.3 | 19 | 221 | 4199 |
| 50A | 9 | 6.3 | 19 | 221 | 4199 |
| 50A | 10 | 25 | 10 | 659 | 6590 |
| 50A | 11 | 25 | 10 | 574 | 5740 |
| 50A | 12 | 6.3 | 64 | 171 | 10944 |
| 50A | 13 | 6.3 | 64 | 171 | 10944 |
| 50A | 14 | 25 | 42 | 371 | 15582 |
| 50A | 15 | 25 | 8 | 286 | 2288 |
| 50A | 16 | 6.3 | 11 | 187 | 2057 |
| 50A | 17 | 6.3 | 11 | 187 | 2079 |
| 50A | 18 | 6.3 | 54 | 157 | 8478 |
| 50A | 19 | 6.3 | 54 | 36 | 1944 |
| 50A | 20 | 6.3 | 36 | 137 | 4932 |
| 50A | 21 | 20 | 14 | 355 | 4970 |
| 50A | 22 | 20 | 14 | 355 | 4970 |
| 50A | 23 | 20 | 4 | 286 | 1144 |
| 60B | 24 | 5 | 36 | 142 | 5112 |
| 60B | 25 | 5 | 18 | 170 | 3060 |
| 50A | 26 | 25 | 4 | 322 | 1288 |
| 50A | 27 | 25 | 10 | 100 | 1000 |

INDICE:
P107 / P113 – Fundacao ao Piso do 6o Pav
P109 A P112 – Fundacao ao Piso do 5o Pav

FCK= 35 MPa (Piso do 2o Subsolo ao Piso do 1o Pav)
FCK= 30 MPa (Piso do 1o Pav para cima)

EC = 26 GPa (MODULO DE ELASTICIDADE SECANTE)

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

| REV | DATA | DESCRICAO |
|---|---|---|
| 1 | 16/04/2009 | LIBERADO PARA OBRA |
| 0 | 31/03/2009 | EMISSAO INICIAL |

Simetria Engenharia e Projetos Ltda
SIA QUADRA AC No 51 SALAS 201 a 203
BRASILIA-DF CEP: 71200-045
FADN: (0061) 3036-9633
simetria@simetria.eng.br

PROJETO ESTRUTURAL

CLIENTE: DISCO INCORPORADORA E IMOBILIARIA LTDA
OBRA: EDIFICIO RESIDENCIAL OLYMPIQUE — No OBRA:
ENDERECO OBRA: SRIA AREA ESPECIAL 04 LOTES G e H – GUARA/DF
DESCRICAO: ARMACAO DOS PILARES DA TORRE A JUNTA A (02/09)
DESENHO No: 059/

| DESENHISTA: | DATA: | ESCALA: | UNIDADE | ARQUIVO PLT: |
|---|---|---|---|---|
| TGS/HELENA | 31/03/2009 | 1:20 | cm | 421-EST-059-XXX-R01 |

PROPRIETARIO: RESPONSAVEL TECNICO

RESPONSAVEL TECNICO PELO PROJETO ESTRUTURAL
SIMETRIA ENGENHARIA E PROJETOS S/C LTDA
CREA/2725/RF

SIMETRIA ENGENHARIA DE PROJETOS S/C LTDA PL:PILARES-02.PLT 16/04/2009 08:43:10