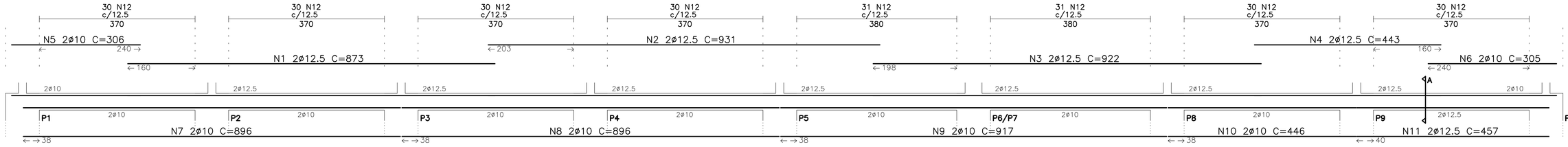
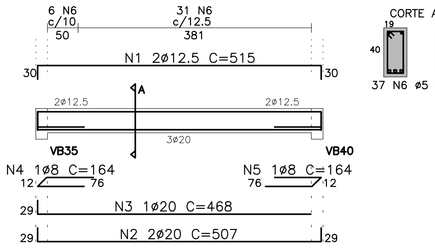
| ESC. PLOT. 1=20 |
|---|
| AO 841x1189 |
| CORES/ESP. |
| RED 0,20 |
| YELLOW 0,50 |
| GREEN 0,30 |
| CYAN 0,40 |
| BLUE 0,30 |
| MAGENTA 0,10 |
| WHITE 0,70 |
| COR 8 0,30 |

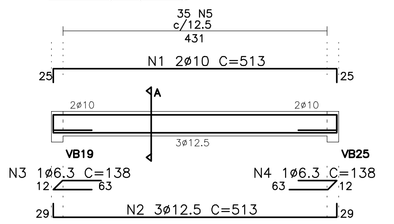
## VB1 (19/40)



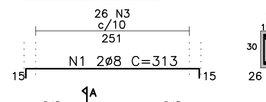

## VB2 (19/40)



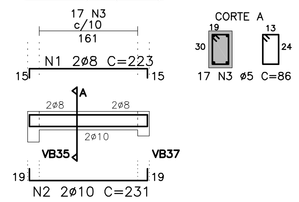

## VB3 (19/40)



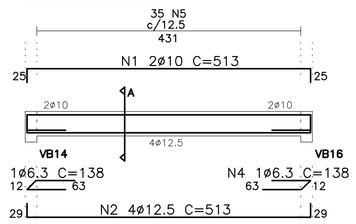

## VB4 (19/30)



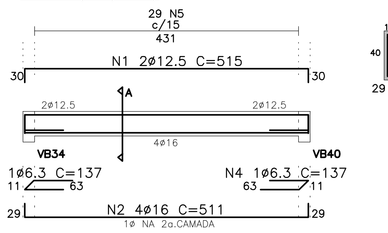

## VB5 (19/30)



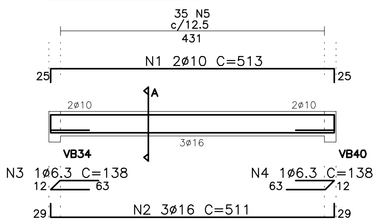

## VB7 (19/40)



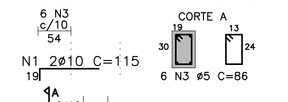

## VB8 (19/40)



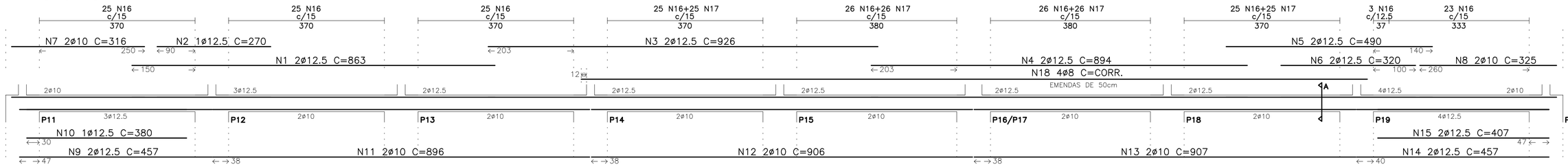

## VB10 (19/40)



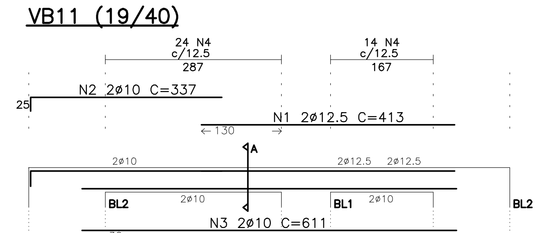

## VB18=VB24=VB32 (19/40)




## VB6 (19/40)



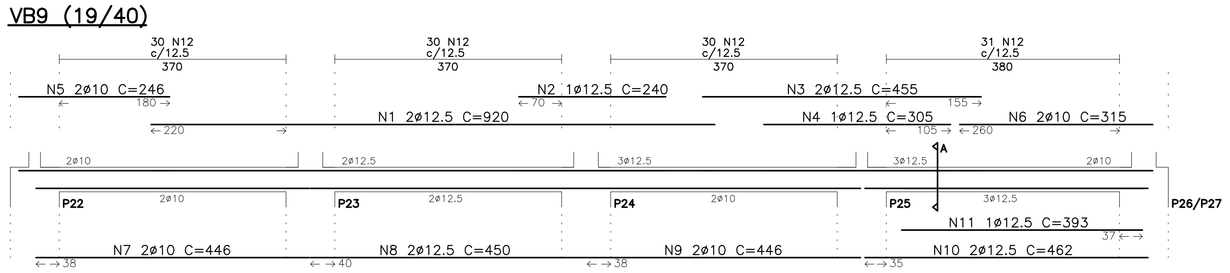

## VB11 (19/40)



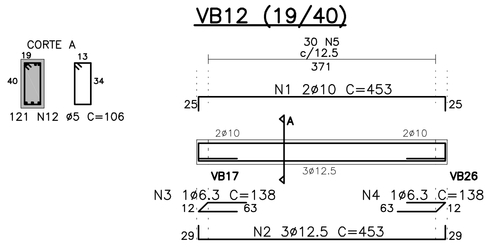

RESUMO DAS VIGAS DA FUNDAÇÃO (01/02)

| ACO | ø | COMPR(cm) | PESO(kg) |
|---|---|---|---|
| 60B | 5 | 174318 | 279 |
| 50A | 6.3 | 26986 | 68 |
| 50A | 8 | 11190 | 45 |
| 50A | 10 | 39582 | 250 |
| 50A | 12.5 | 61128 | 612 |
| 50A | 16 | 11211 | 180 |
| 50A | 20 | 3894 | 95 |
| 50A | 25 | – | – |
| PESO TOTAL (kg) | | | 1529 |

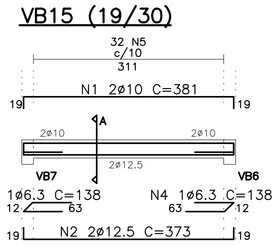
## VB9 (19/40)



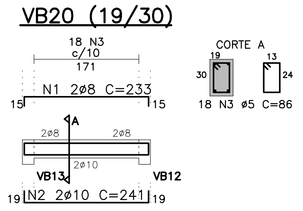

## VB12 (19/40)



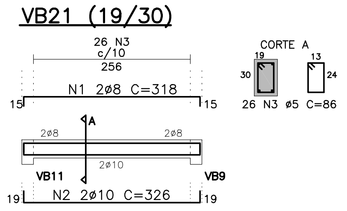

## VB15 (19/30)



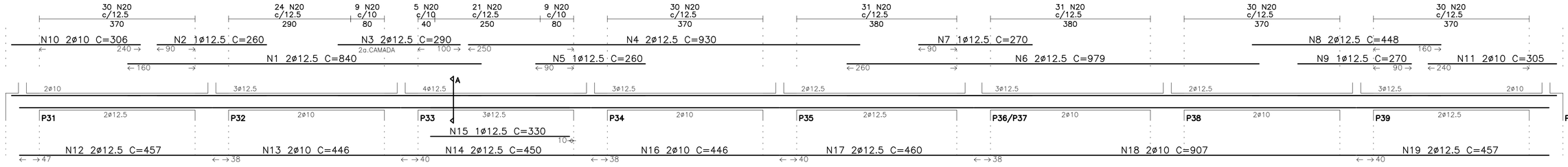

## VB20 (19/30)



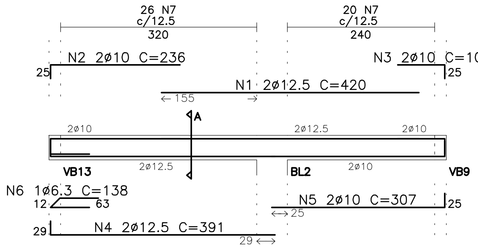

## VB21 (19/30)



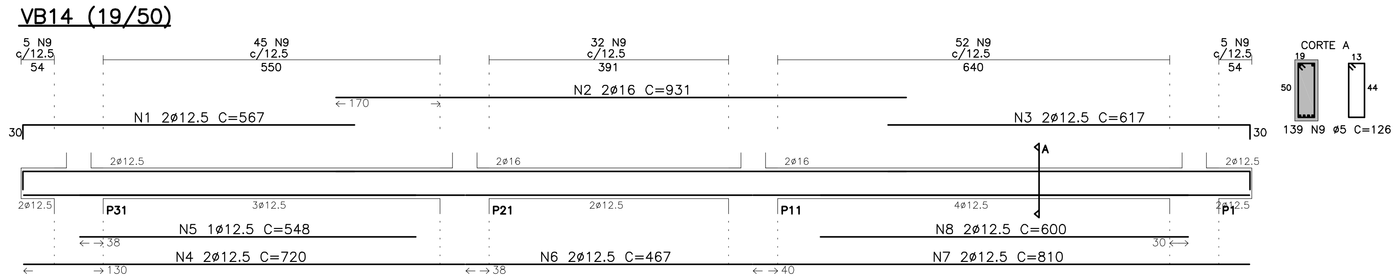

## VB13 (19/40)



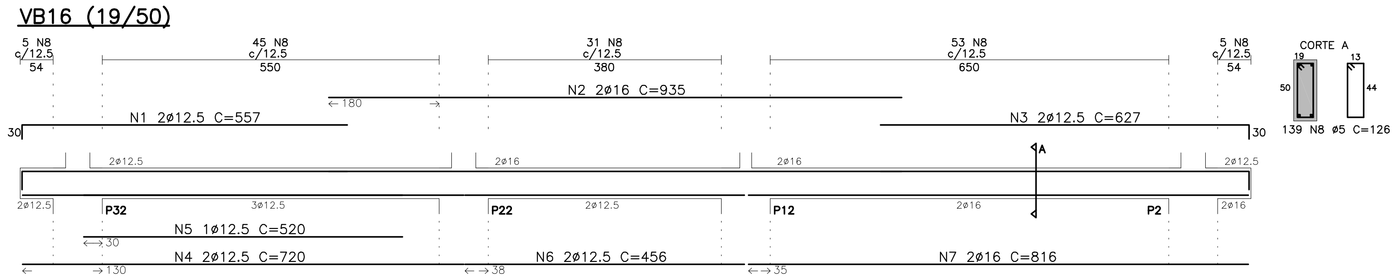

## VB17 (19/40)



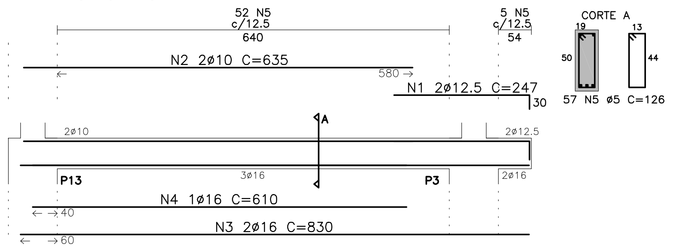

## VB14 (19/50)



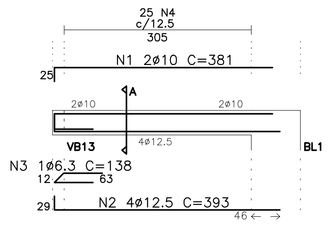

## VB16 (19/50)



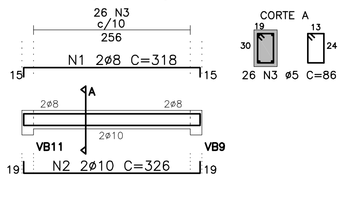

## VB19 (19/50)



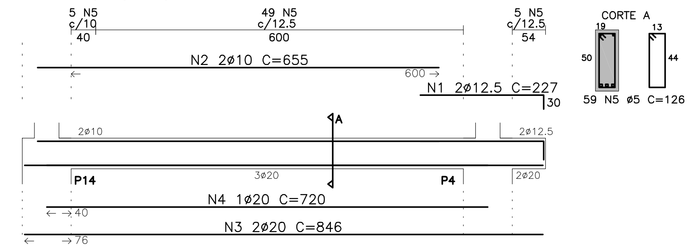

## VB22 (19/40)



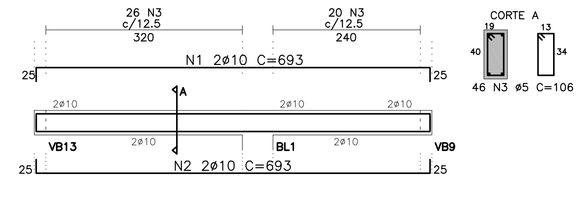

## VB23 (19/30)




## VB25 (19/50)




## VB26 (19/40)




VB18=VB24=VB32 (3x)

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 10 | 2 | 115 | 230 |
| 2 | 8 | 2 | 62 | 124 |
| 3 | 5 | 6 | 86 | 516 |

VB19

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 12.5 | 2 | 247 | 494 |
| 2 | 10 | 2 | 635 | 1270 |
| 3 | 16 | 2 | 830 | 1660 |
| 4 | 16 | 1 | 610 | 610 |
| 5 | 5 | 57 | 126 | 7182 |

VB20

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 8 | 2 | 233 | 466 |
| 2 | 10 | 2 | 241 | 482 |
| 3 | 5 | 18 | 86 | 1548 |

VB21

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 8 | 2 | 318 | 636 |
| 2 | 10 | 2 | 326 | 652 |
| 3 | 5 | 26 | 86 | 2236 |

VB22

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 10 | 2 | 381 | 762 |
| 2 | 12.5 | 4 | 393 | 1572 |
| 3 | 6.3 | 1 | 138 | 138 |
| 4 | 5 | 25 | 106 | 2650 |

VB23

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 8 | 2 | 318 | 636 |
| 2 | 10 | 2 | 326 | 652 |
| 3 | 5 | 26 | 86 | 2236 |

VB25

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 12.5 | 2 | 227 | 454 |
| 2 | 10 | 2 | 655 | 1310 |
| 3 | 20 | 2 | 846 | 1692 |
| 4 | 20 | 1 | 720 | 720 |
| 5 | 5 | 59 | 126 | 7434 |

VB26

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 10 | 2 | 693 | 1386 |
| 2 | 10 | 2 | 693 | 1386 |
| 3 | 5 | 46 | 106 | 4876 |

VB7

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 10 | 2 | 513 | 1026 |
| 2 | 12.5 | 4 | 513 | 2052 |
| 3 | 6.3 | 1 | 138 | 138 |
| 4 | 6.3 | 1 | 138 | 138 |
| 5 | 5 | 35 | 106 | 3710 |

VB8

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 12.5 | 2 | 515 | 1030 |
| 2 | 16 | 4 | 511 | 2044 |
| 3 | 6.3 | 1 | 137 | 137 |
| 4 | 6.3 | 1 | 137 | 137 |
| 5 | 6.3 | 29 | 108 | 3132 |

VB9

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 12.5 | 2 | 920 | 1840 |
| 2 | 12.5 | 1 | 240 | 240 |
| 3 | 12.5 | 2 | 455 | 910 |
| 4 | 12.5 | 1 | 305 | 305 |
| 5 | 10 | 2 | 246 | 492 |
| 6 | 10 | 1 | 315 | 630 |
| 7 | 10 | 2 | 446 | 892 |
| 8 | 12.5 | 2 | 450 | 900 |
| 9 | 10 | 2 | 446 | 892 |
| 10 | 12.5 | 2 | 462 | 924 |
| 11 | 12.5 | 1 | 393 | 393 |
| 12 | 5 | 121 | 106 | 12826 |

VB10

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 10 | 2 | 513 | 1026 |
| 2 | 16 | 3 | 511 | 1533 |
| 3 | 6.3 | 1 | 138 | 138 |
| 4 | 6.3 | 1 | 138 | 138 |
| 5 | 5 | 35 | 106 | 3710 |

VB11

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 12.5 | 2 | 413 | 826 |
| 2 | 10 | 2 | 337 | 674 |
| 3 | 10 | 2 | 611 | 1222 |
| 4 | 5 | 38 | 106 | 4028 |

VB12

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 10 | 2 | 453 | 906 |
| 2 | 12.5 | 3 | 453 | 1359 |
| 3 | 6.3 | 1 | 138 | 138 |
| 4 | 6.3 | 1 | 138 | 138 |
| 5 | 5 | 30 | 106 | 3180 |

VB13

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 12.5 | 2 | 840 | 1680 |
| 2 | 12.5 | 1 | 260 | 260 |
| 3 | 12.5 | 2 | 290 | 580 |
| 4 | 12.5 | 2 | 930 | 1860 |
| 5 | 12.5 | 1 | 260 | 260 |
| 6 | 12.5 | 2 | 979 | 1958 |
| 7 | 12.5 | 1 | 270 | 270 |
| 8 | 12.5 | 2 | 448 | 896 |
| 9 | 12.5 | 1 | 270 | 270 |
| 10 | 10 | 2 | 306 | 612 |
| 11 | 10 | 2 | 305 | 610 |
| 12 | 12.5 | 2 | 457 | 914 |
| 13 | 10 | 2 | 446 | 892 |
| 14 | 12.5 | 2 | 450 | 900 |
| 15 | 12.5 | 1 | 330 | 330 |
| 16 | 10 | 2 | 446 | 892 |
| 17 | 12.5 | 2 | 460 | 920 |
| 18 | 10 | 2 | 907 | 1814 |
| 19 | 12.5 | 2 | 457 | 914 |
| 20 | 5 | 250 | 106 | 26500 |

VB14

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 12.5 | 2 | 567 | 1134 |
| 2 | 16 | 2 | 931 | 1862 |
| 3 | 12.5 | 2 | 617 | 1234 |
| 4 | 12.5 | 2 | 720 | 1440 |
| 5 | 12.5 | 1 | 548 | 548 |
| 6 | 12.5 | 2 | 467 | 934 |
| 7 | 12.5 | 2 | 810 | 1620 |
| 8 | 12.5 | 2 | 600 | 1200 |
| 9 | 5 | 139 | 126 | 17514 |

VB15

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 10 | 2 | 381 | 762 |
| 2 | 12.5 | 2 | 373 | 746 |
| 3 | 6.3 | 1 | 138 | 138 |
| 4 | 6.3 | 1 | 138 | 138 |
| 5 | 5 | 32 | 86 | 2752 |

VB16

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 12.5 | 2 | 557 | 1114 |
| 2 | 16 | 2 | 935 | 1870 |
| 3 | 12.5 | 2 | 627 | 1254 |
| 4 | 12.5 | 2 | 720 | 1440 |
| 5 | 12.5 | 1 | 520 | 520 |
| 6 | 12.5 | 2 | 456 | 912 |
| 7 | 16 | 2 | 816 | 1632 |
| 8 | 5 | 139 | 126 | 17514 |

VB17

| N | ø | Q | UNI | TOTAL |
|---|---|---|---|---|
| 1 | 12.5 | 2 | 420 | 840 |
| 2 | 10 | 2 | 236 | 472 |
| 3 | 10 | 2 | 101 | 202 |
| 4 | 12.5 | 2 | 391 | 782 |
| 5 | 10 | 2 | 307 | 614 |
| 6 | 6.3 | 1 | 138 | 138 |
| 7 | 5 | 46 | 106 | 4876 |

CR-2 - PADRÃO TUBULÃO 204

| No. | MODIFICAÇÕES | APROVAÇÃO | DATA | APROVAÇÃO | DATA |
|---|---|---|---|---|---|
| | | AUTOR DO PROJETO | | FDE | |

OBSERVAÇÕES

DESENHO DE REFERÊNCIA

| No. | APROVAÇÃO | DATA |
|---|---|---|
| | AUTOR DO PROJETO | |
| | FDE | |

NOTAS=

01–CONCRETO= fck ≥ 25 MPa
02–AÇO= CA–50 – fyk=500 MPa
CA–60 – fyk=600 MPa
03–MEDIDAS EM cm, NÍVEIS EM m.
04–NÃO TIRAR MEDIDAS EM ESCALA.
05–CONFIRMAR MEDIDAS NO LOCAL.
06– COBRIMENTO=3,0cm

DETALHE DO RAIO DE CURVATURA (R)

VALOR ESPECIFICADO NO ESTIOLO

| ø (mm) | R (cm) | C.C. (cm) |
|---|---|---|
| 12.5 | 10 | 16 |
| 16 | 13 | 21 |
| 20 | 16 | 25 |
| 25 | 20 | 31 |

C.C.=COMPRIMENTO DA CURVA

FDE FUNDAÇÃO PARA O DESENVOLVIMENTO DA EDUCAÇÃO

FUNDAÇÃO PARA O DESENVOLVIMENTO DA EDUCAÇÃO – F D E

| | | | |
|---|---|---|---|
| ESCOLA – NOME/LOCAL: – | | | DESENHO: 1 2 0 1 0 4 6 |
| INTERVENÇÃO: CRECHE – CR–2 | | | No LOTE: 00 |
| ETAPA/AREA TECNICA: PROJETO EXECUTIVO DE ESTRUTURA | TIPO PROJETO: PADRÃO | DATA: MAR/2011 | ETAPA/AREA TECNICA: PE – EST |
| DESENHO: ARMAÇÃO DAS VIGAS DA FUNDAÇÃO (01/02) | ESCALA: INDICADA | FOLHA: 13/00 | REVISÃO: 00 |

DESENHO GERADO PELO SISTEMA CAD – PDR ENGECALC ENGENHARIA E PROJETOS ESTRUTURAIS S/C LTDA

12010406_000PE1300_01