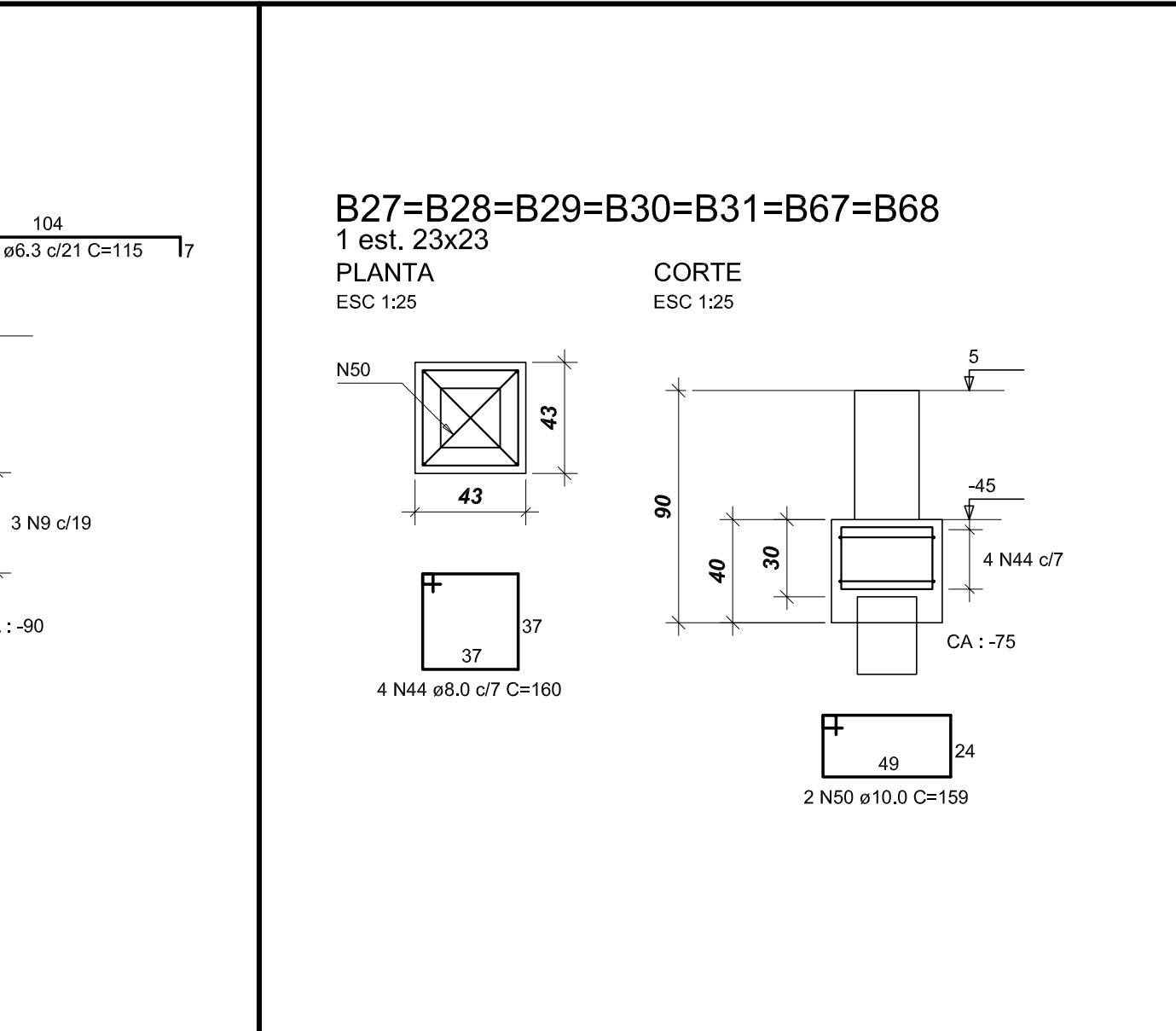
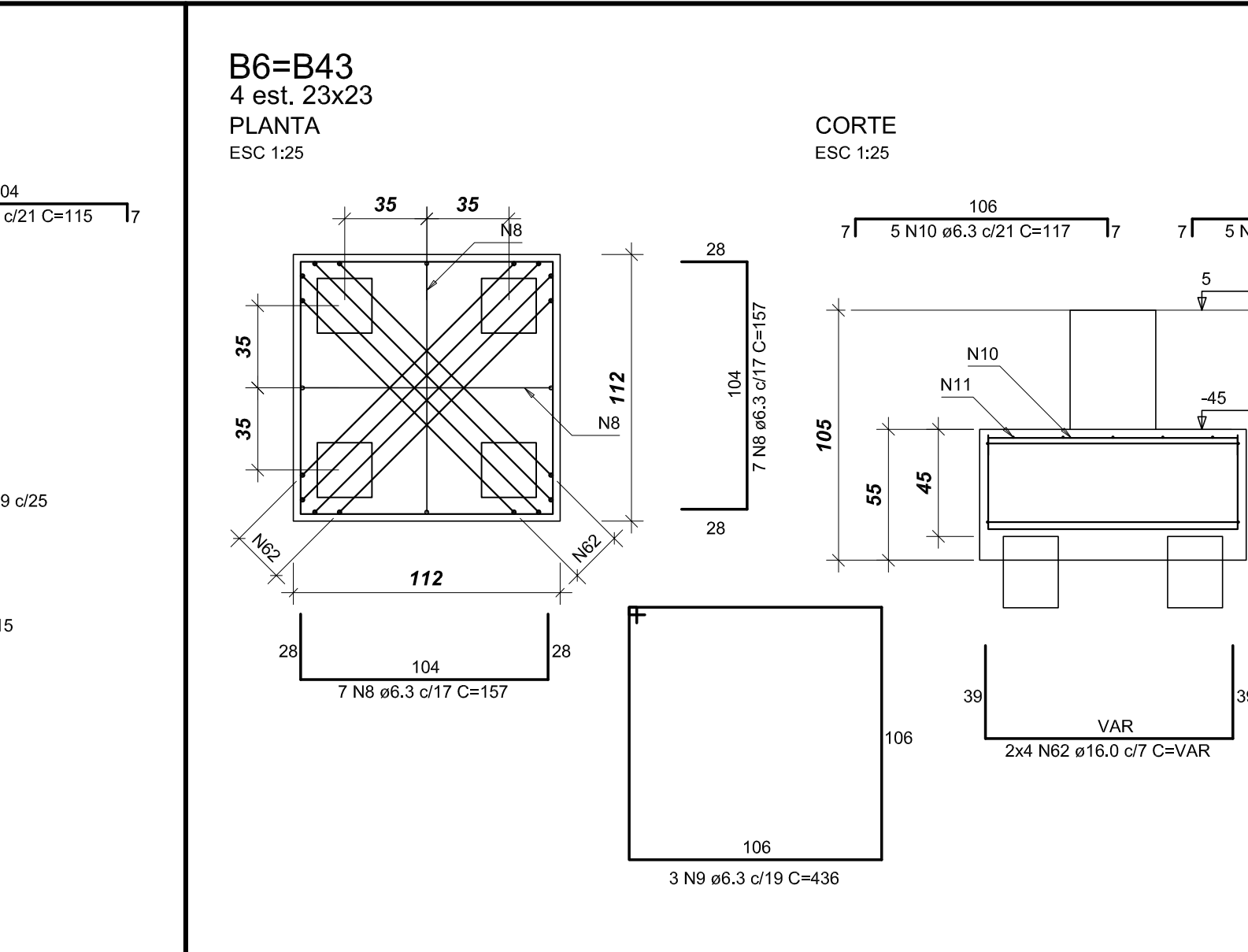
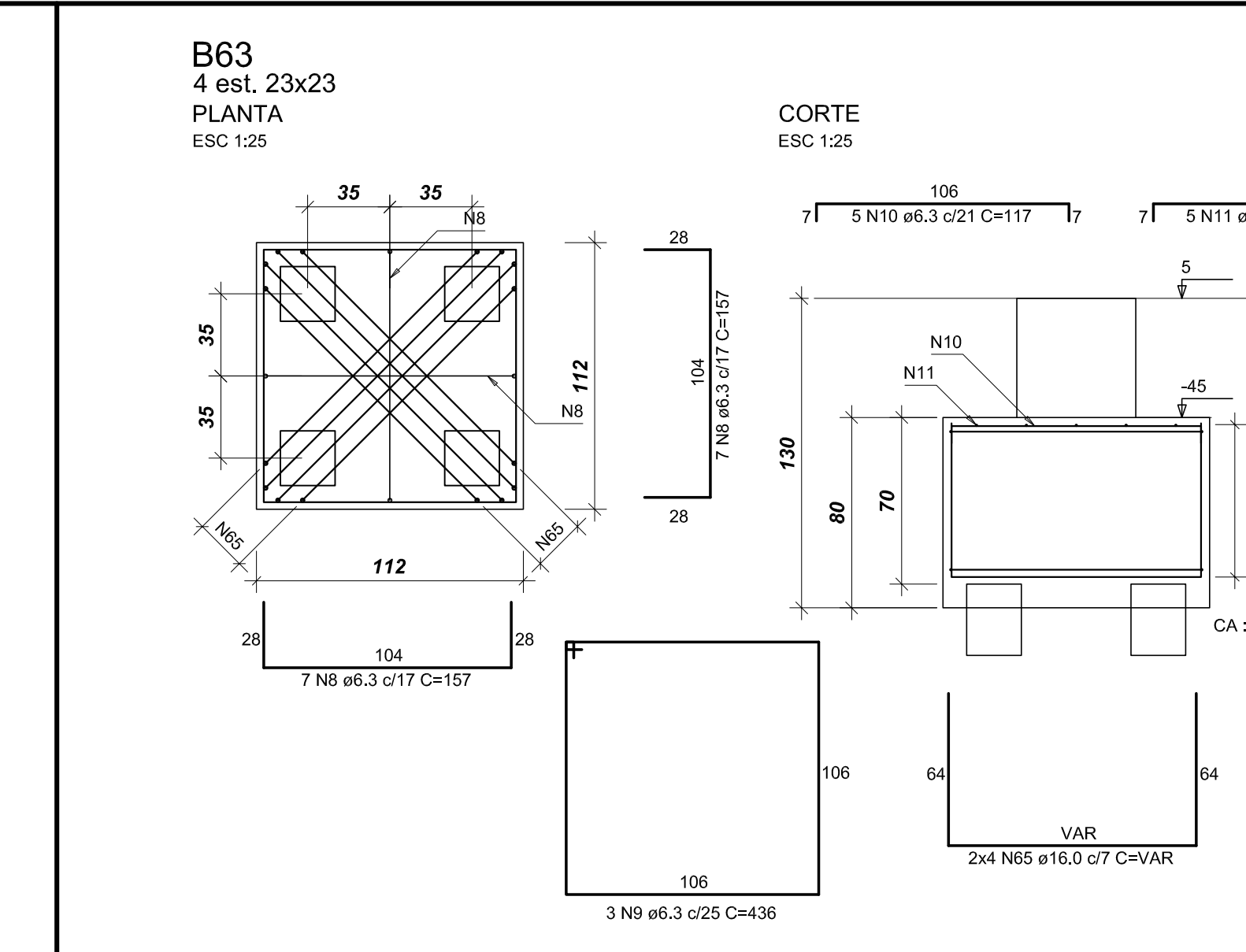
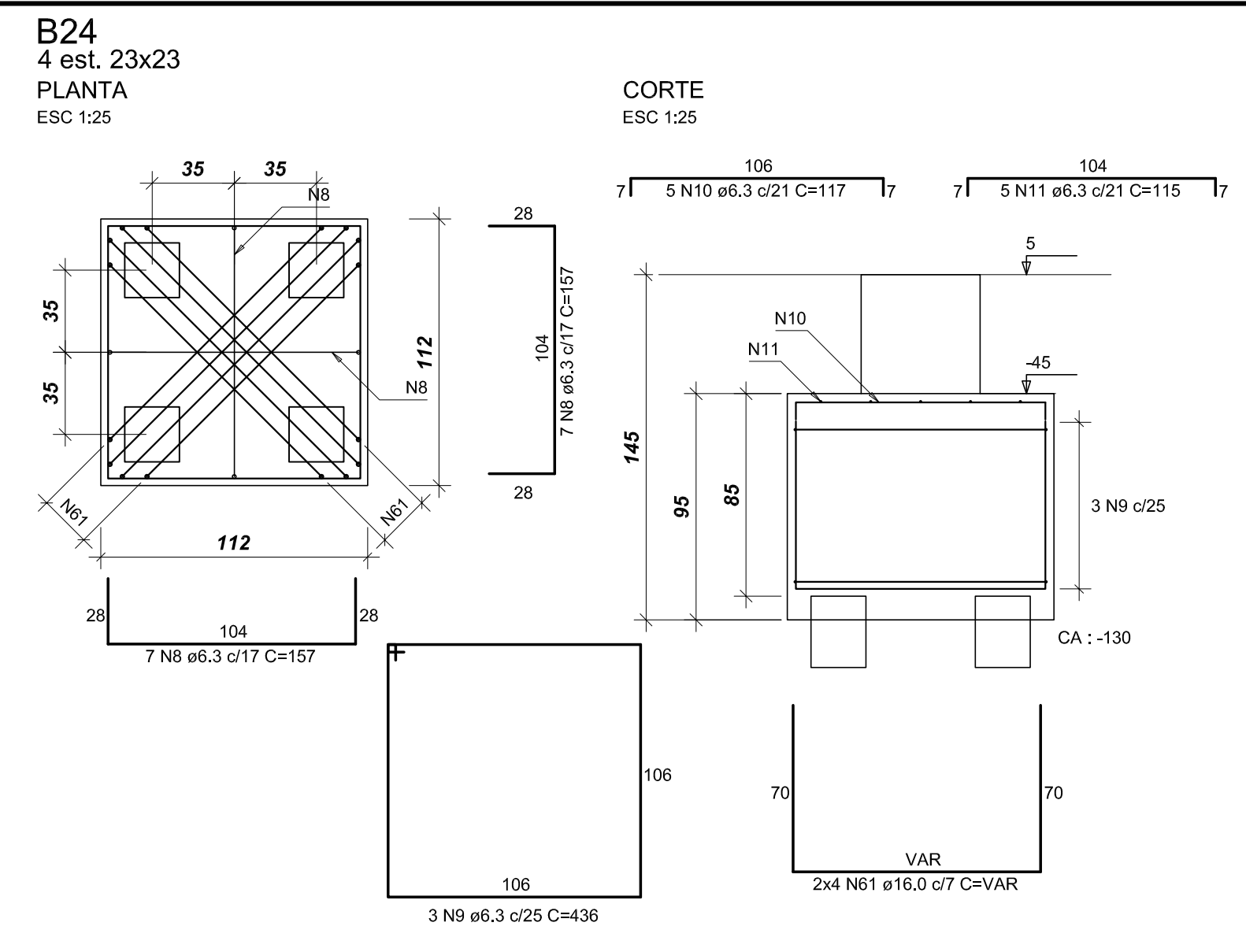
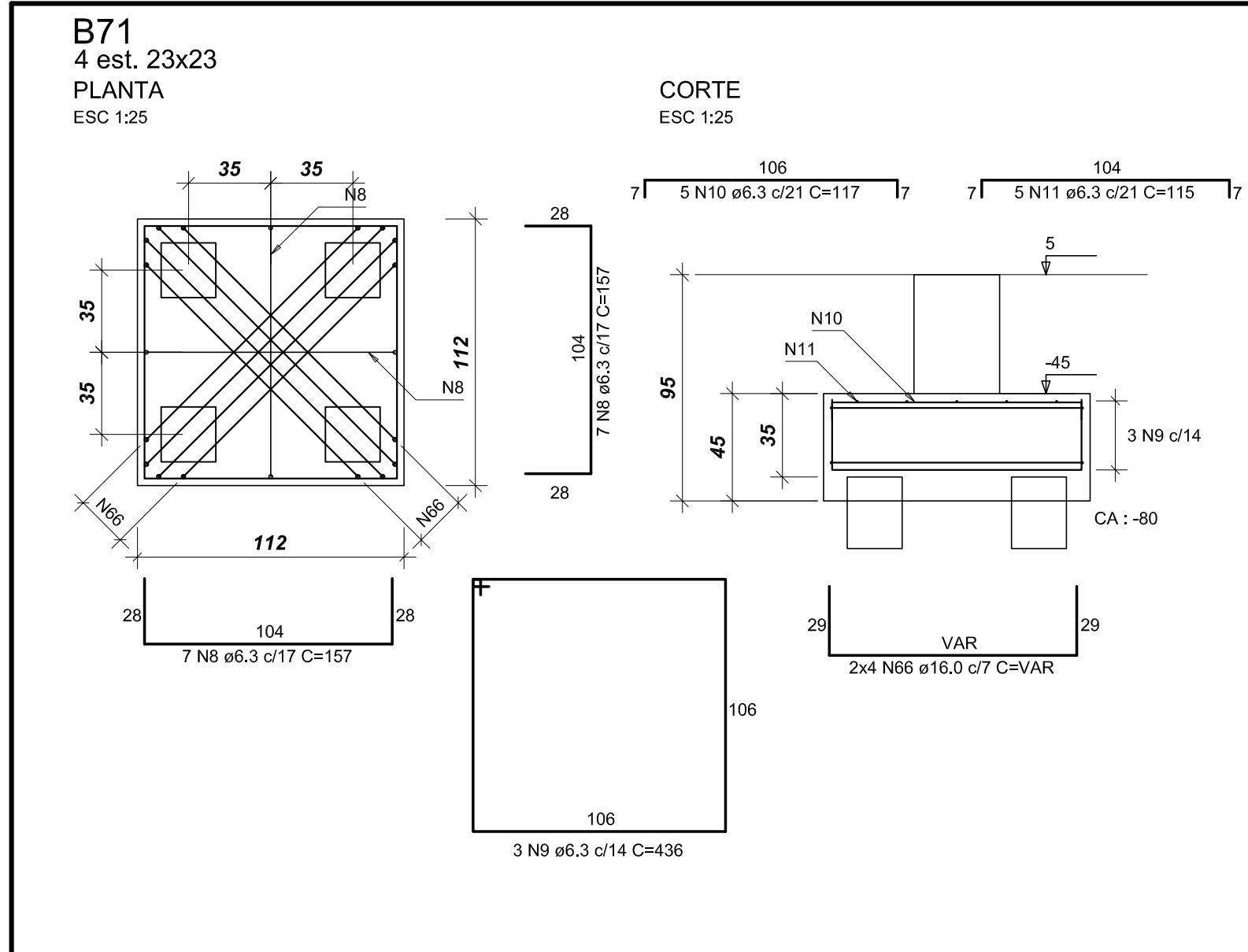
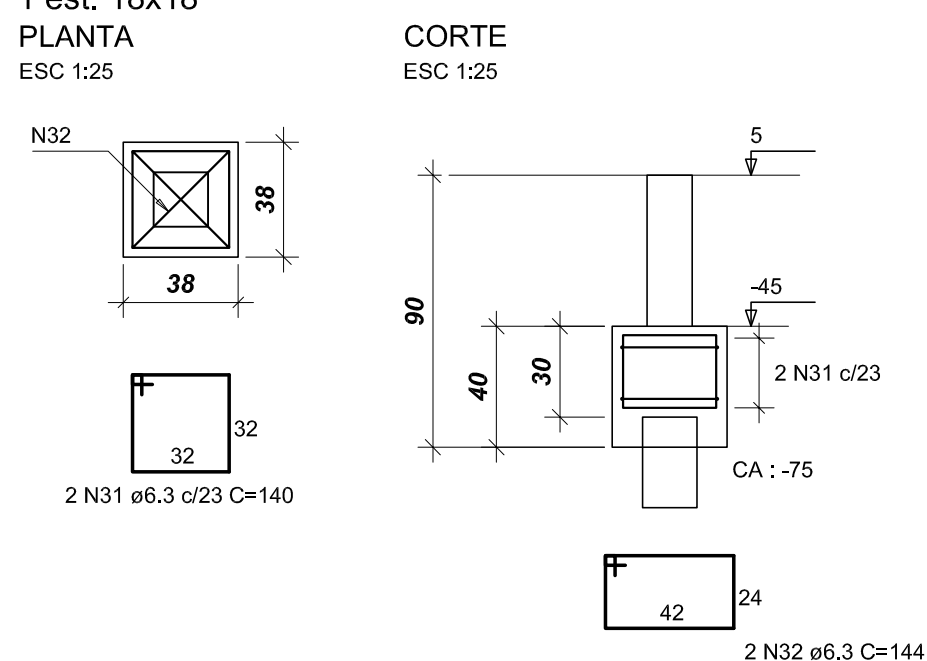




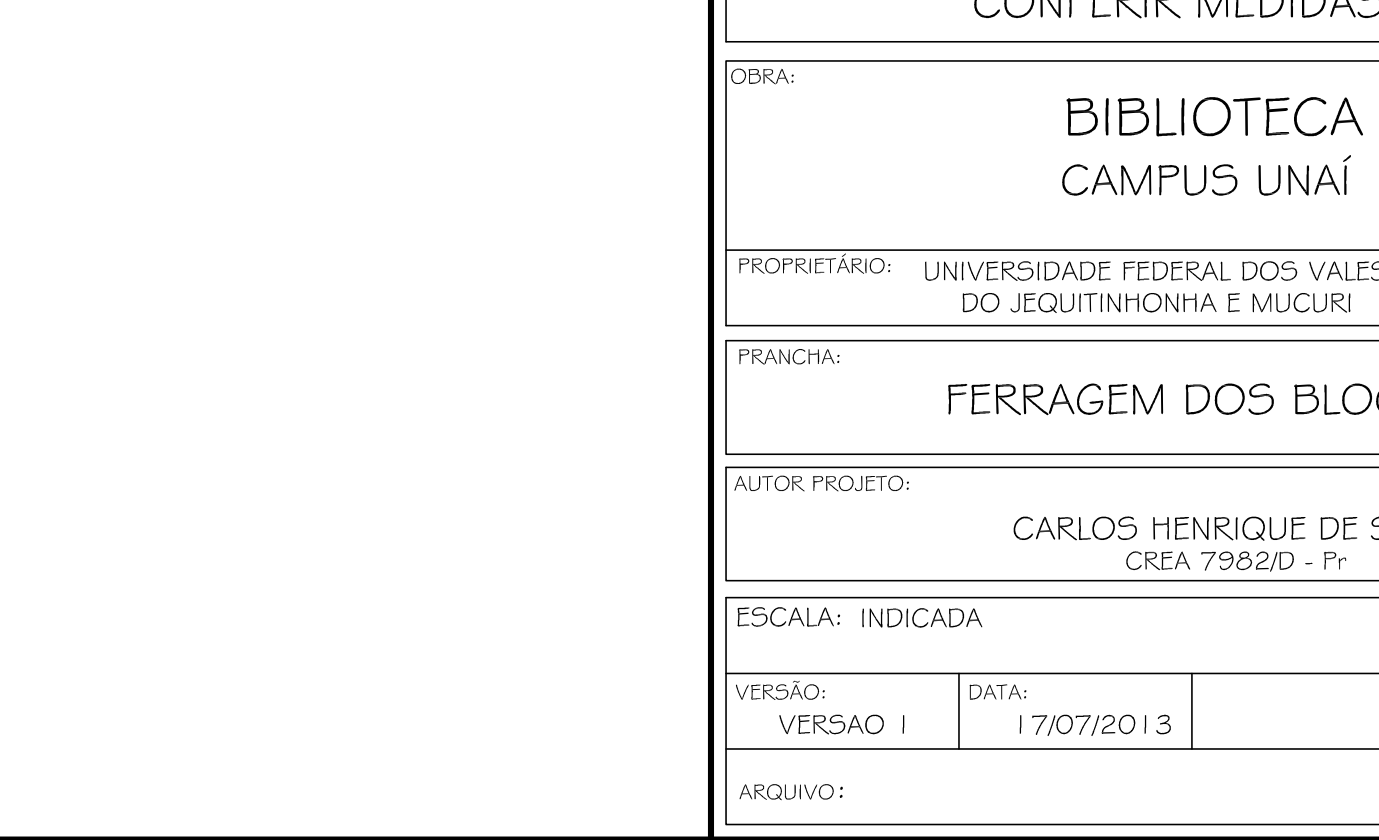
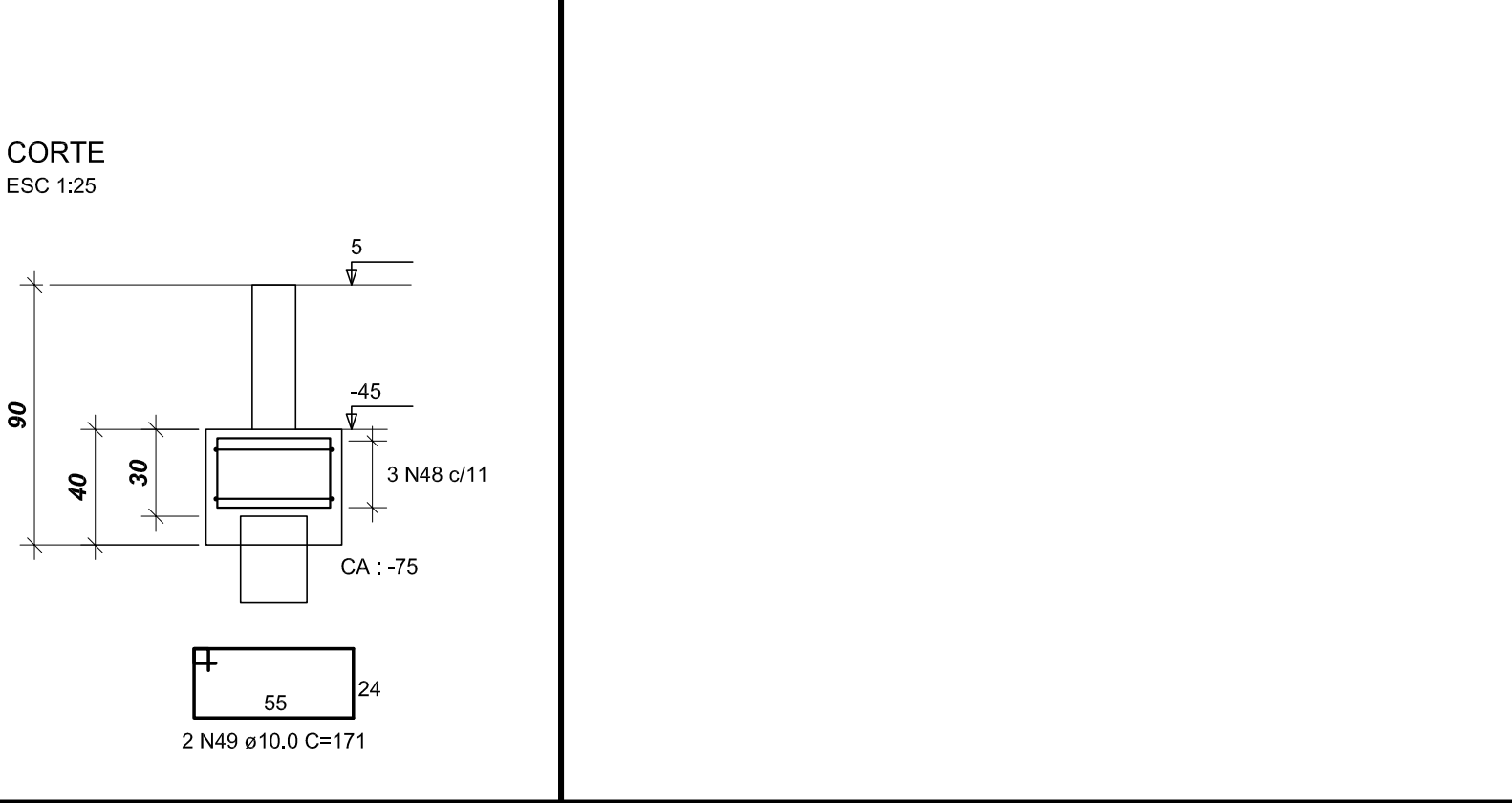
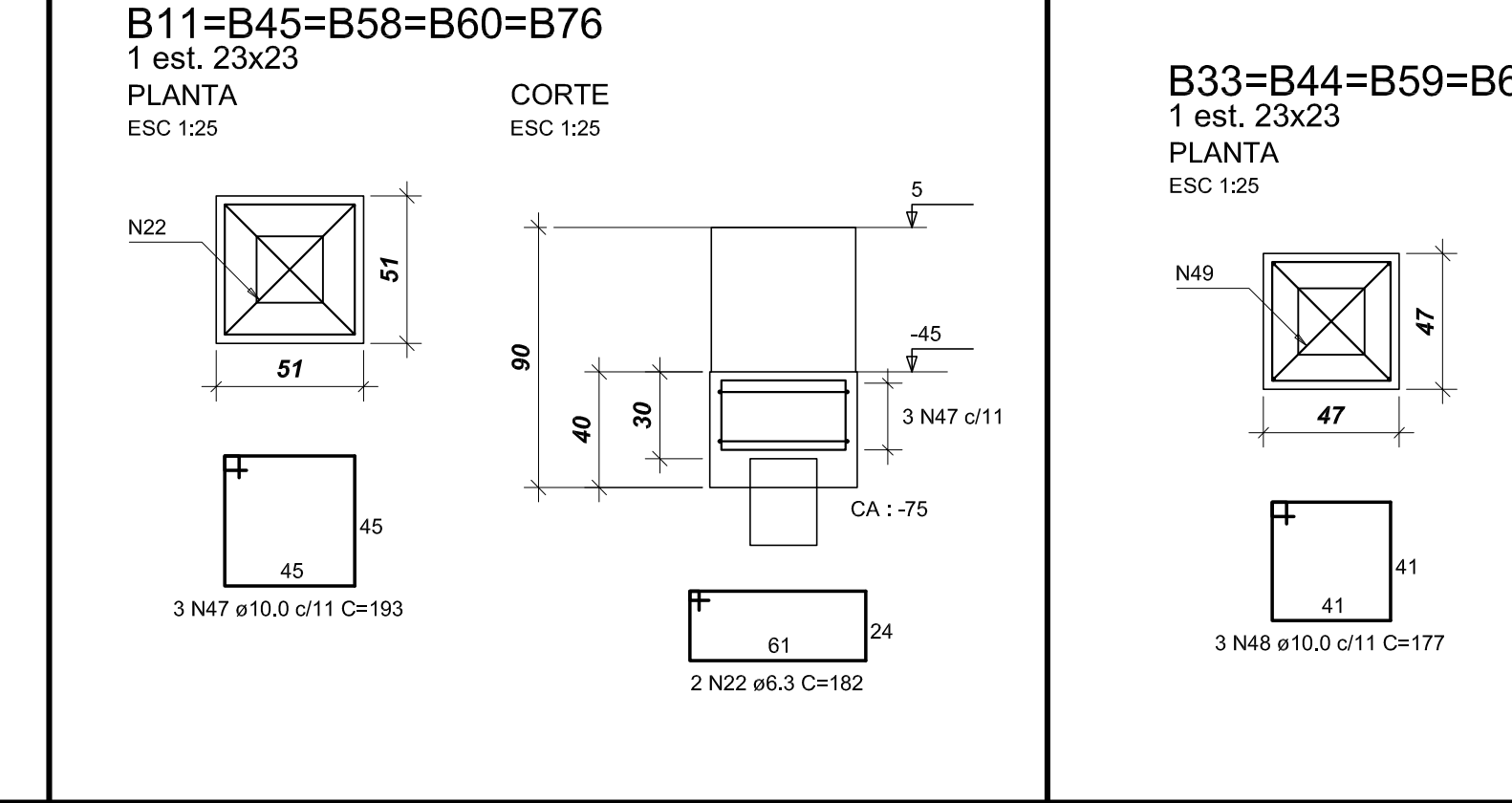
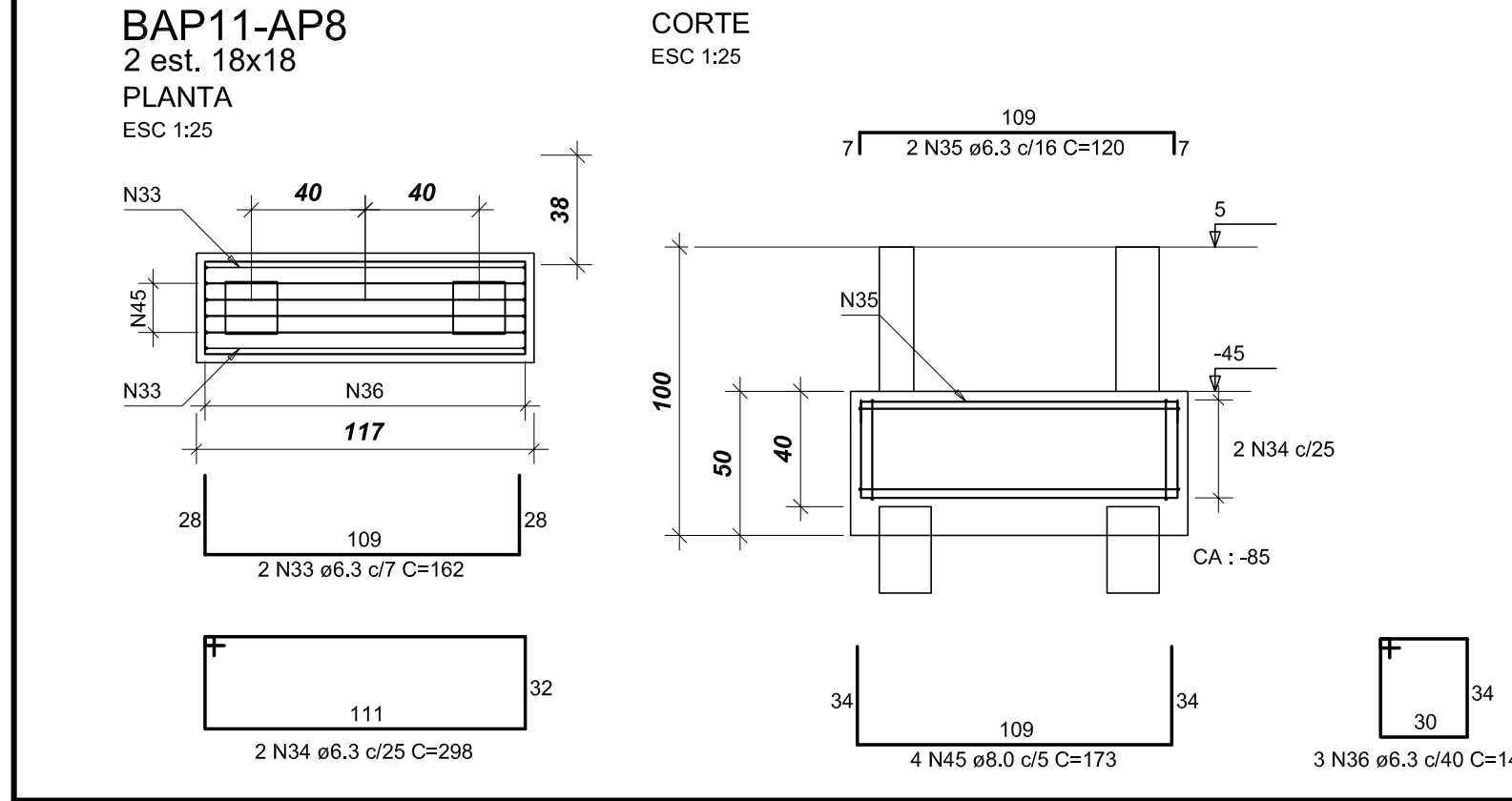
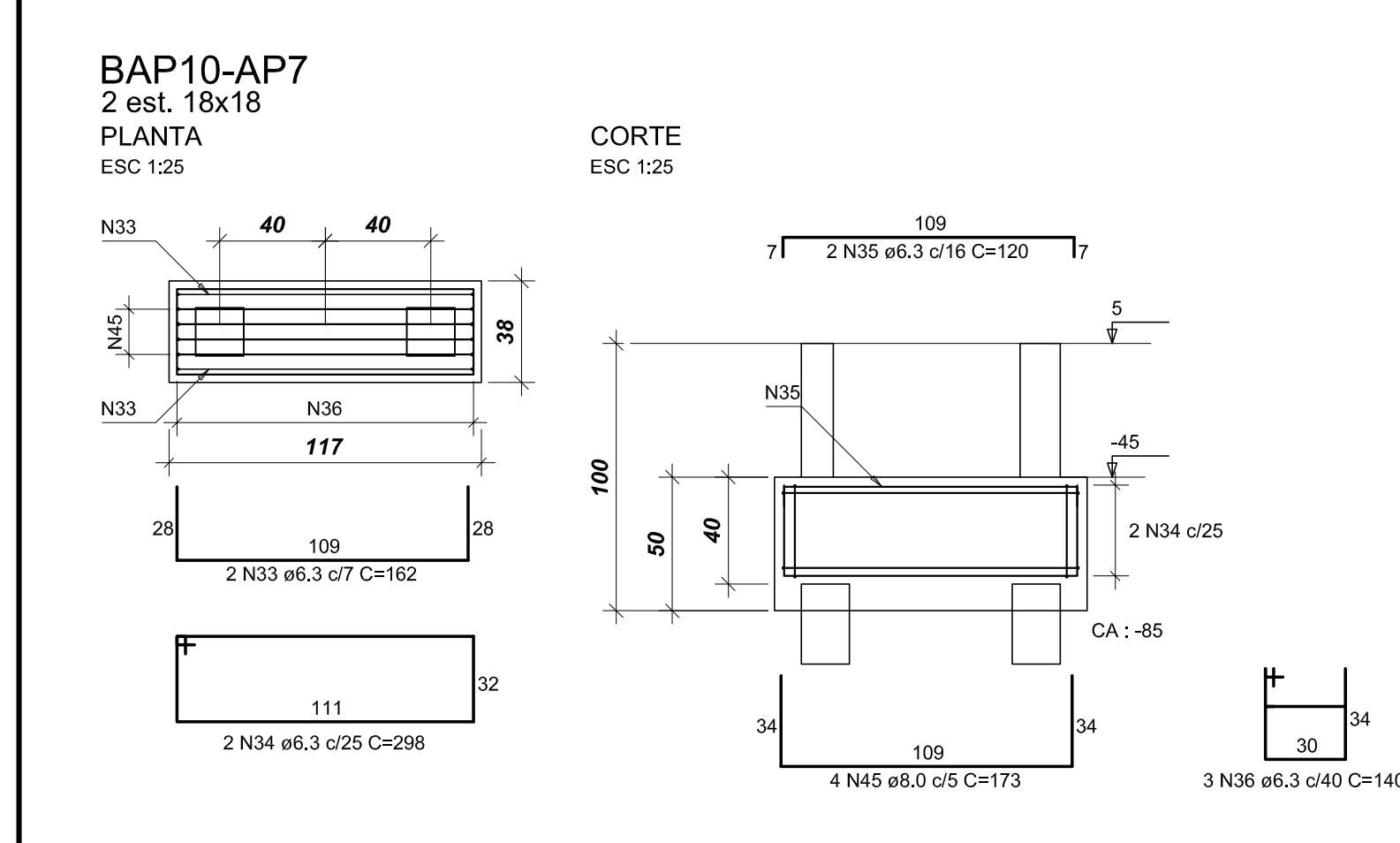
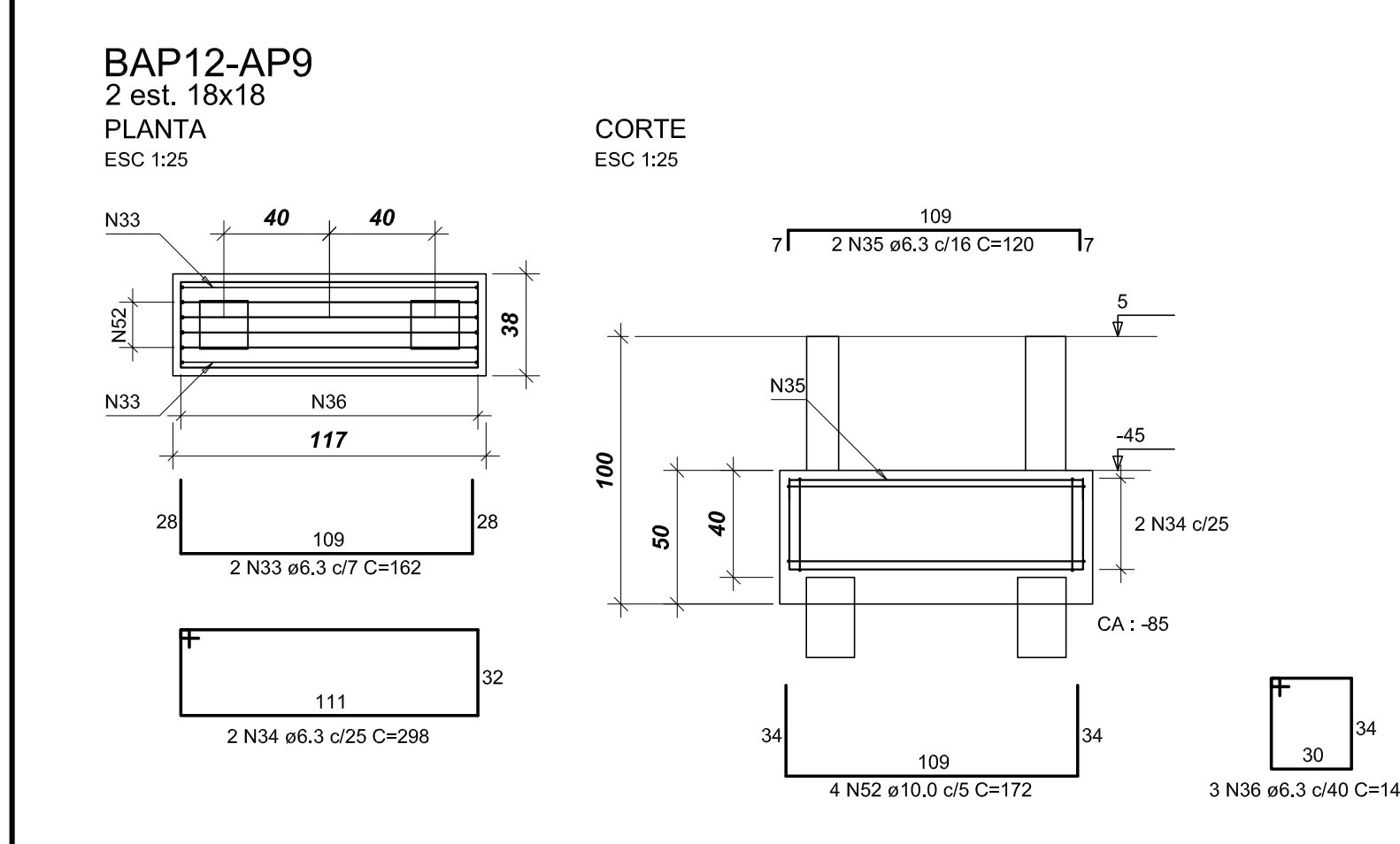
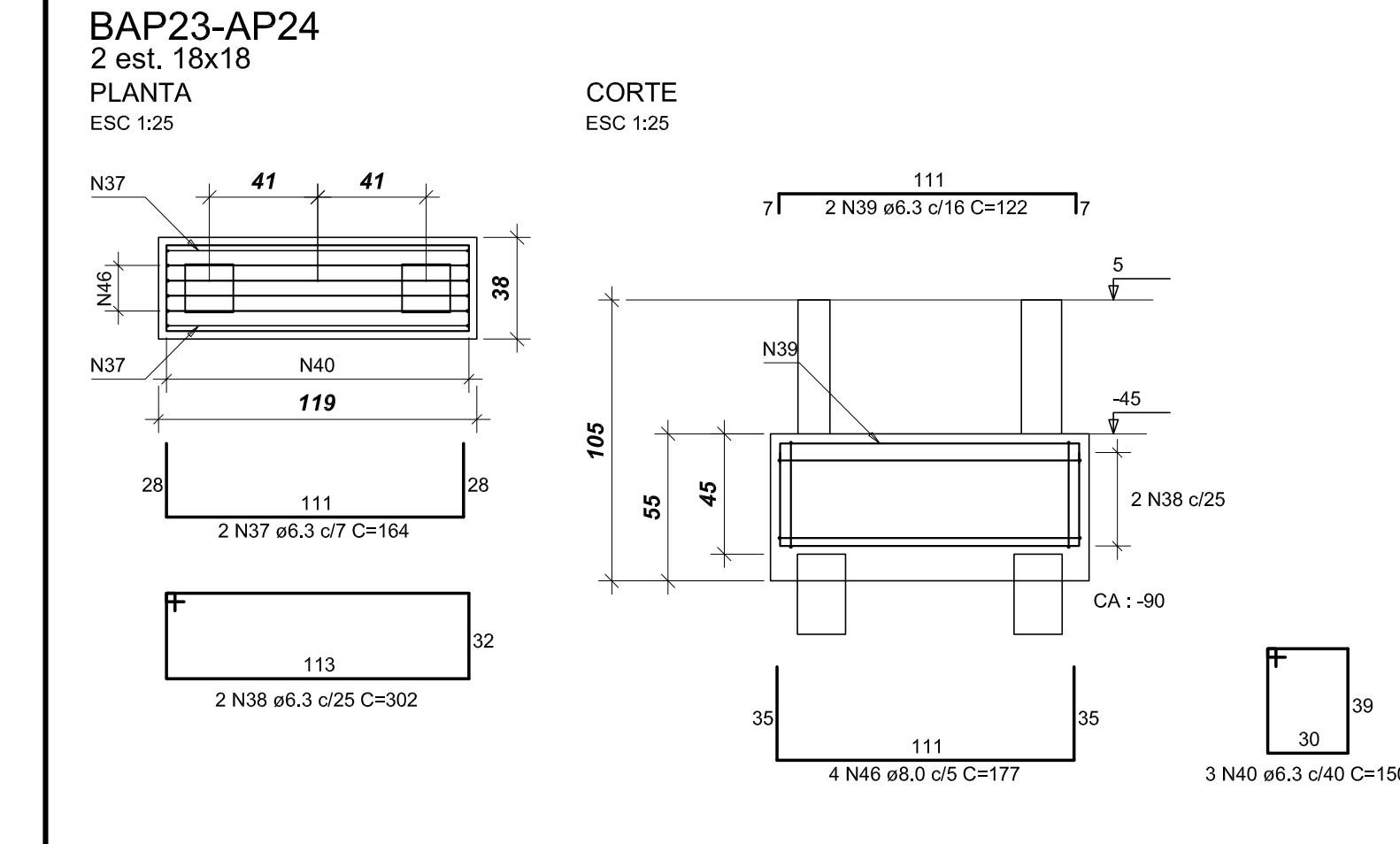
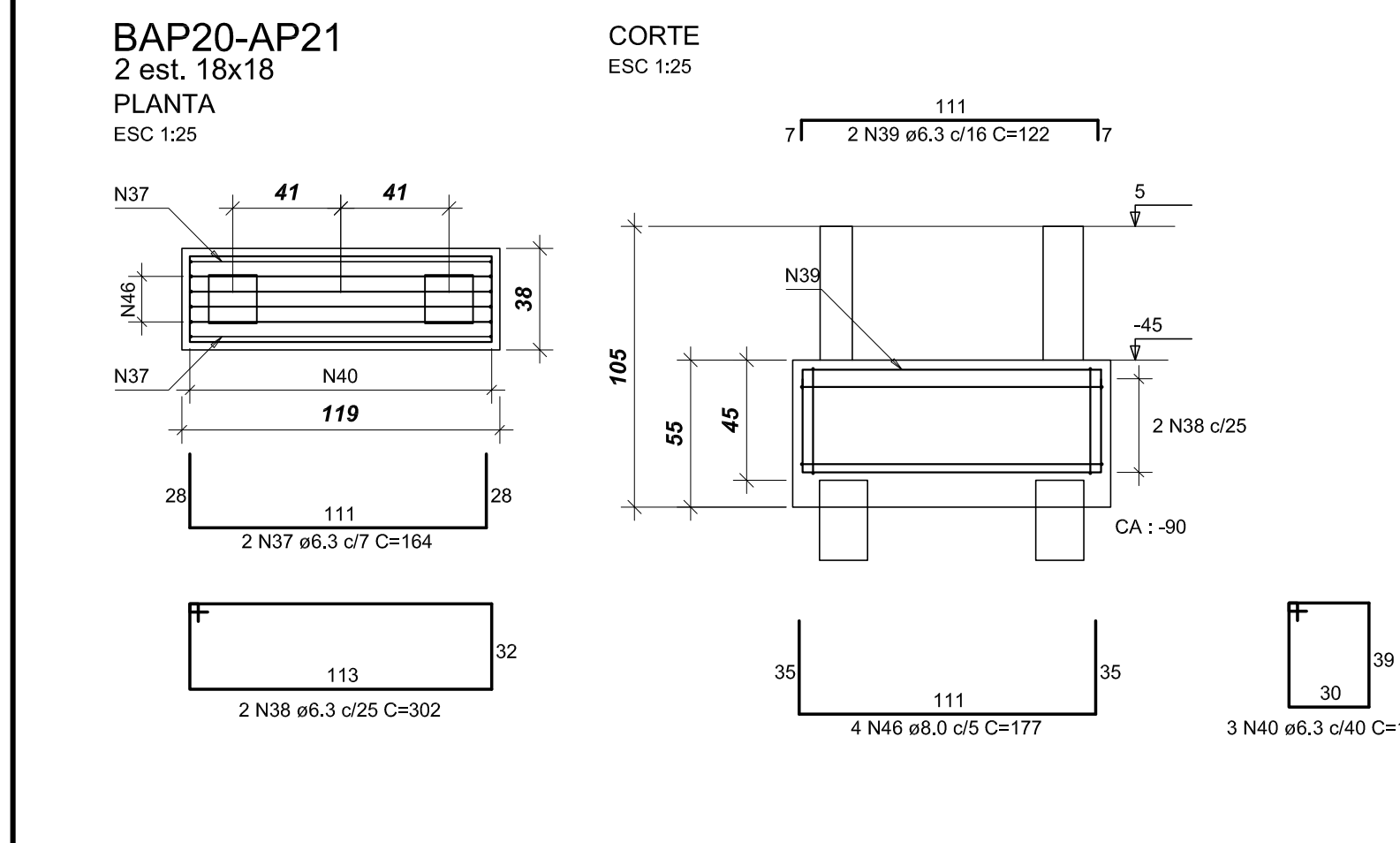
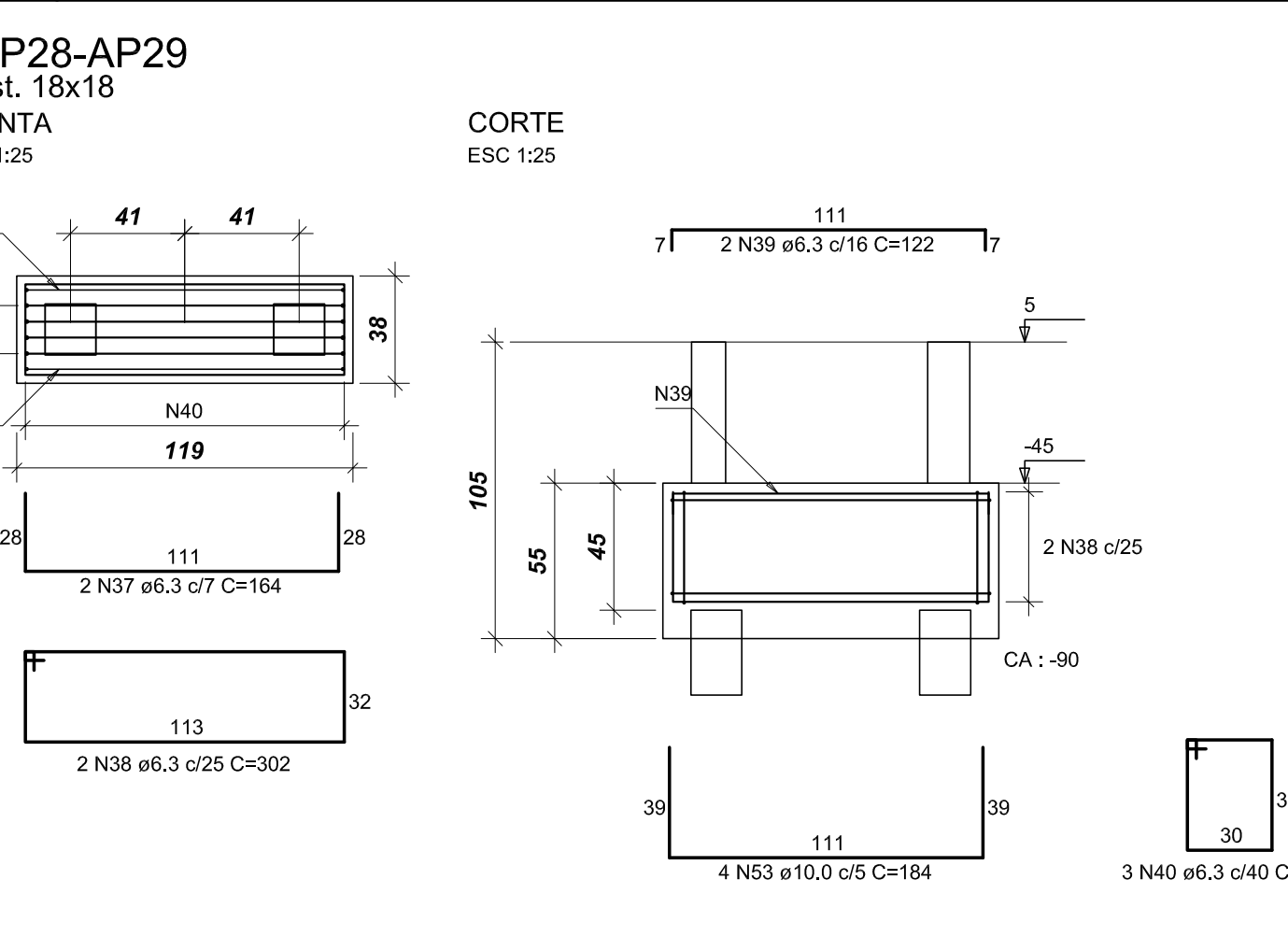
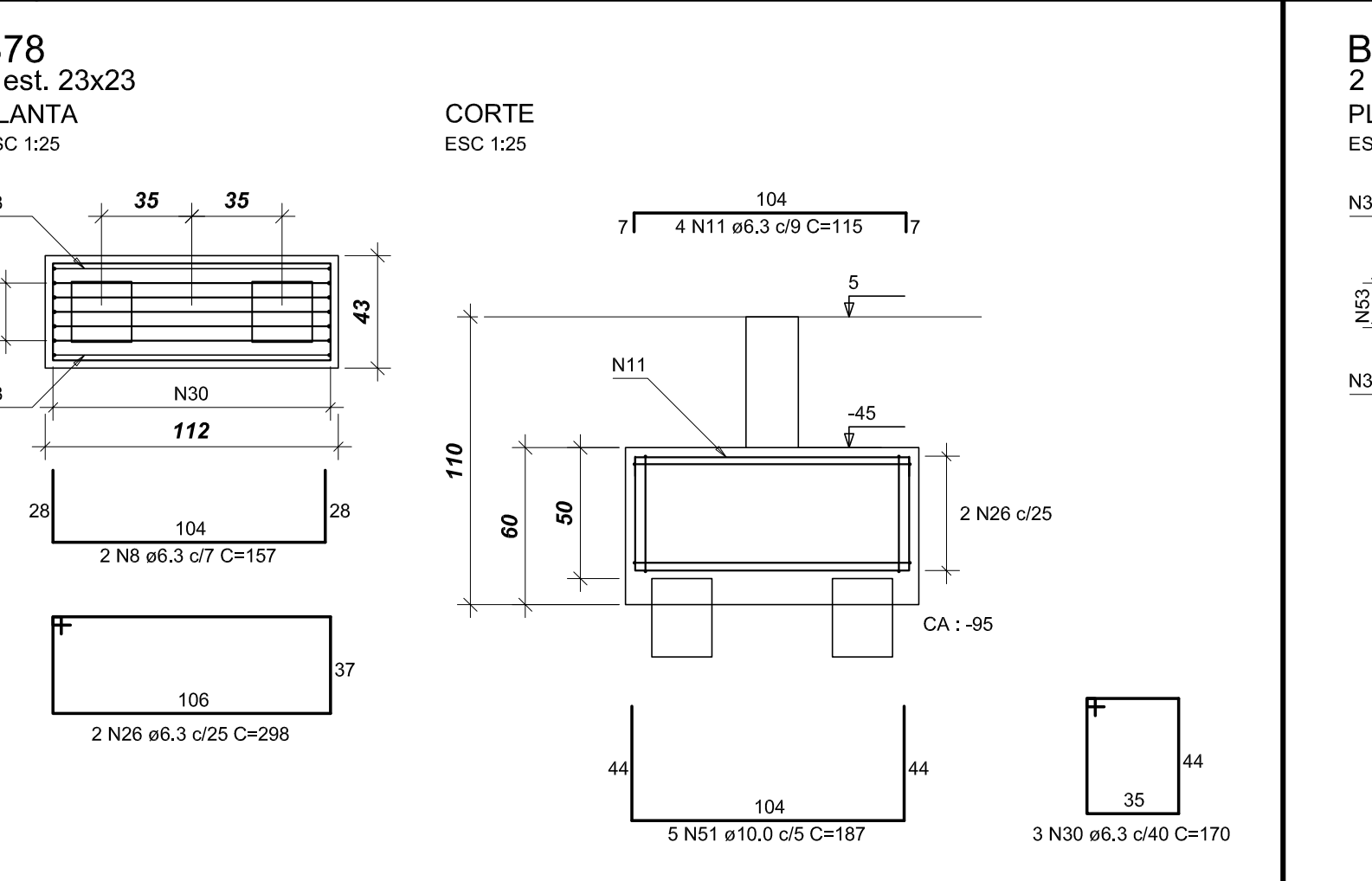
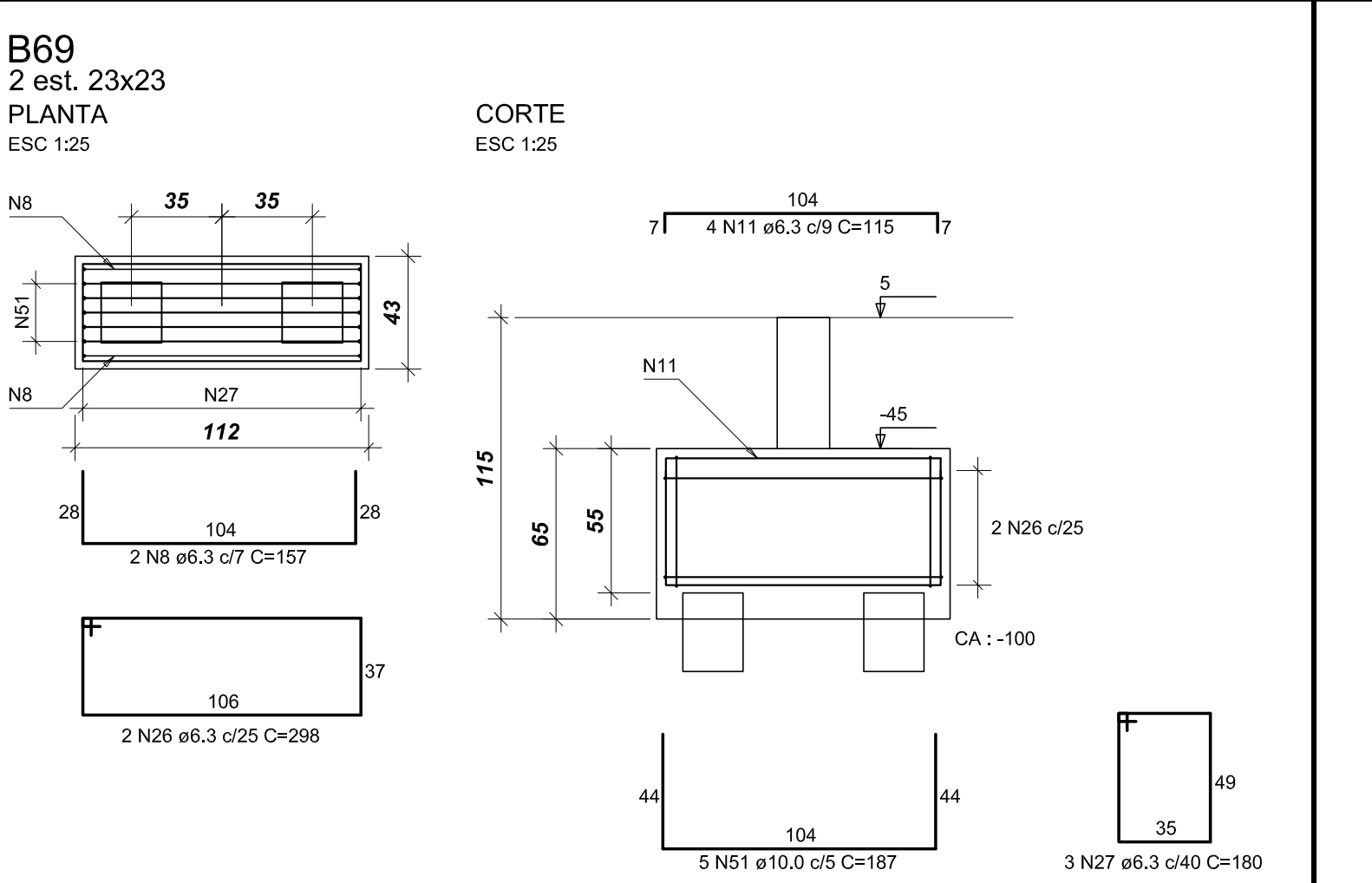
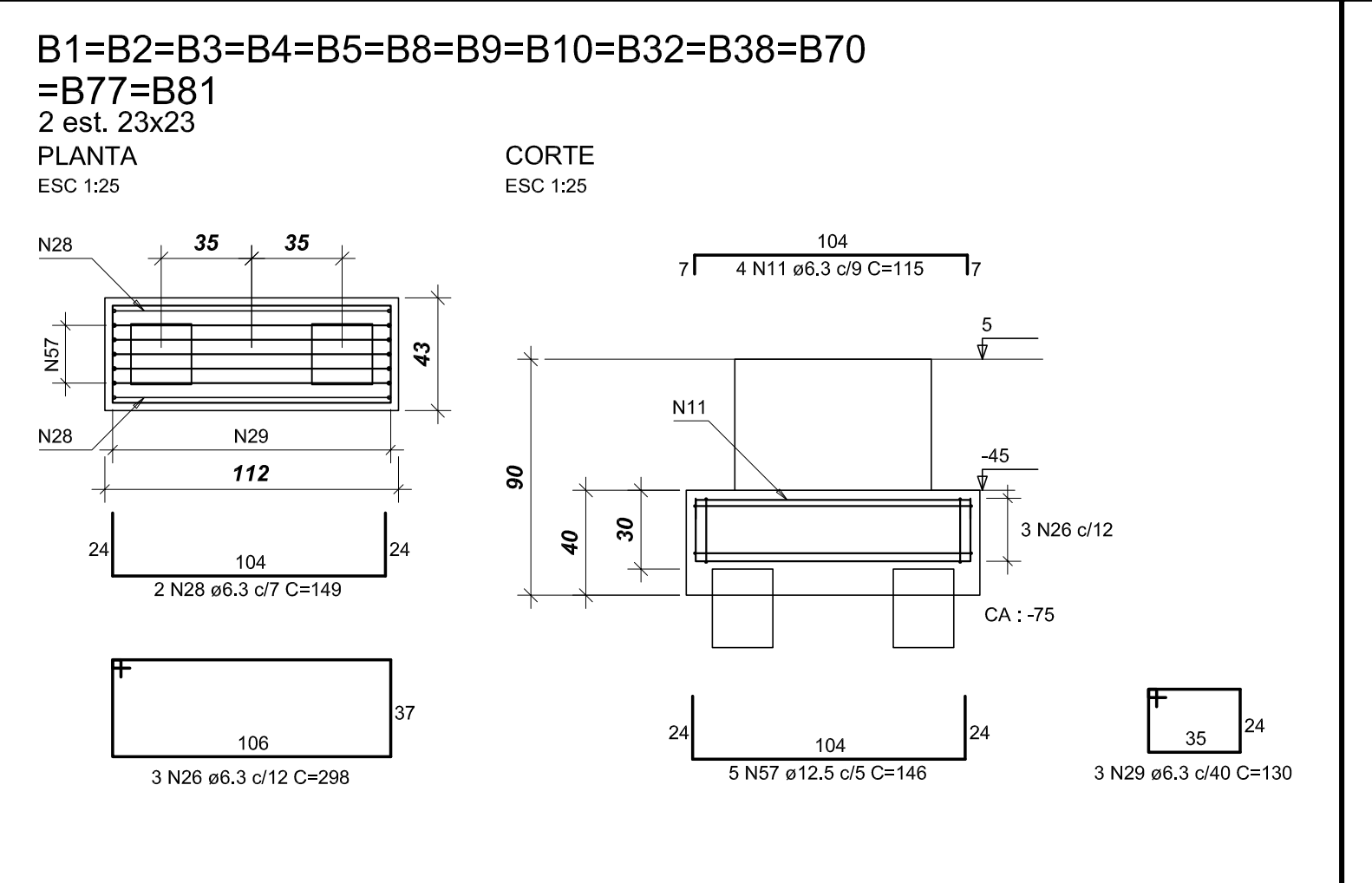
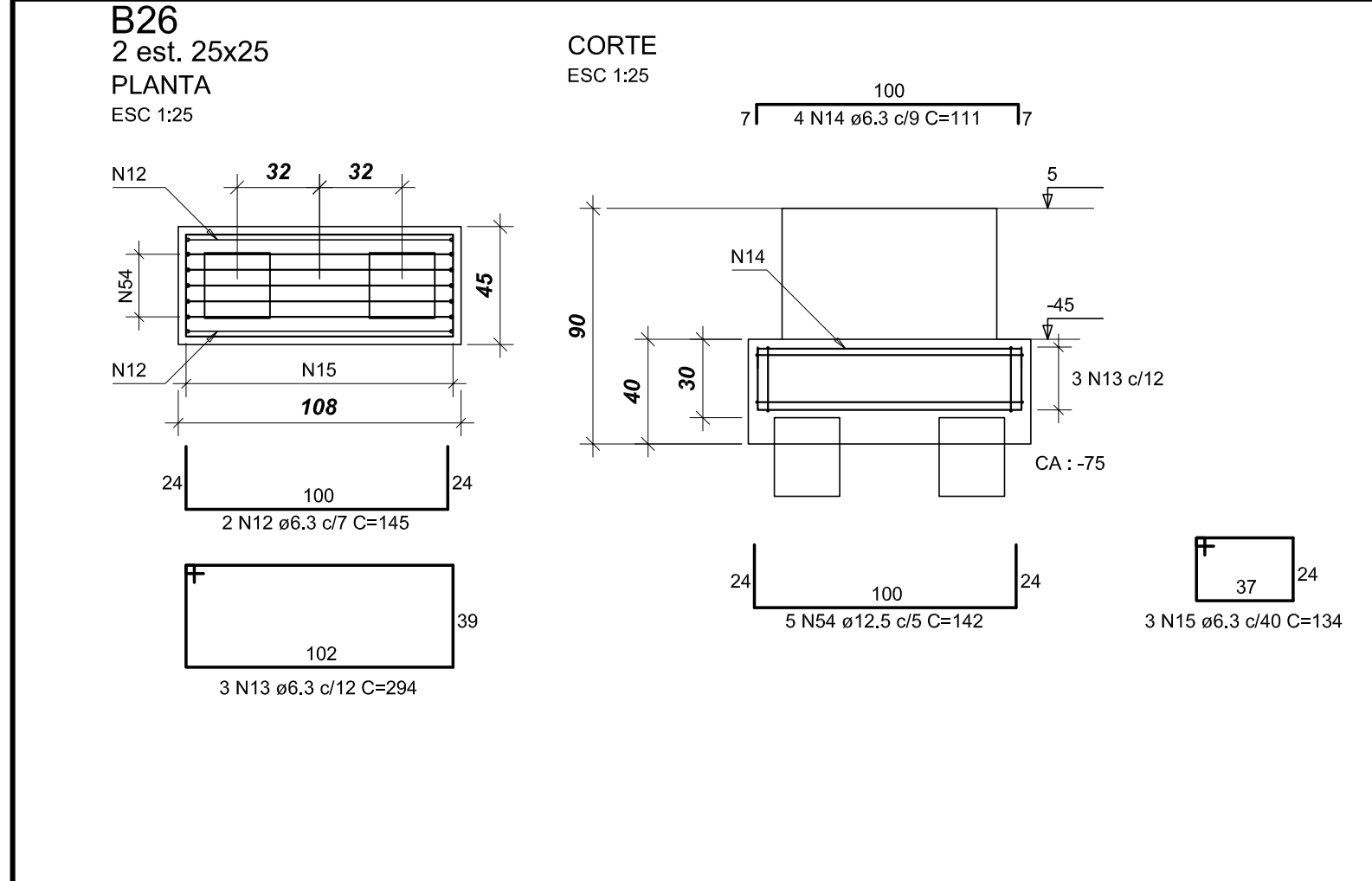
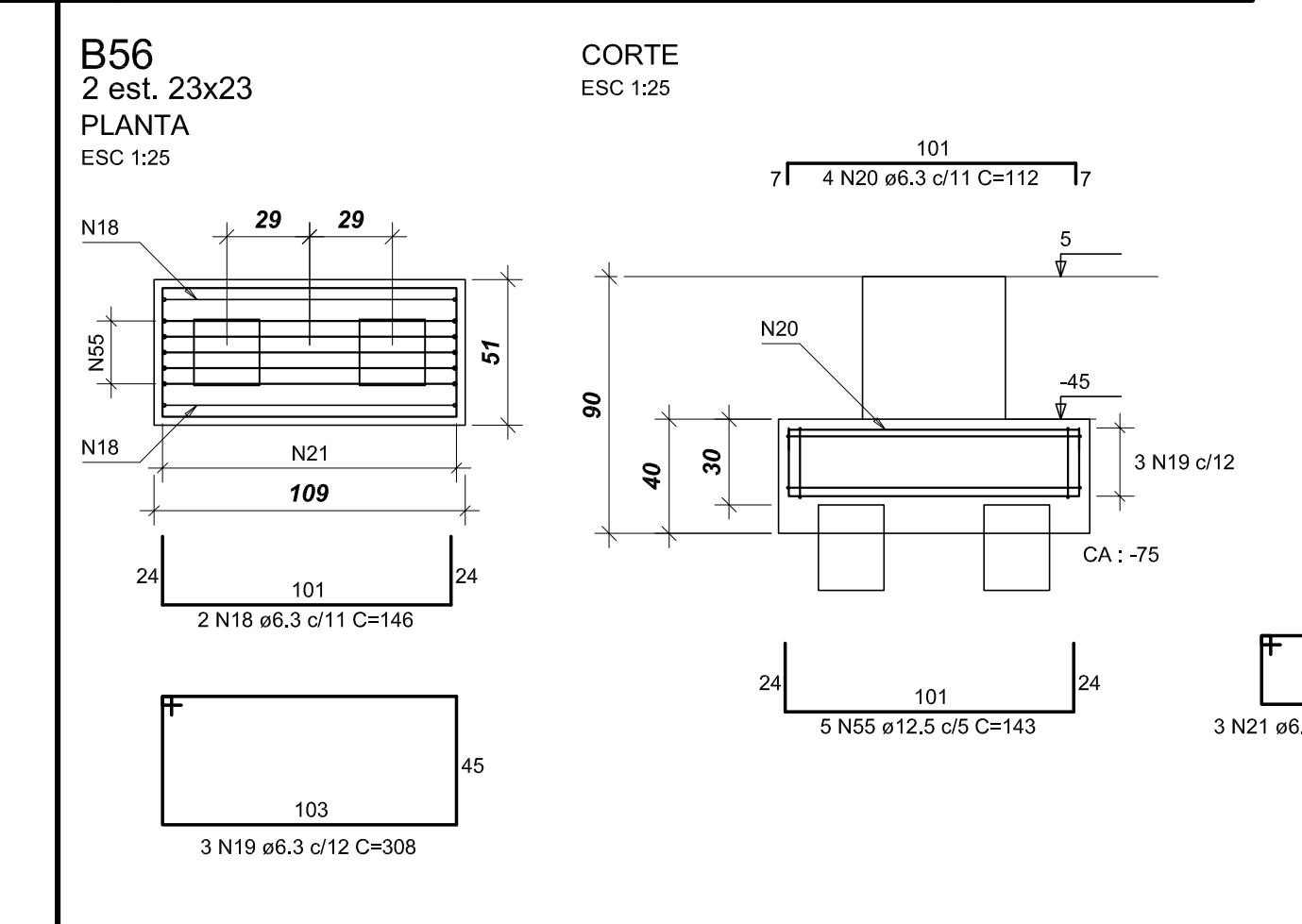
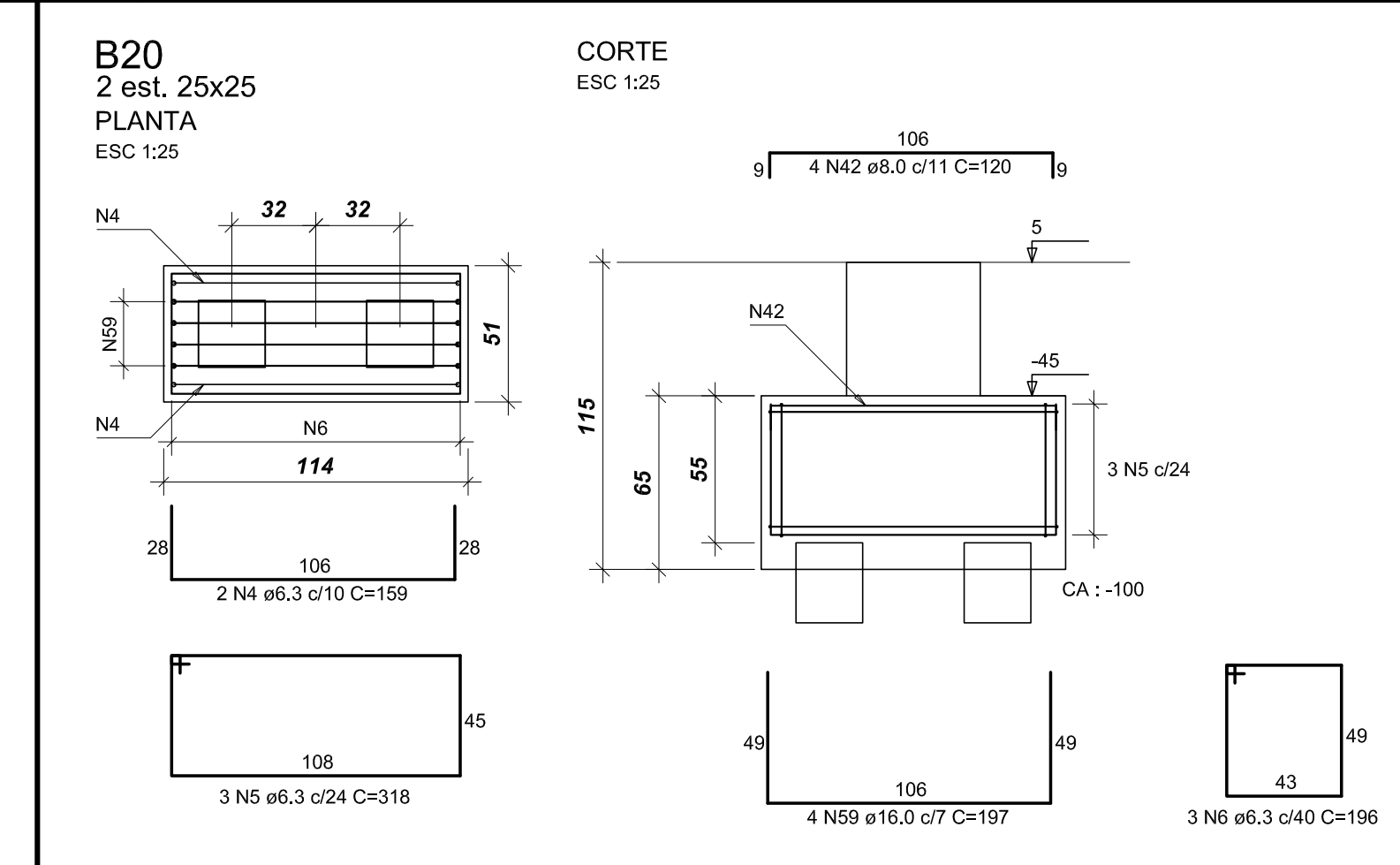
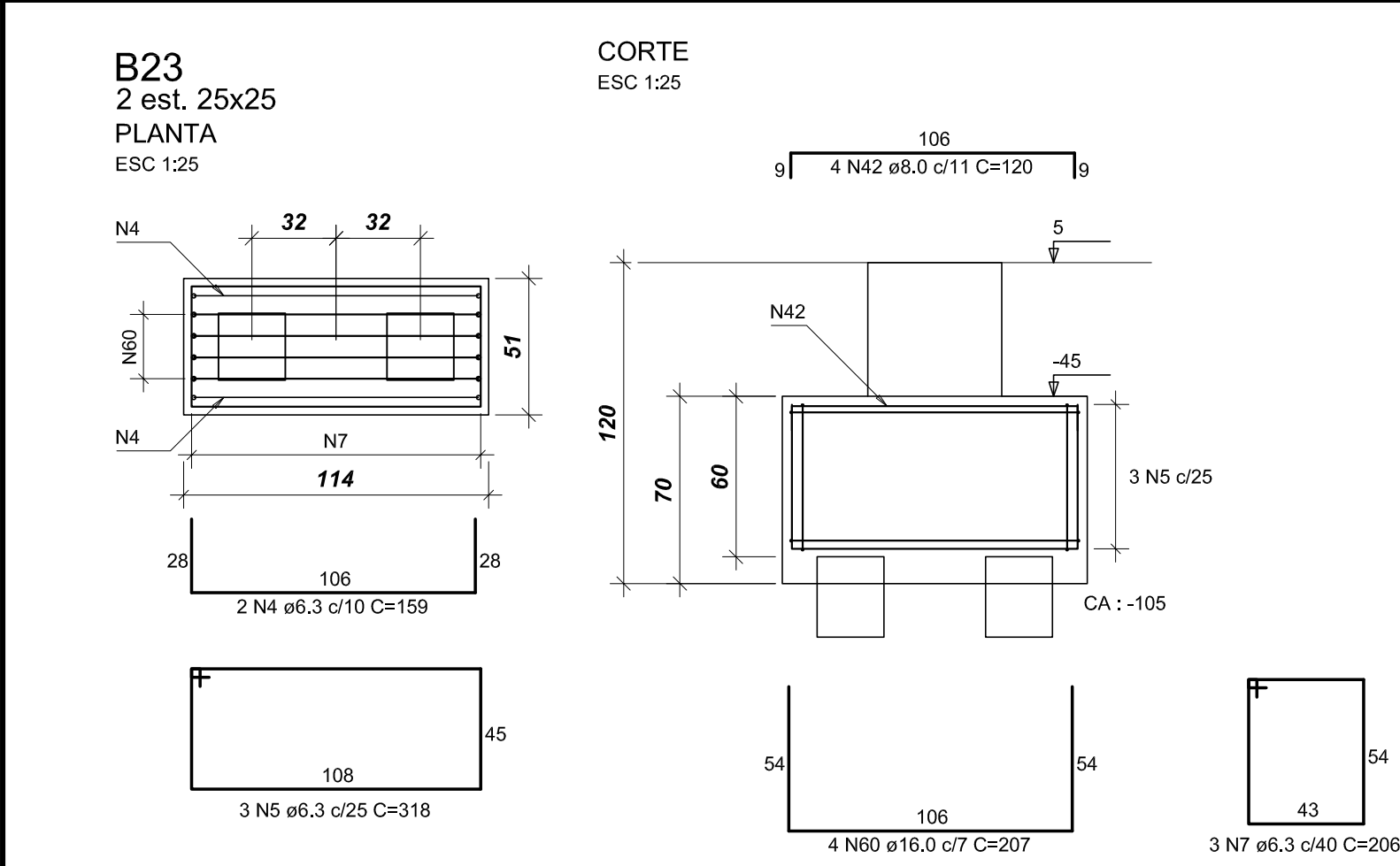
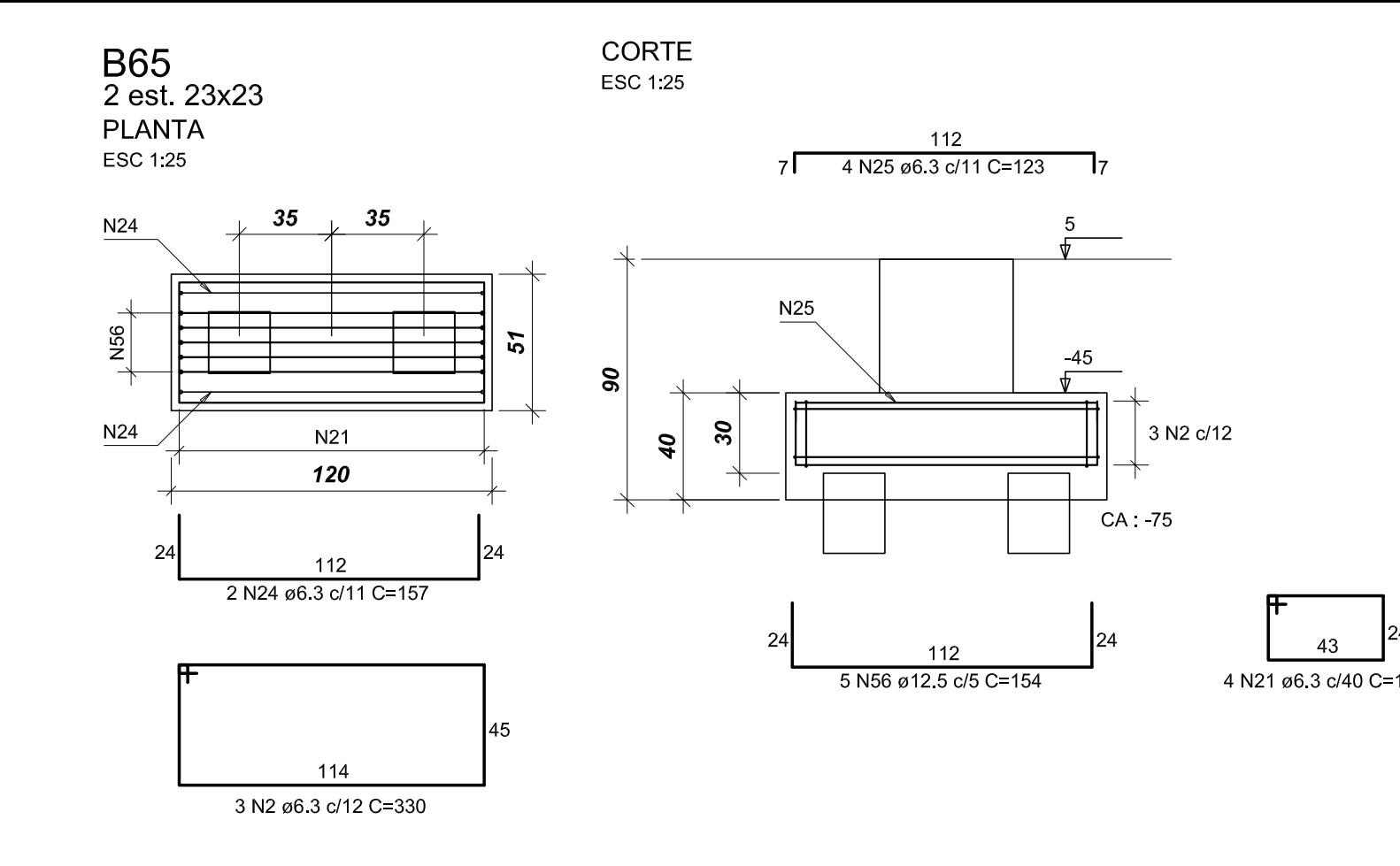
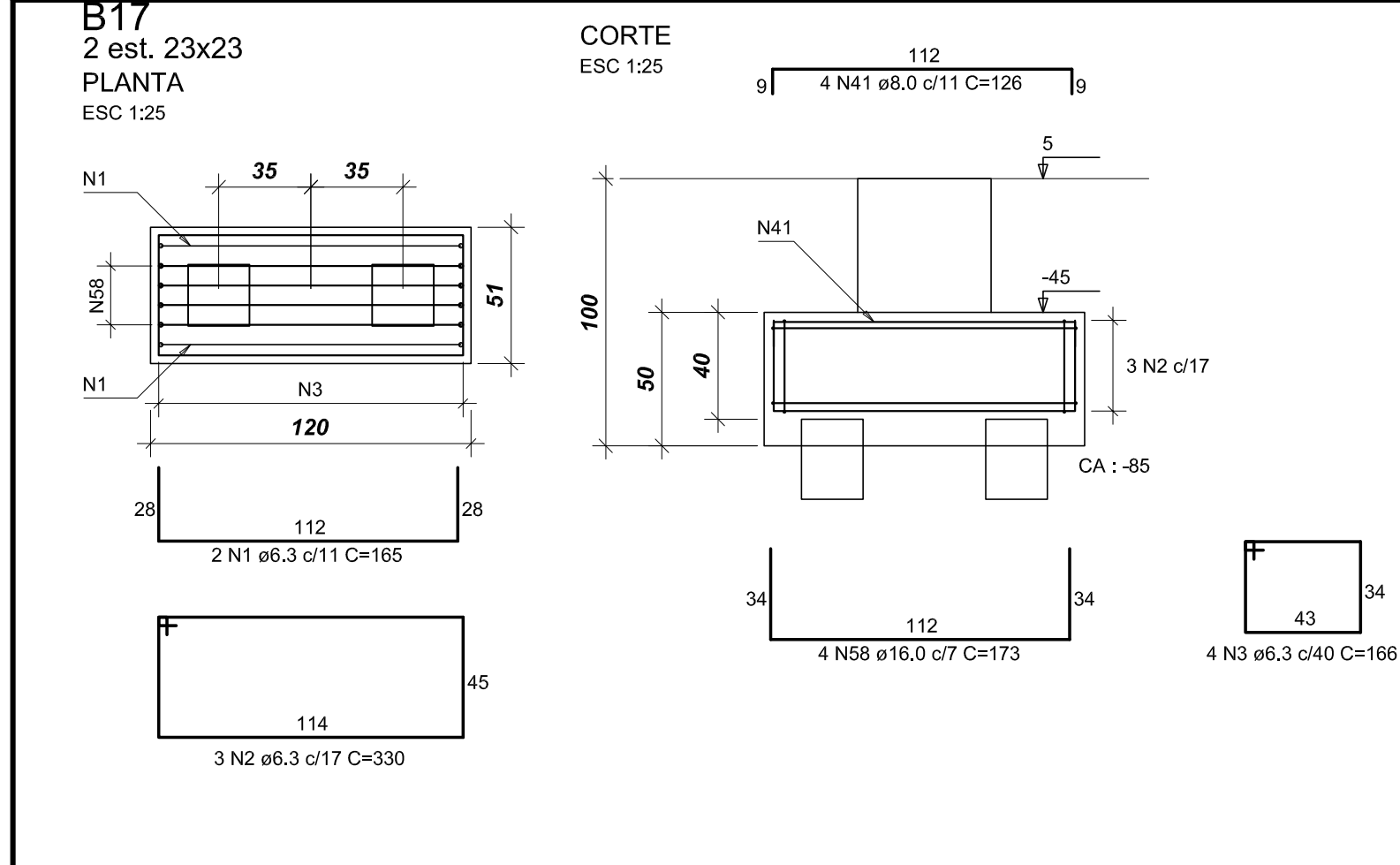
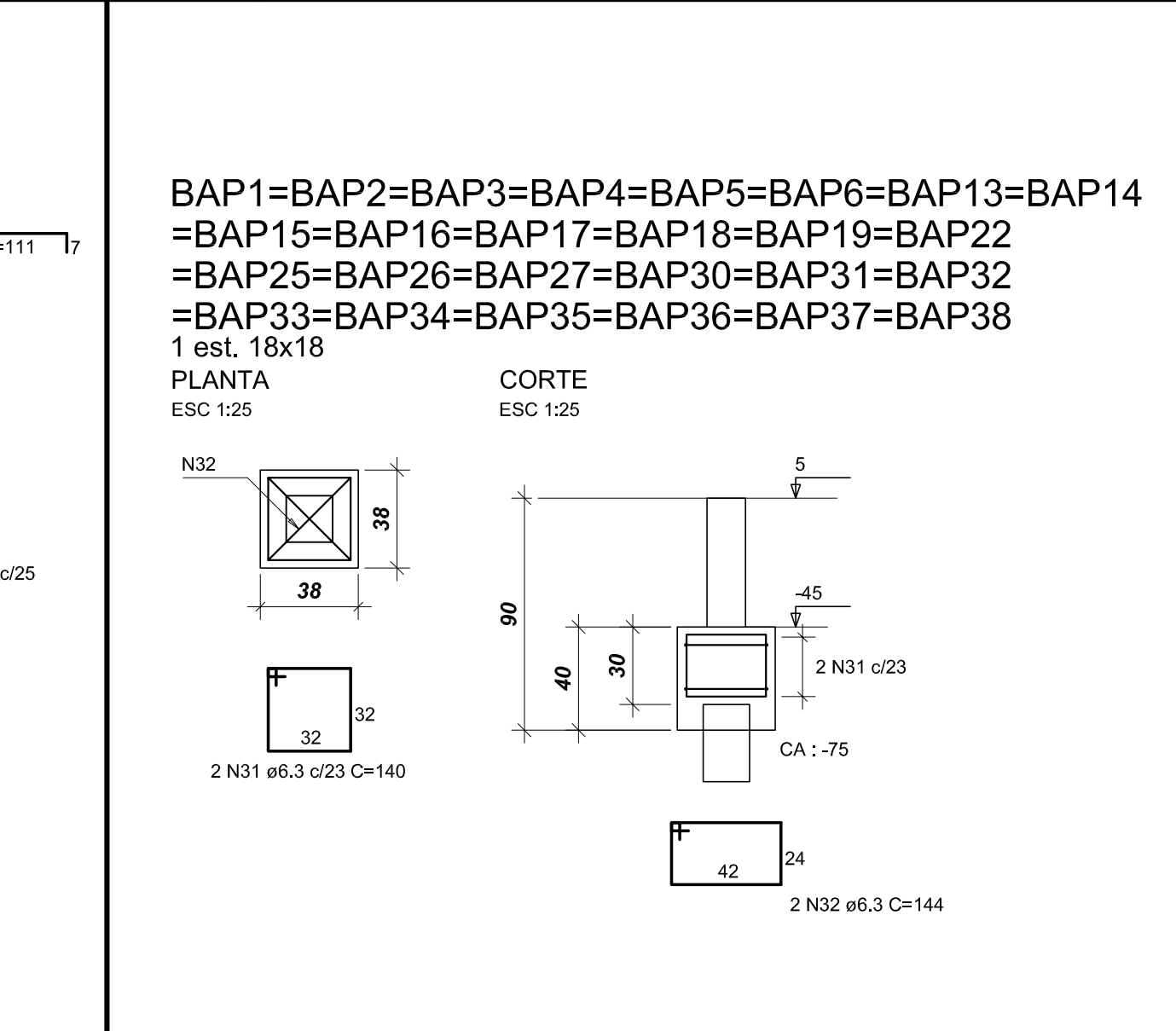
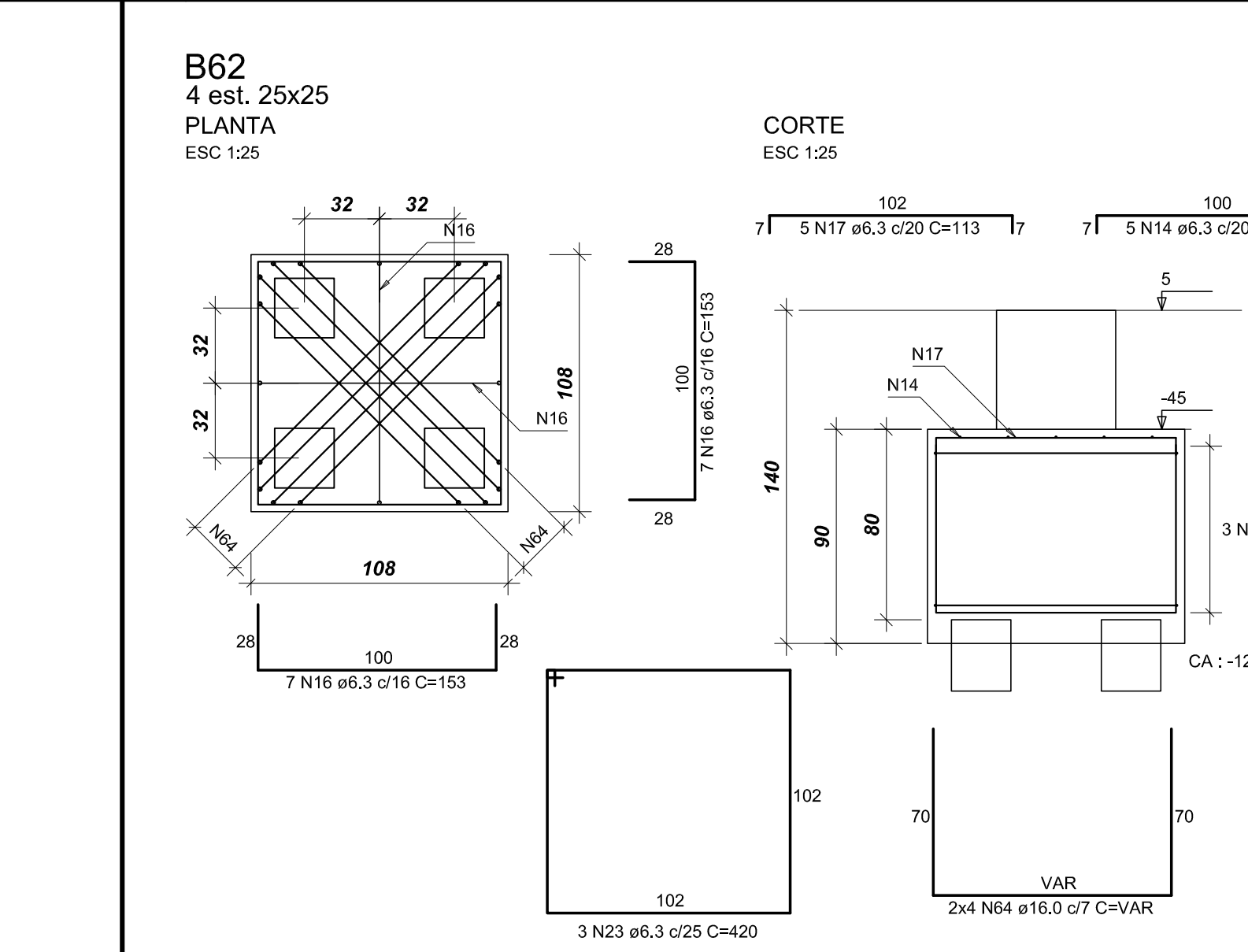
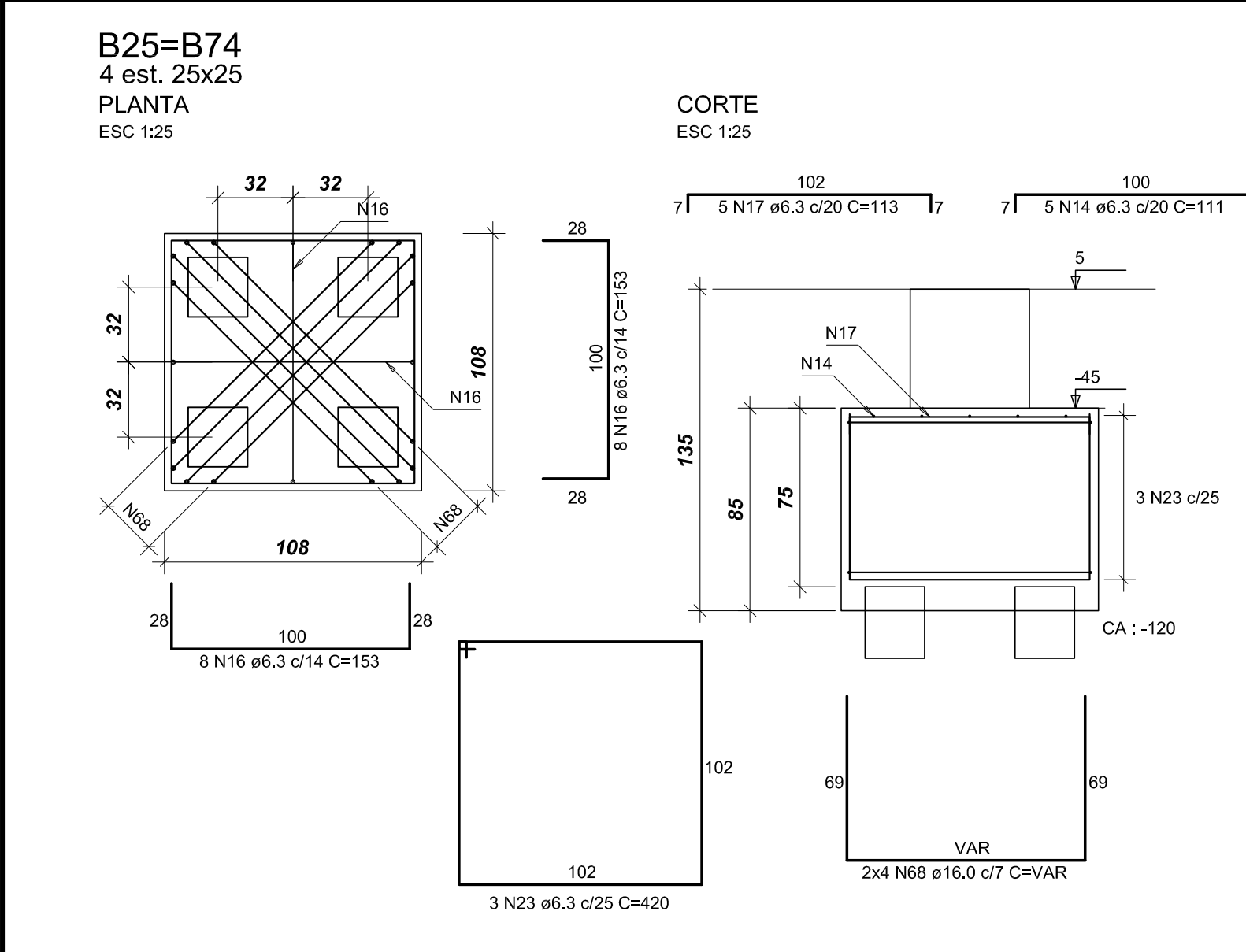
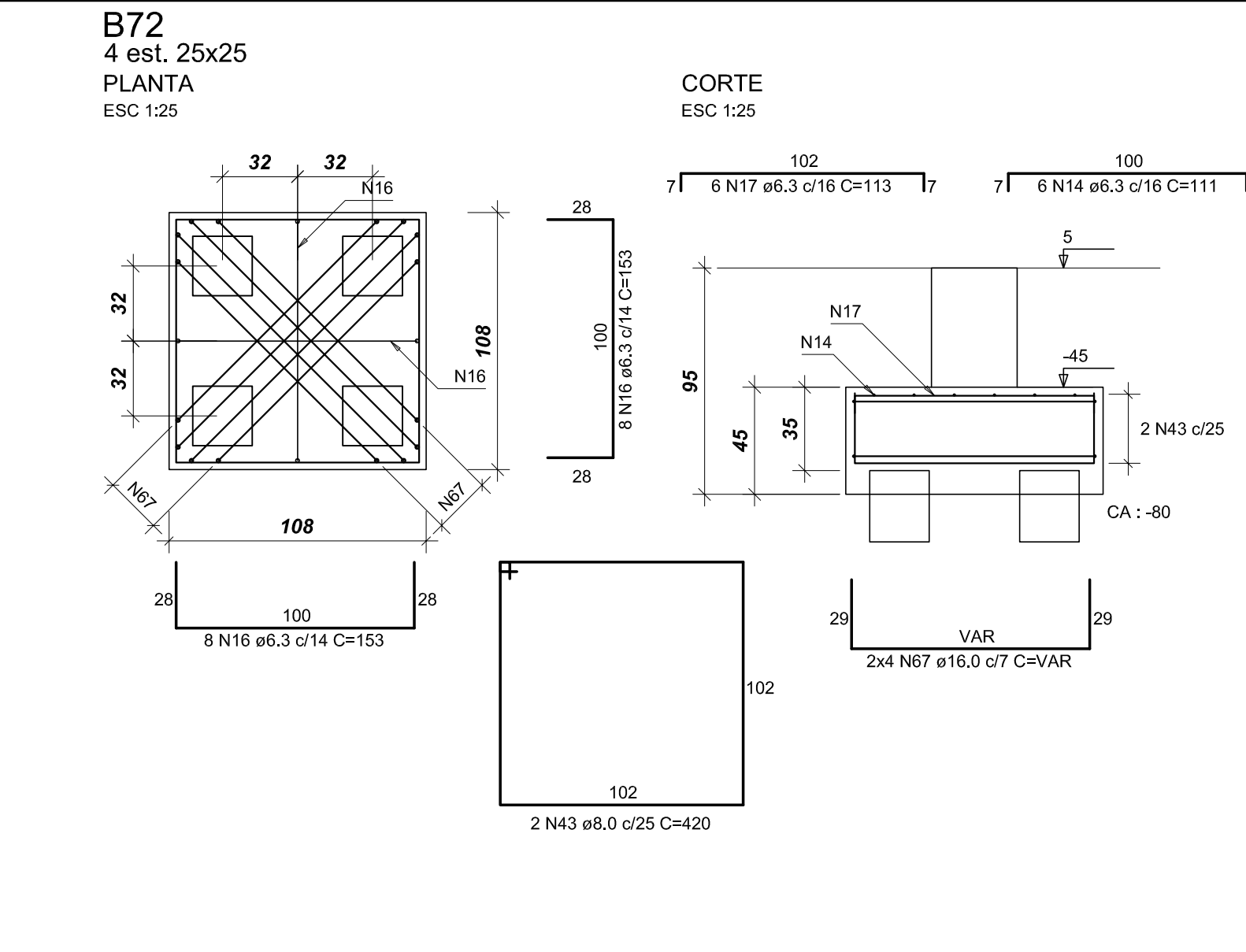
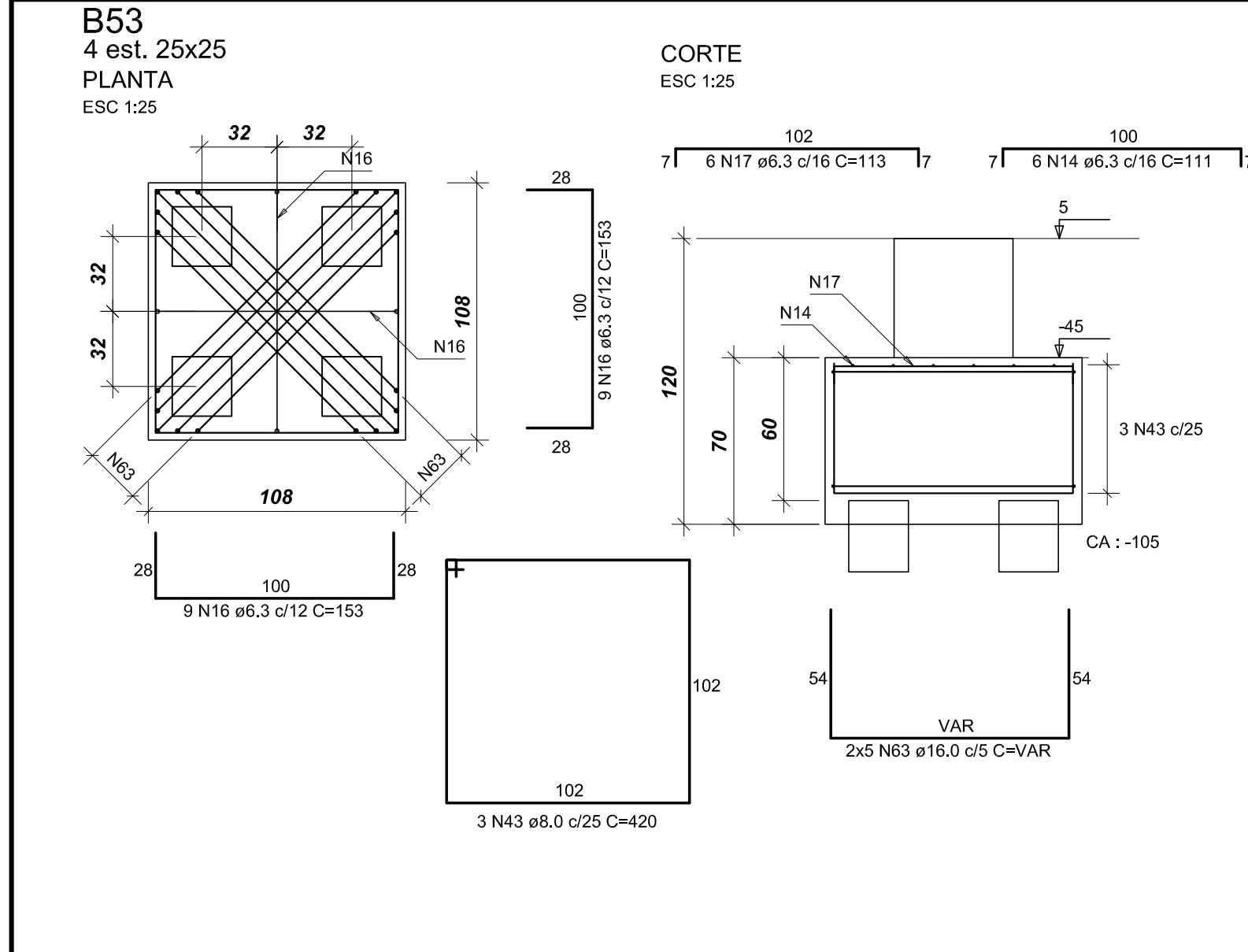
| RELAÇÃO DO AÇO |    |      |    |      |         |      |
|----------------|----|------|----|------|---------|------|
| AÇO            | N  | DIAM | Q  | UNIT | C.TOTAL | (cm) |
| 50             | 1  | 6,3  | 2  | 165  | 330     |      |
|                | 2  | 6,3  | 6  | 330  | 1980    |      |
|                | 3  | 6,3  | 4  | 165  | 664     |      |
|                | 4  | 6,3  | 4  | 159  | 636     |      |
|                | 5  | 6,3  | 3  | 135  | 198     |      |
|                | 6  | 6,3  | 3  | 106  | 588     |      |
|                | 7  | 6,3  | 3  | 106  | 588     |      |
|                | 8  | 6,3  | 74 | 157  | 11618   |      |
|                | 9  | 6,3  | 15 | 36   | 694     |      |
|                | 10 | 6,3  | 25 | 117  | 2925    |      |
|                | 11 | 6,3  | 85 | 115  | 9775    |      |
|                | 12 | 6,3  | 2  | 145  | 280     |      |
|                | 13 | 6,3  | 3  | 254  | 452     |      |
|                | 14 | 6,3  | 31 | 111  | 3441    |      |
|                | 15 | 6,3  | 3  | 135  | 452     |      |
|                | 16 | 6,3  | 90 | 153  | 12240   |      |
|                | 17 | 6,3  | 27 | 113  | 3051    |      |
|                | 18 | 6,3  | 2  | 146  | 282     |      |
|                | 19 | 6,3  | 4  | 112  | 448     |      |
|                | 20 | 6,3  | 9  | 420  | 3780    |      |
|                | 22 | 6,3  | 10 | 182  | 1820    |      |
|                | 23 | 6,3  | 9  | 420  | 3780    |      |
|                | 24 | 6,3  | 2  | 157  | 314     |      |
|                | 25 | 6,3  | 3  | 180  | 540     |      |
|                | 26 | 6,3  | 43 | 298  | 12814   |      |
|                | 27 | 6,3  | 3  | 180  | 540     |      |
|                | 28 | 6,3  | 26 | 149  | 3874    |      |
|                | 29 | 6,3  | 39 | 130  | 5070    |      |
|                | 30 | 6,3  | 3  | 170  | 510     |      |
|                | 31 | 6,3  | 52 | 144  | 7288    |      |
|                | 32 | 6,3  | 52 | 144  | 7488    |      |
|                | 33 | 6,3  | 6  | 122  | 732     |      |
|                | 34 | 6,3  | 6  | 298  | 1788    |      |
|                | 35 | 6,3  | 6  | 122  | 720     |      |
|                | 36 | 6,3  | 9  | 140  | 1260    |      |
|                | 37 | 6,3  | 6  | 164  | 984     |      |
|                | 38 | 6,3  | 6  | 302  | 1812    |      |
|                | 39 | 6,3  | 9  | 150  | 1350    |      |
|                | 40 | 6,3  | 9  | 150  | 1350    |      |
|                | 41 | 6,0  | 4  | 126  | 504     |      |
|                | 42 | 8,0  | 8  | 120  | 960     |      |
|                | 43 | 8,0  | 8  | 173  | 2100    |      |
|                | 44 | 8,0  | 28 | 100  | 4480    |      |
|                | 45 | 8,0  | 8  | 173  | 1384    |      |
|                | 46 | 8,0  | 8  | 177  | 1416    |      |
|                | 47 | 10,0 | 15 | 103  | 2895    |      |
|                | 48 | 10,0 | 12 | 177  | 2124    |      |
|                | 49 | 10,0 | 8  | 171  | 1368    |      |
|                | 50 | 10,0 | 14 | 159  | 2226    |      |
|                | 51 | 10,0 | 10 | 187  | 1870    |      |
|                | 52 | 10,0 | 4  | 172  | 688     |      |
|                | 53 | 10,0 | 4  | 184  | 736     |      |
|                | 54 | 12,5 | 5  | 142  | 710     |      |
|                | 55 | 12,5 | 5  | 143  | 715     |      |
|                | 56 | 12,5 | 60 | 146  | 8460    |      |
|                | 57 | 12,5 | 4  | 107  | 708     |      |
|                | 58 | 16,0 | 4  | 173  | 692     |      |
|                | 59 | 16,0 | 4  | 207  | 828     |      |
|                | 60 | 16,0 | 4  | 207  | 828     |      |
|                | 61 | 16,0 | 10 | VAR  | VAR     |      |
|                | 62 | 16,0 | 16 | VAR  | VAR     |      |
|                | 63 | 16,0 | 10 | VAR  | VAR     |      |
|                | 64 | 16,0 | 8  | VAR  | VAR     |      |
|                | 65 | 16,0 | 8  | VAR  | VAR     |      |
|                | 66 | 16,0 | 8  | VAR  | VAR     |      |
|                | 67 | 16,0 | 8  | VAR  | VAR     |      |
|                | 68 | 16,0 | 16 | VAR  | VAR     |      |

BAP1=BAP2=BAP3=BAP4=BAP5=BAP6=BAP13=BAP14  
=BAP15=BAP16=BAP17=BAP18=BAP19=BAP22  
=BAP25=BAP26=BAP27=BAP30=BAP31=BAP32  
=BAP33=BAP34=BAP35=BAP36=BAP37=BAP38  
1 est. 18x18



| RESUMO DO AÇO |       |         |                 |
|---------------|-------|---------|-----------------|
| AÇO           | DIAM  | C.TOTAL | PESO(40%<br>kg) |
| CA50          | 6,3   | 1141,8  | 279,8           |
|               | 8,0   | 105,4   | 42,8            |
|               | 10,0  | 118,1   | 47,5            |
|               | 12,5  | 117,1   | 112,9           |
|               | 16,0  | 187,9   | 256,9           |
| PESO TOTAL    |       |         |                 |
| CA50          | 805,9 |         |                 |

Vol. de concreto total (C-20) = 17,01 m³  
Área da forma total = 88,59 m²



|                                                                                                                                                                                      |                  |                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------|
| 01                                                                                                                                                                                   | 12.07.2013       | PROJETO ESTRUTURAL          |
| VP                                                                                                                                                                                   | DATA             | RESPONSÁVEL                 |
|                                                                                                                                                                                      |                  | COORDENADOR DA REVISÃO      |
| <b>AS BUILT</b><br>AS BUILT ENGENHARIA DE PROJETOS LTDA<br>Rua Jovino do Rosário, 1584 - Boa Vista<br>CEP: 62060-425 - Curitiba - Paraná<br>asbultprojetos@gmail.com - (41)3088-4949 |                  |                             |
| PACOTE: PROJETO ESTRUTURAL                                                                                                                                                           |                  |                             |
| CONFERIR MEDIDAS NA OBRA                                                                                                                                                             |                  |                             |
| OBRA: BIBLIOTECA CAMPUS UNAI                                                                                                                                                         |                  |                             |
| PROPRIETÁRIO: UNIVERSIDADE FEDERAL DOS VALES DO JEQUITINHONHA E MUCURI                                                                                                               |                  | CNPJ: 16.968.315/0001-57    |
| PRONOME: FERRAGEM DOS BLOCOS (2)                                                                                                                                                     |                  |                             |
| AUTOR PROJETO: CARLOS HENRIQUE DE SOUZA GONÇALVES<br>CREA 79620-D - Pr                                                                                                               |                  |                             |
| ESCALA: INDICADA                                                                                                                                                                     | DESENHO: EQUIPE  | FOLHA: 04/26                |
| VERSÃO: VERSAO 1                                                                                                                                                                     | DATA: 17/07/2013 | ÁREA CONTRUÇÃO: 4,127,32 m² |
| ARQUIVO: 2 N49 ø10,0 C=171                                                                                                                                                           |                  |                             |