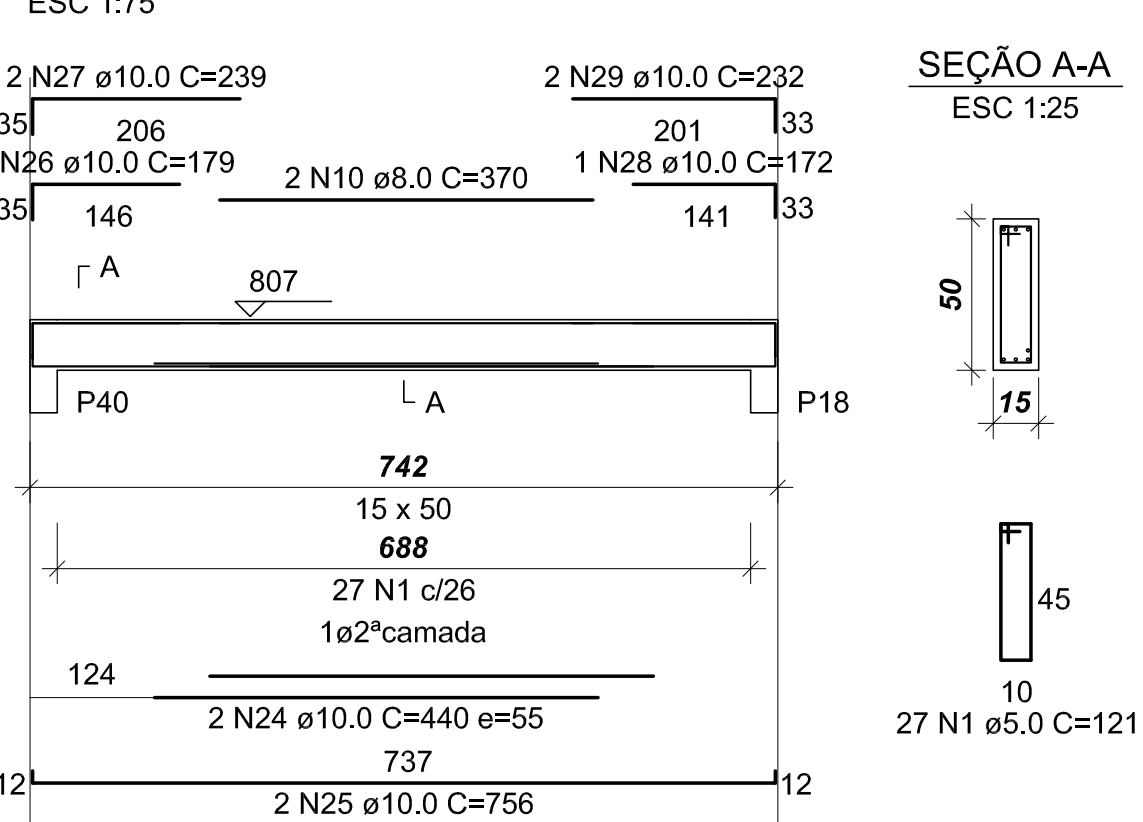
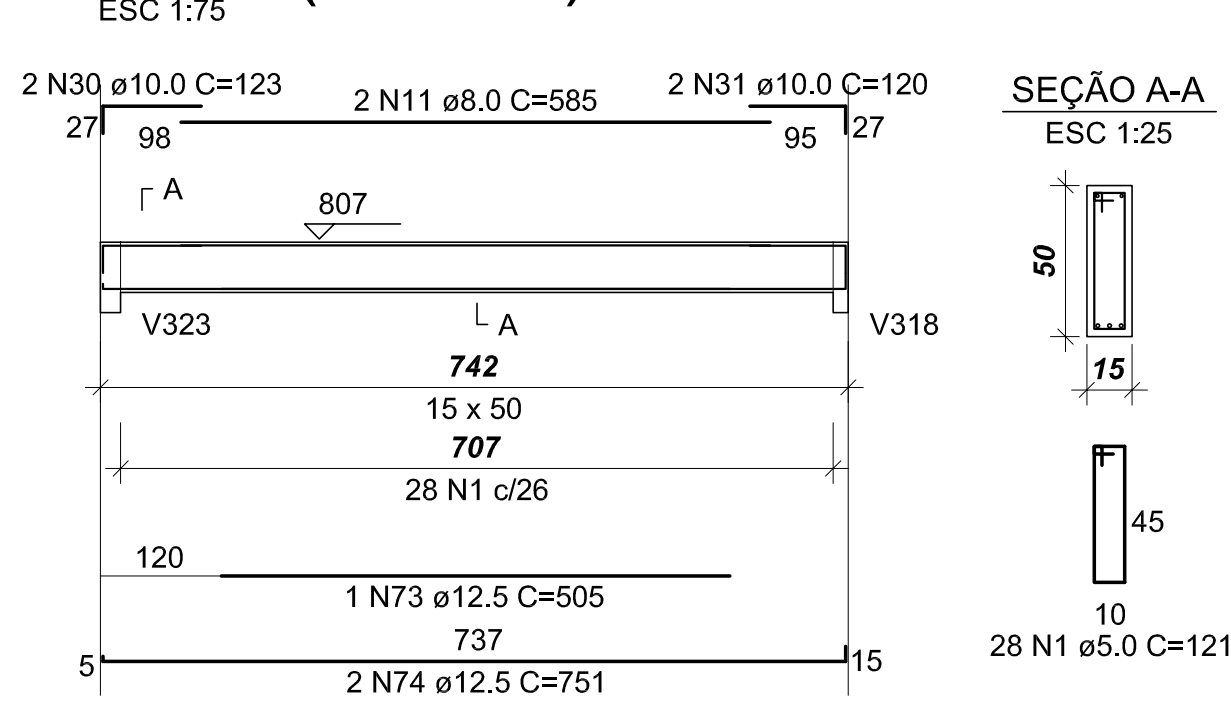


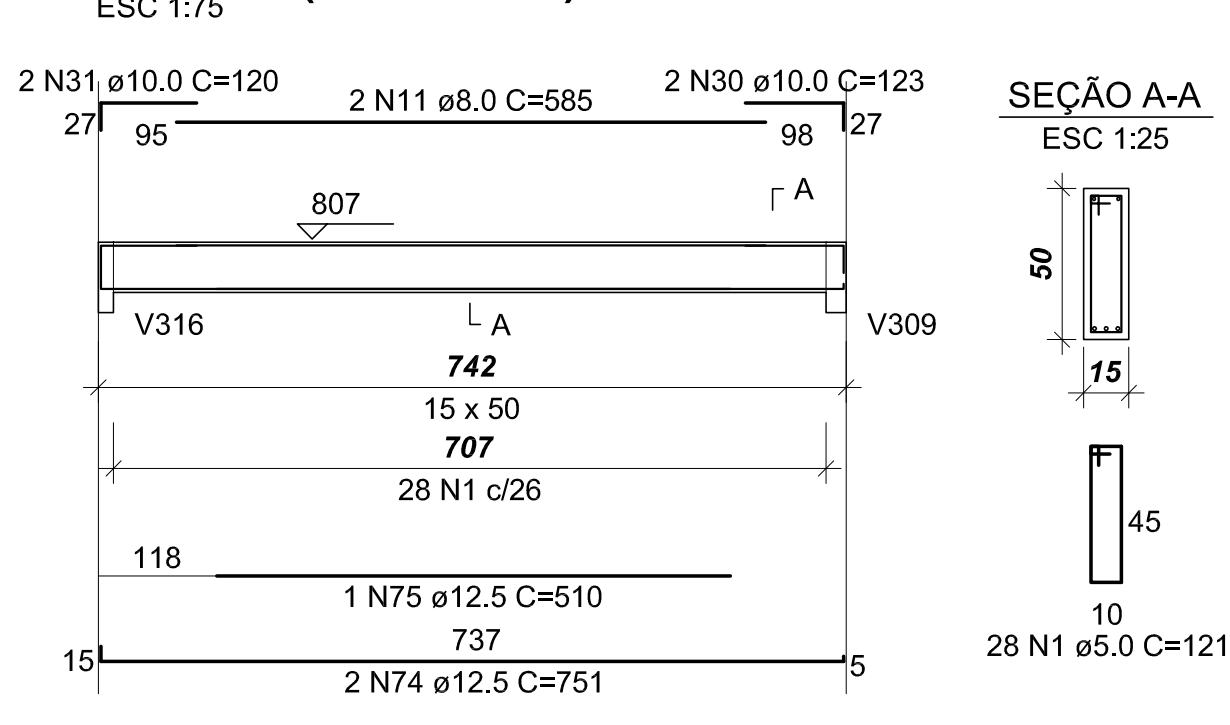
### V364 (15 x 50)



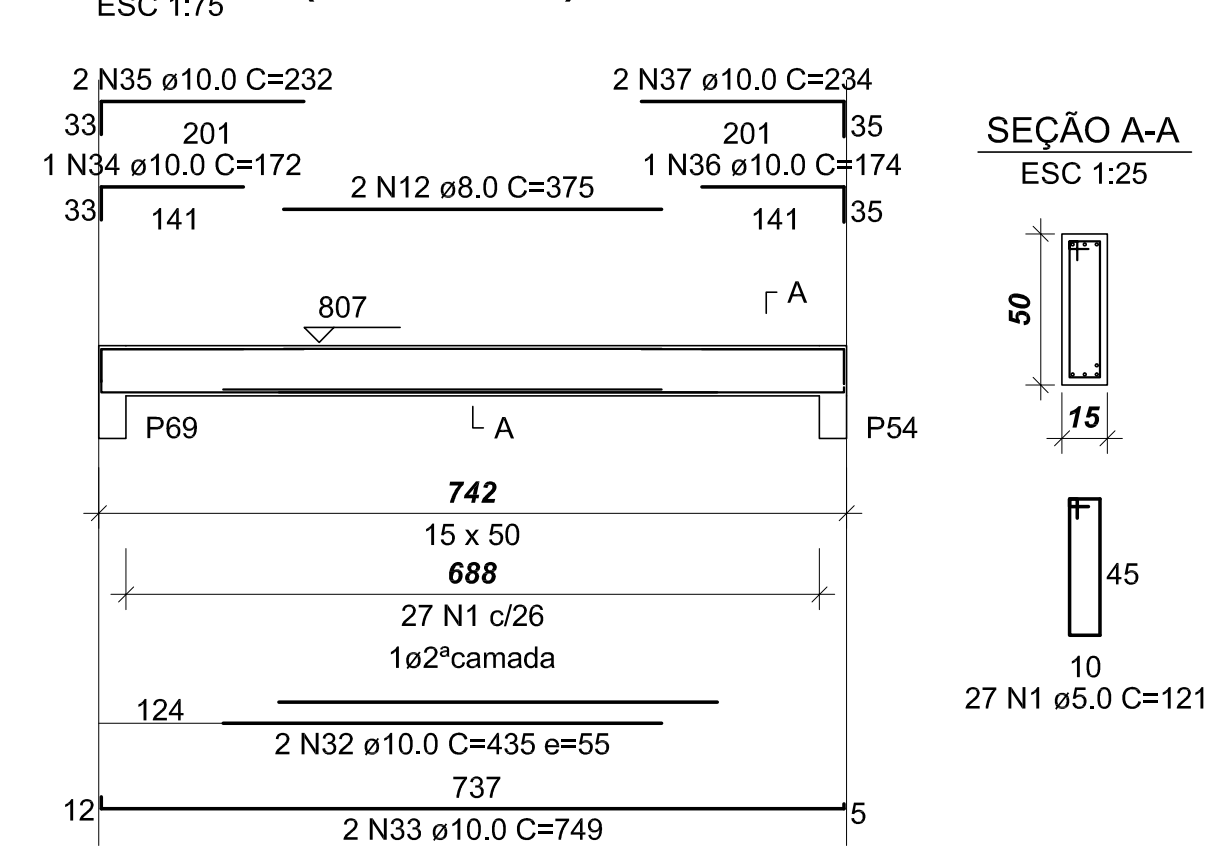
### V365 (15 x 50)



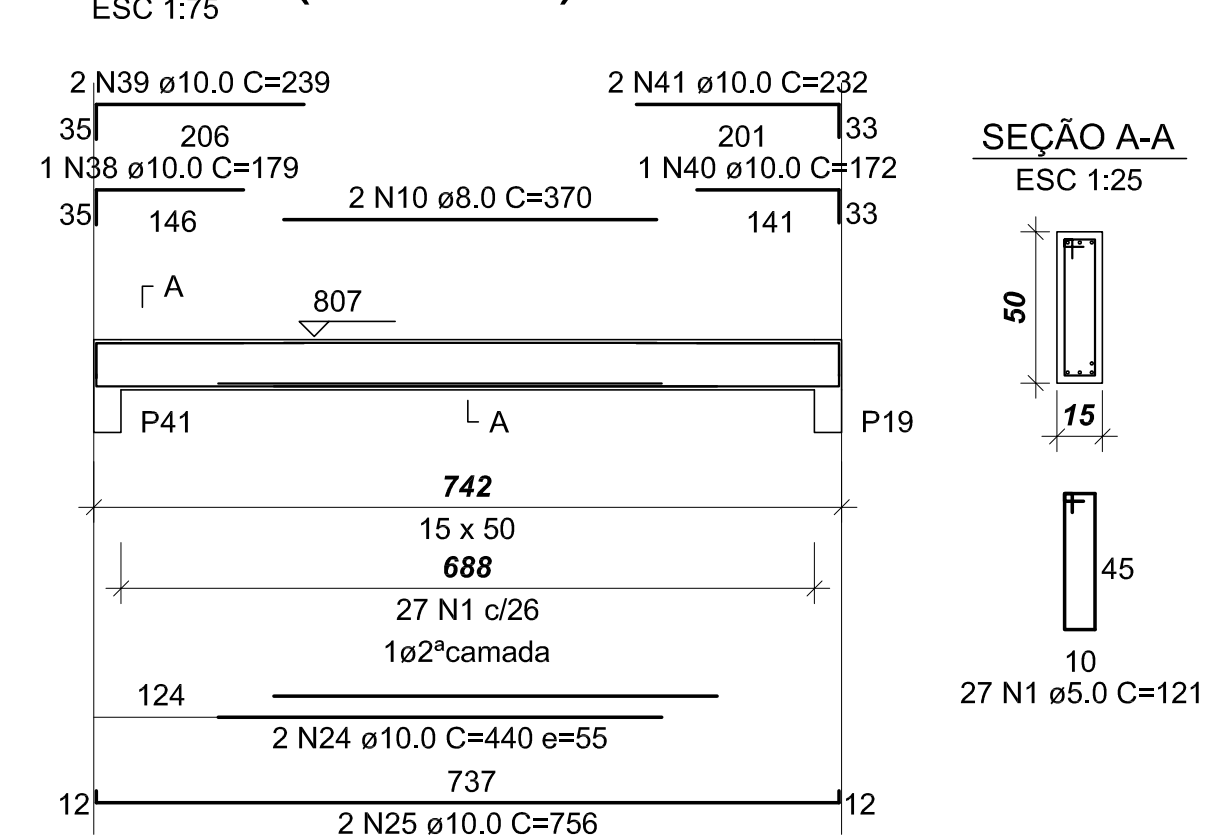
### V366 (15 x 50)



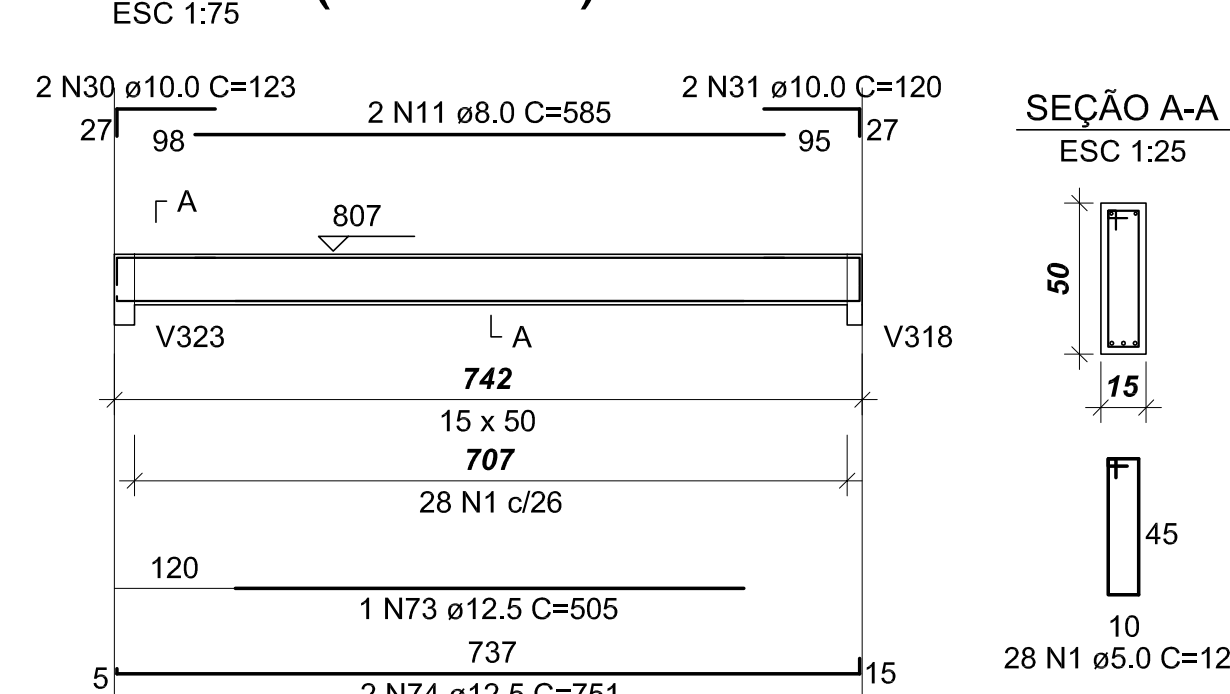
### V367 (15 x 50)



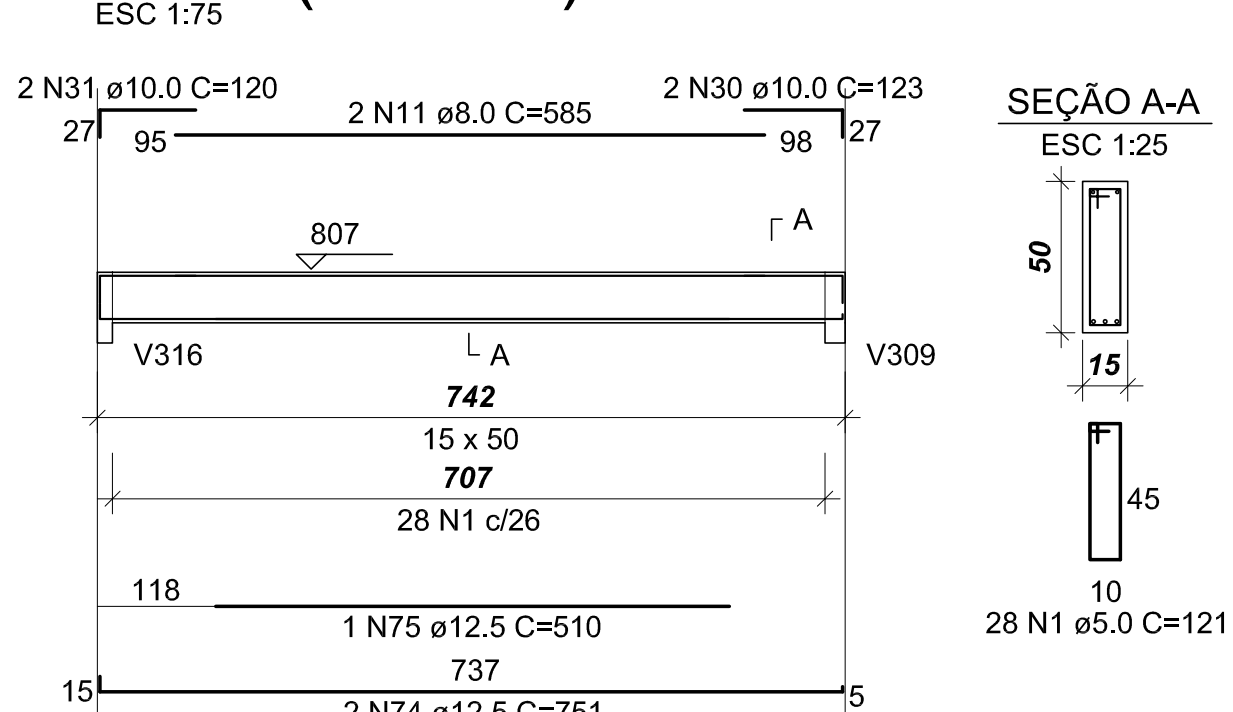
### V368 (15 x 50)



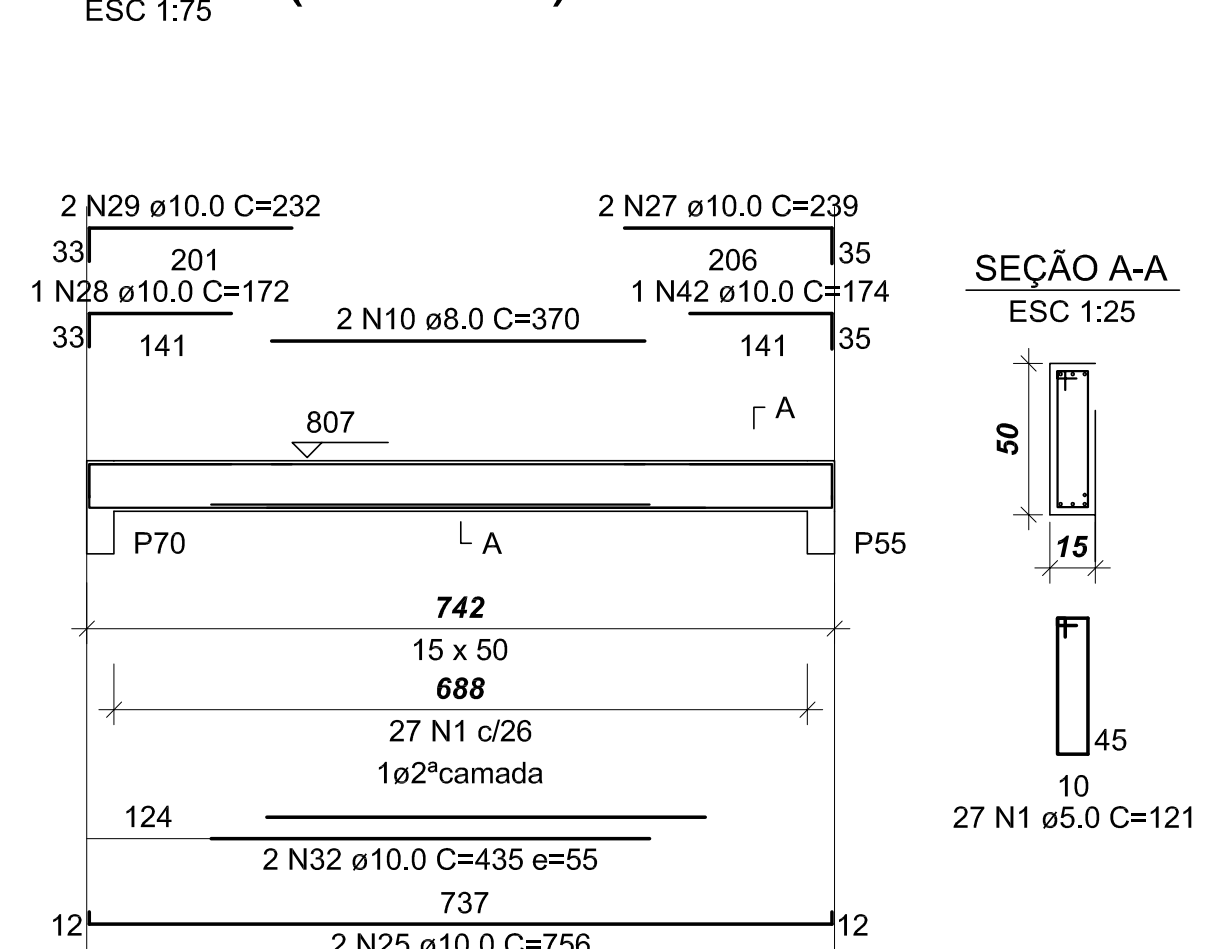
### V369 (15 x 50)



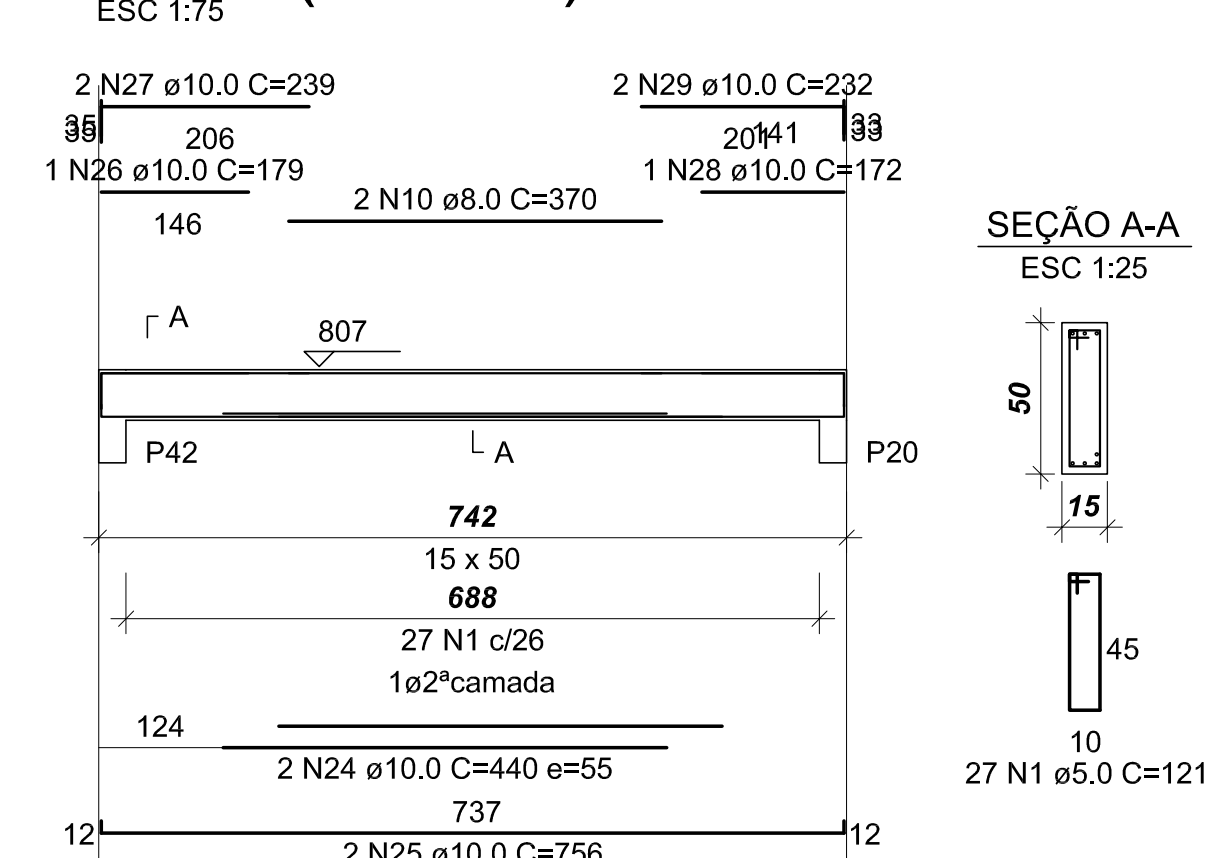
### V370 (15 x 50)



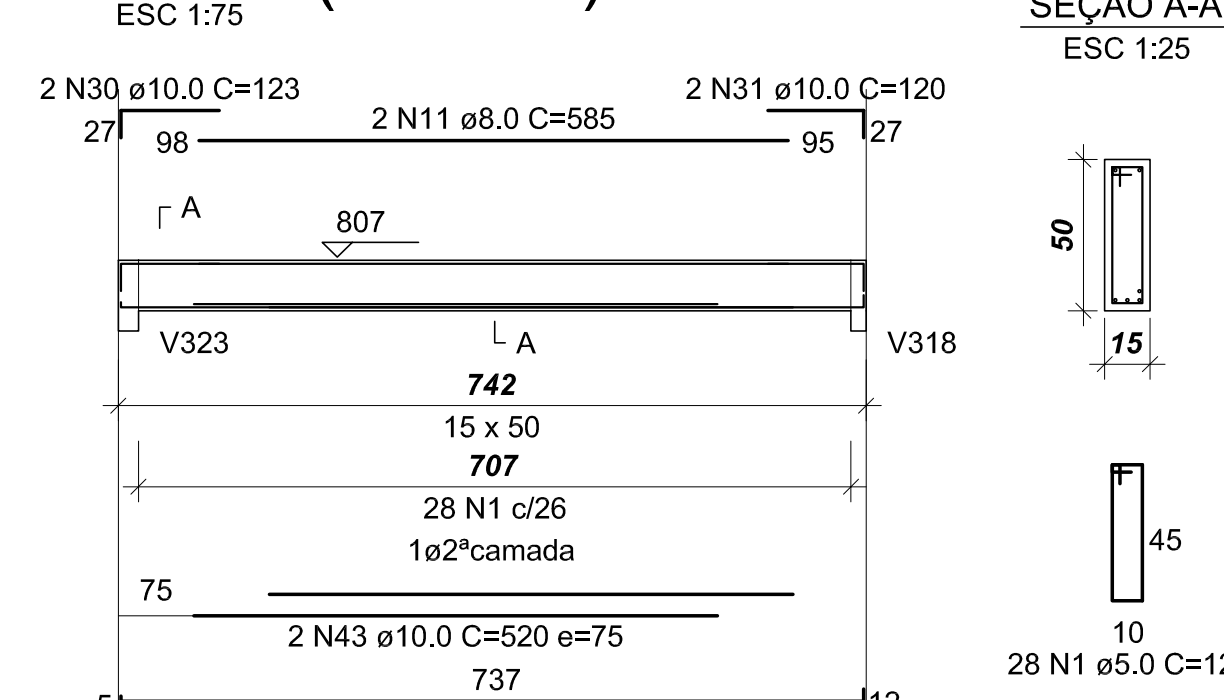
### V371 (15 x 50)



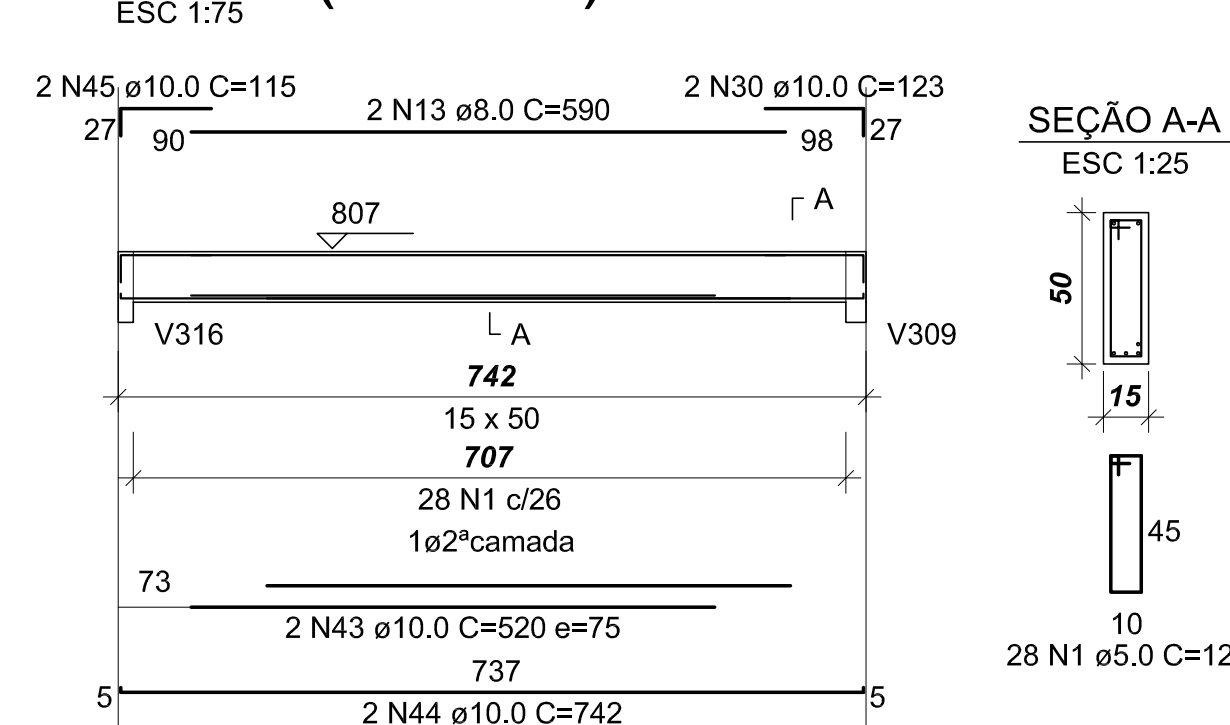
### V372 (15 x 50)



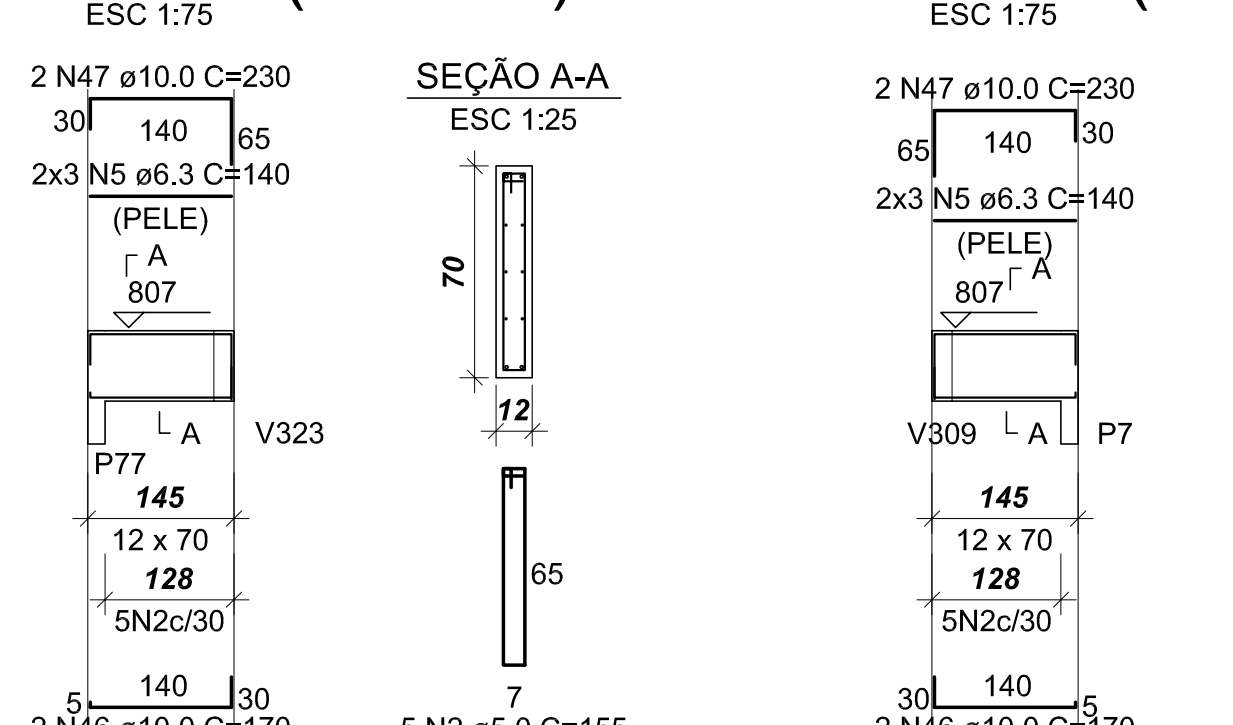
### V373 (15 x 50)



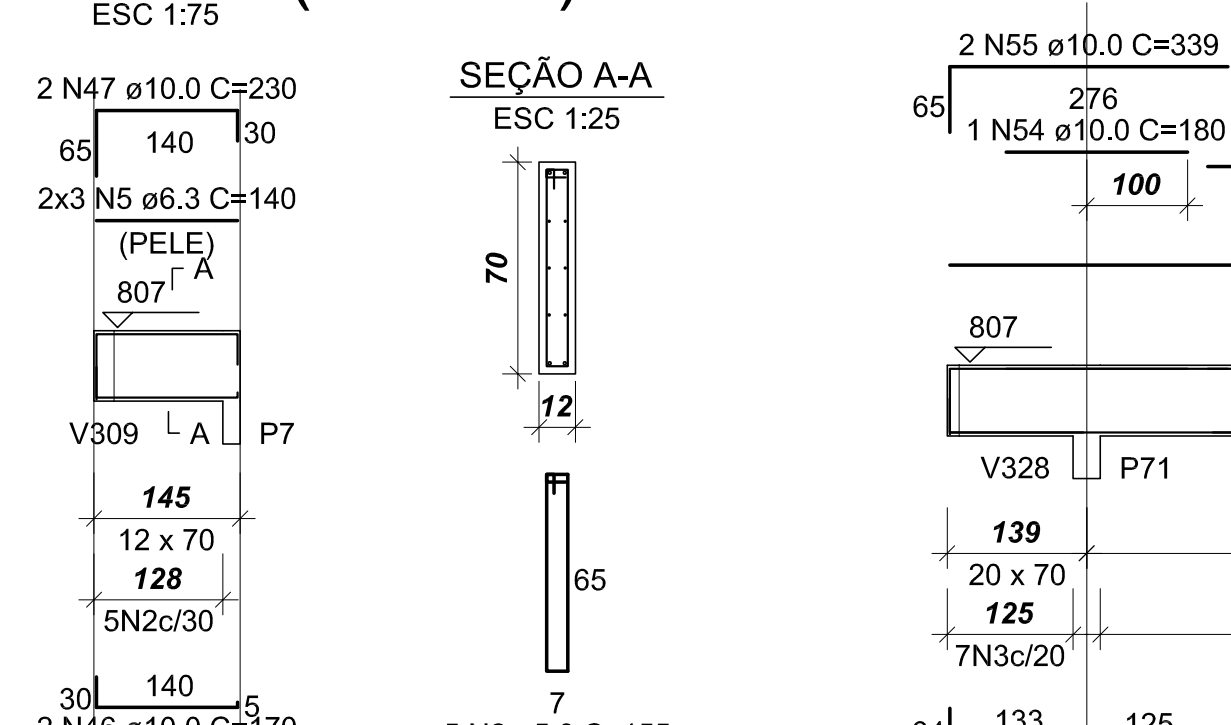
### V374 (15 x 50)



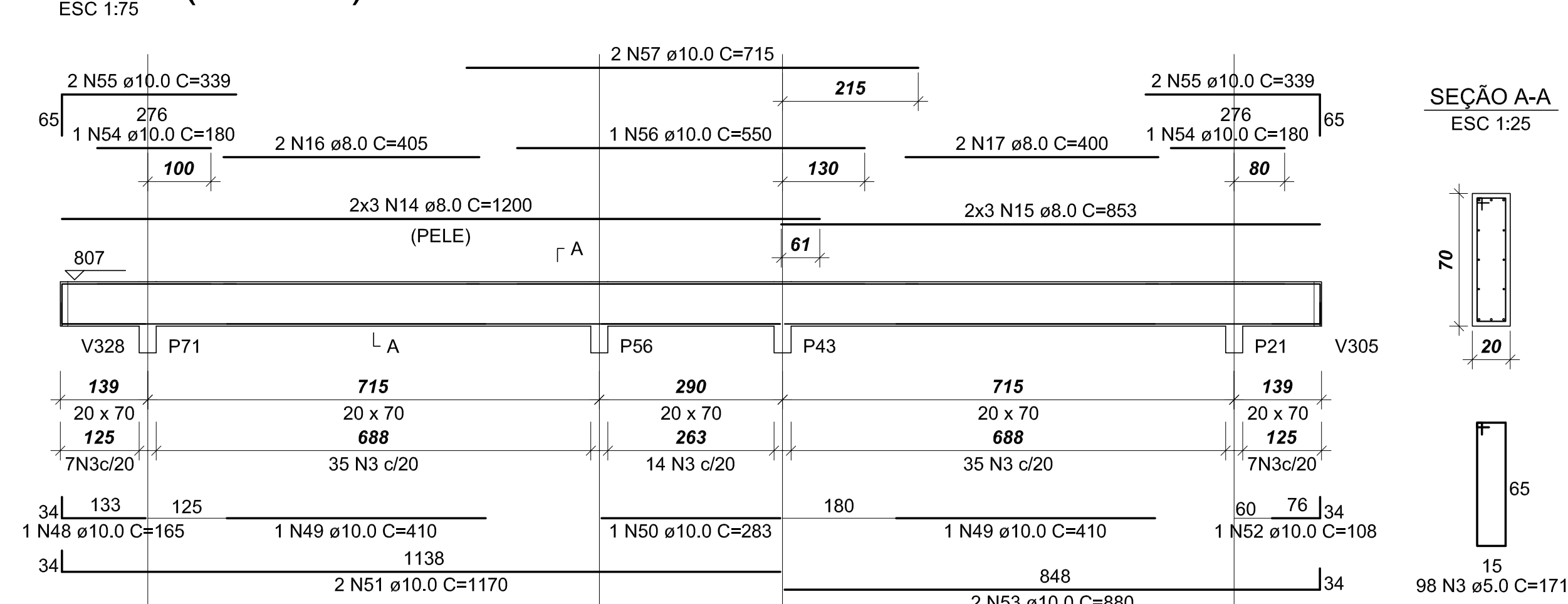
### V375 (12 x 70)



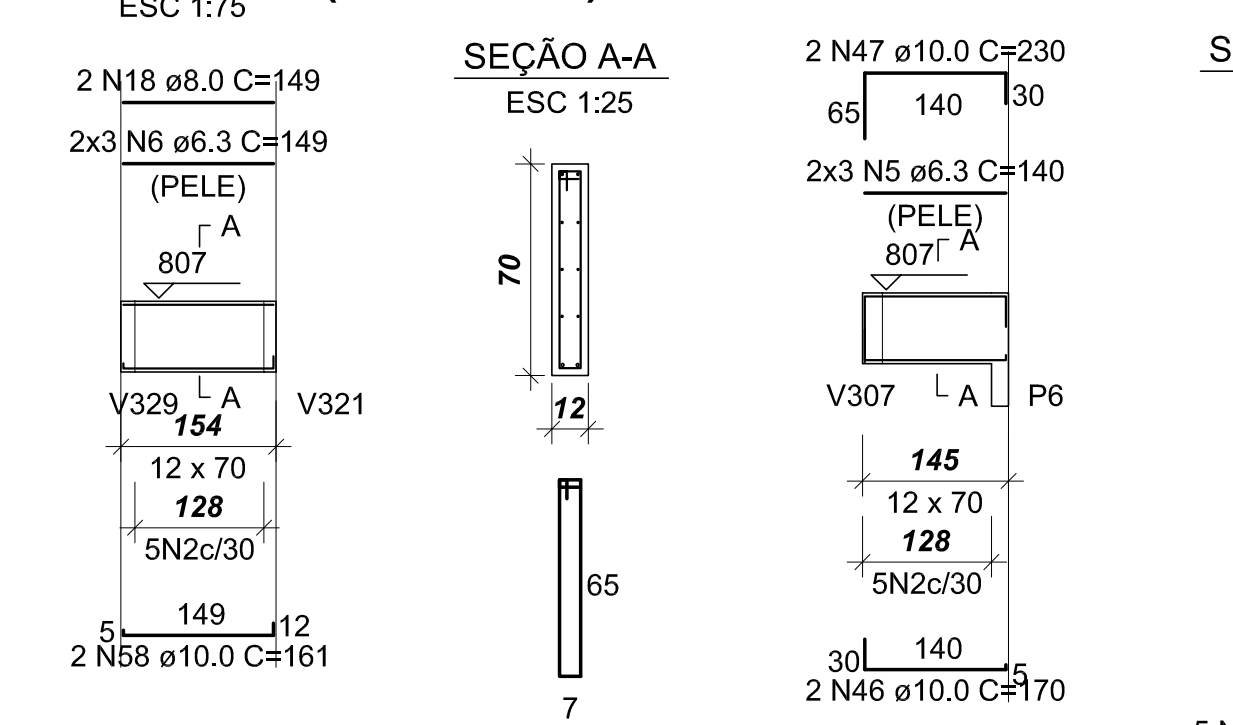
### V376 (12 x 70)



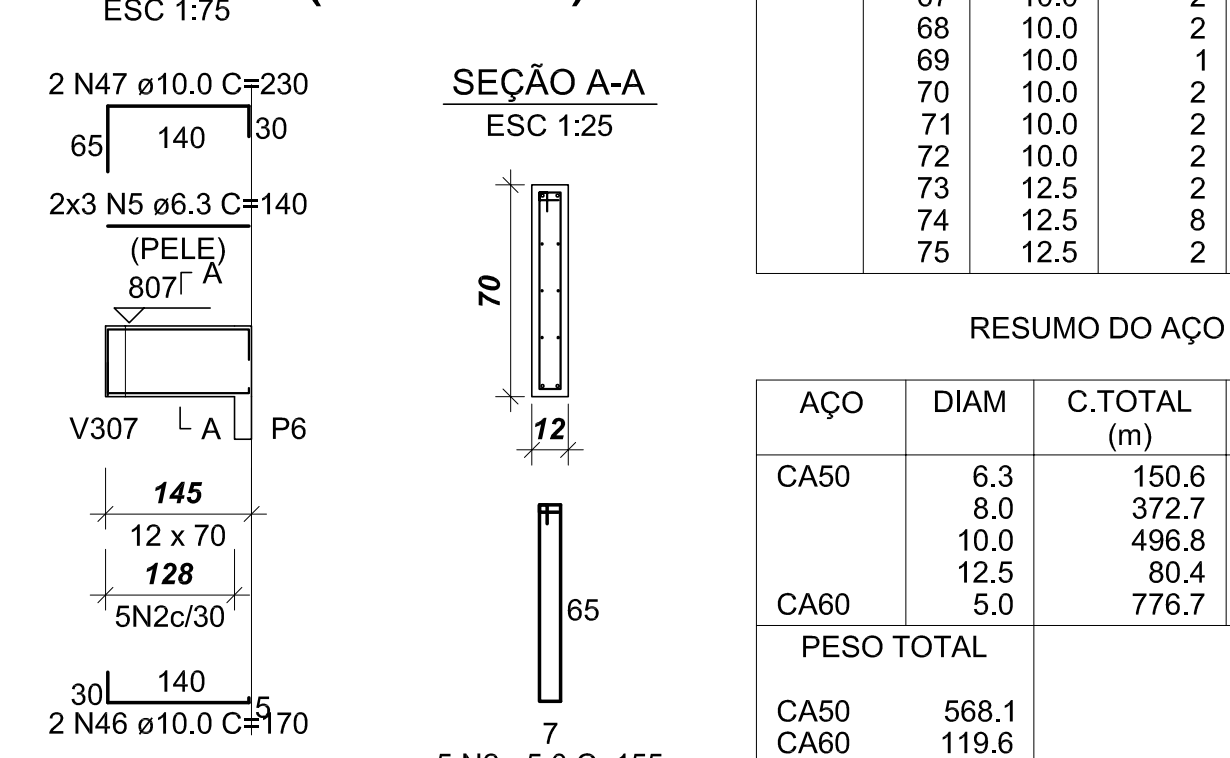
### V377 (20 x 70)



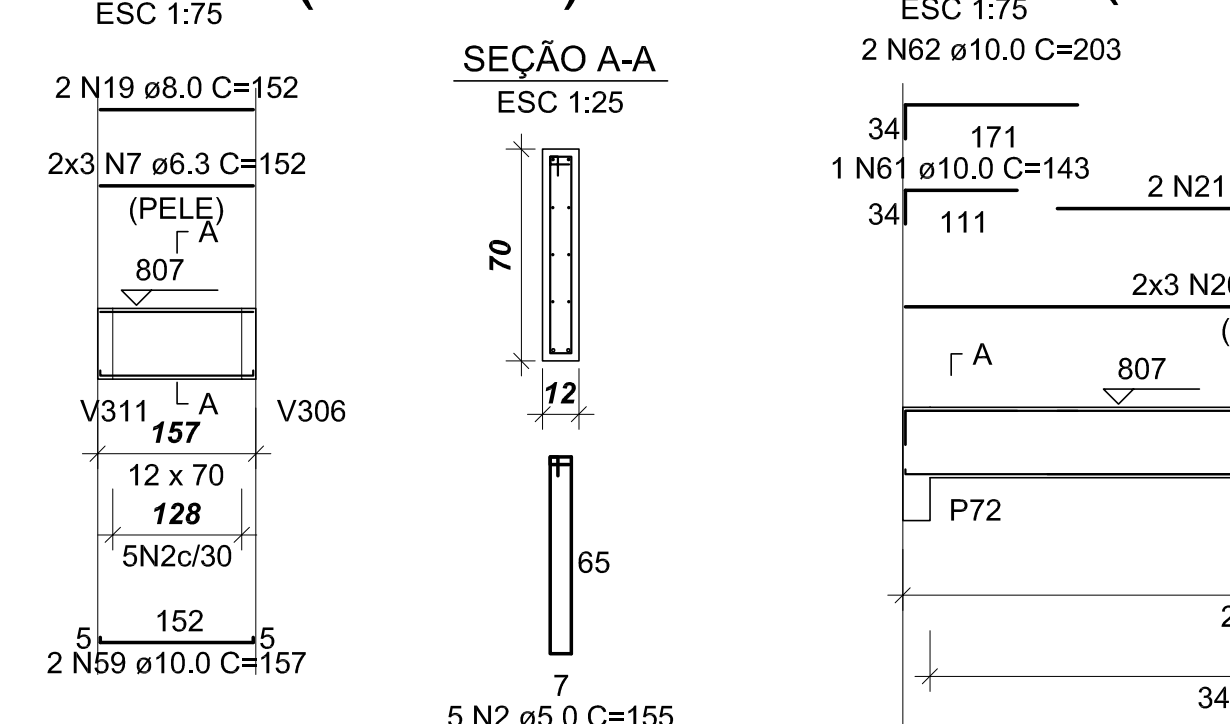
### V378 (12 x 70)



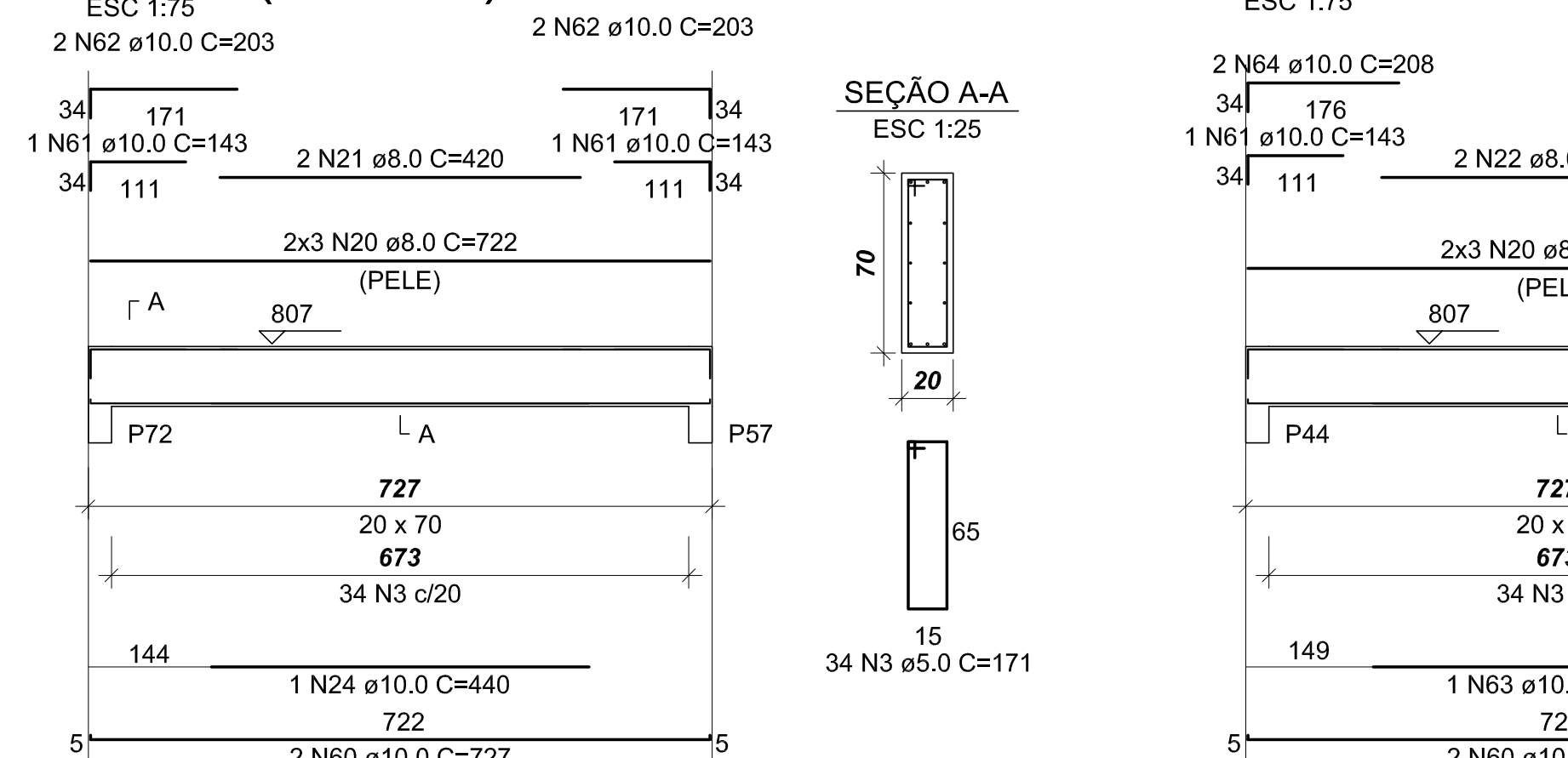
### V385 (12 x 70)



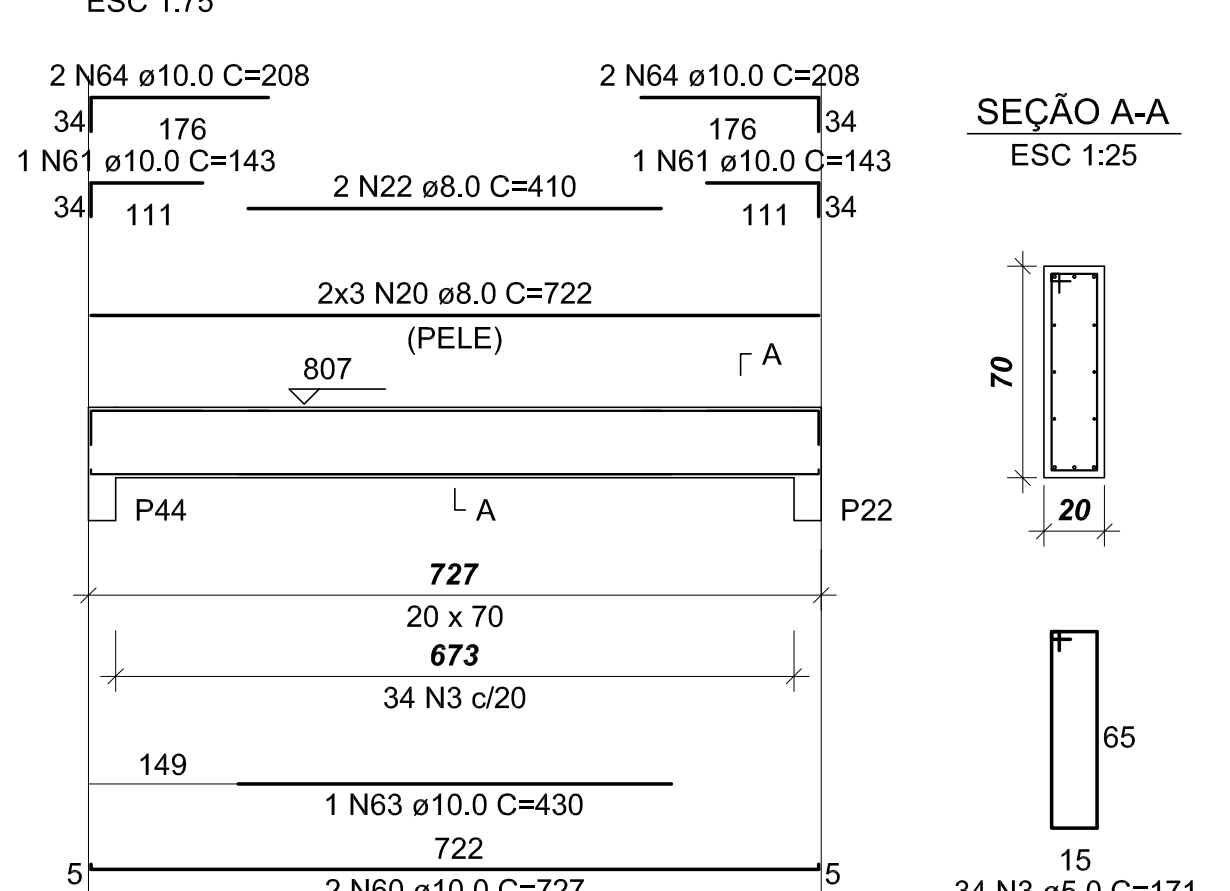
### V379 (12 x 70)



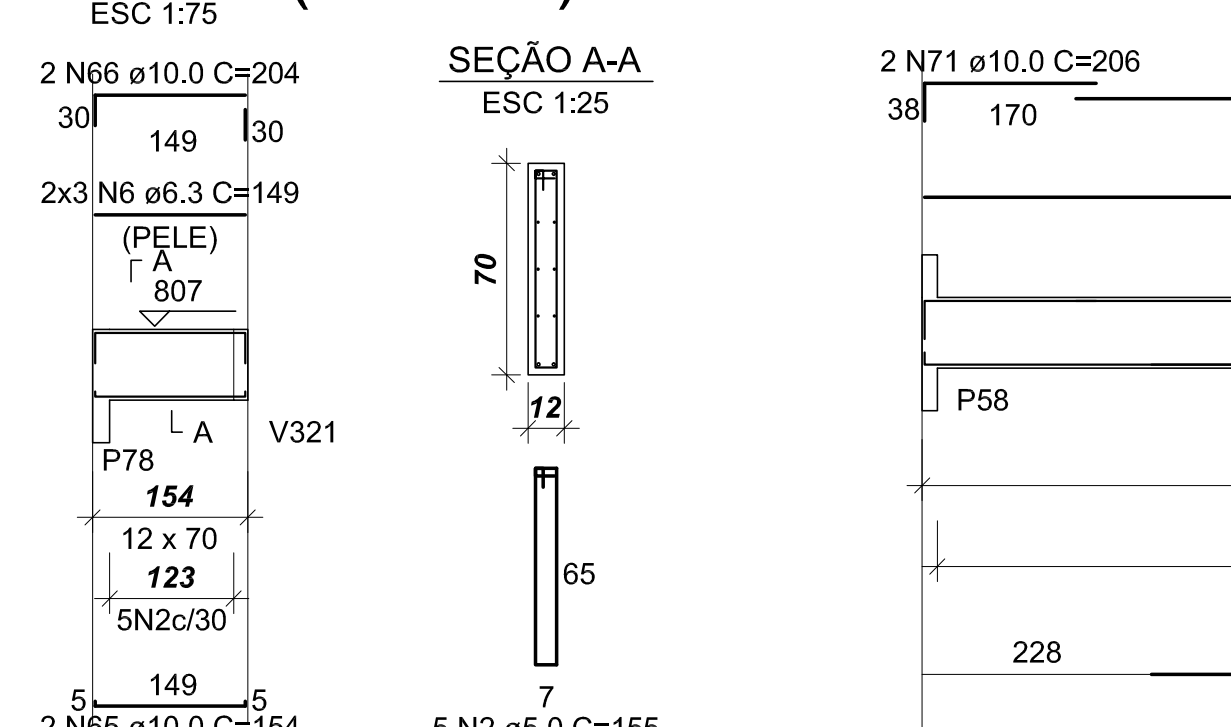
### V380 (20 x 70)



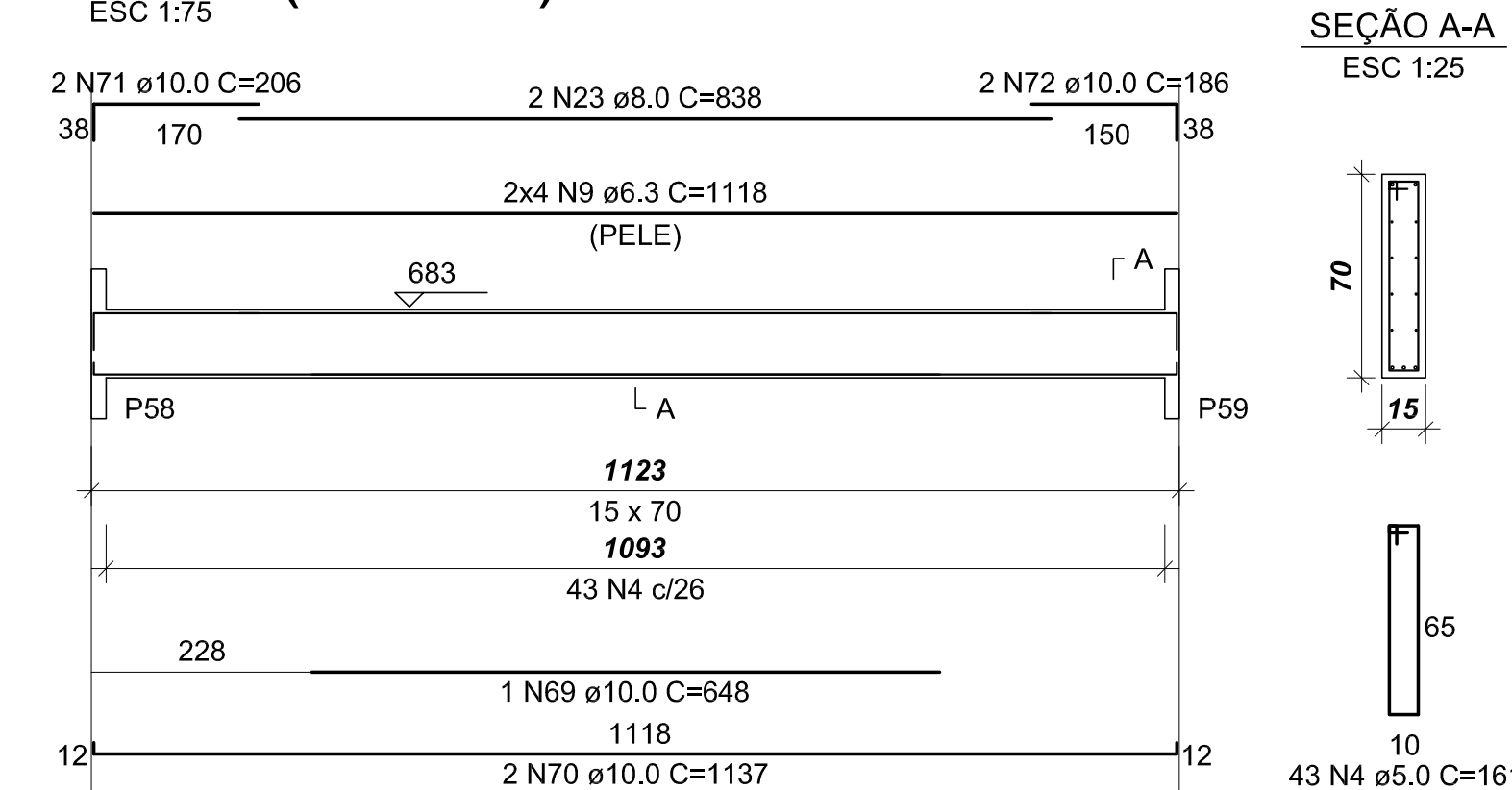
### V381 (20 x 70)



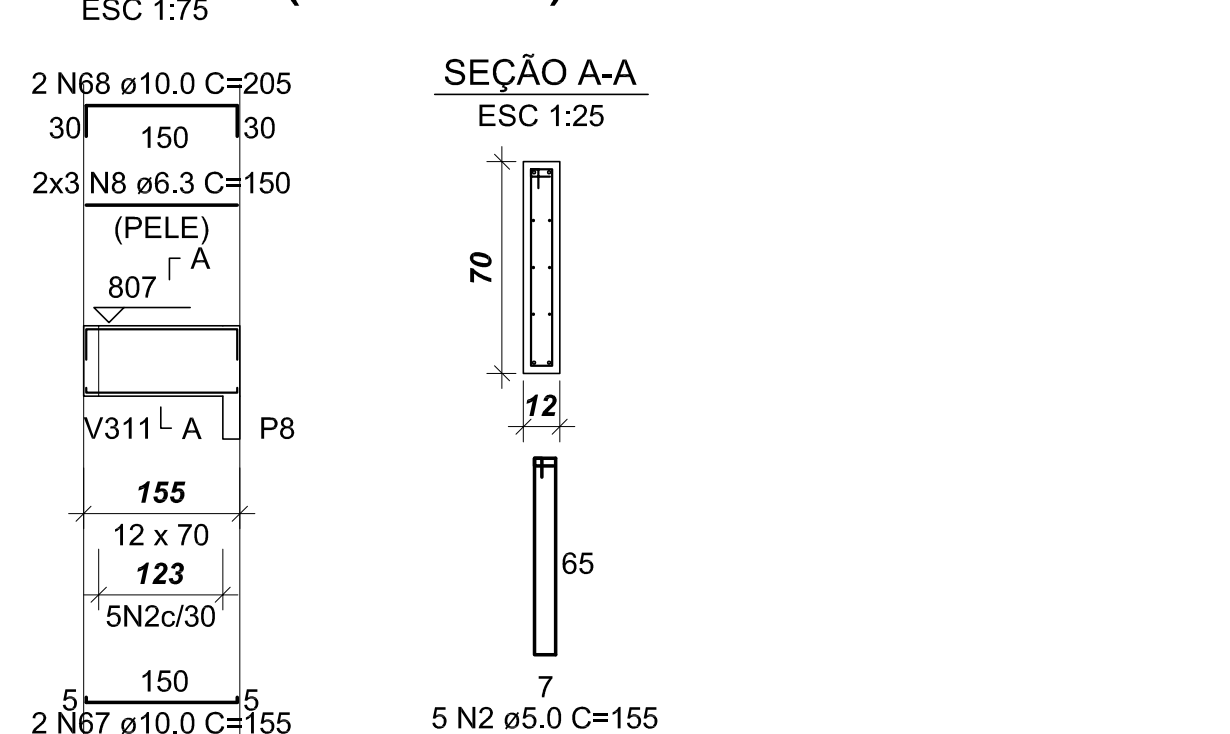
### V382 (12 x 70)



### V384 (15 x 70)



### V383 (12 x 70)



| AÇO | N  | DIAM | Q   | UNIT (cm) | C.TOTAL (cm) |
|-----|----|------|-----|-----------|--------------|
| 60  | 1  | 5.0  | 303 | 121       | 36663        |
|     | 2  | 5.0  | 35  | 155       | 5425         |
|     | 3  | 5.0  | 166 | 171       | 28386        |
|     | 4  | 5.0  | 43  | 161       | 6923         |
|     | 5  | 6.3  | 18  | 140       | 2530         |
|     | 6  | 6.3  | 12  | 149       | 1788         |
|     | 7  | 6.3  | 6   | 152       | 912          |
|     | 8  | 6.3  | 6   | 150       | 900          |
|     | 9  | 6.3  | 8   | 1118      | 8944         |
|     | 10 | 8.0  | 8   | 370       | 2960         |
|     | 11 | 8.0  | 10  | 585       | 5850         |
|     | 12 | 8.0  | 2   | 375       | 750          |
|     | 13 | 8.0  | 2   | 590       | 1180         |
|     | 14 | 8.0  | 6   | 1200      | 7200         |
|     | 15 | 8.0  | 6   | 853       | 5118         |
|     | 16 | 8.0  | 2   | 405       | 810          |
|     | 17 | 8.0  | 2   | 400       | 800          |
|     | 18 | 8.0  | 2   | 149       | 298          |
|     | 19 | 8.0  | 2   | 152       | 304          |
|     | 20 | 8.0  | 12  | 722       | 8664         |
|     | 21 | 8.0  | 2   | 420       | 840          |
|     | 22 | 8.0  | 2   | 410       | 820          |
|     | 23 | 8.0  | 2   | 179       | 358          |
|     | 24 | 10.0 | 7   | 440       | 3080         |
|     | 25 | 10.0 | 8   | 756       | 6048         |
|     | 26 | 10.0 | 2   | 179       | 358          |
|     | 27 | 10.0 | 6   | 239       | 1434         |
|     | 28 | 10.0 | 3   | 172       | 516          |
|     | 29 | 10.0 | 6   | 232       | 1392         |
|     | 30 | 10.0 | 12  | 123       | 1476         |
|     | 31 | 10.0 | 10  | 120       | 1200         |
|     | 32 | 10.0 | 4   | 435       | 1740         |
|     | 33 | 10.0 | 4   | 749       | 2996         |
|     | 34 | 10.0 | 1   | 172       | 172          |
|     | 35 | 10.0 | 2   | 232       | 464          |
|     | 36 | 10.0 | 1   | 174       | 174          |
|     | 37 | 10.0 | 2   | 234       | 468          |
|     | 38 | 10.0 | 1   | 179       | 179          |
|     | 39 | 10.0 | 2   | 239       | 478          |
|     | 40 | 10.0 | 1   | 172       | 172          |
|     | 41 | 10.0 | 2   | 232       | 464          |
|     | 42 | 10.0 | 1   | 174       | 174          |
|     | 43 | 10.0 | 4   | 520       | 2080         |
|     | 44 | 10.0 | 2   | 742       | 1484         |
|     | 45 | 10.0 | 2   | 115       | 230          |
|     | 46 | 10.0 | 6   | 170       | 1020         |
|     | 47 | 10.0 | 6   | 230       | 1380         |
|     | 48 | 10.0 | 1   | 165       | 165          |
|     | 49 | 10.0 | 2   | 410       | 820          |
|     | 50 | 10.0 | 1   | 283       | 283          |
|     | 51 | 10.0 | 2   | 1170      | 2340         |
|     | 52 | 10.0 | 1   | 108       | 108          |
|     | 53 | 10.0 | 2   | 880       | 1760         |
|     | 54 | 10.0 | 2   | 180       | 360          |
|     | 55 | 10.0 | 4   | 339       | 1356         |
|     | 56 | 10.0 | 1   | 550       | 550          |
|     | 57 | 10.0 | 2   | 715       | 1430         |
|     | 58 | 10.0 | 2   | 161       | 322          |
|     | 59 | 10.0 | 2   | 157       | 314          |
|     | 60 | 10.0 | 4   | 727       | 2908         |
|     | 61 | 10.0 | 4   | 143       | 572          |
|     | 62 | 10.0 | 4   | 203       | 812          |
|     | 63 | 10.0 | 1   | 430       | 430          |
|     | 64 | 10.0 | 4   | 208       | 832          |
|     | 65 | 10.0 | 2   | 154       | 308          |
|     | 66 | 10.0 | 2   | 204       | 408          |
|     | 67 | 10.0 | 2   | 155       | 310          |
|     | 68 | 10.0 | 2   | 205       | 410          |
|     | 69 | 10.0 | 1   | 648       | 648          |
|     | 70 | 10.0 | 2   | 1137      | 2274         |
|     | 71 | 10.0 | 2   | 206       | 412          |
|     | 72 | 10.0 | 2   | 186       | 372          |
|     | 73 | 12.5 | 2   | 505       | 1010         |
|     | 74 | 12.5 | 8   | 751       | 6008         |
|     | 75 | 12.5 | 2   | 510       | 1020         |

| AÇO        | DIAM  | C.TOTAL (m) | PESO+0% (kg) |
|------------|-------|-------------|--------------|
| CA50       | 6.3   | 150.6       | 36.9         |
|            | 8.0   | 372.7       | 147.3        |
|            | 10.0  | 496.8       | 306.4        |
|            | 12.5  | 80.4        | 77.5         |
| PESO TOTAL |       | 776.7       | 119.6        |
| CA50       | 588.1 |             |              |
| CA60       | 119.6 |             |              |

Vol. de concreto total (C-25)=13.02 m³  
Área de forma total = 182.52 m²

|                                                                                                                                                                                                                                                                 |                                                          |                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------|
| 01                                                                                                                                                                                                                                                              | 22.07.2013                                               | PROJETO ESTRUTURAL         |
| Nº                                                                                                                                                                                                                                                              | DATA                                                     | RESPONSÁVEL                |
| DESCRIÇÃO DA REVISÃO:                                                                                                                                                                                                                                           |                                                          |                            |
|  <b>AS BUILT ENGENHARIA DE PROJETOS LTDA</b><br>Rua Antônio de Barros, 1504 - Boa Vista,<br>CEP 82560-435 - Curitiba - Paraná<br>asbuiltprojeto@gmail.com - (41) 3308-4949 |                                                          |                            |
| FASE:                                                                                                                                                                                                                                                           |                                                          |                            |
| PROJETO ESTRUTURAL                                                                                                                                                                                                                                              |                                                          |                            |
| CONFERIR MEDIDAS NA OBRA                                                                                                                                                                                                                                        |                                                          |                            |
| CORR:                                                                                                                                                                                                                                                           |                                                          |                            |
| ADMINISTRAÇÃO CAMPUS UNAI                                                                                                                                                                                                                                       |                                                          |                            |
| PROPRIETÁRIO:                                                                                                                                                                                                                                                   | UNIVERSIDADE FEDERAL DOS VALES DO JEQUITINHONHA E MUCURI | CNPJ: 16.266.315/0001-57   |
| FRANCHA:                                                                                                                                                                                                                                                        | FERRAGENS DAS VIGAS: PAVIMENTO COBERTURA(4)              |                            |
| AUTOR PROJETO: CARLOS HENRIQUE DE SOUZA GONÇALVES                                                                                                                                                                                                               |                                                          |                            |
| CRIA 789502 - P1                                                                                                                                                                                                                                                |                                                          |                            |
| ESCALA:                                                                                                                                                                                                                                                         | INDICADA                                                 | DESENHO: EQUIPE            |
| VERSÃO:                                                                                                                                                                                                                                                         | DATA: 22/07/2013                                         | ÁREA CONSTRUIDA: 3056,63m² |
| VERSÃO: 1                                                                                                                                                                                                                                                       |                                                          | FOLHA: EST                 |
| ARQUIVO:                                                                                                                                                                                                                                                        |                                                          | 21/22                      |