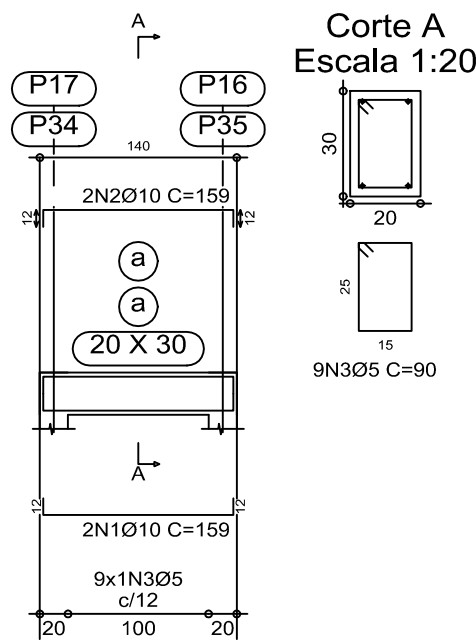
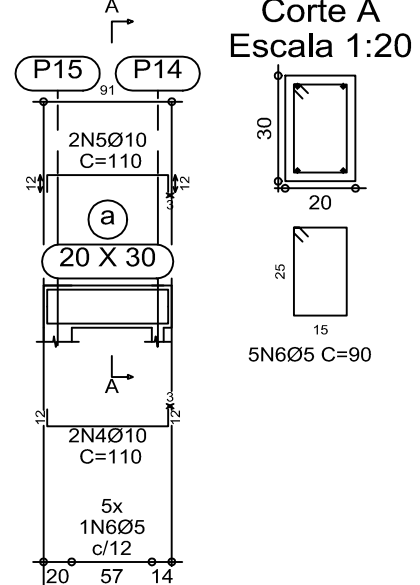


Respaudo  
Desenho de Vigas  
Concreto: C25, em geral  
Aço: CA-50-A e CA-60-B  
Escala vigas: 1:50  
Escala seções: 1:20

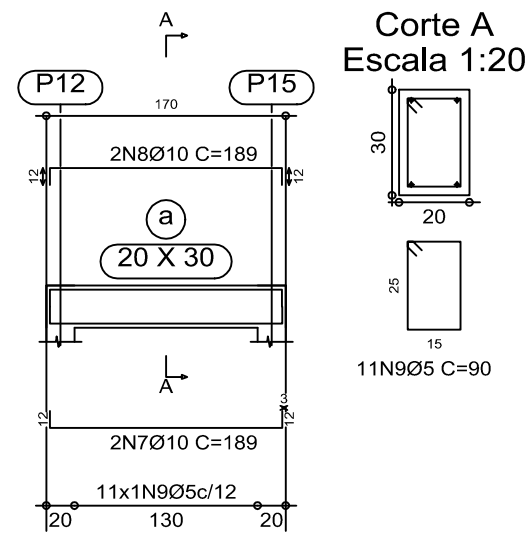
V 1  
V 14  
Escala 1:50



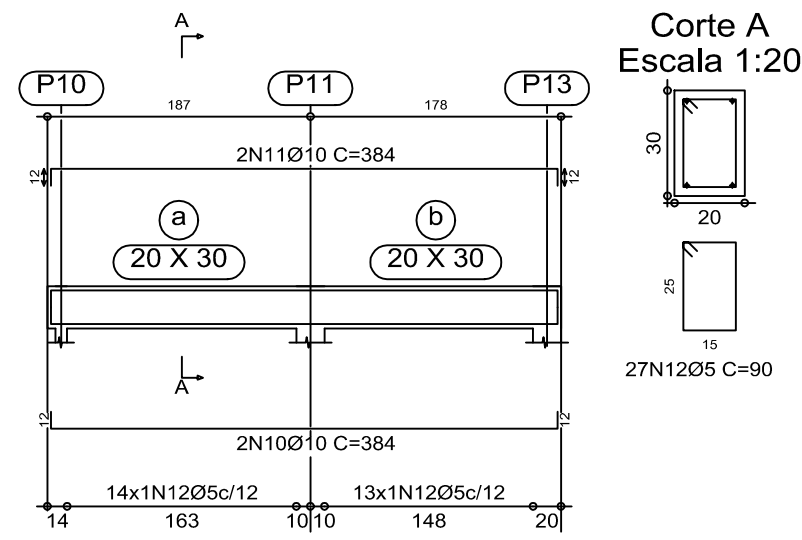
V 2  
Escala 1:50



V 3  
Escala 1:50

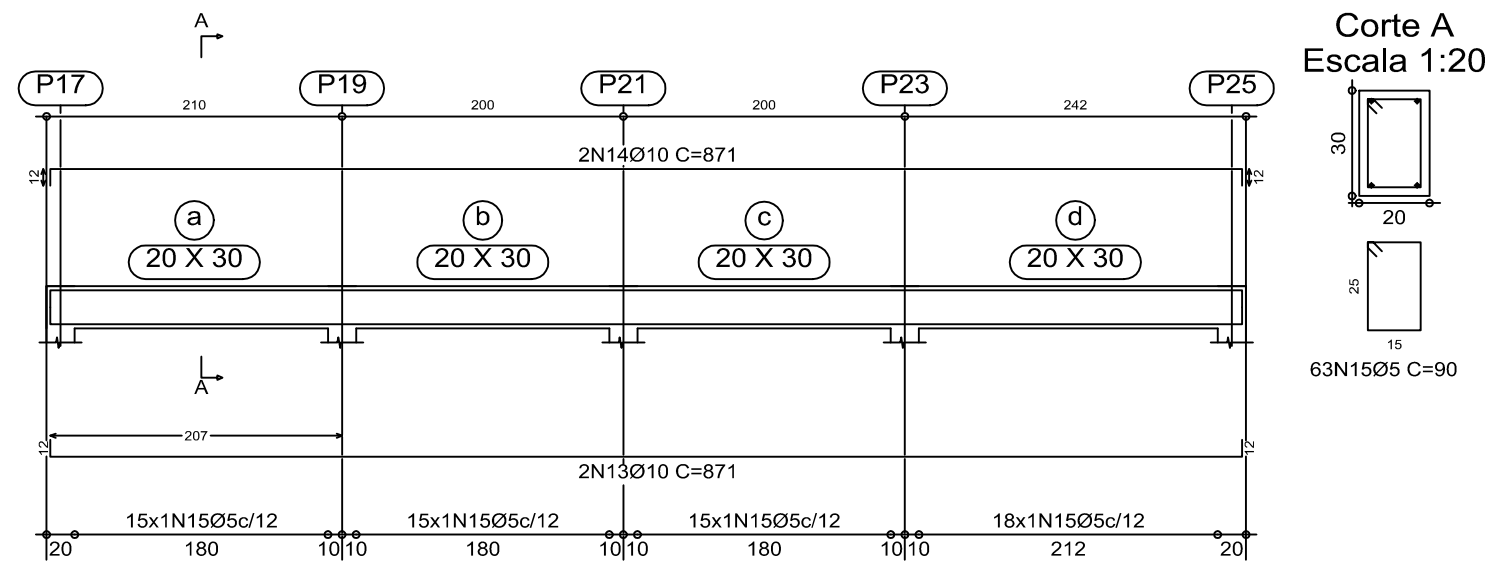


V 4  
Escala 1:50

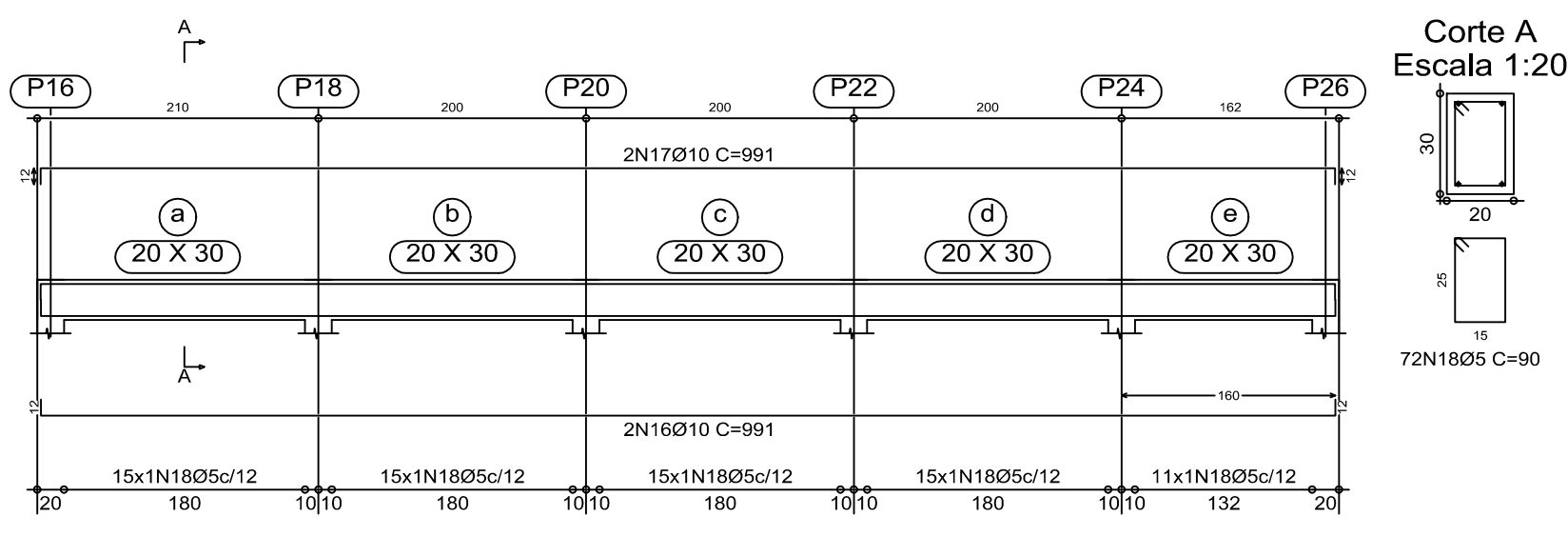


| RESUMO AÇO<br>Respaudo<br>VIGAS | Comp. Total<br>(m) | Peso(com perdas)<br>(kg) | Total |
|---------------------------------|--------------------|--------------------------|-------|
| CA-50-A Ø10                     | 290,4              | 201                      | 201   |
| CA-60-B Ø5                      | 454,5              | 78                       | 78    |
| Total                           |                    |                          | 279   |

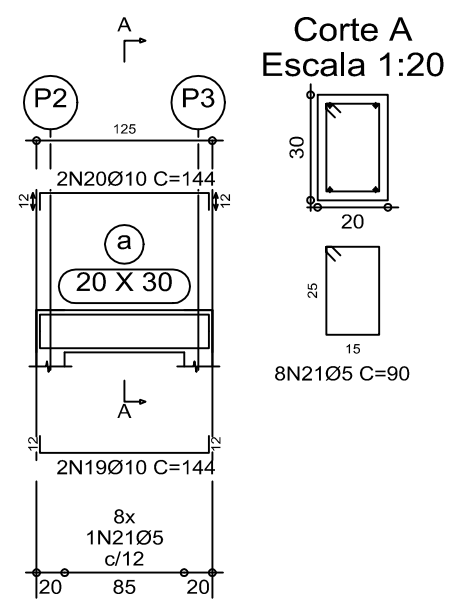
V 5  
Escala 1:50



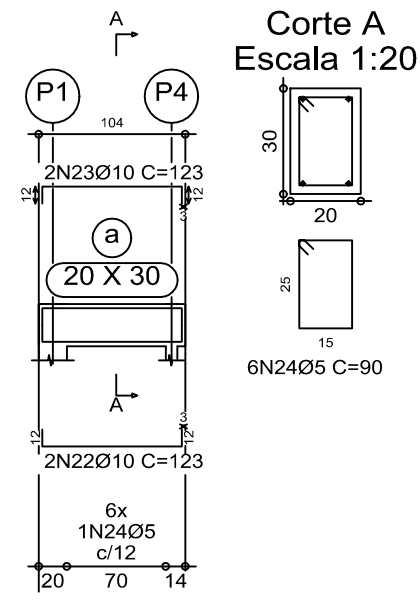
V 6  
Escala 1:50



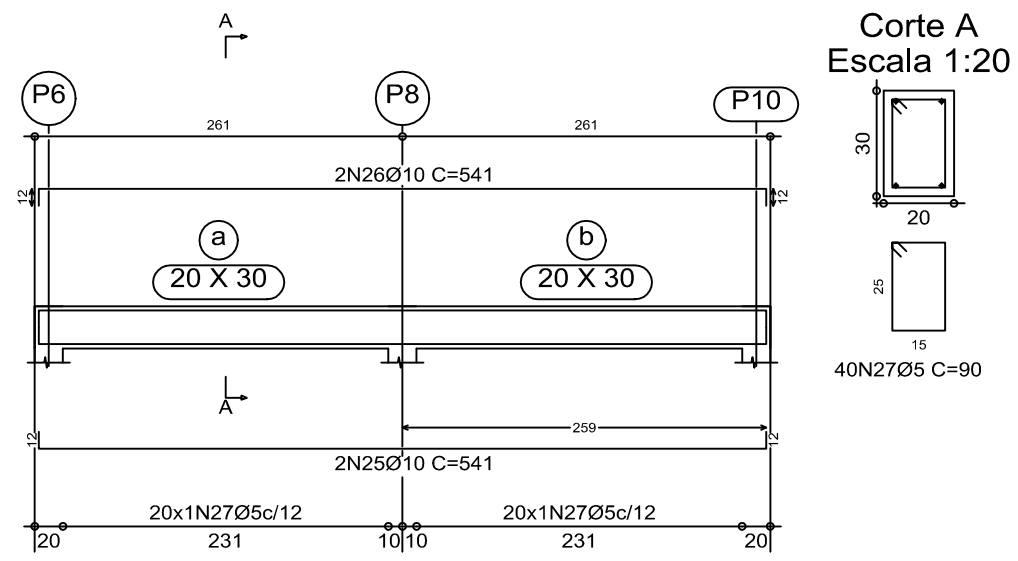
V 7  
Escala 1:50



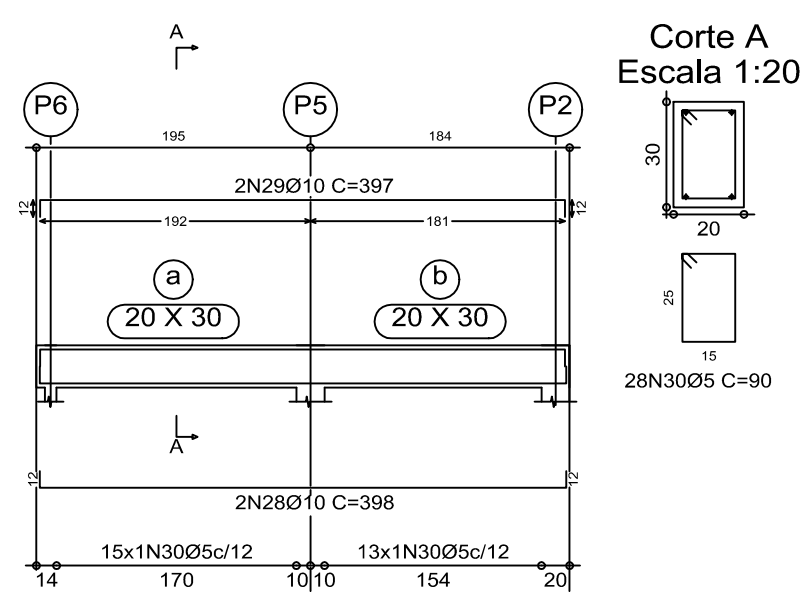
V 8  
Escala 1:50



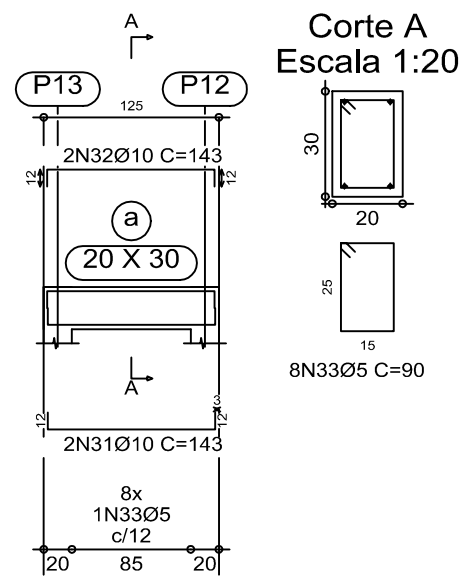
V 9  
Escala 1:50



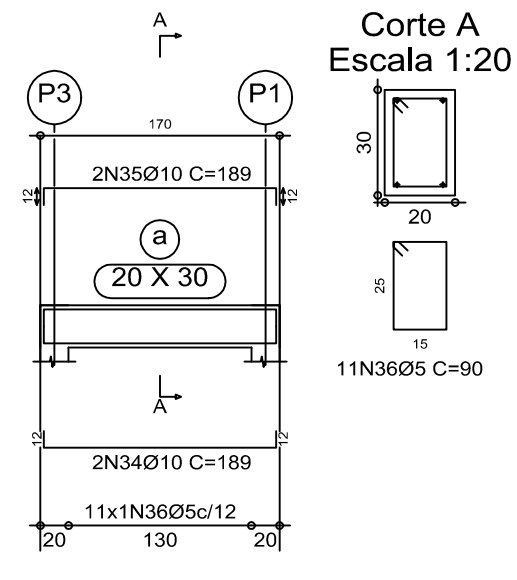
V 10  
Escala 1:50



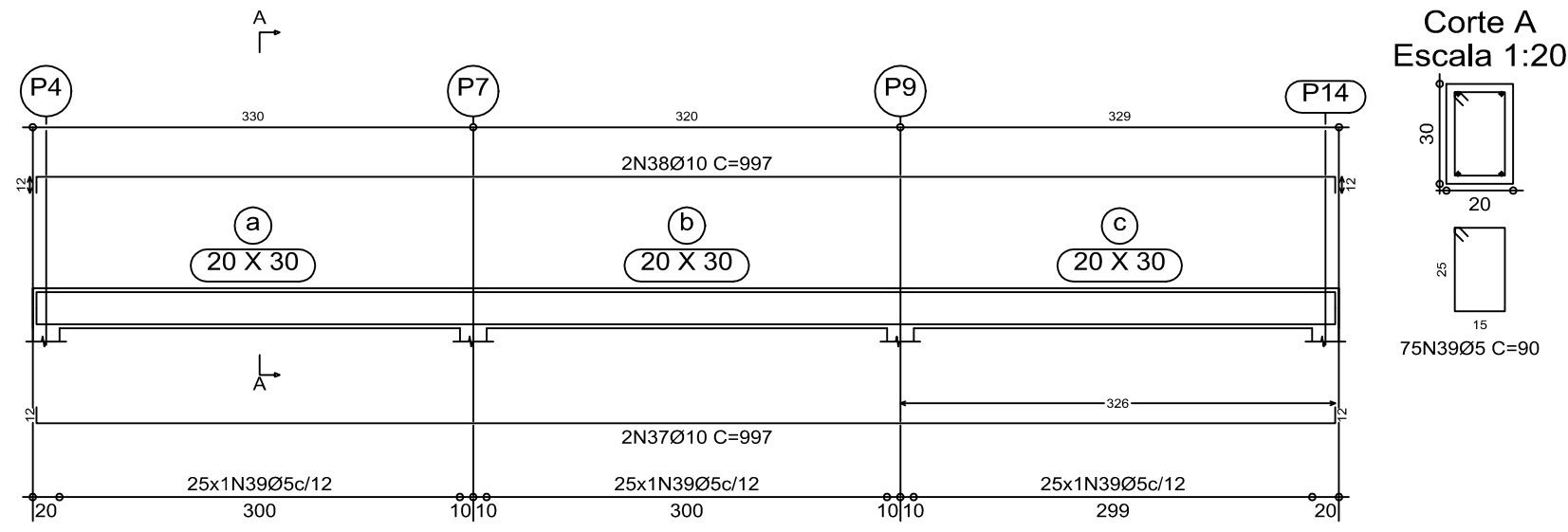
V 11  
Escala 1:50



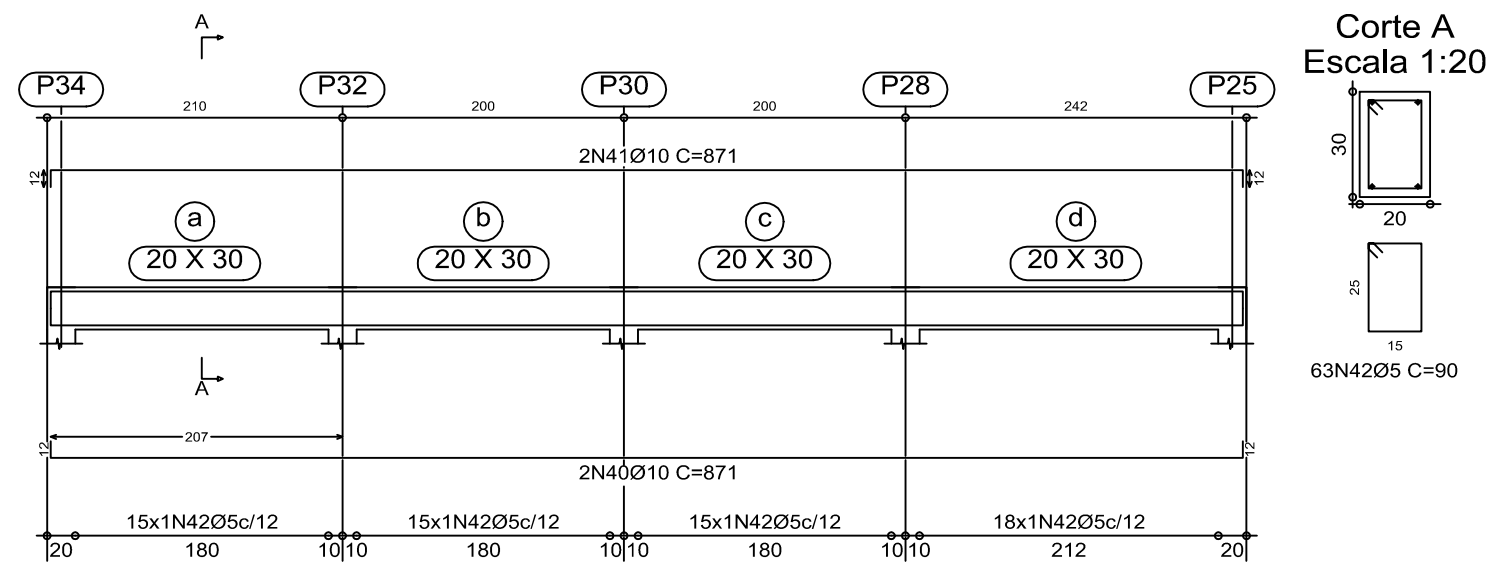
V 12  
Escala 1:50



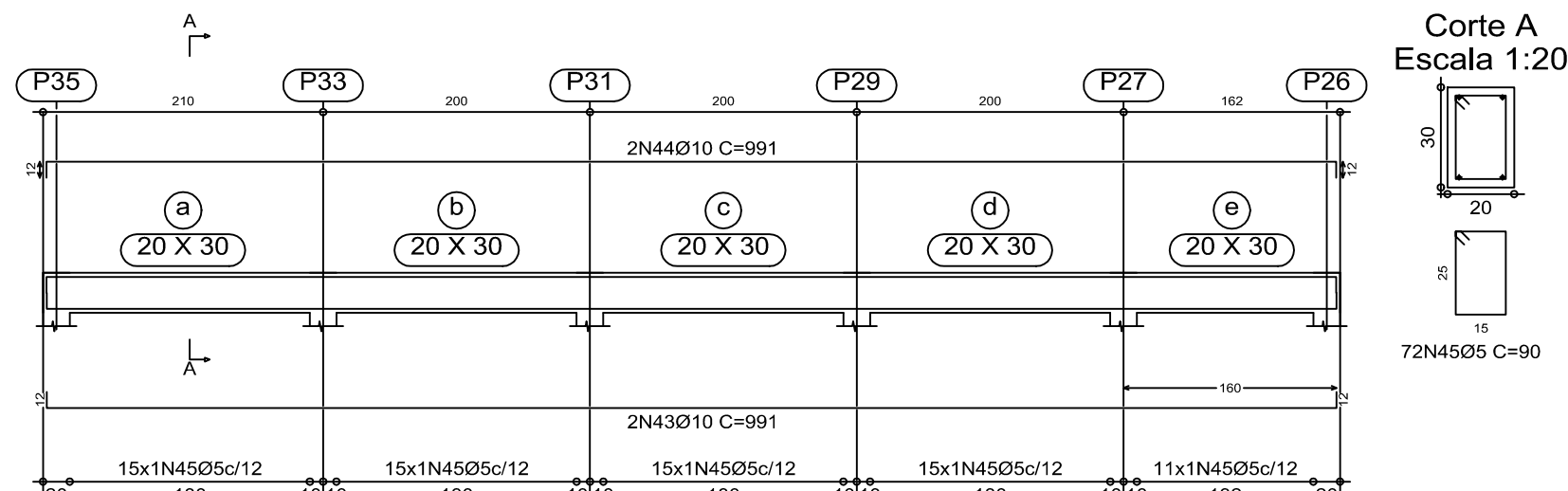
V 13  
Escala 1:50



V 15  
Escala 1:50



V 16  
Escala 1:50



| Elemento | Pos.       | Diam. | Q. | Dob.<br>(cm) | Reta<br>(cm) | Dob.<br>(cm) | Comp.<br>(cm) | Total<br>(cm) | CA-50-A<br>(kg) | CA-60-B<br>(kg) |
|----------|------------|-------|----|--------------|--------------|--------------|---------------|---------------|-----------------|-----------------|
| V 1= 14  | 1          | Ø10   | 2  | 12           | 135          | 12           | 159           | 318           | 2,00            |                 |
|          | 2          | Ø10   | 2  | 12           | 135          | 12           | 159           | 318           | 2,00            |                 |
|          | 3          | Ø5    | 9  |              |              |              | 90            | 810           |                 | 1,27            |
|          | Total+10%: |       |    |              |              |              |               |               | 4,40            | 1,40            |
| V 2      | 4          | Ø10   | 2  | 12           | 86           | 12           | 110           | 220           | 1,38            |                 |
|          | 5          | Ø10   | 2  | 12           | 86           | 12           | 110           | 220           | 1,38            |                 |
|          | 6          | Ø5    | 5  |              |              |              | 90            | 450           |                 | 0,71            |
|          | Total+10%: |       |    |              |              |              |               |               | 3,04            | 0,78            |
| V 3      | 7          | Ø10   | 2  | 12           | 165          | 12           | 189           | 378           | 2,37            |                 |
|          | 8          | Ø10   | 2  | 12           | 165          | 12           | 189           | 378           | 2,37            |                 |
|          | 9          | Ø5    | 11 |              |              |              | 90            | 990           |                 | 1,55            |
|          | Total+10%: |       |    |              |              |              |               |               | 5,21            | 1,71            |
| V 4      | 10         | Ø10   | 2  | 12           | 360          | 12           | 384           | 768           | 4,82            |                 |
|          | 11         | Ø10   | 2  | 12           | 360          | 12           | 384           | 768           | 4,82            |                 |
|          | 12         | Ø5    | 27 |              |              |              | 90            | 2430          |                 | 3,82            |
|          | Total+10%: |       |    |              |              |              |               |               | 10,60           | 4,20            |
| V 5      | 13         | Ø10   | 2  | 12           | 847          | 12           | 871           | 1742          | 10,94           |                 |
|          | 14         | Ø10   | 2  | 12           | 847          | 12           | 871           | 1742          | 10,94           |                 |
|          | 15         | Ø5    | 63 |              |              |              | 90            | 5670          |                 | 8,90            |
|          | Total+10%: |       |    |              |              |              |               |               | 24,07           | 9,79            |
| V 6      | 16         | Ø10   | 2  | 12           | 967          | 12           | 991           | 1982          | 12,45           |                 |
|          | 17         | Ø10   | 2  | 12           | 967          | 12           | 991           | 1982          | 12,45           |                 |
|          | 18         | Ø5    | 71 |              |              |              | 90            | 6390          |                 | 10,03           |
|          | Total+10%: |       |    |              |              |              |               |               | 27,39           | 11,03           |
| V 7      | 19         | Ø10   | 2  | 12           | 120          | 12           | 144           | 288           | 1,81            |                 |
|          | 20         | Ø10   | 2  | 12           | 120          | 12           | 144           | 288           | 1,81            |                 |
|          | 21         | Ø5    | 8  |              |              |              | 90            | 720           |                 | 1,13            |
|          | Total+10%: |       |    |              |              |              |               |               | 3,98            | 1,24            |
| V 8      | 22         | Ø10   | 2  | 12           | 99           | 12           | 123           | 246           | 1,54            |                 |
|          | 23         | Ø10   | 2  | 12           | 99           | 12           | 123           | 246           | 1,54            |                 |
|          | 24         | Ø5    | 6  |              |              |              | 90            | 540           |                 | 0,85            |
|          | Total+10%: |       |    |              |              |              |               |               | 3,39            | 0,94            |
| V 9      | 25         | Ø10   | 2  | 12           | 517          | 12           | 541           | 1082          | 6,79            |                 |
|          | 26         | Ø10   | 2  | 12           | 517          | 12           | 541           | 1082          | 6,79            |                 |
|          | 27         | Ø5    | 40 |              |              |              | 90            | 3600          |                 | 5,65            |
|          | Total+10%: |       |    |              |              |              |               |               | 14,94           | 6,22            |
| V 10     | 28         | Ø10   | 2  | 12           | 374          | 12           | 398           | 796           | 5,00            |                 |
|          | 29         | Ø10   | 2  | 12           | 373          | 12           | 397           | 794           | 4,99            |                 |
|          | 30         | Ø5    | 28 |              |              |              | 90            | 2520          |                 | 3,96            |
|          | Total+10%: |       |    |              |              |              |               |               | 10,99           | 4,36            |
| V 11     | 31         | Ø10   | 2  | 12           | 119          | 12           | 143           | 286           | 1,80            |                 |
|          | 32         | Ø10   | 2  | 12           | 119          | 12           | 143           | 286           | 1,80            |                 |
|          | 33         | Ø5    | 8  |              |              |              | 90            | 720           |                 | 1,13            |
|          | Total+10%: |       |    |              |              |              |               |               | 3,96            | 1,24            |
| V 12     | 34         | Ø10   | 2  | 12           | 165          | 12           | 189           | 378           | 2,37            |                 |
|          | 35         | Ø10   | 2  | 12           | 165          | 12           | 189           | 378           | 2,37            |                 |
|          | 36         | Ø5    | 11 |              |              |              | 90            | 990           |                 | 1,55            |
|          | Total+10%: |       |    |              |              |              |               |               | 5,21            | 1,71            |
| V 13     | 37         | Ø10   | 2  | 12           | 973          | 12           | 997           | 1994          | 12,52           |                 |
|          | 38         | Ø10   | 2  | 12           | 973          | 12           | 997           | 1994          | 12,52           |                 |
|          | 39         | Ø5    | 75 |              |              |              | 90            | 6750          |                 | 10,60           |
|          | Total+10%: |       |    |              |              |              |               |               | 27,54           | 11,66           |
| V 15     | 40         | Ø10   | 2  | 12           | 847          | 12           | 871           | 1742          | 10,94           |                 |
|          | 41         | Ø10   | 2  | 12           | 847          | 12           | 871           | 1742          | 10,94           |                 |
|          | 42         | Ø5    | 63 |              |              |              | 90            | 5670          |                 | 8,90            |
|          | Total+10%: |       |    |              |              |              |               |               | 24,07           | 9,79            |
| V 16     | 43         | Ø10   | 2  | 12           | 967          | 12           | 991           | 1982          | 12,45           |                 |
|          | 44         | Ø10   | 2  | 12           | 967          | 12           | 991           | 1982          | 12,45           |                 |
|          | 45         | Ø5    | 71 |              |              |              | 90            | 6390          |                 | 10,03           |
|          | Total+10%: |       |    |              |              |              |               |               | 27,39           | 11,03           |
| Ø5:      |            |       |    |              |              |              |               |               | 0,00            | 78,50           |
| Ø10:     |            |       |    |              |              |              |               |               | 200,58          | 0,00            |
| TOTAL:   |            |       |    |              |              |              |               |               | 200,58          | 78,50           |

## ESTRUTURA ANFITEATRO

| REVISÕES  | DATA  | DESCRIÇÃO   |
|---|---|---|
| 00  | 20/02/2017  | EMIÇÃO ORIGINAL   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
| <div><div>S</div><div>Sérgio Azara</div></div> <div>Eng. Civil CREA: 72.806/D-MG<br/>(34) 3216-1294 - 9981-8056</div> | PROJETO :<br>PROJETO ESTRUTURAL   |   |
|   | FOLHA<br>05/05  |   |
|   | LOCALIZAÇÃO :   | Fck:<br>25 Mpa<br>Fator Água Cimento:<br><0.60<br>SLUMP (abatimento):<br>10±2 |
|   | PRAÇA AMÉRICO ABÍLIO DE ARAÚJO - CENTRO,<br>CORMUBAIBA - GO   |   |
| ASSINATURAS:  |   |   |
| PROPRIETÁRIO : _____<br><br>PREFEITURA MUNICIPAL DE CORMUBAIBA  | OS DIREITOS AUTORAIS DESTA PROPOSTA DE PROJETO SÃO DE PROPRIEDADE DO ENG. CIVIL SÉRGIO H. F. AZARA, SENDO PROIBIDA SUA REPRODUÇÃO TOTAL OU PARCIAL, SEM COMO SUA CESSÃO A TERCEIROS E UTILIZAÇÃO P/ OUTROS FINS, SEM A AUTORIZAÇÃO PREVIA E POR ESCRITO DO AUTOR. TÍTULO IV- DEC. LEI-7903 DEC. LEI-8481 DE 1946. |   |
| ENGENHEIRO: _____<br><br>SÉRGIO HENRIQUE FERREIRA DE AZARA CREA:72506/D MG  |   |   |
| CONTEÚDO: DETALHAMENTO DE VIGAS DO RESPAUDO DOS ARRIMOS   |   |   |

| TABELA DE PENAS FY   | COLO | 1   | 2     | 3     | 4     | 5     | 6     | 7     | 8    | 9     |
|----------------------|------|-----|-------|-------|-------|-------|-------|-------|------|-------|
| PLACAGEM - ESC. 1:50 | PROV | 2   | 2     | 2     | 2     | 2     | 2     | 2     | 2    | 2     |
|                      | PROV | 0,1 | 0,130 | 0,190 | 0,190 | 0,180 | 0,500 | 0,200 | 0,09 | 0,250 |