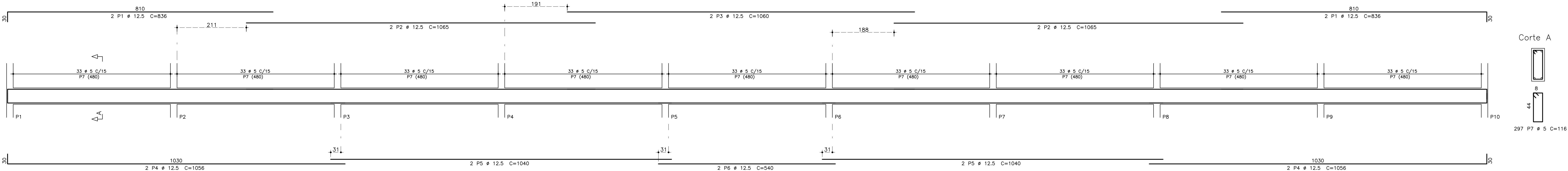
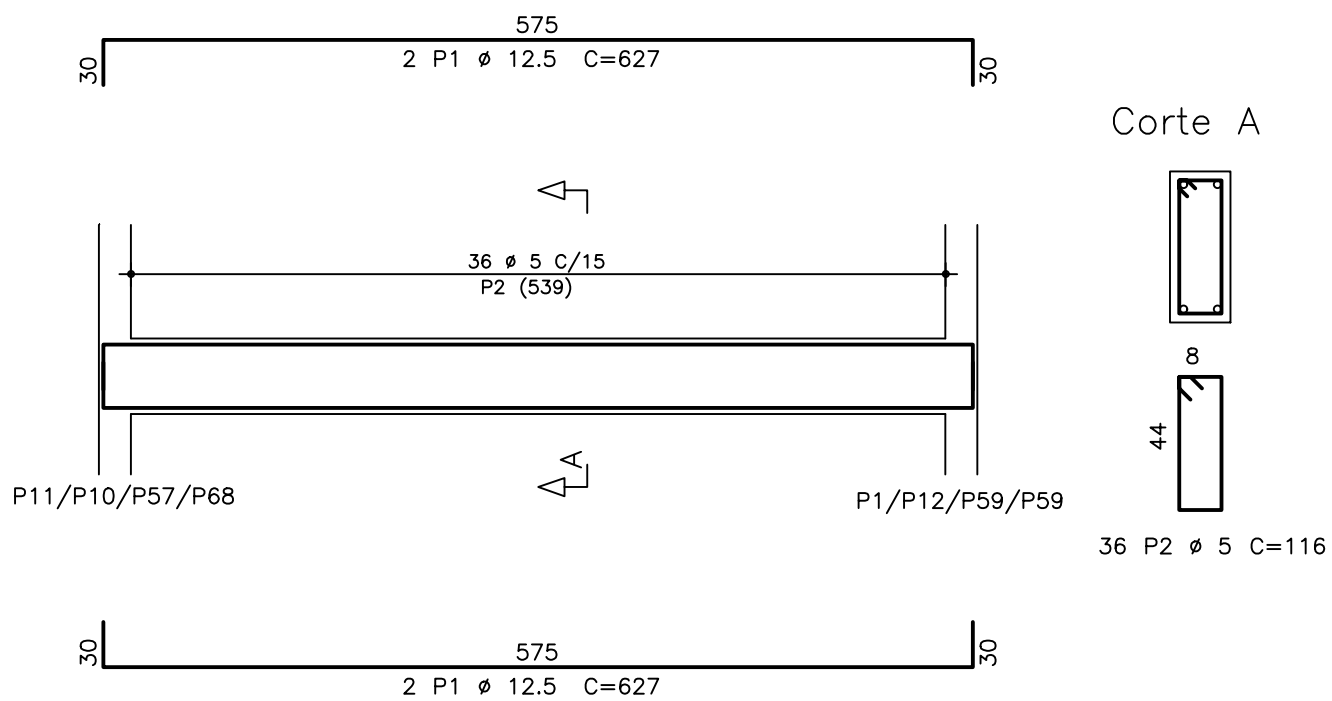


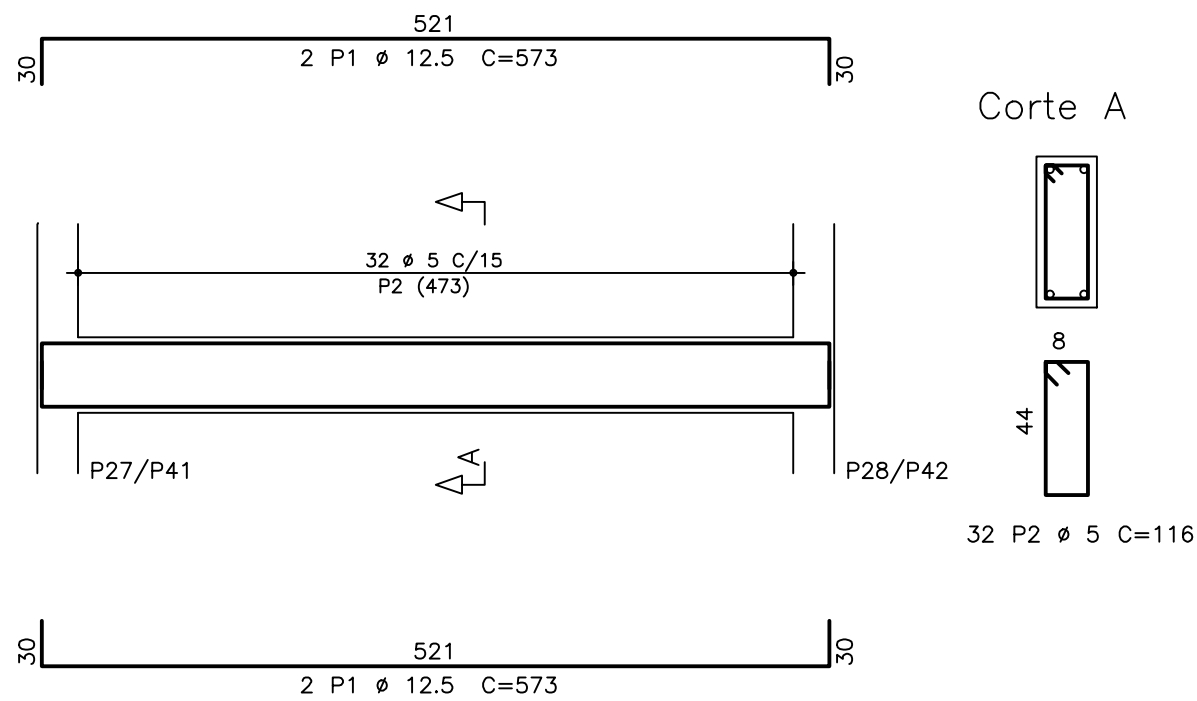
C1 14/50



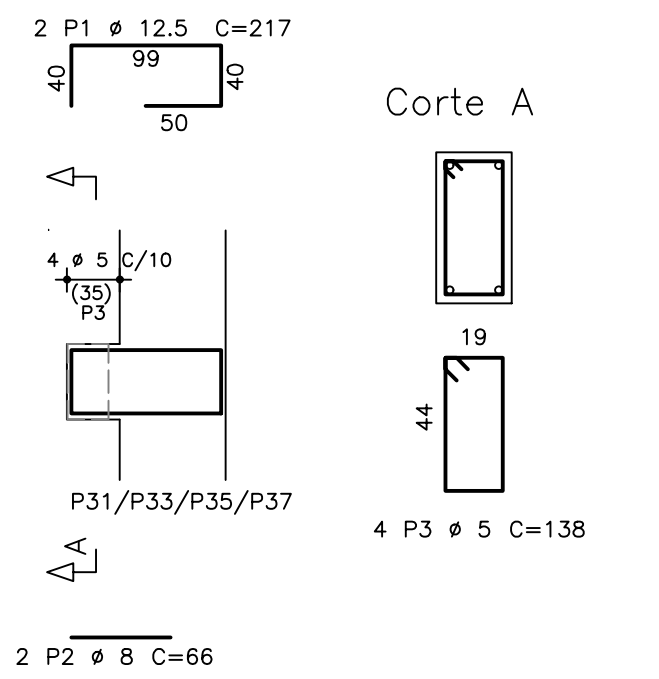
C2=C3=C20=C22 14/50



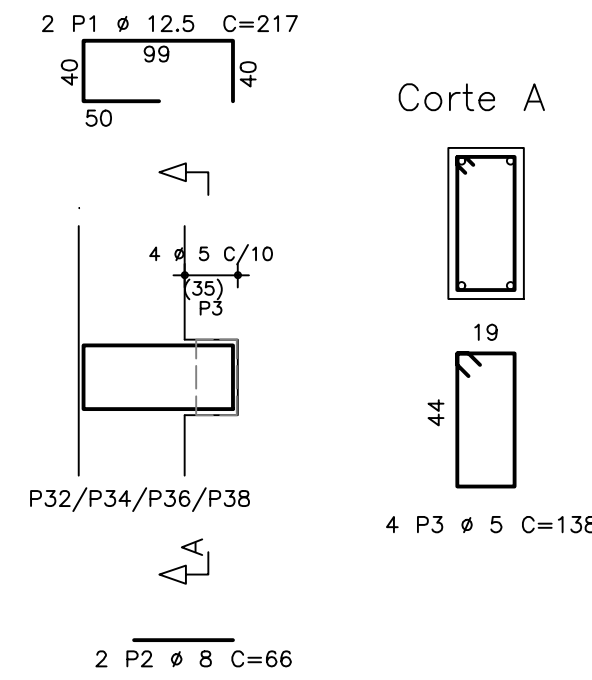
C5=C18 14/50



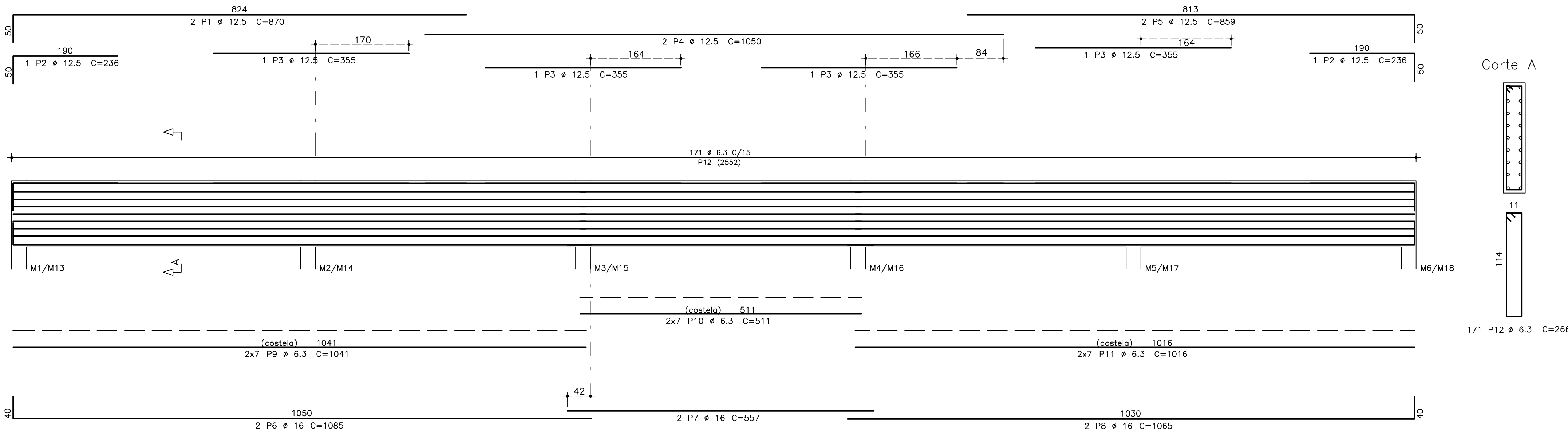
C8=C10=C12=C14 25/50



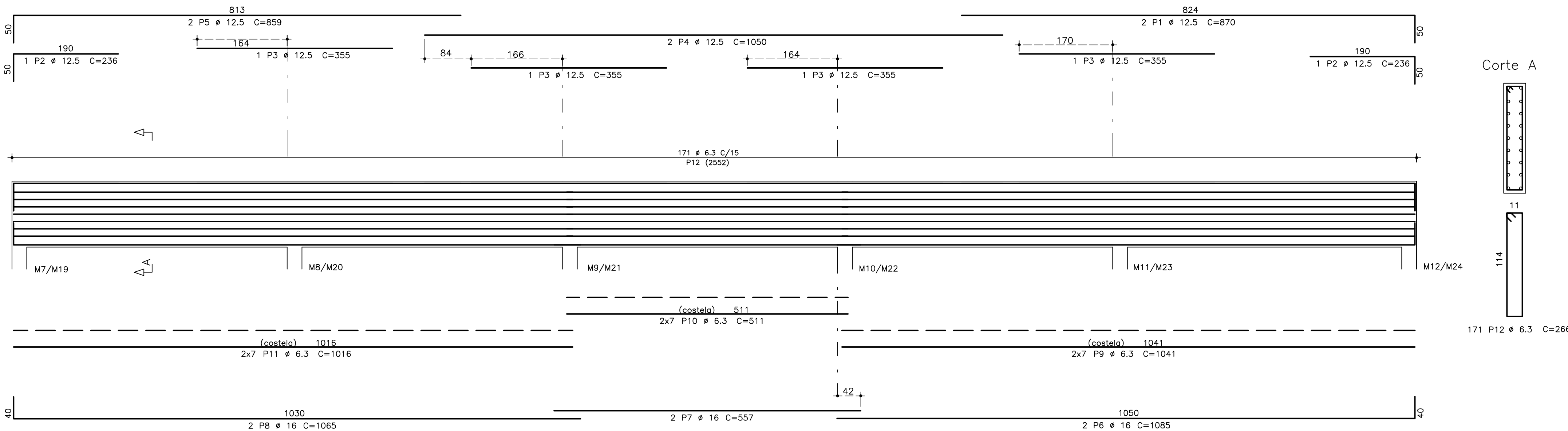
C9=C11=C13=C15 25/50



C6=C16 17/120



C7=C17 17/120



| AÇO | POS | BIT (mm) | QUANT | COMPRIMENTO | |
|---------------------|-----|----------|-------|-------------|------------|
| | | | | UNIT (cm) | TOTAL (cm) |
| C1 | 50 | 1 | 12.5 | 4 | 836 |
| | 50 | 2 | 12.5 | 4 | 1065 |
| | 50 | 3 | 12.5 | 2 | 1060 |
| | 50 | 4 | 12.5 | 4 | 1056 |
| | 50 | 5 | 12.5 | 4 | 1040 |
| | 50 | 6 | 12.5 | 2 | 540 |
| | 50 | 7 | 5 | 297 | 116 |
| | 50 | 8 | 16 | 4 | 1085 |
| | 50 | 9 | 6.3 | 28 | 1041 |
| | 50 | 10 | 6.3 | 28 | 511 |
| C2=C3=C20=C22 (X4) | | | | | |
| C6=C16 | 50 | 1 | 12.5 | 4 | 870 |
| | 50 | 2 | 12.5 | 4 | 1065 |
| | 50 | 3 | 12.5 | 8 | 355 |
| | 50 | 4 | 12.5 | 4 | 1050 |
| | 50 | 5 | 12.5 | 4 | 859 |
| | 50 | 6 | 16 | 4 | 1085 |
| | 50 | 7 | 16 | 4 | 557 |
| | 50 | 8 | 16 | 4 | 1065 |
| | 50 | 9 | 6.3 | 28 | 1041 |
| | 50 | 10 | 6.3 | 28 | 511 |
| C7=C17 (X2) | | | | | |
| C8=C10=C12=C14 | 50 | 1 | 12.5 | 4 | 870 |
| | 50 | 2 | 12.5 | 4 | 1065 |
| | 50 | 3 | 12.5 | 8 | 355 |
| | 50 | 4 | 12.5 | 4 | 1050 |
| | 50 | 5 | 12.5 | 4 | 859 |
| | 50 | 6 | 16 | 4 | 1085 |
| | 50 | 7 | 16 | 4 | 557 |
| | 50 | 8 | 16 | 4 | 1065 |
| | 50 | 9 | 6.3 | 28 | 1041 |
| | 50 | 10 | 6.3 | 28 | 511 |
| C9=C11=C13=C15 (X4) | | | | | |
| C5=C18 | 50 | 1 | 12.5 | 8 | 573 |
| | 50 | 2 | 5 | 64 | 116 |
| | 50 | 3 | 5 | 16 | 116 |
| | 50 | 4 | 5 | 16 | 116 |
| | 50 | 5 | 5 | 16 | 116 |
| | 50 | 6 | 5 | 16 | 116 |
| | 50 | 7 | 5 | 16 | 116 |
| | 50 | 8 | 5 | 16 | 116 |
| | 50 | 9 | 5 | 16 | 116 |
| | 50 | 10 | 5 | 16 | 116 |

| RESUMO AÇO CA 50-60 | | | |
|---------------------|----------|-----------|-----------|
| AÇO | BIT (mm) | COMPR (m) | PESO (kg) |
| 60 | 5 | 630 | 101 |
| 50 | 6.3 | 3258 | 814 |
| 50 | 8 | 11 | 4 |
| 50 | 12.5 | 671 | 671 |
| 50 | 16 | 217 | 346 |
| Peso Total | | 60 = | 101 kg |
| Peso Total | | 50 = | 1836 kg |

| DETALHE DE DOBRAMENTO DOS FERROS | Ø | RAIO (cm) | DESCONTO (cm) |
|----------------------------------|------|-----------|---------------|
| | 10.0 | 7.5 | 3.0 |
| | 12.5 | 9.3 | 4.0 |
| | 16.0 | 12.0 | 5.0 |
| | 20.0 | 15.0 | 6.0 |
| | 25.0 | 18.5 | 8.0 |

| | | | | |
|---------|-----------|----------------|------|-------------|
| REVISÃO | DESCRIÇÃO | SOLICITADO POR | DATA | RESPONSÁVEL |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
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TAUFIG ASFURA
CREA 1086 - PE/PA

GAMAL ASFURA
CREA 16973 - PE/PA

ITALO B. SCHMITZ
CREA 0545.442

engest
engenharia estrutural ltda.

RUA ARNÓBIO MARQUES, 271 - STO. AMARO - RECIFE-PE - CEP:50.100-130.
FONE:(081)3222-6652 - FAX:3231-2500 E-MAIL:engestpe@terra.com.br

| | | |
|---|---|---|
| OBRA | GINÁSIO DE ESPORTES | (PREFEITURA DE LIMOEIRO) |
| 11/2017 | RESP. TÉCNICO GAMAL ASFURA PROJETO ESTRUTURAL DESENHO AMARO CORTEZ | ESCALA CA- 50 e 60 1:50 CONCRETO fck > 35 MPa ABRIL/2017 REVISÃO P02-02.DWG 0 |
| FUNDAÇÃO - ARMAÇÃO DAS CINTAS (PARTE 01/03) | | |