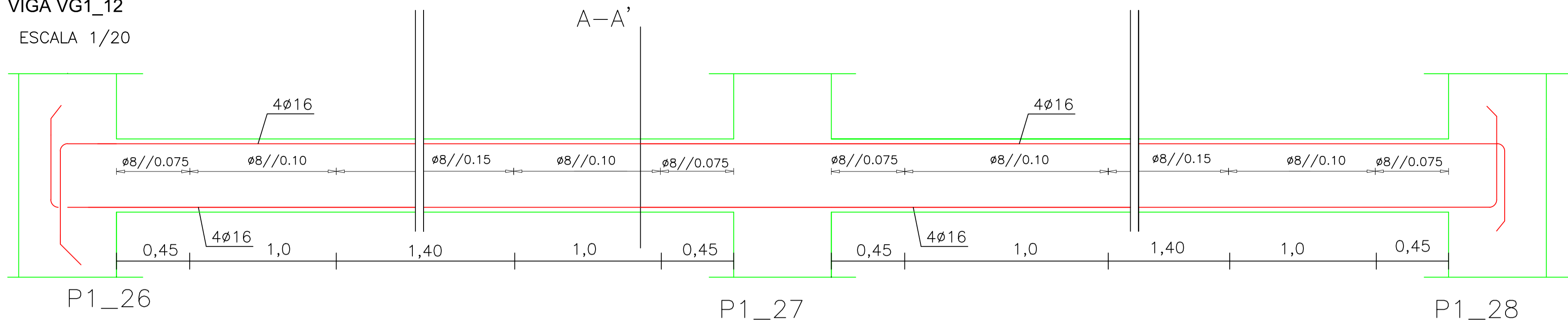
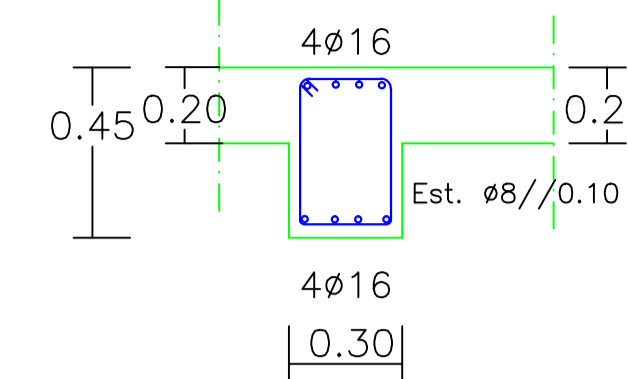


VIGA VG1_12

ESCALA 1/20

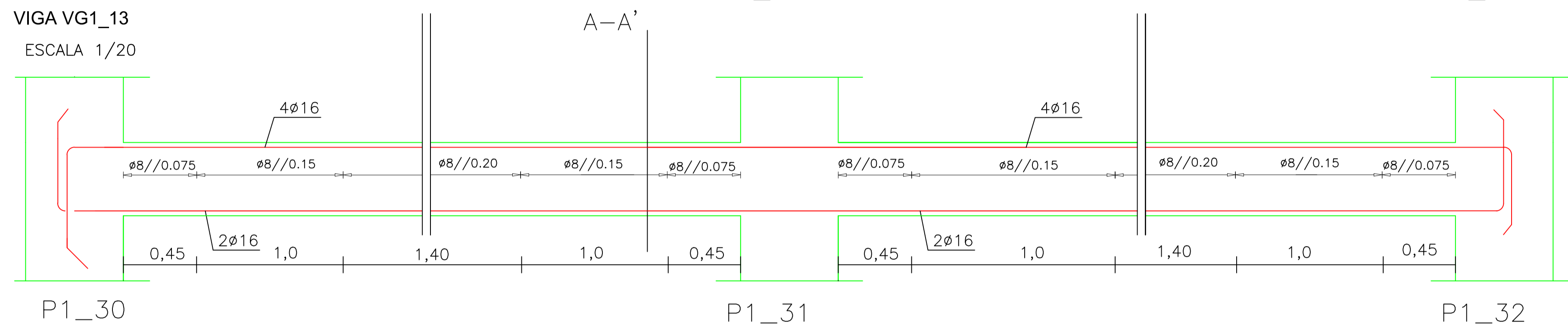


CORTE VG1_12 A-A'

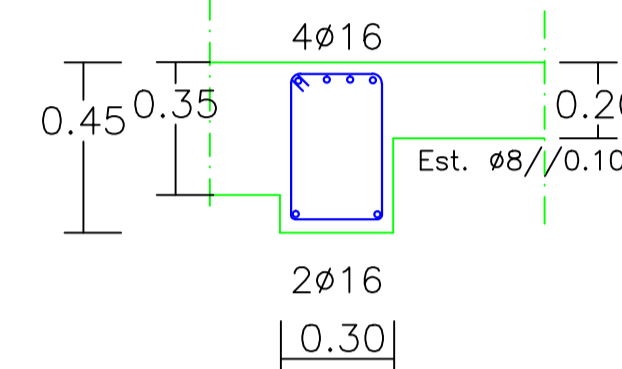


VIGA VG1_13

ESCALA 1/20

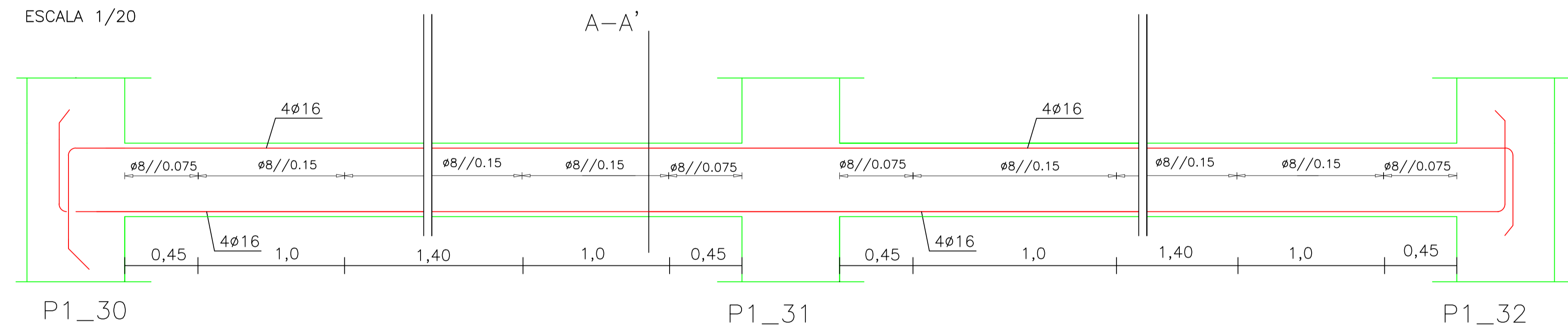


CORTE VG1_13 A-A'

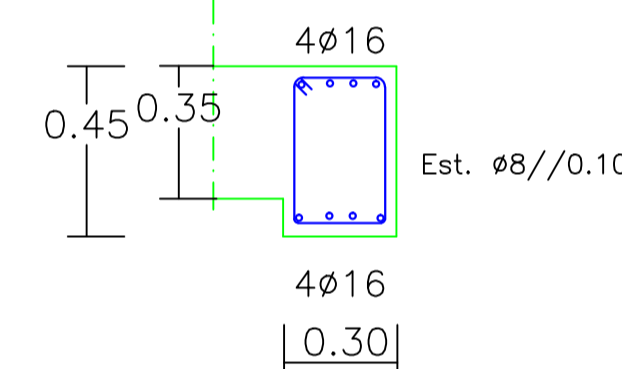


VIGA VG1_14

ESCALA 1/20

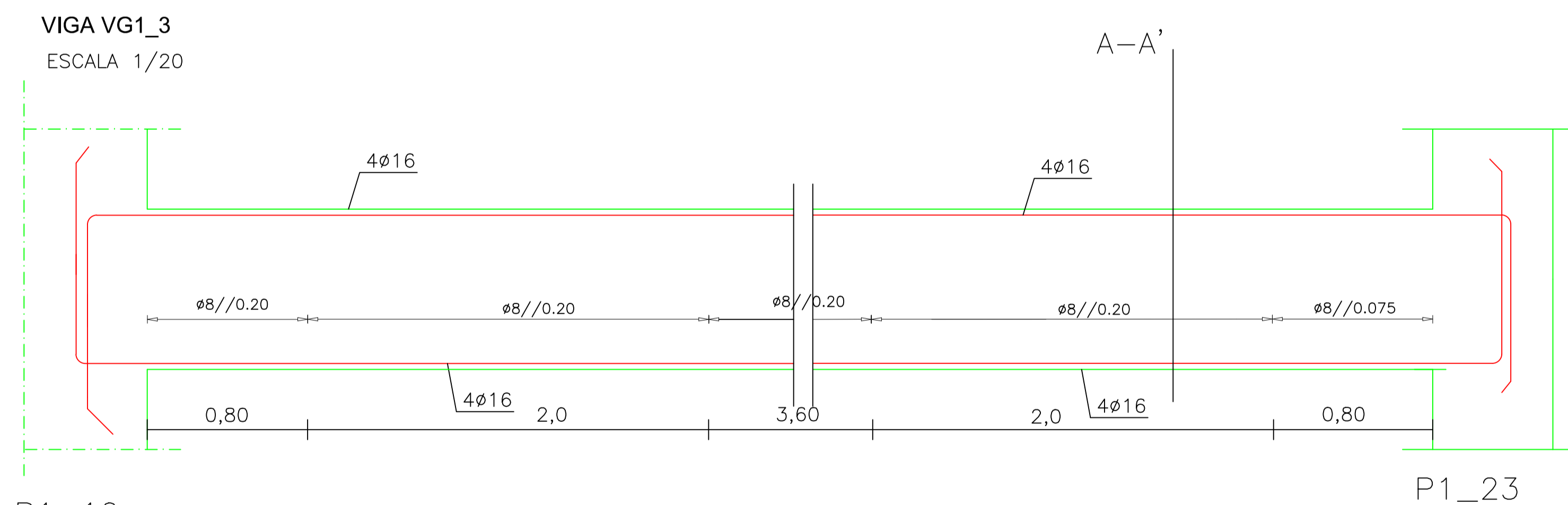


CORTE VG1_14 A-A'

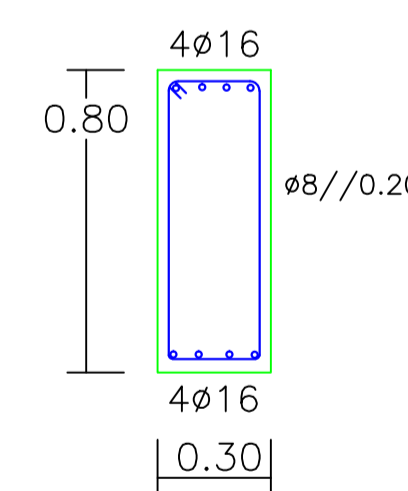


VIGA VG1_3

ESCALA 1/20

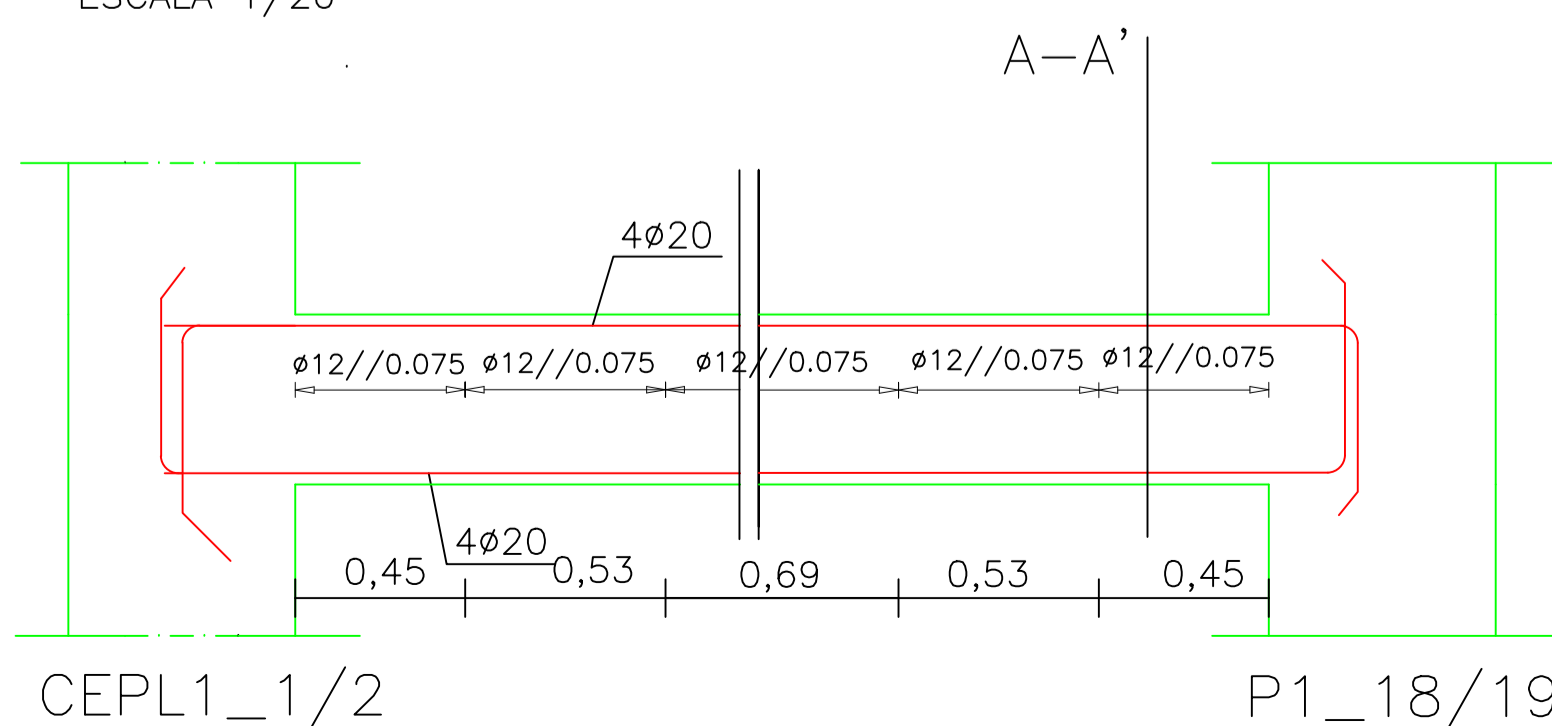


CORTE VG1_3 A-A'

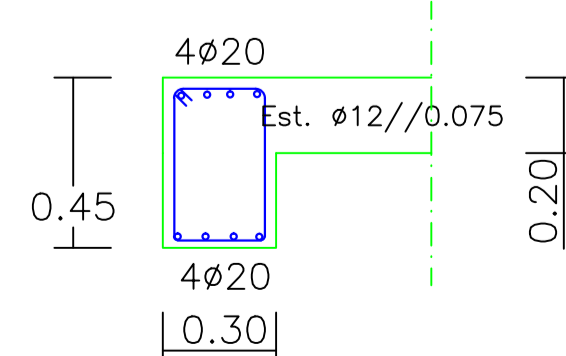


VIGA VG1_15/16

ESCALA 1/20



CORTE VG1_16 A-A'



| COMPRIMENTOS AMARRAÇÃO (lb) E EMENDA (lb0) | | |
|--|---------|---------|
| Varão | lb0 (m) | lb0 (m) |
| Ø10 | 0.40 | 0.65 |
| Ø12 | 0.50 | 0.75 |
| Ø16 | 0.70 | 1.00 |
| Ø20 | 0.85 | 1.25 |
| Ø25 | 1.05 | 1.25 |

| MATERIAIS | | |
|-----------|----------------|---|
| BETÃO | Fundações | NP EN 206-1:C25/30•XC2(P)•CL0,40•Dmáx 22•S4 |
| | Superestrutura | NP EN 206-1:C25/30•XC1(P)•CL0,40•Dmáx 22•S4 |
| | Regularização | NP EN 206-1:C16/20•XC1(P)•CL0,40•Dmáx 22•S4 |
| ACO | Fundações | A400NR SD |
| | Superestrutura | A400NR SD |

| RECOBRIMENTOS | |
|-----------------|-------|
| Fundações | 5.0cm |
| Pilares e Vigas | 3.5cm |
| Lajes | 3.5cm |

| | | |
|---|--|---|
| | Área Departamental de Engenharia Civil Mestrado em Engenharia Civil | |
| | Trabalho Final de Mestrado | |
| Realizado por: André Cardoso N° 33505 | BETÃO ARMADO Vigas - VG1_3/12/13/14/15/16 | Folha: 6/6 N°Des. 17/17 Escala: 1/20 Data: DEZEMBRO/15 |