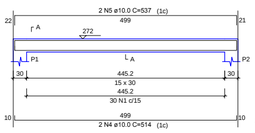
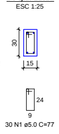
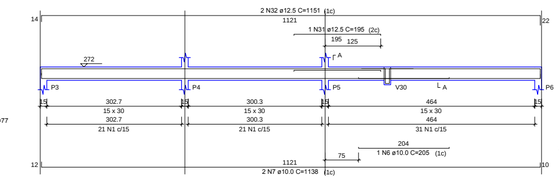
## V1
ESC 1:50



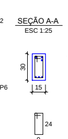

SEÇÃO A-A
ESC 1:25



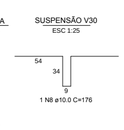

## V2
ESC 1:50



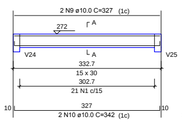

SEÇÃO A-A
ESC 1:25



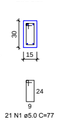

SUSPENSÃO V30
ESC 1:25



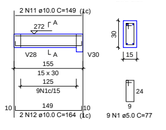

## V3
ESC 1:50



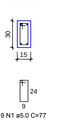

SEÇÃO A-A
ESC 1:25



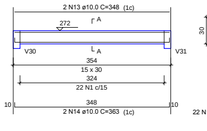

## V4
ESC 1:50




SEÇÃO A-A
ESC 1:25

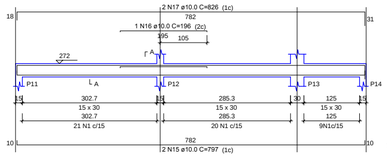



## V5
ESC 1:50

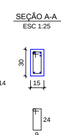



SEÇÃO A-A
ESC 1:25

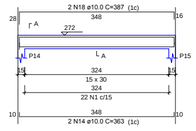
## V6
ESC 1:50



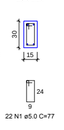

SEÇÃO A-A
ESC 1:25



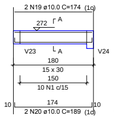

## V7
ESC 1:50



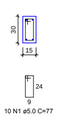

SEÇÃO A-A
ESC 1:25



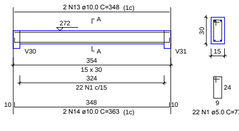

## V8
ESC 1:50



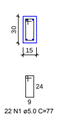

SEÇÃO A-A
ESC 1:25



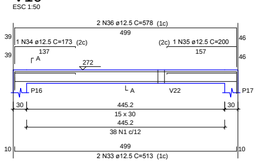

## V9
ESC 1:50



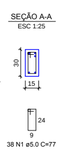

SEÇÃO A-A
ESC 1:25



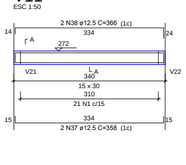

## V10
ESC 1:50



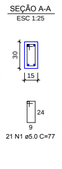

SEÇÃO A-A
ESC 1:25



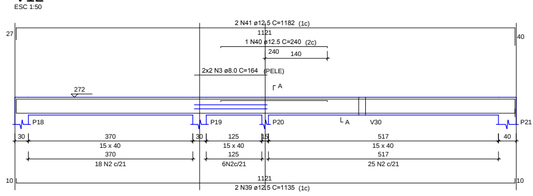

## V11
ESC 1:50



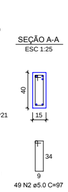

SEÇÃO A-A
ESC 1:25



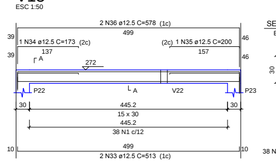

## V12
ESC 1:50



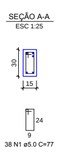

SEÇÃO A-A
ESC 1:25



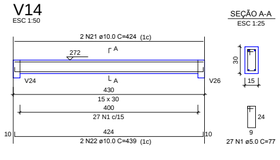

## V13
ESC 1:50



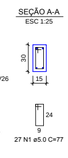

SEÇÃO A-A
ESC 1:25



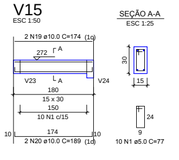

## V14
ESC 1:50




SEÇÃO A-A
ESC 1:25



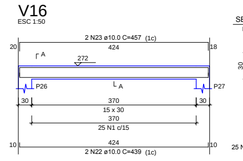

## V15
ESC 1:50



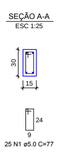

SEÇÃO A-A
ESC 1:25



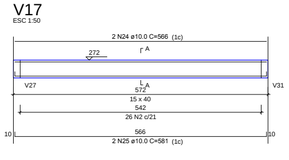

## V16
ESC 1:50



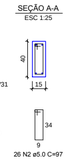

SEÇÃO A-A
ESC 1:25



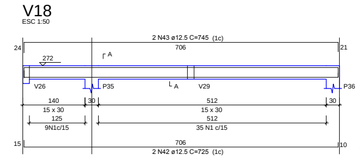

## V17
ESC 1:50




SEÇÃO A-A
ESC 1:25

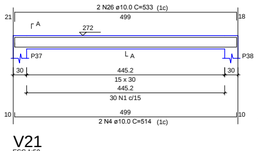



## V18
ESC 1:50

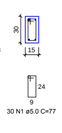



SEÇÃO A-A
ESC 1:25

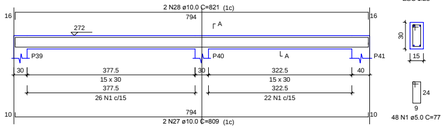
## V19
ESC 1:50




SEÇÃO A-A
ESC 1:25



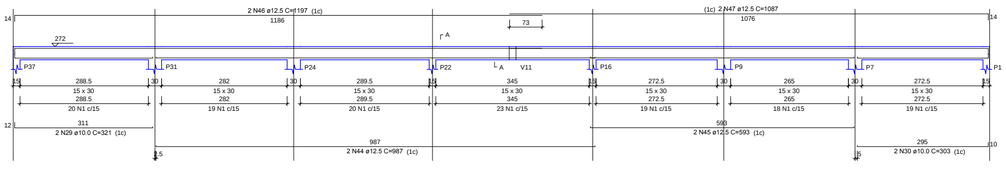

## V20
ESC 1:50



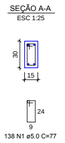

SEÇÃO A-A
ESC 1:25



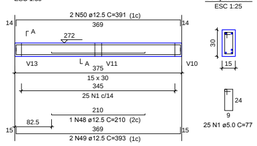

## V21
ESC 1:50



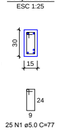

SEÇÃO A-A
ESC 1:25



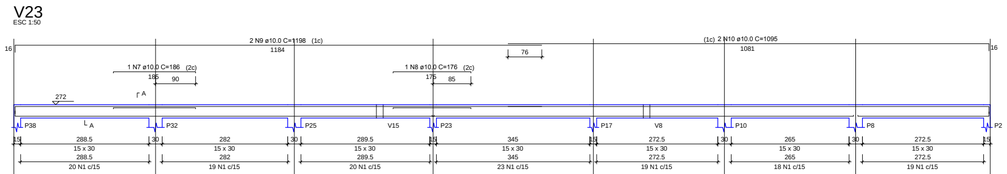

## V22
ESC 1:50




SEÇÃO A-A
ESC 1:25

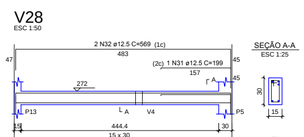



## V23
ESC 1:50




SEÇÃO A-A
ESC 1:25

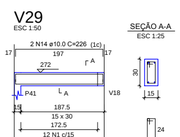
## V28
ESC 1:50




SEÇÃO A-A
ESC 1:25



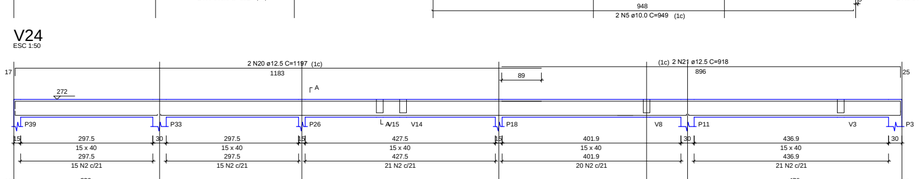

## V29
ESC 1:50




SEÇÃO A-A
ESC 1:25

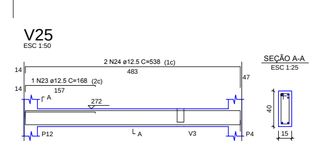



## V24
ESC 1:50




SEÇÃO A-A
ESC 1:25

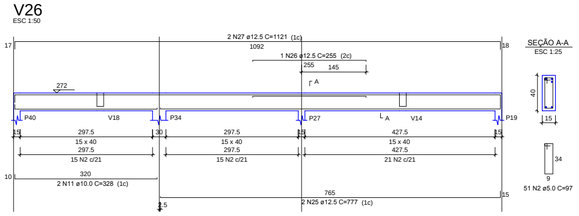
## V25
ESC 1:50



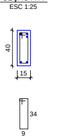

SEÇÃO A-A
ESC 1:25



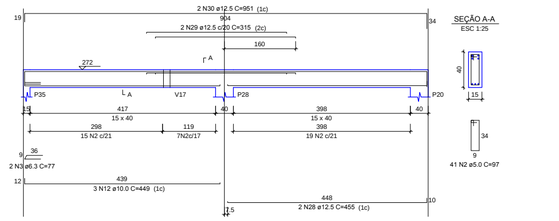

## V26
ESC 1:50




SEÇÃO A-A
ESC 1:25




ESC 1:50

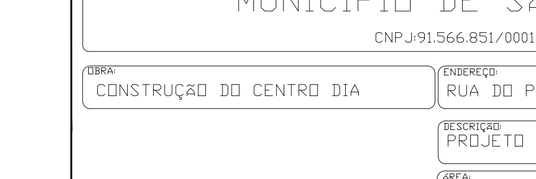



SEÇÃO A-A
ESC 1:25




## V27

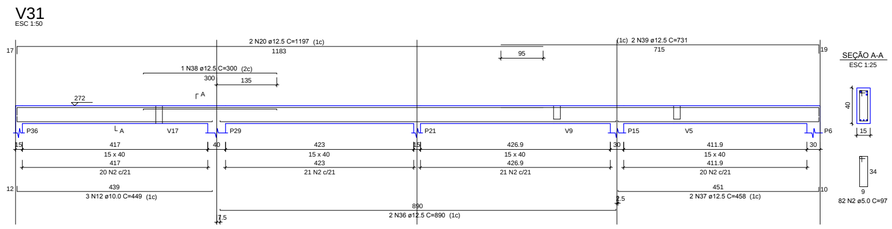
## V30
ESC 1:50




SEÇÃO A-A
ESC 1:25




## V31
ESC 1:50




SEÇÃO A-A
ESC 1:25




RELAÇÃO DO AÇO

| | | | |
|---|---|---|---|
| V1 | V2 | V3 | |
| V4 | V5 | V6 | |
| V7 | V8 | V9 | |
| V10 | V11 | V12 | |
| V13 | V14 | V15 | |
| V16 | V17 | V18 | |
| V19 | V20 | V21 | |
| V22 | V23 | V24 | |
| V25 | V26 | V27 | |
| V28 | V29 | V30 | |
| V31 | V32 | | |

| AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|
| CA60 | 1 | 5.0 | 703 | 77 | 54131 |
| | 2 | 5.0 | 75 | 97 | 7275 |
| CA50 | 3 | 8.0 | 4 | 164 | 656 |
| | 4 | 10.0 | 4 | 514 | 2056 |
| | 5 | 10.0 | 2 | 537 | 1074 |
| | 6 | 10.0 | 2 | 348 | 696 |
| | 7 | 10.0 | 2 | 1138 | 2276 |
| | 8 | 10.0 | 1 | 176 | 176 |
| | 9 | 10.0 | 2 | 327 | 654 |
| | 10 | 10.0 | 2 | 342 | 684 |
| | 11 | 10.0 | 2 | 342 | 684 |
| | 12 | 10.0 | 2 | 164 | 328 |
| | 13 | 10.0 | 4 | 348 | 1392 |
| | 14 | 10.0 | 6 | 363 | 2178 |
| | 15 | 10.0 | 2 | 797 | 1594 |
| | 16 | 10.0 | 2 | 826 | 1652 |
| | 17 | 10.0 | 2 | 826 | 1652 |
| | 18 | 10.0 | 2 | 387 | 774 |
| | 19 | 10.0 | 4 | 174 | 696 |
| | 20 | 10.0 | 4 | 189 | 756 |
| | 21 | 10.0 | 4 | 439 | 1756 |
| | 22 | 10.0 | 4 | 439 | 1756 |
| | 23 | 10.0 | 2 | 457 | 914 |
| | 24 | 10.0 | 2 | 566 | 1132 |
| | 25 | 10.0 | 2 | 581 | 1162 |
| | 26 | 10.0 | 2 | 609 | 1218 |
| | 27 | 10.0 | 2 | 609 | 1218 |
| | 28 | 10.0 | 2 | 821 | 1642 |
| | 29 | 10.0 | 2 | 321 | 642 |
| | 30 | 10.0 | 1 | 303 | 606 |
| | 31 | 12.5 | 2 | 1087 | 2174 |
| | 32 | 12.5 | 2 | 1151 | 2302 |
| | 33 | 12.5 | 4 | 513 | 2052 |
| | 34 | 12.5 | 2 | 173 | 346 |
| | 35 | 12.5 | 2 | 200 | 400 |
| | 36 | 12.5 | 2 | 1138 | 2276 |
| | 37 | 12.5 | 2 | 358 | 716 |
| | 38 | 12.5 | 2 | 366 | 732 |
| | 39 | 12.5 | 2 | 1135 | 2270 |
| | 40 | 12.5 | 1 | 240 | 240 |
| | 41 | 12.5 | 2 | 1182 | 2364 |
| | 42 | 12.5 | 2 | 725 | 1450 |
| | 43 | 12.5 | 2 | 745 | 1490 |
| | 44 | 12.5 | 2 | 987 | 1974 |
| | 45 | 12.5 | 2 | 593 | 1186 |
| | 46 | 12.5 | 2 | 1087 | 2174 |
| | 47 | 12.5 | 2 | 1087 | 2174 |
| | 48 | 12.5 | 1 | 210 | 210 |
| | 49 | 12.5 | 2 | 393 | 786 |
| | 50 | 12.5 | 2 | 391 | 782 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO (kg) |
|---|---|---|---|
| CA50 | 10.0 | 2818.8 | 1737.4 |
| | 12.5 | 1105.6 | 679.1 |
| CA60 | 5.0 | 614.1 | 104.1 |

PESO TOTAL (kg)

| | |
|---|---|
| CA50 | 2416.5 |
| CA60 | 104.1 |

Volume de concreto (C-25) = 6.03 m³

RELAÇÃO DO AÇO

| | | | |
|---|---|---|---|
| V23 | V24 | V25 | |
| V26 | V27 | V28 | |
| V29 | V30 | V31 | |

| AÇO | N | DIAM (mm) | QUANT | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|
| CA60 | 1 | 5.0 | 180 | 77 | 13860 |
| | 2 | 5.0 | 328 | 97 | 31816 |
| CA50 | 3 | 6.3 | 2 | 77 | 154 |
| | 4 | 8.0 | 2 | 164 | 328 |
| | 5 | 10.0 | 2 | 949 | 1898 |
| | 6 | 10.0 | 2 | 303 | 606 |
| | 7 | 10.0 | 1 | 186 | 186 |
| | 8 | 10.0 | 1 | 176 | 176 |
| | 9 | 10.0 | 2 | 1087 | 2174 |
| | 10 | 10.0 | 2 | 1095 | 2190 |
| | 11 | 10.0 | 4 | 328 | 1312 |
| | 12 | 10.0 | 6 | 449 | 2694 |
| | 13 | 10.0 | 2 | 212 | 424 |
| | 14 | 10.0 | 2 | 226 | 452 |
| | 15 | 10.0 | 2 | 288 | 576 |
| | 16 | 10.0 | 2 | 466 | 932 |
| | 17 | 12.5 | 2 | 1062 | 2124 |
| | 18 | 12.5 | 2 | 155 | 310 |
| | 19 | 12.5 | 2 | 483 | 966 |
| | 20 | 12.5 | 4 | 1197 | 4788 |
| | 21 | 12.5 | 2 | 918 | 1836 |
| | 22 | 12.5 | 4 | 502 | 2008 |
| | 23 | 12.5 | 1 | 168 | 168 |
| | 24 | 12.5 | 1 | 539 | 1078 |
| | 25 | 12.5 | 1 | 771 | 1542 |
| | 26 | 12.5 | 2 | 1121 | 2242 |
| | 27 | 12.5 | 2 | 455 | 910 |
| | 28 | 12.5 | 2 | 315 | 630 |
| | 29 | 12.5 | 1 | 951 | 1902 |
| | 30 | 12.5 | 1 | 303 | 606 |
| | 31 | 12.5 | 2 | 569 | 1138 |
| | 32 | 12.5 | 2 | 446 | 892 |
| | 33 | 12.5 | 2 | 340 | 680 |
| | 34 | 12.5 | 2 | 953 | 1906 |
| | 35 | 12.5 | 2 | 155 | 310 |
| | 36 | 12.5 | 2 | 458 | 916 |
| | 37 | 12.5 | 1 | 300 | 300 |
| | 38 | 12.5 | 2 | 731 | 1462 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | PESO (kg) |
|---|---|---|---|
| CA50 | 10.0 | 154.6 | 104.8 |
| | 12.5 | 300.4 | 318.3 |
| CA60 | 5.0 | 456.8 | 77.4 |

PESO TOTAL (kg)

| | |
|---|---|
| CA50 | 423.6 |
| CA60 | 77.4 |

Volume de concreto (C-25) = 5.63 m³

MUNICIPIO DE SÃO JORGE-RS

CNPJ:91.566.851/0001-51

OBRA: CONSTRUÇÃO DO CENTRO DIA

ENDEREÇO: RUA DO PARQUE, SÃO JORGE-RS

DESCRIÇÃO: PROJETO ESTRUTURAL-VIGAS FORRO

ÁREA: 338,95 m²

ESCALA: IND

DATA: 09/07/2025

ANEXO I-N

DANILO SALVALAGGIO
PREFEITO MUNICIPAL

Assinado de forma digital por augusto ben
DN: cn=augusto ben, o, ou, email=solucione.seg@gmail.com, c=BR
Dados: 2025.07.09 18:39:06 -03'00'

RESP. TÉC: AUGUSTO BEN
CREA-RS 236427

| | | | |
|---|---|---|---|
| DESENHO: AUGUSTO | REVISÃO:00 | DATA:09/07/25 | |
| DESENHO: | REVISÃO: | DATA: | |
| DESENHO: | REVISÃO: | DATA: | |

FOLHA: 141