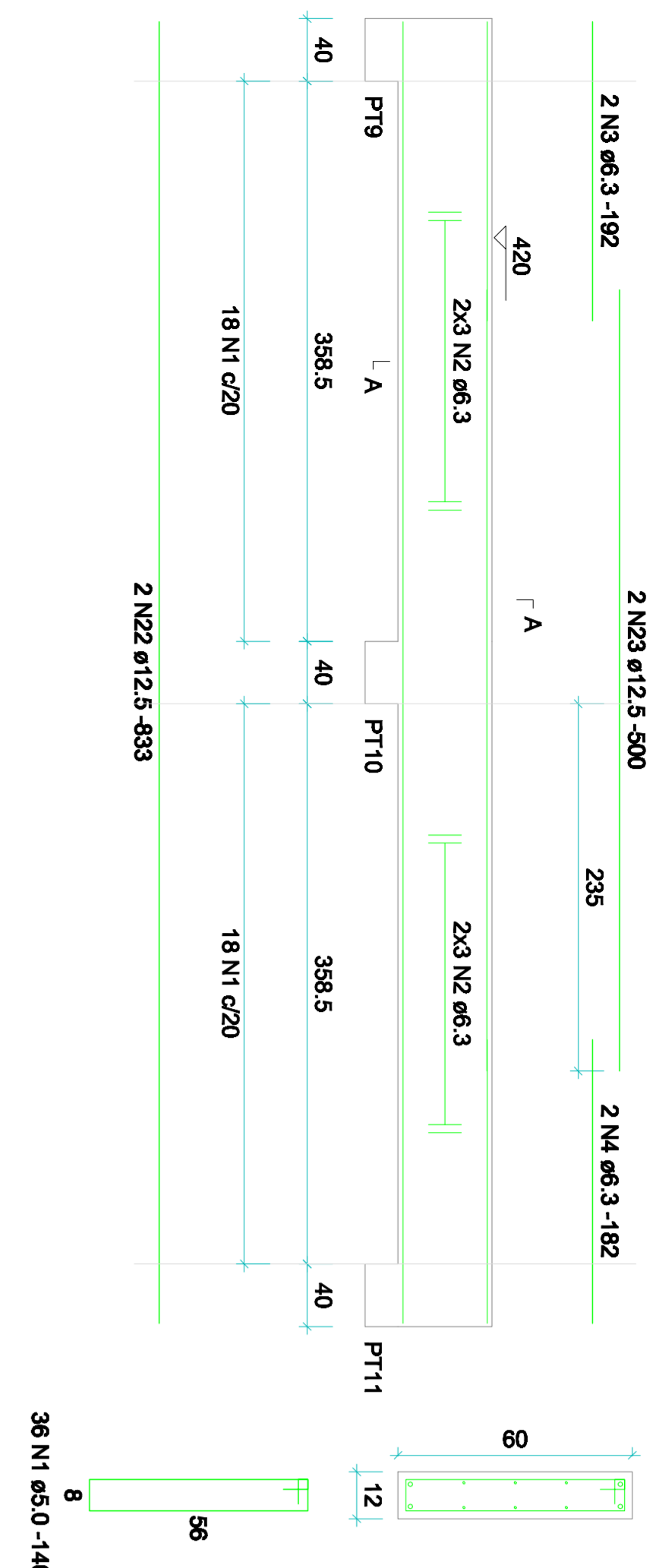
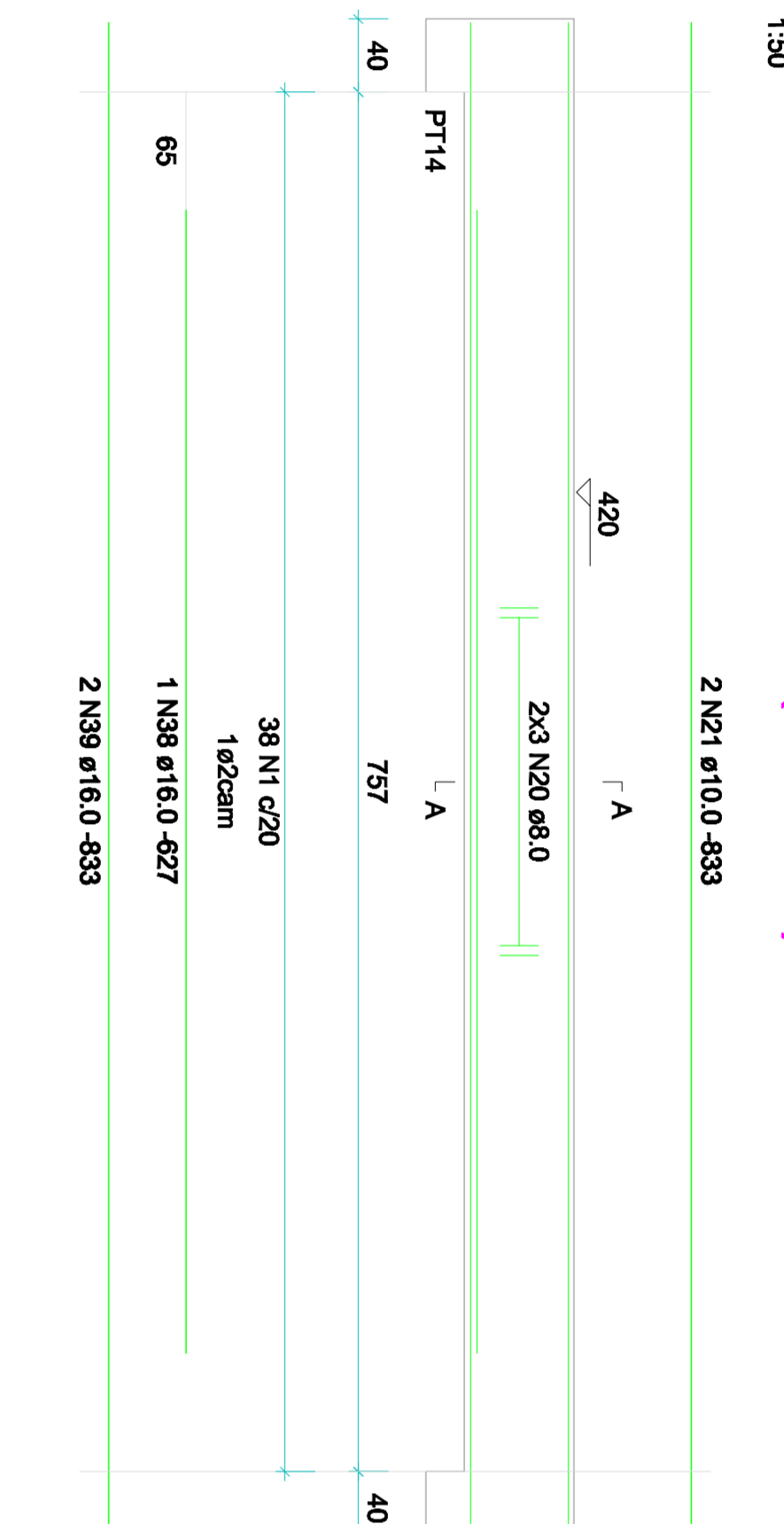




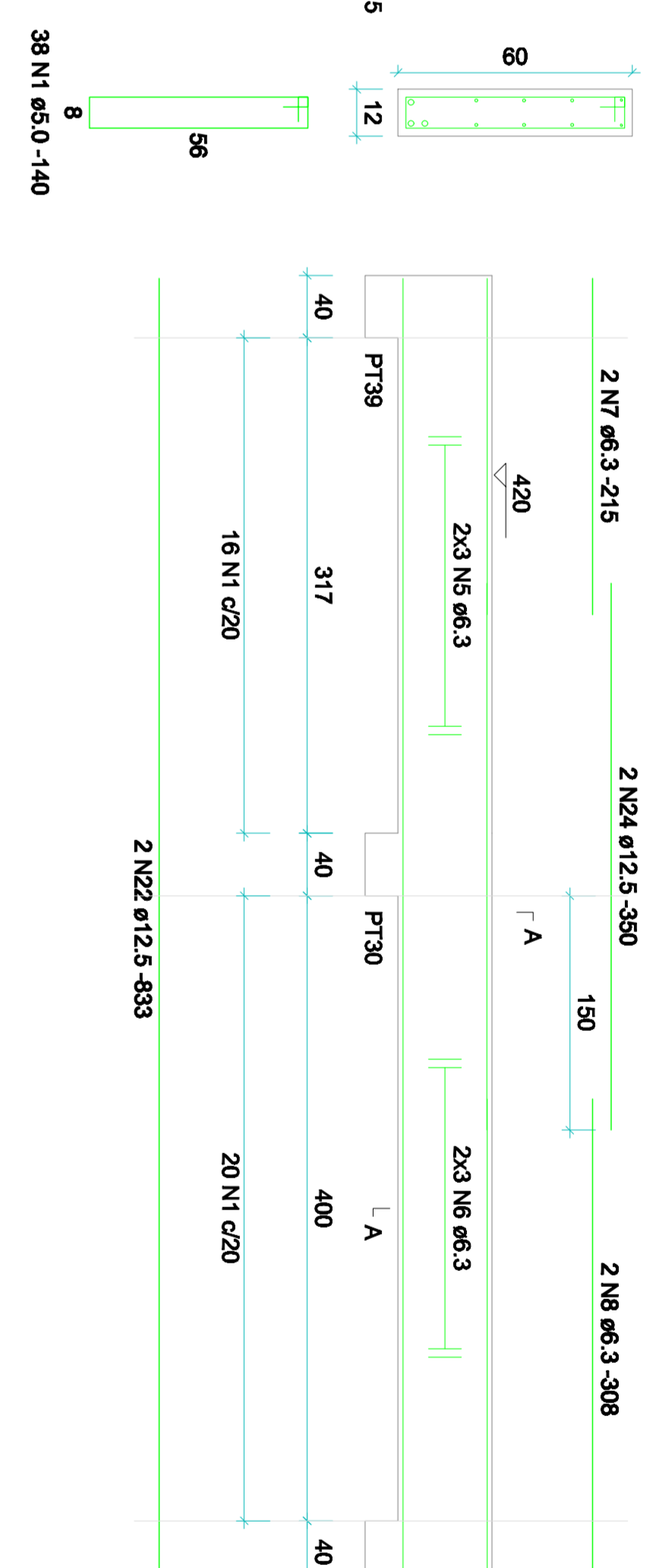
VT2 (12 x 60)



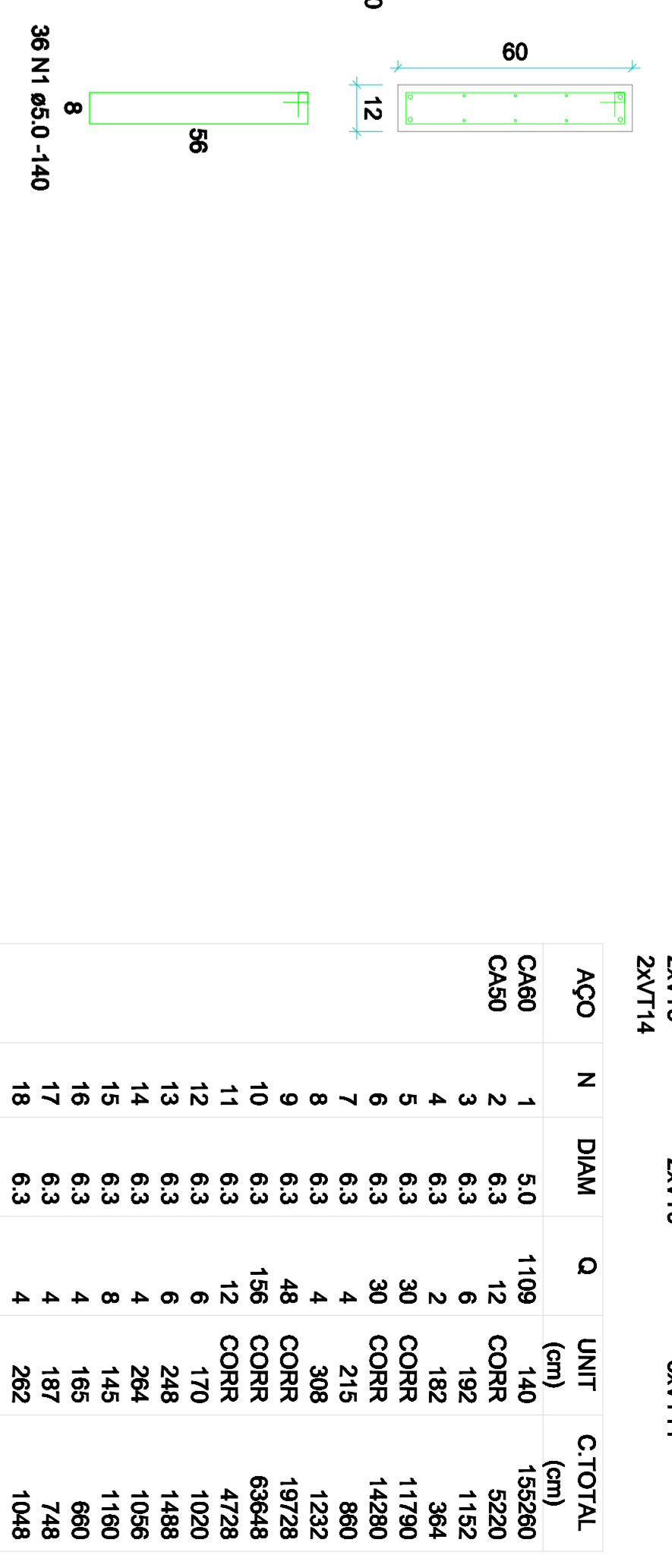
VT1=VT3=VT8=VT15 (12 x 60)



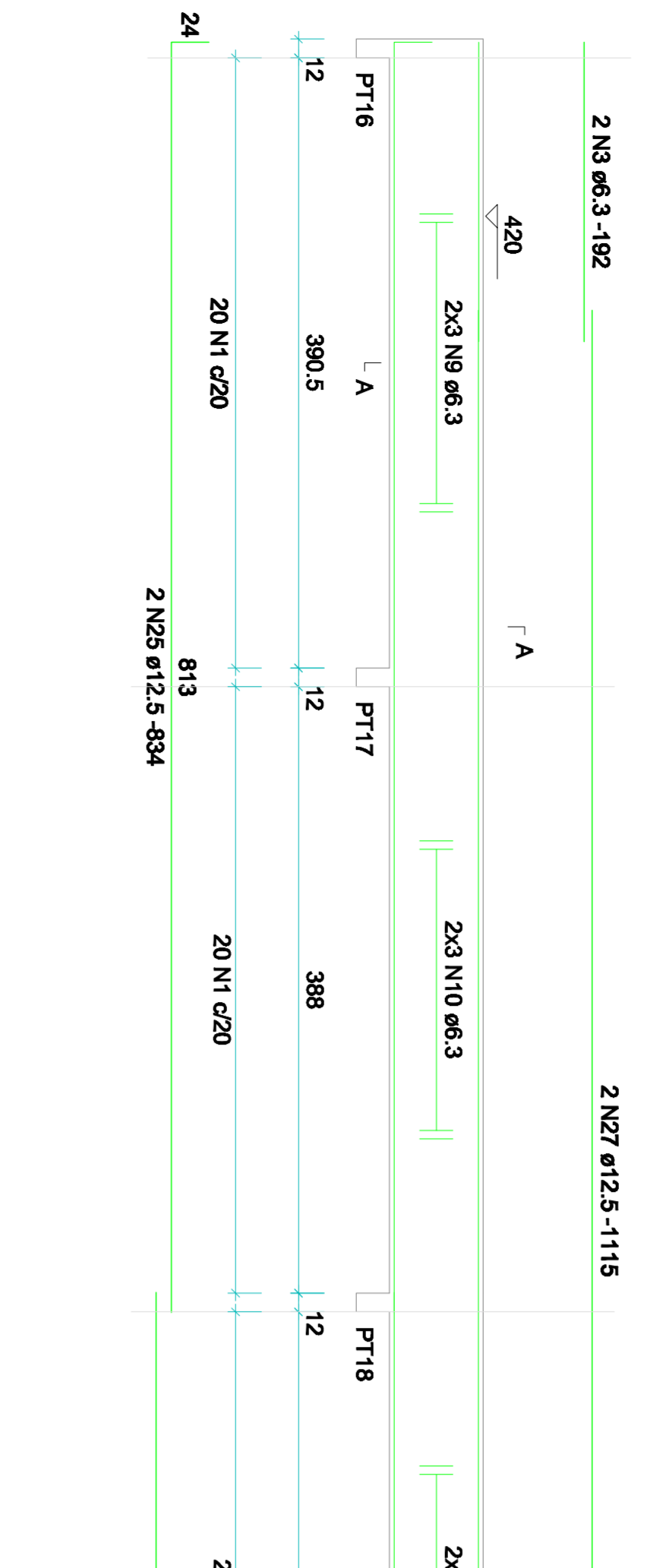
VT9=VT10 (12 x 60)



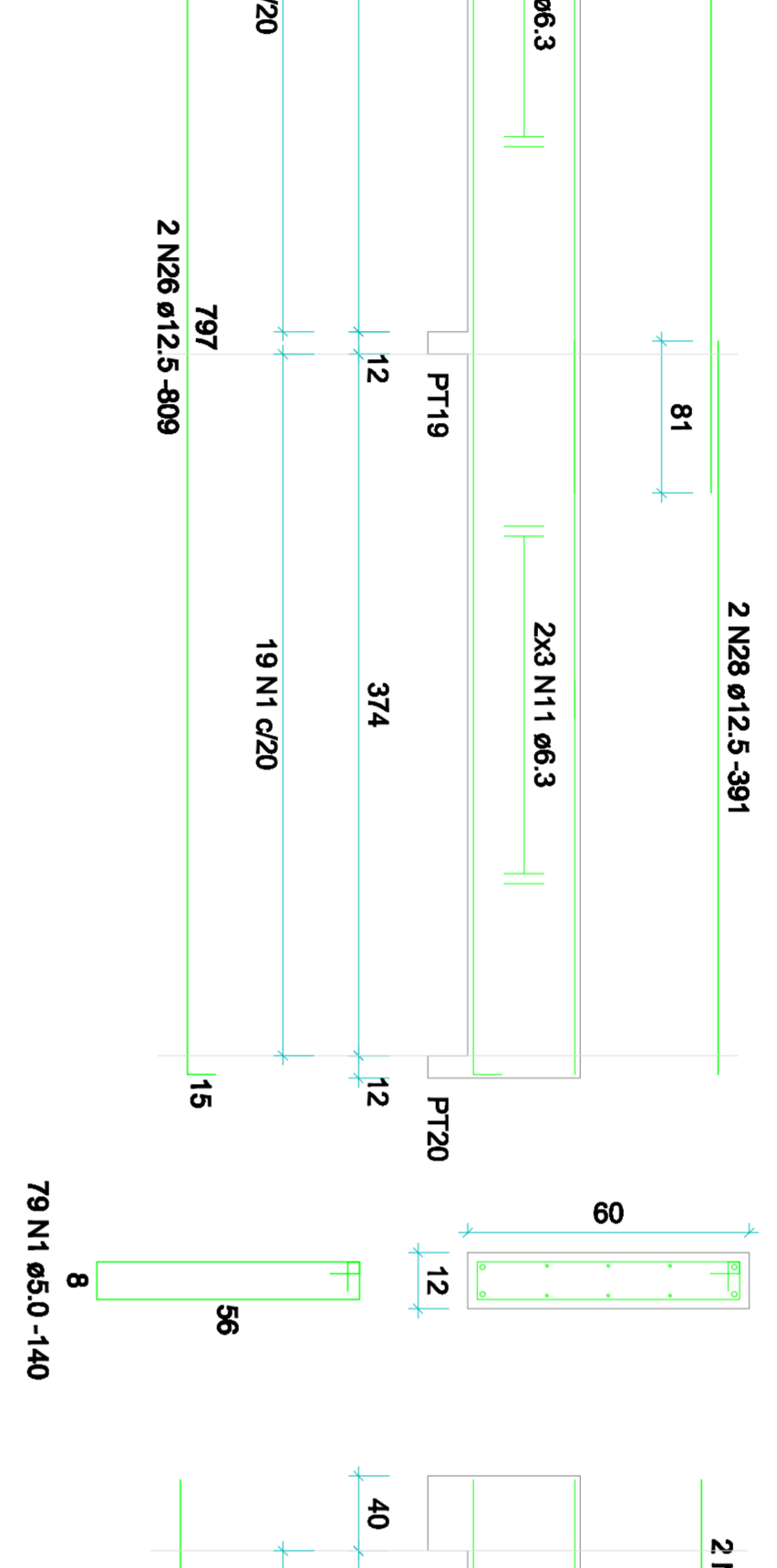
VT4=VT6 (12 x 60)



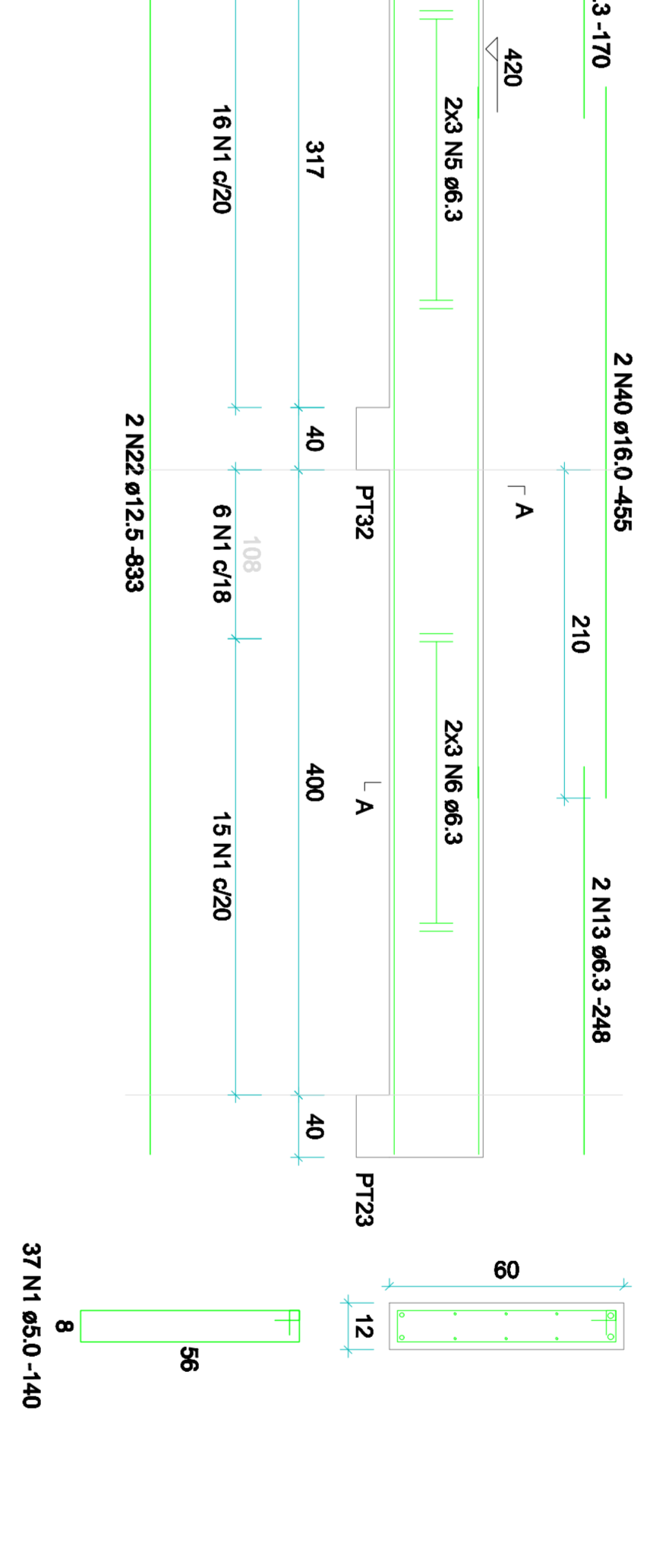
VT5=VT7 (12 x 60)



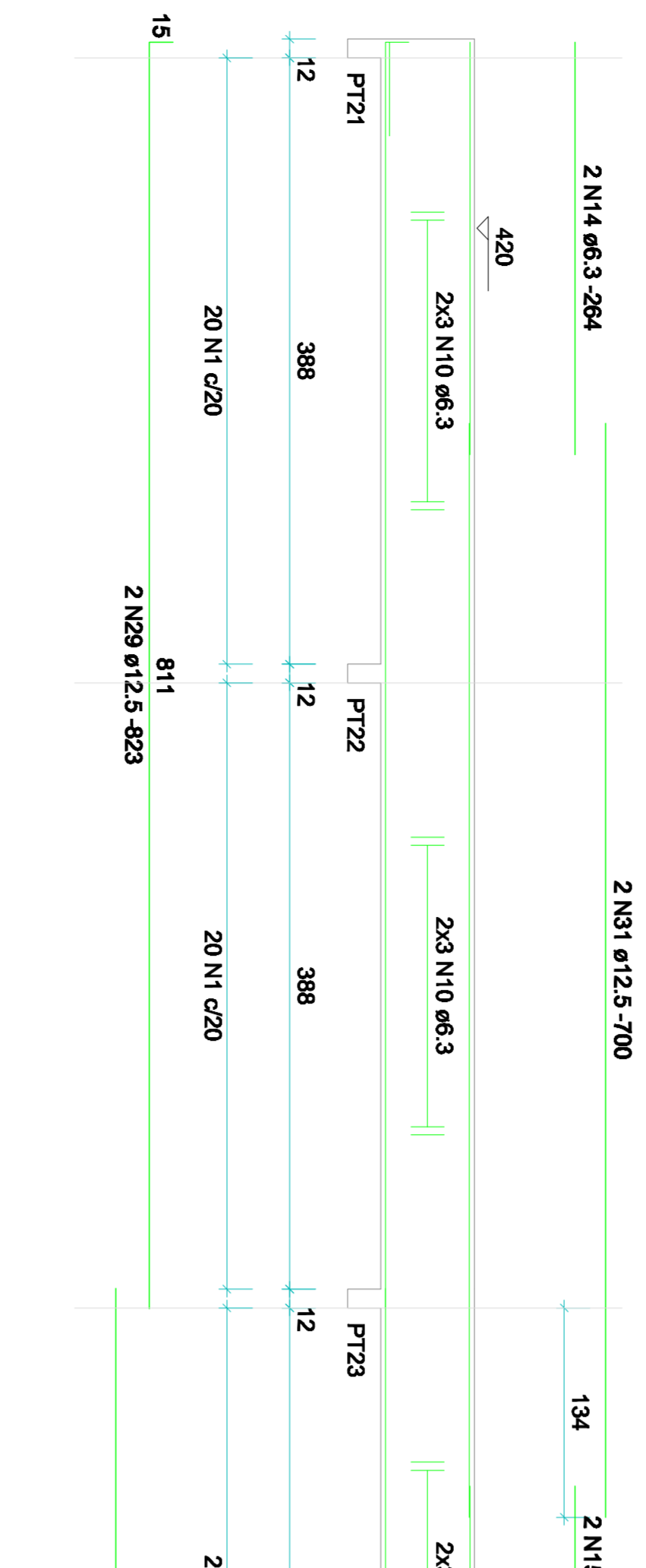
VT1=VT12=VT13 (12 x 60)



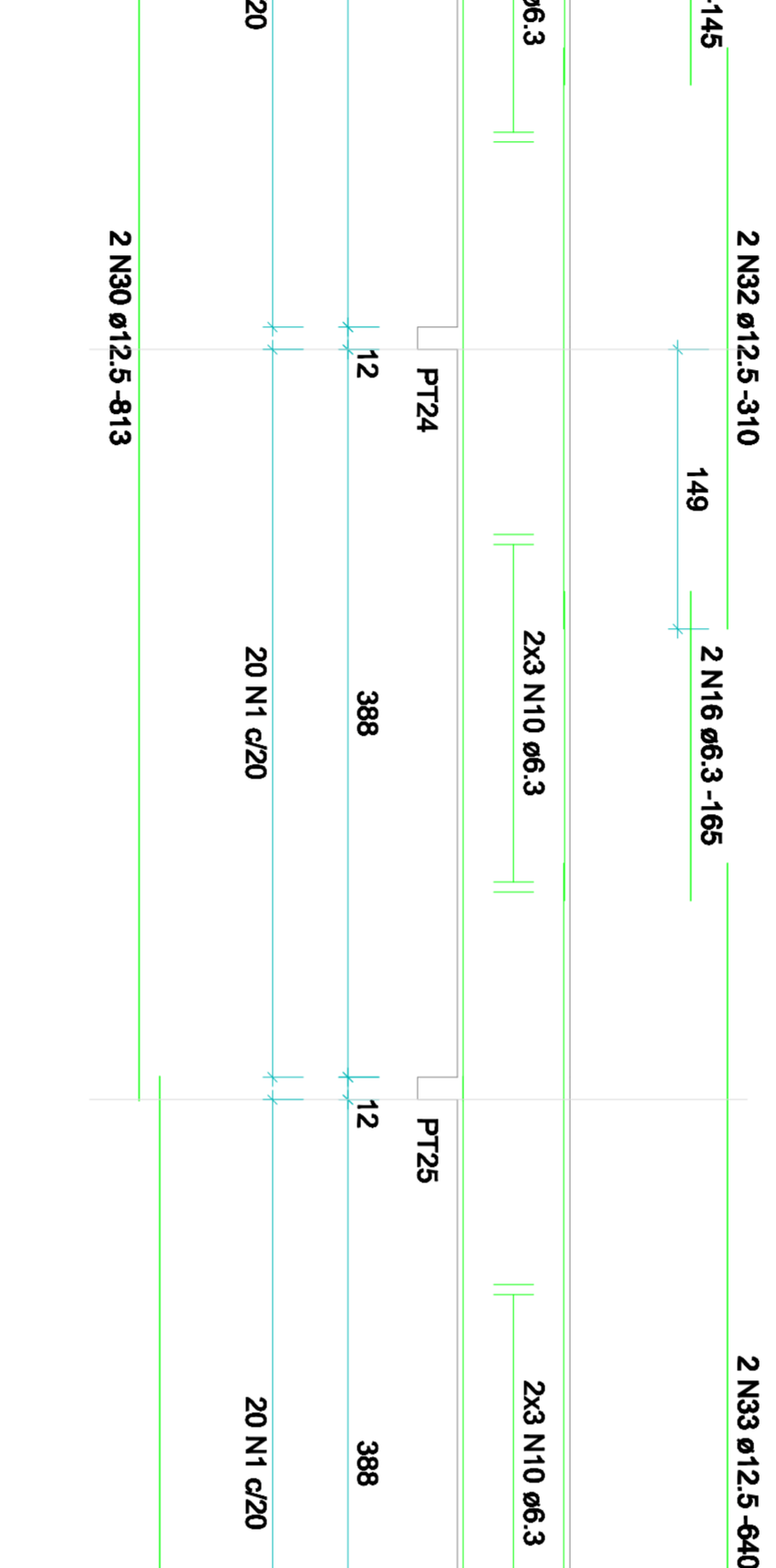
VT14=VT16 (12 x 60)



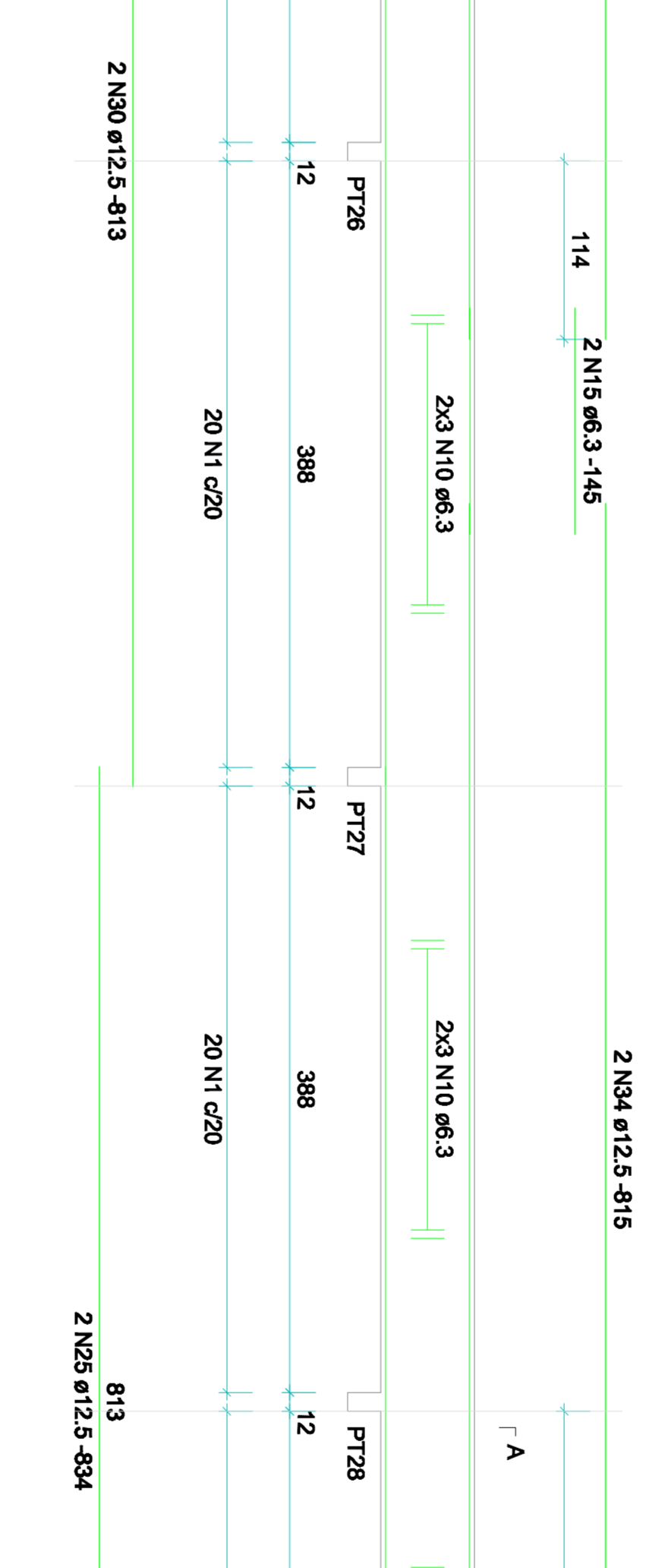
VT1=VT12=VT13 (12 x 60)



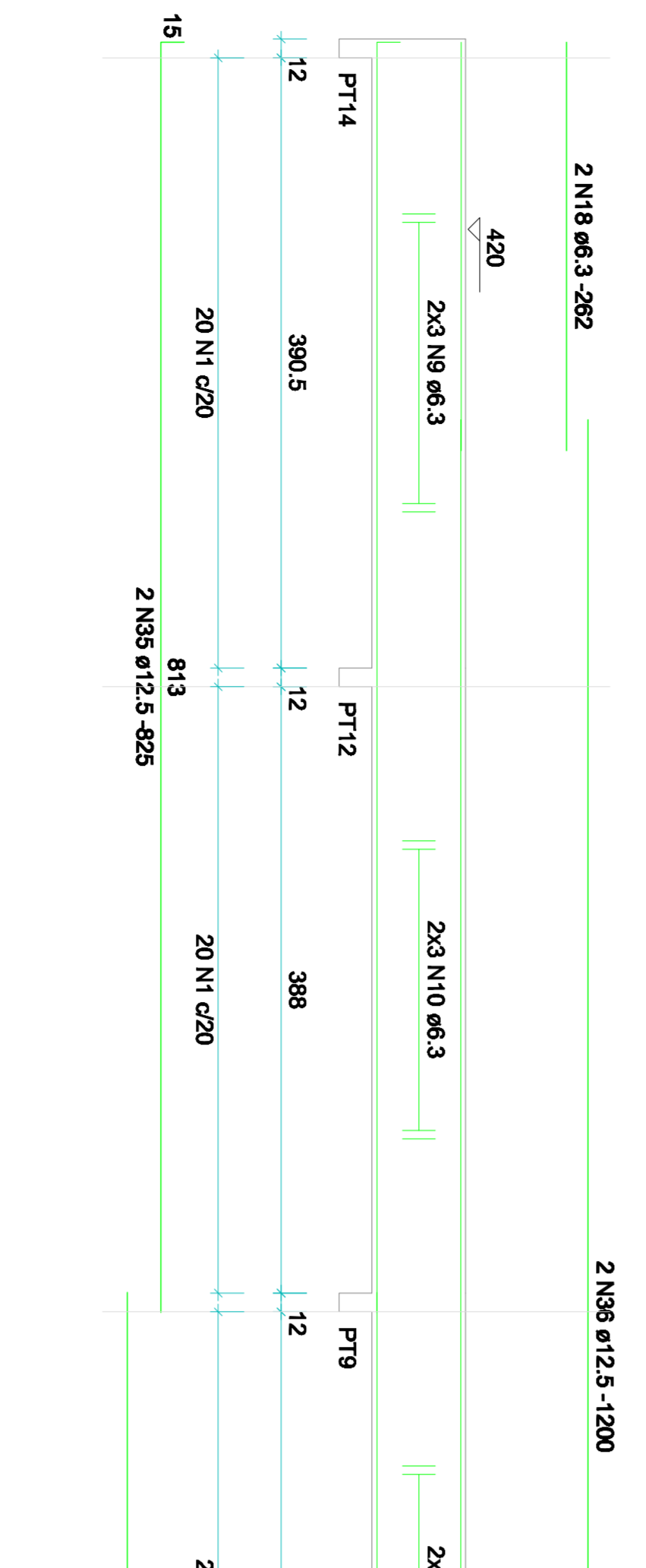
VT1=VT12=VT13 (12 x 60)



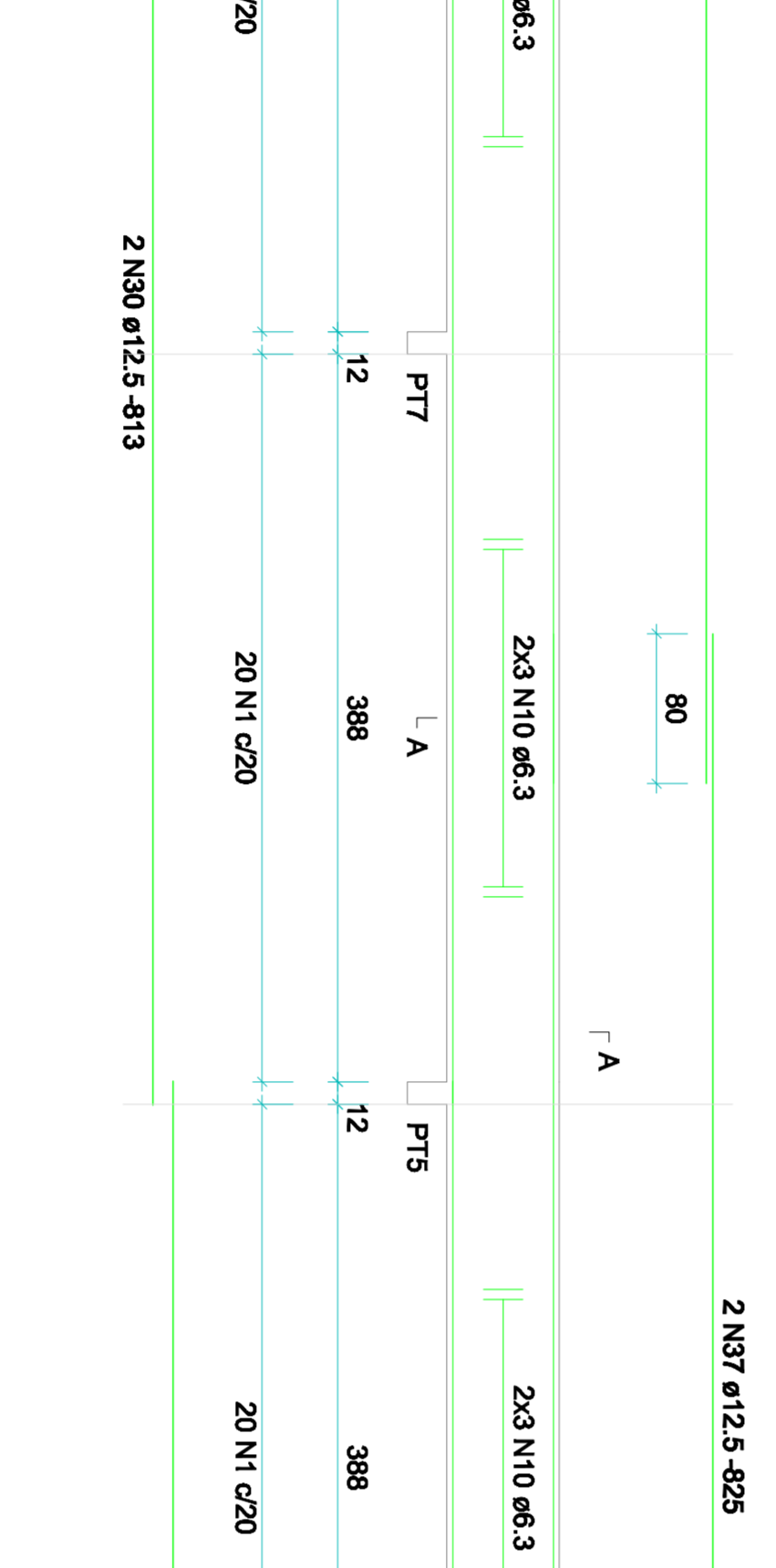
VT1=VT12=VT13 (12 x 60)



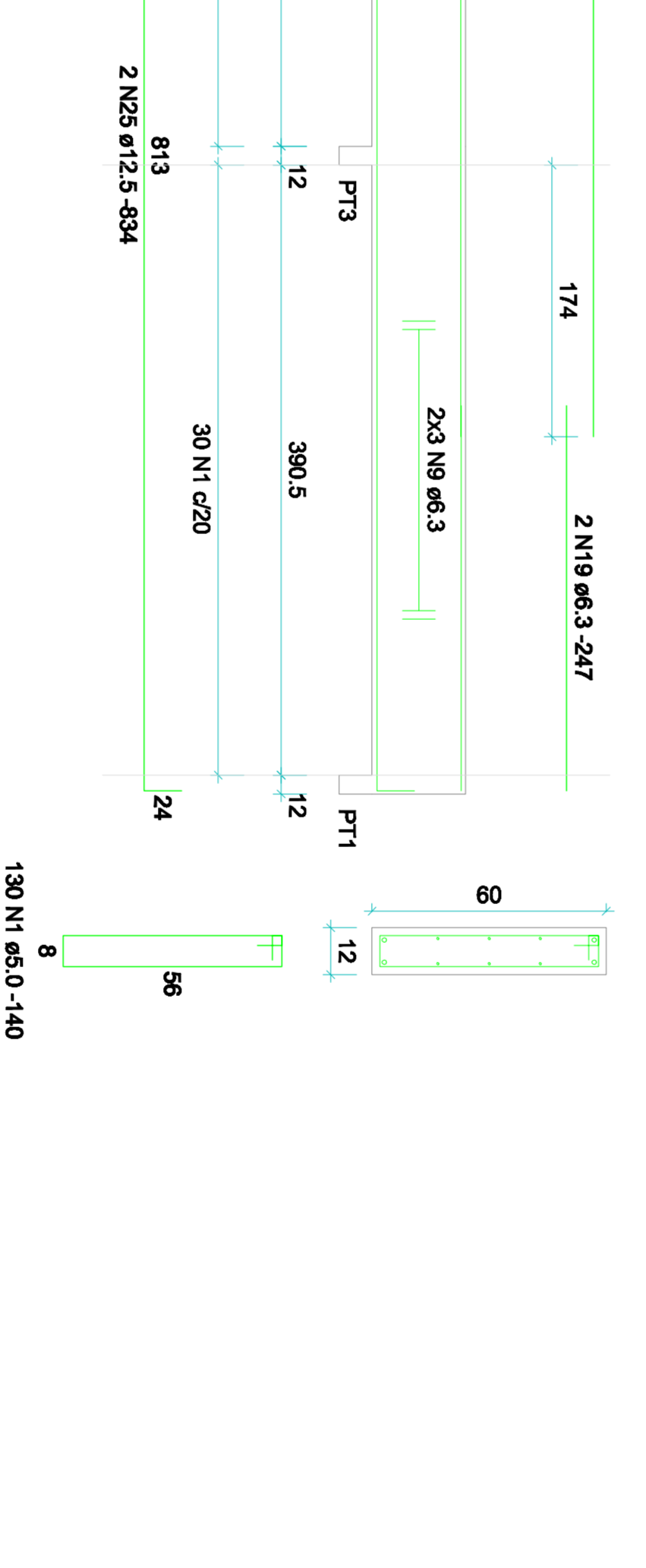
VT1=VT12=VT13 (12 x 60)



VT1=VT12=VT13 (12 x 60)



VT1=VT12=VT13 (12 x 60)



Relação do apo

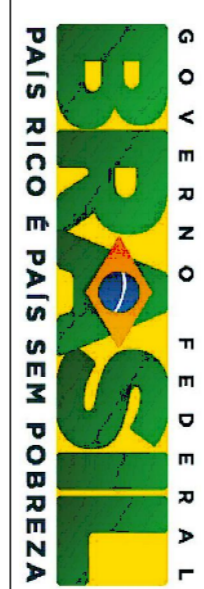
| 2xVT5 | | 2xVT9 | | 3xVT11 | |
|--------|----|-------|------|--------|---------|
| 2xVT14 | | | | | |
| AÇO | N | DIAM | Q | UNIT | C.TOTAL |
| Cx50 | 1 | 5.0 | 1109 | 340 | 155290 |
| | 2 | 6.3 | 6 | COBR | 1152 |
| | 3 | 6.3 | 2 | 182 | 354 |
| | 4 | 6.3 | 30 | COBR | 11780 |
| | 5 | 6.3 | 30 | COBR | 11780 |
| | 6 | 6.3 | 4 | COBR | 11780 |
| | 7 | 6.3 | 4 | COBR | 11780 |
| | 8 | 6.3 | 4 | COBR | 11780 |
| | 9 | 6.3 | 48 | COBR | 18728 |
| | 10 | 6.3 | 125 | COBR | 42728 |
| | 11 | 6.3 | 125 | COBR | 42728 |
| | 12 | 6.3 | 6 | 170 | 1020 |
| | 13 | 6.3 | 8 | 248 | 1488 |
| | 14 | 6.3 | 4 | 124 | 1185 |
| | 15 | 6.3 | 8 | 165 | 660 |
| | 16 | 6.3 | 4 | 165 | 748 |
| | 17 | 6.3 | 4 | 167 | 748 |
| | 18 | 6.3 | 4 | 247 | 888 |
| | 19 | 6.3 | 4 | 247 | 888 |
| | 20 | 8.0 | 24 | COBR | 19992 |
| | 21 | 10.0 | 8 | 833 | 6664 |
| | 22 | 12.5 | 2 | 500 | 1000 |
| | 23 | 12.5 | 2 | 500 | 1000 |
| | 24 | 12.5 | 12 | 834 | 10008 |
| | 25 | 12.5 | 12 | 834 | 10008 |
| | 26 | 12.5 | 4 | 1115 | 4460 |
| | 27 | 12.5 | 4 | 1115 | 4460 |
| | 28 | 12.5 | 4 | 391 | 1564 |
| | 29 | 12.5 | 12 | 823 | 3282 |
| | 30 | 12.5 | 4 | 310 | 1240 |
| | 31 | 12.5 | 4 | 825 | 3300 |
| | 32 | 12.5 | 4 | 825 | 3300 |
| | 33 | 12.5 | 4 | 1500 | 4800 |
| | 34 | 12.5 | 4 | 825 | 3300 |
| | 35 | 12.5 | 4 | 825 | 3300 |
| | 36 | 12.5 | 4 | 825 | 3300 |
| | 37 | 12.5 | 4 | 827 | 2586 |
| | 38 | 16.0 | 8 | 833 | 6664 |
| | 39 | 16.0 | 8 | 833 | 6664 |
| | 40 | 16.0 | 8 | 455 | 2750 |

Resumo do apo

| AÇO | DIAM | C.TOTAL | PESO + 10 % |
|------------|-------|---------|-------------|
| Cx50 | 6.3 | 13017 | 33.1 |
| Cx50 | 8.0 | 200 | 86.8 |
| Cx50 | 10.0 | 667 | 45.2 |
| Cx50 | 12.5 | 6968 | 596.1 |
| Cx50 | 16.0 | 1526 | 239.3 |
| Cx50 | 5.0 | 1526 | 263.2 |
| PESO TOTAL | | | |
| Cx50 | 180.8 | | |
| Cx40 | 283.2 | | |

Vol. de concreto total (Cp=25 Mpa) = 18.44 m³

Área da armação total = 50.71 m²



PRAÇA DOS ESPORTES E DA CULTURA

MODELO 3000m²

XXXXX Número do empreendimento
XXXXX Número do Processo

Local da obra: Rua Pedro da Sá Freitas, Nº270, Vila Buz, Cep 06212-980;

Município: Rio Grande Estado: Rio Grande do Sul

Projeto Arq., Eng. e const. Ltda.

Av. 84, 644, Sala 03, Ed. Maria Carolina, Goiânia - GO

Tel./Fax: 62 3281 2735

PROJETO DE ESTRUTURA - PROJETO EXECUTIVO

Autor do projeto: ENGº ZIAD JOSEPH ESPEER
CREA: 8787/D-GO

Autor da Adaptação: Engº Rubia Mara da Silva Rodrigues, CREA: 46.762 D

PROJETO DE ESTRUTURA
DETALHE DAS VIGAS DA COBERTURA

| | | | | | |
|----------|------------|----------------------|----------|--------------------|------|
| Data: | 05/12/2011 | Escala: | indicada | Número da prancha: | |
| Revisão: | | Assinatura: | | | |
| R00 | | 300-ESTR-EXE-400.DWG | | 07 | / 09 |

100 mm