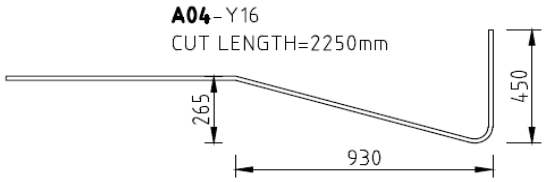
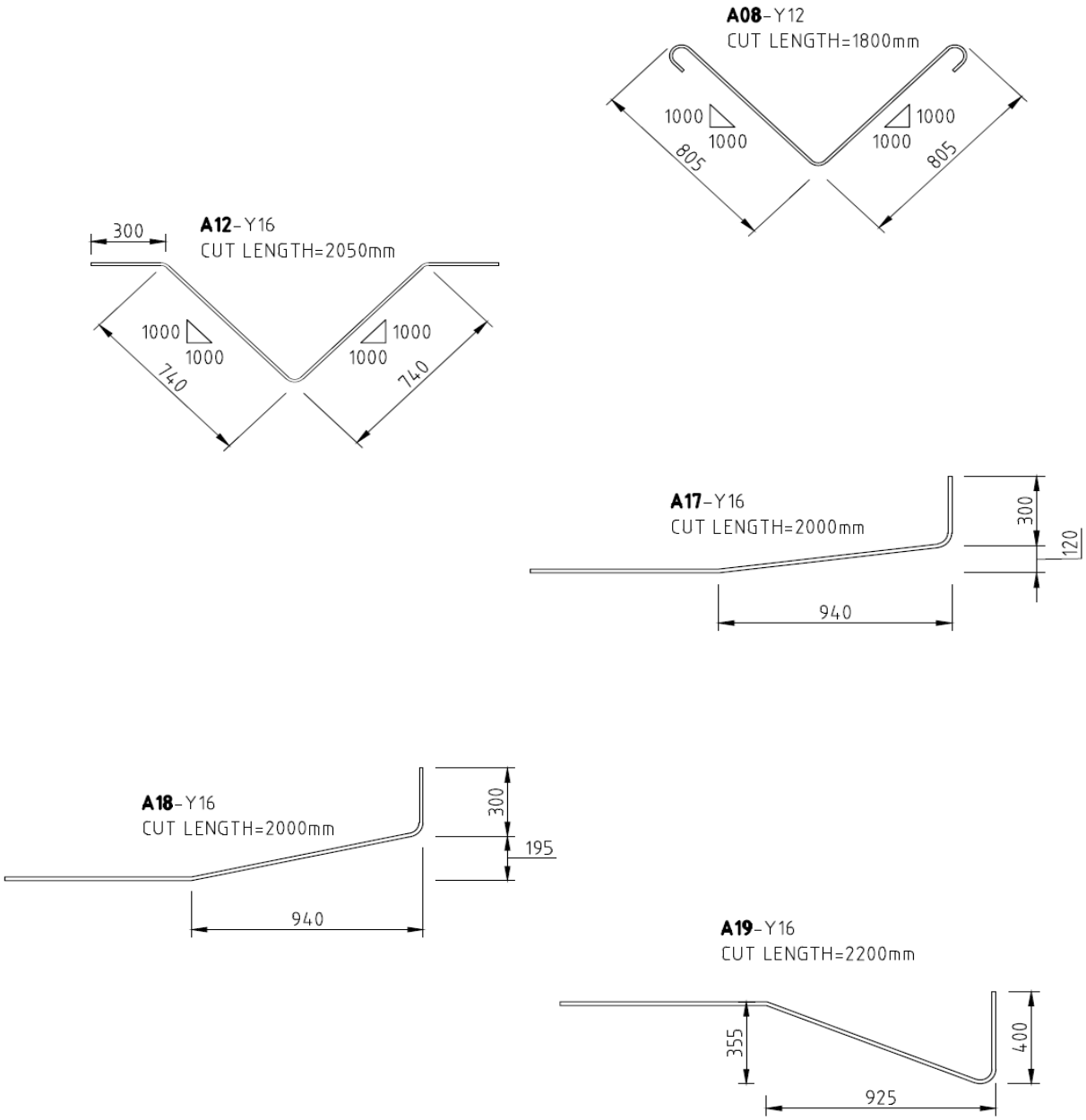
| Member | No of | No in | Y or | Dia | Bar | Total | Cut | Mass | Shape | ions to SABS 82 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mbrs | Each | R | Size | Mark | No | Length | kg | Code | A | B | C | D | E or R |
| **ROOF & FLOOR SLAB REINFORCING** | 4 | 28 | Y | 16 | A01A | 112 | 4 300,0 | 760 | 38 | 3300 | 305 | 750 | | |
| | 4 | 4 | Y | 20 | A01B | 16 | 4 500,0 | 178 | 38 | 3500 | 305 | 750 | | |
| | 4 | 4 | Y | 20 | A01C | 16 | 4 800,0 | 189 | 38 | 3800 | 305 | 750 | | |
| | 4 | 4 | Y | 20 | A01D | 16 | 5 100,0 | 201 | 38 | 4100 | 305 | 750 | | |
| | 4 | 4 | Y | 20 | A01E | 16 | 5 400,0 | 213 | 38 | 4400 | 305 | 750 | | |
| | 4 | 4 | Y | 20 | A01F | 16 | 5 700,0 | 225 | 38 | 4700 | 305 | 750 | | |
| | 4 | 4 | Y | 20 | A01G | 16 | 6 000,0 | 237 | 38 | 5000 | 305 | 750 | | |
| | 4 | 4 | Y | 20 | A01H | 16 | 6 300,0 | 249 | 38 | 5300 | 305 | 750 | | |
| | 4 | 4 | Y | 20 | A01J | 16 | 6 600,0 | 260 | 38 | 5600 | 305 | 750 | | |
| | 4 | 4 | Y | 20 | A01K | 16 | 6 900,0 | 272 | 38 | 5900 | 305 | 750 | | |
| | 4 | 4 | Y | 20 | A01L | 16 | 7 200,0 | 284 | 38 | 6200 | 305 | 750 | | |
| | 4 | 4 | Y | 20 | A01M | 16 | 7 500,0 | 296 | 38 | 6500 | 305 | 750 | | |
| | 4 | 20 | Y | 20 | A02 | 80 | 9 650,0 | 1904 | 38 | 450 | 8850 | 450 | | |
| | 4 | 20 | Y | 20 | A03 | 80 | 6 700,0 | 1322 | 20 | 6700 | | | | |
| | 4 | 40 | Y | 20 | A04 | 160 | 2 250,0 | 888 | 99 | **SEE SKETCH** | | | | |
| | 4 | 104 | Y | 16 | A05A | 416 | 3 400,0 | 2232 | 38 | 1600 | 280 | 1600 | | |
| | 4 | 96 | Y | 16 | A05B | 384 | 3 550,0 | 2152 | 38 | 1600 | 395 | 1600 | | |
| | 4 | 28 | Y | 12 | A06 | 112 | 1 650,0 | 164 | 49 | 280 | 280 | 1060 | 205 | 205 |
| | 4 | 200 | Y | 16 | A07 | 800 | 1 750,0 | 2210 | 37 | 1600 | 175 | | | |
| | 4 | 14 | Y | 12 | A08 | 56 | 1 800,0 | 90 | 99 | **SEE SKETCH** | | | | |
| | 4 | 18 | Y | 16 | A09A | 72 | 3 400,0 | 386 | 38 | 250 | 2965 | 250 | | |
| | 4 | 18 | Y | 16 | A09B | 72 | 3 700,0 | 421 | 38 | 400 | 2965 | 400 | | |
| | 4 | 46 | Y | 16 | A10A | 184 | 9 300,0 | 2701 | 38 | 8355 | 270 | 750 | | |
| | 4 | 4 | Y | 16 | A10B | 16 | 7 350,0 | 186 | 38 | 6380 | 270 | 750 | | |
| | 4 | 4 | Y | 16 | A10C | 16 | 7 050,0 | 178 | 38 | 6080 | 270 | 750 | | |
| | 4 | 4 | Y | 16 | A10D | 16 | 6 750,0 | 171 | 38 | 5780 | 270 | 750 | | |
| | 4 | 4 | Y | 16 | A10E | 16 | 6 450,0 | 163 | 38 | 5480 | 270 | 750 | | |
| | 4 | 4 | Y | 16 | A10F | 16 | 6 150,0 | 155 | 38 | 5180 | 270 | 750 | | |
| | 4 | 4 | Y | 16 | A10G | 16 | 5 850,0 | 148 | 38 | 4880 | 270 | 750 | | |
| | 4 | 4 | Y | 16 | A10H | 16 | 5 550,0 | 140 | 38 | 4580 | 270 | 750 | | |
| | 4 | 4 | Y | 16 | A10J | 16 | 5 250,0 | 133 | 38 | 4280 | 270 | 750 | | |
| | 4 | 4 | Y | 16 | A10K | 16 | 4 950,0 | 125 | 38 | 3980 | 270 | 750 | | |
| | 4 | 4 | Y | 16 | A10L | 16 | 4 650,0 | 117 | 38 | 3680 | 270 | 750 | | |
| | 4 | 4 | Y | 16 | A10M | 16 | 4 350,0 | 110 | 38 | 3380 | 270 | 750 | | |
| | 4 | 4 | Y | 16 | A10N | 16 | 4 050,0 | 102 | 38 | 3080 | 270 | 750 | | |
| | 4 | 24 | Y | 12 | A11A | 96 | 1 600,0 | 136 | 49 | 280 | 280 | 1025 | 205 | 205 |
| | 4 | 48 | Y | 12 | A11B | 192 | 1 700,0 | 290 | 49 | 280 | 280 | 1105 | 230 | 160 |
| | 4 | 36 | Y | 12 | A12 | 144 | 2 050,0 | 262 | 99 | **SEE SKETCH** | | | | |
| | 4 | 28 | Y | 16 | A13 | 112 | 4 200,0 | 742 | 38 | 3300 | 230 | 750 | | |
| | 4 | 20 | Y | 16 | A14A | 80 | 6 700,0 | 846 | 20 | 6700 | | | | |
| | 4 | 2 | Y | 16 | A14B | 8 | 6 300,0 | 80 | 20 | 6340 | | | | |
| | 4 | 2 | Y | 16 | A14C | 8 | 6 000,0 | 76 | 20 | 6040 | | | | |
| | 4 | 2 | Y | 16 | A14D | 8 | 5 700,0 | 72 | 20 | 5740 | | | | |
| | 4 | 2 | Y | 16 | A14E | 8 | 5 400,0 | 68 | 20 | 5440 | | | | |
| | 4 | 2 | Y | 16 | A14F | 8 | 5 100,0 | 64 | 20 | 5140 | | | | |
| | 4 | 2 | Y | 16 | A14G | 8 | 4 800,0 | 61 | 20 | 4840 | | | | |
| | 4 | 2 | Y | 16 | A14H | 8 | 4 500,0 | 57 | 20 | 4540 | | | | |
| | 4 | 2 | Y | 16 | A14J | 8 | 4 200,0 | 53 | 20 | 4240 | | | | |
| | 4 | 2 | Y | 16 | A14K | 8 | 3 900,0 | 49 | 20 | 3940 | | | | |
| | 4 | 2 | Y | 16 | A14L | 8 | 3 600,0 | 46 | 20 | 3640 | | | | |
| | 4 | 2 | Y | 16 | A14M | 8 | 3 300,0 | 42 | 20 | 3340 | | | | |
| | 4 | 20 | Y | 16 | A15A | 80 | 7 000,0 | 884 | 55 | 750 | 230 | 5200 | 230 | 750 |
| | 4 | 2 | Y | 16 | A15B | 8 | 6 900,0 | 87 | 55 | 750 | 230 | 5060 | 230 | 750 |
| | 4 | 2 | Y | 16 | A15C | 8 | 6 750,0 | 85 | 55 | 750 | 230 | 4910 | 230 | 750 |
| | 4 | 2 | Y | 16 | A15D | 8 | 6 600,0 | 83 | 55 | 750 | 230 | 4760 | 230 | 750 |
| | 4 | 2 | Y | 16 | A15E | 8 | 6 450,0 | 81 | 55 | 750 | 230 | 4610 | 230 | 750 |
| | 4 | 2 | Y | 16 | A15F | 8 | 6 300,0 | 80 | 55 | 750 | 230 | 4460 | 230 | 750 |
| | 4 | 2 | Y | 16 | A15G | 8 | 6 150,0 | 78 | 55 | 750 | 230 | 4310 | 230 | 750 |
| | 4 | 2 | Y | 16 | A15H | 8 | 6 000,0 | 76 | 55 | 750 | 230 | 4160 | 230 | 750 |
| | 4 | 2 | Y | 16 | A15J | 8 | 5 850,0 | 74 | 55 | 750 | 230 | 4010 | 230 | 750 |
| | 4 | 2 | Y | 16 | A15K | 8 | 5 700,0 | 72 | 55 | 750 | 230 | 3860 | 230 | 750 |
| | 4 | 2 | Y | 16 | A15L | 8 | 5 550,0 | 70 | 55 | 750 | 230 | 3710 | 230 | 750 |
| | 4 | 2 | Y | 16 | A15M | 8 | 5 400,0 | 68 | 55 | 750 | 230 | 3560 | 230 | 750 |
| | 4 | 20 | Y | 16 | A16A | 80 | 3 950,0 | 499 | 55 | 750 | 325 | 1960 | 325 | 750 |
| | 4 | 2 | Y | 16 | A16B | 8 | 3 850,0 | 49 | 55 | 750 | 325 | 1820 | 325 | 750 |
| | 4 | 2 | Y | 16 | A16C | 8 | 3 700,0 | 47 | 55 | 750 | 325 | 1670 | 325 | 750 |
| | 4 | 2 | Y | 16 | A16D | 8 | 3 550,0 | 45 | 55 | 750 | 325 | 1520 | 325 | 750 |
| | 4 | 2 | Y | 16 | A16E | 8 | 3 400,0 | 43 | 55 | 750 | 325 | 1370 | 325 | 750 |
| | 4 | 2 | Y | 16 | A16F | 8 | 3 250,0 | 41 | 55 | 750 | 325 | 1220 | 325 | 750 |
| | 4 | 2 | Y | 16 | A16G | 8 | 3 100,0 | 39 | 55 | 750 | 325 | 1070 | 325 | 750 |
| | 4 | 2 | Y | 16 | A16H | 8 | 2 950,0 | 37 | 55 | 750 | 325 | 920 | 325 | 750 |
| | 4 | 2 | Y | 16 | A16J | 8 | 2 800,0 | 35 | 55 | 750 | 325 | 770 | 325 | 750 |
| | 4 | 2 | Y | 16 | A16K | 8 | 2 650,0 | 34 | 55 | 750 | 325 | 620 | 325 | 750 |
| | 4 | 2 | Y | 16 | A16L | 8 | 2 500,0 | 32 | 55 | 750 | 325 | 470 | 325 | 750 |
| | 4 | 2 | Y | 16 | A16M | 8 | 2 350,0 | 30 | 55 | 750 | 325 | 320 | 325 | 750 |

| Member | No of | No in | Y or | Dia | Bar | Total | Cut | Mass | Shape | ions to SABS 82 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mbrs | Each | R | Size | Mark | No | Length | kg | Code | A | B | C | D | E or R |
| | 4 | 20 | Y | 16 | A17 | 80 | 2 000,0 | 253 | 99 | **SEE SKETCH** | | | | |
| | 4 | 20 | Y | 16 | A18 | 80 | 2 000,0 | 253 | 99 | **SEE SKETCH** | | | | |
| | 4 | 40 | Y | 16 | A19 | 160 | 2 200,0 | 556 | 99 | **SEE SKETCH** | | | | |
| | 4 | 6 | Y | 16 | A20A | 24 | 3 350,0 | 127 | 38 | 225 | 2965 | 225 | | |
| | 4 | 6 | Y | 16 | A20B | 24 | 3 600,0 | 136 | 38 | 350 | 2965 | 350 | | |
| | 4 | 46 | Y | 16 | A21A | 184 | 9 250,0 | 2686 | 38 | 8355 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A21B | 8 | 7 250,0 | 92 | 38 | 6380 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A21C | 8 | 6 950,0 | 88 | 38 | 6080 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A21D | 8 | 6 650,0 | 84 | 38 | 5780 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A21E | 8 | 6 350,0 | 80 | 38 | 5480 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A21F | 8 | 6 050,0 | 76 | 38 | 5180 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A21G | 8 | 5 750,0 | 73 | 38 | 4880 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A21H | 8 | 5 450,0 | 69 | 38 | 4580 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A21J | 8 | 5 150,0 | 65 | 38 | 4280 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A21K | 8 | 4 850,0 | 61 | 38 | 3980 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A21L | 8 | 4 550,0 | 58 | 38 | 3680 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A21M | 8 | 4 250,0 | 54 | 38 | 3380 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A21N | 8 | 3 950,0 | 50 | 38 | 3080 | 195 | 750 | | |
| | 4 | 2 | Y | 16 | A22A | 8 | 7 350,0 | 93 | 38 | 6380 | 290 | 750 | | |
| | 4 | 2 | Y | 16 | A22B | 8 | 7 050,0 | 89 | 38 | 6080 | 290 | 750 | | |
| | 4 | 2 | Y | 16 | A22C | 8 | 6 750,0 | 85 | 38 | 5780 | 290 | 750 | | |
| | 4 | 2 | Y | 16 | A22D | 8 | 6 450,0 | 81 | 38 | 5480 | 290 | 750 | | |
| | 4 | 2 | Y | 16 | A22E | 8 | 6 150,0 | 78 | 38 | 5180 | 290 | 750 | | |
| | 4 | 2 | Y | 16 | A22F | 8 | 5 850,0 | 74 | 38 | 4880 | 290 | 750 | | |
| | 4 | 2 | Y | 16 | A22G | 8 | 5 550,0 | 70 | 38 | 4580 | 290 | 750 | | |
| | 4 | 2 | Y | 16 | A22H | 8 | 5 250,0 | 66 | 38 | 4280 | 290 | 750 | | |
| | 4 | 2 | Y | 16 | A22J | 8 | 4 950,0 | 63 | 38 | 3980 | 290 | 750 | | |
| | 4 | 2 | Y | 16 | A22K | 8 | 4 650,0 | 59 | 38 | 3680 | 290 | 750 | | |
| | 4 | 2 | Y | 16 | A22L | 8 | 4 350,0 | 55 | 38 | 3380 | 290 | 750 | | |
| | 4 | 2 | Y | 16 | A22M | 8 | 4 050,0 | 51 | 38 | 3080 | 290 | 750 | | |
| | | | | | | | | | | | | | | |
| **WALLS** | 4 | 92 | Y | 12 | A23A | 368 | 1 500,0 | 490 | 38 | 650 | 245 | 650 | | |
| | 4 | 4 | Y | 12 | A23B | 16 | 1 200,0 | 17 | 38 | 500 | 245 | 500 | | |
| | 4 | 4 | Y | 12 | A23C | 16 | 500,0 | 7 | 38 | 140 | 245 | 140 | | |
| | 4 | 42 | Y | 12 | A24A | 168 | 4 700,0 | 701 | 49 | 980 | 980 | 2715 | 695 | 695 |
| | 4 | 4 | Y | 12 | A24B | 16 | 4 400,0 | 63 | 49 | 980 | 690 | 2715 | 695 | 490 |
| | 4 | 4 | Y | 12 | A24C | 16 | 3 900,0 | 55 | 49 | 980 | 170 | 2715 | 695 | 120 |
| | 4 | 42 | Y | 12 | A25A | 168 | 4 300,0 | 641 | 49 | 885 | 885 | 2525 | 625 | 625 |
| | 4 | 4 | Y | 12 | A25B | 16 | 4 050,0 | 58 | 49 | 885 | 595 | 2525 | 625 | 420 |
| | 4 | 4 | Y | 12 | A25C | 16 | 3 500,0 | 50 | 49 | 885 | 75 | 2525 | 625 | 55 |
| | 4 | 48 | Y | 12 | A26 | 192 | 550,0 | 94 | 38 | 250 | 95 | 250 | | |
| | 4 | 48 | Y | 12 | A27 | 192 | 850,0 | 145 | 20 | 880 | | | | |
| | 4 | 2 | Y | 16 | A28 | 8 | 1 300,0 | 16 | 38 | 250 | 880 | 250 | | |
| | 4 | 50 | Y | 10 | A29 | 200 | 550,0 | 68 | 38 | 250 | 75 | 250 | | |
| | 4 | 50 | Y | 12 | A30 | 200 | 2 850,0 | 506 | 20 | 2865 | | | | |
| | 4 | 2 | Y | 16 | A31 | 8 | 3 300,0 | 42 | 38 | 250 | 2865 | 250 | | |
| | | | | | | | | | | | | | | |
| **CLIPS** | 4 | 48 | R | 8 | A32 | 192 | 250,0 | 19 | 85 | 75 | 110 | 48 | 50 | |
| | 4 | 16 | R | 8 | A33 | 64 | 300,0 | 8 | 85 | 75 | 130 | 48 | 50 | |
| | 4 | 48 | R | 10 | A34 | 192 | 450,0 | 53 | 85 | 100 | 280 | 60 | 60 | |
| | 4 | 48 | R | 10 | A35 | 192 | 600,0 | 71 | 85 | 100 | 395 | 60 | 60 | |
| | | | | | | | | | | | | | | |
| | 4 | 200 | Y | 12 | A36 | 800 | 1 500,0 | 1065 | 62 | 750 | 530 | 750 | | |



| Member | No of Mbrs | No in Each | Y or R | Dia Size | Bar Mark | Total No | Cut Length | Mass kg | Shape Code | ions to SABS 82 A | B | C | D | E or R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|




Engineers

ORIGINATOR: ZAA

Date: 2019.07.26

Compiled: DC

Checked: MC

Approved: J ZIETSMAN Pr Eng

Signed:

| MILD STEEL | | |
|---|---|---|
| | R8 | 26,5 |
| | R10 | 124,3 |
| | R12 | 0 |
| | R16 | 0 |
| | R20 | 0 |
| | R32 | 0 |
| TOTAL R BARS = | | 151 kg |

| HIGH YIELD STEEL | | |
|---|---|---|
| | Y10 | 68 |
| | Y12 | 4 834 |
| | Y16 | 23 292 |
| | Y20 | 6 718 |
| | Y25 | 0 |
| | Y32 | 0 |
| TOTAL Y BARS = | | 34 911 kg |

TRANSNET

Transnet National Ports Authority

Date:

Name:

Signed:

ZAA SCHEDULE No.

**1785-CO-090-C-SCH-0018-01 T0A**

**DCT BERTHS 203 to 205 RECONSTRUCTION**
**DEEPENING AND LENGTHENING**

TNPA SCHEDULE No.

**2122830-1-090-C-SC-1017-01 T0A**

ZAA REFERENCE DRAWING

**1785-CO-090-C-DWG-0018-01**

TITLE

**REINFORCEMENT SCHEDULE**
**TYPE 1 TUNNEL CONNECTION**

TNPA REFERENCE DRAWING

**2122830-1-090-C-GA-1017-01**