| STATE | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| GA. | | | |

## SINGLE 8'-0" X 7'-0" BOX CULVERT

BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS

| DESIGN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| BAR A | 454A @ 6" | 457A @ 6" | 558A @ 6" | 561A @ 6" | 622A @ 6" | | | |
| BAR C | 706 @ 12" | 520 @ 6" | 611 @ 6" | 707 @ 6" | 708 @ 6" | | | |
| BAR E | 430 @ 12" | 431 @ 12" | 432 @ 12" | 433 @ 12" | 434 @ 12" | | | |
| BAR G IN 2 SLABS | 28 - 401 | 28 - 401 | 28 - 401 | 28 - 401 | 28 - 401 | | | |
| BAR H IN 2 WALLS | 20 - 402 | 20 - 402 | 20 - 402 | 20 - 402 | 20 - 402 | | | |
| BAR J IN EXT. CORNER | 0 | 0 | 3-412B @ 8½" | 3-413B @ 9" | 4-416B @ 10" | | | |
| $T_1$ | 12" | 13" | 14" | 15" | 16" | | | |
| $T_2$ | 13" | 14" | 15" | 16" | 17" | | | |
| $T_3$ | 12" | 13" | 14" | 15" | 16" | | | |
| X | 10'-0" | 10'-2" | 10'-4" | 10'-6" | 10'-8" | | | |
| Y | 9'-1" | 9'-3" | 9'-5" | 9'-7" | 9'-9" | | | |
| $YD^3$ CLASS AA CONCRETE/FT | 1.299 | 1.418 | 1.539 | 1.662 | 1.787 | | | |
| LB BAR REINF STEEL/FT | 142.4 | 145.0 | 216.0 | 241.3 | 294.1 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 4.6 | 4.8 | 4.9 | 5.1 | 5.3 | | | |
| LB BAR REINF STEEL | 728 | 730 | 732 | 733 | 735 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 4.8 | 5.0 | 5.2 | 5.3 | 5.5 | | | |
| LB BAR REINF STEEL | 884 | 888 | 892 | 896 | 900 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 5.4 | 5.6 | 5.8 | 6.0 | 6.1 | | | |
| LB BAR REINF STEEL | 932 | 937 | 941 | 946 | 950 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 6.6 | 6.9 | 7.1 | 7.3 | 7.6 | | | |
| LB BAR REINF STEEL | 1058 | 1064 | 1070 | 1076 | 1082 | | | |

## SINGLE 8'-0" X 9'-0" BOX CULVERT

BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS

| DESIGN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| BAR A | 474A @ 6" | 469A @ 6" | 570A @ 6" | 572A @ 6" | 630A @ 6" | | | |
| BAR C | 519 @ 6" | 520 @ 6" | 611 @ 6" | 707 @ 6" | 708 @ 6" | | | |
| BAR E | 442 @ 12" | 524 @ 12" | 525 @ 12" | 444 @ 6" | 445 @ 6" | | | |
| BAR G IN 2 SLABS | 28 - 401 | 28 - 401 | 28 - 401 | 28 - 401 | 28 - 401 | | | |
| BAR H IN 2 WALLS | 26 - 402 | 26 - 402 | 26 - 402 | 26 - 402 | 26 - 402 | | | |
| BAR J IN EXT. CORNER | 0 | 0 | 3-412B @ 8½" | 3-413B @ 9" | 4-416B @ 10" | | | |
| $T_1$ | 12" | 13" | 14" | 15" | 16" | | | |
| $T_2$ | 13" | 14" | 15" | 16" | 17" | | | |
| $T_3$ | 12" | 13" | 14" | 15" | 16" | | | |
| X | 10'-0" | 10'-2" | 10'-4" | 10'-6" | 10'-8" | | | |
| Y | 11'-1" | 11'-3" | 11'-5" | 11'-7" | 11'-9" | | | |
| $YD^3$ CLASS AA CONCRETE/FT | 1.448 | 1.579 | 1.712 | 1.847 | 1.985 | | | |
| LB BAR REINF STEEL/FT | 168.6 | 170.5 | 247.6 | 279.6 | 340.0 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 5.0 | 5.2 | 5.4 | 5.6 | 5.8 | | | |
| LB BAR REINF STEEL | 803 | 804 | 806 | 808 | 810 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 5.2 | 5.4 | 5.6 | 5.8 | 6.0 | | | |
| LB BAR REINF STEEL | 960 | 964 | 968 | 972 | 976 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 5.8 | 6.0 | 6.3 | 6.5 | 6.7 | | | |
| LB BAR REINF STEEL | 1009 | 1014 | 1018 | 1023 | 1028 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 7.2 | 7.5 | 7.7 | 8.0 | 8.3 | | | |
| LB BAR REINF STEEL | 1137 | 1143 | 1149 | 1155 | 1161 | | | |

## SINGLE 8'-0" X 8'-0" BOX CULVERT

BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS

| DESIGN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| BAR A | 462A @ 6" | 464A @ 6" | 565A @ 6" | 567A @ 6" | 626A @ 6" | | | |
| BAR C | 519 @ 6" | 520 @ 6" | 611 @ 6" | 707 @ 6" | 708 @ 6" | | | |
| BAR E | 436 @ 12" | 437 @ 12" | 521 @ 12" | 522 @ 12" | 523 @ 12" | | | |
| BAR G IN 2 SLABS | 28 - 401 | 28 - 401 | 28 - 401 | 28 - 401 | 28 - 401 | | | |
| BAR H IN 2 WALLS | 22 - 402 | 22 - 402 | 22 - 402 | 22 - 402 | 22 - 402 | | | |
| BAR J IN EXT. CORNER | 0 | 0 | 3-412B @ 8½" | 3-413B @ 9" | 4-416B @ 10" | | | |
| $T_1$ | 12" | 13" | 14" | 15" | 16" | | | |
| $T_2$ | 13" | 14" | 15" | 16" | 17" | | | |
| $T_3$ | 12" | 13" | 14" | 15" | 16" | | | |
| X | 10'-0" | 10'-2" | 10'-4" | 10'-6" | 10'-8" | | | |
| Y | 10'-1" | 10'-3" | 10'-5" | 10'-7" | 10'-9" | | | |
| $YD^3$ CLASS AA CONCRETE/FT | 1.373 | 1.498 | 1.626 | 1.755 | 1.886 | | | |
| LB BAR REINF STEEL/FT | 151.2 | 153.0 | 234.5 | 260.0 | 316.6 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 4.8 | 5.0 | 5.2 | 5.4 | 5.5 | | | |
| LB BAR REINF STEEL | 754 | 756 | 757 | 759 | 761 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 5.0 | 5.2 | 5.4 | 5.6 | 5.8 | | | |
| LB BAR REINF STEEL | 910 | 914 | 918 | 922 | 926 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 5.6 | 5.8 | 6.0 | 6.2 | 6.5 | | | |
| LB BAR REINF STEEL | 959 | 963 | 968 | 972 | 977 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 6.9 | 7.2 | 7.4 | 7.7 | 8.0 | | | |
| LB BAR REINF STEEL | 1085 | 1091 | 1097 | 1103 | 1109 | | | |

## SINGLE 8'-0" X 10'-0" BOX CULVERT

BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS

| DESIGN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| BAR A | 476A @ 6" | 704A @ 12" | 575A @ 6" | 634A @ 6" | 636A @ 6" | | | |
| BAR C | 519 @ 6" | 520 @ 6" | 611 @ 6" | 707 @ 6" | 708 @ 6" | | | |
| BAR E | 529 @ 12" | 530 @ 12" | 447 @ 6" | 714 @ 12" | 715 @ 12" | | | |
| BAR G IN 2 SLABS | 28 - 401 | 28 - 401 | 28 - 401 | 28 - 401 | 28 - 401 | | | |
| BAR H IN 2 WALLS | 28 - 402 | 28 - 402 | 28 - 402 | 28 - 402 | 28 - 402 | | | |
| BAR J IN EXT. CORNER | 0 | 0 | 3-412B @ 8½" | 3-414B @ 9" | 4-416B @ 10" | | | |
| $T_1$ | 12" | 13" | 14" | 15" | 16" | | | |
| $T_2$ | 13" | 14" | 15" | 16" | 17" | | | |
| $T_3$ | 12" | 13" | 14" | 15" | 16" | | | |
| X | 10'-0" | 10'-2" | 10'-4" | 10'-6" | 10'-8" | | | |
| Y | 12'-1" | 12'-3" | 12'-5" | 12'-7" | 12'-9" | | | |
| $YD^3$ CLASS AA CONCRETE/FT | 1.522 | 1.659 | 1.798 | 1.940 | 2.083 | | | |
| LB BAR REINF STEEL/FT | 185.4 | 219.6 | 266.4 | 362.8 | 373.5 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 5.1 | 5.4 | 5.6 | 5.8 | 6.0 | | | |
| LB BAR REINF STEEL | 827 | 829 | 830 | 832 | 834 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 5.4 | 5.6 | 5.8 | 6.0 | 6.2 | | | |
| LB BAR REINF STEEL | 985 | 989 | 993 | 996 | 1000 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 6.0 | 6.2 | 6.5 | 6.7 | 6.9 | | | |
| LB BAR REINF STEEL | 1034 | 1039 | 1043 | 1048 | 1052 | | | |
| PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL | | | | | | | | |
| $YD^3$ CLASS AA CONCRETE | 7.4 | 7.7 | 8.0 | 8.3 | 8.6 | | | |
| LB BAR REINF STEEL | 1163 | 1169 | 1175 | 1181 | 1187 | | | |

| DATE | REVISION | BY |
|---|---|---|
| | | |

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD

REINFORCED CONCRETE
SINGLE BOX CULVERT
8'X7', 8'X8', 8'X9' AND 8'X10'

NO SCALE — SEPTEMBER 2017

DES. YSK
DRW. FGS
TRA. ____
CHK. JWB

(SUBMITTED) STATE DESIGN POLICY ENGINEER
(APPROVED) Margaret B Pirkle CHIEF ENGINEER

NUMBER 2401
SHEET 2-1 OF 3