

SINGLE 10'-0" X 9'-0" BOX CULVERT								
BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS								
DESIGN	1	2	3	4	5	6	7	8
BAR A	473A @ 6"	705A @ 12"	576A @ 6"	639A @ 6"	641A @ 6"			
BAR C	531 @ 6"	615 @ 6"	716 @ 6"	717 @ 6"	805 @ 6"			
BAR E	443 @ 12"	445 @ 12"	446 @ 12"	447 @ 12"	448 @ 12"			
BAR G IN 2 SLABS	32 - 401	34 - 401	34 - 401	40 - 401	40 - 401			
BAR H IN 2 WALLS	26 - 402	26 - 402	26 - 402	32 - 402	32 - 402			
BAR J IN EXT. CORNER	0	0	3-419B @ 11½"	3-421B @ 13"	3-422B @ 14½"			
T ₁	14"	16"	18"	20"	22"			
T ₂	15"	17"	19"	21"	23"			
T ₃	14"	16"	18"	20"	22"			
X	12'-4"	12'-8"	13'-0"	13'-4"	13'-8"			
Y	11'-5"	11'-9"	12'-1"	12'-5"	12'-9"			
YD ³ CLASS AA CONCRETE/FT	1.891	2.188	2.494	2.808	3.130			
LB BAR REINF STEEL/FT	180.5	249.9	304.3	376.3	418.2			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	6.1	6.5	7.0	7.4	7.8			
LB BAR REINF STEEL	887	909	911	1048	1050			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	6.4	6.8	7.2	7.7	8.1			
LB BAR REINF STEEL	1076	1101	1108	1251	1258			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	7.1	7.6	8.1	8.6	9.1			
LB BAR REINF STEEL	1134	1161	1169	1314	1322			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	8.8	9.4	10.0	10.5	11.1			
LB BAR REINF STEEL	1282	1312	1323	1472	1483			

SINGLE 10'-0" X 10'-0" BOX CULVERT								
BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS								
DESIGN	1	2	3	4	5	6	7	8
BAR A	475A @ 6"	578A @ 6"	579A @ 6"	642A @ 6"	643A @ 6"			
BAR C	531 @ 6"	615 @ 6"	716 @ 6"	717 @ 6"	805 @ 6"			
BAR E	447 @ 12"	533 @ 12"	534 @ 12"	535 @ 12"	451 @ 6"			
BAR G IN 2 SLABS	32 - 401	34 - 401	34 - 401	40 - 401	40 - 401			
BAR H IN 2 WALLS	28 - 402	28 - 402	28 - 402	32 - 402	32 - 402			
BAR J IN EXT. CORNER	0	0	3-419B @ 11½"	3-421B @ 13"	3-422B @ 14½"			
T ₁	14"	16"	18"	20"	22"			
T ₂	15"	17"	19"	21"	23"			
T ₃	14"	16"	18"	20"	22"			
X	12'-4"	12'-8"	13'-0"	13'-4"	13'-8"			
Y	12'-5"	12'-9"	13'-1"	13'-5"	13'-9"			
YD ³ CLASS AA CONCRETE/FT	1.977	2.287	2.605	2.931	3.265			
LB BAR REINF STEEL/FT	188.6	272.7	324.8	399.4	449.4			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	6.3	6.7	7.2	7.6	8.1			
LB BAR REINF STEEL	912	933	935	1048	1050			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	6.6	7.0	7.5	7.9	8.4			
LB BAR REINF STEEL	1100	1126	1133	1251	1258			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	7.3	7.8	8.3	8.8	9.4			
LB BAR REINF STEEL	1159	1186	1194	1314	1322			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	9.0	9.7	10.3	10.9	11.5			
LB BAR REINF STEEL	1307	1337	1348	1472	1483			

SINGLE 10'-0" X 11'-0" BOX CULVERT								
BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS								
DESIGN	1	2	3	4	5	6	7	8
BAR A	477A @ 6"	580A @ 6"	581A @ 6"	644A @ 6"	645A @ 6"			
BAR C	531 @ 6"	615 @ 6"	716 @ 6"	717 @ 6"	805 @ 6"			
BAR E	535 @ 12"	451 @ 6"	452 @ 6"	617 @ 12"	719 @ 12"			
BAR G IN 2 SLABS	32 - 401	34 - 401	34 - 401	40 - 401	40 - 401			
BAR H IN 2 WALLS	30 - 402	30 - 402	30 - 402	36 - 402	36 - 402			
BAR J IN EXT. CORNER	0	0	3-419B @ 11½"	3-421B @ 13"	3-422B @ 14½"			
T ₁	14"	16"	18"	20"	22"			
T ₂	15"	17"	19"	21"	23"			
T ₃	14"	16"	18"	20"	22"			
X	12'-4"	12'-8"	13'-0"	13'-4"	13'-8"			
Y	13'-5"	13'-9"	14'-1"	14'-5"	14'-9"			
YD³CLASS AA CONCRETE/FT	2.064	2.386	2.716	3.055	3.401			
LB BAR REINF STEEL/FT	206.3	292.2	344.6	429.0	487.0			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL								
YD³CLASS AA CONCRETE	6.5	6.9	7.4	7.9	8.3			
LB BAR REINF STEEL	936	957	959	1096	1098			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL								
YD³CLASS AA CONCRETE	6.8	7.2	7.7	8.2	8.7			
LB BAR REINF STEEL	1125	1150	1157	1300	1307			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL								
YD³CLASS AA CONCRETE	7.5	8.1	8.6	9.1	9.7			
LB BAR REINF STEEL	1184	1211	1219	1364	1372			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL								
YD³CLASS AA CONCRETE	9.3	9.9	10.6	11.2	11.9			
LB BAR REINF STEEL	1333	1363	1374	1524	1535			

SINGLE 10'-0" X 12'-0" BOX CULVERT								
BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS								
DESIGN	1	2	3	4	5	6	7	8
BAR A	479A @ 6"	582A @ 6"	646A @ 6"	647A @ 6"	648A @ 6"			
BAR C	804 @ 12"	615 @ 6"	716 @ 6"	717 @ 6"	805 @ 6"			
BAR E	536 @ 12"	453 @ 6"	618 @ 12"	720 @ 12"	721 @ 12"			
BAR G IN 2 SLABS	32 - 401	34 - 401	34 - 401	40 - 401	40 - 401			
BAR H IN 2 WALLS	34 - 402	34 - 402	34 - 402	42 - 402	42 - 402			
BAR J IN EXT. CORNER	0	0	3-420B @ 11½"	3-421B @ 13"	3-422B @ 14½"			
T ₁	14"	16"	18"	20"	22"			
T ₂	15"	17"	19"	21"	23"			
T ₃	14"	16"	18"	20"	22"			
X	12'-4"	12'-8"	13'-0"	13'-4"	13'-8"			
Y	14'-5"	14'-9"	15'-1"	15'-5"	15'-9"			
YD ³ CLASS AA CONCRETE/FT	2.150	2.485	2.827	3.178	3.537			
LB BAR REINF STEEL/FT	230.4	305.9	429.6	464.3	507.1			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	6.7	7.2	7.7	8.2	8.7			
LB BAR REINF STEEL	985	1006	1008	1169	1172			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	7.0	7.5	8.0	8.5	9.0			
LB BAR REINF STEEL	1175	1200	1207	1375	1382			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	7.8	8.3	8.9	9.5	10.0			
LB BAR REINF STEEL	1234	1261	1270	1440	1448			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	9.6	10.3	11.0	11.7	12.4			
LB BAR REINF STEEL	1385	1415	1426	1601	1613			

			DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA			
			REVISION	STANDARD REINFORCED CONCRETE SINGLE BOX CULVERT 10'X9', 10'X10', 10'X12' AND 10'X12' NO SCALE SEPTEMBER 2017			
		BY	DES. YSK DRW. FGS TRA. CHK. JWB	(SUBMITTED) <i>[Signature]</i> STATE DESIGN POLICY ENGINEER (APPROVED) <i>[Signature]</i> CHIEF ENGINEER	NUMBER 2401 SHEET 2-N OF 3		