

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

DOUBLE 4'-0" X 3'-0" BOX CULVERT								
BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS								
DESIGN	1	2	3	4	5	6	7	8
BAR A	404A @ 12"	501A @ 12"	401A @ 6"	401A @ 6"	403A @ 6"			
BAR B	516 @ 12"	404 @ 6"	407 @ 6"	407 @ 6"	502 @ 6"			
BAR C	542 @ 12"	451 @ 6"	451 @ 6"	451 @ 6"	543 @ 6"			
BAR E	406 @ 12"	406 @ 12"	406 @ 12"	406 @ 12"	408 @ 12"			
BAR F	406 @ 12"	406 @ 12"	406 @ 12"	406 @ 12"	408 @ 12"			
BAR G IN 2 SLABS	32 - 401	32 - 401	32 - 401	32 - 401	32 - 401			
BAR H IN 3 WALLS	14 - 402	14 - 402	14 - 402	14 - 402	14 - 402			
BAR J IN EXT. CORNER	0	0	0	3-401B @ 4 1/2"	2-403B @ 5"			
BAR J IN INT. CORNER	0	0	3-401B @ 4 1/2"	4-401B @ 4 1/2"	4-404B @ 5"			
T ₁	8"	8"	8"	8"	9"			
T ₂	9"	9"	9"	9"	10"			
T ₃	8"	8"	8"	8"	9"			
X	10'-4"	10'-4"	10'-4"	10'-4"	10'-6"			
Y	4'-5"	4'-5"	4'-5"	4'-5"	4'-7"			
YD ³ CLASS AA CONCRETE/FT	0.820	0.820	0.820	0.820	0.912			
LB BAR REINF STEEL/FT	87.2	96.2	113.8	130.5	151.3			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	3.8	3.8	3.8	3.8	3.9			
LB BAR REINF STEEL	655	655	655	655	656			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	4.0	4.0	4.0	4.0	4.1			
LB BAR REINF STEEL	813	813	813	813	817			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	4.4	4.4	4.4	4.4	4.5			
LB BAR REINF STEEL	862	862	862	862	866			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	5.5	5.5	5.5	5.5	5.6			
LB BAR REINF STEEL	988	988	988	988	994			

DOUBLE 4'-0" X 4'-0" BOX CULVERT								
BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS								
DESIGN	1	2	3	4	5	6	7	8
BAR A	415A @ 12"	504A @ 12"	411A @ 6"	411A @ 6"	412A @ 6"			
BAR B	522 @ 12"	403 @ 6"	404 @ 6"	405 @ 6"	502 @ 6"			
BAR C	542 @ 12"	451 @ 6"	451 @ 6"	542 @ 6"	543 @ 6"			
BAR E	414 @ 12"	414 @ 12"	414 @ 12"	414 @ 12"	415 @ 12"			
BAR F	414 @ 12"	414 @ 12"	414 @ 12"	414 @ 12"	415 @ 12"			
BAR G IN 2 SLABS	32 - 401	32 - 401	32 - 401	32 - 401	32 - 401			
BAR H IN 3 WALLS	18 - 402	18 - 402	18 - 402	18 - 402	18 - 402			
BAR J IN EXT. CORNER	0	0	0	3-401B @ 4 1/2"	3-403B @ 5"			
BAR J IN INT. CORNER	0	0	3-401B @ 4 1/2"	4-401B @ 4 1/2"	4-404B @ 5"			
T ₁	8"	8"	8"	8"	9"			
T ₂	9"	9"	9"	9"	10"			
T ₃	8"	8"	8"	8"	9"			
X	10'-4"	10'-4"	10'-4"	10'-4"	10'-6"			
Y	5'-5"	5'-5"	5'-5"	5'-5"	5'-7"			
YD ³ CLASS AA CONCRETE/FT	0.906	0.906	0.906	0.906	1.005			
LB BAR REINF STEEL/FT	97.9	106.0	124.5	156.7	166.8			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	4.3	4.3	4.3	4.3	4.4			
LB BAR REINF STEEL	690	690	690	690	692			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	4.5	4.5	4.5	4.5	4.6			
LB BAR REINF STEEL	850	850	850	850	853			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	5.0	5.0	5.0	5.0	5.2			
LB BAR REINF STEEL	899	899	899	899	903			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	6.2	6.2	6.2	6.2	6.4			
LB BAR REINF STEEL	1027	1027	1027	1027	1032			

DOUBLE 4'-0" X 5'-0" BOX CULVERT								
DESIGN	1	2	3	4	5	6	7	8
BAR A	44A @ 12"	508A @ 12"	420A @ 6"	422A @ 6"	425A @ 6"			
BAR B	517 @ 12"	403 @ 6"	403 @ 6"	405 @ 6"	502 @ 6"			
BAR C	542 @ 12"	451 @ 6"	451 @ 6"	542 @ 6"	543 @ 6"			
BAR E	420 @ 12"	420 @ 12"	513 @ 12"	513 @ 12"	514 @ 12"			
BAR F	420 @ 12"	420 @ 12"	420 @ 12"	420 @ 12"	421 @ 12"			
BAR G IN 2 SLABS	32 - 40I	32 - 40I	32 - 40I	32 - 40I	32 - 40I			
BAR H IN 3 WALLS	20 - 402	20 - 402	20 - 402	20 - 402	20 - 402			
BAR J IN EXT. CORNER	0	0	0	3-40IB @ 4 1/2"	3-403B @ 5"			
BAR J IN INT. CORNER	0	0	3-40IB @ 4 1/2"	4-40IB @ 4 1/2"	4-404B @ 5"			
T ₁	8"	8"	8"	8"	9"			
T ₂	9"	9"	9"	9"	10"			
T ₃	8"	8"	8"	8"	9"			
X	10'-4"	10'-4"	10'-4"	10'-4"	10'-6"			
Y	6'-5"	6'-5"	6'-5"	6'-5"	6'-7"			
YD ³ CLASS AA CONCRETE/FT	0.993	0.993	0.993	0.993	1.097			
LB BAR REINF STEEL/FT	106.3	114.9	138.8	171.9	182.5			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	4.5	4.5	4.5	4.5	4.6			
LB BAR REINF STEEL	714	714	714	714	716			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	4.7	4.7	4.7	4.7	4.8			
LB BAR REINF STEEL	874	874	874	874	878			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	5.2	5.2	5.2	5.2	5.4			
LB BAR REINF STEEL	924	924	924	924	928			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	6.5	6.5	6.5	6.5	6.7			
LB BAR REINF STEEL	1053	1053	1053	1053	1058			

DOUBLE 4'-0" X 6'-0" BOX CULVERT								
BARREL REINFORCEMENT QUANTITIES AND DIMENSIONS								
DESIGN	1	2	3	4	5	6	7	8
BAR A	452A @ 12"	439A @ 6"	439A @ 6"	518A @ 6"	521A @ 6"			
BAR B	517 @ 12"	403 @ 6"	403 @ 6"	405 @ 6"	502 @ 6"			
BAR C	542 @ 12"	451 @ 6"	451 @ 6"	542 @ 6"	543 @ 6"			
BAR E	428 @ 12"	519 @ 12"	519 @ 12"	428 @ 6"	429 @ 6"			
BAR F	428 @ 12"	428 @ 12"	428 @ 12"	428 @ 12"	429 @ 12"			
BAR G IN 2 SLABS	32 - 40I	32 - 40I	32 - 40I	32 - 40I	32 - 40I			
BAR H IN 3 WALLS	26 - 402	26 - 402	26 - 402	26 - 402	26 - 402			
BAR J IN EXT. CORNER	0	0	2-40IB @ 4½"	3-402B @ 4½"	3-404B @ 5"			
BAR J IN INT. CORNER	0	0	3-40IB @ 4½"	4-40IB @ 4½"	4-404B @ 5"			
T ₁	8"	8"	8"	8"	9"			
T ₂	9"	9"	9"	9"	10"			
T ₃	8"	8"	8"	8"	9"			
X	10'-4"	10'-4"	10'-4"	10'-4"	10'-6"			
Y	7'-5"	7'-5"	7'-5"	7'-5"	7'-7"			
YD ³ CLASS AA CONCRETE/FT	1.079	1.079	1.079	1.079	1.190			
LB BAR REINF STEEL/FT	115.6	140.9	161.7	214.3	225.6			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 90° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	4.7	4.7	4.7	4.7	4.8			
LB BAR REINF STEEL	764	764	764	764	765			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 75° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	4.9	4.9	4.9	4.9	5.0			
LB BAR REINF STEEL	926	926	926	926	929			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 60° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	5.4	5.4	5.4	5.4	5.6			
LB BAR REINF STEEL	976	976	976	976	981			
PARAPET, BARREL END, AND TOEWALL QUANTITIES - 45° SKEW - TOTAL								
YD ³ CLASS AA CONCRETE	6.7	6.7	6.7	6.7	6.9			
LB BAR REINF STEEL	1107	1107	1107	1107	1113			

		DATE	DEPARTMENT OF TRANSPORTATION	
			STATE OF GEORGIA	
		REVISION	STANDARD	
			REINFORCED CONCRETE DOUBLE BOX CULVERT	
			4'X3', 4'X4', 4'X5' AND 4'X6'	
			NO SCALE	SEPTEMBER 2017
	BY	DES. <u>YSK</u> DRW. <u>FCS</u> TRA. <u> </u> CHK. <u>JWB</u>	(SUBMITTED) <u>B. A. A. S. S.</u> STATE DEPT. POLICY ENGINEER (APPROVED) <u>Margaret B. Puckett</u> CHIEF ENGINEER	NUMBER 2402 SHEET 2-A OF 3