STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	STP00-1267-00(008)	603	946

WINGWALLS, TOEWALLS AND PARAPETS FOR 45° SKEW

CLEAR HEIGHT	N BARS AT 1'-0" C. TO C.						P BARS AT 1'-0" C. TO C. - WING E						P BARS AT 1'-0" C. TO C. - WING F						R BARS AT 1'-0" C. TO C.				M BARS			U BARS			CLEAR HEIGHT
	SIZE	NO. (CONSTANT LENGTH)	* LENGTH	NO. (VARIABLE LENGTH)	LENGTH *		SIZE	NO. (CONSTANT LENGTH)	LENGTH	NO. (VARIABLE LENGTH)	LENGTH		SIZE	NO. (CONSTANT LENGTH)	LENGTH	NO. (VARIABLE LENGTH)	LENGTH		SIZE	NO. (VARIABLE LENGTH)	LENGTH **		SIZE	NO. (CONSTANT LENGTH)	LENGTH	SIZE	NO. (CONSTANT LENGTH)	LENGTH	
					SHORTEST	LONGEST					SHORTEST	LONGEST					SHORTEST	LONGEST			SHORTEST	LONGEST							
2'	#4	6	5'-5"	16	4'-4"	5'-4"	#4	10	5'-0"	2	1'-7"	1'-7"	#4	10	3'-5"	2	1'-3"	1'-3"	#6	44	3'-6"	3'-6"	#6	14	X_s + 1'-9"	#6	8	X_s + 1'-9"	2'
3'	#4	6	6'-8"	32	4'-4"	6'-7"	#4	10	9'-11"	4	2'-5"	6'-5"	#4	10	6'-0"	4	1'-9"	4'-0"	#6	76	3'-6"	3'-6"	#6	14	X_s + 1'-9"	#6	8	X_s + 1'-9"	3'
4'	#5	6	8'-2"	50	4'-5"	8'-2"	#4	10	15'-6"	6	4'-2"	12'-1"	#4	10	9'-3"	6	2'-9"	7'-4"	#6	108	3'-6"	3'-6"	#6	14	X_s + 1'-9"	#6	8	X_s + 1'-9"	4'
5'	#5	6	9'-2"	58	4'-9"	9'-2"	#4	10	18'-1"	8	4'-2"	15'-11"	#4	10	10'-11"	8	2'-10"	9'-8"	#6	128	3'-6"	3'-6"	#6	14	X_s + 1'-9"	#6	8	X_s + 1'-9"	5'
6'	#5	6	10'-2"	68	5'-1"	10'-2"	#4	10	20'-9"	10	4'-2"	19'-11"	#4	10	12'-7"	10	2'-10"	12'-2"	#6	148	3'-6"	3'-6"	#6	14	X_s + 1'-9"	#6	8	X_s + 1'-9"	6'
7'	#5	6	11'-3"	76	5'-5"	11'-3"	#4	12	23'-9"	10	4'-4"	20'-3"	#4	12	13'-11"	10	2'-10"	12'-0"	#6	164	3'-6"	4'-7"	#6	14	X_s + 1'-9"	#6	8	X_s + 1'-9"	7'
8'	#6	6	12'-5"	82	5'-10"	12'-3"	#4	12	26'-5"	14	0'-9"	24'-3"	#4	12	15'-6"	14	0'-9"	14'-4"	#6	176	3'-8"	5'-3"	#6	14	X_s + 1'-9"	#6	8	X_s + 1'-9"	8'
9'	#6	6	13'-5"	92	6'-2"	13'-4"	#4	12	29'-3"	16	0'-11"	28'-5"	#4	12	17'-2"	16	0'-11"	16'-9"	#6	196	3'-8"	5'-9"	#6	14	X_s + 1'-9"	#6	8	X_s + 1'-9"	9'
10'	#7	6	14'-7"	102	6'-8"	14'-7"	#4	14	31'-11"	16	0'-11"	28'-6"	#4	14	18'-9"	16	0'-11"	16'-10"	#6	216	3'-8"	6'-3"	#6	14	X_s + 1'-9"	#6	8	X_s + 1'-9"	10'
11'	#7	6	15'-7"	110	6'-11"	15'-7"	#4	14	34'-11"	18	0'-11"	32'-5"	#4	14	20'-5"	18	0'-11"	19'-0"	#6	232	3'-8"	6'-10"	#6	14	X_s + 1'-9"	#6	8	X_s + 1'-9"	11'
12'	#8	6	16'-8"	120	7'-3"	16'-8"	#4	14	37'-6"	20	1'-1"	36'-0"	#4	14	22'-1"	20	1'-0"	21'-4"	#6	248	3'-8"	7'-4"	#6	14	X_s + 1'-9"	#6	8	X_s + 1'-9"	12'

* LENGTH INCLUDES VERTICAL LEG, HORIZONTAL LEG AND 180° STANDARD HOOK.
** LENGTH INCLUDES 2 STANDARD 180° HOOKS.

X_s = TOTAL SKEWED BARREL WIDTH OUT TO OUT (DIMENSION "X" FROM CULVERT SHEET TIMES 1.414)
Y = TOTAL BARREL HEIGHT OUT TO OUT (DIMENSION "Y" FROM CULVERT SHEET)

DIMENSIONS AND QUANTITIES FOR 45° SKEW

CLEAR HEIGHT	H	W_1	W_2	S	M	N	Q	R	T_3	Z	CY CLASS A CONCRETE	LB BAR REINF STEEL	CLEAR HEIGHT
2'	3'-1"	1'-1"	2'-0"	1'-1"	4'-3"	2'-8"	-	1'-0"	10"	-	4.5	365	2'
3'	4'-3½"	2'-3½"	2'-0"	2'-1½"	9'-2"	5'-3"	-	1'-0"	10"	-	8.1	669	3'
4'	5'-9"	3'-9"	2'-0"	2'-7"	14'-9"	8'-6"	-	1'-0"	10"	-	13.3	1132	4'
5'	6'-9"	4'-5"	2'-4"	2'-7"	17'-4"	10'-2"	-	1'-0"	10"	-	16.7	1432	5'
6'	7'-9"	5'-1"	2'-8"	2'-7"	20'-0"	11'-10"	-	1'-0"	10"	-	20.4	1736	6'
7'	8'-9½"	5'-9½"	3'-0"	2'-7½"	23'-0"	13'-2"	1'-6"	2'-0"	10"	2'-6"	26.6	2161	7'
8'	9'-10½"	6'-6½"	3'-4"	2'-8½"	25'-8"	14'-9"	2'-0"	2'-6"	12"	3'-6"	36.7	2926	8'
9'	10'-11"	7'-3"	3'-8"	2'-9"	28'-6"	16'-5"	2'-6"	3'-0"	12"	4'-0"	44.2	3459	9'
10'	11'-11"	7'-11"	4'-0"	2'-9"	31'-2"	18'-0"	2'-6"	3'-6"	12"	4'-6"	51.9	4729	10'
11'	12'-11"	8'-8"	4'-3"	2'-9"	34'-2"	19'-8"	3'-0"	4'-0"	12"	5'-0"	62.5	5388	11'
12'	13'-11½"	9'-5½"	4'-6"	2'-9½"	36'-9"	21'-4"	3'-0"	4'-6"	12"	5'-0"	70.2	7102	12'

QUANTITIES SHOWN INCLUDE WINGWALLS, WINGWALL FOOTINGS, AND WINGWALL TOEWALL FOR BOTH ENDS.

DATE	REVISIONS	BY

GEORGIA
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES

SPECIAL DESIGN
REINFORCED CONCRETE SKEWED
WINGWALLS, TOEWALLS AND PARAPETS
FOR 75°, 60°, AND 45° SKEWS

DRAWING NO. 36-008
CULVERT SHEET 7 OF 7

NO SCALE — MARCH 2003

DESIGNED STD — CHECKED WEI — REVIEWED JPT/MCD
DRAWN STD/KWK — DESIGN GROUP WEI — APPROVED PVL