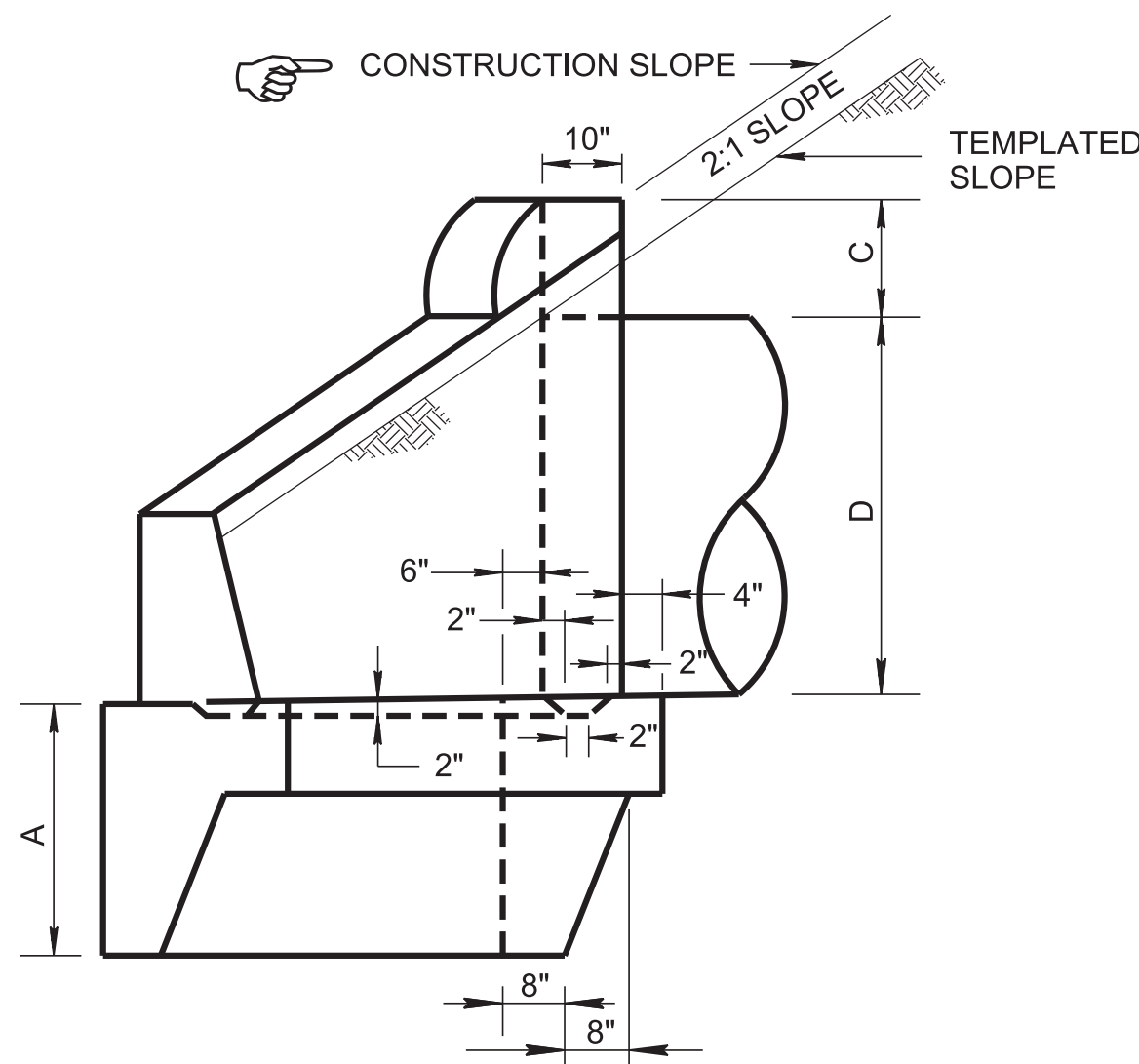
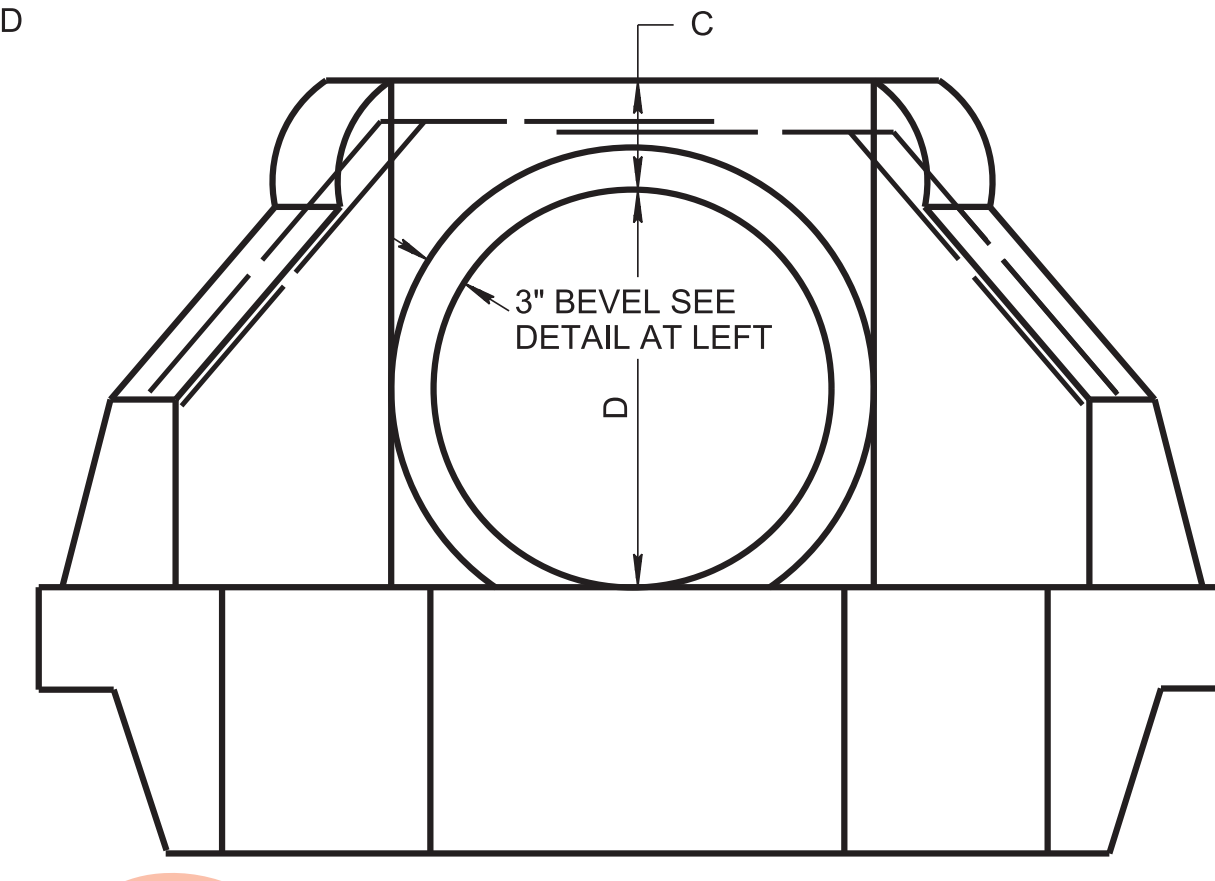


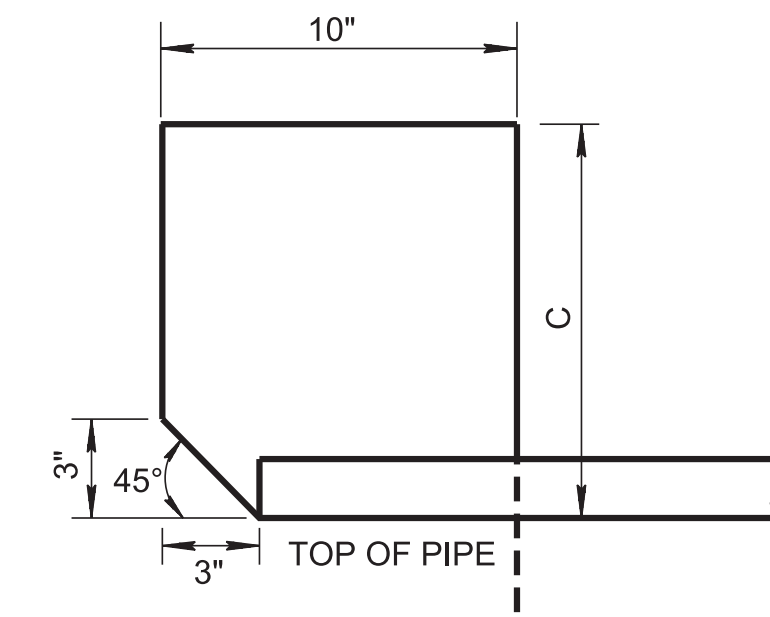
ELEVATION



END VIEW



ELEVATION - E.W. AT 90°

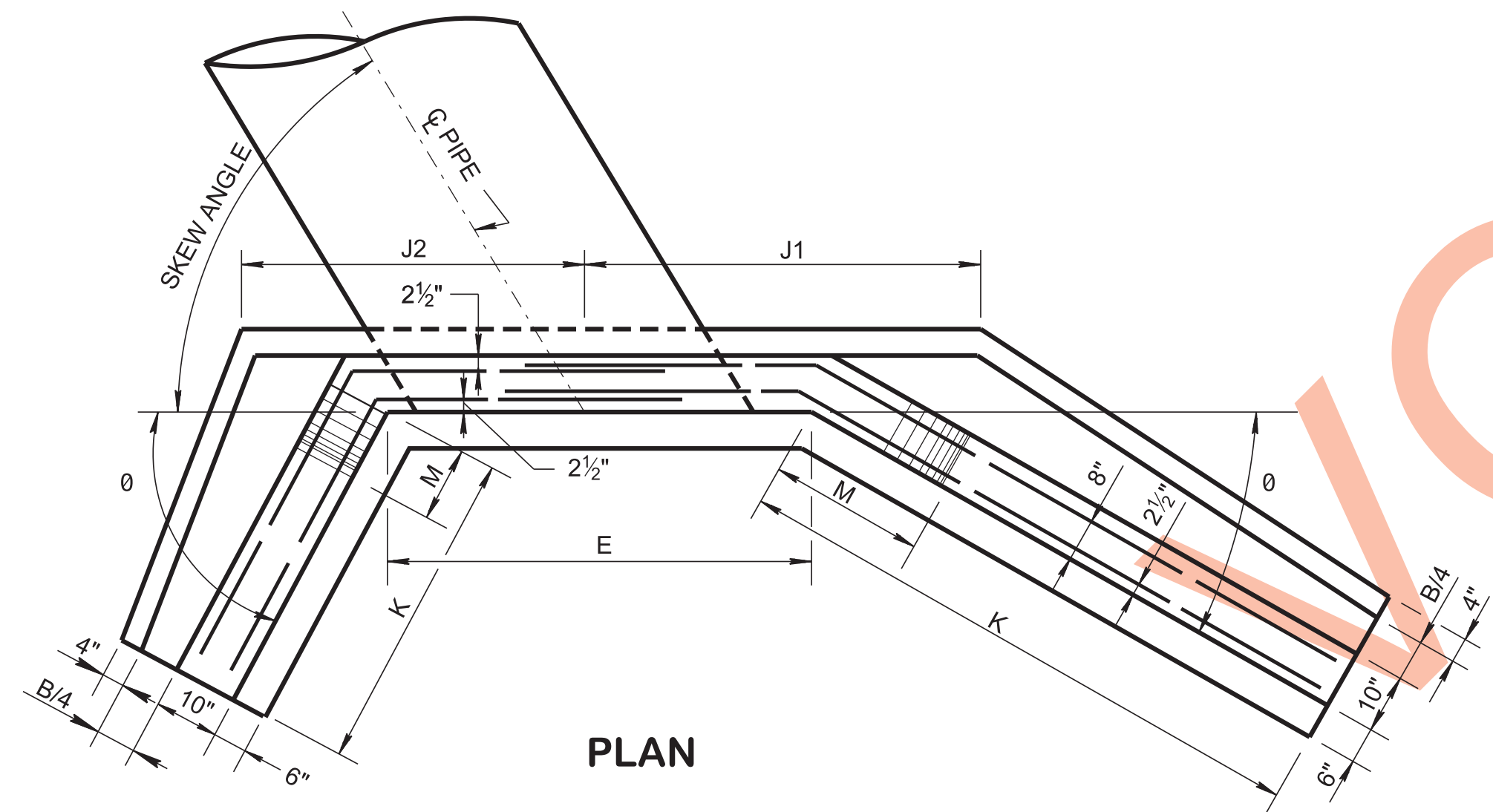


SHOWING BEVEL REQUIRED ON ENDWALLS WHEN PLANS REQUIRE ENDWALLS TO BE CONSTRUCTED AT 90° TO THE CENTER LINE OF PIPE. BEVEL NOT REQUIRED WHEN ENDWALL IS CONSTRUCTED ON THE "BELLED" END OF CONCRETE PIPE.

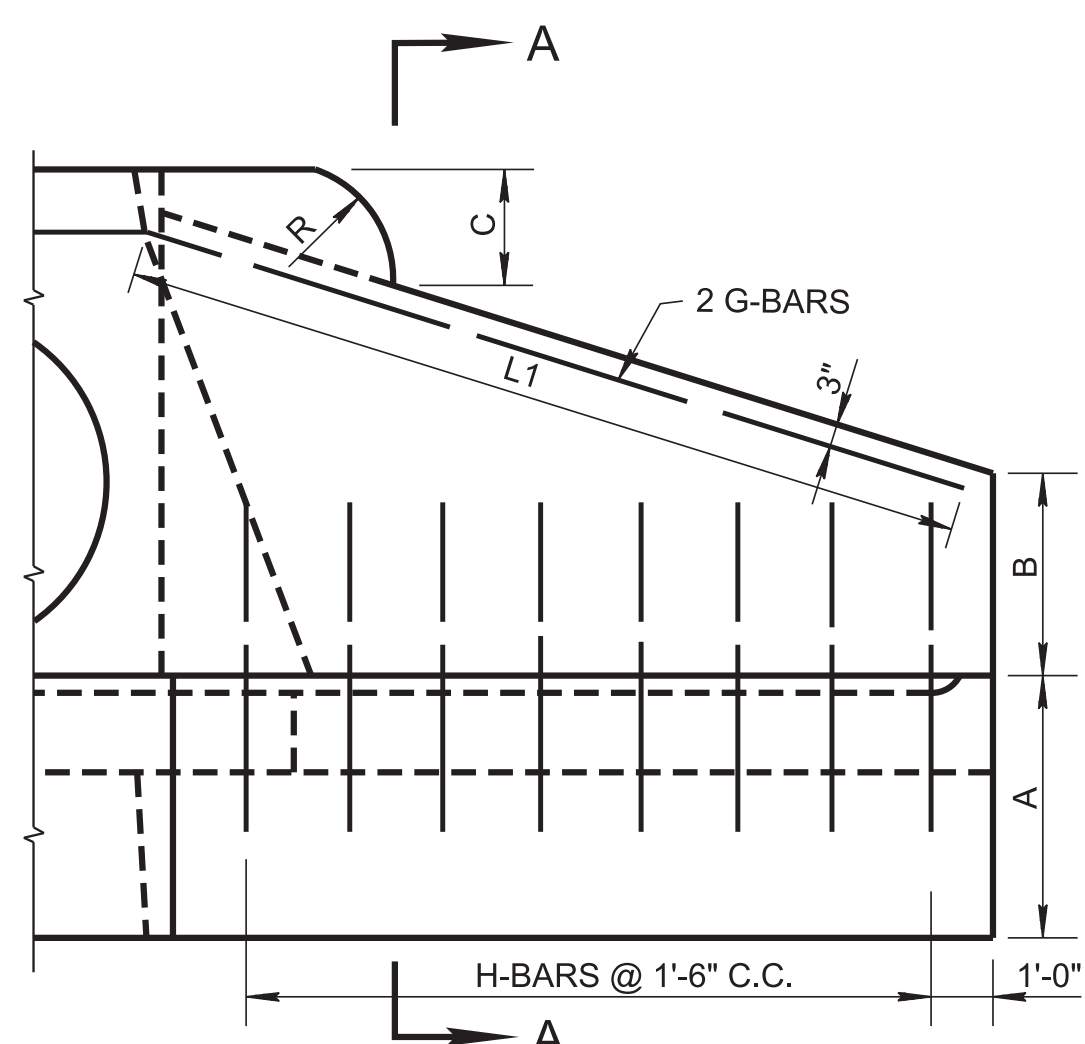
BEVEL DETAIL

SPECIAL NOTE

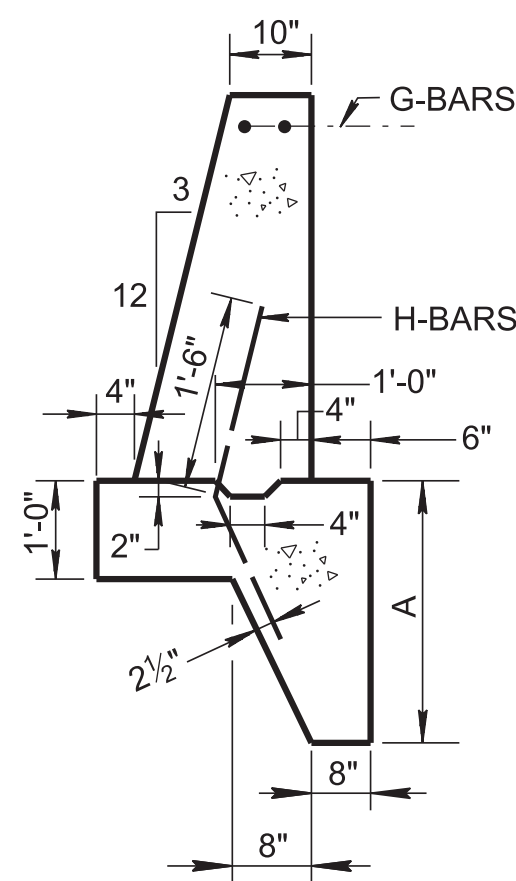
ON CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO WIDEN FILL OR FLATTEN SLOPE OF FILL TO CATCH THE TOP OF THE ENDWALL AS SHOWN BY "CONSTRUCTION SLOPE".



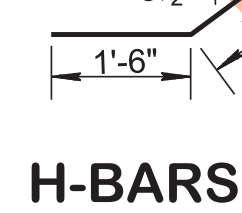
PLAN



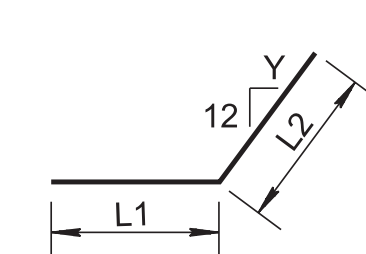
FRONT ELEVATION OF WING



SECTION A-A



H-BARS



G-BARS

DIAM. D	DIMENSIONS												REINFORCING STEEL					QUANTITIES IN ONE ENDWALL					
	A	B	C	SKEW	E	J1	J2	WING	Ø	K	M	R	H-BARS #4 3'-3" L.G. NO.	G - BARS #6				STEEL LBS.	CONC. CU. YDS.				
														NO.	L1	L2	TOTAL			BEND Y-INS.			
36"	2'-6"	1'-6"	1'-0"	90°	3'-8"	3'-6"	3'-6"	BOTH	45°-00'	6'-0 1/2"	1'-9 1/4"	1'-0"	8	4	6'-2"	3'-2"	9'-4"	11 1/2	73	3.89			
				75°	3'-9 1/2"	3'-8 1/2"	3'-7"	LONG	37°-30'	7'-1 1/2"	2'-2 1/4"	1'-0"	4	2	7'-2"	3'-2"	10'-4"	15	73	4.00			
								SHORT	52°-30'	5'-3 3/4"	1'-5 3/4"	1'-0"	3	2	5'-6"	3'-3"	8'-9"	9	80	4.37			
				60°	4'-2 3/4"	4'-1 1/2"	3'-10"	LONG	30°-00'	8'-9 1/2"	2'-9 1/4"	1'-0"	5	2	8'-10"	3'-5"	12'-3"	19 1/2	6 3/4	80	4.37		
				SHORT	60°-00'	4'-8 1/2"	1'-3"	1'-0"	3	2	5'-0"	3'-6"	8'-6"	6 3/4									
				LONG	22°-30'	11'-7"	3'-9"	1'-0"	7	2	11'-7"	3'-11"	15'-6"	27									
				SHORT	67°-30'	4'-3 3/4"	1'-0 3/4"	1'-0"	3	2	4'-7"	4'-0"	8'-7"	5									
42"	2'-6"	1'-9"	1'-0"	90°	4'-3"	4'-0"	4'-0"	BOTH	45°-00'	6'-8 3/4"	1'-9 1/4"	1'-0"	8	4	6'-11"	3'-5"	10'-4"	11 3/4	79	4.72			
				75°	4'-4 3/4"	4'-2 1/4"	4'-0 1/2"	LONG	37°-30'	7'-11 1/4"	2'-2 1/4"	1'-0"	5	2	8'-1"	3'-6"	11'-7"	15	84	4.85			
								SHORT	52°-30'	5'-10 1/4"	1'-5 3/4"	1'-0"	4	2	6'-2"	3'-7"	9'-9"	9	89	5.29			
				60°	4'-11"	4'-8 1/4"	4'-3 3/4"	LONG	30°-00'	9'-9 1/2"	2'-9 1/4"	1'-0"	6	2	9'-10"	3'-9"	13'-7"	19 1/2	6 3/4	89	5.29		
				SHORT	60°-00'	5'-3 1/2"	1'-3"	1'-0"	3	2	5'-6"	3'-10"	9'-6"	6 3/4									
				LONG	22°-30'	12'-10 3/4"	3'-9"	1'-0"	8	2	12'-11"	4'-4"	17'-3"	27									
				SHORT	67°-30'	4'-10 1/4"	1'-0 3/4"	1'-0"	3	2	5'-3"	4'-5"	9'-8"	5									
48"	2'-9"	2'-0"	1'-3"	90°	4'-10"	4'-5 1/2"	4'-5 1/2"	BOTH	45°-00'	7'-5 1/2"	1'-9 1/4"	1'-0"	10	4	7'-8"	3'-9"	11'-5"	11 3/4	90	5.88			
				75°	5'-0"	4'-8 1/4"	4'-5 3/4"	LONG	37°-30'	8'-9"	2'-2 1/4"	1'-0"	6	2	8'-11"	3'-9"	12'-8"	15	92	6.05			
								SHORT	52°-30'	6'-6 1/2"	1'-5 3/4"	1'-0"	4	2	6'-10"	3'-10"	10'-8"	9	100	6.60			
				60°	5'-7"	5'-3"	4'-9 1/4"	LONG	30°-00'	10'-9 1/4"	2'-9 1/4"	1'-0"	7	2	10'-11"	4'-1"	15'-0"	19 1/2	6 3/4	100	6.60		
				SHORT	60°-00'	5'-10 1/2"	1'-3"	1'-0"	4	2	6'-3"	4'-2"	10'-5"	6 3/4									
				LONG	22°-30'	14'-2 1/2"	3'-9"	1'-0"	9	2	14'-3"	4'-9"	19'-0"	27									
				SHORT	67°-30'	5'-4 3/4"	1'-0 3/4"	1'-0"	4	2	5'-10"	10'-8"	5	117	7.80								
54"	2'-9"	2'-0"	1'-3"	90°	5'-5"	4'-11"	4'-11"	BOTH	45°-00'	8'-10 1/2"	1'-9 1/4"	1'-0"	12	2	9'-2"	4'-0"	13'-2"	11 3/4	105	7.26			
				75°	5'-7 1/4"	5'-2"	4'-11 1/4"	LONG	37°-30'	10'-4 1/4"	2'-2 1/4"	1'-0"	7	2	10'-8"	4'-1"	14'-9"	15	108	7.46			
								SHORT	52°-30'	7'-9 1/4"	1'-5 3/4"	1'-0"	5	2	8'-2"	4'-2"	12'-4"	9	114	8.13			
				60°	6'-3"	5'-9 3/4"	5'-3"	LONG	30°-00'	12'-9 1/4"	2'-9 1/4"	1'-0"	8	2	12'-11"	4'-5"	17'-4"	19 1/2	6 3/4	114	8.13		
				SHORT	60°-00'	7'-0 1/4"	1'-3"	1'-0"	4	2	7'-6"	4'-6"	12'-0"	6 3/4									
				LONG	22°-30'	16'-9 1/2"	3'-9"	1'-0"	11	2	16'-11"	5'-2"	22'-1"	27									
				SHORT	67°-30'	6'-5 3/4"	1'-0 3/4"	1'-0"	4	2	7'-0"	5'-3"	12'-3"	5	136	9.60							
60"	3'-0"	2'-0"	1'-6"	90°	6'-0"	5'-4 1/2"	5'-4 1/2"	BOTH	45°-00'	10'-3 1/4"	1'-9 1/4"	1'-0"	14	4	10'-8"	4'-4"	15'-0"	11 3/4	120	9.07			
				75°	6'-2 1/2"	5'-8"	5'-4 1/2"	LONG	37°-30'	12'-0 1/2"	2'-2 1/4"	1'-0"	8	2	12'-4"	4'-5"	16'-9"	15	123	9.33			
								SHORT	52°-30'	9'-0 1/2"	1'-5 3/4"	1'-0"	6	2	9'-7"	4'-6"	14'-1"	9	130	10.17			
				60°	6'-11 1/2"	6'-4 1/2"	5'-8 3/4"	LONG	30°-00'	14'-9 1/4"	2'-9 1/4"	1'-0"	9	2	15'-0"	4'-9"	19'-9"	19 1/2	6 3/4	130	10.17		
				SHORT	60°-00'	8'-2 1/4"	1'-3"	1'-0"	5	2	8'-9"	4'-10"	13'-7"	6 3/4									
				LONG	22°-30'	19'-5 1/4"	3'-9"	1'-0"	12	2	19'-7"	5'-6"	23'-1"	27									
				SHORT	67°-30'	7'-6 3/4"	1'-0 3/4"	1'-0"	5	2	7'-6"	5'-8"	13'-2"	5	152	12.00							
66"	3'-3"	2'-0"	1'-6"	90°	6'-7"	5'-10"	5'-10"	BOTH	45°-00'	11'-8 1/4"	1'-9 1/4"	1'-0"	24	4	11'-5"	4'-8"	16'-1"	11 3/4	153	11.41			
				75°	7'-0"	6'-3"	5'-11 1/4"	LONG	37°-30'	13'-8 1/4"	2'-2 1/4"	1'-0"	14	2	13'-5"	4'-10"	18'-3"	15	158	11.74			
								SHORT	52°-30'	10'-3 3/4"	1'-5 3/4"	1'-0"	11	2	10'-0"	4'-11"	14'-11"	9	169	12.82			
				60°	7'-9 3/4"	7'-0 3/4"	6'-3 3/4"	LONG	30°-30'	16'-9 1/2"	2'-9 1/4"	1'-0"	17	2	16'-6"	5'-9"	21'-9"	19 1/2	6 3/4	169	12.82		
				SHORT	60°-00'	9'-4"	1'-3"	1'-0"	9	2	9'-1"	5'-4"	14'-5"	6 3/4									
				LONG	22°-30'	22'-0 1/2"	3'-9"	1'-0"	22	2	21'-9"	6'-2"	27'-11"	27									
				SHORT	67°-30'	8'-8"	1'-0 3/4"	1'-0"	8	2	8'-3"	6'-3"	14'-6"	5	198	16.60							
66"	3'-3"	2'-0"	1'-6"	35°	11'-5 5/8"	10'-6 3/4"	8'-1 1/2"	LONG	47°-30'	28'-1 1/4"	4'-9"	1'-0"	28	2	27'-9"	6'-6"	34'-3"	35	225	18.00			
								SHORT	72°-30'	8'-3 3/4"	1'-0"	1'-0"	8	2	8'-2"	8'-8"	14'-10"	4	151	13.55			
				90°	7'-2"	6'-3"	6'-3"	BOTH	45°-00'	13'-1"	1'-9 1/4"	1'-0"	18	4	13'-7"	5'-0"	18'-7"	11 3/4	151	13.55			
				75°	7'-5"	6'-7 3/4"	6'-3 1/2"	LONG	37°-30'	15'-4"	2'-2 1/4"	1'-0"	10	2	15'-9"	5'-3"	21'-0"	15	153	13.90			
				SHORT	52°-30'	11'-6 3/4"	1'-5 3/4"	1'-0"	7	2	12'-2"	5'-4"	17'-6"	9	167	14.94							
72"	3'-6"	2'-0"	2'-0"	60°	8'-3 1/4"	7'-6"	6'-8"	LONG	30°-00'	18'-9 1/4"	2'-9 1/4"	1'-0"	12	2	19'-0"	5'-10"	24'-10"	19 1/2	167	14.94			
								SHORT	60°-00'	10'-5 3/4"	1'-3"	1'-0"	7	2	11'-2"	5'-11"	17'-1"	6 3/4	196	17.28			
				45°	10'-1 1/2"	9'-3 1/4"	7'-7 1/2"	LONG	22°-30'	24'-7 1/4"	3'-9"	1'-0"	16	2	24'-10"	7'-1"	31'-11"	27	196	17.28			
								SHORT	67°-30'	9'-8 3/4"	1'-0 3/4"	1'-0"	6	2	10'-5"	7'-2"	17'-9"	5	163	15.70			
78"	3'-9"	2'-0"	2'-0"	90°	7'-9"	6'-8 3/4"	6'-8 3/4"	BOTH	45°-00'	14'-6"	1'-9 1/4"	1'-0"	18	4	15'-5"	5'-8"	20'-7"	11 3/4	163	15.70			
				75°	8'-0 1/4"	7'-1 3/4"	6'-8 3/4"	LONG	37°-30'	16'-11 3/4"	2'-2 1/4"	1'-0"	11	2	17'-6"	5'-8"	23'-2"	15	169	16.00			
								SHORT	52°-30'	12'-10"	1'-5 3/4"	1'-0"	8	2	13'-6"	5'-9"	19'-3"	9	182	17.57			
				60°	8'-11 1/2"	8'-1"	7'-1 3/4"	LONG	30°-00'	20'-9 1/4"	2'-9 1/4"	1'-0"	13	2	21'-2"	6'-4"	27'-6"	19 1/2	6 3/4	182	17.57		
				SHORT	60°-00'	11'-7 3/4"	1'-3"	1'-0"	7	2	12'-4"	6'-5"	18'-9"	6 3/4									
				LONG	22°-30'	27'-3 1/4"	3'-9"	1'-0"	18	2	26'-5"	7'-9"	34'-2"	27	215	20.63							
				SHORT	67°-30'	10'-9 1/4"	1'-0 3/4"	1'-0"	7	2	11'-7"	7'-10"	19'-5"	5									

REV. 7-1-72: CHANGED DEPARTMENT NAME.
 REV. 1-7-76: CHANGED DWG. NO. FROM G-10-41 TO D-PE-1.
 REV. 2-12-76: ADDED DETAIL FOR BEVELS ON 90° ENDWALLS.
 REV. 06-28-19: REVISED SHEET NAME AND REDREW SHEET.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED

STATE OF TENNESSEE
 STANDARD DRAWING
 DEPARTMENT OF TRANSPORTATION

TYPE "A"
 CONCRETE ENDWALLS FOR ROUND PIPE
 (PIPE SIZES 36" TO 78", ALL SKEWS, 2:1 SLOPE)