

TABLE 1 - PARAPET DIMENSIONS

S	K	M	t	P
4'	2"	1'-6"	9"	5'-0"
5'	2"	1'-6"	8"	6'-0"
6'	3"	1'-7"	7"	7'-2"
7'	4"	1'-8"	7"	8'-4"
8'	4"	1'-8"	7"	9'-4"
9'	5"	1'-9"	6"	10'-6"
10'	6"	1'-10"	5"	11'-8"

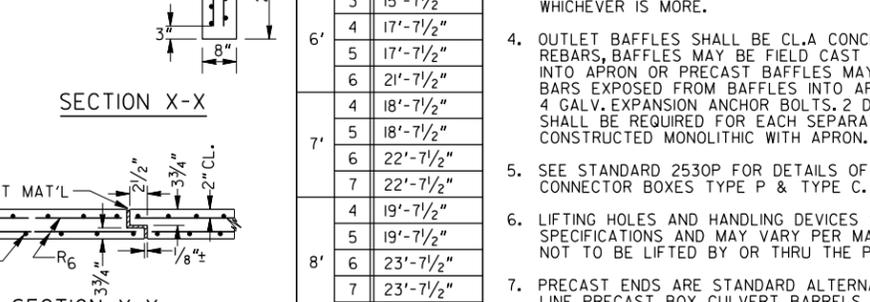
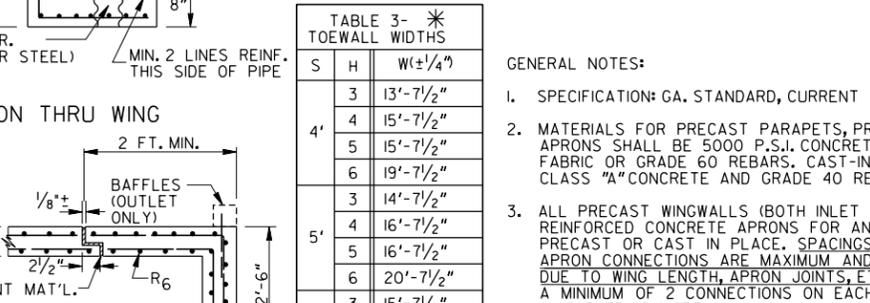
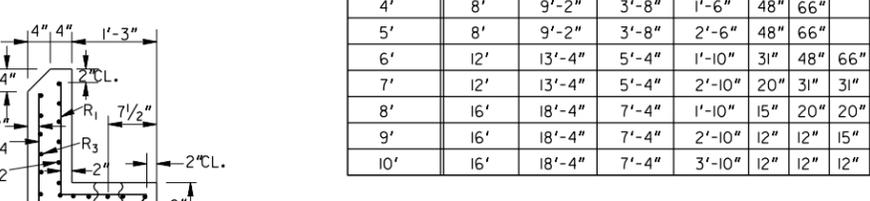
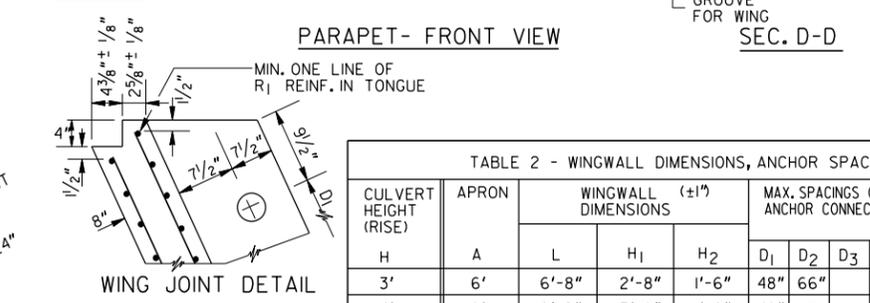
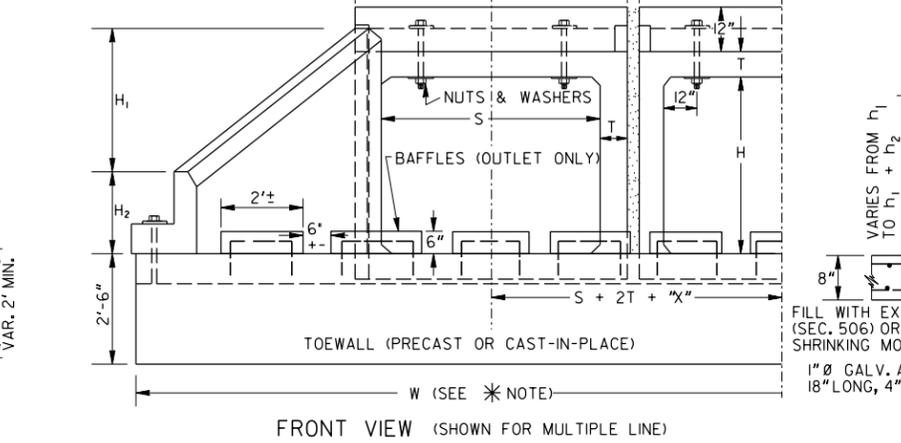
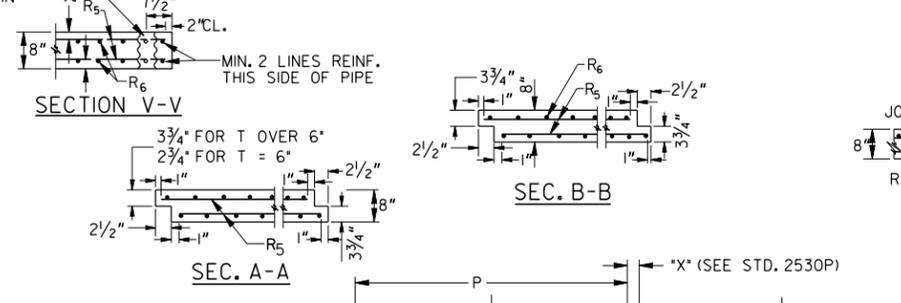
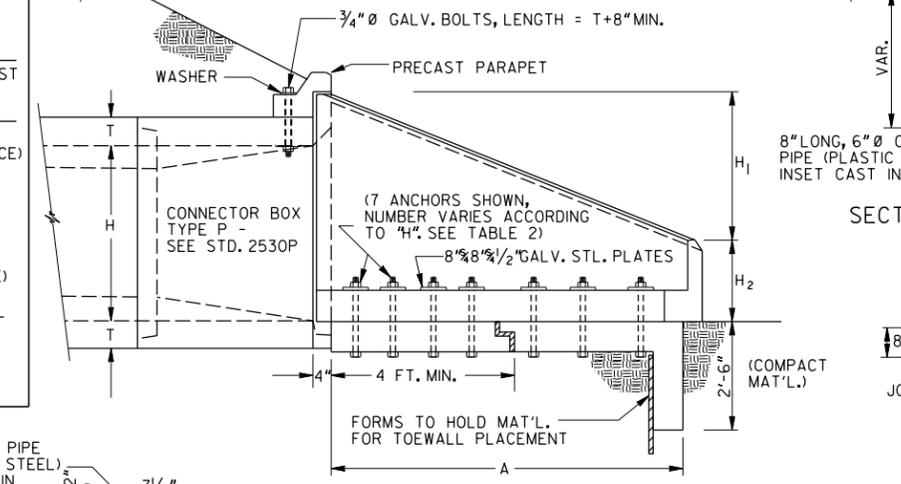
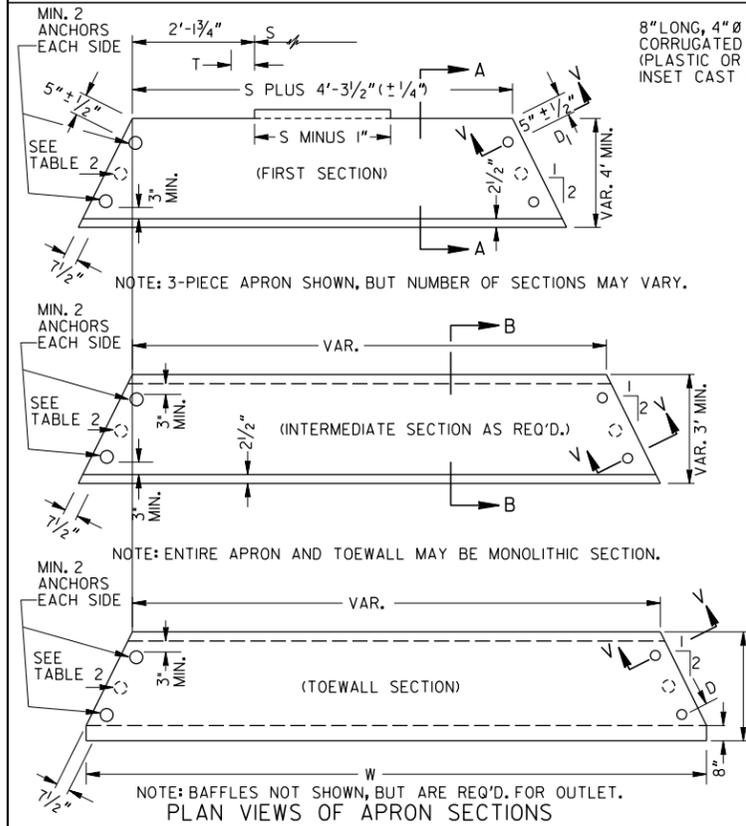
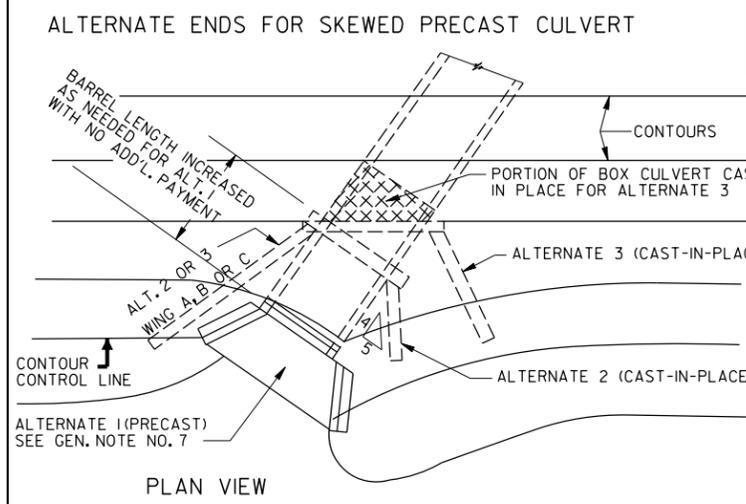


TABLE 2 - WINGWALL DIMENSIONS, ANCHOR SPACINGS, WINGWALL & APRON REINFORCING

CULVERT HEIGHT (RISE)	APRON	WINGWALL DIMENSIONS (+/-)		MAX. SPACINGS (INCHES) FOR WINGWALL TO APRON ANCHOR CONNECTIONS EACH WING. SEE NOTE #3 (+/-)										STEEL AREAS SQ. IN./LIN. FT.				
		L	H1	H2	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	R1	R2		
3'	6'	6'-8"	2'-8"	1'-6"	48"	66"											0.19	0.19
4'	8'	9'-2"	3'-8"	1'-6"	48"	66"											0.19	0.19
5'	8'	9'-2"	3'-8"	2'-6"	48"	66"											0.19	0.19
6'	12'	13'-4"	5'-4"	1'-10"	31"	48"	66"										0.20	0.19
7'	12'	13'-4"	5'-4"	2'-10"	20"	31"	31"	48"	66"								0.32	0.19
8'	16'	18'-4"	7'-4"	1'-10"	15"	20"	20"	31"	48"	66"							0.48	0.19
9'	16'	18'-4"	7'-4"	2'-10"	12"	12"	15"	15"	20"	20"	31"	48"	66"				0.68	0.19
10'	16'	18'-4"	7'-4"	3'-10"	12"	12"	12"	15"	15"	20"	20"	31"	48"				0.93	0.19

TABLE 3 - TOEWALL WIDTHS

S	H	W (+/-)
3'	13'-7 1/2"	
4'	15'-7 1/2"	
5'	15'-7 1/2"	
6'	19'-7 1/2"	
7'	14'-7 1/2"	
8'	16'-7 1/2"	
9'	16'-7 1/2"	
10'	20'-7 1/2"	
11'	20'-7 1/2"	
12'	22'-7 1/2"	
13'	22'-7 1/2"	
14'	19'-7 1/2"	
15'	19'-7 1/2"	
16'	23'-7 1/2"	
17'	23'-7 1/2"	
18'	27'-7 1/2"	
19'	20'-7 1/2"	
20'	20'-7 1/2"	
21'	24'-7 1/2"	
22'	24'-7 1/2"	
23'	28'-7 1/2"	
24'	28'-7 1/2"	
25'	28'-7 1/2"	
26'	21'-7 1/2"	
27'	21'-7 1/2"	
28'	25'-7 1/2"	
29'	29'-7 1/2"	
30'	29'-7 1/2"	

- GENERAL NOTES:**
- SPECIFICATION: GA. STANDARD, CURRENT EDITION & SUPPLEMENTS THERETO.
 - MATERIALS FOR PRECAST PARAPETS, PRECAST WINGWALLS AND PRECAST APRONS SHALL BE 5000 P.S.I. CONCRETE (SEC. 500) AND WELDED WIRE FABRIC OR GRADE 60 REBARS. CAST-IN-PLACE CONSTRUCTION SHALL BE CLASS "A" CONCRETE AND GRADE 40 REBARS.
 - ALL PRECAST WINGWALLS (BOTH INLET & OUTLET) REQUIRE 8" THICK REINFORCED CONCRETE APRONS FOR ANCHOR CONNECTIONS. APRONS MAY BE PRECAST OR CAST IN PLACE. SPACINGS (IN TABLE 2) FOR WINGWALL TO APRON CONNECTIONS ARE MAXIMUM AND MAY BE REDUCED DUE TO WING LENGTH, APRON JOINTS, ETC. EACH APRON SECTION MUST HAVE A MINIMUM OF 2 CONNECTIONS ON EACH SIDE OR AS REQUIRED BY TABLE 2, WHICHEVER IS MORE.
 - OUTLET BAFFLES SHALL BE CL. A CONCRETE MIN. REINFORCED WITH NO. 4 REBARS. BAFFLES MAY BE FIELD CAST ONTO NO. 4 REBARS GROUTED 6" MIN. INTO APRON OR PRECAST BAFFLES MAY BE SECURED TO APRON BY GROUTING BARS EXPOSED FROM BAFFLES INTO APRON 6" MIN. OR SECURED WITH NO. 4 GALV. EXPANSION ANCHOR BOLTS. 2 DOWEL CONNECTIONS OR 2 ANCHORS SHALL BE REQUIRED FOR EACH SEPARATE BAFFLE OR BAFFLES MAY BE CONSTRUCTED MONOLITHIC WITH APRON.
 - SEE STANDARD 2530P FOR DETAILS OF PRECAST BOX CULVERTS AND CONNECTOR BOXES TYPE P & TYPE C.
 - LIFTING HOLES AND HANDLING DEVICES SHALL BE ACCORDING TO GA. STD. SPECIFICATIONS AND MAY VARY PER MANUFACTURER. PRECAST SECTIONS ARE NOT TO BE LIFTED BY OR THRU THE PIPE SLEEVE INSERTS.
 - PRECAST ENDS ARE STANDARD ALTERNATES FOR SINGLE OR FOR MULTIPLE LINE PRECAST BOX CULVERT BARRELS NORMAL TO THE ROADWAY. SKEWED INSTALLATIONS MAY HAVE PRECAST ENDS WHERE ROADSIDE GEOMETRICS ARE COMPATIBLE. THE ALLOWANCE OF PRECAST ENDS WITH SKEWED PRECAST BARRELS, EITHER SINGLE OR MULTIPLE LINE, SHALL BE AS SHOWN IN THE PLANS OR APPROVED BY THE ENGINEER FOR A GIVEN LOCATION. CAST-IN-PLACE ENDS (SEE SEPARATE STANDARDS) SHALL BE USED FOR EITHER SKEWED OR NON-SKEWED PRECAST BARRELS WHERE PRECAST ENDS ARE NOT USED.

DEPARTMENT OF TRANSPORTATION
 STATE OF GEORGIA

STANDARD
 PRECAST BOX CULVERT ENDS
 WINGWALLS, PARAPETS, TOEWALLS & APRONS

NOT TO SCALE REDRAWN JULY 2024 MAR. 1985

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NUMBER 2535P