



TYPICAL DIMENSIONS AND QUANTITIES

CULVERT DIA. (IN.) D	S	SQUARE HEADWALL				15° SKEW HEADWALL				
		L (1) (FT.)	A	CONCRETE (CU. YD.)	NO. 4 BARS (LBS.)	L	A	K	CONCRETE (CU. YD.)	NO. 4 BARS (LBS.)
102	21' 0"	17	8' 6"	9.4	428	19' 3"	9' 7-1/2"	13' 2"	9.8	472
108	21' 10"	18	9' 0"	10.4	456	20' 4"	10' 2"	14' 0"	10.9	504
114	22' 8"	19	9' 6"	11.5	484	21' 6"	10' 9"	14' 11"	12.1	535
120	23' 6"	20	10' 0"	12.7	513	22' 7"	11' 3-1/2"	15' 9"	13.4	568
126	24' 4"	21	10' 6"	13.9	542	23' 9"	11' 10-1/2"	16' 8"	14.7	601
132	25' 2"	22	11' 0"	15.2	572	24' 10"	12' 5"	17' 6"	16.1	634
138	26' 0"	23	11' 6"	16.6	602	26' 0"	13' 0"	18' 5"	17.6	668
144	26' 10"	24	12' 0"	18.0	632	27' 1"	13' 6-1/2"	19' 3"	19.2	703
150	27' 8"	25	12' 6"	19.5	663	28' 3"	14' 1-1/2"	20' 2"	20.8	738
156	28' 6"	26	13' 0"	21.1	695	29' 5"	14' 8-1/2"	21' 1"	22.6	773
162	29' 4"	27	13' 6"	22.8	727	30' 6"	15' 3"	21' 11"	24.4	810
168	30' 2"	28	14' 0"	24.5	759	31' 8"	15' 10"	22' 10"	26.3	846
174	31' 0"	29	14' 6"	26.3	792	32' 9"	16' 4-1/2"	23' 9"	28.3	884
180	31' 10"	30	15' 0"	28.2	826	33' 11"	16' 11-1/2"	24' 8"	30.4	921

NOTES:

DESIGN SPECIFICATIONS-AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

CONCRETE MIX SHALL BE 3Y43.

THE DEPTH OF THE CUT OFF WALL SHOWN MAY BE REDUCED IF ROCK IS ENCOUNTERED.

CLEAR SPACING FOR MULTIPLE PIPE INSTALLATIONS SHALL NOT BE LESS THAN ONE-HALF THE DIAMETER OF THE LARGER PIPE BETWEEN SIDES OF ADJACENT PIPES TO PERMIT CAREFUL PLACING AND TAMPING OF BACKFILL MATERIAL.

ALL REINFORCING BARS SHALL HAVE 1-1/2" MINIMUM CLEAR.

① L = K FOR SQUARE HEADWALL.

② DO NOT USE INSIDE CLEAR ZONE WITHOUT GUARDRAIL PROTECTION

APPROVED Nov. 12, 1975

[Signature]
Division Director
Materials, Research and Standards

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
INLET PROTECTION
FOR STRUCTURAL PLATE PIPE
102" THRU 180" DIA. OR SPANS OF EQUIVALENT DIA.

SPECIFICATION REFERENCE 2411	STANDARD PLATE NO. 3127A
REVISED 3-22-2013 M.J.E.	