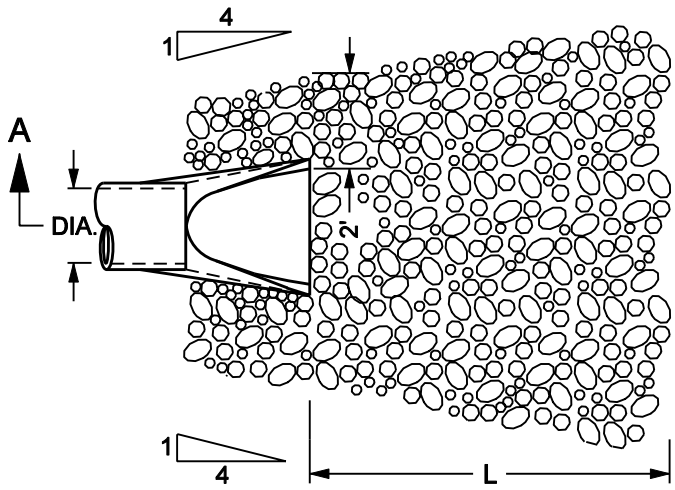
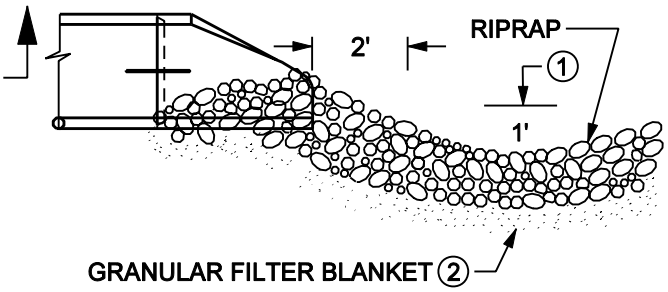


PLAN VIEW



SECTION A-A

TABLE OF QUANTITIES - RIPRAP AT RCP OUTLETS							
DIA. OF ROUND PIPE (IN.)	L (FT.)	CLASS II d_{50} = 6"		CLASS III d_{50} = 9"		CLASS IV d_{50} = 12"	
		12" DEPTH RIPRAP (CU.YDS.)	6" DEPTH GRANULAR FILTER (CU.YDS.)	18" DEPTH RIPRAP (CU.YDS.)	9" DEPTH GRANULAR FILTER (CU.YDS.)	24" DEPTH RIPRAP (CU.YDS.)	12" DEPTH GRANULAR FILTER (CU.YDS.)
12	8	2.8	1.4	4.1	2.1	5.5	2.8
15	8	2.9	1.5	4.4	2.2	5.8	2.9
18	10	3.9	2.0	5.9	3.0	7.8	3.9
21	10	4.2	2.1	6.3	3.2	8.4	4.2
24	12	5.5	2.8	8.3	4.2	11.0	5.5
27	12	5.8	2.9	8.7	4.4	11.6	5.8
30	14	7.3	3.7	10.9	5.5	14.5	7.3
36	16	9.2	4.6	13.8	6.9	18.3	9.2
42	18	10.9	5.5	16.3	8.2	21.7	10.9
48	20	12.9	6.5	19.4	9.7	25.8	12.9

1. FOR PIPES GREATER THAN OR EQUAL TO 30" USE 1.5'.

2. GEOTEXTILE FABRIC MAY BE SUBSTITUTED FOR GRANULAR FILTER UNLESS OTHERWISE SPECIFIED. FABRIC SHALL COVER THE AREA OF RIPRAP AND EXTEND UNDER THE CULVERT APRON 3 FT. FABRIC SHALL MEET MNDOT SPEC. 3733.

NOTES:
PIPE SIZES LARGER THAN THOSE SHOWN REQUIRE A SPECIAL DESIGN.

REQUIREMENTS FOR RIPRAP SIZE, THICKNESS AND FILTER BLANKET WILL BE DESIGNATED IN THE PLANS.

MNDOT SPEC. REF. 3601, 3733
MNDOT 3133C
NOT TO SCALE

MINNEAPOLIS
DEPARTMENT OF PUBLIC WORKS

DRAWN: CXD	DATE: 4/03
APPROVED: HRS	DATE: 12/06

RIPRAP AT RC PIPE OUTLETS

STANDARD PLATE NO. SEWR-3005