



TABLE OF QUANTITIES - RIPRAP AT RCP OUTLETS

DIA. OF ROUND PIPE (IN.)	L (FT.)	CLASS II d <sub>50</sub> = 6"		CLASS III d <sub>50</sub> = 9"		CLASS IV d <sub>50</sub> = 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



DRW: CXD      DATE: 4/03  
APP: HRS      DATE: 12/06

RIPRAP AT RC PIPE OUTLETS

STANDARD PLATE NO. SEWR-3005