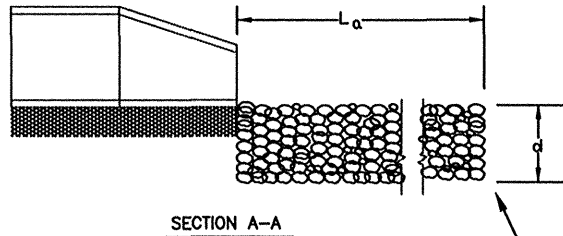
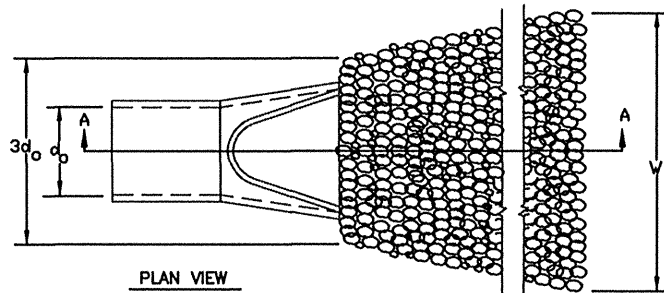


TYPE A
PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL

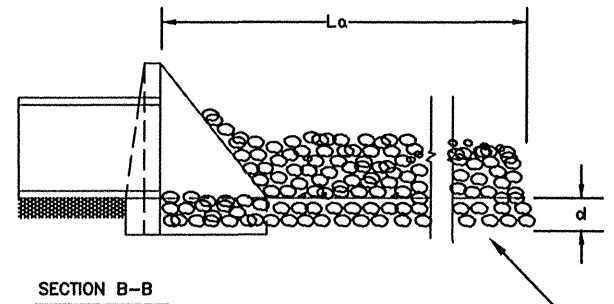
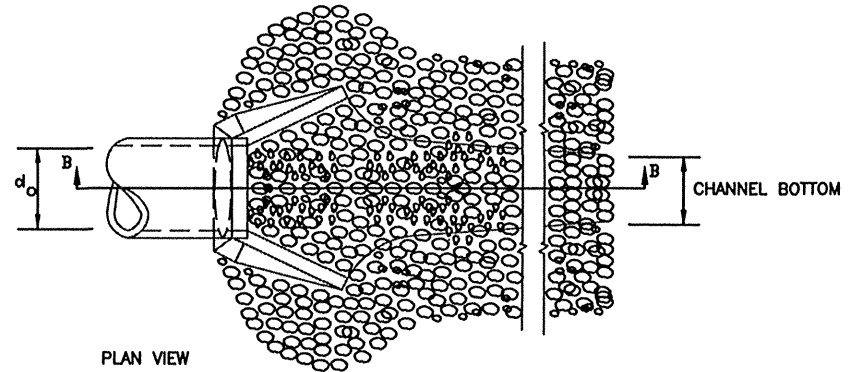


PROVIDE GEOTEXTILE UNDERLINER OR GRADED GRAVEL FILTER
(4" MIN. - #57 WASHED STONE BEDDING MATERIAL)

NOTES:

- (1) $d = 1.5$ TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN SIX (6") INCHES.
- (2) $d_t = 1'$ ABOVE MAXIMUM TAILWATER OR TOP OF CHANNEL BANK (WHICHEVER IS LESS.)
- (3) L_{at} = LENGTH OF RIPRAP APRON. (TO OBTAIN L_a , USE FIG. 8.06a FOR TYPE A INSTALLATION AND FIG. 8.06b FOR TYPE B.) REFER TO:
NCDENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

TYPE B
PIPE OUTLET TO WELL- DEFINED CHANNEL



PROVIDE GEOTEXTILE UNDERLINER OR GRADED GRAVEL FILTER
(4" MIN. - #57 WASHED STONE BEDDING MATERIAL)

CULVERT OUTLET PROTECTION

CITY OF ROCKY MOUNT
DEPT. OF ENGINEERING

APPROVED
-

STD. NO.
3.22

DATE
01-31-03

REVISION
-

REVISIONS		
NO	DATE	DESCRIPTION