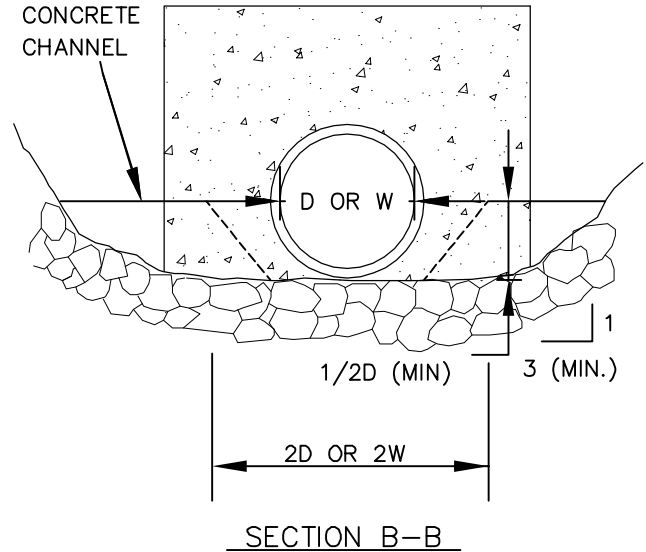
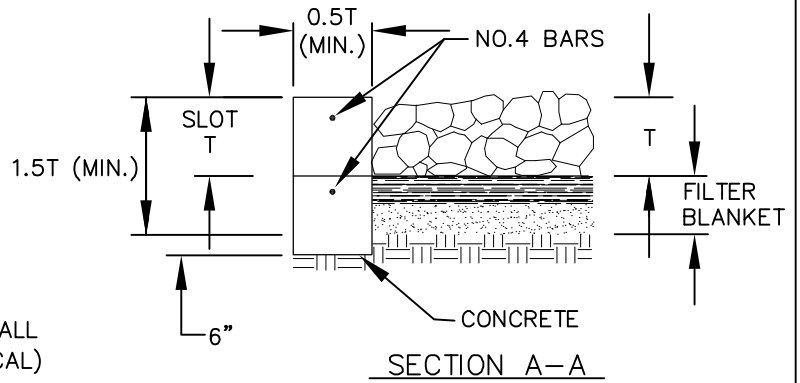
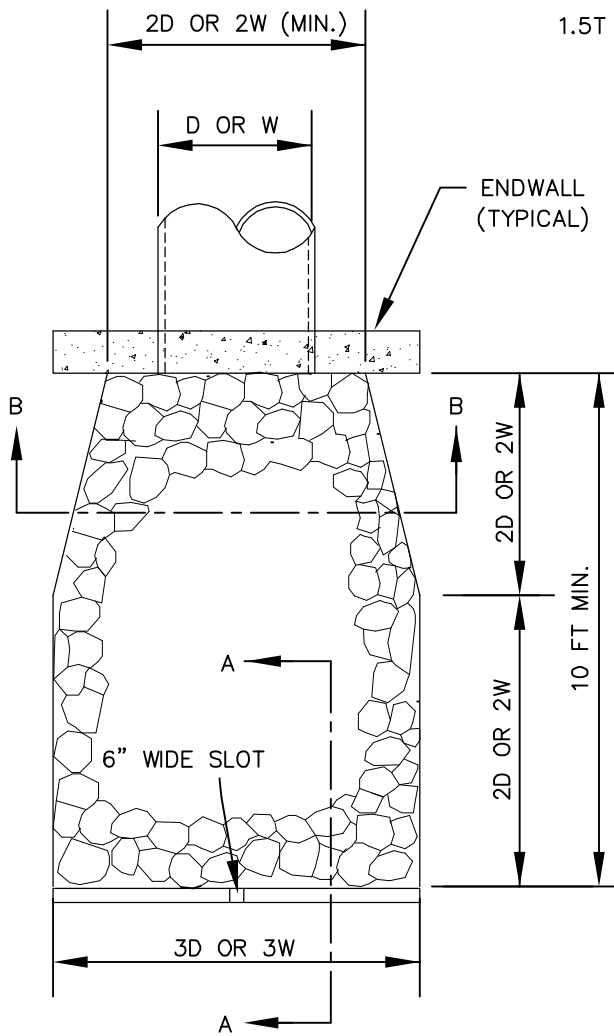


D = PIPE DIAMETER
 W = BOTTOM WIDTH OF CHANNEL



DESIGN VELOCITY FT/SEC.	ROCK CLASSIFICATION BY WEIGHT
6-10	200 LBS
10-12	1/4 TON
12-14	1/2 TON
14-16	1 TON
16-18	2 TON

NOTES

- PLANS SHALL SPECIFY:
 - ROCK CLASS AND THICKNESS (T)
 - FILTER MATERIAL, NUMBER OF LAYERS AND THICKNESS.
- RIP RAP SHALL BE EITHER QUARRY STONE OR BROKEN CONCRETE (IF SHOWN ON THE PLANS). COBBLES ARE NOT ACCEPTABLE.
- RIP RAP SHALL BE PLACED OVER FILTER BLANKET WHICH MAY BE EITHER GRANULAR MATERIAL OR PLASTIC FILTER CLOTH.
- PLACEMENT
 - MINIMUM DEPTH = 1-1/2 TIMES AVERAGE STONE SIZE.
 - ROCKS SHALL BE PLACED TO PROVIDE A MINIMUM OF VOIDS.
 - SURFACE ROCKS SHALL PROTRUDE AT LEAST 1/2 THEIR VERTICAL DIMENSION.
- RIP RAP IS TO BE PLACED OVER A GEOTEXTILE FABRIC ON A NATURAL BEDDING, OR IT MAY GROUTED OR PLACED OVER A GRAVEL BEDDING AS REQUIRED BY THE COUNTY.

S:\Engineering\Traffic\Draft\Projects\Current\Projects\RoadwayStandards\TAR Standard drawings\Standard Drawings Revised 1.1.10\dwgs\U200-800.dwg

REVISION	DATE	BY

DEPARTMENT OF TRANSPORTATION
 AND DEVELOPMENT
 150 BEAVERCREEK ROAD
 OREGON CITY, OR 97045



APPROVAL DATE: 1/1/10

SCALE: N.T.S.

**RIP RAP
 ENERGY DISSIPATOR**

STANDARD
 DRAWING

U800