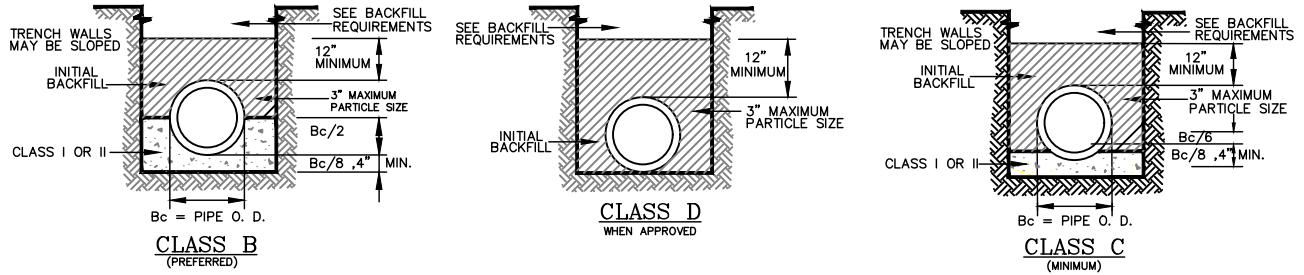
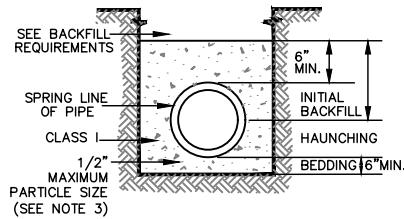


BACKFILL MATERIAL FOR RIGID PIPE

(CONCRETE, IRON PIPE, VITRIFIED CLAY PIPE, ETC)



BACKFILL MATERIAL FOR FLEXIBLE (PVC)



NOTES:

- BACKFILL MATERIAL DESCRIPTIONS (FROM ASTM 02321 & 02487)
1. CLASS 1- ANGULAR 1/4 TO 1 1/2 INCH GRADED STONE, INCLUDING A NUMBER OF FILL MATERIALS THAT HAVE REGIONAL SIGNIFICANCE SUCH AS CORAL, SLAG, CINDERS, CRUSHED STONE, & CRUSHED SHELLS.
 2. CLASS B- COURSE SANDS AND GRAVEL WITH MAXIMUM PARTICLE SIZE 1 1/2", INCLUDING VARIOUSLY GRADED SANDS AND GRAVELS AND NON-COHESIVE, EITHER WET OR DRY SOIL. TYPES OF GW, GP, SW, AND SP ARE INCLUDED IN THIS CLASS.
 3. WHEN IN THE OPINION OF THE ENGINEER, THE CONDUIT WILL BE SUBJECTED TO LIVE LOADS OR LOADINGS NOT COVERED BY THESE REQUIREMENTS, MORE STRINGENT BACKFILL OPERATIONS MAY BE REQUIRED.
 4. SHARP STONES AND CRUSHED ROCK (LARGER THAN 3/4") WHICH COULD CAUSE SIGNIFICANT SCRATCHING OR ABRASION OF THE PIPE, SHALL BE EXCLUDED FROM THE EMBEDMENT MATERIAL.

NOTICE:

TRENCH WIDTH FOR ALL TYPES OF PIPES SHALL BE A MINIMUM OF THE FOLLOWING; THE DIAMETER OF THE PIPE PLUS 12"