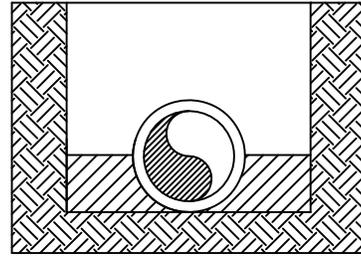
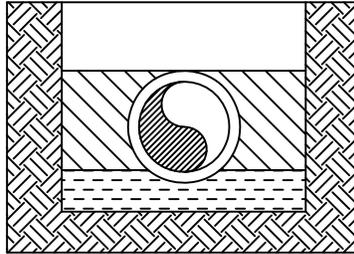


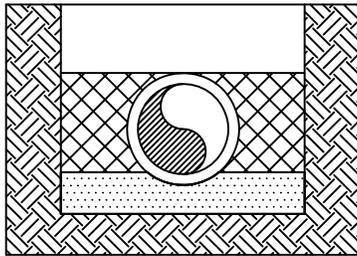
TYPE 1
 FLAT-BOTTOM* TRENCH, LOOSE EMBEDMENT
 E = 50 psi (340 kPa). K = 0.110



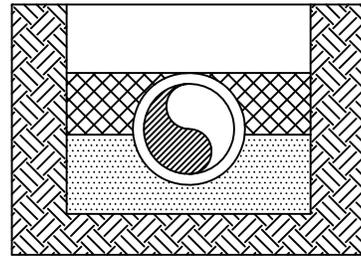
TYPE 2
 FLAT-BOTTOM* TRENCH, EMBEDMENT LIGHTLY
 CONSOLIDATED TO CENTERLINE OF PIPE.
 E = 200 psi (1,380 kPa). K = 0.110



TYPE 3
 PIPE BEDDED ON 4" (100 mm) MINIMUM
 OF LOOSE SOIL** EMBEDMENT LIGHTLY
 CONSOLIDATED TO TOP OF PIPE.
 E = 400 psi (2,760 kPa). K = 0.102



TYPE 4
 PIPE BEDDED ON SAND, GRAVEL OR CRUSHED
 STONE TO DEPTH OF 1/8 PIPE DIAMETER, 4"
 (100 mm) MINIMUM. EMBEDMENT COMPACTED
 TO TOP OF PIPE. (APPROXIMATELY 80% STANDARD
 PROCTOR. AASHTO T-99 OR ASTM D 698)
 E = 1,000 psi (6,900 kPa). K = 0.096



TYPE 5
 PIPE ENBEDDED IN COMPACTED GRANULAR
 MATERIAL TO CENTERLINE OF PIPE. COMPACTED
 GRANULAR OR SELECT MATERIAL TO TOP OF PIPE.
 (APPROXIMATELY 90% STANDARD PROCTOR.
 AASHTO T-99 OR ASTM D 698)
 E = 2,000 psi (13,800 kPa). K = 0.083

NOTE: REQUIRED EMBEDMENT TYPE WILL DEPEND ON THE PIPE'S DIMENSION RATIO, INTERNAL OPERATING PRESSURE, AND EXTERNAL LOAD, AND SHALL BE SPECIFIED BY THE PURCHASER. (SEE SEC. 5.3)

* "FLAT-BOTTOM" IS DEFINED AS UNDISTURBED EARTH.

** "LOOSE SOIL" OR "SELECT MATERIAL" IS DEFINED AS NATIVE SOIL EXCAVATED FROM THE TRENCH, FREE OF ROCKS FOREIGN MATERIAL, AND FROZEN EARTH. A SOFT "LOOSE SOIL" BEDDING WILL CONTOUR TO THE PIPE BOTTOM. CAUTION MUST BE EXERCISED TO ENSURE PROPER PLACEMENT OF EMBEDMENT MATERIAL UNDER THE HAUNCHES OF THE PIPE.

From AWWA C.605
 UNDERGROUND INSTALLATION OF PVC PIPE



DRAFT

SCALE: N.T.S.
 DATE: 10/1/14

PIPE ENVELOPE REQUIREMENTS

DETAIL

D-60