

APPENDIX C

Table 401-1 Pipe Alternates for Culvert Classes

Type of Pipe Depth of Cover in feet (a)	Class A Culvert 0 to 10 (l)	Class B Culvert >10 to 16	Class C Culvert >16 to 23	Class D Culvert >23 to 33 (i)	Class E Culvert 0 to 3 (b)	Class F Drive Culvert ( c)
Reinforced Concrete Pipe (d)	II	III	IV	V	IV	II
Nonreinforced Concrete Pipe (e)	1	3	NO	NO	NO	1,3 (f)
Corrugated and Spiral Ribbed Al-Alloy Pipe	YES	YES	YES	YES	NO	YES
Corrugated and Spiral Ribbed Steel Pipe	YES	YES	YES	YES	NO	YES
Smooth-Lined Corrugated Plastic Pipe (CPE) (g, j)	YES (h)	YES (k)	NO	NO	NO	YES (h)

- a. Cover, including the pavement structure is the height of fill above the top of the pipe.
- b. Class E culvert applies if the culvert is beneath the influence of proposed pavement and the depth of cover is 3 ft or less.
- c. Class F culvert applies for driveway culverts (residential and commercial).
- d. Roman numerals refer to class of reinforced concrete pipe in accordance with AASHTO M 170
- e. Arabic numerals refer to the class of nonreinforced concrete pipe in accordance with AASHTO M 86
- f. Nonreinforced concrete pipe Class 1 is allowed for Class F culverts with a depth of cover up to 10 feet. Nonreinforced concrete pipe class 3 is allowed for Class F with a depth of cover from 10 ft to 16 ft.
- g. Provide CPE in accordance with AASHTO M 294, Type S polyethylene pipe.
- h. Allow only for no greater than 36 in diameter pipe for CPE pipes.
- i. Special design is required for fill heights greater than 33 ft.
- j. At least 2 ft cover if the culvert is outside the influence of proposed pavement (measured from top of pipe to final grade.)
- k. Allowed only for 12 in to 24 in diameter CPE pipes. Refer to the Class B Plastic Pipe Qualified Products List for approved manufactures and products.
- l. Class A culvert applies if the culvert is outside the influence of proposed pavement or is beneath the influence of proposed pavement and the depth of cover is from 3 ft to 10 ft.