

An educational document from the American Concrete Pipe Association for users and specifiers

1.2 Thus, it is incumbent upon the product manufacturer, specifier, or project engineer to verify and assure that the pipe specified for an intended application, when installed according to procedures outlined in this practice, will provide a long term, satisfactory performance according to criteria established for that application.

7.2 Trench Bottom—Install foundation and bedding as required by the engineer according to conditions in the trench bottom.



7.10 Manhole Connections—Use flexible water stops, resilient connectors, or other flexible systems approved by the engineer to make watertight connections to manholes and other structures.

7.11 Field Monitoring—Compliance with contract documents with respect to pipe installation, including trench depth, grade, water conditions, foundation, embedment and backfill materials, joints, density of materials in place, and safety, should be monitored by the engineer at a frequency appropriate to project requirements.

7.5.1 Percent Compaction of Embedment — The Soil Class (from Table 2) and the required percent compaction of the embedment should be established by the engineer based on an evaluation of specific project conditions.



7.6 Minimum Cover—The minimum depth of cover should be established by the engineer based on an evaluation of specific project conditions.

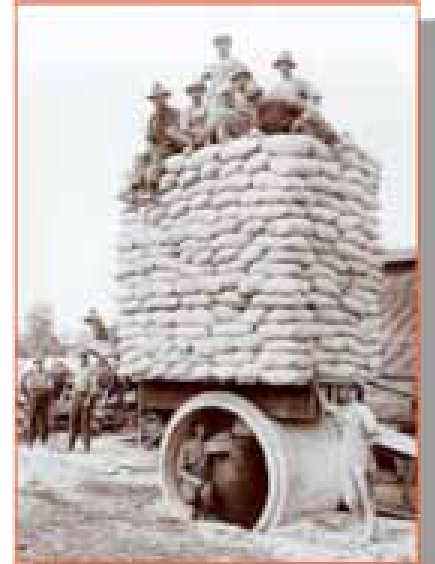


When Specifying Pipe – Make Sure You Get a Structure

When you specify Reinforced Concrete Pipe per ASTM C-76 you can be assured that a load tested structure is delivered to your job site.

	Class III		Class IV		Class V	
	D-0.01	D-Ult	D-0.01	D-Ult	D-0.01	D-Ult
Diameter	1350	2000	2000	3000	3000	3750
12	10,800	16,000	16,000	24,000	24,000	30,000
15	13,500	20,000	20,000	30,000	30,000	37,500
18	16,200	24,000	24,000	36,000	36,000	45,000
21	18,900	28,000	28,000	42,000	42,000	52,500
24	21,600	32,000	32,000	48,000	48,000	60,000
27	24,300	36,000	36,000	54,000	54,000	67,500
30	27,000	40,000	40,000	60,000	60,000	75,000
36	32,400	48,000	48,000	72,000	72,000	90,000
42	37,800	56,000	56,000	84,000	84,000	105,000
48	43,200	64,000	64,000	96,000	96,000	120,000
54	48,600	72,000	72,000	108,000	108,000	135,000
60	54,000	80,000	80,000	120,000	120,000	150,000
66	59,400	88,000	88,000	132,000	132,000	165,000
72	64,800	96,000	96,000	144,000	144,000	180,000

Calculated loads in pounds required per ASTM C-76.



When you specify flexible pipe, such as corrugated metal, spiral rib metal or HDPE, are you confident the final installation will provide the structure that the applied loads require? You won't know until it is deflection tested in the field.

Remember – with flexible pipe designs and installations the Engineer is responsible for:

- Foundations and Bedding
- Trench Widths
- Embedment Densities -% Compaction
- Minimum Cover
- Flexible Connections to Structures
- Field Monitoring
- Establishing Methods for Controlling and Monitoring Distortions of Pipe

ASTM D2321-09 states that the Engineer is to verify and assure that the pipe installed per this specification will provide long term, satisfactory performance.



If you have not received a copy of a passing mandrel test or laser profile – your design is not verified.