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Committee C13
Concrete Pipe

Formed in 1931, the ASTM International committee on concrete pipe develops standards and publications for concrete pipe, concrete box sections, and concrete manhole sections used for constructing sewers, culverts, and more. Subcommittees focus on the development of specifications, test methods, and definitions for reinforced sewer and culvert pipe, low head pressure pipe, manholes, and more.

www.astm.org/COMMITTEE/C13

A diverse membership of over 250 technical experts from 11 different countries manage more than 65 standards on concrete pipe.

C13 Subcommittees & Key Documents

How You Can Contribute to the Committee

Membership in Committee C13
The committee welcomes all users, technical experts or anyone with a general interest who has a desire to work toward further development of concrete pipe standardization for the benefit of the public. Meetings are held once a year. Standards development work continues all year long through electronic tools and virtual meetings.

Membership or travel fees restricting your participation? Contact Jimmy Farrell at jfarrell@astm.org

Just a few of the benefits you will receive when you join ASTM:

- Network with other professionals worldwide;
- Have direct input into the development of new and revised standards;
- Your input will help assure the quality of these concrete products and that new methods and technology are appropriately applied;
- Participate in informational webinars;
- Receive a free volume of the *Annual Book of ASTM Standards*;
- Enjoy discounts on all ASTM publications;
- Receive free subscription to *ASTM Standardization News* and *ASTM eNews*; and
- Benefit from reduced attendance fees at ASTM symposia and technical workshops
- PDH's may be available. Check local requirements.

C13.01 — Non-Reinforced Concrete Sewer, Drain and Irrigation Pipe

Scope
The promotion of knowledge and the development and review of standards for the design, methods of test, manufacturing and performance for non-reinforced concrete sewer, storm drain, culvert and irrigation pipe; concrete drain tile; perforated concrete pipe; and porous concrete pipe.

C14 & C14M — Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe (and Metric)

C118 & C118M — Standard Specification for Concrete Pipe for Irrigation or Drainage (and Metric)

C412 & C412M — Standard Specification for Concrete Drain Tile (and Metric)

C444 & C444M — Standard Specification for Perforated Concrete Pipe (and Metric)

C505 & C505M — Standard Specification for Nonreinforced Concrete Irrigation Pipe with Rubber Gasket Joints (and Metric)

C654 & C654M — Standard Specification for Porous Concrete Pipe (and Metric)

C985 & C985M — Standard Specification for Nonreinforced Concrete Specified Strength Culvert, Storm Drain, and Sewer Pipe (and Metric)

C13.02 Reinforced Sewer and Culvert Pipe

Scope
The promotion of knowledge and the development of standards that reflect sound engineering principles for the design and manufacturing of reinforced concrete pipe and to provide guidelines as to the structural configuration of the pipe for meeting strength and durability requirements.

C76 & C76M — Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (and Metric)

C506 & C506M — Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe (and Metric)

C507 & C507M — Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe (and Metric)

C655 & C655M— Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe (and Metric)

C1765 — Standard Specification for Steel Fiber Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

C1818 — Standard Specification for Synthetic Fiber Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

C1846/C1846M — Standard Specification for Performance Based Manufacture of Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe

C13.03 — Determining the Effects of Biogenic Sulfuric Acid on Concrete Pipe and Structures

Scope
To develop methods of testing, specifications, definitions, practices and guidelines relating to concrete pipe, manholes and components, in which the concrete is modified by additives and compounds, to determine the effectiveness of the modified concrete to resist biogenic sulfuric acid. The scope of the subcommittee does not include determination of the effectiveness of concrete pipe linings and coatings in resisting sulfuric acid. These objectives will be implemented by the development and coordination of standards relating to nomenclature, standard conditions and methods associated with the exposure to biogenic sulfuric acid environments, and accelerated or service testing of such materials, components and combined assemblies

WK60407 — Microbiologically Induced Corrosion of Precast Concrete Products

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C13.04 Low Head Pressure Pipe

Scope
The promotion of knowledge and the development of standards for the design, construction and application of reinforced concrete pressure pipe with low internal pressure heads

C361 & C361M — Standard Specification for Reinforced Concrete Low-Head Pressure Pipe (Metric version separate)

C13.05 Special Projects

Scope
Development and revision of standards to include economics, manufacture, installation, and special projects.

C1131 —Standard Practice for Least Cost (Life Cycle) Analysis of Concrete Culvert, Storm Sewer, and Sanitary Sewer Systems

C1417 & C1417M — Standard Specification for Manufacture of Reinforced Concrete Sewer, Storm Drain, and Culvert Pipe for Direct Design (and Metric)

C1479 & C1479M — Standard Practice for Installation of Precast Concrete Sewer, Storm Drain, and Culvert Pipe Using Standard Installations (and Metric)

C1675 — Standard Practice for Installation of Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers

C1837 — Standard Specification for Production of Dry Cast Concrete Used for Manufacturing Pipe, Box, and Precast Structures

C1840/C1840M — Standard Practice for Inspection and Acceptance of Installed Reinforced Concrete Culvert, Storm Drain, and Storm Sewer Pipe

C13.06 Manholes and Specials

Scope
The promotion of knowledge and development of standard manufacturing, installation and testing specifications for circular structures utilizing cementitious materials and related appurtenances which are provided for access to installed drainage, utility and sanitary sewer systems.

C478 & C478M — Standard Specification for Circular Precast Reinforced Concrete Manhole Sections (and Metric)

C923 & C923M — Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals (and Metric)

C1244 & C1244M — Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill (and Metric)

C1478 & C1478M — Standard Specification for Storm Drain Resilient Connectors Between Reinforced Concrete Storm Sewer Structures, Pipes, and Laterals (and Metric)

C1821/C1821M — Standard Practice for Installation of Underground Circular Precast Concrete Manhole Structures

C13.07 Acceptance Specifications and Precast Concrete Box Sections

Scope
Formation and review of specifications for the manufacture, structural design with steel and/or specialty reinforcing, and testing for concrete pipe, concrete box sections, and precast concrete bridge systems used in constructing sewers, culverts, and irrigation and drainage systems. Development and review of practices and guides covering design, installation, testing, and performance of concrete pipe and precast concrete bridge systems.

C1433 & C1433M — Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers (and Metric)

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Committed to serving global societal needs, ASTM International positively impacts public health and safety, consumer confidence, and overall quality of life. We integrate consensus standards – developed with our international membership of volunteer technical experts – and innovative services to improve lives... Helping our world work better.

C1504 & C1504M — Standard Specification for Manufacture of Precast Reinforced Concrete Three-Sided Structures for Culverts and Storm Drains (Metric)

C1577 — Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD

C1786 — Standard Specification for Segmental Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers Designed According to AASHTO LRFD

C13.08 Joints for Precast Concrete Structures

Scope
The promotion of knowledge and the development of standards for the design, testing, materials and fabrication of joints and related appurtenances for precast concrete pipe, manholes and box sections.

C443 & C443M — Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets (and Metric)

C877 & C877M — Standard Specification for External Sealing Bands for Concrete Pipe, Manholes, and Precast Box Sections (and Metric)

C990 & C990M — Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants (and Metric)

C1619 — Standard Specification for Elastomeric Seals for Joining Concrete Structures

C1628 — Standard Specification for Joints for Concrete Gravity Flow Sewer Pipe, Using Rubber Gaskets

C1677 — Standard Specification for Joints for Concrete Box, Using Rubber Gaskets

C13.09 Methods of Test

Scope
Develops and updates standard test methods for concrete pipe, manhole sections or tile. Test Methods include concrete and concrete unit strength, water absorption and water tightness, manhole step strength and integrity and adequacy of joint seal lubricant. Additional standard tests include tests on installed pipelines and manhole units, which demonstrate proper water tightness and functioning joint seals and pipe units. Construction and installation procedures are not included.

C497 & C497M — Standard Test Methods for Concrete Pipe, Manhole Sections, or Tile (and Metric)

C969 & C969M — Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines (and Metric)

C1103 & C1103M — Standard Practice for Joint Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines (and Metric)

C1214 & C1214M — Standard Test Method for Concrete Pipe Sewerlines by Negative Air Pressure (Vacuum) Test Method (and Metric)

C1618 & C1618M — Standard Test Method for Concrete Sanitary Sewer Pipe by Negative (Vacuum) or Positive Air Pressure (and Metric)

C13.10 Correlation and Editorial

Scope
A forum for the various C13 Subcommittee Chairmen to discuss common editorial problems to assist in correlating the various C13 Specifications wherever possible, and to maintain ASTM C822 Standard Terminology Relating to Concrete Pipe and Related Products

C822 — Standard Terminology Relating to Concrete Pipe and Related Products