



Standard Specification for Design, Testing, Manufacture, Selection, and Installation of Fabricated Metal Access Hatches for Utility, Water, and Wastewater Structures^{1,2}

This standard is issued under the fixed designation C1802; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

ε¹ NOTE—Editorial corrections were made throughout in April 2015.

1. Scope

1.1 This specification covers the design, testing, manufacture, selection, and installation of fabricated metal access hatches for utility, water, and wastewater structures including utility vaults, drainage structures, valve vaults, meter vaults, wet wells, pump enclosures, utility trenches, piping trenches, and drainage trenches.

1.2 This specification is applicable to various configurations of access hatches constructed of fabricated metal of various materials and grades for various loading conditions, traffic speeds, or both.

1.3 Engineering design and testing criteria are provided for access hatches to be located in various areas subjected to various loading conditions, traffic speed, frequency, or combinations thereof.

1.4 Proof loading criteria is provided to allow the access hatches to be designed by engineering calculation and/or by ultimate strength load testing.

1.5 Production loading criteria is provided to allow the access hatches to be tested to verify the load capacity of the manufactured hatches.

1.6 Hatch loading selection guidelines are included to allow selection of the proper hatch design loading for the conditions of the actual area of placement.

1.7 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical

conversions to SI units that are provided for information only and are not considered the standard.

1.8 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:³

- A36/A36M Specification for Carbon Structural Steel
- A53/A53M Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
- A123/A123M Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
- A176 Specification for Stainless and Heat-Resisting Chromium Steel Plate, Sheet, and Strip (Withdrawn 2015)⁴
- A240/A240M Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
- A242/A242M Specification for High-Strength Low-Alloy Structural Steel
- A276 Specification for Stainless Steel Bars and Shapes
- A325 Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength
- A490 Specification for Structural Bolts, Alloy Steel, Heat Treated, 150 ksi Minimum Tensile Strength
- A500/A500M Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
- A514/A514M Specification for High-Yield-Strength, Quenched and Tempered Alloy Steel Plate, Suitable for Welding

¹ This specification is under the jurisdiction of ASTM Committee C27 on Precast Concrete Products and is the direct responsibility of Subcommittee C27.10 on Utility Structures.

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² This specification is primarily a design, testing, manufacturing, selection, purchasing, and installation specification. The successful performance of this product depends upon the proper selection of the loading criteria based on the product's actual use and the products proper installation. The purchaser of the fabricated metal access hatches specified herein is cautioned that proper correlation of the loading conditions, proper installation for the hatch specified, and provision for inspection of the installation at the construction site, are required.

³ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

⁴ The last approved version of this historical standard is referenced on www.astm.org.