CANADIAN STANDARDS ASSOCIATION

A257 Series-09

Standards for concrete pipe and manhole sections

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Preface

This is the fifth edition of CSA A257 Series, *Standards for concrete pipe and manhole sections*. It supersedes the previous editions published in 2003, 1992, 1982, and 1974.

As with the previous editions, the Standards contained in this edition include requirements for

- the determination of physical properties;
- non-reinforced circular concrete pipe;
- steel-reinforced circular concrete pipe; and
- joints for concrete pipe.

Major changes in this new edition include the following:

- a clause on steel hoop circumferential reinforcement for manhole components has been added to CSA A257.4 to extend the permitted height of steel hoop reinforced manhole components to 1830 mm;
- 975 mm diameter pipe has been added to Table 5 of CSA A257.2; and
- a procedure for making dry cast concrete cylinders has been added to CSA A257.0.

These Standards were prepared by the Technical Committee on Concrete Pipe, under the jurisdiction of the Strategic Steering Committee on Concrete and Related Products, and have been formally approved by the Technical Committee. They will be submitted to the Standards Council of Canada for approval as National Standards of Canada.

October 2009

Notes:

(1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*

(2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*

(3) *This publication was developed by consensus, which is defined by* CSA Policy governing standardization — Code of good practice for standardization *as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this publication.*

(4) *CSA Standards are subject to periodic review, and suggestions for their improvement will be referred to the appropriate committee.*

(5) *All enquiries regarding this Standard, including requests for interpretation, should be addressed to Canadian Standards Association, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.*

Requests for interpretation should

(a) define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;

(b) provide an explanation of circumstances surrounding the actual field condition; and

(c) be phrased where possible to permit a specific "yes" or "no" answer.

Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are published in CSA's periodical* Info Update*, which is available on the CSA Web site at www.csa.ca.*

CSA Standard

A257.0-09
Methods for determining physical properties of circular precast concrete pipe, manhole sections, catch basins, and fittings

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A257.0-09
Methods for determining physical properties of circular precast concrete pipe, manhole sections, catch basins, and fittings

1 Scope

1.1
This Standard applies to circular precast concrete pipe, manhole (maintenance hole) sections, and accessories intended for
(a) use as sewer pipe for the conveyance of sewage, industrial wastes, and storm water; and
(b) the construction of culverts.

1.2
This Standard describes the following procedures for testing circular precast concrete pipe, manhole sections, and joints:
(a) three-edge-bearing test (see Clause 4);
(b) concrete compression tests (see Clause 5);
(c) absorption test (see Clause 6);
(d) hydrostatic test (see Clause 7);
(e) flat slab top test (see Clause 8); and
(f) manhole step tests (see Clause 9).

1.3
This Standard does not apply to cast-in-place elements or to non-circular precast concrete pipe, manhole, or catch basin sections.

1.4
In CSA Standards, "shall" is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; "should" is used to express a recommendation or that which is advised but not required; "may" is used to express an option or that which is permissible within the limits of the standard; and "can" is used to express possibility or capability. Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material. Notes to tables and figures are considered part of the table or figure and may be written as requirements. Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

2 Reference publications
This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below, including all amendments published thereto.