

# Standards for concrete pipe and manhole sections



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# ***CSA Standards Update Service***

*A257 Series-09*

*October 2009*

**Title:** *Standards for concrete pipe and manhole sections*

**Pagination:** **93 pages** (xii preliminary and 81 text), each dated **October 2009**

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ISSN 1978-1-55491-298-8

**Technical Editor:** Muktha Tumkur

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# Technical Committee on Concrete Pipe

<b>M.C. Marshall</b>	Mel C. Marshall Industrial Consultants Inc., Delta, British Columbia	<i>Chair</i>
<b>E. Kling</b>	Hanson Pipe and Precast, Cambridge, Ontario	<i>Vice-Chair</i>
<b>M. Adcock</b>	The Shaw Group Limited, Lantz, Nova Scotia	
<b>J. Bradfield</b>	Anchor Concrete Products Limited, Kingston, Ontario	<i>Associate</i>
<b>K.G. Collicott</b>	R.V. Anderson Associates Limited, Toronto, Ontario	
<b>W.E. Dunn</b>	Lombard Pre-Cast LP The Langley Concrete Group, Victoria, British Columbia	
<b>H. Grund</b>	Dillon Consulting Limited, London, Ontario	
<b>I. Guppy</b>	Halifax Regional Municipality, Halifax, Nova Scotia	
<b>P. Imm</b>	Con Cast Pipe Limited, Guelph, Ontario	<i>Associate</i>
<b>J.D. Johnson</b>	Dillon Consulting Limited, London, Ontario	<i>Associate</i>
<b>R. Klimas</b>	City of Toronto Technical Services, Toronto, Ontario	
<b>N. Lasnier</b>	Tubecon Inc., Montréal, Québec	<i>Associate</i>
<b>A.G. Lee</b>	AGL Marketing Limited, Halton Hills, Ontario	<i>Associate</i>
<b>J. Mion</b>	Central Precast Products Limited, Nepean, Ontario	
<b>G.F. Mulhern</b>	Ontario Concrete Pipe Association, Halton Hills, Ontario	<i>Associate</i>
<b>M. Recchia</b>	Munro Concrete Products Limited, Utopia, Ontario	
<b>P. Sharma</b>	Hamilton Kent, Toronto, Ontario	

<b>E.C. Shelestynsky</b>	Procon Engineering Inspections Inc., Caledon, Ontario	
<b>R.H. Smith</b>	Newcastle Engineering Ltd., Nanaimo, British Columbia	
<b>M. Thomas</b>	Ministry of Transportation, St. Catharines, Ontario	
<b>B. Wood</b>	Con Cast Pipe Limited, Guelph, Ontario	
<b>D. Youkhana</b>	City of Burlington, Burlington, Ontario	
<b>K. Yousafzai</b>	Leduc County, Nisku, Alberta	
<b>M. Tumkur</b>	Canadian Standards Association, Mississauga, Ontario	<i>Project Manager</i>

# 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.*
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*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.