OTTAWA WATERPROOFING PRO

Drain Tile & Foundation Drains

Weeping tile under the Building Code: size, stone cover, where foundation drains discharge and replacing them

4 Expert Answers from Waterproofing IQ

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Q1

How big must foundation drain tile be under Ontario's Building Code?

Ontario's Building Code requires foundation drain tile or pipe to be at least 100 mm in diameter (clause 9.14.3.2).

The pipe is laid so its top sits below the bottom of the floor slab. Butt joints are left open between 6 mm and 10 mm. The pipe must be covered on the top and sides with at least 150 mm of crushed stone or other coarse clean granular material, where no more than 10 per cent of the material passes a 4 mm sieve (clause 9.14.3.3). The Code also sets out an alternative: a granular layer at least 125 mm deep under the footing, extending at least 300 mm beyond its outside edge (clause 9.14.4.2).

Where the drain tile goes matters too. The Code says foundation drains discharge to a sewer, a drainage ditch, or a dry well (clause 9.14.5.1). A dry well is only permitted where natural groundwater sits below its bottom, and it must be at least 5 m from the foundation. The City of Ottawa notes that in some older homes the foundation drain may connect to the sanitary or combined sewer, or may not be present at all, and that foundation drains should not be connected to the sanitary sewer.

One thing worth knowing: the Code requires drainage at the bottom of every foundation wall that encloses the building interior, unless it can be shown to be unnecessary (clause 9.14.2.1). Replacing drain tile is on the City of Ottawa's permit list, so a building permit is required before that work starts. Ask the contractor who pulls the permit and confirm that the new tile's discharge point complies with both the Code and the City's requirements.

A fair quote for drain tile work should spell out the pipe diameter, the type and depth of granular cover, where the drain discharges, and whether any interior or exterior membrane work is included in the scope.

If you want to hear from Ottawa waterproofing contractors directly, the request form on this site sends your details to contractors listed in the Ottawa Construction Network directory.

Q2

Are foundation drains present in every older Ottawa house?

No, foundation drains are not present in every older Ottawa house. The City of Ottawa says that in some older homes they may not be present at all, and in others they may exist but be connected to the sanitary or combined sewer rather than the storm sewer.

Ontario's Building Code (clause 9.14.2.1) requires drainage at the bottom of every foundation wall that encloses the building interior, unless it can be shown to be unnecessary. Where drain tile is used, it is at least 100 mm in

diameter, laid with its top below the bottom of the floor slab and covered on the top and sides with at least 150 mm of crushed stone or other clean coarse granular material (9.14.3.2, 9.14.3.3). It drains to a sewer, a drainage ditch or a dry well, or to a sump with a pump where gravity drainage is not practical (9.14.5).

The City notes that foundation drains collect groundwater from around the foundation and carry it to the storm sewer by a storm lateral. Where a drain exists but runs to the sanitary sewer, the City says that connection should not be there. The City lists failed foundation drains as one of the things a backwater valve or sump pump will not fix on its own.

Ask any contractor quoting interior or exterior drainage work how they will find out what drains your house has and where they go, and have that written into the quote.

If you want to hear from local contractors who work on foundation drainage in Ottawa, the request form on this site sends your details to contractors listed in the Ottawa Construction Network directory.

Q3

Can a granular layer under the footing replace drain tile in Ontario?

Yes, Ontario's Building Code provides an alternative to drain tile at the base of the foundation wall. Instead of perforated pipe surrounded by stone, clause 9.14.4.2 allows a granular layer at least 125 mm deep placed under the footing and extending at least 300 mm beyond its outside edge.

The standard approach under clause 9.14.3.2 and 9.14.3.3 calls for drain tile or pipe at least 100 mm in diameter, with butt joints left 6 mm to 10 mm open, covered on the top and sides with at least 150 mm of crushed stone or other coarse clean granular material where no more than 10 per cent of the material passes a 4 mm sieve. The granular-layer alternative in 9.14.4.2 is a different path to the same goal: moving water away from the base of the wall.

A few things shape whether the alternative actually works for a given house:

- Clause 9.14.2.1 requires drainage at the bottom of every foundation wall that contains the building interior, unless it can be shown to be unnecessary. The granular layer is one way to meet that requirement, but it still has to drain somewhere. Clause 9.14.5.1 says foundation drains discharge to a sewer, a drainage ditch, or a dry well. A dry well is only permitted where natural groundwater is below its bottom and it sits at least 5 m from the foundation (9.14.5.3).
- Where hydrostatic pressure occurs, clause 9.13.3.1 requires waterproofing rather than dampproofing. The Code does not give a number or a test for when hydrostatic pressure occurs, so ask the contractor which protection

the quote covers and why.

If someone is proposing the granular alternative as a retrofit, ask them to explain in writing exactly how it will drain and where that water goes.

The City of Ottawa's permit list names "structural foundation repairs and drain tile replacement" as work that requires a building permit. Make sure the written quote names the drainage method, the discharge point, and who applies for the permit.

Q4

Will Ontario's Code allow a dry well where Ottawa groundwater sits high?

Ontario's Building Code permits a dry well for foundation drain discharge only where natural groundwater is below the bottom of the dry well, and the well is at least 5 m from the foundation (clause 9.14.5.3). If groundwater in your area sits high, that first condition cannot be met, and the Code does not allow a dry well.

What the Code requires instead

Where a dry well is ruled out, clause 9.14.5.1 says foundation drains must discharge to a sewer or a drainage ditch. The City of Ottawa says foundation drains in some older homes may be connected to the sanitary or combined sewer, and that foundation drains should not be connected to the sanitary sewer. Where gravity drainage to a sewer is not practical, clause 9.14.5.2 requires an automatic sump pump, with the pit at least 750 mm deep and at least 0.25 m² in area, covered with a child-resistant, airtight lid. The City advises discharging the sump pump to the ground at least 1.2 m from the foundation, or connecting it to the storm sewer.

The Code gives no number for what counts as "high" groundwater, and it gives no test a homeowner can run. Whether groundwater at a specific property is high enough to disqualify a dry well, and what the right discharge point is for that property, are things a contractor assesses by looking at the site, the soil and the existing drainage arrangement.

A few things worth asking any contractor who proposes a dry well or a sump discharge:

- What evidence do they have about groundwater depth at this property, and how does that satisfy clause 9.14.5.3?
- Where exactly will the discharge go, and how does that connect to the storm sewer or reach the surface?
- Who pulls the permit, given that drain tile replacement and plumbing alterations both require one from the City of Ottawa?

Because the discharge point for a sump pump or a foundation drain touches the plumbing system, ask whether a licensed plumber does or signs off the plumbing portion of the work.
Before any design work, ask the contractor to show in writing where the drains will discharge and which option in 9.14.5 that uses.

Disclaimer: This guide is provided for informational purposes only by Ottawa Waterproofing Pro. It does not constitute professional advice. Always consult qualified contractors and your local building authority (the City of Ottawa) before starting any waterproofing or foundation project. Some of this work needs a City building permit, and a free locate request is required before any digging. Information is current as of November 8, 2026 and may change. Visit **ottawawaterproofingpro.com** for the latest answers.