

REQUIRED SEPTIC DRAWINGS FOR ONTARIO

The following list of drawings should be used as a guide when preparing drawings for submission for a septic permit, for a project designed under (Part Eight) of the Ontario Building Code, which does not require professional design but must be qualified (BCIN).

The Designer that prepares the permit drawings is responsible to ensure that they provide sufficient information to ensure compliance with the requirements of the Ontario Building Code. **As of January 1st, 2006, all Designers will be required to show proof of meeting the qualifications required by the Ministry of Housing.**

1. The Site Plan:

- The proposed septic location and dimensions.
- The location of all existing or proposed buildings on the lot.
- Access routes; roads, driveways, right of way.
- The setbacks to lot lines.
- The existing and proposed drainage patterns should be illustrated, (provide geodetic elevations if in a flood plain).
- The plan must be to scale and show all property boundaries, adjacent road and water bodies. The location of site services, wells, power lines.

2. Sections and Details:

- Cross sections will illustrate all the materials that make up the septic system, load rate area, filter medium and contact area (mantle).
- Adequate information shall be included to be able to determine the location of; the load rate area, filter medium and contact area.
- Adequate information on a cross section shall include the depth of the excavation, rock or water table and soil type and the depth of materials to be used with pipe.
- Adequate information on a top elevation showing tank location, pump chamber (if required) bed size showing the number of runs and spacing of piping or other and location of distribution box if used.
- Show proposed grade of the septic system.

***** The above information is required when making an application for a septic permit, before the application can be considered complete when receiving it in the office.**

Should any of the above information be missing at the time when the application is received in the office, the application will be considered incomplete and will delay the turnaround time to process the application.

NOTE: Any application that requires a septic system for a new Single Family Dwelling/Seasonal Dwelling must be approved before the permits can be issued for the dwellings.

Application for a Permit to Construct or Demolish

This form is authorized under subsection 8(1.1) of the Building Code Act.

For use by Principal Authority	
Application number:	Permit number (if different):
Date received:	Roll number:

Application submitted to: _____
 (Name of municipality, upper-tier municipality, board of health or conservation authority)

A. Project information			
Building number, street name	Unit number	Lot/con.	
Municipality	Postal code	Plan number/other description	
Project value est. \$	Area of work (m ²)		

B. Purpose of application	
<input type="checkbox"/> New construction <input type="checkbox"/> Addition to an existing building <input type="checkbox"/> Alteration/repair <input type="checkbox"/> Demolition <input type="checkbox"/> Conditional Permit	
Proposed use of building	Current use of building
Description of proposed work	

C. Applicant			
Applicant is: <input type="checkbox"/> Owner or <input type="checkbox"/> Authorized agent of owner			
Last name	First name	Corporation or partnership	
Street address	Unit number	Lot/con.	
Municipality	Postal code	Province	E-mail
Telephone number ()	Fax ()	Cell number ()	

D. Owner (if different from applicant)			
Last name	First name	Corporation or partnership	
Street address	Unit number	Lot/con.	
Municipality	Postal code	Province	E-mail
Telephone number ()	Fax ()	Cell number ()	

E. Builder (optional)				
Last name		First name	Corporation or partnership (if applicable)	
Street address			Unit number	Lot/con.
Municipality		Postal code	Province	E-mail
Telephone number ()		Fax ()		Cell number ()
F. Tarion Warranty Corporation (Ontario New Home Warranty Program)				
i. Is proposed construction for a new home as defined in the <i>Ontario New Home Warranties Plan Act</i> ? If no, go to section G.			<input type="checkbox"/> Yes	<input type="checkbox"/> No
ii. Is registration required under the <i>Ontario New Home Warranties Plan Act</i> ?			<input type="checkbox"/> Yes	<input type="checkbox"/> No
iii. If yes to (ii) provide registration number(s): _____				
G. Required Schedules				
i) Attach Schedule 1 for each individual who reviews and takes responsibility for design activities.				
ii) Attach Schedule 2 where application is to construct on-site, install or repair a sewage system.				
H. Completeness and compliance with applicable law				
i) This application meets all the requirements of clauses 1.3.1.3 (5) (a) to (d) of Division C of the Building Code (the application is made in the correct form and by the owner or authorized agent, all applicable fields have been completed on the application and required schedules, and all required schedules are submitted). Payment has been made of all fees that are required, under the applicable by-law, resolution or regulation made under clause 7(1)(c) of the <i>Building Code Act, 1992</i> , to be paid when the application is made.			<input type="checkbox"/> Yes	<input type="checkbox"/> No
ii) This application is accompanied by the plans and specifications prescribed by the applicable by-law, resolution or regulation made under clause 7(1)(b) of the <i>Building Code Act, 1992</i> .			<input type="checkbox"/> Yes	<input type="checkbox"/> No
iii) This application is accompanied by the information and documents prescribed by the applicable by-law, resolution or regulation made under clause 7(1)(b) of the <i>Building Code Act, 1992</i> which enable the chief building official to determine whether the proposed building, construction or demolition will contravene any applicable law.			<input type="checkbox"/> Yes	<input type="checkbox"/> No
iv) The proposed building, construction or demolition will not contravene any applicable law.			<input type="checkbox"/> Yes	<input type="checkbox"/> No
I. Declaration of applicant				
I _____ declare that:				
(print name)				
1. The information contained in this application, attached schedules, attached plans and specifications, and other attached documentation is true to the best of my knowledge.				
2. If the owner is a corporation or partnership, I have the authority to bind the corporation or partnership.				
_____		_____		
Date		Signature of applicant		

Personal information contained in this form and schedules is collected under the authority of subsection 8(1.1) of the *Building Code Act, 1992*, and will be used in the administration and enforcement of the *Building Code Act, 1992*. Questions about the collection of personal information may be addressed to: a) the Chief Building Official of the municipality or upper-tier municipality to which this application is being made, or, b) the inspector having the powers and duties of a chief building official in relation to sewage systems or plumbing for an upper-tier municipality, board of health or conservation authority to whom this application is made, or, c) Director, Building and Development Branch, Ministry of Municipal Affairs and Housing 777 Bay St., 2nd Floor. Toronto, M5G 2E5 (416) 585-6666.

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Project Information			
Building number, street name		Unit no.	Lot/con.
Municipality	Postal code	Plan number/ other description	
B. Individual who reviews and takes responsibility for design activities			
Name		Firm	
Street address		Unit no.	Lot/con.
Municipality	Postal code	Province	E-mail
Telephone number ()	Fax number ()	Cell number ()	
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1. of Division C]			
<input type="checkbox"/> House	<input type="checkbox"/> HVAC – House	<input type="checkbox"/> Building Structural	
<input type="checkbox"/> Small Buildings	<input type="checkbox"/> Building Services	<input type="checkbox"/> Plumbing – House	
<input type="checkbox"/> Large Buildings	<input type="checkbox"/> Detection, Lighting and Power	<input type="checkbox"/> Plumbing – All Buildings	
<input type="checkbox"/> Complex Buildings	<input type="checkbox"/> Fire Protection	<input type="checkbox"/> On-site Sewage Systems	
Description of designer's work			
D. Declaration of Designer			
I _____ declare that (choose one as appropriate):			
(print name)			
<input type="checkbox"/> I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories.			
Individual BCIN: _____			
Firm BCIN: _____			
<input type="checkbox"/> I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code.			
Individual BCIN: _____			
Basis for exemption from registration: _____			
<input type="checkbox"/> The design work is exempt from the registration and qualification requirements of the Building Code.			
Basis for exemption from registration and qualification: _____			
I certify that:			
1. The information contained in this schedule is true to the best of my knowledge.			
2. I have submitted this application with the knowledge and consent of the firm.			
_____		_____	
Date		Signature of Designer	

NOTE:

1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d) of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
2. Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

Schedule 2: Sewage System Installer Information

A. Project Information			
Building number, street name		Unit number	Lot/con.
Municipality	Postal code	Plan number/ other description	
B. Sewage system installer			
Is the installer of the sewage system engaged in the business of constructing on-site, installing, repairing, servicing, cleaning or emptying sewage systems, in accordance with Building Code Article 3.3.1.1, Division C?			
<input type="checkbox"/> Yes (Continue to Section C)		<input type="checkbox"/> No (Continue to Section E)	<input type="checkbox"/> Installer unknown at time of application (Continue to Section E)
C. Registered installer information (where answer to B is "Yes")			
Name		BCIN	
Street address		Unit number	Lot/con.
Municipality	Postal code	Province	E-mail
Telephone number ()	Fax ()	Cell number ()	
D. Qualified supervisor information (where answer to section B is "Yes")			
Name of qualified supervisor(s)		Building Code Identification Number (BCIN)	
E. Declaration of Applicant:			
<p>I _____ declare that:</p> <p style="text-align: center;">(print name)</p> <p><input type="checkbox"/> I am the applicant for the permit to construct the sewage system. If the installer is unknown at time of application, I shall submit a new Schedule 2 prior to construction when the installer is known;</p> <p><u>OR</u></p> <p><input type="checkbox"/> I am the holder of the permit to construct the sewage system, and am submitting a new Schedule 2, now that the installer is known.</p> <p>I certify that:</p> <p>1. The information contained in this schedule is true to the best of my knowledge.</p> <p>2. If the owner is a corporation or partnership, I have the authority to bind the corporation or partnership.</p> <p>_____</p> <p style="display: flex; justify-content: space-between;"> Date Signature of applicant </p>			

SEWAGE SYSTEM CALCULATIONS

(to be submitted with application)

(see Chart on reverse)

Q	=	Total Daily Design Sewage Flow in Litres
T	=	Percolation Time of Soil

SEPTIC TANK SIZE	=	Working Capacity of Septic Tank
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Residential	=	Q	x	2	=	_____	Litres
Commercial	=	Q	x	3	=	_____	Litres

Note: In no case shall the working capacity of septic tank be less than 3600 litres.

ABSORPTION TRENCHES	=	Length of Distribution Pipe (for systems with septic tank)
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L	=	$\frac{Q \times T}{200}$					
	=	$\frac{x}{200}$	=	_____	Metres		

Note: The total length of distribution pipe shall be not less than 40 metres.

Loading Rate Area (unsaturated suitable soil in area of bed and mantle)

Loading Rate Area required	=	Q	÷	6			
	=	_____	÷	6	=	_____	Sq. Metres

FILTER BED	=	Size of filter required
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If Q is 3000 litres or less	=	Q	÷	75			
		_____	÷	75	=	_____	Sq. Metres

If Q is more than 3000 litres	=	Q	÷	50			
		_____	÷	50	=	_____	Sq. Metres

Base of Filter Medium - shall extend to a thickness of 250mm over the following area:

AREA =	=	$\frac{Q \times T}{850}$					
		$\frac{x}{850}$	=	_____	Sq. Metres		

NOTE: "T" is the Percolation Time of the Native Soil upon which the filter material is placed.

Loading Rate Area (unsaturated suitable soil in area of bed and mantle)

Loading Rate Area Required	=	Q	÷	Loading Rate (based on "T" Time of native soil)			
	=	_____	÷	_____	=	_____	Sq. Metres

NOTE:	Suitable soil, existing or imported, in the loading rate area must have a "T" of 15 minutes or less, if imported material is used for the leaching bed or filter.
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SEWAGE SYSTEM INSTALLATION PROPOSAL

TOTAL # OF BEDROOMS :		TOTAL FLOOR AREA :	m ²
TOTAL PLUMBING FIXTURE UNITS:			
TOTAL DAILY DESIGN FLOW RATE (Expressed in Litres/day):			Q =

Calculations for proposal must be provided on a separate sheet

TEST HOLE	Sub-surface conditions encountered			
	Rock & G.W.T.	Depth (m)	Soil Type	"T" Time
		- 0 -		
		- 0.25 -		
		- 0.50 -		
		- 0.75 -		
		- 1.00 -		
		- 1.25 -		
		- 1.50 -		

PROPOSE TO CONSTRUCT:

CLASS 4 FILTER BED PROOF OF APPROVED FILTER MATERIAL MUST BE PROVIDED PRIOR TO FINALINSPECTION

Dug Into Existing Soil		Raised		If Raised, How Far Above Existing Soils?	metres	Contact Area	M ²
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CLASS 4 TRENCH BED

Dug Into Existing Soil		Raised		If Raised, How Far Above Existing Soils?	metres	Total length of Tile	metres
# Of Runs Of Tile		Length of Runs			metres		

CLASS 2 GREY-WATER PIT or CLASS 3 CESSPOOL

Wall Structure -- Concrete Block		Rock		Other:	
Dimensions Of Pit	Length:	Width:	Height:	Type Of Cover:	
Type Of Class 1 To Be Used	Privy	Composting	Chemical	Electrical	Other:

CLASS 5 - HOLDING TANK - PUMP OUT CONTRACT MUST BE PROVIDED (District Approval Required)

Concrete		Polyethylene		Other:
Size (L)	Alarm Is – Audio	And Visual		Describe Platform:

IS A PUMP REQUIRED?

Yes		No		Raw Sewage		Effluent	
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THE CHARTS BELOW ARE FOR GUIDANCE PURPOSES ONLY

You Should Always Refer To The Ontario Building Code For Current Regulations

TOTAL DAILY DESIGN FLOW RATES FOR RESIDENTIAL OCCUPANCY "Q" (Litres/Day)		Example of how to determine daily design flow rate:
Dwellings: a) 1 bedroom dwelling b) 2 bedroom dwelling c) 3 bedroom dwelling d) 4 bedroom dwelling e) 5 bedroom dwelling f) Additional flow for i) each bedroom over 5 ii) A) each 10m ² (or part thereof) over 200m ² , up to 400m ² (3) or B) each 10m ² (or part thereof) over 400m ² up to 600m ² (3), and C) each 10m ² (or part thereof) over 600m ² (3), or iii) each fixture unit over 20 fixture units	750 1100 1600 2000 2500 500 100 75 50 50	Using a 4 bedroom, 235m ² home with 22 fixture units. From Chart on left: 4 bedroom home > 200m ² or > 20 fixture units = 2,000ℓ/day additional 35m ² = 400ℓ/day (additional 2 fixture units = 100ℓ/day) * Q (total daily design flow rate) = 2,400 litres/day If, as in the example above, there is a choice in arriving at the flow rate (e.g., fixture units vs. floor area) use the <u>one</u> calculation that provides the greatest daily flow rate value.

APPROXIMATE SOIL PERCOLATION RATES "T"													
The following are <u>estimated typical ranges</u> of "T" times. <u>Actual "T" times</u> may vary significantly due to <u>on-site soil conditions</u> .													
Soil Type *	Clean Med - Course Sand		Silty Gravelly Sands		Silty Sands Sandy Silts		Sandy Silty Clays			Silty Clays		Clay	
"T" (min/cm) *	1	3	6	8	10	16	20	25	29	33	38	44	50+

CLEARANCE DISTANCES FOR COMPONENTS OF SEWAGE SYSTEMS (metres)							
⇒ <u>If the bed is raised</u> , add 2 metres for every 1 metre of rise	Wells (with 6 m casing)	Wells (not 6 m casing)	Springs Potable	Springs Not Potable	Surface Water (lake, river, etc.)	Property Lines	Dwellings Structures
Class 4 Distribution Pipe	15	30	30	30	15	3	5
Class 4 Septic Tank	15	15	15	15	15	3	1.5
Class 5 Holding Tank	15	30	30	15		3	1.5
Class 1 Privy	15	30	30	30	15	3	
Class 2 Grey-Water Pit	15	30	30	15	15	3	