

Schedule 2A: Sewage System Information

A. Proposed sewage system

System is for: Residential Use Commercial or Industrial or Agricultural Use

The installation is: New Replacement Alteration/Repair

B. Type of proposed sewage system

In-ground Raised

Trench Bed Filter Bed Type A Dispersal Bed

C. Approved Treatment Unit: II III IV

Manufacturer:

Model:

*** Please attach documentation to application ***

D. Design flow calculations - single dwelling units (separate calculations required for multi-residential and non-residential structures)

Record number of plumbing fixtures in chart below
(include rough-in plumbing, eg. for future basement bathroom)

Description of Fixture	# Existing	+	# New/ Proposed	x	Fixture Units	=	Fixture Unit Count
bathroom group eg. 1 ea toilet, sink, bathtub/1-head shower or Separately as:		+		x	6	=	
lavatory/bathroom sink		+		x	1.5	=	
toilet		+		x	4	=	
tub or 1-head shower		+		x	1.5	=	
bidet		+		x	1	=	
dishwasher(not connected to sink)		+		x	1	=	
laundry tub		+		x	1.5	=	
sink, bar sink or kitchen sink (ea)		+		x	1.5	=	
washing machine		+		x	1.5	=	
Other - specify:		+		x		=	
Total Fixture Units:							
Total Fixture Units over 20:							

Record finished floor area - in square meters - for the following:

1 st Floor	2 nd Floor	Other: (please specify)	TOTAL

Will this septic system serve more than one dwelling unit? (eg. basement apt, granny flat etc.)

Yes No

Please specify:

Schedule 2A: Sewage System Information - cont'd.

E. Design Flow Calculations for Dwellings (separate calculation required for non-residential structures)

Where:

A= bedroom flow (1-5 bedrooms) B= bedroom flow (over 5 bedrooms) C= Living area flow D= Fixture units over 50.

Bedroom Flow (A)	Select Number of Bedrooms	Volume (in litres)		Total Flow
	1 Bedroom	750	=	
	2 Bedrooms	1100	=	
	3 Bedrooms	1600	=	
	4 Bedrooms	2000	=	
	5 Bedrooms	2500	=	
TOTAL (A)				

Bedroom Flow (B)	>5 Bedrooms?	# of bedrooms >5	Volume (in litres)	Total Flow
	<input type="checkbox"/> Yes <input type="checkbox"/> No		x 500 each	=
TOTAL (B)				

Living Area Flow(C)	Total Living area in m ² :			Total Flow
	Size of Living Area (in m ²)	Number of 10m ² -increments <u>over</u> 200 m ²	Volume (in litres)	
	0 - 200 m ²	x	0	=
	201 - 400 m ²	x	100	=
	401 - 600 m ²	x	75	=
	> 600 m ²	x	50	=
TOTAL (C)				

Fixture Units (D)	Number of fixture units over 20	=		x	50 litres/ fixture unit	=	Total Flow
TOTAL (D)							

F. Design Flow (eg. "Q") (Number of litres per day - insert totals for A and B or C or D from Section E (above)).

Q = A + (the highest of) B or C or D

Q = _____ (A) + _____ (B or C or D)

Q = _____ Litres per day

G. Septic Tank Size (working capacity) for Class 4 System New Existing Replacement

		Working Capacity			
		Minimum	Proposed		
1 Residential(3600L minimum)	2	x	Q (from Section F)		
2 Non-Residential(3600L minimum)	3	x	Q (from Section F)		

Schedule 2A: Sewage System Information - cont'd.

H. Percolation Rate of Design Soil (T)

Percolation Rate of Design Soil T = _____ min/cm Soil is: <input type="checkbox"/> Native <input type="checkbox"/> Imported	Percolation Rate of Mantle Sand T = _____ min/cm Soil is: <input type="checkbox"/> Native <input type="checkbox"/> Imported	SEE: <input type="checkbox"/> Laboratory Analysis <input type="checkbox"/> Laboratory Report Attached
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NOTE: The Municipality requires documentation on the native and imported soils proposed to be used by a certified soils technician to determine the percolation rate ("T"-time).

I. Water Supply for Lot

Water supply is existing

Proposed supply is:

Drilled Well
 Municipal Well
 Other, please specify: _____

Are other wells located within 30 m of proposed septic tank/distribution pipe? Yes No

If yes, be sure to include location and setback on site plan.

Additional appliances (check as applicable):

Water softener Does it backwash into septic? Yes No
 Water Filter Does it backwash into septic? Yes No

J. Site Evaluation - Test Pit

A test pit should be dug at the location of the proposed leaching bed to observe subsoil profile and groundwater conditions. Test pits should be a minimum of 1m wide and 1.5m deep.

TEST PIT SOIL DATA

TEST PIT SOIL DATA					
TEST PIT #1			TEST PIT #2		
Rock or Ground Water Table	Depth (meters)	Description of Soil	Rock or Ground Water Table	Depth (meters)	Description of Soil
	0			0	
	0.25			0.25	
	0.5			0.5	
	0.75			0.75	
	1			1	
	1.25			1.25	
	1.5			1.5	
	1.8			1.8	

Topsoil to be removed:	Usable existing soil:
Depth: _____ m	Depth: _____ m
Excavation of existing soil:	Imported fill:
Depth: _____ m	Depth: _____ m

Schedule 2C: Class 4 Sewage System Calculations

A: Absorption Trench

Distribution Pipe
 Type I Chamber
 Type II Chamber

L= Length of distribution pipe (in meters)

D= Daily design flow (in litres)

T= Percolation Time of underlying soil

L=QT/200				
Q	x	T	÷200	= L
	x		÷200	=

With Treatment Unit or Type II Chamber				
L=QT/300				
Q	x	T	÷300	= L
	x		÷300	=

Length (in meters)

Minimum	Proposed

B. Filter Bed

Distribution Pipe
 Type I Chamber
 Type II Chamber

Effective Surface area:

a) If $Q \leq 3000$ litres/day

$$A = Q/75$$

Q	÷ 75	A (m ²)

Surface Area (m²)

Minimum	Proposed

b) If $Q > 3000$ litres/day

$$A = Q/50$$

Q	÷ 50	A (m ²)

c) Where level II, III, IV treatment unit used as described in **Table 8.6.2.2.**

$$A = Q/100$$

Q	÷ 100	A (m ²)

Surface Area (m²)

Minimum	Proposed

For a), b) or c): If "A" (area) of effective surface area is greater than 50m²:

How many cells are to be installed?

What is the size of each cell?

d) **Filter Medium Base Area:**

$$A = QT/850$$

Q	x	T	÷ 850	A

Base Area (m²)

Minimum	Proposed

C. Loading Rate (Mantle) from Table 8.7.4.1 of the Building Code (if applicable)

**Loading Rates (LR) for
Fill-based/Absorption Trenches and Filter Beds**

*** You must use the T-time of the native soil when calculating the Loading Area****

If the Percolation Time of Soil (T) in minutes per cm is:	Loading Rate (LR) (L/m ²)/per day
between 1 and 20	10
between 20 and 35	8
between 35 and 50	6
greater than 50	4

Enter loading rate below. Divide "Q" by corresponding loading rate (LR) to get the Loading Area.

Q	÷	LR	=	Loading Area (LA)

Schedule 2C: Class 4 Sewage System Calculations - cont'd.

D. Type A Dispersal Bed

Q = Daily design flow (in litres) T = Percolation Time of underlying soil A = Area (in m²)

(i) **Stone Layer area:**

If Q ≤ 3,000 litres/day

$$A = Q/75$$

Q	÷	75	=	A
x	÷	75	=	

(ii) If Q ≥ 3,000 litres/day

$$A = Q/50$$

Q	÷	50	=	A
x	÷	50	=	

(iii) **Sand Layer where T ≤ 15**

$$A = \frac{QT}{850}$$

Q	x	T	÷	850	=	A
x	x	x	÷	850	=	

(iv) **Sand Layer area where T > 15**

shall,

- a) extend to at least 15m beyond the perimeter of the treatment unit, or distribution pipes if utilized, in any direction that the effluent entering the soil will move horizontally and,
- b) have an area that is not less than the value determined by the following formula:

$$A = \frac{QT}{400}$$

Q	x	T	÷	400	=	A
x	x	x	÷	400	=	

E. Pump and Siphons (if applicable)

Distribution Pipe

L = Total length of distribution pipe in the leaching bed

V = Effluent volume (in litres) pumped.

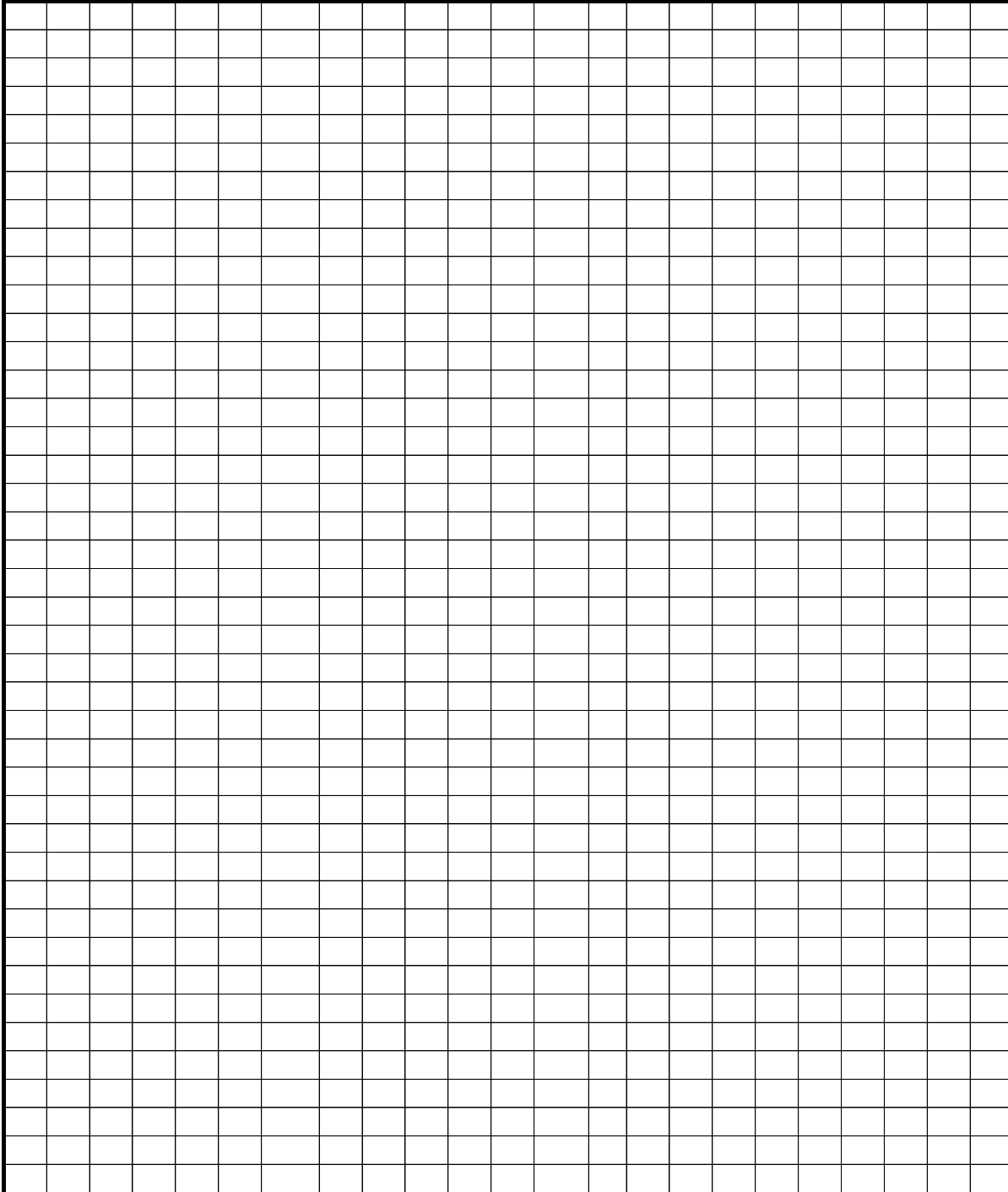
				Proposed		
75mm (3") diameter distribution pipe	V =	3.3 x	<input style="width: 50px; height: 20px;" type="text"/> (L) =	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; height: 20px;"></td> <td style="width: 50%; height: 20px;"></td> </tr> </table>		
100 mm (4") diameter distribution pipe	V =	5.9 x	<input style="width: 50px; height: 20px;" type="text"/> (L) =	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; height: 20px;"></td> <td style="width: 50%; height: 20px;"></td> </tr> </table>		

A Dose Pump is required if total distribution pipe is 150m or more

Dose Pump required? Yes No

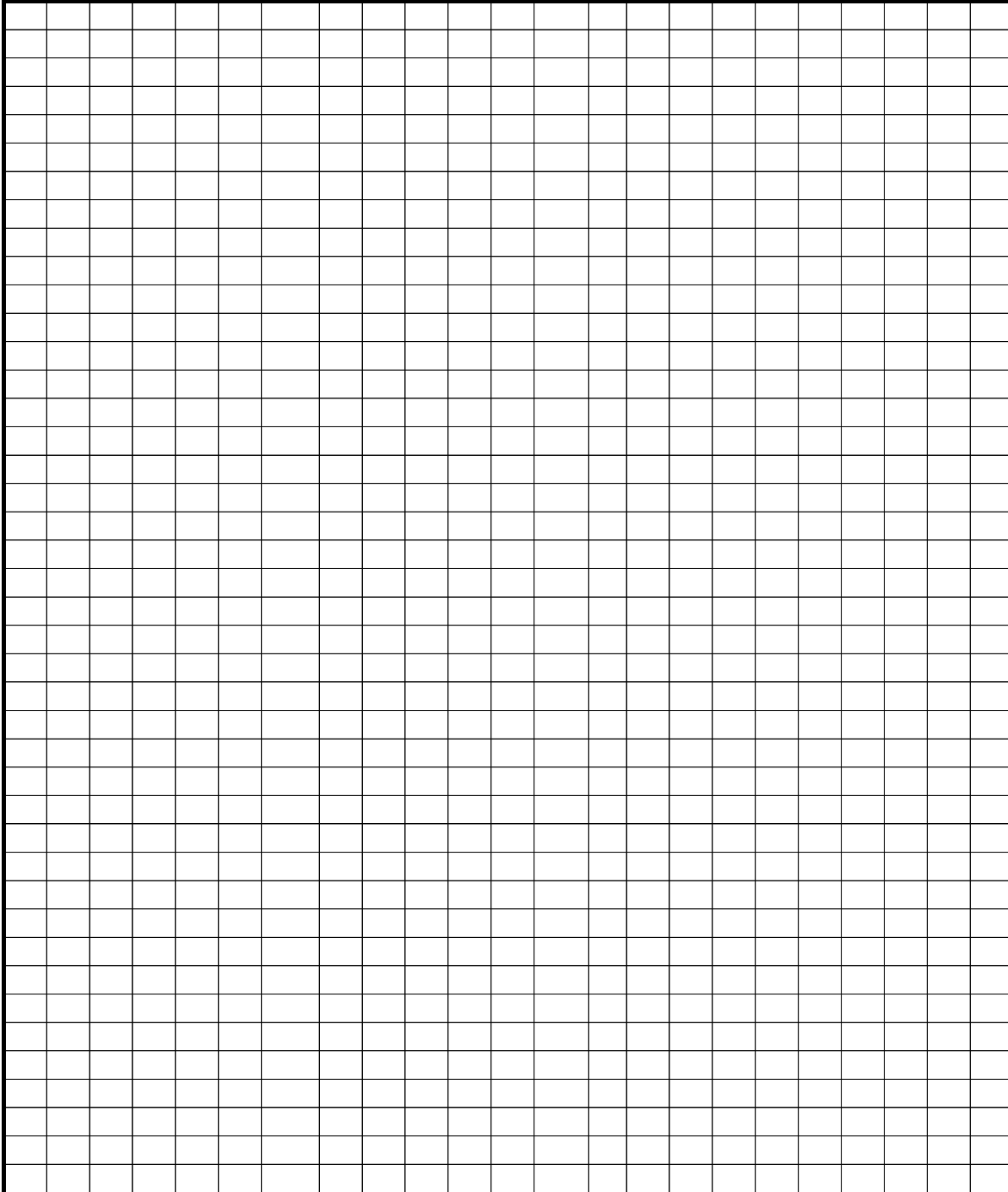
F. Site Plan - Layout

- Locate and show horizontal distance from sewage system to all proposed or existing structures, driveway, property lines, swimming pools
- Locate and show clearance to all wells (including those on adjacent properties)
- Water courses (eg. lakes, rivers, ponds, etc.)
- Cross section including dimensions and elevations in relation to existing grade as well as water table/bedrock depth
- North (facing) arrow
- Tank and pump chamber sizes (in litres) and name of manufacturer
- Base, contact and loading areas (in square meters)
- Length of distribution pipe (in meters)



G. Site Plan - Cross Section

- Locate and show horizontal distance from sewage system to all proposed or existing structures, driveway, property lines, swimming pools.
- Locate and show clearance to all wells (including those on adjacent properties)
- Water courses (eg. lakes, rivers, ponds, etc.)
- Cross section including dimensions and elevations in relation to existing grade as well as water table and bedrock depth
- North (facing) arrow
- Tank and pump chamber sizes (in litres) and name of manufacturer
- Base, contact and loading areas (in square meters)
- Length of distribution pipe (in meters)



H. Declaration and Acknowledgement

1. I acknowledge that any deviation from the approved plans and specifications after the permit is issued is a violation of the Building Code Act and agree to consult with a building inspector before making any changes from the approved plans.
2. I agree to comply with the provisions of Municipal Building and Zoning By-laws.
3. I acknowledge that I am required to submit an "as built" septic design drawing at the install inspection.
4. I declare that the information contained herein is in every respect, fully and truthfully stated to the best of my knowledge and belief.
5. I acknowledge that I will provide a pit analysis of filter medium and any imported material where applicable.
6. I acknowledge, that, prior to backfilling, the stone layer shall be protected by covering it with an untreated building paper or a permeable geo-textile fabric.
7. I acknowledge that a leaching bed shall not be covered with any material having a hydraulic conductivity less than 0.01 m/day.
8. I acknowledge that I will operate (if owner), or advise owner (if contractor), of the operation and maintenance required on the septic system.
9. I acknowledge that I will provide a Maintenance Contract for a Treatment Unit and Class-5 Holding Tank.
10. I acknowledge that should a temporary entrance be required to construct this septic system, I will obtain such permit as is required prior to commencing construction.

Submitted by:

Name (please print)

Signature of Owner/Agent

Date

I. For Office Use Only

NOTES:

Name (please print)

*Signature of Chief Building Official or
Designate*

Date Approved