Schedule 2A: Sewage System Information

A. Proposed Sewage System

IS FOR: ☒ Residential Use ☐ Commercial Use

INSTALLATION IS: ☒ New ☐ Alteration ☐ Replacement ☐ Repair

Test Holes are required for all new or replacement Class 4 septic system applications; minimum size to be 3 feet (.9 meters) wide and 6 feet (1.8 meters) deep. Must be stepped or sloped.

DUG END OF APRIL 2026
Are Test Holes ready?
☒ Yes ☐ No

B. Type of Proposed Sewage System

- ☐ Class 2 – Leaching Pit
- ☐ Class 3 – Cesspool
- ☒ Class 4 – Sewage System
- ☐ Class 5 – Holding Tank

NOTE: Class 2, 3 & 5 sewage systems have limited or restricted uses.

C. Design Flow Calculations – Dwellings (separate calculations required for non-residential structures)

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

Description of Fixture	Number of New/Proposed Fixtures		Fixture Units		Fixture Unit Count
Dishwasher	1	X	1.5	=	1.5
Garbage Grinder		X	3	=	
Hot Tub / Spa		X	1.5	=	
Kitchen Sink	1	X	1.5	=	1.5
Laundry tub	1	X	1.5	=	1.5
Toilet		X	4	=	
Tub / Shower (1 head)		X	1.5	=	
Wash Basin		X	1.5	=	
Washing Machine	1	X	1.5	=	1.5
Bathroom Group	2	X	6	=	12
Other – please specify: _____		X		=	
TOTAL FIXTURE UNITS:					18
TOTAL FIXTURE UNITS OVER 20:					0

Additional Appliances: ☐ Water Softener → ☐ Does it backwash into Septic?
☐ Water Filter → ☐ Does it backwash into Septic?

Record finished floor area (in square meters) for the following:

1st Floor	2nd Floor	3rd Floor	Loft	Other – please specify:	TOTAL
69	139				208

Record number of separate dwelling units: 0

Schedule 2A: Sewage System Installer Information Cont'd

D. 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 = Fixtures Units *over* 50

Bedroom Flow (A)

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

Bedroom Flow (B)

> 5 Bedrooms	Number of Bedrooms > 5	Volume (Litres)			
❑ Yes ❑ No	0	X	500 (each)	=	
			TOTAL (B)		0

Living Area Flow (C)

Size of Living Area	# of increments of 10m² over living area	Volume (Litres)			Total Flow
❑ 0 – 200 M2		X	0	=	
☒ 201 – 400 M2	1	X	100	=	100
❑ 401 – 600 M2		X	75	=	
❑ >600 M2		X	50	=	
			TOTAL (C)		100

Fixture Units (D)

Number of Fixture Units over 20 (from pg. 5)	=			Volume (Litres)
0	X	50 L/Fixture Unit		
TOTAL (D)		0		

E. Design Flow (Number of Litres per day)

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

$$Q = \frac{1100}{A} + \frac{100}{(B \text{ or } C \text{ or } D)}$$

Q = 1200 **Litres per day**

F. Septic Tank Size (Working Capacity) for Class 4 System ❑ Existing ❑ Replacement

❑ Residential (3600L) Minimum	2 X Q	Proposed / Existing Working Capacity
❑ Non-Residential (3600L) Minimum	3 X Q	3600 Litres

G. Other Treatment Unit ❑ Tertiary ❑ Secondary

Manufacturer	Model	BMEC (attach to Application)

Schedule 2B: Soil Design Criteria and Site Evaluation

A. Percolation Rate of Design Soil (T)

Percolation Rate of Design Soil	Percolation Rate of Mantle Sand	
T = FILTER SAND - 8 min/cm Soil is: ❑ Native ☒ Imported	T = 12 min/cm Soil is: ☒ Native ❑ Imported	SEE: ❑ Laboratory Analysis ❑ Lab Report Attached

NOTE: The Town of Midland will require documentation by a certified soil technician on proposed imported soils to confirm the percolation rate ("T"-time), or the suitability of filter sand or imported fill.

B. Percolation Rate and Classification of Native Soil

❑ Laboratory Analysis (report attached) ❑ Test of Site (test hole) ❑ Estimated (Unified System)

Test Hole #1			Test Hole #2		
Soil Description	**Depth (in meters)**	**Township Confirmation**	**Soil Description**	**Depth (in meters)**	**Township Confirmation**
eg. Topsoil	0m - .3m		eg. Topsoil	0m - .3m	
6" TOPSOIL			12" TOPSOIL		
36" SAND			12" SAND		
Depth to groundwater (or T > 50 min/cm):		1.06	Depth to groundwater (or T > 50 min/cm):		0.6
Notes:			Notes: LOWER LYING AREA AT FRONT OF LOT		

ESTIMATED PERCOLATION RATE OF NATIVE SOIL (for example only)

Check	T-time (in min/cm)	Visual Appearance	Soil Type (Unified Soil Classification System)
❑	4 – 12	Silty gravels, Gravel-sand-silt	GM – Permeable to medium permeable, depending on amount of
❑	12 – 50	Clayey gravel, gravel-sand-clay mixtures	GC – Important to estimate amount of silt and clay
❑	2 – 12	Gravel, sand mix, minimal fine	SW – Medium permeability
❑	2 – 8	Gravelly sand, uniform, minimal fine	SP – Medium permeability
☒	8 – 20	Silty sand / loam mix	SM – Medium to low permeability
❑	12 – 50	Clayey sand / silty loam mix	SC – Medium to low permeability depending on amount of clay
❑	20 - 50	Inorganic silts / clayey silts	ML – Medium to low permeability

NOTE: Filter bed can only be installed in the ground when "T" time of native soil does not exceed 15 min/cm. 8.7.4.2.(2)

C. Water Supply for Lot

❑ **Is existing**

☑ **Proposed to be:**
☒ Drilled Well
❑ Dug Well
❑ Other, please specify: _____

Are other wells located within 30m of proposed septic tank / distribution pipe?	❑ Yes – if yes, be sure to include on Site Plan ☒ No

Schedule 2C: Class 4 Sewage System Calculations

A. Absorption Trench

❑ In-ground
❑ Raised
❑ Partially Raised

L = Length of Distribution Pipe (in metres)
Q = Daily Design Flow (in litres)
T = Percolation Time of Underlying Soil

8.7.3.1(2)

$$L = \frac{\quad}{Q} \times \frac{\quad}{T} \; / \; 200$$

$$L = \_\_\_\_\_$$

NOTES:

OR

8.7.3.1(3) With Treatment Unit or Permitted by Proprietary Products

$$L = QT / 300$$

$$L = \frac{\quad}{Q} \times \frac{\quad}{T} \; / \; 300$$

$$L = \_\_\_\_\_$$

NOTES:

B. Filter Bed

❑ In-ground
❑ Raised
☒ Partially Raised

L = Length of Distribution Pipe (in metres)
Q = Daily Design Flow (in litres)
T = Percolation Time of Underlying Soil

EFFECTIVE SURFACE AREA

i. If Q < 3000 litres / day

A = Q / 75

A = 1200 / 75

A = 16 m²

OR

ii. If Q > 3000 litres / day

A = Q / 50

A = _____ / 50

A = _____ m²

If Area "A" of effective surface area is greater than 50 m²:
How many cells are to be installed? 22.4
What is the size of each cell? _____

FILTER MEDIUM BASE AREA

$$A = QT / 850$$

$$A = \frac{1200}{\quad} \times \frac{12}{\quad} \; / \; 850$$

A = 16.94 m² PROPOSE 22.4 SQ METRE FILTER BED

Schedule 2C: Class 4 Sewage System Calculations Cont'd

C. Loading Rate (fill area) From Table 8.7.4.1A of the Building Code (if applicable)

LOADING RATE (LR) FOR:
FILL-BASED / ABSORPTION TRENCHES AND FILTER BEDS

	Percolation Time of Soil (T) min / cm	Loading Rate (LR) (L/m²) / per day
☒	Between 1 – 20	10
☐	Between 20 – 35	8
☐	Between 35 – 50	6
☐	Greater than 50	4

Loading Area (in m²) = Q / LR
LR = 120 m²

NATURALLY OCCURRING

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

Dose Pump required? ☐ Yes ☒ No

L = total length of distribution pipe in the leaching bed
V = effluent volume (in litres) pumped

☐ 3" diameter distribution pipe V = 3.3 x L = _____

☐ 4" diameter distribution pipe V = 5.9 x L = _____

D. Site Plan

PROVIDE THE FOLLOWING INFORMATION:

- 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 sources (eg. lakes, rivers etc.)
- Swales, slopes and changes in grade
- North (facing) arrow
- Tank and pump chamber sizes (in litres)
- Base, contact and loading areas (in square metres)
- Length of distribution pipe (in metres)

Please use the attached template.