Design of On-Site Sewage System

Schedule D to Bylaw No. 2011.21

Class of System ☐ 2 or 3 ☐ 4 ☐ 5 ☐ New Install ☐ Alter/Repair

Water Supply ☐ Existing or ☐ Proposed

☐ Drilled Well
☐ Dug Well
☐ Lake/ River
☐ Other: _____

Fixture Unit Type	# of Fixtures	Fixture Unit Value	Total
3pc Bathroom Group		6	
Flush Tank Toilet		4	
Lavatory		1	
Bathtub		1.5	
Shower (1 head)		1.5	
Bidet		1	
Urinal		1.5	
Kitchen Sinks (dbl)		1.5	
Laundry Tub		1.5	
Clothes Washer		1.5	
Dishwasher (0 if connected to sink drain)		1.5	
Floor Drain 4”		4	
Other			
		Total Fixture Units:	

Number of Bedrooms	Volume (L)
1 Bedroom	750
2 Bedrooms	1100
3 Bedrooms	1600
4 Bedrooms	2000
5 Bedrooms	2500

Daily Design Sanitary Sewage Flow Calculations (Q)

A. Base Flow from Number of Bedrooms: _____ L (max 5)
B. Additional Bedrooms over 5: _____ x 500 = _____ L
C. Each Additional Fixture over 20: _____x 50 = _____ L
D. Additional Living Space over 200sqm
- **i.** Each 10sqm over 200sqm up to 400sqm: _____ x 100 = _____ L
- **ii.** Each 10sqm over 400sqm up to 600sqm: _____ x 75 = _____ L
- **iii.** Each 10sqm greater than 600sqm: _____ x 50 = _____ L

Daily Sewage Flow (Q) = A plus the greater of B or C or D = _____ L/day

Tank(s)

Minimum Size Septic Tank 3600L
Minimum Size Holding Tank 9000L

Septic Tank Size (residential) Q x 2 = _____ L, Proposed: _____ L
Septic Tank Size (non-residential) Q x 3 = _____ L, Proposed: _____ L

Holding Tank Size Q x 7 = _____ L, Proposed: _____ L

Sewage Bed Design

☐ **Conventional Trench**

Trench Bed Sizing (native soil percolation time = T)

- QT/200

_____ x _____ /200 = _____m; Proposed: _____m

☐ **Raised Trench Bed**

Trench Bed Sizing (imported soil percolation time = T)

- QT/200

_____ x _____ /200 = _____m; Proposed: _____m

Daily Loading Area (native soil percolation time = T)

- Q/Loading Rate Factor (chart below)

_____ / _____ = _____ sqm, Proposed: _____ sqm

Receiving Soil Percolation Rate	Loading Rate Factor
1 ≤ 20	10
20 ≤ 35	8
35 ≤ 50	6
greater than 50	4

☐ **Filter Bed**

Filter Bed Area

- 3000L/day or less = Q/75, *or*
- 3000L/day or more = Q/50

_____ / _____ = _____ sqm, Proposed: _____ sqm

Contact Area (native soil percolation time = T)

- QT/850

_____ x _____/850 = _____ sqm, Proposed: _____ sqm

Daily Loading Area (native soil percolation time = T)

- Q/Loading Rate Factor (chart above)

_____ / _____ = _____ sqm, Proposed: _____ sqm

☐ **Copy of Maintenance agreement if using any of the below is required**

☐ **Alternative Treatment Unit**
Manufacturer: _____ Model: _____
BMEC/BNQ#: _____ No. of Units (if applicable): _____

☐ **Type A Dispersal Bed/ BMEC Area Bed**
Stone Area
- 3000L/day or less = Q/75, *or*
- 3000L/day or more = Q/50

_____ / _____ = _____ sqm, Proposed: _____ sqm
Sand Area (native soil percolation time = T)
- T less than 15 = QT/850
- T greater than 15 = QT/400

_____ x _____/_____ = _____ sqm, Proposed: _____ sqm

☐ **Type B Dispersal Bed**
Dispersal Area (native soil percolation time = T)
- QT/400 *or*
- Q/Loading Rate (using table 2-8 o BCMOH)

_____ / _____ = _____ sqm, Proposed: _____ sqm
Linear Loading Rate (native soil percolation time = T)
- T less than 24 = Q/40 *or*
- T greater than 24 = Q/50 *or*
- From Table 2-11 of BCMOH where required

_____ / _____ = _____ m, Proposed: _____ sqm

Class 2 or 3 Systems
Size _____ sqm;
Configured as Length _____ m x Width _____ m x Height _____ m
Wall Structure_____; Type of Cover _____

Lot Diagram
As part of the application a lot diagram is required, this must indicate north and show the following required information with proposed or existing **setbacks:**
☐ Sewage System Components (tank, bed, loading area, mantle area)
☐ Existing Sewage Systems
☐ Structures (proposed or existing, incl. pools)
☐ Property Lines
☐ Topographical Features (steep slopes, low lands)
☐ Water Supplies (incl. neighbours) and other water features (lakes, streams, etc.)
☐ Driveways
☐ Direction of Slope

TOWNSHIP OF RAMARA	Date:_____ Project:_____