

# **Town of Lakeshore Building Department**

## **GUIDE TO RESIDENTIAL SEPTIC SYSTEM PERMITS**

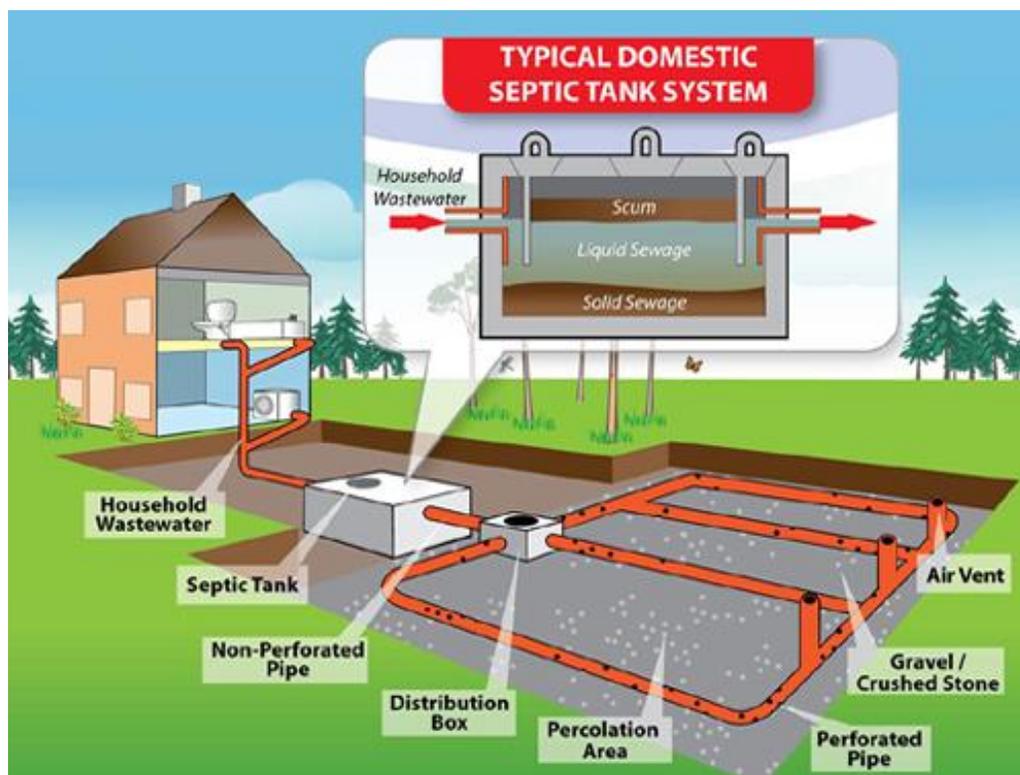


## What is a Septic System

The Town of Lakeshore consists of urban and rural properties. Sanitary sewers typically handle all sewage from urban properties. In rural areas, many properties are not connected to municipal services. They have to provide their own waste water treatment services right on their properties using a sewage septic system.

## How Does a Septic System Work

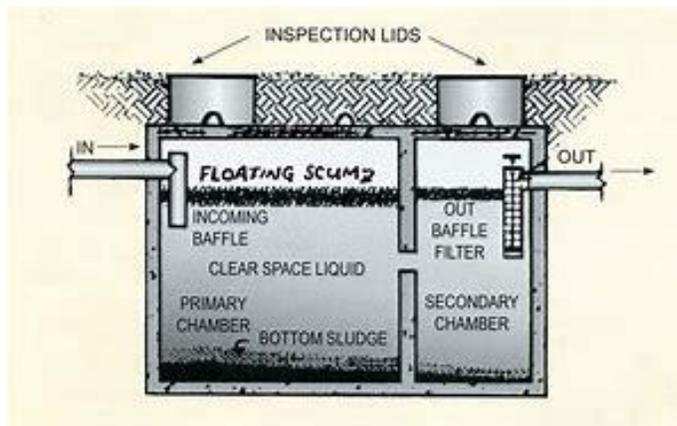
A traditional septic system has three main components. It consists of **the septic tank, distribution pipes and the leaching bed.**



The **septic tank** is comprised of a reservoir with two chambers buried on your property. The reservoir depends on the needs of the house involved. The first chamber (chamber 1) separates the solids from the liquids through decantation: heavier solids settle to the bottom of the reservoir and become sludge while greases and fats, called scum, float to the surface. The second chamber (chamber 2) contains water with fewer solids that is evacuated towards the distribution pipe and eventually to the leaching bed. Emptying the tank every two years is recommended to ensure proper function of the leaching bed.

The **distribution pipes** are a system of pipes leading from the septic tank to the leaching bed. This may include a distribution chamber to direct waste water evenly to different parts of the leaching bed. Traditional systems use gravity, but some sites use pumps to move water uphill from the septic tank. Larger systems use pumps to distribute the waste water over the leaching bed area.

Liquids slowly run off towards the leaching bed from the outlet located in the tanks second chamber. A **typical leaching bed** is an arrangement of connected pipes with holes along the sides and bottom surrounded by stone or gravel and properly draining soil or other filtering material. Soil filtering material must allow the waste water to drain away slowly enough that contaminants are filtered out, but also quickly enough that the bed does not fill up in most instances. Some waste water in the soil gets taken up by grass roots.



**Typical Section thru Septic Tank**



**Typical Leaching Bed**

There are different types of leaching beds. They include the conventional bed, raised bed, filter bed and shallow buried trenches.

- **Conventional bed**: used where the natural soils are suitable filter material and the ground is well drained. The leaching bed pipes are laid in stone filled trenches below normal ground level
- **Raised Bed**: used where natural soils are not suitable filter materials, or the site has a high water table, or bedrock is close to the surface. Soils is brought in to the site to create a leaching bed that is high enough above the underground water table or bedrock. The leaching beds are laid in stone filled trenches in the imported soils. This system requires a large extra area of soil downstream from the bed (in direction the waste water will flow as it seeps through the soil). This is called the “mantle” and is an important part of the soil filter.
- **Filter Bed**: used where a smaller bed area is required due to site conditions or lot size. Instead of trenches the whole area is excavated and filled with a layer of filter sand. A Layer of stone is placed on top of the sand and pipes are laid into it. This system can be installed in ground, partially raised or fully raised and may also use a mantle
- **Shallow Buried Trench**—used where a smaller bed area is required. This system can only be used with a “tertiary treatment” unit which provides more treatment than a traditional septic tank. Filtered waste water is pumped under pressure through perforated pipes; which gets sprayed into specially designed pipe chambers to spread the waste water evenly over the trenches. This requires additional maintenance as well an annual inspection and testing is required.



## **Who should apply for a permit?**

It is the property owner's responsibility to ensure that a building permit is obtained. You may authorize your contractor to apply for the permit, however as the owner, ensure that a permit is in place prior to commencement of work. Owner should also verify that all work, inspections and all permits are complete prior to finalizing any contracts.

## **How long does it take to get my permit and when can I start?**

Septic Permits are usually issued within 10 business days of a complete application being submitted. Applications that are incomplete because of missing or incorrect information will be delayed. **No work can commence** until the permit has been issued and all fees have been paid.

## **What is required for a Sewage Septic System Permit**

Documents for permit applications will vary by the type of construction project. Every project will require an application to construct or demolish. This can be found on our web site at [www.lakeshore.ca](http://www.lakeshore.ca).

For new residential dwelling to be constructed the septic system application package is submitted at the same time as the application for a new dwelling to be constructed. The building permit and septic permit are issued at the same time. ERCA approval may be required prior to any issuance of a septic permit.

### **Checklist for Septic Application Submissions**

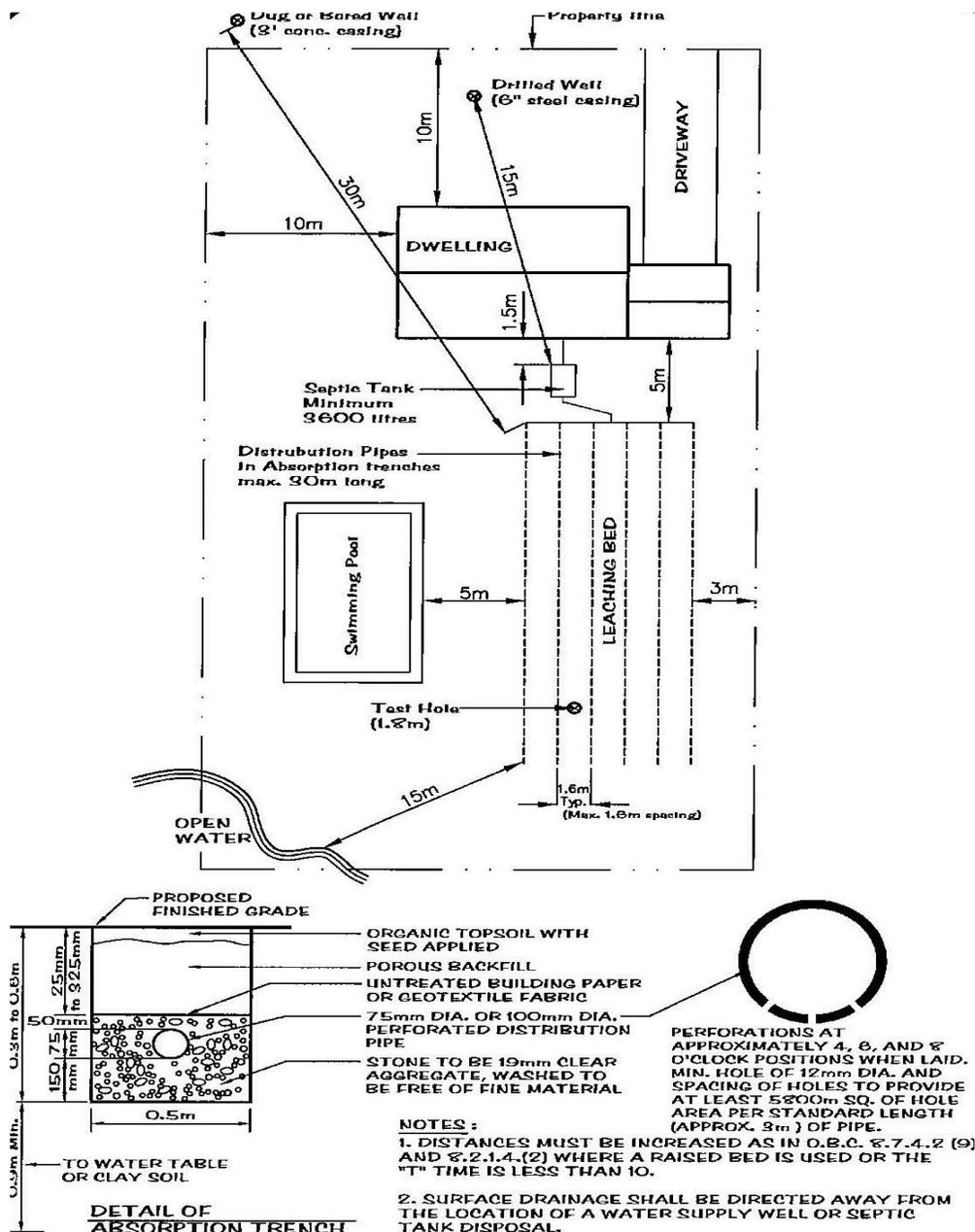
- Building Permit Application to Construct or Demolish
- Septic designer (Schedule 1) and installer (Schedule 2) forms to be filled out
- ERCA Approval (if required)
- Submit daily design calculations / fixture units Table 1 and Table 2
- A site plan indicating the full system layout with all setbacks and contact area
- Site elevation view showing how the bed will be constructed. Raised verse in ground Separation distances from rock, clay, water and etc.
- Copy of imported soil report if using a raised bed
- If a raised bed is proposed they must show the contact loading area dimensions for the bed with mantel
- If using a secondary treatment system (ie. Waterloos Bio-filter system) a copy of the BNQ certification and all components and sizing information is required. The maintenance agreement will be required prior to final inspection.

Please note that incomplete applications or plans will not be accepted.

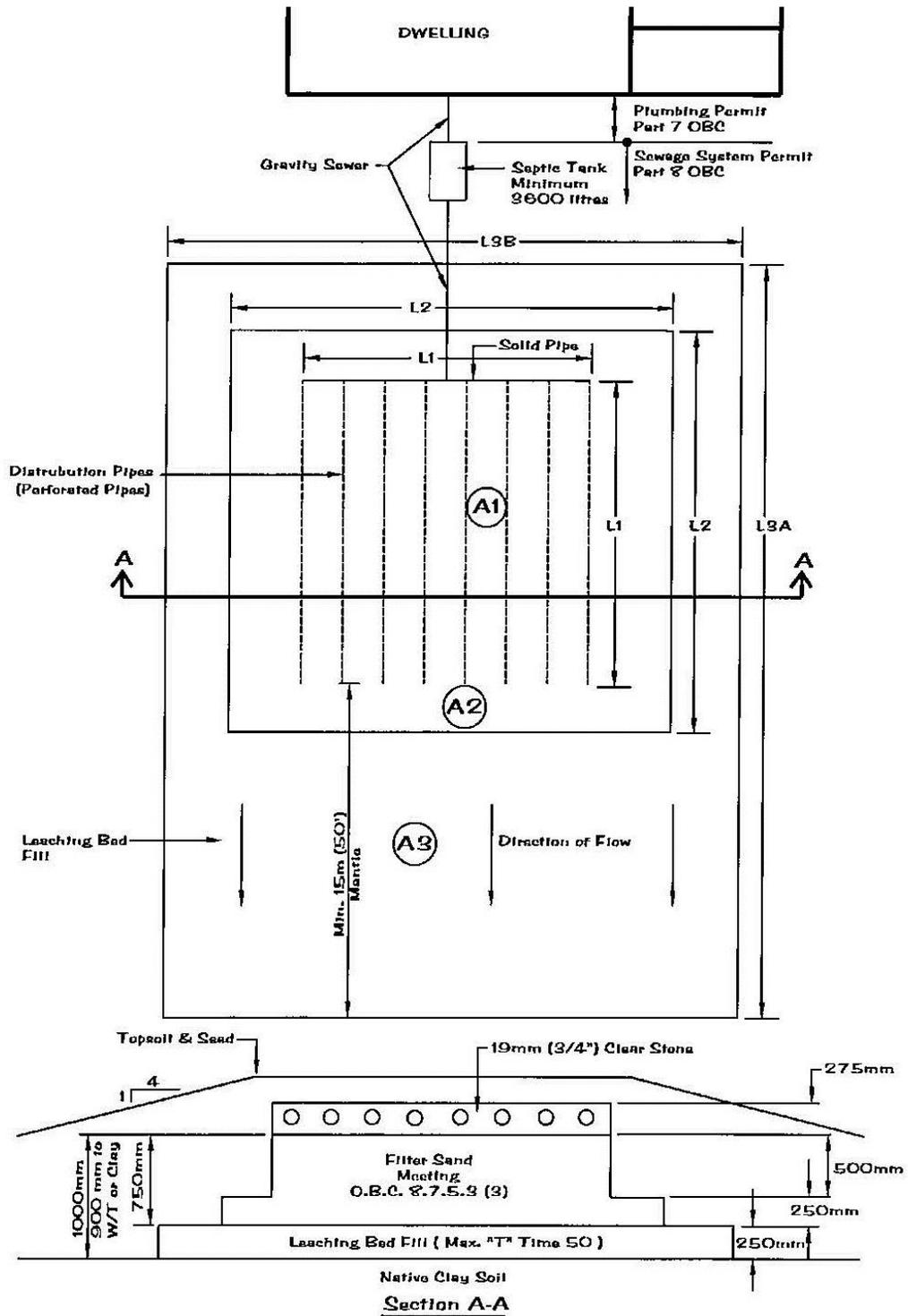
## What drawings will I need to submit?

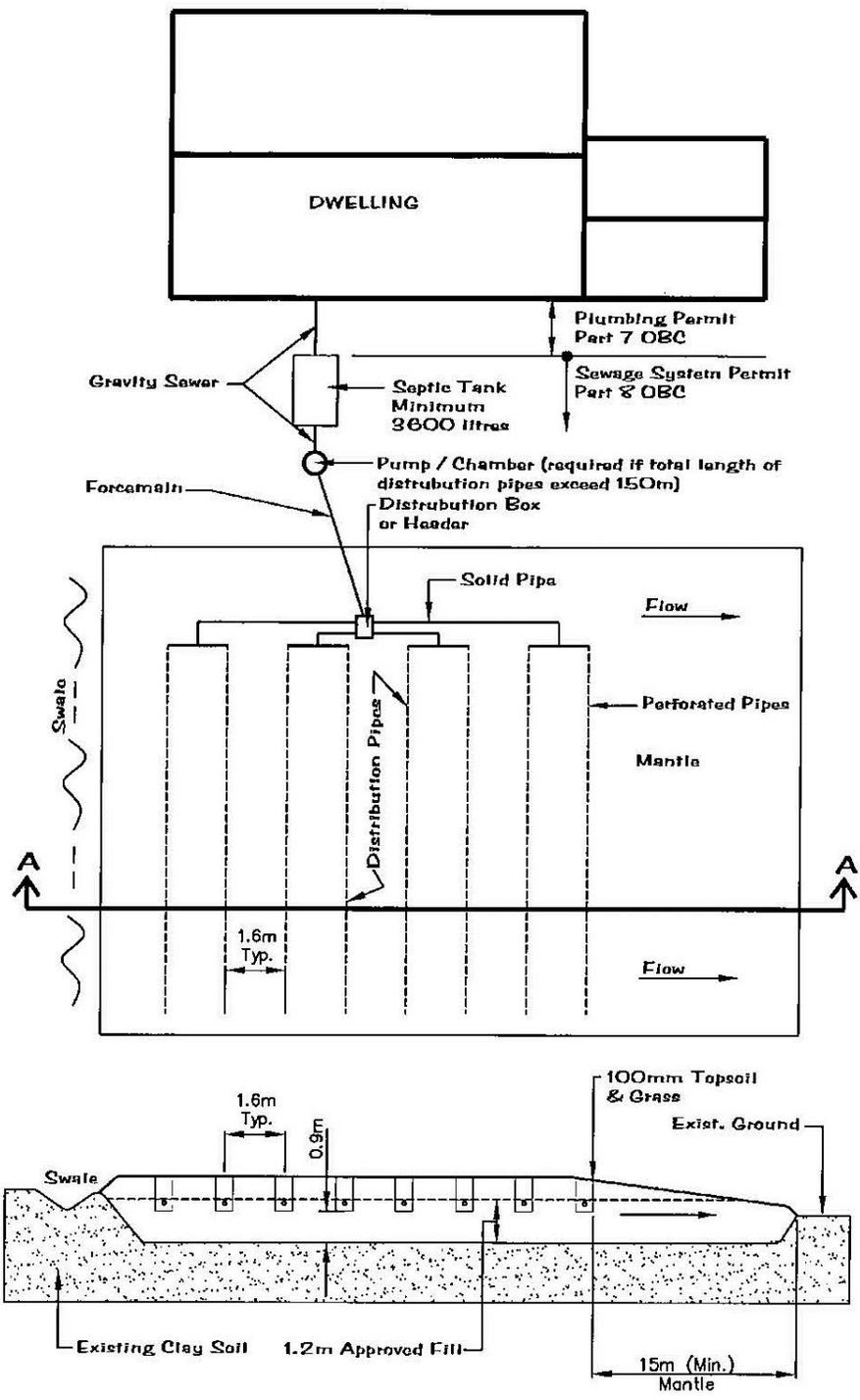
Along with the requirements list above proper drawings will be required to be submitted with the application.

- **Site plan** (scaled drawing) Indicate location of dwelling unit, septic tank, leaching bed, well, water courses, driveways, easements, swimming pools and other buildings
- Provide section thru septic leaching bed (separation distances from rock, clay, water and etc.)
- Grading plan may be required for new residential dwelling and septic systems within an infill lot



# TYPICAL SITE PLAN





Section A-A

**TYPICAL FILTER BED AND DETAILS**

## **TYPICAL RAISED LEACHING BED SECTIONS AND DETAILS**

### **What is the cost of a New Septic permit?**

Please refer to the Town of Lakeshore Tariff of Fees By-Law to view the current fee schedule

### **What inspections are required and how are they scheduled?**

Requesting inspections is the responsibility of the homeowner or the contractor of the project and confirm that all work has been completed. Permit drawings must be on site at time of inspection.

Any work covered before inspections are made, must be uncovered by the applicant. Inspections will be available between the hours of 9:00 am to 12:00 pm and 1:00 pm to 3:30 pm. Inspection request must be made 24-48 hours in advance at 519-728-2818.

### **Septic inspections consist of three separate inspections.**

- 1. Pre-Construction Inspection (Scarification Inspection)**
  - Septic bed area exposed and scarified
- 2. Septic Tank and Bed Inspection**
  - Septic tank size and manufacturer markings exposed for inspector
- 3. Final Approval:**
  - Septic tank and associated piping installed and backfilled
  - Septic bed backfilled to appropriate depth and grass seed or sod placed over septic bed.

### **Maintaining your Sewage Septic System**

Once your septic system is installed it is important that it be properly maintained to extend its life and prevent contamination of ground and surface water. It is recommended that you have your septic tank inspected and pumped out as needed every three to five years. How often you need to pump the solids out of the septic tank depends on three major factors:

- The number of people in your household
- The amount of wastewater generated which is based on the number of people in the household
- The volume of solids in the wastewater

Although your septic tank requires maintenance the leaching bed typical does not. However you should adhere to the following rules to prolong its functional life:

- **Do not drive over the leaching bed with cars, trucks or heavy equipment,**

- **Do not plant trees or shrubbery in the leaching bed area, the roots can get into the lines and plug them,**
- **Do not cover the leaching bed with hard surface, such as concrete or asphalt. Grass is best cover, because it will help prevent erosion, and help remove excess water.**
- **Do divert surface runoff water from roofs, patios, driveways and other areas away from the absorption field.**
- **Have the tank pumped out every three to five years,**
- **Avoid excessive use of anti- bacterial soaps, bleaches and harsh cleaning products**
- **Don't put paints, solvents, pesticides and other toxic chemicals in your system. Use recycling or hazardous waste collection programs for these substances**