Procedure for an Application for a Sewage System Permit

The following guidelines summarize the minimum information and documentation required to obtain a septic permit in accordance with the BCA and Town of Gravenhurst Building By-Law

If you are doing any new construction or additions to an existing structure within the shoreline activity area, you will require **Planning Approvals**;

1. **Completed Application;**
    a. A Ministry of Municipal Affairs and Housing application fully completed including Roll No.; Note: if not signed by owner, provide a letter
    b. Schedule 1 – Designer Information for On-Site Sewage System
    c. Schedule 2 – Sewage System Installer Information

2. **Supporting Documentation;**
    1. **Municipal Form 1** – soil and water table: information
    2. **Municipal Form 2** Calculations –Design Criteria

    The performance level of a septic system must be evaluated if one or more of the following are proposed;
    - Adding bedrooms,
    - Adding fixtures, or
    - Increasing floor area by 15% or greater.
    - The daily design flow of the septic system must meet Division B 8.2.1.3. of the Ontario Building Code.

    3. **Municipal Form 3** Proposal to Construct Class 4 Sewage System

NOTE: If the installer "Z" designed the sewage system, installer "Z" is the only one who can construct it. If an owner changes installers and wishes installer "Q" to install the system, installer "Q" will be required to provide a replacement application, design, and additional fees.

THE SITE PLAN is the *most important part of the application.* The *SITE PLAN* provides an aerial view of the property. This could be a survey or drawing as long as it is accurate, to scale in metric. The site plan must be large enough and clear enough to be legible but shall not exceed a paper size of 11x17.

The site plan shall include the following. Building By-law ( ):
Overall property layout, indicating property lines
The legal description, lot size, property dimensions
The location and voltage of hydro electric transmission lines of above ground electrical conductors
The location of clearances (setbacks) located both on the property and in proximity to the property, as described in column 1 of Tables 8.2.1.5., 8.2.1.6A and 8.2.1.6.B of the Building Code, which includes structures, well with a water tight casing to a depth of 6 m., other well, lake, pond, reservoir, river, spring not used as a source of potable water, stream and property line
Existing and finished ground levels or grades
Existing rights-of way, easements and municipal services, utility corridors
The location of any existing or proposed sewage system
In connection with applications for sewage systems under section 3.07 of this by-law, the location of any unsuitable, disturbed or compacted areas, proposed access routes for system maintenance
Setbacks from driveway
North Arrow
A list of Sewage System Permit fees has been included on the bottom of Municipal Form 3 for your information. The fee will be determined and entered by building department staff.

The Approval Process
The approval process generally consists of
screening of the application for completeness (incomplete applications will not be accepted)
a site inspection technical review
issuance of approval. These steps are outlined below.

A screening of the application will determine if all information has been provided. This is **not** a technical review. Incomplete applications will be returned. The following constitutes a complete permit application**. See checklist below for required information. If the application is accepted, the fees shall be paid in full.**

☐	Application Complete
☐	Schedule 1 Designer Information Sheet Complete
☐	Schedule 2 Installer Information Sheet Complete
☐	Declaration Signed
☐	Calculation Sheets (1,2,3,) Complete
☐	Site Plan (in metric) with applicable details
☐	Cross Section Drawing of designed system

If the application is accepted a site inspection will be required. It is the applicant/owner's responsibility to request the inspection when the site is ready. The location of the proposed sewage system components should be clearly marked out on site. Test holes must be excavated at the proposed site. They will be 1.5 metres in depth or to rock. The property lines should be clearly marked.

A technical review of the application will be carried out within five business days of the receipt of a completed application and the completion of the onsite inspection.

The inspection combined with the technical review will assess the;
Application's compliance with the Ontario Building code,
Adequacy of the submitted detailed design documentation and other supporting information,
Conformance of the design to the principles of sound engineering, and the adequacy of controls and maintenance features provided to facilitate the proper operation of the sewage system.

Where the Inspector determines that the design is unsatisfactory for any reason, the designer will be advised of the non-compliance and an amended application will be required.

Issuance of the Permit: You will receive:
A laminated copy of your building permit showing the required inspections that shall be posted in a visible location on site.
A 2nd copy of the permit with a summary of the system attached.

INSPECTION REQUIREMENTS

It is **your responsibility** to notify us when your project is ready for any of the inspections listed.
Subgrade or Base Inspection prior to installation may be a condition of Approval. **Review the approval**. Prior to the request for inspection provide "as built drawing" of installation, grain size analysis and weight bills for filter media.

Substantial Completion inspection is required when the septic system is substantially complete, before backfilling of bed and tank.
Final Grading Inspection. When construction of the sewage system is complete, a final grading inspection is required. This inspection will be requested on the inspection report provided during the substantial completion inspection.

IMPORTANT – NO SEWAGE SYSTEM SHALL BE PUT INTO USE UNTIL A FINAL INSPECTION HAS BEEN COMPLETED.

Application for a Permit to Construct or Demolish

This form is authorized under subsection 8(1.1) of the *Building Code Act,1992*

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

☐ New construction ☐ Addition to an existing building ☐ Alteration/repair ☐ Demolition ☐ Conditional Permit

Proposed use of building	Current use of building
Description of proposed work	

C. Applicant

Applicant is: ☐ Owner or ☐ 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 *Ontario New Home Warranties Plan Act*? If no, go to section G.	☐ Yes	☐ No
ii. Is registration required under the *Ontario New Home Warranties Plan Act*?	☐ Yes	☐ 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).	☐ Yes	☐ No
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 *Building Code Act, 1992*, to be paid when the application is made.	☐ Yes	☐ 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 *Building Code Act, 1992.*	☐ Yes	☐ 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 *Building Code Act, 1992* which enable the chief building official to determine whether the proposed building, construction or demolition will contravene any applicable law.	☐ Yes	☐ No
iv) The proposed building, construction or demolition will not contravene any applicable law.	☐ Yes	☐ 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]

☐ House	☐ HVAC – House	☐ Building Structural
☐ Small Buildings	☐ Building Services	☐ Plumbing – House
☐ Large Buildings	☐ Detection, Lighting and Power	☐ Plumbing – All Buildings
☐ Complex Buildings	☐ Fire Protection	☐ On-site Sewage Systems

Description of designer's work

D. Declaration of Designer

I _____ declare that (choose one as appropriate):

(print name)

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: _____

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: _____

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) (c).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 practice, 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?

☐ Yes (Continue to Section C) ☐ No (Continue to Section E) ☐ 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:

I _____ declare that:
(print name)

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;

OR

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.

I certify that:

1. The information contained in this schedule 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

MUNICIPAL FORM 1 – SOIL & WATER TABLE INFORMATION
(Minimum depth of test pits: 1.5 metres)

Date: _____ TEST PIT - Sub-surface conditions encountered

		APPLICANT'S USE		INSPECTOR'S USE	
Existing grade	Depth (m)	Soil Type	"T" Time	Soil Type	"T" Time
Rock & G.W.T.	- 0 -				
	- 0.25 -				
	- 0.50 -				
	- 0.75 -				
	- 1.00 -				
	- 1.25 -				
	- 1.50 -				

LEGEND: (Elevations based on existing grade) (Note: proposed revised grades must be noted on site plan)

BR – be BR - bedrock or impervious soil (min. 0.9 metres to bottom of stone)		m – metres
GWT - ground water table	EG - existing grade	Note proposed grade (PG) if applicable
HGWT– high ground water table (min. 0.9 metres to bottom of stone)		T -percolation rate (min/cm)

SEWAGE SYSTEM DESIGN CRITERIA (Based on above details):

Sewage System minimum raised height above grade	1.5m -- GWT or bedrock depth = Minimum raised height of bed _____=_____(raised height of system)

WATER SUPPLY (PROPOSED OR EXISTING):

Municipal		Dug Well		Shallow or Sand Pt.		Other		Specify:	

INSPECTORS REPORT:

Date of Inspection:	LEACHING BED DESIGN CRITERIA Depth to rock/impervious soil _____ metres
Time of Inspection: _____	Design HGWT 1.5M –_____(HGWT encountered) =____metres
Weather:	Site to be scarified yes no
Representing Owner:	Sub-grade inspection yes no
Design "T"_____ min/cm	Loading Area (Mantle) yes no
Percolation test required yes no	Inspected and Recommended by:
Grain size analysis required yes no	

BUILDING PERMIT APPLICATION – ONSITE SEWAGE SYSTEM

MUNICIPAL FORM 2 DESIGN CRITERIA

PLUMBING SPECIFICATIONS – FOR ALL BUILDINGS TO BE SERVICED BY THE PROPOSED SEWAGE SYSTEM

FIXTURES	# EXISTING Fixture	+ # NEW (Proposed)	= Total per		UNITS =		FIXTURE COUNT	OFFICE USE
Bathtub/shower		+	=		1.5	=		
Shower stall		+	=		1.5	=		
Wash basin		+	=		1.5	=		
Toilet		+	=		4	=		
Bidet		+	=		1	=		
Kitchen sink (single or double)		+	=		1.5	=		
Bar sink		+	=		1.5	=		
Washing Machine		+	=		1.5	=		
Urinal		+	=		2	=		
Other		+	=			=		
TOTAL FIXTURE UNITS (addition of fixture count column)						=		

Buildings to be serviced by system	EXISTING		ADDITIONAL		TOTALS	OFFICE USE
Floor Area (not including basement)	**M^2**		**M^2**	=	**M^2**	
Bedrooms (number)				=		

TOTALS Calculated Flow Rate (see Design Flow Chart)

 # Bedrooms _____ → _____ **L/day**
 # Fixture Units (FU) _____ → _____ **L/day**
Floor Area _____ → _____ **L/day**

Total Daily Sewage Flow Q = _____ L/day[bedroom flow rate(up to ,500L/day)+highest calculated rate]
(Flow to be used for design Schedule 3C)

PROPOSAL TO CONSTRUCT SEWAGE SYSTEM

☐ Class 2 Leaching Pit -- (200 L./fixture unit (pressurized) cannot exceed 1,000 L./day)

Side wall Loading rate (litres/day /sq.m.) = 400/T Lr = 400/___=_____sq. m. of sidewall
Design details:_____.

☐ Class 4 Sewage System - septic tank and or leaching bed (filter or trench bed see Schedule 3C (next page)

☐ Tertiary Treatment Unit – BMEC approval & Literature (specs for unit) must be submitted with application

Make/model _____ Flow Rate_____L./day Alarm _____(mech. systems)

Raised Height _____ metres. Stone Area _____m² Sand Area _____m²

☐ Class 5 Holding Tank – Requirements: Audio/Visual Alarm & 3" venting

Q X 7 = x 7 =_____L Tank Size Proposed _____L
District of Muskoka Approval _____Pump Out Contract _____ (approval and contract required prior to submission)

BUILDING PERMIT APPLICATION – ONSITE SEWAGE SYSTEM

MUNICIPAL FORM 3 – PROPOSAL TO CONSTRUCT CLASS 4 SEWAGE SYSTEM

☐ **Septic Tank (Q x 2.5 if Residential with Garburator)** **Use Existing_____New CSA Standard ____**

Residential Occupancy
Q x 2 = _____X 2 = _____litres

Non-Residential (Commercial)
Q x 3 = _____X 3 = _____litres

Proposed Working Capacity _____litres (min. 3600L)

☐ Treatment Unit (specify) _____Operating Capacity _____litres/day

---

☐ Class 4F Filter Bed

If Q is 3000 litres or less Q ÷ 75 = ÷ 75 = _____ Sq. Metres

If Q is more than 3000 litres Q ÷ 50 = ÷ 50 = _____ Sq. M. ÷ 2 pods of _____Sq. M.

If Treatment Unit Q ÷ _____ = __ ÷ = _____ Sq. Metres

Extended Contact Area (Base of Filter) $\frac{Q}{850} \times T \times \frac{\quad}{850}$ = _____Sq. Metre Contact Area

PROPOSAL: # of Pods____ Filter Bed Area _____ m² Contact Area _____m² Raised height _____ m.

☐ Class 4 Trench Bed Absorption trench(* ÷ 300 if treatment unit)

T-time (percolation rate of soil used for calculation.) Native Imported Raised height m.

Q X T ÷ 200* = x ÷ 200* = m. ÷ no. of runs = m. per run

☐ Class 4 Loading Rates - Area requirements (required for all Class 4 sewage systems)

Percolation Time of Existing (in-situ) Soils Formula and Calculation of Loading Area Req'd

If "T" is : 1 < 20 …….. Use: $\frac{Q}{10}$ = _____ = _____ m²

If "T" is : 20 --- 35 …….. Use: $\frac{Q}{8}$ = _____ = _____ m²

If "T" is : 35 --- 50 …….. Use: $\frac{Q}{6}$ = _____ = _____ m²

If "T" is : > 50 …….. Use: $\frac{Q}{4}$ = _____ = _____ m²

OFFICE USE ONLY

As of January 1, 2013 subject to change

SEWAGE SYSTEM PERMIT FEES		PERMIT FEE	$
New Sewage system/Holding Tank	$450.00		
New Septic Tank only	$175.00	FEE PAID	$
Bed Replacement only	$300.00		
Leaching Pit	$175.00	RECEIPT #	

THE CHARTS BELOW ARE FOR GUIDANCE PURPOSES ONLY

You should always refer to the Ontario Building Code for Current Regulations.

TOTAL DAILY DESIGN RATES FOR RESIDENTIAL OCCUPANCY "Q" (Litres/Day)	
Dwellings:	
a) 1 bedroom dwelling……..	750
b) 2 bedroom dwelling……..	1100
c) 3 bedroom dwelling……..	1600
d) 4 bedroom dwelling……	2000
e) 5 bedroom dwelling……	2500
f) Additional flow for **(2)****	
i. Each bedroom over 5……	500
ii. A) each 10m^2 (or part thereof) over 200m^2 up to 400m^2 **(3**)** or……	100
B) each 10m^2 (or part thereof)over 400m^2 up to 600m ^{2} **(3**),** and ……	75
C) each 10m^2 (or part thereof)over 600m^2 **(3**)** or……	50
iii. each fixture unit of 20 fixture units……..	50
(2)** Where multiple calculations of sewage volume is permitted the calculation resulting the highest flow shall be used in determining the design daily sanitary sewage flow.	
(3)** Total finished area, excluding the area of the finished basement.	

Example of how to determine daily design flow rate:

Using a 4 bedroom 235 m^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) =2400ℓ/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 **One** calculation that provides the **greatest** daily flow rate value.

APPROXIMATE SOIL PERCOLATION RATES "T"

The following are estimated typical ranges of "T" times. Actual "T' times may vary significantly due to on site soil conditions.

Soil Type	Clean Med-Course Sand	Silty Gravely 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+

SIZING FORMULAS FOR COMPONENTS OF SEPTIC SYSTEMS BASED ON TOTAL DAILY DESIGN FLOW RATES

Class 4 Filter Bed Surface area of filter medium in square metres)	If daily flow rate is <3,000ℓ/day÷ 75 If daily flow rate is > 3,000ℓ/day÷50 Minimum area of filter medium =10m^2 Maximum area of filter medium =50m^2	Example using the total flow rate from above: Flow rate=2,400ℓ/day(which is ,3000ℓ/day) ⇨A (area of bed) =2,400÷75=32m^2 Under max. allowed area →1 bed = 32m^2
Class 4 Trench Bed (total length of distribution pipe in metres)	Formula for conventional beds without secondary treatment units: L=QT÷200 where: L is total length of pipe Q is total daily design flow rate T is soil percolation rate Minimum length of tile = 40metres	Example using the total flow rate from above: Q = 2400l/day (flow rate from above) T = 6min/cm (if using "typical med course sand) L = (total length of distribution pipe) +QT ÷200 ⇨ L = (2,400 x 6 ÷ 200) = 72 metres
Septic Tank (litres)	Tank(s) must have a minimum working capacity of 2 X's the daily design flow rate. Minimum tank size 3,600 litres	Example using the total flow rate from above of 2,400ℓ/day then the minimum tank size would be ⇨total Working Capacity 2 x 2,400 = 4,800 litres

MINIMUM CLEARANCE DISTANCES FOR COMPONENTS OF SEWAGE SYSTEMS (METRES)

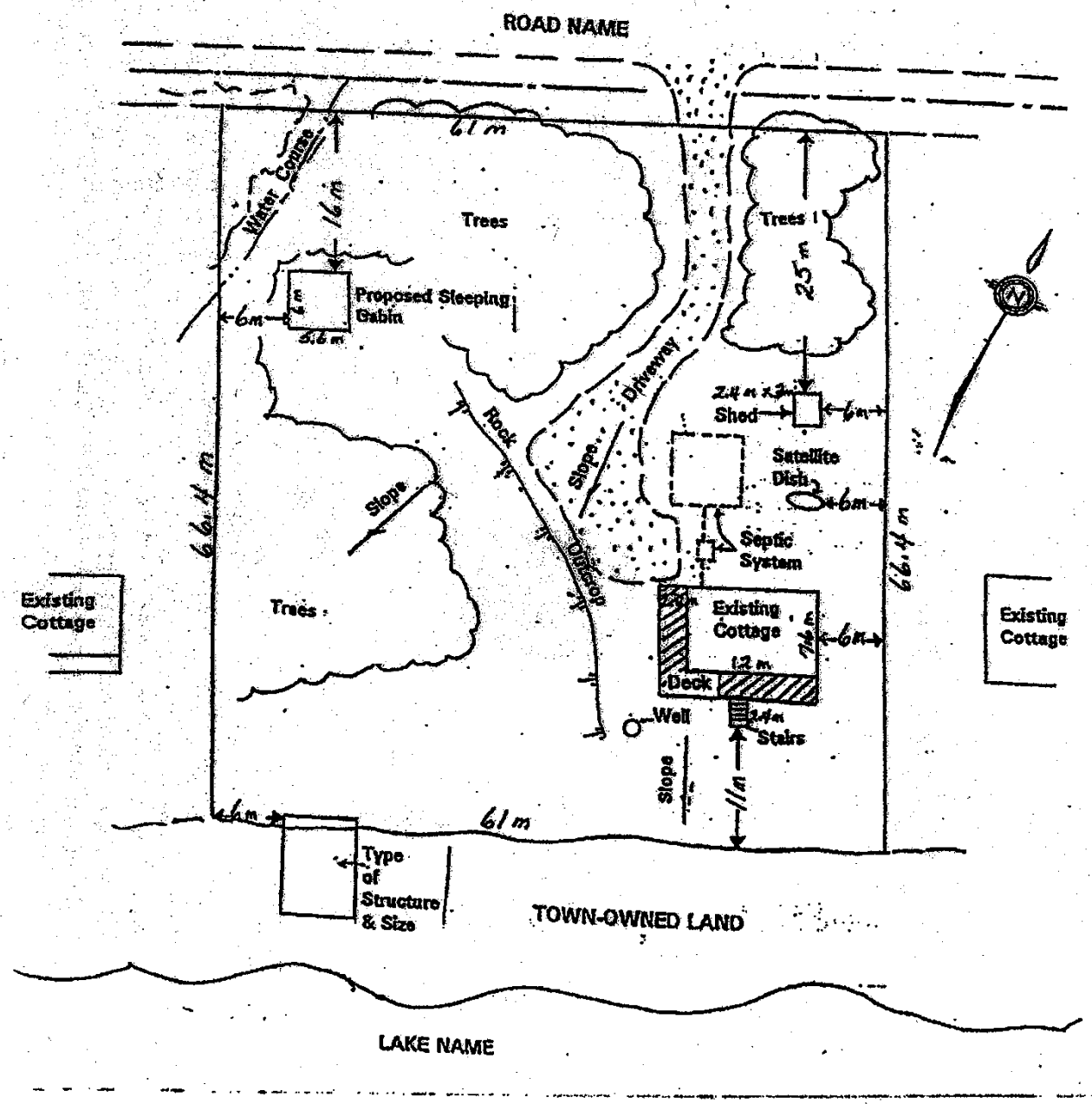
⇨ If the bed is raised, add 2 metres for every 1 metre of rise	Wells (with 6m casing)	Wells (not 6m casing)	Springs Potable	Springs Not Potable	Surface Water (lake, river etc.)	Property Lines	Dwellings Structure
Class 4 Distribution Pipe	15	30	30	30	15	3	5
Class 4 Septic Tank	15	15	15	15	15	3	1.5
Class 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	

LOCATION PLAN OF:

Part of Lot **, Concession II
former Township of **
Town of Gravenhurst
District of Muskoka
being Lot **, Plan **

Scale: 1

SAMPLE BUILDING LOCATION PLAN



DECLARATION - AUTHORIZED AGENTS

I, _____, am the owner of the property for which this permit is to
(Please print)
apply. I do hereby grant authorization to _____ to act on my behalf in regard to this application. (Please print)

Owners Signature: _____ (Date)_____

PLEASE PRINT IN INK

I, _____, THE UNDERSIGNED, HEREBY ACKNOWLEDGE AND AGREE TO THE FOLLOWING:

3.1.18.1. Clearance to Buildings

(1) Where a building is to be constructed in proximity to existing above ground electrical conductors of voltage not less than 2.5 kV and not more than 46kV,

(a) The building shall not be located beneath the conductors, and

(b) The horizontal distance between the building and the conductors shall not be less than 3m (9 ft 10 in.)

(2) Where a building is to be constructed in proximity to existing above ground electrical conductors of a voltage more than 46kV, the clearances between the building and the conductors shall conform to the requirements of CAN/CSA-C22.3 No. 1, "Overhead Systems".

There are no Right of Ways or Easements (either Registered or Unregistered on title) on this property for which this application pertains.
This building permit may be revoked if work is not commenced within six (6) months or if there is a lapse in construction for a period of twelve (12) months.
I will be solely responsible for give at least two municipal working days notice for the purpose of having inspections carried out pursuant to inspection requirements listed on the posted building permit and further acknowledge that failure to give required inspection notices can result in having to uncover uninspected work and/or penalties as set out in the Building Code Act.
No changes in plans will be made without written approval from the Chief Building Official and/or Plumbing Inspector
The information set out in this application is accurate and correct.

Date:_____ Signature:_____