



PATERSON GROUP

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Geotechnical Engineering
Environmental Engineering
Hydrogeology
Materials Testing
Building Science
Rural Development Design
Retaining Wall Design
Noise and Vibration Studies

July 27, 2026

File: PH4841-LET.01.REV.01.

Percy Pyper (1997) Ltd
1971 Old Prescott Road,
Greely, ON
K4P 1N6

Attention: **Brent Pyper**

patersongroup.ca

Subject: **Septic System Impact Assessment
(Terrain Analysis)
Re-zoning and Site Plan Control Application**
5360 Bank Street
Ottawa (Gloucester), Ontario

INTRODUCTION

Paterson Group Inc. (Paterson) was retained by Greely Sand and Gravel Inc. to carry out a Septic System Impact Assessment in support of a proposed Re-zoning application and a Site Plan Control application (hereby referred to as Site Plan application) for the aforementioned property. It is our understanding that the current property, identified as Part of Lot 29, Concession 4 and located at 5360 Bank Street, Ottawa, consists of a 6.74 hectares (ha) parcel with an existing development in the central portion of the site. The proposed Re-zoning application aims to rezone the 6.74 ha parcel from Rural Countryside (RU) to Light Industrial. Please refer to the Key Plan attached for more details.

The purpose of this study has been to carry out a septic system impact assessment using publicly available information and fieldwork performed by others to determine the site's suitability for private on-site wastewater systems. Specifically, the intent of this report is to provide a maximum sewage flow volume which the subject site can support from a nitrate attenuation standpoint and assess the theoretical septic impact of the proposed replacement sewage system. This hydrogeological study is required to assess the risk that the development's individual on-site sewage system will not cause concentrations of nitrate in groundwater to exceed 10 mg/L at the property boundary.





BACKGROUND

Hydrogeological Assessment

As the subject site is to be municipally serviced with a water supply, a Hydrogeological Assessment under the City of Ottawa's (City) Hydrogeological and Terrain Analysis Guidelines (HTAG) is not required to support the Re-zoning application and Site Plan application.

Subject Site

The subject property consists of a light industrial development with associated storage facilities and is located at 5360 Bank Street in the City of Ottawa, Ontario (refer to City of Ottawa, Plan of Survey, attached). The subject site is currently occupied by a maintenance garage, a site trailer and a number of covered storage areas with associated paved and gravel access lanes. The site is currently serviced by a private water supply and private septic system, however the Site Plan application is proposed to be serviced using municipal water supply. A proposed replacement septic system design has been approved by the Ottawa Septic System Office (OSSO) in support of the Site Plan application. There are no proposed building changes as part of the Site Plan application.

The subject site is largely rectangular in shape with a total area of 6.74 ha. The John Boyce Municipal Drain flows north-west to south-east through the western half of the severed property. The site and buildings are currently considered legal non-conforming as the site is currently zoned as RU (rural). The intention of the aforementioned Re-zoning application is to rezone the subject site as light industrial.

Regional Geology

Published surficial geology mapping (OGS MRD128) for the area in the vicinity of the subject site indicates that the majority of the site is underlain predominantly by glaciofluvial deposits consisting of river deposits and delta topset facies. The north-eastern portion of the site is mapped to consist of stone-poor, silty sand to sandy silt-textured till on Paleozoic terrain.

Published bedrock geology mapping (OGS MRD219) indicates that the subject lands are underlain by dolostone with minor shale and sandstone of the Beekmantown Group and Oxford Formation. The available bedrock mapping coincides with the well driller's description on the Ministry of the Environment, Conservation and Parks (MECP) Water Well Records (WWR) for the surrounding well supplies installed within the subject area, which generally indicate a grey limestone.



On-site Geological Studies

A series of boreholes were excavated on the subject parcel to delineate the subsurface soil conditions as part of the Phase II Environmental Site Assessment (ESA) completed by Gemtec (Project:100227.101 dated October 2, 2023).

The subsurface profile generally consisted of a sand to silt with varying amounts of trace clay or gravel extending to the depth of the borehole. Topsoil was recorded to extend to a maximum depth of 1.98 m bgs (BH23-06). A varying fill layer was identified on the site in the locations of BH 23-3, BH23-4, BH23-5 and BH23-6 and extended to a maximum depth of 6.1 m bgs.

Karst Mapping

Available Karst mapping (OGS GRS005) was reviewed as part of this assessment. The available mapping does not indicate the presence of any inferred or potential karstic features. Furthermore, no indication of karstic features were observed during the site visits completed by Paterson personnel.

Mississippi-Rideau Source Protection Plan

The Mississippi-Rideau Source Protection Plan (MRSP) provides guidance as to which policies apply to a given property, municipality or specific activity and if there are specific designations that apply to the area. The subject site and surrounding areas have been designated as a Highly Vulnerable Aquifer (HVA), with parts of the site being mapped as an Intake Protection Zone (IPZ) Zone 3 and a Significant Groundwater Recharge Area (SGRA).

Based upon the designation of an SGRA, IPZ Zone 3 and HVA, the MRSP provides a list of activities that are prohibited, managed or encouraged to change dependent upon the vulnerable area type. The subject site is mapped to be in IPZ zone 3 (Source Protection Atlas), however has a IPZ score of less than 8 (MRSP). There is no prohibition of land uses on the subject site based upon its existing usage.

Therefore, there are no related requirements for an HVA, a IPZ with a score of less than 8 or SGRA at this location.

TERRAIN ANALYSIS

The fieldwork which was completed as part of the Phase II ESA by Gemtec for the site (Report 100227.101, dated October 2, 2023) was used in support of this assessment. Additional information pertaining to this investigation was gathered from available geological mapping and surrounding WWR's.



Surficial Geology

A series of boreholes were put down on the subject parcel to delineate the subsurface soil conditions as part of the environmental investigation (Gemtec Report 100227.101 dated October 2, 2023). In August, 2023, seven (7) boreholes were completed on the property to delineate the subsurface profile. The location of the boreholes on the property are delineated on Gemtec's Borehole and Monitoring Well Location Plan, Figure A-4, attached.

The test hole locations were recorded and the subsurface conditions, including the soil morphology and depth to the groundwater table (if encountered), were carefully observed and recorded. The soils encountered were classified texturally in the field, and later reviewed in the laboratory.

The boreholes were advanced to a maximum depth of 6.9 m bgs. Auger refusal was recorded to occur at 4.0 m bgs in boreholes 23-01, 23-02, and 23-07, and the remainder of the boreholes extended past 4.0 m bgs to a maximum depth of 6.9 m bgs.

According to the borehole logs, the subsurface profile generally consisted of a sand to silt with varying amounts of clay or gravel extending to the depth of the borehole. Topsoil was recorded to extend to a maximum depth of 1.98 m bgs (BH23-06). A varying fill layer was identified on the site in the locations of BH 23-3, BH23-4, BH23-5 and BH23-6 and extended to a maximum depth of 6.1 m bgs.

Reference should be made to the borehole logs appended to this report for the details of the soil profiles encountered at each test hole location.

Materials encountered during Gemtec's Phase II ESA were consistent with the available surficial and bedrock geology mapping.

Hydrogeological Sensitivity of the Site

The subject site currently consists of a developed area which has been used for construction and light industrial use since prior to 1958 (Milestone Aggregate Consulting Services Inc. Chronological History – 5360 Bank Street dated March 21, 2023).

The topography of the site is generally sloping gently away from the central portion. The local flow direction of the surficial aquifer is expected to be towards the western portion of the site, where the John Boyce Municipal Drain runs from northwest to southeast across the site. The regional groundwater flow is considered to be in an southeasterly direction.

According to surrounding Water Well Records (WWR), the bedrock depths surrounding the proposed site vary from 0 to 13.4 m bgs. According to the field investigation, the overburden thickness was observed to be greater than 2 m at all borehole locations. As



the proposed site does not have bedrock within 2 m of the ground surface, the site is not considered hydrogeologically sensitive.

Conceptual Lot Development

The existing development is not anticipated to change as part of the Site Plan application. The Site Plan application is being completed to ensure that the existing site use conforms to current City of Ottawa policies.

Sewage System Design and Total Daily Design Sewage Flow

As this Terrain Analysis is completed to support both a Re-zoning and Site Plan application, the proposed sewage system will be analysed and the maximum predicted nitrate concentration for the Site will be determined.

An approved Ottawa Septic System Office (OSSO) Sewage System Installation Permit (SSIP) will be submitted as part of the Site Plan control application submission. The approved OSSO SSIP is for a Total Daily Design Sanitary Sewage Flow (TDDSSF) of 450 L/day. Please refer to the approved OSSO SSIP for additional details.

PREDICTIVE NITRATE IMPACT ASSESSMENT

Nitrate is considered to be a critical parameter of concern when assessing impacts to groundwater quality downgradient of an onsite sewage system. The City of Ottawa (City) annotated MECP Procedure D-5-4 in the City of Ottawa's (City) Hydrogeological and Terrain Analysis Guidelines (HTAG) applies for the proposed development. For the purpose of this guideline, the Ontario Drinking Water Objective of 10 mg/L of nitrate is the maximum allowable concentration detectable in the groundwater prior to the property line.

A detailed impact assessment is required due to the commercial nature of the site. In order to demonstrate that private services would adequately support the proposed Re-zoning application, a predictive nitrate impact assessment (NIA) for the subject site was completed. This calculation was completed to determine the maximum sewage flow volume which could be applied to the subject site with the current site conditions, to support the Re-zoning application. The City of Ottawa requires that a Predictive Nitrate Impact Assessment completed in support of a Re-zoning application be completed without the use of tertiary treatment, whereas a Predictive Nitrate Impact Assessment completed in support of a Site Plan application can be completed using tertiary treatment. As such, calculations to determine the maximum onsite flow volumes were completed. A maximum sewage flow volume calculation was completed using a conventional system (no nitrate reduction) (Scenario 1) to support the Re-zoning application and another with an NSF 245/ BNQ tertiary treatment system with 50 % nitrate reduction (Scenario 2) to support the Site Plan application. A third calculation was completed using the TDDSSF of 450 L/day, as per the approved OSSO SSIP submitted as part of the Site Plan application, to demonstrate that the proposed usage will meet the



City's minimum requirements (Scenario 3). The values shown in the Predictive Nitrate Impact Assessment calculation attached to this report are summarized below:

☐	Site area	6.74 ha
☐	Impervious area %	40 %
☐	Concentration of nitrate in effluent	
	• Scenario 1+3: Value based on conventional effluent concentration	40 mg/L
	• Scenario 2: Value based on NSF245/BNQ certified nitrate reduction system with 50% nitrate reduction	20 mg/L
☐	Surplus Water	298 mm/year
	<i>(The surplus water value was estimated based on Environment Canada Climate Office values with a soil type comprised of fine sandy loam (Mature Forest) and anthropogenic sources, which can be found attached.)</i>	
☐	Combined infiltration factor based on:	0.75
	• Topography infiltration factor	0.20
	• Soil texture infiltration factor	0.40
	• Cover infiltration factor	0.15

The topography infiltration factor of 0.20 is based upon rolling land (average slope of 2.8 to 3.8 m/km). The soil texture infiltration factor was based upon an "open sandy loam" with a value of 0.4 which is a reasonable generalization based upon the field investigation by others, available geological mapping and surrounding WWR's. The "vegetative cover infiltration factor" was calculated as 0.15 based upon the site being approximately halfway between undeveloped land consisting of partially wooded areas and developed areas.

Scenario 1 – Site Maximum TDDSSF with Conventional Sewage system:

As part of the Re-zoning application, a Predictive Nitrate Impact Assessment was completed to determine the maximum sewage flow volume which could be applied to the subject site using the current site conditions and a conventional septic system without surpassing the maximum nitrate attenuation concentration of 10 mg/L in the groundwater prior to the property line. Based on the existing site conditions and the use of a conventional sewage system (40 mg/L nitrate concentration), the predicted maximum allowable sewage flow volume is **9.5 m³/day** to attenuate the nitrate concentration to below the 10 mg/L nitrate concentration in the groundwater prior to the property line.

Scenario 2 – Site Maximum TDDSSF with Tertiary Sewage system (NSF 245/BNQ):

As part of the Site Plan application, a Predictive Nitrate Impact Assessment was completed to determine the maximum sewage flow volume which could be applied to the subject site using the current site conditions and a NSF 245/BNQ certified tertiary



treatment septic system without surpassing the maximum nitrate attenuation concentration of 10 mg/L in the groundwater prior to the property line. This type of system would have a minimum 50 % nitrate reduction requirement. Based on the existing site conditions and the use of a NSF 245 / BNQ tertiary treatment sewage system (20 mg/L nitrate concentration), the predicted maximum allowable sewage flow volume is **greater than 10 m³/day** to attenuate the nitrate concentration to below the 10 mg/L nitrate concentration in the groundwater prior to the property line. It should be noted that a sewage system with a TDDSSF of greater than 10,000 L/day would require a MECP Environmental Compliance approval (ECA).

Scenario 3 – OSSO SSIP System for Site Plan:

As per the approved OSSO SSIP permit that has been submitted as part of the Site Plan application, the proposed TDDSSF volumes are **0.45 m³/day**. The proposed system is a conventional system (40 mg/L nitrate concentration). This TDDSSF is less than the maximum allowable sewage low volume presented for a conventional system.

Using the existing site conditions, a predictive NIA using a TDDSSF of 450 L/day results in a nitrate concentration of 0.31 mg/L at the property boundary. Please refer to the Predictive Nitrate Impact Assessment calculation attached to this report for further details.

The OSSO approved SSIP consists of a sewage system which would result in a predictive nitrate concentration of 0.31 mg/L at the property boundary. As the Ontario Drinking Water Objective of 10 mg/L of nitrate is the maximum allowable concentration detectable in the groundwater prior to the property line, it is our opinion that the property can adequately support the proposed Site Plan application without having an adverse impact on the underlying bedrock aquifer based on the results of the predictive NIA.



CONCLUSIONS

Based on the information contained within the body of this review, the following conclusions can be drawn:

- 1.0 A Sewage System Permit and Building Permit need to be issued prior to the commencement of construction on the proposed sewage system.
- 2.0 As overburden thickness was recorded to be greater than 2 m, the site is not considered hydrogeologically sensitive.
- 3.0 Based on the existing site conditions and the use of a conventional sewage system (40 mg/L nitrate concentration), the predicted maximum allowable sewage flow volume is 9.5 m³/day to attenuate the nitrate concentration to the maximum 10 mg/L nitrate concentration in the groundwater prior to the property line.
- 4.0 The predictive NIA completed on the OSSO approved SSIP with TDDSSF of 0.45 m³/day resulted in a predictive nitrate concentration of 0.31 mg/L at the property boundary, which is below the Ontario Drinking Water Objective maximum allowable concentration of 10 mg/L of nitrate detectable in the groundwater prior to the property line.

The present report applies only to the project described in this document. Use of this report for purposes other than those described herein or by person(s) other than Greely Sand and Gravel, or their agents, is not authorized without review by Paterson for the applicability of our recommendations to the alternative use of the report.

We trust that this report satisfies your present requirements. Should you have any questions regarding this report, do not hesitate to contact us.

Yours truly,

PATERSON GROUP INC.

Alex Schopf
PhD, E.I.T

Attachments:

- ☐ Key Plan
- ☐ MECP Water Well Records
- ☐ Nitrate Impact Assessment Calculation
- ☐ City of Ottawa Plan of Survey
- ☐ Gemtec Soil Profile and Test Data Sheets
- ☐ Gemtec – Figure A-4 Borehole and Monitoring Well Location Plan



Erik Ardley
P. Geo



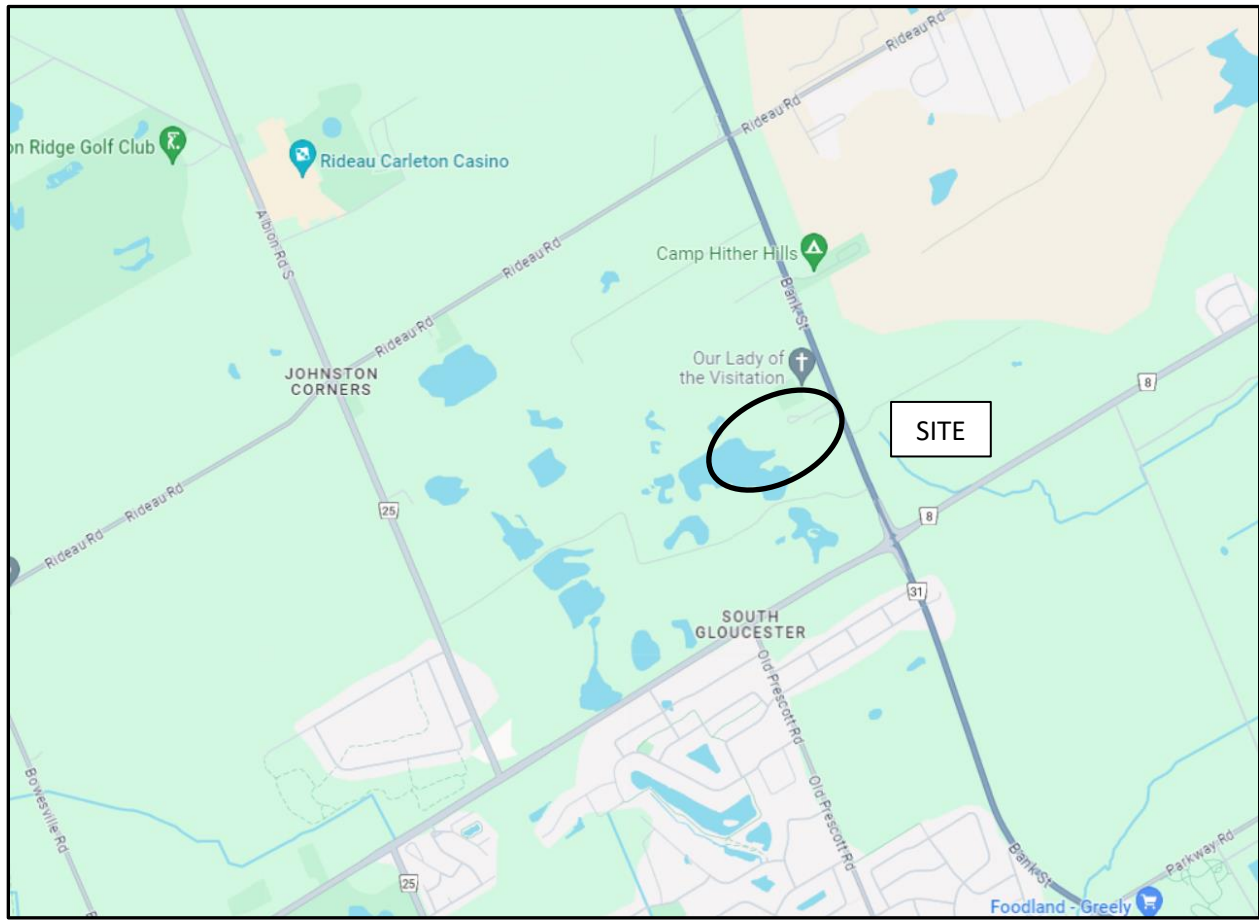


FIGURE 1

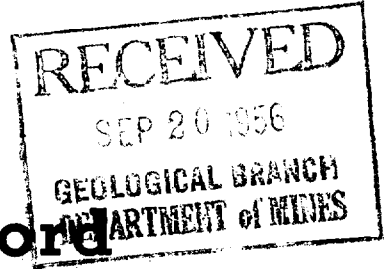
KEY PLAN

UTM 18Z 4549710E
5R 50145810N
Elev. 4R 0346
Basin 25

317/52



15 No 2206



The Water-well Drillers Act, 1954
Department of Mines

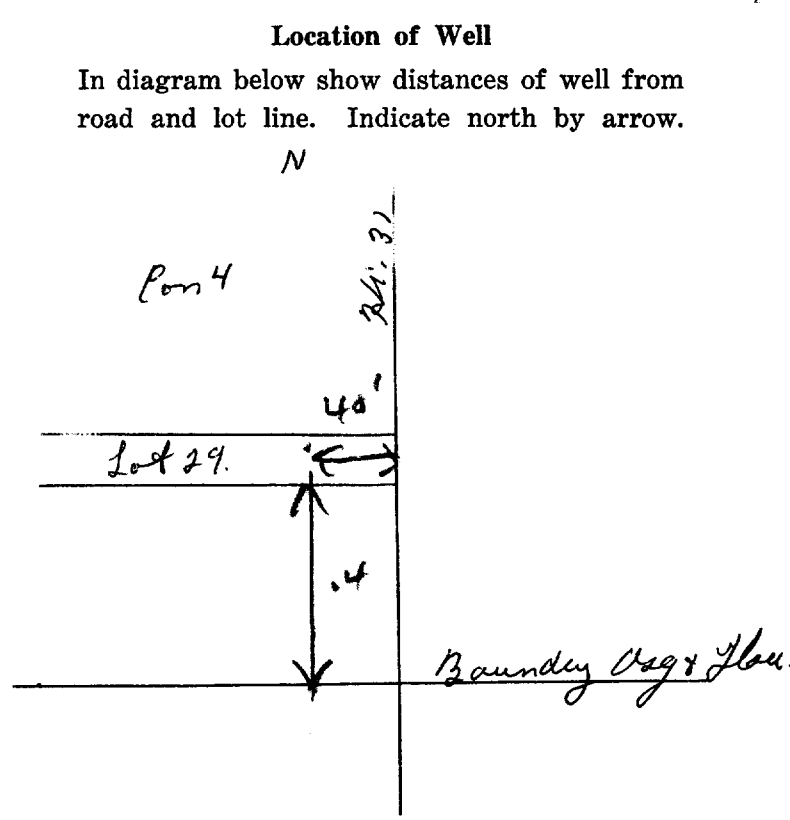
Water-Well Record

County or Territorial District Carleton Township, Village, Town or City Gloucester
Address 1 Gloucester
(day) (month) (year)

Pipe and Casing Record	Pumping Test
Casing diameter(s) <u>4"</u>	Static level <u>10'</u>
Length(s) <u>9</u>	Pumping rate <u>260 G.P.H.</u>
Type of screen	Pumping level <u>12'</u>
Length of screen	Duration of test <u>1 hr</u>

Well Log			Water Record		
Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water (s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
6' Clay	1 "	6'			
Lime stone GREY	6'	45''	45''	35''	fresh

For what purpose(s) is the water to be used?
HOUSE
Is water clear or cloudy? CLEAR
Is well on upland, in valley, or on hillside?
UPLAND
Drilling firm M. Meagher
Address 639 Rawanwood Ave. (24)
Name of Driller
Address
Licence Number
I certify that the foregoing statements of fact are true.
Date 11/1/56
Signature of Licensee M. Meagher



Wm

15 № 2272

UTM 18^Z 454920^E

$|5|_R \quad |5| \quad |0| \quad |1| \quad |4| \quad |8| \quad |9| \quad |0|_N$



ONTARIO

Elev. 2425.93 | 6120.17

Basin 295

✓		
---	--	--

407 28

The Water-well Drillers Act, 1954
Department of Mines

GROUND WATER BRANCH
DEC 18 1958
ONTARIO WATER
RESOURCES COMMISSION

Water-Well Record

PARLETON Township, Village, Town or City.....GLOUCESTER.....

Village, Town or City).....

Address

Date completed 28 02 2
(day) (month) (year)

Pipe and Casing Record

Pumping Test

Casing diameter(s) 4"
Length(s) 21'
Type of screen No
Length of screen

Static level 8
Pumping rate 250 GPH
Pumping level 14
Duration of test 171/2

Well Log

Water Record

[illegible]

For what purpose(s) is the water to be used?

House

Is water clear or cloudy?.....CLEAR.....

Is well on upland, in valley, or on hillside?.....

Drilling firm

Address

Name of Driller M. MEATHER

Address 017222

Licence Number.....71.....

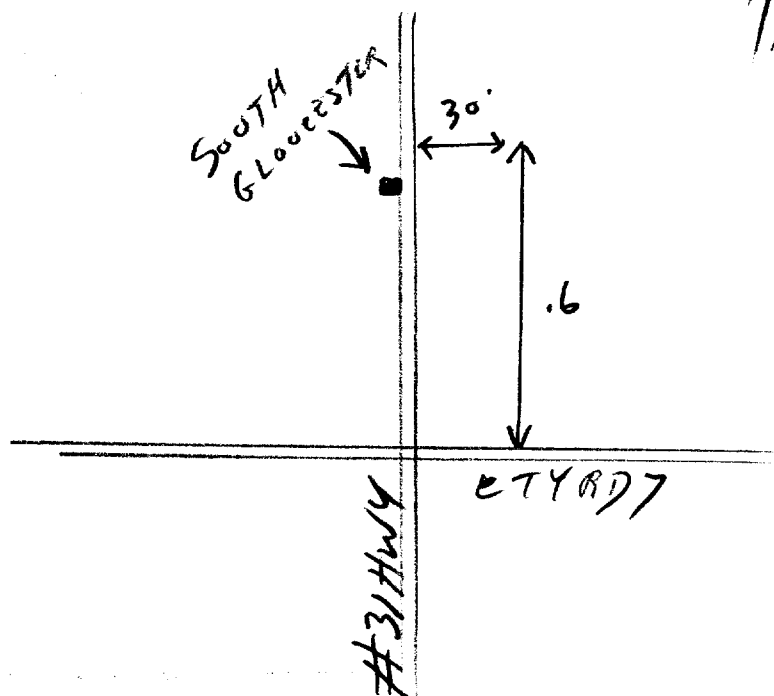
I certify that the foregoing
statements of fact are true.

Date Dec 15 W. McArthur

Signature of Licensee

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



316/52

UTM 118 2 4 5 4 9 7 10 E

5 R 5 0 1 4 8 1 10 N

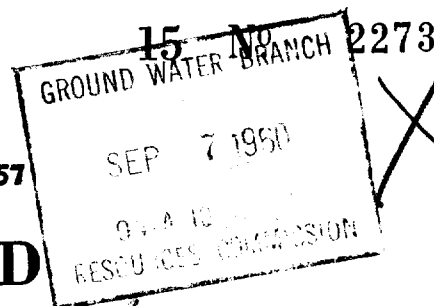
Elev. 1240.3 Feet

Basin 12 K

Lot 28



The Ontario Water Resources Commission Act, 1957



WATER WELL RECORD

County or District PARLETON Township, Village, Town or City GLOUCESTERCon. SRP Lot 28 Date completed 19 July 60Address S. GLOUCESTER

Casing and Screen Record

Inside diameter of casing 4"
 Total length of casing 16'
 Type of screen -
 Length of screen -
 Depth to top of screen -
 Diameter of finished hole 4"

Pumping Test

Static level 9
 Test-pumping rate 2 1/2 G.P.M.
 Pumping level 14
 Duration of test pumping 1 HR
 Water clear or cloudy at end of test CLEAR
 Recommended pumping rate 2 1/2 G.P.M.
 with pumping SETTING of 24

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
<u>LOAM</u>	<u>0</u>	<u>14</u>			
<u>GRAVEL</u>	<u>14</u>	<u>16</u>			
<u>GRAY LIMESTONE</u>	<u>16</u>	<u>58</u>	<u>58</u>	<u>49</u>	<u>FRESH</u>

For what purpose(s) is the water to be used?

HOUSE

Is well on upland, in valley, or on hillside?

✓Drilling Firm M. McAGHERAddress OTIMWA

Licence Number

Name of Driller SAME

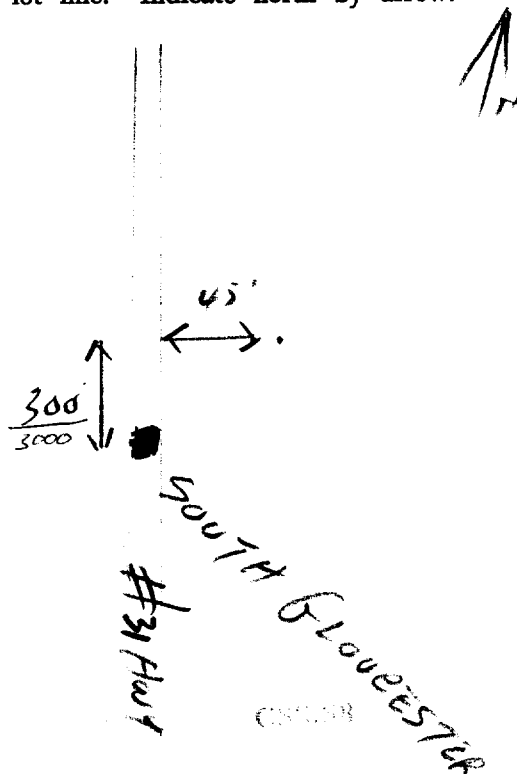
Address

Date AUG 26/60

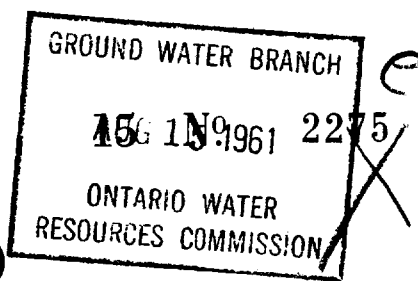
(Signature of Licensed Drilling Contractor)

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



31G/52



UTM 1182 454930E

Ripley 5697 48110N

The Ontario Water Resources Commission Act

Elev. 042 0350

WATER WELL RECORD

Basin 28
County or District

Con. 5 RF

Lot 28

Township, Village, Town or City GLOUCESTER

Date completed 2 JULY 61
(day month year)

Address BILLINGS BRIDGE

Casing and Screen Record

Inside diameter of casing 4"
 Total length of casing 10'
 Type of screen -
 Length of screen -
 Depth to top of screen -
 Diameter of finished hole 4"

Pumping Test

Static level 8'
 Test-pumping rate 4 G.P.M.
 Pumping level 8'
 Duration of test pumping 1 HR
 Water clear or cloudy at end of test CLEAR
 Recommended pumping rate 4 G.P.M.
 with pump setting of 25' feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record

From
ft.To
ft.Depth(s) at
which water(s)
foundKind of water
(fresh, salty,
sulphur)

GREY Limestone

0

100

100

FRESH

For what purpose(s) is the water to be used?

STORE - HOUSE & GARAGE

Is well on upland, in valley, or on hillside?

Drilling or Boring Firm

M MEAGHER

Address OTTAWA

Licence Number 245

Name of Driller or Borer SAME

Address

Date AUG 9/61

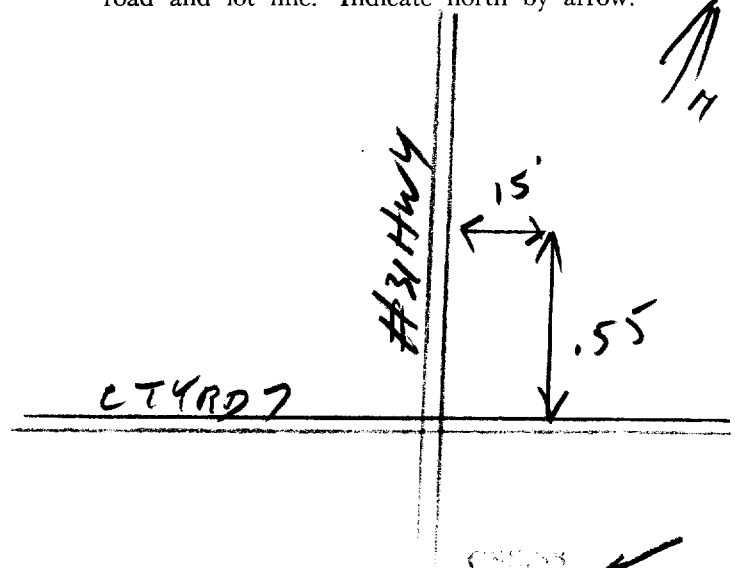
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M Sets 60-5990

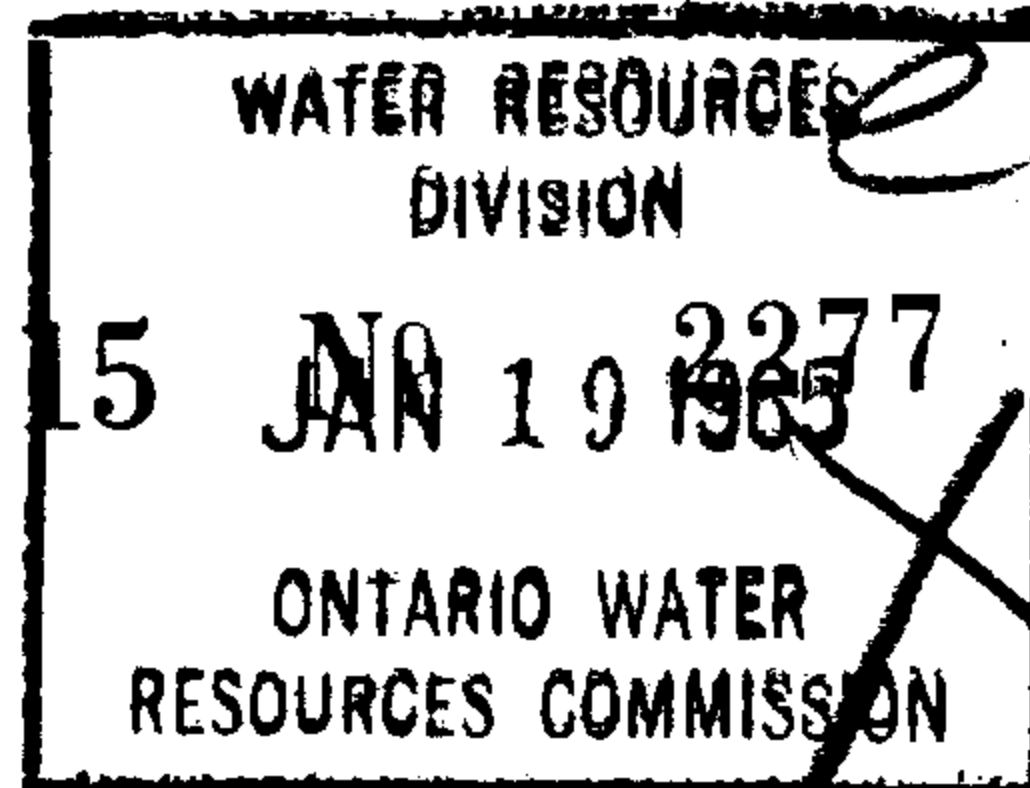
OWRC COPY

Location of Well

In diagram below show distances of well from
road and lot line. Indicate north by arrow.



31G/57



UTM 118 2 4 5 4 9 4 10 E

RIDEAU FRONT
5 0 1 4 8 5 0 N

The Ontario Water Resources Commission Act

WATER WELL RECORD

CON 7
Elev. 4 28 3 5 6

Basin 2 5 1 Carleton

Township, Village, Town or City

Con. 5 R F Lot P F A 2 28

Date completed

(day)

month

year

Owner (print in block letters)

Address

Casing and Screen Record

Pumping Test

Inside diameter of casing 2
 Total length of casing 34
 Type of screen —
 Length of screen —
 Depth to top of screen —
 Diameter of finished hole 2

Static level 22
 Test-pumping rate 2 G.P.M.
 Pumping level 60
 Duration of test pumping 2 hr
 Water clear or cloudy at end of test Cloudy
 Recommended pumping rate 2 G.P.M.
 with pump setting of 60 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record

From ft.

To ft.

Depth(s) at which water(s) found

Kind of water (fresh, salty, sulphur)

Top Soil
 Sand
 Lime Stone

0 4
 4 5
 5 152

Fresh

For what purpose(s) is the water to be used?

House
Upland

Is well on upland, in valley, or on hillside?

Drilling or Boring Firm

F. R. Carsetti

Address

1510 Base line Rd.
Ottawa

Licence Number

1472

Name of Driller or Borer

Address

Same

Date

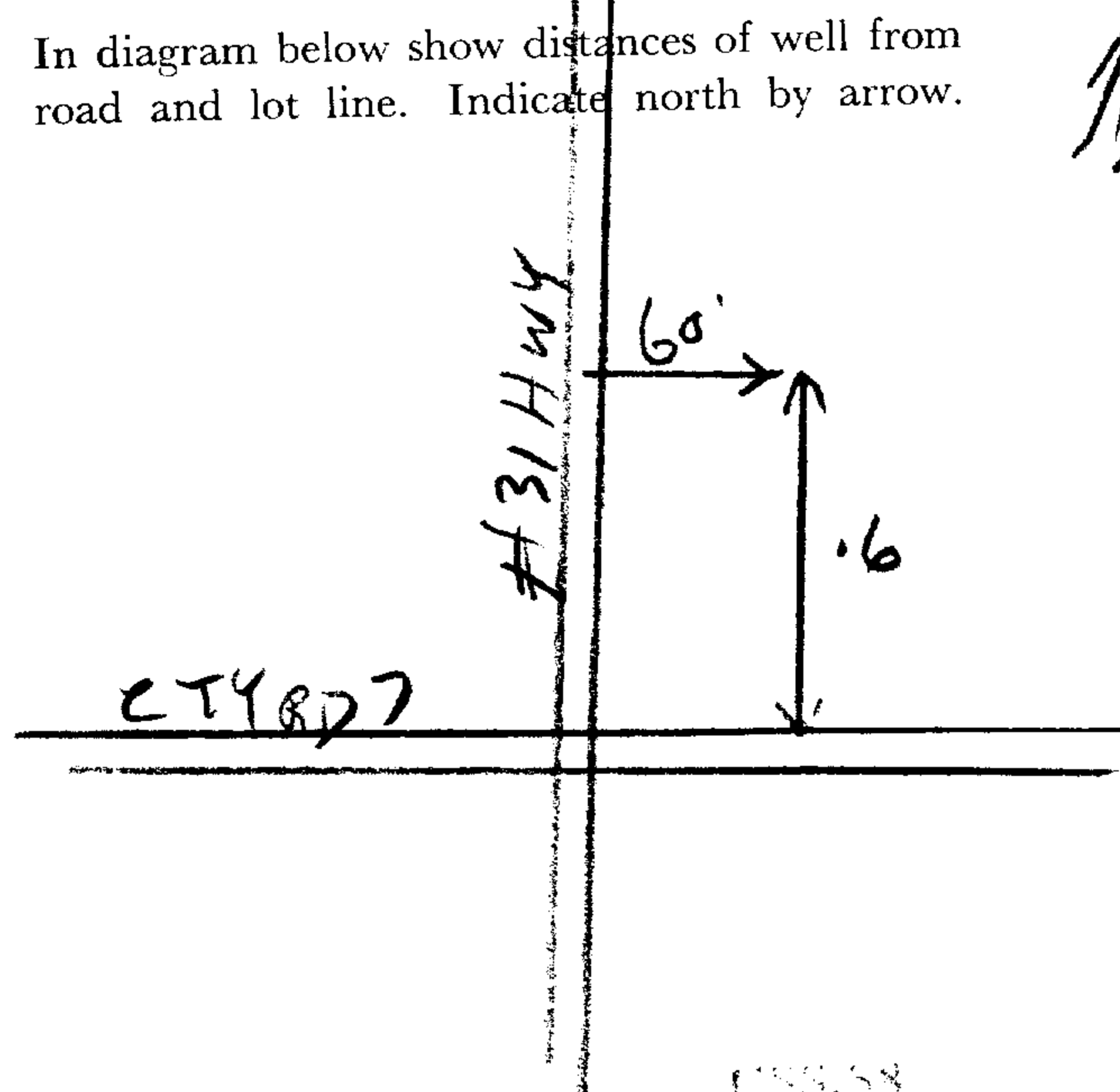
Oct 9 - 1964

(Signature of Licensed Drilling or Boring Contractor)

F. R. Carsetti

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



UTM *File* *8* *2* *4* *5* *5* *1* *4* *0* *E*

SR *5* *0* *1* *4* *3* *9* *0* *N*

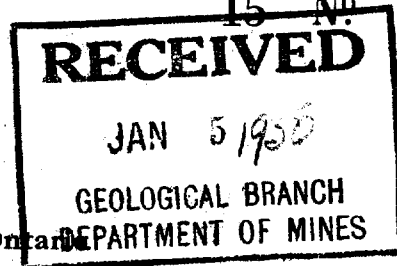
Elev. *4* *R* *0* *3* *3* *5*

Basin *2* *5*



The Well Drillers Act

Department of Mines, Province of Ontario



Water Well Record

Carlton Co.

Gloucester

Con. Lot Pt. Lot

Manotick station Acres

Cost of Well (not including pump) *8165.00*

Pipe and Casing Record

Pumping Test

Casing diameter(s) <i>4"</i>	Date <i>May 10/48</i>
Length(s) of casing(s) <i>15 feet</i>	Developed Capacity <i>400 gals a hr</i>
Length of screen <i> </i>	Duration of Test <i>1 1/2 hrs</i>
Type of screen <i> </i>	Pumping Rate <i>74 gals</i>
Type of pump <i> </i>	Drawdown <i>3 feet</i>
Capacity of pump <i> </i>	Static level of completed well <i>18 feet</i>
Depth of pump setting <i> </i>	Is well a gravel-wall type? <i>no</i>

Water Record

Kind (fresh or mineral) <i>Fresh</i>	Depth(s) to Water Horizon(s) <i>64 feet</i>	Kind of Water <i>Fresh</i>	No. of Feet Water Rises <i>57 feet</i>
Quality (hard, soft, contains iron, sulphur etc.) <i>hard</i>			<i>42 ft</i>
Appearance (clear, cloudy, coloured) <i>clear</i>			
For what purpose(s) is the water to be used? <i>Domestic</i>			
How far is well from possible source of contamination? <i>40 feet</i>			
What is source of contamination? <i>septic tank</i>			
Enclose a copy of any mineral analysis that has been made of water <i> </i>			

Well Log

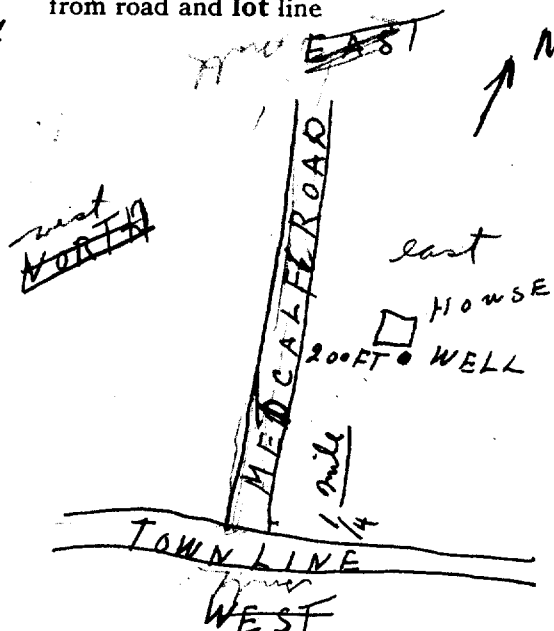
Drift and Bedrock Record

From	To
0 ft.	ft.

<i>15 feet of hard Pan and</i>	<i>1</i>	<i>15 ft</i>
<i>foldens</i>		
<i>lime stone rock</i>	<i>15</i>	<i>22</i>

Location of Well

In diagram below show distances of well from road and lot line



Situation: Is well on upland, in valley, or on hillside? *hill*

Drilling Firm *Gordon S. Mulligan*

Address *Westboro N.R. #1*

Recorded by *Gordon S. Mulligan* Address *Westboro N.R. #1*

Date *May 10/48* Licence Number

316/52

67

UTM 18Z 45 5 1 1 0 E

5R 5014390 N

Elev. 4R 0335

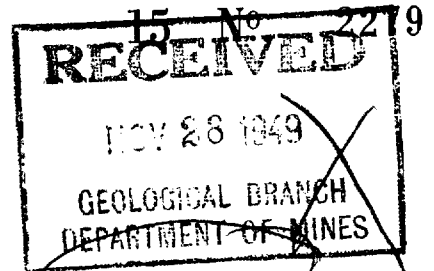
Basin 25



ONTARIO

The Well Drillers Act

Department of Mines, Province of Ontario



Water Well Record

Con. *4* Lot *5* Pt. Lot *5*
Billings Bridge
Date Completed *July 28 1949* Cost of Well (not including pump) *100.00*

Pipe and Casing Record

Pumping Test

Casing diameter(s) <i>4"</i>	Date <i>July 28</i>
Length(s) of casing(s) <i>6'</i>	Developed Capacity <i>1</i>
Length of screen	Duration of Test <i>1</i>
Type of screen	Pumping Rate
Type of pump	Drawdown
Capacity of pump	Static level of completed well <i>6'</i>
Depth of pump setting	Is well a gravel-wall type?

Water Record

Kind (fresh or mineral) <i>fresh</i>	Depth(s) to Water Horizon(s) <i>40'</i>	Kind of Water <i>good</i>	No. of Feet Water Rises <i>34'</i>
Quality (hard, soft, contains iron, sulphur etc.) <i>hard</i>			
Appearance (clear, cloudy, coloured) <i>clear</i>			
For what purpose(s) is the water to be used? <i>farm</i>			
How far is well from possible source of contamination? <i>60'</i>			
What is source of contamination? <i>out house</i>			
Enclose a copy of any mineral analysis that has been made of water			

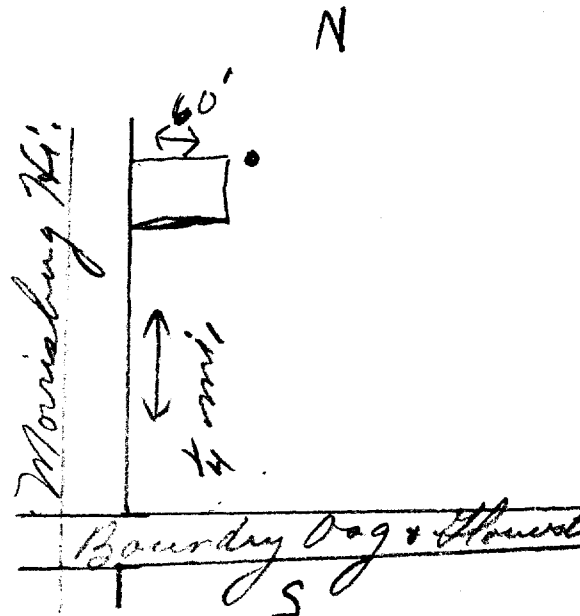
Well Log

Drift and Bedrock Record

From	To
0 ft.	ft.
<i>1'</i>	<i>6'</i>
<i>6'</i>	<i>44'</i>

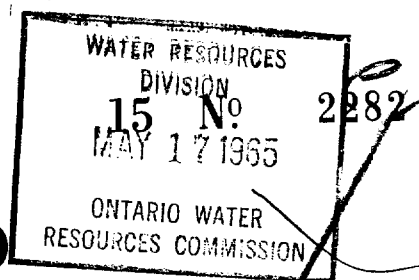
Location of Well

In diagram below show distances of well from road and lot line



Situation: Is well on upland, in valley, or on hillside? *uplands*
Drilling Firm *M. M. Meagher*
Address *Buttman Bay*
Recorded by *M. M. Meagher* Address
Date Licence Number *499*

316/52



UTM 118Z 4551110E

R. 5R 501144219N The Ontario Water Resources Commission Act

Elev. 4R 0336

WATER WELL RECORD

Lot 29
Basin 25 CarletonCounty or District
Con. C.C.V.R.P. Lot 29

Township, Village, Town or City Gloucester

Date completed 29 March 1965
(day month year)

Address 33 Market St. North Bay

Casing and Screen Record

Inside diameter of casing 6 1/4"
 Total length of casing 21 1/2'
 Type of screen none
 Length of screen —
 Depth to top of screen —
 Diameter of finished hole 6"

Pumping Test

Static level 15'
 Test-pumping rate 5 G.P.M.
 Pumping level 60'
 Duration of test pumping 1/2 hr
 Water clear or cloudy at end of test clear
 Recommended pumping rate 5 G.P.M.
 with pump setting of 60' feet below ground surface

Well Log

Overburden and Bedrock Record

Till
LimestoneFrom
ft.To
ft.Depth(s) at
which water(s)
foundKind of water
(fresh, salty,
sulphur)0
88
80

60-80

fresh

For what purpose(s) is the water to be used?

house hold

Is well on upland, in valley, or on hillside? upland

Drilling or Boring Firm

McLean Water Supply Ltd.

Address 1532 Raven Ave

Ottawa 3

Licence Number 1686

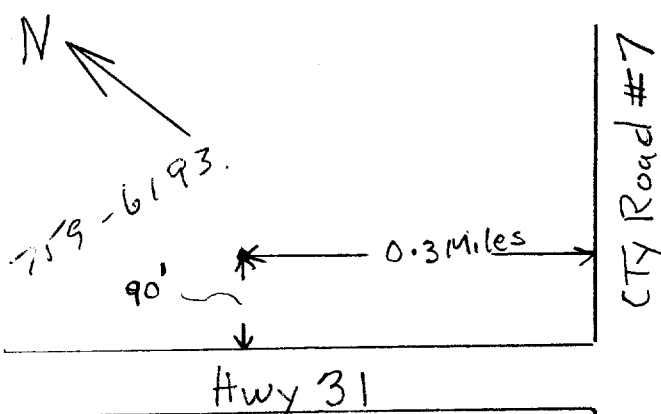
Name of Driller or Borer B. Smart

Address

Date April 1, 1965

C.D. McLean
(Signature of Licensed Drilling or Boring Contractor)

Location of Well

In diagram below show distances of well from
road and lot line. Indicate north by arrow.

316/52



UTM 1182 456700 E

Elev. 4520 150115550 N

The Ontario Water Resources Commission Act

WATER WELL RECORD

Basin 42 0330

County or District CANTON

Con. 45 RF Lot 29

Township, Village, Town or City

Date completed 17 SEP 61

Address SOUTH GLOUCESTER ONT

Casing and Screen Record

Inside diameter of casing 5
 Total length of casing 12
 Type of screen
 Length of screen
 Depth to top of screen
 Diameter of finished hole 5

Pumping Test

Static level 8
 Test-pumping rate 4 G.P.M.
 Pumping level 10
 Duration of test pumping 1 hr
 Water clear or cloudy at end of test CLEAR
 Recommended pumping rate 4 G.P.M.
 with pump setting of 30 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
CLAY COAM	0	8		
Limestone	8	46	46	FRESH

For what purpose(s) is the water to be used?

Is well on upland, in valley, or on hillside?

Drilling or Boring Firm

Address OTTAWA

Licence Number 1636

Name of Driller or Borer SAME

Address

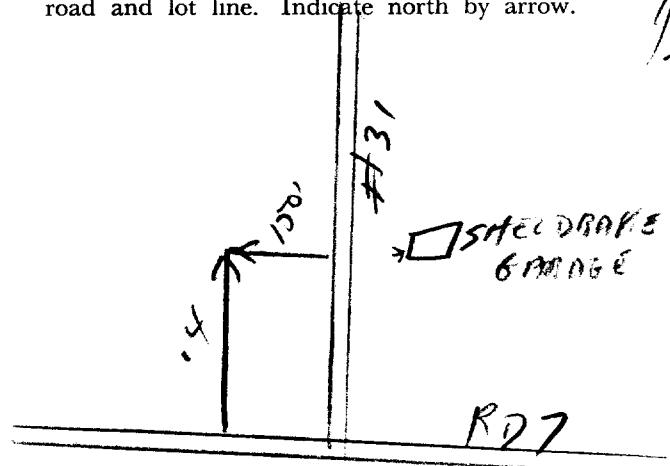
Date Nov 8

(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



31G/52.

WATER RESOURCES
DIVISION

15 No.

2284

NOV 30 1965

ONTARIO WATER
RESOURCES COMMISSION

UTM 118 2 4550110 E

R 5 R 50114730 N

The Ontario Water Resources Commission Act

Elev. 4 0348

Lot 29

Basin 25

County or District

Con

5 RP Lot 29

WATER WELL RECORD

Township, Village, Town or City

Date completed

(day)

month

year

ress

Pumping Test

Casing and Screen Record

Inside diameter of casing 5
Total length of casing 12
Type of screen
Length of screen
Depth to top of screen
Diameter of finished hole 5

Static level 5
Test-pumping rate 4 G.P.M.
Pumping level 5
Duration of test pumping 1 HR
Water clear or cloudy at end of test CLEAR
Recommended pumping rate 4 G.P.M.
with pump setting of 25 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record

From
ft.To
ft.Depth(s) at
which water(s)
foundKind of water
(fresh, salty,
sulphur)

CLAY LOAM

0

4

LIMESTONE

4

48

48

FRESH

For what purpose(s) is the water to be used?

HOUSE

Is well on upland, in valley, or on hillside?

Drilling or Boring Firm

M MEAGHER

Address

OTTAWA

Licence Number

1636

Name of Driller or Borer

SAME

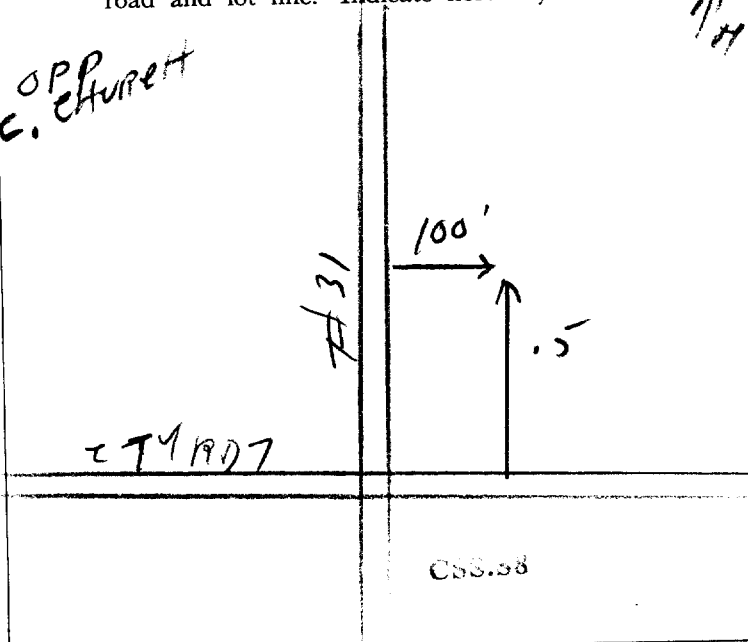
Address

Date

Nov 8

(Signature of Licensed Drilling or Boring Contractor)

Location of Well

In diagram below show distances of well from
road and lot line. Indicate north by arrow.

CS 5.53



WATER WELL RECORD

Water management in Ontario

1. PRINT ONLY IN SPACES PROVIDED

2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11

MUNICIP.

CON

COUNTY OR DISTRICT

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE

CON., BLOCK, TRACT, SURVEY, ETC.

LOT	25-27
-----	-------

CITY OR DISTRICT
Carl

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE
 Gloucester

CON., BLOCK, TRACT, SURVEY
4 5 RE

LOT 25
028

R#6 Ottawa Ont

DATE COMPLETED

DAY 22 MO. 07 YR. 69

014820

Re
4

ELEVATION
0.350

RC.
5BASIN CODE
25**LOG OF OVERBURDEN AND BEDROCK MATERIALS** (SEE INSTRUCTIONS)[illegible]

31 0005609 00147090513 0050315

32

41 WATER RECORD

WATER FOUND AT FEET	KIND OF WATER	
0-10	1 ☒ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL
10-13	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL
15-18	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL
20-23	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL
25-28	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL
30-33	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
05 ¹⁰⁻¹¹ 8	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 OPEN HOLE	12 188	0	0018 ¹⁹⁻¹⁸ 50
17-18 05	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE	19		20-23 0050
24-25	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	26		27-30

Z	SIZE(S) OF OPENING (SLOT NO.)	31-33	DIAMETER	34-38	LENGTH	39-40
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SCREEN	INCHES		FEET	
	MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN	41-44	80
			FEET	

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET		MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
FROM	TO	
10-13	14-17	
18-21	22-25	
26-29	30-33	80

71	PUMPING TEST METHOD	10	PUMPING RATE	11-14	DURATION OF PUMPING
----	---------------------	----	--------------	-------	---------------------

PUMPING TEST	1 ☐ PUMP 2 ☒ BAILER		0010		GPM.	01		15-16 HOURS		00		17-18 MINS	
	STATIC LEVEL		WATER LEVEL END OF PUMPING		25				1 ☒ PUMPING 2 ☐ RECOVERY				
	19-21		22-24		15 MINUTES 26-28		30 MINUTES 29-31		45 MINUTES 32-34		60 MINUTES 35-37		
	010 FEET		010 FEET		010 FEET		010 FEET		010 FEET		010 FEET		
	IF FLOWING, GIVE RATE		38-41		PUMP INTAKE SET AT				WATER AT END OF TEST				
					GPM.				FEET				
									1 ☐ CLEAR 2 ☐ CLOUDY				
	RECOMMENDED PUMP TYPE		RECOMMENDED PUMP SETTING		43-45		RECOMMENDED PUMPING RATE		46-48				
	☒ SHALLOW ☐ DEEP		030		FEET		0005		GPM				
	50-53		020.0		GPM./FT. SPECIFIC CAPACITY								

FINAL STATUS OF WELL	54	1 ☒ WATER SUPPLY	5 ☐ ABANDONED, INSUFFICIENT SUPPLY
		2 ☐ OBSERVATION WELL	6 ☐ ABANDONED, POOR QUALITY
		3 ☐ TEST HOLE	7 ☐ UNFINISHED
		4 ☐ RECHARGE WELL	

55-56

WATER USE 01

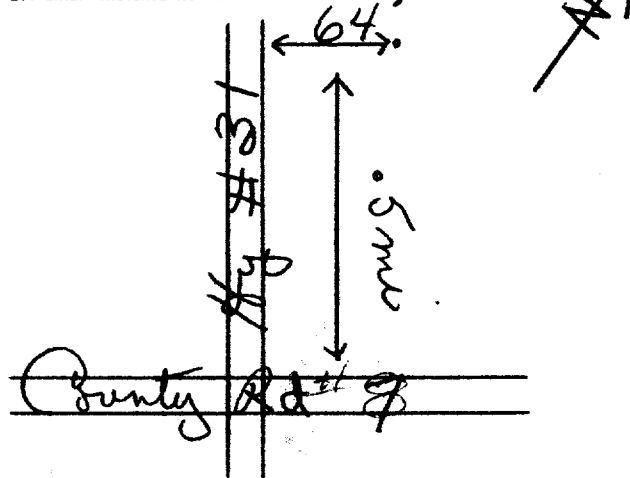
1 ☒ DOMESTIC
2 ☐ STOCK
3 ☐ IRRIGATION
4 ☐ INDUSTRIAL
☐ OTHER

5 ☐ COMMERCIAL
6 ☐ MUNICIPAL
7 ☐ PUBLIC SUPPLY
8 ☐ COOLING OR AIR CONDITIONING
9 ☐ NOT USED

METHOD OF DRILLING	57	1 ☒ CABLE TOOL	6 ☐ BORING
		2 ☐ ROTARY (CONVENTIONAL)	7 ☐ DIAMOND
		3 ☐ ROTARY (REVERSE)	8 ☐ JETTING
		4 ☐ ROTARY (AIR)	9 ☐ DRIVING
		5 ☐ AIR PERCUSSION	

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLERS REMARKS:

CONTRACTOR	NAME OF WELL CONTRACTOR		LICENCE NUMBER
	Capital Water Supply		3216
	ADDRESS		
	14 Ashford Dr Ottawa		
	NAME OF DRILLER OR BORER		LICENCE NUMBER
	A. Maurice		
	SIGNATURE OF CONTRACTOR	SUBMISSION DATE	
	Halter Savanash	DAY _____ MO. _____ YR. _____	

OFFICE USE ONLY	DATA SOURCE	58 CONTRACTOR	59-62	DATE RECEIVED	63-68	80
	1	1503		301969		
	DATE OF INSPECTION		INSPECTOR			
	REMARKS:					

OWRC COPY



WATER WELL RECORD

316/59

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11 1515658 15002 RF 05
COUNTY OR DISTRICT: Carleton PLACE: 23 Belmond Ave Ottawa Ont. DATE COMPLETED: 24 MO 07 YR 76
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Gloucester CON. BLOCK, TRACT, SURVEY, ETC: Con 5 RF 1759
BIRTHING: 014500 4 ELEVATION: 0338 4 26

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
grey	clay			0	5
grey	shale rock			5	15
grey	limestone			15	130
white	sandstone			130	155

31 00.05205 00.15217 0.130215 0.155118
32

41 WATER RECORD

WATER FOUND FEET	KIND OF WATER
10-13	1 ☒ FRESH 3 ☐ SULPHUR 4 ☐ MINERAL
15-18	1 ☒ FRESH 3 ☐ SULPHUR 4 ☐ MINERAL
20-23	1 ☐ FRESH 3 ☐ SULPHUR 4 ☐ MINERAL
25-28	1 ☐ FRESH 3 ☐ SULPHUR 4 ☐ MINERAL
30-33	1 ☐ FRESH 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIA. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
10-11	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	188	0 042
17-18	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE		20-23
24-25	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE		27-30

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
	INCHES	FEET
MATERIAL AND TYPE		
DEPTH TO TOP OF SCREEN		

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE
FROM TO	(CEMENT GROUT, LEAD PACKER, ETC.)
10-13 14-17	
18-21 22-25	
26-29 30-33 80	

71 PUMPING TEST METHOD

1 ☒ PUMP 2 ☐ BAILER	PUMPING RATE: 0025 GPM	DURATION OF PUMPING: 01 HOURS 00 MINS
STATIC LEVEL: 030 FEET	WATER LEVELS DURING PUMPING	WATER AT END OF TEST: 070 FEET
19-21 070 FEET	15 MINUTES: 070 FEET	30 MINUTES: 070 FEET
22-24 070 FEET	45 MINUTES: 070 FEET	60 MINUTES: 070 FEET
26-28 070 FEET	29-31 070 FEET	32-34 070 FEET
35-37 070 FEET		
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
	GPM	FEET
RECOMMENDED PUMP TYPE: ☒ SHALLOW ☐ DEEP	RECOMMENDED PUMP SETTING: 070 FEET	RECOMMENDED PUMP RATE: 0005 GPM

FINAL STATUS OF WELL: 1 ☒ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☐ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED

WATER USE: 01 1 ☒ DOMESTIC 2 ☐ STOCK 3 ☐ IRRIGATION 4 ☐ INDUSTRIAL 5 ☐ COMMERCIAL 6 ☐ MUNICIPAL 7 ☐ PUBLIC SUPPLY 8 ☐ COOLING OR AIR CONDITIONING 9 ☐ NOT USED

METHOD OF DRILLING: 5 1 ☐ CABLE TOOL 2 ☐ ROTARY (CONVENTIONAL) 3 ☐ ROTARY (REVERSE) 4 ☐ ROTARY (AIR) 5 ☒ AIR PERCUSSION 6 ☐ BORING 7 ☐ DIAMOND 8 ☐ JETTING 9 ☐ DRIVING

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.

Diagram showing well location relative to road and lot line. North arrow pointing up. Distances: 260' from road, 31' from lot line.

DRILLERS REMARKS:

CONTRACTOR: Henry Marie Well Drilling, 3644, Box 326, Richmond Ont.

SIGNATURE OF CONTRACTOR: [Signature]

SUBMISSION DATE: 27 MO 2 YR 76

OFFICE USE ONLY

DATA SOURCE: 1 3644 DATE RECEIVED: 011126

DATE OF INSPECTION: 18/6/77 INSPECTOR: [Signature]

REMARKS: [Signature]

WI



Ontario

Ministry
of the
Environment

50. 87789.

The Ontario Water Resources Act

WATER WELL RECORD

1523309

MUNICIP

15002

CON.

CON.

104

1. PRINT ONLY IN SPACES PROVIDED

2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11

COUNTY OR DISTRICT

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE

CON. BLOCK, TRACT, SURVEY, ETC.

LOT

25-27

5410 BANK ST

DATE COMPLETED

DAY 28

MO

2

YR

89

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
BROWN	SAND	Topsoil	PACKED	0	2'
BROWN	SAND	GRAVEL & Cobbles	LOOSE	2	6'
Black	LIMESTONE	GREY LIMESTONE LAYERS	BACKEN	6'	11'
GREY	LIMESTONE	BLACK LIMESTONE LAYERS	HARD	11'	72'
Black	LIMESTONE		MED, HARD	72'	97'
GREY	LIMESTONE	QUARTZ LAYERS	HARD	97'	125'

31

32

41

WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER					
67	1 ☒ FRESH	3 ☐ SULPHUR	14	2 ☐ SALTY	4 ☐ MINERALS	15
107	1 ☒ FRESH	3 ☐ SULPHUR	19	2 ☐ SALTY	4 ☐ MINERALS	20
116	1 ☒ FRESH	3 ☐ SULPHUR	24	2 ☐ SALTY	4 ☐ MINERALS	25
	1 ☐ FRESH	3 ☐ SULPHUR	29	2 ☐ SALTY	4 ☐ MINERALS	30
	1 ☐ FRESH	3 ☐ SULPHUR	34	2 ☐ SALTY	4 ☐ MINERALS	35

CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
6 1/4	1 ☒ STEEL	1.88	0	22'
6"	1 ☒ STEEL		22'	

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
	INCHES	FEET

61

PLUGGING & SEALING RECORD

DEPTH SET AT - FEET		MATERIAL AND TYPE	(CEMENT GROUT LEAD PACKER, ETC.)
FROM	TO		
0	21	Cement Grout	
		Type 10 PORTLAND	

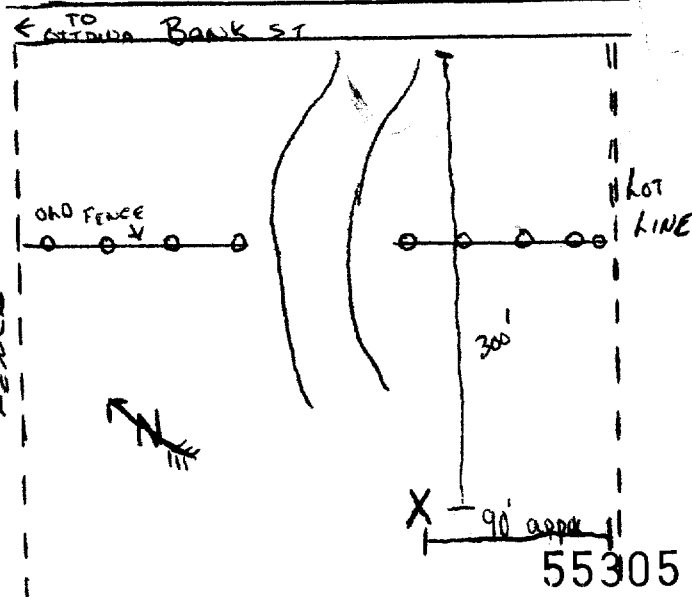
71

PUMPING TEST

PUMPING TEST METHOD		PUMPING RATE		DURATION OF PUMPING	
1 ☒ PUMP	2 ☐ BAILER	5	GPM	2	HOURS
STATIC LEVEL		WATER LEVELS DURING		1 ☒ PUMPING	
10-21		15 MINUTES		2 ☐ RECOVERY	
100		100			
IF FLOWING, GIVE RATE		PUMP INTAKE SET AT		WATER AT END OF TEST	
		100			
RECOMMENDED PUMP TYPE		RECOMMENDED PUMP SETTING		RECOMMENDED PUMPING RATE	
1 ☐ SHALLOW 2 ☐ DEEP		100		5	

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLER'S REMARKS

54

FINAL STATUS OF WELL

1 ☐ WATER SUPPLY	5 ☐ ABANDONED, INSUFFICIENT SUPPLY
2 ☐ OBSERVATION WELL	6 ☐ ABANDONED POOR QUALITY
3 ☒ TEST HOLE	7 ☐ UNFINISHED
4 ☐ RECHARGE WELL	8 ☐ DEWATERING

55-56

WATER USE

1 ☒ DOMESTIC	5 ☐ COMMERCIAL
2 ☐ STOCK	6 ☐ MUNICIPAL
3 ☐ IRRIGATION	7 ☐ PUBLIC SUPPLY
4 ☐ INDUSTRIAL	8 ☐ COOLING OR AIR CONDITIONING
9 ☐ OTHER	9 ☐ NOT USED

57

METHOD OF CONSTRUCTION

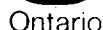
1 ☐ CABLE TOOL	5 ☐ BORING
2 ☐ ROTARY (CONVENTIONAL)	6 ☐ DIAMOND
3 ☐ ROTARY (REVERSE)	7 ☐ JETTING
4 ☐ ROTARY (AIR)	8 ☐ DRIVING
5 ☐ AIR PERCUSSION	9 ☐ DIGGING
	10 ☐ OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR	WELL CONTRACTOR'S LICENCE NUMBER
Valley Drilling Co Ltd	5222
ADDRESS	
P.O. Box 437 CARP, ONT	
NAME OF WELL TECHNICIAN	WELL TECHNICIAN'S LICENCE NUMBER
Bill Brown	
SIGNATURE OF WELL CONTRACTOR	SUBMISSION DATE
Bill Brown	0190
	DAY MO. YR.

OFFICE USE ONLY

DATA SOURCE	CONTRACTOR	DATE RECEIVED
	5222	APR 04 1989
DATE OF INSPECTION	INSPECTOR	
REMARKS		



50 - 43889

The Ontario Water Resources Act

WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11

1523342

MUNICIP
15002

CON.
CON

104

COUNTY OR DISTRICT

COUNTY OR DISTRICT OTTAWA CARLETON TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE CLARESTER

CON BLOCK, TRACT, SURVEY ETC

LOT 25-27

DATE COMPLETED ⁴⁸⁻⁵³
DAY 18 MO 12 YR 88

ING	RC	ELEVATION	BASIN CODE	I	II	III	IV
		16-314					

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

[illegible]

31

32

WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER			
10-13 122	1 ☒ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS	14	
15-30 143	1 ☒ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS	19	
20-23	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS	24	
25-28	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS	25	
30-33	1 ☐ FRESH 2 ☐ SALTY	3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS	34	

CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
6 1/4	☒ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☐ PLASTIC	.188	0	22' 13"
6"	☐ STEEL ☐ GALVANIZED ☒ CONCRETE ☐ OPEN HOLE ☐ PLASTIC		22'	150'
24-25	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☐ PLASTIC			27-3'

PLUGGING & SEALING RECORD

DEPTH SET AT FEET		MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
FROM	TO	
10-13	21' ¹⁴⁻¹⁷	CEMENT GROUT
18-21	22-25	
26-29	30-33	
	80	

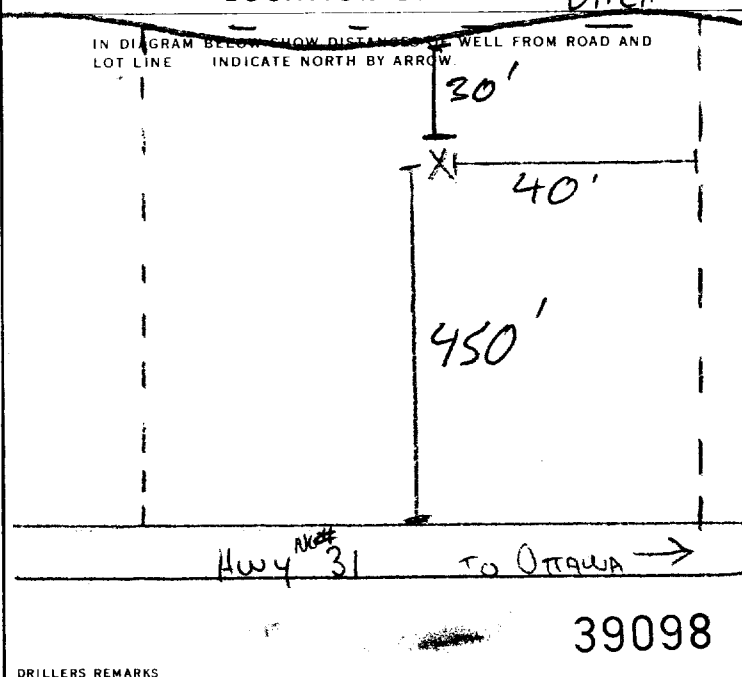
1

PUMPING TEST

PUMPING TEST METHOD <i>AIR</i> 1 ☒ PUMP 2 ☐ BAILER		10 PUMPING RATE <i>6</i>		11-14 DURATION OF PUMPING <i>2</i> 15-16 HOURS 17-18 MINS	
STATIC LEVEL		25 WATER LEVELS DURING 1 ☐ PUMPING 2 ☐ RECOVERY			
19-21 <i>6</i> FEET		22-24 <i>60</i> FEET		15 MINUTES <i>60</i> FEET	
		20-21 <i>60</i> FEET		22-24 <i>60</i> FEET	
IF FLOWING, GIVE RATE		PUMP INTAKE SET AT <i>60</i> GPM		WATER AT END OF TEST 1 ☒ CLEAR 2 ☐ CLOUDY	
RECOMMENDED PUMP TYPE ☐ SHALLOW ☒ DEEP		RECOMMENDED PUMP SETTING <i>60</i> FEET		RECOMMENDED PUMPING RATE <i>4</i> GPM	
50-53					

LOCATION OF WELL Ditch

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.

**FINAL
STATUS
OF WELL**

1 ☐ WATER SUPPLY	5 ☐ ABANDONED, INSUFFICIENT SUPPLY
2 ☐ OBSERVATION WELL	6 ☐ ABANDONED POOR QUALITY
3 ☒ TEST HOLE	7 ☐ UNFINISHED
4 ☐ RECHARGE WELL	9 ☐ DEWATERING

WATER USE

[illegible]

**METHOD
OF
CONSTRUCTION**

1 ☐ CABLE TOOL	6 ☐ BORING
2 ☐ ROTARY (CONVENTIONAL)	7 ☐ DIAMOND
3 ☐ ROTARY (REVERSE)	8 ☐ JETTING
4 ☐ ROTARY (AIR)	9 ☐ DRIVING
5 ☒ AIR PERCUSSION	☐ DIGGING ☐ OTHER

DRILLERS REMARKS

OFFICE USE ONLY

SOURCE

DATE OF INSPECTION _____

REMARKS

58	CONTRACTOR	59-62
----	------------	-------

DATE RECEIVED

5222

APR 04 1989

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9



The Ontario Water Resources Act

WATER WELL RECORD

15002 CON

1524825

MUNICIP. CON.
Bourneville Rd

104

1. PRINT ONLY IN SPACES PROVIDED

2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

COUNTY OR DISTRICT

TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE

CON BLOCK TRACT SURVEY ETC

LOT 25-27

DATE COMPLETED 48-53 9

18 6 10

NG	RC	ELEVATION	RC	BASIN CODE	II	III	IV
----	----	-----------	----	------------	----	-----	----

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

31

32

WATER RECORD

51 CASING & OPEN HOLE RECORD

SCREEN	SIZE(S) OF OPENING (SLOT NO.)	31-33	DIAMETER	34-38	LENGTH	39-40
				INCHES	FEET	
	MATERIAL AND TYPE			DEPTH TO TOP OF SCREEN	41-44	10
				FEET		

PLUGGING & SEALING RECORD

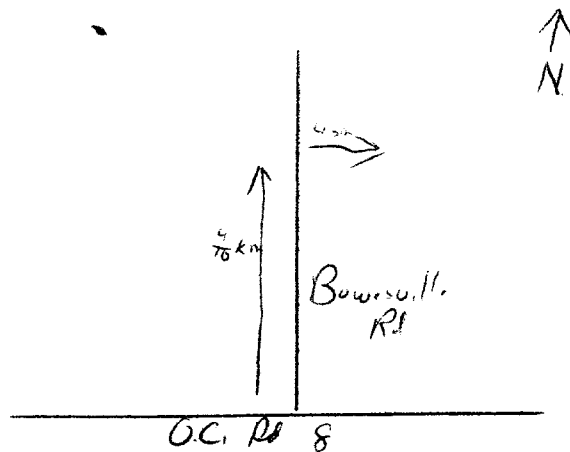
71

PUMPING TEST METHOD 1 ☒ PUMP 2 ☐ BAILER		PUMPING RATE 30 GPM		DURATION OF PUMPING 15-16 HOURS 17-18 MINS	
STATIC LEVEL 7 19-21 FEET	WATER LEVEL END OF PUMPING 30 22-24 FEET	25 WATER LEVELS DURING		1 ☐ PUMPING 2 ☐ RECOVERY	
		15 MINUTES 30 28-28 FEET	30 MINUTES 30 29-31 FEET	45 MINUTES 30 32-34 FEET	60 MINUTES 30 35-37 FEET
IF FLOWING, GIVE RATE 38-41 GPM		PUMP INTAKE SET AT FEET		WATER AT END OF TEST 42	
RECOMMENDED PUMP TYPE ☒ SHALLOW ☐ DEEP		RECOMMENDED PUMP SETTING 30 FEET		RECOMMENDED PUMPING RATE 10 GPM	

50-53

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE INDICATE NORTH BY ARROW.



56323

DRILLERS REMARKS

FINAL STATUS OF WELL	54	1 ☐ WATER SUPPLY	5 ☐ ABANDONED, INSUFFICIENT SUPPLY
	2 ☐ OBSERVATION WELL	6 ☐ ABANDONED POOR QUALITY	
	3 ☐ TEST HOLE	7 ☐ UNFINISHED	
	4 ☐ RECHARGE WELL	☐ DEWATERING	
WATER USE	55-56	1 ☐ DOMESTIC	5 ☐ COMMERCIAL
	2 ☐ STOCK	6 ☐ MUNICIPAL	
	3 ☐ IRRIGATION	7 ☐ PUBLIC SUPPLY	
	4 ☐ INDUSTRIAL	8 ☐ COOLING OR AIR CONDITIONING	
		☐ OTHER _____	9 ☐ NOT USED
METHOD OF CONSTRUCTION	57	1 ☐ CABLE TOOL	6 ☐ BORING
	2 ☐ ROTARY (CONVENTIONAL)	7 ☐ DIAMOND	
	3 ☐ ROTARY (REVERSE)	8 ☐ JETTING	
	4 ☐ ROTARY (AIR)	9 ☐ DRIVING	
		5 ☐ AIR PERCUSSION	☐ DIGGING ☐ OTHER

CONTRACTOR	NAME OF WELL CONTRACTOR <i>H. Mains Well Drilling</i>		WELL CONTRACTOR'S LICENCE NUMBER <i>3694</i>
	ADDRESS <i>Box 326, Richmond Ont.</i>		
	NAME OF WELL TECHNICIAN <i>[Signature]</i>		WELL TECHNICIAN'S LICENCE NUMBER
	SIGNATURE OF TECHNICIAN/CONTRACTOR <i>[Signature]</i>		SUBMISSION DATE DAY <i>18</i> MO <i>6</i> YR <i>90</i>

OFFICE USE ONLY	DATA SOURCE	58	CONTRACTOR	59-62	DATE RECEIVED	63-68	69
			3644		SEP 17 1990		
	DATE OF INSPECTION		INSPECTOR				
	REMARKS						

PREDICTIVE NITRATE IMPACT ASSESSEMENT - 40 mg/L		
Infiltration Factors		
Topography	0.20	
Soil	0.40	
Cover	0.15	
Total	0.75	
Site Characteristics		
Area of Site :	67400	m ²
Roof + paved driveway areas	20723	m ²
Impervious Area	20723	m ²
Percent Impervious Area =	31	%
Infiltration Area =	46677	m ²
Septic Effluent		
Concentration of Effluent (Cs) =	40	mg/L
Infiltration Calculation		
Nitrate concentration in precipitation (C _i) =	0	mg/L
Surplus Water (Environment Canada)	298	mm/yr
Factored Water Surplus =	224	mm/yr
Infiltration % due to stormwater management measures	-	%
Infiltration rate from stormwater management measures =	0	mm/yr
Infiltration Flow Entering the System (Q _i) =	29	m ³ /day
Mass Balance Model (MOEE, 1995)		
$C_T = (Q_b C_b + Q_e C_e + Q_i C_i) / (Q_b + Q_e + Q_i)$ = Cumulative Nitrate Concentration		
Q _b = flow entering the system across the upgradient area	0	m ³ /day
C _b = background nitrate concentration	0	mg/L
Q _e = flow entering the system from the septic drainfield	9.5	m ³ /day
C _e = concentration of nitrates in the septic effluent	40	mg/L
Q _i = flow entering the system from infiltration	29	m ³ /day
C _i = Concentration of nitrates in the infiltrate	0	mg/L
C_T =	9.98	mg/L
Maximum Allowable Sewage Flow Volume		
Daily Sewage Flow (Q _s)=	9.5	m ³
<i>Notes: Site characteristic values were measured as approximate values from the available site plans and GeoOttawa.</i>		

PREDICTIVE NITRATE IMPACT ASSESSEMENT - 20 mg/L		
Infiltration Factors		
Topography	0.20	
Soil	0.40	
Cover	0.15	
Total	0.75	
Site Characteristics		
Area of Site :	67400	m ²
Roof + paved driveway areas	20723	m ²
Impervious Area	20723	m ²
Percent Impervious Area =	31	%
Infiltration Area =	46677	m ²
Septic Effluent		
Concentration of Effluent (Cs) =	20	mg/L
Infiltration Calculation		
Nitrate concentration in precipitation (C _i) =	0	mg/L
Surplus Water (Environment Canada)	298	mm/yr
Factored Water Surplus =	224	mm/yr
Infiltration % due to stormwater management measures	-	%
Infiltration rate from stormwater management measures =	0	mm/yr
Infiltration Flow Entering the System (Q _i) =	29	m ³ /day
Mass Balance Model (MOEE, 1995)		
$C_T = (Q_b C_b + Q_e C_e + Q_i C_i) / (Q_b + Q_e + Q_i)$ = Cumulative Nitrate Concentration		
Q _b = flow entering the system across the upgradient area	0	m ³ /day
C _b = background nitrate concentration	0	mg/L
Q _e = flow entering the system from the septic drainfield	10	m ³ /day
C _e = concentration of nitrates in the septic effluent	20	mg/L
Q _i = flow entering the system from infiltration	29	m ³ /day
C _i = Concentration of nitrates in the infiltrate	0	mg/L
C_T =	5.18	mg/L
Maximum Allowable Sewage Flow Volume		
Daily Sewage Flow (Q _s)=	10	m ³
<i>Notes: Site characteristic values were measured as approximate values from the available site plans and GeoOttawa.</i>		

PREDICTIVE NITRATE IMPACT ASSESSEMENT - 450 L/day

Infiltration Factors

Topography	0.20
Soil	0.40
Cover	0.15
Total	0.75

Site Characteristics

Area of Site :	67400	m ²
Roof + paved driveway areas	20723	m ²
Impervious Area	20723	m ²
Percent Impervious Area =	31	%
Infiltration Area =	46677	m ²

Septic Effluent

Concentration of Effluent (Cs) =	20	mg/L
----------------------------------	----	------

Infiltration Calculation

Nitrate concentration in precipitation (C _i) =	0	mg/L
Surplus Water (Environment Canada)	298	mm/yr
Factored Water Surplus =	224	mm/yr
Infiltration % due to stormwater management measures	-	%
Infiltration rate from stormwater management measures =	0	mm/yr
Infiltration Flow Entering the System (Q _i) =	29	m ³ /day

Mass Balance Model (MOEE, 1995)

$$C_T = (Q_b C_b + Q_e C_e + Q_i C_i) / (Q_b + Q_e + Q_i) = \text{Cumulative Nitrate Concentration}$$

Q _b = flow entering the system across the upgradient area	0	m ³ /day
C _b = background nitrate concentration	0	mg/L
Q _e = flow entering the system from the septic drainfield	0.45	m ³ /day
C _e = concentration of nitrates in the septic effluent	20	mg/L
Q _i = flow entering the system from infiltration	29	m ³ /day
C _i = Concentration of nitrates in the infiltrate	0	mg/L
C_T =	0.31	mg/L

Sewage Flow Volume

Daily Sewage Flow (Q _s)=	0.45	m ³
--------------------------------------	------	----------------

Notes: Site characteristic values were measured as approximate values from the available site plans and GeoOttawa.

SCHEDULE			
PART	LOT	CONCESSION	PIN
1 to 5 (both inclusive)	PART OF 29	4	All of 04327-0069

Part 2: Subject to easement, Inst. GL36799
 Part 4: Subject to easement, Inst. OC670199

PART OF LOT 29
CONCESSION 4 (RIDEAU FRONT)
 Geographic Township of Gloucester
CITY OF OTTAWA
 Surveyed by Annis, O'Sullivan, Vollebakk Ltd.

Surveyor's Certificate

I CERTIFY THAT :

1. This survey and plan are correct and in accordance with the Survey Act, the Surveyors Act and the Land Titles Act and the regulations made under them.
2. The survey was completed on the 10th day of February, 2021.

Feb. 25/22
Date


Stefan S. Bazar
Ontario Land Surveyor

Distances shown on this plan are ground distances and can be converted to grid distances by multiplying by the combined scale factor of 0.999948.

Bearings are grid, derived from Can-Nel 2016 Real Time Network GPS observations on reference points A and B, shown herein, having a bearing of N58°38'30"E and are referenced to Specified Control Points 01919760735 and 01919871649, MTM Zone 9 (7°30' West Longitude) NAD-83 (original).

For bearing comparisons, a rotation of 0°38'25" counter-clockwise was applied to bearings on plan P18P2 and a rotation of 00°02'40" to P4.

Coordinates are derived from Can-Nel 2016 Real Time Network GPS observations referenced to Specified Control Points 01919760735 and 01919871649, MTM Zone 9 (7°30' West Longitude) NAD-83 (original).

Coordinate values are to urban accuracy in accordance with O. Reg. 216/10.

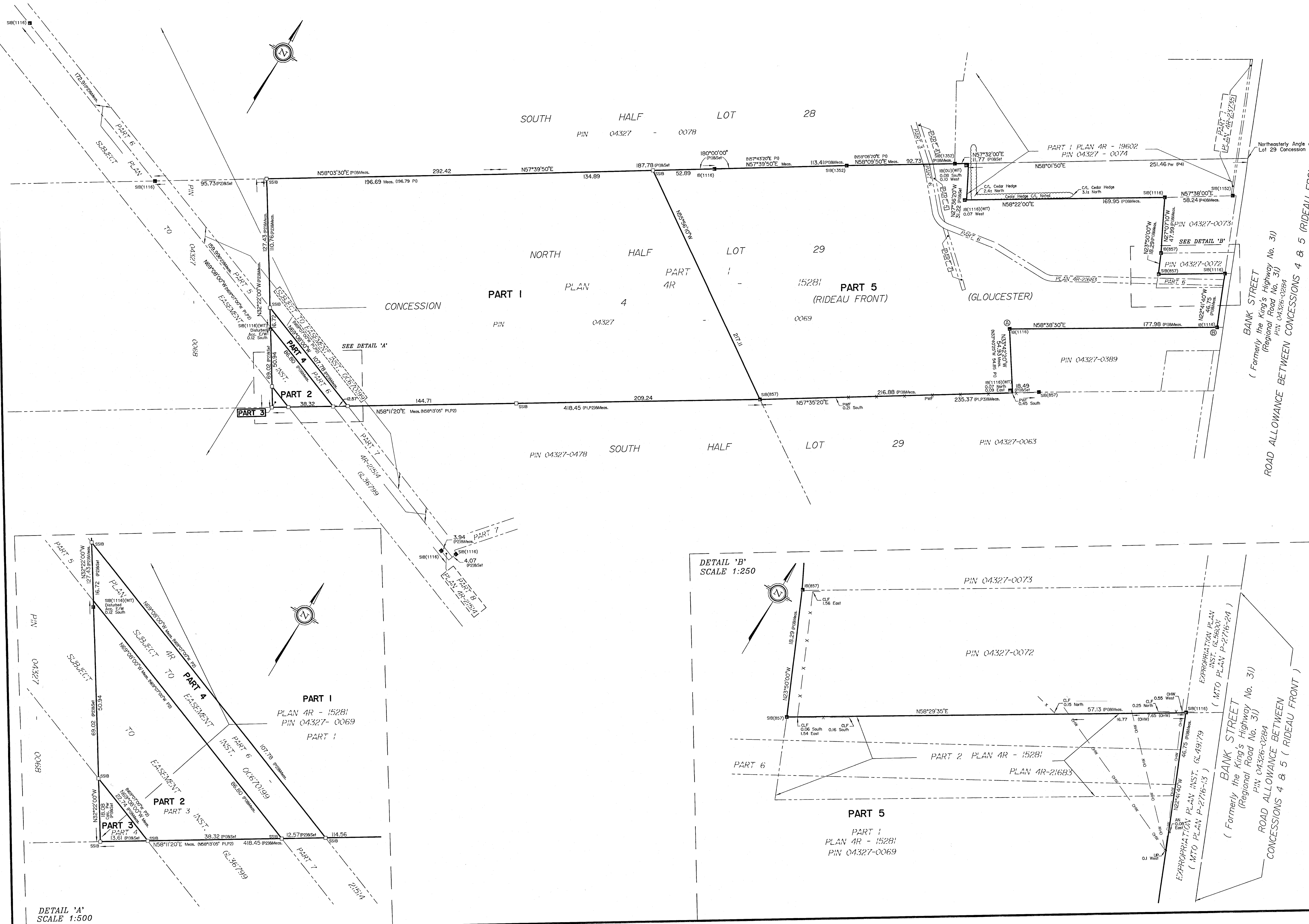
01919760735	Nothing	5026903.03	Easting	3769698.72
01919871649	Nothing	5007189.87	Easting	3724326.05
• Point A	Nothing	5016475.65	Easting	373731.38
• Point B	Nothing	5016568.25	Easting	377469.36

Caution: Coordinates cannot, in themselves, be used to re-establish corners or boundaries shown on this plan.

ANNIS, O'SULLIVAN, VOLLEBEKK & L
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: Nepean@aoavltd.com

Ontario
Land Survivors

Job No. 223627-21 Gravel/Sand/Gravel PHL129 C4 GL R F



RECORD OF BOREHOLE 23-01

CLIENT: PERCY PYPER (1997) LTD.
 PROJECT: 5360 Bank Street Phase Two ESA
 JOB#: 100227.101
 LOCATION: Salt Domes

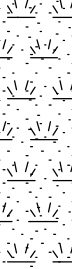
SHEET: 1 OF 1
 DATUM: CGVD28
 BORING DATE: Aug 21 2023

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLE DATA				COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m				
0		Ground Surface										
		Brown gravelly sand with trace silt			SA1	CS			M&I, BTEX, PHCs F1-F4	None		
					SA2	CS			M&I, BTEX, PHCs F1-F4	None		
1					NR							
					SA3	CS				None		
2					SA4	CS				None		
					NR							
3					SA5	CS				None		
					SA6	CS				None		
	Direct Push	End of Borehole Refusal		3.96								

RECORD OF BOREHOLE 23-02

CLIENT: PERCY PYPER (1997) LTD.
 PROJECT: 5360 Bank Street Phase Two ESA
 JOB#: 100227.101
 LOCATION: Cold Patch Pile

SHEET: 1 OF 1
 DATUM: CGVD28
 BORING DATE: Aug 21 2023

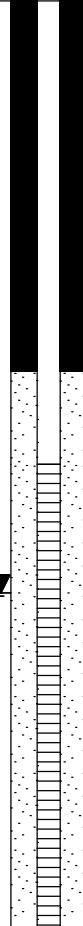
DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLE DATA				COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m				
0		Ground Surface										
1		Dark brown silty sand, trace clay (top soil)			SA1	CS			M&I, BTEX, PHCs F1-F4	None		
2		Orangey brown silty sand (beach sand)		1.83	SA2	CS			M&I, BTEX, PHCs F1-F4	None		
3					NR							
					SA3	CS				None		
		End of Borehole Refusal		3.96								

RECORD OF BOREHOLE 23-03 (MW)

CLIENT: PERCY PYPER (1997) LTD.
PROJECT: 5360 Bank Street Phase Two ESA
JOB#: 100227.101
LOCATION: Tanks Outside CACE

SHEET: 1 OF 1
DATUM: CGVD28
BORING DATE: Aug 21 2023

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLE DATA				COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m				
0	Auger	Ground Surface		108.84								
		Light brown medium sand		0.03	NR							
		Dark brown silty sand, trace clay			SA1	CS			HEX: 115, IBI: 2	None		
1					NR							
				107.01	SA2	CS			HEX: 160, IBI: 2	None		
2		Crushed/ pulverized rock		1.83	SA3	CS			HEX: 0, IBI: 1	None		
		Grey brown sand with gravel		2.13	NR							
3	Direct Push											
				105.49	SA4	CS				None		
		Crushed/ pulverized rock		3.35								
4		Wet, brown grey medium sand with trace clay		105.18	SA5	CS			HEX: 0, IBI: 0	None		
				3.66	NR							
5					SA6	CS			HEX: 950, IBI: 2	None		
		Crushed rock		103.51								
				5.33								
		Brown sandy gravel with some silt		103.35	SA7	CS			HEX: 0, IBI: 2	None		
				5.49								
6					NR							
				102.74								
		End of Borehole		6.10								
		Intersected Water Table										



50mm diameter
PVC well screen

GROUNDWATER OBSERVATIONS

DATE	DEPTH (m)	ELEVATION (m)
Aug. 23/23	3.86	104.94
Aug. 25/23	3.86	104.94

RECORD OF BOREHOLE 23-04 (MW)

CLIENT: PERCY PYPER (1997) LTD.
PROJECT: 5360 Bank Street Phase Two ESA
JOB#: 100227.101
LOCATION: Side of Building

SHEET: 1 OF 1
DATUM: CGVD28
BORING DATE: Aug 21 2023

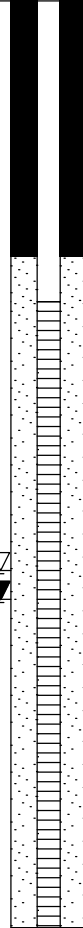
DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLE DATA				COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m				
0	Direct Push	Ground Surface		109.77								

RECORD OF BOREHOLE 23-05 (MW)

CLIENT: PERCY PYPER (1997) LTD.
PROJECT: 5360 Bank Street Phase Two ESA
JOB#: 100227.101
LOCATION: Beside Diesel Tank

SHEET: 1 OF 1
DATUM: CGVD28
BORING DATE: Aug 21 2023

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLE DATA				COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m				
0	Auger	Ground Surface		110.60								
		Greyish brown silty sand with crushed rock and gravel (Fill)			NR							
1	Direct Push				SA1	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
					NR							
2					SA2	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
		Grey sandy silt, trace clay		108.47								
				2.13	SA3	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
3					NR							
		Grey brown silty sand and gravel, trace clay		107.55								
				3.05	SA4	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
4					SA5	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
		Grey brown clayey silt with sand, wet to 5.64 mbgs		106.33								
				4.27	NR							
5					SA6	CS			BTEX, PHCs F1-F4	HEX: 310, IBI: 1	None	
					SA7	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
6					NR							
		End of borehole Intersection of Water Table Caved to 5.94 mbgs		104.50								
				6.10								



GROUNDWATER OBSERVATIONS

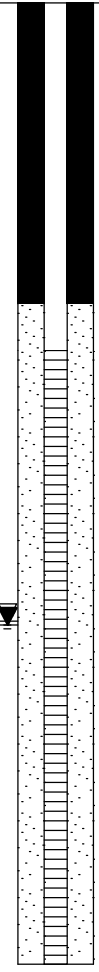
DATE	DEPTH (m)	ELEVATION (m)
Aug. 23/23	3.51	106.85
Aug. 25/23	3.70	106.66

RECORD OF BOREHOLE 23-06 (MW)

CLIENT: PERCY PYPER (1997) LTD.
PROJECT: 5360 Bank Street Phase Two ESA
JOB#: 100227.101
LOCATION: Beside Sea Cans

SHEET: 1 OF 1
DATUM: CGVD28
BORING DATE: Aug 22 2023

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLE DATA				COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m				
0	Auger	Ground Surface		110.29								
		Dark brown silty sand, trace clay (Topsoil)			NR							
1					SA1	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
					NR							
2		Grey brown sand, trace silt (Beach sand)		108.31 1.98	SA2	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
					NR							
3	Direct Push				SA3	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 2	None	
4		Wet, brown silty sand. Organic debris at 3.2 mbgs.		106.48 3.81	SA4	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
					SA5	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
5					SA6	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
6												
		End of Borehole Intersection of Water Table		104.20 6.10								



50 mm diameter
PVC well screen

GROUNDWATER OBSERVATIONS

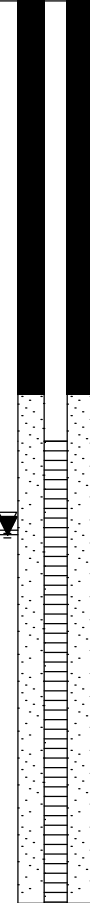
DATE	DEPTH (m)	ELEVATION (m)
Aug. 23/23	3.92	106.22
Aug. 25/23	3.95	106.20

RECORD OF BOREHOLE 23-07 (MW)

CLIENT: PERCY PYPER (1997) LTD.
 PROJECT: 5360 Bank Street Phase Two ESA
 JOB#: 100227.101
 LOCATION: Asphalt Front of Building

SHEET: 1 OF 1
 DATUM: CGVD28
 BORING DATE: Aug 22 2023

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLE DATA				COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m				
0	Auger	Ground Surface		110.20								
		Asphalt			NR							
		Light brown silty sand, trace gravel and rock			SA1	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
1					NR							
2	Direct Push				SA2	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None	
3					SA3	CS				HEX: 0, IBI: 0	None	
4					SA4	CS				HEX: 0, IBI: 0	None	
					SA5	CS				HEX: 0, IBI: 0	None	
		End of Borehole Auger Refusal at 3.96 mbgs, Core Refusal at 4.57 mbgs		105.63 4.57								



38 mm diameter
PVC well screen

GROUNDWATER OBSERVATIONS

DATE	DEPTH (m)	ELEVATION (m)
Aug. 23/23	3.40	106.71
Aug. 23/23	3.43	106.68

N:\PROJECTS\100227-101\DRAWING\1. DRAWINGS\ESA TWO RD\100227-101_ESA_TWO_RD_2023-06.dwg



LEGEND

BH/ MW #
XX.XX

BOREHOLE/ MONITORING WELL ID
GROUND SURFACE ELEVATION, IN METRES
GEODETIC DATUM

BOREHOLE LOCATION
(current investigation by GEMTEC)

MONITORING LOCATION
(current investigation by GEMTEC)

PHASE TWO PROPERTY

APEC NUMBER	AREA OF POTENTIAL ENVIRONMENTAL CONCERN
1	PCA #28, INTERIOR FURNACE OIL TANK
2	PCA #8, MOTOR OIL BENCH TANK
3	PCA #28, DYED DIESEL TANK
4	PCA #28, FIBERGLASS FURNACE OIL TANK
5	PCA #8, WASTE OIL STORAGE TANK
6	PCA #8, WASTE OIL STORAGE TOTES
7	PCA #48, BULK STORAGE OF ROAD SALTS
8	PCA OT.5 STOCKPILING OF ASPHALT COLD PATCH
9	PCA OT.6 OIL WATER SEPARATOR
10	PCA #28, FURNACE OIL TANK
11	PCA #28, TWO DYED DIESEL TANKS

GENERAL NOTE(S)
1. Coordinate system: NAD83, UTM ZONE 18,
2. Contains information licensed under the Open Government Licence - Ontario,
3. Maps Data: Google, ©2023 CNES / Airbus, First Base Solutions, Maxar Technologies
4. Geographic dataset source: Ontario GeoHub.

SCALE
1:1250

DRAWING
BOREHOLE AND MONITORING WELL LOCATIONS

CLIENT
PERCY PYPER (1997) LTD.
C/O MILESTONE AGGREGATE CONSULTING SERVICES INC.

PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
5360 BANK STREET
OTTAWA, ONTARIO

DRAWN BY
C.Z.

CHECKED BY
D.E./M.K.

PROJECT NO.
100227.101

REVISION NO.
0

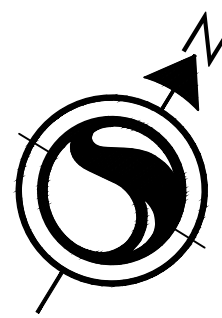
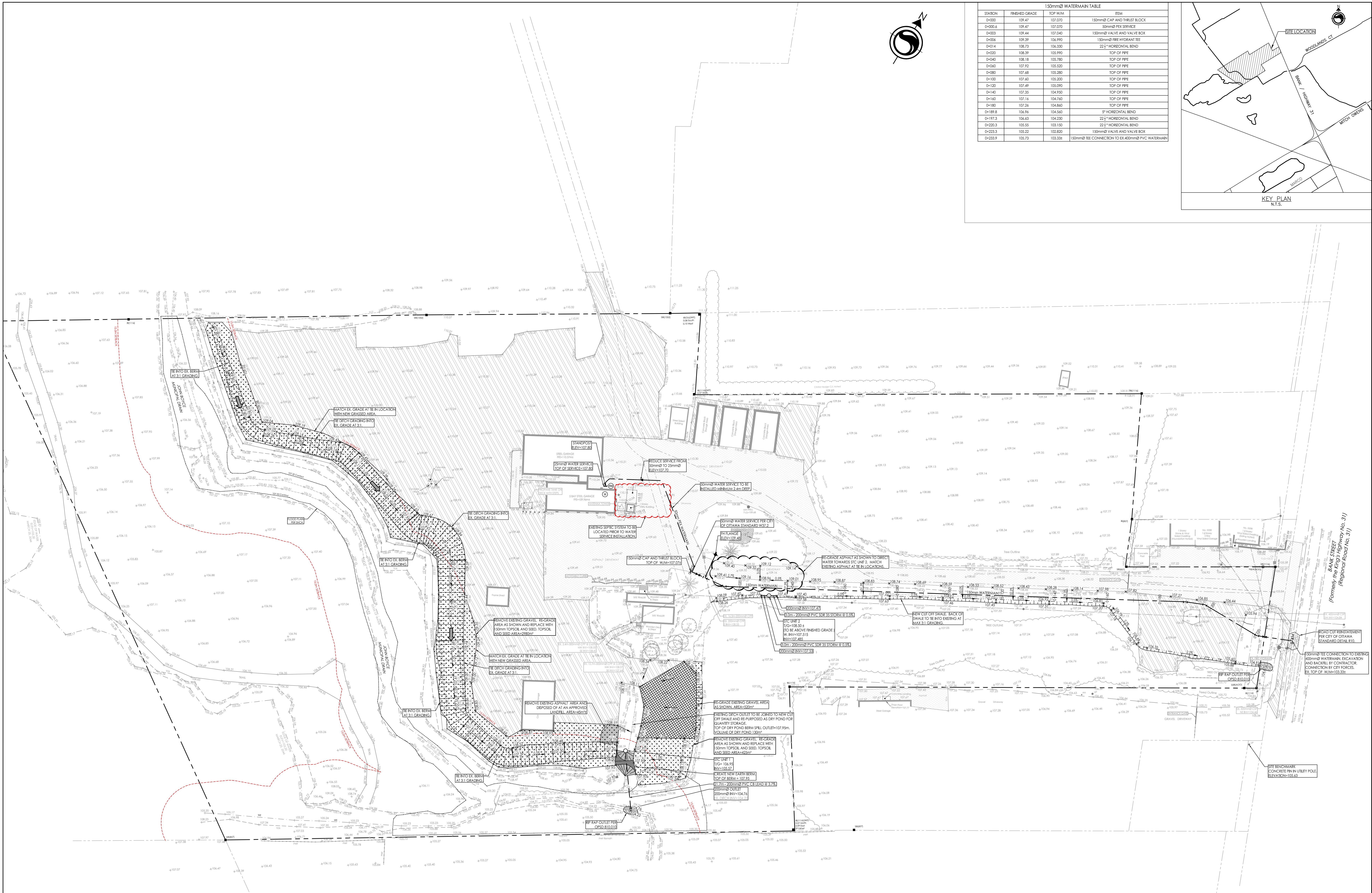
DATE
SEPTEMBER 2023

FIGURE NO.
FIGURE A.4

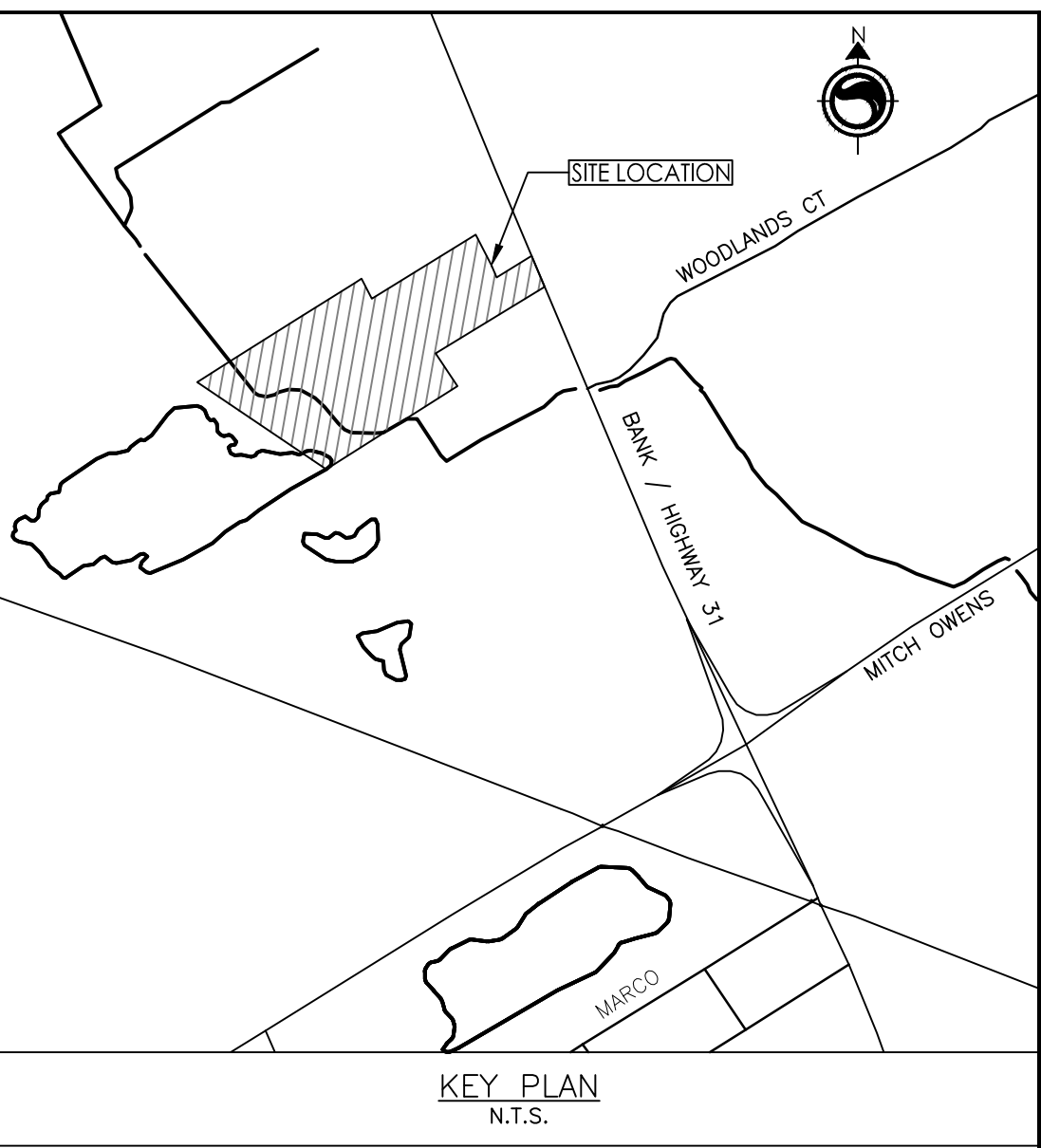
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ottawa@gemtec.ca

\\010\BANKSTREET\160401995\160401995.dwg (160401995.DWG)
2024/11/15 11:57 AM by: JANE WANG

ORIGINAL SHEET ARCH 1

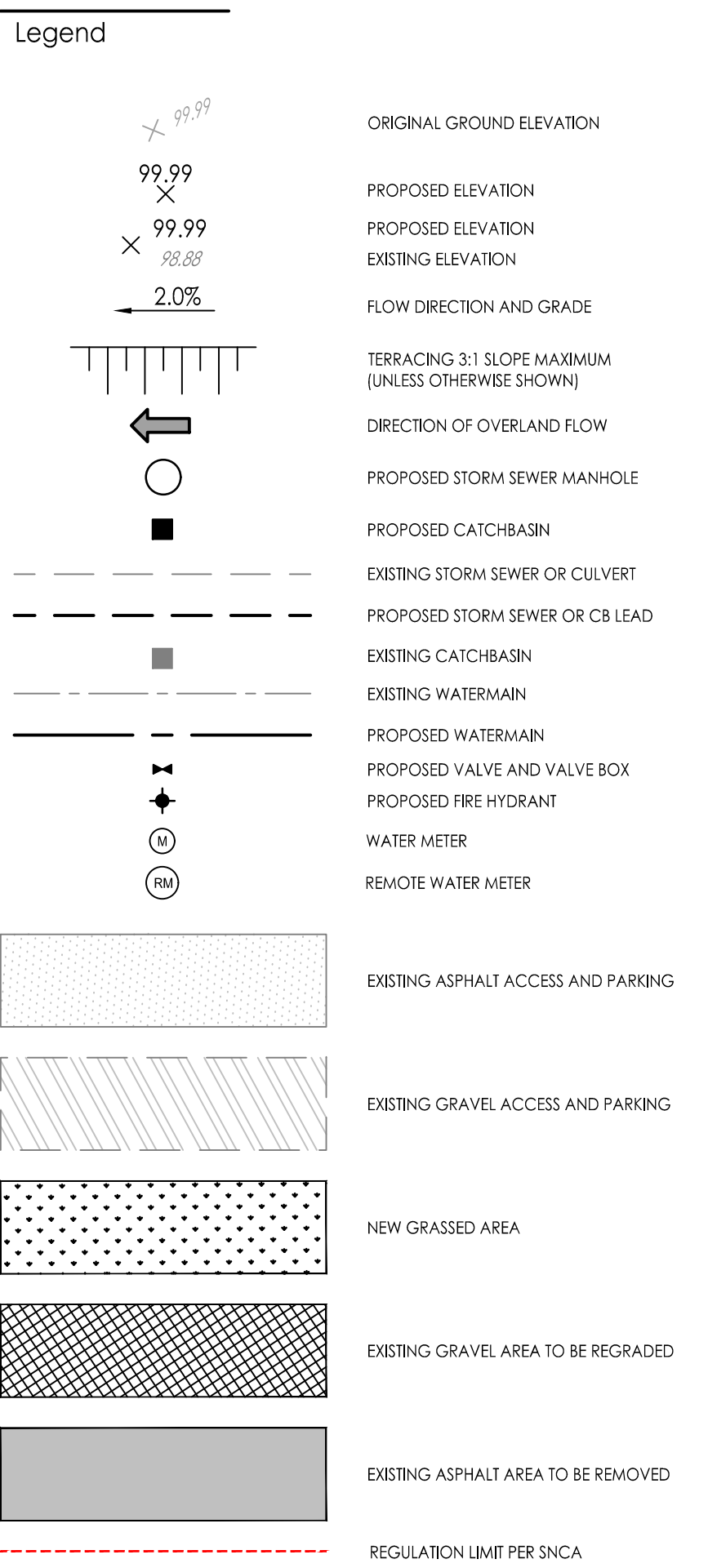


150mm RCP WATERMAIN TABLE			
STATION	FINISHED GRADE	TOP W/M	ITEM
D+0+00	109.47	107.070	150mm RCP AND THURST BLOCK
D+0+05.4	109.47	107.070	50mm RCP SERVICE
D+0+03	109.44	107.040	150mm VALVE AND VALVE BOX
D+0+05	109.39	106.990	150mm FIRE HYDRANT TEE
D+0+14	108.73	106.330	22.5° HORIZONTAL BEND
D+0+20	108.39	105.990	TOP OF PIPE
D+0+40	108.18	105.780	TOP OF PIPE
D+0+60	107.72	105.320	TOP OF PIPE
D+0+80	107.68	105.280	TOP OF PIPE
D+0+100	107.60	105.200	TOP OF PIPE
D+0+120	107.49	105.090	TOP OF PIPE
D+0+40	107.38	104.980	TOP OF PIPE
D+0+60	107.16	104.760	TOP OF PIPE
D+0+80	107.26	104.860	TOP OF PIPE
D+0+98.8	106.96	104.560	2° HORIZONTAL BEND
D+0+17.3	106.63	104.330	22.5° HORIZONTAL BEND
D+0+23.3	105.55	103.150	22.5° HORIZONTAL BEND
D+0+23.3	105.22	102.820	150mm VALVE AND VALVE BOX
D+0+23.9	105.73	103.330	50mm RCP CONNECTION TO EX. 400mm PVC WATERMAIN



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Notes

BANK STREET
(Formerly the Kings Highway, No. 31)
Regional Road No. 311

150mm RCP CONNECTION TO EXISTING
150mm WATERMAIN. EXCAVATION
AND BACKFILL BY CONTRACTOR.
CONNECTION BY CITY FORCES.
SEE TOP OF W/M=103.330.

PRE BENCHMARK
CONCRETE IN IN UTILITY POOL
ELEVATION=106.61

Revision	By	App'd	Date
0	ISSUED FOR REVIEW	MJS	24.09.03

File Name	Drawn	Checked	Design	Date
160401995.DWG	MJS	DT	DT	24.09.03

Permit-Seal

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Client/Project
5360 BANK STREET ZONING BYLAW
AMENDMENT AND SITE PLAN CONTROL

GREELY SAND & GRAVEL INC.
1971 OLD PRESCOTT ROAD
GREELY, ON

Title
REMOVALS, SERVICING, GRADING
AND RE-INSTATEMENT PLAN

Project No.	Scale	Sheet	Revision
160401995	1:500	0	0

Drawing No. RSGP-1 4 of 4