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Phase I-Environmental Site Assessment

936 March Road
Ottawa, Ontario

Prepared For

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EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by Minto Communities (Minto) to conduct a Phase I Environmental Site Assessment (ESA) of the property addressed 936 March Road. The purpose of this Phase I ESA was to research the past and current use of the Phase I Property and Phase I ESA Study Area and to identify any environmental concerns with the potential to have impacted the subject land.

Based on the historical research conducted as part of the Phase I ESA, the Phase I Property was first developed in the late 1800's as a farmstead with the existing residential dwelling and outbuildings. The Beachburg rail corridor transects the eastern portion of the site in an approximate north-south direction. Based on the aerial review, miscellaneous items were stored in the vicinity of the outbuildings since the early 1990's. The historical use of the adjacent and neighbouring properties was primarily vacant or agricultural with occasional farmsteads or residential dwellings.

The Phase I Property is currently occupied by a residential dwelling and private garage, as well as two (2) former farm structures used for the storage of equipment and miscellaneous items. An original farm building further to the north of the residential dwelling is no longer present. Stored items noted in the aerial review, adjacent to the former farm building and northeast of the residential dwelling, were being removed at the time of the site visit. The remainder of the property is primarily occupied by soy fields farmed by the neighbour across March Road, as well as some wood areas. Shirley's Brook transects the western portion of the site in an approximate north-south direction and the aforementioned Beachburg rail line has been abandoned.

At the time of the site visit, the current uses of the adjacent and neighbouring properties within the Phase I ESA Study Area were observed from publicly accessible areas. The adjacent and neighbouring properties are largely vacant or agricultural land and residential dwellings. As noted previously, the former rail line that transects the property is not currently in operation (the tracks have been removed).

Based on the historical research in combination with observations made at the time of the site visit, potentially contaminating activities which have resulted in APECs on the Phase I Property include on-site fuel storage and the storage of miscellaneous items by Fuller Construction.

Recommendations

Based on the results of the Phase I ESA, it is our opinion that a Phase II Environmental Site Assessment is required for the property.

Based on the age of the residential dwelling (late 1800's) possible asbestos-containing materials (ACMs) observed during the site visit include vinyl floor tiles, acoustic ceiling tiles and drywall joint compound. Possible asbestos-containing drywall joint compound may also be present in the private garage. The potential ACMs were observed to be in good condition at the time of the site visit.

Based on the age of the residential dwelling, lead-based paint may be present beneath more recent paints or on any original or older painted surfaces. Painted surfaces were generally observed to be in good condition throughout the building at the time of the site visit.

Prior to any possible future demolition activities, a designated substance survey (DSS) must be conducted for the existing structures in accordance with Ontario Regulation 490/09 under the Occupational Health and Safety Act.

1.0 INTRODUCTION

At the request of Minto Communities (Minto) Paterson Group (Paterson) conducted a Phase I-Environmental Site Assessment (Phase I-ESA) of the property addressed 936 March Road, in the City of Ottawa, Ontario. The purpose of this Phase I-ESA was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject property.

Paterson was engaged to conduct this Phase I-ESA by Ms. Beth Henderson of Minto. The offices of Minto are located at 200-180 Kent Street, Ottawa, Ontario. Ms. Henderson can be reached by telephone at (613) 782-2311.

This report has been prepared specifically and solely for the above noted project which is described herein. It contains all of our findings and results of the environmental conditions at this site.

This Phase I-ESA report has been prepared in general accordance with Ontario Regulation 153/04 as amended by O.Reg. 269/11 (Environmental Protection Act), and also complies with the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I-ESA are based on a review of readily available geological, historical and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

2.0 PHASE I PROPERTY INFORMATION

Address:	936 March Road, Ottawa, Ontario
Legal Description:	Part of Lot 12, Concession 4, Geographic Township of March, City of Ottawa
Property Identification Numbers:	04527-1004, 04527-1005
Location:	The subject site is located between March Road and March Valley Road, approximately 240m north of Maxwell Bridge Road, in the City of Ottawa, Ontario. For the purposes of this report, March Road is assumed to travel in a north-south direction. The subject site is shown on Figure 1 - Key Plan following the body of this report.
Latitude and Longitude:	45° 22' 1" N, 75° 56' 1" W

Site Description:

Configuration:	Irregular (2 parcels divided by a railway corridor)
Site Area:	78 hectares (approximate)
Zoning:	RU – Rural, with a floodplain overlay along Shirley's Brook, which transects the Phase I Property in an approximate north-south direction, parallel to March Road.
Current Use:	The property is currently used for residential and agricultural purposes (soy fields).
Services:	The Phase I Property has private services (a potable well and septic system).

3.0 SCOPE OF INVESTIGATION

The scope of work for this Phase I-Environmental Site Assessment was as follows:

- Determine the historical activities on the subject site and study area by conducting a review of readily available records, reports, photographs, plans, mapping, databases and regulatory agencies;
- Investigate the existing conditions present at the subject site and study area by conducting site reconnaissance;
- Conduct interviews with persons knowledgeable of current and historic operations on the subject property, and if warranted, neighbouring properties;
- Present the results of our findings in a comprehensive report in general accordance with the requirements of Ontario Regulation 269/11 amending O.Reg. 153/04 made under the Environmental Protection Act and in compliance with the requirements of CSA Z768-01;
- Provide a preliminary environmental site evaluation based on our findings;
- Provide preliminary remediation recommendations and further investigative work if contamination is suspected or encountered.

4.0 RECORDS REVIEW

4.1 General

Phase I-ESA Study Area Determination

A radius of approximately 250 m was determined to be appropriate as a Phase I ESA study area for this assignment. Properties outside the 250 m radius are not considered to have impacted the subject land, based on their significant distance from the site.

First Developed Use Determination

According to the current tenant, Ms. Jennifer Arbuckle, the Phase I Property was first developed as a farmstead in the late 1800's.

Fire Insurance Plans and City of Ottawa Street Directories

Due to the rural setting of the Phase I Property, there are no fire insurance plans (FIPs) or city directories for the Phase I Property or for properties within the Phase I Study Area.

Draft Plan of Subdivision

A draft plan of subdivision prepared by Stantec Geomatics was reviewed as part of this assessment. The draft plan of subdivision shows the Phase I Property in its current configuration.

Previous Engineering Reports

Paterson has conducted several environmental assessments for properties within the Phase I Study Area. Based on a review of our files, no potential environmental concerns were identified with respect to the Phase I Property.

Geotechnical Investigation

A Geotechnical Investigation was conducted for the Phase I Property in June of 2018. Thirty-eight boreholes were placed across the subject land to depths ranging from approximately 1.3 to 7.8m below grade. The subsurface profile generally consisted of topsoil over sand, silty clay and/or glacial till. Fill material was not identified at any of the borehole locations. No evidence of potential contamination was noted in the soil samples during the geotechnical field program.

4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on June 18, 2018. The subject site and adjacent properties were not listed in the NPRI database. No records of pollutant release were listed in the database for properties located within the Phase I Study Area.

PCB Inventory

A search of national PCB waste storage sites was conducted. No PCB waste storage sites are located within the Phase I Study Area.

Ontario Ministry of Environment, Conservation and Parks (MECP) Instruments

A request was submitted to the MECP Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MECP issued instruments for the site. Based on the MECP response dated August 30, 2018, no records were located responsive to the request. A copy of the MECP response is provided in Appendix 2.

MECP Coal Gasification Plant Inventory

The Ontario Ministry of Environment and Climate Change document entitled "Municipal Coal Gasification Plant Site Inventory, 1991" was reviewed to reference the locations of former plants with respect to the site. No coal gasification plants were identified within the Phase I Study Area.

MECP Incident Reports

A request was submitted to the MECP Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MECP for the site or adjacent properties. Based on the MECP response dated August 30, 2018, no records were located responsive to the request. A copy of the MECP response is provided in Appendix 2.

MECP Waste Management Records

A request was submitted to the MECP Freedom of Information office for information with respect to waste management records. Based on the MECP response dated August 30, 2018, no records were located responsive to the request. A copy of the MECP response is provided in Appendix 2.

MECP Submissions

A request was submitted to the MECP Freedom of Information office for information with respect to reports related to environmental conditions that have been submitted to the MECP. Based on the MECP response dated August 30, 2018, no records were located responsive to the request. A copy of the MECP response is provided in Appendix 2.

MECP Brownfields Environmental Site Registry

A search of the MECP Brownfields ESR was conducted for properties within the Phase I Study Area. According to the ESR, no Records of Site Condition (RSCs) have been filed for the Phase I Property. No RSCs were identified for properties within the Phase I Study Area.

MECP Waste Disposal Site Inventory

The Ontario Ministry of Environment document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. This document includes all recorded active and closed waste disposal sites, industrial manufactured gas plants and coal tar distillation plants in the Province of Ontario. No active or closed waste disposal sites were identified for the Phase I Property or for any properties within the Phase I Study Area.

Areas of Natural Significance

A search for areas of natural significance and features within the Phase I Study Area was conducted on the web site of the Ontario Ministry of Natural Resources (MNR) on June 18, 2018. The search did not reveal any areas of natural significance on the Phase I Property or within the Phase I Study Area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on May 31, 2018 to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. A response from the TSSA, dated May 31, 2018, indicated that no records were identified. A copy of the TSSA correspondence is included in Appendix 2.

City of Ottawa Landfill Document

The document entitled “Old Landfill Management Strategy, Phase I-Identification of Sites, City of Ottawa”, was reviewed. According to the document, there are no closed landfill sites within the Phase I Study Area.

City of Ottawa Historical Land Use Inventory (HLUI)

A request was submitted to the City of Ottawa for a search of the Historical Land Use Inventory (HLUI) database. Based on the City of Ottawa response dated August 23, 2018, there are no activities associated with the Phase I Property. The HLUI database identified 56 activities within the Phase I Study Area. Based on the nature of the activities and their separation distances from the Phase I Property, they are not considered to represent areas of potential environmental concern (APECs) on the Phase I Property. A copy of the City correspondence is provided in Appendix 2.

4.3 Physical Setting Sources

Aerial Photographs

Historical air photos from the National Air Photo Library were reviewed in approximate ten (10) year intervals. The review period dates back to the first available air photos for the site. Based on the review, the following observations have been made:

- | | |
|------|--|
| 1934 | The Phase I Property was occupied by the existing residential dwelling and farm buildings. An apparent barn or outbuilding was also present further to the north of the residential dwelling. The remainder of the subject land was occupied by agricultural lands, with some treed areas. A rail line corridor transects the eastern portion of the property in an approximate north-south direction. Adjacent and neighbouring properties were occupied by agricultural lands with occasional farmsteads or residential dwellings. |
| 1952 | No significant changes appear to have been made to the Phase I Property or to the adjacent and neighbouring lands. |
| 1976 | An apparent ditch transects the western portion of the Phase I Property in an approximate north-south direction. No significant changes appear to have been made to the subject land or the adjacent and neighbouring properties. |

- 1989 The Phase I Property and neighbouring lands within the Phase I Study Area appear to remain unchanged from the previous photograph.
- 1991 (City of Ottawa web site) The northern most outbuilding or barn seen in the previous photographs, is no longer present. An apparent storage area is present to the east of the former barn. The stored items cannot be distinguished from the photograph. There appears to be increased activity (possible storage areas) further to the east of the residential dwelling.
- Additional outbuildings are present on the adjacent farmstead to the south, along March Road. Otherwise no significant changes appear to have been made to the adjacent and neighbouring properties.
- 2008 (City of Ottawa, geoOttawa) The Phase I Property appears to remain unchanged from the previous photograph. A residential subdivision is under construction to the southeast of the Phase I Property.
- 2017 (City of Ottawa, geoOttawa) The Phase I Property appears as it currently exists, with no changes from the previous photograph. The subdivision to the southeast of the Phase I Property has been completed. Commercial development has occurred along the east side of March Road further south of the Phase I Property.

Laser copies of selected aerial photographs reviewed are included in Appendix 1.

Topographic Maps

Topographic maps were obtained from Natural Resources Canada – The Atlas of Canada website and from the City of Ottawa website. The topographic maps indicate that the Phase I Property slopes down to the east, with a difference in grade of approximately 10m.

According to the maps, Shirley's Brook transects the western portion of the Phase I Property in an approximate north-south direction, while drainage ditches are present on the eastern portion of the site in an approximate east-west direction. An illustration of the referenced topographic map is presented on Figure 2 – Topographic Map, appended to this report.

Physiographic Maps

The Ontario Geological Survey publication ‘The Physiography of Southern Ontario, Third Edition’ was reviewed as a part of this assessment. According to the publication and attached mapping, the site is situated within the Ottawa Valley Clay Plains physiographic region, described as “clay plains interrupted by ridges of rock or sand”.

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, bedrock in the area of the site consists of interbedded sandstone and dolomite of the March Formation and dolomite of the Oxford Formation. Overburden soils are reported to consist of offshore marine sediments with erosional terraces, with drift thicknesses between 0 and 10m.

Water Well Records

The MECP well mapping website was accessed to obtain well records for all drilled wells within 250 m of the Phase I Property. A well record was identified for the Phase I Property, as well as 28 well records for domestic potable wells or well abandonments on properties within the Phase I Study Area.

The well mapping website did not identify any monitoring well records for the Phase I Property or for any properties within the Phase I Study Area. Copies of the MECP well records are provided in Appendix 2.

Water Bodies and Areas of Natural Significance

Shirley’s Brook transects the western portion of the Phase I Property in an approximate north-south direction. Otherwise, no bodies of water are present on the Phase I Property or within the Phase I Study Area. No areas of natural significance are known to exist within the Phase I Study Area.

5.0 INTERVIEWS

Property Owner Representative

Ms. Jennifer Arbuckle, the current tenant, was interviewed at the time of the site visit. Ms. Arbuckle indicated that the property has been occupied by the existing farmstead for approximately 150 years and that the Fuller family has owned the property for approximately 40 years. Ms. Arbuckle indicated that the property has been occupied by soy crops for the past 8 to 10 years and that prior to soy, the land was farmed for corn. To the knowledge of Ms. Arbuckle, the land has been farmed by the neighbour, across March Road, for the past 20 years.

Ms. Arbuckle indicated that the furnace oil aboveground storage tank (AST) situated in the basement was replaced in 2012 and that to her knowledge there were no leaks or spills associated with the previous AST or the existing AST. Ms. Arbuckle also indicated that the property owner stores scrap metal and unused construction equipment (associated with Fuller Construction). Fuller was in the process of removing the waste materials and equipment at the time of the site visit.

The information obtained in this interview is consistent with site information obtained from other sources and is considered to be valid.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site visit was conducted on June 19, 2018. Weather conditions were sunny, with a temperature of approximately 20° C. Personnel from the Environmental Department of Paterson Group conducted the site visit. The uses of neighbouring properties within the Phase I Study Area were also assessed at the time of the site visit, from publicly accessible areas. Photographs of the Phase I Property and adjacent lands are provided in the Figures Section of this report.

6.2 Specific Observations at Phase I Property

Buildings and Structures

The Phase I Property is occupied by a two-storey residential dwelling with a basement level, a private garage and two (2) outbuildings associated with the original farmstead. The dwelling, reportedly constructed in the late 1800's, has a stone and mortar foundation and is finished on the exterior with red brick and a metal roof.

A wood frame private garage structure, with an asphaltic-shingled roof, is present adjacent to the east of the residential dwelling. Two other wood-framed structures with metal or shingled roofs are present to the east of the dwelling and are used for storage of lawn maintenance equipment and miscellaneous building materials.

The residential dwelling is currently heated with oil-fired equipment, while the other structures have never been heated.

Underground Utilities and Below Grade Structures

A potable well is present to the southeast of the residential dwelling, while a septic system is reportedly present on the north side of the dwelling. Otherwise there are no underground utilities or below grade structures on the Phase I Property. Telephone and Hydro services are provided via overhead wires. The approximate locations of the well and septic are shown on Drawing PE4343-1A.

Site Features

The aforementioned buildings and structures occupy the southwestern portion of the Phase I Property. Shirley's Brook transects the site in an approximate north-south direction and is situated just west of the residential dwelling. A wooded area is present to the east of the residential dwelling. The northeastern portion of the site is also wooded. The remainder of the site is occupied by soy fields, which are separated by tree lines and drainage ditches. The Beachburg rail corridor (abandoned rail line) transects the Phase I Property in an approximate north-south direction.

A slope, approximately 6m high, runs in a north-south direction within the western portion of the subject site, sloping downward to the east. The slope was noted to be stable and shaped to an approximate 8H:1V slope or less. Overall, the ground surface across the subject site slopes downward from southwest to northeast from an elevation of approximately 80m above sea level (asl) to an elevation of approximately 65m asl. Site drainage consists of surficial infiltration and sheet flow to onsite drainage ditches and Shirley's Brook.

An empty aboveground fuel storage tank (AST) was observed to the further to the east of the residential dwelling at the time of the site assessment. No tag information was noted on the AST, which was approximately 5,000L in volume and in fair condition at the time of the site visit.

Based on the apparent age, condition and location of the AST, the tank is considered to have been empty when placed on the Phase I Property by Fuller Construction and not used on the Phase I Property for the storage of fuel. The tank appears to have been recently moved from a nearby grove of trees; a hole observed in the tank, is considered to have occurred during the moving of the AST. No signs of leakage or staining were noted on the AST or on the ground surface in the vicinity of the ASTs original or current location.

No other ASTs or signs of underground storage tanks (USTs) were noted at the time of the site visit.

A potable well is present on the southeastern portion of the Phase I Property, southeast of the residential dwelling. A septic system is present further to the southwest of the residential dwelling. No other underground structures were noted on the exterior of the Phase I Property at the time of the site visit.

Pole-mounted transformers were noted on or adjacent to the Phase I Property, along March Road. No signs of leakage were noted on or around the units. The transformers are not considered to pose a concern to the Phase I Property.

Waste generated on site includes domestic waste and recycling which is collected at the curbside by the municipality. Domestic waste water generated on site is discharged to the aforementioned septic system.

Other waste materials observed on site include defunct construction equipment, wooden job shacks and scrap metal. The aforementioned waste materials were stored further to the northeast and east of the residential dwelling and outbuildings. Fuller Construction was in the process of removing the waste at the time of the site visit. As noted in the aerial photograph review, a former barn structure was present further north of the residential dwelling. Stored items adjacent to the barn were unidentifiable from the photograph and considered to have included farm implements. The barn structure was no longer present at the time of the site visit and previously stored items appeared to have been removed based on soil disturbances noted at the time of the site visit.

No evidence of fill material was noted on the Phase I Property at the time of the site visit. There were no unidentified substances on the exterior of the Phase I Property at the time of the site visit. The above-noted site features are shown on Drawing PE4343-1 - Site Plan.

Interior Assessment

A general description of the interior of the residential building is as follows:

- Floor materials consist of a combination of hardwood, ceramic floor tiles and poured concrete (basement).
- Wall materials consist of gypsum board, ceramic tile, lathe and plaster with stone and mortar walls partially covered with apparent spray-foam insulation in the basement.
- Ceiling materials consist gypsum board, stipple plaster or unfinished wood beams.
- Lighting is provided by fluorescent and incandescent fixtures.

The dwelling is currently heated with oil-fired equipment. A 682L aboveground storage tank was situated within the southwest corner of the basement. The AST was of single-wall, non-metallic construction and manufactured in 2011. The tank was situated within a drip-pan and was in good condition at the time of the site visit, with no signs of leakage or staining on or around the AST.

According to the current tenant, the previous AST had been situated at the same location. Cuts in the concrete floor slab were noted beneath the spill tray. The purpose of the cuts was unclear at the time of the site visit. It should be noted that a copper fuel line was observed protruding from the concrete floor slab in the vicinity of the furnace. The copper fuel supply line associated with the former AST and leading to the furnace, is considered to have been partially buried in the concrete floor slab. Ms. Arbuckle was unaware of any leaks or spills associated with the previous or existing AST. No visual or olfactory evidence of leaks or stains were noted in the basement of the dwelling at the time of the site visit.

No evidence of underground storage tanks (USTs) was observed on the interior of the dwelling at the time of the site visit. Chemical storage within the dwelling was limited to small quantities of commercially available cleaning chemicals. No sumps or drains were observed on the interior of the dwelling at the time of the site visit.

Outbuildings

With the exception of some gypsum board on the interior of the private garage, the interiors of the remaining structures on site are not finished.

Minor quantities of fuels (less than 20L) including fuel and lubricants, were noted in the private garage and outbuilding closest to the residential dwelling. The chemicals were properly stored with no signs of leakage or staining in the immediate vicinity noted at the time of the site visit.

Hazardous Building Materials

Based on the reported date of construction (late 1800's), possible asbestos-containing materials (ACMs) observed within the dwelling during the site visit include drywall joint compound, stipple plaster finishes and hard plaster. Any drywall joint compound present within the private garage may also contain asbestos. The potential ACMs were observed to be in very good condition at the time of the site visit.

Based on the age the dwelling, lead-based paint may be present beneath more recent paints or on any original or older painted surfaces. Painted surfaces were generally observed to be in very good condition throughout the dwelling at the time of the site visit.

Urea Formaldehyde Foam Insulation (UFFI) was not identified during the site visit, however wall cavities within the dwelling were not observed for insulation type.

Ozone-depleting substances (ODSs) noted at the time of the site visit include a kitchen refrigerator. No potential sources of polychlorinated biphenyls (PCBs) were noted at the time of the site assessment.

No evidence of mould or water damage were observed on the interior of the subject buildings.

Neighbouring Properties

An inspection of the neighbouring properties was conducted from publicly accessible roadways at the time of the site inspection. Land use adjacent to the subject site was as follows:

- North – Agricultural and treed land, and Beachburg rail corridor (abandoned rail line);
- South – Residential and vacant, undeveloped land (1225 March Valley Road);
- East – March Valley Road followed by vacant land and Shirley's Brook;
- West – March Road followed by residential and agricultural.

The abandoned rail line within the corridor that transects the subject land is considered to be a PCA, however it is not considered to result in an APEC on the Phase I Property. No other PCAs were identified within the Phase I Study Area. Current land use within the Phase I Study Area is illustrated on Drawing: PE4343-2 – Surrounding Land Use Plan in the Figures section of this report, following the text.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

The following tables indicate the current and past uses of the site as well as associated potentially contaminating activities dating back to the first developed use of the site.

Table 1 Land Use History – 936 March Road				
Time Period	Name of Owner	Property Use	Description of Property Use	Other Observations from Aerial Photos, FIPs, etc.
Prior to 1998	Various private individuals	Residential and Agricultural or Other	Phase I Property was reportedly developed as a farmstead in the late 1800's.	First developed use based on personal interviews. Existing farmstead can be seen in 1934 aerial (earliest aerial available for review). No significant change in land use noted in subsequent 1952, 1976, 1989 aeriels.
1998 to present	Fuller Family	Residential and Agricultural or Other	Farmstead: residential dwelling and agricultural lands.	No changes to land use observed in subsequent aeriels dated 1999, 2008 and 2017.

Potentially Contaminating Activities

The following historical and/or existing PCAs were identified on the Phase I Property:

- Item 28, Table 2, O.Reg. 153/04 as amended by O.Reg. 269/11: “Gasoline and Associated Products Storage in Fixed Tanks” - this PCA was identified based on the partially buried copper fuel supply line in the concrete floor slab within the residential dwelling.

Although not listed in Table 2 the storage of scrap metal and construction equipment is considered to be a PCA. The aforementioned on-site PCAs are considered to result in APECs on the Phase I Property as further discussed in the following section.

The abandoned rail line is not considered to represent an APEC on the Phase I Property based on the distance of the former rail lines from the property (approximately 10 to 15m), no evidence of ancillary activities, spur lines, loading or fueling, in combination with the nature of potential contaminants typically associated with this activity; metals and polynuclear aromatic hydrocarbons (PAHs) have low solubility and low mobility in the subsurface.

A dry cleaning establishment is situated approximately 200m south of the Phase I Property, within the commercial development at 846 March Road and is considered to be a drop-off location only with no dry cleaning chemicals used on-site. This property is not considered to represent a concern to the Phase I Property.

Other than the Beachburg rail corridor, no existing or historical off-site PCAs were identified within the Phase I Property. As noted above, this PCA is not considered to result in an APEC on the Phase I Property.

APECs resulting from PCAs on the Phase I Property are shown in red on Drawing PE4343-1 - Site Plan.

Areas of Potential Environmental Concern

Table 2 Areas of Potential Environmental Concern					
Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern with respect to Phase I Property	Potentially Contaminating Activity	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil, and/or Sediment)
APEC 1	In the immediate vicinity of the residential dwelling.	PCA 28 – Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs (F ₁ -F ₄)	Soil and Groundwater
APEC 2	Area around the former barn and storage area further north of the residential dwelling.	Other: farm operations, miscellaneous storage	On-site	BTEX PHCs (F ₁ -F ₄) metals	Soil
				BTEX PHCs (F ₁ -F ₄)	Groundwater
APEC 3	Former storage area further northeast of the residential dwelling	Other: storage of scrap metal and construction equipment	On-site	BTEX PHCs (F ₁ -F ₄) metals	Soil
				BTEX PHCs (F ₁ -F ₄)	Groundwater
APEC 4	Former storage area further east of the residential dwelling	Other: storage of scrap metal and construction equipment	On-site	BTEX PHCs (F ₁ -F ₄) metals	Soil
				BTEX PHCs (F ₁ -F ₄)	Groundwater

Contaminants of Potential Concern (CPCs)

Based on the APECs identified above, CPCs in the soil include the following benzene, ethylbenzene, toluene and xylenes (BTEX), petroleum hydrocarbons (PHCs, Fractions F₁-F₄) and metals.

CPCs in the groundwater include BTEX and PHCs.

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, bedrock in the area of the site consists of interbedded sandstone and dolomite of the March Formation and dolomite of the Oxford Formation. Overburden soils are reported to consist of offshore marine sediments with erosional terraces or bedrock, with drift thicknesses between 0 and 10m.

Buildings and Structures

The Phase I Property is occupied by a two-storey residential dwelling with a basement level, a private garage and two (2) outbuildings associated with the original farmstead. No other above grade buildings or structures were present on the Phase I Property.

Water Bodies

Shirley's Brook transects the western portion of the Phase I Property in an approximate north-south direction and is considered to flow in a southerly direction before heading east to Shirley's Bay. No other water bodies are present on the Phase I Property or within the Phase I Study Area.

Areas of Natural Significance

No areas of natural significance are known to exist within the Phase I Study Area.

Potable Water Wells

The MECP well mapping website was accessed to obtain well records for all drilled wells within 250 m of the Phase I Property. A well record was identified for the Phase I Property, as well as 28 well records for domestic potable wells or well abandonments on properties within the Phase I Study Area.

Monitoring Wells

The MECP well mapping did not identify any monitoring well records for the Phase I Property or for any properties within the Phase I Study Area.

Neighbouring Land Use

Neighbouring land use in the Phase I Study Area is primarily residential and agricultural or vacant land. A commercial development (various restaurants, retail and service establishments) is present further to the south of the Phase I Property. Land use is shown on Drawing PE4343-2 - Surrounding Land Use Plan.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of this report, historical and existing PCAs resulting in APECs on the Phase I Property include the following: fuel storage on the Phase I Property and the storage of scrap metal and equipment.

The abandoned railway line that transects the eastern portion of the Phase I Property is not considered to result in an APEC on the Phase I Property based on the separation distance of the former rail lines from the subject land, in combination with the nature (low-solubility and low subsurface mobility) of potential contaminants of concern typically associated with a rail bed (polynuclear aromatic hydrocarbons and metals).

Contaminants of Potential Concern

The CPCs identified in this Phase I ESA are listed in Section 7.1 of this report.

Assessment of Uncertainty and/or Absence of Information

The information available for review as part of the preparation of this Phase I ESA is considered to be sufficient to conclude that there are potentially contaminating activities on the subject site which have resulted in areas of potential environmental concern on the Phase I Property. The presence of potentially contaminating activities was confirmed by a variety of independent sources, including, in some cases, observations made during the Phase I site visit. As such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.

8.0 CONCLUSIONS

Assessment

Paterson Group was retained by Minto Communities (Minto) to conduct a Phase I Environmental Site Assessment (ESA) of the property addressed 936 March Road. The purpose of this Phase I ESA was to research the past and current use of the Phase I Property and Phase I ESA Study Area and to identify any environmental concerns with the potential to have impacted the subject land.

Based on the historical research conducted as part of the Phase I ESA, the Phase I Property was first developed in the late 1800's as a farmstead with the existing residential dwelling and outbuildings. The Beachburg rail corridor transects the eastern portion of the site in an approximate north-south direction. Based on the aerial review, miscellaneous items were stored in the vicinity of the outbuildings since the early 1990's. The historical use of the adjacent and neighbouring properties was primarily vacant or agricultural with occasional farmsteads or residential dwellings.

The Phase I Property is currently occupied by a residential dwelling and private garage, as well as two (2) former farm structures used for the storage of equipment and miscellaneous items. An original farm building further to the north of the residential dwelling is no longer present. Stored items noted in the aerial review, adjacent to the former farm building and northeast of the residential dwelling, were being removed at the time of the site visit. The remainder of the property is primarily occupied by soy fields farmed by the neighbour across March Road, as well as some wood areas. Shirley's Brook transects the western portion of the site in an approximate north-south direction and the aforementioned Beachburg rail line has been abandoned.

At the time of the site visit, the current uses of the adjacent and neighbouring properties within the Phase I ESA Study Area were observed from publicly accessible areas. The adjacent and neighbouring properties are largely vacant or agricultural land and residential dwellings. As noted previously, the former rail line that transects the property is not currently in operation (the tracks have been removed).

Based on the historical research in combination with observations made at the time of the site visit, potentially contaminating activities which have resulted in APECs on the Phase I Property include on-site fuel storage and the storage of miscellaneous items by Fuller Construction.

Recommendations

Based on the results of the Phase I ESA, **it is our opinion that a Phase II Environmental Site Assessment is required for the property.**

Based on the age of the residential dwelling (late 1800's) possible asbestos-containing materials (ACMs) observed during the site visit include vinyl floor tiles, acoustic ceiling tiles and drywall joint compound. Possible asbestos-containing drywall joint compound may also be present in the private garage. The potential ACMs were observed to be in good condition at the time of the site visit.

Based on the age of the residential dwelling, lead-based paint may be present beneath more recent paints or on any original or older painted surfaces. Painted surfaces were generally observed to be in good condition throughout the building at the time of the site visit.

Prior to any possible future demolition activities, a designated substance survey (DSS) must be conducted for the existing structures in accordance with Ontario Regulation 490/09 under the Occupational Health and Safety Act.

9.0 STATEMENT OF LIMITATIONS

This Phase I - Environmental Site Assessment report has been prepared in general accordance with O.Reg. 153/04 as amended by O.Reg. 269/11, and meets the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I - ESA are based on a review of readily available geological, historical and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

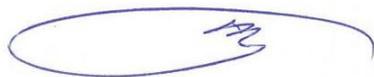
Should any conditions be encountered at the subject site and/or historical information that differ from our findings, we request that we be notified immediately in order to allow for a reassessment.

This report was prepared for the sole use of Minto Communities and 2559688 Ontario Inc. Permission and notification from Minto, 2559688 Ontario Inc. and Paterson Group will be required to release this report to any other party.

Paterson Group Inc.



Karyn Munch, P.Eng., QP_{ESA}



Mark S. D'Arcy, P.Eng., QP_{ESA}



Report Distribution:

- Minto Communities
- Paterson Group

10.0 REFERENCES

Federal Records

Air photos at the Energy Mines and Resources Air Photo Library.
National Archives.
Maps and photographs (Geological Survey of Canada surficial and subsurface mapping).
Natural Resources Canada – The Atlas of Canada.
Environment Canada, National Pollutant Release Inventory.
PCB Waste Storage Site Inventory.

Provincial Records

MECP Freedom of Information and Privacy Office.
MECP Municipal Coal Gasification Plant Site Inventory, 1991.
MECP document titled “Waste Disposal Site Inventory in Ontario”.
MECP Brownfields Environmental Site Registry.
Office of Technical Standards and Safety Authority, Fuels Safety Branch.
MNR Areas of Natural Significance.
MECP Water Well Inventory.

Municipal Records

City of Ottawa Document “Old Landfill Management Strategy, Phase I - Identification of Sites.”, prepared by Golder Associates, 2004.
The City of Ottawa eMap website.

Local Information Sources

Draft Plan of Subdivision prepared by Stantec Geomatics, 2018.
Personal Interviews.

Public Information Sources

Google Earth.
Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4343-1 – SITE PLAN

DRAWING PE4343-2 – SURROUNDING LAND USE PLAN

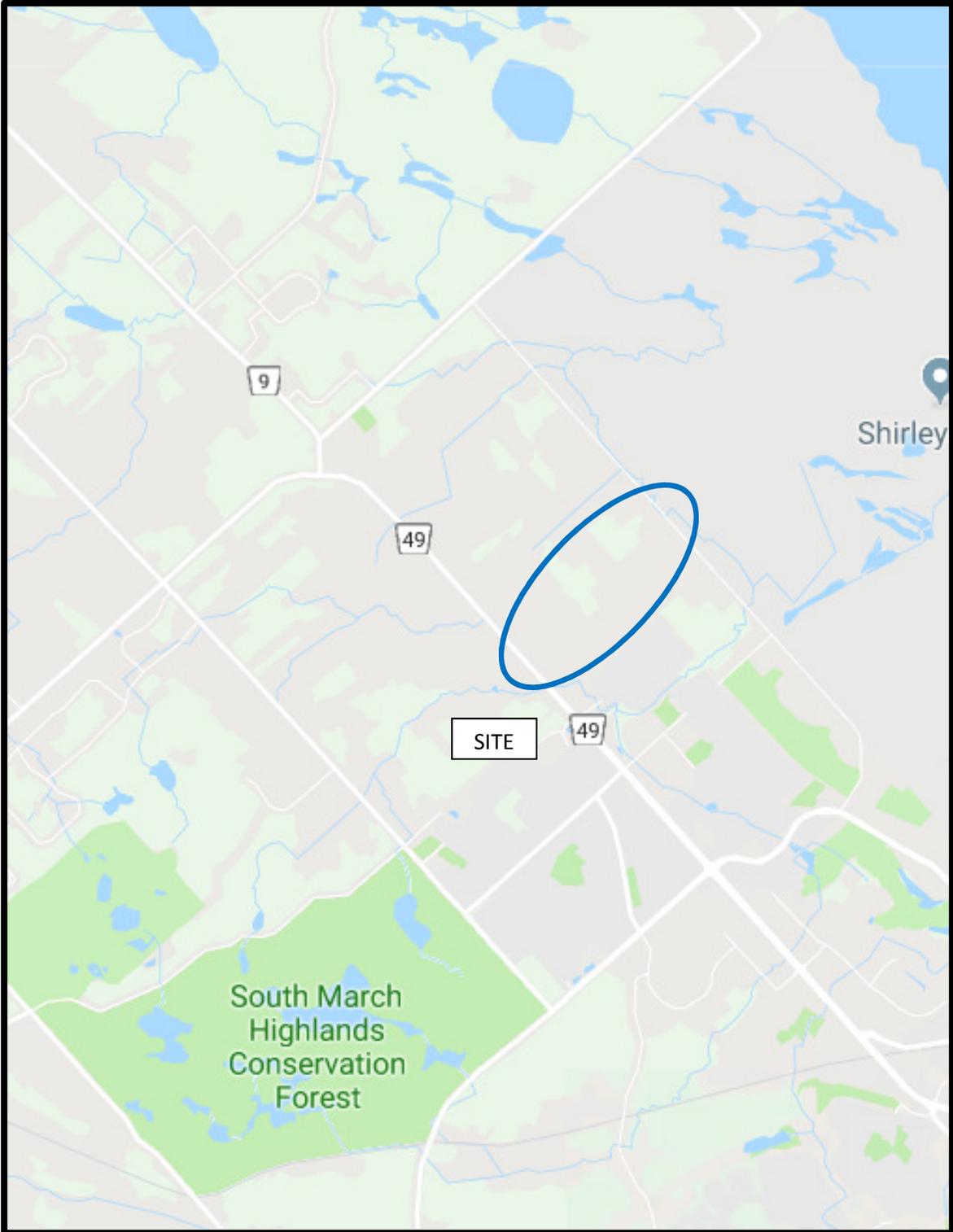


FIGURE 1
KEY PLAN

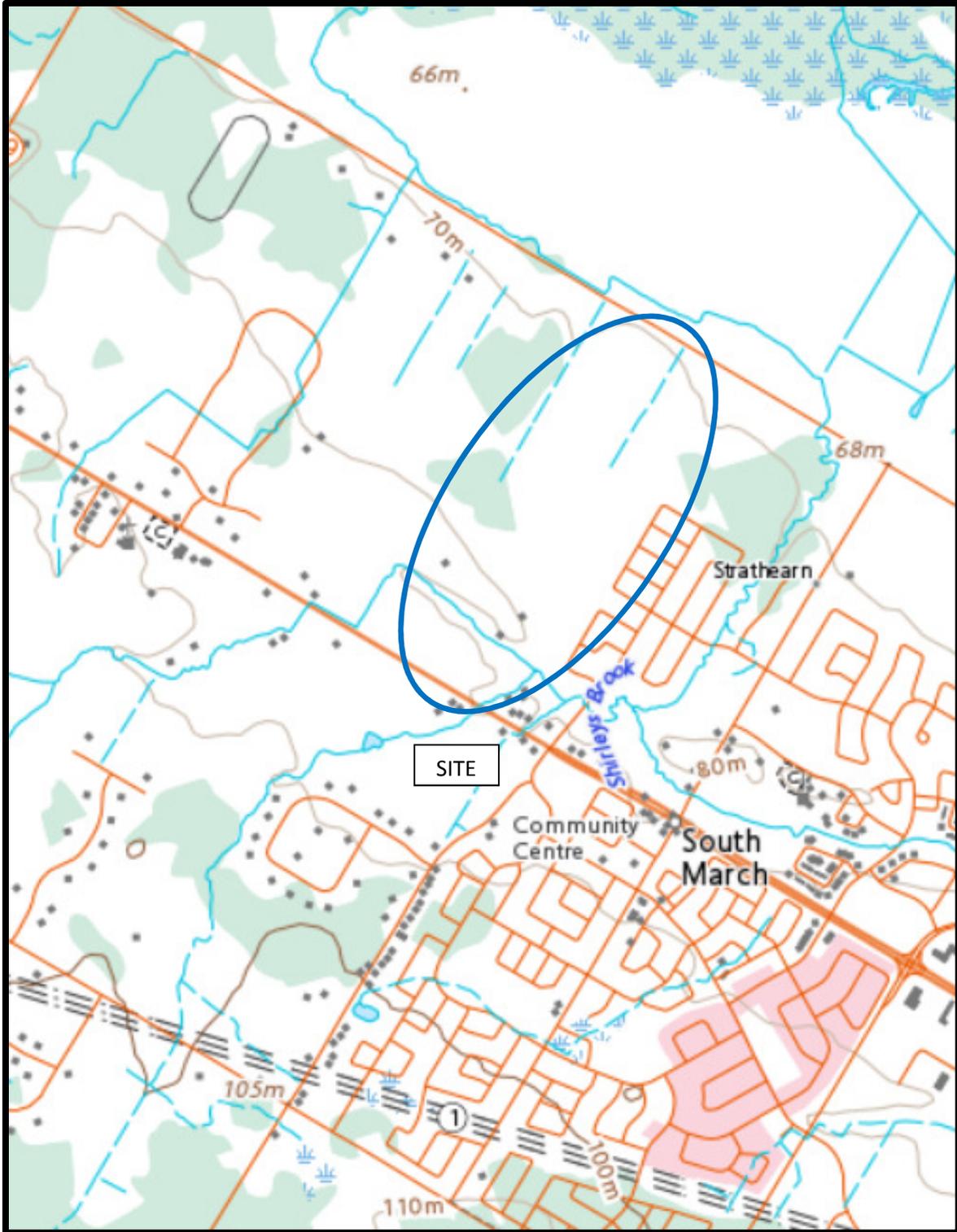
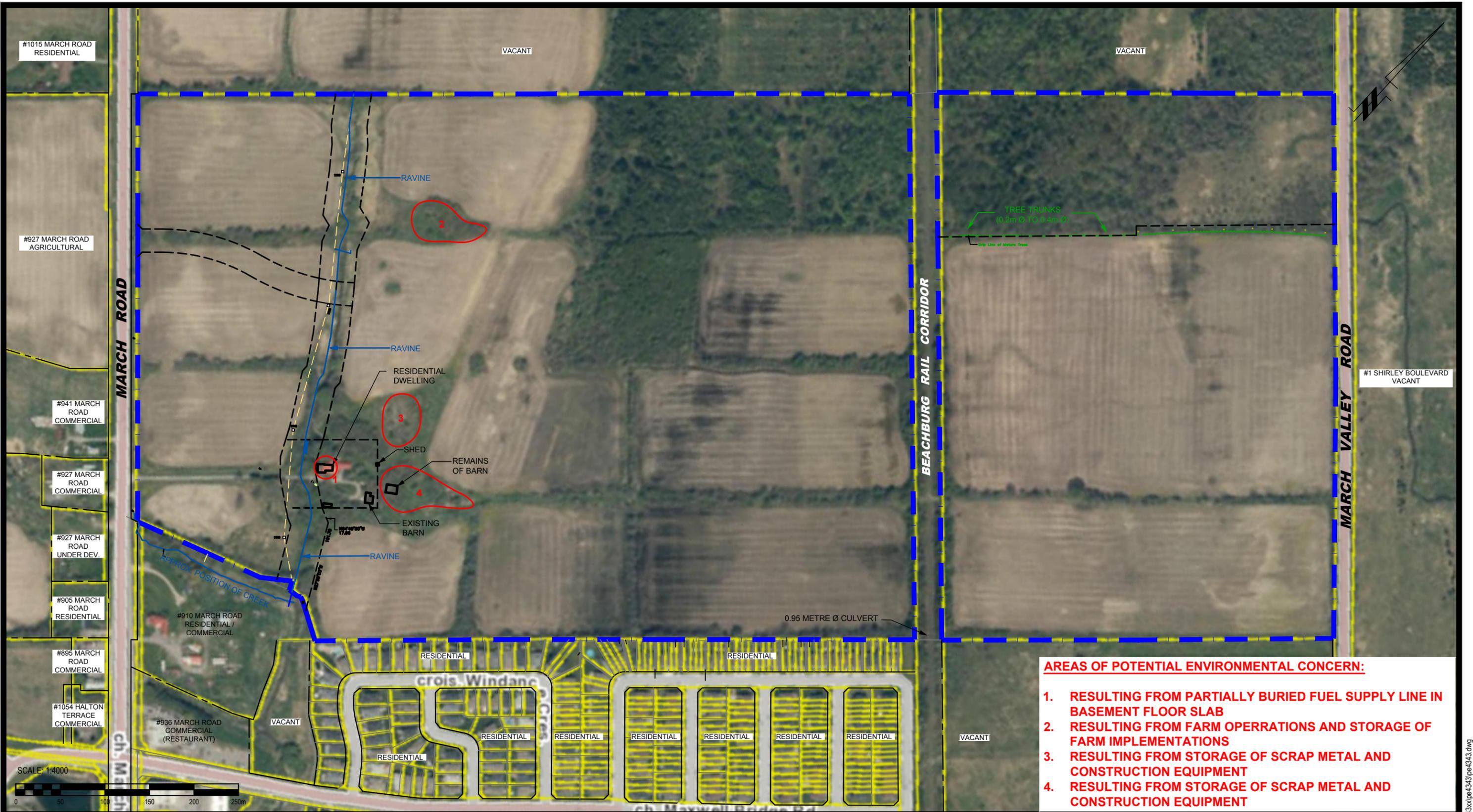


FIGURE 2
TOPOGRAPHIC MAP



- AREAS OF POTENTIAL ENVIRONMENTAL CONCERN:**
1. RESULTING FROM PARTIALLY BURIED FUEL SUPPLY LINE IN BASEMENT FLOOR SLAB
 2. RESULTING FROM FARM OPERATIONS AND STORAGE OF FARM IMPLEMENTATIONS
 3. RESULTING FROM STORAGE OF SCRAP METAL AND CONSTRUCTION EQUIPMENT
 4. RESULTING FROM STORAGE OF SCRAP METAL AND CONSTRUCTION EQUIPMENT

patersongroup
consulting engineers

154 Colonnade Road South
Ottawa, Ontario K2E 7J5
Tel: (613) 226-7381 Fax: (613) 226-6344

NO.	REVISIONS	DATE	INITIAL
0			

MINTO COMMUNITIES
PHASE I - ENVIRONMENTAL SITE ASSESSMENT
936 MARCH ROAD

OTTAWA, ONTARIO

SITE PLAN

Scale:	1:4000	Date:	07/2018
Drawn by:	RCG	Report No.:	PE4343-1
Checked by:	KM	Dwg. No.:	PE4343-1
Approved by:	MSD	Revision No.:	0

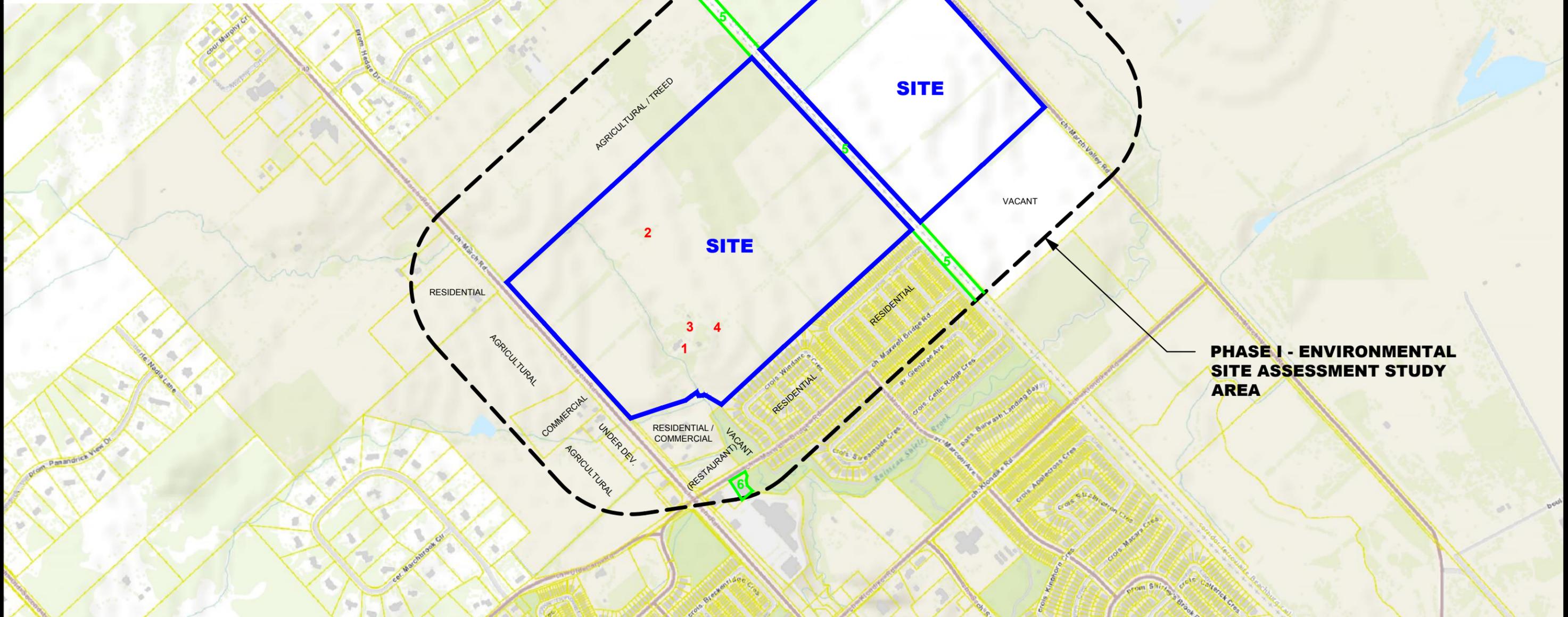
p:\autocad drawings\environmental\pe4343\pe4343.dwg

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN:

1. RESULTING FROM PARTIALLY BURIED FUEL SUPPLY LINE IN BASEMENT FLOOR SLAB
2. RESULTING FROM FARM OPERATIONS AND STORAGE OF FARM IMPLEMENTATIONS
3. RESULTING FROM STORAGE OF SCRAP METAL AND CONSTRUCTION EQUIPMENT
4. RESULTING FROM STORAGE OF SCRAP METAL AND CONSTRUCTION EQUIPMENT

POTENTIALLY CONTAMINATING ACTIVITIES:

5. FORMER RAIL LINE CORRIDOR
6. DRY CLEANERS (DROP-OFF LOCATION)



patersongroup
consulting engineers

154 Colonnade Road South
Ottawa, Ontario K2E 7J5
Tel: (613) 226-7381 Fax: (613) 226-6344

NO.	REVISIONS	DATE	INITIAL
0			

MINTO COMMUNITIES
PHASE I - ENVIRONMENTAL SITE ASSESSMENT
936 MARCH ROAD
OTTAWA, ONTARIO

Title: **SURROUNDING LAND USE PLAN**

Scale:	1:10000	Date:	07/2018
Drawn by:	RCG	Report No.:	PE4343-1
Checked by:	KM	Dwg. No.:	PE4343-2
Approved by:	MSD	Revision No.:	0

APPENDIX 1

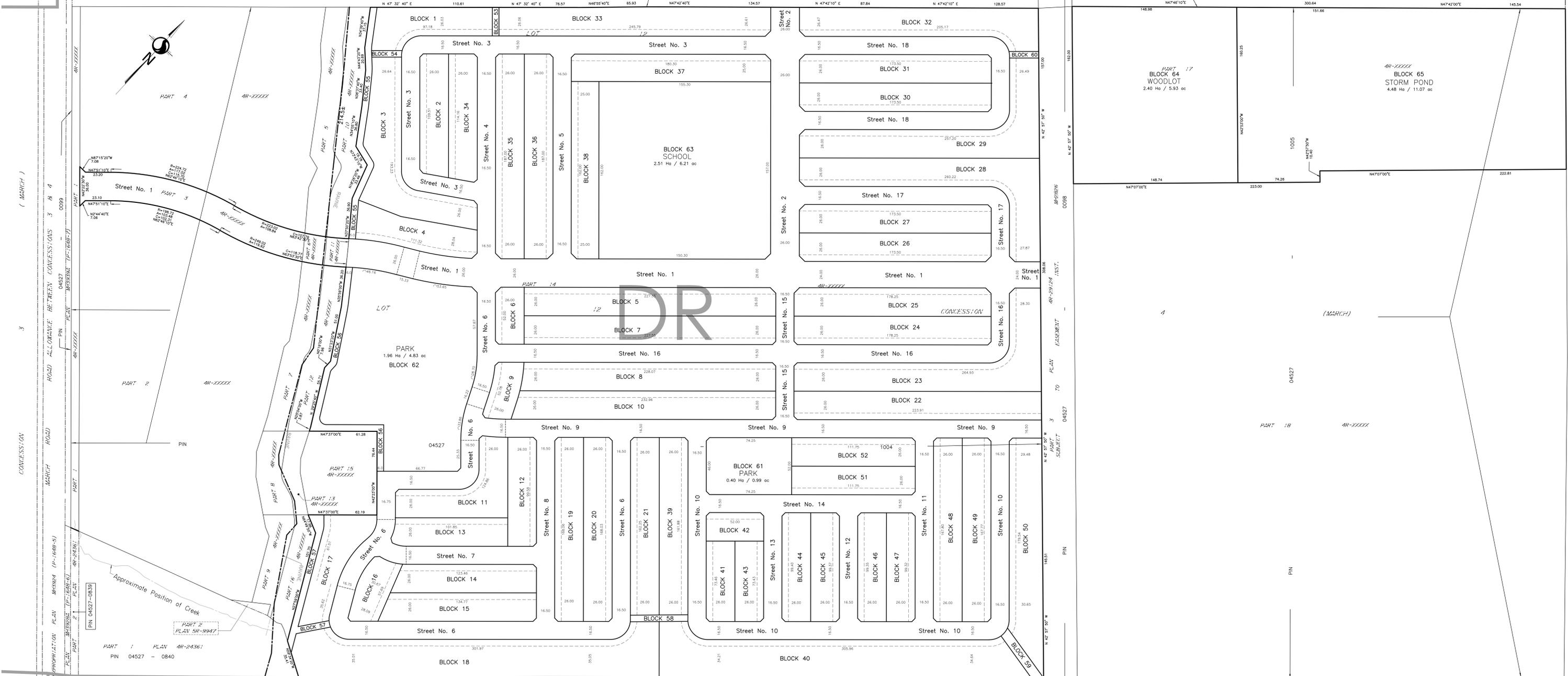
DRAFT PLAN OF SUBDIVISION

AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS

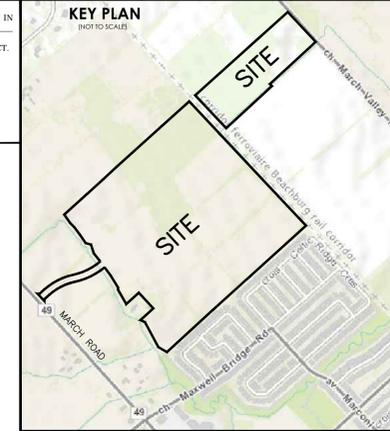
RC[338r]

LOT 13 CONCESSION 4 (MARCH) AND LOT 12 AND LOT 13 CONCESSION 4 (MARCH)



SUBJECT TO THE CONDITIONS, IF ANY, SET FORTH IN OUR LETTER DATED... THIS DRAFT PLAN IS APPROVED BY THE CITY OF OTTAWA UNDER SECTION 51 OF THE PLANNING ACT. THIS DAY OF... 20...

ADAM BROWN, MANAGER DEVELOPMENT REVIEW: RURAL PLANNING, INFRASTRUCTURE AND ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA



DRAFT PLAN OF SUBDIVISION PART OF LOT 12 CONCESSION 4 (GEOGRAPHIC TOWNSHIP OF MARCH) CITY OF OTTAWA



METRIC CONVERSION DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

GRID SCALE CONVERSION DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.99972

BEARING NOTE BEARINGS ARE DERIVED FROM PLAN 4R-XXXXX PREPARED BY OTHERS.

INFORMATION REQUIRED UNDER SECTION 51(7) OF THE PLANNING ACT R.S.O. 1990

- a. SEE PLAN b. SEE PLAN c. SEE PLAN d. SEE PROPOSED LAND USE SCHEDULE (ABOVE) e. SEE PLAN f. SEE PLAN g. SEE PLAN h. CITY WATER AVAILABLE i. SEE SOIL REPORT j. SEE TOPOGRAPHICAL INFORMATION k. ALL CITY SERVICES AVAILABLE l. NO EASEMENTS REGISTERED ON TITLE

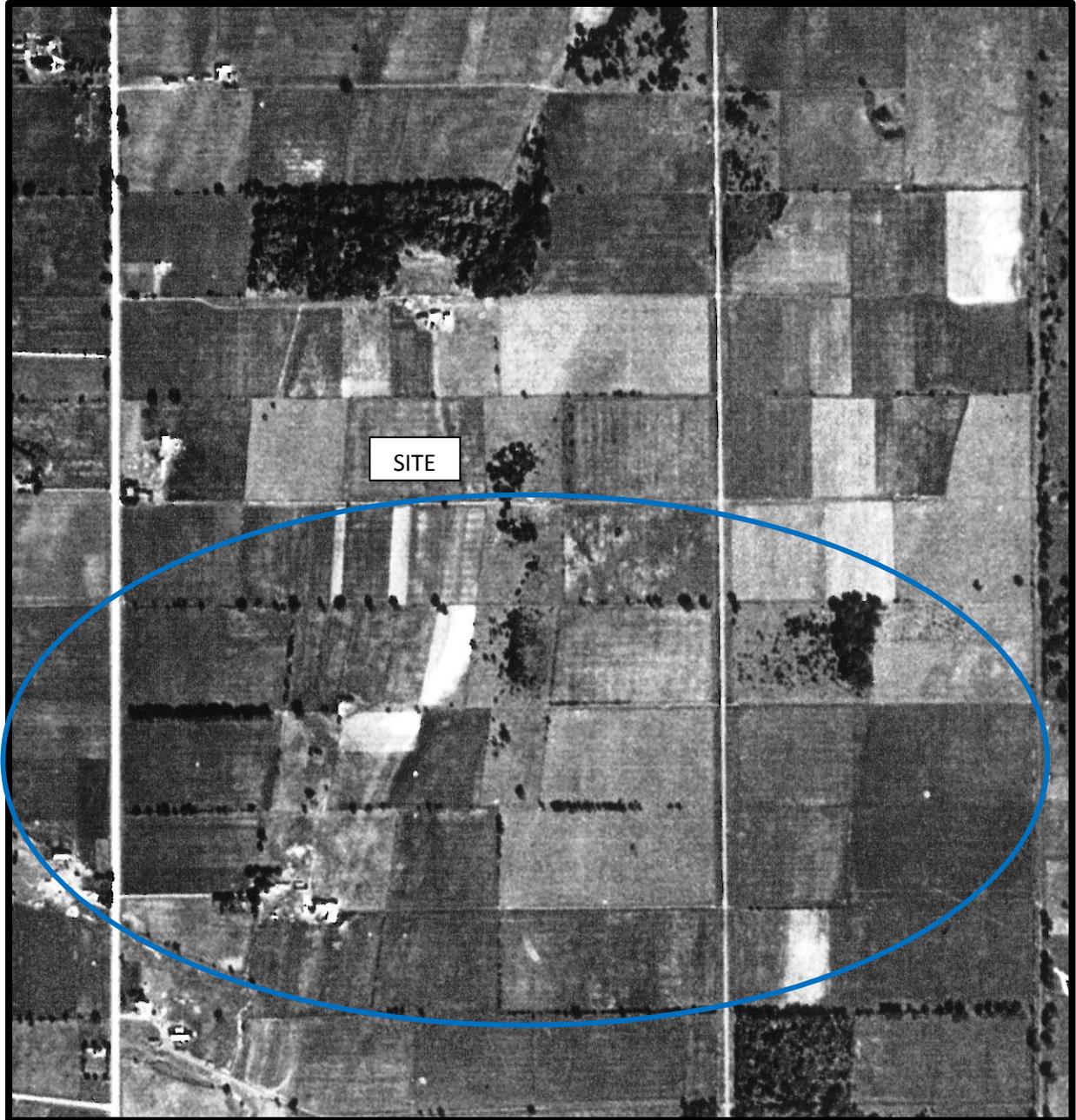
SURVEYOR'S CERTIFICATE I HEREBY CERTIFY THAT THE BOUNDARIES OF THE SUBJECT LANDS AND THEIR RELATIONSHIP TO ADJOINING LANDS HAVE BEEN ACCURATELY AND CORRECTLY SHOWN.

DATE: BRIAN J. WEBSTER ONTARIO LAND SURVEYOR

Stantec Geomatics Ltd. CANADA LAND SURVEYORS ONTARIO LAND SURVEYORS 1251 CLIVE AVENUE, SUITE 400 OTTAWA, ONTARIO, K2C 3C4 TEL: 416.724.4200 FAX: 416.722.2799 stan@stec.com

NOTE: THE PLAN DATA IS COMPILED FROM OFFICE RECORDS OF STANTEC GEOMATICS LTD. AND HAS NOT BEEN VERIFIED BY FIELD MEASUREMENTS. ALL DISTANCES ARE APPROXIMATE. TO BE VERIFIED BY FINAL REGISTERED PLANS.

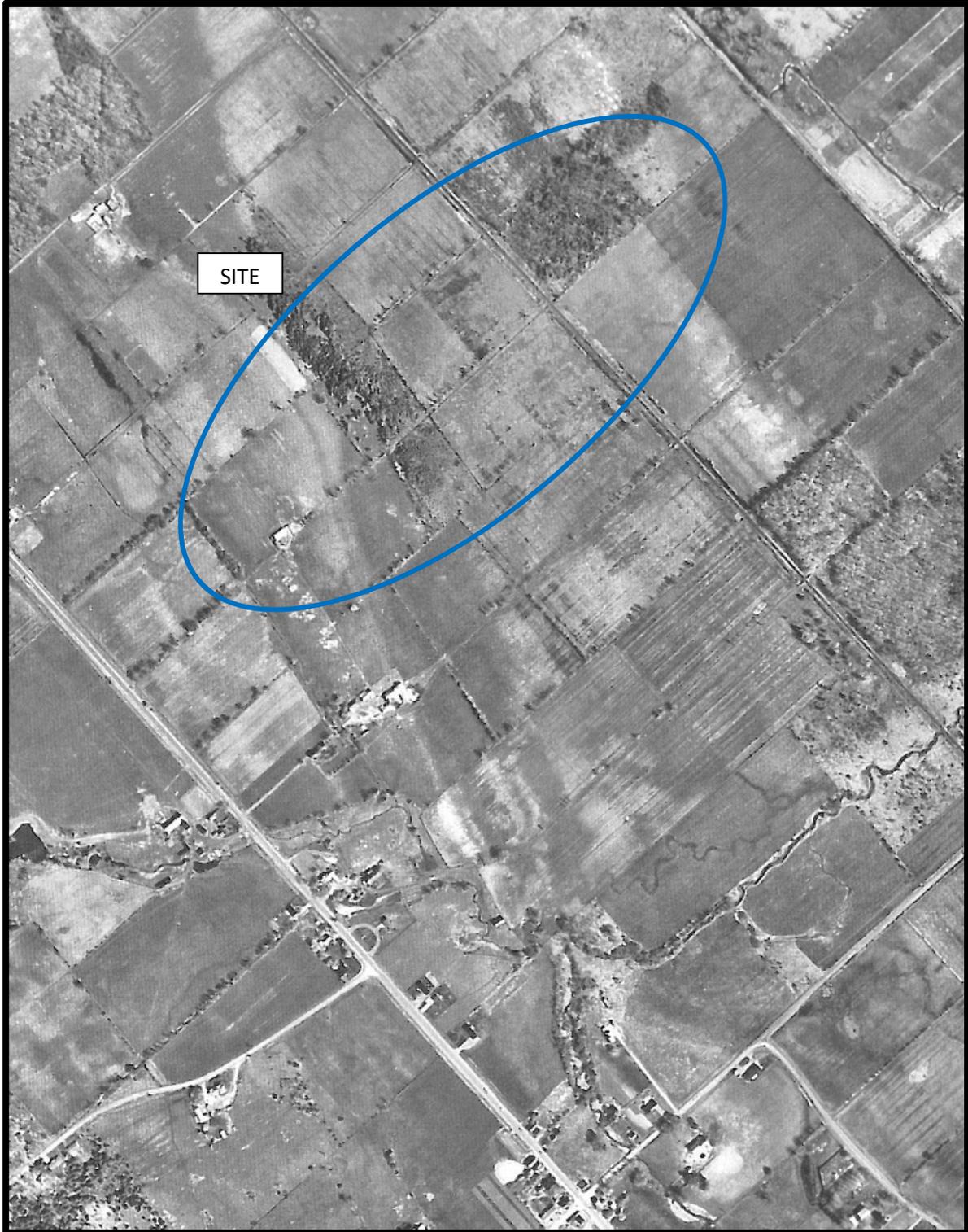




AERIAL PHOTOGRAPH
1934



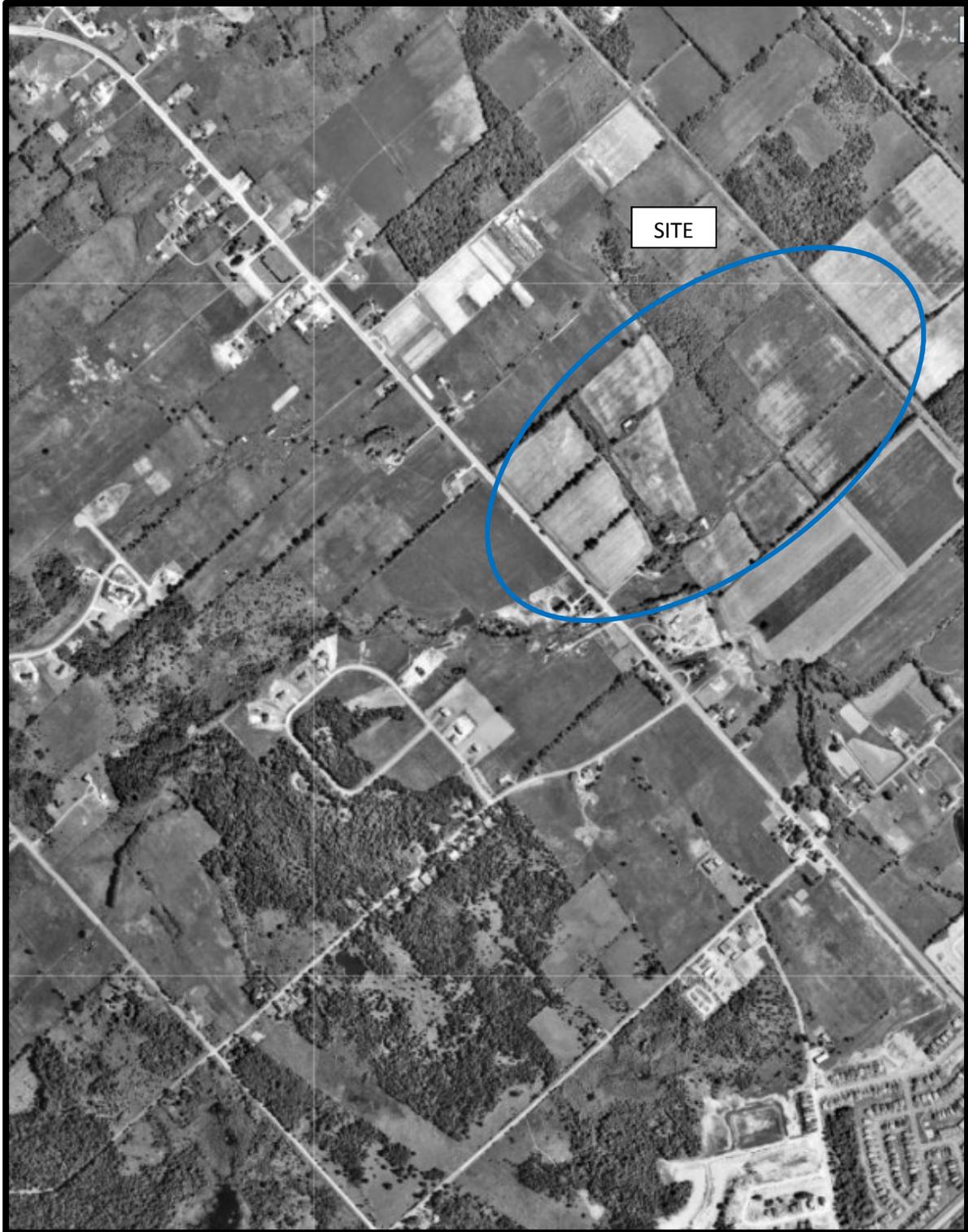
AERIAL PHOTOGRAPH
1952



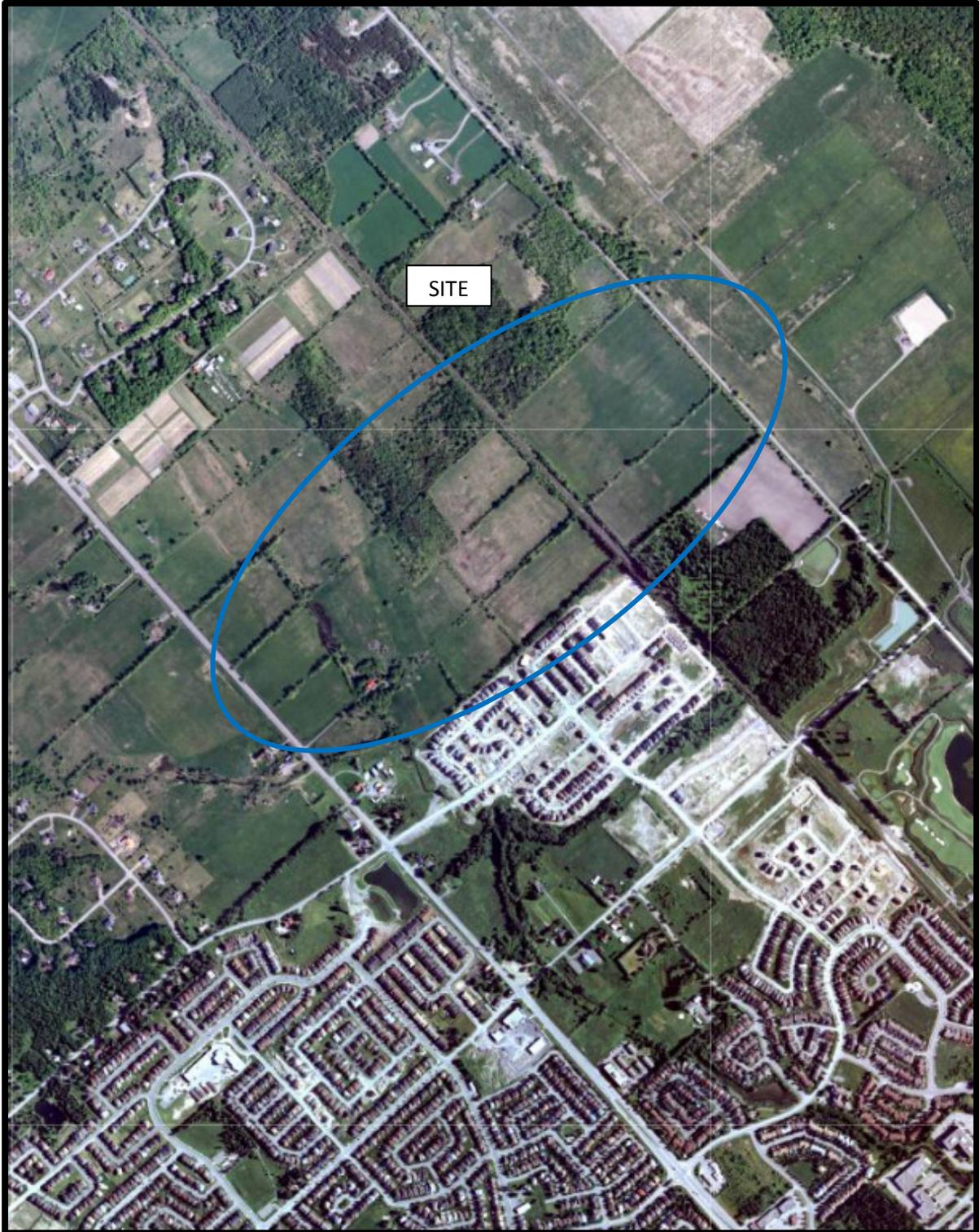
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1976



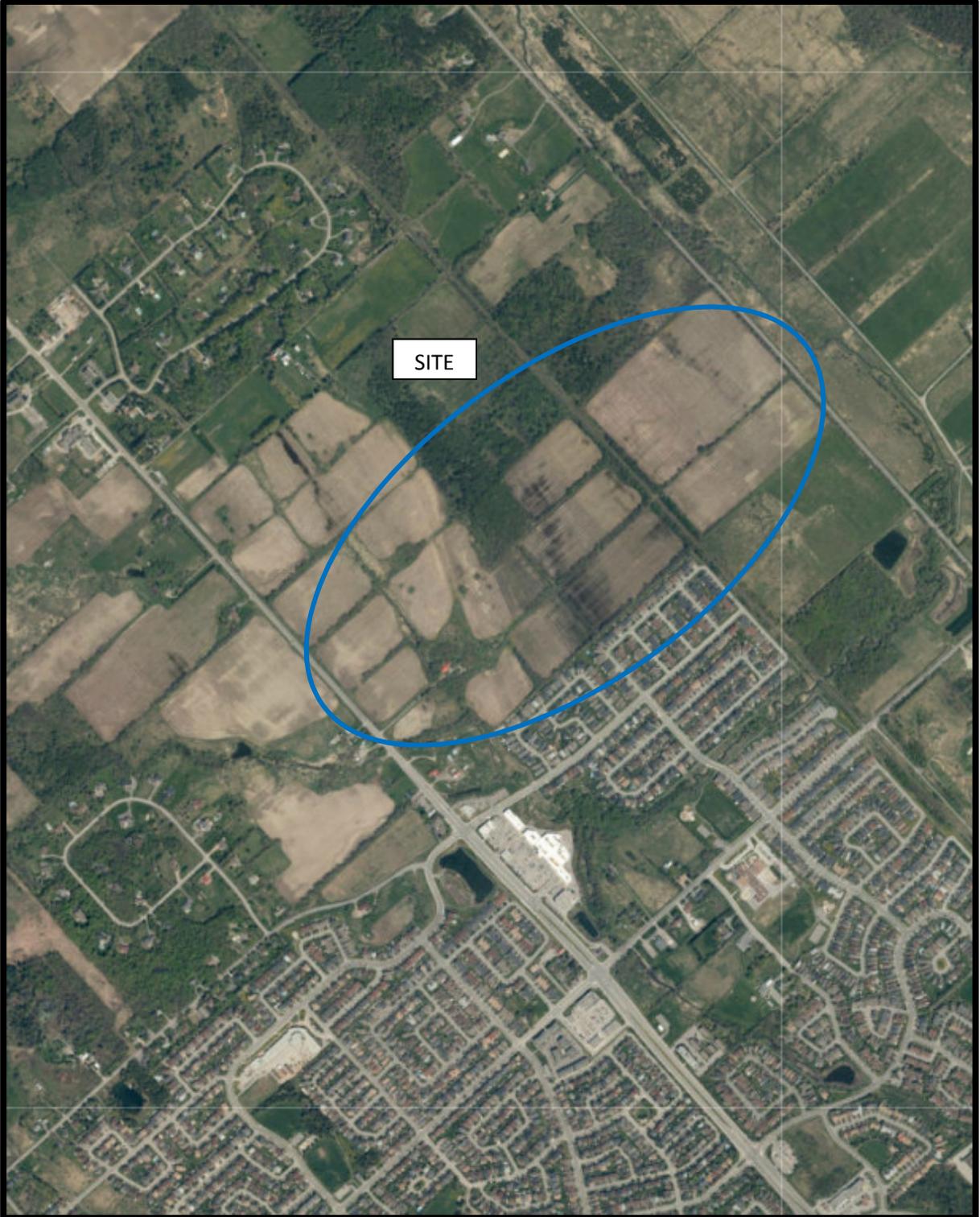
AERIAL PHOTOGRAPH
1989



AERIAL PHOTOGRAPH
1991



AERIAL PHOTOGRAPH
2008



SITE

AERIAL PHOTOGRAPH
2017

Site Photographs

PE4343

936 March Road, Ottawa, Ontario

June 19, 2018



Photograph 1: Photograph illustrates residential dwelling and private garage, facing north.



Photograph 2: Photograph illustrates Shirley's Brook on western portion of Phase I Property, facing northwest.

Site Photographs

PE4343

936 March Road, Ottawa, Ontario

June 19, 2018



Photograph 3: Photograph illustrates former farm building east of residential dwelling, facing east.



Photograph 4: Photograph illustrates former farm building southeast of residential dwelling, facing west.

Site Photographs

PE4343

936 March Road, Ottawa, Ontario

June 19, 2018



Photograph 5: Photograph illustrates removal of scrap metal northeast of residential dwelling, facing north.



Photograph 6: View of western-central portion of Phase I Property, facing west. Photograph illustrates access laneway, soy fields and residential farmstead across March Road.

Site Photographs

PE4343

936 March Road, Ottawa, Ontario

June 19, 2018



Photograph 7: Photo illustrates area of former stored scrap metal east of residential dwelling, facing north.



Photograph 8: Photograph illustrates unused AST and equipment southeast of residential dwelling, facing northwest.

APPENDIX 2

MECP FREEDOM OF INFORMATION

TSSA CORRESPONDENCE

CITY OF OTTAWA HISTORICAL LAND USE INVENTORY

MECP WELL RECORDS

Ministry of the Environment,
Conservation and Parks

Freedom of Information and
Protection of Privacy Office

12th Floor
40 St. Clair Avenue West
Toronto ON M4V 1M2
Tel: (416) 314-4075

Ministère de l'Environnement, de
la Protection de la nature et des
Parcs

Bureau de l'accès à l'information et
de la protection de la vie privée

12^e étage
40, avenue St. Clair ouest
Toronto ON M4V 1M2
Tél. : (416) 314-4075



August 30, 2018

Karyn Munch
Paterson Group Inc.
154 Colonnade Road
Ottawa, ON K2E 7J5

Dear Karyn Munch:

RE: ***Freedom of Information and Protection of Privacy Act Request***
Our File # A-2018-05201, Your Reference PE4343

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 936 March Road, Ottawa.

After a thorough search through the files of the Ministry's Ottawa District Office, Investigations and Enforcement Branch, Environmental Assessment and Permissions Branch, Environmental Monitoring and Reporting Branch, Sector Compliance Branch and Safe Drinking Water Branch, no records were located responsive to your request. To provide you with this response and in accordance with Section 57 of the *Freedom of Information and Protection of Privacy Act*, the fee owed is \$30.00 for 1 hour of search time @ \$30.00 per hour. **We have applied the \$30.00 for this request from your initial payment. This file is now closed.**

You may request a review of my decision by contacting the Information and Privacy Commissioner/Ontario, 2 Bloor Street East, Suite 1400, Toronto, ON M4W 1A8 (800-387-0073 or 416-326-3333). Please note that there is a \$25.00 fee and you only have 30 days from receipt of this letter to request a review.

If you have any questions regarding this matter, please contact Aaron Foster at aaron.foster@ontario.ca.

Yours truly,

For


Janet Dadufalza
FOI Manager

Karyn Munch

From: Public Information Services <publicinformationsservices@tssa.org>
Sent: May-31-18 10:20 AM
To: Karyn Munch
Subject: RE: Records Search Request - PE4343

Good morning Karyn,

Thank you for your request for confirmation of public information.

We confirm that there are no records in our database of any fuel storage tanks at the subject addresses.

For a further search in our archives please complete our release of public information form found at https://www.tssa.org/en/about-tssa/release-of-public-information.aspx?_mid_=392 and email the completed form to publicinformationsservices@tssa.org or through mail along with a fee of \$56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a Cheque made payable to TSSA.

Although TSSA believes the information provided pursuant to your request is accurate, please note that TSSA does not warrant this information in any way whatsoever.

Kind regards,

Yalini

From: Karyn Munch <KMunch@Patersongroup.ca>
Sent: May 31, 2018 7:56 AM
To: Public Information Services <publicinformationsservices@tssa.org>
Subject: Records Search Request - PE4343

Good morning,

Could you please complete a search of your records for **underground/aboveground storage tanks, historical spills or other incidents/infractions** for the following addresses in the City of Ottawa (Kanata):

886, 905, 910, 927, 936, 941, 1015, 1020 March Road
1225 March Valley Road
1 Shirley Boulevard

Thank-you very much.

Best Regards,

Karyn Munch, P.Eng.

patersongroup
solution oriented engineering

154 Colonnade Road South
Ottawa, Ontario, K2E 7J5
Tel: (613) 226-7381 Ext. 217



File Number: D06-03-18-0043

August 23, 2018

Paterson Group Inc.
154 Colonnade Road South
Ottawa, ON
K2E 7J5

Sent via email [kmunch@patersongroup.ca]

Dear Paterson Group Inc.,

**Re: Information Request
936 March Road, Ottawa, Ontario (“Subject Property”)**

Internal Department Circulation

The Planning, Infrastructure and Economic Development Department has the following information in response to your request for information regarding the Subject Property:

- No information was returned on the Subject Property from Departmental circulation.

Search of Historical Land Use Inventory

This acknowledges receipt of the signed Disclaimer regarding your request for information from the City’s Historical Land Use Inventory (HLUI 2005) database for the Subject Property.

A search of the HLUI database revealed the following information:

- There are no activities associated with the Subject Property.

The HLUI database was also searched for activity associated with properties located within 50m of the Subject Property. The search revealed the following:

- There are 56 activities associated with properties located within 50m of the Subject Property: Activity Numbers 14509, 5801, 5751, 5753, 5754, 5762, 5767, 5769, 5770, 5772, 5774, 5837, 5838, 5840, 5846, 5849, 5852, 5853, 5854, 5855, 5856, 5861, 5869, 5870, 5871, 5872, 5874, 5875, 5884, 5886, 5887, 5889, 5890,

*Shaping our future together
Ensemble, formons notre avenir*

City of Ottawa
Planning, Infrastructure and Economic
Development Department

110 Laurier Avenue West, 4th Floor
Ottawa, ON K1P 1J1
Tel: (613) 580-2424 ext. 21690
Fax: (613) 560-6006
www.ottawa.ca

Ville d'Ottawa
Services de la planification, de l'infrastructure et
du développement économique

110, avenue Laurier Ouest, 4e étage
Ottawa (Ontario) K1P 1J1
Tél.: (613) 580-2424 ext. 21690
Télééc: (613) 560-6006
www.ottawa.ca

5891, 5896, 5898, 5899, 5893, 5901, 5903, 5907, 5908, 5909, 59, 3412, 6653, 3906, 5943, 5814, 5867, 5981, 6326, 6393, 6654, 6621, 9494

A site map has been included to show the location of the Subject Property as well as the location of all the activities noted above.

Additional information may be obtained by contacting:

Ontario's Environmental Registry

The Environmental Registry found at <http://www.ebr.gov.on.ca/ERS-WEB-External/> contains "public notices" about environmental matters being proposed by all government ministries covered by the Environmental Bill of Rights. The public notices may contain information about proposed new laws, regulations, policies and programs or about proposals to change or eliminate existing ones. By using key words i.e. name of proponent/owner and the address one can ascertain if there is any information on the proponent and address under the following categories: Ministry, keywords, notice types, Notice Status, Acts, Instruments and published date (all years).

The Ontario Land Registry Office

Registration of real property is recorded in the Ontario Land Registry Office through the Land Titles Act or the Registry Act. Documents relating to title and other agreements that may affect your property are available to the public for a fee. It is recommended that a property search at the Land Registry Office be included in any investigation as to the historic use of your property. The City of Ottawa cannot comment on any documents to which it is not a party.

Court House
161 Elgin Street 4th Floor
Ottawa ON K2P 2K1
Tel: (613) 239-1230
Fax: (613) 239-1422

Please note, as per the HLUI Disclaimer, that the information contained in the HLUI database has been compiled from publicly available records and other sources of information. The HLUI may contain erroneous information given that the records used as sources of information may be flawed. For instance, changes in municipal addresses over time may introduce error. Accordingly, all information from the HLUI database is provided on an "as is" basis with no representation or warranty by the City with respect to the information's accuracy or exhaustiveness in responding to the request.

Furthermore, the HLUI database and the results of this search in no way confirm the presence or absence of contamination or pollution of any kind. This information is provided on the assumption that it will not be relied upon by any

person for any purpose whatsoever. The City of Ottawa denies all liability to any persons attempting to rely on any information provided from the HLUI database.

Please note that in responding to your request, the City of Ottawa does not guarantee or comment on the environmental condition of the Subject Property. You may wish to contact the Ontario Ministry of Environment and Climate Change for additional information.

If you have any further questions or comments, please contact Colette Gorni at 613-580-2424 ext. 21690 or HLUI@ottawa.ca

Sincerely,

A handwritten signature in black ink, appearing to read 'Colette Gorni', written in a cursive style.

Colette Gorni

Per:

Michael Boughton, MCIP, RPP
Senior Planner
Development Review East
Planning Services
Planning, Infrastructure and Economic Development Department

MB/ CG

Attach: 2

cc: File no. D06-03-18-0043

14509, 5801, 5751, 5753, 5754, 5762, 5767,
5769, 5770, 5772, 5774, 5837, 5838, 5840,
5846, 5849, 5852, 5853, 5854, 5855, 5856,
5861, 5869, 5870, 5871, 5872, 5874, 5875,
5884, 5886, 5887, 5889, 5890, 5891, 5896,
5898, 5899, 5893, 5901, 5903, 5907, 5908,
5909, 59, 3412, 6653, 3906, 5943, 5814, 5867,
5981, 6326, 6393, 6654, 6621, 9494

Scale 1: n/a

936 March Road
Ottawa, ON
File # D06-03-18-0043
Colette Gorni



Overview

ID# = Activity Identification Number

 = Subject Site



CITY OF OTTAWA

HLUI ID: __670HY8

AREA (Square Metres): 12819616.556

Report: RPTC_OT_DEV0122

Run On: 23 Aug 2018 at: 11:43:34

Study Year
1998

PIN
047130001

Multi-NAIC
Y

Multiple Activities
Y

Activity ID: 14509 **Multiple PINS:** N

PIN Certainty: 1 **Previous Activity ID(s) :** 5801, 5751, 5753, 5754, 5762, 5767, 5769, 5770, 5772, 5774, 5837, 5838, 5840, 5846, 5849, 5852, 5853, 5854, 5855, 5856, 5861, 5869, 5870, 5871, 5872, 5874, 5875, 5884, 5886, 5887, 5889, 5890, 5891, 5896, 5898, 5899, 5893, 5901, 5903, 5907, 5908, 5909, 59

Related PINS: 045660173

Name: UNNAMED SAND/GRAVEL PIT
Address: , WEST CARLETON
Facility Type: Sand and Gravel Pits
Comments 1: UTM = 419300E, 5034300N. Area is 150m x 100m.
Comments 2:

Generator Number:

Storage Tanks:

HL References 1: 1922-DMD-TM-Ottawa-Sheet#14, 1948-DND-ASE-NTS-31G/5, 1967-EMR-SMB-NTS-31G/5-7th ed., 1985-EMR-SMB-NTS-31G/5-11th ed.; 1951-DND-ASE-NTS-31G/4E-4th ed., 1966-EMR-SMB-NTS-31G/4-5th ed., 1975-EMR-SMB-NTS-31G/4-6th ed., 1979-EMR-SMB-NTS-31G/4-7th ed.

HL References 2: 1951-DND-ASE-NTS-31F/8E-3rd ed., 1964-EMR-SMB-NTS-31F/8-5th ed., 1976-EMR-SMB-NTS-31F/8-7th ed., 1989-EMR-CCM-NTS-31F/8-8th ed.

HL References 3: 1991-WDSI/WMB/MOE

NAICS	SIC
221330	499
562990	499
221320	499
562920	499
212323	82
562210	499



CITY OF OTTAWA

HLUI ID: __670HY8

AREA (Square Metres): 12819616.556

Report: RPTC_OT_DEV0122

Run On: 23 Aug 2018 at: 11:43:34

Study Year
1998

PIN
047130001

Multi-NAIC
Y

Multiple Activities
Y

Company Name

Year of Operation

Unnamed Sand/Gravel Pit	c. 1975
Unnamed Sand/Gravel Pit	c. 1975-1979
Unnamed Sand/Gravel Pit	c. 1948
Unnamed Sand/Gravel Pit	c. 1964-1976
Unnamed Sand/Gravel Pit	c. 1922-1948
Unnamed Sand/Gravel Pit	c. 12966-1979
Unnamed Sand/Gravel Pit	c. 1975
Unnamed Sand/Gravel Pit	c. 1976-1989
Unnamed sand/Gravel Pit	c. 1989
Unnamed Sand/Gravel Pit	c. 1975-1979
Unnamed Sand/Gravel Pit	c. 1985
Unnamed Sand/Gravel Pit	c. 1966
Unnamed Sand/Gravel Pit	c. 1976
Unnamed Sand/Gravel Pit	c. 1951
Unnamed Sand/Gravel Pit	c. 1966
Unnamed Sand/Gravel Pit	c. 1966-1979
Unnamed Sand/Gravel Pit	c. 1951-1976
Unnamed Sand/Gravel Pit	c. 1979
Unnamed Sand/Gravel Pit	c. 1971-1979
UNNAMED SAND/GRAVEL PIT	c. 1994
Unnamed Sand/Gravel Pit	c. 1967
Unnamed Sand/Gravel Pit	c. 1948-1967
Unnamed Sand/Gravel Pit	c. 1951-1979
Unnamed Sand/Gravel Pit	c. 1951-1979
Unnamed Sand/Gravel Pit	c. 1953-1971
Unnamed Sand/Gravel Pit	c. 1967-1985
Unnamed Sand/Gravel Pit	c. 1951
Unnamed Sand/Gravel Pit	c. 1966-1979
Unnamed Sand/Gravel Pit	c. 1966-1975
Unnamed Sand/Gravel Pit	c. 1966-1975
Unnamed Sand/Gravel Pit	c. 1989
Waste Disposal Site	c. 1971



CITY OF OTTAWA

HLUI ID: __670HY8

AREA (Square Metres): 12819616.556

Report: RPTC_OT_DEV0122

Run On: 23 Aug 2018 at: 11:43:34

Study Year
1998

PIN
047130001

Multi-NAIC
Y

Multiple Activities
Y

Unnamed Sand/Gravel Pit

c. 1964-1989



CITY OF OTTAWA

HLUI ID: __670HY8

AREA (Square Metres): 12819616.556

Report: RPTC_OT_DEV0122

Run On: 23 Aug 2018 at: 11:43:34

Study Year
1998

PIN
047130001

Multi-NAIC
Y

Multiple Activities
Y

Activity ID: 3906 Multiple PINS: Y
PIN Certainty: 1 Previous Activity ID(s) : 5943, 5814, 5867, 5981, 6326, 6393, 6654

Related PINS: 045660156

Name: DEPARTMENT OF NATIONAL DEFENCE

Address: , WEST CARLETON

Facility Type: Telecommunication Broadcasting Industries

Comments 1: UTM = 418200E, 5033250N. Area is 1500m x 1050m.

Comments 2:

Generator Number:

Storage Tanks:

HL References 1: 1922-DMD-TM Ottawa-Sheet#14, 1948-DND-ASE-NTS-31G/5, 1967-EMR-SMB-NTS-31G/5-7th ed., 1985-EMR-SMB-NTS-31G/5-11th ed, 1951-DND-ASE-NTS-31F/8E-3rd ed., 1964-EMR-SMB-NTS-31F/8-5th ed., 1976-EMR-SMB-NTS-31F/8-7th ed., 1989-EMR-CCM-NTS-31F/8-8th ed.

HL References 2: City of Nepean, File# D06-00-DEF

HL References 3:

NAICS	SIC
911110	811
221330	499
562920	499
515120	481
562990	499
221320	499
562210	499
515110	481
713930	965

Company Name

Year of Operation

Department of National Defence	c. 1985
Department of National Defence	c. 1967
Department of National Defence	c. 1976-1989
Department of National Defence	c. 1922-1985
Department of National Defence	c. 1970
Department of National Defence	c. 1948-1990



CITY OF OTTAWA

HLUI ID: __670HY8

AREA (Square Metres): 12819616.556

Report: RPTC_OT_DEV0122

Run On: 23 Aug 2018 at: 11:43:34

Study Year
1998

PIN
047130001

Multi-NAIC
Y

Multiple Activities
Y

Activity ID: 6621 Multiple PINS: N

PIN Certainty: 1 Previous Activity ID(s) :

Related PINS: 047130001

Name: GVT. OF CAN. - R.C.M.P.
Address: 3 SHIRLEY BOULEVARD, NEPEAN
Facility Type: Protective Services

Comments 1:

Comments 2:

Generator Number: ON0283162

Storage Tanks:

HL References 1:

HL References 2:

HL References 3: 2000 PID

NAICS SIC
911230 0

Company Name

GVT. OF CAN. - R.C.M.P.

Year of Operation

c. 2000



CITY OF OTTAWA

HLUI ID: __670HY8

AREA (Square Metres): 12819616.556

Report: RPTC_OT_DEV0122

Run On: 23 Aug 2018 at: 11:43:34

Study Year
1998

PIN
047130001

Multi-NAIC
Y

Multiple Activities
Y

Activity ID: 9494 Multiple PINS: N

PIN Certainty: 1 Previous Activity ID(s) :

Related PINS: 047130001

Name: NATURAL RESOURCES CANADA - GEODETIC SURVEY

Address: , OTTAWA

Facility Type: General Administrative Services

Comments 1: Connaught Ranges, Ridelle street

Comments 2: Geodetic Survey Site

Generator Number: ON6382495

Storage Tanks:

HL References 1:

HL References 2:

HL References 3: 2003 PID

NAICS	SIC
911910	0

Company Name

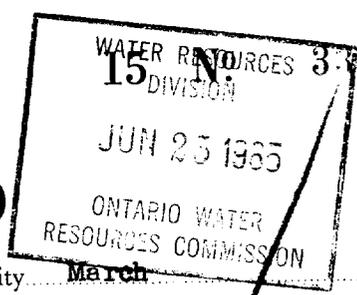
NATURAL RESOURCES CANADA - GEODETIC SURVEY

Year of Operation

c. 2003



3165d



UTM 18 426560 E

5 R 5022940 N The Ontario Water Resources Commission Act

Elev. 4 R 0260

WATER WELL RECORD

Basin 25 | Carleton | Township, Village, Town or City March

Con. 111 | Lot Pt. of 11 | Date completed 28 May 1965 (day month year)

Address South March, Ont.

Casing and Screen Record

Inside diameter of casing 15' of 5"

Total length of casing 15'

Type of screen nil

Length of screen nil

Depth to top of screen nil

Diameter of finished hole 5"

Pumping Test

Static level 7'

Test-pumping rate 5 GPM G.P.M.

Pumping level 17'

Duration of test pumping 1 Hour

Water clear or cloudy at end of test clear

Recommended pumping rate 5 GPM 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) found	Kind of water (fresh, salty, sulphur)
0'	11'		
		43'	fresh
11'			

Clay

Red Granite

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

New Home

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

Drilling or Boring Firm

Blair Phillips Drilling Co. Ltd.

Address

Ottawa

Licence Number 1815

Name of Driller or Borer J. Moore

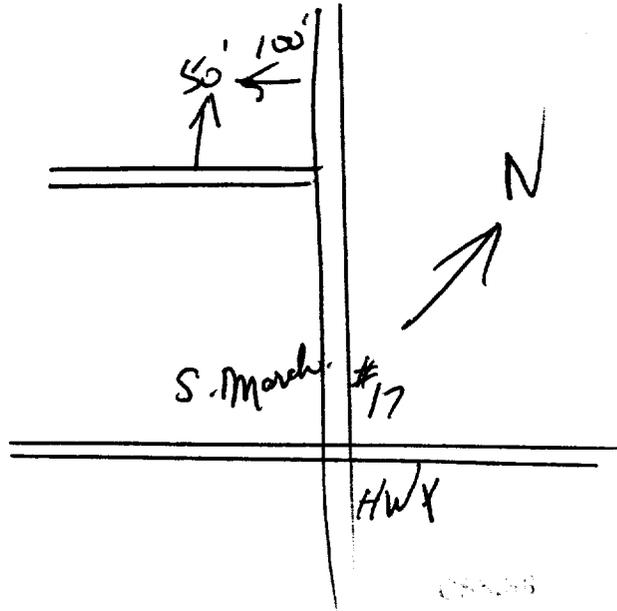
Address Kars, Ont.

Date 28 May 1965

(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.



388A



31G5d

GROUND-WATER BRANCH
15 No. 3
JAN 17 1964
ONTARIO WATER RESOURCES COMMISSION

UTM 18 42 61 43 10 E

Co. 5 R 50 2 3 1 10 5 N

Elev. 20 14 R 0 2 6 0

Basin 2 5 1 L 1 Carleton

County or District 111

Lot 12

Township, Village, Town or City March

Date completed 23 May 1963 (day month year)

Address 716 Edison Ave Ottawa

Casing and Screen Record

Inside diameter of casing 6 1/4"
Total length of casing 20'
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 40'
Duration of test pumping 1 hr
Water clear or cloudy at end of test clear
Recommended pumping rate 5 G.P.M.
with pump setting of 50' 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 & broken rock	0	12		
limestone	12	38		
sandstone	38	60	60	fresh

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

house

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

Drilling or Boring Firm

McBean Water Supply Ltd.

Address 1532 Raven Ave
Ottawa, Ont.

Licence Number 1090

Name of Driller or Borer H. Scharf

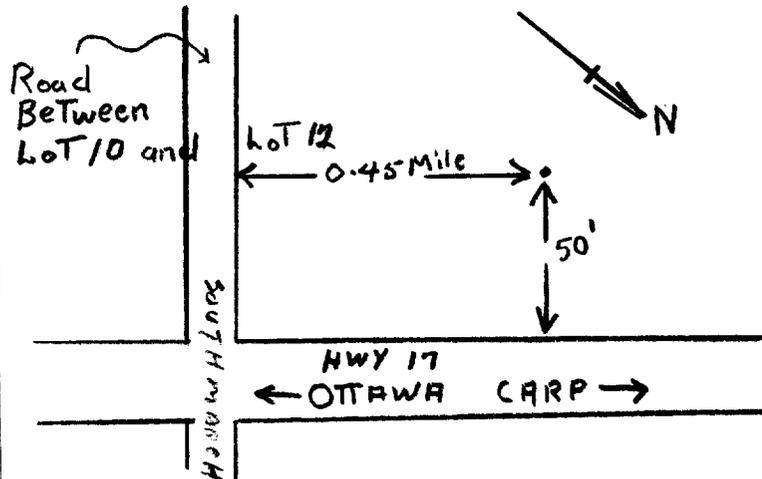
Address

Date May 23 / 63

(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.





3165d

GROUND WATER BRANCH
15 No
FEB 20 1962
ONTARIO WATER RESOURCES COMMISSION

3117

UTM 18 426660 E

05 R 5022920 N

The Ontario Water Resources Commission Act

Elev 4 0245

WATER WELL RECORD

Basin 25
County or District Carleton

Township, Village, Town or City March

Con. 4 Lot 11

Date completed 12 Nov 61
(day month year)

Address Britannia Bay

Casing and Screen Record

Inside diameter of casing 4"
Total length of casing 24'
Type of screen _____
Length of screen _____
Depth to top of screen _____
Diameter of finished hole 4"

Pumping Test

Static level 10'
Test-pumping rate _____ G.P.M.
Pumping level 14'
Duration of test pumping 1/2 hr
Water clear or cloudy at end of test clearing
Recommended pumping rate 5 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)
<u>clay</u>	<u>0</u>	<u>16</u>		
<u>shale</u>	<u>16</u>	<u>22</u>		
<u>sandstone</u>	<u>22</u>	<u>38</u>	<u>37</u>	<u>fresh</u>

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

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

Drilling or Boring Firm Ben & Sparkes

Address _____

Licence Number 244

Name of Driller or Borer Ben & Sparkes

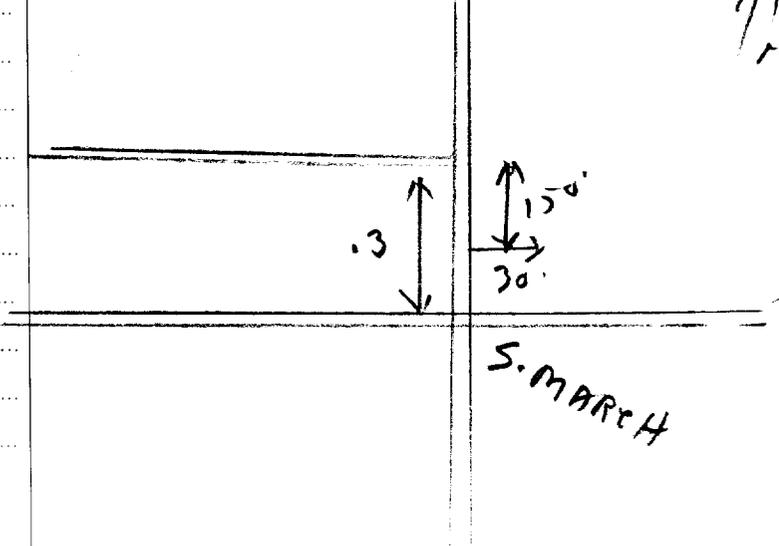
Address _____

Date Feb 7/62

(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.



S. MARCH

UTM 18Z 426465E
C5R 5023270N
 Elev: 4R 0260



3195d

WATER RESOURCES
 DIVISION NO. 15
 JUL 6 1964
 ONTARIO WATER
 RESOURCES COMMISSION

3414
 X

The Ontario Water Resources Commission Act

WATER WELL RECORD

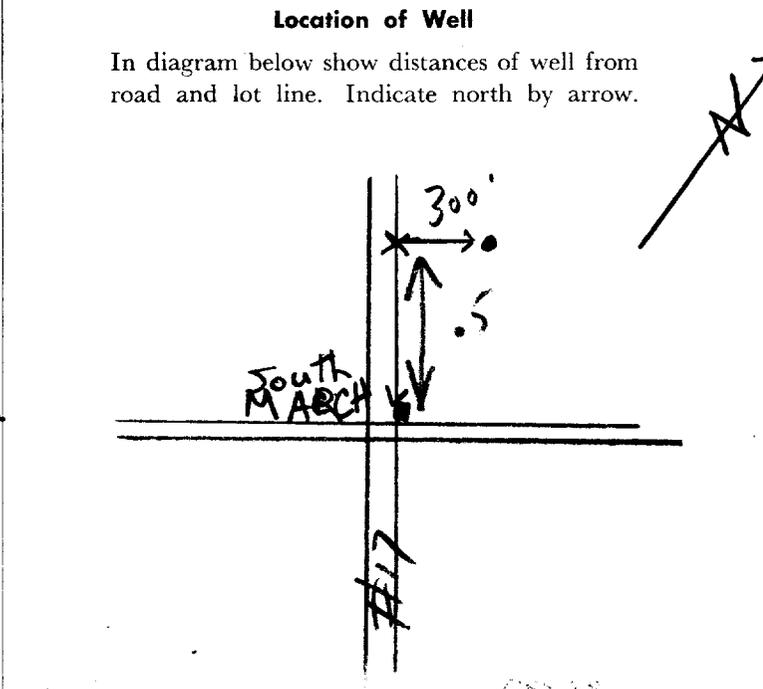
Basin 25 | 1 | Carl
 County or District
 Con. 4 Lot 12 Township, Village, Town or City March
 Date completed 6 Feb 64
 (day month year)
 Address South March

Casing and Screen Record	
Inside diameter of casing	<u>5"</u>
Total length of casing	<u>18'</u>
Type of screen	
Length of screen	
Depth to top of screen	
Diameter of finished hole	<u>5"</u>

Pumping Test	
Static level	<u>11'</u>
Test-pumping rate	<u>10</u> G.P.M.
Pumping level	<u>11'</u>
Duration of test pumping	<u>1 hr</u>
Water clear or cloudy at end of test	<u>cloudy</u>
Recommended pumping rate	<u>5</u> G.P.M.
with pump setting of	<u>40'</u> feet below ground surface

Well Log	Water Record			
	Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found
<u>clay + boulders</u>	<u>0</u>	<u>9</u>	<u>50</u>	<u>fresh</u>
<u>Sandstone</u>	<u>9</u>	<u>40</u>		
<u>granite</u>	<u>40</u>	<u>51</u>		

For what purpose(s) is the water to be used? old house
 Is well on upland, in valley, or on hillside? upland
 Drilling or Boring Firm Capital Water Supply
 Address 1243 Heron Rd
Ottawa
 Licence Number 1223
 Name of Driller or Borer M Kavanagh
 Address
 Date 9/3/64
Walter Kavanagh
 (Signature of Licensed Drilling or Boring Contractor)



Con 10
Feb 11
CODED



1510247

1182 426610

4R 5022970

lev. 5R 0256

WATER WELL RECORD

sin 251
County or District Carleton Place

Township, Village, Town or City March

Con. 1V Lot 11

Date completed 11 June 1969
(day month year)

Owner M. Holitzner Ltd
(print in block letters)

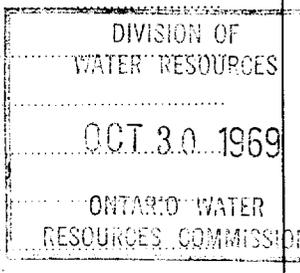
Address Hazeldean Ont.

S

Casing and Screen Record

Pumping Test

Inside diameter of casing 5"
Total length of casing 28'
Type of screen
Length of screen
Depth to top of screen
Diameter of finished hole 5"



Static level 5
Test-pumping rate 10 G.P.M.
Pumping level 9
Duration of test pumping 1 hr
Water clear or cloudy at end of test
Recommended pumping rate 5 G.P.M.
with pump setting of 30 feet below ground surface

Well Log

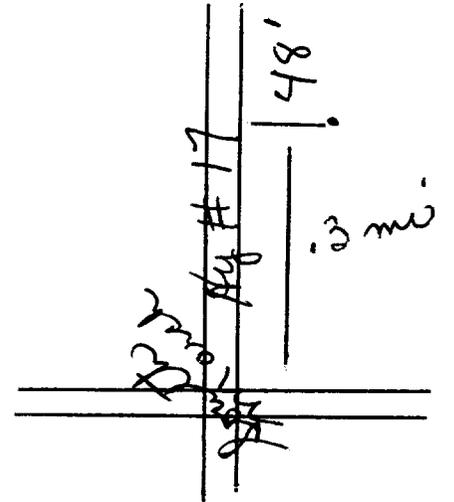
Water Record

Overburden and Bedrock Record	Water Record			
	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
<u>clay</u>	<u>0</u>	<u>25</u>	<u>60</u>	<u>fresh</u>
<u>sandstone</u>	<u>25</u>	<u>62</u>		

For what purpose(s) is the water to be used? household
Is well on upland, in valley, or on hillside?
Drilling or Boring Firm Capital Water Supply Ltd.
Address 14 Ashford Dr Ottawa 6
Licence Number 3216
Name of Driller or Borer B Acres
Address
Date 11 June 1969
Walter Kavanaugh
(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.





Ontario

WATER WELL RECORD

316/5d

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

11

1514785

MUNICIPALITY: 15006 CON

OH

COUNTY OR DISTRICT: West Carleton TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: March CON., BLOCK, TRACT, SURVEY, ETC.: 4

DATE COMPLETED: DAY 01, MONTH 07, YEAR 75
ELEVATION: 231.00
GRID CODE: 4 26

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown clay			soft.	0	25
Gray sandstone			hard	25	90

31 002560585 009021873
32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0065	1 <input checked="" type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERAL
0084	1 <input checked="" type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

INCHES DIAM.	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
06"	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE	.188	0 007
	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE		27 090

SCREEN

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

61 PLUGGING & SEALING RECORD

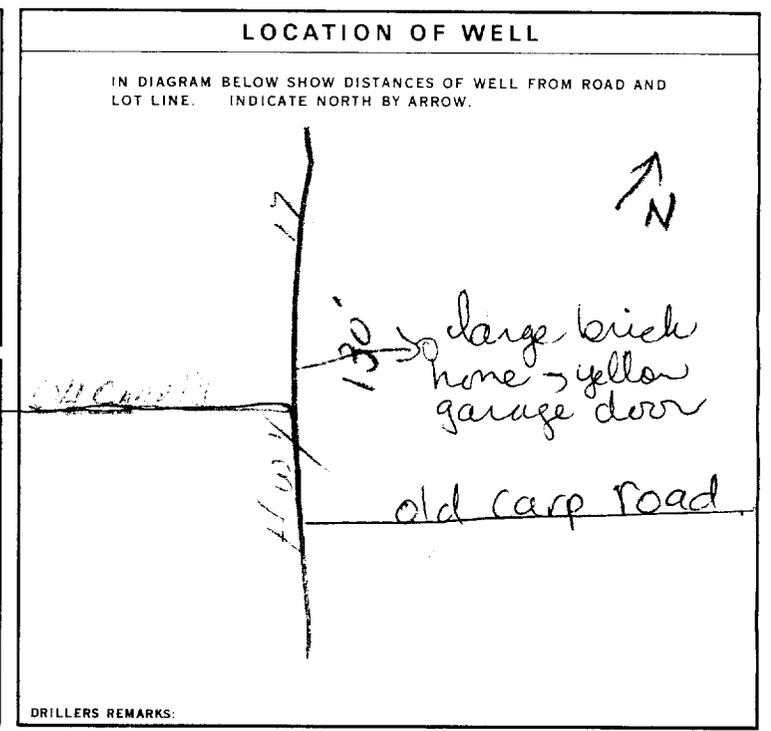
DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
10-13	14-17
18-21	22-25
28-29	30-33 80

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE GPM	DURATION OF PUMPING HOURS
1 <input type="checkbox"/> PUMP 2 <input type="checkbox"/> BAILER	0015	02 00

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
011	030	15 MINUTES: 030, 30 MINUTES: 030, 45 MINUTES: 030, 60 MINUTES: 030

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING FEET	RECOMMENDED PUMPING RATE GPM
1 <input checked="" type="checkbox"/> SHALLOW 2 <input type="checkbox"/> DEEP	030	0005



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 OTHER 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

CONTRACTOR: NAME OF WELL CONTRACTOR: Maple Leaf Drilling LICENCE NUMBER: 3658
ADDRESS: 2107-465 Richmond Road Ottawa
NAME OF DRILLER OR BOREN: R. Bisson LICENCE NUMBER:
SIGNATURE OF CONTRACTOR: [Signature] SUBMISSION DATE: DAY 9 MO. 7 YR. 75

OFFICE USE ONLY: DATA SOURCE: 1 CONTRACTOR: 3658 DATE RECEIVED: 2307 75
DATE OF INSPECTION: 10/6/77 INSPECTOR: [Signature]
REMARKS: P
WI



MINISTRY OF THE ENVIRONMENT
The Ontario Water Resources Act
WATER WELL RECORD

31G5d

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

11 1516260 15.0.06 CON. CQN 03
COUNTY OR DISTRICT: Carleton TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: March 3 CON., BLOCK, TRACT, SURVEY, ETC.: 3
DATE COMPLETED: DAY 04 MO 10 YR 77
6 Primrose Ave. Ottawa, Ontario
NG 23140 RC 4 ELEVATION 0260 RC 4 BASIN CODE 26

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
brown	clay		packed	0	9
brown	clay	boulders	packed	9	11
grey	limestone	sandstone	hard	11	35
grey	sandstone			35	115

31 000960579 00116051379 00352151873 9115218
32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
0113	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

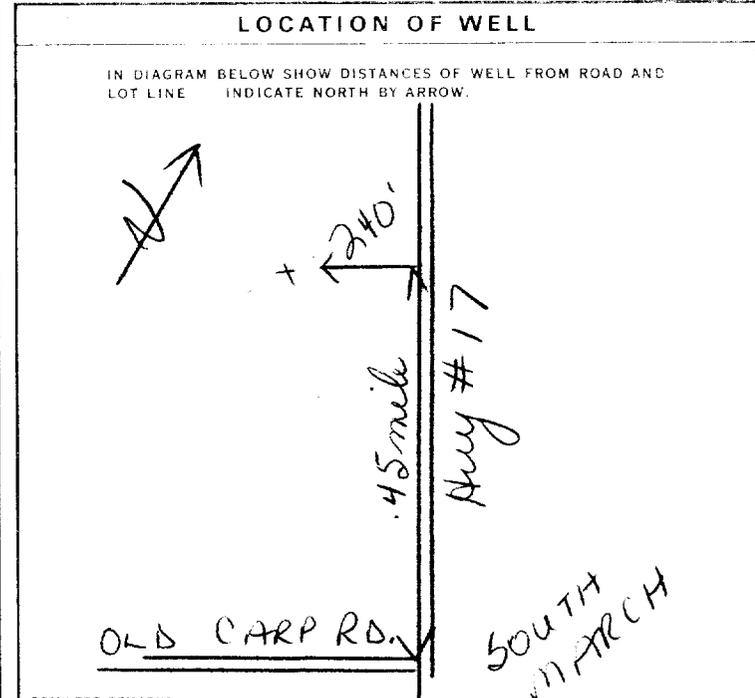
INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
65	1 <input checked="" type="checkbox"/> STEEL 12 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE	188	0 0022
06	1 <input type="checkbox"/> STEEL 19 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE		22 215
	1 <input type="checkbox"/> STEEL 26 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE		0115 27-30

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE
10-13 14-17	
18-21 22-25	
26-29 30-33 80	

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 <input checked="" type="checkbox"/> PUMP 2 <input type="checkbox"/> BAILER	0015 GPM	01 15-16 00 17-18 MINS
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
020 FEET	070 FEET	15 MINUTES 070 FEET 30 MINUTES 070 FEET 45 MINUTES 070 FEET 60 MINUTES 070 FEET
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
	075 FEET	1 <input checked="" type="checkbox"/> CLEAR 2 <input type="checkbox"/> CLOUDY
RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMP RATE
<input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP	075 FEET	0005 GPM



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

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 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

CONTRACTOR

NAME OF WELL CONTRACTOR: Capital Water Supply Ltd. LICENCE NUMBER: 1558
ADDRESS: Box 490 Stittsville, Ontario
NAME OF DRILLER OR BORER: W. Kavanagh LICENCE NUMBER:
SIGNATURE OF CONTRACTOR: [Signature] SUBMISSION DATE: DAY 5 MO 10 YR 77

OFFICE USE ONLY

DATA SOURCE: 1 58 CONTRACTOR: 1558 59-62 DATE RECEIVED: 171177 63-68 80
DATE OF INSPECTION: 29 June 29/78 INSPECTOR: [Signature] DN
REMARKS: New Brown Buck Bump low
P
WI



WATER WELL RECORD

3165d

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

11 1516836

MUNICIPALITY 15006 CON. 03

COUNTY OR DISTRICT: Carleton TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: March CON., BLOCK, TRACT, SURVEY, ETC.: 3

DATE COMPLETED: DAY 08 MO. 11 YR. 78

ADDRESS: Old Camp Rd. R.R. #1
22960 Manitoulin, Ont.

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
<u>Brown</u>	<u>Sand</u>		<u>loose</u>	<u>0</u>	<u>2</u>
<u>Grey</u>	<u>Sandstone</u>	<u>white layers</u>	<u>hard</u>	<u>2</u>	<u>125</u>

31 000262877 01252187473

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-13 <u>0120</u>	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
15-18	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
20-23	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
25-28	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
30-33	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIA. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
<u>6 7/8</u>	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE	<u>188</u>	<u>0</u>	<u>22</u>
<u>6 7/8</u>	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE		<u>22</u>	<u>55</u>
<u>5 7/8</u>	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE		<u>55</u>	<u>125</u>

SCREEN

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

MATERIAL AND TYPE: _____ DEPTH TO TOP OF SCREEN: _____

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

71 PUMPING TEST

PUMPING TEST METHOD: 1 PUMP 2 BAILER

PUMPING RATE: 0010 GPM DURATION OF PUMPING: 01 HOURS 00 MINS

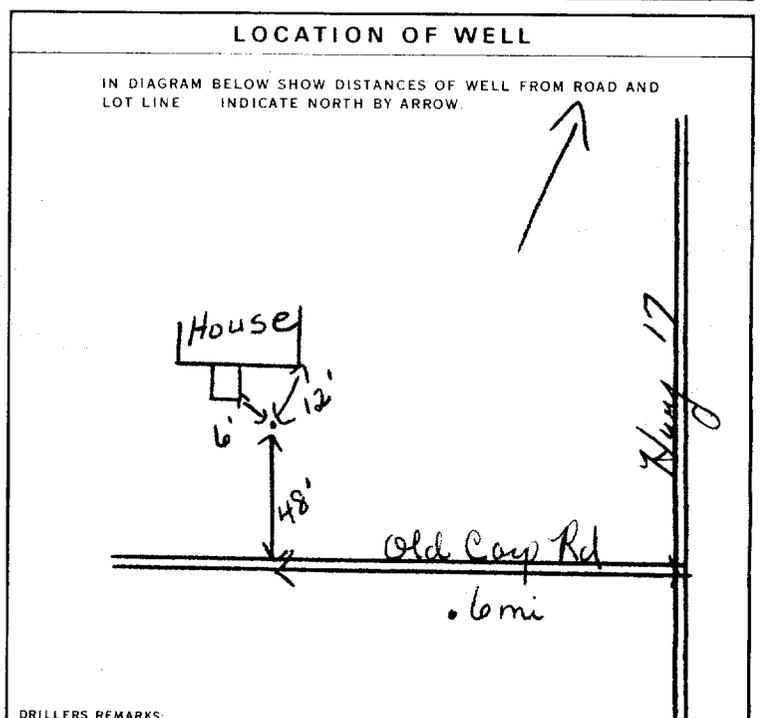
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING					
19-21 FEET	22-24 FEET	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES	75 MINUTES	90 MINUTES
<u>025</u>	<u>050</u>	<u>050</u>	<u>050</u>	<u>050</u>	<u>050</u>	<u>050</u>	<u>050</u>

IF FLOWING, GIVE RATE: _____ PUMP INTAKE SET AT: _____ WATER AT END OF TEST: _____

RECOMMENDED PUMP TYPE: SHALLOW DEEP

RECOMMENDED PUMP SETTING: 075 FEET

RECOMMENDED PUMPING RATE: 0005 GPM



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

WATER USE

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 DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: CAPITAL WATER SUPPLY LTD LICENCE NUMBER: 1538
 ADDRESS: Box 490, Stutterville, Ontario
 NAME OF DRILLER OR BORER: S Miller LICENCE NUMBER: _____
 SIGNATURE OF CONTRACTOR: JK Kawamachi SUBMISSION DATE: DAY 9 MO. 11 YR. 78

OFFICE USE ONLY

DATA SOURCE: 1 CONTRACTOR: 1538 DATE RECEIVED: 181278
 DATE OF INSPECTION: 22/05/79 INSPECTOR: JK
 REMARKS: _____

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

11

1520048

15006 CON
Hardwood Plains 04

COUNTY OR DISTRICT: Carleton Place TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: March CON. BLOCK, TRACT, SURVEY, ETC.: Con 4 LOT: 12

106 Claymor Ave. Ottawa DATE COMPLETED: DAY 17 MO 7 YR. 85

ELEVATION: 124 RC: 156

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
grey	sand			0	3
grey	sandstone			3	102
black	granite			102	125

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
85	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERAL
120	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
6 1/2	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE	1/8	0	22
6	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE		22	125
	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE			

SCREEN

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

MATERIAL AND TYPE: _____ DEPTH TO TOP OF SCREEN: _____ FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
3	22 cement grout
18-21	22-25
26-29	30-33

71 PUMPING TEST

PUMPING TEST METHOD: 1 PUMP 2 BAILER

PUMPING RATE: 15 GPM

DURATION OF PUMPING: 15-16 HOURS: 0 17-18 MINS: _____

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
8 FEET	60 FEET	15 MINUTES: 60 FEET 30 MINUTES: 60 FEET 45 MINUTES: 60 FEET 60 MINUTES: 60 FEET

IF FLOWING, GIVE RATE: _____ GPM

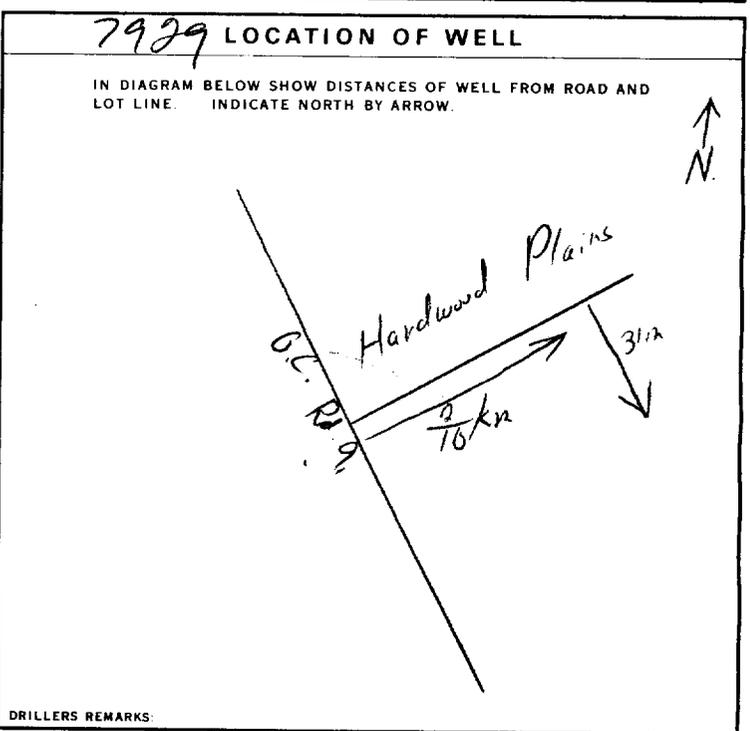
PUMP INTAKE SET AT: _____ FEET

WATER AT END OF TEST: _____ FEET

RECOMMENDED PUMP TYPE: SHALLOW DEEP

RECOMMENDED PUMP SETTING: 60 FEET

RECOMMENDED PUMPING RATE: 10 GPM



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

WATER USE

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 DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: Henry Mains Well Drilling LICENSE NUMBER: 3644

ADDRESS: Box 326, Richmond Ont.

NAME OF DRILLER OR BORER: [Signature] LICENSE NUMBER: _____

SIGNATURE OF CONTRACTOR: [Signature] SUBMISSION DATE: DAY 18 MO 7 YR. 85

OFFICE USE ONLY

DATA SOURCE: _____ CONTRACTOR: 3644 DATE RECEIVED: 08 10 85

DATE OF INSPECTION: _____ INSPECTOR: _____

REMARKS: **WDE**

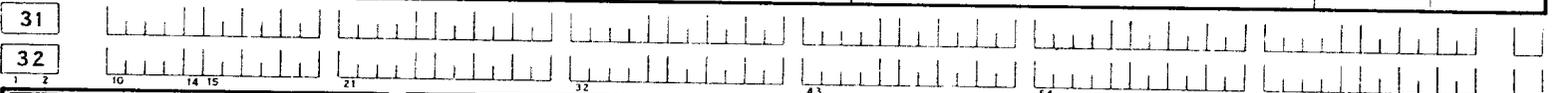
1. PRINT ONLY IN SPACES PROVIDED
2. CHECK CORRECT BOX WHERE APPLICABLE

1520650 Plan 4M404

COUNTY OR DISTRICT: Carleton Place TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: March CON., BLOCK, TRACT, SURVEY, ETC.: Con 4, Lillian Way LOT: 11
+13167, Kanata K2K 1X4 DATE COMPLETED: DAY 29 MO 4 YR 86

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
grey	clay	stones		0	3
grey	sandstone			3	80
white	sandstone			80	95
red	granite			95	105



41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
98	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 14 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 19 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 24 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 29 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 34 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
6 1/4	1 <input checked="" type="checkbox"/> STEEL 12 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE	1/88	0	22
6	1 <input type="checkbox"/> STEEL 19 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE		22	105
	1 <input type="checkbox"/> STEEL 26 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE			

SCREEN

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

61 PLUGGING & SEALING RECORD

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

Cement grouted

71 PUMPING TEST

PUMPING TEST METHOD: 1 PUMP 2 BAILER

PUMPING RATE: 20 GPM

DURATION OF PUMPING: 15-17 HOURS 0 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING			
6	30	15 MINUTES: 30	30 MINUTES: 30	45 MINUTES: 30	60 MINUTES: 30

IF FLOWING, GIVE RATE: _____ GPM

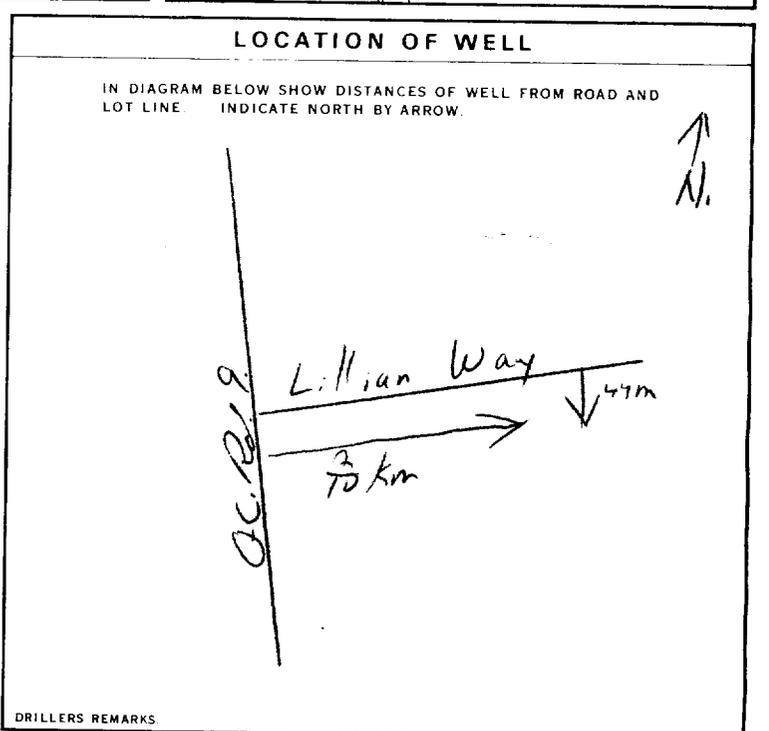
PUMP INTAKE SET AT: _____ FEET

WATER AT END OF TEST: 1 CLEAR 2 CLOUDY

RECOMMENDED PUMP TYPE: SHALLOW DEEP

RECOMMENDED PUMP SETTING: 30 FEET

RECOMMENDED PUMPING RATE: 8 GPM



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

WATER USE

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 DRILLING

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

CONTRACTOR

NAME OF WELL CONTRACTOR: A. Mains Well Drilling LICENCE NUMBER: 3644
 ADDRESS: Box 326 Richmond Ont.
 NAME OF DRILLER OR BORER: J. Mains LICENCE NUMBER: _____
 SIGNATURE OF CONTRACTOR: J. Mains SUBMISSION DATE: DAY 30 MO 4 YR 86

OFFICE USE ONLY

DATA SOURCE: _____ CONTRACTOR: _____ DATE RECEIVED: 120886 63-68 80
 DATE OF INSPECTION: _____ INSPECTOR: _____
 REMARKS: _____



WATER WELL RECORD

Ontario

OTTAWA - CARLETON

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

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1524281

MUNICIP. 1,6006

CON. CON. 04

COUNTY OR DISTRICT: **KANATA** TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: **KANATA** CON. BLOCK, TRACT, SURVEY, ETC.: **LOT 17 CON 4** LOT: **12**

DATE COMPLETED: DAY **9** MO. **AUG** YR. **89**

ADDRESS: **OHARA CRESCENT DRIVE**

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
BROWN	SAND	STONES	LOOSE	0	4
BROWN	BEDROCK	SANDSTONE	CEMENTED	4	41
GREY	BEDROCK	GRANITE	POROUS	41	103

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER			
41	<input checked="" type="checkbox"/> FRESH	<input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERAL
92	<input checked="" type="checkbox"/> FRESH	<input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERAL
103	<input checked="" type="checkbox"/> FRESH	<input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
6 1/2	STEEL	1/8	0	20

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE
10-13	1 BAG CEMENT

71 PUMPING TEST

PUMPING TEST METHOD: PUMP

PUMPING RATE: **15** GPM

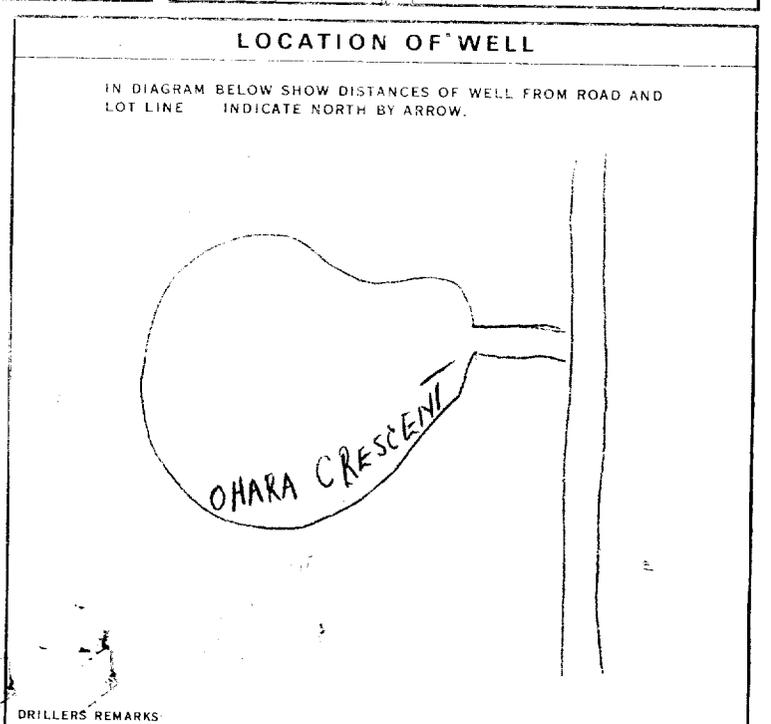
DURATION OF PUMPING: **1** HOUR

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
15 FEET	30 FEET	15 MINUTES: 25 FEET, 30 MINUTES: 30 FEET, 45 MINUTES: 30 FEET, 60 MINUTES: 30 FEET

RECOMMENDED PUMP TYPE: DEEP

RECOMMENDED PUMP SETTING: **75** FEET

RECOMMENDED PUMPING RATE: **10** GPM



FINAL STATUS OF WELL

WATER SUPPLY

WATER USE

DOMESTIC

METHOD OF DRILLING

ROTARY (AIR)

CONTRACTOR

NAME OF WELL CONTRACTOR: **MOROUGHNEY - DRILLING** LICENCE NUMBER: **3701**

ADDRESS: **1110 FISHER AVE OTTAWA**

NAME OF DRILLER OR BORER: **[Signature]** LICENCE NUMBER: **70504**

SIGNATURE OF CONTRACTOR: **[Signature]** SUBMISSION DATE: _____

OFFICE USE ONLY

DATA SOURCE: **3701** CONTRACTOR: **3701** DATE RECEIVED: **FEB 26 1990**

DATE OF INSPECTION: _____ INSPECTOR: _____

REMARKS: _____

P

WI

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

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1526583

MUNICIP 15006

CON. CON

104

COUNTY OR DISTRICT: **Ottawa** TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: **Kanata** CON. BLOCK, TRACT, SURVEY ETC: **4** LOT: **13**

DATE COMPLETED: DAY **17** MO **9** YR **92**

Acres Road Carp, Ontario KOA 110

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown	Sand			0	4
Gray	Sand		wet	4	12
Gray	Sandy Clay	Stones	Wet	12	28
Gray	Limestone		Hard	28	99

31 32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-13	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS
15-18	NOT TESTED
20-23	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS
25-28	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS
30-33	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
6 1/4	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC	.188	0	30
6	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC		30	99
	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC			

SCREEN

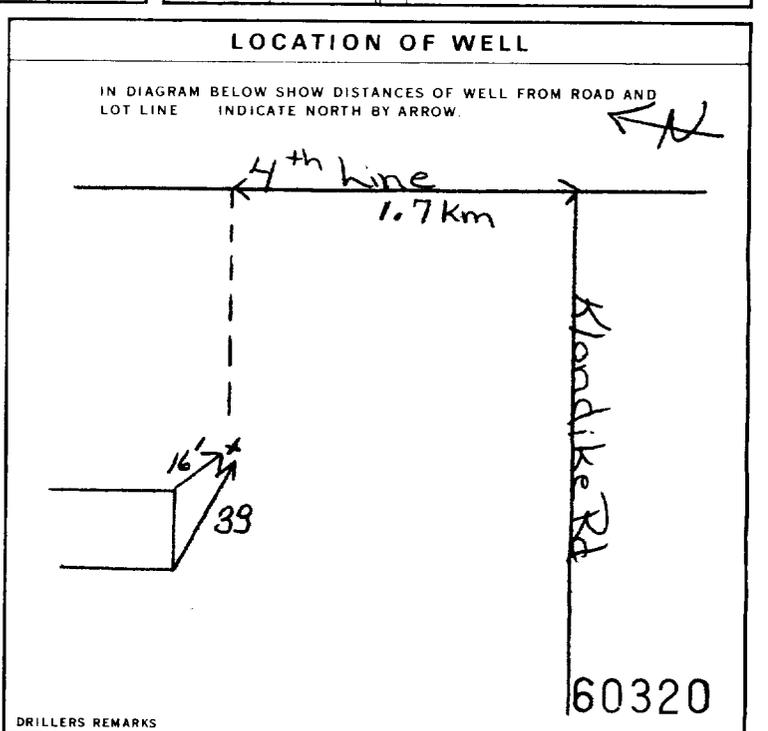
SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET
MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE	CEMENT GROUT LEAD PACKER, ETC.
FROM TO		
10-13 14-17	5	Grouted Cement (5)
30 27-25		
26-29 30-33 80		

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE GPM	DURATION OF PUMPING HOURS
1 <input checked="" type="checkbox"/> PUMP 2 <input type="checkbox"/> BAILER	50	1
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
19-21	22-24	15 MINUTES 26-28 30 MINUTES 29-31 45 MINUTES 32-34 60 MINUTES 35-37
17 FEET	25 FEET	19 FEET 17 FEET 17 FEET 17 FEET
IF FLOWING GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
	17 FEET	17 FEET
RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
<input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP	50 FEET	10 GPM



FINAL STATUS OF WELL

1 <input type="checkbox"/> WATER SUPPLY	5 <input type="checkbox"/> ABANDONED, INSUFFICIENT SUPPLY
2 <input checked="" type="checkbox"/> OBSERVATION WELL	6 <input type="checkbox"/> ABANDONED POOR QUALITY
3 <input type="checkbox"/> TEST HOLE	7 <input type="checkbox"/> UNFINISHED
4 <input type="checkbox"/> RECHARGE WELL	<input type="checkbox"/> DEWATERING

WATER USE

1 <input type="checkbox"/> DOMESTIC	5 <input type="checkbox"/> COMMERCIAL
2 <input checked="" type="checkbox"/> STOCK	6 <input type="checkbox"/> MUNICIPAL
3 <input type="checkbox"/> IRRIGATION	7 <input type="checkbox"/> PUBLIC SUPPLY
4 <input type="checkbox"/> INDUSTRIAL	8 <input type="checkbox"/> COOLING OR AIR CONDITIONING
<input type="checkbox"/> OTHER	9 <input type="checkbox"/> NOT USED

METHOD OF CONSTRUCTION

1 <input type="checkbox"/> CABLE TOOL	6 <input type="checkbox"/> BORING
2 <input type="checkbox"/> ROTARY (CONVENTIONAL)	7 <input type="checkbox"/> DIAMOND
3 <input type="checkbox"/> ROTARY (REVERSE)	8 <input type="checkbox"/> JETTING
4 <input type="checkbox"/> ROTARY (AIR)	9 <input type="checkbox"/> DRIVING
5 <input type="checkbox"/> AIR PERCUSSION	<input type="checkbox"/> DIGGING <input type="checkbox"/> OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: **Capital Water Supply Ltd.** WELL CONTRACTOR'S LICENCE NUMBER: **1558**

Box 490 **Stittsville, Ontario K2S 1A6**

NAME OF WELL TECHNICIAN: **S. Miller** WELL TECHNICIAN'S LICENCE NUMBER: **T0097**

SIGNATURE OF TECHNICIAN/CONTRACTOR: *[Signature]* SUBMISSION DATE: DAY **21** NO **9** YR **92**

OFFICE USE ONLY

DATA SOURCE: **1558** CONTRACTOR: **1558** DATE RECEIVED: **OCT 22 1992**

DATE OF INSPECTION: _____ INSPECTOR: _____

REMARKS: _____

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2. CHECK CORRECT BOX WHERE APPLICABLE

11

1528691

MUNICIP. 15.006

CON. 104

COUNTY OR DISTRICT: ONTARIO TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: WILKINSON CON. BLOCK, TRACT, SURVEY ETC: 4 LOT: 13
DATE COMPLETED: DAY 9 MO 8 YR 95
ELEVATION: HOUSTON

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
BROWN	SAND		FINE	0	5'
GREY	CLAY		DENSE	5'	18'
GREY	LIMESTONE	Black Limestone	HARD	18'	78'
GREY	LIMESTONE	QUARTZITE	HARD	78'	85'

31
32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
57	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS
80	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
6 1/4"	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC	1.188	0'	22'
6"	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC		22'	85'

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
	INCHES	FEET
		41-44
		30

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE
0	20' CEMENT GROUT.

71 PUMPING TEST

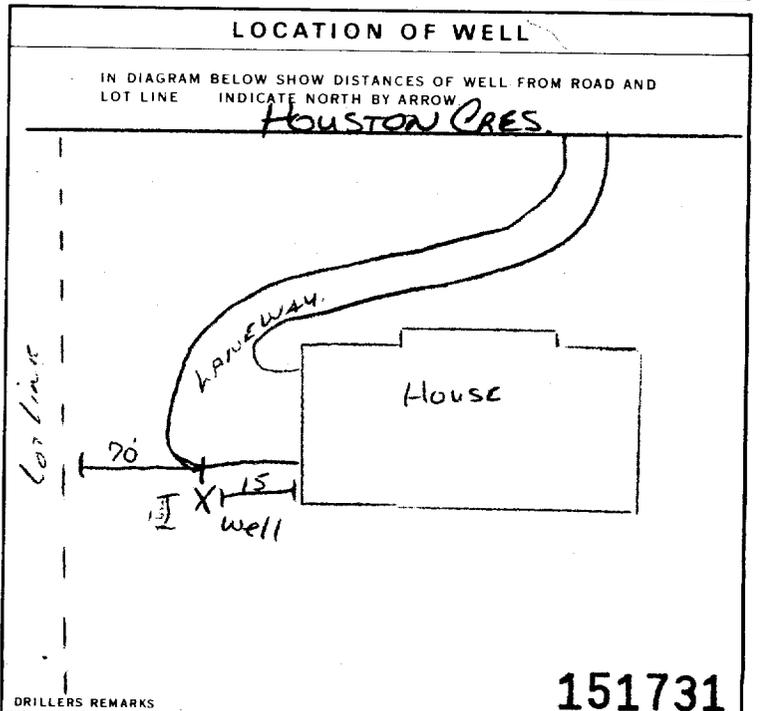
PUMPING TEST METHOD: AIR PUMP 2 BAILER

PUMPING RATE: 8 GPM

DURATION OF PUMPING: 2 HOURS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING			
32 FEET	70 FEET	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
		26-28	29-31	32-34	35-37

RECOMMENDED PUMP TYPE: SHALLOW DEEP



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 DEWATERING

WATER USE

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

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

CONTRACTOR

NAME OF WELL CONTRACTOR: VALLEY DRILLING INC WELL CONTRACTOR'S LICENCE NUMBER: 5222
ADDRESS: PO Box 437 CARP, ONT
NAME OF WELL TECHNICIAN: [Signature] WELL TECHNICIAN'S LICENCE NUMBER: T-310
SIGNATURE OF TECHNICIAN/CONTRACTOR: [Signature] SUBMISSION DATE: _____

OFFICE USE ONLY

DATA SOURCE: _____ CONTRACTOR: 5222 DATE RECEIVED: AUG 29 1995
DATE OF INSPECTION: _____ INSPECTOR: _____
REMARKS: _____

CSS.ES

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

1530542

Municipality 15006 Con. 04
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

County or District: Ottawa Carleton Township/Borough/City/Town/Village: Kanata
 Owner's surname: Gard Weina Construction First name: Address: Kanata
 Con block tract survey, etc.: IV Lot Part of: 13
 Date completed: 26 2 99

Zone Easting Northing RC Elevation RC Basin Code ii iii iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)						
General colour	Most common material	Other materials	General description		Depth - feet	
					From	To
red	Sand				0	5
	clay				5	24
grey	Limestone				24	160

31 32

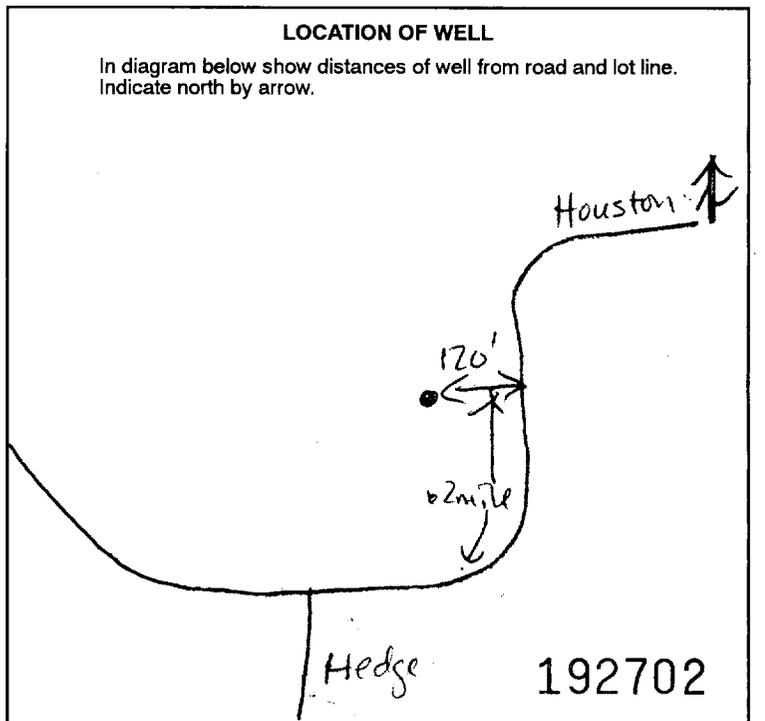
41 WATER RECORD			
Water found at - feet	Kind of water		
42	<input checked="" type="checkbox"/> Fresh	<input type="checkbox"/> Sulphur	<input type="checkbox"/> Minerals
	<input type="checkbox"/> Salty	<input type="checkbox"/> Gas	
47	<input checked="" type="checkbox"/> Fresh	<input type="checkbox"/> Sulphur	<input type="checkbox"/> Minerals
	<input type="checkbox"/> Salty	<input type="checkbox"/> Gas	
53	<input checked="" type="checkbox"/> Fresh	<input type="checkbox"/> Sulphur	<input type="checkbox"/> Minerals
	<input type="checkbox"/> Salty	<input type="checkbox"/> Gas	

51 CASING & OPEN HOLE RECORD				
Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
6 1/2	<input checked="" type="checkbox"/> Steel	188	0	31
	<input type="checkbox"/> Galvanized			
	<input type="checkbox"/> Concrete			
	<input type="checkbox"/> Open hole			
	<input type="checkbox"/> Plastic			
8 3/4	<input type="checkbox"/> Steel		0	29
	<input type="checkbox"/> Galvanized			
	<input type="checkbox"/> Concrete			
	<input type="checkbox"/> Open hole			
	<input type="checkbox"/> Plastic			
6	<input type="checkbox"/> Steel		29	60
	<input type="checkbox"/> Galvanized			
	<input type="checkbox"/> Concrete			
	<input type="checkbox"/> Open hole			
	<input type="checkbox"/> Plastic			

SCREEN	Sizes of opening (Slot No.)		Diameter	Length
	31-33	34-38	inches	feet
	Material and type		Depth at top of screen	
			feet	

61 PLUGGING & SEALING RECORD		
<input checked="" type="checkbox"/> Annular space		<input type="checkbox"/> Abandonment
Depth set at - feet		Material and type (Cement grout, bentonite, etc.)
From	To	
10-13	14-17	Cement grout
18-21	22-25	
26-29	30-33	

71 PUMPING TEST			
Pumping test method	Pumping rate	Duration of pumping	
<input checked="" type="checkbox"/> Pump <input type="checkbox"/> Bailor	18 GPM	Hours	Mins
Static level	Water level end of pumping	Water levels during	
13 feet	50 feet	<input type="checkbox"/> Pumping	<input checked="" type="checkbox"/> Recovery
		15 minutes	30 minutes
		45 minutes	60 minutes
		13 feet	13 feet
		13 feet	13 feet
If flowing give rate	Pump intake set at	Water at end of test	
		<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Cloudy
Recommended pump type	Recommended pump setting	Recommended pump rate	
<input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	18 feet	18 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 Abandoned (Other), 8 Dewatering, 9 Unfinished, 10 Replacement well

WATER USE

1 Domestic, 2 Stock, 3 Irrigation, 4 Industrial, 5 Commercial, 6 Municipal, 7 Public supply, 8 Cooling & air conditioning, 9 Not used, 10 Other

METHOD OF CONSTRUCTION

1 Cable tool, 2 Rotary (conventional), 3 Rotary (reverse), 4 Rotary (air), 5 Air percussion, 6 Boring, 7 Diamond, 8 Jetting, 9 Driving, 10 Digging, 11 Other

Name of Well Contractor: Air Rock Drilling Co. Well Contractor's Licence No.: 1119
 Address: RR#2, Jasper, AB, K6V5W2
 Name of Well Technician: Shannon Turcell Well Technician's Licence No.: T2122
 Signature of Technician/Contractor: Submission date: 7 3 99

MINISTRY USE ONLY

Data source: Contractor: 1119 Date received: JUN 09 1999
 Date of inspection: Inspector:
 Remarks:
 CSS.ES9

Instructions for Completing Form

- For use in the **Province of Ontario** only. This document is a permanent **legal** document. Please retain for future reference.
- All Sections **must** be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well Management Coordinator at 416-235-6203.
- **All metre measurements shall be reported to 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Well Owner's Information and Location of Well Information

Ministry Use Only											
MUN										CON	LOT

Ottawa Carleton	Kanata	11	4
RR#/Street Number/Name 941 March Rd.	City/Town/Village Kanata	Site/Compartment/Block/Tract etc.	
GPS Reading	NAD	Zone	Easting
	8 3	18	426390
			Northing
			5023443
			Unit Make/Model
			Garmin
			Mode of Operation:
			<input type="checkbox"/> Undifferentiated <input checked="" type="checkbox"/> Averaged
			<input type="checkbox"/> Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

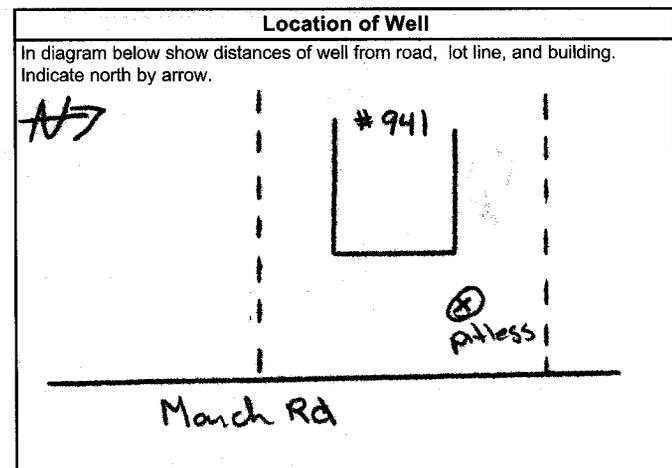
General Colour	Most common material	Other Materials	General Description	Depth Metres	
				From	To
Brown	Clay		Packed	0	2.74
grey	limestone		Hard	2.74	11.58
grey&white	sandstone			11.58	22.24

Hole Diameter		
Depth	Metres	Diameter
From	To	Centimetres
0	6.40	22.75
6.40	22.24	15.23

Construction Record					
Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres		
			From	To	
Casing					
15.86	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	.48	+ .45	6.40	
Screen					
15.23	<input checked="" type="checkbox"/> Open hole		6.40	22.24	

Test of Well Yield				
Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
Submersible				
Pump intake set at - (metres) 18.28	Static Level			
Pumping rate - (litres/min) 50.05	1	5.83	1	5.46
Duration of pumping 1 hrs + ___ min	2	6.08	2	5.41
Final water level end of pumping 7.01 metres	3	6.21	3	5.39
Recommended pump type, <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4	6.30	4	5.36
Recommended pump depth 15.23 metres	5	6.35	5	5.34
Recommended pump rate 45.5 (litres/min)	10	6.50	10	5.23
If flowing give rate - (litres/min)	15	6.62	15	5.16
	20	6.69	20	5.14
	25	6.76	25	5.12
If pumping discontinued, give reason.	30	6.79	30	5.10
	40	6.88	40	5.07
	50	6.94	50	5.04
	60	7.01	60	5.02

Plugging and Sealing Record			<input checked="" type="checkbox"/> Annular space	<input type="checkbox"/> Abandonment
Depth set at - Metres	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)		
From	To			
6.40	0	Grouted Bentonite Slurry	.21m3	



Method of Construction			
<input type="checkbox"/> Cable Tool	<input checked="" type="checkbox"/> Rotary (air)	<input type="checkbox"/> Diamond	<input type="checkbox"/> Digging
<input type="checkbox"/> Rotary (conventional)	<input checked="" type="checkbox"/> Air percussion	<input type="checkbox"/> Jetting	<input type="checkbox"/> Other
<input type="checkbox"/> Rotary (reverse)	<input type="checkbox"/> Boring	<input type="checkbox"/> Driving	

Water Use			
<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Industrial	<input type="checkbox"/> Public Supply	<input type="checkbox"/> Other
<input type="checkbox"/> Stock	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Municipal	<input type="checkbox"/> Cooling & air conditioning	

Final Status of Well			
<input checked="" type="checkbox"/> Water Supply	<input type="checkbox"/> Recharge well	<input type="checkbox"/> Unfinished	<input type="checkbox"/> Abandoned, (Other)
<input type="checkbox"/> Observation well	<input type="checkbox"/> Abandoned, insufficient supply	<input type="checkbox"/> Dewatering	
<input type="checkbox"/> Test Hole	<input type="checkbox"/> Abandoned, poor quality	<input type="checkbox"/> Replacement well	

Audit No. z 47021	Date Well Completed
	YYYY MM DD 2006 7 18
Was the well owner's information package delivered? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Delivered
	YYYY MM DD 2006 7 18

Well Contractor/Technician Information	
Name of Well Contractor Capital Water Supply Ltd	Well Contractor's Licence No. 1558
Business Address (street name, number, city etc.) Box 490 Stittsville Ontario K2S 1A6	
Name of Well Technician (last name, first name) Miller Stephen	Well Technician's Licence No. T0097
Signature of Well Technician/Contractor <i>[Signature]</i>	Date Submitted YYYY MM DD 2006 7 18

Ministry Use Only	
Data Source	Contractor 1558
Date Received AUG 25 2006	Date of Inspection YYYY MM DD
Remarks	Well Record Number

N/A

Well Owner's Information

First Name: Mints Developments Co Last Name: Paterson Group E-mail Address: _____
 Mailing Address (Street Number/Name, RR): 28 Concourse Gate 1 Nepean Municipality: Ont Province: Ont Postal Code: K2E 7T7 Telephone No. (inc. area code): _____
 Well Constructed by Well Owner

Part A Construction and/or Major Alteration of a Well

Address of Well Location (Street Number/Name, RR): #886 March Road Township: March Lot: 11 Concession: 4
 County/District/Municipality: Ottawa-Carleton City/Town/Village: Carrp Province: Ontario Postal Code: _____
 UTM Coordinates: NAD | 8 | 3 | 18 | 426646 | 5023182 | Magellano | _____
 Mode of Operation: Undifferentiated Averaged Differentiated, specify _____

Overburden and Bedrock Materials (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	Depth (Metres) To
			<u>6" Drilled well Abandonment</u>	<u>0</u>	<u>24.08</u>

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	Depth Set at (Metres) To	Type of Sealant Used (Material and Type)	Volume Placed (Cubic Metres)
<u>24.08</u>	<u>0.15</u>	<u>Holetlug</u>	
<u>0.15</u>	<u>0</u>	<u>Soil</u>	

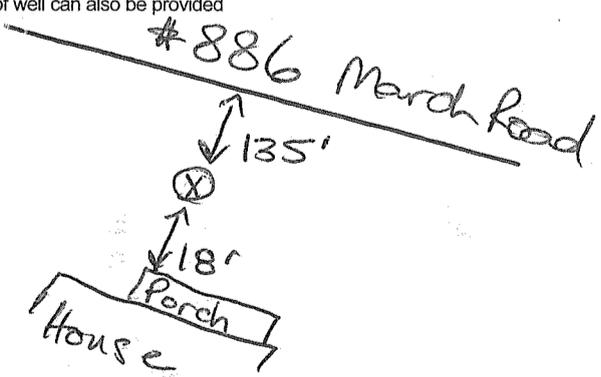
Results of Well Yield Testing

Check box if after test of well yield, water was: <input type="checkbox"/> Clear and sand free <input type="checkbox"/> Cannot develop to sand-free state If pumping discontinued, give reason: Pumping test method Pump intake set at (Metres) Pumping rate (Litres/min) Duration of pumping hrs + min Final water level end of pumping (Metres) Recommended pump type <input type="checkbox"/> Shallow <input type="checkbox"/> Deep Recommended pump depth Metres Recommended pump rate (Litres/min) If flowing give rate (Litres/min)	Draw Down		Recovery	
	Time (Min)	Water Level (Metres)	Time (Min)	Water Level (Metres)
	Static Level		Static Level	
	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	10		10	
	15		15	
	20		20	
	25		25	
	30		30	
	40		40	
	50		50	
	60		60	

Method of Construction
 Cable Tool Diamond Rotary (Conventional) Jetting Rotary (Reverse) Driving Rotary (Air) Digging Air percussion Boring Other, specify _____
Water Use
 Public Commercial Not used Domestic Municipal Dewatering Livestock Test Hole Monitoring Irrigation Cooling & Air Conditioning Industrial Other, specify _____

Status of Well
 Water Supply Dewatering Well Observation and/or Monitoring Hole Replacement Well Abandoned, Insufficient Supply Alteration (Construction) Test Hole Abandoned, Poor Water Quality Other, specify _____ Recharge Well Abandoned, other, specify _____

Location of Well
 Please provide a map below showing:
 - all property boundaries, and measurements sufficient to locate the well in relation to fixed points
 - an arrow indicating the North direction
 - detailed drawings can be provided as attachments no larger than legal size (8.5" by 14")
 - digital pictures of inside of well can also be provided



Water Details
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals

Casing Used
 Galvanized Steel Fibreglass Plastic Concrete
Screen Used
 Galvanized Steel Fibreglass Plastic Concrete
Casing and Well Details
 Diameter of the Hole (Centimetres) _____
 Depth of the Hole (Metres) _____
 Wall Thickness (Metres) _____

No Casing and Screen Used
 Open Hole
 Disinfected? Yes No
 Inside Diameter of the Casing (Metres) _____
 Depth of the Casing (Metres) _____

Date Well Completed (yyy/mm/dd): 2007-08-02 Was the well owner's information package delivered? Yes No Date the Well Record and Package Delivered to Well Owner (yyy/mm/dd): 2007-08-27

Well Contractor and Well Technician Information
 Business Name of Well Contractor: AIR ROCK DRILLING CO LTD Well Contractor's Licence No.: 11119
 Business Address (Street No./Name, number, RR): RR#1 Municipality: RICHMOND
 Province: ONT Postal Code: K0A2Z0 Business E-mail Address: _____
 Bus. Telephone No. (inc. area code): 6138382170 Name of Well Technician (Last Name, First Name): Desautniers
 Well Technician's Licence No.: 74 Signature of Technician: _____ Date Submitted (yyy/mm/dd): 2007-07-08

Ministry Use Only
 Audit No.: z 60172 Well Contractor No.: 1119
 Date Received (yyy/mm/dd): SEP 17 2007 Date of Inspection (yyy/mm/dd): _____
 Remarks: _____

Measurements recorded in: Metric Imperial

Page _____ of _____

Well Owner's Information

First Name McKeown Contracting	Last Name / Organization	E-mail Address	<input type="checkbox"/> Well Constructed by Well Owner
Mailing Address (Street Number/Name) 2878 Stagecoach Road	Municipality Greely	Province Ontario	Postal Code K0A2W0
		Telephone No. (inc. area code) 613 822 2599	

Well Location

Address of Well Location (Street Number/Name) 860 March Road	Township Kanata	Lot 11	Concession 4
County/District/Municipality Ottawa Carleton	City/Town/Village Kanata	Province Ontario	Postal Code
UTM Coordinates Zone Easting Northing NAD 8 3 1 8 426698 5023143	Municipal Plan and Sublot Number	Other	

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)	
				From	To

Annular Space			
Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)	
From: 9.44 To: 0	Grouted Bentonite 3/8" Hole Plug (5 bags)		

Results of Well Yield Testing				
After test of well yield, water was: <input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify _____	Draw Down		Recovery	
	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason: Pump intake set at (m/ft) Pumping rate (l/min / GPM) Duration of pumping _____ hrs + _____ min Final water level end of pumping (m/ft) If flowing give rate (l/min / GPM) Recommended pump depth (m/ft) Recommended pump rate (l/min / GPM) Well production (l/min / GPM) Disinfected? <input type="checkbox"/> Yes <input type="checkbox"/> No	Static Level			
	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
10		10		
15		15		
20		20		
25		25		
30		30		
40		40		
50		50		
60		60		

Method of Construction		Well Use		
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input type="checkbox"/> Domestic	<input type="checkbox"/> Municipal	<input type="checkbox"/> Dewatering
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole	<input type="checkbox"/> Monitoring
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning	
<input type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial		
<input type="checkbox"/> Other, specify _____		<input type="checkbox"/> Other, specify _____		

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		<input type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input checked="" type="checkbox"/> Abandoned, other, specify _____ <input type="checkbox"/> Other, specify _____
			From	To	

Construction Record - Screen				
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	
			From	To

Water Details		Hole Diameter	
Water found at Depth (m/ft) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested	Depth (m/ft) From To	Diameter (cm/in)
Water found at Depth (m/ft) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested		
Water found at Depth (m/ft) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested		

Well Contractor and Well Technician Information	
Business Name of Well Contractor Capital Water Supply Ltd.	Well Contractor's Licence No. 1 5 5 8
Business Address (Street Number/Name) Box 490	Municipality Stittsville
Province Ontario	Postal Code K2S1A6
Business E-mail Address office@capitalwater.ca	Name of Well Technician (Last Name, First Name) Miller, Stephen
Well Technician's Licence No. 0 0 9 7	Signature of Technician and/or Contractor <i>[Signature]</i>
Date Submitted 20080908	

Map of Well Location

Please provide a map below following instructions on the back.

Comments:

Well owner's information package delivered <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered Y Y Y Y M M D D 2 0 0 8 0 9 0 5	Ministry Use Only Audit No. Z 84392 OCT 14 2008 Received
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Measurements recorded in: Metric Imperial

Page 1 of 1

Abandoned

Well Owner's Information

First Name, Last Name (Organization) City of Ottawa, E-mail Address, Mailing Address (Street Number/Name) 100 Constellation Crescent, Municipality Ottawa, Province Ontario, Postal Code K1G6S8, Telephone No. (inc. area code) 6135802400

Well Location

Address of Well Location (Street Number/Name) 895 March Rd., Township, Lot, Concession, County/District/Municipality, City/Town/Village Kanata, Province Ontario, Postal Code K2K1X7, UTM Coordinates, Zone, Easting, Northing, Municipal Plan and Sublot Number, Other

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

Table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth (m/ft) From, To. Includes handwritten notes: Static Water level at 21', Abandoned for Road Construction, GPS - Garmin Etrex.

Annular Space table with columns: Depth Set at (m/ft) From, To, Type of Sealant Used (Material and Type), Volume Placed (m³/ft³). Includes handwritten entries for Hole plug Sand, Hole plug, Sand, Clean Rock.

Method of Construction and Well Use sections with checkboxes for Cable Tool, Rotary, Boring, etc., and Public, Commercial, Domestic, etc.

Construction Record - Casing table with columns: Inside Diameter (cm/in), Open Hole OR Material, Wall Thickness (cm/in), Depth (m/ft) From, To, Status of Well.

Construction Record - Screen table with columns: Outside Diameter (cm/in), Material, Slot No., Depth (m/ft) From, To, Status of Well.

Water Details and Hole Diameter sections with columns for Water found at Depth, Kind of Water, Depth (m/ft) From, To, Diameter (cm/in).

Well Contractor and Well Technician Information section with fields for Business Name (Marathon Drilling Co. Ltd.), Licence No., Address, Municipality, Province, Postal Code, Business E-mail Address, Bus. Telephone No., Name of Well Technician (Eric Foster), Signature, Date Submitted.

Results of Well Yield Testing table with columns: Draw Down (Time, Water Level), Recovery (Time, Water Level). Includes handwritten data points for static level and pumping rates.

Map of Well Location

Please provide a map below following instructions on the back.

Comments section with handwritten text: See Attached.

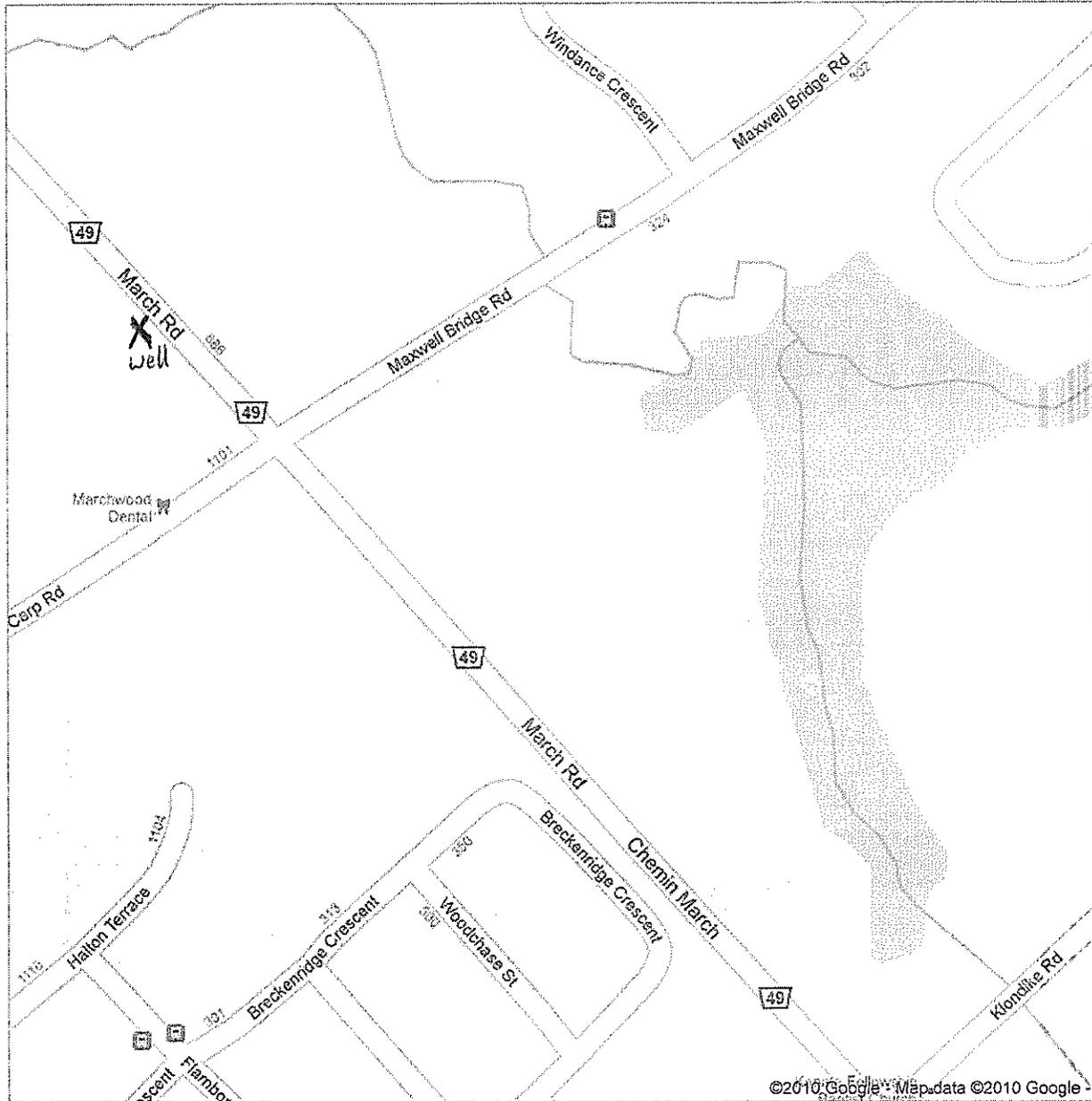
Well owner's information package delivered (Yes/No), Date Package Delivered, Date Work Completed, Ministry Use Only (Audit No. Z096933, Received DEC 22 2010).

15.7.1.1.1

Print

Google maps
Canada

Notes



C-6894
Z096933.

DEC 22 2010

Well ID

Well ID Number: 7201372
 Well Audit Number: C21215
 Well Tag Number: A130127

This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location	
Township	MARCH TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 426635.00 Northing: 5023491.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
----------------	----------------------	-----------------	---------------------	------------	----------

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
------------	----------	--	---------------

Method of Construction & Well Use

Method of Construction	Well Use
------------------------	----------

Status of Well

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
-----------------	-----------------------	------------	----------

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To
------------------	----------	------------	----------

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1844

Results of Well Yield Testing

After test of well yield, water was
If pumping discontinued, give reason
Pump intake set at
Pumping Rate
Duration of Pumping
Final water level
If flowing give rate
Recommended pump depth
Recommended pump rate
Well Production
Disinfected?

Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
45		45	
50		50	
60		60	

Water Details

Water Found at Depth	Kind
----------------------	------

Hole Diameter

Depth From	Depth To	Diameter
------------	----------	----------

Audit Number: C21215

Date Well Completed: September 07, 2012

Date Well Record Received by MOE: May 09, 2013

Updated: June 28, 2018

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Tags

- [Environment and energy.](#)
- [Drinking water.](#)

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Geotechnical
Engineering

Environmental
Engineering

Hydrogeology

Geological
Engineering

Materials Testing

Building Science

Archaeological
Services

POSITION

Intermediate Environmental Engineer

EDUCATION

Carleton University, B.Eng. 2002
Environmental Engineering

MEMBERSHIPS AND AWARDS

Professional Engineers of Ontario
Ottawa Geotechnical Society

EXPERIENCE

2011-present

Paterson Group Inc.
Consulting Engineers
Geotechnical and Environmental Division
Intermediate Engineer

2009-2010

Department of Indian and Northern Affairs
Contaminated Sites Division
Environment Officer (PC-02)

2003 to 2009

Paterson Group Inc.
Consulting Engineers
Geotechnical and Environmental Division
Intermediate Engineer

2002 to 2003

Dessau Soprin Inc.
Consulting Engineers
Environmental Division
Junior Engineer

SELECT LIST OF PROJECTS

Billings-Hurdman Interconnect Watermain - Ottawa
Telus Building Remediation - Ottawa
Block D Lands Remediation and Redevelopment – Kingston
Gladstone Avenue Reconstruction - Ottawa
Lees Avenue Coal Tar Site - City of Ottawa
Nortel Networks Environmental Monitoring Program
3W Zone Feedermain – Ottawa
Bank Street Reconstruction – Ottawa
Lees Avenue Remediation Program – Ottawa
Colonnade Road North Development – Ottawa
Montreal Road Reconstruction – Ottawa
Designated Substance Surveys – Residential and Commercial Sites - Ottawa
Phase I & II Environmental Site Assessments – Residential, Commercial and Industrial Sites – Ottawa (CSA Z768-01 and O.Reg 269/11)
Brownfields Applications and Records of Site Condition – Residential and Commercial Redevelopment

Geotechnical
Engineering

Environmental
Engineering

Hydrogeology

Geological
Engineering

Materials Testing

Building Science

Archaeological
Services

POSITION

Associate and Supervisor of the Environmental Division
Senior Environmental/Geotechnical Engineer

EDUCATION

Queen's University, B.A.Sc.Eng, 1991
Geotechnical / Geological Engineering

MEMBERSHIPS

Ottawa Geotechnical Group
Professional Engineers of Ontario

EXPERIENCE

1991 to Present

Paterson Group Inc.

Associate and Senior Environmental/Geotechnical Engineer
Environmental and Geotechnical Division
Supervisor of the Environmental Division

SELECT LIST OF PROJECTS

Mary River Exploration Mine Site - Northern Baffin Island
Agricultural Supply Facilities - Eastern Ontario
Laboratory Facility – Edmonton (Alberta)
Ottawa International Airport - Contaminant Migration Study - Ottawa
Richmond Road Reconstruction - Ottawa
Billings Hurdman Interconnect - Ottawa
Bank Street Reconstruction - Ottawa
Environmental Review – Various Laboratories across Canada - CFIA
Dwyer Hill Training Centre – Ottawa
Nortel Networks Environmental Monitoring - Carling Campus – Ottawa
Remediation Program - Block D Lands – Kingston
Investigation of former landfill sites – City of Ottawa
Record of Site Condition for Railway Lands – North Bay
Commercial Properties – Guelph and Brampton
Brownfields Remediation – Alcan Site - Kingston
Montreal Road Reconstruction - Ottawa
Appleford Street Residential Development - Ottawa
Remediation Program - Ottawa Train Yards
Remediation Program - Bayshore and Heron Gate
Gladstone Avenue Reconstruction – Ottawa
Somerset Avenue West Reconstruction - Ottawa