Appendix C. Environmental Inventory

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Appendix C.1. Stage 1 Archaeological Assessment and Cultural Heritage Existing Conditions Report

Stage 1 Archaeological Assessment
Class EA for Minor Transmission Facilities
Hydro One Networks Inc.
St. Thomas Line Project
Various Lots and Concessions
Geographic Townships of Westminster, Middlesex County,
Various Lots and Concessions
Geographic Townships of Yarmouth, Elgin County

Original Report

Submitted to:
Ministry of Citizenship and Multiculturalism

Prepared for:
Hydro One Networks Inc.
Environmental Services
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PIF No:	P324-0921-2024
Project No:	2024-090
Dated:	November 4, 2024

EXECUTIVE SUMMARY

In 2024, TMHC Inc. (TMHC) was contracted by Hydro One Networks Inc. (Hydro One) to conduct a Stage 1 archaeological assessment for the proposed St. Thomas Line project. The St. Thomas Line is an approximate 20 km, 230-kilovolt double circuit transmission line that will run between an existing hydro corridor north of Highway 401 in the City of London to the Centennial Transformer Station (TS) in the City of St. Thomas. Three major route alternatives have been proposed for evaluation within a Class Environmental Assessment (EA) process (Map 1). All three of the routes overlap north of Ron McNeil Line at the southern end of the line where it runs to the Centennial TS. Collectively, lands within 100 m of the centre line of each route alternative comprise the Project Area. The need for archaeological assessment work was determined through Hydro One's internal environmental review of the project lands, as per the Class EA for Minor Transmission Facilities.

The Stage 1 background study included a review of current land use, historic and modern maps, past settlement history for the area and a consideration of topographic and physiographic features, soils, and drainage. It also involved a review of previously registered archaeological resources within 1 km of the project area and previous archaeological assessments within 50 m. According to the map-based review and background research, the majority of the Project Area exhibits potential for the discovery of archaeological sites due to proximity (within 300 m) to:

- registered archaeological sites;
- watercourses and wetlands (including Dingman Creek, Kettle Creek, Nineteen Creek);
- mapped 19th-century structures in Westminster and Yarmouth Townships;
- known cemeteries (McColl Cemetery and Kilmartin Cemetery); and,
- historic 19th-century transportation routes (including the early settlement roads of Wilton Grove Road, Dingman Drive, Westminster Drive, Scotland Drive, Manning Drive, Glanworth Drive, Thomson Line, Truman Line, Ferguson Line, Mapleton Line, Ron McNeil Line, Edgeware Line, Highbury Avenue, Yarmouth Centre Road and Old Victoria Road).

A map-based review of the proposed route alternatives for the new Hydro One St. Thomas Line 230kV TL Project was undertaken and the archaeological potential evaluated based on proximity of features signaling the likelihood for archaeological resources to exist. This established that the majority of lands within the Project Area and proposed route alternatives had potential for the discovery of archaeological resources, noting that a detailed field review should be conducted as part of the Stage 2 assessment once the preferred alternative is chosen. Based on this investigation the following recommendations are made:

- Previously Assessed Areas:
  - For the lands within the Project Area and route alternatives that were previously subject to Stage 2 assessment using methodologies in keeping with the 2011 Standards and Guidelines for Consultant Archaeologists and for which there are no outstanding archaeological concerns, no further assessment is required.
- Areas of Low Archaeological Potential:
  - Areas of previous disturbance (e.g., building footprints and existing roads or laneways), as well as low-lying and wet areas are considered to have low archaeological potential.

  - As a field inspection was not conducted as part of this study, areas of low archaeological potential within the preferred route alternative will need to be confirmed and photo-documented at the time of Stage 2 survey (MTC 2011:28; Section 2.1.2).
- Stage 2 Methodologies:
  - Once the preferred route alternative is determined, a more detailed review of existing conditions should be undertaken, alongside a comparison to archaeological potential mapping provided in this report (Maps 19 to 30; SD Maps 14 to 24).
  - In keeping with provincial standards, the agricultural fields should be ploughed for pedestrian survey; however, for any impact areas that are linear corridors less than 10 m wide, test pit survey can be undertaken (as per Section 2.1.2 Standard 1.f.).
  - In keeping with the provincial standards, the non-ploughable areas must be subject to test pit assessment. In both cases, a 5 m transect interval is recommended to achieve the provincial standard.
- A portion of the Project Area that runs within close proximity to a known cemetery is an area of continued archaeological concern. If possible, the selected hydro corridor route will be located at least 20 m away from the cemeteries. If this cannot occur and impacts are planned within 20 m of a cemetery, a cemetery investigation may be required, as determined through consultation with the MCM and the BAO. This will minimally involve a Stage 1 archaeological assessment to collect information about the history of the cemetery and location of burials in proximity to the ROW, potentially followed by Stage 2 test pitting and mechanical topsoil removal to actively search for burials.
- There are two previously registered archaeological sites located within or adjacent to the Project Area that have further CHVI. It is recommended that these areas be avoided, if possible, by selecting an alternate proposed route. If this is not possible, further archaeological assessment is required. Should impacts be proposed at the location of these sites, the following site-specific recommendations apply:
  - AfHg-168 (SD Map 1) is a multi-component Indigenous site previously subject to Stage 1, 2 and 3 assessment (Archaeologix 2008a, 2008b) with further CHVI. If further investigation is planned for the future, the methodology for Stage 4 assessment should follow Section 4.2.2 of the *Standards and Guidelines*. Any work for Stage 4 investigations should be prepared in consultation with Indigenous communities with an interest in this area.
  - AfHg-80 (SD Map 3) is an Early Archaic period site previously subject to Stage 2 assessment (Arnold 1990). The site retains further CHVI and further assessment is required. If further investigation is planned for the future, the methodology for Stage 3 assessment should follow Section 3.2.2 of the 2011 *Standards and Guidelines*. Any work for Stage 3 investigations should be prepared in consultation with Indigenous communities with an interest in this area.
- Previously registered archaeological sites located within the Project Area, but for which there is no determination of CHVI include the Francis Nichol Site (Keron 1981). Standard Stage 2 survey is recommended within 50 m of this reported site. If additional archaeological materials are identified in the vicinity of the site, they would need to be evaluated against current MCM standards and additional work may be required.
- Previously registered archaeological sites located within the Project Area, but for which there is no further CHVI include AfHh-319, AfHg-59, AfHg-60, AfHg-61, AfHg-70, AfHg-77, AfHg-78 and AfHg-79. No further assessment is recommended for these areas.

- Changes to Extent of Project Area:
    - If the extent of the Project Area or route alternatives change to incorporate lands not addressed in this study, further assessment will be required.

Our recommendations are subject to the conditions laid out in Section 6.0 of this report and to the MCM's review and acceptance of this report into the provincial registry.

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LIST OF SUPPLEMENTARY MAPS

PROJECT PERSONNEL

Project Managers	Matthew Beaudoin, PhD (P324)
	Kelly Gostick, MA (P1189)
Project Administrators	Victoria Scott, MA, MLis
	Kellie Theaker, CHRP
	Sara Harvey
GIS Technicians	John Moody, PhD
	David Gostick, BA
Report Writer	Kelly Gostick, MA (P1189)
Researcher	Kelly Gostick, MA (P1189)
Senior Reviewer	Matthew Beaudoin, PhD (P324)

ACKNOWLEDGEMENTS

Katrina Wynne	Environmental Planner, Hydro One
Jennifer Trotman	Environmental Planner, Hydro One
Robert von Bitter	Archaeological Data Coordinator, MCM
Jim Keron	

TERRITORIAL ACKNOWLEDGEMENT

The Project Area is located on the traditional lands of the Anishinaabek (Ah-nish-in-a-bek), Haudenosaunee (Ho-den-no-show-nee), Lūnaapéewak (Len-ahpay- wuk), and Attawandaron (Add-a-won-da-run) peoples, on lands connected with the McKee Purchase (Treaty No. 2) of 1790 and the Dish with One Spoon Covenant Wampum. This land continues to be home to diverse Indigenous peoples (e.g., First Nations, Métis and Inuit) whom we recognize as contemporary stewards of the land and vital contributors of our society.

ABOUT TMHC

Established in 2003, with a head office in London, Ontario, TMHC provides a broad range of archaeological assessment heritage planning and consultation services throughout the Province of Ontario, founded on over forty years of progressive and responsible experience. We provide consulting services for Indigenous communities, municipal heritage planning and training, public outreach, and educational programs, and have established specialties in community engagement, cemetery investigations, faunal analysis, and ground penetrating radar surveys. Since TMHC's inception, we have evolved with the needs of our clients, the demands of the regulatory environment, and the growth in the industry.

Since 2004, TMHC has held retainers with Infrastructure Ontario (formerly the Ontario Realty Corporation), Hydro One, the Ministry of Transportation and the City of Hamilton. Presently, TMHC was successfully added to the Infrastructure Ontario, Ministry of Transportation, Hydro One, Metrolinx, and Niagara Parks retainers. In addition, TMHC has successfully managed a wider variety of highly sensitive, large, and complicated projects and have a proven track record in successfully managing and navigating them to completion. In 2013, TMHC earned the Ontario Archaeological Society's award for Excellence in Cultural Resource Management.

KEY STAFF BIOS

Matthew Beaudoin, PhD, Principal, Manager – Archaeological Assessments

Matthew Beaudoin received a PhD in Anthropology from Western University in 2013 and became a Principal at TMHC in 2019. During his archaeological career, Matthew has conducted extensive field research and artifact analysis on Indigenous and Settler sites from Labrador and Ontario. In addition, Matthew has also conducted ethnographic projects in Labrador. Since joining TMHC in 2008, Matthew has been involved with several notable projects, such as the Imperial Oil's Waterdown to Finch Project, the Camp Ipperwash Project, and the Scugog Island Natural Gas Pipeline Project.

Matthew is an active member of the Canadian Archaeological Association, the Ontario Archaeological Association, the Ontario Historical Society, the World Archaeology Congress, the Council for Northeastern Historical Archaeology, the Society for American Archaeology, and the Society for Historical Archaeology.

Kelly Gostick, MA, Municipal Class EA Unit Manager

Kelly received her Master's Degree in Archaeology from the University of Western Ontario in 2017, studying Late Woodland period settlement patterns. With ten years' experience in consulting archaeology, Kelly has performed numerous roles including field director, report writer, artifact analysis and lab manager. Since joining TMHC in 2016 Kelly has performed all aspects of archaeological work including lab work, archaeological field work and report writing. Kelly is a member of the Ontario Archaeological Society and the Canadian Archaeological Association.

STATEMENT OF QUALIFICATIONS AND LIMITATIONS

The attached Report (the "Report") has been prepared by TMHC Inc. (TMHC) for the benefit of the Client (the "Client") in accordance with the agreement between TMHC and the Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations, and conclusions contained in the Report (collectively, the "Information"):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations");
- represents TMHC's professional judgment in light of the Limitation and industry standards for the preparation of similar reports;
- may be based on information provided to TMHC which has not been independently verified;
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made, or issued;
- must be read as a whole and sections thereof should not be read out of such context; and
- was prepared for the specific purposes described in the Report and the Agreement.

TMHC shall be entitled to rely upon the accuracy and completeness of information that was provided to it and has no obligation to update such information. TMHC accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental, or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

TMHC agrees that the Report represents its professional judgement as described above and that the Information has been prepared for the specific purpose and use described in the Report and the Agreement, but TMHC makes no other representations, or any guarantees or warranties whatsoever, whether express or implied, with respect to the Report, the Information, or any part thereof.

Except (1) as agreed to in writing by TMHC and Client; (2) as required by-law; or (3) to the extent used by governmental reviewing agencies for the purpose of obtaining permits or approvals, the Report and the Information may be used and relied upon only by Client.

TMHC accepts no responsibility, and denies any liability whatsoever, to parties other than Client who may obtain access to the Report or the Information for any injury, loss or damage suffered by such parties arising from their use of, reliance upon, or decisions or actions based on the Report or any of the Information ("improper use of the Report"), except to the extent those parties have obtained the prior written consent of TMHC to use and rely upon the Report and the Information. Any injury, loss or damages arising from improper use of the Report shall be borne by the party making such use.

This Statement of Qualifications and Limitations is attached to, and forms part of the Report and any use of the Report is subject to the terms hereof.

QUALITY INFORMATION

Report prepared by: Kelly Gostick

Kelly Gostick, MA (P1189)

Municipal Class EA Unit Manager

Report reviewed by:

Matthew Beaudoin, PhD (P324)

Principal/Manager of Archaeological Assessment

1 PROJECT CONTEXT

1.1 Development Context

1.1.1 Introduction

In 2024, TMHC Inc. (TMHC) was contracted by Hydro One Networks Inc. (Hydro One) to conduct a Stage 1 archaeological assessment for the proposed St. Thomas Line project. The St. Thomas Line is an approximate 20 km, 230-kilovolt double circuit transmission line that will run between an existing hydro corridor north of Highway 401 in the City of London to the Centennial Transformer Station (TS) in the City of St. Thomas. Three major route alternatives have been proposed for evaluation within a Class Environmental Assessment (EA) process (Map 1). All three of the routes overlap north of Ron McNeil Line at the southern end of the line where it runs to the Centennial TS. Collectively, lands within 100 m of the centre line of each route alternative comprise the Project Area. The need for archaeological assessment work was determined through Hydro One's internal environmental review of the project lands, as per the Class EA for Minor Transmission Facilities (Hydro One 2022). The work was also in keeping with the City of London's *Archaeological Management Plan* (ASI et al. 2017), a guide for assessing potential archaeological impacts in land use planning in the City of London.

All archaeological consulting activities were performed under the Professional Archaeological License of Matthew Beaudoin, PhD (P324) and in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011). Permission to commence the study was given by Katrina Wynne of Hydro One.

1.1.2 Purpose and Legislative Context

The *Ontario Heritage Act* (R.S.O. 1990) makes provisions for the protection and conservation of heritage resources in the Province of Ontario. Heritage concerns are recognized as a matter of provincial interest in Section 2.6.2 of the *Provincial Policy Statement* (PPS 2020) which states:

> *development* and *site alteration* shall not be permitted on lands containing *archaeological resources* or *areas of archaeological potential* unless *significant archaeological resources* have been *conserved*.

In the PPS, the term conserved means:

> the identification, protection, management and use of *built heritage resources, cultural heritage landscapes* and *archaeological resources* in a manner that ensures their cultural heritage value or interest is retained. This may be achieved by the implementation of recommendations set out in a conservation plan, archaeological assessment and/or heritage impact assessment that has been approved, accepted, or adopted by the relevant planning authority and/or decision-maker. Mitigative measures and/or alternative development approaches can be included in these plans and assessments.

The EA Act provides for the protection and conservation of the environment. In this case, the environment is widely defined to cover "cultural heritage" resources. Section 5(3)(c) of the Act stipulates that heritage resources to be affected by a proposed undertaking be identified during the environmental screening process. Within the EA process, the purpose of a Stage 1 background study is to determine if there are known cultural resources within the proposed study area, or potential for such resources to exist. Subsequently, it can act as a planning tool by identifying areas of concern that, where possible, could be avoided to minimize environmental impact. It is also used to determine the need for a Stage 2 field assessment involving the search for archaeological sites.

The Class EA for Minor Transmission Facilities document was developed as a streamlined process to ensure minor transmission projects that have a predictable range of effects are carried out in an environmentally acceptable manner (Hydro One 2024). The Class EA Process is required to meet the terms of Section 3.0 of the Class EA for Minor Transmission Facilities. The project is also subject to Section 92 of the Ontario Energy Board Act, 1998 which requires transmitters and distributors to obtain approval from the Ontario Energy Board for the construction, expansion, or reinforcement of electricity transmission and distribution lines or interconnections. Hydro One contracted TMHC to carry out a Stage 1 archaeological assessment and develop plans for Stage 2 assessment once the Class EA is complete.

2 BACKGROUND REVIEW

2.1 Research Methods and Sources

A Stage 1 overview and background study was conducted to gather information about known and potential cultural heritage resources within the Project Area. According to the *Standards and Guidelines*, a Stage 1 background study must include a review of:

- an up-to-date listing of sites from the Ministry of Citizenship and Multiculturalism's (MCM) PastPortal for 1 km around the Project Area;
- reports of previous archaeological fieldwork within a radius of 50 m around the Project Area;
- topographic maps at 1:10,000 (recent and historical) or the most detailed scale available;
- historical settlement maps (e.g., historical atlas, survey);
- archaeological management plans or other archaeological potential mapping when available; and,
- commemorative plaques or monuments on or near the Project Area.

For this project, the following activities were carried out to satisfy or exceed the above requirements:

- a database search was completed through MCM's PastPortal system that compiled a list of registered archaeological sites within 1 km of each route alternatives (completed April 8, 2024);
- a review of known prior archaeological reports for the Project Area, adjacent lands, or areas of interest related to the route alternatives;
- Ontario Base Mapping (1:10,000) was reviewed through ArcGIS and mapping layers provided by geographynetwork.ca;
- detailed mapping provided by the client was also reviewed; and,
- a series of historic maps and photographs was reviewed related to the post-1800 land settlement.

Additional sources of information were also consulted, including modern aerial photographs, local history accounts, cemetery and burial databases, soils and physiographic data provided by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), and both 1:50,000 (Natural Resources Canada) and finer scale topographic mapping.

When compiled, background information was used to create a summary of the characteristics of the Project Area, in an effort to evaluate its archaeological potential. The Province of Ontario (MTC 2011; Section 1.3.1) has defined the criteria that identify archaeological potential as:

- previously identified archaeological sites;
- water sources;
    - primary water sources (e.g., lakes, rivers, streams, creeks);
    - secondary water sources (e.g., intermittent streams and creeks, springs, marshes, swamps);
    - features indicating past water sources (e.g., glacial lake shorelines, relic river or stream channels, shorelines of drained lakes or marshes, cobble beaches);
    - accessible or inaccessible shorelines (e.g., high bluffs, sandbars stretching into a marsh);
- elevated topography (e.g., eskers, drumlins, large knolls, plateau);
- pockets of well-drained sandy soils;

- distinctive land formations that might have been special or spiritual places (e.g., waterfalls, rock outcrops, caverns, mounds, promontories, and their bases);
- resource areas, including:
    - food or medicinal plants (e.g., migratory routes, spawning areas, prairies);
    - scarce raw materials (e.g., quartz, copper, ochre, or chert outcrops);
    - early Settler industry (e.g., fur trade, logging, prospecting, mining);
- areas of early 19th-century settlement, including:
    - early military locations;
    - pioneer settlement (e.g., homesteads, isolated cabins, farmstead complexes);
    - wharf or dock complexes;
    - pioneer churches;
    - early cemeteries;
- early transportation routes (e.g., trails, passes, roads, railways, portage routes);
- a property listed on a municipal register, designated under the *Ontario Heritage Act*, or that is a federal, provincial, or municipal historic landmark or site; and,
- a property that local histories or informants have identified with possible archaeological sites, historical event, activities, or occupations.

In Southern Ontario (south of the Canadian Shield), any lands within 300 m of any of the features listed above are considered to have potential for the discovery of archaeological resources.

Typically, a Stage 1 assessment will determine potential for Indigenous and 19th-century period sites independently. This is due to the fact that lifeways varied considerably during these eras, so the criteria used to evaluate potential for each type of site also varies.

It should be noted that some factors can also negate the potential for discovery of intact archaeological deposits. The *Standards and Guidelines* (MTC 2011; Section 1.3.2) indicates that archaeological potential can be removed in instances where land has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources. Major disturbances indicating removal of archaeological potential include, but are not limited to:

- quarrying;
- major landscaping involving grading below topsoil;
- building footprints; and,
- sewage and infrastructure development.

Some activities (agricultural cultivation, surface landscaping, installation of gravel trails, etc.) may result in minor alterations to the surface topsoil but do not necessarily affect or remove archaeological potential. It is not uncommon for archaeological sites, including structural foundations, subsurface features, and burials, to be found intact beneath major surface features like roadways and parking lots. Archaeological potential is, therefore, not removed in cases where there is a chance of deeply buried deposits, as in a developed or urban context or floodplain where modern features or alluvial soils can effectively cap and preserve archaeological resources.

2.2 Project Context: Archaeological Context

2.2.1 Project Area: Overview and Physical Setting

Hydro One is planning for the construction of a new 230 kV TL between an existing transmission line in the City of London to the planned Centennial Transformer Station (TS) in the City of St. Thomas (Maps 1 to 5). The Project Area extends from the City of London in the north, through the Municipality of Central Elgin and the City of St. Thomas in the south. Three route alternatives have been proposed for consideration during the Class EA process: 1) Alternative 1A – a western route alternative; 2) Alternative 2A – a central route alternative; and 3) Alternative 3 – a eastern route alternative. Two variations at the southern end including Alternative 1B and 2B. Collectively, lands within 100 m of the centre line of each route alternative comprise the Project Area to allow for route planning and deviation of the proposed routes. The Stage 1 archaeological assessment evaluated data collected from 1 km outside of the Project Area. The Project Area falls primarily in rural agricultural or wooded areas.

2.2.1.1 Alternative 1A and 1B

Alternative 1A, the western most route alternative, (shown in blue on Maps 1-5) measures 19.45 km in length. It starts at an existing transmission line north of Highway 401 and runs south to Dingman Drive, then veers west towards Highbury Avenue where it parallels an existing transmission line. It continues south along the existing transmission line until it turns east after it crosses Truman Line. North of Ferguson Line the line crosses Kettle Creek. South of Ferguson Line it veers slightly east then runs south to the planned Centennial TS.

One route variation encompassing additional land is also under consideration. Alternative 1B (shown as a blue dashed line) is a roughly 3.45 km segment that defers from Alternative 1A after it crosses Kettle Creek, where it travels east before veering south crossing Ferguson Line and Mapleton Line. South of Mapleton Line it veers east to cross an existing transmission line before moving west to rejoin Alternative 1A north of Ron McNeil Line.

2.2.1.2 Alternative 2A and 2B

Alternative 2A, the central route alternative, (shown in green on Maps 1-5) measures 17.96 km in length. It starts at an existing transmission line north of Highway 401 and runs south to Westminster Drive, then veers west towards Highbury Avenue. It continues straight south to Thomson Line where it travels slightly east to cross a tributary of Kettle Creek before travelling south past Truman Line. Here it crosses Kettle Creek before turning east to cross Kettle Creek then travels south to Mapleton Line. South of Mapleton Line it veers west then connects with Alternative 1A, 1B and 3 to travel south to the planned Centennial TS.

One route variation, Alternative 2B (shown as a green dashed line), encompassing additional land is also under consideration. Alternative 2B is a roughly 2.8 km segment that defers from Alternative 2A north of Ferguson Line. This alternative travels southeast to just south of Fergson Line. At this point, the alternative follows Alternative 1A to the Centennial TS.

2.2.1.3 Alternative 3

Route 5, the eastern most route alternative, (shown in purple on Maps 1-5) measures 18.2 km in length. It starts at an existing transmission line north of Highway 401 and runs parallel to Old Victoria Road, south to Thomson Line. South of Thomson Line it turns east to cross Kettle Creek, then veers south to Mapleton Line.

Here it turns west and crosses Yarmouth Centre Road then veers south and connects with Alternative 1A, 1B and 3 to travel south to the planned Centennial TS.

2.2.2 *Physiography*

The Project Area falls within the Mount Elgin Ridges physiographic region (Chapman and Putnam 1984; Map 6). The Mount Elgin Ridges are a series of ridges and vales that extend south from the Thames River valley in the north to the Norfolk Sand Plain to the south (Chapman and Putnam 1984:144). The Project Area sits on part of an extensive glacial spillway that separates till moraines to the south and till plains to the north.

From north to south the Project Area falls within till plains, a spillway, the Westminster Moraine and the St. Thomas Marine and a small portion of clay plain.

2.2.3 Soils

The soils within the Project Area are primarily imperfectly to moderately draining types that have developed on glacial or lacustrine deposits (Maps 7 and 8; Table 1). The northern portion of the Project Area is dominated by moderately draining clay loam soils while the southern portion is predominately imperfectly draining loam soils (Schut 1992; Hagerty and Kingston 1992).

Table 1: Soils within the Project Area

Soil	Parent Material	Drainage	Route
Maplewood Till	Glacial till	Poor	1A
Tavistock Silt Loam	Glacial till	Imperfect	1A
Caledon Sandy Loam	Fluvial deposits	Well	1A
Muriel Silty Clay Loam	Glacial till	Moderate	1A, 2A, 3
Gobles Clay Loam	Clayey textured glacial till	Imperfect	1A, 2A, 3
Tuscola Loam	Lacustrine silts	Imperfect	2A, 3
Wattford Sandy Loam	Lacustrine sands	Well	2A, 3
Eroded Channel		Rapid to poor	1A, 1B, 2A, 2B, 3
Gobbles Loam	Glacial till	Imperfect	1A, 1B, 2A, 2B, 3

2.2.4 Drainage

The Project Area is drained by watercourses, tributaries and subsidiary artificial drains within the Dingman Creek, Kettle Creek and Catfish Creek watersheds (Maps 2 and 3).

The northern portion of the Project Area is drained by Dingman Creek, which flows into the Thames River. Dingman Creek crosses all three Route Alternatives south of Highway 401. Other small unnamed tributaries of Dingman Creek cross all three routes in this area.

The central and southern portions of the Project Area is drained by Kettle Creek. All three routes cross Kettle Creek, with Route Alternative 1A and 2A cross Kettle Creek north of Ferguson Line and Route Alternative 3 crosses Kettle Creek north of Truman Line. Salt Creek, a tributary of Kettle Creek, is also crossed by Route Alternatives 1A, 1B, 2A and 2B south of Mapleton Line and Route Alternative 3 crosses south of Ferguson Line.

The area around the Centennial Line TS is drained by Nineteen Mile Creek, which flows into Catfish Creek. Numerous small tributaries of Nineteen Mile Creek, including the Robertson Drain, are present around the Centennial Line TS.

2.2.5 Natural Vegetation

Prior to land clearing, the natural vegetation in Middlesex and Elgin Counties included deciduous forests, with variation in species related to soil. In general, an association of broad-leaved trees consisting primarily of beech, sugar maple, together with basswood, red maple and (Northern) red, white and bur oak was common. In heavy soils, elm (American and Rock) intermixed with ash, oak, hickory, sycamore, and soft maple were present. Where sandy and lighter soils were present, maples, oak, cherry, and beech species were common. Due to a slightly warmer climate, several tree and plant species exist in southwestern Ontario that cannot thrive in the northern portions of the province, including chestnut, tulip tree, mockernut and pignut hickories, scarlet, black and pin oaks, black gum, blue ash, magnolia, pawpaw, Kentucky coffee tree, redbud, red mulberry, and sassafras. Black walnut, swamp white oak and shagbark history are also common (Schut 1992; Hagerty and Kingston 1992).

2.2.6 Summary of Registered or Known Archaeological Sites

According to PastPortal (accessed April 9, 2024), there are 97 registered archaeological sites and two unregistered sites within 1 km of the Project Area (Table 2). These are largely concentrated around Dingman Creek in the north, along Kettle Creek in the central portion of the Project Area and along the St. Thomas Moraine in the southern section of the Project Area.

2.2.6.1 Known Sites within 50 m of the Route Alternatives

There is at least one registered archaeological site and two unregistered archaeological site that are in close proximity to the Project Area that may pose a planning concern for this project:

- AfHg-168[1] – a multi-component Indigenous site (Archaeologix 2008a, 2008b; SD Map 1) with further CHVI. This area is within 50 m of Alternative 1A and may pose a planning risk;
- Francis Nichol Site – an unregistered site identified by Jim Keron in 1979 (Keron 1981; SD Map 2). It is a large lithic scatter adjacent to Dingman Creek; the CHVI of this site is unknown. This site is within 5 m of Alternative 1A and may pose a planning risk;
- AfHg-80 – an Early Archaic period site (Arnold 1990; SD Map 3) with further CHVI. The site consists of eight pieces of chipping detritus, two biface fragments, a bifurcate base projectile point and a spokeshave over a 10 m x 25 m area. It should be noted that the site might extend into the woodlot to the south. The site is within 49 m of Alternative 2A and may pose a planning risk.
- AfHg-70 – a surface scatter of six Indigenous artifacts over a 5 m x 5 m area that cannot be attributed to a temporal affiliation at this time; this site has no further CHVI (Arnold 1992; SD Map 3). This site is within 65 m of Alternative 2A and does not pose a planning concern;
- AfHg-77 – a surface scatter of nine Indigenous artifacts over a 10 m x 10 m area that cannot be attributed to a temporal affiliation at this time; this site has no further CHVI (Arnold 1992; SD Map 3). This site is within 52 m of Alternative 2A and does not pose a planning concern;
- AfHg-79 – a surface scatter of four Indigenous artifacts over a 20 m x 10 m area that cannot be attributed to a temporal affiliation at this time; this site has no further CHVI (Arnold 1992; SD Map 3). This site is within 93 m of Alternative 2A and does not pose a planning concern.

2.2.6.2 Known Sites within 100 m of the Route Alternatives

There are also five sites of note found within 100 m of the centre line of the route alternatives that may pose a planning concern for this project:

- AfHh-319 – a large multi-component lithic sites dating from the Early Archaic to Woodland period. This site has been extensively assessed (SD Map 4) and has no further CHVI. This site is within 100 m of Alternative 1A and no longer poses a planning concern;
- AfHg-3 (Baker) – a Late Paleo to Late Woodland period site first identified by Jim Keron in 1975 and subject to Stage 3 assessment by Golder in 2016 (SD Map 5). The site has further CHVI and is within 108 m of Alternative 1A and may pose a planning risk;
- AfHg-59 – a surface scatter of 25 Indigenous artifacts over a 10 m x 20 m area that cannot be attributed to a temporal affiliation at this time; this site has unknown CHVI (Arnold 1992; SD Map 3). This site is within 75 m of Alternative 2A and may pose a planning concern;

[1] It should be noted that no site record form was completed for AfHg-168, thus does not appear in the site data search

- AfHg-61 – a surface scatter of three Indigenous artifacts over a 5 m x 5 m area that cannot be attributed to a temporal affiliation at this time; this site has no further CHVI (Arnold 1992; SD Map 3). This site is within 79 m of Alternative 2A and does not pose a planning concern; and,
- AfHg-78 – a surface scatter of four Indigenous artifacts over a 5 m x 5 m area that cannot be attributed to a temporal affiliation at this time; this site has no further CHVI (Arnold 1992; SD Map 3). This site is within 53 m of Alternative 2A and does not pose a planning concern.

Table 2: Registered Archaeological Sites within 1 km of the Project Area

Borden Number	Site Name	Time Period	Affinity	Site Type	Status	Reported By	Route
AfHg-3	Baker	Archaic, Early; Archaic, Late; Paleo-Indian; Woodland, Late	Crawford Knoll, Gainey, Unknown, Unknown	camp / campsite	Further CHVI	Golder Associates Ltd.; Jim Keron	1A
AfHg-4	Keron					Jim Keron	1A
AfHg-5	Wodrich					Dana Poulton	1A
AfHg-6	Ferguson					Jim Keron	2A, 3
AfHg-7	Gartley					Jim Keron	1A
AfHg-8	Grieve 1	Archaic, Late; Paleo-Indian, Early; Pre-Contact; Woodland, Late	Crowfield, Glen Meyer	Other: camp/campsite		Jim Keron	1A
AfHg-9	Grieve 2					Jim Keron	1A
AfHg-10	Grieve 3					Jim Keron	1A
AfHg-11	Grieve 4					Jim Keron	1A
AfHg-12	Skinner 1					Jim Keron	1A
AfHg-13	Skinner 2					Jim Keron	1A
AfHg-33	David Grieve	Archaic; Woodland, Middle		Other: camp/campsite		Peter Timmins	1A
AfHg-34	Robbie	Archaic, Late		Other: camp/campsite		Jim Keron	1A
AfHg-35	Catherine	Archaic, Late; Archaic, Middle; Woodland, Late		Other: camp/campsite		Jim Keron	1A
AfHg-56	William Bradish					Mayer, Poulton & Associates	1A
AfHg-59	Camp Orenda 1	Pre-Contact		scatter	No Further CHVI	Tom Arnold	2B
AfHg-60	Camp Orenda #2	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-61	Camp Orenda #3	Pre-Contact		findspot	No Further CHVI	Tom Arnold	2B
AfHg-62	Camp Orenda #4	Pre-Contact		Other: camp/campsite	No Further CHVI	Tom Arnold	2B
AfHg-63	Camp Orenda #5	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-64	Camp Orenda #6	Woodland, Late		findspot	No Further CHVI	Tom Arnold	2B
AfHg-65	Camp Orenda #7	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-66	Camp Orenda #8	Pre-Contact		Other: camp/campsite		Tom Arnold	2B
AfHg-67	Camp Orenda #9	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-68	Camp Orenda #10	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-69	Camp Orenda #11	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-70	Camp Orenda #12	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-71	John Thompson	Post-Contact		homestead	Further CHVI	Tom Arnold	2B
AfHg-72	Camp Orenda #13	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-73	Camp Orenda #14	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-74	Camp Orenda #15	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-75	Camp Orenda #16	Pre-Contact		Unknown	Further CHVI	Tom Arnold	2B
AfHg-76	Camp Orenda #17	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-77	Camp Orenda #18	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-78	Camp Orenda #19	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-79	Camp Orenda #20	Pre-Contact		Unknown	No Further CHVI	Tom Arnold	2B
AfHg-80	Camp Orenda #21	Archaic, Early		Other: camp/campsite	Further CHVI	Tom Arnold	2B
AfHg-100		Pre-Contact		findspot	No Further CHVI	Archaeologix Inc.	3
AfHg-101		Pre-Contact		Other: camp/campsite	No Further CHVI	Archaeologix Inc.	3

Borden Number	Site Name	Time Period	Affinity	Site Type	Status	Reported By	Route
AfHg-102		Pre-Contact		findspot	No Further CHVI	Robert Pearce & Archaeologix Inc.	3
AfHg-103		Archaic, Early		findspot	No Further CHVI	Archaeologix Inc.	3
AfHg-104		Woodland, Late		Other: camp/campsite	No Further CHVI	Archaeologix Inc.	3
AfHg-105		Archaic, Late	Small Point	Other: camp/campsite	No Further CHVI	Archaeologix Inc.	3
AfHg-108		Archaic, Late	Broad Point	Other: camp/campsite	No Further CHVI	Archaeologix Inc.	3
AfHg-109		Archaic, Late	Broad Point	findspot	No Further CHVI	Archaeologix Inc.	3
AfHg-119		Post-Contact; Pre-Contact		Other: camp/campsite	No Further CHVI	Archaeologix Inc.	3
AfHg-188	Belmont Solar Property 1, Location 1	Post-Contact	Other	house	No Further CHVI	TMHC Inc.	3
AfHg-189	Belmont Solar Property 1 Locations 2 & 3	Archaic	Brewerton	Other: Gorget indicates a possible nearby burial	Further CHVI	TMHC Inc.	3
AfHg-190	Belmont Solar Property 1 Location 4	Archaic	Corner-Notched	scatter	Further CHVI	TMHC Inc.	3
AfHg-191	Belmont Solar Property 1, Location 5	Archaic, Late	Broad Point	findspot	No Further CHVI	TMHC Inc.	3
AfHg-204	Belmont Solar Property 1, Location 6	Archaic, Late	Genessee	findspot	No Further CHVI	TMHC Inc.	3
AfHg-361		Archaic, Late	Unknown	findspot		Golder Associates Ltd.	1A
AfHg-380		Archaic, Middle	Other	findspot	No Further CHVI	TMHC Inc.	1A
AfHg-382	Location 1	Pre-Contact	Unknown	Unknown	Further CHVI	Lincoln Environmental Consulting Corp	1A
AfHg-383	Location 2	Pre-Contact	Unknown	Unknown	Further CHVI	Lincoln Environmental Consulting Corp	1A
AfHh-1	Laidlaw	Woodland		village		W.W. Jury & Jim Keron	1A
AfHh-64	Laidlaw North	Archaic, Late		Other: camp/campsite	No Further CHVI	Jim Keron	1A
AfHh-76	Back 40	Woodland	Saugeen	Other: camp/campsite		Jim Keron	1A
AfHh-77	Barelya					Jim Keron	1A
AfHh-81	Wilton Grove					Jim Keron	1A
AfHh-157	Jock McCallum	Post-Contact		Other: black smith shop	Further CHVI	Mayer, Pihl, Poulton & Associates	1A
AfHh-158	John Cochrane Homestead and Tavern	Post-Contact		Other: tavern/restaurant; homestead		Mayer, Pihl, Poulton & Associates	1A
AfHh-316		Post-Contact	Other	cabin	No Further CHVI	Archaeologix Inc.	1A
AfHh-317		Archaic, Middle	Brewerton	findspot	No Further CHVI	Golder Associates Ltd.	1A
AfHh-318		Woodland, Middle	Unknown	findspot	No Further CHVI	Golder Associates Ltd.	1A
AfHh-319		Archaic, Early; Archaic, Late; Archaic, Middle; Woodland	Brewerton, Crawford Knoll, Kirk-Nettling, Unknown	camp / campsite	No Further CHVI	Golder Associates Ltd.	1A
AeHg-60		Archaic, Early		findspot		ASI Archaeological and Cultural Heritage Services	1A, 1B, 2A, 2B, 3
AeHg-114	Location 10	Archaic, Middle	Unknown	Unknown	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-115	Location 24	Archaic, Late	Lamoka	Unknown	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-116	Location 27	Woodland, Late	Early	Unknown	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-117	Location 36	Woodland, Late	Unknown	Unknown	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-119	Location 58	Archaic, Early	Kirk-Nettling	Unknown	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3

Borden Number	Site Name	Time Period	Affinity	Site Type	Status	Reported By	Route
AeHg-120	Location 68	Post-Contact; Woodland, Late	Other, Unknown	Other: 19th century domestic refuse; Unknown	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-121	Location 70	Pre-Contact	Unknown	Unknown	Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-122	Location 72	Post-Contact; Pre-Contact	Other, Unknown	Unknown; farmstead	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-123	Location 86	Woodland, Middle	Unknown	findspot	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-125	Location 103	Post-Contact	Other	farmstead	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-126	Location 104	Woodland	Unknown	camp / campsite	Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-127	Location 105	Woodland, Late	Other	findspot	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-128	Location 111	Woodland, Middle	TBD	findspot	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-129	Location 116	Archaic, Late	Lamoka	findspot	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-130	Location 117	Woodland, Late	TBD	findspot	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-131	Location 118	Post-Contact	Other	homestead	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-132	Location 122	Pre-Contact	Unknown	Other: chipping station	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-133	Location 126	Woodland, Middle	Saugeen	camp / campsite	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-134	Location 127	Archaic, Late	Lamoka	findspot; hunting loss	No Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3
AeHg-135	Location 131	Archaic, Late	Adder Orchard	camp / campsite	Further CHVI	TMHC Inc.	1A, 1B, 2A, 2B, 3

2.2.7 Summary of Past Archaeological Investigations within 50 m

During the course of this study, it was established that at least 19 previous archaeological assessments have occurred within 50 m of the Project area (Maps 9 to 14, SD Maps 1 to 13). These were identified through a review of TMHC corporate records, industry knowledge, and MCM records. However, it should be noted that the MCM currently does not provide an inventory of archaeological assessments to assist in this determination. A summary of these studies and their recommendations are provided below in Table 3.

It should be noted that upon further review many of the sites from the Camp Orenda archaeological survey appear to be in the wrong location based on SD Map 3, but the maps could not be georeferenced based to correctly identify the site locations.

Table 3: Previous Assessments in the Vicinity of the Project Area

PIF #	Report Title	Relevant Site(s) Identified	Field Methods Meet Current Standards?	Status	Reference	Project Overlap (Y/N)	Map Reference	Alternative
P001-002-047	*Archaeological Assessment (Stages 1 & 2), City of London Industrial Subdivision (OZ-6078), Part of Lots 13, 14 & 15, Concession 2, Geographic Township of Westminster, City of London, Middlesex County, Ontario*	AfHh-317; AfHh-318; AfHh-319	Yes – pedestrian survey and test pit survey at 5 m intervals	Stage 3 recommended for AfHh-319	Archaeologix 2001a	Y	SD Map 4	1A
P001-002-067	*Archaeological Assessment (Stage 3), AfHh-316 & AfHh-319, City of London Industrial Subdivision (OZ-6078), Part of Lot 13, Concession 2, Geographic Township of Westminster, City of London, Middlesex County, Ontario*	AfHh-319	Yes – unit excavation	Stage 4 recommended	Archaeologix 2001b	Y	Map 9	1A
P001-002-125	*Archaeological Assessment (Stage 4), AfHh-316 & AfHh-319, City of London Industrial Subdivision (OZ-6078), Part of Lot 13, Concession 2, Geographic Township of Westminster, City of London, Middlesex County, Ontario*	AfHh-319	Yes – block excavation	No further CHVI	Archaeologix 2001c	Y	Map 10	1A
P001-431-2008	*Archaeological Assessment Stage 1 & 2, Sun Life Assurance Property, 1577 Wilton Grove Road, Part of Lots 8 and 9, Concession 3, Geographic Township of Westminster, now City of London, Middlesex County, Ontario*	14 sites including AfHg-168	Yes – pedestrian survey and test pit survey at 5 m intervals	Stage 3 recommended for AfHg-168	Archaeologix 2008a	Y	SD Map 1	1A
P001-473-2008	*Archaeological Assessment (Stage 3), Sun Life Assurance Property (AfHg-167 to -169), 1577 Wilton Grove Road, Part of Lots 8 and 9, Concession 3, Geographic Township of Westminster, now City of London, Middlesex County, Ontario*	AfHg-168	Yes – unit excavation	AfHg-168 – further CHVI; site has currently been avoided & protected	Archaeologix 2008b	Y	Map 11	1A
P457-0024-2016	*Stage 3 Site Specific Assessment, 1687 Wilton Grove Road, The Barker Site (AfHg-3), Part of Lot 8, Concession 3, Former Geographic Township of Westminster, Now City of London, Middlesex County, Ontario*	AfHg-3	Yes – unit excavation	AfHg-3 – further CHVI; site has currently been avoided & protected	Golder 2017a	N	SD Map 5	1A
P457-0061-2017	*Stage 1-2 Archaeological Assessment, East-West Access, 1577-1687 Wilton Grove Road, Part of Lots 8 and 9, Concession 3, Designated as Parts 1-6, 33R-15630 and Parts 2-4, 33R-15000, Former Geographic Township of Westminster, Now City of London, Middlesex County, Ontario*	None	Yes –test pit survey at 5 m intervals	No further assessment required	Golder 2017b	Y	Map 12	1A
P364-0123-2017	*Stage 1 Archaeological Assessment, Wilton Grove Road Improvements, From Commerce Road to City Limits, London, Ontario*	n/a	Yes	Stage 2 recommended	Golder 2018a	Y	Map 13	1A, 2A, 3
P457-0065-2018	*Stage 2 Archaeological Assessment, Wilton Grove Road Improvements, City of London, Ontario*	None	Yes - pedestrian survey and test pit survey at 5 m intervals	No further assessment required	Golder 2018b	Y	Map 14	2A
P324-0674-2021 & P324-0721-2022	*Stage 1-2 Archaeological Assessment, 1710 Wilton Grove Road, City of London, Part of Lot 12, Concession 2, Geographic Township of Westminster, Middlesex County, Ontario*	None	Yes – pedestrian survey and test pit survey at 5 m intervals	No further assessment required	TMHC 2023a	Y	SD Map 6	1A
P064-218-2008	*Stage 1 Archaeological Assessment, Belmont Solar Farm, Geographic Township of Westminster, Village of Belmont, Middlesex County, Ontario*	n/a	Yes	Stage 2 recommended	TMHC 2008a	Y	n/a	3
P064-236-2008	*Stage 2 Archaeological Assessment, Belmont Solar Farm, Geographic Township of Westminster, Village of Belmont, Middlesex County, Ontario*	None	Yes - pedestrian survey and test pit survey at 5 m intervals	No further assessment required within current Project Area	TMHC 2008b	Y	SD Map 7	3
90-022	*The Camp Orenda Archaeological Survey*	AfHg-59 AfHg-61 AfHg-70 AfHg-77 AfHg-78 AfHg-79 AfHg-80	Yes - pedestrian survey at 5 m intervals	Stage 3 recommended for AfHg-59 and AfHg-80	Arnold 1990	Y	SD Map 3	2A

PIF #	Report Title	Relevant Site(s) Identified	Field Methods Meet Current Standards?	Status	Reference	Project Overlap (Y/N)	Map Reference	Alternative
P324-0479-2020	*Stage 1-2 Archaeological Assessment, Proposed MacPherson Aggregate Pit, 43371 Truman Line, Part of Lot 6, Concession 12, Geographic Township of Yarmouth, Now in the Municipality of Central Elgin, Elgin County, Ontario*	None	Yes - pedestrian survey and test pit survey at 5 m intervals	No further assessment required	TMHC 2021	Y	SD Map 8	1A
P324-0708-2021	*Stage 1 Archaeological Assessment, Proposed Development, Part of Lot 12, Range 1 South of Edgeware Road, Lots 9 and 10, Range 1 North of Edgeware Road and Lot 9, Range 2 North of Edgeware Road, City of St. Thomas, Lots 11 and 12, Range 1 South of Edgeware Road, Lots 11 and 12, Range 1 N of Edgeware Road and Lots 10, 11 and 12, Range 2 North of Edgeware Road, Municipality of Central Elgin, Geographic Township of Yarmouth, Elgin County*	n/a	Yes	Stage 2 recommended	TMHC 2022a	Y	SD Map 9	1A, 1B, 2A, 2B, 3
P324-0737-2022	*Stage 1-2 Archaeological Assessment, Proposed Development, Part of Lot 12, Range 1 South of Edgeware Road, Lots 9 and 10, Range 1 North of Edgeware Road and Lot 9, Range 2 North of Edgeware Road, City of St. Thomas, Lots 11 and 12, Range 1 South of Edgeware Road, Lots 11 and 12, Range 1 N of Edgeware Road and Lots 10, 11 and 12, Range 2 North of Edgeware Road, Municipality of Central Elgin, Geographic Township of Yarmouth, Elgin County*	None	Yes - pedestrian survey and test pit survey at 5 m intervals	No further assessment required	TMHC 2022b	Y	SD Map 10	1A, 1B, 2A, 2B, 3
P324-0761-2022	*Stage 2 Archaeological Assessment – July/August Fieldwork, Proposed Development, Part of Lots 9 and 10, Range 1 North of Edgeware Road and Part of Lots 9 and 10, Range 2 North of Edgeware Road, City of St. Thomas, Lot 11, Range 1 South of Edgeware Road, Municipality of Central Elgin, Geographic Township of Yarmouth, Elgin County*	None	Yes - pedestrian survey and test pit survey at 5 m intervals	No further assessment required	TMHC 2023b	Y	SD Map 11	1A, 1B, 2A, 2B, 3
P324-0818-2023	*Stage 1 Archaeological Assessment Proposed Industrial Development Additional Southern Lands Lots 56 to 59, North of Talbot Road East, Municipality of Central Elgin Geographic Township of Yarmouth Elgin County, Ontario*	None	Yes - pedestrian survey and test pit survey at 5 m intervals	No further assessment required	TMHC 2023c	Y	SD Map 12	1A, 1B, 2A, 2B, 3
P324-0840-2023	*Stage 2 Archaeological Assessment – Spring 2023, Proposed Industrial Development, Additional Lands, Lots 12, Range 1 and 2 North of Edgeware Road, Lots 56 to 59, North of Talbot Road East, Municipality of Central Elgin, Geographic Township of Yarmouth, Elgin County*	None	Yes - pedestrian survey and test pit survey at 5 m intervals	No further assessment required	TMHC 2023d	Y	SD Map 13	1A, 1B, 2A, 2B, 3

2.3 Project Context: Historical Context

2.3.1 Indigenous Settlement in Southern Ontario

This portion of Ontario attracted considerable Indigenous settlement in the past. Southwestern Ontario is home to numerous archaeological sites, including several Iroquoian villages, hamlets, and cabins. In recent years, our archaeological knowledge of the area has improved greatly, at the hands of various cultural resource management surveys and archaeological research projects that have accompanied the industrial and residential expansion of the area. Using existing data and regional syntheses, it is possible to propose a generalized model of Indigenous settlement in the Project Area. The general themes, time periods and cultural traditions of Indigenous settlement, based on archaeological evidence, are provided below and in Table 4.

Table 4: Chronology of Indigenous Settlement in Southwestern Ontario

Period	Time Range	Diagnostic Features	Archaeological Complexes
Early Paleo	9000-8400 BCE	fluted projectile points	Gainey, Barnes, Crowfield
Late Paleo	8400-8000 BCE	non-fluted and lanceolate points	Holcombe, Hi-Lo, Lanceolate
Early Archaic	8000-6000 BCE	serrated, notched, bifurcate base points	Nettling, Bifurcate Base Horizon
Middle Archaic	6000-2500 BCE	stemmed, side & corner notched points	Brewerton, Otter Creek, Stanly/Neville
Late Archaic	2000-1800 BCE	narrow points	Lamoka
Late Archaic	1800-1500 BCE	broad points	Genesee, Adder Orchard, Perkiomen
Late Archaic	1500-1100 BCE	small points	Crawford Knoll
Terminal Archaic	1100-950 BCE	first true cemeteries	Hind
Early Woodland	950-400 BCE	expanding stemmed points, Vinette pottery	Meadowood
Middle Woodland	400 BCE-500 CE	dentate, pseudo-scallop pottery	Saugeen
Transitional Woodland	500-900 CE	first corn, cord-wrapped stick pottery	Princess Point
Late Woodland	900-1300 CE	first villages, corn horticulture, longhouses	
Late Woodland	1300-1400 CE	large villages and houses	
Late Woodland	1400-1650 CE	tribal emergence, territoriality	
Contact Period - Indigenous	1700 CE-present	treaties, mixture of Indigenous & European items	
Contact Period - Settler	1796 CE-present	industrial goods, homesteads	pioneer life, municipal settlement

2.3.1.1 Paleo Period

The first human populations to inhabit this region arrived between 12,000 and 10,000 years ago, coincident with the end of the last period of glaciation. Climate and environmental conditions were significantly different then they are today; local environs would not have been welcoming to anything but short-term settlement. Termed Paleo by archaeologists, Ontario's Indigenous peoples would have crossed the landscape in small groups (i.e., bands or family units) searching for food, particularly migratory game species. In this area, caribou may have provided the staple of the Paleo period diet, supplemented by wild plants, small game, birds, and fish.

Given the low density of populations on the landscape at this time and their mobile nature, Paleo period sites are small and ephemeral. They are sometimes identified by the presence of fluted projectile points manufactured on high quality raw materials. Sites or find spots are frequently located adjacent to the strandlines of large glacial lakes. This settlement pattern has been attributed to the strategic placement of camps in high, dry areas and at logistical points for the interception of migrating caribou herds.

2.3.1.2 Archaic Period

Settlement and subsistence patterns changed significantly during the Archaic period (ca. 8,000 BCE) as both the landscape and ecosystem adjusted to the retreat of the glaciers. Building on earlier patterns, early Archaic period populations continued the mobile lifestyle of their predecessors. Through time and with the development of more resource rich local environments, these groups gradually reduced the size of the territories they exploited on a regular basis. A seasonal pattern of warm season riverine or lakeshore settlements and interior cold weather occupations has been documented in the archaeological record.

Since the large cold weather mammal species that formed the basis of the Paleo period subsistence pattern became extinct or moved northward with the onset of warmer climate conditions, Archaic period populations had a more varied diet, exploiting a range of plant, bird, mammal, and fish species. Reliance on specific food resources like fish, deer and nuts becomes more pronounced through time and the presence of more hospitable environments and resource abundance led to the expansion of band and family sizes. In the archaeological record, this is evident in the presence of larger sites and aggregation camps, where several families or bands would come together in times of plenty. The change to more preferable environmental circumstances led to a rise in population density. As a result, Archaic sites are more plentiful than those from the earlier period. Artifacts typical of these occupations include a variety of stemmed and notched projectile points, chipped stone scrapers, ground stone tools (e.g., celts, adzes) and ornaments (e.g., bannerstones, gorgets), bifaces or tool blanks, animal bone (where and when preserved) and waste flakes, a by-product of the tool making process.

2.3.1.3 Early, Middle and Transitional Woodland Periods

Significant changes in cultural and environmental patterns are witnessed in the Woodland period (c. 950 BCE-1700 CE). By this time, the coniferous forests of earlier times were replaced by stands of mixed and deciduous species. Occupations became increasingly more substantial in this period, culminating in major semi-permanent villages by 1,000 years ago. Archaeologically, the most significant changes by Woodland times are the appearance of artifacts manufactured from modeled clay and the construction of house structures. The Woodland period is often defined by the occurrence of pottery, storage facilities and residential areas similar to those that define the incipient agricultural or Neolithic period in Europe.

Early and Middle Woodland period peoples are also known for a well-developed burial complex and ground stone tool industry. Unique Early Woodland period ground stone items include pop-eyed birdstones and

gorgets. In addition, there is evidence of the development of widespread trade in raw materials, objects and finished tools, with sites in Ontario containing trade items with origins in the Mississippi and Ohio River valleys.

2.3.1.4 Late Woodland Period

During the Late Woodland period, much of Southwestern Ontario was occupied by two groups: Iroquoians and what are thought by archaeologists to be Algonquin speaking populations (the term "Western Basin Tradition" has been used to describe this cultural complex). In the east, the Iroquoian occupants were the Attawandaron, a tribal group described by European missionaries and whose historic homeland was significantly further east. Like other known Iroquoian groups including the Huron (Wendat) and Petun (Tionontati), the Attawandaron practiced a system of intensive horticulture based on three primary subsistence crops (corn, beans and squash). Their villages incorporated a number of longhouses, multi-family dwellings that contained several families related through the female line. The Jesuit Relations describe several Attawandaron centres in existence in the 17th century, including a number of sites where missions were later established. While precontact Attawandaron sites may be identified by a predominance of well-made pottery decorated with various simple and geometric motifs, triangular stone projectile points, clay pipes and ground stone implements, sites post-dating European contact are recognized through the appearance of various items of European manufacture. The latter include materials acquired by trade (e.g., glass beads, copper/brass kettles, iron axes, knives and other metal implements) in addition to the personal items of European visitors and Jesuit priests (e.g., finger rings, stoneware, rosaries, glassware). The Attawandaron were dispersed and their population decimated by the arrival of epidemic European diseases and inter-tribal warfare. Many were adopted into other Iroquoian communities.

Archaeologists have also documented the in-situ development of Late Woodland period archaeological traditions from Middle Woodland period precedents that are believed to have an Algonquin cultural origin, quite distinct from Iroquoian populations who lived to the east. The archaeological record of these groups has been labeled the "Western Basin Tradition." During the Late Woodland period, complex settlements are characteristic of these people and, at their peak, are characterized by fortified villages containing large, likely extended family, structures. Some of the villages are surrounded by earthworks. There is evidence for the cultivation of corn and beans by roughly 900 CE. The pottery traditions of these people varied significantly from those of their Iroquoian neighbors. Early vessels, called Wayne ware, are small, thin-walled pots covered with vertical cord marking and tool impressions. Vessels become more elaborate through time, incorporating multiple bands of tool impressions, castellated rims and incised decoration. Late pottery is characteristically bag-shaped and often incorporates dentate stamping as well as appliqué strips and strap handles, similar to some Mississippian tradition pottery. As was not the case with much Iroquoian pottery, clay fabrics were mixed with shell temper.

2.3.2 Treaty History

The Project Area is encompassed by the McKee Purchase (Treaty No. 2). The treaty was signed May 19, 1790 between the Deputy Agent of Indian Affairs—Alexander McKee, and 27 chiefs of local Ojibwa, Odawa, Pottawatomie, and Wendat nations (Canada 1891; Surtees 1984). The treaty covered a significant area including what became Elgin, Kent, and Essex counties along the north shore of Lake Erie including the entirety of West Tilbury and Rochester Townships in Essex County, and East Tilbury, Raleigh, and Harwich Townships in Kent County. At the time of signing, only two reserves were created. What became known as the Huron and the Huron Church Reserves near what would later be known as Windsor were the domain of all signatories (Surtees 1984). During the 19th-century, the reserves ostensibly became Wendat territory and were gradually sold off until the Anderton Wendat nation dissolved its Canadian status (Canada 1891).

The traditional territories of several contemporary Anishinaabe First Nations encompass the Project Area including Aamjiwnaang First Nation, Chippewas of the Thames First Nation and Walpole Island First Nation (Bkejwanong). The traditional territory of Caldwell First Nation, an Anishinaabe nation who was prevented from signing Treaty No. 2, also encompasses the Project Area. Caldwell First Nation settled their outstanding land claim with the federal government in 2010-11 (Canada 2020).

2.3.3 Nineteenth-Century and Municipal Settlement

The northern most portions of the Project Area fall within the Geographic Township of Westminster in Middlesex County. The southern portion of the Project Area fall within the Geographic Townships of Yarmouth in Elgin County. A brief discussion of early 19th-century and municipal settlement in these places is provided below and provides the context for evaluating historic era archaeological potential.

2.3.3.1 Middlesex County

Prior to the earliest European settlement in Middlesex County, the Thames River Valley environs were actively used for hunting by Chippewa, Ottawa and Pottawatami people. It was from them that the British Crown purchased the lands that eventually became Middlesex County between 1790 and 1796 (Armstrong 1986; Gibb 2001). Shortly after the purchase, Abraham Iredell surveyed the general area. John Graves Simcoe, the first Lieut.-Governor of Upper Canada, visited the Thames River environs in 1793 on his journey to Detroit from Niagara. He admired the countryside and the forks of the Thames aspiring to establish the capital of Upper Canada there. With the gathering American threat to the then capital Niagara, Simcoe was forced to choose an interim site immediately and establish a temporary capital in Toronto, renamed York (Armstrong 1986). Unable to begin work on his capital as he hoped, Simcoe took several steps that would eventually lead to the development of the city including securing the town site and the building of Dundas Street which was planned to stretch from Dundas near Hamilton westward to the Forks of the Thames. Due to the site's remoteness, it would be many years before settlers moved into the area. Simcoe departed Upper Canada in 1796 and Toronto remained the capital of Upper Canada.

Administratively, great changes took place right across the province at the end of the eighteenth century. The Upper Canadian government tried to provide administrative services near areas as soon as they became fairly well populated. In 1798 the government, urged by this need created the District of London which consisted of Middlesex County including London and Westminster Township among others, as well as Oxford and Norfolk Counties with the district capital located at Vittoria in Norfolk County (Armstrong 1986). Middlesex County remained virtually uninhabited at this time with small pockets of settlement occurring at the south end of the county along the shores of Lake Erie in what is now Elgin County.

By 1822 the basic road system in and around Middlesex County was evolving. Port Stanley offered lakeside port entry for migrants destined for the London District (Whebell 1992), with travel facilitated by Kettle Creek or the Port Stanley to London Road (now Highway 4). Dundas Street also connected to Toronto, and Commissioners Road, which was open for sleighs by 1799, was easily passable by 1828. With the road improvements helping to open Middlesex County to further settlement and the subsequent growing population, Vittoria was no longer a viable location as a district capital. In 1826, after some debate, the administration was transferred to the more centrally located London (Armstrong 1986). That same year London was officially founded as a hamlet. An act of the Provincial Parliament was passed to make provisions for a town survey and the building of a new courthouse on Simcoe's Crown Reserve at the Forks, which until then had remained empty.

2.3.3.2 Westminster Township

Westminster was one of the first townships to be settled in the county. As early as the late 18th century, European immigrants, entrepreneurs and ex-military men journeyed here, seeking out the best agricultural and industrial lands on which they would lay the foundations for the modern communities of Delaware, Kilworth, Komoka, Byron, and London. Westminster Township was surveyed by Colonel Burwell. Patents were issued for lands in Westminster Township as early as 1812 (H.R. Page and Co. 1878). At the time of its founding, however, the township had few passable roads, with most passage through the territory provided by simple trails through the area's woods and swamps (H.R. Page & Co.1878: 10). The earliest roads and only decent passage routes early on were Commissioners and Longwoods roads, both of which were established on old Indian trails but improved upon during the War of 1812 (H.R. Page & Co. 1878: 6). The North Talbot Road (now Colonel Talbot Road), which extended north-south through the township to the Talbot Settlement along the Lake Erie Lakeshore, was another early transportation route and focus of early settlement.

2.3.3.3 Elgin County

In 1792, the lands that became Elgin County were designated Suffolk County within the Western District by Lieutenant-Governor John Graves Simcoe. In 1800, the lands were included in the newly formed Middlesex County where they remained until 1851 when the area was reorganized into the United Counties of Middlesex and Elgin. Elgin County separated from Middlesex County in 1853. The county was named for the Governor-General of Canada at the time, Lord Elgin, and was comprised of seven townships including: Aldborough, Bayham, Dunwich, South Dorchester, Southwold, and Yarmouth (H.R. Page & Co. 1877:v).

The first documented settler in the region was Colonel Thomas Talbot, who as a young officer had been Simcoe's secretary. By request and at the recommendation of Simcoe, Talbot was granted 5,000 acres in the Township of Dunwich (H.R. Page & Co. 1877:III). Originally, Talbot requested land in the Township of Yarmouth, but at the time of his request the northern part of the township had been granted to the Canada Company while the southern part had been granted to Colonel Baby. Further, as part of Talbot's application, he put forward a settlement plan in which he would be allotted 200 acres for every family he helped establish in the region with 50 acres being granted to the family in perpetuity and the remaining 150 acres of each lot becoming his property in recompense for the expense he incurred while recruiting settlers (Ermatinger 1895:6). This settlement plan became the basis for what came to be known as the Talbot Settlement. By 1822, the Talbot Settlement spanned 23 townships and had a population of at least 12,000. By 1831, it covered 28 townships with an estimated population of 40,000; thereby placing 518,000 acres in the hands of Colonel Talbot (Ermatinger 1895:6). In Elgin County, Talbot initially placed settlers on land in Aldborough and Dunwich townships, but eventually began placing them in Southwold, Yarmouth, Malahide, Bayhem and South Dorchester townships as well (ECBOGS 2022).

The conditions Talbot set for the free grants within the settlement included that each settler should clear and sow ten acres of land, build a house of prescribed dimensions, and open half of the road in front of the lot within three years of receiving the grant (Ermatinger 1895:7). The road provision resulted in the region becoming noted for one of the best road systems in the province including the Talbot Road which served as the main thoroughfare through the settlement. After the War of 1812, this extensive road network helped facilitate the rapid settlement in the county. The population was at least 2,000 in 1817, 22,491 in 1848, and 33,666 by 1871. The Canada Southern Railway was completed in 1872, further facilitating growth in the region.

2.3.3.4 Yarmouth Township

The Township of Yarmouth was settled around 1810 when several families (including the Drakes, Mandevilles, and Rapeljes) established homesteads on Talbot Street in what would become the City of St. Thomas (H.R. Page & Co. 1877: ix). Many of the earliest township families were headed by ex-military officers, including Captain David Secord who arrived in 1810 and operated a school house out of his home. Initially, growth in this area was slow with only 400 people residing in the area by 1817 (Smith 1850). During the 1820s and 1830s, the township received a large influx of Scottish and Quaker settlers and the population rose to 3,664 by 1841. At this point, the township featured two doctors, two schools, five grist mills and 10 saw mills (Smith 1846). Twenty years later, populations in Yarmouth Township reached their 19th century peak at 6,166. This rapid growth was related to the arrival of the London and Port Stanley Railway in 1856 and the growing importance of the Town of St. Thomas in the west-central portion of the township. In addition to St. Thomas, several other communities developed in Yarmouth Township over the course of the 19th century, including Port Stanley, Union, Sparta, New Sarum and Mapleton. These communities supported a number of industrial and commercial enterprises (Lovell 1873).

The London and Port Stanley Railway was constructed through St. Thomas in 1856 with substantial financial support from the community. Rather than attracting commercial success, the railway brought an economic depression to the community and growth was quite slow thereafter. Despite this, promoter William A. Thomson was able to convince the community of the potential fortunes of a new railroad. In the late 1860s, Thomson lobbied for the construction of the Canada Southern Railway that would connect Amherstburg to Fort Erie. The St. Thomas section of the railway was completed in 1872 and Great Western was forced to counter that effort with an extension of their line between St. Thomas and Glencoe (Paddon et al. 1981:6). The arrival of these railway lines made St. Thomas a major shipping centre and provided an economic impetus for renewed growth. Before the arrival of the Canadian Southern Railway the community's population was roughly 2,300. By 1880 it had grown to 10,000 (Paddon et al. 1981:6).

2.3.4 Review of Historic Maps

Early maps and historical textural sources illustrate and describe late-18th and 19th-century features within the Project Area that reflect archaeological potential. These are inventoried below. Four major sets of maps were considered during the compilation of 19th century features of archaeological potential:

- Tremain's 1862 Map of Middlesex County (Maps 15 and 16);
- Tremain's 1864 Map of Elgin County (Maps 15 and 16);
- H. Belden & Co.'s 1877 Illustrated Historical Atlas of Elgin County (Maps 17 and 18); and,
- H. Belden & Co.'s 1878 Illustrated Historical Atlas of Middlesex County (Maps 17 and 18).

2.3.4.1 Transportation Routes

Several prominent roads within the Project Area were early settlement and transportation routes in the late-18th and 19th centuries, allowing for the passage of people and supplies between prominent settlement and trade centres (Maps 15 to 18). In Westminster Township these include (from north to south, west to east) Wilton Grove Road, Dingman Drive, Westminster Drive, Scotland Drive, Manning Drive, Glanworth Drive, Highbury Avenue and Old Victoria Road. In Yarmouth Township these include (from north to south, west to east) Thomas Line, Truman Line, Ferguson Line, Mapleton Live, Ron McNeil Line and Edgeware Line, Highbury Avenue and Yarmouth Centre Road.

The 1877 and 1878 historic maps (Maps 17 and 18) showing the Project Area indicate that the majority of municipal roads were open by that time (indicated by solid double line on the 1877/1878 maps).

Railway lines are also visible on the 1862/1864 and 1877/1878 historic maps. Roughly 2 km west of the Project Area is the London and Port Stanley Railway (Maps 15 to 18). Approximately 550 m south of the proposed Centennial TS the Canadian National Railway runs east-west from Glencoe to Fort Erie. The Credit Valley Railway crosses Alternative 2B, 2A north of Mapleton Line and Alternative 3 north of Ferguson Line (Map 5).

2.3.4.2 Mapped Settlement Areas

Nineteenth century maps does not depict any notable settlement areas within or nearby the overall Project Area.

2.3.4.3 Known and Registered Cemeteries

All historic and modern cemetery data was collected from the CanadaGen Web's Cemetery Project (2022) and complemented with information from Find a Grave (2022) Database. Two cemeteries are known within 300 m of the Project Area, and one poses a risk for the planning concerns of this study:

- McColl (or McCaul) Cemetery (Lot 11, Concession 7, Westminster Township, Maps 19 and 22)
    - Located on the north side of Glanworth Drive;
    - Approximately 30 m east of the centreline of Alternative 1A;
    - Established ca. 1878;
    - Small family cemetery located in the middle of a field surrounded by a fence; and,
    - Contains at least three burials for the McColl family.

One other is well distant from any of the route alternatives and are not planning concerns for this study:

- Kilmartin Cemetery (Lot 12, Concession 11, Yarmouth Township, Map 24)
    - Located at the corner of Mapleton Line and Yarmouth Centre Road;

- Approximately 240 m northwest of the centreline of Alternative 3;
- Limits are not formally defined;
- Not a planning concern

2.3.4.4 Mapped Buildings

A review of the 1862 historical atlas of Middlesex County and the 1864 historical atlas of Elgin County show numerous built structures, including a number depicted within 300 m of the route alternatives (Maps 15 and 16). Table 5 inventories the mapped structures within 300 m of the Project Area. It should be noted that, in general, the 1880/1881 maps do not depict the location of many buildings, with the exception of non-residential structures. Nor are landowners' names associated with the majority of properties, largely due to the fact that owners had to pay a subscriber's fee to be inventoried in the atlas.

A review of the 1877 historical atlas of Elgin County and the 1878 historical atlas of Middlesex County show numerous built structures, including a number depicted within 300 m of the route alternatives (Maps 17 and 18). Table 6 inventories the mapped structures within 300 m of the Project Area. It should be noted that, in general, the 1880/1881 maps do not depict the location of many buildings, with the exception of non-residential structures. Nor are landowners' names associated with the majority of properties, largely due to the fact that owners had to pay a subscriber's fee to be inventoried in the atlas.

Four structures fall within or in immediate proximity to route alternatives. Information about these structures has been supplemented by archive records from McGill University (2001). The structures include:

- Lot 9, Concession 2, Yarmouth Township: the Gilbert Elliott house is within or immediately adjacent to Alternative 2A;
- Lot 6, Concession 7, Yarmouth Township: the A. Taylor house is within or immediately adjacent to Alternative 3;
- Lot 11, Concession 11, Yarmouth Township: the Mrs. C. House house is within or immediately adjacent to Alternative 1A and 2B; and,
- Lot 11, Concession 12, Yarmouth Township: the I. McIntyre house is within or immediately adjacent to Alternative 2A.

Table 5: Summary of 19th-century Settlement History on Properties Within the Project Areas as depicted on the 1862 and 1864 Historic Atlases of Middlesex and Elgin Counties

Lot	Con	Structure	Name Listed	Part	Comments
Westminster Township					
5	4	House	W.F. Willsies	W½	< 100 m from Alternative 3
5	5	House	n/a	W½	< 100 m from Alternative 3
6	5	House	M. Carrothers	W ½	< 100 m from Alternative 2
6	5	Church	D. Carrothers	E ½	< 100 m from Alternative 3
12	6	House	John Nichol	S ½	< 100 m from Alternative 1A
12	7	House	David Crawford	N ½	< 100 m from Alternative 1A
5	7	House	George Wilson	N ½	< 100 m from Alternative 1A
Yarmouth Township					
11	12	House	Jn. Thomson	N ½	Within/in immediate proximity to Alternative 2A
8	12	School	N. Dewar	N ½	Within/in immediate proximity to m from Alternative 1A
13	11	House	H. Douglas	All	> 100 m from Alternative 3
11	RIN	House	Daniel Black	All	< 100 m from Alternative 1A, 2A and 3

Table 6: Summary of 19th-century Settlement History on Properties Within the Project Areas as depicted on the 1877 and 1878 Historic Atlases of Middlesex and Elgin Counties

Lot	Con	Structure	Name Listed	Part	Comments
Westminster Township					
8	3	House	Griffin	All	< 100 m from Alternative 1A
6	3	House	Wm. Carrothers	All	200 m from Alternative 2A and 3
9	2	House	Gilbert Elliott	All	Within/in immediate proximity to m from Alternative 2A
6	3	House	E. Bralt?	N ½	< 100 m from Alternative 2A
5	4	House	A.B.L. Willsie	W ½	< 100 m from Alternative 3
8	5	House	James Beattie	S ½	< 300 m from Alternative 2A
6	5	House	D. Carrothers	E ½	< 100 m from Alternative 2A
5	6	House	Wm. Cousins	All	< 100 m from Alternative 3
6	7	House	A. Taylor	E ½	Within/in immediate proximity to m from Alternative 3
8	7	House	A. Heeton Cameron	N ½	< 100 m from Alternative 2A
Yarmouth Township					
13	10	House	H. Douglass	NW ¼	< 50 m from Alternative 3
11	11	House	Mrs. C. House	N ¼	Within/in immediate proximity to m from Alternative 1A, 2B
12	11	House	D. Taylor	S ¼	< 300 m from Alternative 1A, 1B, 2B
13	11	House	H. Douglass	S ½	< 100 m from Alternative 3
11	12	House	I. McIntrye	All	Within/in immediate proximity to m from Alternative 1B, 2B
13	12	House	J. Annis	N ½	< 300 m from Alternative 3
13	13	House	J. Glorn	S ½	< 300 m from Alternative 3
12	14	House	N. Taylor	S ½	< 150 m from Alternative 3
11	RIN	House	Daniel Black	All	< 100 m from Alternative 1A, 2A and 3
11	RIS	House	T. Penhale	All	< 100 m from Alternative 1A, 2A and 3

2.3.5 Review of Heritage Properties

Municipal and provincial inventories were reviewed to compile a listing of heritage buildings designated under the Ontario Heritage Act and plaques within 300 m of the Project Area. Although there are municipally inventoried and other registered buildings in the general area, none of these are immediately near the Project Area. There are no listed or designated heritage properties in Elgin County according to the Heritage Trust Database. Based on the City of London's Register of Cultural Heritage Resources (2019) there is one designated heritage property within 300 m of the proposed Alternatives.

- Alternative 3 is within the c. 1860 home at 2115 Wilton Grove Road (Lots 4 and 5, Con 3, Westminster Township). No house is depicted on the 1862 or 1878 Historic Atlas, however the lot the lot is listed under James Blair. The house is an Ontario Farmhouse and is still standing today.

No OHA designated buildings were identified nearby. Further, no heritage plaques or monuments were identified within 300 m of the route.

2.3.6 Current Land Use

Due to the large size of the Project Area a field review was not undertaken for this study. However, based on prior knowledge of existing conditions and existing aerial photography, the proposed route alternatives largely fall within rural lands.

3 ANALYSIS AND CONCLUSIONS

As noted in Section 2.1, the Province of Ontario has identified numerous factors that signal the potential of a property to contain archaeological resources. The Stage 1 background study included a review of current land use, historic and modern maps, past settlement history for the area and a consideration of topographic and physiographic features, soils, and drainage. It also involved a review of previously registered archaeological resources within 1 km of the Project Area and previous archaeological assessments within 50 m. According to the map-based review and background research, the majority of the Project Area exhibits potential for the discovery of archaeological sites due to proximity (within 300 m) to:

- registered archaeological sites;
- watercourses and wetlands (including Dingman Creek, Kettle Creek, Nineteen Creek);
- mapped 19th-century structures in Westminster and Yarmouth Townships;
- known cemeteries (McColl Cemetery and Kilmartin Cemetery); and,
- historic 19th-century transportation routes (including the early settlement roads of Wilton Grove Road, Dingman Drive, Westminster Drive, Scotland Drive, Manning Drive, Glanworth Drive, Thomson Line, Truman Line, Ferguson Line, Mapleton Line, Ron McNeil Line, Edgeware Line, Highbury Avenue, Yarmouth Centre Road and Old Victoria Road).

There are numerous areas of low archaeological potential identified with the Project Area (e.g., roadways, low-lying and wet areas, standing structures); however, they have not been directly observed and photo documented as part of this study. As this report was generated for planning purposes to help evaluate route alternatives, a site inspection was not conducted at this time. Once the preferred route alternative is selected, a more detailed review of existing conditions and assessment areas will be undertaken as part of the Stage 2 assessment planning. Any areas of low-archaeological potential within the preferred route alternative will need to be photo-documented as part of the Stage 2 assessment.

With respect to the individual route alternatives, all contain significant areas with the potential for the discovery of archaeological resources due to proximity to past and present water bodies and watercourses, 19th-century transportation routes, mapped buildings, and registered archaeological sites.

Maps 19 to 30 illustrate features of and lands exhibiting archaeological potential within 300 m of each route alternative and variation. Supplementary Documentation (SD) Maps 14 to 24 illustrate archaeological potential in greater detail, including alternatives in relation to registered archaeological sites. They are organized according to Alternative 1A (SD Maps 14 to 19) and Alternative 2A and 3 (SD Maps 20 to 24). Apart from the illustration of the proposed route alternatives shown in Map 1, no detailed proponent mapping was provided for this study. Instead, the information was provided as a GIS shape file. For that reason, our Stage 1 findings are not illustrated on a proponent map per se.

4 RECOMMENDATIONS

A map-based review of the proposed route alternatives for the new Hydro One St. Thomas Line 230kV Transmission Line Project was undertaken and the archaeological potential evaluated based on proximity of features signaling the likelihood for archaeological resources to exist. This established the majority of lands within the Project Area and proposed route alternatives had potential for the discovery of archaeological resources, noting that a detailed field review should be conducted as part of the Stage 2 assessment once the preferred alternative is chosen. Based on this investigation the following recommendations are made:

- Previously Assessed Areas:
    - For the lands within the Project Area and route alternatives that were previously subject to Stage 2 assessment using methodologies in keeping with the 2011 Standards and Guidelines for Consultant Archaeologists and for which there are no outstanding archaeological concerns, no further assessment is required.
- Areas of Low Archaeological Potential:
    - Areas of previous disturbance (e.g., building footprints and existing roads or laneways), as well as low-lying and wet areas are considered to have low archaeological potential.
    - As a field inspection was not conducted as part of this study, areas of low archaeological potential within the preferred route alternative will need to be confirmed and photo-documented at the time of Stage 2 survey (MTC 2011:28; Section 2.1.2).
- Stage 2 Methodologies:
    - Once the preferred route alternative is determined, a more detailed review of existing conditions should be undertaken, alongside a comparison to archaeological potential mapping provided in this report (Maps 19 to 30; SD Maps 14 to 24).
    - In keeping with provincial standards, the agricultural fields should be ploughed for pedestrian survey; however, for any impact areas that are linear corridors less than 10 m wide, test pit survey can be undertaken (as per Section 2.1.2 Standard 1.f.).
    - In keeping with the provincial standards, the non-ploughable areas must be subject to test pit assessment. In both cases, a 5 m transect interval is recommended to achieve the provincial standard.
- A portion of the Project Area that runs within close proximity to the McColl Cemetery is an area of continued archaeological concern. If possible, the selected hydro corridor route should be located at least 20 m away from the cemetery. If this cannot occur and impacts are planned within 20 m of the mapped cemetery limits cannot be avoided, a Stage 1 cemetery boundary investigation involving detailed cemetery background research to determine the legal historical limits of the cemetery is recommended. If the proposed archaeological assessment will impact the cemetery land, then under the Funeral, Burial and Cremation Services Act, 2002, it would be necessary to obtain a Cemetery Investigation Authorization (CIA) from the Bereavement Authority of Ontario. If the background assessment can credibly identify the legal limits of the cemetery, and the proposed archaeological assessment will not impact the cemetery lands, a CIA is not required. All work should be completed in consultation with the MCM and BAO.
- There are two previously registered archaeological sites located within or adjacent to the Project Area that have further CHVI. It is recommended that these areas be avoided, if possible, by selecting an

alternate proposed route. If this is not possible, further archaeological assessment is required. Should impacts be proposed at the location of these sites, the following site-specific recommendations apply:

  - AfHg-168 (SD Map 1) is a multi-component Indigenous site previously subject to Stage 1, 2 and 3 assessment (Archaeologix 2008a, 2008b) with further CHVI. If further investigation is planned for the future, the methodology for Stage 4 assessment should follow Section 4.2.2 of the *Standards and Guidelines*. Any work for Stage 4 investigations should be prepared in consultation with Indigenous communities with an interest in this area.
  - AfHg-80 (SD Map 3) is an Early Archaic site previously subject to Stage 2 assessment (Arnold 1990). The site retains further CHVI and further assessment is required. If further investigation is planned for the future, the methodology for Stage 3 assessment should follow Section 3.2.2 of the 2011 *Standards and Guidelines*. Any work for Stage 3 investigations should be prepared in consultation with Indigenous communities with an interest in this area.

- Previously registered archaeological sites located within the Project Area, but for which there is no determination of CHVI include the Francis Nichol Site (Keron 1981). Standard Stage 2 survey is recommended within 50 m of this reported site. If additional archaeological materials are identified in the vicinity of the site, they would need to be evaluated against current MCM standards and additional work may be required.
- Previously registered archaeological sites located within the Project Area, but for which there is no further CHVI include AfHh-319, AfHg-59, AfHg-60, AfHg-61, AfHg-70, AfHg-77, AfHg-78 and AfHg-79. No further assessment is recommended for these areas.
- Changes to Extent of Project Area:
  - If the extent of the Project Area or route alternatives change to incorporate lands not addressed in this study, further assessment will be required.

Our recommendations are subject to the conditions laid out in Section 6.0 of this report and to the MCM's review and acceptance of this report into the provincial registry.

5 SUMMARY

A Stage 1 archaeological assessment was conducted for the proposed St. Thomas Line 230kV Transmission Line Project in Middlesex and Elgin Counties. A map-based review established that the majority of lands within the Project Area and proposed route alternatives have archaeological potential due to the proximity of 19th-century transportation routes and structures, registered archaeological sites, as well as ancient and current watercourses and wetlands. Stage 2 survey is recommended for all lands exhibiting archaeological potential and that have not been previously assessed (Maps 19 to 30; SD Maps 14 to 24). More detailed review of the preferred route alternative will be undertaken once chosen.

6 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the MCM as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection, and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the Project Area of a development proposal have been addressed to the satisfaction of the MCM, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented (i.e., unknown or deeply buried) archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act.*

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 requires that any person discovering human remains must notify the police or coroner and Ian Hember, Registrar of Burial Sites, Ontario Ministry of Public and Business Service Delivery. His telephone number is 416-212-7499 and e-mail address is Ian.Hember@ontario.ca.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48(1) of the *Ontario Heritage Act* and may Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48(1) of the *Ontario Heritage Act* and not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

7 BIBLIOGRAPHY

Armstrong, Frederick H.

1986 *The Forest City: An Illustrated History of London, Canada*. Ontario: Windsor Publications Ltd.

Archaeological Services Inc., Letourneau Heritage Consulting Inc. and D.R. Poulton & Associates

2017 *Archaeological Management Plan*. Department of Planning and Development, City of London.

Archaeologix Inc.

2001a *Archaeological Assessment (Stages 1 & 2), City of London Industrial Subdivision (OZ-6078), Part of Lots 13, 14 & 15, Concession 2, Geographic Township of Westminster, City of London, Middlesex County, Ontario.* Licensee Jim Wilson; P001-002-047. Report on file with the MCM.

2001b *Archaeological Assessment (Stage 3), AfHh-316 & AfHh-319, City of London Industrial Subdivision (OZ-6078), Part of Lot 13, Concession 2, Geographic Township of Westminster, City of London, Middlesex County, Ontario.* Licensee Jim Wilson; P001-002-067. Report on file with the MCM.

2001c *Archaeological Assessment (Stage 4), AfHh-316 & AfHh-319, City of London Industrial Subdivision (OZ-6078), Part of Lot 13, Concession 2, Geographic Township of Westminster, City of London, Middlesex County, Ontario.* Licensee Jim Wilson; P001-002-125. Report on file with the MCM.

2008a *Archaeological Assessment Stage 1 & 2, Sun Life Assurance Property, 1577 Wilton Grove Road, Part of Lots 8 and 9, Concession 3, Geographic Township of Westminster, now City of London, Middlesex County, Ontario.* Licensee Jim Wilson; P001-431-2008. Report on file with the MCM.

2008b *Archaeological Assessment (Stage 3), Sun Life Assurance Property (AfHg-167 to -169), 1577 Wilton Grove Road, Part of Lots 8 and 9, Concession 3, Geographic Township of Westminster, now City of London, Middlesex County, Ontario.* Licensee Jim Wilson, PIF P001-473-2008). Report on file with the MCM.

Arnold, Tom

1990 *The Camp Orenda Archaeological Survey.* Licensee Tom Arnold, PIF 90-022. Report on file with the MCM.

Canada

1891 *Indian Treaties and Surrenders*. Volume 1: Treaties 1-138. Reprinted 1992. Fifth House Publishers, Saskatoon, SK.

CanadaGenWeb's Cemetery Project

2022 Virtual Database. Website Link. Accessed April 22, 2024.

Canadian Government (Canada)

1891 *Indian Treaties and Surrenders. Volume 1: Treaties 1-138*. Reprinted 1992. Fifth House Publishers, Saskatoon.

2020 *Specific Claims Branch Report: Caldwell.* Crown-Indigenous Relations and Northern Affairs Canada.

Chapman L.J. and D.F. Putnam

1984 *The Physiography of Southern Ontario*. Third Edition. Ontario Ministry of Natural Resources: Ontario.

2007 Physiography of Southern Ontario, *Ontario Geological Survey, Ministry of Northern Development and Mines*, Miscellaneous Release-Data 228.

Elgin County Branch, Ontario Genealogical Society (ECBOGS)

2022 The Talbot Settlement. Website Link. Accessed May 6, 2024.

Ermatinger, C.O.

1895 The Talbot Settlement. *Historical Sketches of the County of Elgin*. St. Thomas, Ont.: The Elgin Historical and Scientific Institute.

ESRI Canada

2021 Ontario Base Map. Ontario Ministry of Natural Resources Data. ESRI Canada. Website Link. Accessed: April 7, 2021.

Find a Grave

2022 Virtual Database. Website Link. Accessed April 22, 2024.

Gibb, A. (ed)

2001 *London Township*. Two Volumes. Arva: London Township History Book Committee.

Golder Associates Ltd. (Golder)

2017a *Stage 3 Site Specific Assessment, 1687 Wilton Grove Road, The Barker Site (AfHg-3), Part of Lot 8, Concession 3, Former Geographic Township of Westminster, Now City of London, Middlesex County, Ontario.* Licensee Lafe Meicenheimer, PIF P457-0024-2016. Report on file with the MCM.

2017b *Stage 1-2 Archaeological Assessment, East-West Access, 1577-1687 Wilton Grove Road, Part of Lots 8 and 9, Concession 3, Designated as Parts 1-6, 33R-15630 and Parts 2-4, 33R-15000, Former Geographic Township of Westminster, Now City of London, Middlesex County, Ontario*. Licensee Lafe Meicenheimer, PIF P457-0061-2017. Report on file with the MCM.

2018a *Stage 1 Archaeological Assessment, Wilton Grove Road Improvements, From Commerce Road to City Limits, London, Ontario*. Licensee Michael Teal, PIF P364-0123-2017. Report on file with the MCM.

2018b *Stage 2 Archaeological Assessment, Wilton Grove Road Improvements, City of London, Ontario.* Licensee Rhiannon Fisher, PIF P468-0001-2017. Report on file with the MCM.

2018 *Stage 1 Archaeological Assessment, Wilton Grove Road Improvements, From Commerce Road to City Limits, London, Ontario.* Licensee Lafe Meicenheimer, PIF P457-0065-2018. Report on file with the MCM.

Government of Ontario

1990 *Ontario Heritage Act, R.S.O. 1990*. (c. 0.18). Online: Publications Ontario. Website Link. Accessed February 16, 2021.

Hagerty, T.P. and M.S. Kingston

1992 *The Soils of Middlesex County.* Two Volumes. Report No. 56. Guelph: Ontario Centre for Soil Resource Evaluation.

H. Belden & Co. (Belden)

1877 *Illustrated Historical Atlas of the County of Elgin, Ont.* Reprint Edition.

1878 *Illustrated Historical Atlas of the County of Middlesex, Ont*. Toronto: Gorrell, Craig & Co. Lith.

Hydro One Networks Inc.

2024 *Class Environmental Assessment for Minor Transmission Facilities*. Website Link.

Keron, James

1981 Archaeological Survey of The Townships of Westminster and North Dorchester. Licence Number 79-E-0312.

Lovell, John

1873 *Lovell's Gazetteer of British North America*. John Lovell, Montreal.

Microsoft

2019 Computer generated building footprints for Canada, *Microsoft Open Source*. Website Link. Accessed: Nov 3, 2021.

Ministry of Tourism and Culture (MTC; now Ministry of Heritage, Sport, Tourism and Culture Industries)

2011 Standards and Guidelines for Consultant Archaeologists. Toronto.

Ontario Geological Survey

2010 Surficial Geology of Southern Ontario. *Ontario Geological Survey, Ministry of Northern Development, Mines and Forestry*, Miscellaneous Release-Data 128-REV.

Ontario Ministry of Agricultural, Food and Rural Affairs

2019 Soil Survey Complex. Website Link. Accessed June 1, 2023.

Ontario Ministry of Municipal Affairs and Housing (OMMAH)

2020 *Provincial Policy Statement, 2020*. Queen's Printer for Ontario. Website Link. Accessed: April 7, 2022.

OpenStreetMap

2021 Geofabrik Extract. Website Link. Accessed December 10, 2021.

Paddon, Wayne, George Thorman, Don Cosens and Brian Sim

1981 *St. Thomas: 100 Years a City, 1881-1981*. St. Thomas: The St. Thomas Centennial Committee.

Schut, L.W.

1992 *The Soils of Elgin County. Report No. 63 of the Ontario Centre for Soil Resource Evaluation*. Ontario Ministry of Agriculture and Food, Guelph.

Surtees, R.J.

1984 *Indian Land Surrenders in Ontario 1763-1867.* Indian Affairs and Northern Development, Government of Canada, Ottawa.

Smith, W.H.

1846 *Smith's Canadian Gazetteer; Comprising Statistical and General Information Respecting All Parts of the Upper Province, or Canada West*. Toronto: H. & W. Rowsell.

TMHC Inc.

2008a *Stage 1 Archaeological Assessment, Belmont Solar Farm, Geographic Township of Westminster, Village of Belmont, Middlesex County, Ontario.* Licensee Holly Martelle, PIF P064-218-2008. Report on file with MCM.

2008b *Stage 2 Archaeological Assessment, Belmont Solar Farm, Geographic Township of Westminster, Village of Belmont, Middlesex County, Ontario.* Licensee Holly Martelle, PIF P064-236-2008. Report on file with MCM.

2021 *Stage 1-2 Archaeological Assessment, Proposed MacPherson Aggregate Pit, 43371 Truman Line, Part of Lot 6, Concession 12, Geographic Township of Yarmouth, Now in the Municipality of Central Elgin, Elgin County, Ontario.* Licensee Matthew Beaudoin, PIF P324-0479-2020. Report on file with MCM.

2022a *Stage 1 Archaeological Assessment Proposed Development Part of Lot 12, Range 1 South of Edgeware Road Lots 9 and 10, Range 1 North of Edgeware Road and Lot 9, Range 2 North of Edgeware Road City of St. Thomas Lots 11 and 12, Range 1 South of Edgeware Road Lots 11 and 12, Range 1 North of Edgeware Road and Lots 10, 11 and 12, Range 2 North of Edgeware Road Municipality of Central Elgin Geographic Township of Yarmouth Elgin County, Ontario*. Licensee Matthew Beaudoin, PIF P324-0708-2021. Report on file with MCM.

2022b *Stage 1 and 2 Archaeological Assessment Proposed Industrial Development Part of Lot 9, Range 1 South of Edgeware Road Lots 9 and 10, Range 1 North of Edgeware Road and Lot 9, Range 2 North of Edgeware Road City of St. Thomas Lots 11 and 12, Range 1 South of Edgeware Road Lots 11 and 12, Range 1 North of Edgeware Road and Lots 10, 11 and 12, Range 2 North of Edgeware Road Municipality of Central Elgin Geographic Township of Yarmouth Elgin County, Ontario*. Licensee Matthew Beaudoin, PIF P324-0737-2022. Report on file with MCM.

2023a *Stage 1-2 Archaeological Assessment, 1710 Wilton Grove Road, City of London, Part of Lot 12, Concession 2, Geographic Township of Westminster, Middlesex County, Ontario.* Licensee Matthew Beaudoin, PIF P324-0674-2021 and P324-0721-2022. Report on file with MCM.

2023b *Stage 2 Archaeological Assessment- July/August Fieldwork, Proposed Industrial Development Part of Lot 9 and 10, Range 1 North of Edgeware Road and Parts of Lots 9 and 10, Range 2 North of Edgeware Road, City of St. Thomas, Lot 11, Range 1 South of Edgeware Road, Municipality of Central Elgin Geographic Township of Yarmouth Elgin County, Ontario*. Licensee Matthew Beaudoin, PIF P324-0761-2022. Report on file with MCM.

2023c *Stage 1 Archaeological Assessment Proposed Industrial Development Additional Southern Lands Lots 56 to 59, North of Talbot Road East, Municipality of Central Elgin Geographic Township of Yarmouth Elgin County, Ontario*. Licensee Matthew Beaudoin, PIF P324-0818-2023. Report on file with MCM.

2023d *Stage 2 Archaeological Assessment – Spring 2023, Proposed Industrial Development, Additional Lands, Lots 12, Range 1 and 2 North of Edgeware Road, Lots 56 to 59, North of Talbot Road East, Municipality of Central Elgin, Geographic Township of Yarmouth, Elgin County*. Licensee Matthew Beaudoin, PIF P324-0840-2023. Report on file with MCM.

Tremaine, Geo. C.

1862 *Tremaine's Map of the County of Middlesex, Canada West*. Scale 1:47,520. Toronto: Geo R. & G.M. Tremaine.

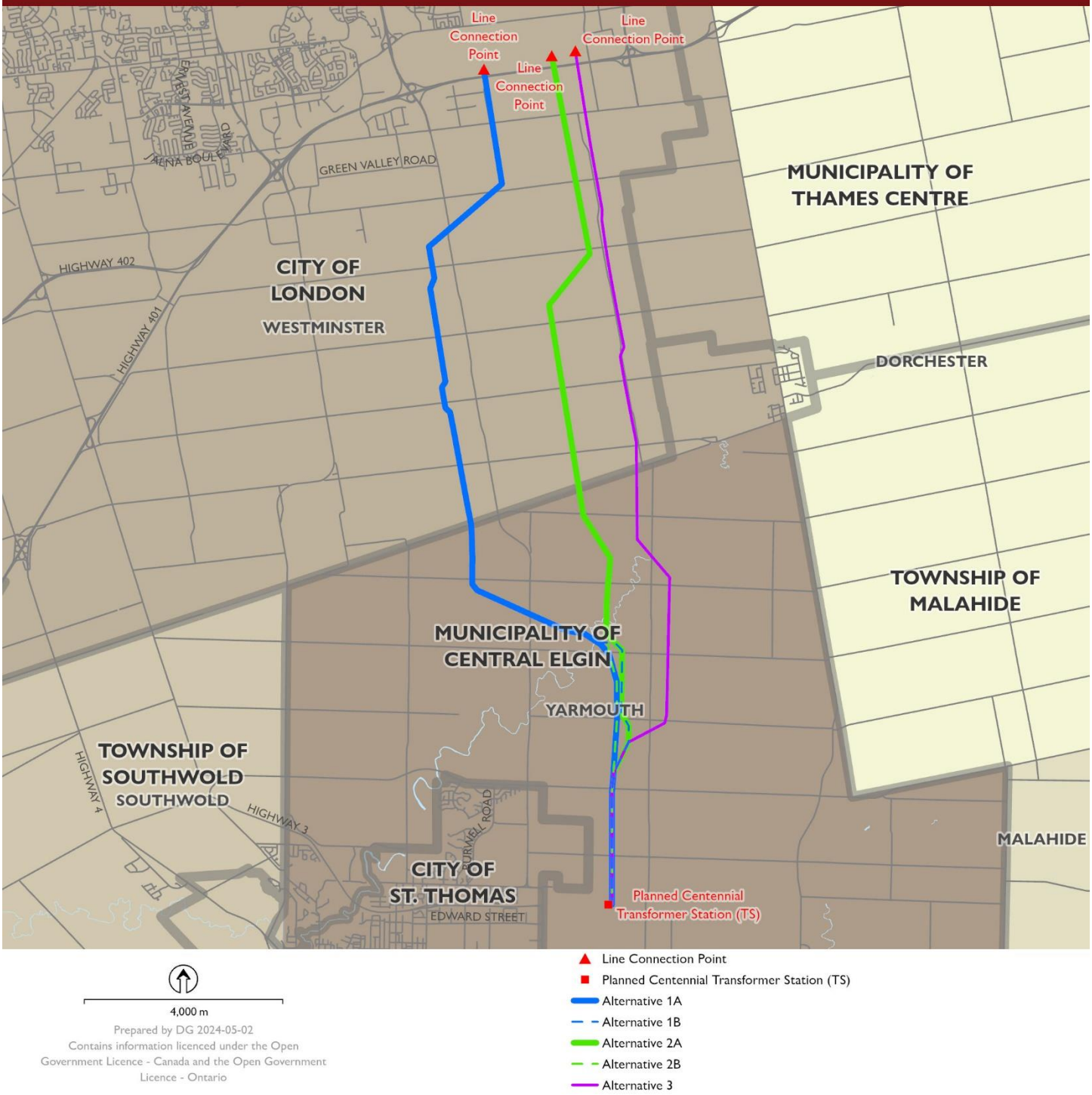
1864 *Tremaine's Map of the County of Elgin*

Whebell, C.F.J.

1992 *The London Strategem: From Concept to Consumation, 1791-1855*. In *Simcoe's Choice: Celebrating London's Bicentennial 1793-1993*. Guy St-Denis, ed. Pp. 31-66. Toronto: Dundurn Press.

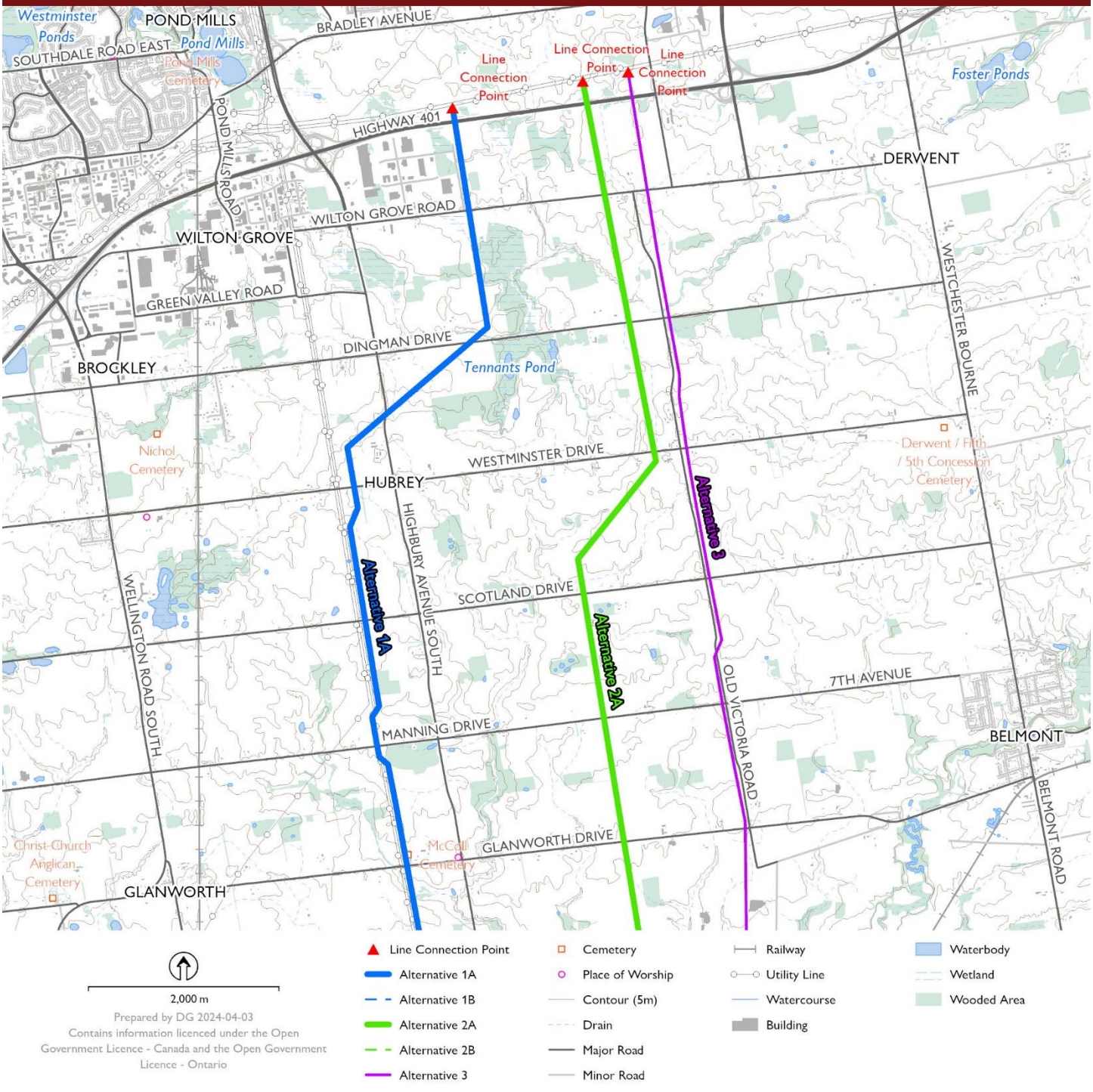
8 MAPS

PROJECT OVERVIEW



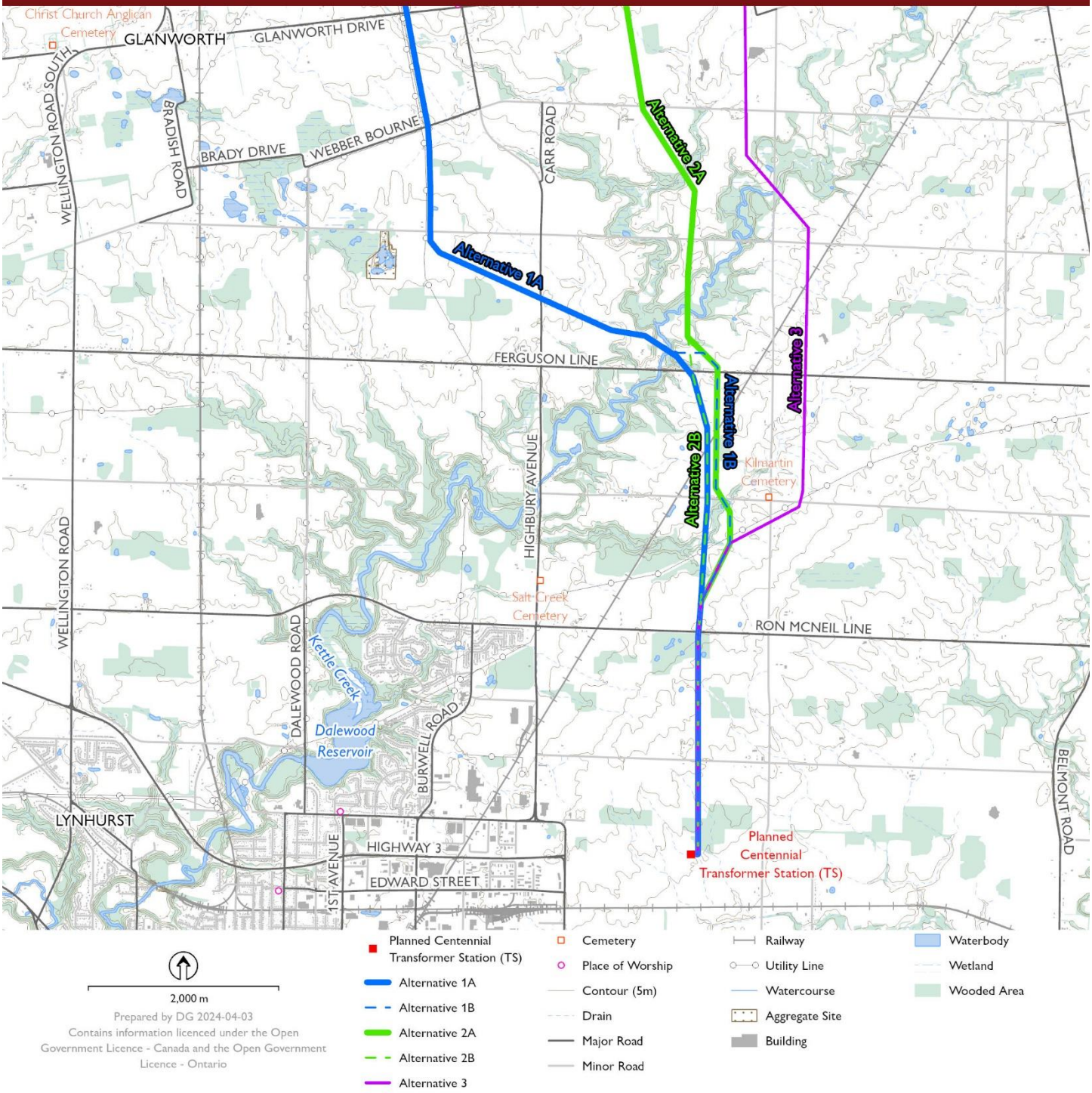
Map 1: Location of the Project Area in The City of London, Municipality of Central Elgin and City of St. Thomas, ON

PROJECT LOCATION



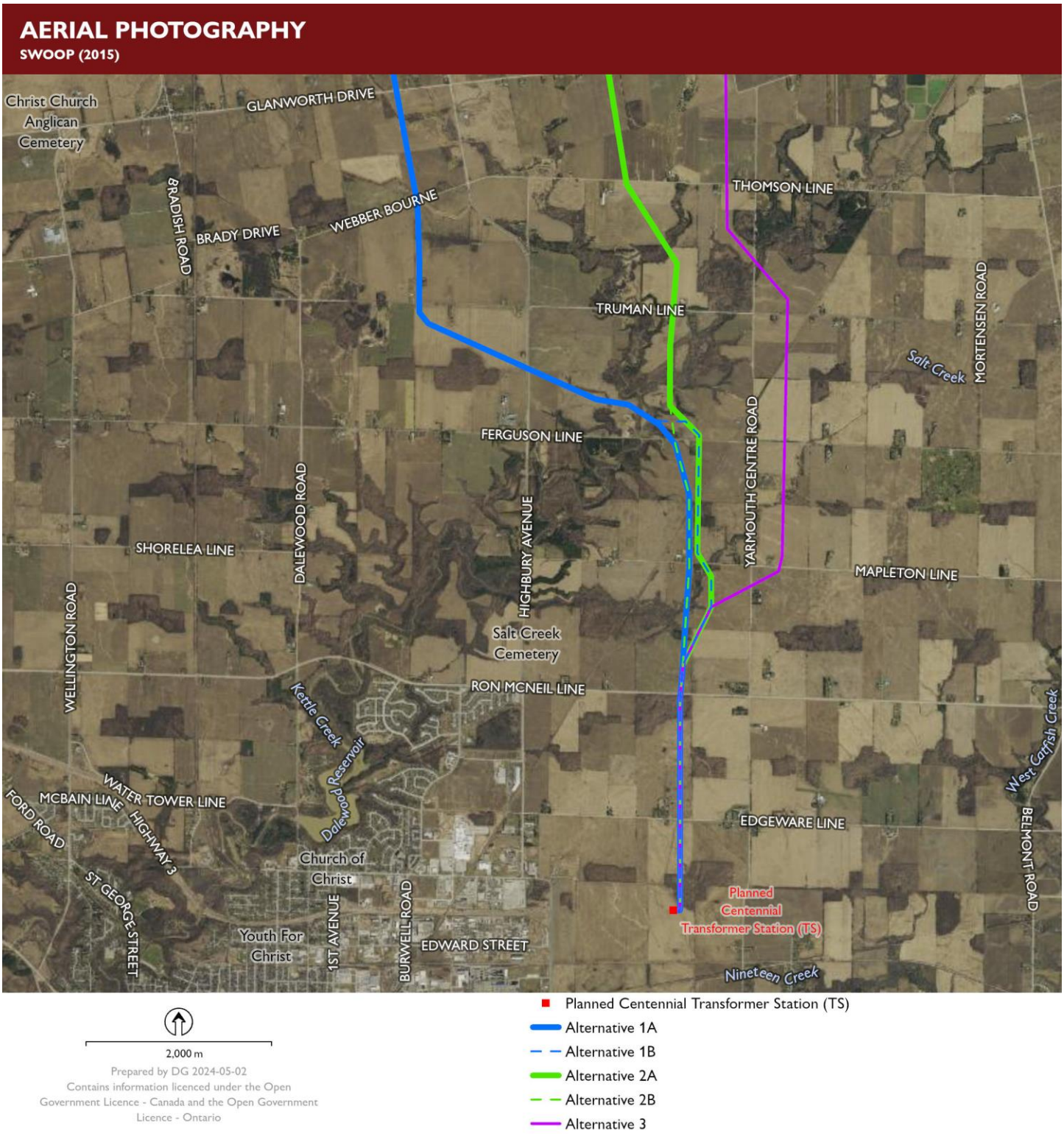
Map 2: Location of the Project Area and Route Alternatives (North Half)

PROJECT LOCATION

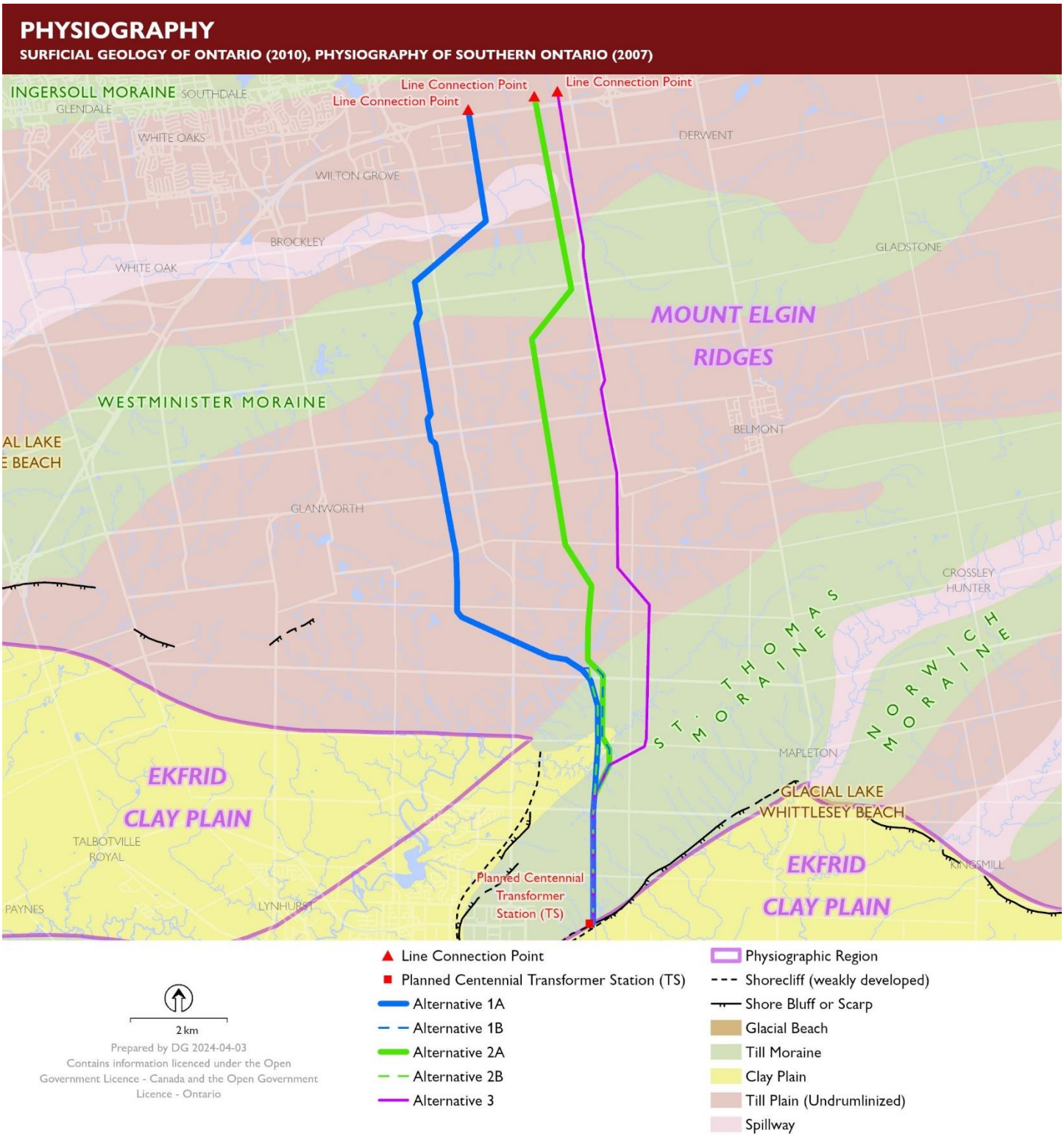


Map 3: Location of the Project Area and Route Alternatives (South Half)

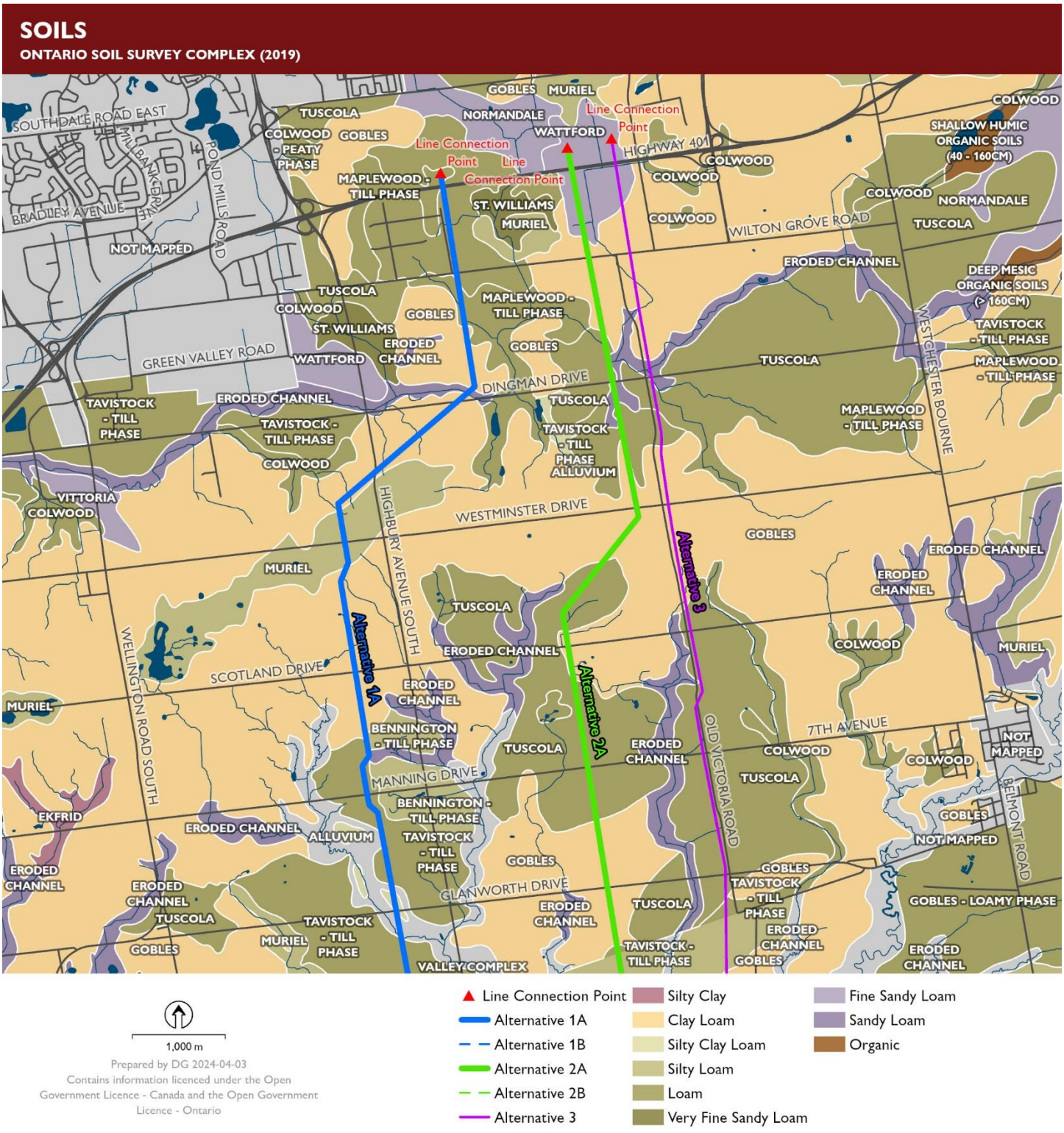
Map 4: Location of the Project Area and Route Alternatives (North Half)



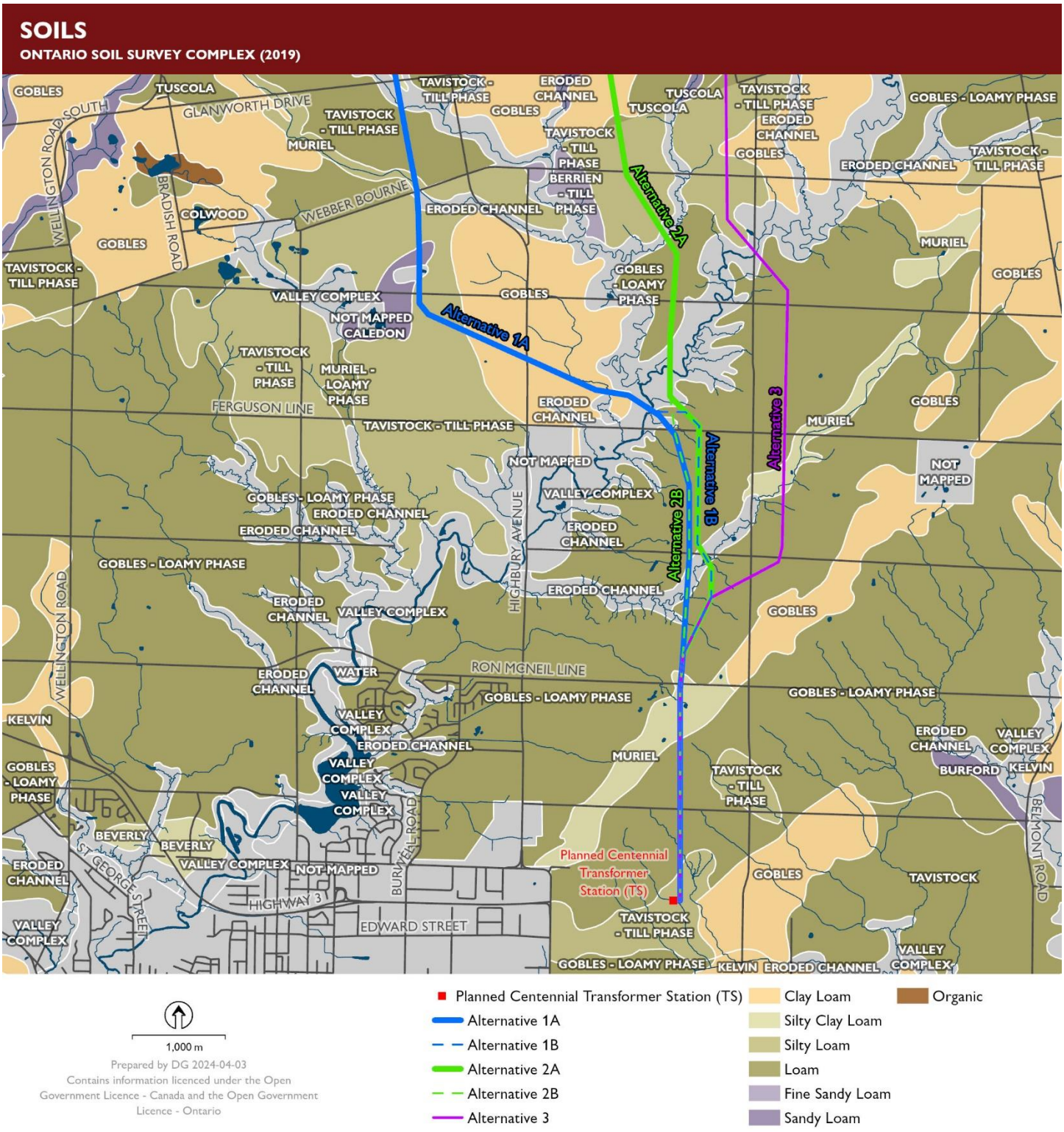
Map 5: Location of the Project Area and Route Alternatives (South Half)



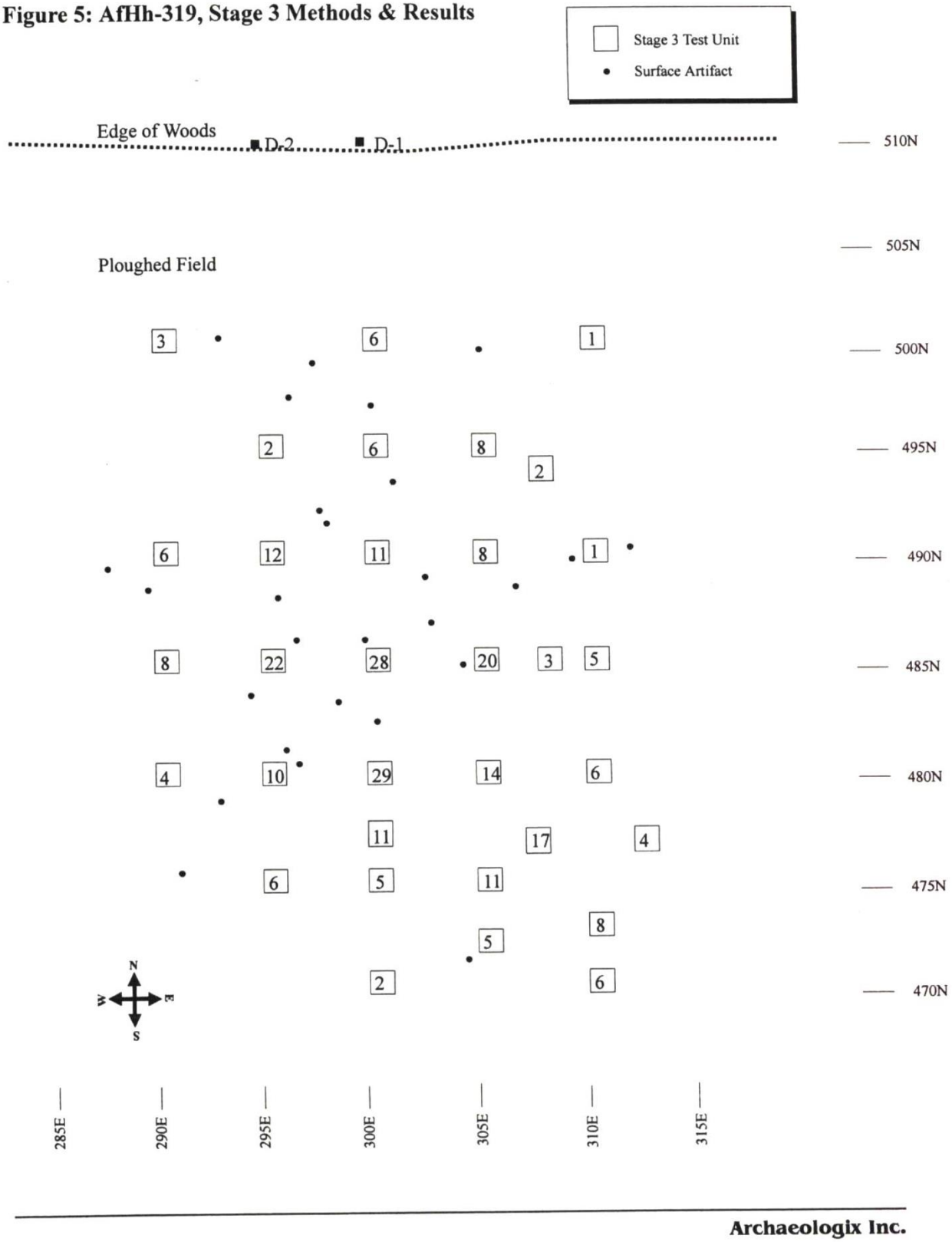
Map 6: Physiography Within the Vicinity of the Project Area



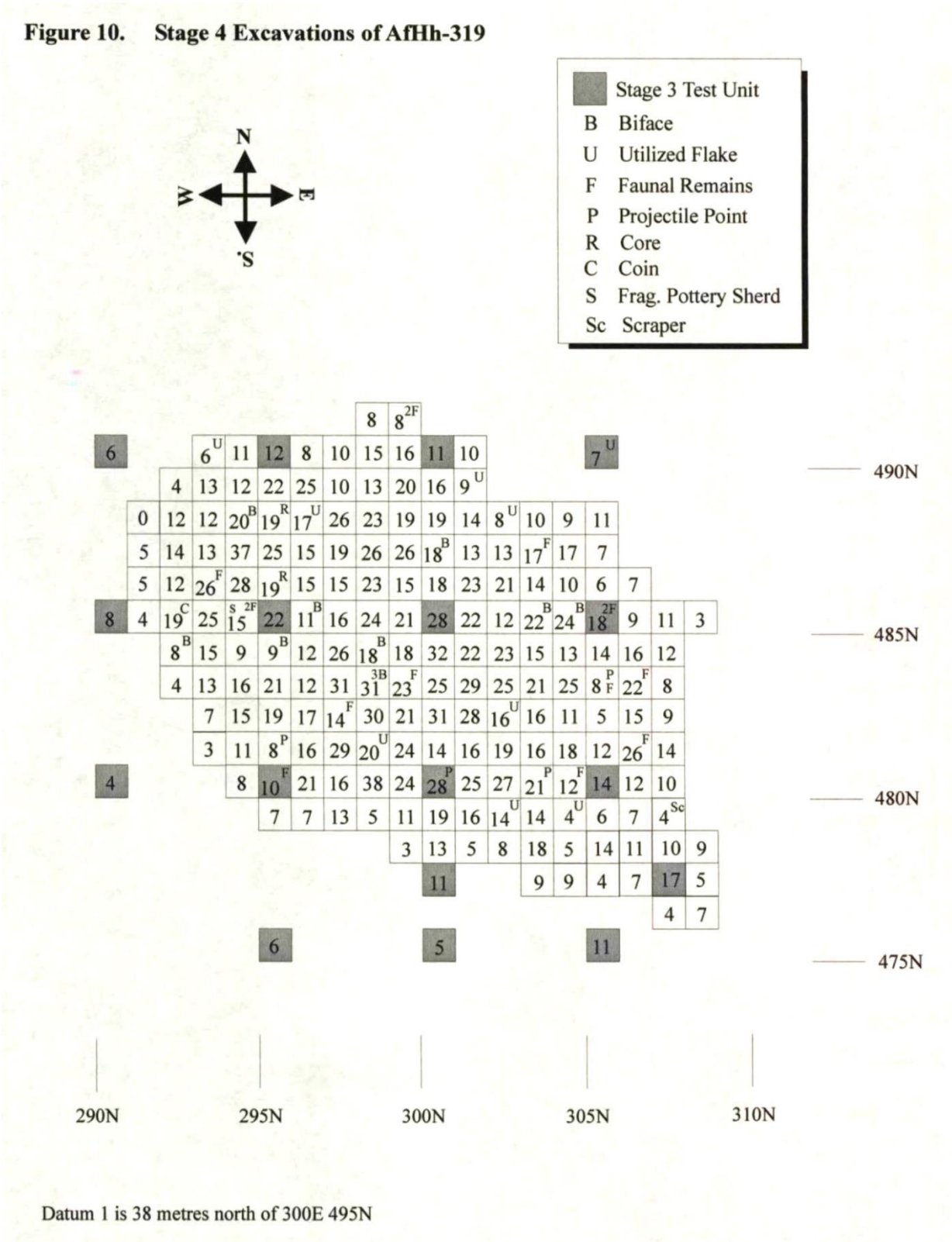
Map 7: Soils Within the Vicinity of the Project Area (North Half)



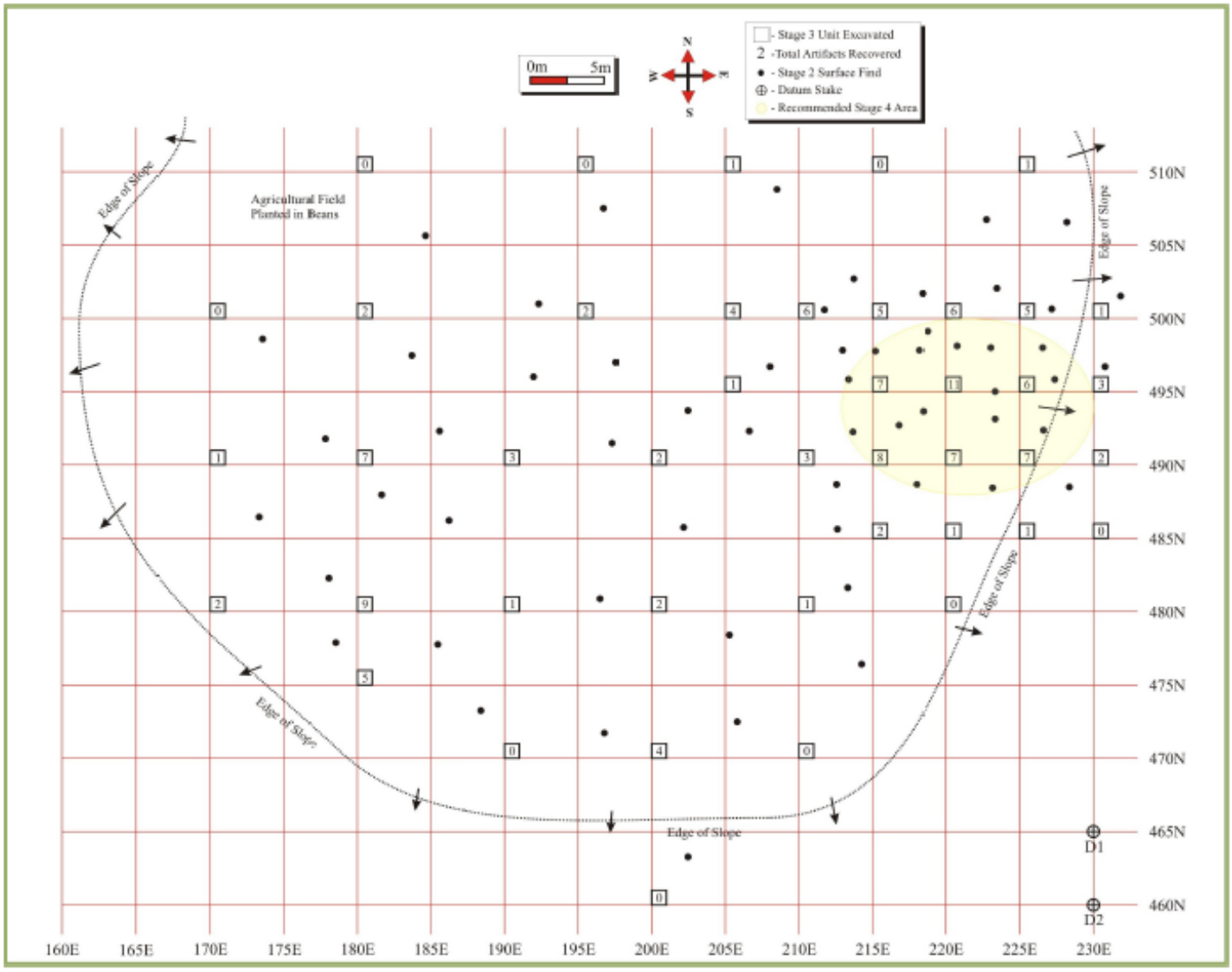
Map 8: Soils Within the Vicinity of the Project Area (South Half)



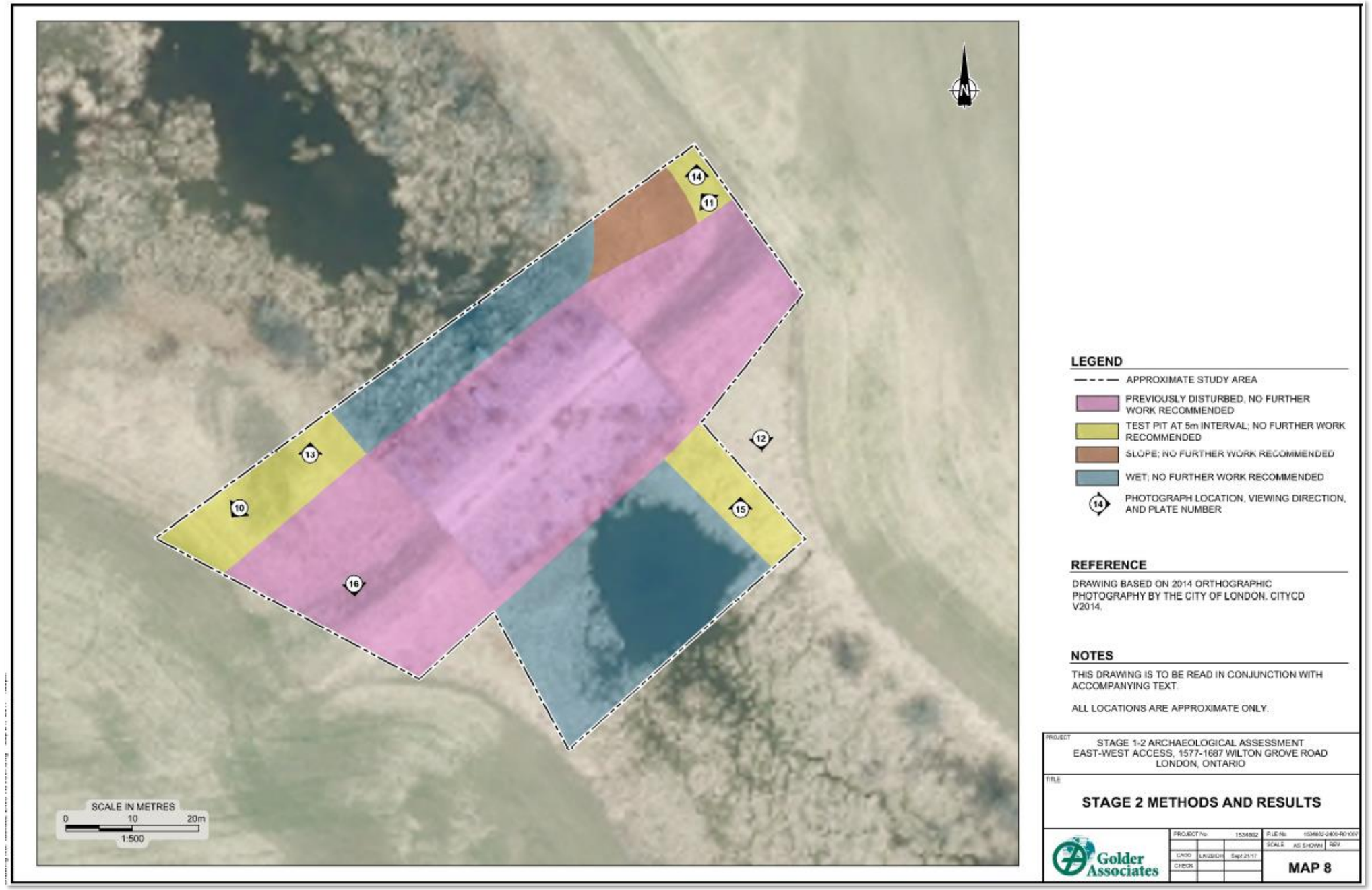
Map 9: AfHh-319 Stage 3 Results (Archaeologix 2001b)



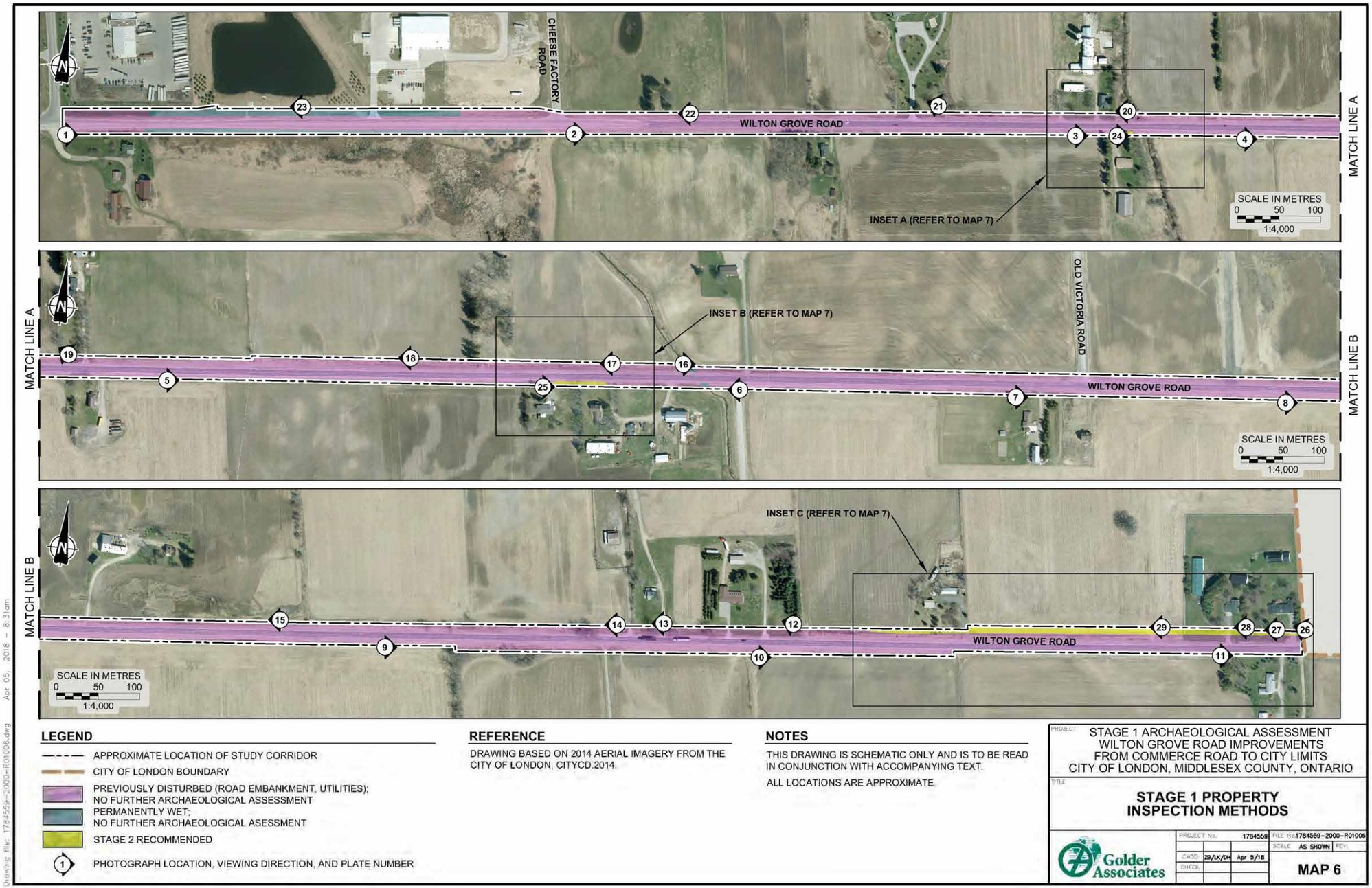
Map 10: AfHh-319 Stage 4 Results (Archaeologix 2001c)



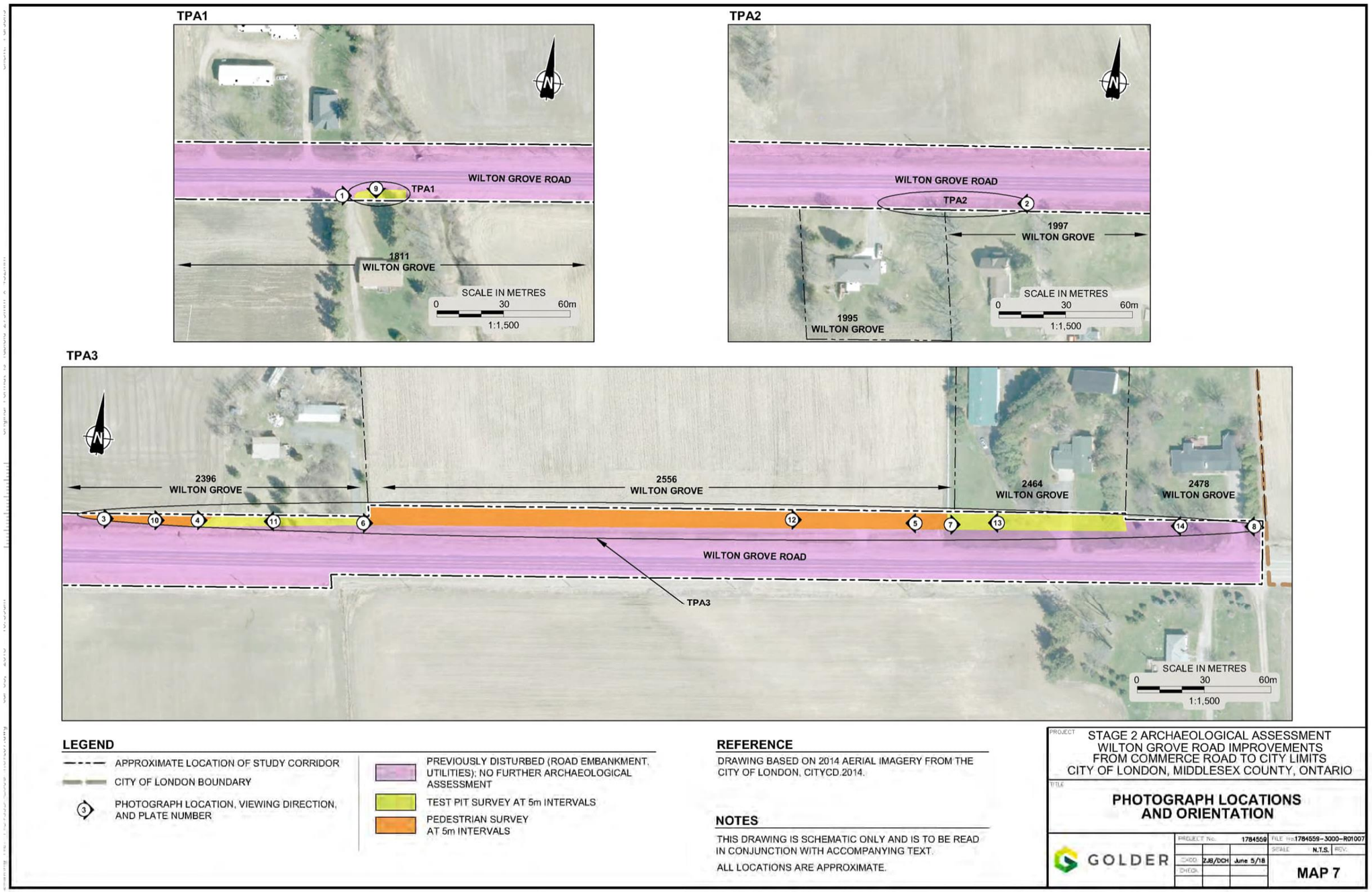
Map 11: AfHg-168 Stage 3 Results (Archaeologix 2008b)



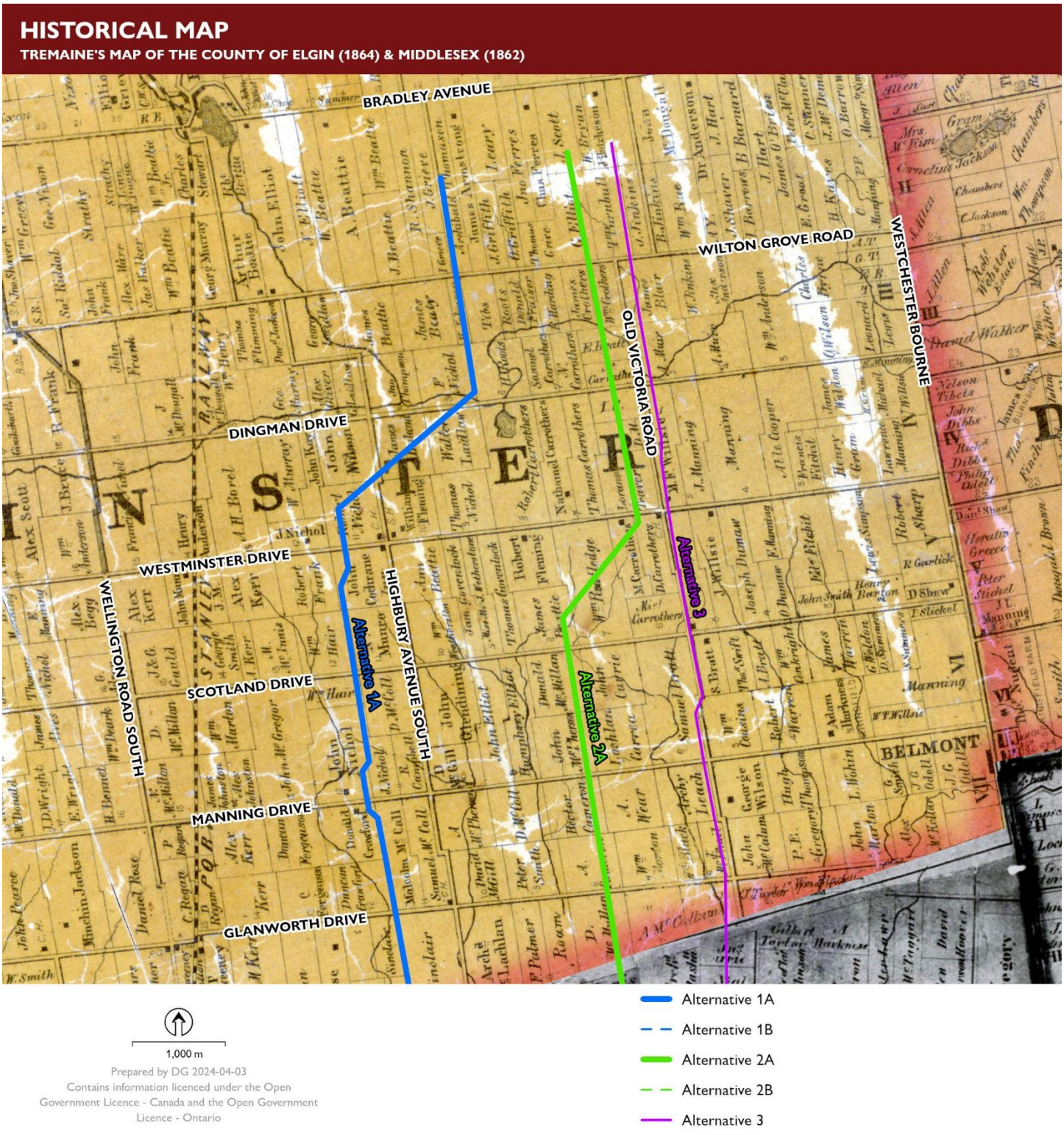
Map 12: 1577-1687 Wilton Grove Road East-West Access Stage 1-2 Results (Golder 2017b)



Map 13: Wilton Grove Road Improvements Stage 1 Results (Golder 2018a)

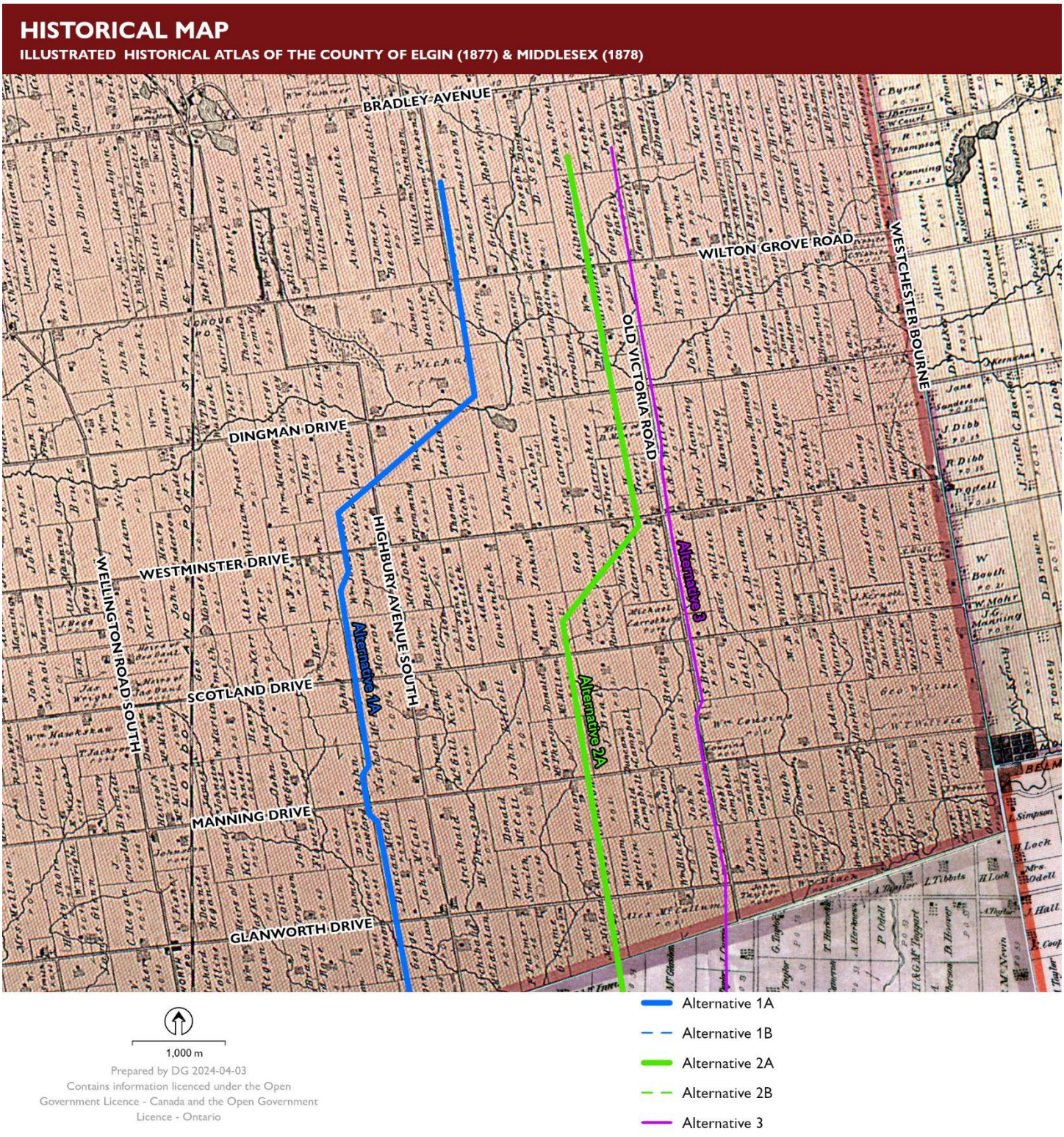


Map 14: Wilton Grove Road Improvements Stage 2 Results (Golder 2018b)

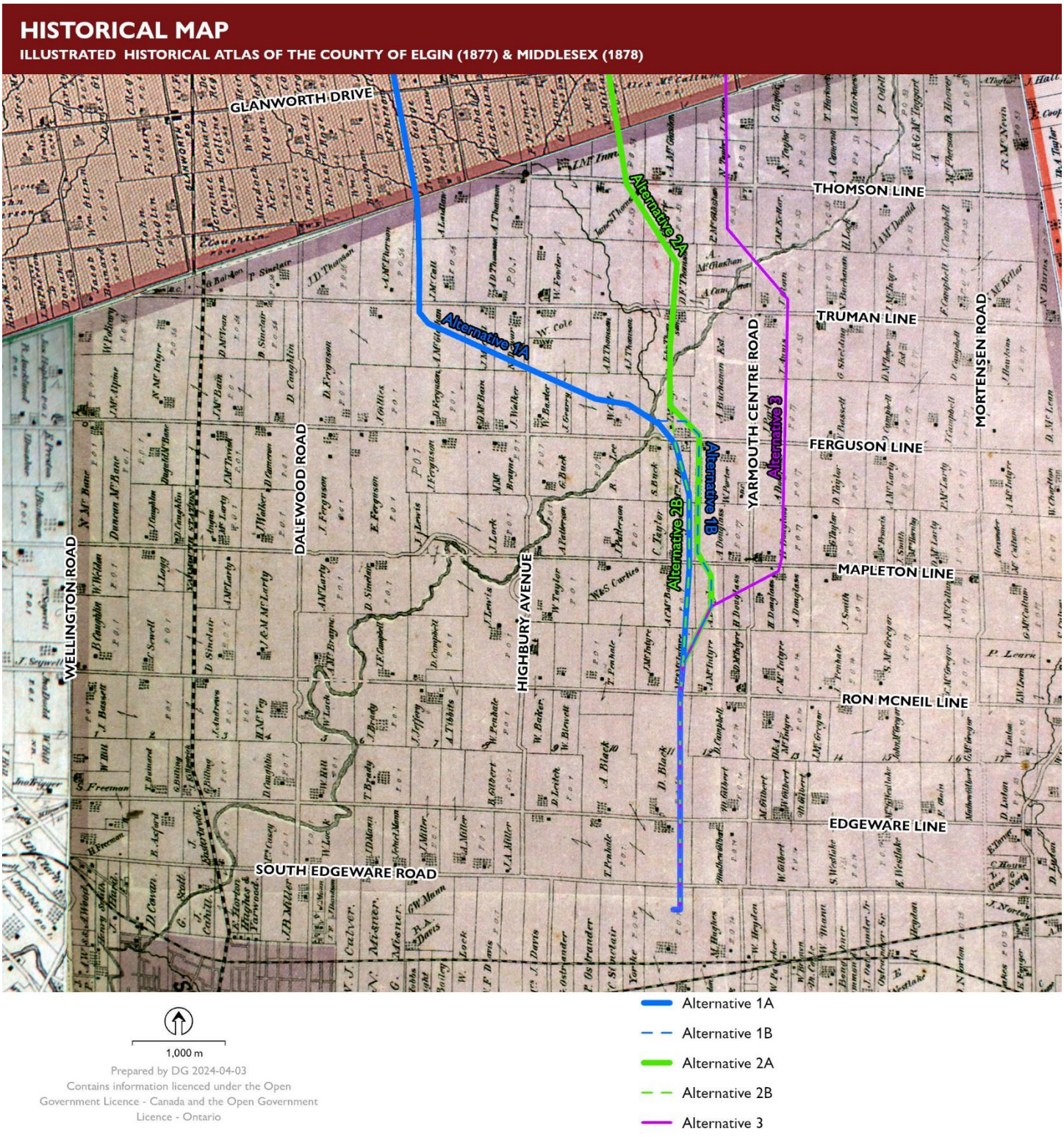


Map 15: Project Area Shown on the 1862/1864 Tremaine Map (North Portion)

Map 16: Project Area Shown on the 1862/1864 Tremaine Map (South Portion)

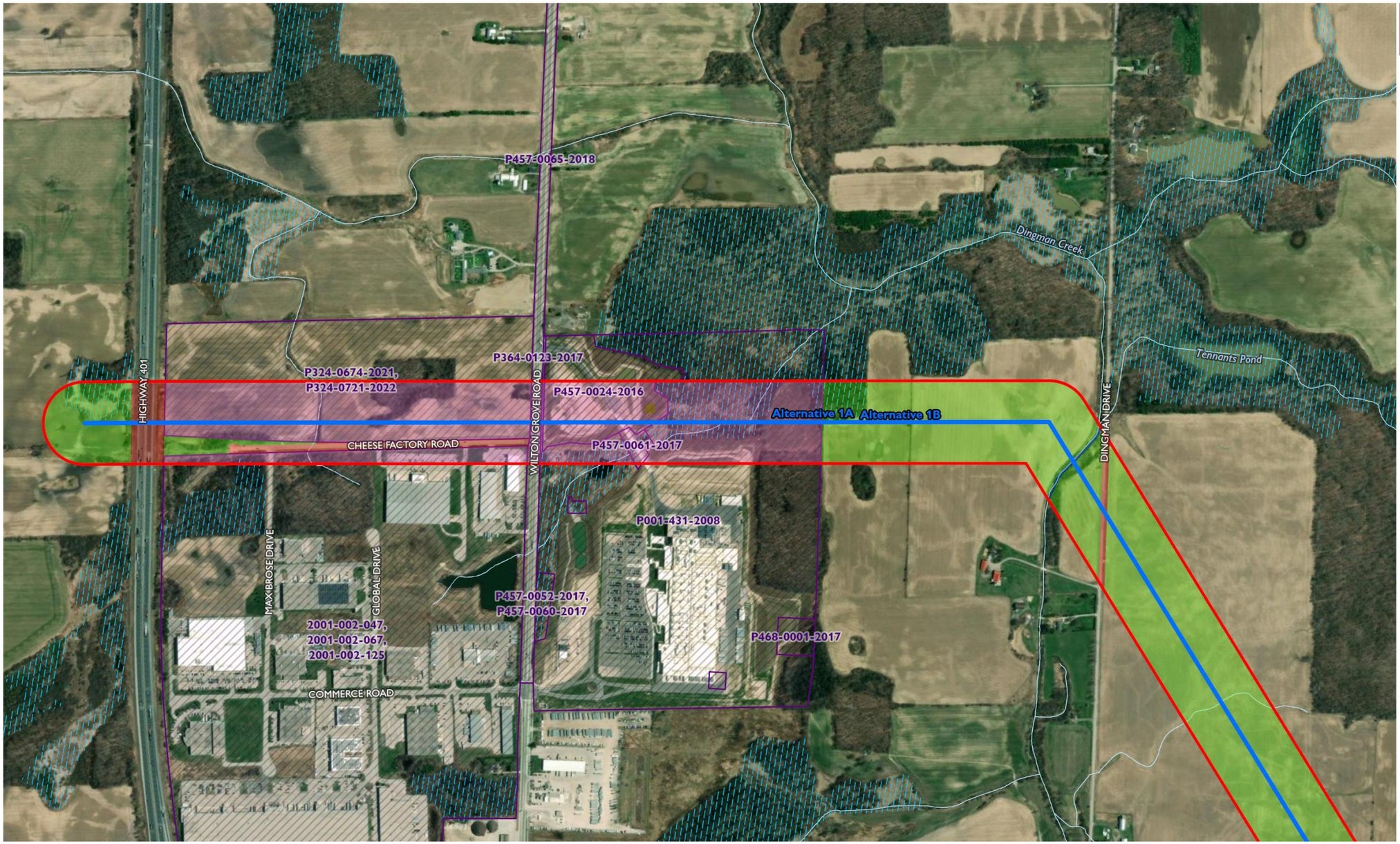


Map 17: Project Area Shown on the 1877/1878 Historic Atlas Map (North Portion)



Map 18: Project Area Shown on the 1877/1878 Historic Atlas Map (South Portion)

Map 19: Location of McColl Cemetery within the Project Area



STAGE 1 RESULTS & RECOMMENDATIONS

- Study Area

ROUTE ALTERNATIVES

- Alternative 1A
- Alternative 1B
- Railway
- Wetland
- Previously Assessed

STAGE 1 ASSESSMENT RESULTS

- Previously Assessed (Further Assessment Required)
- Previously Assessed (No Assessment Required)

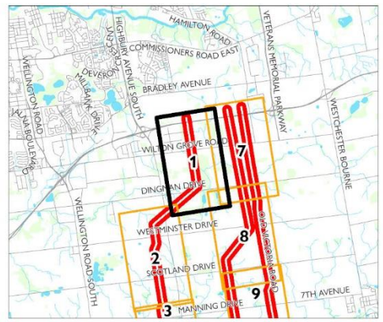
Areas of Archaeological Potential

- Stage 2 Required

Areas of Low Archaeological Potential (No Assessment Required)

- Disturbed (Built Structures, Roads)
- Low-Lying/Wet

Page 1 of 11



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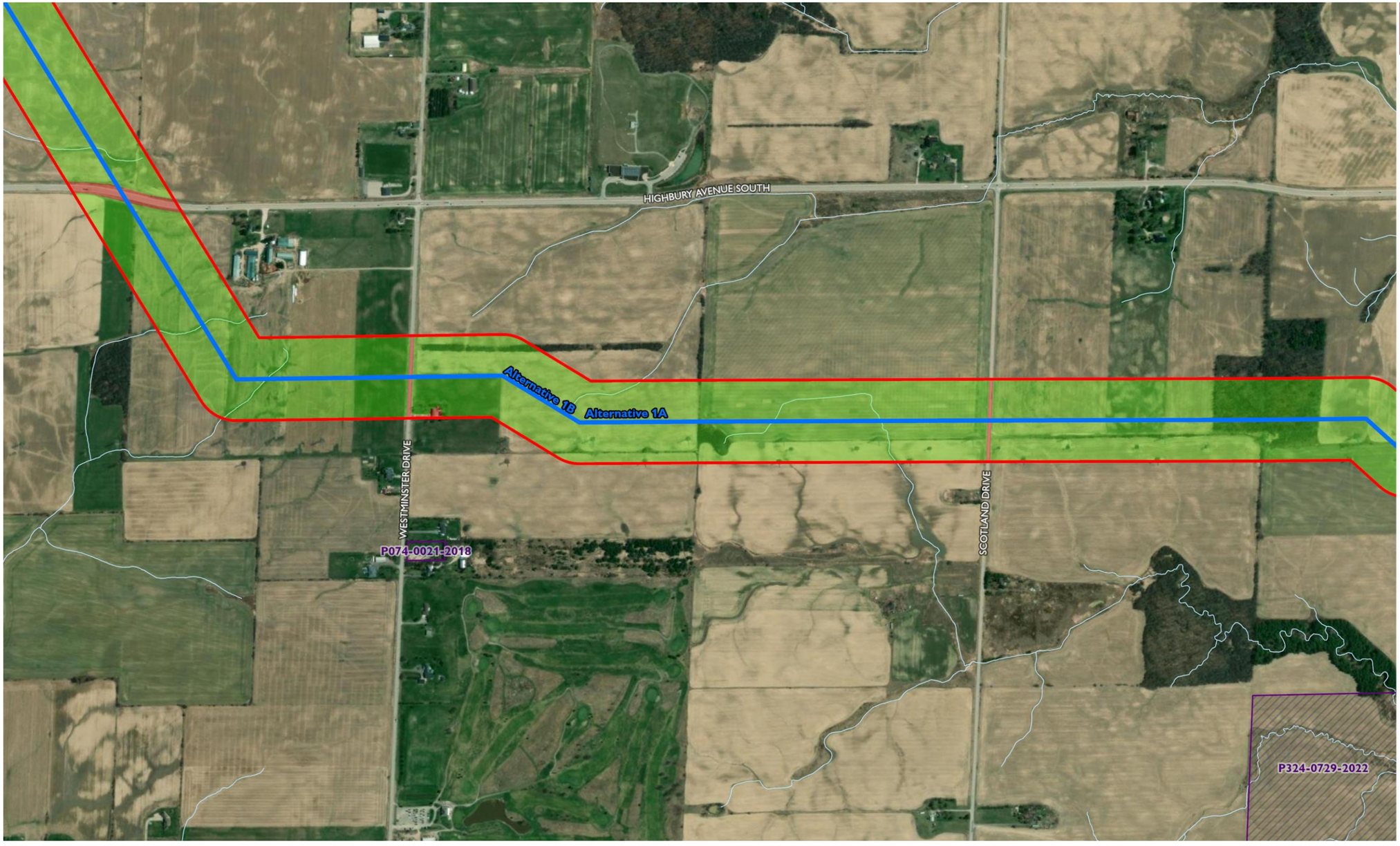
Map 20: Areas of Archaeological Potential (Segment 1 of 11)



STAGE 1 RESULTS & RECOMMENDATIONS

- Study Area

ROUTE ALTERNATIVES

- Alternative 1A
- Alternative 1B
- Railway
- Previously Assessed

STAGE 1 ASSESSMENT RESULTS

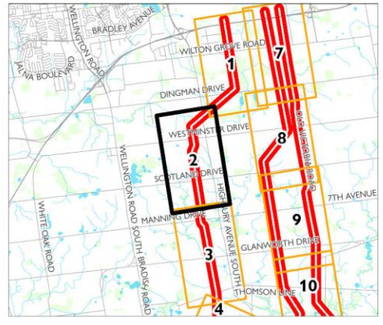
Areas of Archaeological Potential

- Stage 2 Required

Areas of Low Archaeological Potential (No Assessment Required)

- Disturbed (Built Structures, Roads)

Page 2 of 11



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Map 21: Areas of Archaeological Potential (Segment 2 of 11)

STAGE 1 RESULTS & RECOMMENDATIONS

- Study Area

ROUTE ALTERNATIVES

- Alternative 1A
- Alternative 1B
- Railway
- Wetland
- Previously Assessed
- Cemetery Boundary
- Cemetery - Stage 1 Assessment Required

STAGE 1 ASSESSMENT RESULTS

Areas of Archaeological Potential

- Stage 2 Required

Areas of Low Archaeological Potential (No Assessment Required)

- Disturbed (Built Structures, Roads)
- Low-Lying/Wet

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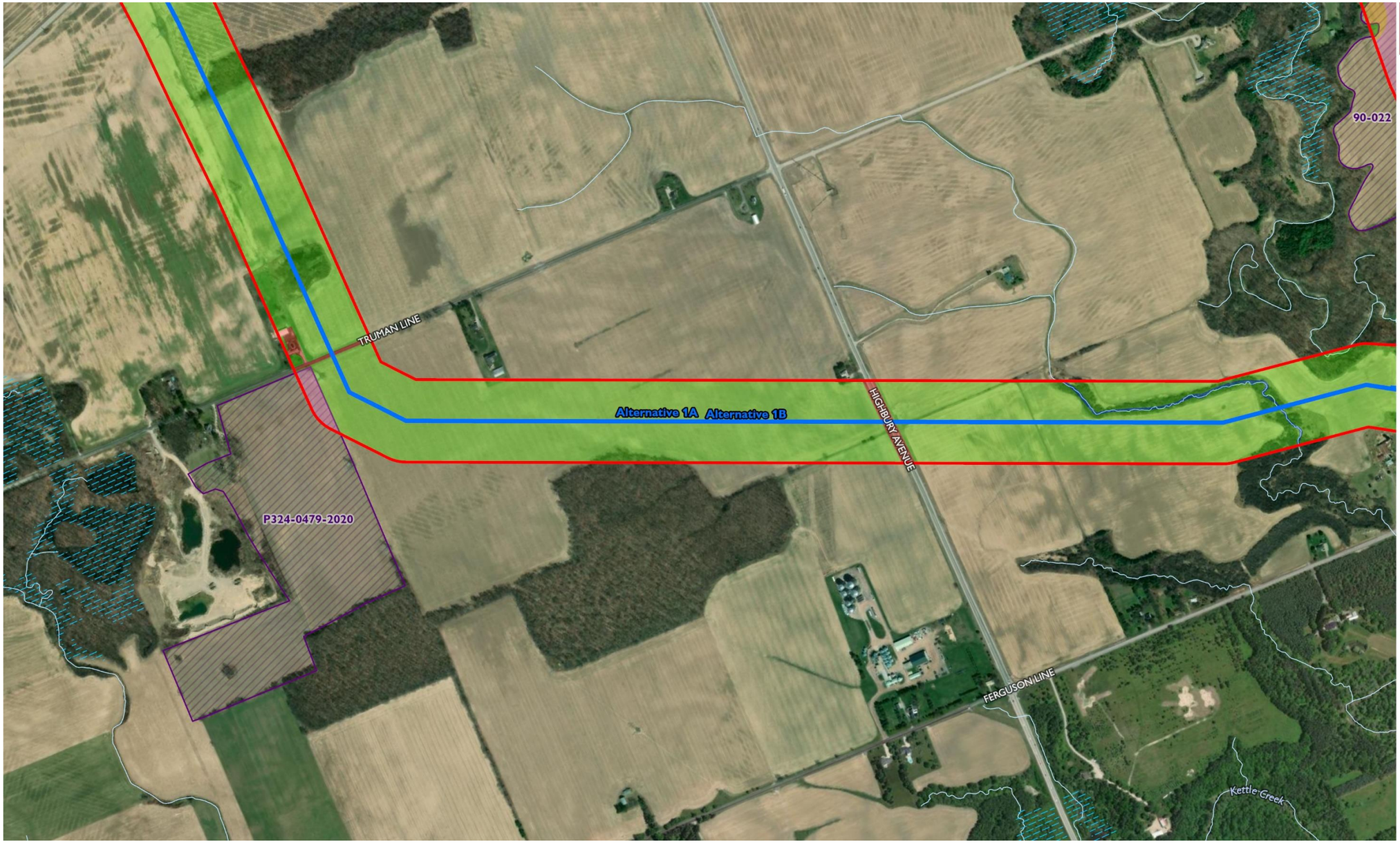
Map 22: Areas of Archaeological Potential (Segment 3 of 11)



STAGE 1 RESULTS & RECOMMENDATIONS

- Study Area

ROUTE ALTERNATIVES

- Alternative 1A
- Alternative 1B
- Railway
- Wetland
- Previously Assessed

STAGE 1 ASSESSMENT RESULTS

- Previously Assessed (Further Assessment Required)
- Previously Assessed (No Assessment Required)

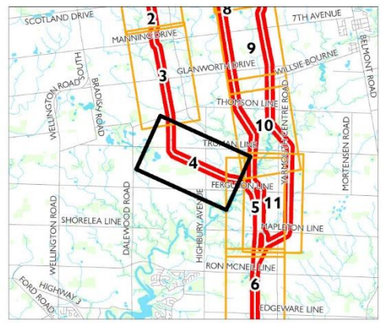
Areas of Archaeological Potential

- Stage 2 Required

Areas of Low Archaeological Potential (No Assessment Required)

- Disturbed (Built Structures, Roads)
- Low-Lying/Wet

Page 4 of 11



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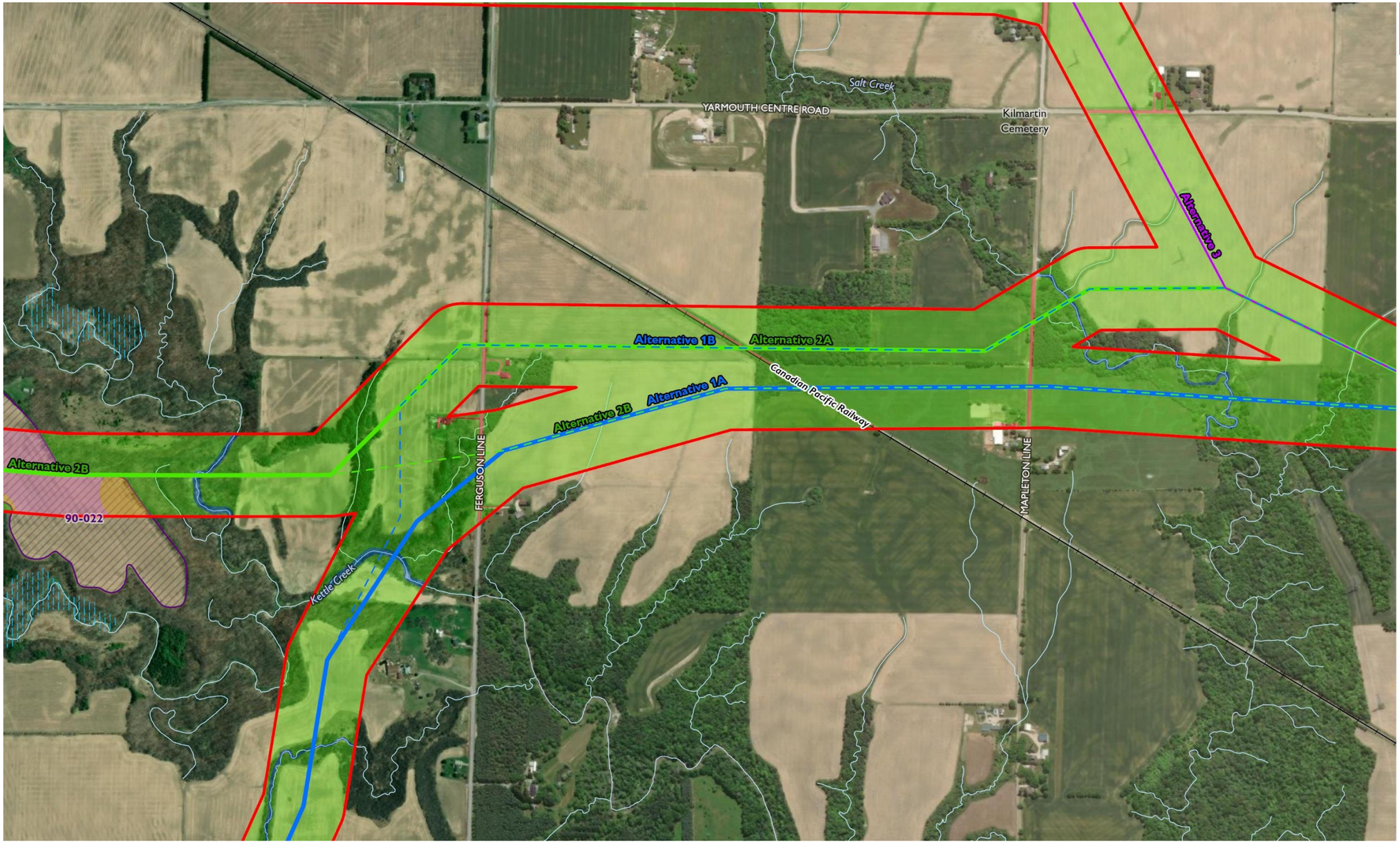
Map 23: Areas of Archaeological Potential (Segment 4 of 11)



STAGE 1 RESULTS & RECOMMENDATIONS

- Study Area

ROUTE ALTERNATIVES

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Railway
- Wetland
- Previously Assessed

STAGE 1 ASSESSMENT RESULTS

- Previously Assessed (Further Assessment Required)
- Previously Assessed (No Assessment Required)

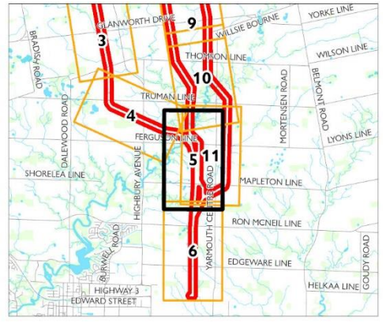
Areas of Archaeological Potential

- Stage 2 Required

Areas of Low Archaeological Potential (No Assessment Required)

- Disturbed (Built Structures, Roads)
- Low-Lying/Wet

Page 5 of 11



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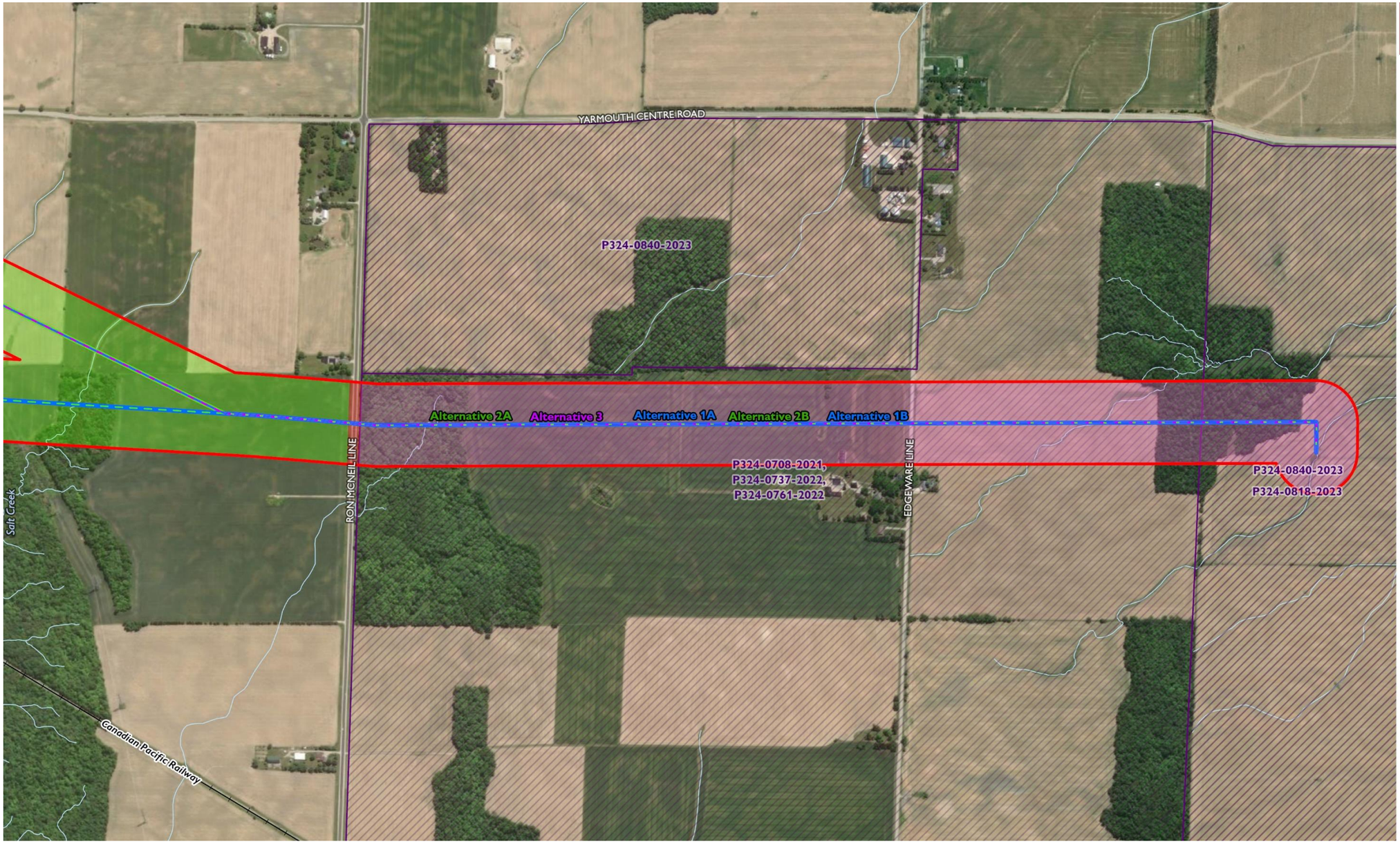
Map 24: Areas of Archaeological Potential (Segment 5 of 11)



STAGE 1 RESULTS & RECOMMENDATIONS

- Study Area

ROUTE ALTERNATIVES

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Railway
- Previously Assessed

STAGE 1 ASSESSMENT RESULTS

- Previously Assessed (No Assessment Required)

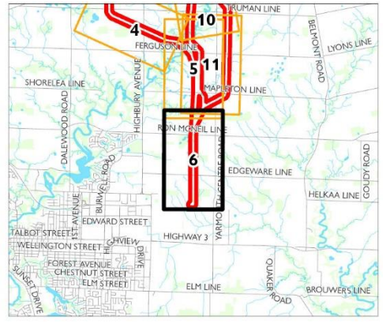
Areas of Archaeological Potential

- Stage 2 Required

Areas of Low Archaeological Potential (No Assessment Required)

- Disturbed (Built Structures, Roads)

Page 6 of 11



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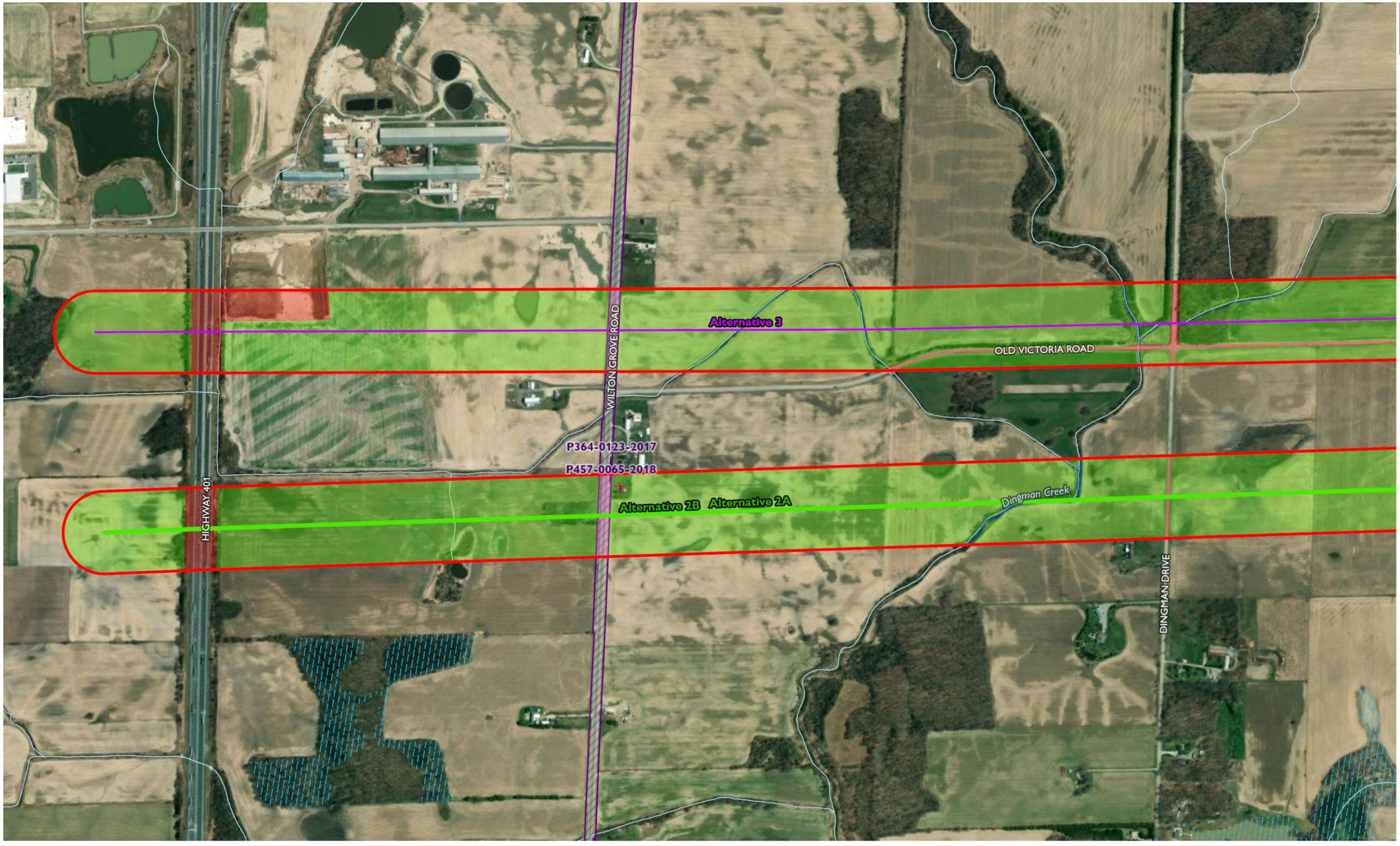
Map 25: Areas of Archaeological Potential (Segment 6 of 11)



STAGE 1 RESULTS & RECOMMENDATIONS

- Study Area

ROUTE ALTERNATIVES

- Alternative 2A
- Alternative 2B
- Alternative 3
- Railway
- Wetland
- Previously Assessed

STAGE 1 ASSESSMENT RESULTS

- Previously Assessed (No Assessment Required)

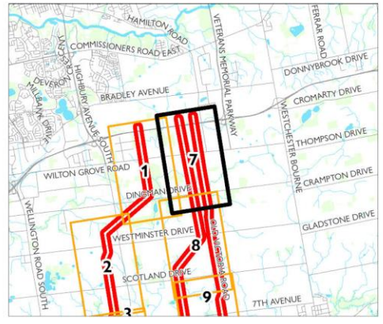
Areas of Archaeological Potential

- Stage 2 Required

Areas of Low Archaeological Potential (No Assessment Required)

- Disturbed (Built Structures, Roads)
- Low-Lying/Wet

Page 7 of 11



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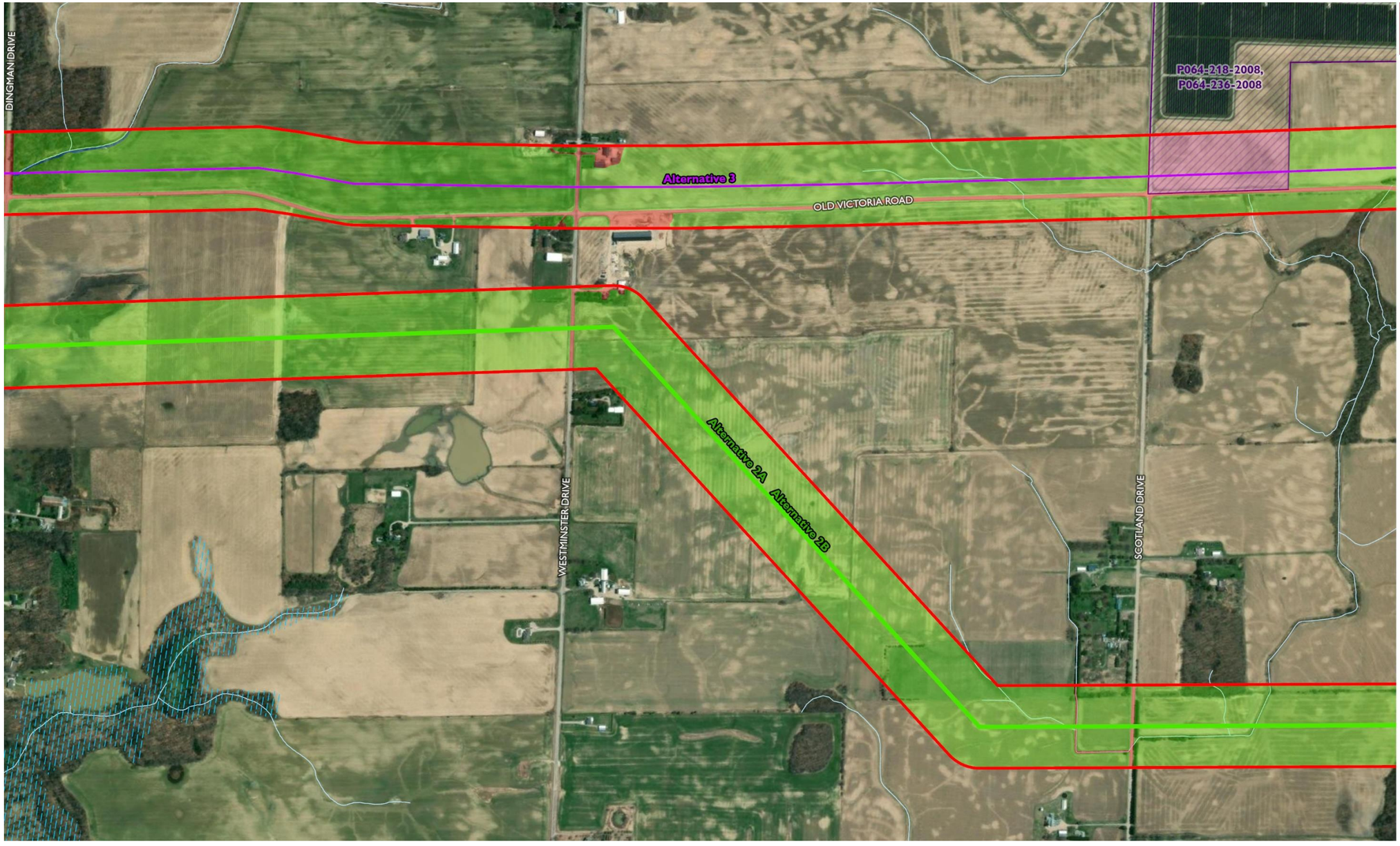
Map 26: Areas of Archaeological Potential (Segment 7 of 11)



STAGE 1 RESULTS & RECOMMENDATIONS

- Study Area

ROUTE ALTERNATIVES

- Alternative 2A
- Alternative 2B
- Alternative 3
- Railway
- Wetland
- Previously Assessed

STAGE 1 ASSESSMENT RESULTS

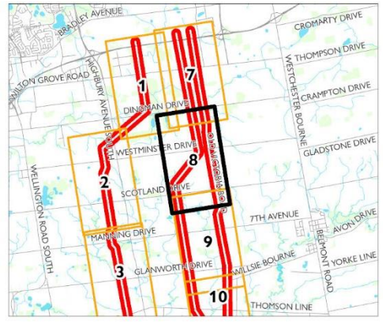
- Previously Assessed (No Assessment Required)

Areas of Archaeological Potential

- Stage 2 Required

Areas of Low Archaeological Potential (No Assessment Required)

- Disturbed (Built Structures, Roads)
- Low-Lying/Wet



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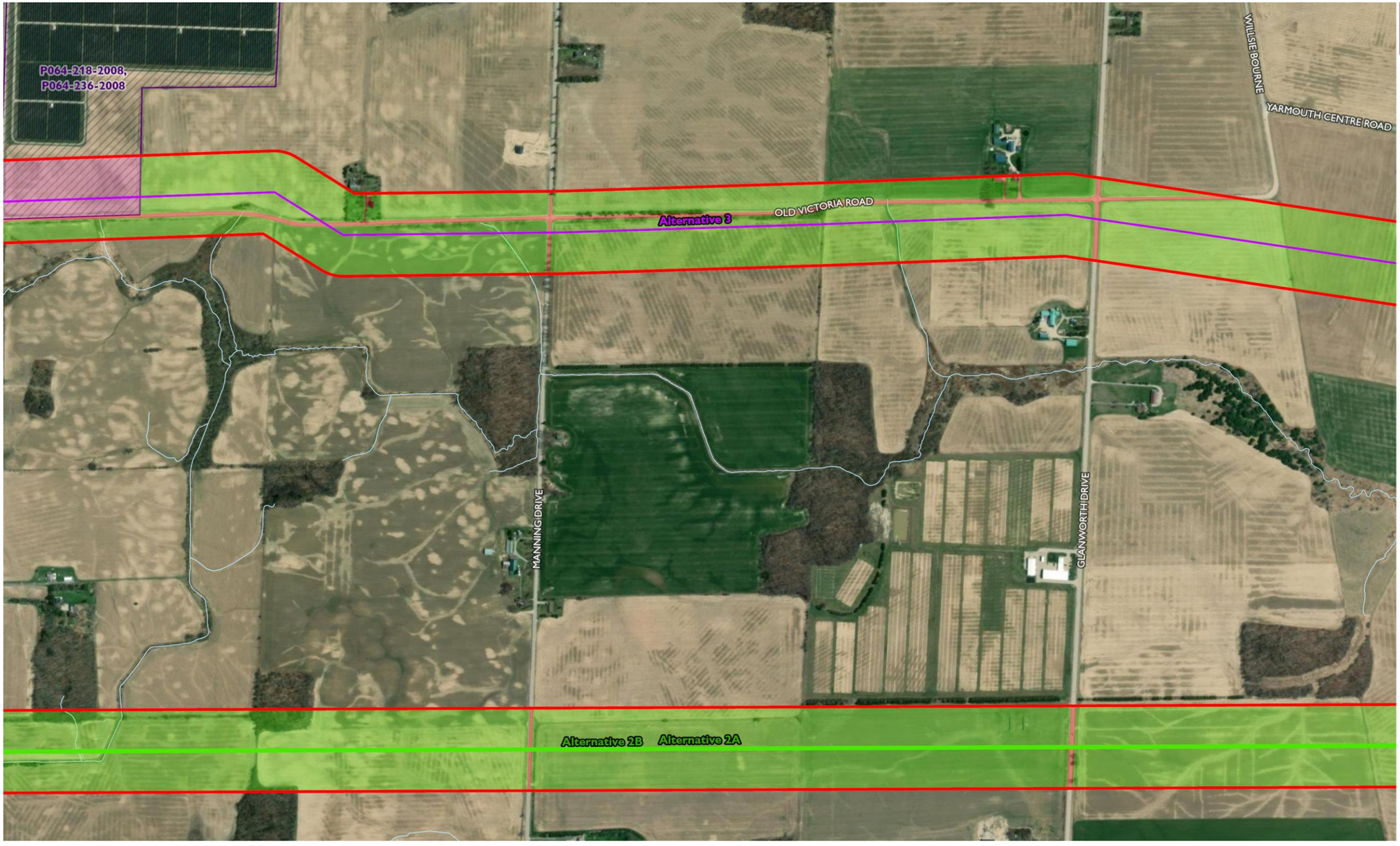
Map 27: Areas of Archaeological Potential (Segment 8 of 11)



STAGE 1 RESULTS & RECOMMENDATIONS

- Study Area

ROUTE ALTERNATIVES

- Alternative 2A
- Alternative 2B
- Alternative 3
- Railway
- Previously Assessed

STAGE 1 ASSESSMENT RESULTS

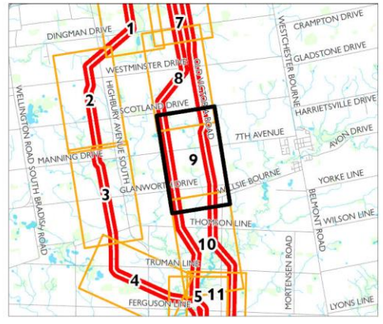
- Previously Assessed (No Assessment Required)

Areas of Archaeological Potential

- Stage 2 Required

Areas of Low Archaeological Potential (No Assessment Required)

- Disturbed (Built Structures, Roads)



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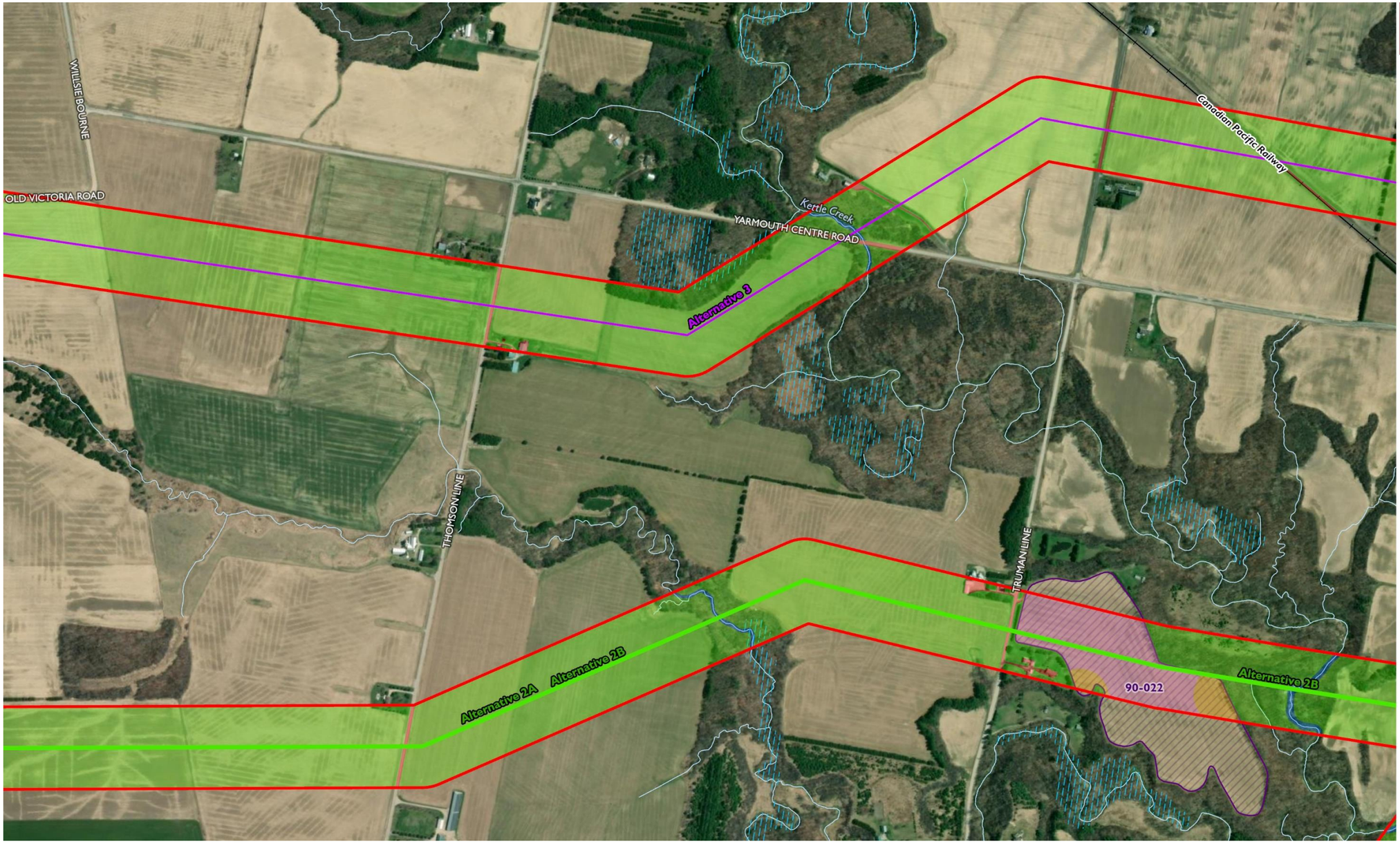
Prepared by DG 2024-05-07

Map 28: Areas of Archaeological Potential (Segment 9 of 11)



STAGE 1 RESULTS & RECOMMENDATIONS

- Study Area

ROUTE ALTERNATIVES

- Alternative 2A
- Alternative 2B
- Alternative 3
- Railway
- Wetland
- Previously Assessed

STAGE 1 ASSESSMENT RESULTS

- Previously Assessed (Further Assessment Required)
- Previously Assessed (No Assessment Required)

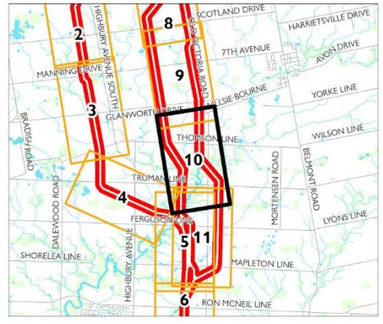
Areas of Archaeological Potential

- Stage 2 Required

Areas of Low Archaeological Potential (No Assessment Required)

- Disturbed (Built Structures, Roads)
- Low-Lying/Wet

Page 10 of 11



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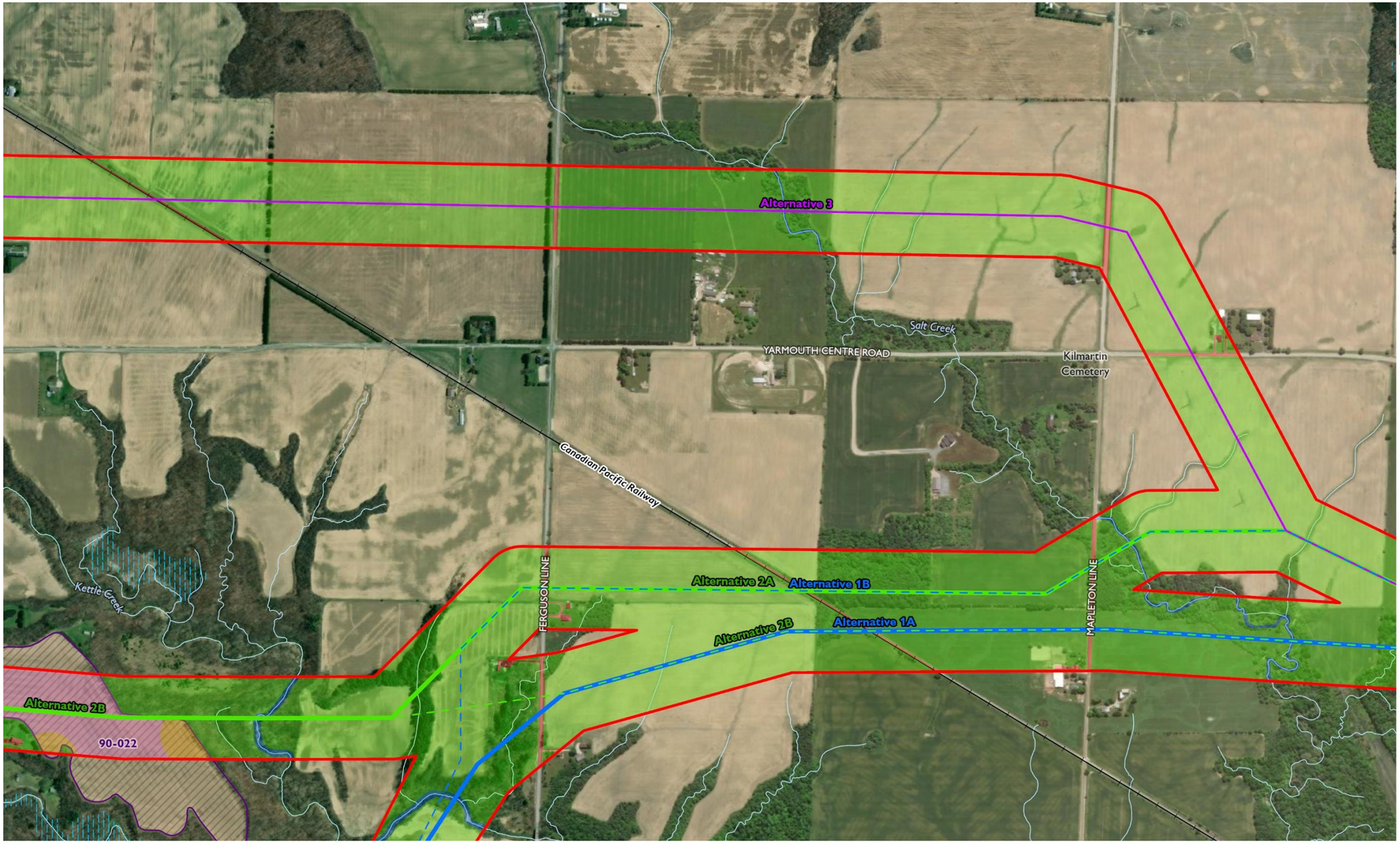
Prepared by DG 2024-05-07

Map 29: Areas of Archaeological Potential (Segment 10 of 11)



STAGE 1 RESULTS & RECOMMENDATIONS

- Study Area

ROUTE ALTERNATIVES

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Railway
- Wetland
- Previously Assessed

STAGE 1 ASSESSMENT RESULTS

- Previously Assessed (Further Assessment Required)
- Previously Assessed (No Assessment Required)

Areas of Archaeological Potential

- Stage 2 Required

Areas of Low Archaeological Potential (No Assessment Required)

- Disturbed (Built Structures, Roads)
- Low-Lying/Wet

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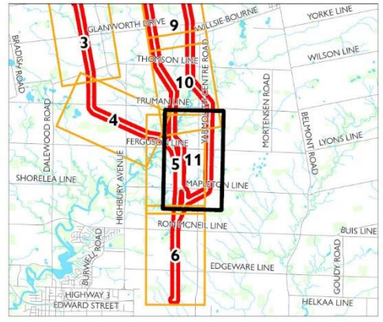

200 m

Prepared by DG 2024-05-07

Map 30: Areas of Archaeological Potential (Segment 11 of 11)

REVISED REPORT

St. Thomas Transmission Line Project

Cultural Heritage Existing Conditions Report

Submitted to:

Hydro One Networks Inc.

Jennifer Trotman, Environmental Planner

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May 16, 2025

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Executive Summary

The Executive Summary summarizes only the key points of the report. For a complete account of the results and conclusions, as well as the limitations of this study, the reader should examine the report in full.

In May 2024, Hydro One Networks Inc. (Hydro One) retained WSP Canada Inc. (WSP) to provide a Cultural Heritage Existing Conditions (CHEC) report to support the St. Thomas Transmission Line Project to construct a new, approximately 20-kilometre (km), double-circuit 230 kilovolt (kV) transmission line from the City of London to the planned Centennial Transformer Station (TS) in the City of St. Thomas, Ontario (the Project). The Project is subject to the *Class Environmental Assessment for Transmission Facilities* (Hydro One 2024). The objective of the CHEC is to help characterize the study area environment by identifying known and potential built heritage resources (BHRs) or cultural heritage landscapes (CHLs) and to assist Hydro One to select the preferred route for the new transmission line.

The study area is defined as five alternative routes, plus a buffer of 120 metres (m) on either side of each centreline[1]. The five high-level alternative routes for the Project are:

- Route 1A
- Route 1B
- Route 2A
- Route 2B
- Route 3

Routes 1A and 1B start at the south end of the City of London, just north of Highway 401, travel through the Municipality of Central Elgin, and culminate at the Centennial TS in the City of St. Thomas.

Routes 2A and 2B also start at the south end of the City of London but traverse east of Routes 1A and 1B through the Municipality of Central Elgin before joining Routes 1A and 1B in the City of St. Thomas and culminating at the Centennial TS.

Route 3 also starts at the south end of the City of London but traverses east of Routes 2A and 2B through the Municipality of Central Elgin before joining Routes 1A, 1B, 2A, and 2B in the City of St. Thomas and culminating at the Centennial TS.

Following guidance outlined in Hydro One's 2019 *Cultural Heritage Identification and Evaluation Process* (Hydro One CH I&E Process), as well as the Ministry of Citizenship and Multiculturalism's (MCM) 2022 *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes: A Checklist for the Non-Specialist* (MCM Checklist), and 2010 *Standards and Guidelines for the Conservation of Provincial Heritage Properties* (MCM S&Gs), this CHEC:

- Provides a background on the relevant provincial and municipal legislation and policies for cultural heritage.
- Outlines the methods used to identify BHRs and CHLs in the study area.

[1] Centreline data sourced from 'PCO236621_DIL_RouteAlternatives_V06.kmz' provided to WSP 15 May 2024.

- Identifies from desktop analysis and field investigations the known and potential BHRs and CHLs within the study area; and
- Provides an analysis of each route alternative with respect to the known and potential cultural heritage resources identified.

In total, the study area includes 199 property parcels. Of these, WSP identified 51 individual properties with known or potential cultural heritage value or interest (CHVI) as BHRs or CHLs, as well as two waterways with known CHVI as CHLs. These include:

- Twenty-seven (27) properties assessed at a preliminary level to have potential CHVI as BHRs.
- Twelve (12) properties assessed at a preliminary level to have potential CHVI as CHLs.
- Eleven (11) properties listed (not designated) on the *City of London Register of Cultural Heritage Resources*.
- Two (2) waterways identified through information gathering as known CHLs.
- One (1) property designated under Part IV of the *Ontario Heritage Act* (OHA).

Based on the desktop research, information gathering, fieldwork, and inventory of BHRs and CHLs, WSP has determined that:

- The Route 1A study area includes or crosses 21 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Shared with Route 1B, Route 1A has the second highest number of potentially impacted BHRs and CHLs out of the five route options.
- The Route 1B study area includes or crosses 21 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Shared with Route 1A, Route 1B has the second highest number of potentially impacted BHRs and CHLs out of the five route options.
- The Route 2A study area includes or crosses 22 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Shared with Route 2B, Route 2A has the highest number of potentially impacted BHRs and CHLs out of the five route options.
- The Route 2B study area includes or crosses 22 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Shared with Route 2A, Route 2B has the highest number of potentially impacted BHRs and CHLs out of the five route options.
- The Route 3 study area includes or crosses 20 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Route 3 has the lowest number of potentially impacted BHRs and CHLs out of the five route options.

Since all route alternatives cross or are adjacent to known and/ or potential BHRs and CHLs identified in this CHEC, WSP recommends to:

- Select a preferred alternative for the Project, incorporating the findings of this CHEC; and
- Conduct a Preliminary Impact Assessment (PIA) for the preferred alternative to identify the direct and indirect impacts to the known and potential BHRs and CHLs identified in this CHEC. Based on the impacts identified, the PIA will determine if property specific Cultural Heritage Evaluation Reports (CHERs) or Heritage Impact Assessment (HIAs) are required.

Study Limitations

WSP Canada Inc. (WSP) has prepared this report in a manner consistent with guidance developed by the Ontario Ministry of Citizenship and Multiculturalism subject to the time limits and physical constraints applicable to this report. No other warranty expressed or implied is made.

This report has been prepared for the specific site, design objective, developments and purpose described to WSP by Hydro One Networks Inc. (the Client). The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without WSP's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the Client, WSP may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to WSP. The report, all plans, data, drawings, and other documents as well as electronic media prepared by WSP are considered its professional work product and shall remain the copyright property of WSP, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of WSP. The Client acknowledges the electronic media is susceptible to unauthorized modification, deterioration, and incompatibility and therefore the Client cannot rely upon the electronic media versions of WSP's report or other work products.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project.

Acronyms

BHR	Built Heritage Resource
CHC	[Hydro One] Cultural Heritage Committee
CHER	Cultural Heritage Evaluation Report
CHL	Cultural Heritage Landscape
CHVI	Cultural Heritage Value or Interest
EA	Environmental Assessment
HIA	Heritage Impact Assessment
I&E	Identification and Evaluation
HCD	Heritage Conservation District
km	Kilometre(s)
m	Metre(s)
MCM	Ministry of Citizenship and Multiculturalism
MHC	Municipal Heritage Committee
OHA	*Ontario Heritage Act*
OHT	Ontario Heritage Trust
PHP	Provincial Heritage Property
PHPPS	Provincial Heritage Property of Provincial Significance
PIA	Preliminary Impact Assessment
PIN	Property Information Number
PPB	Prescribed Public Body
PPS	Provincial Planning Statement
ROW	Right-of-Way
S&G	*Standards and Guidelines for Conservation of Provincial Heritage Properties*
SCHV	Statement of Cultural Heritage Value

GLOSSARY

Adjacent lands	Those lands, contiguous to a specific natural heritage feature or area, where it is likely that development or site alteration would have a negative impact on the feature or area. The extent of the adjacent lands may be recommended by the Province or based on municipal approaches which achieve the same objectives; and d) for the purposes of policy 2.6.3, those lands contiguous to a protected *heritage property* or as otherwise defined in the municipal official plan. (Government of Ontario 2020)
Built Heritage:	Built heritage means one or more significant buildings (including fixtures or equipment located in or forming part of a building), structures, monuments, installations, or remains associated with architectural, cultural, social, political, economic, or military history and identified as being important to a community. For the purposes of these [the MCM] Standards and Guidelines, “structures” does not include roadways in the provincial highway network and in-use electrical or telecommunications transmission towers (MCM 2010).
Conserve:	Conserve means identifying, protecting, using, and/or managing cultural heritage resources in such a way that retains their heritage value. “Conserving” and “conservation” have corresponding meanings (MCM 2010).
Cultural Heritage Landscape:	Cultural heritage landscape means a defined geographical area of heritage significance that human activity has modified and that a community values. Such an area involves a grouping(s) of individual heritage features, such as structures, spaces, archaeological sites, and natural elements, which together form a significant type of heritage form distinct from that of its constituent elements or parts. Heritage conservation districts designated under the *Ontario Heritage Act*, villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trails, and industrial complexes of cultural heritage value are some examples (MCM 2010).
Development:	Development means the construction or placing of buildings or structures on land; the addition to or alteration of existing buildings or structures; site alteration, including but not limited to, alteration of the grade of land, and placing or dumping fill; or the removal of vegetation (MCM 2010).

Environment	As defined by the Environmental Assessment Act, environment means: ▪ air, land or water; ▪ plant and animal life, including human life; ▪ the social, economic and cultural conditions that influence the life of humans or a community; ▪ any building, structure, machine or other device or thing made by humans; ▪ any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities; or ▪ any part or combination of the foregoing and the interrelationships between any two or more of them (ecosystem approach).
Heritage Attributes:	Heritage attributes means the physical features or elements that contribute to a property's cultural heritage value or interest, and may include the property's built or manufactured elements, as well as natural landforms, vegetation, water features, and its visual setting (MCM 2010).
Impact	Includes negative and positive, direct and indirect effects to an identified built heritage resource and cultural heritage landscape. Direct impacts include destruction of any, or part of any, *significant* heritage attributes or features and/or unsympathetic or incompatible alterations to an identified resource. Indirect impacts include, but are not limited to, creation of shadows, isolation of heritage attributes, direct or indirect obstruction of significant views, change in land use, land disturbances (MCM 2006). Indirect impacts also include potential vibration impacts.
Known Built Heritage Resource or Cultural Heritage Landscape	A known built heritage resource or cultural heritage landscape is a property that has recognized cultural heritage value or interest. This can include a property listed on a Municipal Heritage Register, designated under Part IV or V of the *Ontario Heritage Act*, or protected by a heritage agreement, covenant or easement, protected by the Heritage Railway Stations Protection Act or the *Heritage Lighthouse Protection Act*, identified as a Federal Heritage Building, or located within a U.N.E.S.C.O. World Heritage Site (MCM 2016).

Potential Built Heritage Resource or Cultural Heritage Landscape	A potential built heritage resource or cultural heritage landscape is a property that has the potential for cultural heritage value or interest. This can include properties/project area that contain a parcel of land that is the subject of a commemorative or interpretive plaque, is adjacent to a known burial site and/or cemetery, is in a Canadian Heritage River Watershed, or contains buildings or structures that are 40 or more years old (MCM 2016).
Protected Heritage Property:	Means property designated under Parts IV, V or VI of the *Ontario Heritage Act*; property subject to a heritage conservation easement under Parts II or IV of the *Ontario Heritage Act*; property identified by the Province and prescribed public bodies as provincial heritage property under the *Standards and Guidelines for Conservation of Provincial Heritage Properties*; property protected under federal legislation, and UNESCO World Heritage Sites (Government of Ontario 2020).
Provincial Heritage Property:	Provincial heritage property of provincial significance means provincial heritage property that has been evaluated using the criteria found in *Ontario Heritage Act* O. Reg. 10/06 and has been found to have cultural heritage value or interest of provincial significance (MCM 2010).
Provincial Heritage Property of Provincial Significance:	Statement of Cultural Heritage Value means a concise statement explaining why a property is of heritage interest; this statement should reflect one or more of the criteria found in *Ontario Heritage Act* O. Regs. 9/06 and 10/06 (MCM 2010).
Significant:	In regard to cultural heritage and archaeology, resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the *Ontario Heritage Act*. (Government of Ontario 2020).

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FIGURES

APPENDICES

1.0 INTRODUCTION

In May 2024, Hydro One Networks Inc. (Hydro One) retained WSP Canada Inc. (WSP) to provide a Cultural Heritage Existing Conditions (CHEC) report to support the St. Thomas Transmission Line Project to construct a new, approximately 20-kilometre (km), double-circuit 230 kilovolt (kV) transmission line from the City of London to the planned Centennial Transformer Station (TS) in the City of St. Thomas, Ontario (the Project). The new transmission line will meet the electrical load capacity requirements of a large-scale electric vehicle (EV) battery manufacturing facility proposed to be set up in the City of St. Thomas and support future growth in the region.

WSP understands that Hydro One initiated a Class Environmental Assessment (EA) in January 2024 for the Project which adheres to the process and associated requirements as described in the *Class Environmental Assessment for Transmission Facilities* (Hydro One 2024). As part of the Class EA process, WSP further understands Hydro One will identify and assess viable route alternatives for the proposed transmission line within the study area. Alternative routes and construction methods will be evaluated to ultimately select a preferred route. It is anticipated that the new line will have a planned in-service date of Q1 2027 or earlier, which has been mandated by the provincial government.

The objective of the CHEC is to help characterize the study area environment by identifying known and potential built heritage resources (BHRs) or cultural heritage landscapes (CHLs) and to assist Hydro One to select the preferred route for the new transmission line.

The study area is defined as five alternative routes, plus a buffer of 120 metres (m) on either side of each centreline[2]. The five high-level alternative routes for the Project are:

- Route 1A
- Route 1B
- Route 2A
- Route 2B
- Route 3

Routes 1A and 1B start at the south end of the City of London, just north of Highway 401, travel through the Municipality of Central Elgin, and culminate at the Centennial TS in the City of St. Thomas.

Routes 2A and 2B also start at the south end of the City of London but traverse east of Routes 1A and 1B through the Municipality of Central Elgin before joining Routes 1A and 1B in the City of St. Thomas and culminating at the Centennial TS.

Route 3 also starts at the south end of the City of London but traverses east of Routes 2A and 2B through the Municipality of Central Elgin before joining Routes 1A, 1B, 2A, and 2B in the City of St. Thomas and culminating at the Centennial TS.

Following guidance outlined in Hydro One's 2019 *Cultural Heritage Identification and Evaluation Process* (Hydro One CH I&E Process), as well as the Ministry of Citizenship and Multiculturalism's (MCM) 2022 *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes A Checklist for the Non-*

[2] Centreline data sourced from 'PCO236621_DIL_RouteAlternatives_V06.kmz' provided to WSP 15 May 2024.

Specialist (MCM Checklist), and 2010 *Standards and Guidelines for the Conservation of Provincial Heritage Properties* (MCM S&Gs), this CHEC provides:

- Provides a background on the relevant provincial and municipal legislation and policies for cultural heritage.
- Outlines the methods used to identify BHRs and CHLs in the study area.
- Identifies from desktop analysis and field investigations the known and potential BHRs and CHLs within the study area; and
- Provides an analysis of each route alternative with respect to the known and potential cultural heritage resources identified.

This CHEC Report is one component of the EA. The Environmental Study Report will incorporate the information presented herein as appropriate, and this report will be included with the Environmental Study Report as a supporting document.

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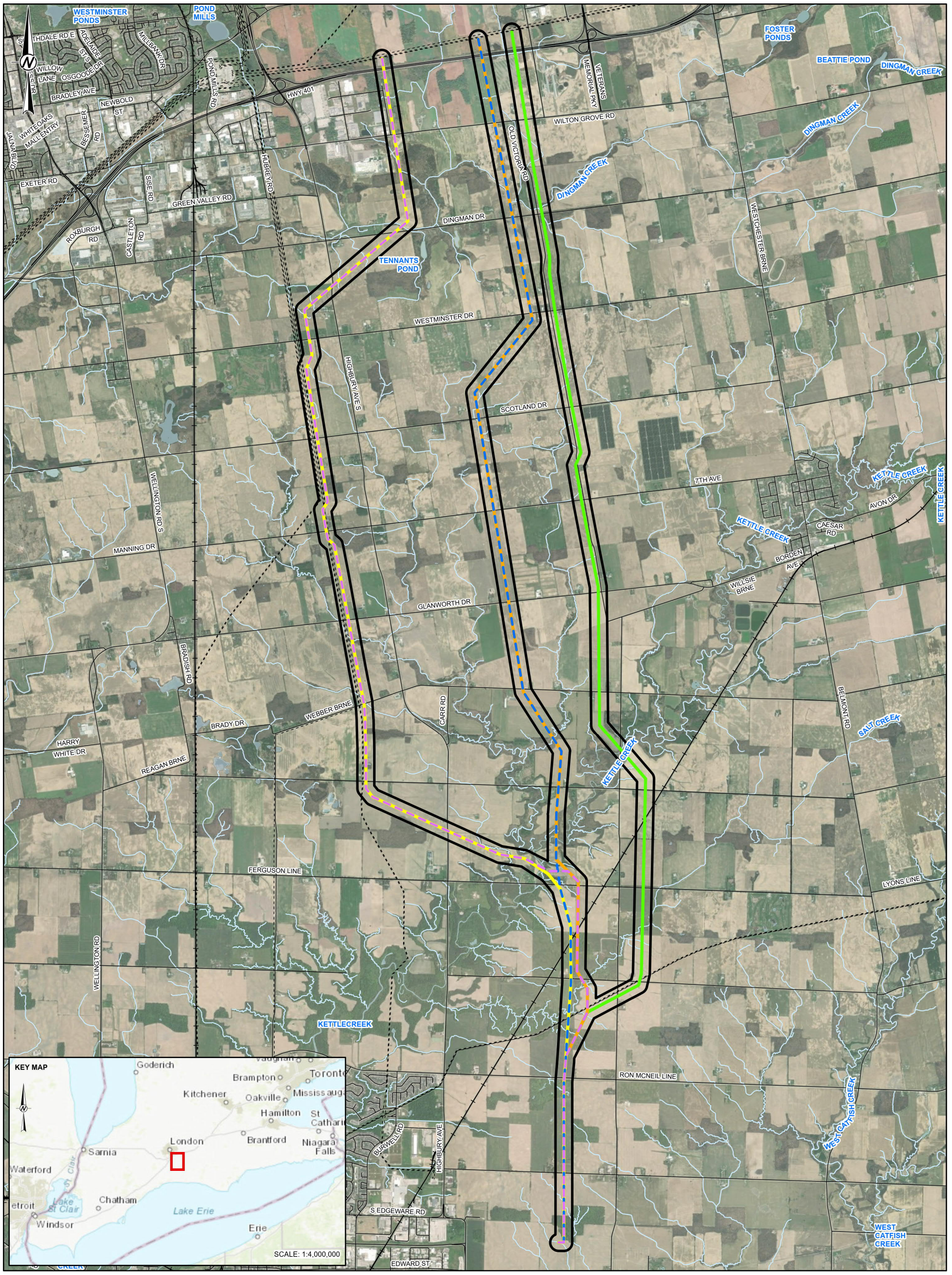

LEGEND

PROPOSED ROUTE:

- ALTERNATIVE 1A
- ALTERNATIVE 1B
- ALTERNATIVE 2A
- ALTERNATIVE 2B
- ALTERNATIVE 3
- STUDY AREA (120 M BUFFER)
- ROADWAY
- RAILWAY
- EXISTING TRANSMISSION LINES
- WATERCOURSE
- WATERBODY

0 500 1,000 2,000

1:52,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. BASE MAP: ESRI, HERE, GARMIN, FAO, NOAA, USGS, EPA, NPS, AAFC, NRCAN, MAXAR
3. COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 17N

CLIENT
HYDRO ONE NETWORKS INC.

PROJECT
ST. THOMAS TRANSMISSION LINE, CULTURAL HERITAGE EXISTING CONDITIONS REPORT

TITLE
LOCATION OF STUDY AREA

CONSULTANT
wsp

YYYY-MM-DD	2025-03-25
DESIGNED	KK
PREPARED	BR
REVIEWED	CC
APPROVED	KK

PROJECT NO.	CONTROL	REV.	FIGURE
CA0034629.6589	0002	0	1

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25mm

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2.0 LEGISLATIVE REQUIREMENTS AND GUIDELINES

2.1 Environmental Assessment Act

The *Environmental Assessment Act* (EAA) was legislated to ensure that Ontario's environment is protected, conserved, and wisely managed. Under the EAA, *environment* includes not only natural elements such as air, land, water and plant and animal life, but also the "social, economic and cultural conditions that influence the life of humans or a community", and "any building, structure, machine or other device or thing made by humans". To determine the potential environmental effects of a new development, the EA process was created to standardize decision-making.

Small-scale project types that occur frequently and have predictable environmental effects are grouped under the "Class EA Process," and do not require additional approvals under the EAA if the established procedure is correctly followed. For the Project, this procedure is outlined in the *Class Environmental Assessment for Transmission Facilities* (2024).

2.2 Ontario Heritage Act

The *Ontario Heritage Act* (OHA) enables the Province and municipalities to conserve significant individual properties and areas. For provincially owned, administered, or occupied heritage properties, compliance with the MCM S&Gs is mandatory under Part III of the OHA and holds the same authority for ministries and prescribed public bodies as a Management Board or Cabinet directive. For municipalities, Part IV and Part V of the OHA enables council to "designate" individual properties (Part IV), or properties within a heritage conservation district (HCD) (Part V), as being of "cultural heritage value or interest" (CHVI). Evaluation for CHVI under the OHA (or *significance* under Provincial Planning Statement [PPS] 2024) is guided by *Ontario Regulation* (O. Reg.) 9/06, as amended by O. Reg. 560/22, which prescribes the *criteria for determining cultural heritage value or interest*. O. Reg. 9/06 has nine absolute or non-ranked criteria:

1) The property has design value or physical value because it is a rare, unique, representative or early example of a style, type, expression, material or construction method.

2) The property has design value or physical value because it displays a high degree of craftsmanship or artistic merit.

3) The property has design value or physical value because it demonstrates a high degree of technical or scientific achievement.

4) The property has historical value or associative value because it has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community.

5) The property has historical value or associative value because it yields, or has the potential to yield, information that contributes to an understanding of a community or culture.

6) The property has historical value or associative value because it demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.

7) The property has contextual value because it is important in defining, maintaining or supporting the character of an area.

8) The property has contextual value because it is physically, functionally, visually or historically linked to its surroundings.

9) The property has contextual value because it is a landmark. O. Reg. 569/22, s. 1.

A property needs to meet only one criterion of *O. Reg. 9.06* to be considered for inclusion on a Municipal Heritage Register in accordance with subsection 27(1) of the OHA. Furthermore, a property needs to meet two criterion of O. Reg. 9/06 to be considered for designation under Part IV of the OHA. If found to meet two or more criterion, the property's CHVI is then described with a Statement of Cultural Heritage Value or Interest (SCHVI) that includes a brief property description, a succinct statement of the property's cultural heritage significance, and a list of its heritage attributes. In the OHA heritage attributes are defined slightly differently to the PPS 2024 and directly linked to real property[3]; therefore, in most cases a property's CHVI applies to the entire land parcel, not just individual buildings or structures. Once a municipal council decides to designate a property, it is recognized through by-law and added to a "Register" maintained by the municipal clerk.

Section B2 of the MCM S&Gs requires that evaluation of built assets or landscapes on properties owned or occupied by the Province or by a provincial ministry, agency or crown corporation —which includes properties prescribed under O. Reg. 157/10 or properties with special significance— must use both O. Reg. 9/06 and the O. Reg. 10/06 *Criteria for Determining Cultural Heritage Value or Interest of Provincial Significance*. The O. Reg. 10/06 criteria are:

1) The property represents or demonstrates a theme or pattern in Ontario's history.

2) The property yields, or has the potential to yield, information that contributes to an understanding of Ontario's history.

3) The property demonstrates an uncommon, rare or unique aspect of Ontario's cultural heritage.

4) The property is of aesthetic, visual or contextual importance to the province.

5) The property demonstrates a high degree of excellence or creative, technical or scientific achievement at a provincial level in a given period.

6) The property has a strong or special association with the entire province or with a community that is found in more than one part of the province. The association exists for historic, social, or cultural reasons or because of traditional use.

7) The property has a strong or special association with the life or work of a person, group or organization of importance to the province or with an event of importance to the province.

8) The property is located in unorganized territory and the Minister determines that there is a provincial interest in the protection of the property. O. Reg. 10/06, s. 1 (2).

If a provincially owned, administered or occupied property meets one or more criterion of O. Reg. 9/06, it may be considered for designation as a Provincial Heritage Property (PHP), while a property that meets one or more of the criteria under O. Reg. 10/06 may be considered for designation as a Provincial Heritage Property of Provincial Significance" (PHPPS). PHPs and PHPPS are formally described with a *Statement of Cultural Heritage Value* (SCHV) that includes a brief property description, a succinct statement of the property's cultural heritage significance, and a list of its heritage attributes. Provincially owned, administered, or occupied properties that are identified to have BHRs or CHLs are then added to a list maintained by MCM.

[3] The OHA definition "heritage attributes means, in relation to real property, and to the buildings and structures on the real property, the attributes of the property, buildings and structures that contribute to their cultural heritage value or interest."

2.2.1 Provincial Guidance Documents

As mentioned above, heritage conservation on provincial properties must comply with the MCM S&Gs. After introducing the requirement for the MCM S&Gs under the OHA and key definitions, the document outlines the overall principles, general provisions, and a series of comprehensive policies for how Ministries and public bodies shall operate to maintain, use, and dispose of provincial heritage properties. The MCM S&Gs also require all provincial ministries and public bodies, such as Hydro One, to develop their own "evaluation process to identify provincial heritage properties" (Section B.2). To address this requirement, Hydro One developed the Hydro One CH I&E Process in 2019 and it was signed by the MCM in 2020.

Additional documents drafted to support implementing the MCM S&Gs include the *Standards and Guidelines for the Conservation of Provincial Heritage Properties – Heritage Identification & Evaluation Process* (2014), which provides detailed explanations of the O. Reg. 9/06 and O. Reg. 10/06 criteria and their application, and *Information Bulletin 3: Heritage Impact Assessments for Provincial Heritage Properties* (Information Bulletin 3), which describes how to organize the sections of a heritage impact assessment and the range of possible impacts and mitigation measures.

The Province, through the MCM, has also developed a series of products to advise municipalities, organizations, and individuals on heritage protection and conservation. One product is the MCM *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes: A Checklist for the Non-Specialist* (MCM Checklist) which helps to screen if a study area contains or is adjacent to known BHRs and CHLs, provides general direction on identifying potential BHRs and CHLs, and aids in determining the next stages of evaluation and assessment.

2.2.2 Hydro One Cultural Heritage Identification and Evaluation Process

As previously mentioned, to meet its requirements as a prescribed public body, Hydro One developed the Hydro One CH I&E Process that was approved by the MCM in 2020 (Hydro One 2019). This guidance document recognizes that Hydro One must comply with the MCM S&Gs and presents an evaluation process to set out the triggers and mandatory steps for the identification and evaluation of properties owned or controlled by Hydro One (Hydro One 2019:2). The Hydro One CH I&E Process applies to all properties that are owned, controlled, administered or occupied by Hydro One (Hydro One 2019:3). Hydro One properties may include the following:

- Transformer stations;
- Distribution stations;
- Land holdings;
- Buildings;
- Hydro transmission corridors including access routes and river crossings;
- New lands that may be required; and
- Parcels of land or buildings with easements

The Hydro One CH I&E Process outlines the triggers for cultural heritage screening and identifies when property specific Cultural Heritage Evaluation Reports (CHERs) are required. This guidance document references and follows the MCM S&Gs and the MCM *Heritage Identification & Evaluation Process* (MCM 2010; MCM 2014). The Hydro One CH I&E Process does not provide guidance on the preparation of Heritage Impact Assessments (HIAs) so Information Bulletin 3 is used per the S&Gs (MCM 2017).

3.0 METHODOLOGY

The objective of the CHEC is to identify known or potential BHRs and CHLs within the study area through desktop data collection and a field review. Since cultural heritage under the OHA is linked to real property, analysis of the study area included property parcels that wholly or partially intersected the study area.

3.1 Study Area and Buffer Methodology

The study area for the CHEC is defined as five high-level alternative routes (with overlap) plus a buffer of 120 m on either side of each centreline (totalling 240 m in width). This study area includes the Project right-of-way (RoW) which measures approximately 22.5 m on either side of the centreline (totalling 45 m in width), as well as a potential vibration buffer measuring 60 m around the RoW (i.e., 82.5 m on either side of each centreline). Outside of this 60 m buffer, an additional 37.5 m buffer completes the 120 m buffer study area. The Project has not entered the detailed engineering phase and therefore the temporary footprint associated with construction activities is not fully known. At this point in time, it is anticipated that temporary storage, stacking, and working areas associated with construction will occur within the RoW, although there will be access roads that extend beyond the RoW. Further details on the project works will be provided following selection of the preferred route alternative and commencement of detailed design.

The Hydro One CH I&E Process, approved by the MCM in 2020, requires that for large areas or corridor projects, a qualified person be retained to complete a CHEC and Preliminary Impact Assessment (PIA). While potential direct and indirect impacts will be assessed during the PIA, the buffers established to support the existing conditions of the CHEC reflect research (Carmen et al. 2012:31) and consultation with WSP vibration specialists, which determined a 60 m buffer adequate for capturing potential vibration impacts to physical heritage attributes such as built structures. Additionally, consultation with Hydro One about proposed project works including the height and structure of potential infrastructure within the Project RoW, along with past knowledge and experience from transmission line projects in southwestern Ontario, determined a 120 m buffer from the Project centreline (totalling 240 m in width) was appropriate to capture potential impacts to contextual heritage attributes such as views and vistas. Due to the size of the lots intersecting the study area (i.e., those represented by large farm tracts), the boundaries of any property/ properties identified as known or potential BHRs or CHLs will often extend beyond the 120 m buffer.

Where the PIA identifies direct impacts to a potential BHR or CHL, a CHER will be prepared for each property or group of properties that are considered to have potential CHVI, per O. Reg. 9/06 and 10/06. If that property is found to have CHVI, then an HIA will be undertaken by a qualified person as early as possible before or during the detailed design phase.

3.2 Screening Methodology

Following the Hydro One CH I&E Process, the study area was screened for BHRs and CHLs using the MCM Checklist. The MCM Checklist provides a screening tool to identify known or recognized BHRs and CHLs in a study area, as well as commemorative plaques, cemeteries, Canadian Heritage River watersheds, properties with buildings or structures 40 or more years old, and potential CHLs. To complete the checklist, WSP undertook the following tasks:

- Reviewed federal, provincial, and municipal heritage registers, inventories, and databases to identify known BHRs and CHLs in the study area. These sources include:
    - Canadian Register of Historic Places (www.historicplaces.ca)

  - Historic Sites and Monuments Board of Canada Directory of Federal Heritage Designations (https://www.pc.gc.ca/apps/dfhd/search-recherche_eng.aspx)
  - Historic Sites and Monuments Board of Canada Directory of Heritage Railway Stations (https://www.pc.gc.ca/en/culture/clmhc-hsmbc/pat-her/gar-sta/on)
  - Ontario Heritage Trust (OHT) Online Plaque Guide (http://www.heritagetrust.on.ca/en/index.php/online-plaque-guide) and Ontario Places of Worship Inventory (https://www.heritagetrust.on.ca/places-of-worship/places-of-worship-database), and List of Easement Properties (http://www.heritagetrust.on.ca/en/property-types/easement-properties)
  - Canadian Heritage River System list of designated heritage river systems (http://chrs.ca/)
  - The Ontario Heritage Bridge List in the Ontario Heritage Bridge Guidelines for Provincially Owned Bridges (Interim) (Ministry of Transport 2008)
- Consulted with the City of St. Thomas planning and clerks staff;
  - Reviewed the online Municipal Heritage Register (https://www.stthomas.ca/visiting_us/heritage_properties)
- Consulted with the City of London heritage planning staff;
  - Reviewed the online Municipal Heritage Register, including mapping (https://london.ca/sites/default/files/2022-12/2022%20Register%20of%20Cultural%20Heritage%20Resources.pdf; https://london.maps.arcgis.com/apps/webappviewer/index.html?id=5d2e70c3d82c427ebd44b75169f6c91d)
- Reached out to the Municipality of Central Elgin staff;
  - Reviewed the online Municipal Heritage Register (https://www.centralelgin.org/en/recreation-and-culture/designated-heritage-properties.aspx)
- Reviewed 19th century historical county maps (Figure 2) and early 20th century topographical maps (Figure 3);
- Conducted a field investigation of the study area.
  - Cultural Heritage Specialist Chelsey Collins (Tyers) and Chelsea Dickinson conducted field investigations between May 22 and 24, 2024, which included documenting properties from the public right-of-way.
- Inventoried and mapped the identified BHRs and CHLs by their association with each proposed route option.

3.3 Information Gathering

Planning staff from the City of St. Thomas, Municipality of Central Elgin and the City of London were contacted to screen for the presence of known or potential BHRs or CHLs. Additionally, the following Indigenous Nations were contacted: Six Nations of the Grand River, Aamjiwnaang, Chippewa of the Thames First Nation, Oneida Nation of the Thames, Haudenosaunee Development Institute/HCCC, Chippewas of Kettle and Stony Point First Nation, Caldwell First Nation, Walpole Island First Nation. A summary of the correspondence is provided in Table 1.

Table 1: Record of Information Gathering

Date	Query	Contact	Response
June 10, 2024	By email: Inquiry regarding listed and designated properties in study area in City of St. Thomas.	Abdul Basit, Legislative Services Coordinator	Confirmed there are no designated or listed properties in the study area, and provided a copy of a report dated November 2023 outlining heritage properties that were demolished for the Volkswagen battery plant.
June 6, 2024	By email: Inquiry regarding listed and designated properties within study area in City of London	Michael Greguol, Heritage Planner Laura Dent, Heritage Planner	A response was provided by Laura Dent on June 18, 2024, identifying listed and designated properties along each Alternative Route.
June 10, 2024 and June 13, 2024	By phone: Two voicemails left, first in general voicemail, second in voicemail of Tanya Graansma, Property Tax Coordinator (as directed by reception), to contact details for who manages the Municipality of Central Elgin's Municipal Heritage Register.	519-631-4860 x. 280	Response received by phone on June 18, 2024 directing WSP to use the municipal heritage registers online.
June 6, 2024	By email: Inquiry regarding properties designated by the Minister and Provincial Heritage Properties.	Karla Barboza	Confirmed by email on June 13, 2024, that to date, no properties have been designated by the Minister and MCM is not aware of any provincial property within or adjacent to the study area, nor any properties being evaluated as a provincial heritage property. Additionally, it was noted that MCM had recently recommended identifying known and potential BHRs and CHLs within 1 km of the right of way in accordance with another recently approved EA, or alternatively providing a rational for a different proposed metric.
June 6, 2024	By email: Inquiry regarding OHT owned properties, easements and plaques.	Samuel Bayefsky	No response received to date.
June 6, 2024	By email: Inquiry regarding potential properties or landscapes of Indigenous cultural heritage value in the study area.	Six Nations of the Grand River: Chief Sherri-Lyn Hill Dawn Russell Lonny Bomberry Tammy Martin Tayler Hill Tanya Hill-Montour	No response received to date.
June 6, 2024	By email: Inquiry regarding potential properties or landscapes of Indigenous	Aamjiwnaang: Chief Christopher Plain Matt Stone	No response received to date.

Date	Query	Contact	Response
	cultural heritage value in the study area.	Cathleen O'Brien	
June 6, 2024	By email: Inquiry regarding potential properties or landscapes of Indigenous cultural heritage value in the study area.	Oneida Nation of the Thames: Chief Todd Cornelius Brandon Doxtator Kailey Thomson Sandra Doxator	No response received to date.
June 6, 2024	Through nationsconnect.ca: Inquiry regarding potential properties or landscapes of Indigenous cultural heritage value in the study area.	Chippewa of the Thames First Nation (COTTFN): Chief Joe Miskokomon Jennifer Mills, Energy Sector Consultation Coordinator	Letters were provided by Jennifer Mills on July 26, 2024 and August 1, 2024, identifying Kettle Creek, Dingman Creek, and their respective wetlands, as culturally and environmentally significant to the COTTFN. These waterbodies have been added as CHLs to the CHEC inventory. The second letter also lists four archaeological sites identified during the Stage 1 archaeological assessment (AA) for the Project: AfHg-168, the Francis Nichol Site, AfGh-80, and the McColl Cemetery. These sites will be further assessed by the Project's archaeology consultant should they be impacted by the preferred route.
June 6, 2024	By email: Inquiry regarding potential properties or landscapes of Indigenous cultural heritage value in the study area.	Haudenosaunee Development Institute: Secretary Leroy Hill Raechelle Williams Sharann Martin Todd Williams	No response received to date.
June 6, 2024	By email: Inquiry regarding potential properties or landscapes of Indigenous cultural heritage value in the study area.	Chippewas of Kettle and Stony Point First Nation: Chief Kimberly Bressette Verna George	Response received via Hydro One April 4, 2025, confirming correct name for Chippewas of Kettle and Stoney Point First Nation.
June 6, 2024	Through nationsconnect.ca: Inquiry regarding potential properties or landscapes of Indigenous cultural heritage value in the study area.	Caldwell First Nation: Chief Mary Duckworth Mary-Jo Rusu Zack Hamm Susan Sullivan	No response received to date.
June 6, 2024	By email: Inquiry regarding potential properties or landscapes of Indigenous cultural heritage value in the study area.	Walpole Island First Nation: Chief Daniel Miskokomon Alicia Blackeagle Dean Jacobs Larissa Wrightman	No response received to date.

4.0 STUDY AREA

In total, the study area includes or crosses 199 property parcels. Of these, WSP identified 51 individual properties with known or potential CHVI as BHRs or CHLs, as well as two waterways with known CHVI as CHLs. These include:

- Twenty-seven (27) properties assessed at a preliminary level to have potential CHVI as BHRs.
- Twelve (12) properties assessed at a preliminary level to have potential CHVI as CHLs.
- Eleven (11) properties listed (not designated) on the *City of London Register of Cultural Heritage Resources*.
- Two (2) waterways identified through information gathering as known CHLs.
- One (1) property designated under Part IV of the OHA.

No significant views or vistas from the designated property were found to be listed as heritage attributes per the Property Specific Designation By-Law (see Table 4, CHR-51). The HIA will provide mitigation measures where impacts related to the isolation of attributes, and/or shadows are identified.

An inventory of the identified BHRs and CHLs are listed by each route option in Sections 5.0 through 5.3.

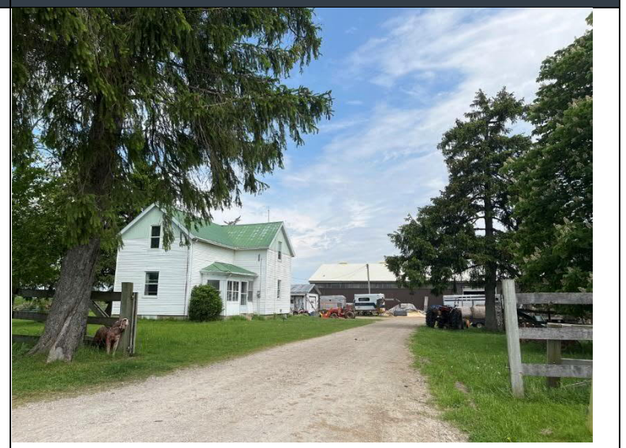
5.0 INVENTORY OF KNOWN AND POTENTIAL BUILT HERITAGE RESOURCES AND CULTURAL HERITAGE LANDSCAPES

5.1 Alternatives 1A and 1B

Table 2 presents the properties assessed at a preliminary level to have CHVI within the Alternative 1A and 1B Study Areas. Figure 4 maps the identified BHRs and CHLs within the study areas.

Table 2: Inventory of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within Alternative 1A and 1B Study Areas

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-1	1A/1B/2A/2B	44571 Mapleton Line, Central Elgin	Farm complex with two-storey yellow-brick dwelling with rectangular plan, complex jerkinhead roof with slate shingles, front porch with brick posts. Two barns southeast of dwelling, rectangular footprints, gable roofs, wood boards with large sliding doors. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint on Lot 11, Concession 10, Yarmouth in the general location of the extant dwelling, and records the relevant portion of the lot belonging to A.C. McBain Historical Topographic Maps surveyed 1913 (Figure 3): Shows frame dwelling footprint in the general location of the extant dwelling, which may be an earlier dwelling or indication that the brick on the extant dwelling is a cladding.	Identified during the field review as a property with potential CHVI	CHL	The property has potential design or physical value for its Arts and Crafts style brick house and its timber frame barns, as well as potential contextual value for its maintenance and support of the rural agricultural character of the area, to which it is visually linked.	■ Arts and Crafts Farmhouse ■ Gable roof barns ■ Rural agricultural setting	 

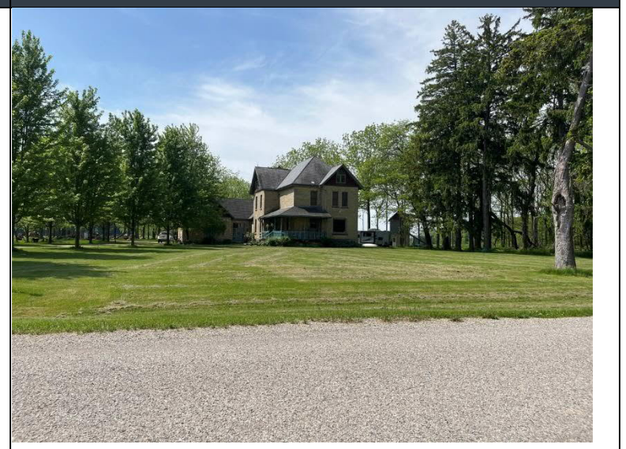
CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-2	1A/1B/2A/2B	44620 Mapleton Line, Central Elgin	Two-storey wood frame dwelling (44620 Mapleton Line) with L-shaped plan, cross gable roof, concrete foundation, clad in horizontal siding. One-storey 1960/70s dwelling (44632 Mapleton Line) also located on property. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint on Lot 11, Concession 11, Yarmouth in the general location of the extant two-storey dwelling and records the relevant portion of the lot belonging to D. Taylor. Historical Topographic Maps surveyed 1913 (Figure 3): Shows frame dwelling footprint in the general location of the extant 2-storey dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value for the farmhouse at 44620 Mapleton Line, which reflects a common vernacular style for farmhouses in Southern Ontario. Given the age of the older dwelling, the property may also have historical or associative value for an association with an early settler family.	■ Vernacular Farmhouse at 44620 Mapleton Line	 

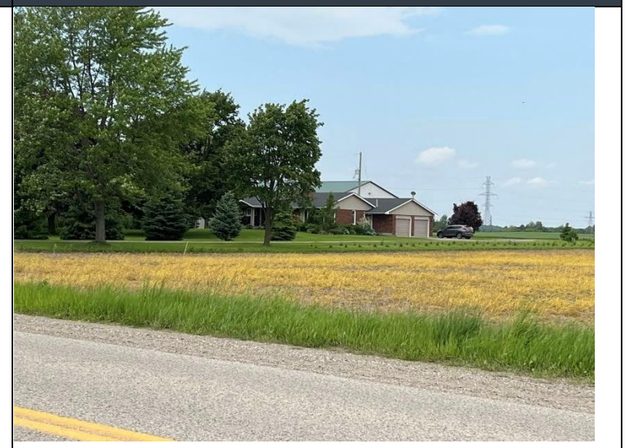
CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-3	1A/1B/2A/2B	44862 Mapleton Line, Central Elgin	Gable roof bank barn, rectangular footprint, masonry foundation, vertical wood board painted red. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint on Lot 12, Concession 11, Yarmouth, and records the relevant portion of the lot belonging to A. Douglass. Historical Topographic Maps surveyed 1913 (Figure 3): Does not show any dwelling footprints on Lot 12, Concession 11, Yarmouth. *A dwelling on the property was demolished sometime between June 2014 and present.	Identified during the field review as a property with potential CHVI	BHR	The property may have design or physical value for the gable roof bank barn.	■ Gable roof barn	
CHR-4	1A/1B/2A/2B	11941 Yarmouth Centre Road, Central Elgin	Two-storey wood frame dwelling, L-shape plan, cross gable roof, horizontal siding, front porch. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint on Lot 12, Concession 11, Yarmouth but it appears to be further from the road then the extant dwelling and records the relevant portion of the lot belonging to W. Porter. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling footprint in the general location of the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value for the farmhouse, which reflects a common vernacular style for farmhouses in Southern Ontario.	■ Vernacular dwelling	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-5	1A/1B/2/2A/2B	44563 Ferguson Line, Central Elgin	Farm complex with two-storey yellow-brick dwelling with rectangular plan, complex jerkinhead roof with slate shingles, front porch with brick posts. Two barns southeast of dwelling, rectangular footprints, gable roofs, wood boards with large sliding doors. 19th or early 20th century barn and smaller accessory structure with rectangular plans, gable roofs, vertical wood boards. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows two dwelling footprints on part of Lot 11, Concession 11, Yarmouth one of which may be the extant dwelling and records the relevant portion of the lot belonging to Mrs. C. House. Historical Topographic Maps surveyed 1913 (Figure 3): Shows wood frame dwelling in similar location to extant dwelling.	Identified during the field review as a property with potential CHVI	CHL	The property has potential design or physical value for the vernacular dwelling and for the 19th/early 20th century barn and accessory structure, as well as, potential contextual value for its maintenance and support of the rural agricultural character of the area, to which it is visually linked.	■ Vernacular dwelling ■ 19th/early 20th century barn and accessory structure ■ Rural agricultural setting	
CHR-6	1A/1B/2A/2B	44648 Ferguson Line, Central Elgin	Two-storey yellow-brick dwelling with L-shape plan, cross-gable roof, bay window, transom above front door, segmentally arched windows. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint on part of Lot 11, Concession 12, Yarmouth in the general location of the extant dwelling and records the relevant portion of the lot belonging to J. McIntyre. Historical Topographic Maps surveyed 1913 (Figure 3): Show a stone or brick dwelling footprint in the general location of the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value for the dwelling as an example of vernacular Gothic Revival style.	■ Gothic Revival style dwelling	 *Please note, the agricultural fields in the foreground are not part of this property.

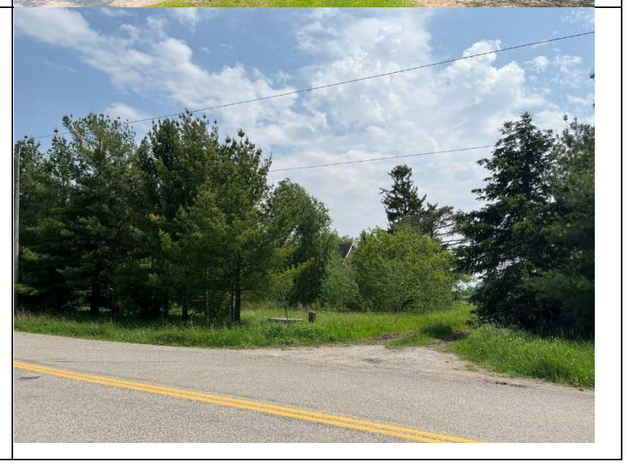
CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-7	1A/1B	44382 Ferguson Line, Central Elgin	Farm complex with one-storey dwelling, rectangular footprint, gable roof, horizontal siding, symmetrical three-bay front façade. Three barns (views obscured from street), rectangular and L-shaped footprints, gable roofs, concrete silo. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows relevant portion of Lot 10, Concession 12, Yarmouth belonging to W. Cole and a dwelling footprint in a similar location to extant dwelling. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a stone or brick dwelling in similar location to extant dwelling, which suggests the current dwelling was reclad in horizontal siding.	Identified during the field review as a property with potential CHVI	CHL	This property has potential design or physical value for the vernacular style of the dwelling and the gable roof barns. Given the age of the dwelling, the property may have associative or historical value for link to a prominent settler family.	■ Vernacular dwelling ■ Gable roof barns	
CHR-8	1A/1B	44122 Ferguson Line, Central Elgin	One-storey dwelling, rectangular footprint, gable roof, horizontal siding, symmetrical three-bay front façade, central front door with wood door surround, rectangular windows. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows relevant portion of Lot 9, Concession 12, Yarmouth belonging to J. Gearry but no dwelling footprints. Historical Topographic Maps surveyed 1913 (Figure 3): Shows no building footprint in the location of the extant dwelling, which may reflect a mistake in mapping or indication that this dwelling was later moved to this location.	Identified during the field review as a property with potential CHVI	BHR	This property has potential design or physical value for the dwelling an example of a neoclassical cottage.	■ Neoclassical Cottage style dwelling	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-9	1A/1B	12363 Highbury Avenue, Central Elgin	One-and-half storey dwelling that was formerly a schoolhouse, rectangular footprint, masonry foundation, yellow-brick, front gable roof with gable peaks along sides. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows footprint of extant dwelling and identifies it as a schoolhouse and that the relevant portion of Lot 8, Concession 13, Yarmouth belongs to N.Dewar. Historical Topographic Maps surveyed 1913 (Figure 3): Shows footprint of schoolhouse in location of extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value as a rare or early example of a 19th century schoolhouse in Central Elgin and potential historical or associative value for community value related to its use as a schoolhouse.	■ Former schoolhouse (now a dwelling)	
CHR-10	1A/1B	43647 Truman Line, Central Elgin	Property includes a 19th or early 20th century barn with an L-shape footprint, concrete foundation, cross-gable roof, vertical wood boards, concrete silo. *Note: Dwelling on property is of recent (less than 40 years) construction. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Does not show any dwelling footprints, but the relevant portion of Lot 7, Concession 12, Yarmouth belongs to A. McGlashan. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling near the current property.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value for the 19th or early 20th century barn.	■ 19th/early 20th century barn	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-11	1A/1B	43371 Truman Line, St. Central Elgin	Two-storey dwelling, yellow-brick, masonry foundation, complex cross hipped and gable roof, wrap around porch, wood shingles in gable ends, slate roof, segmentally arched and rectangular windows with masonry sills, arched window in gable peak. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint in the general location of the extant dwelling and the relevant portion of Lot 6, Concession 12, Yarmouth, belonging to D. Ferguson. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a stone or brick dwelling footprint in the general location of the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value for the dwelling as an example of Queen Anne style.	■ Queen Anne style dwelling	
CHR-12	1A/1B	1977 Webber Bourne, Central Elgin	One-and-a-half storey dwelling, gable roof, front porch, symmetrical three-bay façade with central door, horizontal siding and metal roof. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint, but it does not appear to be in the location of the extant dwelling. Relevant portion of Lot 7, Concession 13 belongs to P. Sinclair. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling footprint in the general location of the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value for the vernacular style dwelling.	■ Vernacular dwelling	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-13	1A/1B	2106 Glanworth Drive, London	The *City of London Register of Cultural Heritage Resources* notes that the property contains the McColl or McCaul Cemetery dating from 1878. *Note: The dwelling on the property and agricultural buildings reflects styles typically dating from the 1960s and onwards and are not of potential CHVI. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows two dwelling footprints that do not appear to reflect the extant dwelling and the relevant portion of Lot 11, Concession 10, Westminster belonging to Duncan McColl. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a stone or brick dwelling footprint east of the extant dwelling.	Listed on the *City of London Register of Cultural Heritage Resources*	CHL	The property has potential historical or associative value for the McColl or McCaul's cemetery.	■ McColl or McCaul's cemetery	
CHR-14	1A/1B	Glanworth Drive, London (PIN 082020080)	Rectangular plan barn, stone foundation, gable roof, vertical wood boards. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Does not show any dwelling footprints, but the relevant part of Lot 11, Concession 8, Westminster belongs to George Laidlaw. Historical Topographic Maps surveyed 1913 (Figure 3): A similar dwelling footprint appears in the Department of National Defence's 1913 topographic map.	Identified during the field review as a property with potential CHVI	BHR	The property has potential physical or design value for the barn, as well as potential contextual value for its maintenance and support of the rural agricultural character of the area, to which it is visually linked.	■ Barn ■ Rural agricultural setting	

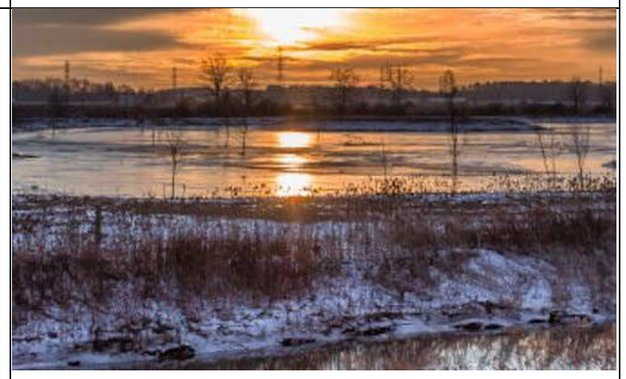
CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-15	1A/1B	2240 Manning Drive, London	One-storey dwelling, hipped roof, gable roof front porch, masonry chimney, asymmetrical front façade with central door flanked by a large window on one side and small one on the other side. The *City of London Register of Cultural Heritage Resources* records the year the dwelling was built as 1912. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint on Lot 12, Concession 6, Westminster that appears to be in a similar location to the extant dwelling. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Listed on the *City of London Register of Cultural Heritage Resources*	BHR	The property has potential physical or design value for the vernacular dwelling.	■ Vernacular dwelling	
CHR-16	1A/1B	5617-5633 Highbury Avenue South, London	Two-storey dwelling (5617 Highbury Avenue South), rectangular footprint, hipped roof with cross gable, yellow-brick, masonry foundation, front porch with wood posts, rectangular and semi-arched window openings. The City of London Register of Cultural Heritage Resources records the year the dwelling was built as 1907. *Property also contains an additional dwelling (5633 Highbury Avenue South) which reflects a bungalow style which appears to date from the 1960s and 1970s, reflecting typical style and materials. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows the relevant portion of Lot 11, Concession 6, Westminster belonging to John McColl and a dwelling footprint which appears to be in a similar location to the extant 2-storey dwelling.	Listed on the *City of London Register of Cultural Heritage Resources*	BHR	The property has potential design or physical value for the Queen Anne style dwelling (5617 Highbury Avenue South).	■ Queen Anne style dwelling	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
			Historical Topographic Maps surveyed 1913 (Figure 3): A similar stone or brick dwelling footprint appears in the Department of National Defence's 1913 topographic map.					
CHR-17	1A/1B	2307 Scotland Drive, London	One-and-a-half or two storey dwelling (view obscured by vegetation from the ROW), cross-gable roof with small gable peak, red-brick. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows the relevant portion of Lot 12, Concession 6, Westminster belonging to John McColl and no dwelling footprints. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling footprint in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value for the Gothic revival style farmhouse.	■ Gothic revival style dwelling	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-18	1A/1B	4811 Highbury Avenue South, London	Farm complex including two-storey dwelling, hipped roof with front dormer, red-brick, masonry foundation, central front porch, symmetrical front façade, rectangular windows with masonry sills and lintels. Of various agricultural buildings, appears to be one 19th/ early 20th century barn behind silos, gable roof with side extension, masonry foundation, vertical wood board painted red. Additional one-storey dwelling, hipped roof, masonry foundation and chimney, horizontal siding, central front door, rectangular window openings. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows the relevant portion of Lot 11, Concession 5, Westminster belonging to Robert Nichol and a dwelling in the general location of the two extant dwellings. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a stone or brick dwelling in a similar location to the extant dwellings and identifies it as a post office.	Identified during the field review as a property with potential CHVI	CHL	The property has potential design or physical value for the four square dwelling, the vernacular one-storey dwelling, and the 19th/early 20th century barn, as well as potential contextual value for its maintenance and support of the rural agricultural character of the area, to which it is visually linked. Additionally, the property may have historical or associative value as a former post office.	■ Four square influenced two-storey dwelling ■ Vernacular one-storey dwelling ■ Gambrel roof barn ■ Rural agricultural setting	 

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-19	1A/1B	4522-4548 Highbury Avenue South, London	Farm complex including two dwellings, a barn and accessory agricultural structures. Early 20th century dwelling (4522 Highbury Avenue South; views largely obscured by vegetation from ROW), two-storeys, red-brick, hipped roof. Mid-20th century dwelling (4548 Highbury Avenue South), one-storey, red-brick cladding, concrete foundation, hipped roof. Bank barn located behind 20th century dwelling, gambrel roof, concrete silo, masonry foundation, reclad in corrugated metal siding. The *City of London Register of Cultural Heritage Resources* records the year the dwelling was built as 1911. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows the relevant portion of Lot 10, Concession 4, Westminster belonging to Walter Laidlaw and a dwelling footprint in the general location of the extant dwelling. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling footprint in a similar location to the extant dwelling which may reflect a mistake in the mapping, or that the extant dwelling is a frame dwelling clad in brick.	Listed on the *City of London Register of Cultural Heritage Resources*	CHL	The property has potential design or physical value for the 1911 red-brick dwelling and the gambrel roof barn, as well as, potential contextual value for its maintenance and support of the rural agricultural character of the area, to which it is visually linked.	■ 1911 red-brick dwelling ■ Barn ■ Rural agricultural setting	 

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-20	1A/1B	1636 Dingman Drive, London	Farm complex including a dwelling and barns. One-and-a-half storey dwelling, gable roof with central front peak, frame dwelling, horizontal siding, symmetrical front façade with central front door flanked by rectangular windows. Gable roof barns, masonry foundations, vertical wood siding and concrete silos. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows the relevant portion of Lot 9, Concession 3, Westminster belonging to F. Nichol and a dwelling footprint in the general location of the extant dwelling. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a stone or brick dwelling footprint in the general location of the extant dwelling which may mean the extant dwelling has been reclad.	Identified during the field review as a property with potential CHVI	CHL	The property has potential physical or design value for the dwelling which may be an example of an Ontario Gothic Revival Cottage and the gable roof barns, as well as potential contextual value for its maintenance and support of the rural agricultural character of the area, to which it is visually linked.	■ Ontario Gothic Revival Cottage ■ Barns ■ Rural agricultural setting	
CHR-21	1A/1B	1871 Bradley Avenue, London	One-and-a-half storey dwelling (views obscured by vegetation from ROW), gable roof with central front peak. Gable roof barn (views obscured by vegetation from ROW), masonry foundation, vertical wood board. The *City of London Register of Cultural Heritage Resources* records the year built as c.1850. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows the portion of Lot 6, Concession 3 belonging to James Armstrong and a dwelling footprint in a similar location to the extant dwelling. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a stone or brick dwelling footprint in a similar location to the extant dwelling.	Listed on the *City of London Register of Cultural Heritage Resources*	CHL	The property has potential physical or design value for the dwelling which may be an example of an Ontario Gothic Revival Cottage and the gable roof barn. Given the age of the dwelling, the property may also have historical or associative value for an association with an early settler family.	■ Ontario Gothic Revival style Dwelling ■ Barn	 **Source:** Google Imagery ©2024

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known / Potential CHVI	Potential Heritage Attributes	Photograph
CHR-52	1A/1B/2A/2B/3	Kettle Creek	Kettle Creek flows roughly northeast to southwest through all three route alternatives before draining into Lake Erie which is approximately 14 km south of the Study Area. The Kettle Creek Conservation Authority describes the watershed as draining 520 square-kilometres of land on north shore of Lake Erie with a main branch originating at Lake Whittaker and three sub-watersheds at Dodd Creek, Upper Kettle Creek, and Lower Kettle Creek (Kettle Creek Conservation Authority 2024).	Identified through information gathering with the COTTFN	CHL	▪ Kettle Creek has known historical/ associative and contextual value. Through information gathering, the creek, and its associated watershed, was identified as culturally and environmentally significant to the COTTFN for fishing, hunting, visiting, and travelling. Described as an important CHL, the COTTFN noted that Kettle Creek leads into Lake Erie where community members have spent time with family, fished, and passed on knowledge to younger generations.	▪ Natural path of the river ▪ River banks ▪ Vegetation along the river	 **Source:** Kettle Creek Conservation Authority 2024
CHR-53	1A/1B/2A/2B/3	Dingman Creek	Dingman Creek flows roughly west to east through all three route alternatives and is a tributary of the Lower Thames River which flows approximately 10 km northwest of the study area. The Middle Thames River flows approximately 3 km north of the Study Area. The City of London's 2020 Dingman Creek EA describes the Dingman Creek sub-watershed as 17,200 hectares (ha) located in Middlesex County of which 74% is within the City of London (City of London 2023).	Identified through information gathering with the COTTFN	CHL	▪ Dingman Creek has known historical/ associative and contextual value. Through information gathering, the creek, and its associated watershed, was identified as culturally and environmentally significant to the COTTFN.	▪ Natural path of the river ▪ River banks ▪ Vegetation along the river	 **Source:** City of London 2023

5.2 Alternatives 2A and 2B

Table 3 includes properties assessed at a preliminary level to have CHVI within the Alternative 2A and 2B Study Areas, with the exception of properties of properties that are included in Table 2 as part of Alternatives 1A and 1B (CHR-1, CHR-2, CHR-3, CHR-4, CHR-5, CHR-6, CHR-52, and CHR-53). Figure 4 maps the identified BHRs and CHLs within the study areas.

Table 3: Inventory of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within Alternative 2A and 2B Study Areas

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-22	2A/2B	44579 Truman Line, Central Elgin	One-and-a-half storey dwelling, gable roof with central shed roof dormer, horizontal siding, symmetrical three-bay façade with central enclosed front porch flanked by rectangular windows. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows relevant portion of Lot 11, Concession 12, Yarmouth belonging to John Thomson and a dwelling footprint in a similar location to the extant dwelling. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a stone or brick dwelling in a similar location to the extant dwelling, which may indicate the extant dwelling has been reclad.	Identified during the field review as a property with potential CHVI	BHR	The property has potential physical or design value for the dwelling which may be an example of a Neo-classical cottage. Given the age of the dwelling the property may also have historical or associative value for an association with an early settler family.	■ Neo-classical Dwelling	
CHR-23	2A/2B	44642 Truman Line, Central Elgin	Two-storey dwelling, front gable roof, concrete foundation, horizontal siding, rectangular windows. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows the relevant portion of Lot 11, Concession 13, Yarmouth belonging to D.F. Thomson and no dwelling footprints. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in the same general location as the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property may have physical or design value for the vernacular dwelling.	■ Vernacular Dwelling	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-24	2A/2B	44309 Thomson Line, Central Elgin	Farm complex including one-and-a-half or two-storey dwelling (views obscured by vegetation from ROW), yellow-brick, gable roof with central front peak. Behind the dwelling are two barns attached together, gable roofs, masonry foundations, vertical wood boards painted red. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows the relevant portion of Lot 10, Concession 13, Yarmouth belonging to James Thompson and a dwelling footprint in the general location of the extant dwelling. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a brick or stone dwelling in the general location of the extant dwelling.	Identified during the field review as a property with potential CHVI	CHL	The property may have physical or design value for the dwelling as an example of the Ontario Gothic Revival Cottage and the red barns. Given the age of the dwelling, the property may also have historical or associative value for an association to an early settler family.	■ Ontario Gothic Revival Cottage ■ Red barns	 **Source:** Google Imagery ©2024
CHR-25	2A/2B	1520 Manning Drive, London	One storey dwelling, field stone foundation, gable roof, horizontal siding, rectangular windows. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint as well as a cultivated area in a similar location to extant dwelling and relevant portion of lot belonging to John McPherson. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property may have physical or design value for the vernacular dwelling, and given its age, it may also have historical or associative value linked with an early settler family.	■ Vernacular dwelling	

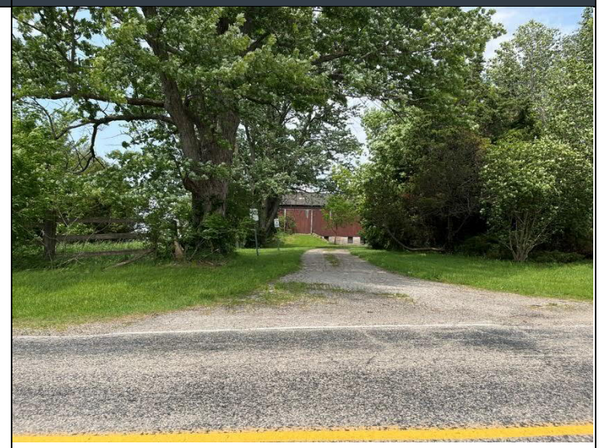
CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-26	2A/2B/3	1250 and 1304 Manning Drive, London	Farm complex including two dwellings, two barns and several accessory structures. One-and-a-half storey dwelling (1304 Manning Drive), gable roof, enclosed front porch, horizontal siding, rectangular window openings. One-and-a-half storey dwelling (1250 Manning Drive), cross-gable roof, enclosed front porch, concrete foundation, horizontal wood siding, rectangular windows. 19th or early 20th century bank barn located between dwellings, masonry foundation, gable roof, vertical wood siding painted red. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint that may be one of the extant dwellings and the relevant portion of Lot 7, Concession 6, Westminster, belonging to Duncan Campbell. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling which may be one of the extant dwellings.	Identified during the field review as a property with potential CHVI	CHL	The property has potential physical or design value for the two dwellings on the property which may reflect a vernacular style for farmhouses in Southern Ontario and the bank barn, as well as potential contextual value for its maintenance and support of the rural agricultural character of the area, to which it is visually linked. Additionally, the property has potential historical or associative value as one of the dwellings may be linked with an early settler family.	■ Both dwellings ■ Bank barn ■ Rural agricultural setting	 1304 Manning Drive 

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
								 1250 Manning Drive
CHR-27	2A/2B	1481 Scotland Drive, London	One-and-a-half storey dwelling, gable roof with central front gable peak, symmetrical three-bay front façade with central front door flanked by windows, wrap-around porch, vertical wood board cladding. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint that may be one of the extant dwellings and the relevant portion of Lot 8, Concession 6, Westminster, belonging to Donald McMillan. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a stone or brick dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property may have physical or design value for the dwelling as an example of an Ontario Gothic Revival Cottage. Given the age of the dwelling, it may also have historical or associative value linked with an early settler family.	■ Ontario Gothic Revival Cottage	

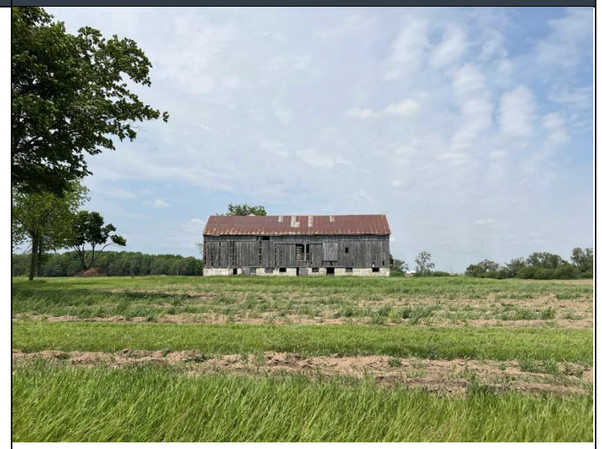
CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-28	2A/2B	1383 Scotland Drive, London	Farm complex (views obscured by vegetation from ROW): One-and-a-half storey, rectangular footprint, cross-gable roof, rectangular windows. Barn located behind dwelling, cross-gable roof, masonry foundation, vertical wood board, concrete silo. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint that may be one of the extant dwellings and the relevant portion of Lot 7, Concession 6, Westminster, belonging to J. Bratt. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Listed on the *City of London Register of Cultural Heritage Resources*	CHL	The property has design or physical value for the vernacular dwelling and bank barn. Given the age of the dwelling the property may also have historical or associative value with a settler family.	• Vernacular dwelling • Barn	 **Source:** Google imagery ©2024
CHR-29	2A/2B	1468 Scotland Drive, London	Farm complex: One-and-a-half storey dwelling, gable roof with central front peak (front part), symmetrical three-bay façade, rectangular windows. Barn with cross-gable roof, masonry foundation, metal siding, concrete silo. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint that may be one of the extant dwellings and the relevant portion of Lot 8, Concession 5, Westminster, belonging to James Beattie. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	CHL	The property may have design or physical value for the dwelling as an example of an Ontario Gothic Revival Cottage and the cross-gambrel roof barn. Given the age of the dwelling the property may also have historical or associative value with a settler family. Additionally, the property has potential contextual value for its maintenance and support of the rural agricultural character of the area, to which it is visually linked.	▪ Ontario Gothic Revival Cottage ▪ Cross-gambrel roof barn ▪ Rural agricultural setting	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-30	2A/2B	1262 Scotland Drive, London	One storey dwelling, gable roof, asymmetrical three-bay front façade with small off-centre front porch, horizontal siding, rectangular windows. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint that may the extant dwelling and the relevant portion of Lot 7, Concession 5, Westminster, belonging to Andrew Routledge. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property may have physical or design value for the vernacular dwelling.	■ Vernacular dwelling	
CHR-31	2A/2B	1291 Westminster Drive, London	Farm complex: Two-storey dwelling, hipped roof with central front gable peak, yellow-brick, wrap-around porch, dentil detailing along roofline, decorative bargeboard in gable peak, segmentally arched windows with masonry sills, masonry keystones and wood shutters. Gambrel roof bank barn located behind dwelling, masonry foundation, vertical wood boards, concrete silo. Another structure behind gambrel roof barn may be a driveshed, gable roof, vertical wood siding. The *City of London Register of Cultural Heritage Resources* records the dwelling as built c.1870. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a footprint on Lot 7, Concession 5, Westminster, in the general location of the extant dwelling and identifies the lot as belonging to George Routledge. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a stone or brick	Listed on the *City of London Register of Cultural Heritage Resources*	CHL	The property may have physical or design value for the dwelling as an example of an Italianate dwelling, the gambrel roof barn and potential driveshed as well as contextual value for its maintenance and support of the rural agricultural character of the area, to which it is visually linked.	■ Italianate dwelling ■ Gambrel roof barn ■ Potential driveshed ■ Rural agricultural setting	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
			dwelling in a similar location to the extant dwelling.					
CHR-32	2A/2B	1145 Westminster Drive, London	One-and-a-half storey dwelling (views obscured by vegetation from the ROW), cross-gable roof, shed roofed front porch. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a footprint on the relevant part of Lot 6, Concession 5, Westminster, in the general location of the extant dwelling and identifies the relevant portion of the lot as belonging to Heirs of M. Carrothers. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value for the vernacular dwelling as well as potential historical or associative value as the dwelling may be linked to early settlers.	▪ Vernacular dwelling	 **Source:** Google Imagery ©2024
CHR-33	2A/2B/3	1063 Westminster Drive, London	One-and-a-half storey dwelling, cross-gable roof, horizontal siding, rectangular windows, asymmetrical front façade with off-centre front door, arched window in the gable end. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Appears to show a footprint on the relevant part of Lot 6, Concession 5, Westminster, in the general location of the extant dwelling and identifies the relevant portion of the lot as belonging to D. Carrothers. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential physical or design value for the vernacular dwelling.	▪ Vernacular dwelling	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-34	2A/2B/3	4953 Old Victoria Road, London	Gable roof barn, rectangular footprint, masonry foundation, vertical wood boards painted red. *Dwelling on the property appears to be less than 40 years old. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint and cultivated area in a similar location to the extant dwelling and barn and the relevant portion of Lot 6, Concession 4, Westminster belongs to William Trever. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential physical or design value for the red barn.	■ Red barn	
CHR-35	2A/2B/3	4855 Old Victoria Road, London	Farm complex: One-and-a-half storey dwelling, cross-gable roof with front gable peak, brick chimney, horizontal siding, rectangular windows. Gambrel roof barn behind dwelling, masonry foundation, vertical wood boards (recently replaced), *The property also contains dwelling addressed as 4825 Old Victoria Road which appears to be less than 40 years old. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint on the relevant portion of Lot 6, Concession 4, Westminster and that it belongs to H. Trever. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	CHL	The property has potential physical or design value for the Gothic Revival style dwelling and the gambrel roof barn.	■ Gothic Revival style dwelling ■ Gambrel roof barn	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-36	2A/2B	1997-2017 Wilton Grove Road, London	Farm complex: Two dwellings, barn (near Wilton Grove Road) and barn (accessed from Dingman Drive). One-and-a-half storey dwelling, gable roof with central front peak (main part), yellow brick with red-brick banding and details in window lintels, symmetrical three-bay front façade with central front door flanked by segmentally arched windows, gothic arched window in gable peak, bargeboard in gable peak, front porch. The *City of London Register of Cultural Heritage Resources* records the year built as 1865. One-storey dwelling, cross-gable roof, horizontal siding, central front porch, rectangular windows. Gambrel roof barn (near Wilton Grove Road), masonry foundation, vertical wood boards painted red. Gable roof barn (near Dingman Drive), masonry foundation, vertical wood boards. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a footprint on the north half of Lot 6, Concession 3, Westminster, in the general location of the One-and-a-half storey extant dwelling and identifies the relevant portion of the lot as belonging to William Crothers. Shows the south half the lot split further into two lots, the south belonging to N. Corrothers and the north to E. Bratt. A dwelling footprint is recorded on the portion belonging to E. Bratt, but it is not in proximity to any extant structures. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a stone or brick dwelling in a similar location to the extant one-and-a-half storey dwelling.	Listed on the *City of London Register of Cultural Heritage Resources*	CHL	The property has potential physical or design value for the Ontario Gothic Revival Cottage, as well as for both barns. Given the age of the dwelling, the property may also have historical or associative value for an association with an early settler family.	■ Ontario Gothic Revival Cottage ■ Gambrel roof barn near Wilton Grove Road ■ Gable roof barn near Dingman Drive	 

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
								
CHR-37	2A/2B	2103 Bradley Avenue, London	Farm complex: One-and-a-half storey dwelling, gable roof with central gable peak (main part), yellow-brick, symmetrical three-bay façade with central door with transom flanked by rectangular windows, arched window in gable peak. The 19th/early 20th century barn is located behind the dwelling at the end of driveway, gable roof, masonry foundation, vertical wood boards. The *City of London Register of Cultural Heritage Resources* records the year built as c.1860. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint on Lot 9, Concession 2, Westminster, in the general location of the extant dwelling and identifies the relevant portion of the lot as belonging to John Scott. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a stone or brick dwelling in a similar location to the extant dwelling.	Listed on the *City of London Register of Cultural Heritage Resources*	CHL	The property has potential physical or design value for the Ontario Gothic Revival Cottage as well as for the gable roof barn.	■ Ontario Gothic Revival Cottage ■ Gable roof barn (19th/early 20th century)	

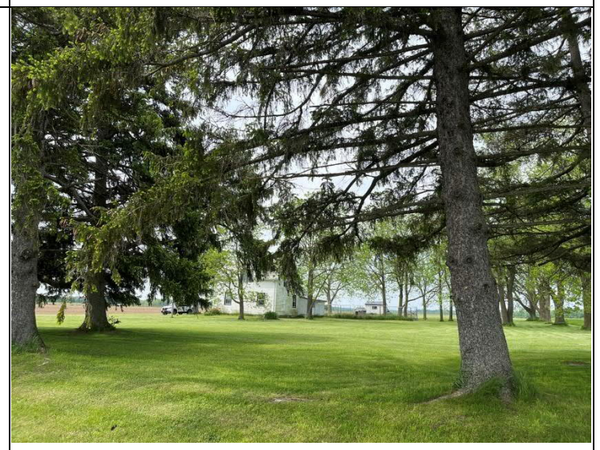
5.3 Alternative Route 3

Table 4 includes properties assessed at a preliminary level to have CHVI within the Alternative Route 3, with the exception of properties that are included in Table 3 as part of Alternatives 2A/2B (CHR-1, CHR-26, CHR-33, CHR-34, CHR-35, CHR-36, CHR-52, and CHR-53). Figure 4 maps all BHRs and CHLs within the study areas.

Table 4: Inventory of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within Alternative 3 Study Area

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-38	3	11374 Yarmouth Centre Rd, Central Elgin	One-and-a-half storey dwelling, red-brick, hipped roof with large gable peaks on all four sides, front porch with shed rood and red-brick columns, fish scale shingles and rectangular windows in gable peaks, rectangular windows with masonry sills. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint on the relevant portion of Lot 13, Concession 10, Yarmouth, slightly north of the extant dwelling and shows the property belongs to H. Douglass. Historical Topographic Maps surveyed 1913 (Figure 3): Shows no dwelling footprints on the property. The Department of National Defence's (formerly Department of Militia and Defence) 1929 topographic map identifies a dwelling footprint in a similar location to the current dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has physical or design value for the dwelling which may be an example of Arts and Crafts style.	■ Arts and Crafts style dwelling	
CHR-39	3	45028 Mapleton Line, Central Elgin	One-and-a-half storey dwelling, side gable roof extending over front porch, dormer across span of roof, rectangular windows, horizontal and vertical siding. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a footprint on the south half of Lot 13, Concession 11, Yarmouth, west of the extant dwelling, and identifies the relevant portion of the lot as belonging to H. Douglass. The dwelling footprint depicted may be the dwelling from the adjacent property which falls outside the study area.	Identified during the field review as a property with potential CHVI	BHR	The property has potential physical or design value for the dwelling as an example of Arts and Crafts style.	■ Arts and Crafts dwelling	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
			Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.					
CHR-40	3	12090 Yarmouth Centre Road, Central Elgin	One-and-a-half storey dwelling, red-brick, cross-hipped roof, central front porch, rectangular windows. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint on the south half of Lot 13, Concession 12, Yarmouth, southwest of the extant dwelling and identifies the relevant portion of the lot as belonging to J. Porter. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling and labels it as a post office. Early post offices were commonly located in dwellings.	Identified during the field review as a property with potential CHVI	BHR	The property may have historical or associative value if the dwelling was the former post office for the area.	■ Dwelling	
CHR-41	3	44799 Thomson Line, Central Elgin	Farm complex: One-and-a-half storey dwelling, cross-gable roof with front gable peak, horizontal siding, rectangular windows, a front porch. Older barn located behind dwelling (views obscured by vegetation from ROW), bank barn, masonry foundation, gable roof, vertical wood boards. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Identifies the relevant portion of Lot 12, Concession 13, Yarmouth as belonging to P. McGlashan, but no dwelling footprints. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	CHL	The property has potential design or physical value for the vernacular dwelling and older barn.	■ Dwelling ■ Older barn	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-42	3	44888 Thomson Line, Central Elgin	Farm complex: One-and-a-half storey dwelling, cross-gable roof, masonry chimneys, horizontal siding, rectangular windows. Gable roof barn with side extension located behind dwelling (views obscured by vegetation from ROW), masonry foundation, vertical wood board. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a footprint on Lot 12, Concession 14, Yarmouth, in the general location of the extant dwelling and identifies the relevant portion of the lot as belonging to N. Taylor. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	CHL	The property has potential design or physical value for the farmhouse which may be a vernacular adaptation of the Gothic Revival style and the gable roof barn.	■ Gothic Revival style dwelling ■ Gable roof barn	
CHR-43	3	13477 Yarmouth Centre Road, Central Elgin	One-and-a-half storey dwelling, masonry foundation, gable roof, elevation facing Yarmouth Centre Road has rectangular window openings and central shed-roof dormer. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a footprint on the relevant portion of Lot 12, Concession 14, Yarmouth, in the general location of the extant dwelling and identifies the relevant portion of the lot as belonging to J. Currie. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value for the dwelling which may be a vernacular adaptation of Neoclassical style. Given the age of the dwelling, the property may also have historical or associative value for an association with early settlers.	■ Vernacular dwelling	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-44	3	1161 Glanworth Drive, London	One-and-a-half storey dwelling, gable roof with front central gable peak, horizontal siding, symmetrical three-bay façade including central front door flanked by rectangular windows. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Identifies the relevant portion of Lot 6, Concession 8, Westminster, belonging to John Taylor, but shows no building footprints. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value for the dwelling which may be an example of an Ontario Gothic Revival Cottage.	■ Gothic Revival style Dwelling	
CHR-45	3	1094 Glanworth Drive, London	Farm complex: One-and-a-half storey dwelling, cross-gable roof, horizontal siding, rectangular windows, front porch. The 19th/early 20th century barn located behind dwelling, gable roof, masonry foundation, vertical wood boards painted white. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a footprint on the relevant portion of Lot 6, Concession 7, Westminster, in the general location of the extant dwelling and identifies the part lot as belonging to John McCallum. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	CHL	The property has potential design or physical value for the farmhouse which may be a vernacular adaptation of the Gothic Revival style and the gable roof barn. Given the age of the dwelling the property may also have historical or associative value with a settler family.	■ Gothic Revival style dwelling ■ Gable roof barn	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-46	3	6366 Old Victoria Road, London	One-and-a-half storey dwelling, cross-gable roof horizontal siding, porch on south side, rectangular windows. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a footprint on Lot 5, Concession 7, Westminster, in the general location of the extant dwelling and identifies the relevant portion of the lot as belonging to John McCallum. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value for the farmhouse which may be a vernacular adaptation of the Gothic Revival style. Given the age of the dwelling, the property may also have historical or associative value for an association with an early settler family.	■ Gothic Revival style dwelling	
CHR-47	3	969 Manning Drive, London	Two-storey dwelling, yellow-brick, hipped roof, brackets under eaves, segmentally arched windows, central front door with segmentally arched transom. The *City of London Register of Cultural Heritage Resources* records the year built as c.1873. *The barn on the property is not visible from the street and may have been demolished. Based on google imagery: masonry foundation, cross-gable roof, vertical wood boards. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a footprint on the relevant portion of Lot 5, Concession 7, Westminster, in the general location of the extant dwelling and identifies the part lot as belonging to Donald Campbell. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a brick or stone dwelling footprint in a similar location to the extant dwelling.	Listed on the *City of London Register of Cultural Heritage Resources*	CHL	The property has potential design or physical value for the dwelling is an example of Italianate style. If the barn remains, the property may also have physical or design value for the barn.	■ Italianate dwelling ■ Barn (if extant)	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-48	3	5788 Old Victoria Road, London	Farm complex: One-and-a-half storey dwelling, gable roof, horizontal siding, symmetrical three-bay front facade with central enclosed front porch flanked by rectangular windows. Bank barn located northeast of the dwelling, masonry foundation, cross-gable roof, vertical wood boards. The *City of London Register of Cultural Heritage Resources* records the year of construction as 1860. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a footprint on the relevant portion of Lot 5, Concession 26, Westminster, in the general location of the extant dwelling and identifies the relevant portion of the lot as belonging to William Cousins. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Listed on the *City of London Register of Cultural Heritage Resources*	CHL	The property has potential design or physical value for the dwelling as an example of a vernacular Neo-classical style and the bank barn. Given the age of the dwelling, the property may also have associative or historical value for an association with an early settler.	■ Dwelling ■ Bank barn	
CHR-49	3	937 Westminster Drive, London	One-and-a-half storey dwelling, gable roof with masonry chimney, horizontal siding, elevation facing Westminster Drive has two rectangular windows. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a footprint on the relevant portion of Lot 5, Concession 5, Westminster, in the general location of the extant dwelling and identifies the part lot as belonging to G. Willsie. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling.	Identified during the field review as a property with potential CHVI	BHR	The property has potential design or physical value for the vernacular dwelling. The age of the dwelling, may also mean the property has potential historical or associative value for an association with an early settler family.	■ Vernacular dwelling	

CHR	Alternative Route	Civic Address or Location	Description	Cultural Heritage Status	Resource Type	Known or Potential CHVI	Potential Heritage Attributes	Photograph
CHR-50	3	942 Westminster Drive, London	Two-and-a-half storey dwelling, masonry foundation, hipped roof with front gable peak, brick chimney, segmentally arched windows, front porch. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows two dwelling footprints on the relevant portion of Lot 5, Concession 4, Westminster, one of which is in the general location of the extant dwelling and identifies the relevant portion of the lot as belonging to A. & L. Willsie. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a frame dwelling in a similar location to the extant dwelling. Subsequent maps from the 20th century show a dwelling footprint in the same location, so the 1913 topographic map may have mistakenly identified the dwelling as a frame dwelling or the brick may be a cladding material.	Identified during the field review as a property with potential CHVI	BHR	The property has potential physical or design value for the dwelling which may be a vernacular adaptation of Edwardian Classicism.	■ Vernacular dwelling	
CHR-51	3	2115 Wilton Grove Road London	One-and-a-half storey dwelling, cross-gable roof with central front gable peak, yellow-brick, symmetrical three-bay front façade with central door flanked by rectangular windows, gothic arched window in gable peak. Illustrated Historical County Atlas Maps (1877/1878) (Figure 2): Shows a dwelling footprint on the relevant portion of Lot 5, Concession 3, Westminster, in the general location of the extant dwelling and identifies the relevant portion of the lot as belonging to James Blair. Historical Topographic Maps surveyed 1913 (Figure 3): Shows a stone or brick dwelling in a similar location to the extant dwelling.	Part IV Designated (By-law L.S.P.-3408-285)	BHR	**Statement of Cultural Heritage Value or Interest from Designation By-law:** 2115 Wilton Grove Road is recommended for designation under Part IV of the Ontario Heritage Act as a building of cultural heritage value. This house is a classic Ontario Farmhouse, one-and-a-half storey in London white brick with some Gothic Revival influences. It is reportedly one of five houses in the area built to similar floor plans in similar styles. The other houses that remain are not within the City of London limits. The house was built c.1852 for James Blair, a Scottish immigrant farmer who purchased the half lot from the Canada Land Company in 1850 to establish and operate a farm. James Blair died in 1896 and was interred in the Pioneer Cemetery at Pond Mills. The house and farm was held in the Blair family ownership until some time after 1904. The farm later was later owned by the family of Jan and Agnes Bruyn, immigrants to Canada in 1964 from the Netherlands.	**Description of Heritage Attributes from Designation By-law:** The house exhibits many attributes of the Ontario Farmhouse, such as: ■ The three-bay front facade with a small central gable over the front door encompassing a small Gothic-arched window. ■ Symmetrical end facades with two windows on each level, aligned over one another ■ A rear "tail" addition.	

5.4 Analysis and Recommendations

Based on the desktop research, information gathering, fieldwork, and inventory of BHRs and CHLs, WSP has determined that:

- The Route 1A study area includes or crosses 21 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Shared with Route 1B, Route 1A has the second highest number of potentially impacted BHRs and CHLs out of the five route options.
- The Route 1B study area includes or crosses 21 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Shared with Route 1A, Route 1B has the second highest number of potentially impacted BHRs and CHLs out of the five route options.
- The Route 2A study area includes or crosses 22 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Shared with Route 2B, Route 2A has the highest number of potentially impacted BHRs and CHLs out of the five route options.
- The Route 2B study area includes or crosses 22 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Shared with Route 2A, Route 2B has the highest number of potentially impacted BHRs and CHLs out of the five route options.
- The Route 3 study area includes or crosses 20 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Route 3 has the lowest number of potentially impacted BHRs and CHLs out of the five route options.

Since all route alternatives cross or are adjacent to known and/ or potential BHRs and CHLs identified in this CHEC, WSP recommends to:

- Select a preferred alternative for the Project, incorporating the findings of this CHEC; and
- Conduct a PIA for the preferred alternative to identify the direct and indirect impacts to the known and potential BHRs and CHLs identified in this CHEC. Based on the impacts identified, the PIA will determine if property specific CHERs or HIAs are required.

6.0 SUMMARY STATEMENT AND RECOMMENDATIONS

In May 2024, Hydro One retained WSP to provide a CHEC report to support the St. Thomas Transmission Line Project to construct one new, approximately 20 km, double-circuit 230 kV transmission line from the City of London to the planned Centennial TS in the City of St. Thomas, Ontario (the Project). The Project is subject to the *Class Environmental Assessment for Transmission Facilities* (Hydro One 2024). The objective of the CHEC is to help characterize the study area environment by identifying known and potential BHRs or CHLs and to assist Hydro One to select the preferred route for the new transmission line.

The study area is defined as five alternative routes, plus a buffer of 120 metres (m) on either side of each centreline[4]. The five high-level alternative routes for the Project are:

- Route 1A
- Route 1B
- Route 2A
- Route 2B
- Route 3

Routes 1A and 1B start at the south end of the City of London, just north of Highway 401, travel through the Municipality of Central Elgin, and culminate at the Centennial TS in the City of St. Thomas.

Routes 2A and 2B also start at the south end of the City of London but traverse east of Routes 1A and 1B through the Municipality of Central Elgin before joining Routes 1A and 1B in the City of St. Thomas and culminating at the Centennial TS.

Route 3 also starts at the south end of the City of London but traverses east of Routes 2A and 2B through the Municipality of Central Elgin before joining Routes 1A, 1B, 2A, and 2B in the City of St. Thomas and culminating at the Centennial TS.

Following guidance outlined in the Hydro One CH I&E Process, the MCM Checklist, and the MCM S&Gs, this CHEC provides a background on the relevant legislation and guidelines, outlines the methods used to identify BHRs and CHLs in the study area, presents an inventory of BHRs and CHLs within the study area, and provides an overview of each route alternative with respect to the identified heritage properties.

In total, the study area includes 199 property parcels. Of these, WSP identified 51 individual properties with known or potential CHVI as BHRs or CHLs, as well as two waterways with known CHVI as CHLs. These include:

- Twenty-seven (27) properties assessed at a preliminary level to have potential CHVI as BHRs.
- Twelve (12) properties assessed at a preliminary level to have potential CHVI as CHLs.
- Eleven (11) properties listed (not designated) on the *City of London Register of Cultural Heritage Resources*.
- Two (2) waterways identified through information gathering as known CHLs.

[4] Centreline data sourced from 'PCO236621_DIL_RouteAlternatives_V06.kmz' provided to WSP 15 May 2024.

- One (1) property designated under Part IV of the OHA.

Furthermore, the preceding analysis has determined that:

- The Route 1A study area includes or crosses 21 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Shared with Route 1B, Route 1A has the second highest number of potentially impacted BHRs and CHLs out of the five route options.
- The Route 1B study area includes or crosses 21 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Shared with Route 1A, Route 1B has the second highest number of potentially impacted BHRs and CHLs out of the five route options.
- The Route 2A study area includes or crosses 22 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Shared with Route 2B, Route 2A has the highest number of potentially impacted BHRs and CHLs out of the five route options.
- The Route 2B study area includes or crosses 22 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Shared with Route 2A, Route 2B has the highest number of potentially impacted BHRs and CHLs out of the five route options.
- The Route 3 study area includes or crosses 20 individual properties with known or potential BHRs or CHLs, and two waterways that are known CHLs. Route 3 has the lowest number of potentially impacted BHRs and CHLs out of the five route options.

Since all route alternatives cross or are adjacent to known and/ or potential BHRs and CHLs identified in this CHEC, WSP recommends to:

- Select a preferred alternative for the Project, incorporating the findings of this CHEC; and
- Conduct a PIA for the preferred alternative to identify the direct and indirect impacts to the known and potential BHRs and CHLs identified in this CHEC. Based on the impacts identified, the PIA will determine if property specific CHERs or HIAs are required.

7.0 REFERENCES CITED

Canada's Historic Places

2010 *Standards and Guidelines for the Conservation of Historic Places in Canada.* Second Edition. Canada's Historic Places, Ottawa.

Carmen RA, Buehler D, Mikesell S, Searls CL.

2012 Current Practices to Address Construction Vibration and Potential Effects to Historic Buildings Adjacent to Transportation Projects. Washington, DC: Wilson, Ihrig and Associates, ICF International, and Simpson, Gumpertz and Heger, Incorporated for the American Association of State Highway and Transportation Officials (AASHTO).

Central Elgin, Municipality of

ND Designated Heritage Properties. https://www.centralelgin.org/en/recreation-and-culture/Heritage/Heritage-Properties-Apr2024-(1).pdf

Government of Ontario

2024 Provincial Planning Statement. https://www.ontario.ca/files/2024-10/mmah-provincial-planning-statement-en-2024-10-23.pdf

Hydro One

2024 Class Environmental Assessment for Transmission Facilities. February 2024.

2019 Cultural Heritage Identification and Evaluation Process. December 2019.

Kettle Creek Conservation Authority

2024 Our Watershed. https://www.kettlecreekconservation.on.ca/our-watershed/

Ministry of Citizenship and Multiculturalism

2022 Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes: A Checklist for the Non-Specialist.

2010 *Standards & Guidelines for Conservation of Provincial Heritage Properties.*

2014 *Standards and Guidelines for the Conservation of Provincial Heritage Properties*: Heritage Identification & Evaluation Process.

2006 *Ontario Heritage Tool Kit: Heritage Property Evaluation – A Guide to Listing, Researching, and Evaluating Cultural Heritage Property in Ontario Communities*.

Ontario Heritage Tool Kit: *Heritage Resources in the Land Use Planning Process*.

London, City of

ND London City Map Gallery. Heritage Sites. https://london.maps.arcgis.com/apps/webappviewer/index.html?id=5d2e70c3d82c427ebd44b75169f6c91d

2023 Dingman Creek Environmental Assessment. https://london.ca/projects/dingman-creek-environmental-assessment

2022 City of London Register of Cultural Heritage Resources. https://london.ca/sites/default/files/2022-12/2022%20Register%20of%20Cultural%20Heritage%20Resources.pdf

Ontario Heritage Trust

Plaque Database. https://www.heritagetrust.on.ca/online-plaque-guide

Places of Worship Inventory. https://www.heritagetrust.on.ca/places-of-worship/places-of-worship-database/inventory

Conservation easements. Ontario Heritage Trust | Conservation easements

Parks Canada

Canada's Historic Places. A Federal, Provincial and Territorial Collaboration. https://www.historicplaces.ca/en/home-accueil.aspx

The Historic Sites and Monuments Board of Canada. Directory of Federal Heritage Designations. https://parks.canada.ca/culture/dfhd

The Historic Sites and Monuments Board of Canada. Federal Heritage Railway Stations. https://parks.canada.ca/culture/designation/gare-station

St. Thomas, City of

ND Municipal Heritage Register. https://www.stthomas.ca/visiting_us/heritage_properties

Signature Page

We trust that this report meets your current needs. If you have any questions, or if we may be of further assistance, please contact the undersigned.

WSP Canada Inc.

Alisha Mohamed, MA, CAHP
Senior Cultural Heritage Specialist

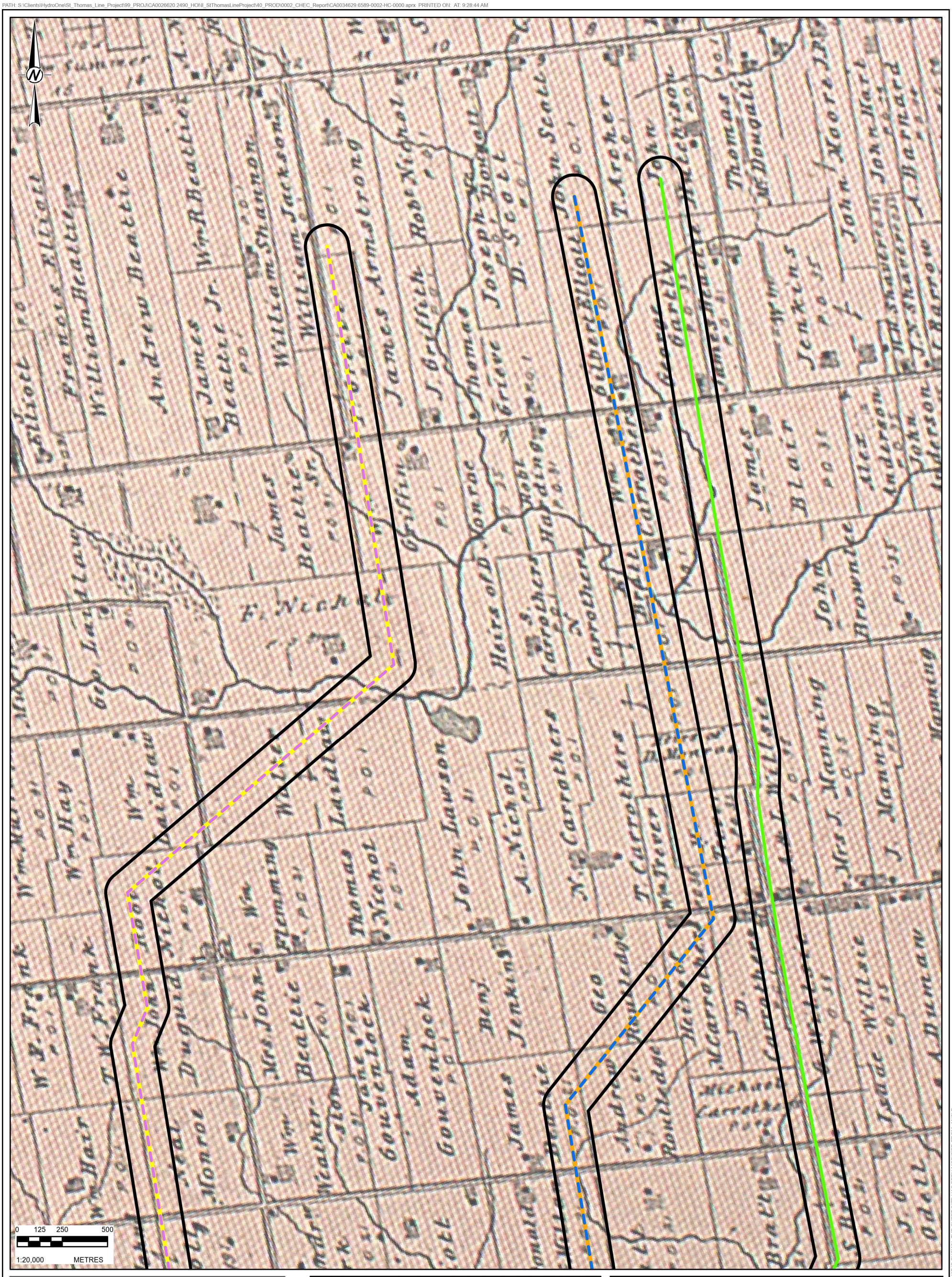
Heidy Schopf, MES, CAHP
Cultural Heritage Team Lead

CC/HC/SP/AM/HS/mp

https://wsponlinecan.sharepoint.com/sites/ca-ca00346296589/shared documents/05. technical/phase 1 chec report/chec/ca0034629.6589-1-r-rev7_honi st. thomas_chec_16may2025.docx

APPENDIX A

Figures



LEGEND

PROPOSED ROUTE:

- ALTERNATIVE 1A
- ALTERNATIVE 1B
- ALTERNATIVE 2A
- ALTERNATIVE 2B
- ALTERNATIVE 3
- STUDY AREA (120 M BUFFER)

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. 1878 ILLUSTRATED HISTORICAL ATLAS FOR COUNTY OF MIDDLESEX 1877 ILLUSTRATED HISTORICAL ATLAS FOR COUNTY OF ELGIN
2. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
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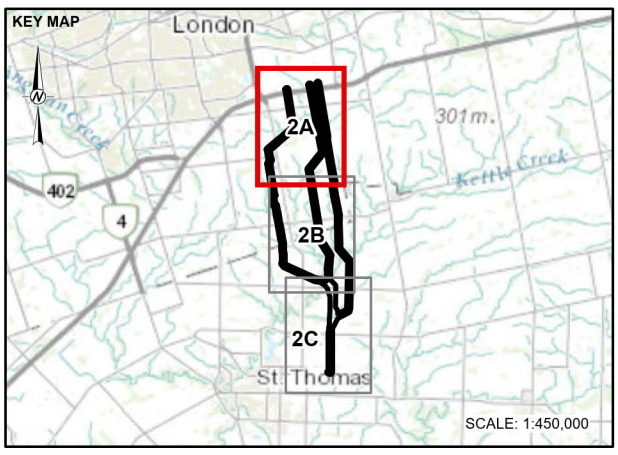

CLIENT
HYDRO ONE NETWORKS INC.

PROJECT
ST. THOMAS TRANSMISSION LINE, CULTURAL HERITAGE EXISTING CONDITIONS REPORT

TITLE
STUDY AREA OVERLAID ON 19th CENTURY HISTORICAL MAPPING

CONSULTANT

YYYY-MM-DD	2025-03-25
DESIGNED	KK
PREPARED	BR
REVIEWED	CC
APPROVED	KK

PROJECT NO.	CONTROL	REV.	FIGURE
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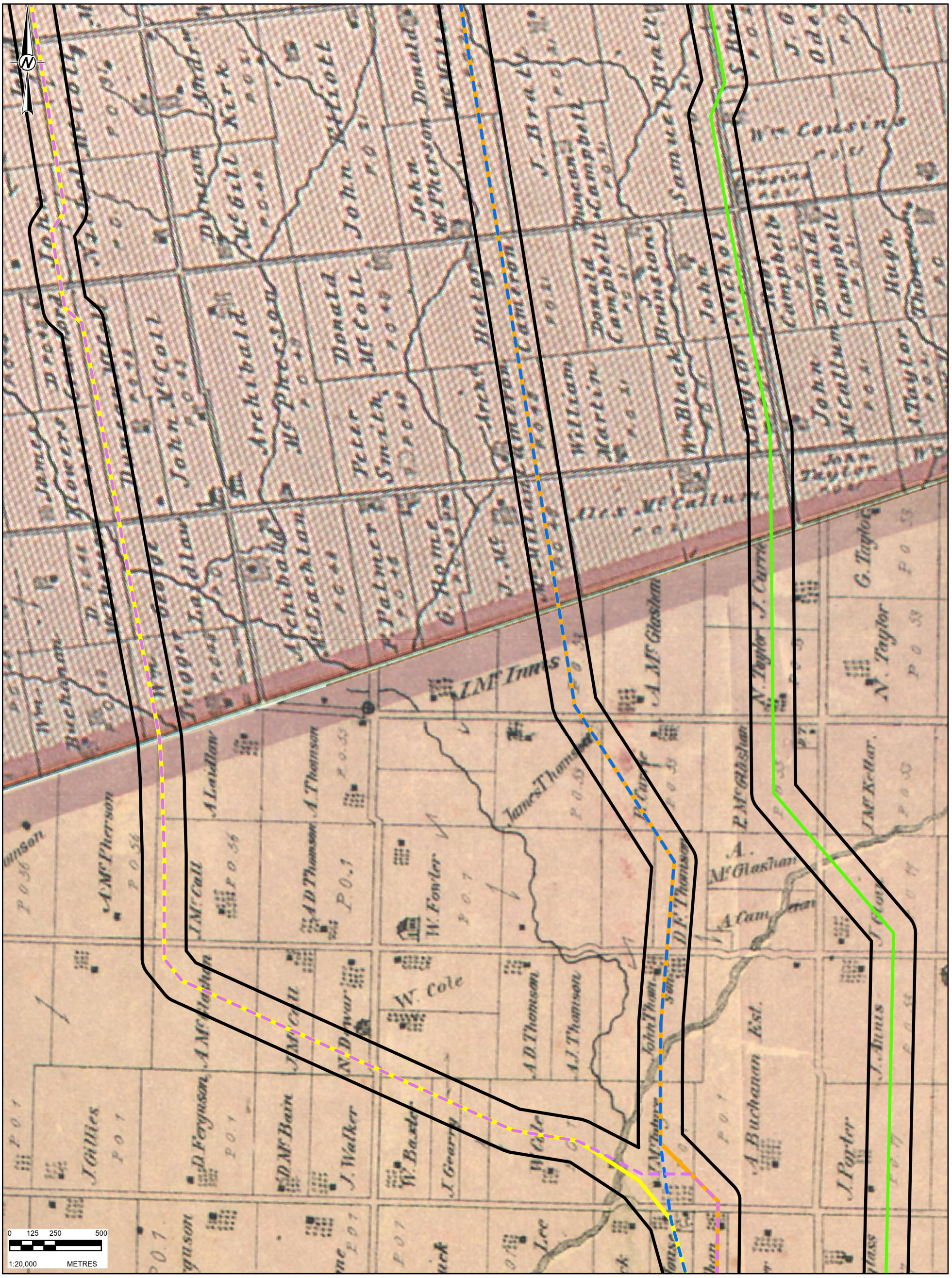

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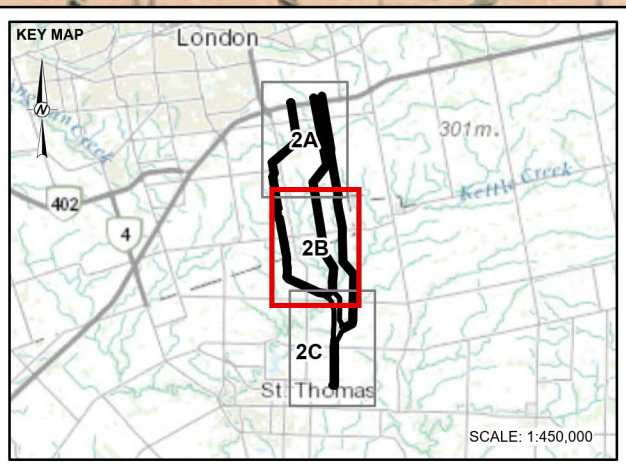

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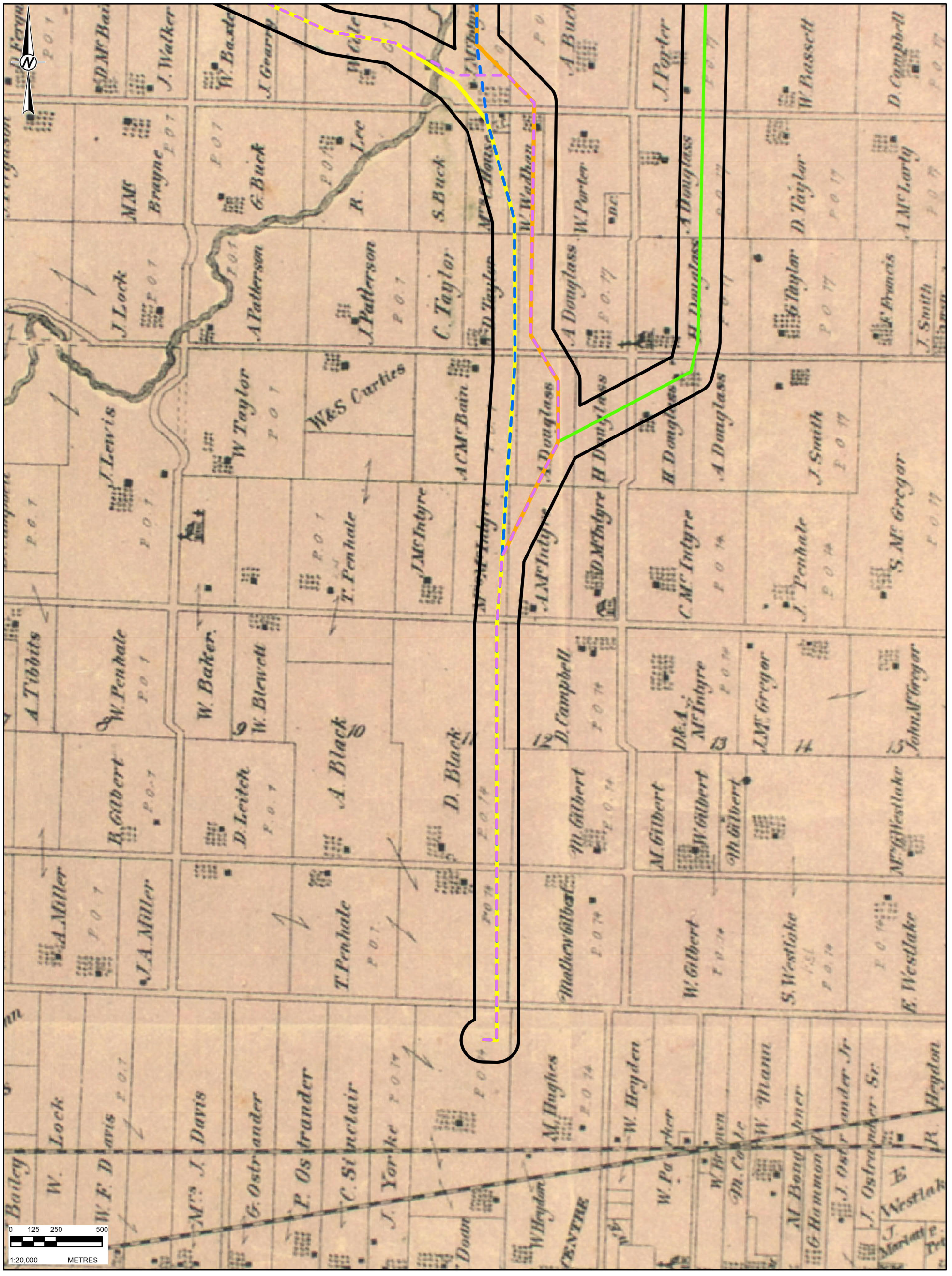

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- ALTERNATIVE 1A
- ALTERNATIVE 1B
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- ALTERNATIVE 2B
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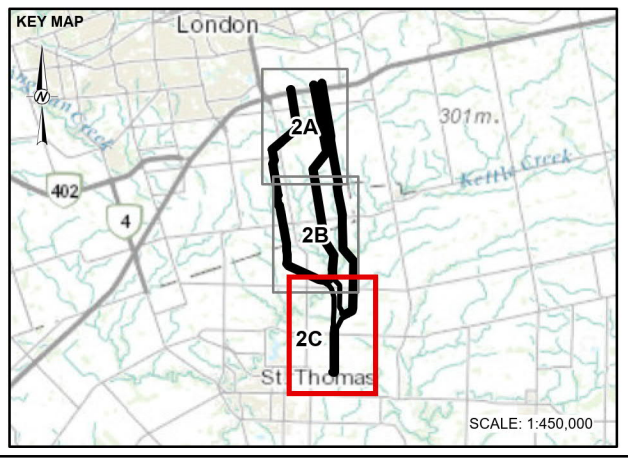

CLIENT
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PROJECT
ST. THOMAS TRANSMISSION LINE, CULTURAL HERITAGE EXISTING CONDITIONS REPORT

TITLE
STUDY AREA OVERLAID ON 19th CENTURY HISTORICAL MAPPING

CONSULTANT
wsp

YYYY-MM-DD	2025-03-25
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PREPARED	BR
REVIEWED	CC
APPROVED	KK

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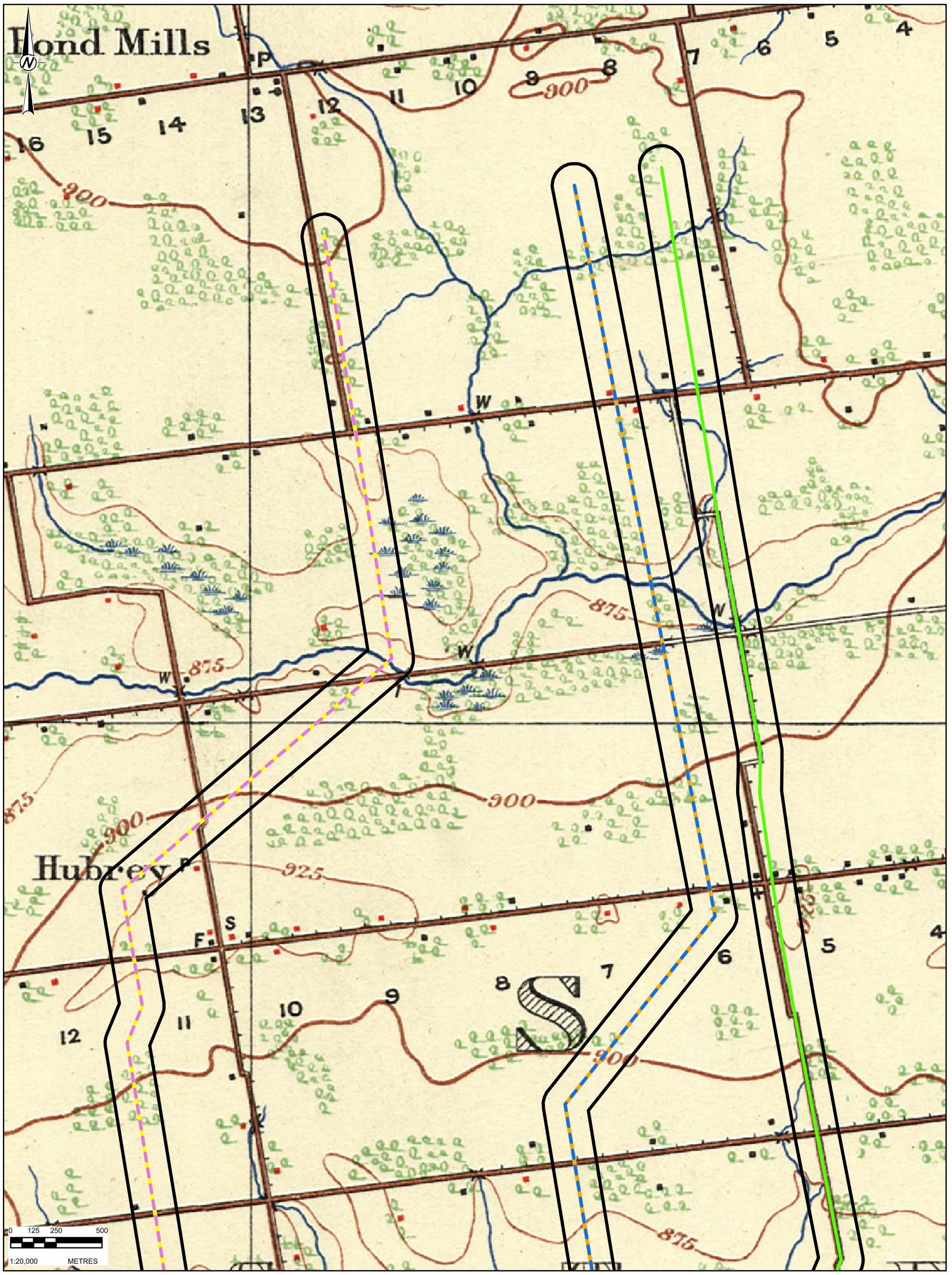

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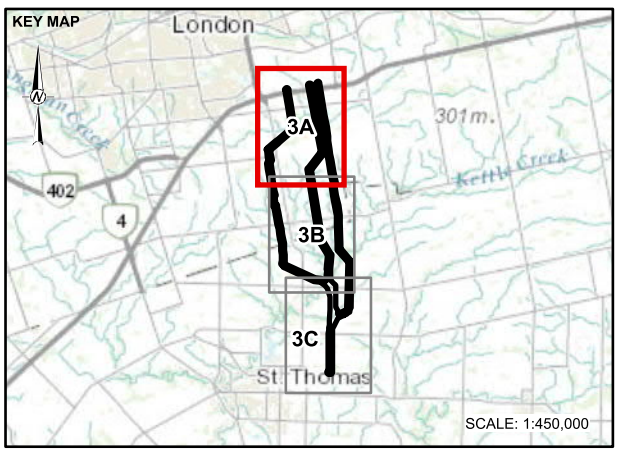
4. COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 17N



CLIENT
HYDRO ONE NETWORKS INC.

PROJECT
ST. THOMAS TRANSMISSION LINE, CULTURAL HERITAGE EXISTING CONDITIONS REPORT

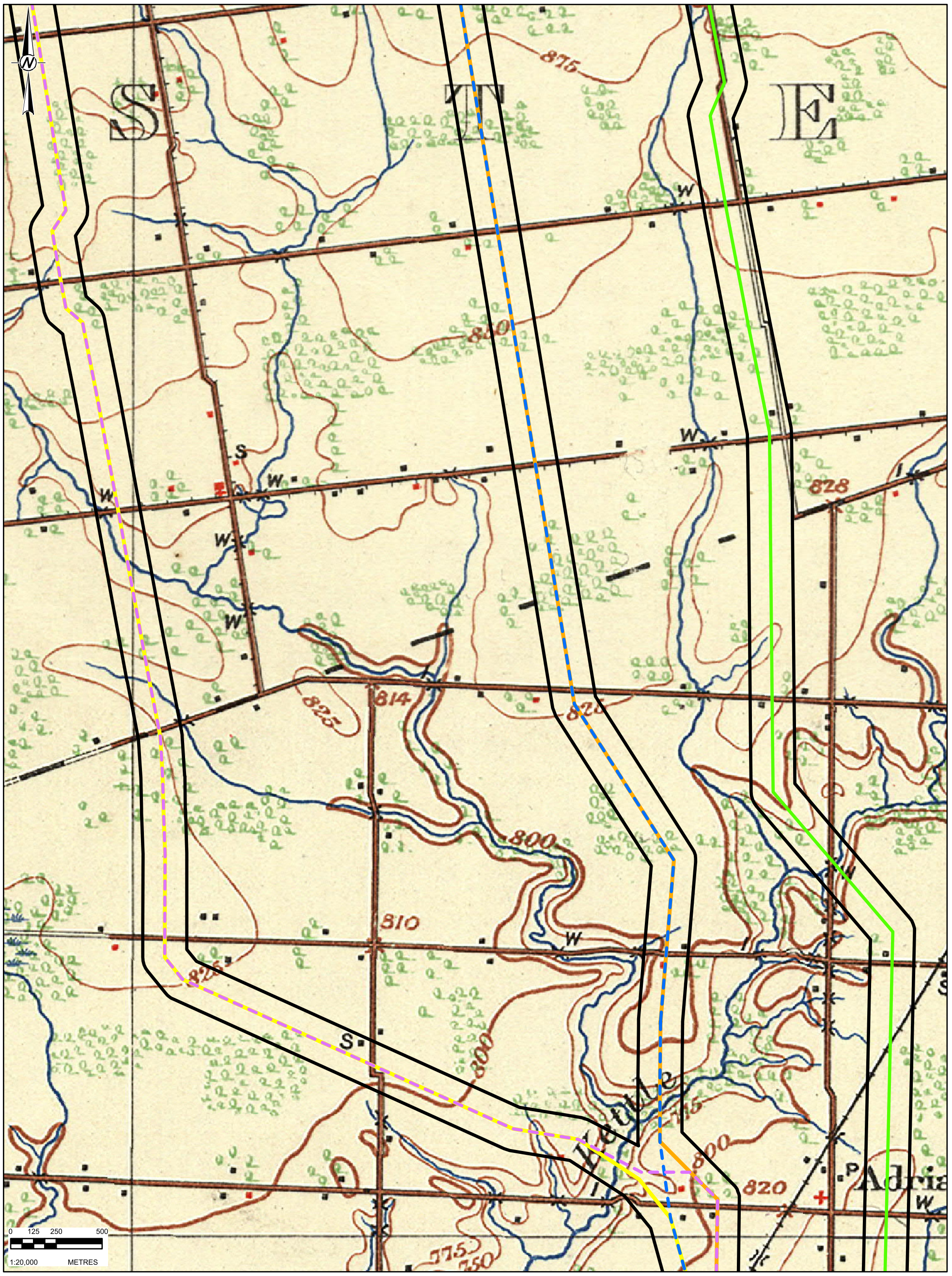
TITLE
STUDY AREA OVERLAID ON 20th CENTURY TOPOGRAPHICAL MAPPING

CONSULTANT

wsp

YYYY-MM-DD	2025-03-25
DESIGNED	KK
PREPARED	BR
REVIEWED	CC
APPROVED	KK

PROJECT NO.	CONTROL	REV.	FIGURE
CA0034629.6589	0002	0	3A



LEGEND

PROPOSED ROUTE:

- ALTERNATIVE 1A
- ALTERNATIVE 1B
- ALTERNATIVE 2A
- ALTERNATIVE 2B
- ALTERNATIVE 3
- STUDY AREA (120 M BUFFER)

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. ST THOMAS, ONTARIO. 1:63,360. MAP SHEET 040I14, [ED. 1], 1913
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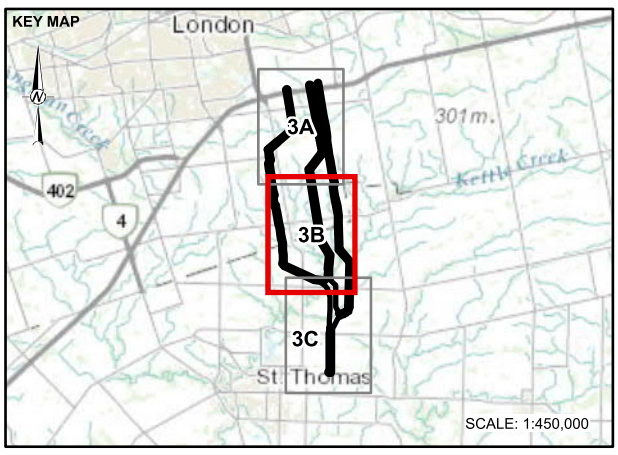

CLIENT
HYDRO ONE NETWORKS INC.

PROJECT
ST. THOMAS TRANSMISSION LINE, CULTURAL HERITAGE EXISTING CONDITIONS REPORT

TITLE
STUDY AREA OVERLAID ON 20th CENTURY TOPOGRAPHICAL MAPPING

CONSULTANT

wsp

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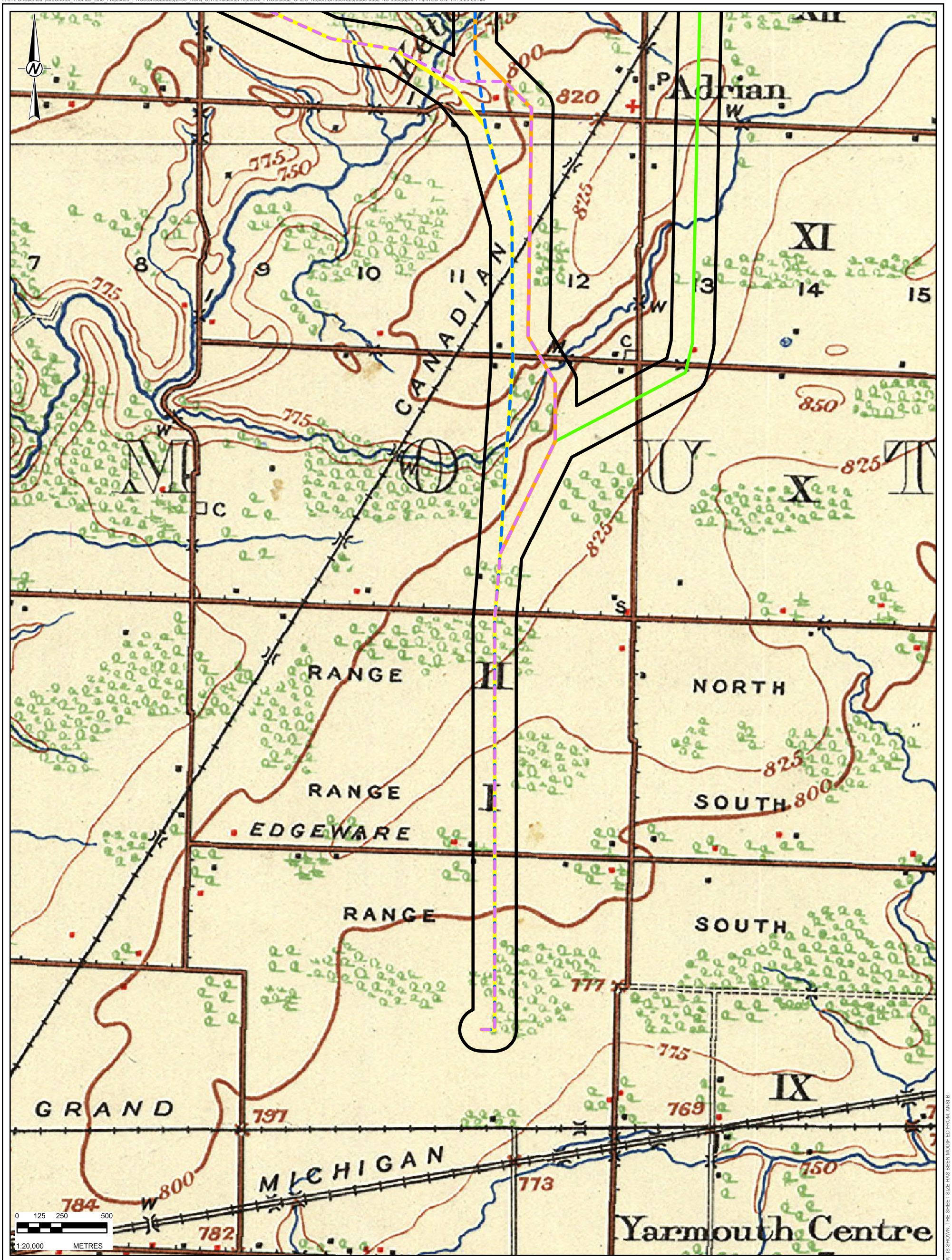
PROJECT NO.	CONTROL	REV.	FIGURE
CA0034629.6589	0002	0	3B



LEGEND

PROPOSED ROUTE:

- ALTERNATIVE 1A
- ALTERNATIVE 1B
- ALTERNATIVE 2A
- ALTERNATIVE 2B
- ALTERNATIVE 3
- STUDY AREA (120 M BUFFER)

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

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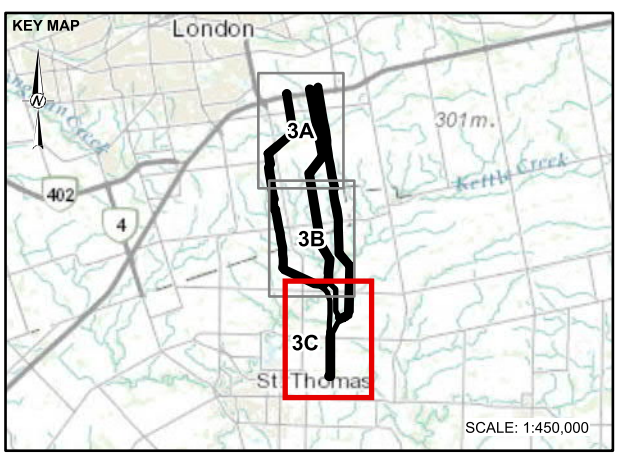


CLIENT
HYDRO ONE NETWORKS INC.

PROJECT
ST. THOMAS TRANSMISSION LINE, CULTURAL HERITAGE EXISTING CONDITIONS REPORT

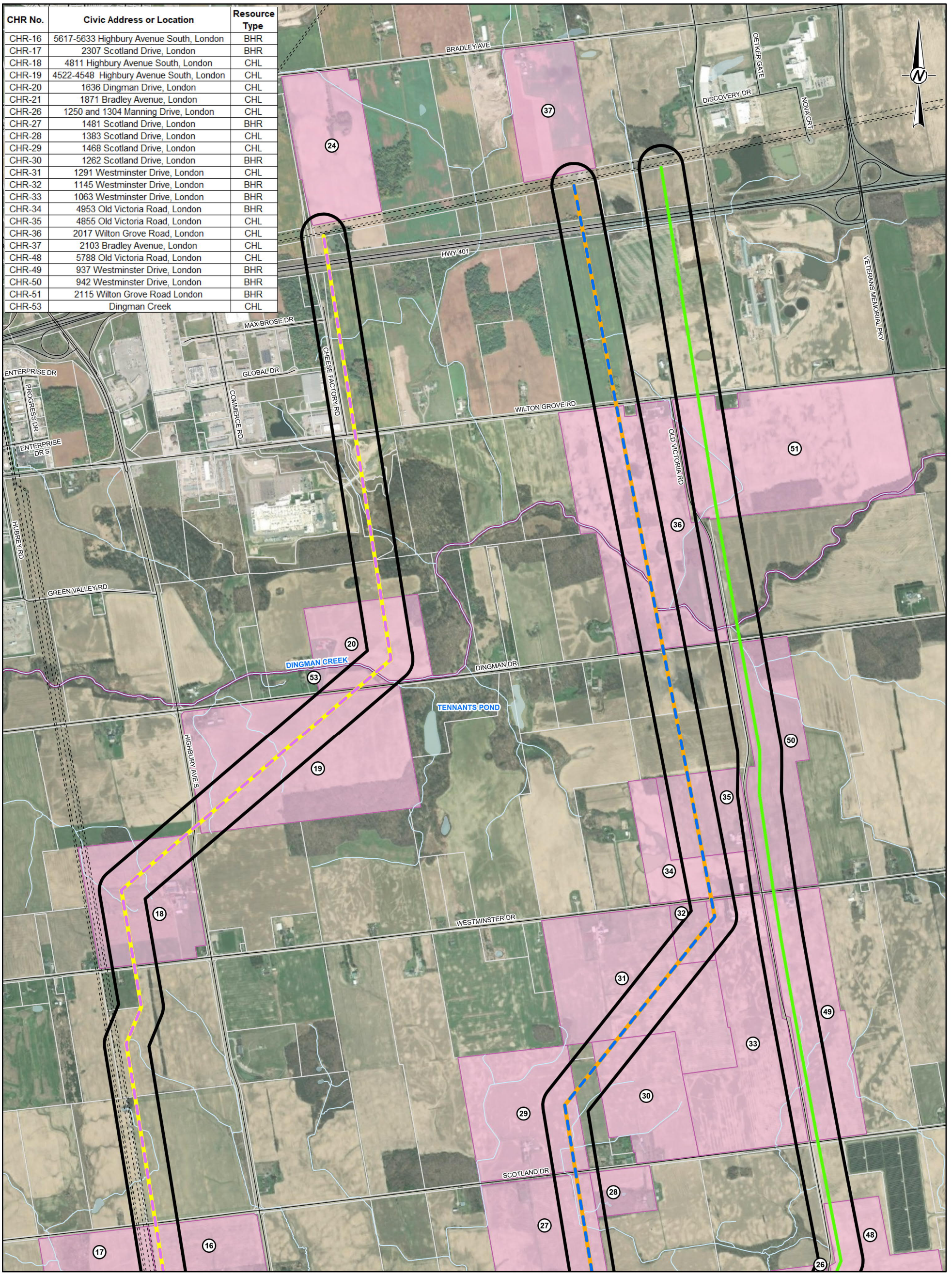
TITLE
STUDY AREA OVERLAID ON 20th CENTURY TOPOGRAPHICAL MAPPING

CONSULTANT
wsp

YYYY-MM-DD	2025-03-25
DESIGNED	KK
PREPARED	BR
REVIEWED	CC
APPROVED	KK

PROJECT NO.	CONTROL	REV.	FIGURE
CA0034629.6589	0002	0	3C

CHR No.	Civic Address or Location	Resource Type
CHR-16	5617-5633 Highbury Avenue South, London	BHR
CHR-17	2307 Scotland Drive, London	BHR
CHR-18	4811 Highbury Avenue South, London	CHL
CHR-19	4522-4548 Highbury Avenue South, London	CHL
CHR-20	1636 Dingman Drive, London	CHL
CHR-21	1871 Bradley Avenue, London	CHL
CHR-26	1250 and 1304 Manning Drive, London	CHL
CHR-27	1481 Scotland Drive, London	BHR
CHR-28	1383 Scotland Drive, London	CHL
CHR-29	1468 Scotland Drive, London	CHL
CHR-30	1262 Scotland Drive, London	BHR
CHR-31	1291 Westminster Drive, London	CHL
CHR-32	1145 Westminster Drive, London	BHR
CHR-33	1063 Westminster Drive, London	BHR
CHR-34	4953 Old Victoria Road, London	BHR
CHR-35	4855 Old Victoria Road, London	CHL
CHR-36	2017 Wilton Grove Road, London	CHL
CHR-37	2103 Bradley Avenue, London	CHL
CHR-48	5788 Old Victoria Road, London	CHL
CHR-49	937 Westminster Drive, London	BHR
CHR-50	942 Westminster Drive, London	BHR
CHR-51	2115 Wilton Grove Road London	BHR
CHR-53	Dingman Creek	CHL



LEGEND

PROPOSED ROUTE:

- ALTERNATIVE 1A
- ALTERNATIVE 1B
- ALTERNATIVE 2A
- ALTERNATIVE 2B
- ALTERNATIVE 3
- STUDY AREA (120 M BUFFER)

- PARCEL OF POTENTIAL CHVI (WITHIN OR PARTIALLY WITIN 120 M BUFFER)
- ROADWAY
- EXISTING TRANSMISSION LINES
- WATERCOURSE
- WATERBODY
- PROPERTY BOUNDARY

0 125 250 500

1:20,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
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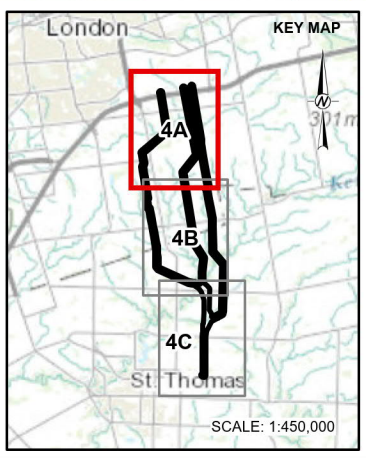


CLIENT
HYDRO ONE NETWORKS INC.

PROJECT
ST. THOMAS TRANSMISSION LINE, CULTURAL HERITAGE EXISTING CONDITIONS REPORT

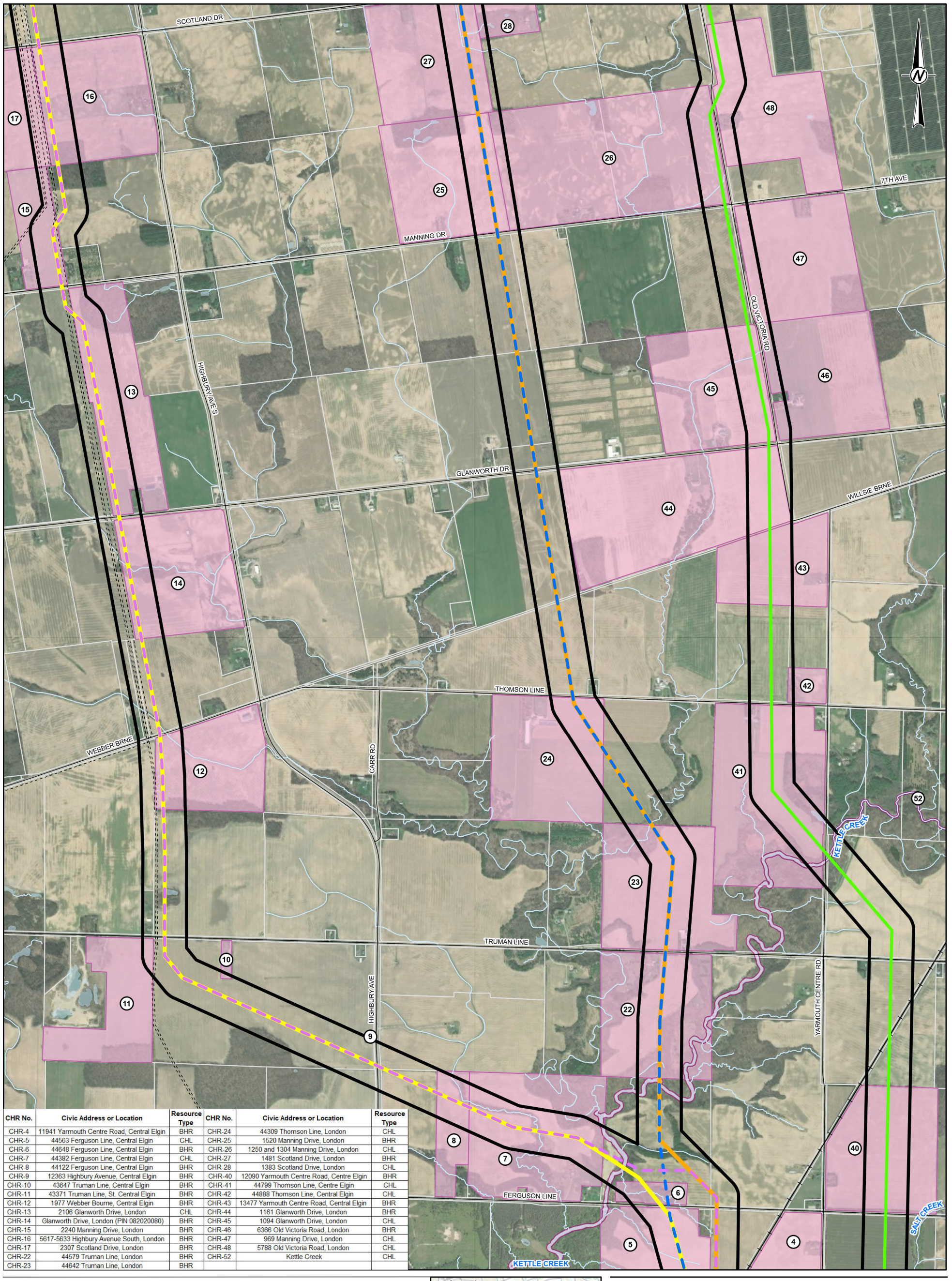
TITLE
PROPERTIES OF KNOWN AND POTENTIAL CHVI IDENTIFIED IN THE STUDY AREA MAPPING

CONSULTANT

wsp

YYYY-MM-DD	2025-03-25
DESIGNED	KK
PREPARED	BR
REVIEWED	CC
APPROVED	KK

PROJECT NO.	CONTROL	REV.	FIGURE
CA0034629.6589	0002	0	4A



CHR No.	Civic Address or Location	Resource Type	CHR No.	Civic Address or Location	Resource Type
CHR-4	11941 Yarmouth Centre Road, Central Elgin	BHR	CHR-24	44309 Thomson Line, London	CHL
CHR-5	44563 Ferguson Line, Central Elgin	CHL	CHR-25	1520 Manning Drive, London	BHR
CHR-6	44648 Ferguson Line, Central Elgin	BHR	CHR-26	1250 and 1304 Manning Drive, London	CHL
CHR-7	44382 Ferguson Line, Central Elgin	CHL	CHR-27	1481 Scotland Drive, London	BHR
CHR-8	44122 Ferguson Line, Central Elgin	BHR	CHR-28	1383 Scotland Drive, London	CHL
CHR-9	12363 Highbury Avenue, Central Elgin	BHR	CHR-40	12090 Yarmouth Centre Road, Centre Elgin	BHR
CHR-10	43647 Truman Line, Central Elgin	BHR	CHR-41	44799 Thomson Line, Centre Elgin	CHL
CHR-11	43371 Truman Line, St. Central Elgin	BHR	CHR-42	44888 Thomson Line, Central Elgin	CHL
CHR-12	1977 Webber Bourne, Central Elgin	BHR	CHR-43	13477 Yarmouth Centre Road, Central Elgin	BHR
CHR-13	2106 Glanworth Drive, London	CHL	CHR-44	1161 Glanworth Drive, London	BHR
CHR-14	Glanworth Drive, London (PIN 082020080)	BHR	CHR-45	1094 Glanworth Drive, London	CHL
CHR-15	2240 Manning Drive, London	BHR	CHR-46	6366 Old Victoria Road, London	BHR
CHR-16	5617-5633 Highbury Avenue South, London	BHR	CHR-47	969 Manning Drive, London	CHL
CHR-17	2307 Scotland Drive, London	BHR	CHR-48	5788 Old Victoria Road, London	CHL
CHR-22	44579 Truman Line, London	BHR	CHR-52	Kettle Creek	CHL
CHR-23	44642 Truman Line, London	BHR			

LEGEND

PROPOSED ROUTE:
- ALTERNATIVE 1A
- ALTERNATIVE 1B
- ALTERNATIVE 2A
- ALTERNATIVE 2B
- ALTERNATIVE 3
- STUDY AREA (120 M BUFFER)

- PARCEL OF POTENTIAL CHVI (WITHIN OR PARTIALLY WITIN 120 M BUFFER)
- ROADWAY
- RAILWAY
- EXISTING TRANSMISSION LINES
- WATERCOURSE
- WATERBODY
- PROPERTY BOUNDARY

0 125 250 500
1:20,000 METRES

NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)
1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. BASE MAP: EARTHSTAR GEOGRAPHICS, CITY OF LONDON, MIDDLESEX COUNTY, ONTARIO BASE MAP, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, © OPENSTREETMAP CONTRIBUTORS, HERE, GARMIN, USGS, NGA, EPA, USDA, NPS, AAFC, NRCAN
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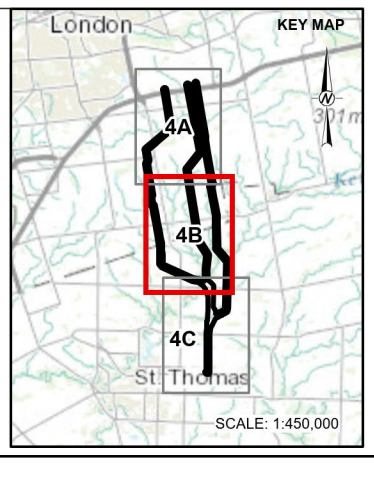


CLIENT
HYDRO ONE NETWORKS INC.

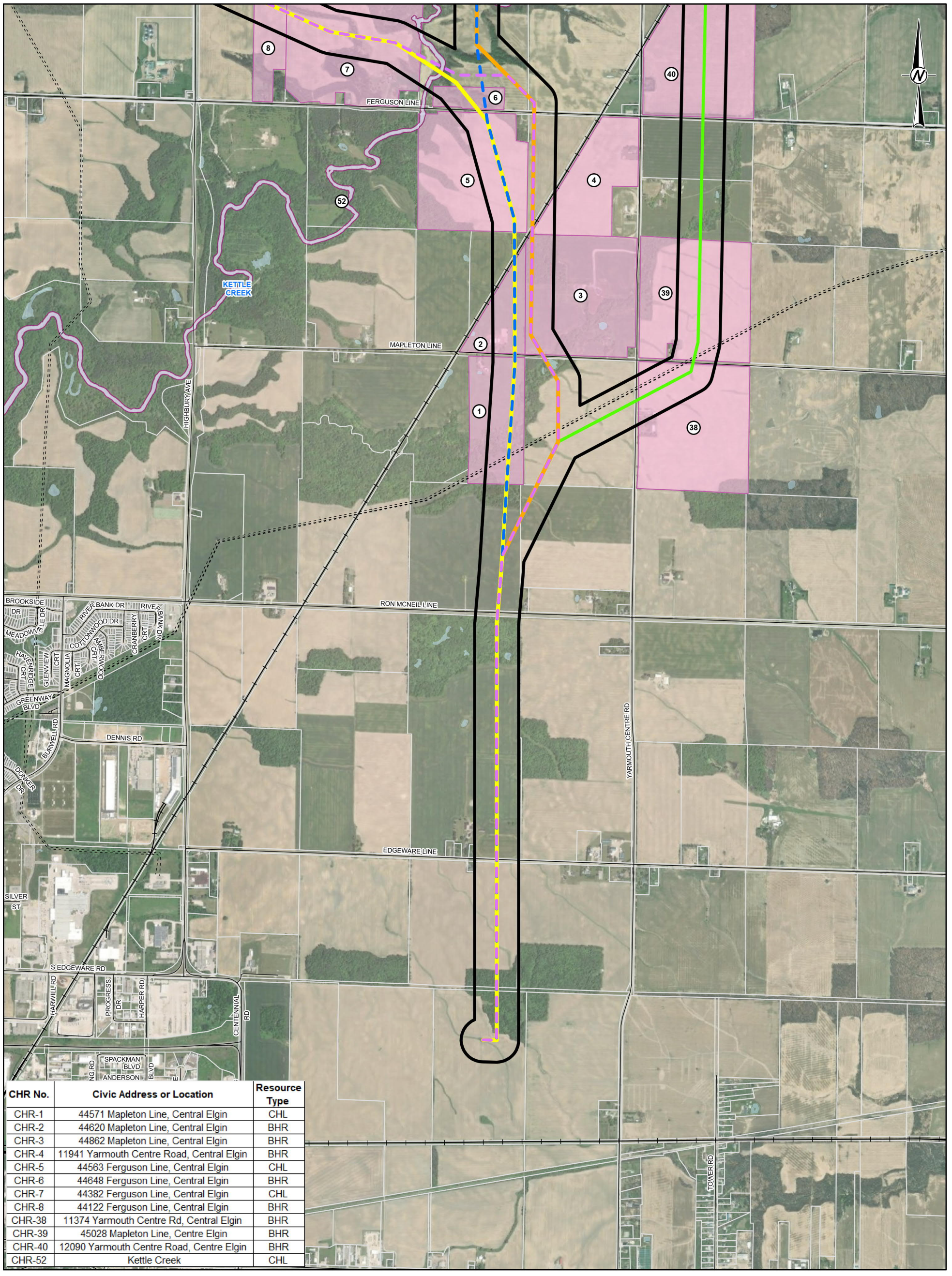
PROJECT
ST. THOMAS TRANSMISSION LINE, CULTURAL HERITAGE EXISTING CONDITIONS REPORT

TITLE
PROPERTIES OF KNOWN AND POTENTIAL CHVI IDENTIFIED IN THE STUDY AREA MAPPING

CONSULTANT
wsp

YYYY-MM-DD	2025-05-15
DESIGNED	KK
PREPARED	BR
REVIEWED	CC
APPROVED	KK

PROJECT NO.	CONTROL	REV.	FIGURE
CA0034629.6589	0002	0	4B



CHR No.	Civic Address or Location	Resource Type
CHR-1	44571 Mapleton Line, Central Elgin	CHL
CHR-2	44620 Mapleton Line, Central Elgin	BHR
CHR-3	44862 Mapleton Line, Central Elgin	BHR
CHR-4	11941 Yarmouth Centre Road, Central Elgin	BHR
CHR-5	44563 Ferguson Line, Central Elgin	CHL
CHR-6	44648 Ferguson Line, Central Elgin	BHR
CHR-7	44382 Ferguson Line, Central Elgin	CHL
CHR-8	44122 Ferguson Line, Central Elgin	BHR
CHR-38	11374 Yarmouth Centre Rd, Central Elgin	BHR
CHR-39	45028 Mapleton Line, Centre Elgin	BHR
CHR-40	12090 Yarmouth Centre Road, Centre Elgin	BHR
CHR-52	Kettle Creek	CHL

LEGEND

PROPOSED ROUTE:
- ALTERNATIVE 1A
- ALTERNATIVE 1B
- ALTERNATIVE 2A
- ALTERNATIVE 2B
- ALTERNATIVE 3
- STUDY AREA (120 M BUFFER)

- PARCEL OF POTENTIAL CHVI (WITHIN OR PARTIALLY WITIN 120 M BUFFER)
- ROADWAY
- RAILWAY
- EXISTING TRANSMISSION LINES
- WATERBODY
- PROPERTY BOUNDARY

0 125 250 500
1:20,000 METRES

NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)
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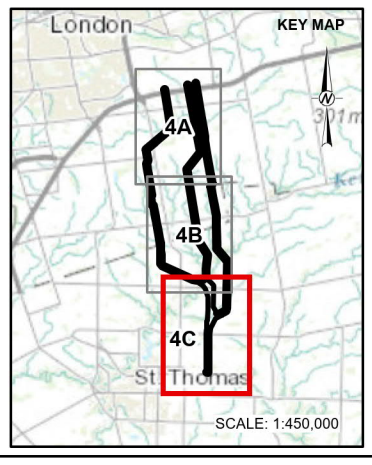

CLIENT
HYDRO ONE NETWORKS INC.

PROJECT
ST. THOMAS TRANSMISSION LINE, CULTURAL HERITAGE EXISTING CONDITIONS REPORT

TITLE
PROPERTIES OF KNOWN AND POTENTIAL CHVI IDENTIFIED IN THE STUDY AREA MAPPING

CONSULTANT
wsp

YYYY-MM-DD	2025-03-25
DESIGNED	KK
PREPARED	BR
REVIEWED	CC
APPROVED	KK

PROJECT NO.	CONTROL	REV.	FIGURE
CA0034629.6589	0002	0	4C

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25mm
0

APPENDIX B

Assessor Qualifications

HEIDY SCHOPF, MES, CAHP

Cultural Heritage Team Lead

Areas of practice

- *Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessments*
- *Cultural Heritage Evaluation Reports*
- *Heritage Impact Assessments*
- *Strategic Conservation Plans*
- *Heritage Documentation (Photography and 3DLiDAR)*
- *Heritage Conservation District Studies and Plans*
- *Peer Review*
- *Project Management*
- *Leadership*

Languages

English

PROFILE

Heidy Schopf is the Cultural Heritage Team Lead for WSP Canada Inc. She is a Senior Cultural Heritage Specialist and has worked in the field of cultural resource management since 2007. Ms. Schopf is a Professional Member of the Canadian Association of Heritage Professionals (CAHP).

Ms. Schopf has worked on hundreds of cultural heritage projects in Ontario, including Cultural Heritage Reports, Cultural Heritage Evaluation Reports (CHERs), Heritage Impact Assessments (HIAs), Strategic Conservation Plans (SCP), heritage documentation (photography, photogrammetry, and LiDAR), Heritage Conservation District (HCD) Studies and Plans, and heritage peer review. She regularly provides cultural heritage conservation guidance to public and private sector clients. Heidy is a Senior Project Manager and has managed and delivered cultural heritage work under a variety of processes, including: *Environmental Assessment Act*, *Planning Act*, *Transit Project Assessment Process* (TPAP), and the *Ontario Heritage Act*. She has extensive and applied knowledge of Ministry of Citizenship and Multiculturalism (MCM) guidance documents for heritage properties.

Ms. Schopf has had the privilege of working with Indigenous Nations on several projects to gather Indigenous perspectives on cultural heritage and integrate this shared learning into WSP's heritage work.

EDUCATION

Master of Environmental Studies (MES), Planning Program, York University	2011
Bachelor of Arts (BA), Anthropology and World History, McGill University	2007

PROFESSIONAL DEVELOPMENT

Senior Project Manager Certificate, Wood Environment & Infrastructure Solutions Canada Limited (Wood)	2022
Subject Matter Expert in Cultural Heritage, Global Technical Expert Network (GTEN), Wood	2021
Metrolinx Personal Track Safety Program	2020
CN Contractor Orientation Course	2020
RAQs Certified in Environmental/Heritage/Natural Sciences, MTO	2020
Secret (Level II) Federal Security Clearance, PWGSC	2017

PROFESSIONAL ASSOCIATIONS

Canadian Association of Heritage Professionals, since 2015	CAHP

CAREER

Cultural Heritage Team Lead, WSP Canada Inc.	2022 – Present
Built Heritage and Cultural Landscape Team Lead, Wood	2019 – 2022
Cultural Heritage Specialist, Stantec	2016 – 2019
Archaeological Services Inc. (ASI)	2011 – 2016

PROFESSIONAL EXPERIENCE

Utilities

- Hydro One Inc. (HONI)
  - **HONI, Proposed Waasigan Transmission Line, Cultural Heritage Evaluation Report for the Dawson Trail, Districts of Thunder Bay, Rainy River and Kenora, Ontario** (Senior Cultural Heritage Specialist, WSP, 2023-2024). Completed senior QA/QC of deliverable.
  - **HONI, Wallaceburg Transformer Station, Cultural Heritage Screening Memorandum, Municipality of Chatham-Kent, Lambton County, Ontario** (Senior Cultural Heritage Specialist, WSP, 2024). Completed senior QA/QC of deliverable.
  - **HONI, Proposed Waasigan Transmission Line, Cultural Heritage Existing Conditions and Preliminary Heritage Impact Assessment, Districts of Thunder Bay, Rainy River and Kenora, Ontario** (Senior Cultural Heritage Specialist, WSP, 2023-2024). Completed senior QA/QC of deliverable.
  - **HONI, St. Clair to Chatham New Transmission Line Project, Cultural Heritage Preliminary Impact Assessment, Municipality of Chatham-Kent and Township of St. Clair, Lambton County, Ontario (Senior Cultural Heritage Specialist, WSP, 2023).** Completed senior QA/QC of deliverable.
- Enbridge Gas Inc. (Enbridge)
  - **Enbridge, Sandford Community Expansion Project, Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment, Hamlet of Sandford and Township of Uxbridge, Ontario** (Senior Cultural Heritage Specialist, WSP 2024). Completed senior QA/QC of deliverable.
  - **Cultural Heritage Assessment Report, Rockland Pipeline Expansion Project, Enbridge Gas Distribution, City of Clarence-Rockland, Ontario, Ontario** (Task Manager, Cultural Heritage Specialist, Stantec, 2018). Prepared scope and costing for heritage component of project. Coordinated background research, site visit, and reporting tasks. Acted as the heritage liaison for the project. Coordinated submission of draft deliverable to client.
  - **NPS 30 Don River Replacement, Cultural Heritage Assessment Report, Enbridge, City of Toronto, Ontario, Ontario** (Task Manager, Cultural Heritage Specialist, Stantec, 2018). Carried out fieldwork, coordinated background research, heritage inventory, impact assessment, and recommendations. Submitted final draft of report to Ministry of Tourism, Culture and Sport for review.
  - **NPS Don River Replacement, Heritage Impact Assessment, Enbridge Gas Distribution, City of Toronto, Ontario, Ontario** (Task Manager, Cultural Heritage Specialist, Stantec, 2018). Heritage Impact Assessment for the Old Eastern Avenue Bridge and Old Consumers Gas (Enbridge Utility) Bridge. Carried out fieldwork, coordinated background research, heritage evaluation, impact assessment, and recommended mitigation measures. Submitted final report to MTCS for review.

Municipal Heritage Planning

- City of London

- **Heritage Impact Assessment, 1352 Wharncliffe Avenue Road South, City of London** (Senior Cultural Heritage Specialist, Wood, 2019). Carried out consultation, coordinated background research, and completed fieldwork, reporting, and heritage evaluation against O. Reg. 9/06. Recommended mitigation measures and next steps.
- **Heritage Impact Statement, 2096 Wonderland Road North, City of London, Ontario** (Cultural Heritage Specialist, Stantec, 2018). Carried out a Heritage Impact Assessment for a listed heritage property in the City of London. Reported fieldwork results, coordinated background research, consulted with the municipality and relevant agencies. Evaluated the property against O. Reg. 9.06 of the Ontario Heritage Act, identified heritage attributes, and drafted a statement of significance. Explored mitigation measures and recommended next steps for the preservation of the property.
- **Heritage Impact Statement, 2591 Bradley Avenue, City of London, Ontario** (Cultural Heritage Specialist, Stantec, 2017). Carried out a Heritage Impact Assessment for a listed heritage property in the City of London. Reported fieldwork results, coordinated background research, consulted with the municipality and relevant agencies. Evaluated the property against O. Reg. 9.06 of the Ontario Heritage Act, identified heritage attributes, and drafted a statement of significance. Explored mitigation measures and recommended next steps for the preservation of the property.

KANIKA KAUSHAL, CAHP, APT, Intern Architect, MRAIC

Senior Cultural Heritage Specialist, Archaeology and Heritage

Areas of practice

Cultural Heritage, Heritage Architecture & Planning

Languages

English, Hindi, Punjabi, Urdu, French

PROFILE

Kanika is a Senior Cultural Heritage Specialist with WSP Canada Inc. She is a Professional member of the Canadian Association of Heritage Professionals, a member of the Association for Preservation Technology International, an intern architect with the Ontario Association of Architects and a member of the Royal Architectural Institute of Canada. Kanika has experience managing both Private and Provincial clients in Heritage Planning and architecture, reviewing policy-based planning applications and providing technical advisory services. Her role involves coordination with Clients, consultants, stakeholders and liaising with Federal, Municipal and Provincial Staff and mentoring juniors on project deliverables.

Kanika's areas of expertise include mixed-use development projects & feasibility studies for heritage rehabilitation projects, cultural heritage landscapes, heritage conservation, heritage impact assessments and policy writing. She actively participates in Canadian Association of Professional Workrooms, events and ACO Heritage Day activities.

In 2021, Kanika co-founded the Society of South Asian Architects (SOSA), the first community-based organization for South Asian representation in Canada. As the Director of Public Relations, she emphasizes the value of diversity and advocates the idea that architecture thrives when it embraces different cultures, perspectives, and experiences.

EDUCATION

Master of Architecture, Heritage Architecture & Planning, University of Waterloo, Canada — 2016

Bachelor of Architecture, Architecture
Guru Gobind Singh Indraprastha University, India — 2012

PROFESSIONAL DEVELOPMENT

E&E ONAC PM Training, WSP — 2024

Managing People, 2WA Consulting Inc. — 2023

AWARDS

Alumni Award — 2024
Awarded by Vastu Kala Academy of Architecture, India for excellence in academic and professional fields.

RAIC Foundation College of Fellows Centennial Fund — 2023
Awarded by Royal Architectural Institute of Canada Foundation in support of being a founding member of Society of South Asian Architects, Canada

American Institute of Architects (AIA) Henry Adams Certificate — 2016
Recipient of the AIA Henry Adams Certificate for outstanding M.Arch. thesis work.

Urban Strategies Inc. Graduate Award — 2016
Recipient of the Urban Strategies Inc. Graduate Award for majoring in designing urban places.

Canadian Architect Student Award of Excellence — 2016
Recipient of the Students Awards of Excellence Program for Canadian Architect Magazine.

International Experience Travel Award University of Waterloo (UW) Recipient of the International Experience Travel Award by UW for 2015 to complete fieldwork in Old Delhi, India for master's research.	2015
Senate Graduate Scholarship University of Waterloo Recipient of the Senate Graduate scholarship for high quality work and good academic standing.	2015
Special Graduate Scholarship University of Waterloo Recipient of the Special Graduate scholarship for first-class cumulative average.	2015

PROFESSIONAL ASSOCIATIONS

Canadian Association of Heritage Professionals	CAHP
Association for Preservation Technology International	Member
Ontario Association of Architects, Canada	Intern Architect
Royal Architectural Institute of Canada	Member
Council of Architecture, India	Architect

CAREER

Senior Cultural Heritage Specialist, Archaeology and Heritage, WSP, Burlington, Ontario, Canada	2023 – Present
Co-Founder and Director of Public Relations, Society of South Asian Architects, Canada (Not-for-Profit)	2021-Present
Senior Heritage Professional and Business Development Heritage Lead, mcCallumSather Architects Inc., Hamilton, Ontario, Canada	2021 – 2023
Intern Heritage Architect, Architects Rasch Eckler Associates Ltd. Toronto, Ontario, Canada	2019 – 2021
Architect, Brickwood419 Design Studio, New Delhi, Canada	2018 – 2019
Intern Architect, Workshop Architecture Inc., Toronto, Canada	2017 – 2018
Architect, Brickwood419 Design Studio, New Delhi, India	2016 – 2017
Architect, Ultraconfidentiel Design Studio, New Delhi, India	2012 – 2013

PROFESSIONAL EXPERIENCE

Heritage Planning

Cultural Heritage Assessments

- Planning Feasibility and Site Selection Study, Ontario, Canada (2023): Senior Cultural Heritage Specialist and Project Manager. Preparation of a Cultural Heritage Screening Memo to identify known and potential built heritage resources and cultural heritage landscapes in the study areas. Client: Infrastructure Ontario, Canada
- Prince Edward County Cultural Heritage Master Plan, Ontario, Canada (2024): Senior Cultural Heritage Specialist and Project Manager involved in the identification and evaluation of 10 significant cultural heritage landscapes, field work, providing support in public consultation and indigenous engagement, report

writing and recommendations to Council. Client: Prince Edward County, Ontario, Canada

Policy Review & Writing

- City of Stratford Official Plan Review, Policy Discussion Paper#1 A Cultural City (2024): Senior Cultural Heritage Specialist conducting review of the existing official plan policies and assessment of impacts of Bill 23 to provide recommendations on policy improvements. Client: City of Stratford, Ontario, Canada
- Impacts of Bill 23 on Ontario Heritage Act (2024): Senior Cultural Heritage Specialist conducting assessment of impacts of Bill 23 to provide recommendations on policy changes and roles and responsibilities of the Heritage Advisory Committee. Client: Municipality of Lakeshore, Ontario, Canada
- Kleinburg Nashville HCD Update for the City of Vaughan, Vaughan, Ontario, Canada (2020): Intern Heritage Architect. Review of the existing HCD Plan and revisions to the design guidelines for the HCD Plan update. Client: City of Vaughan, Ontario, Canada

Heritage Architecture

Heritage Building Conditions Assessment

- Oakham House Chimney Repairs, Toronto. (2023): Senior Heritage Professional. Conducting building existing conditions assessment, field review, photographic documentation, stakeholder consultation, and recommendations on repairs and restoration work. Client: Toronto Metropolitan University, Toronto, Ontario, Canada.

Heritage Building Restoration and Functional Upgrades

- Allan Gardens Conservatory Palm House Building Restoration (2021). Intern Heritage Architect. Conducting building existing conditions assessment, field review, photographic documentation, assessing impacts of the proposed alterations to the heritage attributes of the building. Making recommendations on window design, glazing and palm house cladding replacement. Client: Zeidler Architects, Toronto, Ontario, Canada
- Pembroke Armory Building Energy Retrofits (2022). Senior Heritage Professional. Preparing existing conditions documentation report, impact assessment from the proposed rehabilitation and restoration works. Preparing conservation drawings for the windows and doors replacement and front door restoration work. Coordination with Federal government and Federal Heritage Buildings Review office. Client: AECOM, Ontario, Canada

Heritage Conservation Plans (HCP)

- Client: St Matthews Church, Hamilton, Ontario, Canada. St Matthews Church Rehabilitation Works, Hamilton, ON, Canada (2022). Senior Heritage Professional. Documenting as existing conditions, preparing a list of heritage attributes, assessment of impacts from the proposed development and site alterations. Providing oversight on heritage restoration, replacement tasks.

Cultural Heritage Impact Assessments

- 10560 Highway 7, Carleton Place, Ontario - Heritage Impact Assessment. (2024). Senior Cultural Heritage Specialist completing assessment of impacts and recommendation of mitigation measures. Client: Ministry of Transportation Ontario.

ALISHA MOHAMED, MA

Cultural Heritage Specialist, Environment

Education

Post-Baccalaureate, Heritage and Collections Management, University of Victoria, Victoria, BC, 2015

Master of Arts, Archaeology, Wilfrid Laurier University, Waterloo, ON, 2013

Bachelor of Arts, Archaeology, Wilfrid Laurier University, Waterloo, ON, 2011

Career

Cultural Heritage Specialist/ Archaeologist, WSP (Golder), 2016-Present

Lab Manager, CRM Lab Archaeology and Heritage Management, 2013-2016

Lab Technician, Ontario Heritage Trust, 2012-2016

Collections Assistant/ Interim Collections Manager and Curator, Canadian Air and Space Museum (formerly Toronto Aerospace Museum), 2011

Certifications

Applied Research Licence- Archaeology (R1149), Ministry of Citizenship and Multiculturalism, 2017-present

PROFILE

Alisha started her career in cultural resource management in 2008 and completed her Bachelor of Arts (2011) and Master of Arts (2013) at Wilfrid Laurier University. After graduation, Alisha undertook numerous contract positions at the Ontario Heritage Trust as well as multiple cultural resource management firms in Ontario. In 2015, she completed post-graduate heritage and collections management courses through the University of Victoria which today she applies to her position as a Cultural Heritage Specialist and Archaeologist. Since 2016, Alisha worked for Golder Associates Ltd. which was amalgamated under WSP in 2023. Alisha has been the lead material culture analyst, researcher and report writer for numerous projects across the province and has extensive knowledge of Euro-Canadian material culture as well as archival research processes. Alisha is also an experienced project and task manager for various small to large scale projects in the planning and environmental assessment sectors.

HYDRO ONE PROJECT EXPERIENCE

- Longwood to Lakeshore Transmission Line Project: project management and coordination to support a Class Environmental Assessment for a proposed 500-kilovolt Transmission Line between the Municipality of Strathoy-Caradoc and the Municipality of Lakeshore, in Ontario. Assessments include Cultural Heritage Existing Conditions, Preliminary Impact Assessment, Cultural Heritage Evaluation Reports and Heritage Impact Assessments (2024-present)
- St. Clair to Chatham Transmission Line Project: project management and coordination to support a Class Environmental Assessment for a proposed 230-kilovolt Double Circuit Transmission Line between the Township of St. Clair and Municipality of Chatham-Kent, Ontario. Assessments include Cultural Heritage Existing Conditions, Preliminary Impact Assessment, Cultural Heritage Evaluation Reports and Heritage Impact Assessments (2021-2023)
- Chatham to Lakeshore Transmission Line Project: project management and coordination to support a Class Environmental Assessment for a proposed 230-kilovolt Double Circuit Transmission Line between the Municipality of Chatham-Kent and the Town of Lakeshore, Ontario. Assessments include Cultural Heritage Existing Conditions, Preliminary Impact Assessment, Cultural Heritage Evaluation Reports and Heritage Impact Assessments (2020-2023)
- St. Andrews Transformer Station Project: project management and coordination to complete a Cultural Heritage Evaluation Report for the St. Andrews Transformer Station in the City of Sarnia, Ontario (2021-2022)
- Kent Transformer Station Project: project management and coordination to complete a Cultural Heritage Evaluation Report and Heritage Impact Assessment for the Kent Transformer Station in the Municipality of Chatham-Kent, Ontario (2021-2022)
- Wood Pole Replacement Program: research and report writing to complete Stage 1 Archaeological Assessments for Circuits S2B, L1S, L7S, T1M, P3B, and P5M in North Shore Township, West Nipissing, Perth South, Marathon and Thunder Bay, Ontario, respectively, as well as Stage 1 and subsequent Stage 2 Archaeological Assessments for circuits 12M6 and C3L in Whitchurch-Stouffville and Toronto, Ontario, respectively (2020-2021)
- Power West Trail Project: research, fieldwork and report writing to complete a Stage 1 Archaeological Assessment and subsequent Stage 2 Archaeological Assessment of a community pedestrian trail located in a Hydro One corridor in Toronto, Ontario (2020)

- Power Downtown Toronto Project: research, fieldwork and report writing to support a Class EA to replace two existing 115-kV underground transmission circuits located in the downtown area of the City of Toronto, Ontario, as well as to connect the Terauley Transformer Station and Esplanade Transformer Station via a new route within the Class EA study area. Assessments include a Cultural Heritage Existing Conditions Report, Cultural Heritage Evaluation Report, Heritage Impact Assessment and Stage 1 Archaeological Assessment Report (2019-2020)
- Gold Medal, Glengrove, Essex, Highbury and St. Marys Transformer Stations Project: historical research to assist with the completion of Cultural Heritage Evaluation Reports and/ or Heritage Impact Assessments for the Gold Medal Transformer Station in Mississauga, the Glengrove Transformer Station in Toronto, The Essex Transformer Station in Windsor, the Highbury Transformer Station in London, and the St. Marys Transformer Station in the Town of St. Marys, Ontario (2019)

RELEVANT PROJECT EXPERIENCE

- Brampton Light Rail Transit Project: research, fieldwork and report writing to support an Environmental Assessment for the proposed Brampton Light Rail Transit Extension from Gateway Terminal to the Brampton GO Station in the City of Brampton, Ontario. Assessments include a Cultural Heritage Existing Conditions Report and Stage 1 Archaeological Assessment (2017-2023).
- Oxford Street and Gideon Drive Intersection Improvements Project: task management, research and report writing to support a Class Environmental Assessment (Class EA) for the Oxford Street West and Gideon Drive Intersection Improvements in the City of London, Ontario. Assessments include a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment and Stage 1-2 Archaeological Assessment Report (2021-2022).
- Enbridge Almonte Reinforcement Project: research and report writing to support environmental pre-construction and permitting services for the Almonte Reinforcement Project. Assessments include a Cultural Heritage Checklist, Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment and Stage 1 and 2 Archaeological Assessment Report (2020-2021)
- Toronto Relief Line Transit Project: research, fieldwork and report writing to support the Environmental Project Report for the Toronto Relief Line Project Assessment, approximately 1,175 hectares of central and eastern Toronto, Ontario, on either side of the Don River Valley. Assessments include a Cultural Heritage Assessment Report and Stage 1 Archaeological Assessment Report (2017-2019)

CHELSEY E. COLLINS (TYERS), BES, MCIP, RPP

Cultural Heritage Specialist

Years with firm – *5+*

Years of experience – *12+*

Areas of practice

Cultural Heritage Assessments

Heritage Planning

Environmental Assessments

Heritage Designation

Heritage Conservation Districts

Education

BES, Land Development Planning Specialization, Honours Planning Co-op, University of Waterloo, 2011

Career

Cultural Heritage Specialist, WSP, 2018 – present

Cultural Heritage Planner Planning Development & Heritage Design, City of Hamilton, 2014-2018

Policy Planner (Heritage), Policy Planning, City of Brantford, 2014

Planner II / Heritage Coordinator, Planning and Development, Township of King, 2013-2014

Planner, Heritage & Urban Design, City of Kingston, ON, 2012-2013

Application Technician, Committee of Adjustment, City of Toronto, 2011-2012

Heritage Documentation Specialist (Co-op Position), Historic Places Initiative, Waterloo, ON, 2008-2009

PROFILE

Ms. Collins is a Cultural Heritage Specialist for WSP. Before joining WSP, she worked as Heritage Planner in fast-paced municipal environments for over eight years. She provides a variety of cultural heritage services including historical research, evaluation and analysis of cultural heritage resources, evaluation of complex development applications and facilitation through the heritage permit process.

As a municipal heritage planner Ms. Collins gained experience managing and evaluating cultural heritage resources including seven heritage conservation districts, and a wide variety of cultural heritage resources ranging from single detached dwellings, to evolved industrial cultural heritage landscapes. She also evaluated heritage permits, prepared reports for municipal councils and worked closely with the municipal heritage committees. Ms. Collins also managed the commencement of the of the St. Clair Boulevard HCD Update including initial public consultation and project organization.

Ms. Collins' experience as a heritage consultant has included the environmental assessment process completing Cultural Heritage Reports: Existing Conditions and Preliminary Impact Assessments (Cultural Heritage Report), Cultural Heritage Evaluation Reports (CHER), Heritage Impact Assessments (HIA) and Cultural Heritage Documentation Reports for a variety of public sector clients including the City of London, City of Toronto, Region of Peel and more. Additionally, Ms. Collins has completed several Heritage Impact Assessments for private clients and provided heritage planning consulting services for the City of Cambridge including review of heritage permits.

SELECT RELEVANT EXPERIENCE

- Cultural Heritage Reports: Existing Conditions and Preliminary Impact Assessments
  - North Whitby and North Oshawa Sanitary Sewer Diversion Strategy MCEA, Regional Municipality of Durham, ON (2021-2022): Conducted historical research for the study area, identified existing and potential cultural heritage landscapes and built heritage resources, evaluated the impact of the proposed sanitary sewer on the identified resources and provided recommendations for mitigation measures and further reporting.
  - Lakeshore and Shoreline Improvements between Thirty Road and Martin Road MCEA, Town of Lincoln, ON (2021-2022): Conducted historical research for the study area, identified existing and potential cultural heritage landscapes and built heritage resources, evaluated the impact of the proposed road realignments and improvements on the identified resources and provided recommendations for mitigation measures and further reporting.
  - Hopkins Bay EA, Ramara Township, ON (2020): Conducted historical research for the study area including historic map review, reviewed potential heritage resources in the study area and prepared report with findings.
- Cultural Heritage Evaluation Reports
  - Wharncliffe Road South CN Subway, London, ON (2021): Conducted thorough historical research for study area, evaluated bridge according to Ontario Regulation 9/06 and provided thorough photographic documentation for archival purposes.
  - 69 Wharncliffe Road South, London, ON (2020): Conducted thorough historical research for study area, evaluated bridge according to Ontario Regulation 9/06 and provided appropriate recommendations for next steps in the Environmental Assessment process.

- Grantham Rail Bridge, Cambridge, ON (2021): Conducted through historical research for the rail bridge, evaluated bridge according to Ontario Regulation 9/06 and prepared a Statement of Cultural Heritage Value or Interest.
- University Drive Bridge, London, ON (2019): Conducted thorough historical research for study area, evaluated bridge according to Ontario Regulation 9/06 and provided appropriate recommendations for next steps in the Environmental Assessment process.
- Clark's Bridge, London, ON (2019): Conducted thorough historical research for study area, evaluated bridge according to Ontario Regulation 9/06 and provided appropriate recommendations for next steps in the Environmental Assessment process.
- 1110 Richmond Road, London, ON (2018): Conducted thorough historical research for subject property, evaluated bridge according to Ontario Regulation 9/06 and provided appropriate recommendations for next steps in the Environmental Assessment process.

- Heritage Impact Assessments
  - 5916 Trafalgar Road, Erin, ON (2021-2022): Conducted thorough historical research to identify the site-specific history, documented the existing conditions, evaluated the property according to Ontario Regulation 9/06, prepared a Statement of Cultural Heritage Value or Interest, assessed the impacts of the proposed development and provided recommendations for alternative development and mitigation measures.
  - 12304 Heart Lake Road, Caledon, ON (2021). Conducted thorough historical research to identify the site-specific history, documented the existing conditions, evaluated the property according to Ontario Regulation 9/06, prepared a Statement of Cultural Heritage Value or Interest, assessed the impacts of the proposed development and provided recommendations for alternative development and mitigation measures.
  - Beaconsfield Avenue, Wortley Village/Old South HCD, London, ON (2021): Evaluated potential impact to heritage attributes as expressed in the HCD Plan and recommended appropriate mitigation measures.
- Heritage Documentation and Salvage
  - 433 King Street East, Hamilton, ON (2022): For submission with the development application the Documentation and Salvage report include thorough documentation of existing conditions, the site-specific history of the property and recommendations for salvage of original materials.
  - Winston Churchill and Olde Base Line Road, Caledon, ON (2019-2020): As part of the Environmental Assessment process for road reconstruction, thoroughly documented the nineteenth century stone walls and wooden fences through the study area, identifying opportunities for relocation where possible.

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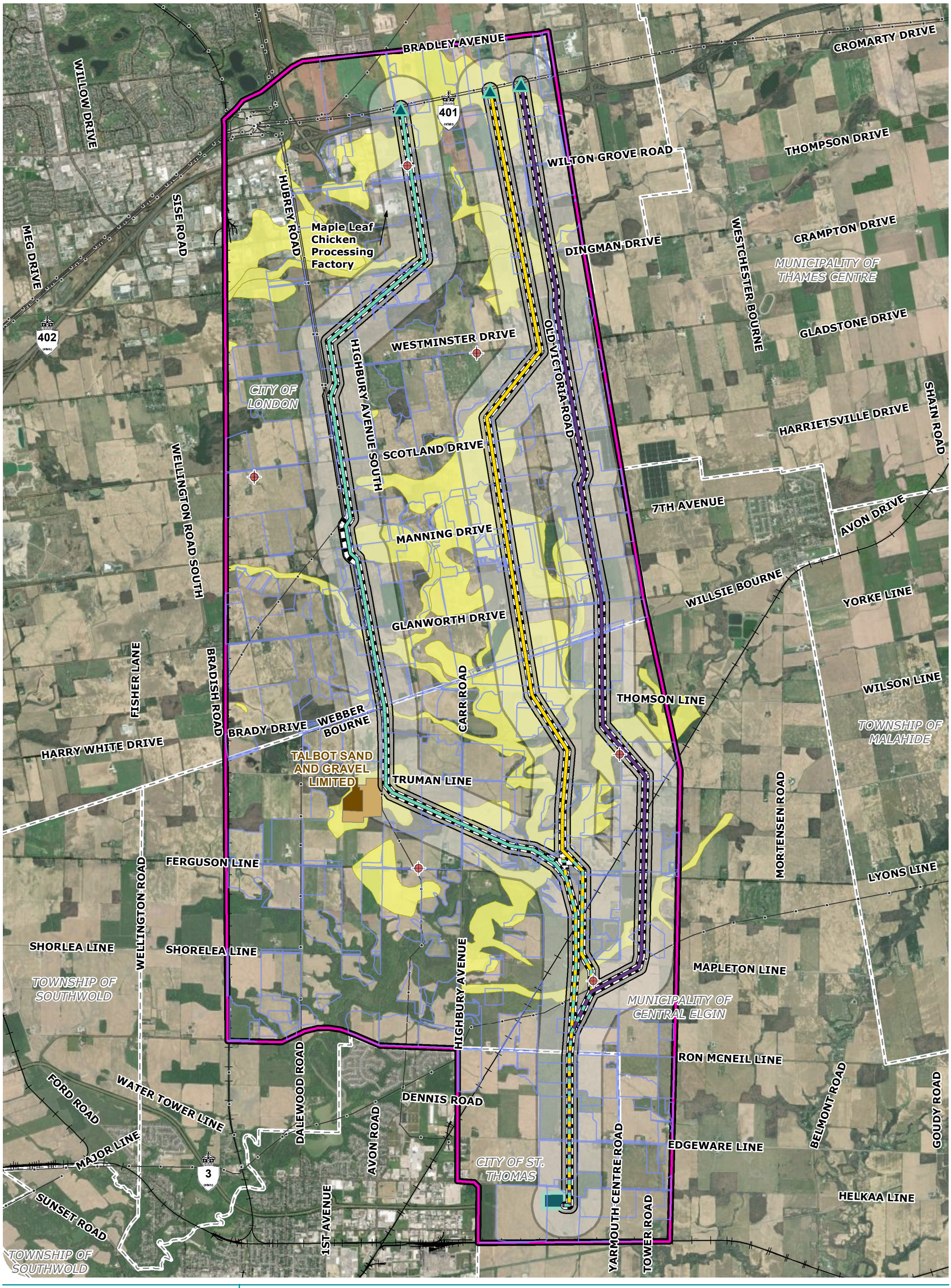
Appendix C.2. Regional Economy



ST. THOMAS LINE PROJECT

Line Connection Point
Route Alternative 1A
Route Alternative 1B
Route Alternative 2A
Route Alternative 2B
Route Alternative 3
Right of Way
Project Study Area (120 m)
Local Study Area (500 m)
Regional Study Area
Planned Centennial Transformer Station (TS)
Existing Electrical Transmission Line
Railway
Abandoned Petroleum Well
Active Aggregate Site
Application Aggregate Site
Area of Potential Aggregate Resource
Tile Drainage Area

REGIONAL ECONOMY

APPENDIX C-2

MAP DRAWING INFORMATION:
1. DATA PROVIDED BY HONI, MNRF LIO, Ontario Geological Survey
2. Imagery: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

MAP CREATED BY: -PAR
MAP CHECKED BY: -BJF
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:55,000
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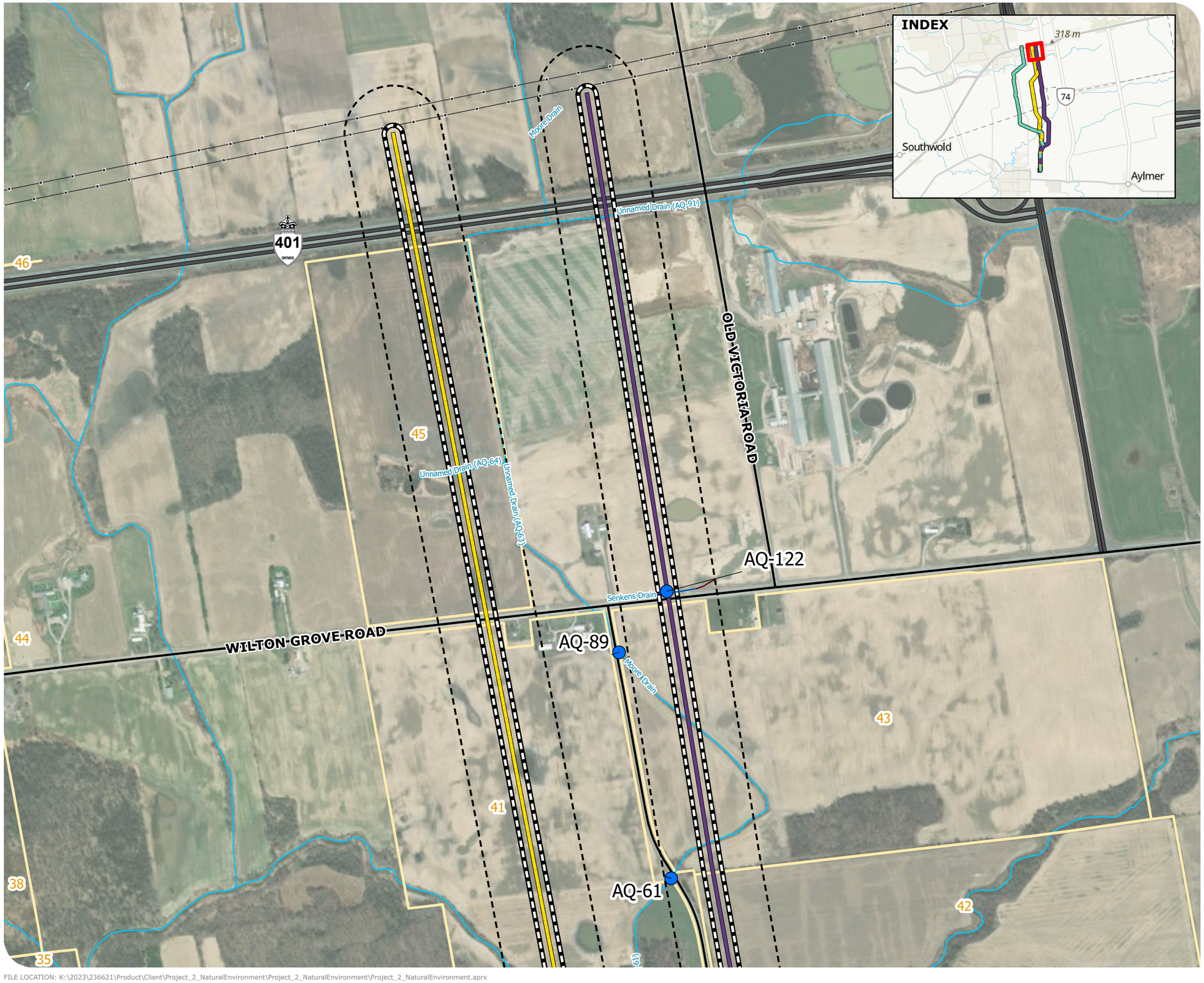
N W E S

PROJECT: 23-6621 STATUS: FINAL DATE: 2024-11-29

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_SocioEconomicMemo\RegionalEconomy_20241129.mxd

Appendix C.3. Survey Station Locations



hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.1

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Existing Transmission Line
- Highway
- Major Road
- Minor Road
- Watercourse (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- F
- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
DATE: 2024-10-10

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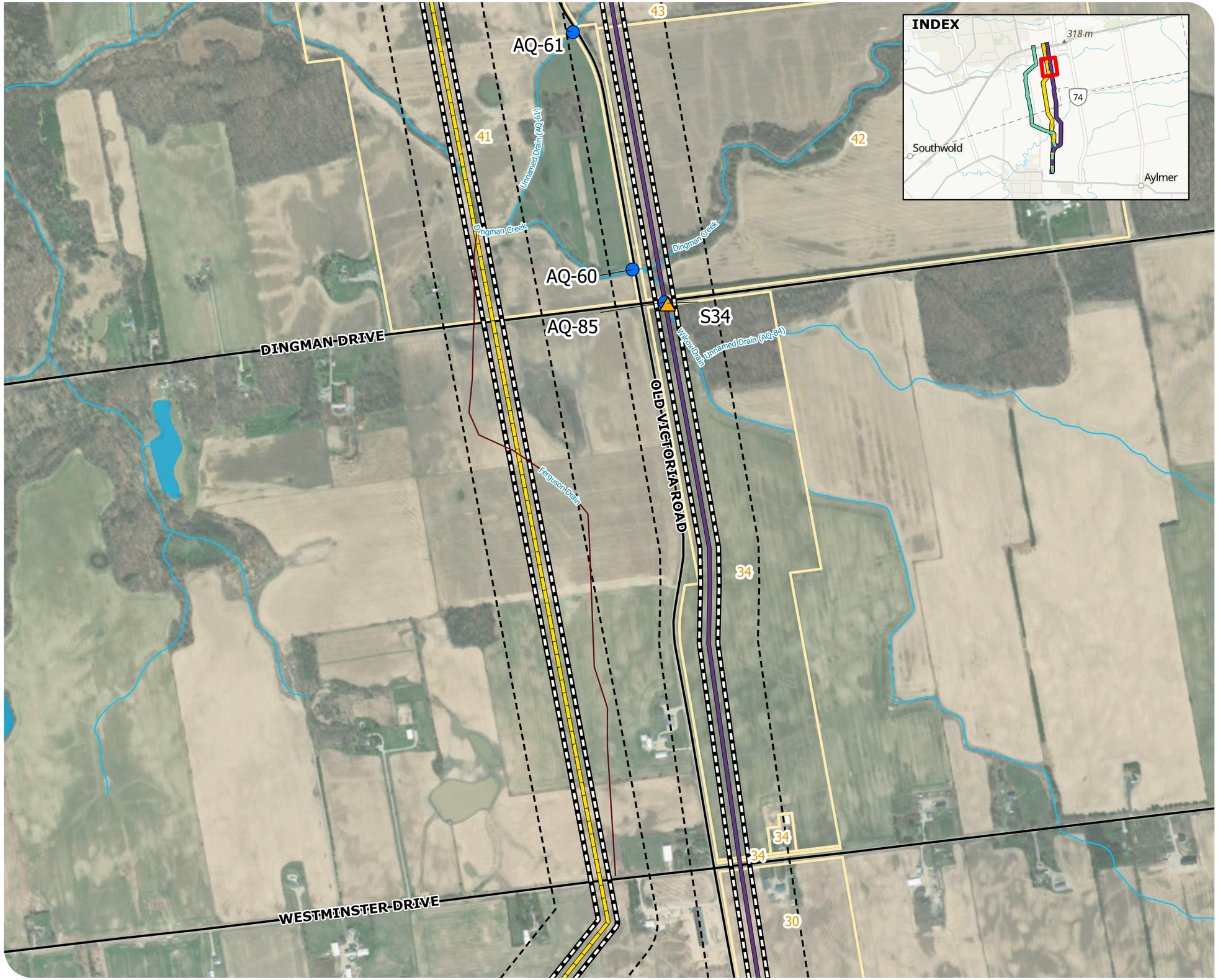

hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.2

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Terrestrial Survey Stations*
- Major Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
DATE: 2024-10-10

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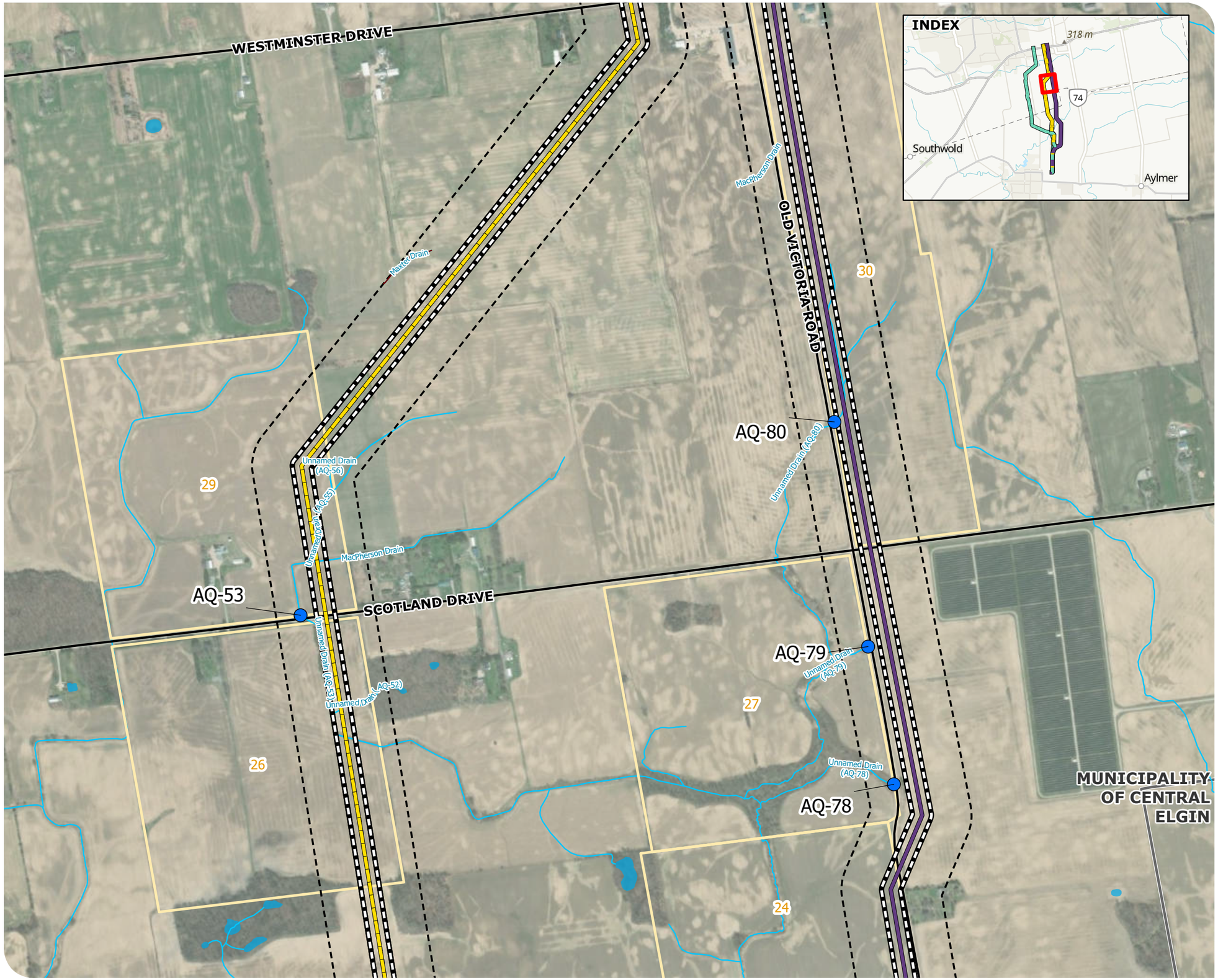

hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.3

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Major Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
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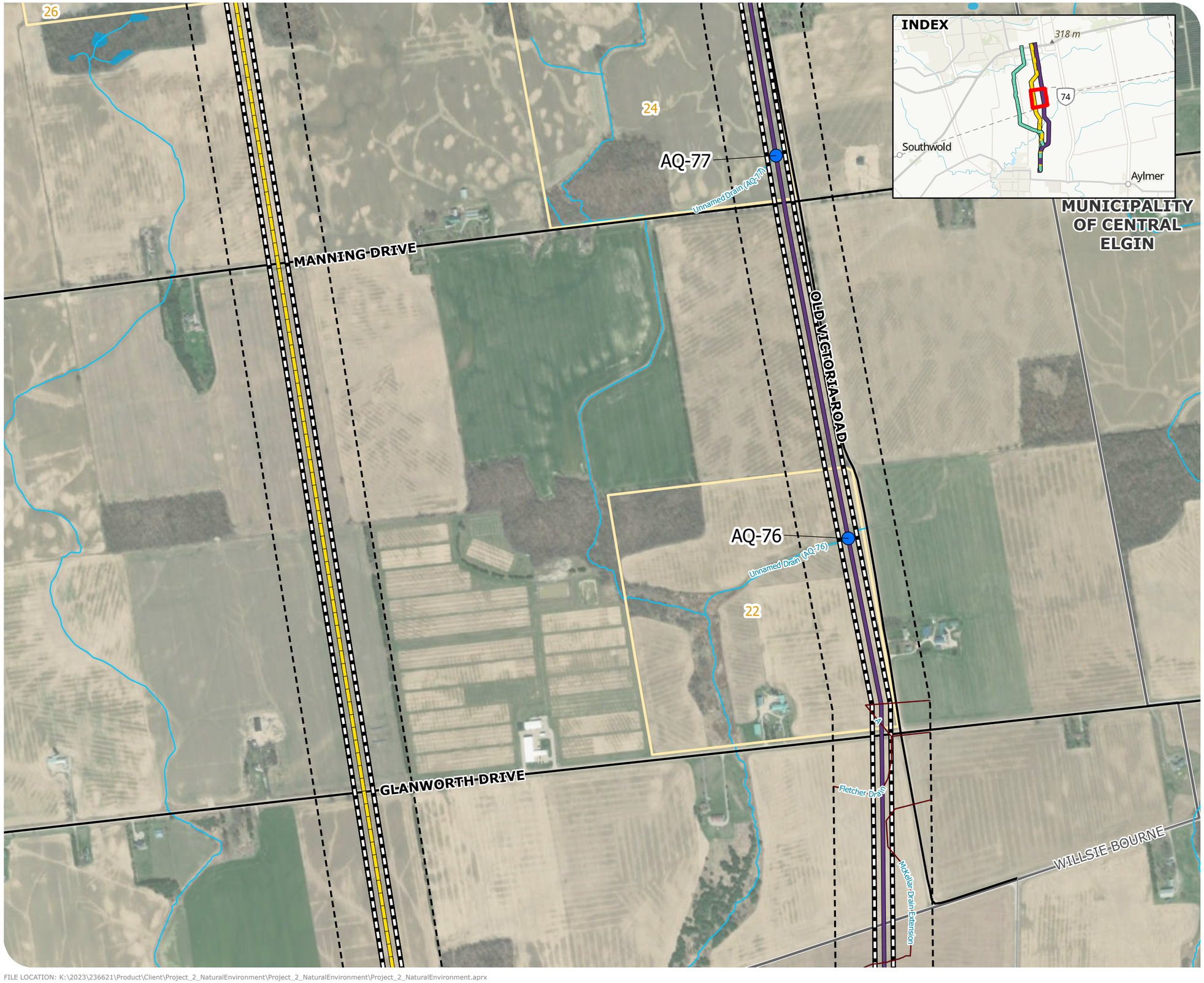

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.4

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Major Road
- Minor Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
DATE: 2024-10-10

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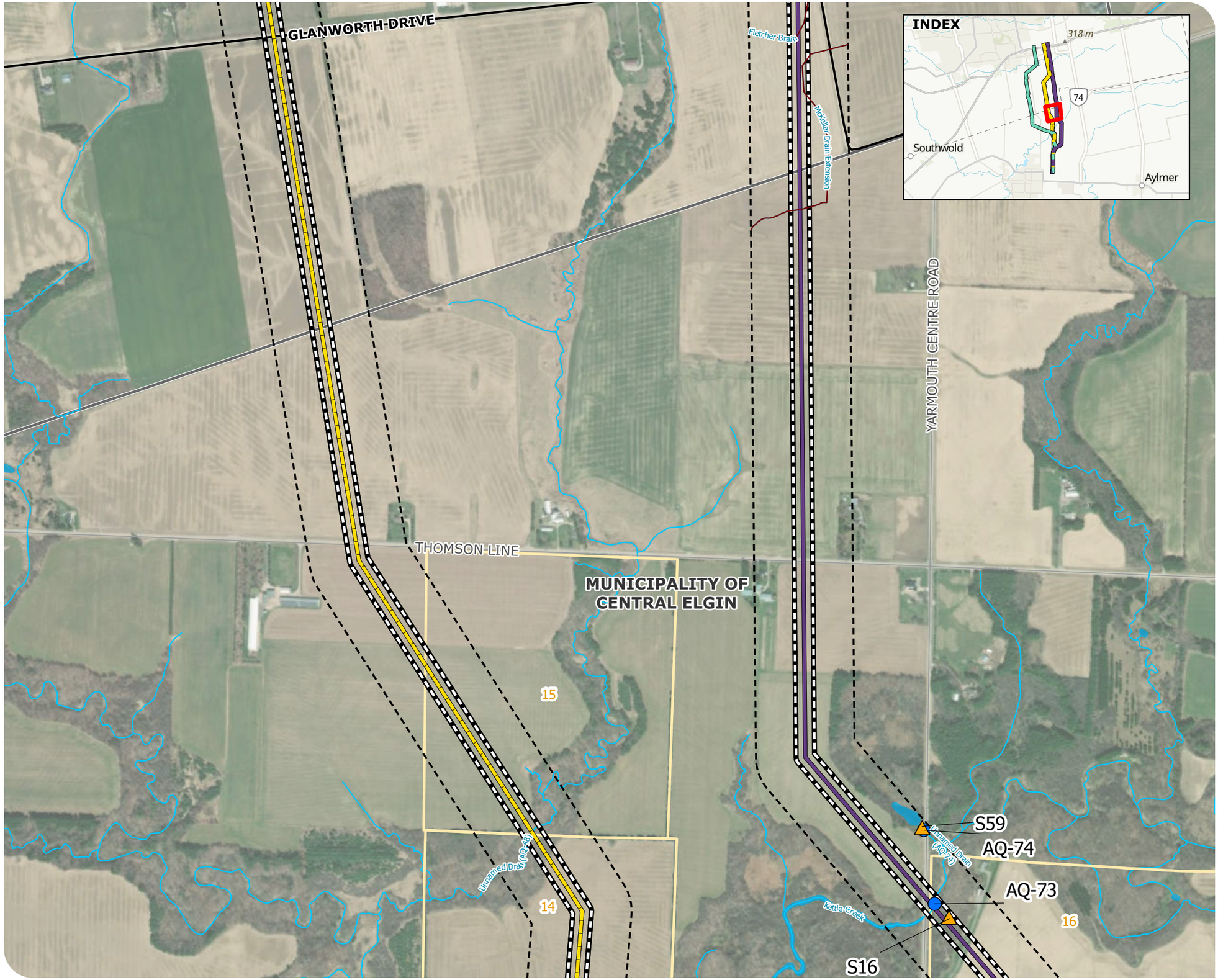

hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.5

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Terrestrial Survey Stations*
- Major Road
- Minor Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

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MAP CHECKED BY: -CP
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DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
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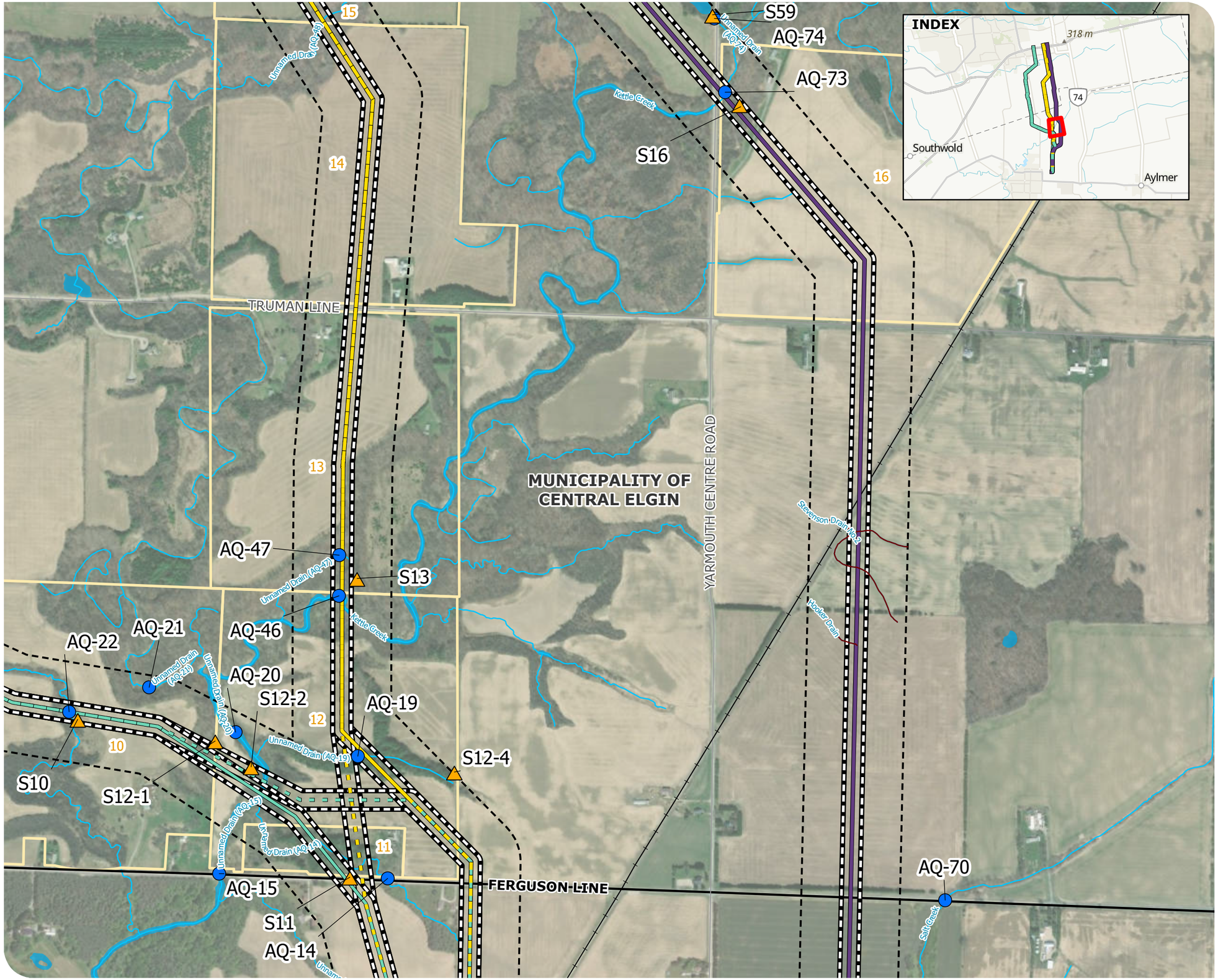

hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.6

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Terrestrial Survey Stations*
- Railway
- Major Road
- Minor Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

MAP DRAWING INFORMATION:
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BASEMAP PROVIDED BY ESRI INC.

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MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
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DATE: 2024-10-10

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hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.7

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Terrestrial Survey Stations*
- Existing Transmission Line
- Highway
- Major Road
- Minor Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

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DILLON CONSULTING

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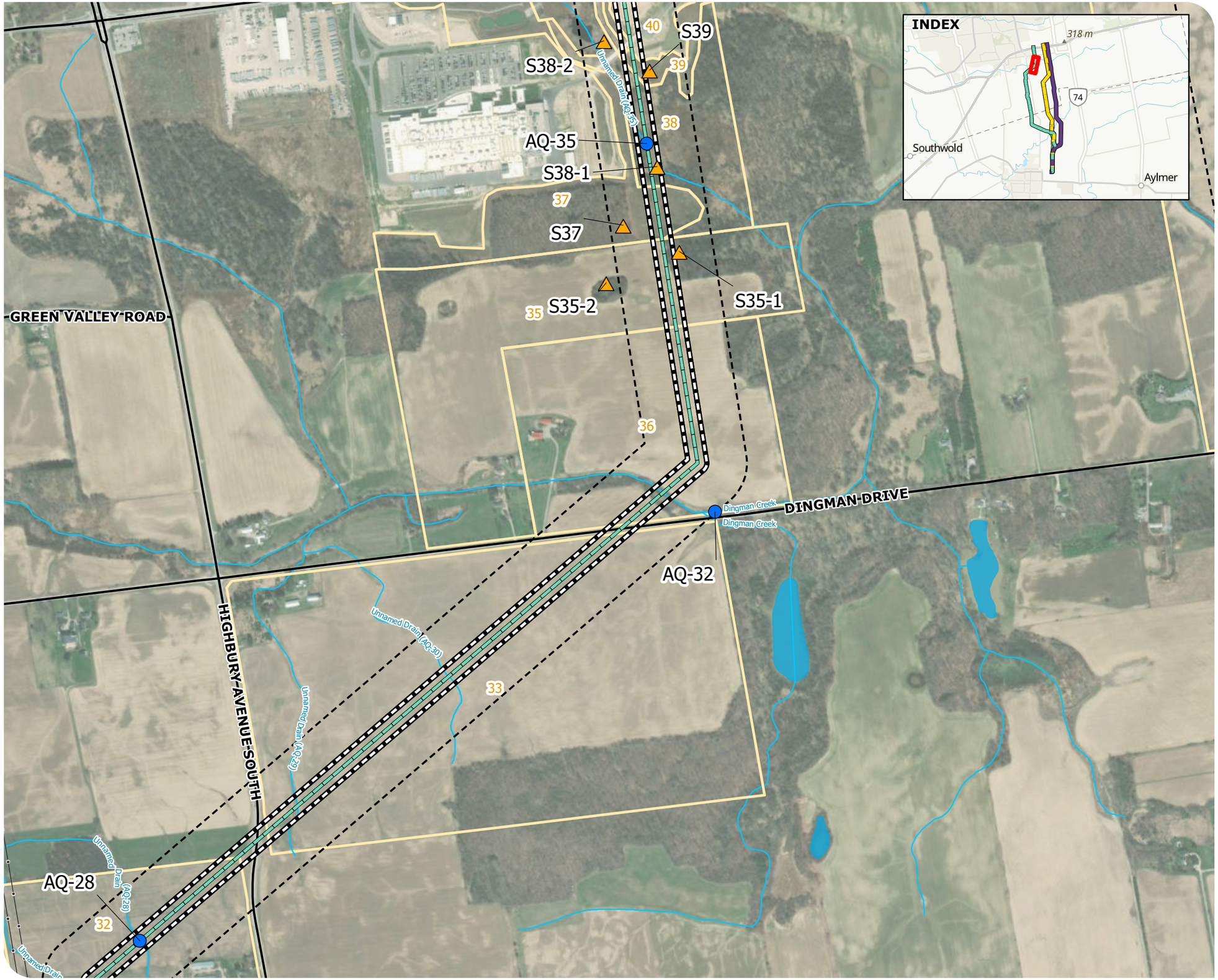

hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.8

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Terrestrial Survey Stations*
- Existing Transmission Line
- Major Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

MAP DRAWING INFORMATION:
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BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

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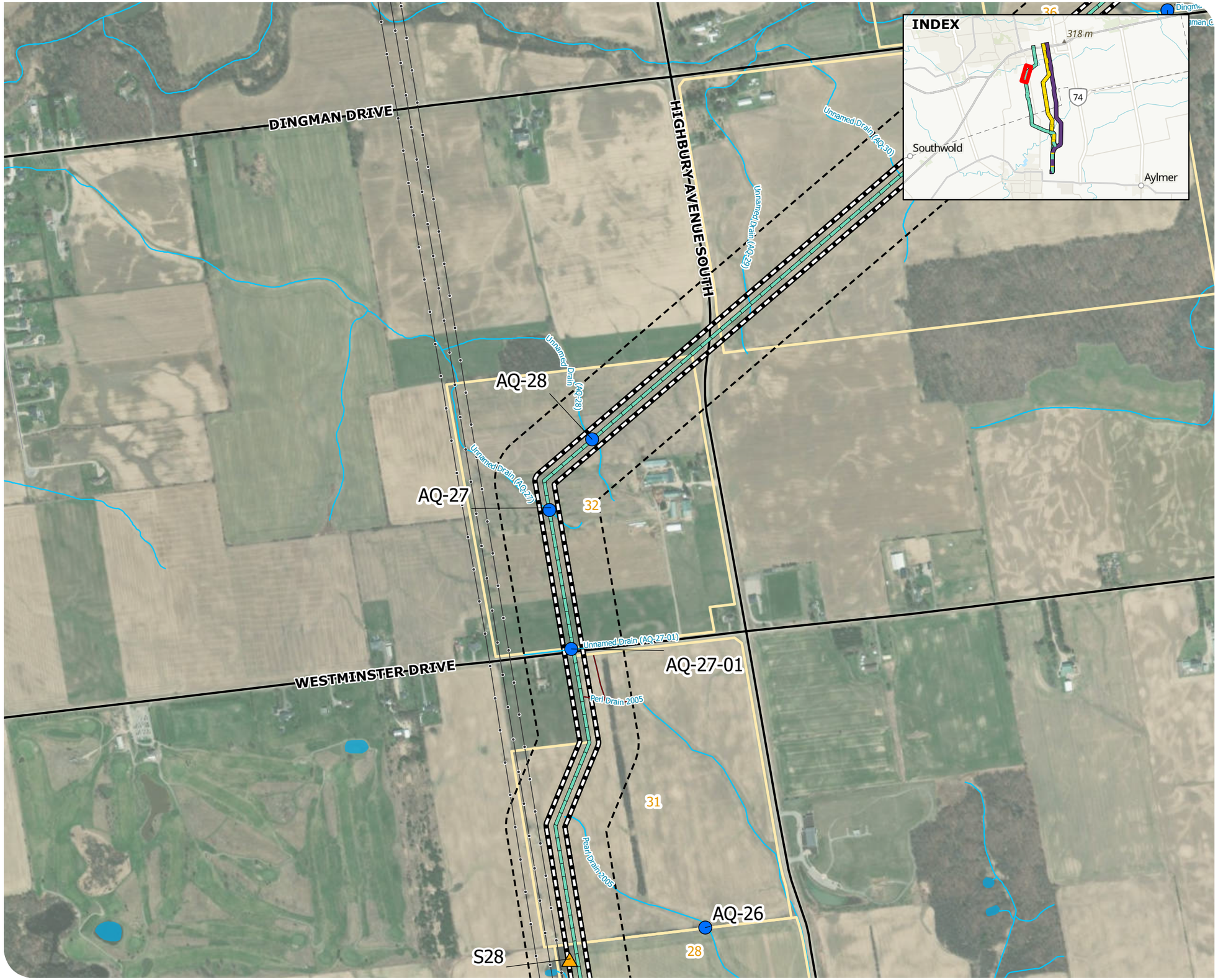

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.9

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Terrestrial Survey Stations*
- Existing Transmission Line
- Major Road
- Minor Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

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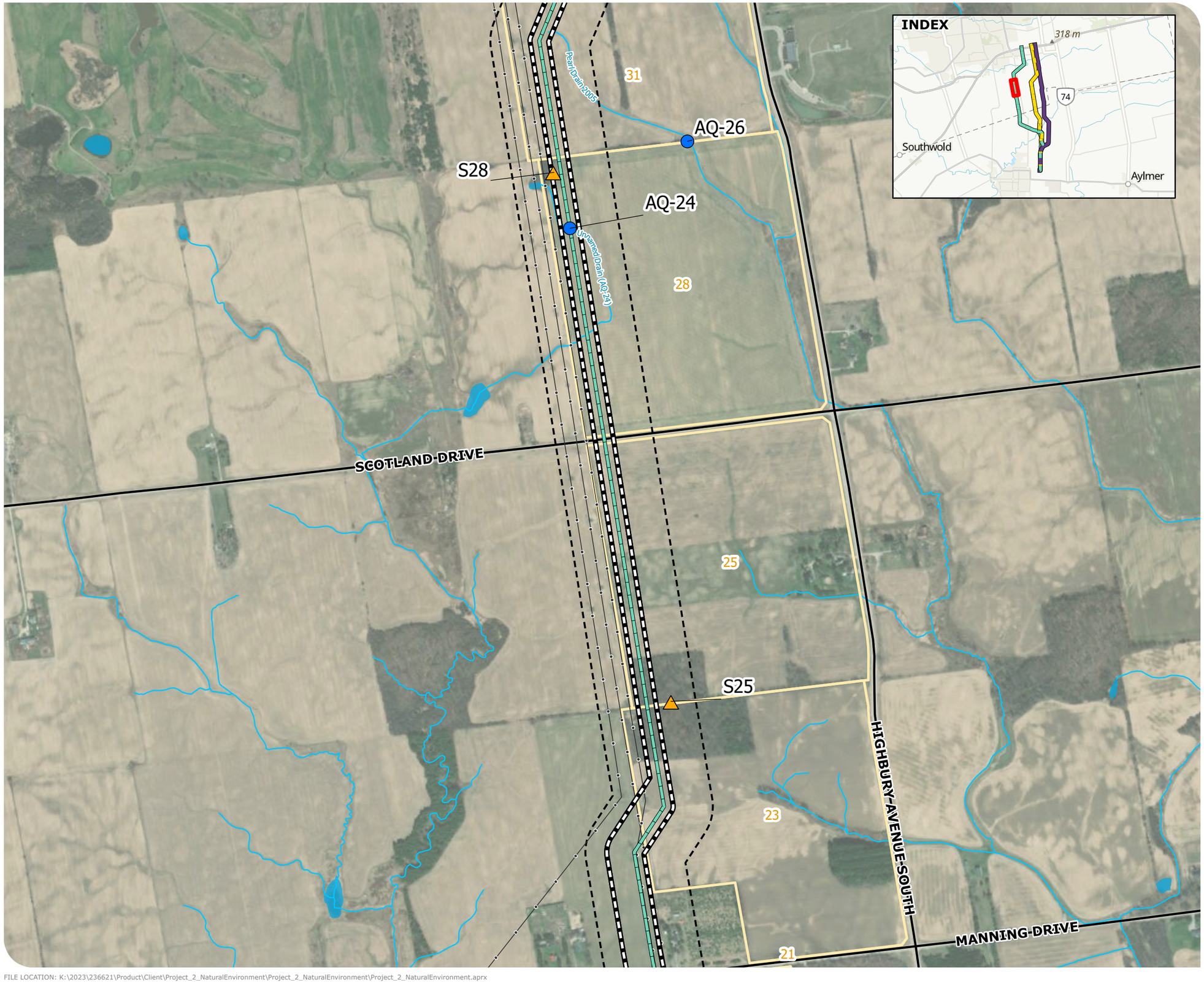


hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.10

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Terrestrial Survey Stations*
- Existing Transmission Line
- Major Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

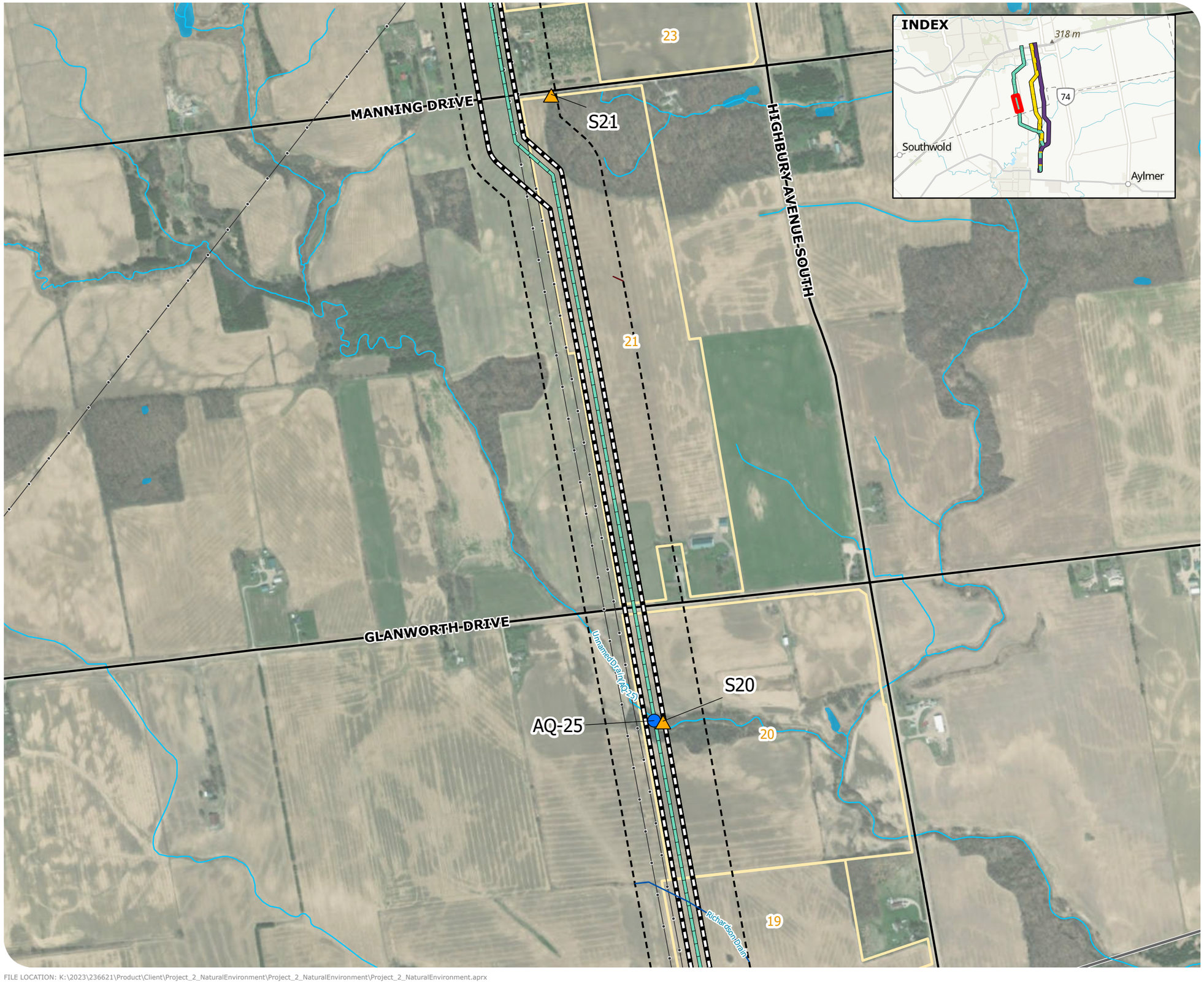
MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
DATE: 2024-10-10

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment.aprx



hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.11

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Terrestrial Survey Stations*
- Existing Transmission Line
- Major Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- F
- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

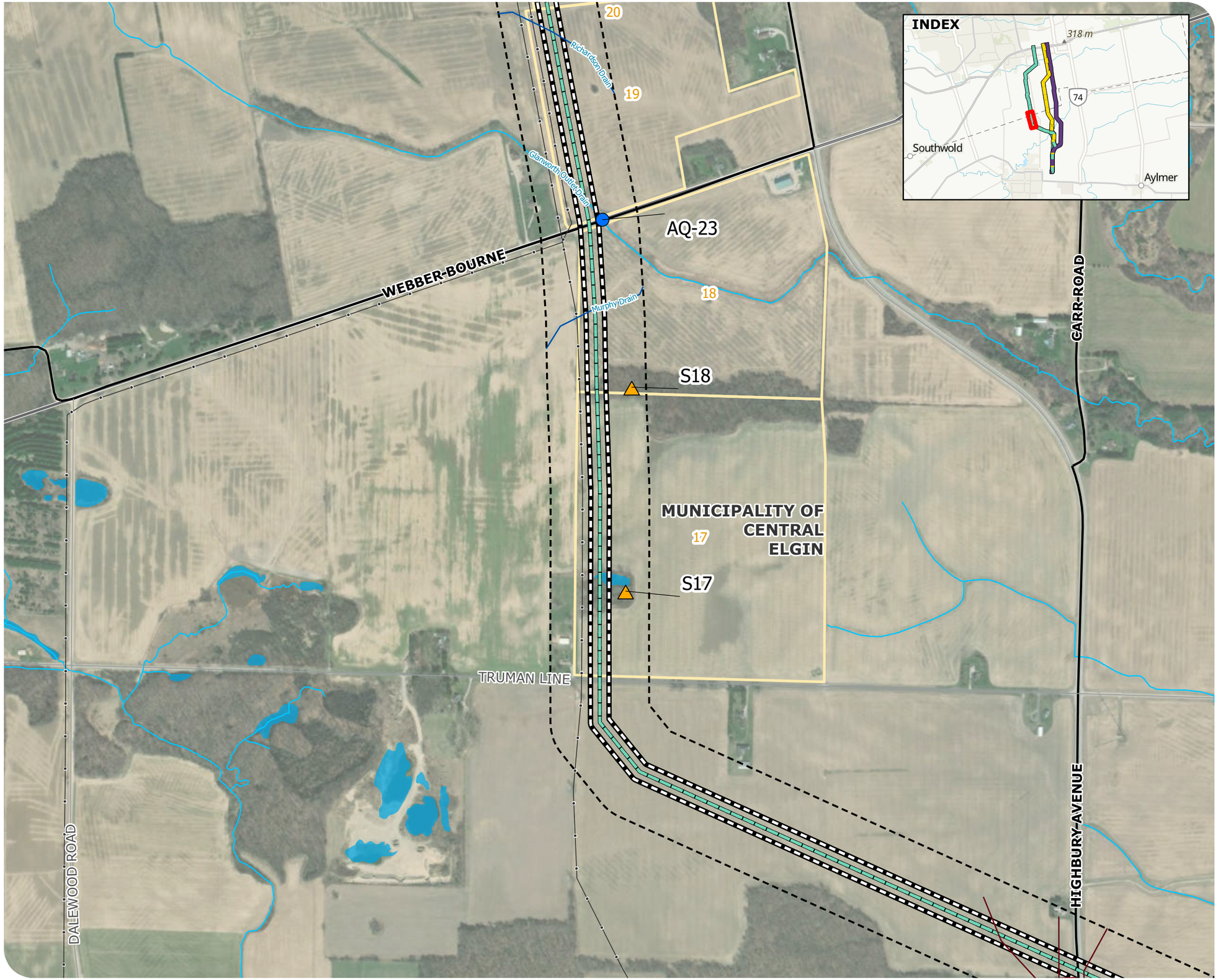
MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
DATE: 2024-10-10

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment.aprx



hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.12

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Terrestrial Survey Stations*
- Existing Transmission Line
- Major Road
- Minor Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- F
- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

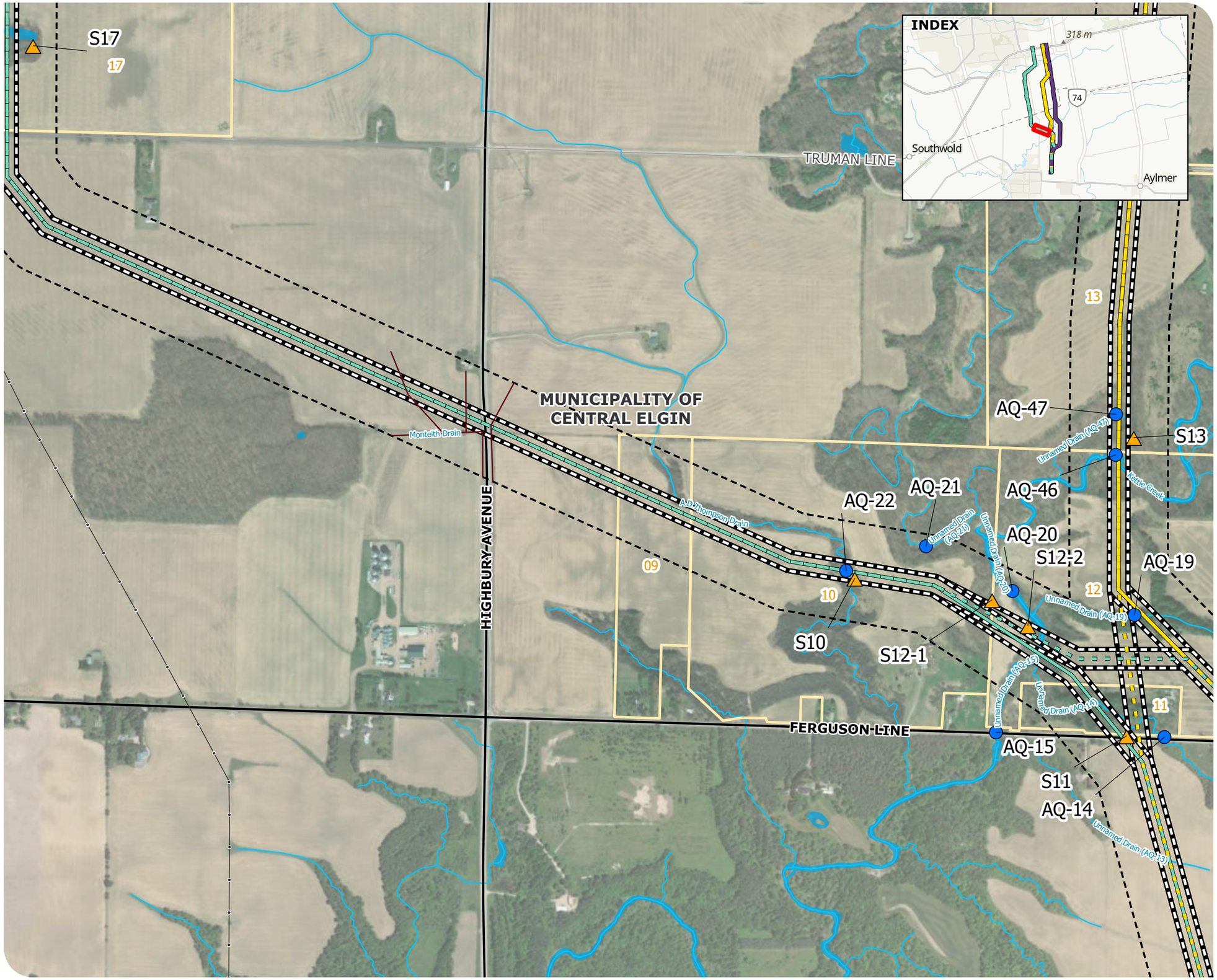
MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
DATE: 2024-10-10

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment.aprx



hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.13

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Terrestrial Survey Stations*
- Existing Transmission Line
- Major Road
- Minor Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

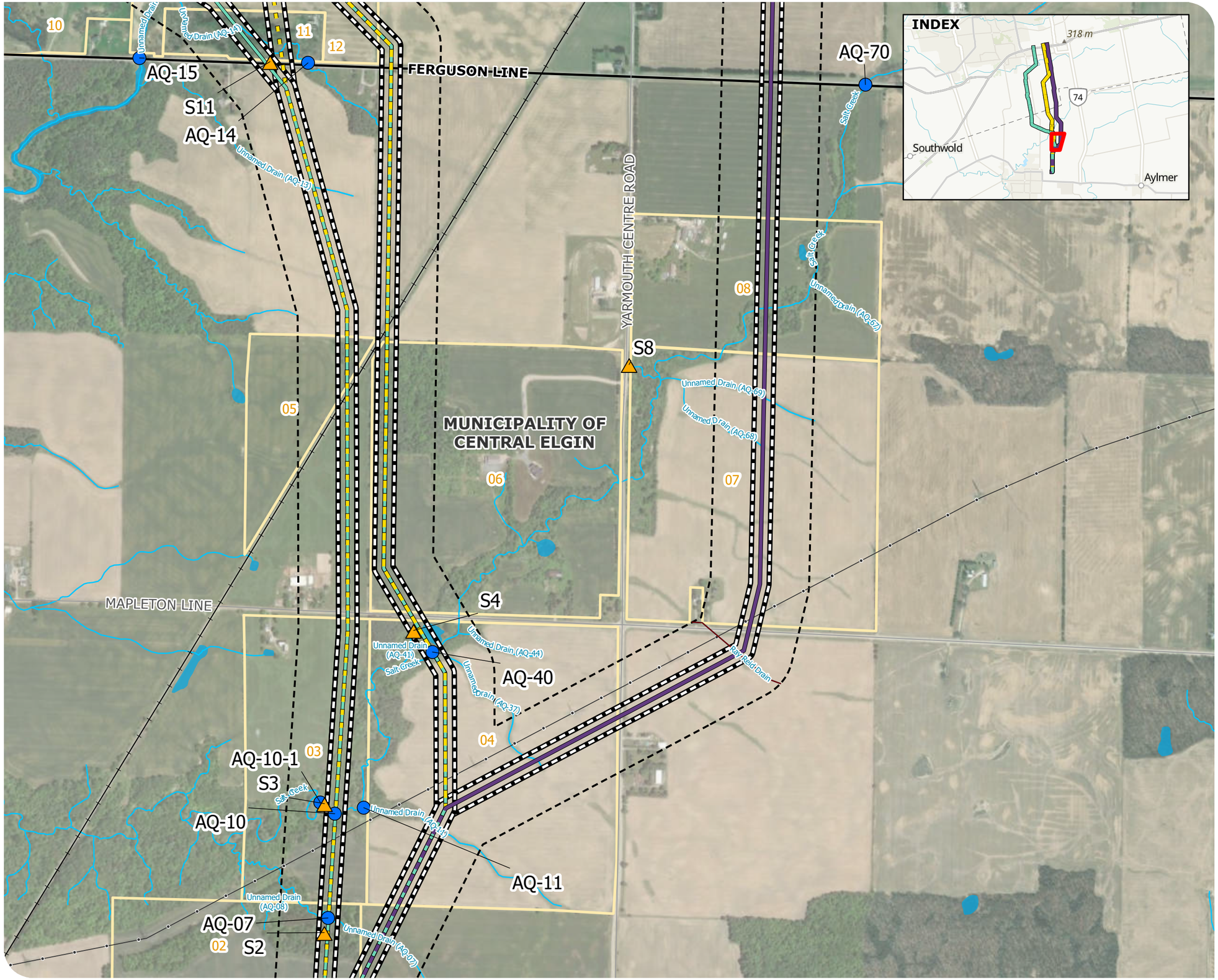
MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
DATE: 2024-10-10

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment.aprx



hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.14

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Terrestrial Survey Stations*
- Existing Transmission Line
- Railway
- Major Road
- Minor Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

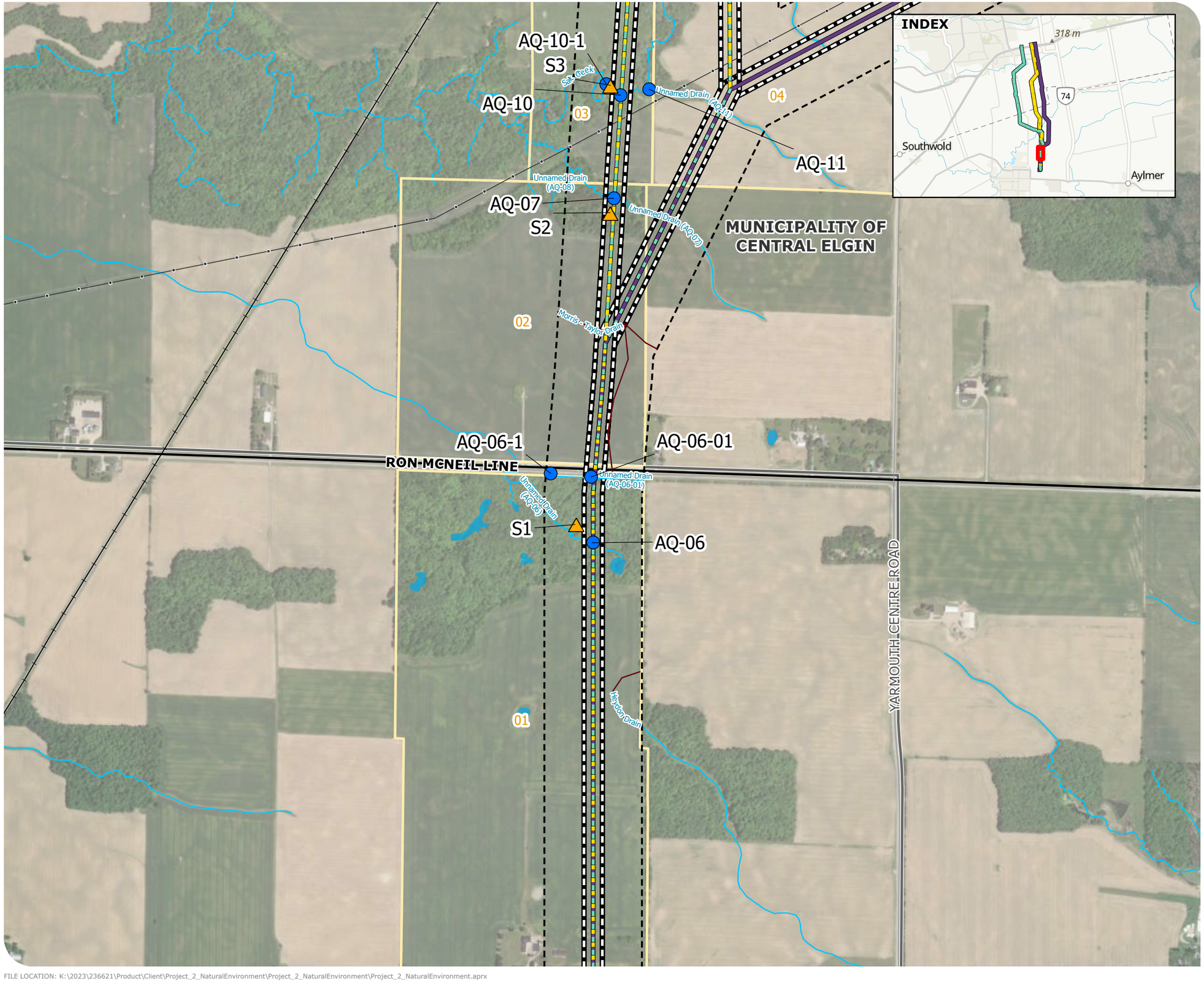
MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
DATE: 2024-10-10

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment.aprx



hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.15

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Watercourse Assessment Stations
- Terrestrial Survey Stations*
- Existing Transmission Line
- Railway
- Major Road
- Minor Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

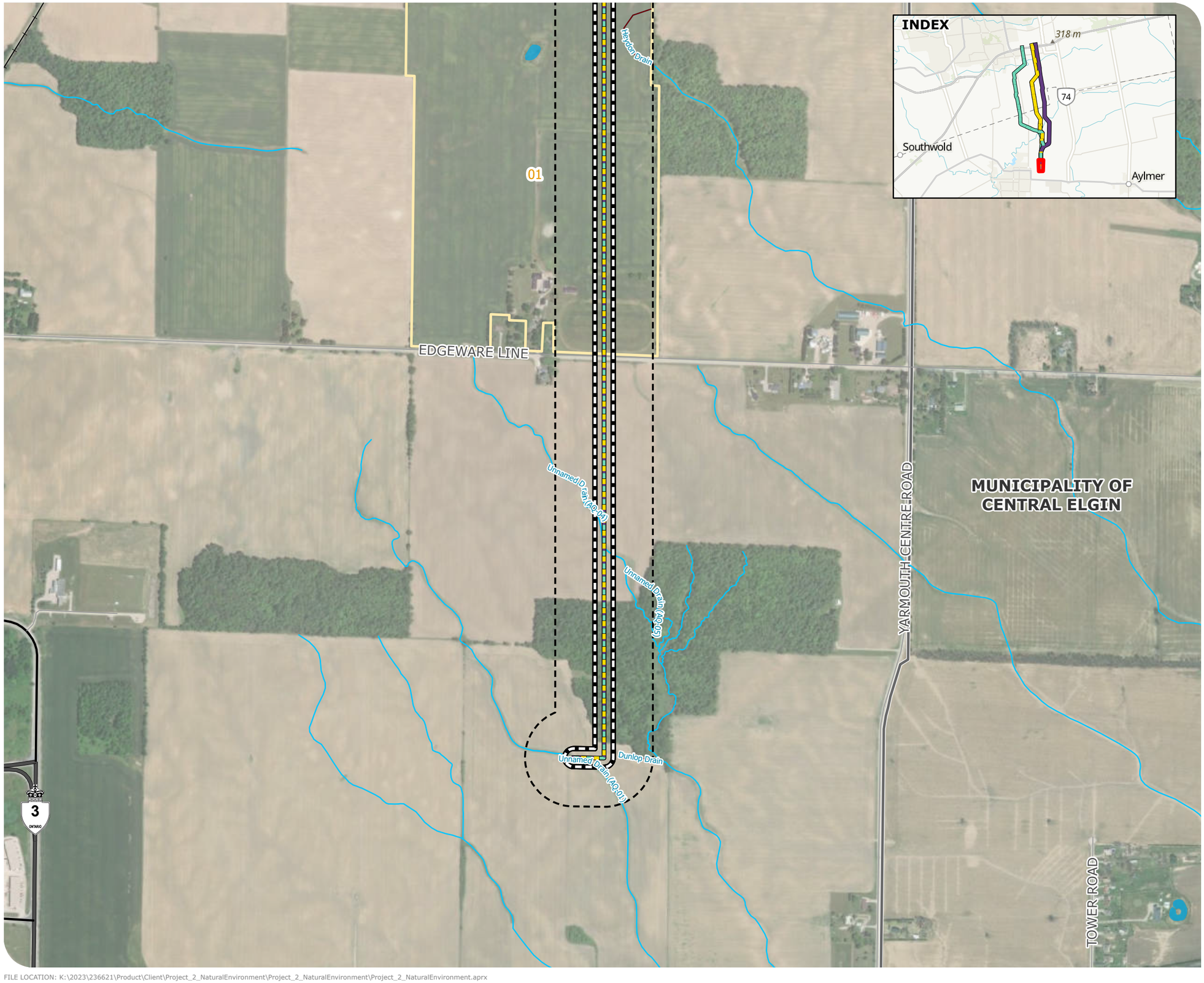
MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
DATE: 2024-10-10

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment.aprx



hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

SURVEY STATION LOCATIONS

APPENDIX C-3.16

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- EEA Parcel
- Railway
- Highway
- Major Road
- Minor Road
- Watercourse (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Municipal Boundary

DFO Drain Classification Type

- Not Rated

*Specific surveys detailed in Appendix C - Table C-4

SCALE 1:9,000

0 200 400 Meters

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

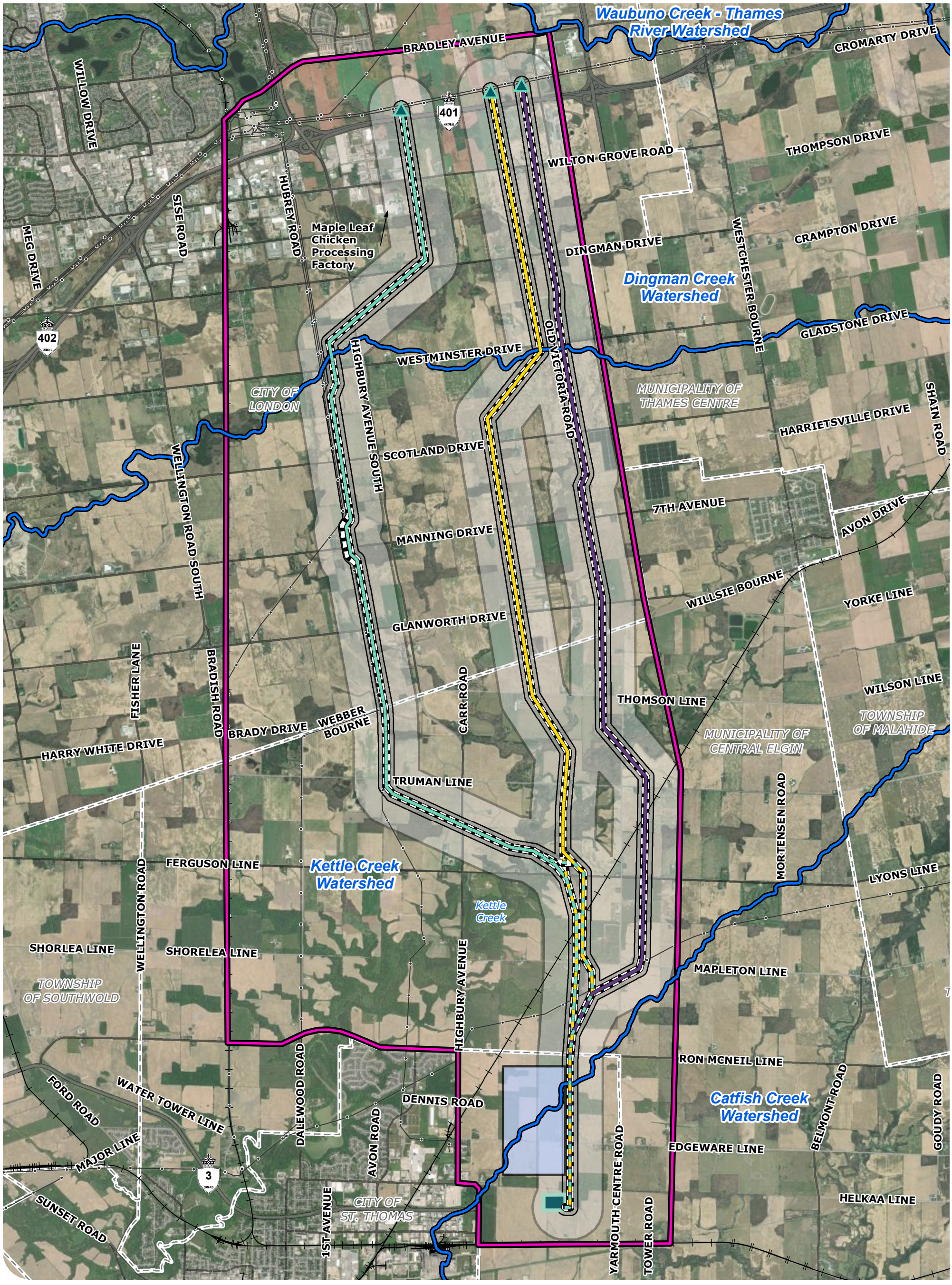
MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
DATE: 2024-10-10

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment.aprx

Appendix C.4. Quaternary Watersheds



ST. THOMAS LINE PROJECT

Line Connection Point
Route Alternative 1A
Route Alternative 1B
Route Alternative 2A
Route Alternative 2B
Route Alternative 3
Right of Way
Project Study Area (120 m)
Local Study Area (500 m)
Regional Study Area
Planned Centennial Transformer Station (TS)
Volkswagen Facility (To be Constructed)
Existing Electrical Transmission Line
Railway
Municipal Boundary
Quaternary Watershed

QUATERNARY WATERSHEDS

APPENDIX C-4

MAP DRAWING INFORMATION:
1. DATA PROVIDED BY HONI, MNRF LIO
2. Imagery: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

MAP CREATED BY: -PAR
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:55,000

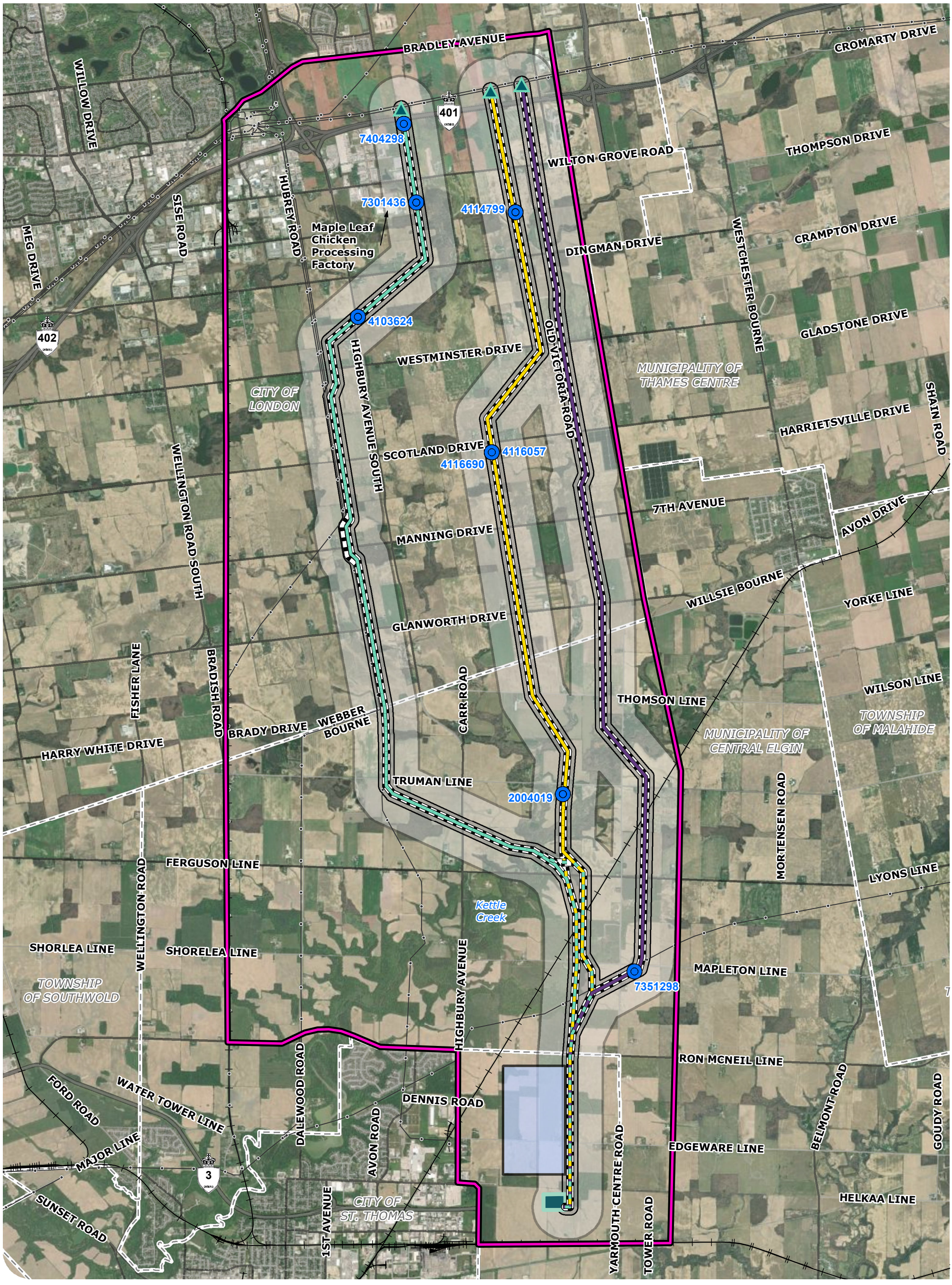
0 0.5 1 2 km

N W E S

PROJECT: 23-6621 STATUS: DRAFT DATE: 2025-03-06

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_ESR\Watershed_20250306.mxd

Appendix C.5. Water Wells in the PSA



ST. THOMAS LINE PROJECT

Line Connection Point
Route Alternative 1A
Route Alternative 1B
Route Alternative 2A
Route Alternative 2B
Route Alternative 3
Right of Way
Project Study Area (120 m)
Local Study Area (500 m)
Regional Study Area
Planned Centennial Transformer Station (TS)
Volkswagen Facility (To be Constructed)
Existing Electrical Transmission Line
Railway
Municipal Boundary
MECP Water Well

WATER WELLS IN THE PSA

APPENDIX C-5

MAP DRAWING INFORMATION:
1. DATA PROVIDED BY HONI, MNRF LIO, MECP
2. Imagery: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

MAP CREATED BY: -PAR
MAP CHECKED BY: -
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:55,000

0 0.5 1 2 km

N W E S

PROJECT: 23-6621 STATUS: DRAFT DATE: 2025-03-06

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_ESR\WaterWells_20250306.mxd

7404298

Ontario — Ministry of the Environment, Conservation and Parks

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. (Place Sticker and/or Print Below) A318862

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

CORPORATION OF THE CITY OF LONDON

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1710 Wilton Grove Rd	-	-	-

County/District/Municipality	City/Town/Village	Province	Postal Code
Middlesex	London	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	486854	4754022		

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	Depth (m/ft) To
Brown	Silt	Sand		0	10'
Grey	Silt	Clay		10'	25'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	1	Cement	
1	14'	Bentonite	
14'	25'	Silica Sand	

Method of Construction

☐ Cable Tool ☐ Diamond ☑ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☐ Air percussion ☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used ☐ Domestic ☐ Municipal ☐ Dewatering ☐ Livestock ☑ Test Hole ☑ Monitoring ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2"	Plastic	0.2	+3	15'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2"	Plastic	.010	15'	25'

Status of Well

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

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
N/A	☐	☐ Fresh ☐ Untested	
	☐	☐ Fresh ☐ Untested	
	☐	☐ Fresh ☐ Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	25'	8"

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify

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)

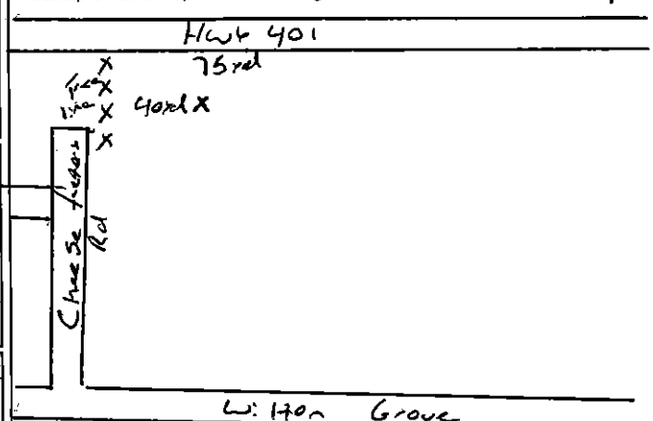
Well production (l/min/GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
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	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Direct Environmental Drilling	7320

Business Address (Street Number/Name)	Municipality
75 Artisans Cres	London

Province	Postal Code	Business E-mail Address
ON	N5V5E9	darmstrong@directenvironmentaldrilling.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
5198680175	Dawson, Matthew

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3963		2021/11/25

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☑ No		2021/11/25

Ministry Use Only

Audit No. Z368872

Received NOV 29 2021

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Ministry's Copy

Ontario (https://www.ontario.ca/page/government-ontario)

Map: Well records

This map allows you to search and view well record information from reported wells in Ontario.

Full dataset is available in the Open Data catalogue (https://data.ontario.ca/dataset/well-records) .

Go Back to Map

Well ID

Well ID Number: 7301436
Well Audit Number: *Z273518*
Well Tag Number: *A229811*
This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location	1577 WILTON GROVE RD LONDON
Township	WESTMINSTER TOWNSHIP

Lot	008
Concession	CON 03
County/District/Municipality	MIDDLESSEX
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 487056.00 Northing: 4752817.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BLCK	LOAM		LOOS	0 ft	1 ft

BRWN	SAND	SILT	DRY	1 ft	15 ft

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed	
0 ft	9 ft	BENTONITE		

Method of Construction & Well Use

Method of Construction	Well Use	
Rotary (Convent.)		
	Monitoring	

Status of Well

Observation Wells

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To	

2.1 inch	PLASTIC	-32 ft	10 ft

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To
2.4 inch	PLASTIC	10 ft	15 ft

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7190

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?	N

Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	12 ft		
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
12 ft	

Hole Diameter

Depth From	Depth To	Diameter
0 ft	15 ft	9 inch

Audit Number: Z273518

Date Well Completed: October 26, 2017

Date Well Record Received by MOE: December 14, 2017

Related

How to use a Ministry of the Environment map (https://www.ontario.ca/page/how-use-ministry-environment-map#wells)

Technical documentation: Metadata record (https://data.ontario.ca/dataset/well-records/resource/3031344e-e3f2-48d5-888c-c1deadfd2f77)

Updated: January 10, 2024
Published: March 20, 2014

UTM 17 Z 486150 E
9 R 4750840 N
Elev. 9 R 0908
Basin 23

Con IV
Lot 10

ONTARIO

tops 40 I/14 g

RECEIVED
MAR 10 1957 41 No 3624
GEOLOGICAL BRANCH
DEPARTMENT of MINES

The Water-well Drillers Act, 1954
Department of Mines

Water-Well Record

County or Territorial District Middlesex, Westminster Township, Village, Town or City WESTMINSTER
Con. IV Lot 10 Street and Number (if in Village, Town or City)
Owner R. V. C. Address London
Date completed 27th (day) 11 (month) 1956 (year)

Pipe and Casing Record

5 1/2" diam.

Casing diameter(s) None
Length(s)
Type of screen
Length of screen

Pumping Test

Static level
Pumping rate
Pumping level
Duration of test

Well Log / Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water (s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Top Soil	0'	1' ✓			
Brown Clay	1'	3' ✓			
Hard Clay with a little Gravel	3'	55' ✓			
Blue Clay	55'	83' ✓			
Hard Clay + Gravel.	83'	150' ✓			
Blue Clay Gravel + Boulders.	150'	240' ✓			
Clay, Gravel with a lot of Boulders.	245'	251' ✓			
Hard Clay + Gravel Boulders.	251'	255' ✓			
Rock.		255'			

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

Is water clear or cloudy?

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

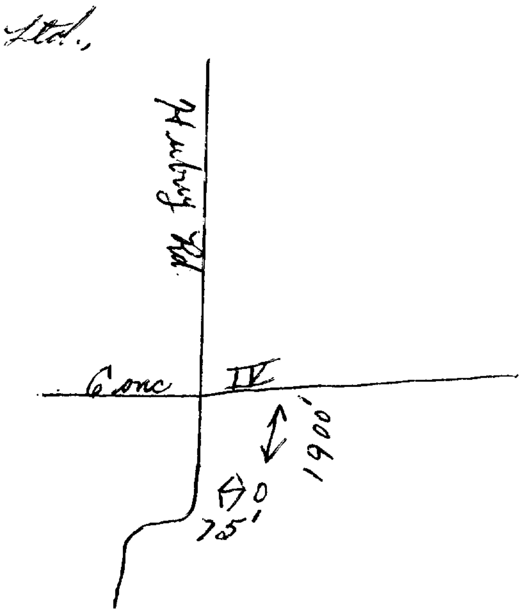
Drilling firm International Water Supply Ltd.
Address 12 Maitland St.
London, Ont.
Name of Driller G. K. Scott
Address 12 Maitland St.
London, Ont.
Licence Number 1118

I certify that the foregoing statements of fact are true.

Date Nov. 30th/56 G. K. Scott
Signature of Licensee

Location of Well

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



Form 5

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

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

11

4114799 MUNICIP 4101 3 CON. CON 03

COUNTY OR DISTRICT: MIDDLESEX
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: LONDON (WESTMINSTER)
CON. BLOCK, TRACT, SURVEY, ETC: CONC 3 12 1/4 DIFFERENCE
LOT: 6
DATE COMPLETED: DAY 8 MO 11 YR 01
[redacted] 85 WILTON GROVE Rd.
RC ELEVATION RC BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BLACK	TOP SOIL			0	2
BROWN	SAND	GRAVEL		2	8
GRAY	CLAY			8	23
GRAY	STONES	SAND		23	24
GRAY	SAND		COURSE	24	31

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
23	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
5	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.241	+4	26
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
16	4 INCHES	4 FEET

MATERIAL AND TYPE: STAINLESS STEEL
DEPTH TO TOP OF SCREEN: 26 FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER ETC.)

71 PUMPING TEST

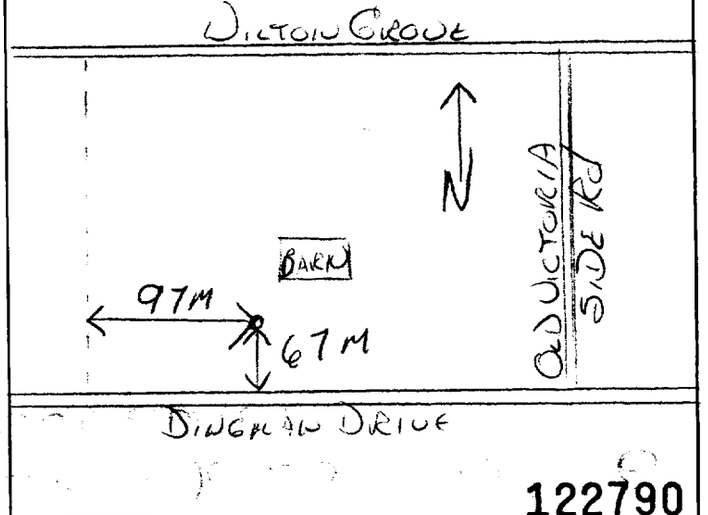
PUMPING TEST METHOD: 1 ☒ PUMP 2 ☐ BAILER
PUMPING RATE: 15 GPM
DURATION OF PUMPING: 2 HOURS ____ MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☒ PUMPING 2 ☐ RECOVERY			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
17 FEET	19 FEET	19 FEET	19 FEET	19 FEET	19 FEET

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: 25 FEET
RECOMMENDED PUMPING RATE: 15 GPM

LOCATION OF WELL

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



DRILLERS REMARKS: 122790

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 ☐ DEWATERING

WATER USE

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

METHOD OF CONSTRUCTION

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

CONTRACTOR

NAME OF WELL CONTRACTOR: A. DALE WELL & PUMP SERVICE
WELL CONTRACTOR'S LICENCE NUMBER: 6746
ADDRESS: 832 WESTMINSTER DRIVE LONDON
NAME OF WELL TECHNICIAN: ALEX DALE
WELL TECHNICIAN'S LICENCE NUMBER: T-0907
SIGNATURE OF TECHNICIAN/CONTRACTOR: R. Alex Dale
SUBMISSION DATE: DAY 21 MO 11 YR 01

OFFICE USE ONLY

DATA SOURCE
CONTRACTOR: 6746
DATE RECEIVED: NOV 30 2001
DATE OF INSPECTION
INSPECTOR
REMARKS

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

Ontario Ministry of the Environment

Well Tag No. (Place sticker and print number below)

A 010523

A 010523

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

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.

Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

RR#/Street Number/Name: 1281 SCOTLAND RD

City/Town/Village: LONDON

Site/Compartment/Block/Tract etc.

GPS Reading — NAD 83 — Zone 17 — Easting 488214 — Northing 4749992

Unit Make/Model

Mode of Operation: ☐ Undifferentiated ☐ Averaged ☐ 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			0	2.45
GREY	GRAVEL			2.45	3.37
BROWN	CLAY			3.37	3.99

Hole Diameter

Depth Metres From	To	Diameter Centimetres
0	3.99	10

Water Record

Water found at 2.45 Metres — Kind of Water: ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was ☐ Clear and sediment free ☐ Other, specify

Chlorinated ☐ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres From	To
Casing				
5.08	☐ Steel ☐ Fibreglass ☒ Plastic ☐ Concrete ☐ Galvanized	.6	.921	0
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen (Outside diam)		Slot No.		
6.28	☐ Steel ☐ Fibreglass ☒ Plastic ☐ Concrete ☐ Galvanized	10	3.99	.921
No Casing or Screen	☐ Open hole			

Test of Well Yield

Pumping test method	Draw Down Time min	Water Level Metres	Recovery Time min	Water Level Metres
Pump intake set at - (metres)	Static Level			
Pumping rate - (litres/min)	1		1	
Duration of pumping ___hrs + ___ min	2		2	
Final water level end of pumping ___ metres	3		3	
Recommended pump type. ☐ Shallow ☐ Deep	4		4	
Recommended pump depth. ___ metres	5		5	
Recommended pump rate. (litres/min)	10		10	
	15		15	
If flowing give rate - (litres/min)	20		20	
	25		25	
If pumping discontinued, give reason.	30		30	
	40		40	
	50		50	
	60		60	

Plugging and Sealing Record

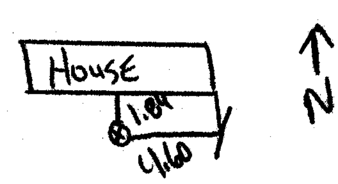
☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
3.99	.921	SILICA SAND	.044
.921	0	BENSEAL	.018

Location of Well

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

SCOTLAND RD



Method of Construction

☐ Cable Tool ☐ Rotary (air) ☐ Diamond ☐ Digging ☐ Rotary (conventional) ☐ Air percussion ☐ Jetting ☒ Other SONIC ☐ Rotary (reverse) ☐ Boring ☐ Driving

Water Use

☐ Domestic ☐ Industrial ☐ Public Supply ☒ Other TESTING ☐ Stock ☐ Commercial ☐ Not used ☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

☐ Water Supply ☐ Recharge well ☐ Unfinished ☐ Abandoned, (Other) ☒ Observation well ☐ Abandoned, insufficient supply ☐ Dewatering ☐ Test Hole ☐ Abandoned, poor quality ☐ Replacement well

Audit No. Z 26893

Date Well Completed YYYY 04 MM 10 DD 29

Was the well owner's information package delivered? ☐ Yes ☐ No

Date Delivered YYYY MM DD

Well Contractor/Technician Information

Name of Well Contractor: MPI DRILLING

Well Contractor's Licence No.: 6571

Business Address (street name, number, city etc.): P.O BOX 2069 PICTON ON K0K 2T0

Name of Well Technician (last name, first name): PAYNE EDWARD

Well Technician's Licence No.: T-3079

Signature of Technician/Contractor: x Edward Payne

Date Submitted YYYY MM DD

Ministry Use Only

Data Source

Contractor 6571

Date Received JUN 08 2005

Date of Inspection YYYY MM DD

Remarks

Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐ *Cette formule est disponible en français*

Ontario Ministry of the Environment

Well Tag Number (Place sticker and print number below): A 010523

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

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.

Ministry Use Only

MUN | CON | LOT

[redacted]

Address of Well Location (County/District/Municipality): Middlesex

Township: WESTMINSTER | Lot: 7 | Concession: VI

RR#/Street Number/Name: 1281 SCOTTLAND RD

City/Town/Village: LONDON | Site/Compartment/Block/Tract etc.:

GPS Reading: NAD 83 | Zone 17 | Easting 488214 | Northing 4748992 | Unit Make/Model: MAGELLAN | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
			Previously Drilled		3.99

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0	3.99	10

Water Record

Water found at ___ Metres / Kind of Water

___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: _____

___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: _____

___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: _____

After test of well yield, water was
☐ Clear and sediment free
☐ Other, specify _____

Chlorinated ☐ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☐ Open hole			

Test of Well Yield

Pumping test method	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Pump intake set at - (metres)	Static Level			
Pumping rate - (litres/min)	1		1	
Duration of pumping ____hrs +____ min	2		2	
Final water level end of pumping ____metres	3		3	
Recommended pump type. ☐ Shallow ☐ Deep	4		4	
Recommended pump depth. ____metres	5		5	
Recommended pump rate. (litres/min)	10		10	
If flowing give rate - (litres/min)	15		15	
If pumping discontinued, give reason.	20		20	
	25		25	
	30		30	
	40		40	
	50		50	
	60		60	

Plugging and Sealing Record

☐ Annular space ☒ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
0	3.99	Bentonite Holeplug	.347

Method of Construction

☐ Cable Tool ☐ Rotary (air) ☐ Diamond ☐ Digging
☐ Rotary (conventional) ☐ Air percussion ☐ Jetting ☐ Other
☐ Rotary (reverse) ☐ Boring ☐ Driving

Water Use

☐ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

☐ Water Supply ☐ Recharge well ☐ Unfinished ☒ Abandoned, (Other) Not needed
☐ Observation well ☐ Abandoned, insufficient supply ☐ Dewatering
☐ Test Hole ☐ Abandoned, poor quality ☐ Replacement well

Well Contractor/Technician Information

Name of Well Contractor: MPI DRILLING | Well Contractor's Licence No.: 6571

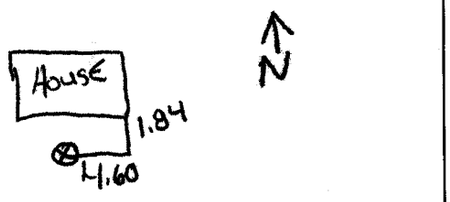
Business Address (street name, number, city etc.): P.O BOX 2069 PICTON ON K0K 2T0

Name of Well Technician (last name, first name): SCOTT HUSK | Well Technician's Licence No.: 7-2104

Signature of Technician/Contractor: X [signature] | Date Submitted YYYY MM DD: 20060808

Location of Well

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



Audit No. Z 53607 | Date Well Completed YYYY MM DD: 2005 06 29

Was the well owner's information package delivered? ☐ Yes ☐ No | Date Delivered YYYY MM DD

Ministry Use Only

Data Source | Contractor: 6571

Date Received YYYY MM DD: SEP 26 2006 | Date of Inspection YYYY MM DD

Remarks | Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐ *Cette formule est disponible en français*

Ministry of the Environment
Ontario

The Ontario Water Resources Act

40 I/14B

WATER WELL RECORD

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

11 | 2004019 | MUNICIP 20007 | CON CON 12

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC	LOT
[redacted]	YARMOUTH	12	11

[redacted] R#1 BELMONT

DATE COMPLETED: DAY 24 MO 2 YR 86

UTM [redacted] 743535 | RL | ELEVATION 0800 | RC | BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	CLAY		DENSE	0	13
GREY	CLAY	SOME STONES	DENSE	13	100
"	FINE SAND	CLAY	MIXED - LOOSE	100	185
"	CLAY		DENSE	185	195
"	MED SAND		LOOSE	195	201
"	FINE SAND		LOOSE	201	203

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
195-201	1 ☑ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
	1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6	1 ☑ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	.188	0	195
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.): A - SLOT 18; B - SLOT 16 | DIAMETER 6 INCHES | LENGTH 6 FEET

MATERIAL AND TYPE | DEPTH TO TOP OF SCREEN 195 FEET

61 PLUGGING & SEALING RECORD

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

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☑ PUMP 2 ☐ BAILER

PUMPING RATE: 8 GPM

DURATION OF PUMPING: 24 HOURS ____ MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☑ PUMPING 2 ☐ RECOVERY			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
34 FEET	130 FEET	65 FEET	95 FEET	110 FEET	115 FEET

IF FLOWING, GIVE RATE: ____ GPM

PUMP INTAKE SET AT: 180 FEET

WATER AT END OF TEST: 1 ☑ CLEAR 2 ☐ CLOUDY

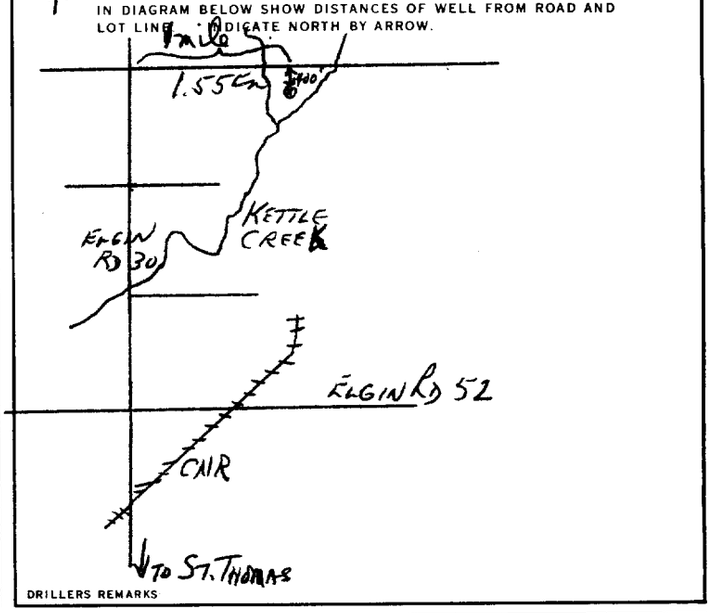
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☑ DEEP

RECOMMENDED PUMP SETTING: 175 FEET

RECOMMENDED PUMPING RATE: 8 GPM

LOCATION OF WELL

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



DRILLERS REMARKS

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

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

METHOD OF DRILLING

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: J. B. WILSON & SON WELL DRILLING LTD | LICENCE NUMBER 5466

ADDRESS: RR# 1 SPRINGFIELD

NAME OF DRILLER OR BORER: J. WILSON | LICENCE NUMBER 5466

SIGNATURE OF CONTRACTOR | SUBMISSION DATE DAY 30 MO 12 YR 86

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR | DATE RECEIVED 170387

DATE OF INSPECTION 1, 19, 88 | INSPECTOR

REMARKS: PITLESS

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506—4—77 FORM 7

Ontario

Ministry of the Environment, Conservation and Parks

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)*

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
5028 Mapleton Line	Yarmouth	13	11

County/District/Municipality	City/Town/Village	Province	Postal Code
Elgin		Ontario	N5P3T2

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	490399	4741042		

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	Depth (m/ft) To
	Pack Sand			145'	130'
	Bentonite	chips.		130'	7'
	top Soil & clay	fill.		7'	0'
	Well Decommissioned.				

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* _____

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
5"	Steel			

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Kind of Water	
☐ Gas	☑ Fresh ☐ Untested	☐ Other, *specify*
☐ Gas	☐ Fresh ☐ Untested	☐ Other, *specify*
☐ Gas	☐ Fresh ☐ Untested	☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* _____

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)*

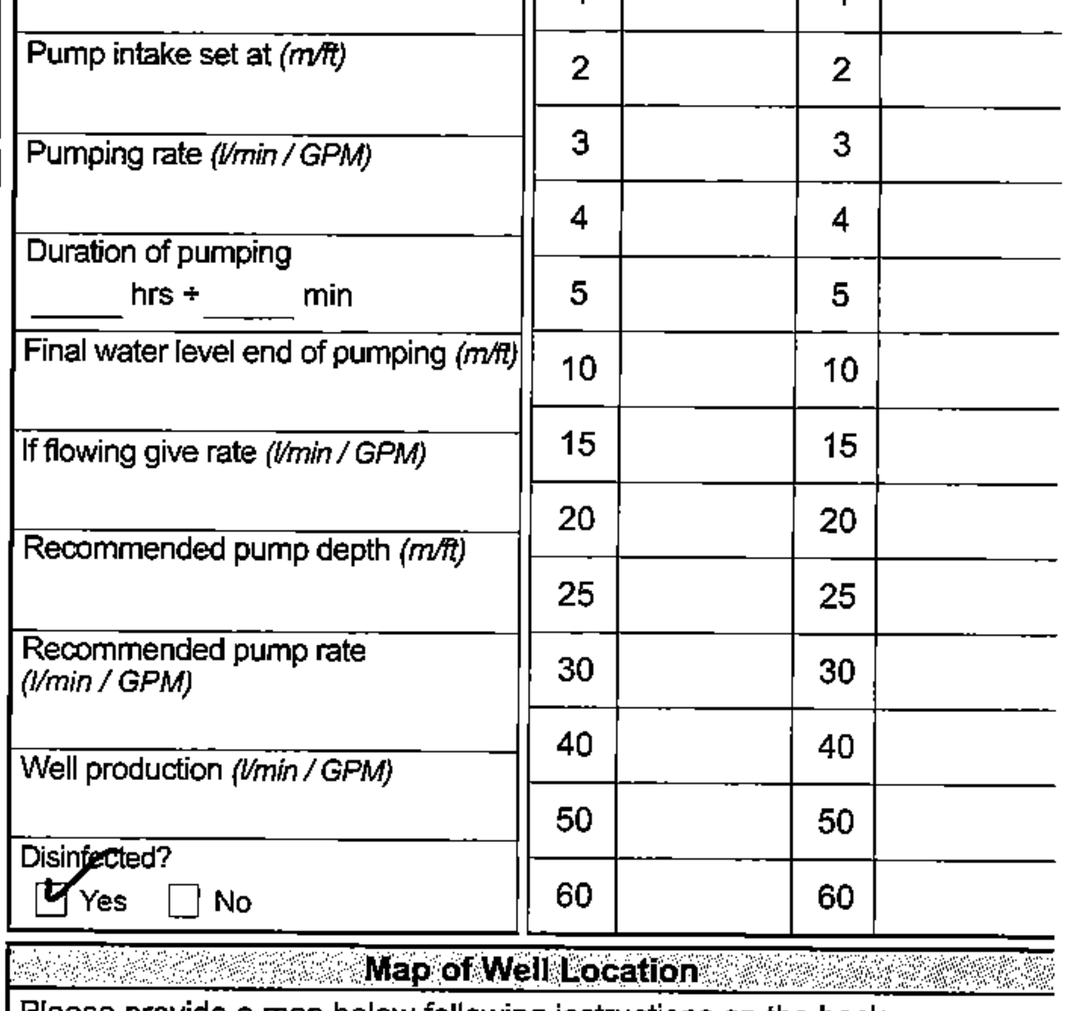
Well production *(l/min / GPM)*

Disinfected? ☑ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	80'		
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	

Map of Well Location

Please provide a map below following instructions on the back.



Comments: Well was inside of cement pit. Pit was Removed & casing dug down to 3' deep.

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
David. S. Ross	4634

Business Address (Street Number/Name)	Municipality
51464 Pressey Line.	Malahide.

Province	Postal Code	Business E-mail Address
Ont	N0L2J0	—

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
5197739615	Ross David.

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T108	[signature]	20190926

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☑ Yes ☐ No	20190926	20190925

Ministry Use Only

Audit No. Z319749

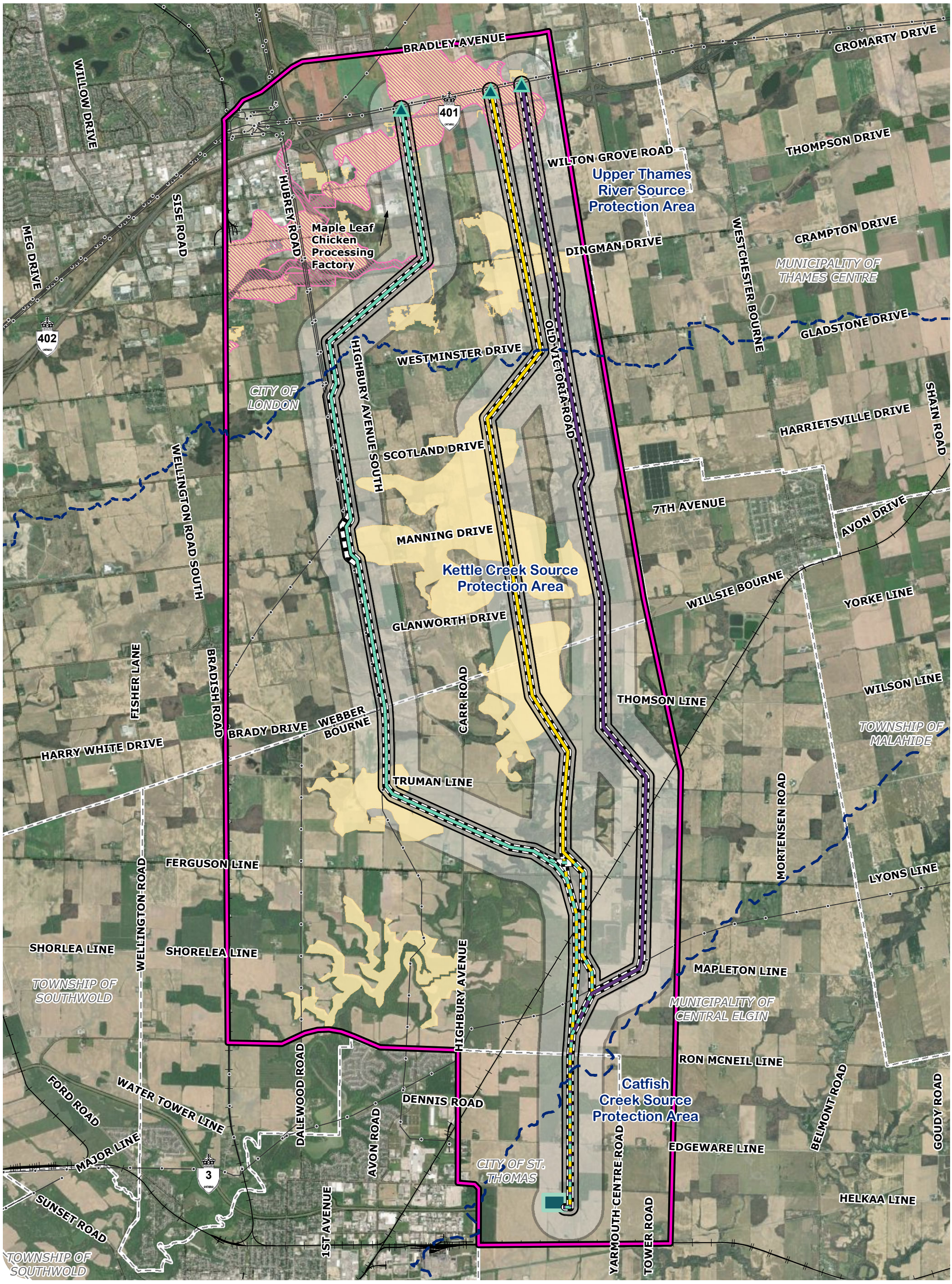
JAN 08 2020

Received

0506E (2018/12)

Ministry's Copy

Appendix C.6. Source Water Protection



ST. THOMAS LINE PROJECT

Line Connection Point
Route Alternative 1A
Route Alternative 1B
Route Alternative 2A
Route Alternative 2B
Route Alternative 3
Right of Way
Project Study Area (120 m)
Local Study Area (500 m)
Regional Study Area
Planned Centennial Transformer Station (TS)
Existing Electrical Transmission Line
Railway
Source Protection Area
Highly Vulnerable Aquifer
Significant Groundwater Recharge Area

SOURCE WATER PROTECTION

APPENDIX C-6

hydro one

MAP DRAWING INFORMATION:
1. DATA PROVIDED BY HONI, MNRF LIO, Thames-Sydenham and Region Source Protection
2. Imagery: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

MAP CREATED BY: -PAR
MAP CHECKED BY: -BJF
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:55,000

0 0.5 1 2 km

N W E S

PROJECT: 23-6621 STATUS: FINAL DATE: 2024-12-04

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_SocioEconomicMemo\SourceWaterProtection_20241129.mxd

Appendix C.7. Natural Heritage Features

ST. THOMAS LINE PROJECT

Line Connection Point
Alternative 1A
Alternative 1B
Alternative 2A
Alternative 2B
Alternative 3
Project Study Area (120 m buffer)
Right of Way
Watercourse (MNRF, 2024)
Drain (MNRF, 2024)
Waterbody (MNRF, 2024)
Provincially Significant Wetland (MNRF, 2024)
Woodlands (MNRF, 2024)
Significant Woodland (City of London; Central Elgin)
Environmentally Sensitive Area (City of London; Central Elgin)
Significant Valleylands (City of London)
Valleylands (City of London)
Conservation Area (UTRCA, KCCA)

NATURAL HERITAGE FEATURES

APPENDIX C-7

MAP DRAWING INFORMATION:
1. DATA PROVIDED BY HONI, MNRF LIO, CITY OF LONDON, MUNICIPALITY OF CENTRAL ELGIN, UPPER THAMES RIVER CONSERVATION AUTHORITY, KETTLE CREEK CONSERVATION AUTHORITY
IMAGERY: WORLD IMAGERY: EARTHSTAR GEOGRAPHICS
WORLD IMAGERY: MAXAR

MAP CREATED BY: -PAR/AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

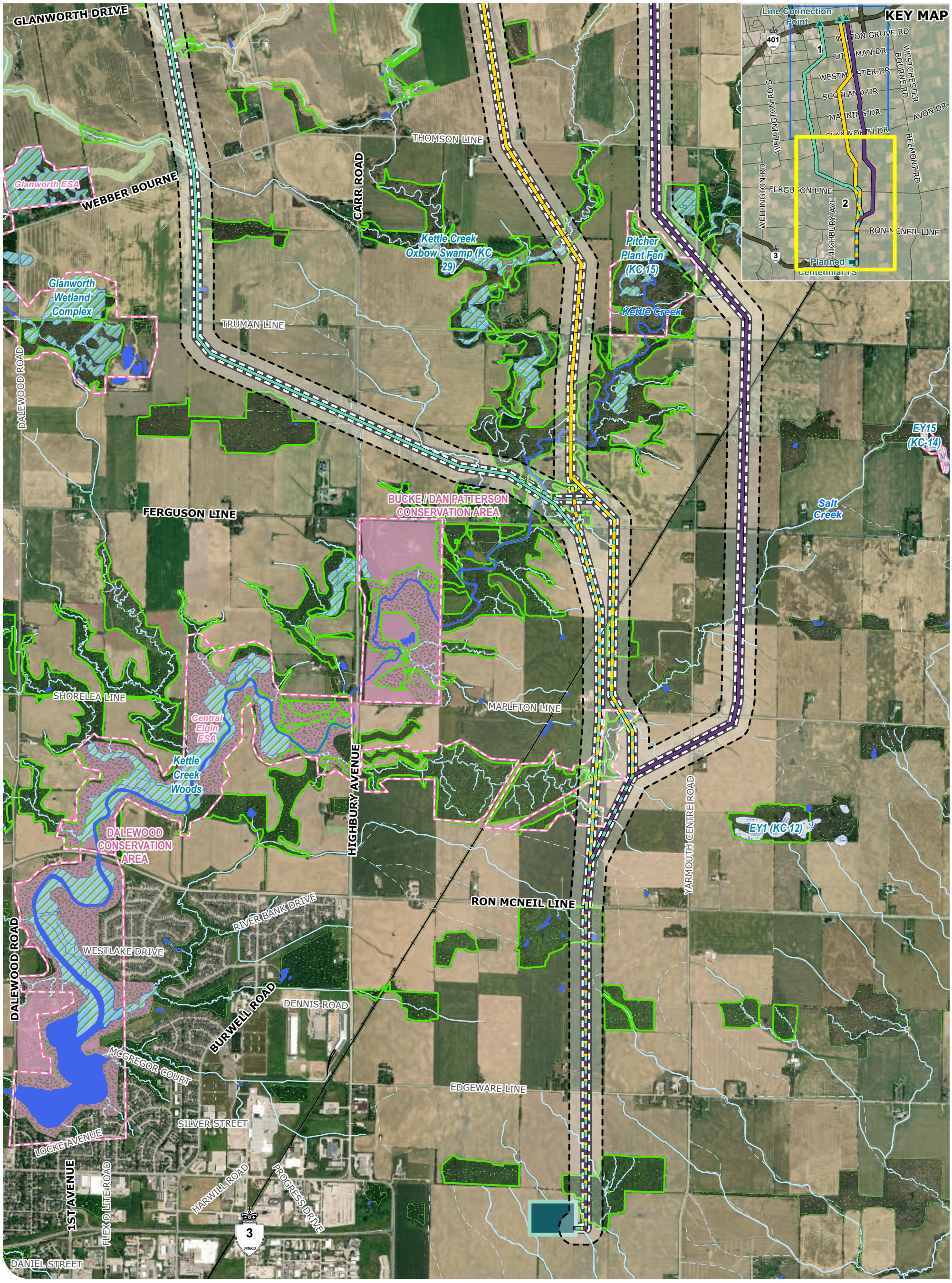
SCALE 1:26,000

0 0.25 0.5 1 KM

N W E S

PROJECT: 23-6621 STATUS: DRAFT DATE: 2024-10-10

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment.aprx



ST. THOMAS LINE PROJECT

NATURAL HERITAGE FEATURES

APPENDIX C-7

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Planned Centennial Transformer Station (TS)
- Project Study Area (120 m buffer)
- Right of Way
- Railway
- Watercourse (MNRF, 2024)
- Drain (MNRF, 2024)
- Waterbody (MNRF, 2024)
- Provincially Significant Wetland (MNRF, 2024)
- Wetland (Evaluated Other) (MNRF, 2024)
- Woodlands (MNRF, 2024)
- Significant Woodland (City of London; Central Elgin)
- Environmentally Sensitive Area (City of London; Central Elgin)
- Significant Valleylands (City of London)
- Valleylands (City of London)
- Conservation Area (UTRCA, KCCA)

hydro one

MAP DRAWING INFORMATION:
1. DATA PROVIDED BY HONI, MNRF LIO, CITY OF LONDON, MUNICIPALITY OF CENTRAL ELGIN, UPPER THAMES RIVER CONSERVATION AUTHORITY, KETTLE CREEK CONSERVATION AUTHORITY
IMAGERY: WORLD IMAGERY: EARTHSTAR GEOGRAPHICS
WORLD IMAGERY: MAXAR

MAP CREATED BY: -PAR/AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

SCALE 1:26,000

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N W E S

PROJECT: 23-6621 STATUS: DRAFT DATE: 2024-10-10

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment.aprx

Appendix C.8. Ecological Land Classification

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.1

- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- Existing Transmission Line
- Highway
- Major Road
- Minor Road
- Watercourse

Ecological Land Classification

CVC_4: Extraction (Active construction)

CVI: Transportation

CVR_4: Residential

FOD: Deciduous Forest

FOD/OA: Deciduous Forest/ Open Aquatic Complex

MEM: Mixed Meadow

MEM/THD: Mixed Meadow/ Deciduous Thicket Complex

OA: Open Aquatic

OAGM1: Annual Row Crop

TAGM5: Fencerow/Hedgerow

THD/MEM: Deciduous Thicket/Mixed Meadow Complex

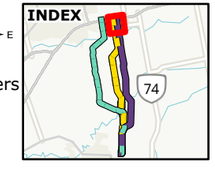
WOM: Mixed Woodland

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

DATE: 2024-10-10

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment.aprx

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.2

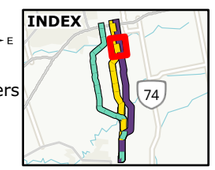
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- Major Road
- Watercourse
- Waterbody
- Ecological Land Classification
  - CVC: Commerical and Institutional
  - CVI: Transportation
  - CVR_4: Residential
  - FOD: Deciduous Forest
  - FOD/MEM: Deciduous Forest/ Mixed Meadow Complex
  - FOD/OA: Deciduous Forest/ Open Aquatic Complex
  - MEM: Mixed Meadow
  - MEM/THD: Mixed Meadow/ Deciduous Thicket Complex
  - OA: Open Aquatic
  - OAGM1: Annual Row Crop
  - TAGM5: Fencerow/Hedgerow

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX



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DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

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MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
DATE: 2024-10-10

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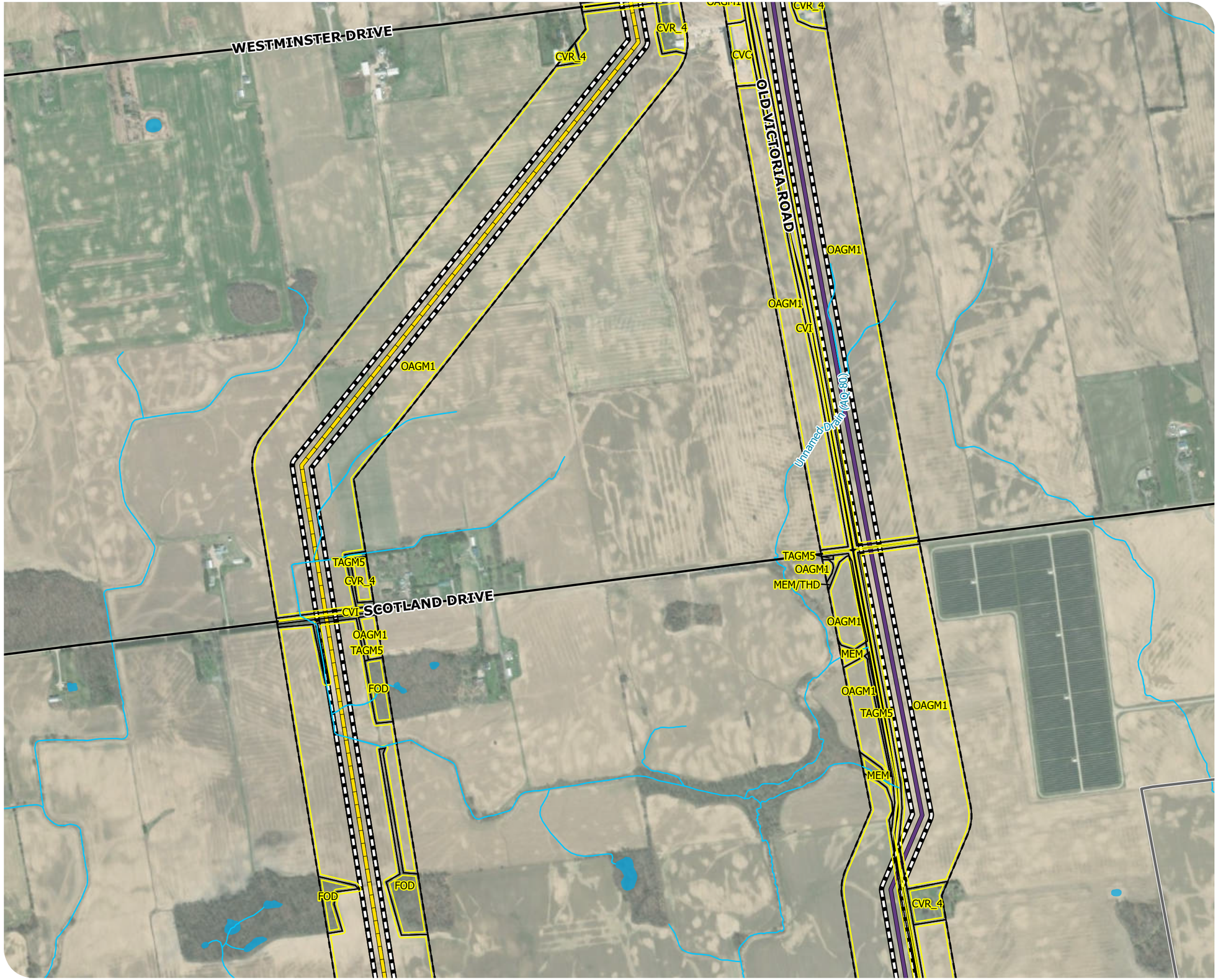

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.3

- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- Major Road
- Watercourse
- Waterbody
- Municipal Boundary

Ecological Land Classification

CVC: Commerical and Institutional

CVI: Transportation

CVR_4: Residential

FOD: Deciduous Forest

MEM: Mixed Meadow

MEM/THD: Mixed Meadow/ Deciduous Thicket Complex

OAGM1: Annual Row Crop

TAGM5: Fencerow/Hedgerow

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX

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MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

DATE: 2024-10-10

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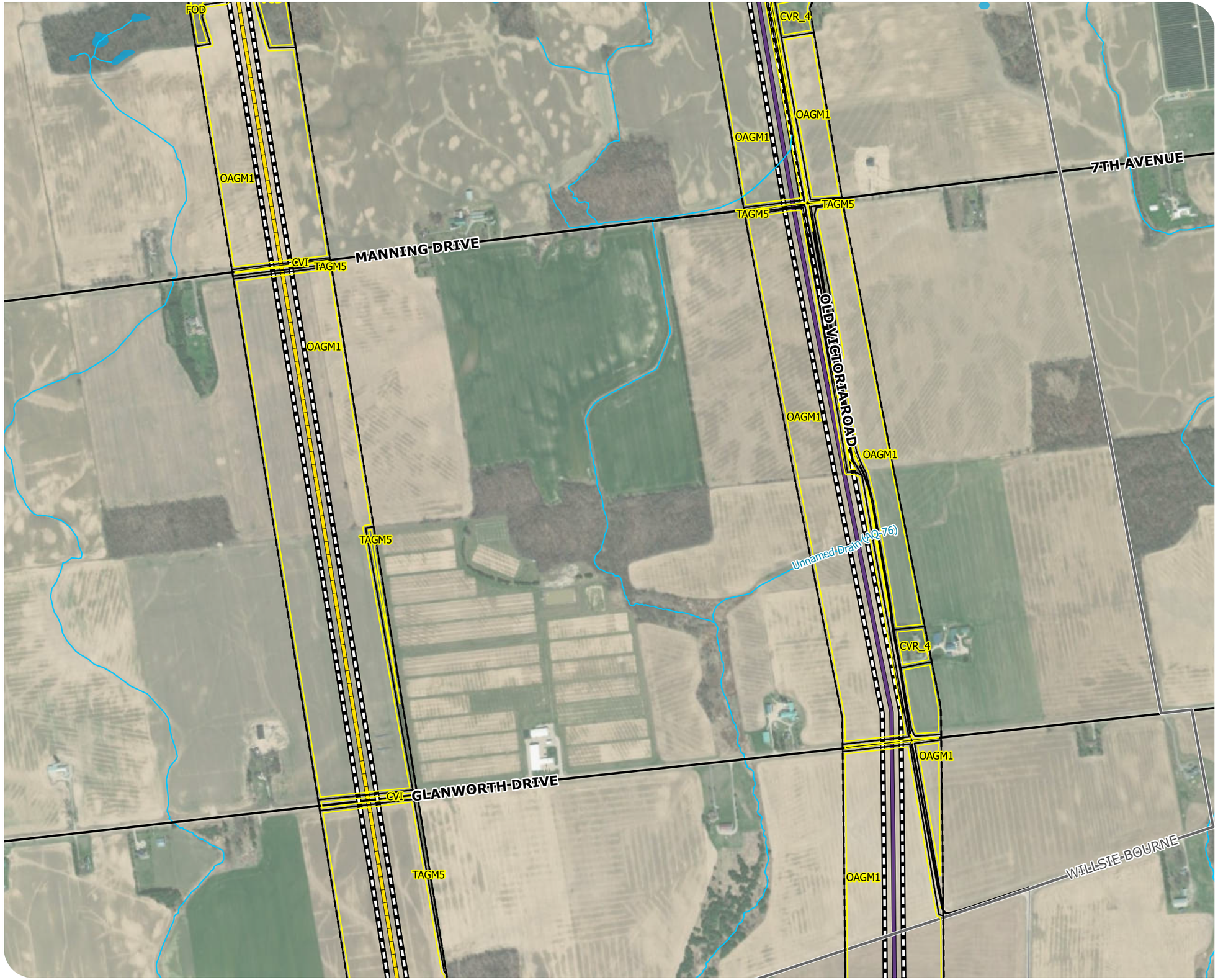


hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.4

- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- Major Road
- Minor Road
- Watercourse
- Waterbody
- Municipal Boundary

Ecological Land Classification

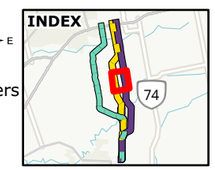
- CVI: Transportation
- CVR_4: Residential
- FOD: Deciduous Forest
- OAGM1: Annual Row Crop
- TAGM5: Fencerow/Hedgerow

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX



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DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

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MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

DATE: 2024-10-10

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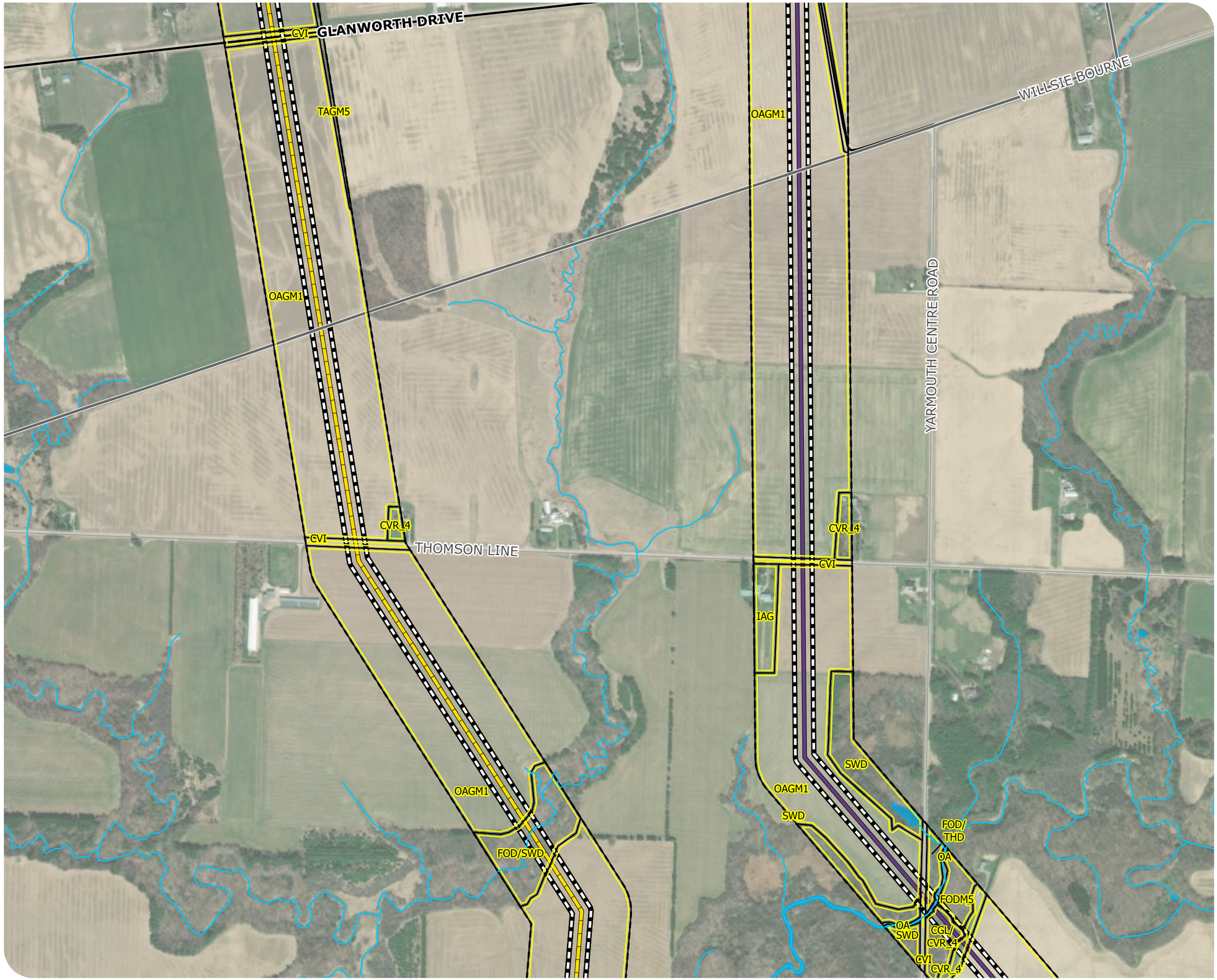

hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.5

- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- Major Road
- Minor Road
- Watercourse
- Waterbody
- Municipal Boundary

Ecological Land Classification

CGL/CVR_4: Manicured Lawn/Rural Residential

CVI: Transportation

CVR_4: Residential

FOD/SWD: Deciduous Forest/ Deciduous Swamp Complex

FOD/THD: Deciduoud Forest/ Deciduous Thicket Complex

FODM5: Dry - Fresh Sugar Maple Deciduous Forest

IAG: Agricultural Infrastructure

OA: Open Aquatic

OAGM1: Annual Row Crop

SWD: Deciduous Swamp

TAGM5: Fencerow/Hedgerow

SCALE 1:9,000

0 70 140 280 Meters

N W E S

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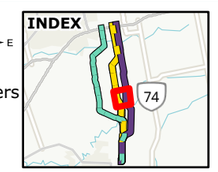

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BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

DATE: 2024-10-10

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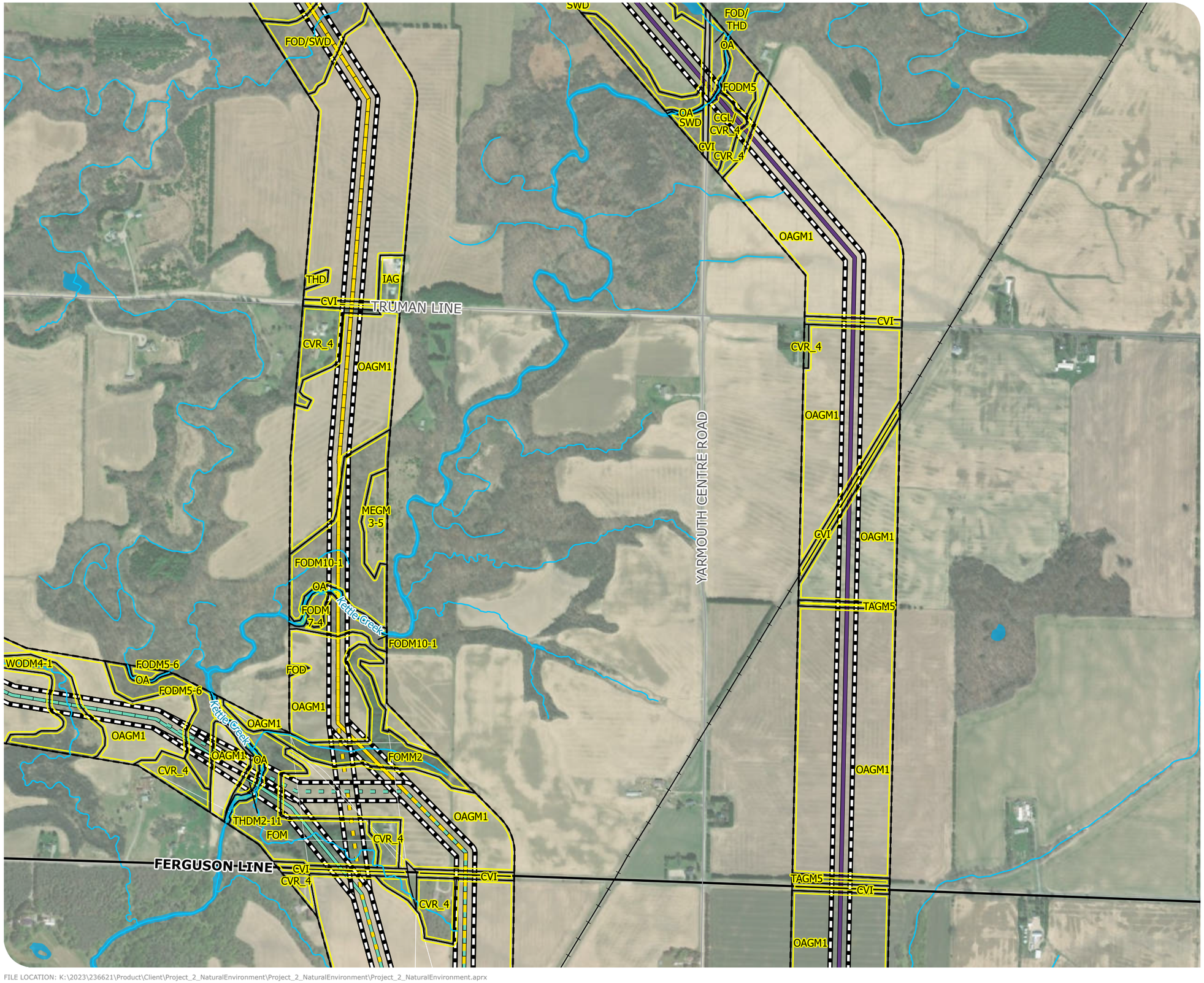


HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.6

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- Railway
- Major Road
- Minor Road
- Watercourse
- Waterbody
- Municipal Boundary

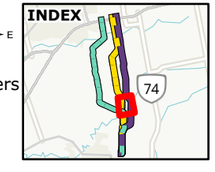
Ecological Land Classification

- CGL/CVR_4: Manicured Lawn/Rural Residential
- CVI: Transportation
- CVR_4: Residential
- FOD: Deciduous Forest
- FOD/SWD: Deciduous Forest/ Deciduous Swamp Complex
- FOD/THD: Deciduoud Forest/ Deciduous Thicket Complex
- FODM10-1: Fresh - Moist Sugar Maple/Beech Carolinian Deciduous Forest
- FODM5: Dry - Fresh Sugar Maple Deciduous Forest
- FODM5-6: Dry - Fresh Sugar Maple - Basswood Deciduous Forest
- FODM7-4: Fresh - Moist Black Walnut Lowland Deciduous Forest
- FOM: Mixed Forest
- FOMM2: Dry - Fresh White Pine - Hardwood
- IAG: Agricultural Infrastructure
- MEGM3-5: Smooth Brome Graminoid Meadow
- OA: Open Aquatic
- OAGM1: Annual Row Crop
- SWD: Deciduous Swamp
- TAGM5: Fencerow/Hedgerow
- THD: Deciduous Thicket
- THDM2-11: Hawthorn Deciduous Shrub Thicket
- WODM4-1: Hawthorn/Apple Deciduous Woodland

SCALE 1:9,000

0 70 140 280 Meters

INDEX



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DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

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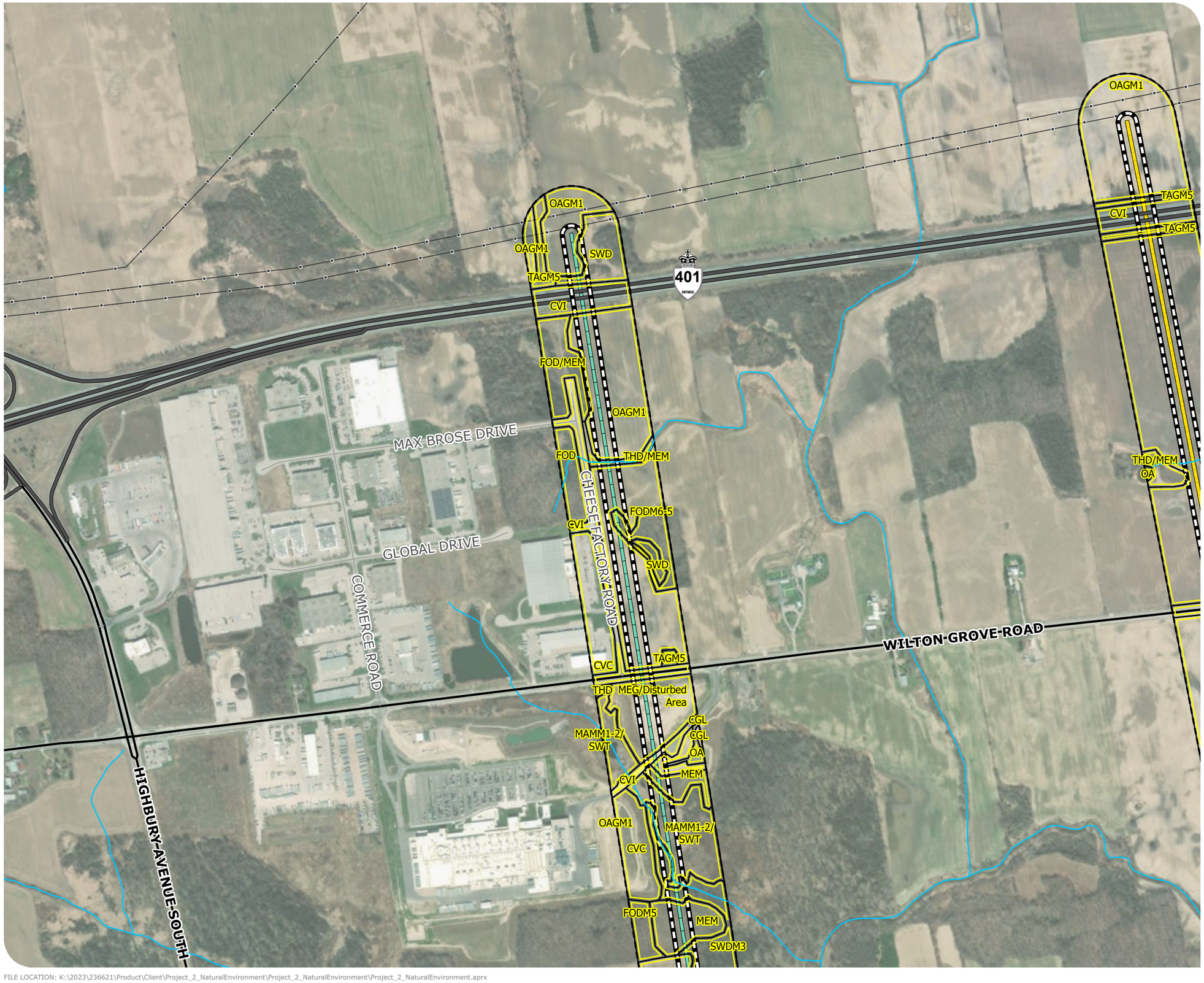

hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.7

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Right of Way
- Project Study Area (120 m buffer)
- Existing Transmission Line
- Highway
- Major Road
- Minor Road
- Watercourse
- Waterbody

Ecological Land Classification

CGL: Manicured Lawn

CVC: Commerical and Institutional

CVI: Transportation

FOD: Deciduous Forest

FOD/MEM: Deciduous Forest/ Mixed Meadow Complex

FODM5: Dry - Fresh Sugar Maple Deciduous Forest

FODM6-5: Fresh - Moist Sugar Maple - Hardwood Deciduous Forest

MAMM1-2/SWT: Cattail Graminoid Mineral Meadow Marsh/Thicket Swamp Complex

MEG/Disturbed Area: Graminoid Meadow/Disturbed Area Complex

MEM: Mixed Meadow

OA: Open Aquatic

OAGM1: Annual Row Crop

SWD: Deciduous Swamp

SWDM3: Maple Mineral Deciduous Swamp

TAGM5: Fencerow/Hedgerow

THD: Deciduous Thicket

THD/MEM: Deciduous Thicket/Mixed Meadow Complex

SCALE 1:9,000

0 70 140 280 Meters

N W E S

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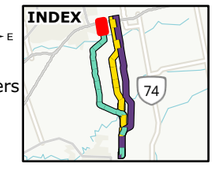

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DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

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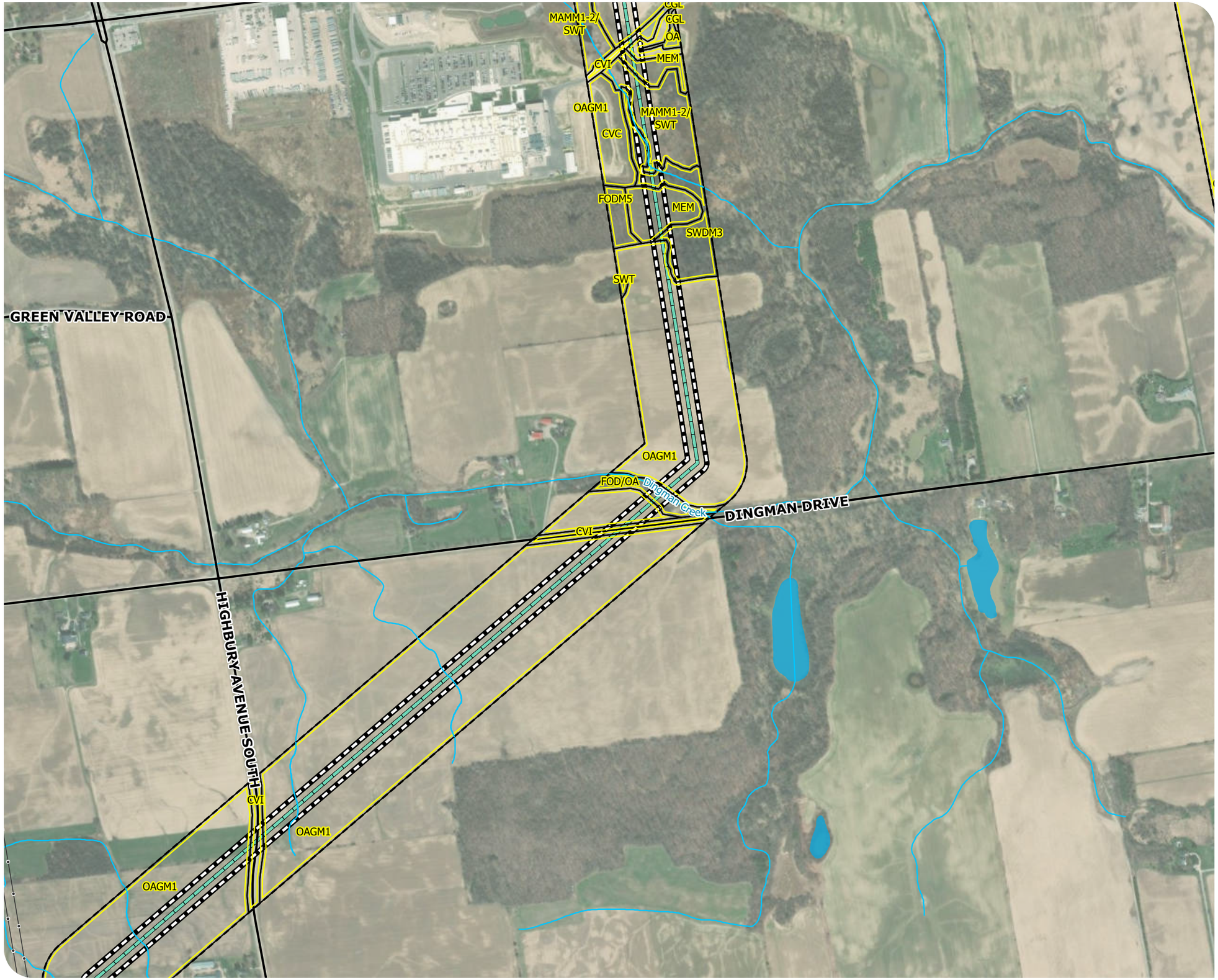


HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.8

- Alternative 1A
- Alternative 1B
- Right of Way
- Project Study Area (120 m buffer)
- Existing Transmission Line
- Major Road
- Watercourse
- Waterbody
- Ecological Land Classification

CGL: Manicured Lawn

CVC: Commerical and Institutional

CVI: Transportation

FOD/OA: Deciduous Forest/ Open Aquatic Complex

FODM5: Dry - Fresh Sugar Maple Deciduous Forest

MAMM1-2/SWT: Cattail Graminoid Mineral Meadow Marsh/Thicket Swamp Complex

MEG/Disturbed Area: Graminoid Meadow/Disturbed Area Complex

MEM: Mixed Meadow

OA: Open Aquatic

OAGM1: Annual Row Crop

SWDM3: Maple Mineral Deciduous Swamp

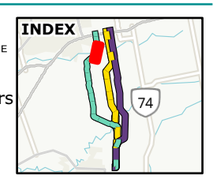
SWT: Thicket Swamp

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX



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MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

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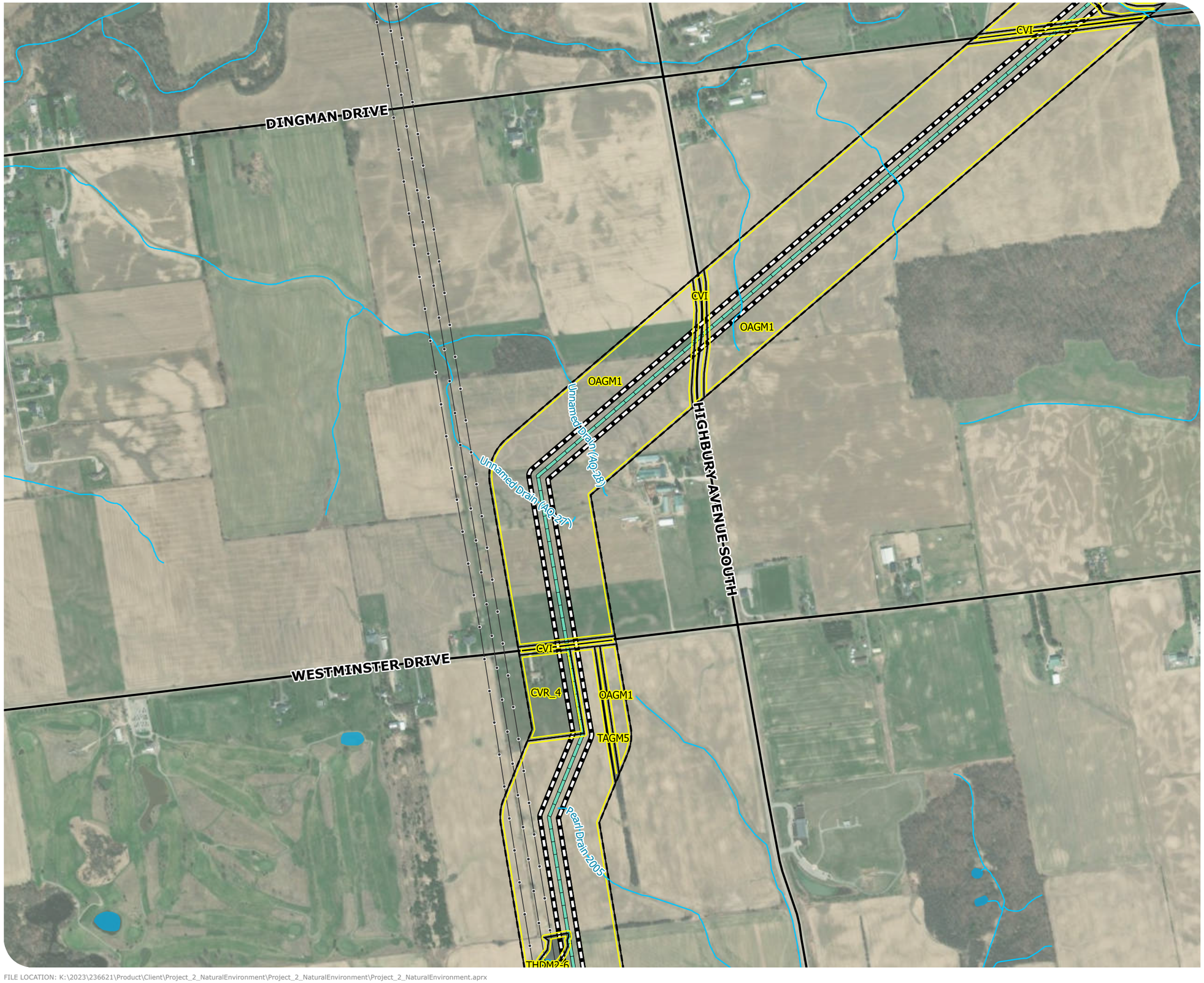


hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.9

- Alternative 1A
- Alternative 1B
- Right of Way
- Project Study Area (120 m buffer)
- Existing Transmission Line
- Major Road
- Minor Road
- Watercourse
- Waterbody

Ecological Land Classification

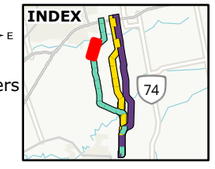
- CVI: Transportation
- CVR_4: Residential
- FOD/OA: Deciduous Forest/ Open Aquatic Complex
- OAGM1: Annual Row Crop
- TAGM5: Fencerow/Hedgerow
- THDM2-6: Buckthorn Deciduous Shrub Thicket

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX



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DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

DATE: 2024-10-10

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hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.10

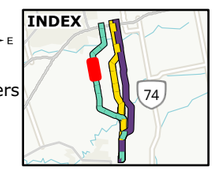
- Alternative 1A
- Alternative 1B
- Right of Way
- Project Study Area (120 m buffer)
- Existing Transmission Line
- Major Road
- Watercourse
- Waterbody
- Ecological Land Classification
  - CVI: Transportation
  - CVR_4: Residential
  - FODM5: Dry - Fresh Sugar Maple Deciduous Forest
  - OAGM1: Annual Row Crop
  - TAGM5: Fencerow/Hedgerow
  - THDM2-6: Buckthorn Deciduous Shrub Thicket

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX



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BASEMAP PROVIDED BY ESRI INC.

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MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621
STATUS: DRAFT
DATE: 2024-10-10

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment.aprx

hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.11

- Alternative 1A
- Alternative 1B
- Right of Way
- Project Study Area (120 m buffer)
- Existing Transmission Line
- Major Road
- Watercourse
- Waterbody
- Municipal Boundary

Ecological Land Classification

CVI: Transportation

CVR_4: Residential

FOD: Deciduous Forest

FODM7-3: Fresh - Moist Willow Lowland Deciduous Forest

MEM: Mixed Meadow

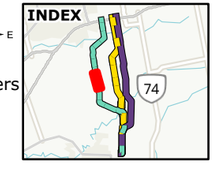
OAGM1: Annual Row Crop

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX



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BASEMAP PROVIDED BY ESRI INC.

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MAP CHECKED BY: -CP
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DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

DATE: 2024-10-10

FILE LOCATION: K:\2023\236621\Product\Client\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment\Project_2_NaturalEnvironment.aprx

hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.12

- Alternative 1A
- Alternative 1B
- Right of Way
- Project Study Area (120 m buffer)
- Existing Transmission Line
- Major Road
- Minor Road
- Watercourse
- Waterbody
- Municipal Boundary

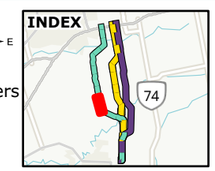
- Ecological Land Classification
  - CVI: Transportation
  - CVR_4: Residential
  - FOD: Deciduous Forest
  - FODM5-1: Dry - Fresh Sugar Maple - Beech Deciduous Forest
  - OAGM1: Annual Row Crop
  - SWD: Deciduous Swamp
  - THD: Deciduous Thicket

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX



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BASEMAP PROVIDED BY ESRI INC.

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MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

DATE: 2024-10-10

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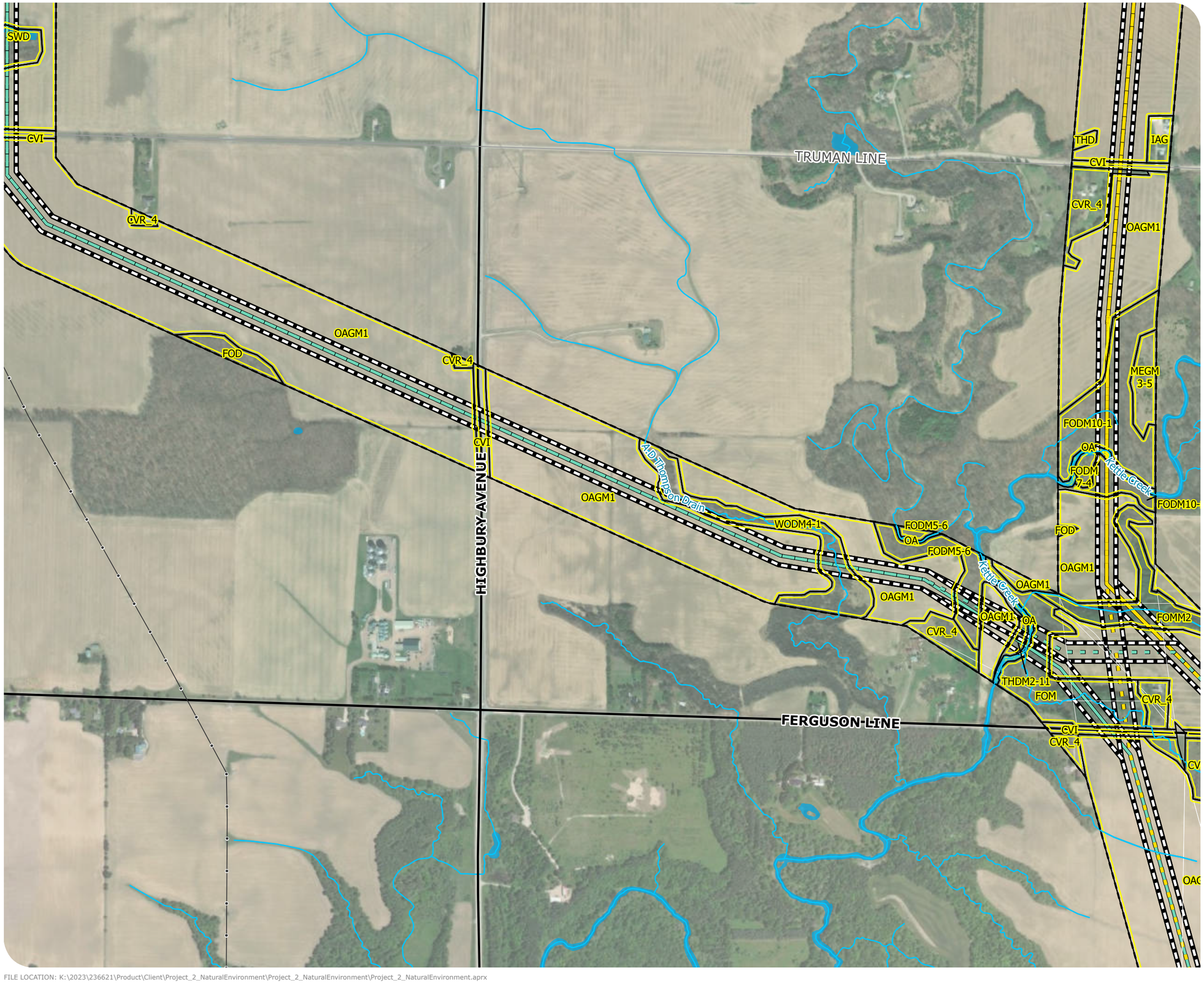


hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.13

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Right of Way
- Project Study Area (120 m buffer)
- Existing Transmission Line
- Major Road
- Minor Road
- Watercourse
- Waterbody
- Municipal Boundary

Ecological Land Classification

CVI: Transportation

CVR_4: Residential

FOD: Deciduous Forest

FODM10-1: Fresh - Moist Sugar Maple/Beech Carolinian Deciduous Forest

FODM5-6: Dry - Fresh Sugar Maple - Basswood Deciduous Forest

FODM7-4: Fresh - Moist Black Walnut Lowland Deciduous Forest

FOM: Mixed Forest

FOMM2: Dry - Fresh White Pine - Hardwood

IAG: Agricultural Infrastructure

MEGM3-5: Smooth Brome Graminoid Meadow

OA: Open Aquatic

OAGM1: Annual Row Crop

SWD: Deciduous Swamp

THD: Deciduous Thicket

THDM2-11: Hawthorn Deciduous Shrub Thicket

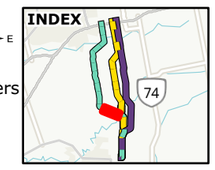
WODM4-1: Hawthorn/Apple Deciduous Woodland

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF
BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

DATE: 2024-10-10

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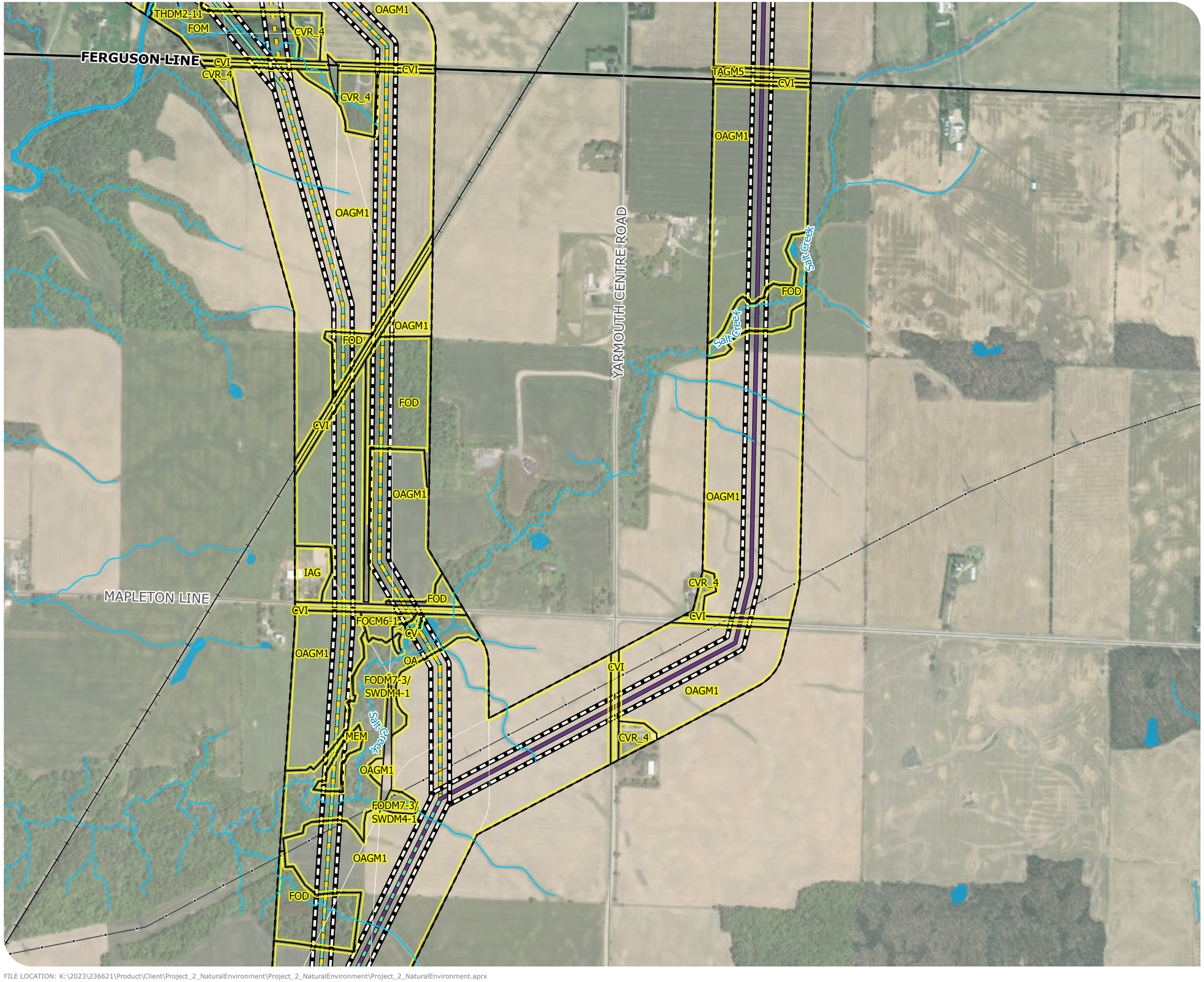


HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.14

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- Existing Transmission Line
- Railway
- Major Road
- Minor Road
- Watercourse
- Waterbody
- Municipal Boundary

Ecological Land Classification

CV: Constructed

CVI: Transportation

CVR_4: Residential

FOCM6-1: Fresh - Moist Sugar Maple - Lowland Ash Decisuous Forest

FOD: Deciduous Forest

FODM7-3/SWDM4-1: Fresh - Moist Willow Lowland Deciduous Forest/Willow Mineral Deciduous Swamp Complex

FOM: Mixed Forest

IAG: Agricultural Infrastructure

MEM: Mixed Meadow

OA: Open Aquatic

OAGM1: Annual Row Crop

TAGM5: Fencerow/Hedgerow

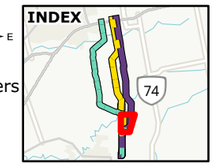
THDM2-11: Hawthorn Deciduous Shrub Thicket

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX



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BASEMAP PROVIDED BY ESRI INC.

MAP CREATED BY: -AEE
MAP CHECKED BY: -CP
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

DATE: 2024-10-10

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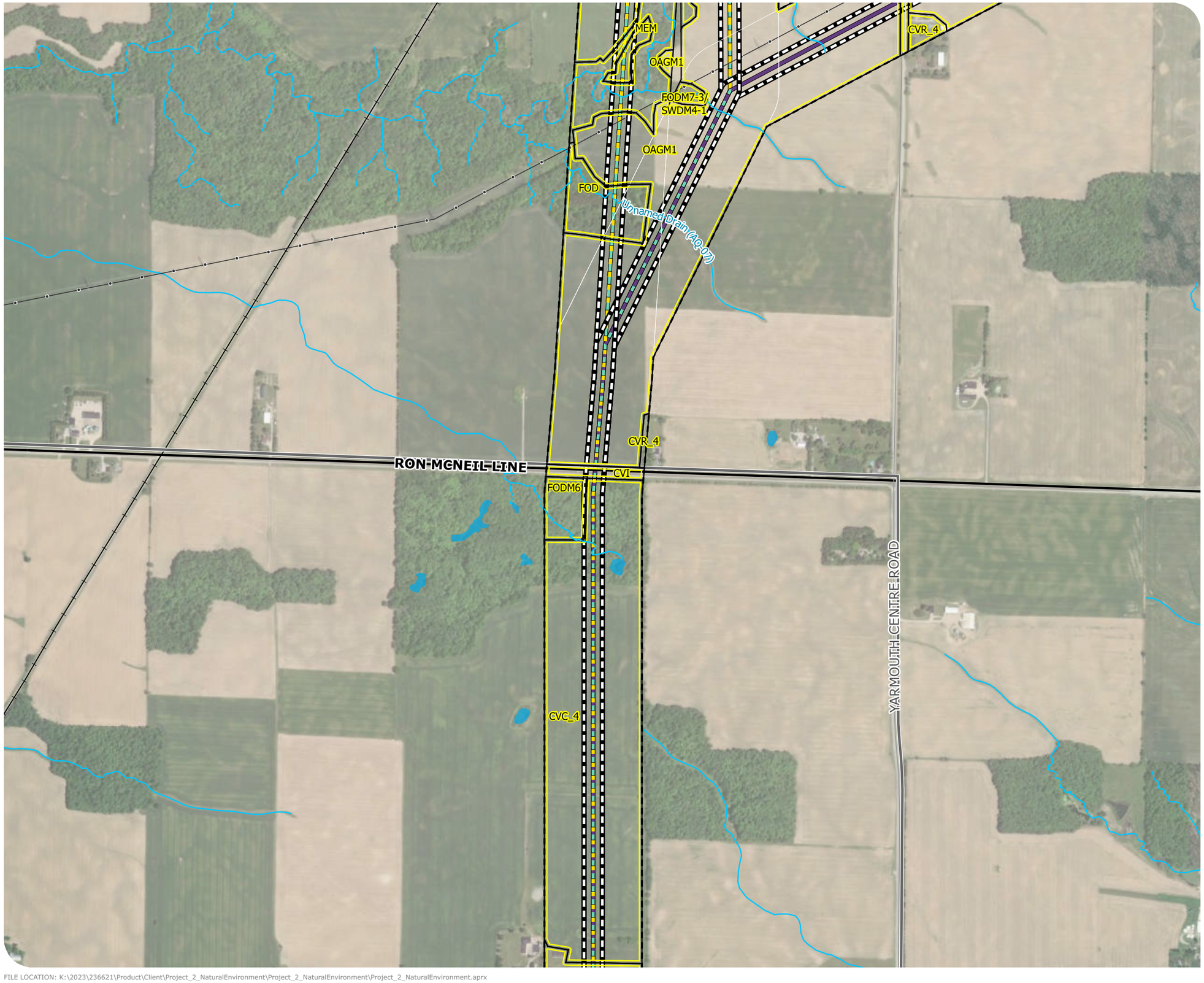


HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.15

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- Existing Transmission Line
- Railway
- Major Road
- Minor Road
- Watercourse
- Waterbody
- Municipal Boundary

Ecological Land Classification

CVC_4: Extraction (Active construction)

CVI: Transportation

CVR_4: Residential

FOD: Deciduous Forest

FODM6: Fresh - Moist Sugar Maple Deciduous Forest

FODM7-3/SWDM4-1: Fresh - Moist Willow Lowland Deciduous Forest/Willow Mineral Deciduous Swamp Complex

MEM: Mixed Meadow

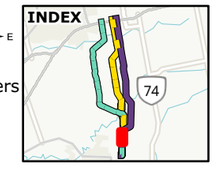
OAGM1: Annual Row Crop

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX



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MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N

DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

DATE: 2024-10-10

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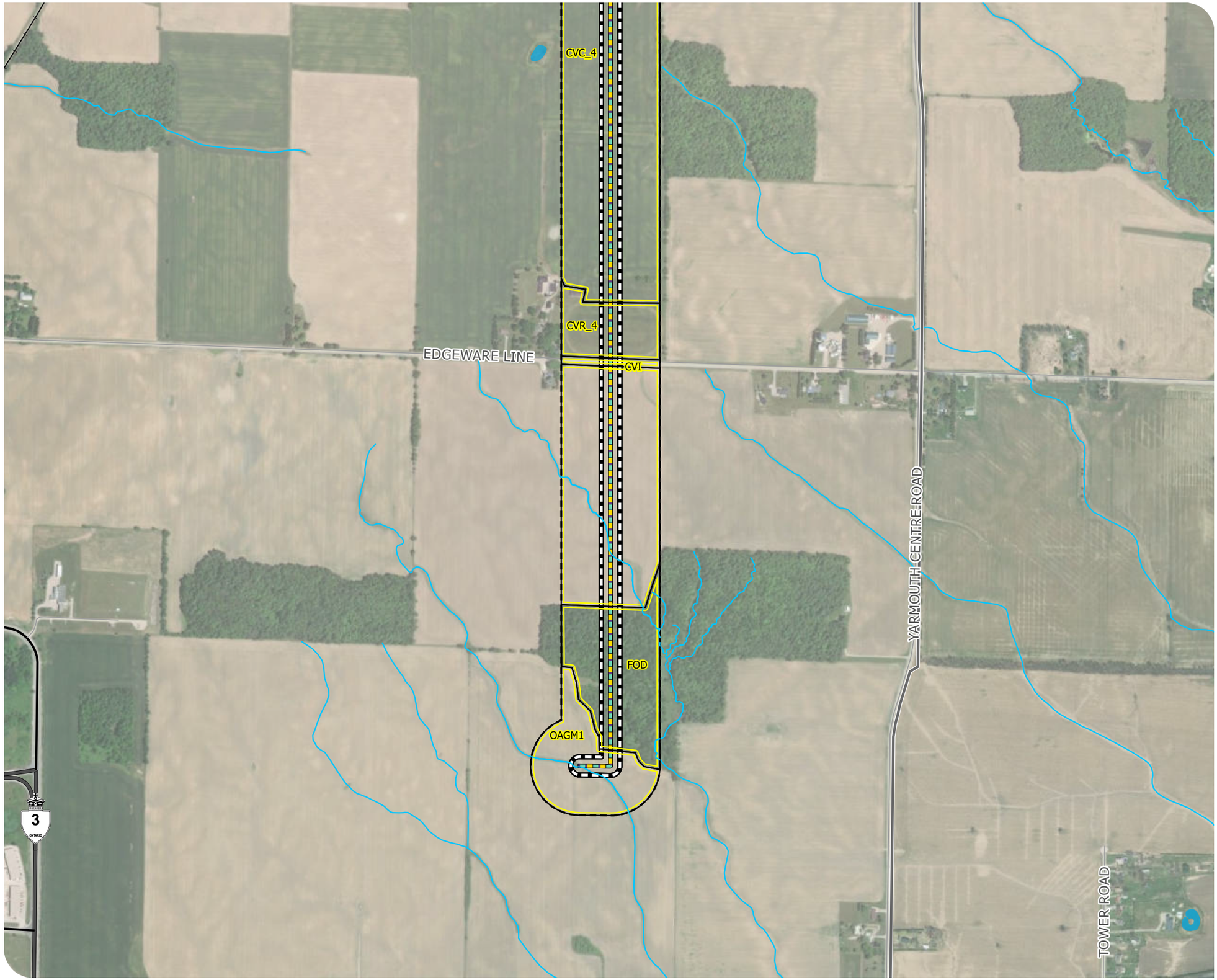


hydro one

HYDRO ONE NETWORKS INC.

ST. THOMAS LINE PROJECT

ECOLOGICAL LAND CLASSIFICATION

APPENDIX C-8.16

- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B
- Alternative 3
- Right of Way
- Project Study Area (120 m buffer)
- Railway
- Highway
- Major Road
- Minor Road
- Watercourse
- Waterbody
- Municipal Boundary

Ecological Land Classification

CVC_4: Extraction (Active construction)

CVI: Transportation

CVR_4: Residential

FOD: Deciduous Forest

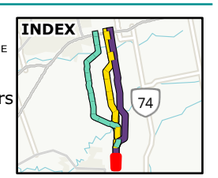
OAGM1: Annual Row Crop

SCALE 1:9,000

0 70 140 280 Meters

N W E S

INDEX



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DILLON CONSULTING

PROJECT: 23-6621

STATUS: DRAFT

DATE: 2024-10-10

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