FINAL REVISED

Stage 1 Background Study and Property Inspection
Stage 2 Property Assessment

St. Columban 1 Electrical Interconnection Line
and Electrical Interconnection Facilities
Municipality of East Huron (Geographic Townships of McKillop and Grey),
Municipality of Morris-Turnberry (Geographic Township of Turnberry), and
Township of Howick, Huron County, Ontario

FIT-F1PW818

Prepared for:

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Stage 2 Property Assessment

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Municipality of East Huron (Geographic Townships of McKillop and Grey), Municipality of Morris-Turnberry (Geographic Township of Turnberry), and Township of Howick, Huron County, Ontario

EXECUTIVE SUMMARY

Archaeological Services Inc. (ASI) was contracted by St. Columban Energy LP, Calgary to conduct a Stage 1 Background Study and Property Inspection and a Stage 2 Property Assessment for the St. Columban 1 Electrical Interconnection Line and Electrical Interconnection Facilities in the Municipality of East Huron (Geographic Township of McKillop and Grey), the Municipality of Morris-Turnberry (Geographic Township of Turnberry), and the Township of Howick, Huron County, Ontario (FIT-F1PW818). The project will entail the installation of a buried electrical interconnection line in existing municipal road right-of-way and the construction of electrical interconnection facilities at three locations. The proposed facilities will serve to connect the 18 megawats (MW) of the 33 MW St. Columban Wind Project to the electrical grid.

All work was undertaken as part of Ontario Regulation 359/09 within the Renewable Energy Approvals (REA) process under Part V.0.1 of the *Environmental Protection Energy Act*. All activities carried out during this assessment were completed in accordance with the terms of the *Ontario Heritage Act* (2005) and the Ministry of Tourism, Culture, and Sport's *Standards and Guidelines for Consultant Archaeologists* (2011).

The Stage 1 background study and property inspection determined that no archaeological sites have been registered within one kilometre of the project study area. However, a review of the physiography and local nineteenth century land use of the project area suggested that it has potential for the identification of Aboriginal and Euro-Canadian archaeological sites. A field inspection of the approximately 43 km long study corridor for the electrical interconnection line and three small study areas (each for proposed electrical interconnection facility) was conducted by ASI in September and November 2011. It confirmed that a majority of the corridor length (41.4 km of the total 43 km, or 96.3%) was situated within road rights-of-way that had been disturbed by road improvements; archaeological site potential was therefore considered to be absent. The remaining portion, totaling 1.6 km, was determined to have archaeological potential, and a Stage 2 property assessment was therefore recommended for this portion as well as for the three small study areas for the proposed electrical interconnection facilities.

The Stage 2 property assessment was conducted in November and December 2011 and was only confined to the portions of the project study area determined to have archaeological potential. Systematic test pit survey at five metre intervals was completed on small lengths of the corridor

totaling 0.315 km. The remaining portion was subjected to judgmental test pit survey which confirmed ground disturbance and the absence of archaeological potential. The three small study areas for the proposed electrical interconnection facilities, encompassing approximately 1.2 ha, were also subject to pedestrian survey. No archaeological remains were recovered.

Based on the assessment results, ASI makes the following recommendations:

1. All of the lands within the study area can be considered clear of further archaeological concern and no further archaeological assessment is required; and

2. If there is any alteration in the design of the proposed project, any new lands must be subject to a Stage 2 Property Assessment if they are to be disturbed by construction and/or staging activities.

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ARCHAEOLOGICAL SERVICES INC.
ENVIRONMENTAL ASSESSMENT DIVISION

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1.0 PROJECT CONTEXT

Archaeological Services Inc. (ASI) was contracted by St. Columban Energy LP, Calgary, to conduct a Stage 1 Background Study and Property Inspection and Stage 2 Property Assessment of the St. Columban 1 Line Routing and Electrical Interconnection Facilities in the Municipalities of Huron East (Geographic Townships of McKillop and Grey) and Morris-Turnberry (Geographic Township of Turnberry) and the Township of Howick, Huron County (Figures 1 and 2). The proposed project, which includes an approximately 43 km electrical interconnection line and three small electrical interconnection facilities, will connect 18 megawatts (MW) of the 33 megawatt St. Columban Wind Project to the Hydro One grid south of Wroxeter. The electrical interconnection line follows various municipal road rights-of-way. The three small study areas for the electrical interconnection facilities comprise portions of the east half of Lot 3, Concession 4 of McKillop Township, the north half of Lot 10, Concession 5 of McKillop Township, and the west half of Lot 31, Concession A of Howick Township.

This assessment was conducted under the project management of Deborah Pihl (MTCS R130) and the senior project management of Robert Pihl (MTCS P057), both of ASI. The project director for this assessment was Robert Pihl (PIF #P057-665-2011).

Section 1 of the Ministry of Tourism, Culture, and Sport's 2011 *Standard and Guidelines for Consultant Archaeologists* (Standards and Guidelines) discusses the objectives of a Stage 1 assessment as follows:

- To provide information about the geography, history, previous archaeological fieldwork and current land condition of the project study area;
- To evaluate in detail the archaeological potential of the project study area which can be used, if necessary, to support recommendations for Stage 2 Archaeological Assessment for all or parts of the property; and
- To recommend appropriate strategies for Stage 2 Archaeological Assessment, if necessary.

And, Section 2 defines the objectives of a Stage 2 assessment as follows:

- To document all archaeological resources on the property;
- To determine whether the property contains archaeological resources requiring further assessment; and
- To recommend appropriate Stage 3 assessment strategies for archaeological sites identified.

This report addresses these objectives in terms of the project as follows: Section 1.0 first provides the development context for the project and then discusses the results of the Stage 1 background study that was conducted to establish the archaeological and historical context for the project area; Section 2.0 describes the field methods used for the Stage 1 property inspection and for Stage 2 property assessment; Section 3.0 notes that no archaeological resources were discovered during the Stage 2 fieldwork and identifies where project documentation is located; Section 4.0 provides an analysis of the archaeological results; Section 5.0 provides recommendations for the next assessment steps; and the remaining sections contain other report information that is required by the MTCS's Standards and Guidelines, such as advice on compliance with legislation, works cited, photo-documentation and mapping.

1.1 Development Context

The current study area consists of a corridor for the electrical interconnection line and three small study areas for the proposed electrical interconnection facilities: the latter are identified as SC1, SC2 and SC1 PCC-POC to Hydro One. The electrical interconnection line is proposed to be buried within the municipal road ROW just off the grass gravel interface at the edge of municipal roads, subject to each municipality's agreement. Directional drilling will be used to install the electrical interconnection line in the hamlet of Cranbrook, at water crossings, at road crossings, and in areas of heavy vegetation. The location of the pull/junction pits is yet to be determined, but they will be sited every 200-400 m in Cranbrook, no closer than 30 m on either side of streams, and no closer than 10 m from the ditches of intersecting roads. The electrical interconnection line depth will be below the frost line at a depth of approximately 1.5 m (personal communication, Jose Menendez, Veresen, November 24, 2011).

All work has been undertaken as part of Ontario Regulation 359/09 within the Renewable Energy Approvals (REA) process under Part V.0.1 of the *Environmental Protection Energy Act*. All activities carried out during this assessment were completed in accordance with the terms of the *Ontario Heritage Act* (2005) and the Ministry of Tourism, Culture, and Sport's (MTCS) 2011 Standards and Guidelines.

Authorization to carry out the activities necessary for the completion of the Stage 1 assessment was granted to ASI by St. Columban Energy LP on September 16, 2011. After the Stage 1 work was underway, the study corridor alternatives were refined and a preferred route was selected. Proposed locations of the associated electric facilities were also identified. Authorization to carry out the Stage 2 activities was granted on September 29, 2011.

1.2 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the project study area, its environmental characteristics (including drainage, soils or surficial geology, and topography, etc.), and current land use and field conditions.

Three sources of information will be consulted to provide information about previous archaeological research: the site record forms for registered sites housed at the MTCS; published and unpublished documentary sources; and the files of ASI.

1.2.1 Previous Archaeological Research

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the Ministry of Tourism, Culture, and Sport (MTCS). This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The study area is located in Borden blocks *AjHh, AkHh, AkHg, AlHh* and *AlHg*.

According to the OASD (email communication, Robert von Bitter, MTCS Data Coordinator, September 22, 2011), no archaeological sites have been registered within 1 km of the study area. However, the area

has not been generally subjected to systematic archaeological research, and therefore, the lack of known archaeological sites should not be considered a predictor of site potential.

The southern-most portion of the present study area (to the south of Winthrop Road) coincides with a portion of the Stage 1 study area for the St. Columban Windfarm project (ASI 2009, PIF 264-076-2009). Following on the recommendations arising from the Stage 1 assessment, a Stage 2 investigation was subsequently conducted at the various proposed facility locations (ASI 2011; PIF 057-665-2011). This work included pedestrian survey at five metre intervals of the ten metre wide corridors for the access roads. Portions of the Turbine 8 access road and the Turbine 15 access road (ASI 2011: Figures 2-6 and 2-10) coincide respectively with the southwest and southeast margins of the study areas for the proposed SC2 and SC1 electrical interconnection facilities (e.g., Operations and Maintenance Buildings [see Figures 12 and 11]).

One additional archaeological assessment included lands that may be within 50 m of the present study area. A Stage 1-2 archaeological assessment was conducted of a proposed aggregate pit to the north of the junction of Johnston Line with Centre Line Road (Henry 2010). No archaeological sites were registered as a result of that assessment.

1.2.2 Geography

In addition to the known archaeological sites, the state of the natural environment is an important predictor of archaeological potential. Accordingly, a description of the physiography and soils are briefly discussed for the study area.

Section 1.3.1 of the Standards and Guidelines stipulates that primary water sources (lakes, rivers, streams, creeks, etc.), secondary water sources (intermittent streams and creeks, springs, marshes, swamps, etc.), ancient water sources (glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches, etc.), as well as accessible or inaccessible shorelines (high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.) are characteristics that indicate archaeological potential.

Water has been identified as the major determinant of site selection and the presence of potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in Ontario after the Pleistocene era, proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modeling of site location.

Other geographic characteristics that can indicate archaeological potential include: elevated topography (eskers, drumlins, large knolls, plateaus), pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground, distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings. Resource areas, including; food or medicinal plants (migratory routes, spawning areas) are also considered characteristics that indicate archaeological potential (MTCS 2011: Section 1.3.1).

The south half of the study area, including two of the proposed electrical connection facilities, is within the Stratford Till Plain physiographic region of southern Ontario (Chapman and Putnam 1984:133-135).

Imperfectly drained Perth clay loam soils have developed on the finely grained ground till that generally covers the area. Drainage within the level to gently undulating terrain is by a network of very small channelized streams and ditches that are part of the South Maitland River drainage. The study corridor also skirts a large wetland in the vicinity of the intersection of Manley Line and Blyth Road. This wetland comprises the headwaters for branches of both the Thames and Maitland Rivers. Well drained soils occur in limited locations; several low esker deposits intersect the study corridor south of Blyth Road and a small area of Huron clay loam occurs south of Newry Road (Ontario Agricultural College 1979) (see Figures 3 and 4).

The north half of the study area, including the northern electrical connection facility, includes two intergrading physiographic regions: the western extreme of the Dundalk Till Plain and the southern edge of the Teeswater Drumlin Fields. The study area portion of the Dundalk Till Plain (Chapman and Putnam 1984: 130-132) extends from Blyth Road northward roughly to Browntown Road. The low hills of the undulating terrain are largely interspersed with poorly drained lowlands. Well drained Huron loam soils have formed on the fine till of the uplands while lowland soils include poorly drained Parkhill loam, imperfectly drained Listowel loam and muck. The Middle Maitland River extends across the middle of this section of the till plain, intersecting the study area north of Cranbrook (Ontario Agricultural College 1979).

The Teeswater Drumlin field comprises the north extreme of the study area, extending northward from Browntown Road (Chapman and Putnam 1984:129-140. The drumlins are poorly defined in this area with numerous wetlands in the valleys of the undulating to rolling terrain, and few well-defined streams feeding into the Little Maitland River. The river occupies a shallow valley and it intersects the study area at Amberley Road (the Grey-Howick township line). The soils in this portion of the study area are predominately well drained Teeswater silt loam on the high ground, well drained Harriston loam on the intermediate elevations, and muck in the low areas (Ontario Agricultural College 1979). In several locations, there are aggregate extraction operations adjacent to the study area.

1.3 Historical Context

This section provides a brief summary of historic research for the study area. A review of available primary and secondary source material was undertaken to produce a contextual overview, including a general description of settlement and historic land use. The study area spans the historic Townships of McKillop and Grey and also extends into the southwest corner of Howick and along a small section of the Howick and Turnberry Township boundary (Figures 5 to 10).

For the Euro-Canadian period, the majority of early nineteenth century farmsteads (i.e., those which are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth century maps) are likely to be captured by the basic proximity to the water model outlined in Section 1.2.2 of this report since these occupations were subject to similar environmental constraints.

Section 1.3.1 of the Standards and Guidelines stipulates that areas of early Euro-Canadian settlement (pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries, are considered to have archaeological potential. Early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed on a municipal register or designated under the *Ontario Heritage Act* or a federal, provincial, or municipal historic landmark or site are also considered to have archaeological potential.

1.3.1 Township Survey and Settlement

In 1827 the British government granted the Canada Company 829,000 acres of unsurveyed land to the east of Lake Huron. One year later, an additional 100,000 acres was added to the tract to compensate for lands in the original block that were unsuitable for cultivation (Lee 2004:70). The purpose of the Canada Company was to raise funds for the colony and for the Crown. This was to be accomplished by encouraging and facilitating emigration from Britain and the settlement of Company lands. The block of land known as the Huron Tract, was almost half of the 2,000,000 acres that had been purchased from the local Native peoples in a treaty signed April 26, 1825 in Amherstberg (Coleman 1978:174 in Lee 2004: 39). The Huron District was officially separated from the London District in 1842 and opened up for settlement shortly thereafter. McKillop Township was part of the Huron Tract.

The other townships were part of the 1836 British purchase from the Chippewa First Nation inhabitants. Survey of lands known as the "Queen's Bush" was initiated in 1847 by Wilkinson. The initial survey was focused on the lots along Amberley Road, which then provided an access route to additional lots extending northward along the lakeshore. The present project study area intersects several of the lots along Amberley Road. Survey of the lands to the north and south of Amberley Road (eventually including Grey, Howick, and Turnberry Townships) was ordered in 1848 and completed within a few years thereafter (www.electricscotland.com/ history/canada/bruce/chapter2.htm). Officially opened for settlement in 1854, the first recorded settlers arrived in the early 1850s, although scattered squatters were present earlier (Township of Howick www.town.howick.on.ca).

1.3.2 Historic Map Review

The 1879 *Illustrated Atlas of the County of Huron* was reviewed to determine the potential for the presence of historical archaeological remains within the study area which extends along historic road rights of way through the margin of Huron County. The atlas appears to have been well subscribed with numerous farmsteads and features depicted. It should be noted, however, that not all features of interest were mapped systematically, given they were financed by subscription, and subscribers were given preference with regard to the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlas.

From its southern terminus near the southeast corner of McKillop Township, the study area for the electrical interconnection line briefly extends to the northwest, following the road between Concessions 4 and 5. The corridor then turns northeast, following the township line road between lots 5 and 6 (see Figures 5 and 6). By 1879, the township was well settled, and numerous buildings, most probably farmsteads, indicated along the township road. The only area which remained unsettled at that time was in the northeast corner of the township which was covered by a large wetland. The electrical interconnection line avoids much of the former wetland by jogging westward along Canada Company Road and then northward on Beechwood Line. In 1879, sections of the roads in the vicinity of the wetland remained unopened in 1879, and the wetland lots remained in the possession of the Canada Company.

The study area traverses the length of Grey Township, for the most part following McNabb Line (between Lots 15 and 16, four blocks west of the eastern edge of the township) (Figures 7 and 8). At the Browntown Road (between Concession 3 and 4), the study corridor jogs westward one block and then resumes its northeastward trend on Johnston Line (5 blocks west of the township limit). The 1879 township mapping indicates numerous farmsteads along the route as well as two school houses and a

church. The village of Cranbrook-Tannersville is situated at the Cranbrook Road intersection, on the south side of the Middle branch of the Maitland River. North of Cranbrook, the Wellington Grey & Bruce Railway extends across Concession IX; no associated structures are indicated in the vicinity of the study area. In 1879, all of the study area roads were open with the exception of the northernmost section of Johnston Line through Concession 1.

At the boundary road between Grey and Howick Townships (Amberley Road), the study corridor continues northeast on Johnston Line across the Little Maitland River (Figure 9). The route turns northwest on Centre Line Road (along the north edge of Concession C) and then northward on McDonald Line which forms the boundary between Howick and Turnberry Townships (Figures 9 and 10). The study corridor ends at the SC1 PCC-POC to Hydro 1 facility, located in the west half of Lot 31, Concession A of Howick Township. Both township atlas maps indicate that the area was well settled with numerous farmsteads along the route.

The study corridor for the electrical interconnection line intersects one town – the rural village of Cranbrook. The 1879 atlas mapping indicates the Cranbrook-Tannerville PO as a hamlet on the south side of what is now Cranbrook Road, extending for one lot width on either side of McNabb Line. The town plot had been laid out across five lots on the northwest corner of the intersection but these lands were at that time apparently unoccupied. The northeast corner of the intersection was owned by John Cameron, and the only structure indicated coincides with the existing historic Cameron House, built of limestone from the nearby riverbed (see project report on Built Heritage). According to the present owner, John Cameron constructed the grand house in advance of the anticipated railway boom. However, in 1874 the Wellington Grey and Bruce Railway was constructed - one concession to the north. Cameron sold shortly thereafter, and the town has grown little since that time. In 1907, Canadian Pacific constructed a rail line a few concession south of Cranbrook, along the north side of Blyth Road. The Wellington Grey and Bruce rail line was abandoned in 1991 and the Canadian Pacific line in 1988 (Andrea 1997: 128-135).

1.4 Cemeteries and Landmarks

There are no cemeteries in the immediate vicinity of the project study area. The nearest is the cemetery 50 m to the north behind the Knox Presbyterian Church in Cranbrook (Plate 57).

The only designated landmark in the study area is Cameron House (Plate 58), situated on the east side of McNabb Line in the hamlet of Cranbrook (84354 McNabb) (Stantec 2011). To avoid possible impact, the directionally bored electrical interconnection line will not be situated on the southeast side of McNabb Line within 30 on either side of the structure (Shawna Peddle, Senior Project Manager, Stantec, personal communication to D. Pihl, 10 November 2011)

2.0 FIELD METHODS

The three small study areas for the electrical interconnection facilities are all situated adjacent to the road ROW in active agricultural fields. An ample area of 46 x 92 m (150 x 300 feet) was designated as the study area for each of the two southerly proposed electrical interconnection facilities. In both cases, previously assessed access roads comprise a portion of the study area (ASI 2011) (Figures 11-12). For the electrical interconnection facility at the north end of the electrical interconnection line, an ample area 61 x 61 m was designated as the study area (Figure 13). Together the three small study areas total 1.2 ha.

The study corridor for the electrical interconnection line extends approximately 43 km between the point of connection at the St. Columban 1 Windfarm, north of Dublin, and the location for connection to the Hydro One network near the intersection of Gough Road and McDonald Line, south of Wroxeter. The electrical interconnection line is proposed to be buried within the municipal ROW, just off the grass gravel interface at the edge of municipal roads, subject to each municipality's agreement.

The application of various field methods is documented in Figures 11-28 and in the plates of Section 9.

2.1 Stage 1 Property Inspection

A property inspection was conducted by Deborah Pihl (R130) of ASI on September 22, and November 16, 2011 in order to gain first-hand knowledge of the geography, topography, and current conditions of the study area. In addition, the archaeological potential of the study area was evaluated and mapped. A property inspection is a visual inspection only and does not include excavation or collection of archaeological resources. The property inspection was conducted by examining the pertinent road rights-of-way and by viewing from the adjacent roadway, in accordance with the MTCS's Standards and Guidelines, Section 1.2.

The study corridor for the electrical interconnection line and the study areas for three electrical interconnection facilities were spot checked during optimal weather conditions which permitted good visibility of land features. These features were documented as were other features that will affect assessment strategies and the removal of potential for sites.

2.2 Stage 2 Pedestrian Survey

The Stage 2 pedestrian survey was conducted on November 16 and December 1, 2011, under the direction of Deborah Pihl (R130), ASI, in order to inventory, identify and describe any archaeological resources extant in the study area. The Stage 2 pedestrian survey was conducted on lands with open ground conditions that had been determined to have archaeological potential, and these were assessed by pedestrian survey in accordance with Standards and Guidelines, section 2.1.1, Standards 1-9. The weather conditions were appropriate for the completion of field work.

The three study areas for the electrical interconnection facilities are within agricultural fields (Figures 11-13). The survey areas were ploughed deep enough to provided total topsoil exposure, but not deeper than previous ploughing. Pedestrian survey was only conducted on lands with acceptable survey conditions, e.g., ground surface visibility of 90%, and after thorough weathering. All three survey areas were assessed by pedestrian survey at 5 m intervals, with the exception of one corner of the north site (SC1 PCC-POC to Hydro One) where there was no potential for sites due to the wet ground conditions (Plate 3).

2.3 Stage 2 Test Pit Survey

According to the Standards and Guidelines, any undisturbed areas requiring test pit survey within 300 m of any feature of archaeological potential must be subject to systematic assessment at 5 m intervals (MTCS 2011). For this Stage 2 assessment, all areas exhibiting archaeological potential that are situated

on lands that have closed surface visibility were subject to test pit survey at 5 m intervals. The assessment was conducted in accordance with Standards and Guidelines, section 2.1.2, Standards 1-9.

Test pit survey involves the excavation of test pits at 30 cm in diameter to sterile subsoil and the screening of all test pit fills through 6 mm mesh to facilitate artifact recovery. Afterwards, test pits are backfilled and their locations recorded on field maps. If archaeological resources are uncovered, test pit intervals are intensified to a maximum of 2.5 m around the positive test pits to define site boundaries. Any factors that precluded the excavation of test pits (e.g. excessive slope, drainage, exposed bedrock, previous disturbance) are noted, and the areas are mapped and photographed. Where necessary, areas of disturbance are confirmed by the excavation of test pits at a judgmental (10 m) interval.

The study area for the electrical interconnection line is entirely within existing municipal road ROW (Figures 14-28). It comprises narrow, vegetation covered strips on either side of the gravel or paved roadbed. The one to two metre wide strips include the area just off the grass gravel interface at the edge of municipal roads. Test pit survey was used to assess portions of the study corridor where there might be potential for sites - in other words, where disturbance from road improvement activities (i.e., elevated roadbed, ditch excavation, and road cuts) was not identifiable based on the contours of the ROW ground surface.

3.0 RECORD OF FINDS

No archaeological resources were recovered during the course of the Stage 2 assessment.

The documentation and materials related to this project will be curated by Archaeological Services Inc. until such a time that arrangements for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner(s), the MTCS, and any other legitimate interest groups.

Document/Material	Location	Comments
Written Field Notes, Annotated Field Maps, GPS Logs, etc.	Archaeological Services Inc., 528 Bathurst Street, Toronto, ON M5S 2P9	Field notes hard copy, GPS data (digital)
Field Photography (Digital)	Archaeological Services Inc., 528 Bathurst Street, Toronto, ON M5S 2P9	Stored on ASI network servers and/or CD-ROM
Research/Analysis/Reporting Materials (Various Formats)	Archaeological Services Inc., 528 Bathurst Street, Toronto, ON M5S 2P9	Hard copy and/or digital files stored on ASI network servers and/or CD-ROM
Artifacts	n/a	n/a

4.0 ANALYSIS AND CONCLUSIONS

The results of the assessments of the study corridor and three small study areas are mapped in Section 8.0: Figures 11-28 and photo-documented in Section 9.0: Plates 1-108.

The Stage 1 background study determined that no archaeological sites have been registered within one kilometre of the project study area. A review of the geographic and historic context of the study area suggested that the area has potential for the identification of Aboriginal and Euro-Canadian

archaeological resources. A field inspection of the study area confirmed the presence of features associated with the potential for archaeological sites.

MTCS's Standards and Guidelines, Section 1.3.1 provides a list of features or characteristics that can be used to indicate archaeological potential. Table 1 lists those that were identified in the background study and property inspection completed for the project study area.

Table 1: Features of Archaeological Potential

Site Potential Feature or Characteristic	Identified in Study Area
Previously identified archaeological site (within immediate vicinity of project study area)	n/a
Water sources (primary or secondary water sources, features indicating past water sources, accessible/inaccessible shoreline)	--the Maitland River Main and Little branches and tributaries --swamps/ wetlands
Elevated topography (e.g., eskers, drumlins, large knolls, plateaux)	--several eskers and ridges
Pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground	--on low eskers and ridges
Distinctive land formations suitable for special or spiritual places (e.g., waterfalls, rock outcrops, caverns, mounds and promontories)	n/a
Resource areas for food / medicinal plants, scarce raw materials, early Euro-Canadian industry)	n/a
Areas of early Euro-Canadian settlement (including military or pioneer settlement, early wharf or dock complexes, pioneer churches or cemeteries)	--remnant 19th century farmsteads, schoolhouses, and churches
Early historical transportation routes (e.g., trails, passes, roads, railways, portage routes)	--almost all roads are indicated as open roads on 1879 Belden atlas map
Property listed on a municipal register / designated under *Ontario Heritage Act* or historic landmark	n/a
Property identified by local histories / informant	--Cameron House in Cranbrook (Stantec 2011)

During the Stage 1 property inspection, a number of corridor sections were visibly identifiable as disturbed due to road construction and improvement activities that have resulted in extensive and deep land alterations that have severely damaged the integrity of any potential archaeological resources. There is no potential for archaeological sites in the following sections of the electrical interconnection line study corridor:

- Bridge Road (SC 1 PCC-POP to Hydro One facility to Manley Line) (Figure 14);

- Canada Company Road (Manley Line to Beechwood Line) (Figures 17-18);
- Beechwood Line (Canada Company Road to Blyth Road) (Figures 18-19);
- Blyth Road (Beechwood Line to McNabb Line) (Figure 19);
- McNabb Line (Blyth Road to St. Michaels Road) (Figures 19-20);
- McNabb Line (Fischer Line to Newry) (Figure 22);
- Browntown Road (McNabb Line to Johnston Line) (Figure 24-25);
- Johnston Line (Amberley Road to Centre Line Road) (Figure 26); and
- McDonald Line (Centre Line Road to Operations and Maintenance Building) (Figures 27-28).

No additional archaeological assessment is required in these sections of the electrical interconnection line study corridor.

4.1 Stage 2 Pedestrian Survey - study areas for three electrical interconnection facilities

Three small study areas, totalling 1.2 ha, for the proposed electrical interconnection facility sites were assessed by pedestrian survey under suitable survey conditions. Field results are indicated in Figures 11-13, and photo-documented in Section 9, Plates 1-4. One corner of the north survey area was determined to be wet with no potential for sites (Figure 13; Plate 3). For the proposed electrical interconnection facility sites, 96% of the total area was pedestrian surveyed at 5 m intervals, and 4% was not surveyed since it was wet with no potential for sites. No archaeological resources were recovered.

4.2 Stage 2 Test Pit Survey – Study corridor for electrical interconnection facilities

In the portions of the remaining sections of the electrical interconnection line study corridor where there was potential for sites (i.e., where road improvement disturbance was not discernable on the ground surface), test pit survey was conducted. Most of the locations without visible disturbance were along less improved roadway, on topographic rises where roadbed elevation and ditching appeared minimal. A judgmental 10 m interval was used to confirm ground disturbance and the absence of archaeological potential. Disturbed soil profiles were characterized by road gravel overlaying subsoil, or mottled fill overlaying gravel and subsoil. The locations of disturbed soils confirmed by judgmental test pitting are indicated in Figures 15-17, 21-25, and 27.

Undisturbed soil profiles were identified in a few scattered locations along the electrical interconnection line study corridor. Topsoil occurrences were often as isolated or a thin layer between gravel and subsoil. These locations were defined by excavating test pits at 5 m intervals. The locations of 5 m interval test pitting and undisturbed soils are indicated in Figures 21, 23, 24, 26, and 27. No archaeological resources were recovered.

Of the approximately 43 km of electrical interconnection line study corridor, 98% of the narrow corridor (both sides of the roadway) was identified as having been previously disturbed by road improvement and considered to have no potential. The remaining 1,590 m (1.8%) was assessed by excavating test pits. Test pit assessment at 10 m intervals determined that 1,275 m (1.5%) of narrow study corridor exhibited

disturbed soil profiles. The remaining 315 m (0.3 %) was assessed by excavating test pits at 5 m intervals. No archaeological resources were recovered.

5.0 RECOMMENDATIONS

Based on the results from the Stage 1 background study and property inspection and the Stage 2 property assessment, ASI makes the following recommendations:

1. All of the lands within the study area can be considered clear of further archaeological concern and no further archaeological assessment is required; and

2. If there is any alteration in the design of the proposed project, any new lands must be subject to a Stage 2 Property Assessment if they are to be disturbed by construction and/or staging activities.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

ASI also advises compliance with the following legislation:

- This report is submitted to the Minister of Tourism, Culture, and Sport as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, RSO 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 field work and report recommendations ensure the conservation, preservation and protection 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 Ministry of Tourism, Culture, and Sport, 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 field work 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 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 sec. 48 (1) of the Ontario Heritage Act.

- The Cemeteries Act, R.S.O 1990 c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002. c.33 (when proclaimed in force) require that any person discovering human remains must immediately notify the police or coroner and the Registrar of Cemeteries, Ministry of Consumer Services.

7.0 WORKS CITED

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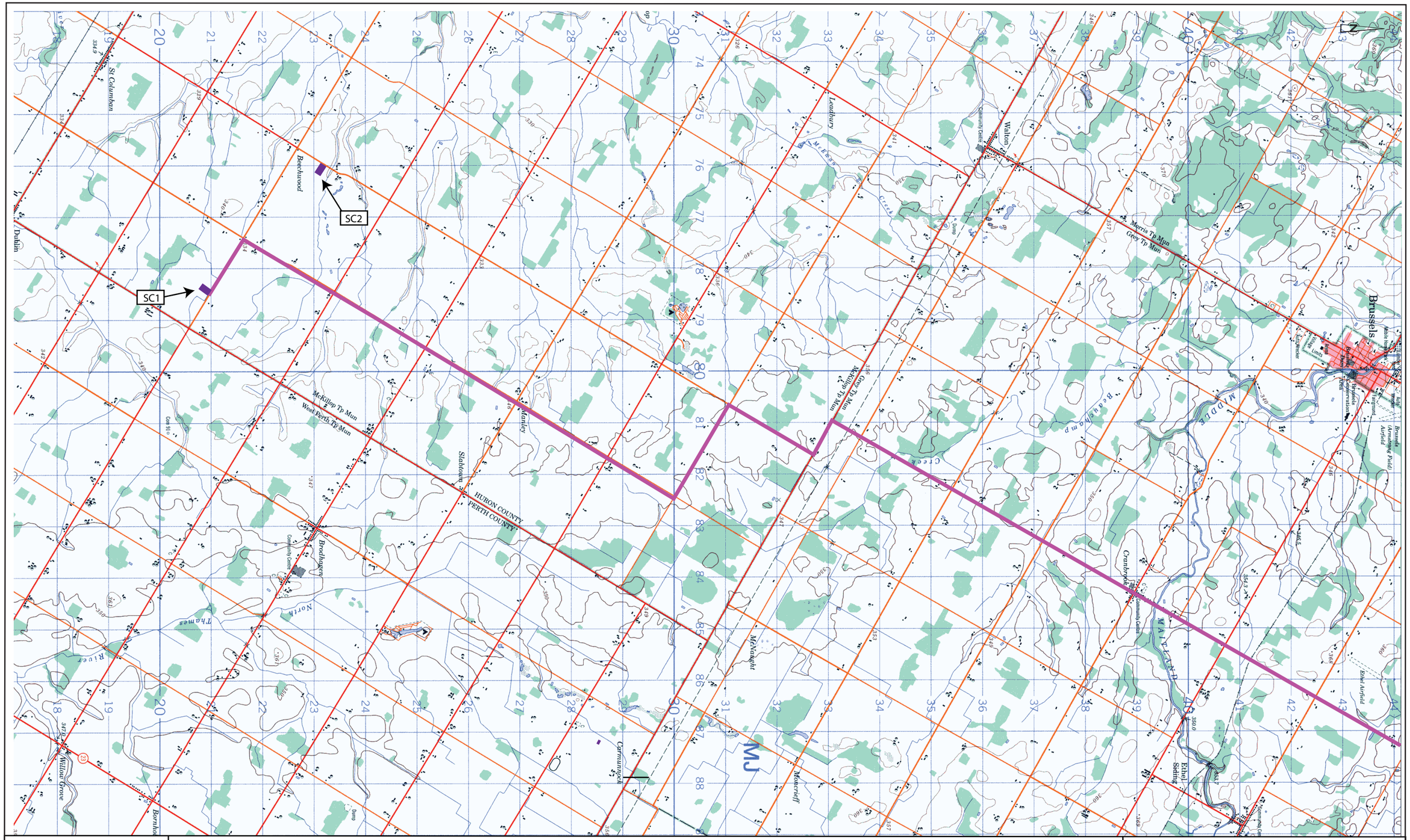
www.town.howick.on.ca).

8.0 MAPS



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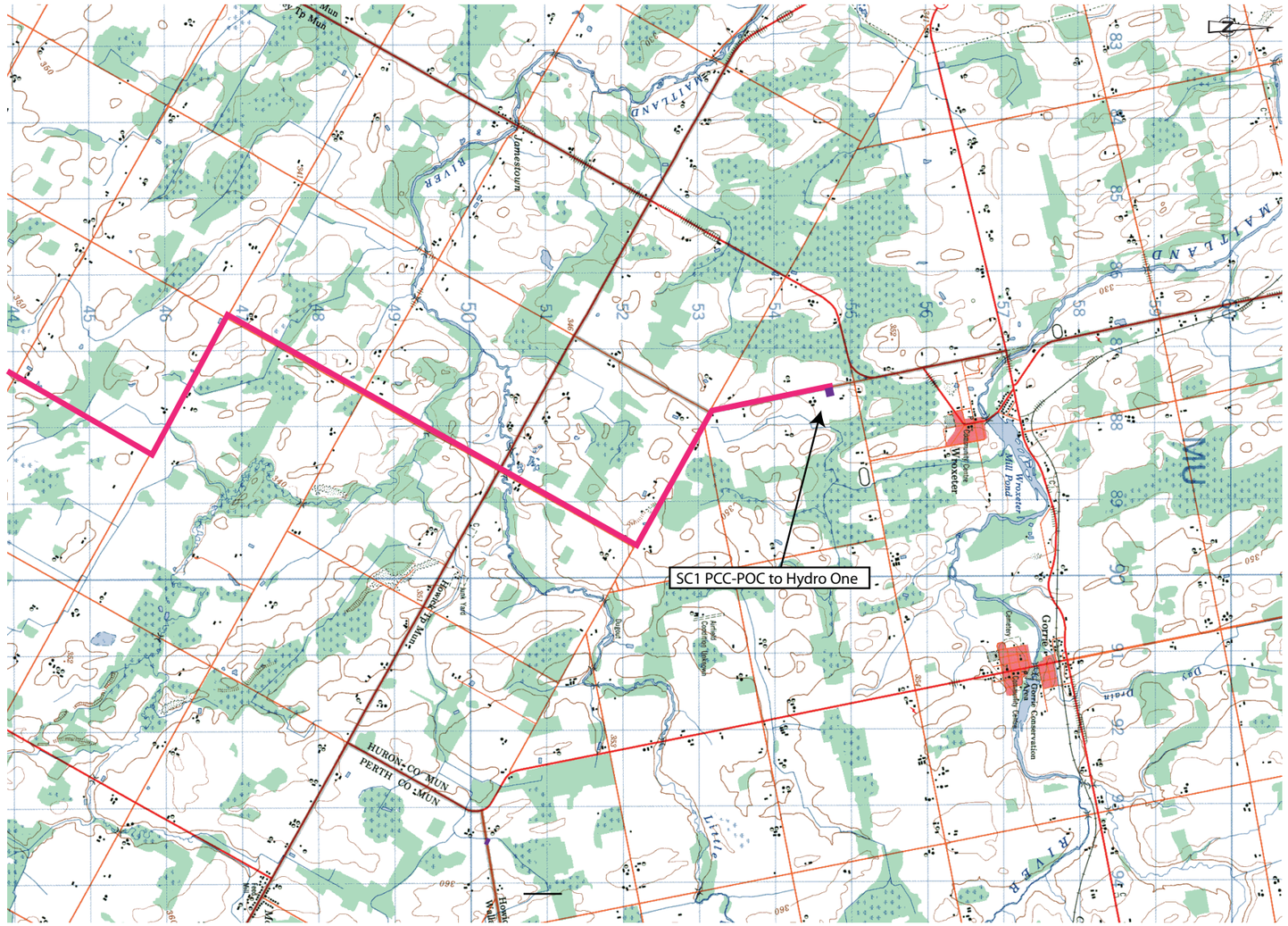
LEGEND
Study area line
Study area Operations and Maintenance Building

SCALE 0 5 km

BASE:
Map Title - NTS Sheet 40 P/11 Seaforth
Map Producer - Natural Resources Canada
Date - 1999, Edition 6

ASI PROJECT NO.: 11EA-232
DATE: 20SEP11
DRAWN BY: D. Pihl
FILE: 11EA-232 FIG1

Figure 1: Location of the St. Columban 1 Line Routing project - south portion of study area



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LEGEND

Study area line
Study area SC1 PCC-POC to Hydro One

0 SCALE 5 km

BASE:
Map Title - NTS Sheet 45 P/14 Wingham
Map Producer - Natural Resources Canada
Date - 1986, Edition 4

ASI PROJECT NO.: 11EA-232
DATE:
DRAWN BY:
FILE: 11EA-232 FIG1

Figure 2: Location of the St. Columban 1 Line Routing project - north portion of study area

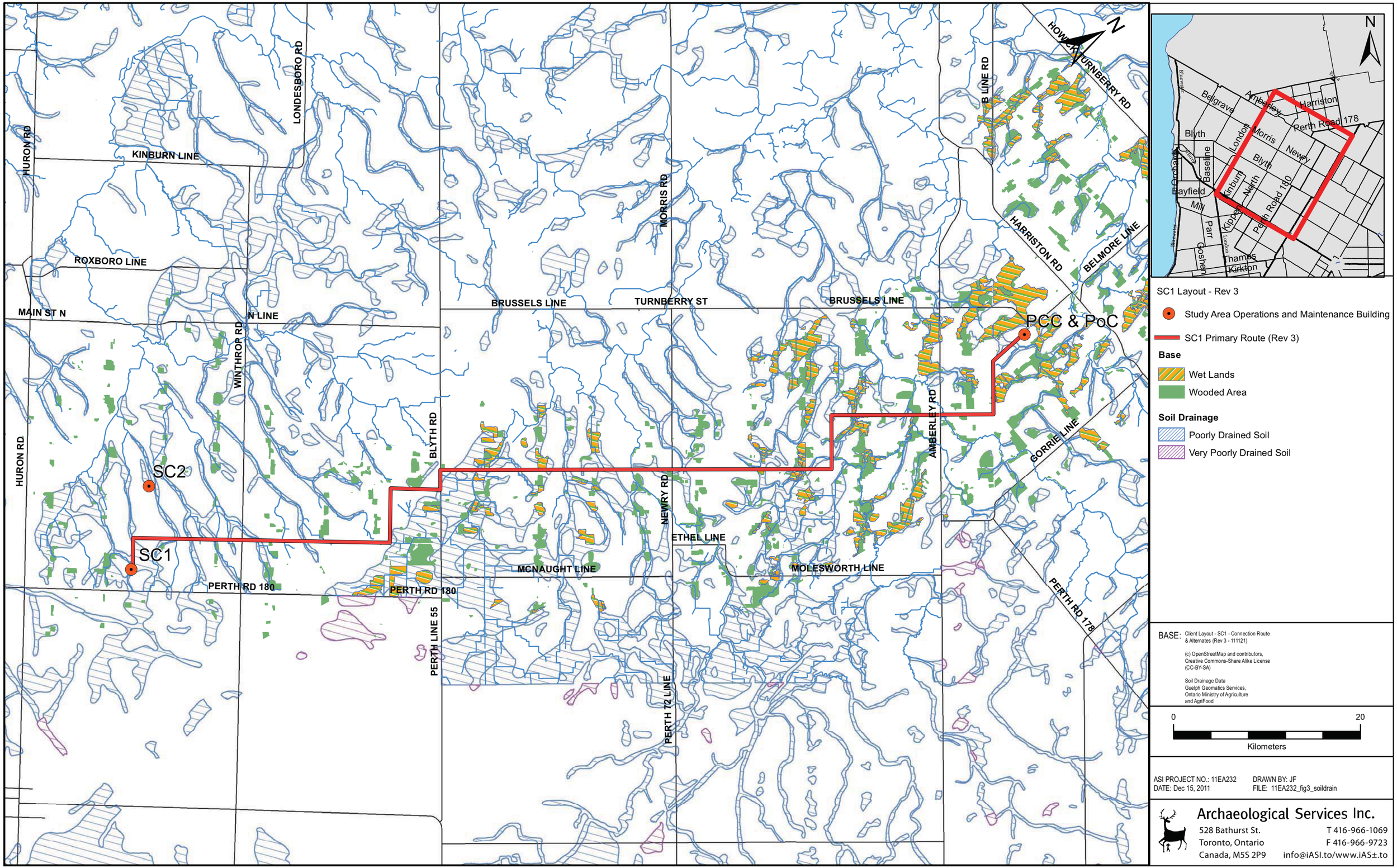


Figure 3: St Columban 1 Line Routing Project – Soil Drainage

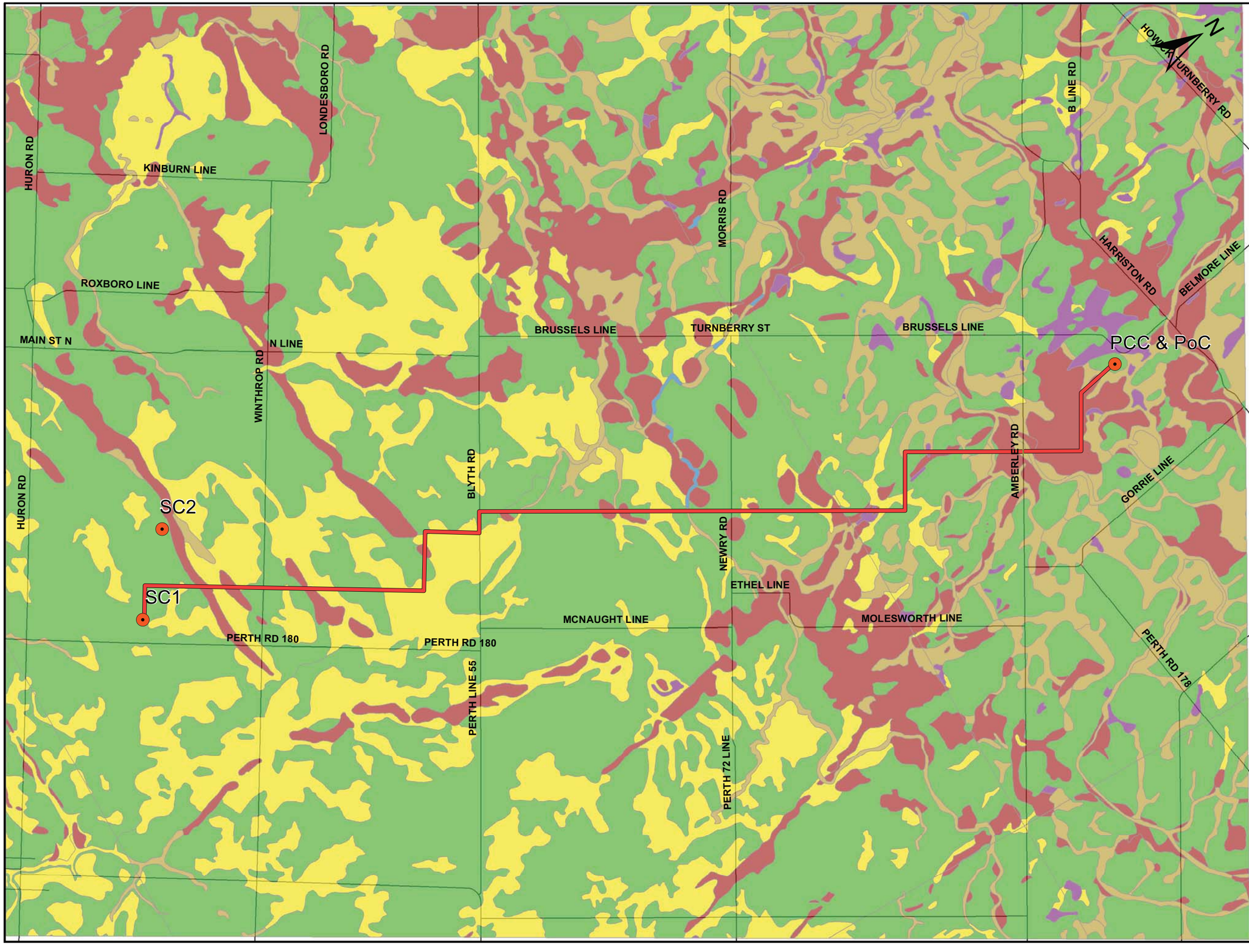


Figure 4: St Columban 1 Line Routing Project – Surficial Geology

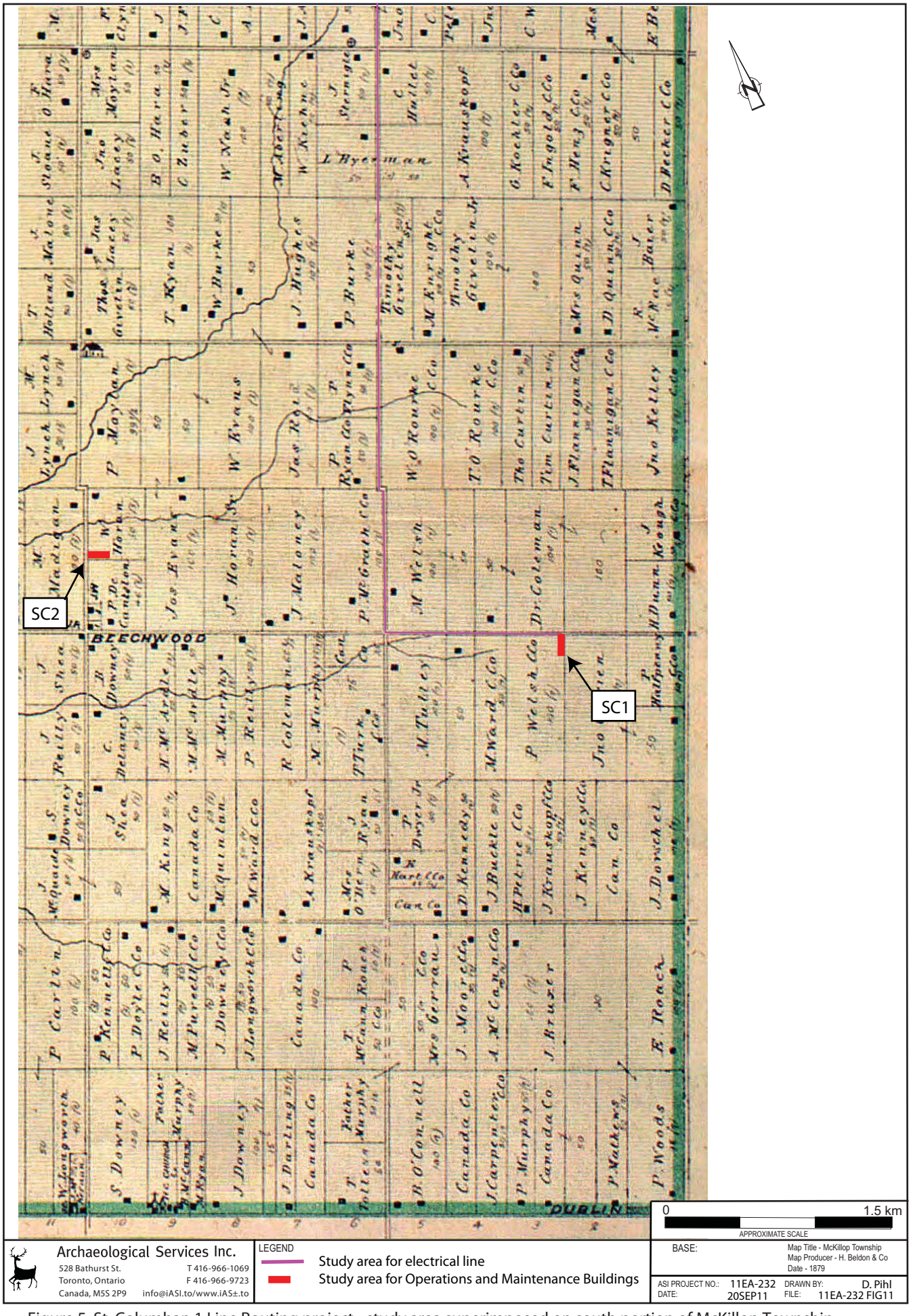
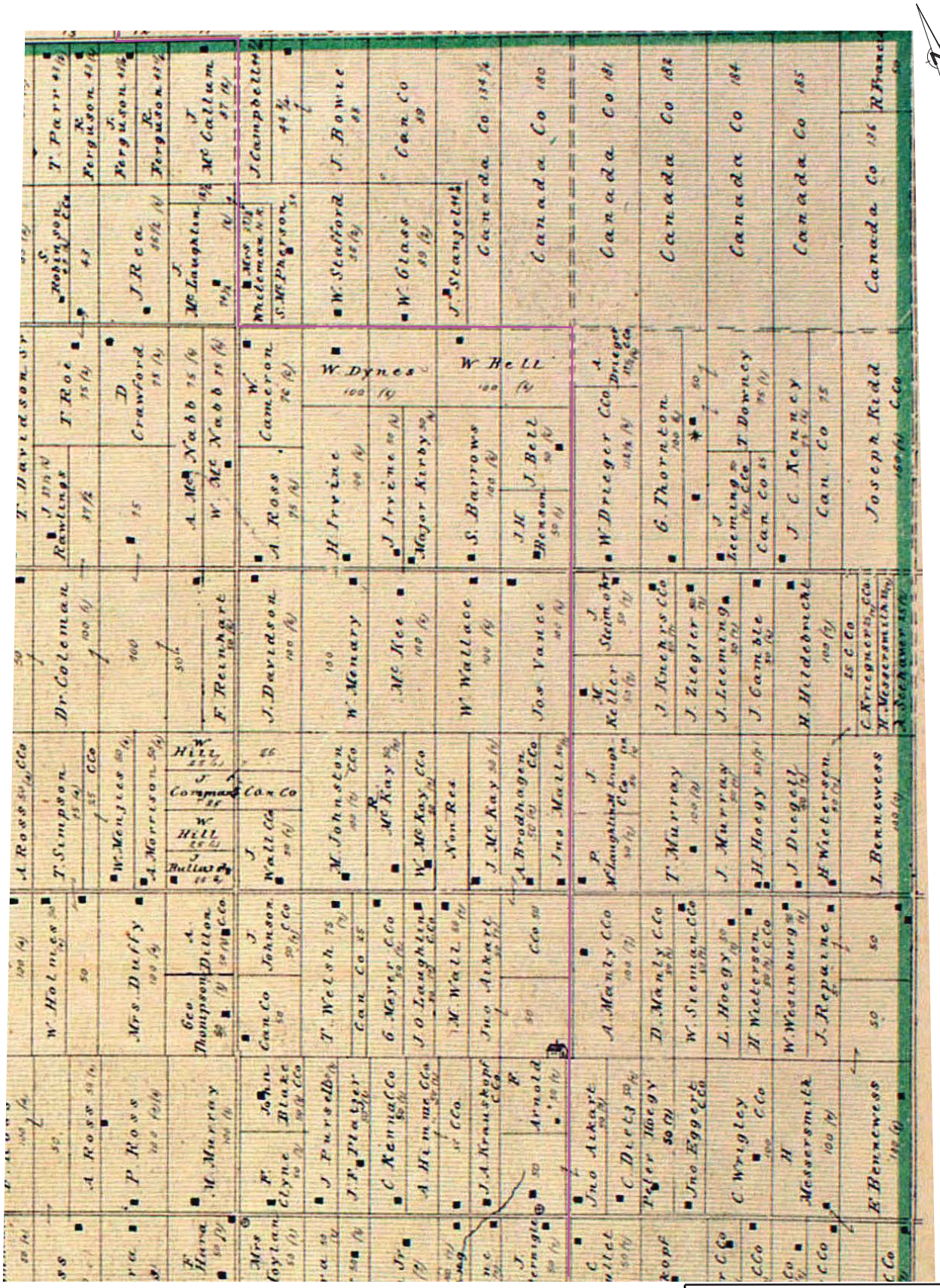


Figure 5: St. Columban 1 Line Routing project - study area superimposed on south portion of McKillop Township



0 1.5 km

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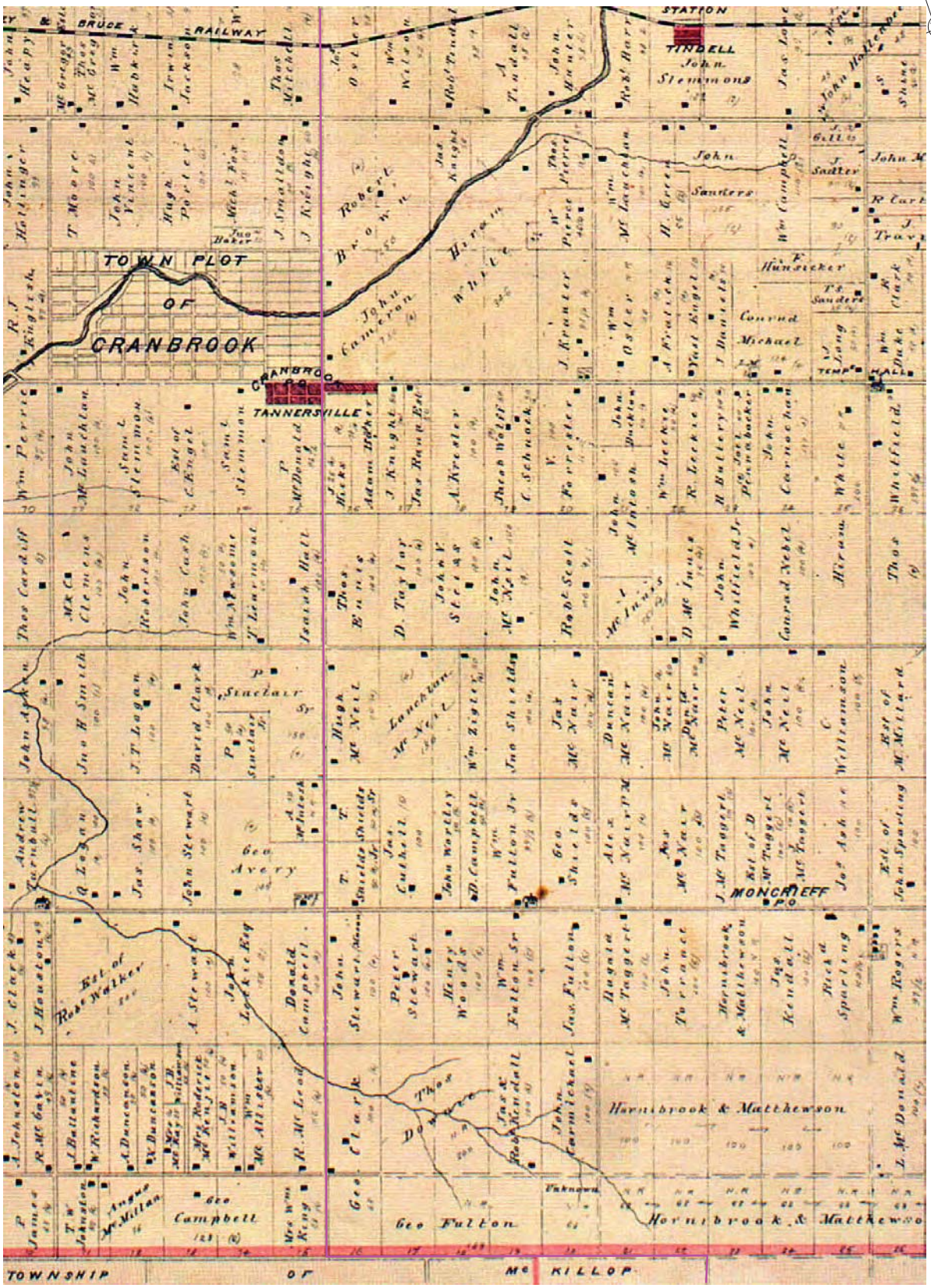
LEGEND

Study area for line

BASE: Map Title - McKillop Township
Map Producer - H. Beldon & Co
Date - 1879

ASI PROJECT NO.: 11EA-232 DRAWN BY: D. Pihl
DATE: 20SEP11 FILE: 11EA-232 FIG12

Figure 6: St. Columban 1 Line Routing project - study area superimposed on north portion of McKillop Township



0 2 km

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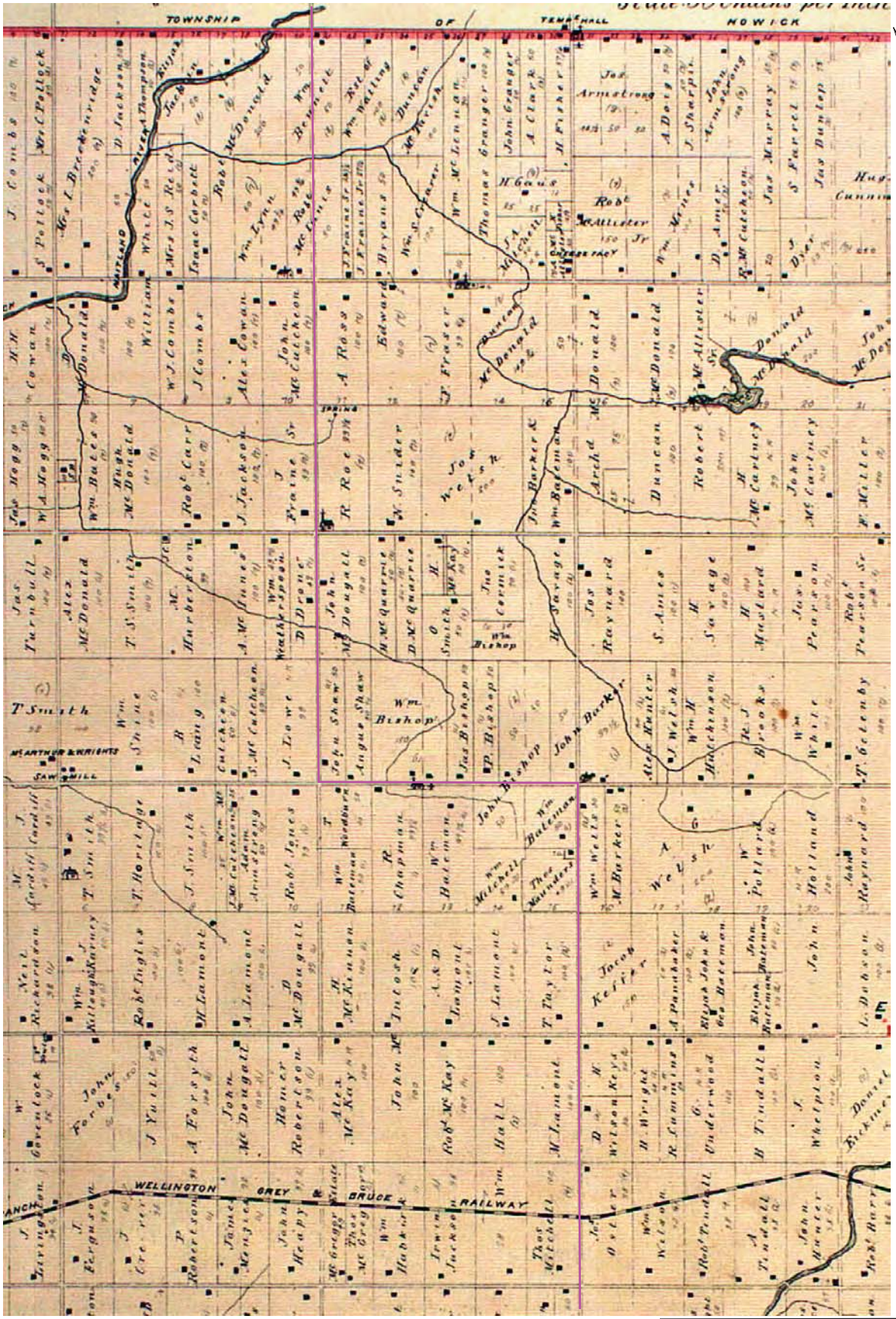
LEGEND

Study area for line

BASE: Map Title - Grey Township
Map Producer - H. Beldon & Co
Date - 1879

ASI PROJECT NO.: 11EA-232 DRAWN BY: D. Pihl
DATE: 20SEP11 FILE: 11EA-232 FIG13

Figure 7: St. Columban 1 Line Routing project - study area superimposed on south portion of Grey Township



0 2 km

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LEGEND

Study area for line

BASE: Map Title - Grey Township
Map Producer - H. Beldon & Co
Date - 1879

ASI PROJECT NO.: 11EA-232 DRAWN BY: D. Pihl
DATE: 20SEP11 FILE: 11EA-232 FIG14

Figure 8: St. Columban 1 Line Routing project - study area superimposed on north portion of Grey Township

BASE:
Map Title: Map Title - Howick Township
Map Producer: Map Producer - H. Beldon & Co
Date, Project or Map No.: Date - 1879

LEGEND
Study area for electrical interconnection line
Study area for St. Columban PCC-POC to Hydro 1

0 2 km
APPROXIMATE SCALE

ASI PROJECT NO.: 11EA-232 DRAWN BY: D. Pihl
DATE: 20SEP11 FILE: 11EA-232 FIG15

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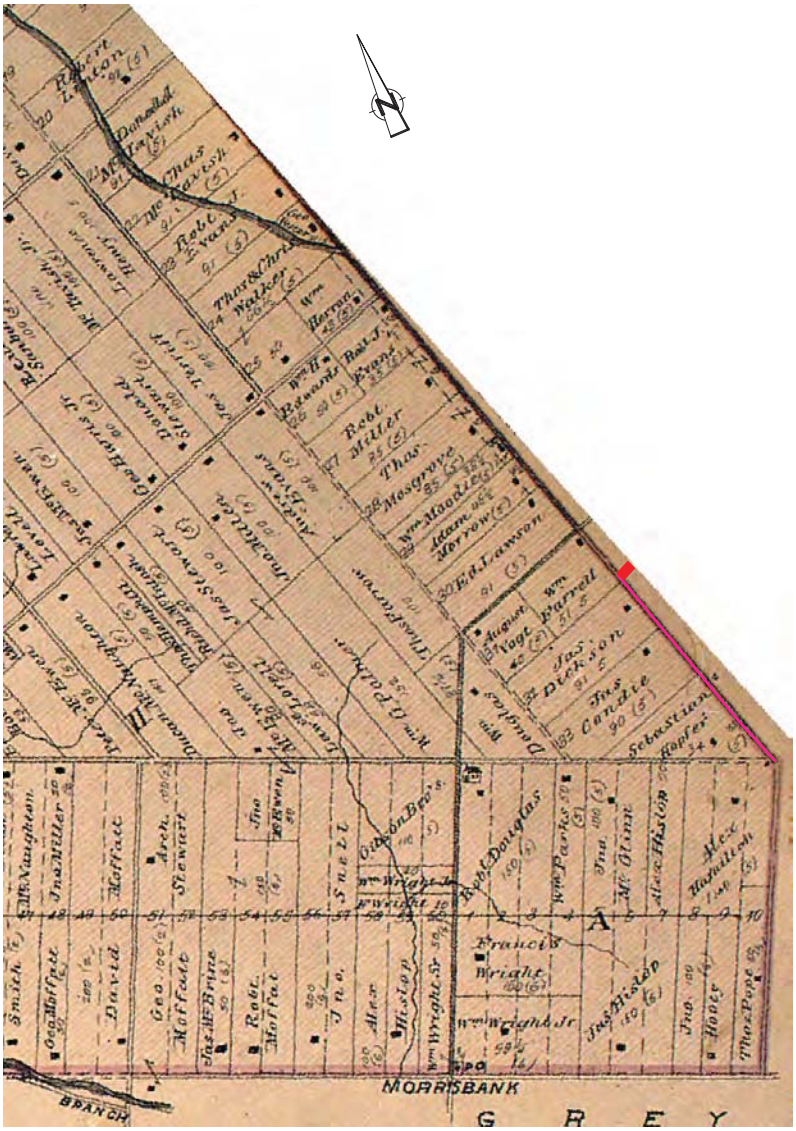
Figure 9: St. Columban 1 Electrical Interconnection Line and Electrical Interconnection Facilities - study area superimposed on southwest portion of 1879 Howick Township map



0 2 km
APPROXIMATE SCALE

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LEGEND
Study area for line
Study area for St. Columban PCC-POC to Hydro 1

BASE: Map Title - Turnberry Township
Map Producer - H. Beldon & Co
Date - 1879

ASI PROJECT NO.: 11EA-232 DRAWN BY: D. Pihl
DATE: 20SEP11 FILE: 11EA-232 FIG16

Figure 10: St. Columban 1 Line Routing project - study area superimposed on east portion of Turnberry Township

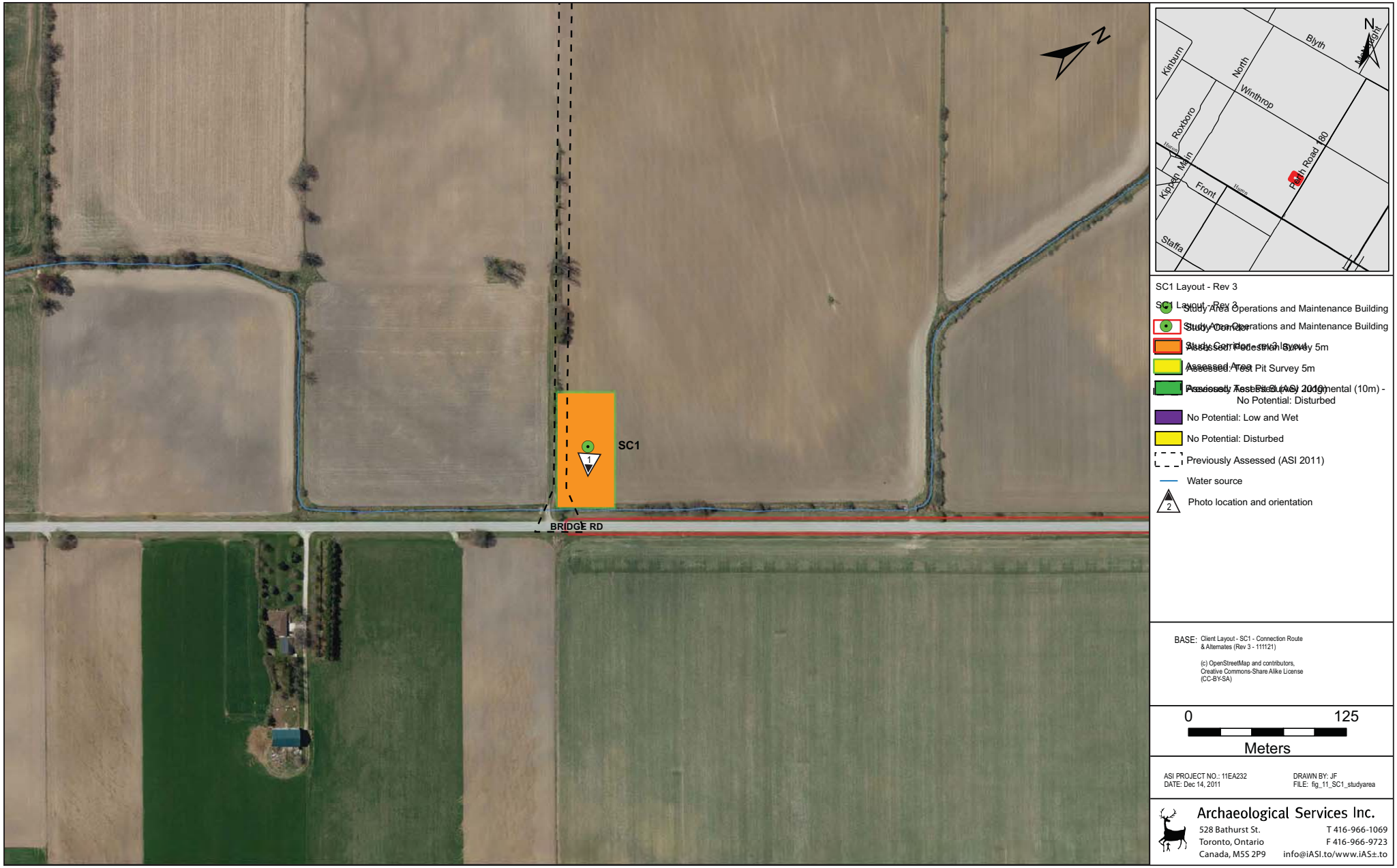


Figure 11: St Columban 1 Electrical Interconnection Line & Electrical Interconnection Facilities – Study Area for SC1 Operations and Maintenance Building

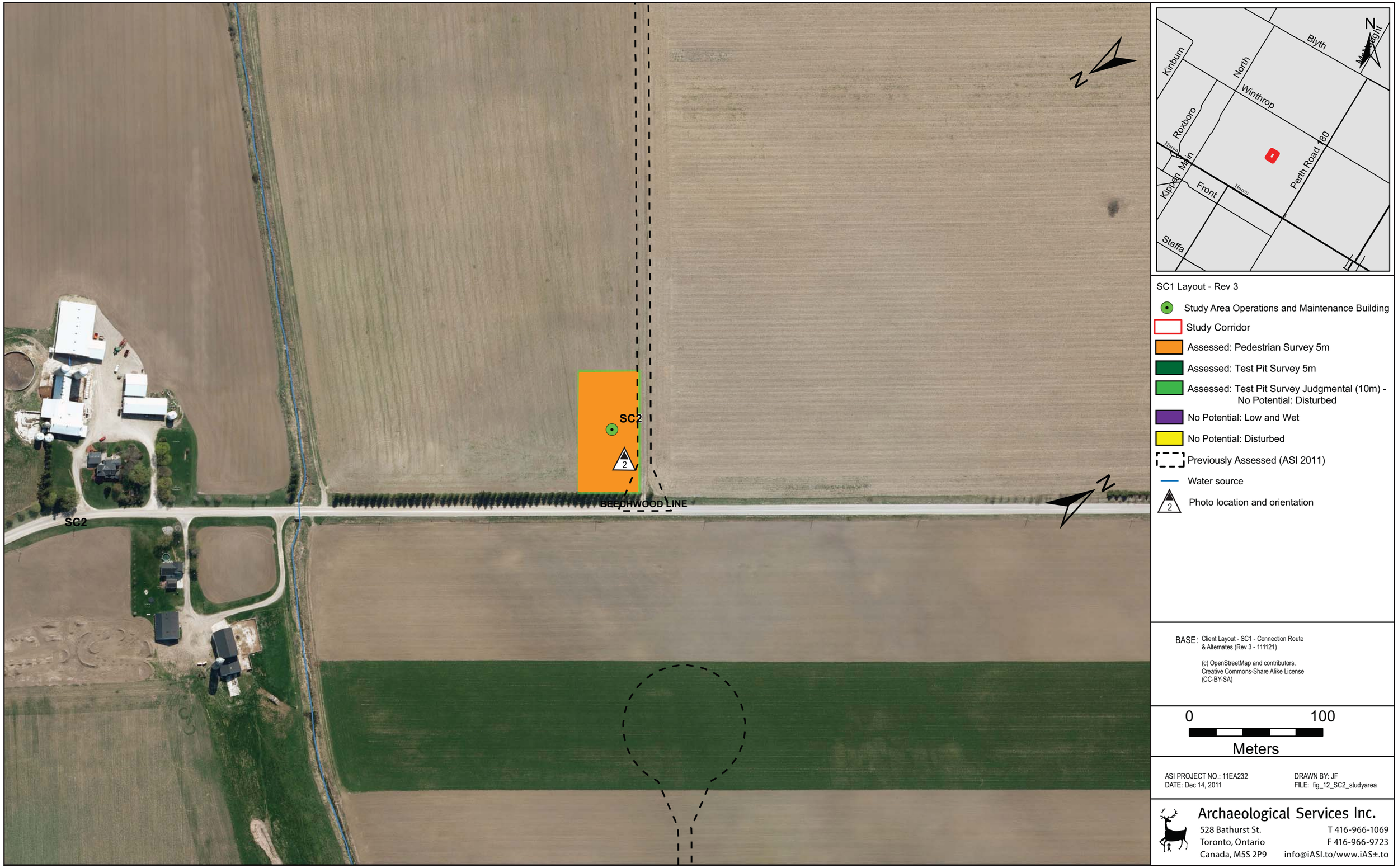
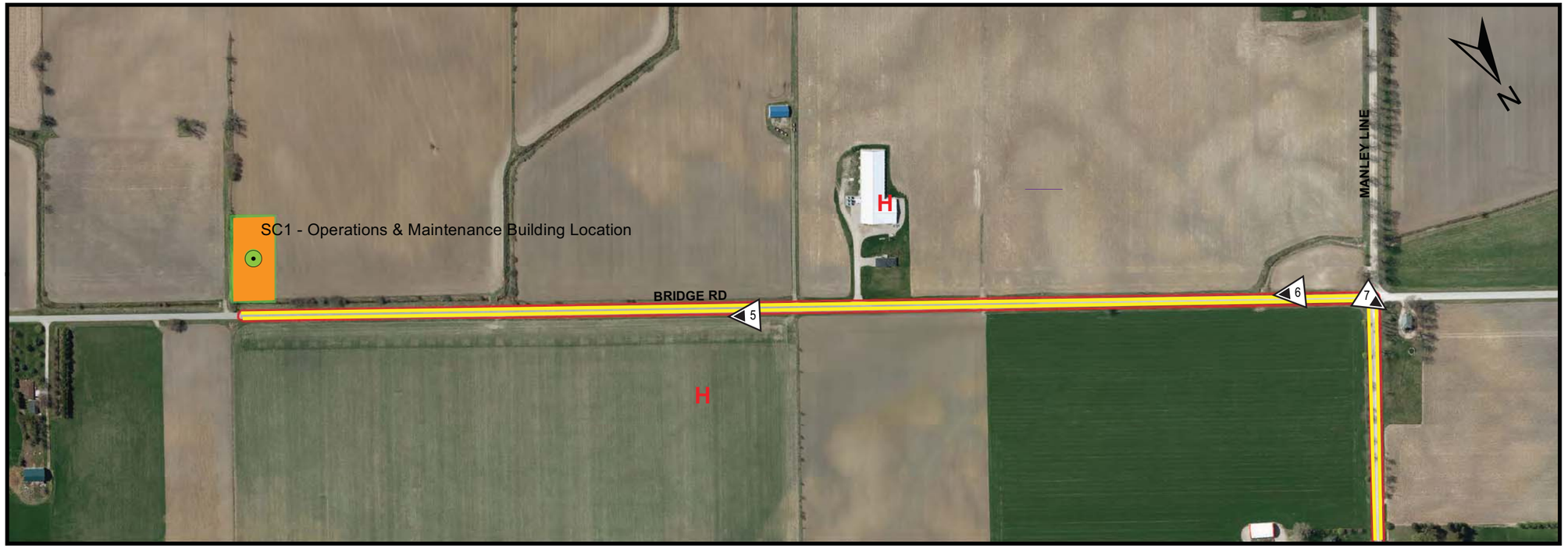
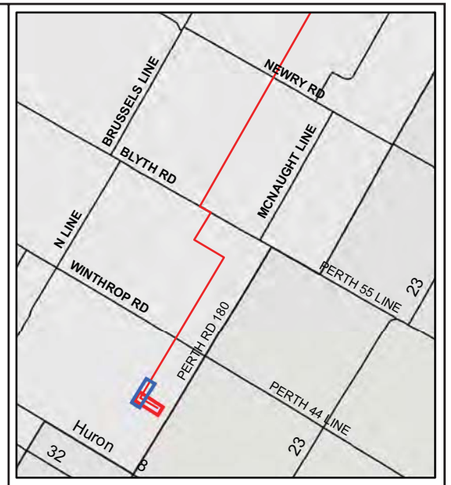


Figure 12: St Columban 1 Line Routing Project – Study Area for SC2 Operations and Maintenance Building

Figure 13: St Columban 1 Electrical Interconnection Line & Electrical Interconnection Facilities – Study Area for SC1 PCC – POC to Hydro One





SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H Historic Structure (Belden 1879)
- Water source
- 2 Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232 DRAWN BY: JF
DATE: Dec 14, 2011 FILE: 11EA232_fig14_s1_2

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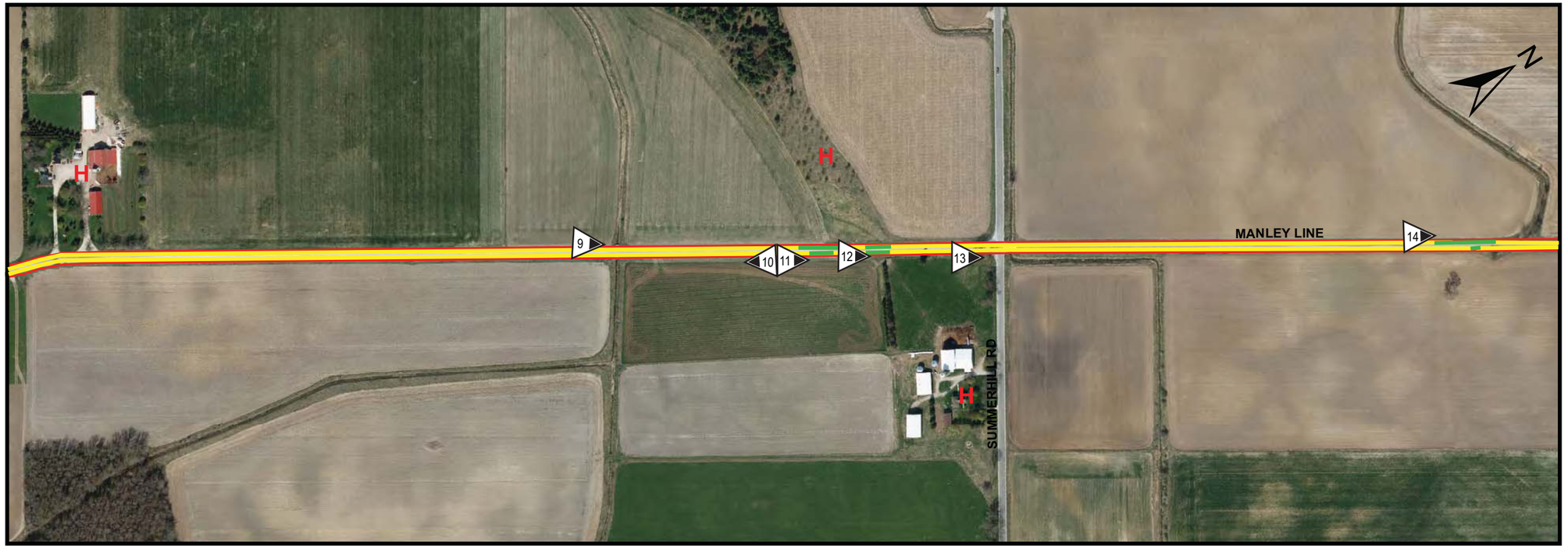
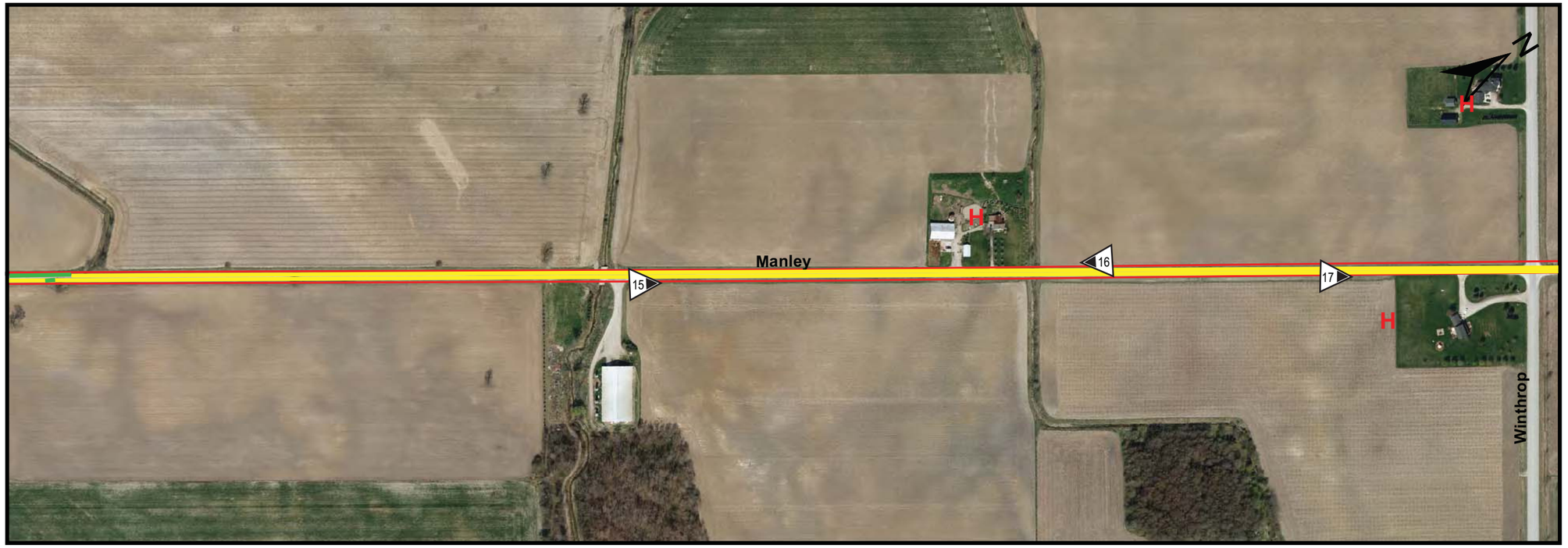
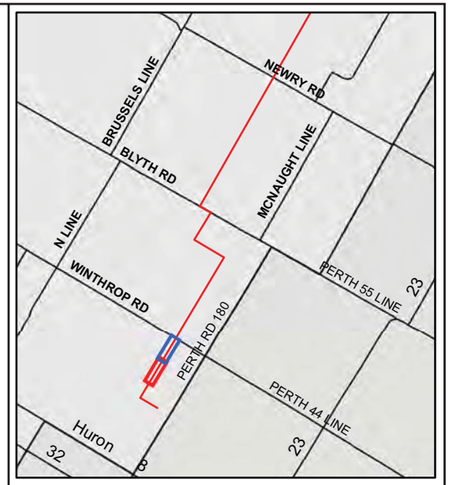
Figure 14: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 1 & 2)







SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H Historic Structure (Belden 1879)
- Water source
- 2 Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

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DATE: Dec 14, 2011 FILE: 11EA232_fig15_s3_4

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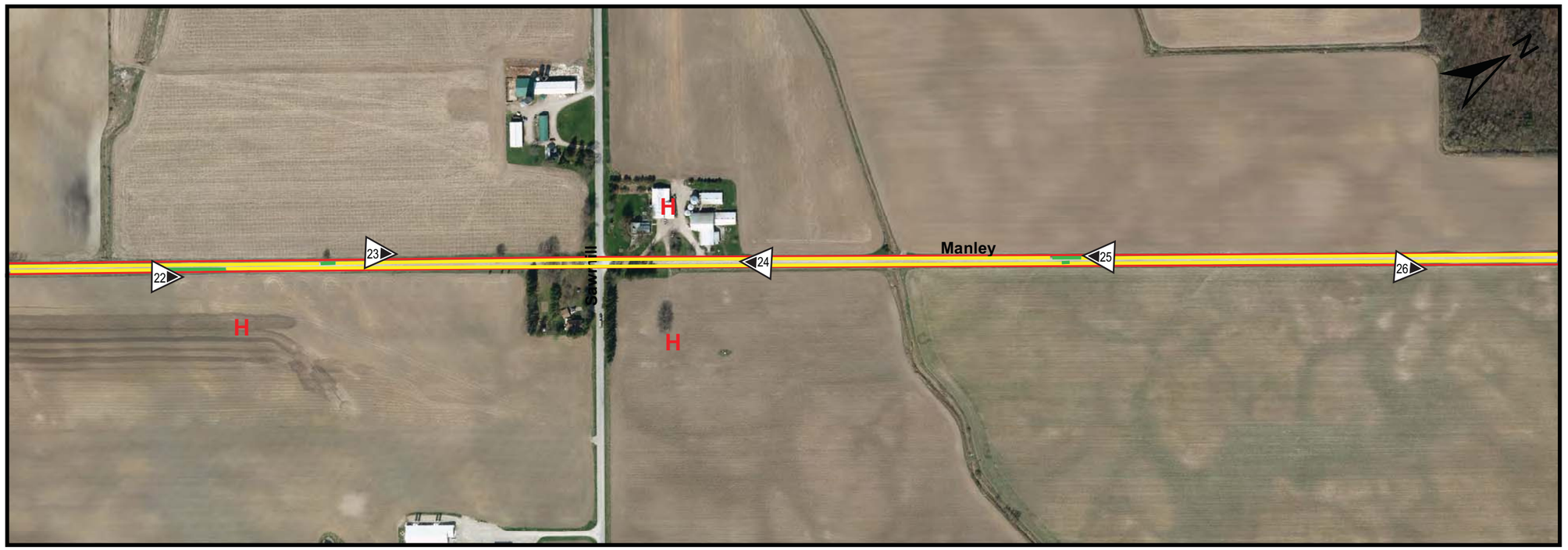
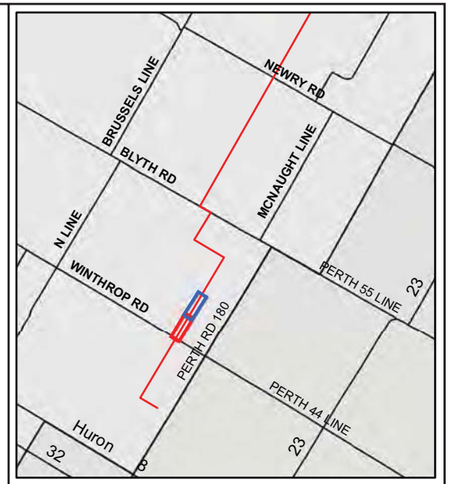
Figure 15: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 3 & 4)





SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H Historic Structure (Belden 1879)
- Water source
- 2 Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
DATE: Dec 14, 2011
DRAWN BY: JF
FILE: 11EA232_fig16_s5_6

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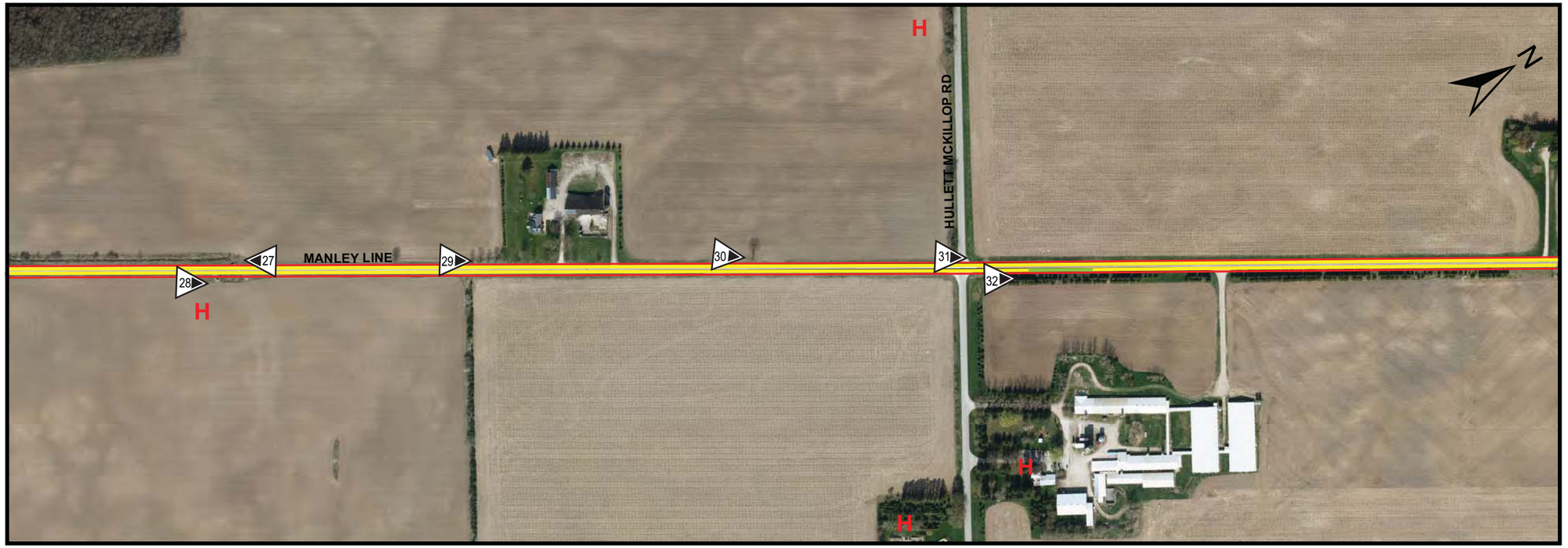
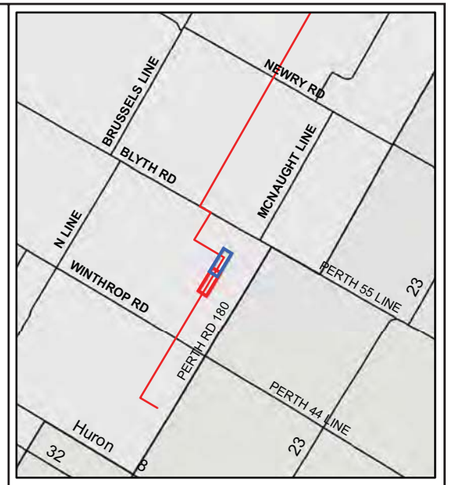
Figure 16: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 5 & 6)





SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H Historic Structure (Belden 1879)
- Water source
- 2 Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
DATE: Dec 14, 2011
DRAWN BY: JF
FILE: 11EA232_fig17_s7_8

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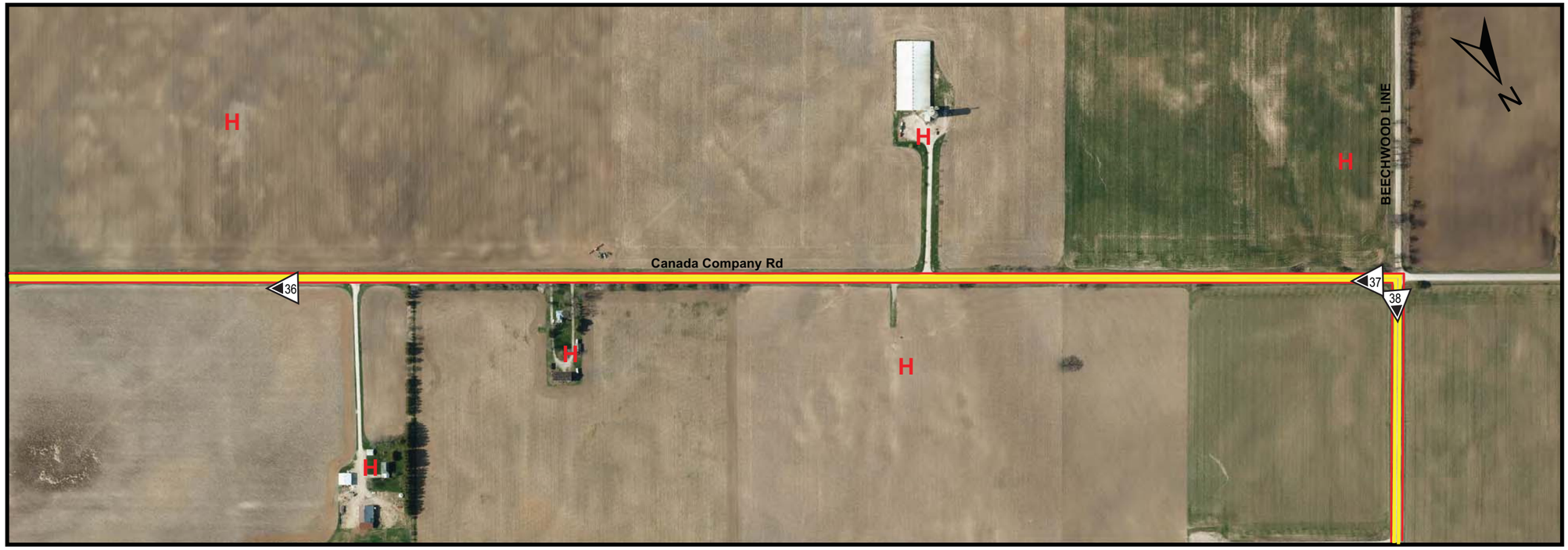
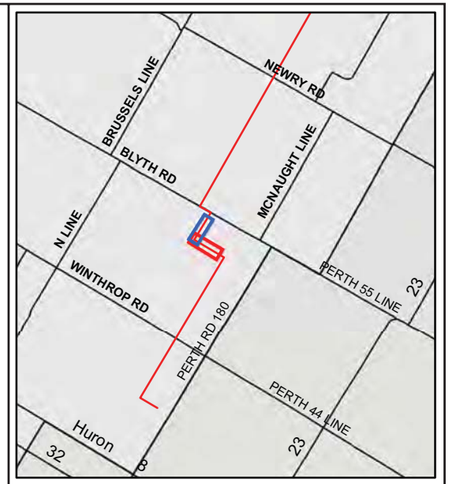
Figure 17: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 7 & 8)





SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H Historic Structure (Belden 1879)
- Water source
- 2 Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
DATE: Dec 14, 2011
DRAWN BY: JF
FILE: 11EA232_fig18_s9_10

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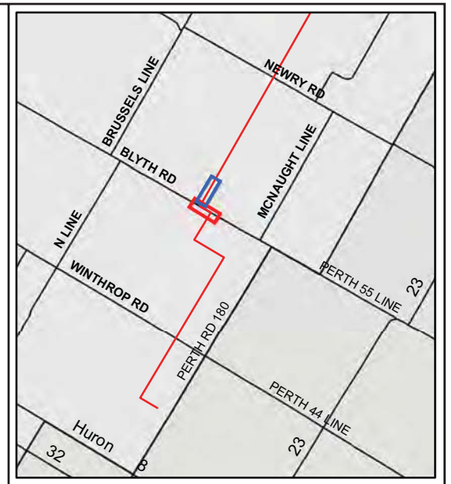
Figure 18: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 9 & 10)



SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H Historic Structure (Belden 1879)
- Water source
- 2 Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
DATE: Dec 14, 2011
DRAWN BY: JF
FILE: 11EA232_fig19_s11_12

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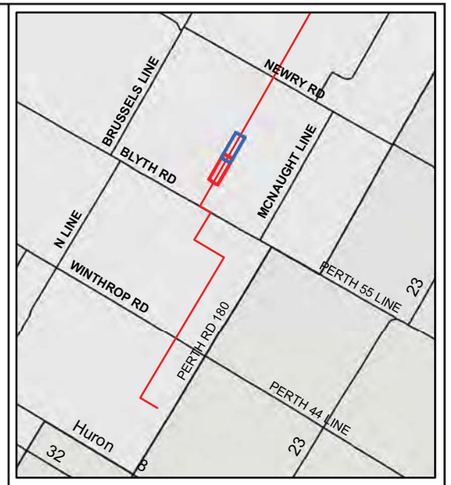
Figure 19: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 11 & 12)



SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H Historic Structure (Belden 1879)
- Water source
- 2 Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
DATE: Dec 14, 2011
DRAWN BY: JF
FILE: 11EA232_fig20_s13_14

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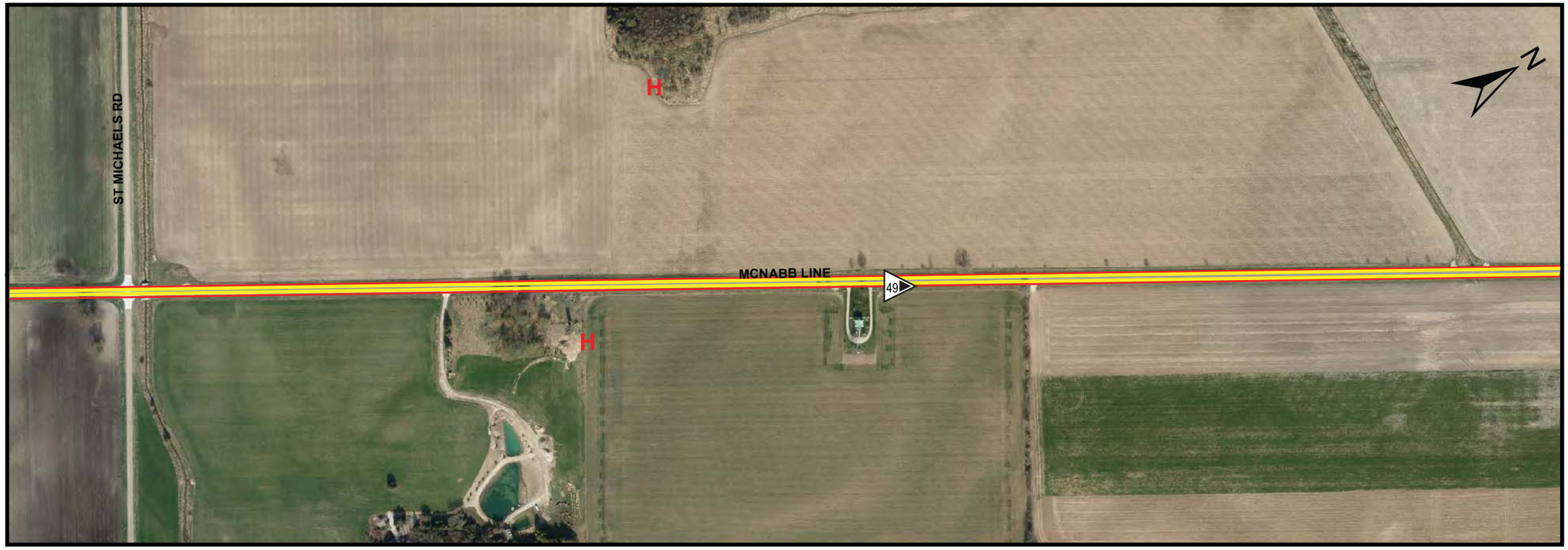
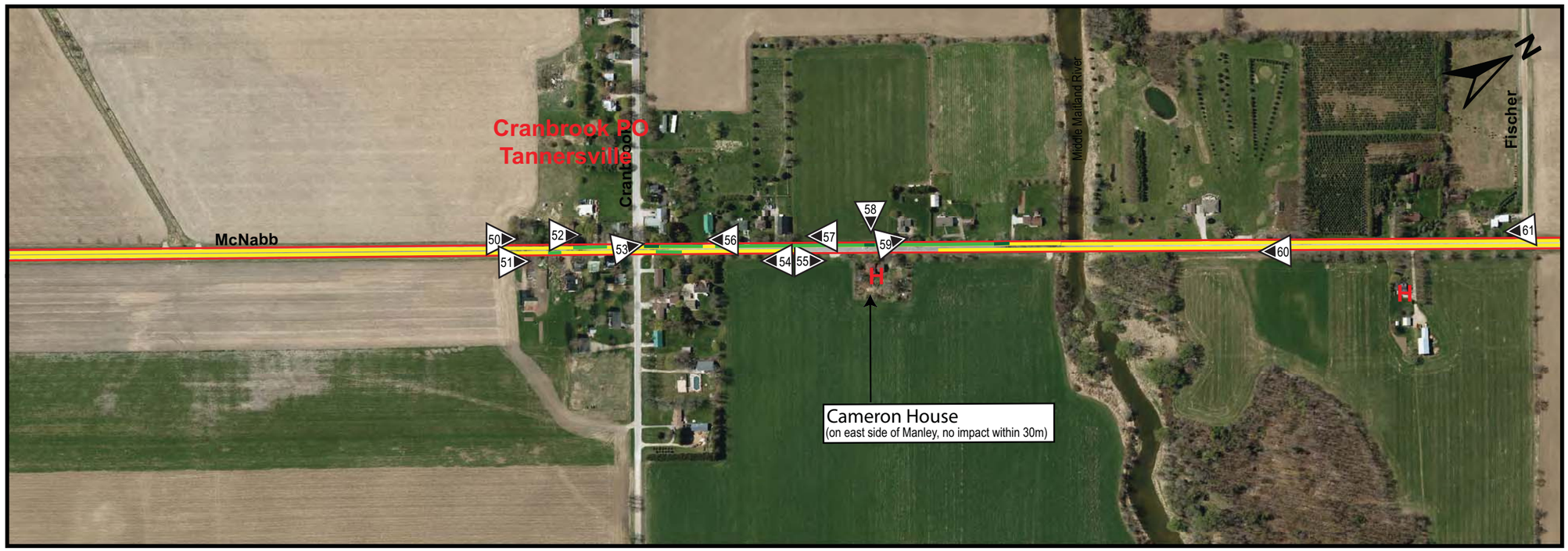
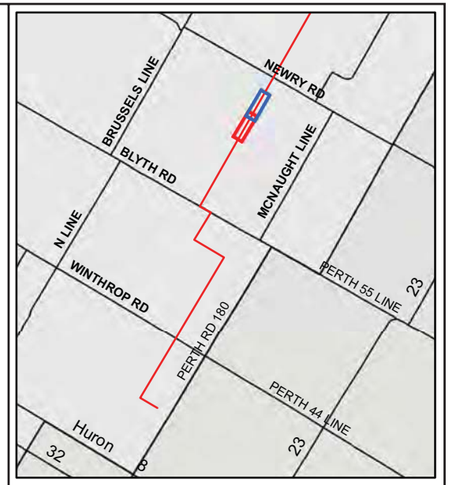
Figure 20: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 13 & 14)







SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H Historic Structure (Belden 1879)
- Water source
- 2 Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
DATE: Dec 14, 2011
DRAWN BY: JF
FILE: 11EA232_fig21_s15_16

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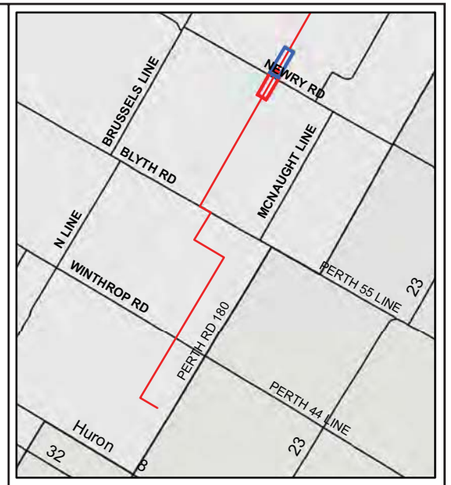
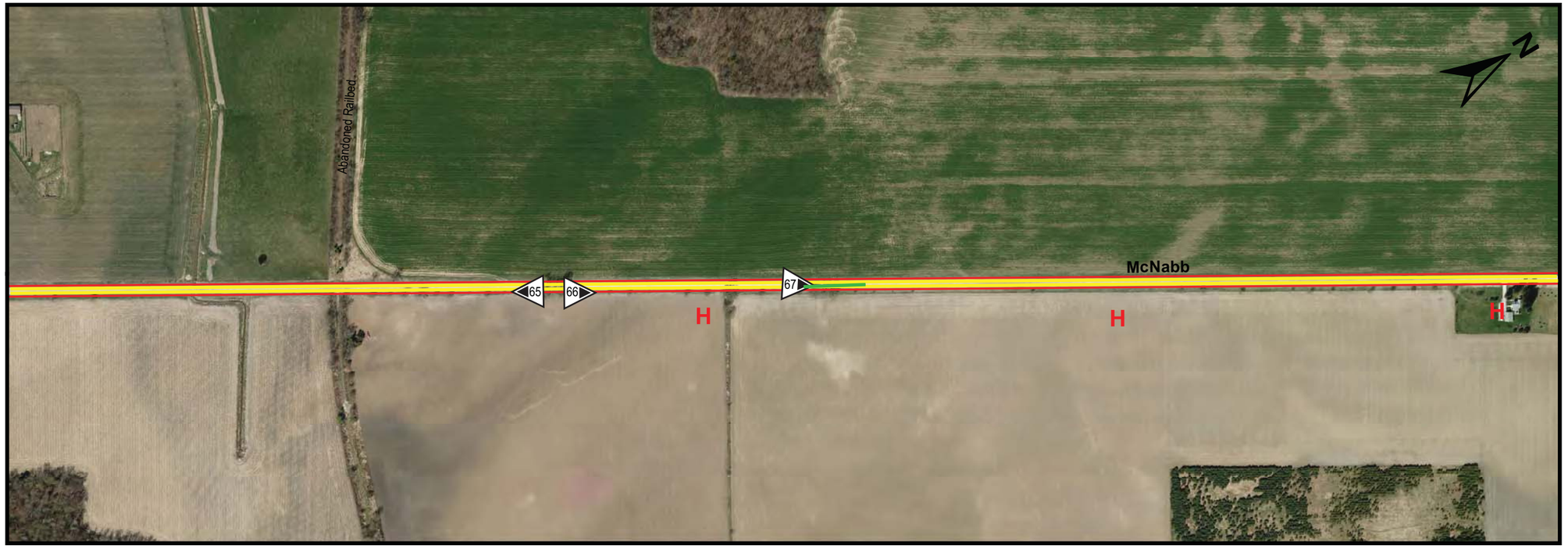
Figure 21: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 15 & 16)



SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H — Historic Structure (Belden 1879)
- Water source
- 2 — Photo location and orientation



BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
DATE: Dec 14, 2011
DRAWN BY: JF
FILE: 11EA232_fig22_s17_18

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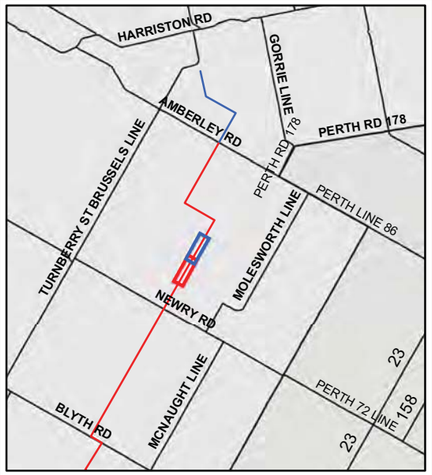
Figure 22: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 17 & 18)



SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H Historic Structure (Belden 1879)
- Water source
- 2 Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
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FILE: 11EA232_fig23_s19_20

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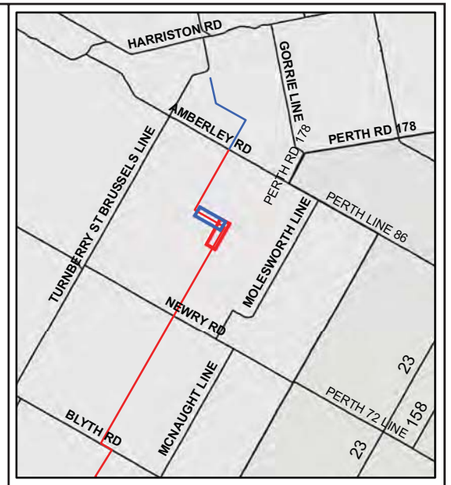
Figure 23: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 19 & 20)



SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H — Historic Structure (Belden 1879)
- Water source
- 2 — Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
DATE: Dec 14, 2011
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FILE: 11EA232_fig24_s21_22

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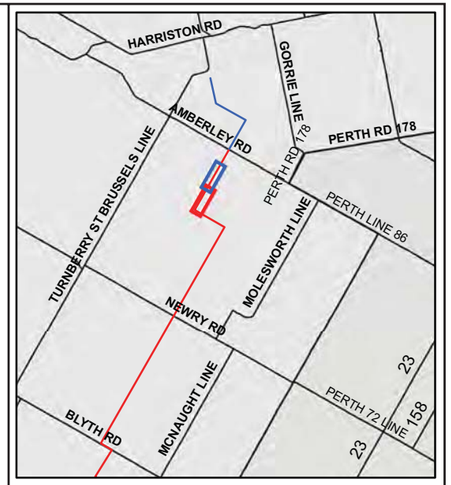
Figure 24: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 21 & 22)



SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H — Historic Structure (Belden 1879)
- Water source
- 2 — Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
DATE: Dec 14, 2011
DRAWN BY: JF
FILE: 11EA232_fig25_s23_24

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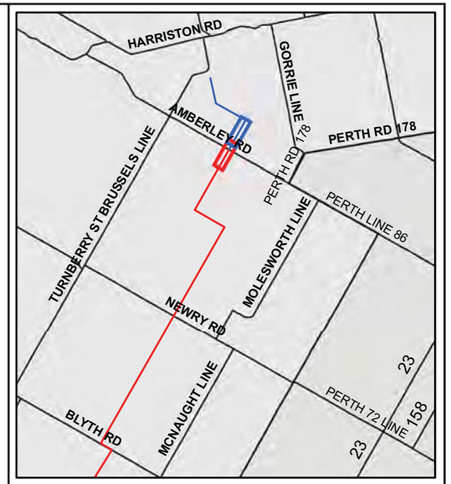
Figure 25: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 23 & 24)



SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H Historic Structure (Belden 1879)
- Water source
- 2 Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
DATE: Dec 14, 2011
DRAWN BY: JF
FILE: 11EA232_fig26_s25_26

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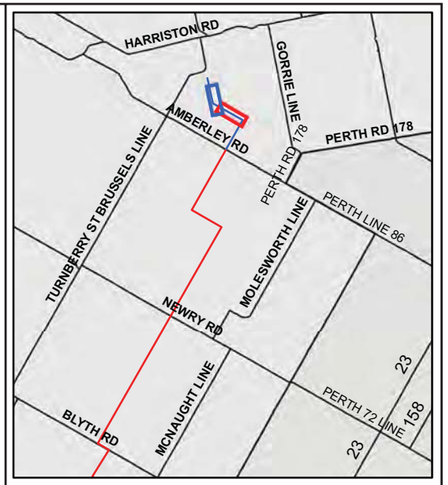
Figure 26: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 25 & 26)



SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H Historic Structure (Belden 1879)
- Water source
- 2 Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
DATE: Dec 14, 2011
DRAWN BY: JF
FILE: 11EA232_fig27_s27_28

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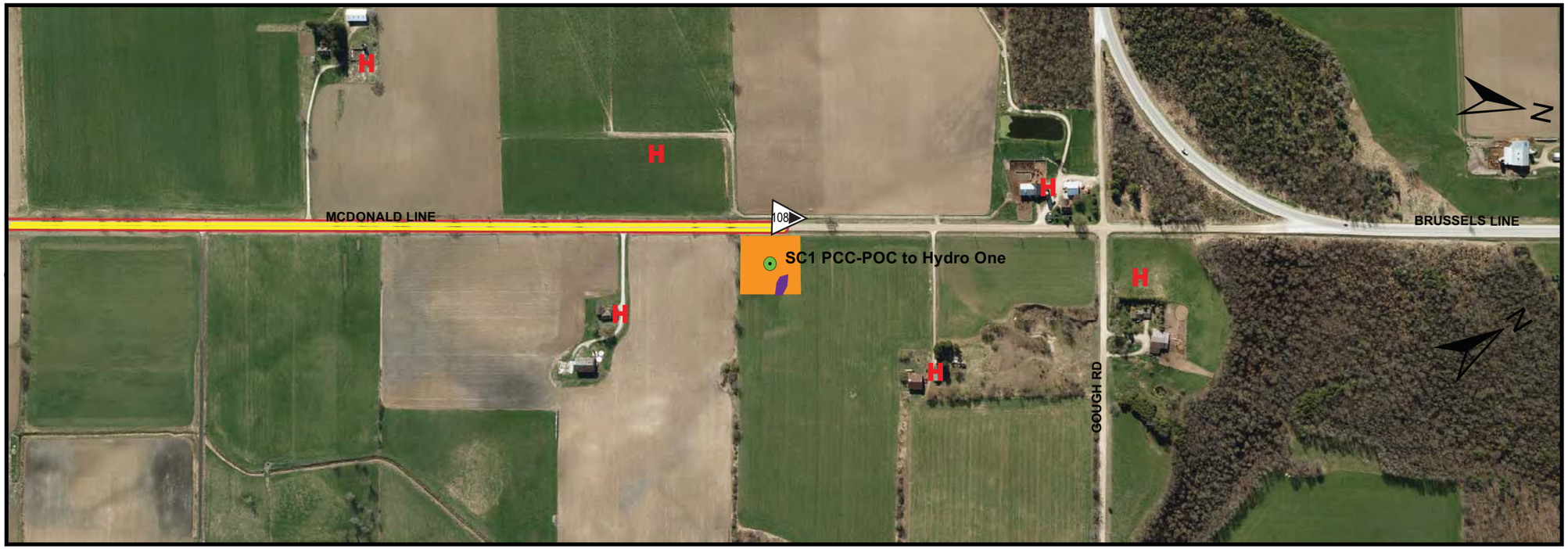
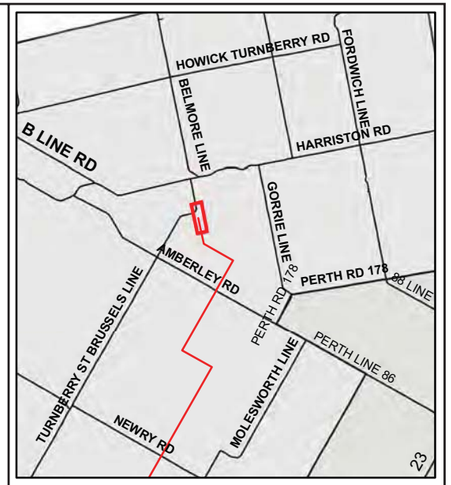
Figure 27: St Columban 1 Line Routing Project – Results of Stage 1 – 2 Archaeological Assessment (Sheets 27 & 28)





SC1 Layout - Rev 3

- Study Area Operations and Maintenance Building
- Study Corridor
- Assessed: Pedestrian Survey 5m
- Assessed: Test Pit Survey 5m
- Assessed: Test Pit Survey Judgmental (10m) - No Potential: Disturbed
- No Potential: Low and Wet
- No Potential: Disturbed
- H Historic Structure (Belden 1879)
- Water source
- 2 Photo location and orientation

BASE: Client Layout - SC1 - Connection Route & Alternates (Rev 3 - 111121)

0 250
Meters

ASI PROJECT NO.: 11EA232
DATE: Dec 14, 2011
DRAWN BY: JF
FILE: 11EA232_fig28_s29

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Figure 28: St Columban 1 Electrical Interconnection Line & Electrical Interconnection Facilities – Results of Stage 1 – 2 Archaeological Assessment (Sheet 28)

9.0 IMAGES

Plate 1: view northeast, SC1 Operations and Maintenance Building site study area. Bridge Road and drainage ditch at tree line.

Plate 2: view to southeast, SC2 Operations and Maintenance Building site study area.

Plate 3a: view to east, ploughed and weathered study area was pedestrian surveyed at 5 m intervals. Water is a small pocket of the undulating terrain.

Plate 4b: view to southeast, ploughed and weathered study area was pedestrian surveyed at 5 m intervals. Note wet pocket in northwest portion of study area.

Plate 5: view to north, ploughed and weathered study area was pedestrian surveyed at 5 m intervals.

Plate 6: View southeast, fill slope and ditch disturbance along Bridge Road. Level terrain.

Plate 7: view southeast, fill slope disturbance along paved and improved Bridge Road.

Plate 8: view north, 1890 schoolhouse on northwest corner of Bridge-Manley intersection. Fill slope in study corridor.

Plate 9: view to northeast, fill slope disturbance along Manley Line. Level terrain near farmstead.

Plate 10: view to northeast, fill slope disturbance & channelized stream crossing along Manley Line.

Plate 11: view to southwest, fill slope disturbance along Manley Line.

Plate 12: view to northeast, judgmental test pitting determined ROW disturbance on small rises just south of esker.

Plate 13: view to northeast, judgmental test pitting identified disturbance where Manley Line intersects an esker.

Plate 14: view to northeast along Manley. Study corridor comprises fill slope in the vicinity of intersection with Summerhill Line.

Plate 15: view to northeast where judgmental test pitting identified disturbance on wide, gentle fill slope on rise south of small creek.

Plate 16: view to northeast, wide, gentle fill slope disturbance on southeast side of Manley Line.

Plate 17: view to southwest toward historic farmstead, wide, fill slope disturbance along Manley.

Plate 18: view to northeast, fill slope disturbance on northwest side of Manley Line, in vicinity of historic farmstead location.

Plate 19: view to northeast, shallow ditch and fill slope disturbance along Manley Line in vicinity of creek.

Plate 20: view to northeast, fill slope disturbance along Manley Line at channelized stream crossing.

Plate 21: view to southwest, judgmental testpitting identified disturbance on low rise in vicinity of former schoolhouse on northwest side of Manley Line. Wet at south end of tested area.

Plate 22: view to northeast, judgmental test pitting of low rise identified disturbance both sides of Manley Line.

Plate 23: view to northeast, judgmental test pits on low rise near homestead identified disturbance.

Plate 24: view to northeast, fill slope disturbance along Manley Line.

Plate 25: view to southwest, fill slope disturbance along Manley near historic farmstead.

Plate 26: view to southwest along Manley Line. Judgmental test pitting on this rise near small creek confirmed disturbance.

Plate 27: view to northeast, fill slope disturbance along Manley Line.

Plate 28: view to southwest, fill slope disturbance and deep drainage ditch along Manley Line.

Plate 29: view to northeast along Manley line, disturbance at drainage ditch crossing and on fill slope.

Plate 30: view to northeast, study corridor disturbed by ditching and fill slope on northwest side Manley in vicinity of historic farmstead.

Plate 31: view to northeast, wide, gentle fill slope along Manley Line.

Plate 32: view to northeast, visible fill slope disturbance, adjacent to northwest side of Manley Line.

Plate 33: view to northeast, judgmental test pitting along southeast side of Manley determined that the vicinity was disturbed.

Plate 34: view to southwest, disturbed fill slope adjacent to Manley Line, on the top of the broad rise.

Plate 35: view to southwest, disturbed fill slope along Manley Line.

Plate 36: view to northwest, disturbed fill slope along Canada Company Road.

Plate 37: view to southeast, ditch and fill slope disturbance along Canada Company Road.

Plate 38: view to southeast, fill slope and shallow ditch disturbance along Canada Company Road.

Plate 39: View northeast, fill slope disturbance along Beechwood Line.

Plate 40: view southwest, fill slope and ditch disturbance along Beechwood Line.

Plate 41: View northwest, fill slope and ditch disturbance along paved and improved Blyth Road.

Plate 42: View northeast, steep fill slope along paved and improved McNabb Line.

Plate 43: view to northeast, fill slope and ditch disturbance along paved and improved McNabb Line.

Plate 44: view to southwest, fill slope disturbance along paved and improved McNabb. Low and level terrain near channelized stream.

Plate 45: view to northeast, fill slope disturbance along paved and improved McNabb Line.

Plate 46: view to northeast, fill slope disturbance on low & level terrain near channelized stream.

Plate 47: view to northeast, ditch and fill slope disturbance along paved and improved McNabb Line.

Plate 48: view to southwest, fill slope disturbance along northwest side of McNabb Line in vicinity of historic farmstead.

Plate 49: view to southwest, fill slope on low ground near drainage ditch at intersection with St.Michaels Road.

Plate 50: view to northeast, fill slope disturbance along paved and improved McNabb Line.

Plate 51: view to northeast from south limit of the Cranbrook, judgmental testpitting determined disturbance along southeast side of McNabb.

Plate 52: view to northeast, from south limit of hamlet of Cranbrook, along northwest side of McNabb. Fill slope disturbance in study corridor.

Plate 53: view to northeast, judgmental testpits identified disturbance here and on northeast corner

Plate 54: view to northwest, test pits excavated at 5m intervals where topsoil was present.

of intersection.

Plate 55: view to southwest, fill slope disturbance along southeast side of McNabb.

Plate 56: view northeast, fill slope disturbance along southeast side of McNabb.

Plate 57: view to southwest, densely packed gravel in front of 1950's community hall.

Plate 58: view to southwest, judgmental test pitting identified disturbance near 1888 Knox Presbyterian Church. Cemetery at rear.

Plate 59: view to east, test pit assessment at 5 m intervals on northwest side of McNabb, opposite

Plate 60: view to northeast. Test pitting at 5m interval near river (scanty topsoil present). Judgmental test

Cameron House (local limestone).

Plate 61: view to southwest, fill slope disturbance along McNabb within Middle Maitland River valley.

pitting elsewhere confirmed disturbance.

Plate 62: view to northeast, fill slope and ditch disturbance on the valley slope.

Plate 63: view to southwest, fill slope and shallow ditch disturbance along McNabb atop the north wall of Middle Maitland River valley.

Plate 64: view to northeast, fill slope disturbance along the southeast side of McNabb.

Plate 65: view to northeast, wide, gentle fill slope disturbance along gravelled McNabb.

Plate 66: view to southwest, fill slope disturbance. Abandoned rail bed at tree line in distance.

Plate 67: view to northeast, fill slope disturbance along McNabb.

Plate 68: view to northeast, judgmental test pitting of isolated patch of well drained soils near historic farmstead identified disturbance.

Plate 69: view to northeast, ditch disturbance along McNabb Line.

Plate 70: view to northeast, fill slope disturbance long northwest side of McNabb. Judgmental test pitting confirmed disturbance on southeast side.

Plate 71: view to southwest, along northwest side of McNabb.

Plate 72: view to northeast, 12 test pits at 5 m intervals identified no cultural remains on northwest side of McNabb.

Plate 73: view to northeast, fill slope and ditch disturbance along southeast side of McNabb.

Plate 74: view to northeast, judgmental test pitting confirmed disturbance in vicinity of historic farmstead.

Plate 75: view to southwest, fill slope along McNabb, south of Cardiff intersection.

Plate 76: view to northeast, ditch and fill slope disturbance along McNabb, north of Cardiff Road intersection.

Plate 77: view to northeast, judgemental test pitting on both sides of McNabb confirmed disturbance. Rise

Plate 78: view to northeast, judgmental test pitting confirmed disturbance. Creek valley in background.

in distance also judgmentally tested.

Plate 79: view to southwest, ditch and fill slope disturbance along McNabb Line.

Plate 80: view to northeast, 5 m interval test pits on northwest side of McNabb identified scanty topsoil and no cultural remains. Ditch on southeast side.

Plate 81: view to northeast, ditch and fill slope disturbance along McNabb Line.

Plate 82: view to southwest, 5m interval test pits on southeast side of McNabb (fill was screened). Ditch on west.

Plate 83: view to southeast, judgmental test pitting

Plate 84: view to southeast, ditch and fill slope

confirms disturbance along southeast side of McNabb.

Plate 85: view to northwest, fill slope along gravelled and well elevated roadbed of Browntown Line.

disturbance along McNabb.

Plate 86: view to northeast, fill slope along gravelled and well elevated roadbed of Browntown Line.

Plate 87: view to northeast, fill slope and ditch disturbance along Johnston Line.

Plate 88: view to southwest, fill slope disturbance on Johnston Line.

Plate 89: view to northeast, ditch and fill slope disturbance along Johnston Line.

Plate 90: view to southwest, fill slope disturbance along Johnston Line.

Plate 91: view to west-southwest, fill slope adjacent to lower ground along Johnston Line. Gravel extraction operation on esker in background.

Plate 92: view to northeast, judgmental test pitting confirmed disturbance on the southeast side of Johnston Line near farmstead location.

Plate 93: view to northeast, judgmental testpits along Johnston Line confirm disturbance.

Plate 94: view to northeast, ditch & fill slope disturbance along Johnston Line through low and level terrain.

Plate 95: view to west, test pit assessment at 5m intervals along northeast side of Johnston Line. High ground. No cultural remains recovered.

Plate 96: view to northeast, fill slope & steep slope on southeast side of Johnston Line high ground.

Plate 97: view to northeast, fill slope adjacent to Johnston Line at Amberley Rd & Little Maitland River crossings. Historic farmstead in background.

Plate 98: view to northeast, deep ditch and fill slope disturbance adjacent to gravelled and improved Johnston Line.

Plate 99: view to southeast, ditch and fill slope disturbance along Johnston Line. Historic farmstead at right.

Plate 100: view to northwest, ditching and cut slope disturbance along Centre Line Rd.

Plate 101: view to northwest, ditch, fill slope and cut slope disturbance along Centre line Rd.

Plate 102: view to southwest, road cut disturbance on both sides of Centre Line Road.

Plate 103: view to northeast, judgmental testpits confirm disturbance on southwest side of Centre Line Rd. Northeast side ditch.

Plate 104: view to southwest, ditch disturbance along both sides of Centre Line Road near wetland & farm.

Plate 105: view to northeast, 5 m interval test pits along southwest side of road. Judgmental test pits on opposite side confirmed disturbance.

Plate 106: view to southwest, ditch & road cut disturbance along Centre Line Road.

Plate 107: view to northeast, road cut, slope & ditch disturbance along Centre Line Road south of intersection with McDonald Line, near farmsteads.

Plate 108: view to north, fill slope and ditch disturbance along improved gravel roadbed of McDonald Line near farmsteads.

Plate 109: view to north, fill slope disturbance along improved roadbed of McDonald line in vicinity of proposed connection facility and historic farmsteads.