

4. Existing Environment

4.1 Natural Heritage Environment

A review of the natural heritage features in the study area was carried out in consultation with the Ministry of Natural Resources and Forestry (MNRF) and the Toronto Region Conservation Authority (TRCA). In addition, the City of Toronto's land use database was reviewed.

Background data collected from the MNRF's Natural Heritage Information Centre online data indicated the following with respect to the study area:

- There are no current records for species at risk;
- There are no current records for rare species;
- There are no watercourses;
- There are no provincial parks, conservation reserves or Areas of Natural and Scientific Interest (ANSI);
- There are no wetlands;
- The study area is not within the Niagara Escarpment, the Greenbelt, or the Oak Ridges Moraine; and
- There are some woodland features.

A response received from the MNRF on May 13, 2014 further indicated that there are no records of species at risk in the study area.

A field survey was also conducted on June 19, 2015 to identify any species at risk, potential species at risk habitat, and/or any other significant natural features within the study limits. The following was noted at the time of the field survey:

- There are no species at risk and/or potential species at risk habitat were not observed;
- No barn swallows or barn swallow nests were observed in the Highland Creek Overpass structure over Highway 2A;
- One bird nest was observed in the Highland Creek Overpass structure over Highway 2A (no activity was observed);

- Incidental bird observations included House Sparrow (*Passer domesticus*), European Starling (*Sturnus vulgaris*), Red-winged Blackbird (*Agelaius phoeniceus*), American Robin (*Turdus migratorius*) and Northern Cardinal (*Cardinalis cardinalis*);
- Some mature street trees were noted in the study area including native (sugar maple (*Acer saccharum*) and oak (*Quercus sp.*)) and non-native (Norway maple (*Acer platanoides*) and black locust (*Robinia pseudoacacia*)) species.

In summary, the study area is highly urbanized and natural features are limited to manicured lawns and gardens with planted trees. Wooded areas adjacent to Highway 2A were represented by a mix of mature native and non-native trees species, with high understorey and ground cover that may provide some value for wildlife. In addition, some mature trees were noted along the study area roadways. Existing natural heritage features within and surrounding the study area are illustrated in **Exhibit 4-1**.

4.2 Cultural Heritage

Heritage conservation is a priority consideration in the development of the City. The City's Heritage Preservation Services department advises the Toronto Preservation Board and City Council on matters relating to the Ontario *Heritage Act* by identifying buildings, structures, places and districts of cultural heritage value or interest; reviewing and advising on development proposals which affect heritage resources; monitoring the maintenance of heritage sites; developing heritage policies; administering financial assistance programs and providing educational services. As such, the City maintains an inventory of 'listed' and 'designated' properties that are to be protected as part of the City's historic resources.

"Listed" properties are recognized based on a number of criteria, including architecture, history, and neighbourhood context. These types of properties are identified as having heritage attributes that the City would like to see preserved. "Designated" properties within the inventory are under Part IV of the *Ontario Heritage Act* or are located within a Heritage Conservation District designated under Part V of the *Ontario Heritage Act* and are also identified by a by-law number.

Five properties within the study area are listed on the City's heritage inventory, including one building designated under the Part V of the *Ontario Heritage Act*, as outlined in **Exhibit 4-2**.

Exhibit 4-1: Natural Heritage Features

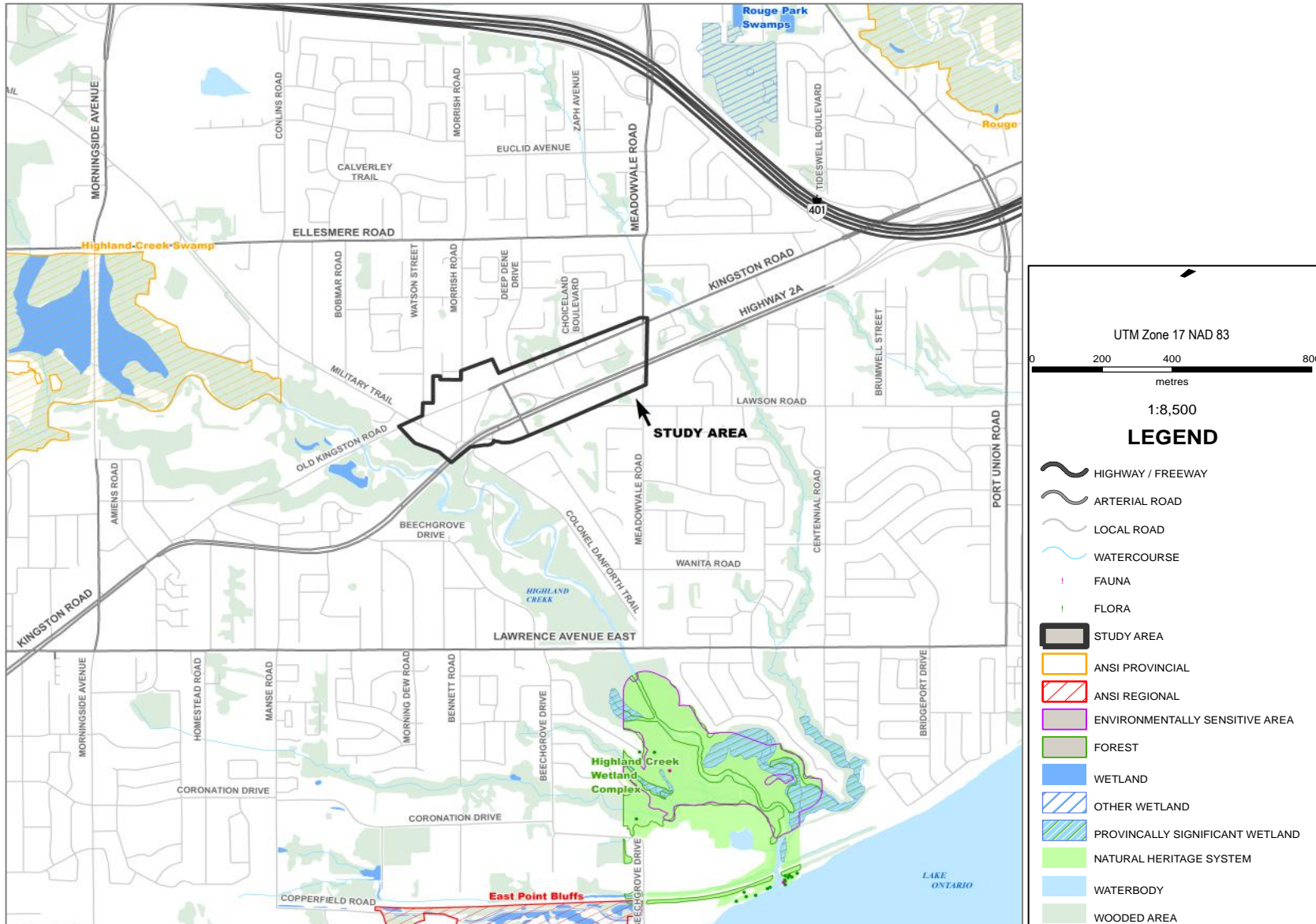


Exhibit 4-2: Summary of Heritage Resources in the HCV TMP Study Area

Status	Property Name	Property Address
Listed in City's Heritage Inventory	W.D. Morrish	215 Morrish Road (358, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380 and 382 Old Kingston Road)
	John Morrish House	6278 Kingston Road
	St. Joseph's Cemetery	200 Morrish Road
	Highland Creek Cemetery	390 Old Kingston Road
Designated Under Part V of the <i>Ontario Heritage Act</i>	W.J. Morrish Store (June 5, 1978)	6282 Kingston Road

A screening for cultural heritage resources was carried out as part of the Highland Creek Village Area Study completed in 2012. As per the findings of the screening, Highland Creek was recognized as a community in 1852 and was the largest residential and business centre in the former Township of Scarborough. The community historically comprised churches, a school, a number of general stores, blacksmith shops and hotels that catered to travellers along Kingston Road. Highland Creek was considered a rural farming community until approximately the 1950s, at which time the majority of the present-day neighbourhood was developed. As such, the Highland Creek Village has not retained much of its built heritage and generally comprises one and two-storey commercial land uses, many of which include commercial and automotive service and/or sales operations.

Based on historical information reviewed as part of this TMP, the vast geographical area that makes up Scarborough was established through the initial settlement of smaller villages. In 1799, the townships first grist mill was built at Highland Creek (Schofield *et al.* 1996). The "Front Road" parallel to the lake was initially cut in 1801 and was subsequently improved, straightened and renamed Kingston Road in 1817. Military Trail was the first highway to be constructed in Scarborough and was built in 1799 by Asa Danforth. By 1885, Highland Creek was the largest commercial center in all of Scarborough. One of the earliest post offices in Canada was built in Highland Creek in 1852 (Brown 1997).

The Morrish family was also one of the first of several notable settlers to the Scarborough area. John Morrish established a residence and store to the northwest of the Meadowvale Road and Kingston Road intersection in 1890. In addition, W.D. Morrish constructed a store at the corner of Morrish Road and Old Kingston Road in 1924.

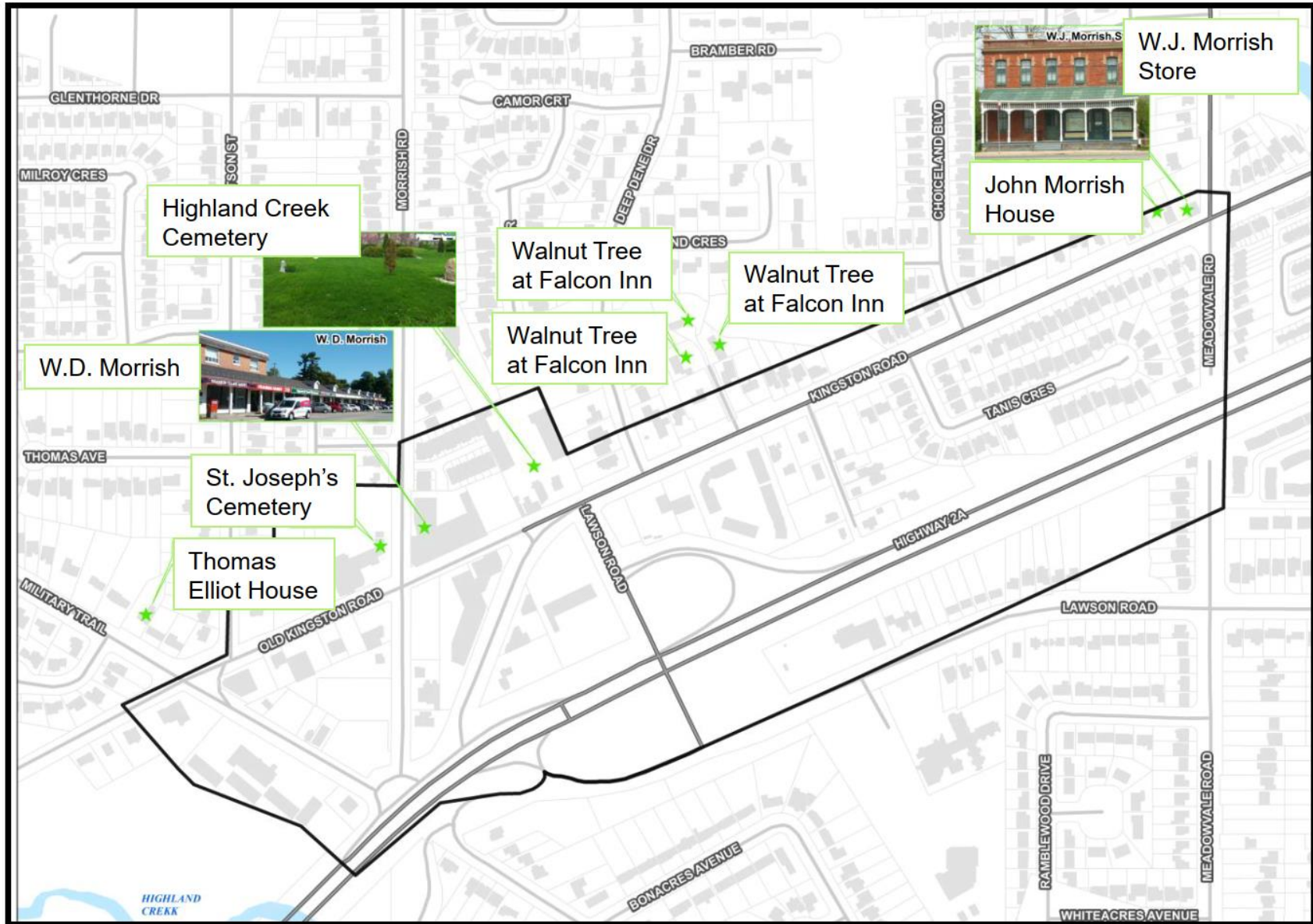
The Roman Catholic Church, now the St. Joseph's Church, can be identified on the 1878 Map of the Township of Scarborough. According to the historical plaque installed at the church it was established in 1854 and served the Irish Catholic community within Highland Creek. The church building itself was rebuilt in 1964; however, St. Joseph's cemetery is listed on the City's heritage inventory.

The Wesleyan Cemetery (Highland Creek Cemetery) comprises a burial ground that dates back to the reign of George III, prior to 1800, and contains a variation of many older headstones, as well as more recent burials.

The Morrish Store is the only built heritage resource in the village area listed in the City's heritage inventory and one of the very last vestiges of the former village.

Please refer to **Exhibit 4-3** for the location of these properties.

Exhibit 4-3: Heritage Property Location Plan



4.3 Archaeological Assessment

A Stage 1 Archaeological Assessment (AA) was completed for the study area to determine areas that may have the potential to contain archaeological resources (please refer to **Exhibit 4-4**). As part of the Stage 1 AA, a desktop review of available geography, history, previous archaeological field work and the City of Toronto’s Interim Archaeological Potential dataset was carried out. In addition, a site visit was conducted on May 23, 2014, to identify the current land conditions in the area.

Exhibit 4-4: Stage 1 AA Location Plan



Based on the findings of the Stage 1 AA, three parcels of land were identified as having the potential to contain archaeological resources. As such, Stage 2 AA investigations were recommended for these areas, should they have the potential to be impacted by construction activities (please see **Section 12.1** for more details on the Stage 2 AA investigations that were conducted as part of this study).

In addition, as part of the Stage 1 AA, historic churches and cemeteries were noted to be present within the study area.

A copy of the Stage 1 AA report is included in **Appendix C** of this document.

4.4 Contamination Overview Study (COS)

A contamination overview study (COS) was completed for the study area to identify areas of potential environmental concern and provide an understanding of the potential areas of risk to inform the evaluation of alternative solutions.

As part of the COS, the review of available historical information for the study area included retaining the services of EcoLog ERIS, a site-specific environmental database and information services company. Requests to EcoLog for any fire insurance records for the study area identified that none were available. Additional reference was made to the existing inventories of coal gasification plant waste sites, landfill/waste disposal sites, national PCB sites, Brownfields Environmental Site Registry, and the City of Toronto borehole log database for the area.

Based on the findings of the COS, the primary properties of environmental concern consist of active and former automotive sales and/or service facilities, a car storage yard, a gasoline service station, and an on-site dry-cleaning operation. It was further noted that the majority of these properties are situated within the west portion of the study area (i.e., Morrish Road, Old Kingston Road, Kingston Road and Military Trail). It is recommended that a Phase I and/or Phase II Environmental Site Assessment (ESA) be completed for properties identified as having potential issues of environmental concern, should the preferred solution encroach onto the respective property.

A copy of the COS report is included in **Appendix D** of this report.

4.5 Water, Wastewater and Stormwater Servicing

A high-level evaluation of the existing water, wastewater, and stormwater servicing infrastructure was undertaken to identify the opportunities and constraints required to support existing land uses and accommodate planned future land uses within the Study limits, as well as establish the municipal servicing infrastructure that will be required to accommodate the preferred design alternative from the TMP. The subject servicing review was also undertaken to fulfill the requirements of Phases 1 and 2 of the Municipal Class EA process

The study area for the FSR is located in the eastern part of Toronto (formerly Scarborough) immediately east of the Highland Creek valley. The study area is bound by Old Kingston Road to the north, Military Trail to the west, Lawson Road to the east and by Highway 2A / Colonel Danforth Drive / Lawson Road to the south. The study area is presently a predominantly mixed blend of commercial and residential land use and transportation corridors.

Key servicing opportunities and constraints that may have an impact on the feasibility of the transportation improvements being evaluated were identified. The outcome of the existing conditions assessment is summarized as follows:

Water and Wastewater Servicing

- Projected growth and road reconfiguration can be supported through realignment
- and upsizing of sanitary sewers and watermains (where necessary)
- New Military Trail and Lawson Road intersections provide opportunity to improve connectivity with existing water distribution systems on Colonel Danforth Drive and Lawson Road south of Highway 2A

Stormwater Servicing

There are opportunities to achieve stormwater management design objectives through low-impact development (LID) measures:

- Bio-engineered swales
- Bio-retention gardens
- Tree pits in boulevards
- Permeable pavements for on-street parking

Centralized facilities can be considered:

- Reduce need for on-site management
- Improve water quality & quantity in municipal ROW

Control peak flows to the Centennial Creek corridor to reduce downstream flood risk.

The recommendations of the functional servicing assessment are discussed in **Section 13.4**.

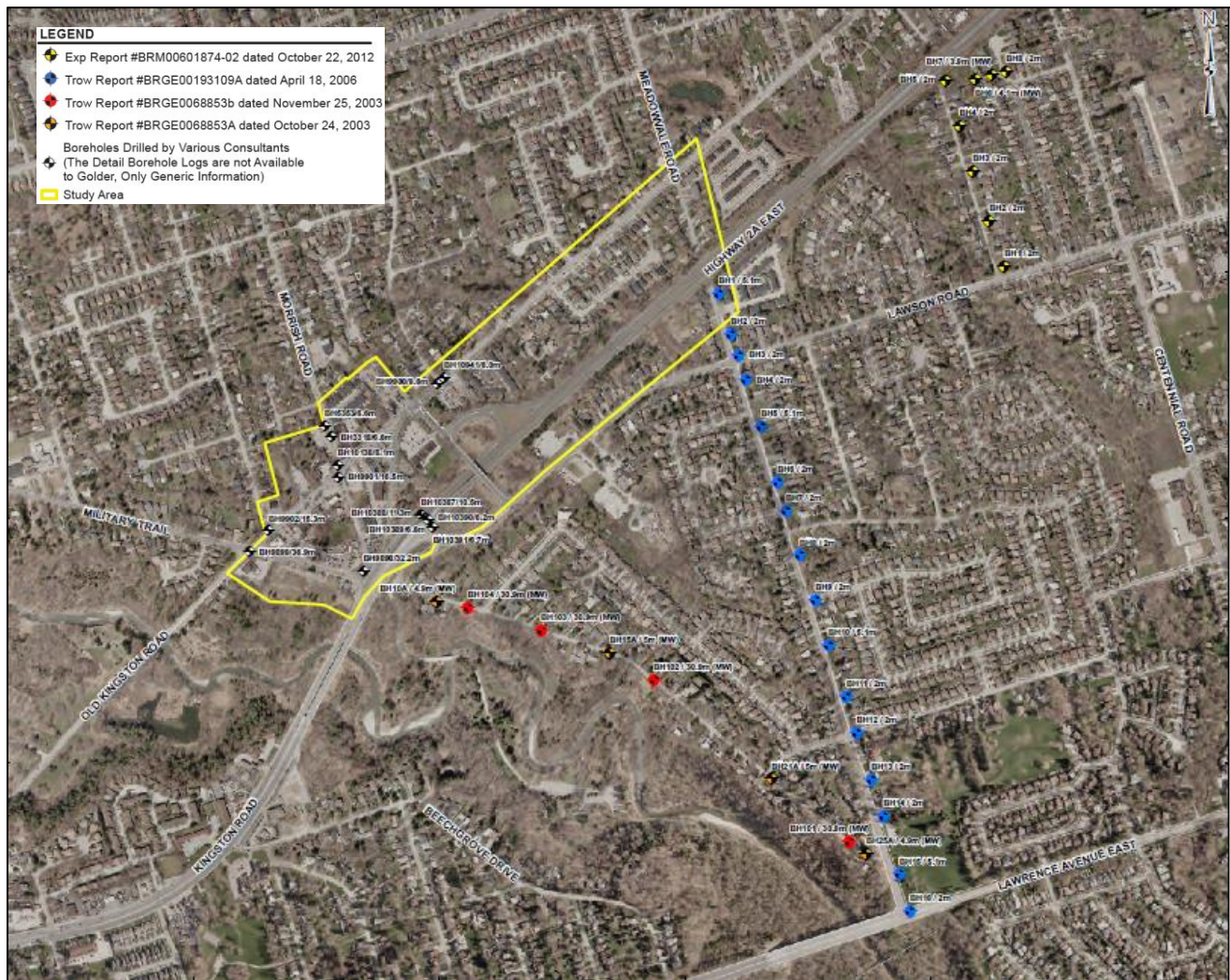
4.6 Geotechnical Desktop Study

Available geotechnical information for the study area was reviewed to identify subsurface conditions reported as part of historical subsurface investigations that were previously completed at select locations in the area. Historical borehole data for the area has been recorded within the City of Toronto’s borehole database. This information was also reviewed to provide an overview of subsurface conditions in the study area, identify gaps in the subsurface

data and determine if available subsurface information is sufficient to support future subsurface investigations.

The previous investigation reports and associated borehole logs were reviewed to determine the approximate location and subsurface condition at each borehole location. The findings of the geotechnical desktop study indicated that the majority of historical geotechnical boreholes reviewed were located outside of the TMP study area limits (please refer to **Exhibit 4-5**).

Exhibit 4-5: Geotechnical Data Review Summary



It was noted that the available existing information for the study area was not sufficient for preliminary design purposes and that further investigations and analyses would be required at the preliminary design stage. In addition, for projects that are identified as part of the preferred solution and carried forward to the functional design levels as part of this TMP, additional geotechnical investigations were completed, as discussed in **Section 12.2**.

A copy of the Geotechnical Desktop Review and the Geotechnical Borehole Investigation reports are included in **Appendix E** of this report.

4.7 Subsurface Utility Engineering (SUE) Study

As discussed in **Section 12.3**, A Level B SUE was undertaken for the Schedule A+ projects recommended as part of this TMP. A Level D Subsurface Utility Engineering (SUE) Study was conducted for the study area in accordance with the CI/ASCE Standard 38-02. This pre-design stage level of study allows for identification of potential utility conflicts. The Level D study was conducted by contacting utilities and gathering record information for the project study area. Using the collected information and professional judgement, a drawing was prepared that identifies the locations of the underground utilities in the study area. A copy of the SUE Level D drawings and the Level B SUE report are included in **Appendix F** of this report.