Environmental Impact Study Report

Hillside Subdivision

287 & 318 Lake Street, Town of Picton

County of Prince Edward

Prepared for:

Homes First Development Corporation
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Submitted by:

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1. Introduction

Greer Galloway, a division of Jp2g Consultants Inc. was retained by Home First Development Corporation to prepare an Environmental Impact Study (EIS) report in support of the Hillside Residential Development at 287 & 318 Lake Street, Part of Lot 23, Concession 2 & 3 Military Track, Former Township of Hallowell, Town of Picton, County of Prince Edward. The 24.26 ha property consists of two (2) parcels. Figure 1, Site Location Plan, shows the location of the property.

This report has been prepared to support an Official Plan Amendment, Zoning Bylaw Amendment and Draft Plan of Subdivision application to be submitted to the County of Prince Edward (The County). The County requires an EIS as the Marsh Creek crosses the property and there is an escarpment and valleyland/wetland related to the creek. These features are within an area zoned Environmental Protection. In addition, unevaluated wetlands are mapped to the north and south of the property in adjacent lands. The study addresses the potential negative environmental impacts to the natural heritage features present in and adjacent (within 120 m) to the property and to determine compliance with the Provincial Planning Statement (2024).

This report is undertaken to characterize the existing conditions of the property and adjacent lands, by assessing background information obtained from agencies and field assessments. The report contains the information required for an EIS based on the County's Terms of Reference. This requires that the study:

a. Identify and evaluate the nature and boundaries of any natural heritage features, associated natural heritage corridors/linkages, ecological functions, and values on or adjacent to the site that could be adversely affected by the proposed development;

b. describe and map proposed development activities;

c. predict the effects of the proposed development on the various components of the environment on and adjacent to the site, such as wildlife, fish, vegetation, soil, surface water, groundwater, air and any other relevant factors, taking into consideration effects during and after site disturbance;

d. identify and evaluate the significance of all predicted adverse and positive effects on the various environmental considerations including impacts to natural features and their ecological functions;

e. itemize and recommend all measures that can be taken to avoid, reduce, or mitigate the predicted negative impacts; and

f. evaluate the cumulative effect that the project (and any other known projects or activities) may have following implementation of any mitigation measures on the natural features and ecological functions identified for protection.

2. Background

The 26.24-hectare property is located on Part of Lot 23, Concession 2 & 3 Military Track, Former Township of Hallowell, Prince Edward County (civic address 287 & 318 Lake Street). The irregular-shaped property is at the intersection of Lake Street and County Road 22 and consists of two (2) parcels (north and south).

The property is in the urban area of the Town of Picton. Land uses surrounding the property include residential, commercial, industrial, agricultural and land covered with natural/successional vegetation and/or agricultural fields.

According to the County's Comprehensive Zoning By-law 1816-2006 (October 23rd, 2006), Schedule A1-West Picton, the property is zoned Future Development and Environmental Protection. There is a building, a barn and an old quarry on the north parcel of the property. Woodland covers more than half the area of the property.

Marsh Creek is within the property and crosses it in a south to north direction. Escarpments, valleyland and the Marsh Creek are present in the property and are zoned Environmental Protection by the planning policies.

Schedule B – Natural Features of the County's Official Plan (July 8th, 2021) show the northwest part of the property within the Watershed for Waring's Creek. The creek and wetland as part of a Valleyland.

Schedule C – Constraint Areas of the County's Official Plan (July 8th, 2021) show the property within the Source Water Protection – Intake Protection Zone and presence of steep slopes (>25 % and >3 m change in elevation).

The historical use of the property is agricultural and natural area. Aerial photography from 1940 and 1954 shows the property as being subject to agricultural activities except for the escarpments and area where the woodland/wetland and creek are currently located. The existing building and barn appear in the photographs. It is possible that the wetland and woodland were subject to cattle grazing as currently occurring.

According to the Ministry of Natural Resources (MNR) NHIC online mapping the property is not within an Area of Natural and Scientific Interest or Provincially Significant Wetland. There is woodland and an unevaluated wetland within the property. Field investigations indicate the wetlands mapped south of the property and around Marsh Creek do not exist, but a wetland was identified on the central part of the property, surrounding the Marsh Creek. The Beaver Meadow Complex is the closest Provincially Significant Wetland to the property and is located approximately 950 m west of the property boundary. Natural Heritage features identified on the property are presented in Figure 2.

3. Environmental Policy Context

This EIS report has been prepared with reference to the legislation and policies described in the following subsections:

Provincial Planning Statement

The Ontario Planning Act (1990) requires that planning decisions be consistent with the new Provincial Planning Statement (PPS) that came into effect October 20, 2024. Section 4.1 of the PPS specifies policy related to protection of natural heritage features and functions.

Subsection 4.1.4 Development and Site Alteration shall not be permitted in:

a. Significant wetlands in Ecoregions 5E, 6E and 7E; and
b. Significant coastal wetlands.

Subsection 4.1.5 Development and Site Alteration shall not be permitted in:

a. Significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River);
b. Significant wildlife habitat; and
c. Significant areas of natural and scientific interest unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

Subsection 4.1.6 states that development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

Subsection 4.1.7 states that development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

Subsection 4.1.8 states that development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 4.1.4, 4.1.5, and 4.1.6 unless the ecological

function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

Species at Risk Act

The purposes of the Species at Risk Act (SARA) are to prevent wildlife species in Canada from disappearing, to provide for the recovery of wildlife species that are extirpated (no longer exist in the wild in Canada), endangered, or threatened as a result of human activity, and to manage species of special concern to prevent them from becoming endangered or threatened. A series of measures applicable across Canada provides the framework to accomplish these goals. Some of these measures establish how governments, organizations, and individuals in Canada work together, while others implement a species assessment process to ensure the protection and recovery of species.

Endangered Species Act

Species listed on the Species at Risk in Ontario (SARO) list as endangered or threatened are protected under the *Endangered Species Act*, 2007 (ESA). Section 9(1) of the ESA prohibits a person from killing, harming, harassing, capturing or taking a member of a species listed as endangered, threatened or extirpated on the SARO list. Section 10(1) of the ESA prohibits the damage or destruction of habitat of a species listed as endangered or threatened on the SARO list.

Conservation Authority

The Quinte Region Conservation Authority (Quinte Conservation) regulates river or stream valleys, wetlands, and hazardous lands (valleylands, shorelines, floodplains) under the Ontario Regulation 41/24, as made under Section 28 of the *Conservation Authorities Act*. The purpose of the regulation is to prevent and restrict development and site alterations near water and wetlands to protect the public from flooding, erosion and other natural hazards.

Municipality of Prince Edward County

The property is located within the jurisdiction of Prince Edward County. The County's Official Plan (July 8th, 2021) describes the planning policies for the land use and their application to meet the specific needs of the communities. The property is located within Picton Urban Centre (Map 14 – Picton Settlement Boundary). According to the Official Plan, the Secondary Plan for the Urban Centre of Picton shall be deemed to be Part of the new Official Plan. The land uses for the property based on Schedule A – Secondary Plan of Picton Urban Centre are Town Residential, Town Corridor, Parks, Open Space, and Environmental Protection. See Figure 3: Land Use Designation.

The County of Prince Edward Comprehensive Zoning By-law 1816-2006 (October 23rd, 2006) establishes a land use designation of Future Development (FD) and Environmental Protection (EP). Uses permitted in the Environmental Protection Areas are of low impact and limited to open spaces, conservation, or flood protection, as described in the Zoning By-law document. See Figure 3: Land Use Designation.

The land within the property designated Environmental Protection Area in the Picton Urban Centre Secondary Plan of the Official Plan does not align with the Environmental Protection Area included in the Zoning By-law. Development is proposed in part of the Secondary Plan EP area.

Policy 2.10.3 of the Picton Urban Centre Secondary Plan states: *Recognize that the boundaries of the Environmental Protection Area may change as a result of more detailed analysis completed by public agencies such as Quinte Conservation and the Ministry of Natural Resources, or as a result of project-specific Environmental Impact Studies (EIS) completed by an applicant.* An amendment of Schedule A of the Official Plan is requested to re-designate the southern potion of the site's land use from Environmental Protection and

Town Residential to Town Corridor, preserving the ecological sensitive features such as Marsh Creek and Valleyland/wetland under the land designated Environmental Protection.

4. Proposed Development

The property is located at the south edge of the Picton Urban Area. The owner of the property is proposing the construction of the Hillside Residential Development which includes 313 rental units (290 apartment units and 86 townhomes), 54 link units, and 53 single detached units. The development also includes access roads, a 1.73 ha of green space, and 1.15 ha for storm water management (SWM) ponds. The owner is in the process to purchase the piece of land located in the southwest corner where part of the storm water management pond is proposed and the closed road allowance. The development will have access to both Lake Street and County Road 22. The roads collect and distribute traffic at relatively low operating speeds to and from local roads. The development will be serviced by municipal water and sewer. Part of the deciduous forest, the whole valleyland/wetland and the Marsh Creek located in the Environmental Protection Area on the east side of the property will be outside the development area. A 50 m setback from the wetland boundary and 15 m from the creek have been established as specified in the County's Official Plan. A 15 m setback has been applied to the top of the slope to protect the development from natural hazards. The SWM facilities are proposed in the southwest and northwest corners of the property, away from the protection area. Figure 4 shows the proposed Residential Development, and the Site Plan is included in Appendix A.

5. Study Approach

5.1 Study Area

The study area for this EIS is the subject property and adjacent lands within a 120 m radius of the property boundary. The study area includes natural, aquatic, agricultural and residential areas. The comprehensive desktop review included the following sources:

- Ontario Ministry of Natural Resources (MNR) Natural Heritage Information Centre (NHIC) geographic, species and natural areas information queries.
- Ontario Ministry of Natural Resources (MNR) Wetlands information query.
- Aquatic Species at Risk online Maps (Fisheries and Oceans Canada, 2024).
- Fish ON-Line (Ministry of Natural Resources) online mapping, 2024.
- Ontario Reptile and Amphibian Atlas (ORAA) (Ontario Nature, 2024).
- Ontario Breeding Birds Atlas (OBBA) – First and Second Atlas, Birds Studies Canada.
- Atlas of the Mammals of Ontario (Dobbyn 1994).
- Geology, topography, hydrogeology, hydrology maps and reports.
- Existing aerial photography.
- County of Prince Edward Official Plan (July 8th, 2021).
- County of Prince Edward Comprehensive Zoning By-law No. 1816-2006 (October 23rd, 2006).

5.2 Field Investigations

The natural features were evaluated through field investigations. Field investigations were carried out to determine the existing conditions of the natural features, document breeding birds and other wildlife, identify wildlife habitat, identify vegetation communities, obtain a plant inventory, and determine wetland boundary. As the property is composed of two (2) parcels, the site investigations in the south parcel were performed in 2023 and in the north parcel in 2023 and 2024.

Table 1: Summary of Natural Environment Site Investigations

Date	Field Time	Weather	Inspection staff	Field Information
South Parcel				
April 13, 2023	10:30 am to 2:00 pm	Sunny 11°C	Y. Ramirez Sophie Prust	Bat roosting habitat assessment, early frogs, vegetation communities, plant inventory, and wildlife.
April 21, 2023	10:00 pm to 10:30 pm	Breeze, Partially Cloudy 15°C	Y. Ramirez	Early frogs
May 12, 2023	8:45 am to 12:45 pm	Sunny, Breeze, 15°C	Y. Ramirez	Breeding Birds; Ecological Land Classification; plant inventory; wildlife and wildlife habitat assessments. Wetland assessment.
June 9, 2023	9:30 pm to 10:30 pm	Cloudy, no precipitation, Breeze 14°C	Y. Ramirez	Amphibian Survey, Eastern Whip-poor-will survey
June 13, 2023	7:00 am to 1:00 pm	Sunny, Humid, breeze, 21°C	Y. Ramirez	Breeding Birds; Ecological Land Classification; plant inventory; wildlife and wildlife habitat assessments.
July 5, 2023	10:00 pm to 11:00 pm	Calm wind, clear sky, no precipitation	Y. Ramirez	Eastern Whip-poor-will survey
July 19, 2023	7:00 am to 11:30 am	Sunny with some clouds, Breeze, 20°C	Y. Ramirez	Breeding Birds; Ecological Land Classification; plant inventory; wildlife and wildlife habitat assessments, wetland assessment.
July 20, 2023	9:00 pm to 10:00 pm	Clear sky, no precipitation, humid 20°C	Y. Ramirez	Amphibian Survey
October 12, 2023	8:00 am to 12:30 pm	Sunny with some clouds, breeze, 15°C	Y. Ramirez	Migratory Birds, late summer plants, wildlife.
North Parcel				
November 23rd, 2023	10:30 am to 3:00 pm	Sunny and cloudy 11°C	Y. Ramirez	Wetland Evaluation; fall plant inventory; wildlife and wildlife habitat assessment.

Date	Field Time	Weather	Inspection staff	Field Information
April 22nd, 2024	8:00 to 8:30 pm	Calm wind, Clear sky 11°C	Y. Ramirez Lauren Dupuis	Early frogs
May 24th, 2024	7:00 am to 11:30 am	Sunny, Calm wind with some breeze 16°C	Y. Ramirez	Breeding birds; ecological land classification; plant inventory; wildlife and wildlife habitat assessments; wetland assessment.
June 14th, 2024	7:00 am to 11:00 am	Sunny, Breeze 18°C	Y. Ramirez Lauren Dupuis	Breeding birds; ecological land classification; plant inventory; wildlife and wildlife habitat assessments.
August 16th, 2024	7:15 am to 11:30 pm	Sunny and cloudy, Calm wind, 16°C	Y. Ramirez	Ecological land classification; plant inventory; wildlife and wildlife habitat assessments; wetland assessment.
September 27th, 2024	7:30 am to 11:30 am	Sunny, Calm wind, clear sky, no precipitation, cool morning, 13°C	Y. Ramirez	Breeding birds; ecological land classification; plant inventory; wildlife and wildlife habitat assessments.

5.3 Vegetation Community Mapping

Vegetation Communities were determined using a combination of aerial photography and field surveys. Aerial imagery allowed the delineation of distinct community boundaries and field assessments were used to collect data to classify each community type. The Ecological Land Classification for Southern Ontario (Lee et al., 1998) was used to classify vegetation communities.

Butternut is listed as Endangered species under Ontario's Endangered Species Act (2007) and the SARA. Butternut trees are present on the property. The Butternut trees on the south parcel were assessed by a qualified Butternut health assessor on May 25th, 2023. The Butternut trees on the north parcel will need to be assessed by a qualified Butternut health assessor.

5.4 Wetland Boundary

The Ministry of Natural Resources (MNR) is the authority responsible for the evaluation of the wetlands in Ontario. Wetlands are evaluated and mapped following the methodology established on the Ontario Wetland Evaluation System (OWES) Manuals for Southern and Northern Ontario Regions. The wetlands and their functions are evaluated based on the biological, social, hydrological and special features. The wetlands with the highest scores are designated Provincially Significant Wetlands. The unevaluated wetlands are also mapped by the MNR. Field verification is required in order to identify wetlands and determine their boundaries. Wetland is mapped in the property, lands to the north and south of the subject property. The wetland mapped

in the property within the forest and west of the creek do not exist; however, wetland is present surrounding Marsh Creek outside the mapped wetlands. The boundary of the wetland in the property was identified using the 50% wetland vegetation rule, as specified by the OWES (2022). Soil samples were collected and analyzed to confirm the wetland boundaries where the vegetation was not the conclusive factor. A hand auger was used to collect the soil samples. Wetland boundaries in the property were marked with a hand-held GPS unit for incorporation into the Concept Site Plan.

Wetland was delineated in accordance with Quinte Region Conservation's definition:

a) is seasonally or permanently covered by shallow water or has a water table close to or at its surface,
b) directly contributes to the hydrological function of a watershed through connection with a surface watercourse,
c) has hydric soils, the formation of which has been caused by the presence of abundant water, and
d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which has been favoured by the presence of abundant water but does not include periodically soaked or wet land that is used for agricultural purposes and no longer exhibits a wetland characteristic referred to in clause (c) or (d).

5.5 Wildlife Surveys

Breeding bird surveys were performed during the site visits on May 12, June 13, and July 19, 2023 in the south parcel and on April 22nd, May 24th, and June 14th, 2024 on the north parcel. Breeding bird survey points were done early in the morning, with low wind speed, and absence of rain/fog as per the Ontario Breeding Bird Protocol (OBBA). The observations were performed for 5 minutes to determine the breeding evidence. Figure 7 shows the location of the survey points.

Eastern Whip-poor-will is listed on the SARO as a threatened species. Review of bird records (Birds Canada, 2005) indicated a 26 percent probability of finding the Eastern Whip-poor-will in the area. The deciduous forest present in the property is potentially a suitable habitat for this species. Surveys were conducted in June and July 2023 around the full moon. The MNRF protocol for Eastern Whip-poor-will survey was followed (MNRF, 2014). A survey during the month of May was not conducted due to weather conditions prevailing around the full moon.

The presence of frogs and toads and their habitat was determined by performing auditory surveys in 2023 and 2024 and recording all the incidental observations. The Marsh Monitoring Program's Participants Handbook for Surveying Amphibians was applied (Birds Studies Canada, 2008).

Bats use two different habitats for roosting during the day. Hibernation roosts are found in caves, hollow trees, abandoned buildings, and abandoned mines. Maternity roosts used by bats are in woodlands with appropriate tree snags or cavities. A snag or cavity tree is defined as a standing live or dead tree greater than 25 cm in diameter at breast height (DBH), with cavities, caves, crevices, hollows, loose bark, and cracks in cliffs. High quality or significant wildlife habitat (SWH) is defined as woodland with greater than 10 roost trees per hectare. To determine the presence of suitable habitat for bats on and/or adjacent to the property, a maternity roost survey was conducted in 2023. Following the Bat and Bat Habitats: Guidelines for Wind Power Projects (MNRF, 2011) a bat maternity habitat assessment was conducted early in the spring (April 2023) in the forest located in the south property. The protocol specifies that for sites with ≤10 ha of treed forest or swamp ELC community types, a minimum of 10 randomly selected plots are to be surveyed, with an additional plot added for each extra hectare up to a maximum of 35 plots. For each plot a survey area of 12.6 m radius (0.05 ha) is to be assessed. Surveys are conducted during the leaf-off period (fall to early spring). The snag density has to be calculated to determine the significance of the area as a bat maternity roost habitat. For this study, thirteen (13) plots were randomly surveyed. See Figure 7 for location of the plots.

No other surveys were conducted, during the site investigations, all the observed species were documented, including birds, reptiles, amphibians, and mammals. Any sightings or signs (i.e. scat, tracks, vocalizations) indicating potential use of the site by wildlife was documented. Site assessments were performed from early in

the morning (7:00 am) to early afternoon (1:00 pm) to observe wildlife, on warm days, with low wind speed and absence of rain as recommended on the survey protocols.

5.6 Species at Risk

Species at Risk (SAR) included those species listed in the ESA and the SARA. An initial desktop review for potential Species at Risk (SAR) was conducted to determine presence and potential habitat for SAR in the study area. The MNR online NHIC map was consulted to identify the SAR likely to be present in the property and adjacent land. Available information was reviewed for additional records of SAR. No species-specific surveys were conducted for SAR except for Whip-poor-will. General observations of SAR were also recorded as part of the site investigations performed at the site.

5.7 Aquatic Habitat, Surface Water and Drainage Feature

The aquatic habitat investigation included a visual inspection of the property and adjacent land to identify and map all the aquatic features on the property including watercourses (permanent and intermittent), seeps, springs, and overland drainage paths. Aerial photography and topographic base mapping and topographic survey for the property were reviewed to identify aquatic features on the property and adjacent lands. The aquatic features in the property were evaluated to determine channel structure, substrates, and flow, and assess presence of fish habitat.

6. Existing Conditions

The property is within the urban area of Picton. The property has been historically used for agriculture. Currently, the property is vacant and covered with vegetation except for two active agricultural fields. An abandoned building and a barn are in it. Land use of the immediate area is a mixture of rural residential, commercial, industrial, agricultural, and natural areas. Access to the property is via County Road 22 and Lake Street. There is an entrance at the southeast corner of the agricultural fields on County Road 22, that is used for farming machinery and equipment. A second entrance with a gate is located on County Road 22, in the southeast part of the property. A third entrance is located on Lake Street. There is a driveway covered with gravel and plants growing within the gravel. An area north of the entrance is observed flat where the native soil and part of the bedrock have been removed. Also, there is an abandoned pit where the limestone has been excavated. The east side of the pit is approximately 7 m high and 2 m on the northwest side. Currently, the pit is covered with vegetation with some debris in it.

The building and the barn are behind the pit close to the edge of the escarpment. Most of the walls and roofs of the buildings have collapsed. Manitoba maple, trembling aspen and eastern red cedar are growing around the buildings. Remains of a building were found approximately 45 m north of the building and barn, at the edge of the escarpment. There are two drilled wells that were part of a hydrogeology assessment. These wells need to be decommissioned as per Regulation 903. Debris from past agricultural activities is found around the property.

Crops found in the agricultural fields include soybeans and hay. As the owner allows the previous landowner to continue using the property for farming operations, it has been observed that cattle are allowed to graze in the forest and wetland areas. This area is fenced. Several trails made by cattle were observed within the forest and wetland. There is a 1.7 m diameter corrugated culvert under County Road 22 that is used for the cattle to move between properties without the need to cross County Road 22.

On the east part of the property, a valley is present within the escarpments. The valley and escarpments are covered with vegetation. Marsh Creek runs throughout the valley. Marsh Creek crosses the property in a north to south direction. The headwaters for the creek are identified to be south of County Road 22. Surface water

flows from the headwaters to the property under County Road 22 through a 27 cm blue pipe. There is a wire fence that separates the south and the north parcels. Surface water from the south property flows into the subject property through two creek branches which downslope they combine into a single channel until the fence wire that separates the parcels is reached.

North of the wire fence, a high ground island separates the two branches for approximately 20 m, then the branches combine into a single branch. Fron the point the creek combines into a one branch in the north parcel, it shows a defined channel. Two concrete culverts and the remains of a wood bridge that allowed access to the land on the east side of the creek were found north of the property. The aerial photograph from 1954 shows that the creek was not in the current location, it was located to the east.

Ash trees are a common species found in southern Ontario Forests. The ashes populations are highly impacted due to the emerald ash borer (EAB). In the property, some trees are infected with the beetle.

The property is covered with deciduous forest and red cedar woodland. Few fallen trees were observed in the deciduous forest as the trees are used for firewood. Several piles of chopped wood were observed within the forest.

Based on the MNR natural heritage online mapping, an unevaluated wetland is mapped in the deciduous forest in the south parcel and around the creek in the north parcel. During the site investigations, it was found that these wetlands do not exist; however, wetland was identified surrounding the creek (valleyland). The creek and wetland are impacted due to cattle grazing. The ash trees present in the forested area were observed dead or highly impacted by the emerald ash borer (EAB). A photolog showing the existing conditions at the property is included in Appendix E.

6.1 Geology and Soils

The surficial physiography of the area has resulted primarily from glacial activity during the Late Wisconsinan Substage of the Quaternary period (circa 23,000 to 10,000 BP). The site is part of the Prince Edward Peninsula (Chapman and Putnam 1984). This region is separated from the mainland by the Bay of Quinte and is characterized by low relief and shallow soils. The geology consists of upper Middle Ordovician rocks that unconformably overlie Precambrian basement rocks of the Grenville Province. Overburden thickness is variable, but generally, thin and large portions of the County have less than 1 m of overburden. While the subject site is mapped as being underlain by a thin mantle of quaternary sediments, actual overburden thickness across the site were found to be in the range of 0.45 to 2.3 m.

The bedrock consists of limestones and shales laid down over older Precambrian-age rock beginning in the middle Ordovician (approximately 460 million years ago) as part of a continent-wide marine transgression. This transgression (a period of increasing sea levels) deposited, in order, the Shadow Lake, Gull River, Bobcaygeon, Verulam and Lindsay Formations (Armstrong and Carter, 2010). The Verulam and Lindsay Formations are to be the uppermost bedrock units beneath the property. The Verulam formation is generally shallow dip to the south. The thickness of the Verulam formation is around 90 m. It is comprised of brown and grey finely crystalline limestone with smaller 3 to 15 cm interbeds of shale. The Lindsay formation is younger than the Verulam and is typified by grey sublithographic to finely crystalline, nodular and shaly limestone (Carson, 1981). The Verulam Formation is mapped as occurring in the east part of the property. It is interpreted that a fault crossing the property separates both formations. Outcrops are mapped within the property.

The overburden geology is composed of unconsolidated deposits resulting primarily from glacial activity. The Soils Map of the County of Prince Edward, Ontario, Report No. 10 classifies soils developed on this property as Pontypool sand. A smaller area within the eastern portion of property is classified as Farmington loam. The Pontypool sand is glacio-fluvial coarse sand to cobbly gravel with a steep topography and is found associated with the Picton Esker. The surface layer is dark brown to yellow coarse sand, and cobblestone, single grain structure, underlain by a thin layer of brown sandy loam, then cobbly grey sand and gravel. Drainage is excessive and this can affect the quality of agricultural activity on these soils (Richards and Morwick, 1948).

6.2 Topography and Drainage

Topography on the property is rolling to moderate steep dominated by a central North-South trending topographic high with subsurface drainage to the east and west. Elevations in the property were determined from the survey performed by the Greer Galloway Group Inc., on November 10, 2022 in the south parcel, on February 1st, 2024 on the north parcel and the Ontario Base online Mapping (MNR), ranging from 100 to 134 metres Above Sea Level (mASL). The highest elevation is reported at the east, top of the escarpment and the lowest west close to the road. A steep area is located between the deciduous forest and the wetland with almost a vertical slope several meters high (west escarpment), and bedrock exposed and on the northeast corner and the quarry.

Drainage in the property is determined by the slope. As the property has rolling-steep topography, drainage is to the lowest areas within the property which are the wetland and the low area in the middle of the property and then west to the property boundary and the road ditch.

6.3 Hydrology and Hydrogeology

The County is subdivided into ten quaternary sub-watersheds which drain into the larger recognizable Lakes and bays. The Waring's Creek sub-watershed flows into West Lake. The headwaters of the Waring's Creek begin within the Picton-Hallowell urban boundary, and the watershed encompasses a significant portion of the urban area. The northwest part of the property falls within the Waring's Creek subwatershed. The Marsh Creek is part of the subwatershed that drains into the Picton Bay. The headwaters for the Marsh Creek are lands south of the property where surface water from precipitation flows to the south crossing County Road 22 through a culvert and then flows through the property in a north direction to final discharge to the Bay of Picton. A watercourse is mapped on the central east part of the property in adjacent land. Overland flow was observed in early spring, but a defined channel was not identified. No other surface water features are found in the property or adjacent lands.

In Prince Edward County, groundwater flow follows the land topography flowing outwards from the flat land toward the shorelines. The pathways of many streams are controlled by bedrock depressions shaped by bedrock faults (Prince Edward County, 2012). Groundwater on the property is anticipated to flow in the northwestern direction following topography and secondary more local direction towards Marsh Creek located in the eastern portion. Review of well records in a 0.5 km radius show wells yields range from 13.6 to 68.2 litres/minute with groundwater found from 10.7 to 26.0 metres below surface. Groundwater quality in the area is generally hard, sometimes sulphury with poor yields (MECP, 2024).

Based on Schedule C: Constraints Areas of the County's Official Plan, the Marsh Creek is part of a Source Water Protection – Intake Protection Zone. Drinking water intake for the Town of Picton is in the Picton Bay and the Marsh Creek discharges to the Bay. The Marsh Creek is within the EP area where development is not permitted. A restoration plan is recommended to restore and enhance the ecological functions of the creek and riparian area. Two SWM ponds are proposed but surface water will not be discharged to the creek. Therefore, impacts to the water quality in the creek are not expected. Stopping cattle from grazing in the wetland and applying a restoration plan will improve the water quality in the creek.

6.4 Vegetation Communities

Prince Edward County is in the Mixed wood Plains Ecozone which occupies all of Ontario south of the Canadian Shield. This area is characterized by mixed deciduous-evergreen forests and tolerant hardwood forests, wetlands, and tallgrass prairies and alvars developed on the limestone bedrock (Prince Edward County, 2012).

The property is on the south edge of the Picton Urban Centre where the native vegetation has been replaced by urban development. Past activities such as agricultural practices have also impacted the natural features. Most of the natural features in the Town of Picton are present in patches of variable size around development.

However, a large natural area is situated on the east side of Town which includes the vegetation present in the property.

Aerial photographs from 1940 and 1954 show that most of the property was used for agriculture except for the escarpments located on the central and east part of the property which were covered with vegetation. The deciduous forest currently present on the property also appears in the historical photographs. The existing red cedar forest is a result of the abandonment of agricultural practices. Also, Marsh Creek channel on the north parcel was not in its current location, it was more to the east.

A valley is present between the escarpments that run along the subject property. In the past, the valley was subject to agricultural activities. It is unknown when the agricultural practices stopped. However, remains of these practices still are evident as the identified meadow is periodically “soaked” or ‘wet” as a result of agricultural practices that created long trenches and holes made by plowing.

Hedgerow vegetation is found in the south parcel south, east, and west along the edges of the agricultural fields and between properties. The species found in these areas are typical of disturbed edge habitat, where traffic, road maintenance, agricultural activities and other activities introduce a seed source and provide regular disturbance. Trees, shrubs and herbaceous species are found north, south and east with herbaceous species as dominant in the west side.

An approximate area of 5.5 ha is occupied with agricultural fields with cash crops. A field approximately 4 ha in size was observed with soybeans and a field 1.5 ha in size was observed with hay.

Ten (10) vegetation communities were identified in the property (Figure 5: Vegetation Communities). A description of each community is included in the following table while a list of the plant species identified at the property is included in Appendix B.

Table 2: ELC Vegetation Communities

ELC Community	Community Description
OAG – Open Agriculture	The fields are actively producing cash crops. Soybeans and hay are the crops planted and observed during the site investigations.
FOD5 Dry-Fresh Sugar Maple Deciduous Forest	This community represents the mature forest found on the property. The tree canopy is represented by sugar maple (*Acer saccharum*), bitternut hickory (*Carya cordiformis*), ironwood (*Ostrya virginiana*), red oak (*Quercus rubra*), shagbark hickory (*Carya ovata*), American beech (*Fagus grandifolia*), black cherry (*Prunus serotina*), yellow birch (*Betula alleghaniensis*), white birch (*Betula papyrifera*), trembling aspen (*Populus tremuloides*), large-toothed aspen (*Populus grandidentata*), crab apple (*Malus sp.*), basswood (*Tilia americana*), Manitoba maple (*Acer negundo*), and easter red cedar (*Juniperus virginiana*). Eastern white pine (*Pinus strobus*) is found within the forest occupying a minimum area. Shrubs species include red-berried elderberry (*Sambucus pubens*), alternate-leaved dogwood (*Cornus alternifolia*), chokecherry (*Prunus virginiana*), nannyberry (*Viburnum lentago*), common prickly ash (*Zanthoxylum americanum*), common buckthorn (*Rhamnus cathartica*), Tatarian honeysuckle (*Lonicara tatarica*), and saplings of the canopy layer species. Ground vegetation is represented by jack-in-the-pulpit (*Arisaema triphyllum*), long-spurred violet (*Viola rostrata*), early meadow-rue (*Thalictrum dioicum*), common black currant (*Ribes americanum*), bloodroot (*Sanguinaria canadensis*), white trillium (*Trillium grandiflorum*), yellow trout-lily (*Erythronium americanum*), wood anemone (*Anemone*

	quinquefolia), wild leek (*Allium tricoccum*), wild strawberry (*Fragaria virginiana*), mayapple (*Podophyllum peltatum*), red trillium (*Trillium erectum*), wild lily of the valley (*Maianthemum canadense*), herb-Robert (*Geranium robertianum*), kidney-leaf buttercup (*Ranunculus abortivus*), small bedstraw (*Gallium trifidum*), common helleborine (*Epipactis helleborine*), common juniper (*Juniperus communis*), horsetail (*Equisetum sp.*), garlic mustard (*Alliaria petiolata*), common dandelion (*Taraxacum officinale*), cleavers (*Galium aparine*), common yellow woodsorrel (*Oxalis stricta*), and Richardson's sedge (*Carex richrdsonii*). Species found along the edges of the forest are typical of disturbed edge habitat with abundance of herbaceous species, similar to the species found in the hedgerow vegetation.
FOC2-1 – Dry – Fresh Red Cedar Coniferous Forest	This community covers the largest area within the property. It is found on the east side of the property. The dominant species is the eastern red cedar. Other tree species found include crab apple and European mountain ash (*Sorbus aucuparia*). Shrub species include common prickly ash, common juniper, Tatarian honeysuckle, and common buckthorn. Herbaceous species include common milkweed (*Asclepias syriaca*), tall buttercup (*Ranunculus acris*), oxeye daisy (*Leucanthemum vulgare*), poison ivy (*Toxicodendron radicans*), cleavers, common dandelion, great mullein (*Verbascum Thapsus*), herb-Robert, Canada goldenrod (*Solidago canadensis)*, Deptford pink (*Dianthus armeria*), spinulose wood fern (*Dryopteris carthusiana*), sensitive fern (*Onoclea sensibilis*), sedges, mosses, and grasses.
CUW1-1 Red Cedar Cultural Woodland	This community occupies the southeast and northwest part of the property. The dominant species is the eastern red cedar. Other tree species found include crab apple, common pear (*Pyrus communis*), black walnut (*Juglans nigra*), Manitoba maple, bur oak (*Quercus macrocarpa*), white ash (*Fraxinus americana*), green ash (*Fraxinus pennsylvanica*), black cherry, American elm (*Ulmus americana*), butternut (*Juglans cinerea*), and European mountain ash. Shrub species include staghorn sumac (*Rhus typhina*), common prickly ash, Tatarian honeysuckle, and common buckthorn. Herbaceous species include common milkweed, tall buttercup, ox-eye daisy, poison ivy, cleavers, common dandelion, great mullein, ground juniper, herb Robert, Canada goldenrod, Deptford pink, sedges, mosses, and grasses. This community is in a successional stage as available aerial photography shows this area as part of agricultural fields. The eastern red cedar forms a dense forest where the ground is covered with mosses, with a shrub layer present in open areas within this forest.
CUW1-2 White Pine Cultural Woodland	This community is very small and it is found between meadow and deciduous forest vegetation on the southcentral part of the property. It is distinguished from the other communities as the dominant species is the eastern white pine. Other tree species present include sugar maple, white ash, green ash, eastern red cedar, black walnut, and common pear. Other species found include common buckthorn, common dandelion, Canada

	goldenrod, and seedlings of the tree species. The community is tight resulting in low ground cover.
MAS2-1 – Cattail Mineral Shallow Marsh	This community is present on the east side of Marsh Creek. It is composed of narrow-leaved cattail (*Thypha angustifolia*), reed canary grass (*Phalaris arundinacea*), red-top grass (*Agrostis gigantea*), wild teasel (*Dipsacus fullonum*), tall buttercup, purple loosestrife (*Lythrum salicaria*), curly dock (*Rumex crispus*), spotted joe-pye-weed (*Eupatorium maculatum*), boneset (*Eupatorium perfoliatum*), woolgrass bulrush (*Scirpus atrovirens*), northern water plantain (*Alisma plantago-aquatica*), white meadowsweet (*Spiraea alba*), swamp milkweed (*Asclepias incarnata*), northern bugleweed (*Lycopus uniflorus*), American wild mint (*Mentha canadensis*), climbing nightshade (*Solanum dulcamara*), horsetail (*Equisetum sp.*), retrorse sedge (*Carex retrorsa*), blister sedge (*Carex vesicaria*), swamp thistle (*Cirsium muticum*), sensitive fern (*Onoclea sensibilis*), and ostrich fern (*Matteuccia struthiopteris*).
MAM2-3 – Red-top Mineral Meadow Marsh	This community is found around Marsh Creek. It is composed of red-top grass, elecampane (*Inula helenium*), bull thistle (*Cirsium vulgare*), wild teasel, tall buttercup, purple loosestrife, curly dock, spotted joe-pye-weed, boneset, deptford pink, reed canary grass, square-stemmed monkey flower (*Mimulus ringens*), woolgrass bulrush, water plantain (*Alisma plantago-aquatica*), swamp milkweed (*Asclepias incarnata*), sensitive fern, ostrich fern, and other grasses. This community is present around the creek and has been subject to anthropogenic disturbance due to cattle grazing. The trees found in this community include an eastern cottonwood (*Populus deltoides*) and a butternut. There is a Manitoba maple at the edge of the transition zone.
SWT2-2 – Willow Mineral Thicket Swamp	This community is found on the east side of the creek at the south property boundary. The wetland is an extension of the wetland identified in the south property. The plant composition is different as the wetland is not subject to cattle grazing. Species identified in the wetland include Bebb's willow (*Salix bebbiana*), American elm, alternate-leaved dogwood, gray dogwood, red-osier dogwood, nannyberry, slender willow (*Salix petiolaris*), spotted touch-me-not, horsetail, spotted joe-pye-weed, narrow-leaved cattail, Small yellow lady's slipper (*Cypripedium parviflorum var. parviflorum*), Canada anemone, white meadowsweet, reed canary grass, wild teasel, rushes and mosses.
CUT 1 – Swamp Rose Cultural Thicket	This community is found around the creek in the central part. It is mainly composed of shrubs and herbaceous species. This area is where the slope changes and the creek has defined banks. The dominant species in this community is the swamp rose (*Rosa palustris*). Other species include common dandelion, tall buttercup, Canada anemone, mayapple (*Podophyllum peltatum*), dam's rocket (*Hesperis matronalis*), bloodroot, red-top grass, wood sedge, wild black currant (*Ribes americanum*), and Philadelphia fleabane (*Erigeron philadelphicus*).

MEMF1-1 – Dry-Fesh Goldenrod Forb Meadow	This community is found in the southwestern corner. The owner is acquiring this piece of property to accommodate the SWM facility. It occupies an approximately area of 1,000 m². It is subject to constant anthropogenic disturbance as it is close to the intersection of County Road 10 and County Road 22. The dominant species is Canada goldenrod and tall goldenrod, and herbaceous species found in the hedgerow vegetation.
CUM1-1– Dry-Moist Old Field Meadow	This community is found in two areas within the property. The largest meadow is in the west part where the development is proposed. A small meadow is found in the valley. The meadow in the valley is composed of a mixture of terrestrial and wet condition species, but it is not a wetland as is dominated with Canada goldenrod and red top grass. Species found include gray dogwood, wild carrot (*Daucus carota*), tufted vetch (*Vicia cracca*), grass-leaved goldenrod (*Euthamia graminifolia*), tall goldenrod (So*lidago altissima*), goat's beard (*Tragopodon dubius*), chicory (*Cichorium intybus*), white heath aster (*Symphyotrichum ericoides*), common milkweed, black medic (*Medicago lupulina*), tall buttercup, riverbank grape, smooth brome grass, red fescue (*Festuca rubra*), and fowl mannagrass (*Glyceria striata*).

6.5 Wetland

The Marsh Creek traverses the property in a south to north direction. The headwaters of the creek are south of County Road 22. Surface water from upper land flows to the creek which crosses County Road 22 through a 27 cm diameter culvert. The creek discharges to the property on an area covered with grass. The creek in the discharge area does not have a defined channel, the banks are almost flat and then moderate until the flow is discharged to a flat area before the creek splits into two branches. The two branches flow several metres into a steep area before land gets flat again and the two branches merge to one channel with moderate bank slopes, then the creek banks get shallow and smooth allowing the development of a wetland (valleyland). As the parcels are separated by a wire fence; north of the fence, the creek splits into two branches again for several metres, then merge into one branch with define channel.

Wetland is present in the central east part of the property, in the valleyland (valley) where precipitation accumulates and surface water overflow precipitation. The bottom of steep slopes defines the wetland boundary. The part of the wetland provides suitable habitat for amphibians. This wetland is composed of meadow marsh and swamp communities. A setback of 50 m from the wetland boundary has been established to protect its ecological functions. See Figure 6. Wetland Boundary. The wetland was identified based on the presence of wetland species and the hydrologic conditions prevalent in its location. The wetland south of the wire fence is highly impacted due to cattle grazing and constantly subject to successional changes in vegetation composition. It is recommended to implement a restoration plan to restore and enhance the ecological functions of the wetland.

6.6 Aquatic Habitat

Based on the MNR mapping tool, the Marsh Creek crosses the property in the east side. Also, a watercourse is mapped east of the property and discharging into Marsh Creek. Site investigations confirmed that a watercourse was not found discharging to Marsh Creek. The area mapped as part of the watercourse is covered with rocks, lacking vegetation cover and without a defined channel. Overland flow was observed early in the spring. A drilled well was found on the bottom of the slope close to the property boundary in the area where the watercourse is mapped. No other watercourses are found on the property.

Assessment of the creek/wetland indicates that fish habitat is not present. Open water within the wetland is not present. In the spring, water was observed running in the creek and ponded in the northern part, but no fish were present. Water is found in the creek after precipitation events. The creek bed was observed to be covered with grass except in the steep area where the creek bed is composed of stones.

Review of background information resulted in no data available that indicates presence of fish in the creek. A review of the MNR Online Mapping Tool Fish On-Line indicates no presence of fish in the Marsh Creek; however, it is known that salmon enter the creek, and it has been observed in a SWM pond approximately 1 km from the Picton Bay.

Records of aquatic SAR from MNR online mapping and DFO online mapping (2022, 2024) were reviewed to determine the presence of SAR species in the creeks crossing within the property. No records of SAR or areas identified as critical habitat for fish were found for the Marsh Creek. Three species are reported in the Picton Bay, river redhorse (*Moxostoma carinatum*)- Special Concern, northern sunfish (*Lepomis peltastes*) – Special Concern, and grass pickerel (*Esox americanus vermiculatus*) – Special Concern. The creek does not provide habitat for any of these species.

The creek will be maintained in its current condition, it is expected that the thermal regime, water quality and biology component will not be affected with the proposed development. Measures are recommended to protect its ecological functions. It is recommended to apply a restoration program for the vegetation surrounding the creek. This program will include the removal of invasive species and planting of native species.

6.7 Terrestrial Wildlife

6.7.1 Breeding Birds

A total of thirty-five (45) species of birds were recorded. The majority of the birds documented are common and widespread in Ontario and have been previously reported in the area except for Eastern Meadowlark, Eastern Wood-pewee, Barn Swallow, and Wood Thrush. A list of wildlife species documented during the site investigations and the breeding evidence is included in Appendix C.

6.7.2 Mammals

A total of six (6) mammals were observed using the property through incidental observations. A white-tailed deer (*Odocoileus virginianus*), deer prints, and a lot of deer pellets were observed around the property. Raccoon (*Procyon lotor*) scats and prints were found around the pit and the wetland. A raccoon (*Procyon lotor*) lives in the forest and sleeps on top of an eastern pine tree. Red fox (*Vulpes vulpes*) scats were found in the west escarpment and in the pit. Other species found include an eastern cottontail (*Sylvilagus floridanus*), eastern gray squirrel (*Sciurus carolinensis*) and eastern chipmunk (*Tamias striatus*). These species are common in the area. During the November 2023 site investigation, it was noticed the significant presence of deer in the property as beds and numerous trails were found.

6.7.3 Amphibians

The wetland and the creek were surveyed for amphibian breeding habitat. The creek does not provide suitable habitat for frogs, it is too deep in the spring and dry during the drought season. The north part of the provides habitat to frogs in early spring. Spring peppers (*Pseudacris crucifer*) and western chorus frogs (*Pseudacris triseriata*) were heard during the April surveys. Both species had call level code of 3. During the rest of the site investigations, northern Leopard frogs (*Lithobates pipiens*) and green frogs (*Lithobates clamitans*) were heard and observed in the property and wetland.

A search for salamander was carried out and eastern red-backed salamanders (*Plethodon cinereus*) were observed within the deciduous forest.

6.7.4 Reptiles

Visual observations of reptiles were completed during each site visit. An Eastern Gartersnake (*Thamnophis sirtalis*) was found dead on County Road 22 in front of the access gate and another snake was found alive in the property within the swamp rose thicket. No turtles were observed during the site investigations.

6.7.5 Species at Risk

General reports were obtained from the NHIC database regarding records of SAR within the Study Area. Additional records of SAR were obtained from sources mentioned in Section 5.1. A list of SAR records is included in the following Table.

Table 3: Potential Endangered and Threatened Species within the Study Area

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
Birds					
Short-eared Owl	*Asio flammeus*	Special Concern	Special Concern	Low	The Short-eared Owl is found in grasslands, coastal marshes and tundra where it nests on the ground and hunts for small mammals. They are also found in man-made agricultural habitats (e.g. managed grasslands) COSEWIC, 2008a). Habitat is not found on the property.
Whip-poor-will	*Antrostomus vociferus*	Threatened	Threatened	Low	The whip-poor-will uses forested areas for roosting and nesting. Nesting areas include most types of forest at early stages of succession or edges of forests with a dense tree cover but showing similar structure at the ground level, rock or sand barrens with scattered trees, savannahs, old burns, as well as sparse conifer plantations. Also, the species can nest in cultivated fields, orchards, urban parks, mine tailings and along gravel roads and railways (Environment Canada, 2015a). The forest is suitable habitat for this species, but the species was not heard during the surveys performed.
Chimney Swift	*Chaetura pelagica*	Threatened	Threatened	Low	Nesting habitat includes cave walls and hollow trees or tree cavities in old growth forests, man-made structures such as chimneys, barns, silos, and abandoned buildings (COSEWIC, 2007a). This species was not heard and/or observed.
Red-headed Woodpecker	*Melanerpes erythrocephalus*	Endangered	Endangered	Low	Suitable nesting areas include open deciduous forest with little understory and a high density of dead trees used for nesting and perching. They are found in a variety of natural and disturbed areas (COSEWIC, 2007b). Suitable habitat is not present on the property.
Loggerhead Shrike	*Lanius ludovicianus*	Not Listed	Endangered	Low	Habitat includes dense trees or shrubs for nesting, elevated perches natural and artificial for hunting, mating, and territory advertisement, short to medium height grassy areas for foraging (COSEWIC, 2014a; Environment Canada, 2015b). Suitable habitat is not found on the property.
Bank Swallow	*Riparia riparia*	Threatened	Threatened	Low	Bank Swallows nest in burrows in natural and man-made settings, wherever there are silt or

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
					sand deposits. Nest are often along riverbanks and in aggregates pits (COSEWIC, 2013a). Suitable habitat is not found on the property.
Barn Swallow	*Hirundo rustica*	Threatened	Special Concern	Low	The natural habitat of Barn Swallow includes caves, holes, crevices and ledges in cliff faces but anthropogenic features are often used in farmlands, rural, suburban areas, and villages where they build the nest around many kinds of structures, especially barns and other farm outbuildings, under bridges, wharves, boat-houses, and culverts (COSEWIC, 2011a). The species was not observed during the site visits.
Wood Thrush	*Hylocichla mustelina*	Threatened	Special Concern	Low	Wood Thrush nests mainly in second-growth and mature deciduous and mixed forests, with saplings and well-developed understorey layers. The species prefers large forest mosaics and small forest fragments (COSEWIC, 2012a). The species was not heard and/or observed during the site visits.
Eastern Wood-pewee	*Contopus virens*	Special Concern	Special Concern	High	The Eastern Wood-Peewee prefers mature and intermediate-age deciduous and mixed forest having an open understorey (COSEWIC, 2012b). The species was heard and observed in the forest.
Least Bittern	*Ixobrychus exilis*	Threatened	Threatened	Low	Least Bitterns are found in a variety of wetland habitats, but their preferred habitat is cattail marshes with a mix of open pools and channels. Preferred habitat consists of robust-emergent-dominated but interspersed wetlands free of purple Loosestrife and European Common Red, with limited urban land use and high proportion of wetlands in the surrounding landscape. The presence of stands of dense vegetation is essential for nesting because the nests of least Bittern sit on platforms of stiff stems (COSEWIC, 2009b). Habitat for this species is not found on the property.
Grasshopper Sparrow	*Ammodramus savannarum pratensis*	Special Concern	Special Concern	Low	Eastern Grasshopper Sparrow typically breeds in large human-created grasslands (≥ 5 ha), such as pastures and hayfields, and natural prairies such as alvars, characterized by well-drained, often poor dry soil dominated by relatively low, sparse perennial herbaceous vegetation (COSEWIC, 2013b). Agricultural practices do not provide suitable habitat for this species. Also, the area covered with hay is small.
Bobolink	*Dolichonyx oryzivorus*	Threatened	Threatened	Low	Habitat includes hayfields, pastures, fallow or abandoned fields, meadows, and tall grass prairie remnants, savannahs and alvar grasslands (COSEWIC, 2010a). Bobolink was not observed during the site visits. The area with hay is small and the rest of the field is subject to crop rotation.

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
Eastern Meadowlark	*Sturnella magna*	Threatened	Threatened	Low	Habitat includes hayfields, pastures, fallow or abandoned fields, meadows, and tall grass prairie remnants, savannahs and alvar grasslands (COSEWIC, 2011b). the species was not observed in the property, but it was heard on the adjacent property. Potential habitat for this species is found on the agricultural fields depending on the crop. The species was not heard and/or observed in the property. It was heard on adjacent land to the south.
Amphibians and Reptiles					
Western Chorus Frog	*Pseudacris triseriata*	Threatened	Not at Risk	High	The Western Chorus Frog requires both terrestrial and aquatic habitats in close proximity. Terrestrial habitat consists mostly of humid prairie, moist woods, meadows, marshes, bottomland swaps, and temporary ponds in open county. For reproduction and tadpole development, this species requires seasonally dry, temporary ponds that are devoid of predators such as fish. The western chorus frog overwinters underground or under surface cover, such as fallen logs (COSEWIC, 2008b). Western Chorus frogs were heard in the wetland. The wetland in the property and adjacent and provide breeding habitat early spring.
Eastern Milksnake	*Lampropetltis traingulum*	Not At Risk	Special Concern	Low-Medium	Habitats include areas with suitable coverage that range from prairies to meadows, pastures, hayfields, rocky outcrops, rocky hillsides and forests (COSEWIC, 2014b). This species was not observed; however, potentially suitable habitat is present within the forest and adjacent properties.
Blanding's Turtle	*Emydoidea blandingii*	Threatened	Threatened	Low	Preferred habitat is found in shallow water in large wetlands and shallow lakes with abundant submergent and emergent vegetation (COSEWIC, 2005). Suitable habitat is not found on the wetland.
Eastern Musk Turtle	*Sternotherus odoratus*	Special Concern	Special Concern	Low	Habitats include littoral zones of waterways such as slow to no current, soft bottom rivers, lakes, bays, streams, ponds, canals, and swamps. The preferred habitat contains floating or submerged vegetation and water less than 2 meters deep (COSEWIC, 2012c). Suitable habitat for this species is not found on the property.
Snapping Turtle	*Chelydra serpentina*	Special Concern	Special Concern	Low	Preferred habitat is slow-moving water with soft mud bottom and dense aquatic vegetation. Nesting takes place on sand and gravel banks along waterways, including artificial dam and railways embankments (COSEWIC, 2008c). Suitable habitat is not found in the wetland.
Northern Map Turtle	*Graptemys geographica*	Special Concern	Special Concern	Low	Northern Map Turtle inhabits lakes and rivers with slow moving currents, muddy bottoms, and abundant aquatic vegetation. Habitat must

Common Name	Scientific Name	Federal Status	Provincial Status	Probability of Occurrence	Rationale
					contain basking sites such as rocks, and deadheads, with an unobstructed view (COSEWIC, 2012d). Suitable habitat is not found in the wetland.
Midland Painted Turtle	*Chrysemys picta marginata*	Special Concern	Not at Risk	Low	Habitats include ponds, marshes, lakes and slow-moving creeks. Midland Painted Turtles prefer waterbodies with soft bottoms and areas to bask like logs and rocks protruding from the water COSEWIC, 2018). Suitable habitat for this species is not found on the property.
Mammals					
Northern Myotis	*Myotis septentrionalis*	Endangered	Endangered	Low	Hibernation roosts for the four species are found in caves, hollow trees, abandoned buildings, and abandoned mines. Most species choose maternity roosts in woodlands with appropriate tree cavities, caves, crevices, under loose bark, and cracks in cliffs (COSEWIC, 2013c). Significant habitat for these species is not found in the forest. No evidence of suitable roosting habitat used by bats was found.
Little Brown Myotis	*Myotis lucifugus*	Endangered	Endangered	Low	
Tri-coloured Bat	*Perimyotis subflavus*	Endangered	Endangered	Low	
Insects					
Monarch	*Danaus plexippus*	Endangered	Special Concern	High	Caterpillars feed on milkweed plants found in meadows and open areas. Adult butterflies are found in diverse habitats where they feed on nectar from a variety of wildflowers (COSEWIC, 2016). Suitable habitat is present on the property. Adult monarch butterflies were observed in the wetland.
Plants					
Butternut	*Juglans cinerea*	Endangered	Endangered	High	Butternut trees are typically found in moist, well-drained soils. It is found in deciduous forests or alternatively growing alone (COSEWIC, 2017). Butternuts are found in the property.
Four-leaved Milkweed	*Asclepias quadrifolia*	Endangered	Endangered	Low	Habitat includes dry to mesic, relatively open deciduous forests. In Ontario, the Four-leaved Milkweed prefers to grow on shallow, rocky soils and steep slopes (COSEWIC, 2010b). Four-leaved milkweed was not observed in the property.

Seven (7) species at risk were heard and/or observed during the site investigations (Eastern Meadowlark, Eastern Wood-pewee, Wood Thrush, Barn Swallow, Western Chorus Frog, Monarch Butterfly, and Butternut). Four (4) of the species are listed under the SARO as Special Concern (Eastern Wood-pewee, Barn Swallow, Wood Thrush, and Monarch Butterfly), one (1) as Threatened (Eastern Meadowlark) and one (1) as Endangered (Butternut). Western Chorus Frog is not at risk in Ontario. Under Schedule 1 of the SARA, Eastern Wood-pewee is listed as Special Concern, four (4) species as Threatened (Eastern Meadowlark, Barn Swallow, Wood Thrush, and Western Chorus Frog) and two (2) species as Endangered (Monarch and Butternut). The species listed as Special concern are not protected under the Ontario Endangered Species Act; however, measures should be applied to protect the species and their habitat.

Eastern Meadowlark is listed as Threatened species under Ontario's Endangered Species Act (2007) and Threatened under the SARA. Eastern Meadowlark was heard and observed on the property. The main causes

of the decline in Eastern Meadowlark populations include: 1) habitat loss on the breeding and wintering grounds caused by the large-scale conversion of forage crops to intensive grain crops and other row crops, reforestation of abandoned farmlands, and urbanization; 2) intensification and modernization of agricultural techniques promoting earlier and more frequent haying during the nesting season, which results in low breeding success; 3) a high (and probably increasing) rate of nest predation; 4) overgrazing by livestock; 5) mortality due to pesticide use on the breeding and wintering grounds; and 6) reduced reproductive output stemming from brown-headed cowbird nest parasitism. The meadow vegetation found on the property provides nesting habitat to Eastern Meadowlark. Eastern Meadowlark nesting habitat will be impacted by the proposed development. A permit from MECP and compensation measures will be required.

Eastern Wood pewee is listed as a Special Concern species under Ontario's Endangered Species Act (2007) and Schedule 1 of the SARA. The species is threatened by habitat loss, habitat fragmentation and degradation due to urban development and/or changes in how forests are managed. Reduction in the availability of flying insects they eat. Loss of eggs and fledgling birds from increasing number of predators such as blue jays and squirrels. Changes to the make-up of forests due to white-tailed deer over-browsing, which may reduce the number of insects available to eat. Eastern Wood-pewee breeding birds on private lands are protected under the Migratory Bird's Convention Act. Eastern Wood-pewee was heard and seen in the deciduous forest. Part of the forest will be affected by the proposed development. Therefore, impacts to Eastern Wood-pewee habitat are expected. MNRF will be consulted to determine if a permit is required and the compensation measures to be applied.

Barn Swallow is listed as a Special Concern species under the Ontario's Endangered Species Act (2007) and Threatened under Schedule 1 of the SARA. Natural habitat of Barn Swallow includes caves, holes, crevices and ledges in cliff faces but anthropogenic features are often used in farmlands, rural, suburban areas, and villages where they build the nest around many kinds of structures, especially barns and other farm outbuildings, under bridges, wharves, boat-houses, and culverts. Recent changes were made to the status of Barn Swallow, the species recently was changed from Threated to Special Concern due to significant improvement in the size of the population. Barn swallows were observed flying over the meadow vegetation. Barn swallow nests were not observed in the building and barn, but these structures provide nesting habitat. A complete inspection of the structures was not performed due to safety concerns as the structures have a high risk of collapsing. Prior to demolishing the buildings, they should be inspected to ensure Barn Swallows are not using them. Efforts should continue be made to protect the species and maintain secure populations.

Wood Thrush is listed as a Special Concern species under Ontario's Endangered Species Act (2007) and Threatened under Schedule 1 of the SARA. The species is threatened by habitat loss on its wintering grounds and habitat fragmentation and degradation on its breeding grounds. It also suffers from high rates of nest predation and cowbird parasitism associated with habitat fragmentation on the breeding grounds. Wood Thrush found in private lands unprotected, unless the land is protected through voluntary conservation and stewardship programs. Thrushes breeding on private lands are also protected under the Migratory Bird's Convention Act. A Wood Thrush was heard during May and June 2024 site visits in the red cedar forest. The forest will not be affected by the development. Therefore, impacts to Wood Thrush are not expected.

Western Chorus Frog is not listed under Ontario's Endangered Species Act (2007), but it is listed as a Threated species under Schedule 1 of the SARA. Western Chorus Frogs were heard in the wetland in the property. A setback of 50 m from this feature has been established to protect suitable habitat for Western Chorus Frog and other amphibians. Direct impacts on Western Chorus Frog are not expected as the proposed development will be outside the habitat for Western Chorus frog; however, as this species requires both terrestrial and aquatic habitats. Mitigation measures should be applied to avoid harm to this species during removal of vegetation.

The Butternut tree is listed as an Endangered species under Ontario's Endangered Species Act (2007) and Schedule 1 of the SARA. Butternut trees are present in the property. Three (3) butternut trees are found on the northwest corner of the property and a tree is found in the wetland. The Butternut trees on the northwest corner of the property were assessed by a qualified Butternut health assessor on May 25th, 2023, and the assessment

report submitted to the MECP. See Butternut Assessment Report in Appendix D. The Health Assessment determined that the three (3) trees are considered retainable (Category 2). For those retainable Butternuts, a minimum protective buffer of a 25 m radius from the stem of each Butternut is required to prevent root disturbance. A larger area up to 50 m is also considered protected habitat for the tree. Within the 25 m buffer area, activities that would remove or significantly compact the roots and soil, and cause direct harm to the Butternut are not permitted. Within the 25-50 metre buffer area, activities that would significantly damage or destroy habitat e.g., by impacting the tree's ability to disperse seeds, are also not permitted. Removal of other vegetation and careful logging practices within this radius are permitted. Additionally, four (4) butternut trees were found on the north parcel. Figure 7 shows the location of the butternuts. The Butternut trees on this part of the property will be assessed by a qualified Butternut health assessor to determine the health of the trees and the compensation measures to be applied as the trees are within the area proposed for development.

With the proposed development it is expected that some butternuts trees will be removed. As development is proposed within the 25 m setback applied to the butternuts to be preserved, a compensation measure must be applied. A permit from the MECP will be required and a compensation plan must be prepared and submitted for approval to the MECP. It is expected that for the tree proposed to be removed, 20 butternuts will need to be planted. For the preserved trees to be harm, 10 butternuts will need to be planted. A total of 40 butternut seedlings will need to be included in the compensation plan as a compensation measure.

An additional butternut tree was found within the wetland. This tree was not assessed but impacts to the tree are not expected as is within the wetland and a 50 m setback from the wetland has been established to protect this feature.

The Monarch Butterfly is listed as a species of Special Concern under Ontario's Endangered Species Act (2007) and as an Endangered in Schedule 1 of the SARA. Adult butterflies were observed in the wetland, fields, and hedgerow vegetation. There is potential for adult butterflies to be disturbed/affected during the clearing of vegetation. Mitigation measures should be applied to prevent harm to caterpillars and adult butterflies.

If an impact on a species at risk or its habitat cannot be avoided, a person(s) should contact MECP to discuss options, including applying for authorization under the ESA. In situations where an activity is not registered with or authorized by the MECP, a person(s) must comply with the ESA by modifying proposed activities to avoid impacts on species at risk and habitats protected under the ESA.

7. Significant Natural Heritage Features and Functions

7.1 Significant Woodlands

Section 3.1.3 Natural Heritage System Policies of the Prince Edward County Official Plan has identified the Woodlands within the County that are larger than 40 hectares in size. Development is not permitted within woodlands identified in Schedule B: Natural Heritage Features and Areas of the Official Plan.

The property is located within the Picton-Hallowell Urban Centre. The woodland located in the property is approximately 6.5 ha in size but is part of a woodland greater than 40 ha. The woodland in the property and adjacent land is not identified as significant woodland. The woodland is composed of an old/mature native tree species stand and provides protection to wetland and Creek and provides connectivity between forested areas to the north, east and south, indicating it is ecologically important due to its structure and ecological functions. The woodland within the property and adjacent lands to the north will continue to be protected as are designated Environmental Protection under the County's Zoning By-law. In addition, the woodland provides habitat to Eastern Wood-pewee and Wood Thrush, indicating the woodland is a candidate for significant wildlife habitat.

According to Schedule A: Picton Urban Centre, the deciduous forest in the property is designated Environmental Protection. According to the County's Zoning By-law, only one portion of the deciduous/coniferous forest in the south parcel is within the area designated Environmental Protection. The Environmental Protection areas do

not align, resulting in an approximately 2 ha area of forest to be affected by the proposed development, which is within the Environmental Protection area as per Picton Urban Area Secondary Plan. Development in the Zoning By-law Environmental Protection area is not proposed. Approximately 4.3 ha of forest within the property which includes deciduous forest and red cedar cultural woodland will not be affected by the proposed development. This area includes Zoning By-law EP area and part of the 50 m and 15 m setbacks established to protect the wetland and creek. A 1.853 ha area will be part of the development green space. It is expected that native trees species that do not represent a hazard will be maintained within the green space.

Part of the Eastern Wood-pewee habitat will be protected in addition to the forest protected in lands to the east. Measures have been recommended to ensure the forest in the EP zone is not affected by the development, hence protect its ecological functions.

7.2 Significant Valleylands

Section 3.1.3 Natural Heritage System Policies of the Prince Edward County Official Plan has identified Valleylands within the County. Development is not permitted within valleylands identified in Schedule B: Natural Heritage Features and Areas of the Official Plan.

The area surrounding the creek is part of a valleyland identified in Schedule B of the Official Plan. The valleyland south part of the creek has been identified as wetland. An approximately area of 230 m was observed to be part of the valleyland as it was observed to be a natural depressional area with water flowing through for some period of the year. The area is enclosed within two walls (escarpments) with a minimum slope of 25%. A 50 m setback from the wetland boundary has been established to protect it. It is determined that 50 m setback is sufficient to protect the ecological functions of the valleyland (creek/wetland).

The area identified as valleyland extends to the north following the Marsh Creek morphology. This area is designated as Environmental Protection. Therefore, development is not permitted. The proposed development will be within the area designated Future Development.

The wetland/valleyland is currently impacted by cattle grazing. It has been recommended that a restoration program be implemented to restore and enhance the ecological functions of the valley.

7.3 Significant Wetlands

Provincially Significant Wetlands (PSWs) are those areas identified by the province as being the most valuable. They are determined by a science-based ranking system known as the Ontario Wetland Evaluation System (OWES). Wetlands in Prince Edward County are generally comprised of marsh and hardwood swamp, with marshes bordering lakes and lagoons (Prince Edward County, 2012).

Based on the MNR Natural Heritage Online Mapping, there is an unevaluated wetland within the woodland and an unevaluated wetland surrounding the Marsh Creek. Information from the field investigations was used to determine that these wetlands do not exist. Vegetation and soils in these areas indicate that wetland is not present. South of the property, there is a trail that crosses the area where the wetland is mapped. Changes in elevation are observed with the land sloping down to the east toward the creek and to the west toward the forest. Therefore, this area is included as part of the deciduous forest. The area is impacted by the trail as vegetation has been removed. North part of the property, the area mapped as a wetland is covered with red cedar. Vegetation and soils in this area indicate that wetland is not present except for wetland identified surrounding the creek.

Wetland surrounding the creek is subject to seasonal flooding due to precipitation. Also, the creek banks are almost flat allowing flooding of adjacent land. The wetland was observed to be impacted by cattle grazing in it. A more complex structure of the wetland is observed in the north portion as cattle do not have access to the wetland.

A 50 m setback has been established to protect the wetland and it is considered sufficient. A restoration program has been recommended for the wetland area.

7.4 Areas of Natural and Scientific Interest (ANSI)

The property in within the Picton Urban Centre. It is not located within an ANSI area. The natural features including the wetland and part of the forest will be protected as they are located within the area designated environmental protection and the 50 m setback from the wetland boundary.

7.5 Significant Habitat for Provincially Endangered and Threatened Species

The general habitat of species that are listed as endangered or threatened is automatically protected under the Endangered Species Act (ESA), 2007. Seven (7) species at risk were heard and/or observed during the site investigations (Eastern Meadowlark, Eastern Wood-pewee, Wood Thrush, Barn Swallow, Western Chorus Frog, Monarch Butterfly, and Butternut). Four () of the species are listed under the SARO as Special Concern (Eastern Wood-pewee, Wood Thrush, Barn Swallow, and Monarch Butterfly), one (1) as Threatened (Eastern Meadowlark) and one (1) as Endangered (Butternut). Under Schedule 1 of the SARA, Eastern Wood-pewee and Barn Swallow are listed as Special Concern, three (3) as Threatened (Eastern Meadowlark, Wood Thrush, and Western Chorus Frog) and two (2) as Endangered (Monarch Butterfly and Butternut).

Eastern Meadowlark was heard and observed in the property. The species was present in the area proposed for development. Therefore, a permit from the MECP will be required as the nesting habitat for this species will be affected.

Eastern Wood-pewee is listed as special concern. The species is not protected under the Endangered Protection Act. Eastern Wood-pewee was seen and heard in the deciduous forest during the site investigations. A portion of the forest will be removed to accommodate part of the development. The MNRF must be contacted to determine if a permit under the Migratory Bird Act and Significant Wildlife Habitat is required.

Wood Thrush was heard in the deciduous forest and red cedar forest. Nesting habitat for this species is present in the property. Part of the deciduous forest will be removed to accommodate the proposed development. The forest in the escarpment and the red cedar forest will not be impacted by the development. Construction activities should be restricted to the area proposed for development to avoid unnecessary damage.

Barn Swallows were observed flying over the meadow vegetation. Nesting habitat for Barn Swallow is present in the buildings. Barn Swallow nests were not observed in the building during the site investigation. Inspection of the structures prior to demolishing them should be carried out to ensure Barn Swallow Nest are not present.

Butternut trees were found in the property. As a result of the proposed development, some of them will be removed and other will be maintained; however, development is proposed close to these trees. A permit from the MECP will be required as well as a compensation plan for the tree to be removed and the potential impact that the proposed development may cause to the trees to be retained. A butternut was found in the wetland area, this tree will not be affected by the development.

Monarch butterflies were observed in the property and milkweed plants were found in the meadow-hedgerow vegetation, as well of wildflowers that can provide food to the adult butterflies. The milkweeds on the property provide a potential source of food for Monarch caterpillars. The hay, wildflowers found in the hedgerow vegetation and in the edge of the forest provide food to butterflies. Significant feeding habitat for this species is not found in the property; however, measures must be applied to avoid harm to butterflies.

Western Chorus Frog is not listed under the the Ontario's Endangered Species Act (2007), but it is listed as Threated species in Schedule1 of the SARA. Suitable habitat for Western Chorus Frogs is present in the wetland. Impacts to the habitat of this species are not expected; however, as the species can be found in the forest and forest vegetation will be impacted by the development, mitigation measures should be applied to avoid harm to this species.

Early in the spring a survey was performed to determine the presence of significant habitat for bats. It was determined that the forest in the property does not qualify as a significant roosting habitat for bats. Signs of past use of the cavities as a nesting habitat within the forest were not reported; however, due to the presence of cavities, measures should be applied to avoid harm to bats during the removal of vegetation.

Eastern Milksnakes were not heard or seen. It is possible that the specie is present in the property. Measures should be applied to avoid harm to the species during the removal of vegetation.

7.6 Significant Wildlife Habitat

Wildlife habitat are areas where plants, animals, and other organisms live, and find adequate amounts of food, water, shelter, and space needed to sustain their populations. Specific wildlife habitats (SWH) of concern may include areas where species concentrate at a vulnerable point in their annual or life cycle; and areas which are important to migratory or non-migratory species (PPS, 2014). Wildlife habitat is considered significant where it is: ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or Natural Heritage System (MNR, 2010). Wildlife observations in the property and adjacent include species of birds, mammals, amphibians and reptiles. The wetland provides suitable habitat for amphibians.

Also, the wetland in the property and lands to the north are part of the corridor for amphibian species.

Eastern Wood-pewee and Wood Thrush are listed as special concern. The species were seen and heard during the site investigations. Therefore, the forest provides suitable habitat for the species. A portion of the forest will be removed to accommodate part of the development. The MNRF must be contacted to determine if a permit under the Migratory Bird Act and Significant Wildlife Habitat is required.

Tables containing the list of SWH categories with potential to occur on the property are included in Appendix E, based on an evaluation of provincial criteria (MNR, 2015).

7.7 Connectivity and Ecological Linkages

Schedule B of the PEC Official Plan shows Natural Core Area Linkages that have been identified in the County to protect natural features and functions. The property is located within Picton Urban Centre and is not within the identified Natural Core Area Linkages. Part of the forest will be lost as development is proposed in the west side of the deciduous forest. Connectivity between species diversity and communities will be maintained through the woodland preserved in the property, treed areas within the urban area and woodland surrounding these areas, allowing movement of wildlife and dispersal of flora and maintaining the interaction between the terrestrial and aquatic ecosystems.

The forest is fragmented by County Road 22. The road causes effects such as reduction of populations through direct mortality as a result of collisions with vehicles, traffic disturbance (e.g. noise, light and motion), reduction of quality of habitat near the roads, and possible behavioral unwillingness for the animal to move onto the road surface. In addition, as the property is located within the urban area of Picton, development surrounding the property is affecting the presence of wildlife and hence the movement of wildlife between habitats; however, the vegetation not to be impacted by the development will continue to provide connectivity to the forest located to the north, south and east. Currently, there is a big culvert under County Road 22 that it is used for the cows to move between properties and possibly by wildlife. This culvert should be maintained for wildlife to use it and reduce road mortality. The loss of connectivity is considered low.

Effects in the aquatic connectivity are considered of low significance. Fish habitat was not identified within the property. No development is proposed in the wetland surrounding the creek. Therefore, the connectivity of the upstream flow with the downstream flow will continue under the current conditions. It is planned the construction of a storm water management facility to treat the surface water from impervious surface but water leaving the SWM pond will be discharged to the roadside ditch west side of the property.

8. Opportunities and Constrains

8.1 Natural Heritage System

The creek and wetland (valleyland) within the property are designated on the Prince Edward County Official Plan as Environmental Protection. These important features and their associated buffers are considered constraints to the proposed development. All the development is proposed outside the creek and wetland. Protection of the wetland allows the opportunity to preserve the remaining native vegetation communities within Picton Urban Centre as well as preserving the functions of Marsh Creek and the wetland.

Presence of steep slopes within the property are found on the east part of the property. As a 50 m setback has been established to protect the wetland and a 15 m setback to the creek, the proposed development will be outside the steep slopes.

The property is within the Picton Urban Centre surrounded by residential, commercial and industrial development. The long-term use of the property for agricultural practices have degraded the natural features. Due to the presence of escarpments, development is restricted to the west side of the property, on the impacted areas.

8.2 Regulated Areas

Quinte Conservation regulates activities in natural and hazardous areas subject to processes such as flooding, erosion, dynamic beaches, or unstable soil or bedrock.

There are no dynamic beaches or unstable soil or bedrock in the property. Hazard areas found in the property include the wetlands and the steep slopes (escarpments) surrounding the creek/wetland. A 15 m setback from the top of the slope has been applied to protect the proposed development from natural hazards.

The creek and wetland are in an area designated valleyland as is a depressional area with walls having a minimum of 25 % slope. A setback of 50 meters have been established from the wetland boundary as per Official Plan. The steep slopes in the south parcel are within the 50 m setback which protect future development from hazard lands. It is determined that the proposed development will not be impacted by hazard lands or subject to flooding.

9. Impact Assessment and Recommendations

The property is located within the Picton Urban Area and current planning policies allow for residential development. The residential development will implement the applicable policies and it is expected the development will not cause significant impacts to the natural features as the development area will be between areas of extensive anthropogenic disturbance. An evaluation of the impacts is provided in the following table.

Table 4: Potential Impacts and Prevention, Mitigation and Restoration Measures

Potential Impacts	Prevention, Mitigation and Restoration Measures
Significant Wetlands	
• There are no significant wetlands in or adjacent to the property. • Wetland is identified in the property. • The northwest part of the property is within the Waring's Creek sub-watershed. • The Marsh Creek and wetland is within an area designated Valleyland. • The wetland mapped within the forest and north part of the property do not exist.	• A 50 m setback from the wetland boundary is proposed to protect its functions and it is considered sufficient to protect its the ecological functions. • The wetland setback must be part of the EP area. • The wetland is currently highly impacted due to cattle grazing in it. It is recommended the preparation of a restoration plan to restore and enhance the ecological functions of the wetland. • Cattle should not be permitted to access the wetland and forest. • The wetland is within an area designated Environmental Protection. Therefore, development is not proposed within the Zoning By-law EP area. • It is determined that the property has a minimal contribution to the Waring's Creek Watershed as the west part of the land drains to a watercourse outside the Waring's Creek Watershed.
Habitat for Threatened and Endangered Species	
Direct Impacts during Construction: • Potential contravention of the Endangered Species Act., 2007 if active SAR birds are removed during the breeding season. • Harm to Monarch butterfly and caterpillar during removal of vegetation. • Removal of butterfly habitat. • Harm to snakes. • Removal of Butternut trees. • Harm to bats and roosting habitat. • Harm to amphibians.	• It is recommended that construction workers be briefed on the potential species to be found in the area for development and make them familiar with the regulations of the ESA. • Best practices should be implemented during the construction to ensure species are not harmed by equipment or workers activities. • The construction area should be inspected prior to beginning construction to ensure that Monarch butterflies (caterpillars and adults) are not harmed by the work. • Prior to beginning activities each day, checks for wildlife should be conducted thorough a visual inspection of the work area and immediate surroundings. Areas with wildflowers including milkweeds should be inspected for the presence of Monarch caterpillars. • Trees with cavities should be inspected prior to removal to ensure bats are not using them. • Restrict construction activities to the area designated for construction. Minimize any disturbance to the surrounding areas. • Keep secure stockpile materials, vehicles, and structures against wildlife entry. • Litter and other waste material must be appropriately contained and promptly disposed of. • Avoid harm to any SAR. Many species are protected under provincial and/or federal legislation. Legal protection of egg-laying species applies to their eggs as well. Penalties for contravening these Acts are severe. • Stand back and allow the animal to leave the site. Wildlife may be encouraged to move away from the work area by shouting, waving of arms, clapping of hands or gentle redirection using a broom. Contact a project biologist/wildlife service provider for assistance if needed (e.g., if young animals are found). Do not unnecessarily harass any wildlife. • Work areas should be checked by a qualified person for the presence of birds and nests containing eggs and/or young. If the birds and/or nests are encountered, works should not be initiated in the

Potential Impacts	Prevention, Mitigation and Restoration Measures
	affected location of the nest until after August 31st (or as soon as it has been determined that the young have left the nest). Please note that the breeding bird season in the subject area extends from April 1st to August 31st. Therefore, activities should commence after August 31st whenever possible. • Workers must be vigilant and check work areas for the presence of snakes. If snakes are encountered, whenever possible, work should be temporarily suspended until the animal is out of harm's way. Workers should report any snake observations immediately (including photographs and coordinates) to the local MECP Office. • The butternut trees on the north parcel must be assessed to determine if a permit from MECP is required and/or compensation measures required if trees are removed or potentially impacted by the proposed development. • A permit to remove butternut trees will be required from MECP. • MNRF must be consulted to determine if a permit is required as Eastern Wood-pewee habitat will be affected.
Indirect Impact during Construction • Potential contravention of the Endangered Species Act., 2007 if SAR species are harmed or active nests are removed during the breeding season. • Removal of Monarch food resources (wildflowers). • Noise of machinery early in spring. • Disposal of waste outside of the designated areas, in the natural areas.	• Restrict noise work to day hours and avoid unnecessary running of machinery causing the noise. • Inspection of the area prior to removal of vegetation to ensure Monarchs are not harmed. • The areas not to be disturbed should be clearly marked on-site with signs or by installing a protection fence. • Keep secure stockpile materials, vehicles and structures against wildlife entry. • Litter and other waste material must be appropriately contained and promptly disposed of.
Direct Impacts Post-Construction: • Harm of butterflies flying on the garden area of the residences. • Increase of generalist species. • People accessing the EP area. • Dumping of garbage in the EP area.	• Use of native wildflowers is recommended for landscaped areas. • Maintain a natural barrier to protect the EP area/wetland setback. • Maintain signs to avoid dumping of garbage and/or leaf and yard waste in the EP area.
Wildlife	
Direct Impacts during Construction: • Disturbance of wildlife movement. • Destruction of bird habitat in the forest to be removed for the development. • Potential impact to Easter Wood-pewee nesting habitat.	• Vegetation in the Zoning By-law EP area will not be affected; therefore, wildlife connectivity will continue to be present allowing the movement of wildlife. • Maintain the 1.7 m diameter culvert under County 22 that is used for cattle to allow wildlife movement between habitats. • Use of fence to establish the working area prior to the initiation of construction work to avoid unnecessary damage to vegetation.

Potential Impacts	Prevention, Mitigation and Restoration Measures
• Reduction in the wildlife connectivity and habitat. • Potential contravention of the Migratory Bird Convention Act., 1994 if removal of habitat takes place during the breeding season. • Increase of mortality of wildlife due to increase of traffic. • Reduction of deer habitat.	• Application of erosion and sedimentation control measures. • Removal of vegetation prior to nesting season (April 1st– August 31st). • Perform searches prior removal of the vegetation to ensure fauna will not be affected by machinery. • The use of 'Clean Equipment Protocol' during construction activities is strongly recommended to reduce the spread of exotic species of plants. • Workers must be vigilant and check work areas for the presence of breeding birds and nests containing eggs and/or young. If breeding birds and/or nests are encountered, work should not continue in the location of the nest until after August 31st (or as soon as it has been determined that the young have left the nest). Please note that the breeding bird season in the subject area extends from April 1st to August 31st. Therefore, work should commence after August 31st if practical. • Workers must be vigilant and check work areas for the presence of wildlife. If animals are encountered, work should be temporarily suspended until the animal is out of harm's way. Activities which may cause adverse impacts to a species or habitat (e.g. use of heavy equipment) should commence after August 31st. • There are forested areas on adjacent land; therefore, wildlife can still use the property as part of the migratory routes between habitats. • Monitoring of the remaining forest to ensure Eastern Wood-pewee continue using the forest.
Indirect Impacts during Construction • Harm to wildlife by machinery during movement of wildlife to other areas of the property • Harm to wildlife trap between machinery.	• Inspection of machinery prior to commence operation to ensure wildlife is not using it. • Workers should be aware of the presence of wildlife and the potential for them to cross through or enter the construction area. • Workers must be vigilant and check work areas for the presence of snakes. If snakes are encountered, work should be temporarily suspended until the animal is out of harm's way.
Direct Impacts Post-Construction: • Increase of generalist species. • Increase predation of native fauna by domestic pets (e.g. cats), particularly small mammals and ground nesting birds. • Changes in wildlife behavior due to outside lighting.	• Pets should not be allowed to run off-leash through the natural areas. • Minimize the use of outdoor lights. • Outdoor lighting should be low wattage, energy efficient and producing minimal glare to prevent impacts on wildlife. • Avoid dumping organic and inorganic waste in the EP area, that could directly affect wildlife behavior.
Terrestrial Habitat	
Direct Impacts during Construction: • Removal of vegetation. • Removal of native substrate for foundations and grading.	• Use of fencing to establish the working area and to avoid unnecessary damage to the vegetation. • Vegetation clearing is recommended to take place before April 1st or after August 31st to avoid contravention of the Migratory Bird Convention Act, 1994 unless it can be confirmed that there are no nesting birds in the area to be cleared. • Removal of invasive species found within the woodland.

Potential Impacts	Prevention, Mitigation and Restoration Measures
• Damage of vegetation out of the construction area by machinery.	• Proper disposal of invasive species removed from the woodland. • Application of a restoration plan for the wetland. • The construction of the roadside ditches should be planned during the summer-dry period when the presence of flow will be limited. • Application of erosion and sedimentation control measures. • Storage, handling and disposal of material used or generated (e.g. organics, soil, grass, woody debris, temporary stockpiles, etc.) during the site preparation should be carried out in a manner that prevents these materials from entering into naturalized areas in the vicinity of the excavation site. • Clean/screened topsoil should be used on the landscaped areas of the property. • Proper disposal of cut vegetation to avoid the spreading of invasive species. • Mechanical control measures are highly recommended to eliminate invasive species. • Maintain and protect the native tree species that are within the project green space area.
Indirect Impacts during Construction: • Damage of vegetation out of the construction area by machinery. • Deposit of material on the EP area.	• Minimize the area to be impacted. • Silt fencing should be established and regularly inspected to ensure that adjacent areas are not affected by construction activities. • Proper disposal of construction waste. • Proper disposal of cut vegetation to avoid the spreading of invasive species.
Direct Impacts Post-Construction: • Introduction of non-native species as part of the green areas of the residences. • Lack of tree cover. • Loss of vegetation due to refuse/vegetation dumping on the forested area out of the development. • Degradation of vegetation due to the use of lawn fertilizers.	• Removal of erosion and sediment control structures once the vegetation has stabilized. • Revegetation of areas affected by construction activities with native species. • Removal of invasive species. • Use of native species in gardens and for landscaping. • Maintain a permanent fence or natural barrier around the development to avoid the spreading of non-native species and the deposition of garbage carried by the wind. • Maintain permanent signs to avoid dumping garbage and/or organic waste in the EP area. • Maintain and incorporate the native trees species that are located within the project green space area. • Native trees should be planted in the green space to enhance the ecological functions of this area and as a compensation measure due to removal of forest.
Aquatic Habitat	
Direct Impact during Construction • Spills • Sedimentation • Contamination of Water	• Application of Erosion and sediment control measures. • Operation of machinery restricted to the development area. • Application of Spill Plan. • Limit activities within the development area to avoid unnecessary damage to aquatic organisms and their habitat. • The creek setback must be part of the area designated EP.

Potential Impacts	Prevention, Mitigation and Restoration Measures
Indirect Impacts during Construction: • Spills • Sedimentation • Contamination of Water • Changes in drainage patterns	• Minimize the area to be impacted. • Use of fencing to establish the working area and to avoid impact to the water quality of the creek. • Application of erosion and sediment control measures. • Avoid runoff toward the creek during construction.
Direct Impacts Post-Construction • Clearing of vegetation • Removal of vegetation. • Increase of runoff due to washing of sand/gravel surfaces (e.g., driveway and around structures).	• Activities that could impact the creek should be avoided. • Avoid the removal of vegetation that could affect organisms using the creek. • Aquatic vegetation, natural woody debris, and boulders should be left in the creek unless they represent a hazard.
Hydrology/Hydrogeology	
Direct Impacts during Construction: • Changes in hydrology/hydrogeology (Runoff / Infiltration) as a result of excavations and exposure of native material. • Increase of impervious areas. • Changes in surface water quality discharged to adjacent properties. • Impacts to adjacent properties and the creek due to an increase of flow rates.	• The project will be services by municipal water and sewage. Impacts to groundwater are not expected. • Changes in hydrology are not expected as the development will be outside the creek and wetland and the applicable setback. Also, a restoration plan is recommended to restore and enhance the water quality in the creek/wetland. • The ditches and storm water management ponds must be designed to receive, treat and discharge pre and post-development discharge rates and avoid impacts to water quality to ensure upstream and downstream properties are not impacted as well as the creek receiving the water. • The development should minimize the impervious areas to avoid increase of runoff discharged to the SWM facilities. • Storage or stockpiling of material should be in designated areas within the proposed area to be affected and covered to avoid runoff or deposition in adjacent land. • To the extent practical, carry out refueling of generators and construction equipment offsite. All onsite refueling to be carried out over an area provided with spill containment. • The construction contractor should have a spills kit and an emergency plan in the case of spills. • Proposed measures for the management of the stormwater should meet water quality, quantity and water balance objectives.
Indirect Impacts during Construction: • Spills • Sedimentation • Contamination of water • Runoff • Groundwater recharge	• SWM/drainage design to control, treat and discharge to the final location. • SWM measures to maximize at-source infiltration of clean roof water. • Operation of Machinery restricted to the development areas. • Preparation and application of a Spill Plan.

Potential Impacts	Prevention, Mitigation and Restoration Measures
Direct Impacts Post-Construction: • Increase of amount of precipitation available for runoff and recharge. • Changes in surface water quality discharged to adjacent properties. • Impacts to adjacent properties and the Marsh Creek due to an increase in discharge rates.	• The post-development target for stormwater management should be to meet, as closely as is practical, the existing or pre-development rate of recharge. • Regular maintenance and inspection of all parts of the SWM ponds to property operation of the facility. • Regular monitoring to avoid the establishment of invasive species. • Regular monitoring and removal of woody species established in the wet area of the SWM ponds.

9.1 Identifying Cumulative Impacts

Cumulative effects are those likely to result from the current project in combination with other activities that have been carried out in the past or that are reasonably foreseeable in the future. For example, the destruction of a small area of habitat might be acceptable if taken in isolation but unacceptable if the surrounding habitat areas are already earmarked for drastic alteration.

The property has been subject to disturbance due to agricultural practices where native vegetation has been eliminated. Also, the property is within the Picton Urban Centre where residential development is permitted. Cumulative beneficial impacts include an increase of affordable supply residential units.

Protection of the natural features and maintenance of the hydrologic cycle will result in conservation of natural diversity and functions. Cumulative impacts in the natural features will be low as the natural vegetation within the EP area will be maintained in its current conditions and a restoration plan for the wetland is recommended. The cumulative impact is the loss of vegetation within the urban area, with the proposed development part of the forest will be removed, resulting in the loss of wildlife habitat and vegetation diversity.

A cumulative negative impact will be the reduction of natural infiltration and the increase of surface runoff. The property is within the urban area of Picton where current development have impacted surface water infiltration. Impervious areas within the development will increase surface water runoff. Green spaces within the development and application of LID measures will reduce runoff.

Degradation of the groundwater and surface water are not expected as the development will be serviced with municipal drinking water and sewage, and the SWM ponds will be designed to provide treatment to pre-development conditions.

Impacts to the drinking water intake protection zone are not expected as the area is within the EP zone where development is not permitted. A restoration plan is recommended to improve the water quality in the creek through restoration of the vegetation in the EP area.

Negative cumulative impacts will include increase of noise from vehicular traffic. Also, cumulative impacts related to air quality due to an increase of vehicular pollution, use of equipment, stationary emissions (e.g. HVAC systems), and energy use.

As the development will be within the areas where the natural features have been removed and prevention and mitigation measures will be applied, we conclude that the proposed development and the related infrastructure will cause no unacceptable ecological impacts and will not contribute to cumulative significant impact related to detriment of natural features in the area.

10. Policy Conformity and Conclusions

The owner of the property is proposing the construction of the Hillside Residential Subdivision which includes 313 rental units (290 apartment units and 86 townhomes), 54 market units, and 53 single detached units. The development also includes access roads, a 1.73 ha of green space, and 1.15 ha for storm water management (SWM) ponds. The proposed residential development is within the urban area of Picton. Planning documents indicate that the proposed development is permitted.

The wetland in the property is not part of a significant wetland (PSW). A 50 m setback has been applied to protect the wetland. Therefore, the proposed development complies with policy 4.1.4. of the PPS.

The property is within the urban area of Picton. The property and adjacent lands are not within an Area of Natural and Scientific Interest. The woodland in the property is part of a woodland greater than 40 hectares and habitat for Special Concern species is present. Approximately 12 ha within the property will maintain its natural condition. Therefore, the proposed development complies with policy 4.1.5 of the PPS as part of the woodland

will not be impacted, habitat for wildlife will continue to be present and measures will be applied to protect SAR and SAR habitat.

The section of Marsh Creek that is within the property does not provide fish habitat; however, a 15 m setback has been applied to protect the creek. Fish have been observed downstream close to the Bay of Picton. As part of the development is proposed the construction of SWM ponds to treat the runoff from the development. Treated runoff will be disposed to the roadside ditch along Lake Street. In addition, a restoration plan has been recommended to restore the creek and wetland. Therefore, the development complies with policy 4.1.6 of the PPS as the water quality in Marsh Creek will not be impacted by the development.

Endangered (Butternut) and Threatened (Eastern Meadowlark) species and their habitat are present in the property. The species will be affected by the proposed development. Measures will be applied to prevent harm to SAR and to compensate for the loss of SAR and SAR habitat. The proposed development will comply with policy 4.1.7 of the PPS as impacts to SAR will be compensated.

Species listed in the SARO and Schedule 1 of the SARA are present in the property. MNR/MECP will be contacted to obtain a permit and apply measures to compensate the impacts that the proposed development will have on the species at risk. In addition, measures have been recommended to avoid harm to SAR.

In the south parcel, the Environmental Protection areas as per the County's Picton Urban Centre Secondary Plan does not align with the Zoning By-law. Development is proposed in part of the Secondary Plan EP area that is outside the Zoning By-law EP area. An amendment of the Official Plan is required to change the land use designation of this area from EP to Town Corridor. Based on the site investigations, approximately 2 ha of forest (EP area) will be affected by the proposed development with an additional 1.853 ha to be part of the development green space. The rest of the forest found in the property will not be affected by the proposed development. This area includes the Zoning By-law EP area and part of the setbacks established to protect the wetland and creek. The ecological functions of the forest subject to development (e.g., wildlife habitat) will be lost; however, the area where the natural features will be preserved is greater than the area to be affected. Impacts to the preserved features and their ecological functions should be avoided, mitigated and restored by applying the recommended measures.

The area that is part of the setbacks established to protect the wetland and creek must be part of the area designated Environmental Protection.

The project complies with the intent of the Zoning Bylaw EP areas as the natural heritage features within the EP will be protected and conserved.

This report has been prepared as part of the supporting documents to be submitted for amendment of Schedule A of the Official Plan. The amendment consists in re-designate part of the EP area and Town Residential area of the south parcel to Town Corridor. The Town Corridor designation will match the land use of the north parcel.

Policy 2.10.3 of the Picton Urban Centre Secondary Plan indicates: *Recognize that the boundaries of the Environmental Protection Area may change as a result of more detailed analysis completed by public agencies such as Quinte Conservation and the Ministry of Natural Resources, or as a result of project-specific Environmental Impact Studies (EIS) completed by an applicant.* The natural features and their ecological functions of the area proposed to be re-designated will be lost, but the rest of the natural heritage features in the property will be preserved and measures have been recommended to avoid, mitigate, and restore these features. Based on the analysis of background information and information obtained from the site investigations, it is our opinion that the proposed change in boundary to re-designate part of the EP area to Town Corridor will not result in significant impacts to the natural features.

Recommendations to avoid impacts and/or mitigate potential impacts have been proposed and are considered adequate. Therefore, it is our opinion that the proposed development will cause low impact in the natural features or their ecological functions and that the proposed development complies with the policies of the PPS.

I trust that this report is complete within the County of Prince Edward terms of reference and sufficient for your present requirements. Please contact me at your convenience if you have any questions about this report or our recommendations.

GREER GALLOWAY, A DIVISION OF JP2G CONSULTANTS INC.

Yazmin Ramirez, M.Sc.
Biologist

11. References

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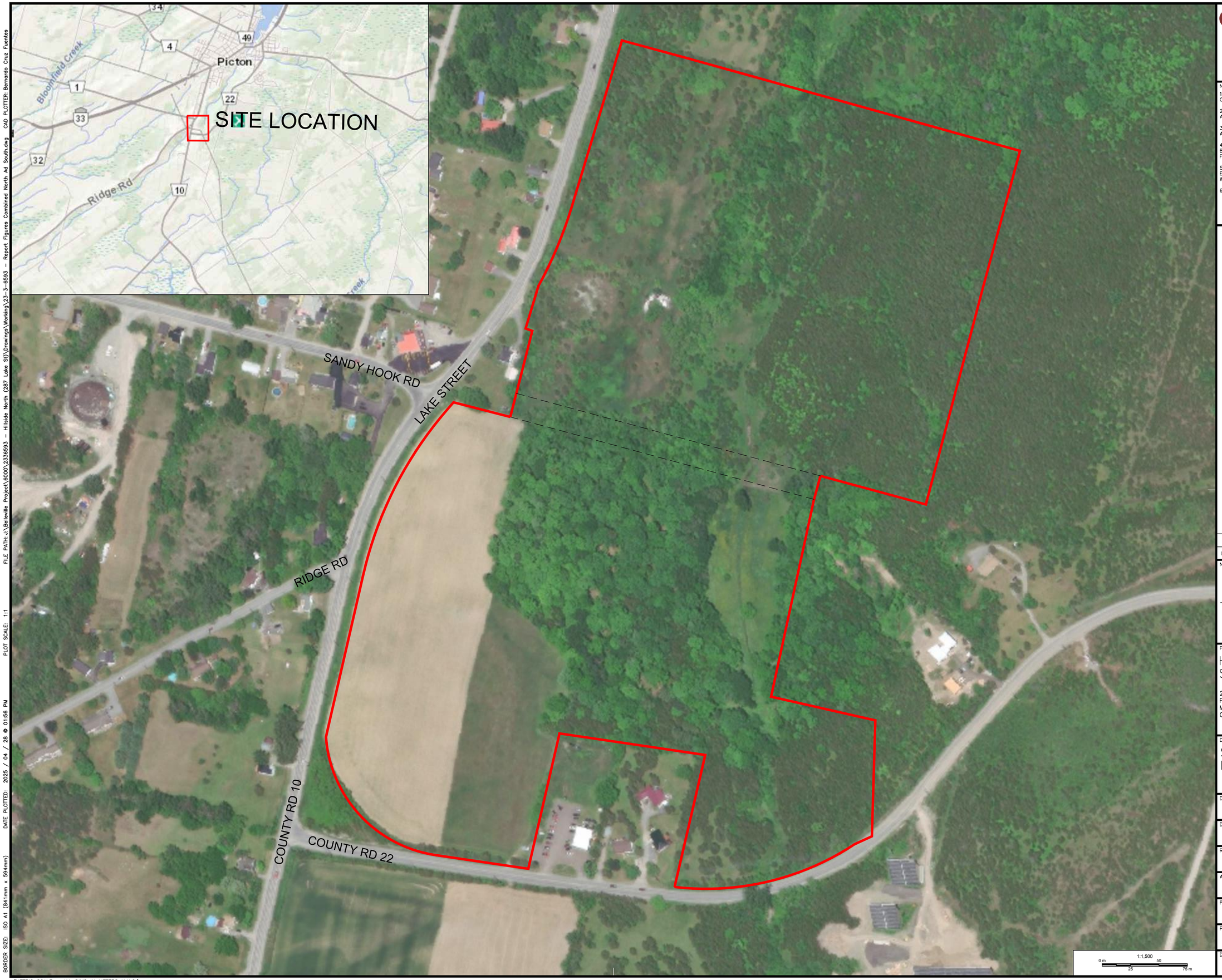
Figures



GREER GALLOWAY
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1620 WALLBRIDGE LOYALIST ROAD
BELLEVILLE, ONTARIO, K8N 4Z5
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FAX: 613-966-3087

NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH RELEVANT CODES AND GUIDELINES.
2. ALL DRAWINGS AND ADDENDA ARE TO BE READ AS, AND IN CONJUNCTION WITH THE SPECIFICATIONS.
3. ALL EQUIPMENT SHALL BE INSTALLED AS SPECIFIED OR APPROVED EQUIVALENT.
4. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK AND BE RESPONSIBLE FOR SAME.
5. CONTRACTOR MUST REPORT ANY DISCREPANCIES TO ENGINEER FOR RESOLUTION BEFORE COMMENCING THE WORK.
6. ANY CHANGES MUST BE APPROVED BY THE ENGINEER.

A / B — A DETAIL NO. / B DRAWING NO. – WHERE DETAILED

PROPERTY BOUNDARY

REVISION	DESCRIPTION	DATE
01	–	YY/MM/DD

NORTH

STAMP

PROJECT
HILLSIDE SUBDIVISION

287 LAKE STREET
PART OF LOT 23, CONCESSION 3,
MILITARY TRACT, HALLOWELL WARD,
COUNTY OF PRINCE EDWARD

DRAWING TITLE
SITE LOCATION MAP

DESIGNED BY: Y. RAMIREZ
DRAWN BY: B. CRUZ-FUENTES
REVIEWED BY: Y. RAMIREZ
APPROVED BY: Y. RAMIREZ
PROJECT DATE: 2025/04/28 (YYYY/MM/DD)
PROJECT #: 23-3-6593

1:1,500
0 m 25 50 75 m

DRAWING # FIGURE 1

DRAWING SCALE (ISO A1)
HOR: 1 : 1500
VER: N/A

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PLOT SCALE: 1:1
DATE PLOTTED: 2025 / 04 / 28 @ 01:56 PM
BORDER SIZE: ISO A1 (841mm x 594mm)

(METRIC SCALE – ALL DIMS IN METERS U.N.O.)

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1620 WALLBRIDGE LOYALIST ROAD
BELLEVILLE, ONTARIO, K8N 4Z5
PHONE: 613-966-3068
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A/B A DETAIL NO. B DRAWING NO. – WHERE DETAILED

PROPERTY BOUNDARY
UNEVALUATED WETLAND
CREEK
PIT

REVISION	DESCRIPTION	DATE
01	–	YY/MM/DD

NORTH

STAMP

PROJECT
HILLSIDE SUBDIVISION

287 LAKE STREET
PART OF LOT 23, CONCESSION 3,
MILITARY TRACT, HALLOWELL WARD,
COUNTY OF PRINCE EDWARD

DRAWING TITLE
NATURAL HERITAGE FEATURES

DESIGNED BY: Y. RAMIREZ
DRAWN BY: B. CRUZ-FUENTES
REVIEWED BY: Y. RAMIREZ
APPROVED BY: Y. RAMIREZ
PROJECT DATE: 2025/04/28 (YYYY/MM/DD)
PROJECT #: 23-3-6593
DRAWING #: FIGURE 2
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(METRIC SCALE – ALL DIMS IN METERS U.N.O.)

SANDY HOOK RD

LAKE STREET

RIDGE RD

COUNTY RD 10

COUNTY RD 22

1:1,500
0 m 50
25 75 m

(METRIC SCALE – ALL DIMS IN METERS U.N.O.)

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1620 WALLBRIDGE LOYALIST ROAD
BELLEVILLE, ONTARIO, K8N 4Z5
PHONE: 613-966-3068
FAX: 613-966-3087

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A / B — A DETAIL NO. / B DRAWING NO. – WHERE DETAILED

PROPERTY BOUNDARY

COMPREHENSIVE ZONING BY-LAW NO. 1816-2006, OCTOBER 23, 2006

- EP - ENVIRONMENTAL PROTECTION
- FD - FUTURE DEVELOPMENT

OFFICIAL PLAN JULY 8, 2021

- TOWN RESIDENTIAL
- TOWN CORRIDOR
- PARK & OPEN SPACE
- ENVIRONMENTAL PROTECTION

REVISION	DESCRIPTION	DATE
01	–	YY/MM/DD

NORTH

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PROJECT
HILLSIDE SUBDIVISION

287 LAKE STREET
PART OF LOT 23, CONCESSION 3,
MILITARY TRACT, HALLOWELL WARD,
COUNTY OF PRINCE EDWARD

DRAWING TITLE
LAND USE DESIGNATION

DESIGNED BY: Y. RAMIREZ

DRAWN BY: B. CRUZ-FUENTES

REVIEWED BY: Y. RAMIREZ

APPROVED BY: Y. RAMIREZ

PROJECT DATE: 2025/04/28 (YYYY/MM/DD)

PROJECT #: 23-3-6593

DRAWING #: FIGURE 3

DRAWING SCALE (ISO A1): HOR: 1 : 1500 VER: N/A

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PLOT SCALE: 1:1
DATE PLOTTED: 2025 / 04 / 28 @ 01:56 PM
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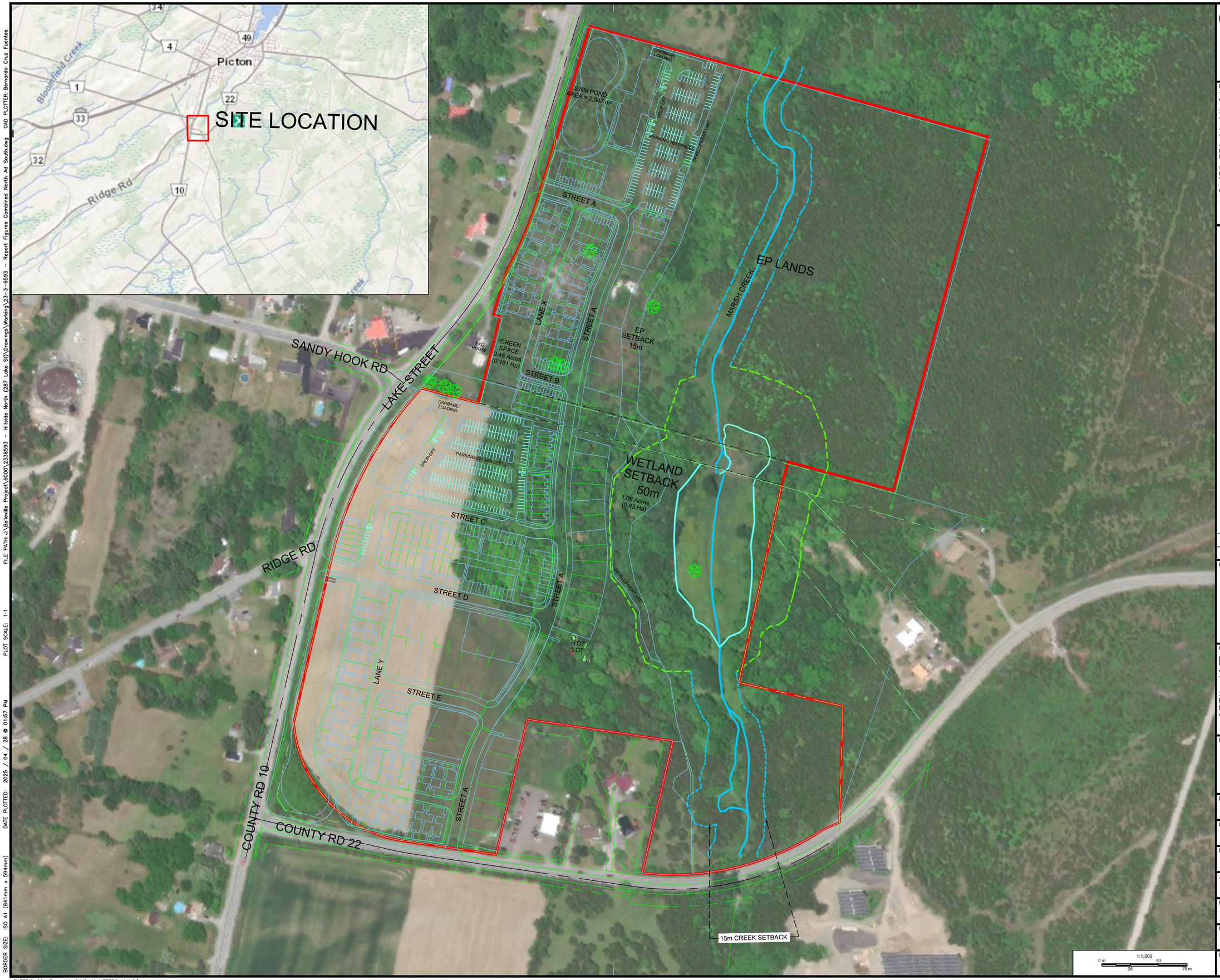

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BELLEVILLE, ONTARIO, K8N 4Z5
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A / B — A DETAIL NO. / B DRAWING NO. – WHERE DETAILED

PROPERTY BOUNDARY
BUTTERNUT TREES
15M OFFSET
50M OFFSET
WETLAND BOUNDARY

REVISION	DESCRIPTION	DATE
01	–	YY/MM/DD

NORTH

STAMP

PROJECT
HILLSIDE SUBDIVISION

287 LAKE STREET
PART OF LOT 23, CONCESSION 3,
MILITARY TRACT, HALLOWELL WARD,
COUNTY OF PRINCE EDWARD

DRAWING TITLE
PROPOSED SUBDIVISION

DESIGNED BY: Y. RAMIREZ
DRAWN BY: B. CRUZ-FUENTES
REVIEWED BY: Y. RAMIREZ
APPROVED BY: Y. RAMIREZ
PROJECT DATE: 2025/04/28 (YYYY/MM/DD)
PROJECT #: 23-3-6593

DRAWING # FIGURE 4

DRAWING SCALE (ISO A1)
HOR: 1 : 1500
VER: N/A

(METRIC SCALE – ALL DIMS IN METERS U.N.O.)

FILE PATH: J:\Belleville Project\6000\2336593 – Hillside North (287 Lake St)\Drawings\Working\23-3-6593 – Report Figures Combined North Ad South.dwg CAD PLOTTER: Bernardo Cruz Fuentes
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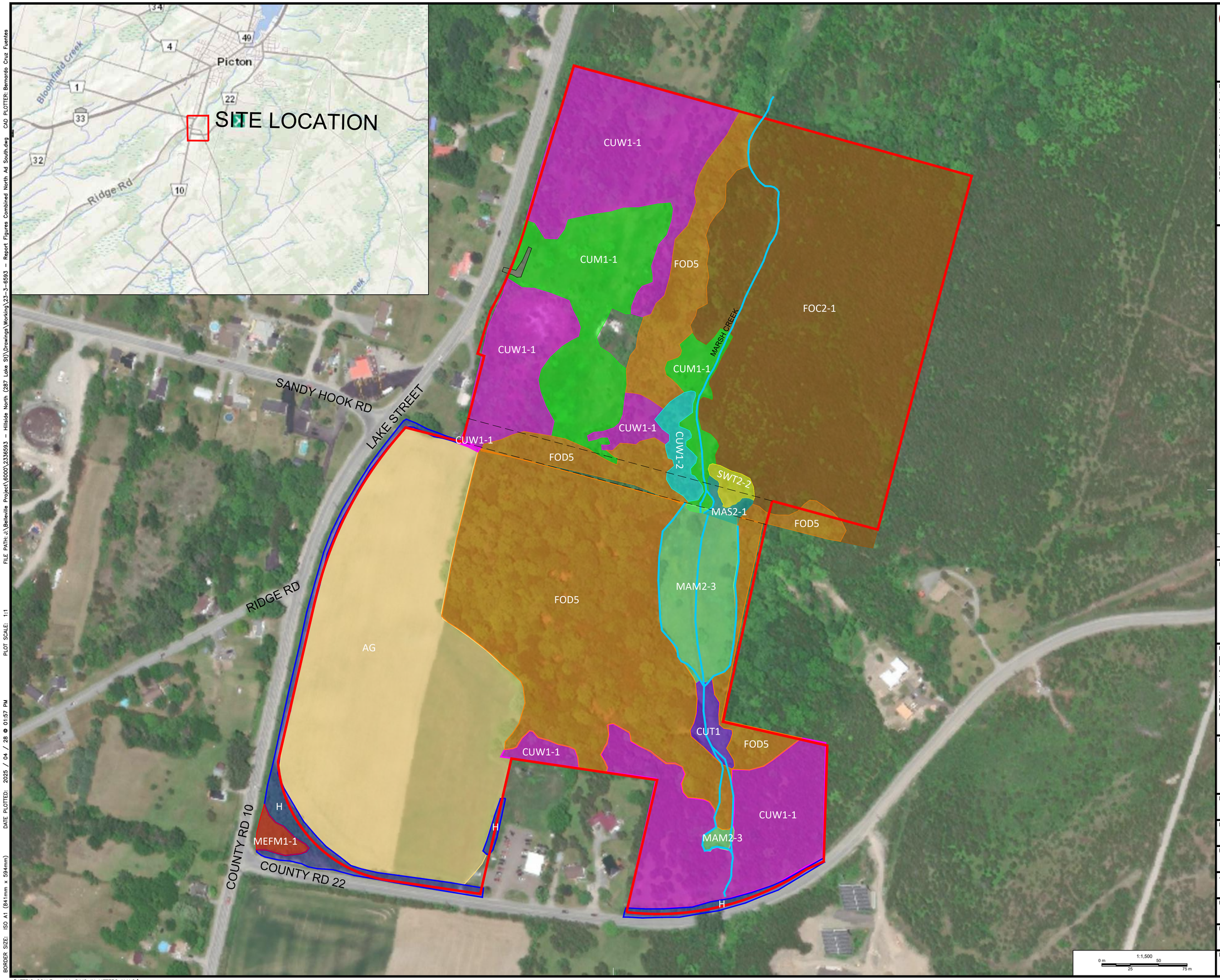

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A / B — A DETAIL NO. / B DRAWING NO. – WHERE DETAILED

- PROPERTY BOUNDARY
- FOD5-DRY-FRESH SUGAR MAPLE DECIDUOUS FOREST
- FOC2-1-DRY-FRESH RED CEDAR CONIFEROUS FOREST
- SWT2-2-WILLOW MINERAL THICKET SWAMP
- MAS2-1-CATTAIL MINERAL SHALLOW MARSH
- CUW1-1-RED CEDAR CULTURAL WOODLAND
- CUW1-2-WHITE PINE CULTURAL WOODLAND
- CUM1-1-DRY-MOIST OLD FIELD MEADOW
- **CUT1** - SWAMP ROSE CULTURAL THICKET
- **MAM2-3** - RED- TOP MINERAL MEADOW MASH
- **MEFM1-1 - DRY-FRESH- GOLDEN FORB MEADOW**
- **AG FIELD -** AGRICULTURAL FIELD
- **H-HEDGEROW**
- DRIVEWAY
- CREEK
- WETLAND BOUNDARY

REVISION	DESCRIPTION	DATE
01	–	YY/MM/DD

NORTH

STAMP

PROJECT
HILLSIDE SUBDIVISION

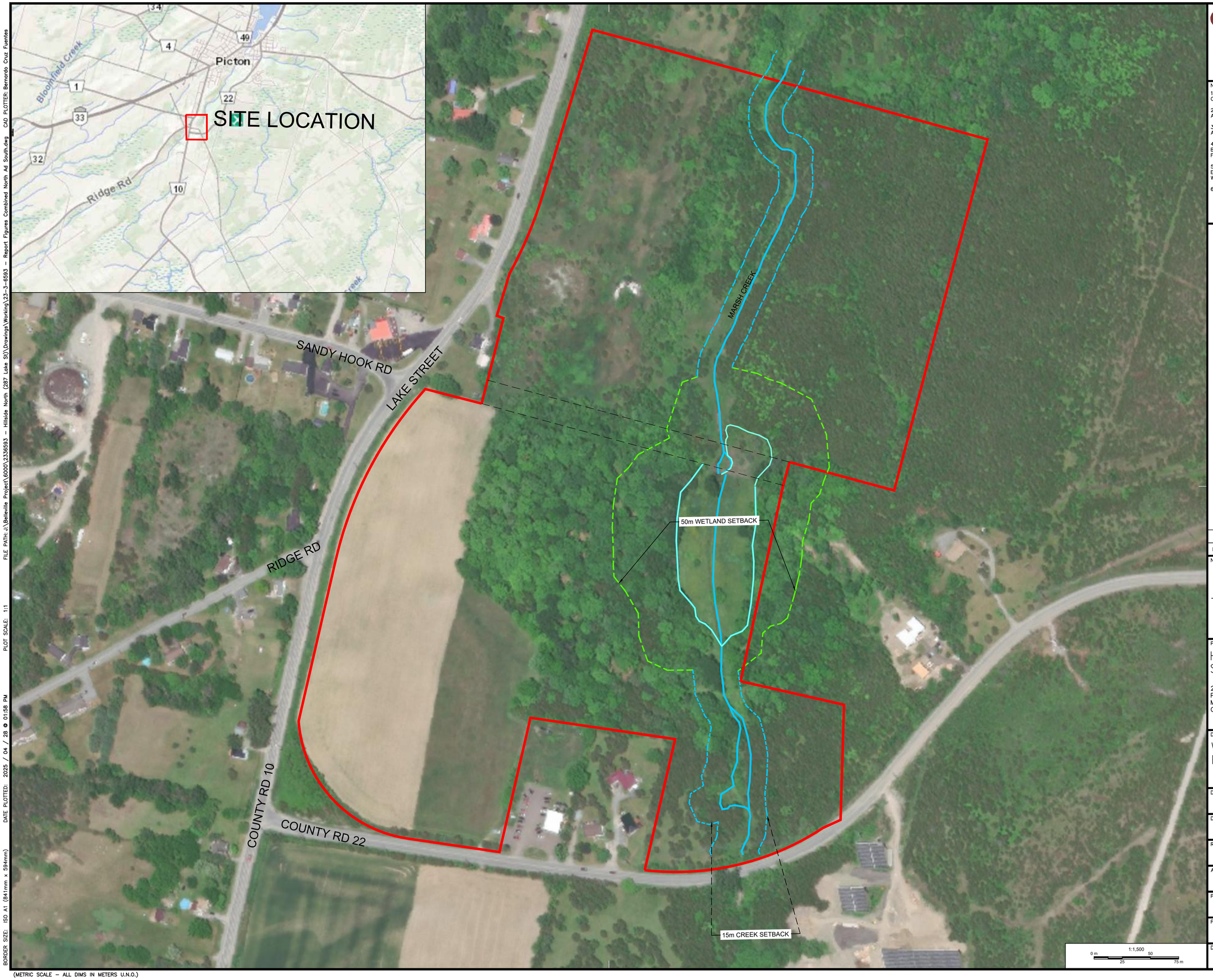
287 LAKE STREET
PART OF LOT 23, CONCESSION 3,
MILITARY TRACT, HALLOWELL WARD,
COUNTY OF PRINCE EDWARD

DRAWING TITLE
VEGETATION COMMUNITIES

DESIGNED BY: Y. RAMIREZ
DRAWN BY: B. CRUZ-FUENTES
REVIEWED BY: Y. RAMIREZ
APPROVED BY: Y. RAMIREZ
PROJECT DATE: 2025/04/28 (YYYY/MM/DD)
PROJECT #: 23-3-6593
DRAWING #: FIGURE 5
DRAWING SCALE (ISO A1): HOR: 1 : 1500 VER: N/A

FILE PATH: J:\Belleville Project\6000\2336593 – Hillside North (287 Lake St)\Drawings\Working\23-3-6593 – Report Figures Combined North Ad South.dwg CAD PLOTTER: Bernardo Cruz Fuentes
PLOT SCALE: 1:1
DATE PLOTTED: 2025 / 04 / 28 @ 01:57 PM
BORDER SIZE: ISO A1 (841mm x 594mm)

(METRIC SCALE – ALL DIMS IN METERS U.N.O.)



GREER GALLOWAY
a division of Jp2g Consultants Inc.

1620 WALLBRIDGE LOYALIST ROAD
BELLEVILLE, ONTARIO, K8N 4Z5
PHONE: 613-966-3068
FAX: 613-966-3087

NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH RELEVANT CODES AND GUIDELINES.
2. ALL DRAWINGS AND ADDENDA ARE TO BE READ AS, AND IN CONJUNCTION WITH THE SPECIFICATIONS.
3. ALL EQUIPMENT SHALL BE INSTALLED AS SPECIFIED OR APPROVED EQUIVALENT.
4. CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH WORK AND BE RESPONSIBLE FOR SAME.
5. CONTRACTOR MUST REPORT ANY DISCREPANCIES TO ENGINEER FOR RESOLUTION BEFORE COMMENCING THE WORK.
6. ANY CHANGES MUST BE APPROVED BY THE ENGINEER.

A / B — A DETAIL NO. / B DRAWING NO. – WHERE DETAILED

- PROPERTY BOUNDARY
- CREEK
- WETLAND BOUNDARY
- 15M OFFSET
- 50M OFFSET

REVISION	DESCRIPTION	DATE
01	–	YY/MM/DD

NORTH

STAMP

PROJECT
HILLSIDE SUBDIVISION

287 LAKE STREET
PART OF LOT 23, CONCESSION 3,
MILITARY TRACT, HALLOWELL WARD,
COUNTY OF PRINCE EDWARD

DRAWING TITLE
WETLAND BOUNDARY

DESIGNED BY: Y. RAMIREZ
DRAWN BY: B. CRUZ-FUENTES
REVIEWED BY: Y. RAMIREZ
APPROVED BY: Y. RAMIREZ
PROJECT DATE: 2025/04/28 (YYYY/MM/DD)
PROJECT #: 23-3-6593

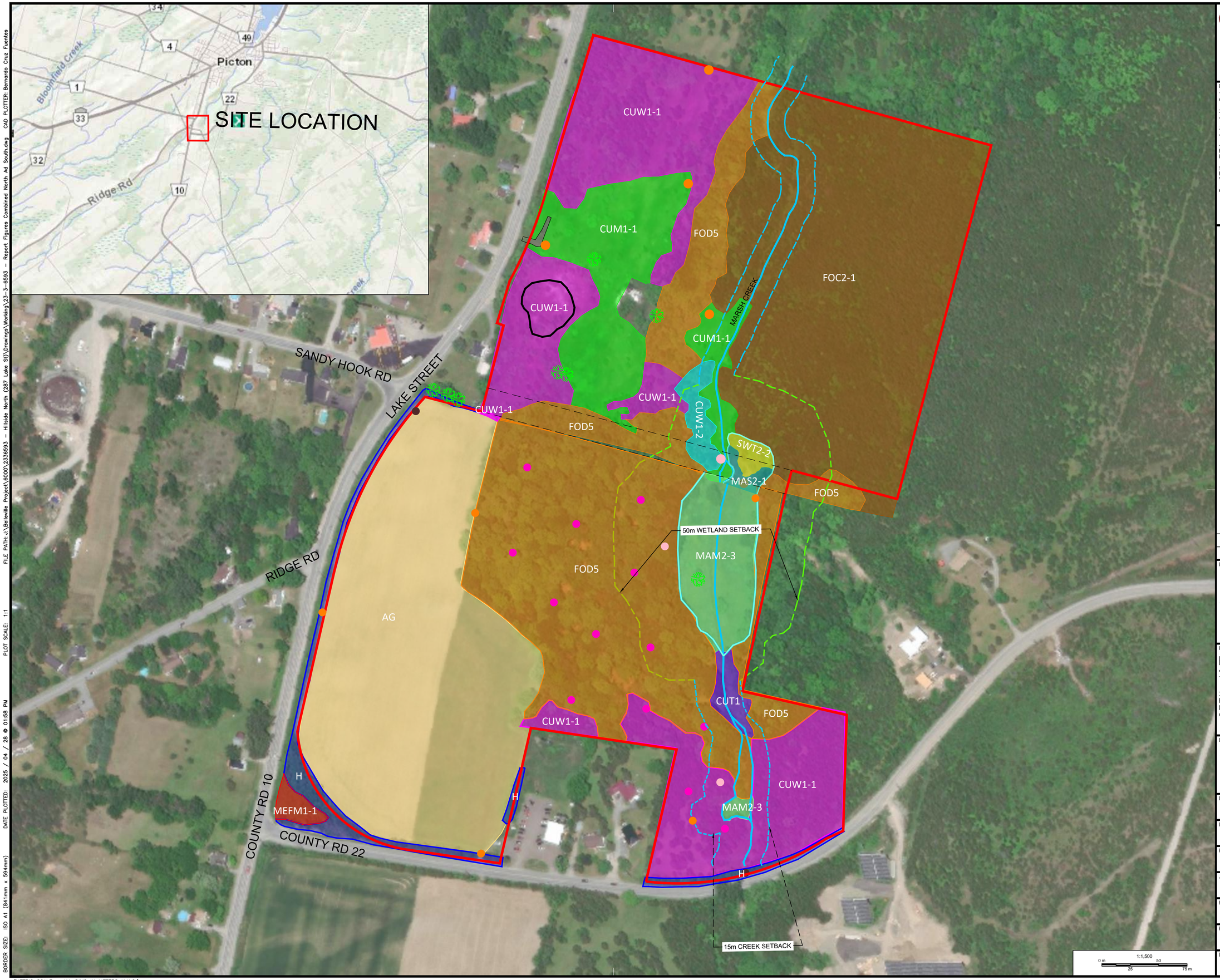
DRAWING #: FIGURE 6

DRAWING SCALE (ISO A1)
HOR: 1 : 1500
VER: N/A

0 m 25 50 75 m 1:1,500

FILE PATH: J:\Belleville Project\6000\23365593 – Hillside North (287 Lake St)\Drawings\Working\23-3-6593 – Report Figures Combined North Ad South.dwg CAD PLOTTER: Bernardo Cruz Fuentes
PLOT SCALE: 1:1
DATE PLOTTED: 2025 / 04 / 28 @ 01:58 PM
BORDER SIZE: ISO A1 (841mm x 594mm)

(METRIC SCALE – ALL DIMS IN METERS U.N.O.)



GREER GALLOWAY
a division of Jp2g Consultants Inc.

1620 WALLBRIDGE LOYALIST ROAD
BELLEVILLE, ONTARIO, K8N 4Z5
PHONE: 613-966-3068
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6. ANY CHANGES MUST BE APPROVED BY THE ENGINEER.

A/B — A DETAIL NO. / B DRAWING NO. – WHERE DETAILED

- PROPERTY BOUNDARY
- FOD5-DRY-FRESH SUGAR MAPLE DECIDUOUS FOREST
- FOC2-1-DRY-FRESH RED CEDAR CONIFEROUS FOREST
- SWT2-2-WILLOW MINERAL THICKET SWAMP
- MAS2-1-CATTAIL MINERAL SHALLOW MARSH
- CUW1-1-RED CEDAR CULTURAL WOODLAND
- CUW1-2-WHITE PINE CULTURAL WOODLAND
- CUM1-1-DRY-MOIST OLD FIELD MEADOW
- **CUT1** - SWAMP ROSE CULTURAL THICKET
- **MAM2-3** - RED- TOP MINERAL MEADOW MASH
- **MEFM1-1 - DRY-FRESH-GOLDEN FORB MEADOW**
- **AG FIELD** - AGRICULTURAL FIELD
- **H-HEDGEROW**
- CREEK
- BUTTERNUT TREES
- AMPHIBIAN SURVEY STATION
- BREEDING BIRD STATION
- **WHIP-POOR-WILL SURVEY STATION**
- **BAT ROOSTING PLOT**
- WETLAND BOUNDARY
- 15M OFFSET
- 50M OFFSET
- DRIVEWAY
- PIT

REVISION	DESCRIPTION	DATE
01	–	YY/MM/DD

NORTH

STAMP

PROJECT
HILLSIDE SUBDIVISION

287 LAKE STREET
PART OF LOT 23, CONCESSION 3,
MILITARY TRACT, HALLOWELL WARD,
COUNTY OF PRINCE EDWARD

DRAWING TITLE
SIGNIFICANT NATURAL HERITAGE FEATURES

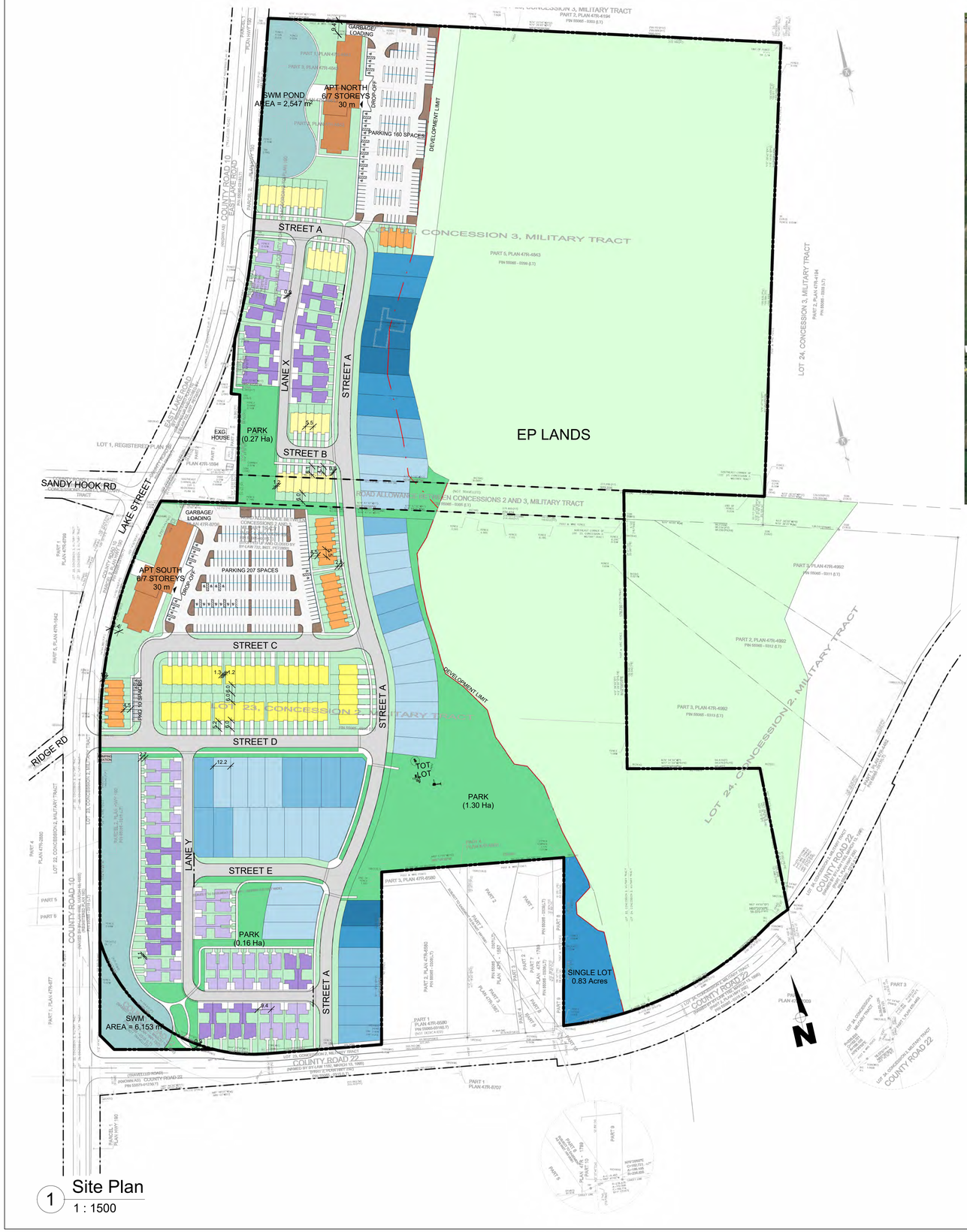
DESIGNED BY: Y. RAMIREZ
DRAWN BY: B. CRUZ-FUENTES
REVIEWED BY: Y. RAMIREZ
APPROVED BY: Y. RAMIREZ
PROJECT DATE: 2025/04/28 (YYYY/MM/DD)
PROJECT #: 23-3-6593

DRAWING #: FIGURE 7
DRAWING SCALE (ISO A1): HOR: 1 : 1500 VER: N/A

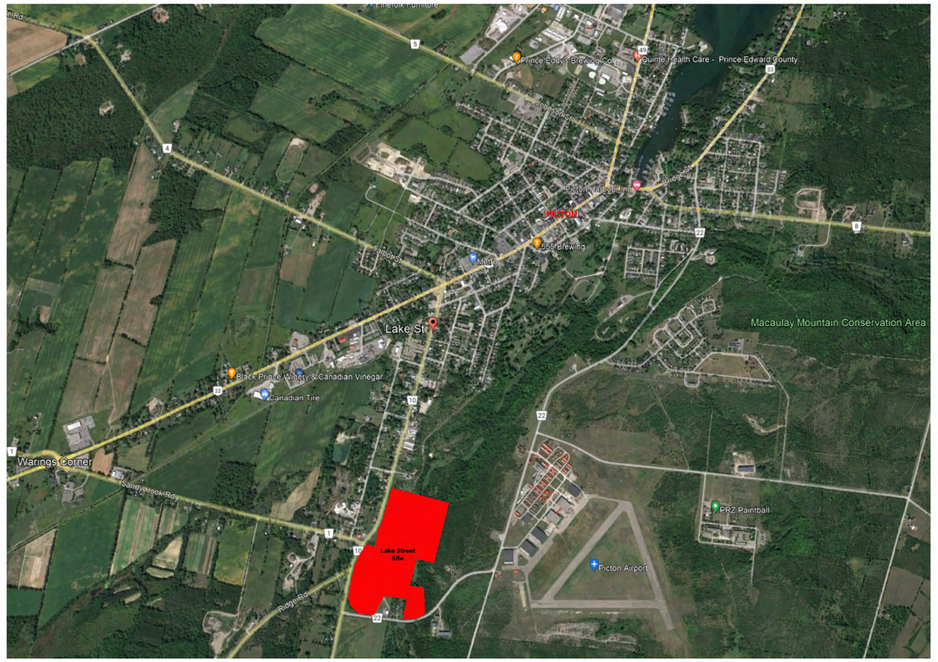
FILE PATH: J:\Belleville Project\6000\2336593 – Hillside North (287 Lake St)\Drawings\Working\23-3-6593 – Report Figures Combined North Ad South.dwg CAD PLOTTER: Bernardo Cruz Fuentes
PLOT SCALE: 1:1
DATE PLOTTED: 2025 / 04 / 28 @ 01:58 PM
BORDER SIZE: ISO A1 (841mm x 594mm)

(METRIC SCALE – ALL DIMS IN METERS U.N.O.)

Appendix A
Site Plan



1 Site Plan
1 : 1500



2 Context Plan
1 : 2500

SITE STATISTICS
Lake Street, P.E.C.

SITE AREA

NORTH PARCEL	119,560.12 m²	29.53 Acres	11.96 Ha
SOUTH PARCEL	138,104.79 m²	34.11 Acres	13.81 Ha
TO BE AQUIRED PEC - CLOSED ROAD ALLOWANCE	2,825.35 m²	0.70 Acres	0.28 Ha
TO BE AQUIRED PEC - SW CORNER	1,941.87 m²	0.48 Acres	0.194 Ha
TOTAL	**262,432.13 m²**	**64.82 Acres**	**26.24 Ha**
PARKLAND DEDICATION	17,278.90 m²	4.27 Acres	1.73 Ha
E.P. LAND CONVEYANCE	122,894.22 m²	30.35 Acres	12.29 Ha
S.W.M.	11,456.20 m²	2.83 Acres	1.15 Ha
DEVELOPABLE	**110,802.81 m²**	**27.37 Acres**	**11.08 Ha**

G.F.A.

APARTMENT NORTH	10,325.00	m²
APARTMENT SOUTH	10,325.00	m²
TOWNHOMES - RENTAL	2,759.32	m²
TOWNHOMES - FREEHOLD	9,432.59	m²
LINKS	11,729.50	m²
SINGLE FAMILY	11,819.88	m²
TOTAL	**56,382.29**	**m²**

F.S.I. **0.51**

COVERAGE **36.95%**

NUMBER OF UNITS

APARTMENT NORTH	145
APARTMENT SOUTH	145
TOWNHOMES - RENTAL	23
TOWNHOMES - FREEHOLD	63
LINKS	54
SINGLE FAMILY	53
TOTAL	**483**

DENSITY **43.59 UNITS/Ha**

PARKING

			BARRIER FREE REQUIRED	BARRIER FREE PROVIDED
APARTMENT NORTH	160 spaces	1.10 spaces/unit	10% 16	**16**
APARTMENT SOUTH	207 spaces	1.43 spaces/unit	10% 21	**21**
TOWNHOMES - RENTAL	35 spaces	1.52 spaces/unit		
TOWNHOMES - FREEHOLD	126 spaces	2.00 spaces/unit		
LINKS	162 spaces	3.00 spaces/unit		
SINGLE FAMILY	212 spaces	4.00 spaces/unit		
EV CHARGE STATIONS	20 spaces	APARTMENT BUILDINGS ONLY		

LANDSCAPED OPEN AREA

HARDSCAPE	26,985.92 m²	24.35%
SOFTSCAPE	42,874.39 m²	38.69%
TOTAL	**69,860.31 m²**	**63.05%**

HEIGHT

APARTMENT NORTH	36.00 m MAX.
APARTMENT SOUTH	36.00 m MAX.
TOWNHOMES - RENTAL	14.00 m MAX.
TOWNHOMES - FREEHOLD	14.00 m MAX.
LINKS	14.00 m MAX.
SINGLE FAMILY	12.00 m MAX.

AMENITY SPACE

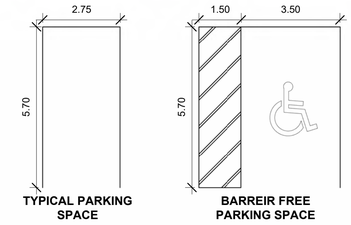
	REQUIRED		PROVIDED	
APARTMENT NORTH				
INDOOR AMENITY	2.00 m²/UNIT	290.00 m²	**428.50 m²**	**2.96 m²/UNIT**
OUTDOOR AMENITY	4.00 m²/UNIT	580.00 m²	**2716.81 m²**	**18.74 m²/UNIT**
APARTMENT SOUTH				
INDOOR AMENITY	2.00 m²/UNIT	290.00 m²	**857.00 m²**	**5.91 m²/UNIT**
OUTDOOR AMENITY	4.00 m²/UNIT	580.00 m²	**2187.13 m²**	**15.08 m²/UNIT**

BICYCLE STORAGE

LONG TERM	72	0.25 SPACES/ UNIT
SHORT TERM	10	

LOADING SPACES **2**

DEDICATED SNOW STORAGE AREAS
AT GRADE 2% 539.72 m²



3 Parking Spaces
1 : 100

LEGEND

RENTAL UNITS

APARTMENT BUILDING B	290 UNITS
TOWNHOMES	23 UNITS
TOTAL	**313 UNITS**

FREEHOLD UNITS

TOWNHOMES 18'	25 UNITS
TOWNHOMES 23'	38 UNITS
30' LINK UNIT LOTS	26 UNITS
35' LINK UNIT LOTS	28 UNITS
40' SINGLE LOTS	22 UNITS
45' SINGLE LOTS	20 UNITS
50' SINGLE LOTS	6 UNITS
60' SINGLE LOTS	4 UNITS
SINGLE LOT	1 UNITS
TOTAL	**170 UNITS**
SITE TOTAL	**483 UNITS**

Revisions

No.	Description	Date
1	REVISED PER STAFF COMMENTS	3/7/2023
2	REVISED PER ENVIRONMENTAL STUDIES	7/12/2023
3	REVISED PER DRAFT PLAN	26/2/2025

HSPM HOLDINGS INC.
51 OAK AVENUE RICHMOND HILL ON L4C 6R5
BETH@ HSPMHOLDINGS.COM

Homes First Development Corporation

Lake Street

SITE PLAN

Project number	22-3
Date	Issue Date
Drawn by	HSPM
Checked by	HSPM

A101

Scale As indicated

2025-04-22 11:59:19 AM

Appendix B
List of Plant Species

Table 1. List of Plant Species

	Scientific Name	Family	S Rank	G Rank
Trees				
Ironwood	*Ostrya virginiana*	Betulaceae	S5	G5
White Birch	*Betula papyrifera*	Betulaceae	S5	G5
Yellow Birch	*Betula alleghaniensis*	Betulaceae	S5	G5
Eastern Red Cedar	*Juniperus virginiana*	Cupressaceae	S5	G5
American Beech	*Fagus grandifolia*	Fagaceae	S4	G5
Bur Oak	*Quercus macrocarpa*	Fagaceae	S5	G5
Red Oak	*Quercus rubra*	Fagaceae	S5	G5
Bitternut Hickory	*Carya cordiformis*	Juglandaceae	S5	G5
Black Walnut	*Juglans nigra*	Juglandaceae	S4?	G5
Butternut	*Juglans cinerea*	Juglandaceae	S2?	G3
Green Ash	*Fraxinus pennsylvanica*	Oleaceae	S5	G5
White Ash	*Fraxinus americana*	Oleaceae	S5	G5
Eastern White Pine	*Pinus strobus*	Pinaceae	S5	G5
Common Pear	*Pyrus communis*	Rosaceae	SNA	G5
Crabapple	*Malus sp.*	Rosaceae	?	G5
Black Cherry	*Prunus serotina*	Rosaceae	S5	G5
Large-tooth Aspen	*Populus grandidentata*	Salicaceae	S5	G5
Trembling Aspen	*Populus tremuloides*	Salicaceae	S5	G5
Manitoba Maple	*Acer negundo*	Sapindaceae	S5	G5
Sugar Maple	*Acer saccharum*	Sapindaceae	S5	G5
Basswood	*Tilia americana*	Tiliaceae	S5	G5
American Elm	*Ulmus americana*	Ulmaceae	S5	G5
Shrubs				
European Smoketree	*Cotinus coggygria*	Anacardiaceae	SNA	GNR
Fragrant Sumac	*Rhus aromatica*	Anacardiaceae	S4	G5

	Scientific Name	Family	S Rank	G Rank
Staghorn Sumac	*Rhus thyphina*	Anacardiaceae	S5	G5
Red Elderberry	*Sambucus racemosa*	Caprifoliaceae	S5	G5
Tatarian Honeysuckle	*Lonicera tatarica*	Caprifoliacaea	SNA	GNR
Alternate-leaf Dogwood	*Cornus alternifolia*	Cornaceae	S5	G5
Gray Dogwood	*Cornus foemina ssp. racemosa*	Cornaceae	S5	G5
Red-osier Dogwood	*Cornus sericea*	Cornaceae	S5	G5
Ground Juniper	*Juniperus communis*	Cupressaceae	S5	G5
Common Lilac	*Syringa vulgaris*	Oleaceae	SNA	GNR
Common Buckthorn	*Rhamnus cathartica*	Rhamnaceae	SNA	GNR
Black Raspberry	*Rubus occidentalis*	Rosaceae	S5	G5
Chokecherry	*Prunus virginiana*	Rosaceae	S5	G5
Common Red Raspberry	*Rubus idaeus*	Rosaceae	SNR	G5
European Mountain Ash	*Sorbus aucuparia*	Rosaceae	SNR	G5
Multiflora Rose	*Rosa multiflora*	Rosaceae	SNA	GNR
Common Prickly Ash	*Zanthoxylum americanum*	Rutaceae	S5	G5
Bebb's Willow	*Salix bebbiana*	Salicaceae	S5	G5
Slender Willow	*Salix petiolaris*	Salicaceae	S5	G5
European Cranberrybush	*Viburnum opulus*	Viburnaceae	S5	G5
Nannyberry	*Viburnum lentago*	Viburnaceae	S5	G5
Wayfaringtree	*Viburnum lantana*	Viburnaceae	SNA	GNR
Vines				
Bittersweet Nightshade	*Solanum dulcarama*	Solanaceae	SNA	GNR
Riverbank Grape	*Vitis riparia*	Vitaceae	S5	G5
Summer Grape	*Vitis aestivalis*	Vitaceae	S4	G5
Virginia Creeper	*Parthenocissus quinquefolia*	Vitaceae	S4?	G5
Ferns				
Bracken Fern	*Pteridium aquilinum*	Dennstaedtiaceae	S5	G5

	Scientific Name	Family	S Rank	G Rank
Sensitive Fern	*Onoclea sensibilis*	Dryopteridaceae	S5	G5
Spinulose Wood Fern	*Dryopteris carthusiana*	Dryopteridaceae	S5	G5
Ostrich Fern	*Matteuccia struthiopteris*	Onocleaceae	S5	G5
Herbs				
Wild Leek	*Allium tricoccum*	Amaryllidaceae	S4	G5
Poison Ivy	*Toxicodendron radicans*	Anacardiaceae	S5	G5
Star-flowered Solomon's Seal	*Maianthemum stellatum*	Asparagaceae	S5	G5
Queen Anne's Lace (Wild Carrot)	*Daucus carota*	Apiaceae	SNA	GNR
Dog-strangle Vine	*Cynanchum rossicum*	Apocynaceae	SNA	GNR
Common Milkweed	*Asclepias syriaca*	Apocynaceae	S5	G5
Swamp Milkweed	*Asclepias incarnata*	Apocynaceae	S5	G5
Jack-in-the-Pulpit	*Arisaema triphyllum*	Araceae	S5	G5
Welsh's Onion	*Allium fistulosum*	Asparagales		GNR
Oxeye Daisy	*Leucanthemum vulgare*	Asteraceae	SNA	GNR
Boneset	*Eupatorium perfoliatum*	Asteraceae	S5	G5
Bull Thistle	*Cirsium vulgare*	Asteraceae	SNA	GNR
Canada Goldenrod	*Solidago canadensis*	Asteraceae	S5	G5
Coltsfoot	*Tussilago farfara*	Asteraceae	SNA	GNR
Common Burdock	*Arctium minus*	Asteraceae	SNA	GNR
Common Dandelion	*Taraxacum officinale*	Asteraceae	SNA	G5
Common Nipplewort	*Lapsana communis*	Asteraceae	SNA	GNR
Common Ragweed	*Ambrosia artemissifolia*	Asteraceae	S5	G5
Common Yarrow	*Achillea millefolium*	Asteraceae	SNA	G5
Chicory	*Cichorium intybus*	Asteraceae	SNA	GNR
Elecampane	*Inula helenium*	Asteraceae	SNA	GNR
Grass-leaved Goldenrod	*Euthamia graminifolia*	Asteraceae	S5	G5
Goat's Beard	*Tragopogon dubius*	Asteraceae	SNA	GNR

	Scientific Name	Family	S Rank	G Rank
New England Aster	*Symphyotrichum novae-angliae*	Asteraceae	S5	G5
Oxeye Daisy	*Leucanthemum vulgare*	Asteraceae	SNA	GNR
Panicled Aster	*Symphyotrichum lanceolatum*	Asteraceae	S5	G5
Philadelphia Fleabane	*Erigeron philadelphicus*	Asteraceae	S5	G5
Smooth Blue Aster	*Symphyotrichum laeve*	Asteraceae	S5	G5
Spotted Joe-pye-weed	*Eupatorium maculatum*	Asteraceae	S5	G5
Swamp Thistle	*Cirsium muticum*	Asteraceae	S5	G5
Tall Goldenrod	*Solidago altissima*	Asteraceae	S5	G5
White Heath Aster	*Symphyotrichum ericoides*	Asteraceae	S5	G5
Jewelweed (Spotted Touch-me-not)	*Impatiens capensis*	Balsaminaceae	S5	G5
Mayapple	*Podophyllum peltatum*	Berberidaceae	S5	G5
Common Viper's-Bugloss	*Echium vulgare*	Boraginaceae	SNA	GNR
Dame's Rocket	*Hesperis matronalis*	Brassicaceae	SNA	G4G5
Garlic Mustard	*Alliaria petiolata*	Brassicaceae	SNA	GNR
Wild Teasel	*Dipsacus fullonum ssp. sylvestris*	Caprifoliacea	SNA	GNR
Bladder Campion	*Silene vulgaris*	Caryphyllaceae	SNA	GNR
Deptford Pink	*Dianthus armeria*	Caryphyllaceae	SNA	GNR
Goldmoss Stonecrop	*Sedum acre*	Crassulaceae	SNA	GNR
Leafy Spurge	*Euphorbia esula*	Euphorbiaceae		GNR
Pinesap	*Monotropa hypopitys*	Ericaceae	S4	G5
Bird's-foot Trefoil	*Lotus corniculatus*	Fabaceae	SNA	GNR
Black Medic	*Medicago lupulina*	Fabaceae	SNA	GNR
Red Clover	*Trifolium pratense*	Fabaceae	SNA	GNR
White Sweet Clover	*Melilotus albus*	Fabaceae	?	?
Tufted Vetch	*Vicia cracca*	Fabaceae	SNA	GNR
Herb Robert	*Geranium robertianum*	Geraniaceae	S5	G5
Wild Geranium	*Geranium maculatum*	Geraniaceae	S5	G5

	Scientific Name	Family	S Rank	G Rank
Bristly Black Currant	*Ribes lacustre*	Grossulariaceae	S5	G5
Wild Black Currant (Gooseberry)	*Ribes americanum*	Grossulariaceae	S5	G5
American Wild Mint	*Mentha canadensis*	Lamiaceae	S5	G5
Catnip	*Nepeta cataria*	Lamiaceae	SNA	GNR
Common Motherwort	*Leonurus cardiana*	Lamiaceae	SNA	GNR
Heal-all	*Prunella vulgaris*	Lamiaceae	S5	G5
Northern Bugleweed	*Lycopus uniflorus*	Lamiaceae	S5	G5
False Solomon's-seal	*Maianthemum racemosum*	Liliaceae	SNR	G5
White Trillium	*Trillium grandiflorum*	Liliaceae	S5	G5
Wild Lily-of-the-Valley	*Maianthenum canadense*	Liliaceae	S5	G5
Yellow Trout-lily	*Erythronium americanum*	Liliaceae	S5	G5
Purple Loosestrife	*Lythrum salicaria*	Lythraceae	SNA	G5
Red Trillium	*Trillium erectum*	Melanthiaceae	S5	G5
Broadleaf Enchanter's Nightshade	*Circaea lutetiana*	Onagraceae	S5	G5
Common Helleborine	*Epipactis helleborine*	Orchidaceae	SNA	GNR
Small Yellow Lady's Slipper	*Cypripedium parviflowum var. parviflorum*	Orchidaceae		
White Adder's-mouth Orchid	*Malaxis monophyllos*	Orchidaceae	S4	G5
Common Yellow Woodsorrel	*Oxalis stricta*	Oxalidaceae	SNA	G5
Bloodroot	*Sanguinaria canadensis*	Papaveraceae	S5	G5
Square-stem Monkeyflower	*Mimulus ringens*	Phrymaceae	S5	G5
Curly Dock	*Rumex crispus*	Polygonaceae	SNA	GNR
Fringed Loosestrife	*Lysimachia ciliata*	Primulaceae	S5	G5
American Wintergreen	*Pyrola americana*	Pyrolaceae	S4?	G5
Canada Anemone	*Anemone canadensis*	Ranunculaceae	S5	G5
Early Meadow-rue	*Thalictrum dioicum*	Ranunculaceae	S5	G5
Kidney-leaf Buttercup	*Ranunculus abortivus*	Ranunculaceae	S5	G5

	Scientific Name	Family	S Rank	G Rank
Tall Buttercup	*Ranunculus acris*	Ranunculaceae	SNA	G5
Wood Anemone	*Anemone quinquefolia*	Ranunculaceae	S5	G5
White Meadowsweet	*Spiraea alba*	Rosaceae	S5	G5
Barren Strawberry	*Waldsteinia fragarioides*	Rosaceae	S5	G5
Wild Strawberry	*Fragaria virginiana*	Rosaceae	S5	G5
Cleavers	*Galium aparine*	Rubiaceae	S5	G5
Small Bedstraw	*Galium trifidum*	Rubiaceae	SNR	G5
Great Mullein	*Verbascum thapsus*	Scrophulariaceae	SNA	GNR
Canada Clearweed	*Pilea pumila*	Urticaceae	S5	G5
Stinging Nettle	*Urtica dioica*	Urticaceae	SNA	G5
Blue Vervain	*Verbena hastata*	Verbenaceae	S5	G5
Long-spur Violet	*Viola rostrata*	Violaceae	S5	G5
Aquatic				
Broadleaf Arrowhead	*Sagittaria latifolia*	Alismataceae	S5	G5
Northern Water plantain	*Alisma triviale*	Alismataceae	S5	G5
Water Horsetail	*Equisetum fluviatile*	Equisetaceae	S5	G5
Horsetail	*Equisetum sp.*	Equisetaceae		
Water Knotweed	*Polygonum amphibium*	Polygonaceae	S5	G5
Ribbonleaf Ponweed	*Potamogeton epihydrus*	Potamogetonaceae	S5	G5
Narrow-leaved Cattail	*Typha angustifolia*	Typhaceae	SNA	G5
Grasses, Sedges & Rushes				
Blister Sedge	*Carex vesicaria*	Cyperaceae	S5	G5
Fescue Sedge	*Carex brevior*	Cyperaceae	S4	G5
Porcupine Sedge	*Carex hystericina*	Cyperaceae	S5	G5
Pennsylvania Sedge	*Carex pensylvanica*	Cyperaceae	S5	G5
Retrorse Sedge	*Carex retrorsa*	Cyperaceae	S5	G5
Richardson's Sedge	*Carex richardsonii*	Cyperaceae	S4	G5

	Scientific Name	Family	S Rank	G Rank
Stellate Sedge	*Carex rosea*	Cyperaceae	S5	G5
Troublesome Sedge	*Carex molesta*	Cyperaceae	S4S5	G5
White Bear Sedge	*Carex albursina*	Cyperaceae	S5	G5
Woolgrass Bulrush	*Scirpus atrovirens*	Cyperaceae	S5	G5
Soft Rush	*Juncus effusus*	Juncaceae	S5	G5
Blue Joint Grass	*Calamagrostis canadensis*	Poaceae	S5	G5
Canada Bluegrass	*Poa compressa*	Poaceae	SNA	GNR
Fowl Mannagrass	*Glyceria striata*	Poaceae	S5	G5
Giant Bentgrass	*Agrostis gigantea*	Poaceae	SNA	G4G5
Orchard Grass	*Dactylis glomerata*	Poaceae	SNA	GNR
Red Fescue	*Festuca rubra*	Poaceae	S5	G5
Reed Canary Grass	*Phalaris arundinacea*	Poaceae	S5	G5
Red top Grass	*Agrostis gigantea stolonifera*	Poaceae	?	GNA
Smooth Brome Grass	*Bromus inermis*	Poaceae	SNA	G5
Timothy grass	*Phleum pratense*	Poaceae	SNA	GNR
American Bur-reed	*Sparganium americanum*	Sparganiaceae	S5	G5

Nature Conservancy conservation concern ranking (2023). G – Global Level, S – Provincial Conservation Status.

SRANK Definition

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S3 – Vulnerable - At moderate risk of extirpation in the province due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
S4 – Apparently Secure - It denotes that a species is apparently secure, with over 100 occurrences in the province.
S5 – Secure - Indicates that a species is widespread in Ontario, it is demonstrably secure in the province.
SNA - Not Applicable - A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities.

SNR - Unranked – National or subnational conservation status not yet assessed.

GRANK definition

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G5 – Secure - At very low risk of extinction or collapse due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
GNR – Unranked – Global rank not yet assessed.
GNA - Not Applicable - A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities.
T - denotes that the rank applies to a subspecies variety.

Appendix C
List of Wildlife Species

Table 2. List of Wildlife

Common Name	Scientific Name	Family	S Rank	G Rank	Breeding Evidence Codes
Birds					
American Crow	*Corvus brachyrhynchos*	Corvidae	S5B	G5	
American Goldfinch	*Carduelis tristis*	Fringillidae	S5	G5	X
American Robin	*Turdus migratorius*	Turdidae	S5B	G5	H
American Yellow Warbler	*Setophaga petechia*	Parulidae	S5B	G5	V
Baltimore Oriole	*Icterus galbula*	Icteridae	S4B	G5	X
Barn Swallow	*Hirundo rustica*	Hirundinidae	S4B	G5	
Black-capped Chickadee	*Poecile atricapillus*	Paridae	S5	G5	X
Blue Jay	*Cyanocitta cristata*	Corvidae	S5	G5	X
Cedar Waxwing	*Bombycilla cedrorum*	Bombycillidae	S5	G5	
Chipping Sparrow	*Spizella passerina*	Passerellidae	S5B	G5	X
Common Grackle	*Quiscalus quiscula*	Icteridae	S5B	G5	X
Common Yellowthroat	*Geothlypis trichas*	Parulidae	S5B	G5	X
Dark-eyed Junco	*Junco hyemalis*	Passerellidae	S5	G5	
Downy Woodpecker	*Dryobates pubescens*	Picidae	S5	G5	
Eastern Bluebird	*Sialia sialis*	Turdidae	S5B,S4N	G5	H
Eastern Kingbird	*Tyrannus tyrannus*	Tyrannidae	S4B	G5	X
Eastern Meadowlark	*Sturnella magna*	Icteridae	S4B,S3N	G5	AE
Eastern Phoebe	*Sayornis phoebe*	Tyrannidae	S5B	G5	S
Eastern Towhee	*Pipilo erythrophthalmus*	Passerellidae	S4B,S3N	G5	X
Eastern Wood-pewee	*Contopus virens*	Tyrannidae	S4B	G4	S
European Starling	*Sturnus vulgaris*	Sturnidae	SNA	G5	X
Gray Catbird	*Dumetella carolinensis*	Mimidae	S4B	G5	H
Great Crested Flycatcher	*Myiarchus crinitus*	Tyrannidae	S5B	G5	X
House Wren	*Troglodytes aedon*	Troglodytidae	S5B	G5	A
Indigo Bunting	*Passerina cyanea*	Cardinalidae	S5B	G5	X

Common Name	Scientific Name	Family	S Rank	G Rank	Breeding Evidence Codes
Killdeer	*Charadrius vociferus*	Charadriidae	S4B	G5	X
Least Flycatcher	*Empidonax minimus*	Tyrannidae	S5B	G5	
Mallard	*Anas platyrhynchos*	Anatidae	S5	G5	
Mourning Dove	*Zenaida macroura*	Columbidae	S5	G5	H
Northern Cardinal	*Cardinalis cardinalis*	Cardinalidae	S5	G5	X
Northern Flicker	*Colaptes auratus*	Picidae	S4B	G5	X
Red-eyed Vireo	*Vireo olivaceus*	Vireonidae	S5	G5	H
Red-tailed Hawk	*Buteo jamaicensis*	Accipitridae	S5	G5	H
Red-winged Blackbird	*Angelaius phoeniceus*	Icteridae	S5	G5	P
Rock Pigeon	*Columba livia*	Columbidae	SNA	G5	
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	Cardinalidae	S5B	G5	H
Ruby-crowned Kinglet	*Corthylio calendula*	Regulidae	S5B,S3N	G5	
Scarlet Tanager	*Piranga olivacea*	Cardinalidae	S5B	G5	X
Song Sparrow	*Melospiza melodia*	Passerellidae	S5B	G5	S
Swainson's Thrush	*Catharus ustulatus*	Turdidae	S5B	G5	
Turkey Vulture	*Cathartes aura*	Cathartidae	S5B,S3N	G5	
Warbling Vireo	*Vireo gilvus*	Vireonidae	S5B	G5	
White-breasted Nuthatch	*Sitta carolinensis*	Sittidae	S5	G5	
White-throated Sparrow	*Zonotrichia albicollis*	Passerellidae	S5	G5	X
Wood Thrush	*Hylocichla mustelina*	Turdidae	S4B	G4	S

Common Name	Scientific Name	Family	S Rank	G Rank
Mammals				
Red Fox	*Vulpes vulpes*	Canidae	S5	G5
White-tailed Deer	*Odocoileus virginianus*	Cervidae	S5	G5
Eastern Cottontail	*Sylvilagus floridanus*	Leporidae	S5	G5
Raccoon	*Procyon lotor*	Procyonidae	S5	G5

Common Name	Scientific Name	Family	S Rank	G Rank
Eastern Chipmunk	*Tamias striatus*	Sciuridae	S5	G5
Eastern Gray Squirrel	*Sciurus carolinensis*	Sciuridae	S5	G5
Amphibians				
Spring Peeper	*Pseidacris crucifer*	Hylidae	S5	G5
Western Chorus Frog	*Pseudacris triseriata*	Hylidae	S4	G5
Eastern Red-backed Salamander	*Plethodon cinereus*	Plethodontidae	S5	G5
Green Frog	*Lithobates clamitans*	Ranidae	S5	G5
Northern Leopard Frog	*Lithobates pipiens*	Ranidae	S5	G5
Reptiles				
Eastern Gartersnake	*Thamnophis sirtalis*	Colubridae	S5	G5

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GNA - Not Applicable - A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities.
T - denotes that the rank applies to a subspecies variety.

Breeding Evidence Codes
(Taken from the Breeding Bird Atlas: https://www.birdsontario.org/jsp/codes.jsp)

OBSERVED	
X	Species observed in its breeding season (no breeding evidence)
POSSIBLE	
H	Species observed in its breeding season in suitable nesting habitat
S	Singing male(s) present, or breeding calls heard, in suitable nesting habitat in breeding season
PROBABLE	
M	At least 7 individuals singing or producing other sounds associated with breeding (e.g., calls or drumming), heard during the same visit to a single square and in suitable nesting habitat during the species' breeding season.
P	Pair observed in suitable nesting habitat in nesting season
T	Permanent territory presumed through registration of territorial song, or the occurrence of an adult bird, at the same place, in breeding habitat, on at least two days a week or more apart, during its breeding season. Use discretion when using this code. "T" is not to be used for colonial birds, or species that might forage or loaf a long distance from their nesting site e.g. Kingfisher, Turkey Vulture, and male waterfowl
D	Courtship or display, including interaction between a male and a female or two males, including courtship feeding or copulation
V	Visiting probable nest site

A	Agitated behaviour or anxiety calls of an adult
B	Brood Patch on adult female or cloacal protuberance on adult male
N	Nest-building or excavation of nest hole, by a wren or a woopecker
CONFIRMED	
NB	Nest-building or excavation of nest hole by a species other than a wren or a woopecker
DD	Distraction display or injury feigning
NU	Used nest or egg shells found (occupied or laid within the period of the survey)
FY	Recently fledged young (nidicolous species) or downy young (nidifugous species) incapable of sustained flight
AE	Adult leaving or entering nest sites in circumstances indicating occupied nest
FS	Adult carrying fecal sac
CF	Adult carrying food for young
NE	Nest containing eggs
NY	Nest with young seen or heard

Appendix D
Butternut Assessment Report

JDB Associates Ltd.
Landscape Architects, Urban Designers, Arborists, Butternut Assessors

Stefan Taina, BHA #505
274 Burton Ave., Suite 1201
Barrie, ON
L4N 5W4
Phone: 705-722-6278
Email address: jdbellassociates@rogers.com

Client name: Homes First Development Corporation
Mailing address: 51 Oak Avenue, Richmond Hill, Ontario, L4C 6R5

Phone:
Email address:

July 28, 2023

RE: 318 Lake Street, Town of Picton, ON - Residential Subdivision

BHA Report Number: 1
Date(s) of Butternut health assessment: May 25, 2023

This letter is in regard to my assessment of the Butternut tree on your property. Please read this letter carefully as it contains important information about the Endangered Species Act, 2007 (ESA).

Butternut is listed as an endangered species on the Species at Risk in Ontario List, and as such, it is protected under the ESA from being killed, harmed, or removed. If you are planning to undertake an activity that may affect Butternut, you may be eligible to follow the requirements set out in section 23.7 of Ontario Regulation 242/08 under the ESA, or you may need to seek an authorization under the ESA (e.g., a permit).

Please visit e-laws at the link provided below for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled. Information about Butternut is also available at: http://www.ontario.ca/environment-and-energy/butternut-trees-your-property.

If you are eligible to kill, harm or take Butternut under section 23.7 of the regulation, your first step is to submit the BHA Report and the original data forms enclosed in this package to the local MECP District Manager. Note that the MECP will

Links:

Endangered Species Act, 2007:
http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_07e06_e.htm

Ontario Regulation 242/08 (refer to section 23.7):
http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_080242_e.htm

Summary of changes related to Butternut:
http://www.ontario.ca/environment-and-energy/butternut-trees-your-property

MECP office locations:
http://www.MECP.gov.on.ca/en/ContactUs/2ColumnSubPage/STEL02_179002.html

not accept photocopies. The BHA Report must be submitted at least 30 days prior to registering to kill, harm, or remove a Butternut tree. During this 30 day period, no Butternut trees (of any category) may be killed, harmed, or removed, and MECP may contact you for an opportunity to examine the trees.

If MECP chooses to examine the trees, a representative of the MECP will contact you using the information you supplied when you submitted the BHA Report. After the examination has been completed, MECP will notify you if the examination results change whether you are eligible for the regulation.

If you are eligible to follow the rules in regulation under section 23.7, you may register your activity using the "Notice of Butternut Impact" form on the MECP Registry **after** the 30 day period has elapsed.

If you are **not** eligible to follow the rules in regulation under section 23.7, please contact the local Ministry of Environment, Conservation and Parks (MECP) office to determine whether you will need to seek a permit. A link to the directory of MECP offices is provided in the text box on the previous page.

As a designated Butternut Health Assessor (BHA), I am providing the following Butternut Health Assessor's Report for the tree located at the above noted property, for which I completed an assessment during the site visit on the above noted date. If there are other Butternut trees at the site that may be affected by the activity and they are not identified in this report, they too must be assessed by a BHA.

Note that municipal by-laws and legislation other than the ESA may also be applicable to the removal or harming of trees.

Please retain this letter and a copy of the BHA Report for your records, along with any other documentation you may receive from the MECP should an examination of the trees occur. If you have any questions, please do not hesitate to contact me or your local MECP district office.

Sincerely,

Stefan Taina

Enclosures:

1. Butternut Health Assessor's Report
2. Original data forms
3. Electronic and printed copies of the Excel data spreadsheet (BHA Tree Analysis)

Butternut Health Assessor's Report

Stefan Taina, BHA #505
274 Burton Ave., Suite 1201
Barrie, ON
L4N 5W4
Phone: 705-722-6278
Email address: jdbellassociates@rogers.com

Client name: Homes First Development Corporation
Mailing address: 51 Oak Avenue, Richmond Hill, Ontario, L4C 6R5

Phone:
Email address:

Property description: 318 Lake Street, Town of Picton, ON - Residential Subdivision
BHA Report Number: 1
Date(s) of Butternut health assessment: May 25, 2023
Date BHA Report prepared: July 28, 2023

Map datum used: NAD83

Total number of trees assessed in this BHA Report: 3

The assessed tree was identified on the attached Tree Inventory Plan TP-1.
The number on the plan corresponds to the tree number used in this report.

This BHA Report includes the following tables:

- Table 1: Butternut trees proposed to be killed, harmed, or taken
- Table 2: Butternut trees that are **not** proposed to be killed, harmed or taken
- Table 3: Trees determined to be hybrid Butternuts
- Table 4: Summary of Assessment Results

Table 1: Butternut trees proposed to be killed, harmed, or taken

Tree #	UTM coordinates	Category[1] *(1, 2, or 3[2])*	dbh[3] (cm)	Cultivated ? *(Y/N)*	*(enter one: killed,*	Reason tree is proposed to be killed, harmed or taken:
BN1	18 4873047 327088	2	75	N	killed	Proposed development
BN2	18 4873047 327101	2	87	N	harmed	Proposed development
BN2	18 4873044 327110	2	73	N	harmed	Proposed development

[1] The extent to which the tree is affected by Butternut Canker is presented in the Excel document titled, "BHA Tree Analysis" that accompanies this BHA Report.
[2] The rules in regulation under section 23.7 of O. Reg. 242/08 are not applicable to Category 3 trees.
[3] dbh: diameter at breast height, rounded to nearest cm (if tree is shorter than breast height, enter zero)

Table 2: Summary of Assessment Results

Result:	Total #:	Important information for persons planning activities that may affect Butternut:
Category 1		• A Category 1 tree is one that is affected by butternut canker to such an advanced degree that retaining the tree would not support the protection or recovery of butternut in the area in which the tree is located; and is considered "non-retainable". • During the 30 day period that follows your submission of this BHA Report to the MECP District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MECP may contact you for an opportunity to examine the trees. • Category 1 trees may be killed, harmed or taken **after** the 30 day period that follows submission of this BHA Report to the MECP District Manager, unless the results of an MECP examination indicate that the assessment has not been conducted in accordance with the document entitled "Butternut Assessment Guidelines: Assessment of Butternut Tree Health for the Purposes of the *Endangered Species Act, 2007"*.
Category 2	**3**	• A Category 2 tree is one that is not affected by Butternut Canker, or is affected by Butternut Canker but the degree to which it is affected is not too advanced and retaining the tree could support the protection or recovery of butternut in the area in which the tree is located, and is considered "retainable". • During the 30 day period that follows your submission of this BHA Report to the MECP District Manager, no Butternut trees (of Category 1, 2, or 3) may be killed, harmed, or taken, and MECP may contact you for an opportunity to examine the trees. • Activities that may kill, harm or take up to a maximum of ten (10) Category 2 trees may be eligible to follow the rules in section 23.7 of Ontario Regulation 242/08, in accordance with the conditions and requirements set out in the regulation. • Refer to e-Laws for the legal requirements of eligible activities under section 23.7 of Ontario Regulation 242/08 and conditions that must be fulfilled: http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_080242_e.htm
Category 3		• A Category 3 tree is one that may be useful in determining sources of resistance to Butternut Canker, and is considered "achievable". • Category 3 trees are not eligible to be killed, harmed or taken under section 23.7 of Ontario Regulation 242/08. • Visit the MECP website using the link below for information on how to seek an ESA authorization, or consider an alternative that will avoid killing, harming or taking any Category 3 trees:
Cultivated		• An activity that involves killing, harming, or taking a cultivated Butternut tree that was not required to be planted to fulfill a condition of an ESA permit or a

Result:	Total #:	Important information for persons planning activities that may affect Butternut:
		condition of a regulation, may be eligible for the exemption provided by subsection 23.7 (11) of O. Reg. 242/08. • Prior to undertaking the activity, the owner or occupier of the land on which the Butternut is located (or person acting on their behalf) will need to determine whether the exemption for cultivated trees is applicable by determining whether or not the tree was cultivated as a result of the requirements for an exemption under O. Reg. 242/08 or a condition of a permit issued under the ESA. This information can be accessed by contacting the local MECP district office. • The owner or occupier of the land on which the Butternut is located (or person acting on their behalf) is encouraged to append the details regarding whether the tree was planted to satisfy a requirement (e.g., the permit number or registration number) to this BHA Report for their records.
Hybrid		• Hybrid Butternut trees are not protected under the ESA, but their removal may be subject to municipal by-laws and other legislation.

NOTE: This concludes the summary of the BHA Report. A complete BHA Report must include the original (hard copy) data forms (i.e., all completed sets of Form 1 and Form 2), an electronic copy of the Excel data analysis spreadsheet, and one printed copy of the Excel data analysis spreadsheet.

Appendix E
SWH Category Tables

Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E

Table 1.1 Seasonal Concentrations of areas of Animals

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
Waterfowl Stopover and Staging Areas (Terrestrial)	American Black Duck Wood Duck Green-winged Teal Blue-winged Teal Mallard Northern Pintail Northern Shoveler American Wigeon Gadwall	CUM1 CUT1 - Plus evidence of annual spring flooding from melt water or run-off within these Ecosites	Fields with sheet water during Spring (mid March to May). • Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. • Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH.	• Any mixed species aggregations of 100 or more individuals required. • The area of the flooded field ecosite habitat plus a 100-300m radius buffer dependant on local site conditions and adjacent land use is the significant wildlife habitat.	Suitable habitat is not present. No further evaluation undertaken.
Waterfowl Stopover and Staging Areas (Aquatic)	Canada Goose, Cackling Goose, Snow Goose, American Black Duck, Northern Pintail, Northern Shoveler, American Wigeon, Gadwall, Green-winged Teal, Blue-winged Teal, Hooded Merganser, Common Merganser, Lesser Scaup, Greater Scaup, Long-tailed Duck, Surf Scoter, White-winged Scoter, Black Scoter, Ring-necked duck, Common Goldeneye, Bufflehead, Redhead, Ruddy Duck, Red-breasted Merganser, Brant, Canvasback, Ruddy Duck.	MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, SWD1, SWD2, SWD3, SWD4, SWD5, SWD6, SWD7.	• Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify. • These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water).	• Aggregations of 100 or more of listed species for 7 days, results in > 700 waterfowl use days. • Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH. • The combined area of the ELC ecosites and a 100m radius area is the SWH.	Suitable habitat for the species is not present. No further evaluation undertaken.
Shorebird Migratory Stopover Area	Greater Yellowlegs, Lesser Yellowlegs, Marbled Godwit Hudsonian Godwit, Black-bellied Plover, American Golden-Plover Semipalmated Plover, Solitary Sandpiper, Spotted Sandpiper, Semipalmated Sandpiper, Pectoral Sandpiper, White-rumped Sandpiper, Baird's	BBO1, BBO2, BBS1, BBS2, BBT1, BBT2. SDO1, SDS2, SDT1, MAM1, MAM2, MAM3, MAM4, MAM5.	Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a SWH.	Presence of 3 or more of listed species and > 1000 shorebird use days during spring or fall migration period. The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area.	Suitable habitat for the species is not present. No further evaluation undertaken.

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
	Sandpiper, Least Sandpiper, Purple Sandpiper, Stilt Sandpiper, Short-billed Dowitcher, Red-necked Phalarope Whimbrel, Ruddy Turnstone Sanderling, Dunlin.				
Raptor Wintering Area	Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl **Special Concern:** Short-eared Owl	FOD, FOM, FOC. Upland: CUM; CUT; CUS; CUW.	The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. Raptor wintering sites need to be > 20 ha with a combination of forest and upland. Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands.	• One or more Short-eared Owls or; • At least 10 individuals and two listed spp. • To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds.	Property does not meet habitat criteria. No further evaluation was undertaken.
Bat Hibernacula	Big Brown Bat Little Brown Myotis Eastern Pipistrelle/Tri-coloured Bat Northern Myotis Eastern Small-footed Myotis	CCR1, CCR2, CCA1, CCA2.	Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. The locations of bat hibernacula are relatively poorly known.	• The area includes 1000m radius around the entrance of the hibernaculum.	Suitable habitat for the species is not present. No further evaluation undertaken.

Bat Maternity Colonies	Big Brown Bat
	Little Brown Myotis
	Silver-haired Bat
	Northern Myotis
		All ELC Ecosites in ELC Community Series:
		FOD
		FOM
			• Tree cavities, vegetation and often in buildings (buildings are not considered to be SWH).
			• Maternity colonies located in Mature deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees
			• Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2.
			• Northern Myotis prefer contiguous tracts of older forest cover for foraging and roosting in snags and trees
			• Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred.
				• Maternity Colonies with confirmed use by;
				  • >20 Northern Myotis
				  • >10 Big Brown Bats
				  • >20 Little Brown Myotis
				  • >5 Adult Female Silver-haired Bats
				• The area of the habitat includes the entire woodland or the forest stand ELC Ecosite containing the maternity colonies.
					A bat roosting survey was performed, and it was concluded that significant habitat is not present. No further Evaluation is required.

Turtle Wintering Areas	Midland Painted Turtle **Special Concern:** Northern Map Turtle	ELC Community Classes; SW, MA, OA and SA, ELC	• For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates.	• Presence of 5 over-wintering Midland Painted Turtles is significant.	ELC communities and habitat criteria are not present within the

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
	Snapping Turtle	Community Series; FEO and BOO Northern Map Turtle - Open Water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.	• Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen.	• One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant. • The mapped ELC ecosite area with the over wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over wintering is the SWH.	property. No further evaluation undertaken.
Reptile Hibernaculum	**Snakes:** Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake **Special Concern:** Milksnake Eastern Ribbonsnake Lizard: **Special Concern (Southern Shield population):** Five-lined Skink	For all snakes, habitat may be found in any ecosite in central Ontario other than very wet ones. Talus, Rock Barren, Crevice and Cave, and Alvar sites may be directly related to these habitats. For Five-lined Skink, ELC Community Series of FOD and FOM and Ecosites: FOC1 FOC3	• For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural locations. • Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line. • Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. • Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures.	Studies confirming: • Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or; individuals of two or more snake spp.	Hibernaculum habitat is not found within the property. No further evaluation undertaken.
Colonially -Nesting Bird Breeding Habitat (Bank and Cliff)	Bank Swallow Cliff Swallow Northern Rough-winged Swallow	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles (Bank Swallow and N. Rough-winged Swallow). Cliff faces, bridge abutments, silos, barns (Cliff Swallows). Habitat found in the following ecosites: CUM1, CUT1, CUS1, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1.	• Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area. • Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. • Does not include a licensed/permitted Mineral Aggregate Operation.	• Presence of 1 or more nesting sites with 8 or more cliff swallow pairs or 50 bank swallow and rough-winged swallow pairs during the breeding season. • A colony identified as SWH will include a 50m radius habitat area from the peripheral nests.	Suitable habitat for the species is not present. The escarpments are covered with vegetation. No further evaluation undertaken.

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
Colonially -Nesting Bird Breeding Habitat (Tree/Shrubs)	Great Blue Heron Black-crowned Night-Heron Great Egret Green Heron	SWM2 SWM3 SWM5 SWM6 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1	• Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. • Most nests in trees are 11 to 15 m from ground, near the top of the tree.	• Presence of 5 or more active nests of Great Blue Heron. • The edge of the colony and a minimum 300m area of habitat or extent of the Forest Ecosite containing the colony or any island <15.0ha with a colony is the SWH.	Suitable habitat for the species is not present. No further evaluation undertaken.
Colonially-Nesting Bird Breeding Habitat (Ground) .	Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer's Blackbird	Any rocky island or peninsula (natural or artificial) within a lake or large river. Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) MAM1 – 6; MAS1 – 3; CUM, CUT, CUS	• Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas. • Brewers Blackbird colonies are found loosely on the ground in or in low bushes in close proximity to streams and irrigation ditches within farmlands.	• Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern. • Presence of 5 or more pairs for Brewer's Blackbird. • Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant. • The edge of the colony and a minimum 150m area of habitat, or the extent of the ELC ecosites containing the colony or any island <3.0ha with a colony is the SWH.	ELC community type with the habitat criteria for the species is not present. No further evaluation undertaken.
Migratory Butterfly Stopover Areas	Painted Lady White Admiral <u>Special Concern</u> Monarch	Combination of ELC Community Series; <u>Field</u>: CUM, CUT, CUS <u>Forest</u>: FOC, FOD, FOM, CUP	A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present and will be located within 5 km of Lake Ontario.	• The presence of Monarch Use Days (MUD) during fall migration (Aug/Oct). • Numbers of butterflies can range from 100-500/day, significant variation can occur between years and multiple years of sampling should occur. • MUD of >5000 or >3000 with the presence of Painted Ladies or White Admiral's is to be considered significant.	The property does not meet ELC criteria for potential butterfly stopover area. No further evaluation undertaken.
Landbird Migratory Stopover Areas	All migratory songbirds. All migrant raptors species:	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD	Woodlots need to be >10 ha in size and within 5 km of Lake Ontario. • Woodlands <2km from Lake Ontario are more significant. • Sites have a variety of habitats; forest, grassland and wetland complexes. • The largest sites are more significant	• Use of the woodlot by >200 birds/day and with >35 spp with at least 10 bird spp. recorded on at least 5 different survey dates. This abundance and diversity of migrant bird species is considered above average and significant.	Property does not meet ELC criteria for potential landbird stopover area. No further evaluation undertaken.

Table 1.2.1 Rare Vegetation Communities.

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
Cliffs and Talus Slopes	Any ELC Ecosite within Community Series: TAO CLO TAS CLS TAT CLT	A Cliff is vertical to near vertical bedrock >3m in height. A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris	Most cliff and talus slopes occur along the Niagara Escarpment.	• Confirm any ELC Vegetation Type for Cliffs or Talus Slopes	Suitable habitat is not present. No further evaluation undertaken.
Sand Barren	ELC Ecosites: SBO1 SBS1 SBT1	Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. They have little or no soil and the underlying rock protrudes through the surface. Usually located within other types of natural habitat such as forest or savannah. Vegetation can vary from patchy and barren to tree covered but less than 60%.	Any sand barren area, no minimum size.	• Confirm any ELC Vegetation Type for Sand Barrens • Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics).	Suitable habitat is not present. No further evaluation undertaken.
Alvar	ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2	An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or	An Alvar site > 0.5 ha in size.	• Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics). • The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses.	The ecosites and the habitat criteria are not present within the property. No further evaluation undertaken.

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
		indicator plant. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animals species. Vegetation cover varies from patchy to barren with a less than 60% tree cover.			
Old Growth Forest	Forest Community Series: FOD FOC FOM	Old Growth forests are characterized by heavy mortality or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	Stands 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest.	Field Studies will determine: • If dominant trees species of the ecosite are >140 years old, then stand is Significant Wildlife Habitat. • The stand will have experienced no recognizable forestry activities. • The area of Forest Ecosites combined to make up the stand is the SWH.	The habitat criteria is not present within the property. No further evaluation undertaken.
Savannah	TPS1 TPS2 TPW1 TPW2 CUS2	A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%.	No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH.	• Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics).	ELC community type with the habitat criteria are not present. No further evaluation undertaken.
Tallgrass Prairie	TPO1 TPO2	A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has < 25% tree cover.	No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH.	• Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species (<50% vegetative cover exotics).	ELC community type with the habitat criteria are not present. No further evaluation undertaken.

Table 1.2.2 Specialized Habitats of Wildlife considered SWH

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Waterfowl Nesting Area	American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Mallard	All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4 **Note: includes adjacency to Provincially Significant Wetlands**	A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur. • Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests. • Wood Ducks and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites.	Studies confirmed: • Presence of 3 or more nesting pairs for listed species excluding Mallards, or; • Presence of 10 or more nesting pairs for listed species including Mallards. • Any active nesting site of an American Black Duck is considered significant.	Habitat criteria is not present within the property. No further evaluation undertaken.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Osprey **Special Concern** Bald Eagle	ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. • Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy. • Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms).	Studies confirm the use of these nests by: • One or more active Osprey or Bald Eagle nests in an area. • For an Osprey, the active nest and a 300 m radius around the nest or the contiguous. • For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. Area of the habitat from 400-800m is dependant on site lines from the nest to the development and inclusion of perching and foraging habitat. • To be significant a site must be used annually.	Suitable habitat for the species is not present within the property. No further evaluation undertaken.
Woodland Raptor Nesting Habitat	Northern Goshawk Cooper's Hawk Sharp-shinned Hawk Red-shouldered Hawk Barred Owl Broad-winged Hawk	May be found in all forested ELC Ecosites. May also be found in SWC, SWM, SWD and CUP3	All natural or conifer plantation woodland/forest stands >30ha with >10ha of interior habitat. Interior habitat determined with a 200m buffer. • Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges	Studies confirm: • Presence of 1 or more active nests from species list is considered significant. • Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28	The ELC community types with the habitat criteria for the species are not present within the property. No further evaluation undertaken.

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
			sometimes on peninsulas or small off-shore islands. • In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest.	ha of suitable habitat is the SWH. • Barred Owl – A 200m radius around the nest is the SWH. • Broad-winged Hawk and Coopers Hawk,– A 100m radius around the nest is the SWH. • Sharp-Shinned Hawk – A 50m radius around the nest is the SWH.	
Turtle Nesting Areas	Midland Painted Turtle <u>Special Concern Species</u> Northern Map Turtle Snapping Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAM2, MAM3, MAM4, MAM5, MAM6, MAM1, MAM2, MAM3, SAS1, SAM1, SAF1, BOO1, FEO1.	• Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. • For an area to function as a turtle-nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. • Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used.	Studies confirm: • Presence of 5 or more nesting Midland Painted Turtles • One or more Northern Map Turtle or Snapping Turtle nesting is a SWH. • The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30-100m around the nesting area dependent on slope, riparian vegetation and adjacent land use is the SWH.	Suitable habitat for the species is not present within the property. No further evaluation undertaken.
Seeps and Springs	Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander spp.	Seeps/Springs are areas where ground water comes to the surface. Often, they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system. • Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species.	Field Studies confirm: • Presence of a site with 2 or more seeps/springs should be considered SWH. • The area of a ELC forest ecosite containing the seeps/springs is the SWH.	Seeps and/or springs are not present within the property. No further evaluation undertaken.

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Amphibian Breeding Habitat (Woodland).	Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog	All Ecosites associated with these ELC Community Series; FOC, FOM, FOD, SWC, SWM, SWD. Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians.	• Presence of a wetland, lake, or pond within or adjacent (within 120m) to a woodland (no minimum size). Some small wetlands may not be mapped and may be important breeding pools for amphibians. • Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat.	Studies confirm; • Presence of breeding population of 1 or more of the listed species with at least 20 individuals (adults, juveniles, eggs/larval masses).	ELC community type with the habitat criteria for the species is not present within the property. No further evaluation undertaken.
Amphibian Breeding Habitat (Wetlands)	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	ELC Community Classes SW, MA, FE, BO, OA and SA.	• Wetlands and pools (including vernal pools) >500m^2 (about 25m diameter) isolated from woodlands (>120m), supporting high species diversity are significant; some small or ephemeral habitats are important amphibian breeding habitats. • Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators. • Bullfrogs require permanent water bodies with abundant emergent vegetation.	Studies confirm: • Presence of breeding population of 1or more of the listed salamander species or 3 or more of the listed frog or toad species and with at least 20 breeding individuals (adults, juveniles, eggs/larval masses) or**;** • Wetland with confirmed breeding Bullfrogs are significant. • The ELC ecosite wetland area and the shoreline are the SWH.	Based on the habitat criteria, the wetland is not significant as only two species were reported. No further evaluation undertaken.
Area-Sensitive Bird Breeding Habitat	Yellow-bellied Sapsucker, Red-breasted Nuthatch, Veery, Blue-headed Vireo, Northern Parula, Black-throated Green Warbler, Blackburnian Warbler, Black-throated Blue Warbler, Ovenbird, Scarlet Tanager, Winter Wren. **Special Concern:** Cerulean Warbler Canada Warbler	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD	• Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha. • Interior forest habitat is at least 200 m from forest edge habitat.	• Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. • Any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH.	The vegetation communities in the property do not contain interior habitat that is required by the species. No further evaluation undertaken.

Table 1.3. Habitats of Species of Conservation Concern considered SWH

Wildlife	Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
Marsh Breeding Bird Habitat	American Bittern, Virginia Rail, Sora, Common Moorhen, American Coot, Pied-billed Grebe, Marsh Wren, Sedge Wren, Common Loon, Sandhill Crane, Green Heron, Trumpeter Swan. **Special Concern:** Black Tern Yellow Rail	MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1, SAM1, SAF1, FEO1, BOO1. For Green Heron: All SW, MA and CUM1 sites.	• Nesting occurs in wetlands. • All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. • For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water.	Studies confirm: • Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or or 1 pair of Sandhill Cranes; or breeding by any combination of 5 or more of the listed species. • Any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH.	ELC community type with the habitat criteria for the species is not present within the property. No further evaluation undertaken.
Open Country Bird Breeding Habitat	Upland Sandpiper Grasshopper Sparrow Vesper Sparrow Northern Harrier Savannah Sparrow **Special Concern** Short-eared Owl	CUM1 CUM2	• Large grassland areas (includes natural and cultural fields and meadows) >30 ha. • Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years). • Grassland sites considered significant should have a history of longevity, at least 5 years or older.	Field Studies confirm: • Presence of nesting or breeding of 2 or more of the listed species. • A field with 1 or more breeding Short-eared Owls is to be considered SWH. • The area of SWH is the contiguous ELC ecosite field areas.	The ELC community type does not meet the habitat criteria for the species. No further evaluation undertaken.
Shrub/Early Successional Bird Breeding Habitat	Indicator Spp: Brown Thrasher Clay-coloured Sparrow Common Spp. Field Sparrow Black-billed Cuckoo Eastern Towhee Willow Flycatcher **Special Concern:** Yellow-breasted Chat Golden-winged Warbler	CUT1 CUT2 CUS1 CUS2 CUW1 CUW2 Patches of shrub ecosites can be complexed into a larger habitat for some bird species	Large field areas succeeding to shrub and thicket habitats >10ha in size. With a history of longevity, either abandoned fields or pasturelands. • Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no row-cropping, haying or live-stock pasturing in the last 5 years). • Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species.	Field Studies confirm: • Presence of nesting or breeding of 1 of the indicator species and at least 2 of the common species. • A field with breeding Yellow-breasted Chat or Golden-winged Warbler is to be considered as Significant Wildlife Habitat. • The area of the SWH is the contiguous ELC ecosite field/thicket area.	ELC community type does not meet the habitat criteria for the species within the property. No further evaluation undertaken.
Terrestrial Crayfish;	Chimney or Digger Crayfish; (*Fallicambarus fodiens*) Devil Crawfish or Meadow Crayfish; (*Cambarus Diogenes*)	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 CUM1 with inclusions of above meadow marsh or	Wet meadow and edges of shallow marshes (no minimum size) identified should be surveyed for terrestrial crayfish. • Constructs burrows in marshes, mudflats, meadows, the ground can't be too moist. Can often be found far from water. • Both species are a semi-terrestrial burrower which spends most of its life within burrows	Studies Confirm: • Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable marsh meadow or terrestrial sites.	Habitat criteria for the species is not present within the property. No further evaluation undertaken.

Wildlife	Species	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
		swamp ecosites can be used by terrestrial crafish.	consisting of a network of tunnels. Usually the soil is not too moist so that the tunnel is well formed.		
Special Concern and Rare Wildlife Species	All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the Natural Heritage Information Centre.	All plant and animal element occurrences (EO) within a 1 or 10km grid. Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy.	When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites.	Studies Confirm: • Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable.	Candidate SWH on the property. Presence of Special Concern Species on the property.

Table 1.4.1 Animal Movement Corridors

Habitat	SPECIES	CANDIDATE SWH		CONFIRMED SWH	Assessment
		ELC Eco-sites	Habitat Criteria and Information Sources	Defining Criteria	
Amphibian Movement Corridors	Eastern Newt, Blue-spotted Salamander, Spotted Salamander, Gray Treefrog, Spring Peeper, Western Chorus Frog, Wood Frog.	Corridors may be found in all ecosites associated with water. Corridors will be determined based on identifying the significant breeding habitat for these species in Table 1.1	Movement corridors between breeding habitat and summer habitat. Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from Table 1.2.2 (**Amphibian Breeding Habitat –Wetland)** of this Schedule.	• Corridors should consist of native vegetation, roadless area, no gaps such as fields, waterways or bodies, and undeveloped areas are most significant. • Corridors should be at least 200m wide with gaps <20m and if following riparian area with at least 15m of vegetation on both sides of waterway. Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat.	The property meets criteria for movement corridor.

Appendix F
Site Photolog

SOUTH PARCEL

Photo 1. A view of the area within the forest mapped as wetland.

Photo 2. A view of the wetland/valleyland.

Photo 3. A view of the gate that provides access to the property from County Road 22.

Photo 4. A view of the hay field.

Photo 5. A view of the gate found at the edge of the Deciduous Forest.

Photo 6. Trail within the Red Cedar Woodland.

Photo 7. A view of the culvert under County Road 22 that allows cows to move between properties and possibly used by wildlife.

Photo 8. A view of the steep slope bordering the valleyland.

Photo 9. Exposed bedrock bordering the Marsh Creek.

Photo 10. A view of the hedgerow vegetation along the west property boundary.

Photo 11. A view of the hedgerow vegetation present south and west of the property.

Photo 12. A view of the Deciduous Forest.

Photo 13. A view of the Eastern Red Cedar Woodland.

Photo 14. A view of the wetland close to the wire fence.

Photo 15. A view of the Swamp Rose Cultural Thicket.

Photo 16. A view of the culvert under County Road 22 and Marsh Creek in the property.

Photo 17. Looking north the creek flowing into a low area before splitting into two branches.

Photo 18. Looking north at the main branch of the creek on the steep area.

Photo 19. Looking north the second branch of the creek on the steep area.

Photo 20. A view of the wetland impacted by cattle grazing.

Photo 21. A view of a drilled well found on the area where a watercourse discharges to the Marsh Creek.

Photo 22. A view of the Red-backed Salamander found in the Deciduous Forest.

Photo 23. A view of the butternut trees located on the northwest corner of the parcel.

Photo 24. A view of the butternut tree located in the wetland/valleyland.

NORTH PARCEL

Photo 1. A view of the driveway that provides access to the property from Lake Street.

Photo 2. A view of the area adjacent to the driveway where the natural soil and bedrock have been removed.

Photo 3. A view of the pit.

Photo 4. A view of the building and barn found in the property.

Photo 5. A view of the drilled wells found in the property.

Photo 6. Looking east, the east escarpment from top of the west escarpment.

Photo 7. A view of the creek channel and the riparian area.

Photo 8. Area where the two branches of the creek combine to a single channel.

Photo 9. A view of the culverts and old wood bridge found in the creek.

Photo 10. Area around the creek that shows wetland is not present.

Photo 11. A view of the Deciduous Forest.

Photo 12. A view of the Eastern Red Cedar Woodland.

Photo 13. A view of the Willow Thicket Swamp.

Photo 14. A view of the Cattail Shallow Marsh.

Photo 15. A view of the Red Cedar Cultural Woodland.

Photo 16. A view of the White Pine Cultural Woodland.

Photo 17. Looking south the Old Field Meadow found on the west part of the property.

Photo 18. Looking east the Old Field Meadow present in the valley.