

Version 1.1

1386 Irwin Road in the
Township of Douro-Dummer

November 2025

Environmental Impact Study



Prepared For:
Black Point Construction Services

Prepared By:
Sumac Environmental Consulting



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November 18, 2025

SEC 25-064a

Sent by email to:

Holly Richards-Conley
Black Point Construction Services
holly@blackpointservices.com

Re: Environmental Impact Study at 1386 Irwin Road in the Township of Douro-Dummer

Dear Ms. Conley,

Thank you for retaining Sumac Environmental Consulting to prepare an Environmental Impact Study at 1386 Irwin Road in the Township of Douro-Dummer.

The following report identifies the form and function of natural heritage on the subject property and assesses the potential impacts to said features with respect to a proposed development. Recommendations and mitigation strategies have been included. This report has been prepared for Black Point Construction Services and the undersigned accepts no responsibility for future use by other parties.

We thank you for the opportunity to be part of this project and should you have any questions, please do not hesitate to contact the undersigned.

Sumac Environmental Consulting

A handwritten signature in cursive script that reads "C Fligg".

Cassandra Fligg, M.Sc.
Environmental Consultant

A handwritten signature in cursive script that reads "Nathan Fligg".

Nathan Fligg, M.Sc.
Environmental Consultant/GIS Technician

Report Summary

Sumac Environmental Consulting has prepared an Environmental Impact Study at 1386 Irwin Road in the Township of Douro-Dummer. It is our understanding that this report has been requested by the Township of Douro-Dummer in response to a development application that supports the re-construction of an existing dwelling on the subject property. Site visits were carried out in spring and summer of 2025 to examine natural features that have the potential of being impacted by a proposed development. A Species at Risk Habitat Assessment was completed to screen for absent, candidate and confirmed habitat of endangered and threatened species (HETS). A Significant Wildlife Habitat (SWH) Assessment was completed to screen for absent, candidate and confirmed SWH. Fish habitat and SWH were identified as occurring on or near the subject property. Significant impacts to the identified features are not anticipated, should the proponent follow the recommendations provided herein.

The recommendations provided in Section 8.2 are summarized as follows:

- A barn swallow nesting structure is recommended to be constructed on the subject property in an effort of offsetting for habitat loss to barn swallow.
- Disturbed areas should be re-seeded and planted with native non-invasive vegetation following construction, where feasible.
- A silt fence should be used during construction to protect aquatic features.
- An emergency response plan should be prepared for all works involving machinery in case of fluid leaks.
- All machinery should be kept in a clean condition and free of fluid leaks.
- Washing, fueling and servicing machinery should not occur within 30 m of aquatic features.
- Stockpiling of fill and/or construction material should not occur within 30 m of aquatic features.
- To protect breeding migratory birds, vegetation removal should not occur between April 1 and August 31 of any given year unless otherwise directed by a biologist or other qualified person at the time of site works.
- Supplemental deer feeding is strongly discouraged as this practice may negatively impact deer migration, increase risk of localized traffic hazards and contribute to disease transmission.
- Encountered wildlife should be allowed to exit the site on their own, via safe routes, or be removed/relocated by qualified wildlife service providers working in accordance with applicable laws.

Key Staff

Environmental Consultant – Cassandra Fligg, M.Sc.

Mrs. Fligg received a master's degree in science (biology) from Lakehead University. She has previously been qualified as an Ecologist with expertise in natural heritage and freshwater ecology by the Ontario Land Tribunal. Mrs. Fligg is proficient in the preparation of natural heritage reports in southern and central Ontario, particularly those that include policy of the Lake Simcoe Protection Plan, Greenbelt Plan, Oak Ridges Moraine Conservation Plan and Niagara Escarpment Plan. She has prepared species at risk screenings to the satisfaction of the Ministry of Environment, Conservation and Parks and assisted proponents in demonstrating avoidance to the harm and/or destruction of species at risk and their habitat, and navigated proponents through the overall benefit permit process where complete avoidance was not possible. Mrs. Fligg is a certified arborist as recognized by the International Society of Arboriculture, certified butternut health assessor as recognized by the Ministry of Natural Resources and Forestry, certified level 2 backpack electrofisher (crew leader) and has completed a fish identification workshop, turtle identification and handling workshop, and diatom algae culture and isolation workshop.

Environmental Consultant – Nathan Fligg, M.Sc.

Mr. Fligg is a well-versed ecologist with more than 15 years experience in both plant and wildlife identification. He is actively building on his identification skills and knowledge through the review of relevant flora literature and the undertaking of field studies for Sumac's natural heritage reports and species at risk screenings in southern and central Ontario. Mr. Fligg has performed various habitat and species-specific studies across southern and central Ontario to the satisfaction of municipalities, conservation authorities, environmental associations, land trust organizations, Niagara Escarpment Commission, Department of Fisheries and Oceans Canada, Ministry of Natural Resources and Forestry, as well as, the Ministry of Environment, Conservation and Parks. Mr. Fligg completed an undergraduate degree in Environmental Sustainability and further went on to receive a master's degree in science from Lakehead University. He is a provincially certified wetland evaluator, certified butternut health assessor, certified level 2 backpack electrofisher (crew leader) and is experienced in the safe handling and release of small mammals, birds, fish, amphibians and reptiles.

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1.0 Introduction

Sumac Environmental Consulting (Sumac) was retained to prepare an Environmental Impact Study (EIS) at 1386 Irwin Road in the Township of Douro-Dummer (hereinafter referred to as the 'subject property'). It is our understanding that an EIS has been requested by the Township of Douro-Dummer in response to a development application that supports the re-construction of an existing dwelling on the subject property.

The subject property is approximately 0.3 ha in size and consists of a residential dwelling and accessory structures (e.g., dock, boathouse, etc.) (Figure 1). The subject property is situated on the shoreline of Stony Lake. According to the County of Peterborough GIS mapping, the subject property is located within the 'Lakeshore Residential' and 'Environmental Constraint' land use designations. The surrounding area is predominantly composed of lakeshore residential properties, agricultural cover, open water and natural cover.

2.0 Planning Context

2.1. Federal

2.1.1. Fisheries Act

The fish and fish habitat protection provisions of the *Fisheries Act* include two (2) core prohibitions against persons carrying on works, undertaking or activities that result in the following:

- the death of fish, by means other than fishing; and
- the harmful alteration, disruption, or destruction of fish habitat.

2.1.2. Migratory Birds Convention Act

The purpose of the *Migratory Birds Convention Act* is to implement the Convention by protecting and conserving migratory birds – as populations and individual birds – and their nests. Migratory Birds Regulations is a regulation made under the *Migratory Birds Convention Act*. Section 5 (1) of the Migratory Birds Regulation states that a person must not engage in any of the following activities unless they have a permit that authorizes them to do so or they are authorized by these Regulations to do so:

- (a) capture, kill, take, injure or harass a migratory bird or attempt to do so;
- (b) destroy, take or disturb an egg; and
- (c) damage, destroy, remove or disturb a nest, nest shelter, eider duck shelter or duck box.

2.2. Provincial

2.2.1. Endangered Species Act

Ontario's *Endangered Species Act* (ESA) provides protection, designation, recovery and other relevant aspects of conservation for species at risk, including habitat protection in the Province.

As per Section 9 (1) of the ESA, no person shall

- a. kill, harm, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;
- b. possess, transport, collect, buy, sell, lease, trade or offer to buy, sell, lease or trade,
 - (i) a living or dead member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species,
 - (ii) any part of a living or dead member of a species referred to in subclause (i),
 - (iii) anything derived from a living or dead member of a species referred to in subclause (i); or
- c. sell, lease, trade or offer to sell, lease or trade anything that the person represents to be a thing described in subclause (b) (i), (ii) or (iii). 2007, c. 6, s. 9 (1).

As per Section 10 (1) of the ESA, no person shall damage or destroy the habitat of,

- a. a species that is listed on the Species at Risk in Ontario List as an endangered or threatened species; or
- b. a species that is listed on the Species at Risk in Ontario List as an extirpated species, if the species is prescribed by the regulations for the purpose of this clause. 2007, c. 6, s. 10 (1).

2.2.2. Fish and Wildlife Conservation Act

The *Fish and Wildlife Conservation Act* aims to conserve and manage fish and wildlife in Ontario.

Section 7 (1) of the *Fish and Wildlife Conservation Act* states that a person shall not destroy, take or possess the nest or eggs of a bird that belongs to a species that is wild by nature.

2.2.3. Provincial Planning Statement

As per Section 4.1.4 of the Provincial Planning Statement, development and site alteration shall not be permitted in significant wetlands in Ecoregions 6E.

As per Section 4.1.5 of the Provincial Planning Statement, development and site alteration shall not be permitted in significant woodlands in Ecoregions 6E, significant valleylands in Ecoregions 6E, significant wildlife habitat, and 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.

As per Section 4.1.6 of the Provincial Planning Statement, development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

As per Section 4.1.7 of the Provincial Planning Statement, development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

As per Section 4.1.8 of the Provincial Planning Statement, 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.

2.2.4. Conservation Authorities Act

Regulated lands of the Otonabee Region Conservation Authority (ORCA) have been mapped on the subject property (Appendix A). Conservation Authorities are empowered by the *Conservation Authorities Act* to regulate development and activities in or adjacent to river or stream valleys, Great Lakes and inland lakes' shorelines, watercourses, hazardous lands and wetlands.

2.3. Municipal

2.3.1. County of Peterborough Official Plan

As per the County of Peterborough Official Plan (office consolidation 2022), the following land use designations have been mapped on the subject property:

- Lakeshore Residential (County GIS mapping); and
- Environmental Constraint (County GIS mapping).

As per Section 4.1.3.4 of the County of Peterborough Official Plan (office consolidation 2022), local plans will prohibit development and site alterations within significant wetlands and significant portions of the habitat of endangered and threatened species.

Moreover, local plans may permit development and site alteration in significant woodlands south and east of the Canadian Shield, significant valleylands south and east of the Canadian Shield, significant wildlife habitat and significant areas of natural and scientific interest.

Development and site alteration will not be permitted in fish habitat except in accordance with provincial and federal requirements.

Moreover, development or site alteration such as filling, grading and excavating may be permitted within or adjacent to the remaining natural heritage features listed in Section 4.1 of this Plan, provided that it has been demonstrated by an Environmental impact assessment that there will be no negative impacts on the natural features or ecological functions for which the area is identified.

As per Section 4.4.3 of the County of Peterborough Official Plan (office consolidation 2022), notwithstanding any other policy of Section 4.4.3, local plans and zoning by-laws will require that all new development and leaching beds be set back at least 30 metres from the ordinary high water marks of all waterbodies. Excepted from this requirement are marina facilities, and other water access facilities, pumphouses, and minor accessory buildings and structures as defined in zoning by-laws.

As per Section 6.2.6.2 of the County of Peterborough Official Plan (office consolidation 2022), the predominant use of land within the Lakeshore Residential designation shall be for permanent single-detached dwellings and seasonal cottages on public roads.

As per Section 6.2.6.3 c. of the County of Peterborough Official Plan (office consolidation 2022), with respect to Lakeshore Residential Policies, structures permitted in the Lakeshore Residential designation, including leaching beds of septic systems, on lots created by consent or plan of subdivision after the date Official Plan Amendment No.3 comes into effect, shall be set back a minimum of 30 metres from the shoreline of any lake or major watercourse in order to ensure adequate protection from changes in water level and flooding and to ensure maintenance of water quality and the protection of fish and wildlife habitats.

Moreover, notwithstanding anything in this section to the contrary, structures such as pump houses, boat houses, docks, open decks and stairs shall be a permitted use and may encroach into the 30 metre setback without a minor variance provided that the property owner can demonstrate to the Township's satisfaction and, if appropriate, the authority having jurisdiction over the waterway, that it does not negatively affect the waterfront environment.

Moreover, structures legally existing as of the date Official Plan Amendment No.3 comes into effect (October 22, 2008) that do not comply with the required water setback provision that require replacement due to structural defects or destruction by fire or other natural causes or by permission of the Township will be permitted to be replaced on the same footprint and may only be enlarged in accordance with the provisions of the Zoning By-law, and where the enlargement does not further encroach into the 30 metre water setback.

Moreover, with respect to existing structures, minor variances or zoning changes to accommodate proposed expansions of a structurally-permanent nature to existing structures and/or septic

systems that further reduce any applicable minimum water setback shall not be permitted unless it is a matter of public health and/or safety.

As per Section 6.2.15.2 of the County of Peterborough Official Plan (office consolidation 2022), with respect to permitted uses, the predominant use of land within the Environmental Constraint designation is the preservation and conservation of the natural environment.

2.3.2. Township of Douro-Dummer

The Township of Douro-Dummer has included their local policies in the County Official Plan.

3.0 Background Review

The following resources were reviewed to gain a deeper understanding of natural heritage with the potential of occurring on the subject property and adjacent lands (i.e., up to 120 m):

- Atlas of the Mammals of Ontario (Dobbyn, 1994);
- Atlas Square No. 17QK33 of the Ontario Butterfly Atlas;
- Atlas Square No. 17QK33 of the Ontario Reptile and Amphibian Atlas;
- Atlas Square No. 17QK3338 of the Natural Heritage Information Centre;
- Atlas Square No. 17TQK33 of the Ontario Breeding Bird Atlas;
- County of Peterborough Official Plan (office consolidation 2022);
- Department of Fisheries and Oceans Canada Aquatic Species at Risk Map;
- eBird;
- iNaturalist;
- Land Information Ontario;
- Ministry of Natural Resources (MNR) Aquatic Resources Area Mapping; and,
- Peterborough County Official Plan (June 2022 draft).

Given the relevant planning jurisdiction, the following features are being considered in the EIS, where applicable to the subject property and adjacent lands:

- Areas of Natural and Scientific Interest (ANSI);
- Fish Habitat;
- Habitat of Endangered and Threatened Species;
- Significant Valleylands;
- Significant Wetlands;
- Significant Wildlife Habitat; and
- Significant Woodlands.

4.0 Characterizing the Natural Environment: Approach and Methodology

4.1. Vegetation

4.1.1. Botanical Inventory

A vascular plant inventory was completed on June 10, 2025 for the vegetation communities that occur on or extend onto the subject property.

4.1.2. Vegetation Communities

Orthographic imagery of the subject property and adjacent lands was used for the basis of Ecological Land Classification (ELC) and further refined through a ground-truthing exercise on June 10, 2025. Vegetation communities were classified following protocol of the Ecological Land Classification (ELC) for Southern Ontario (Lee, H. et al., 1998) and associated Vegetation Type List (Lee, H., 2008), where applicable.

4.2. Area of Natural and Scientific Interest

Background mapping from the MNR was reviewed to identify the nearest ANSI.

4.3. Fish Habitat

Fish habitat is defined in subsection 2(1) of the *Fisheries Act* to include all waters frequented by fish and any other areas upon which fish depend directly or indirectly to carry out their life processes. The subject property, including its shoreline, was screened on June 10, 2025 for evidence of supporting features to fish habitat associated with Stony Lake. Fish habitat and supporting features to fish habitat were mapped and characterized accordingly.

4.4. Habitat of Endangered and Threatened Species

For the purpose of this study, we have defined “Species at Risk” (SAR) to include species designated special concern, threatened and endangered under O. Reg. 230/08 in accordance with the ESA. Species occurrence data from sources outlined in Section 3.0 of this report was used to determine which species at risk are known to occur in proximity to the subject property. An ELC exercise was completed to identify potential habitat opportunities for the listed species at risk. A SAR Habitat Assessment was completed to identify candidate, confirmed and absent SAR habitat on the subject property.

4.4.1. Birds

Two (2) dawn breeding bird surveys were completed in general accordance with dawn breeding bird survey protocol (OBBA, 2021). Surveys were completed within the first five (5) hours after dawn between May 24 and July 10. The first survey was completed on or before June 15. The

second survey was completed on or after June 15. Surveys were not completed during events of precipitation, fog or high winds (i.e., up to 3 on the Beaufort wind scale). One (1) point count station was used to carry out the surveys (Figure 2). The survey conditions were as follows:

Date	Surveyor(s)	Time	Temp.	Cloud Cover	Wind	Precip.
June 10, 2025	Nathan Fligg	0713-0718	15°C	70%	B2	Nil.
July 05, 2025	Tyler Ambeau	0845-0850	19°C	60%	B0	Nil.

One (1) chimney swift nesting survey was completed in general accordance with protocol of the Ontario Swiftwatch Protocol (Birds Canada, 2020). The survey was completed during the day for up to 1 hour during a period of clear skies and low wind (<B2). The survey conditions were as follows:

Date	Surveyor(s)	Time	Temp.	Cloud Cover	Wind	Precip.
July 8, 2025	Michaela Sallows	1010-1110	21°C	20%	B1	Nil.

4.4.2. Mammals

The existing structure on the subject property were monitored for the presence of SAR bats on the evenings of June 23rd and 24th of 2025 following protocol outlined in the most current SAR Bat Building Exit and Roost Survey Protocols document provided by the MECP to Sumac's office. Sumac staff and infrared cameras were used to monitor the various potential exit points of the existing structures. A broadband ultrasonic recorder, Echometer Touch 2 Pro from Wildlife Acoustics, Inc., was used to assist in determining species identification where bats were observed.

4.5. Valleyland

The subject property was screened for valleyland associated with flowing water. If present, valleyland was assessed for significance using the recommended evaluation criteria and standards as described in the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement (MNR, 2005).

4.6. Wetland

The subject property was screened on June 10, 2025 for wetland feature(s) and if present, delineated following the appropriate method (e.g., 50% vegetation rule) as described in the Ontario Wetland Evaluation System: Southern Manual 4th Edition. Digital terrain models and orthographic imagery were used to identify candidate wetland on the adjacent lands.

4.7. Wildlife Habitat

Incidental observations of wildlife, wildlife signs (e.g., scat, tracks, remains of food, claw marks on trees or shrubs, trails or corridors, stunted vegetation, stick nests, turned stones) and habitat opportunities were noted during Sumac's field investigations.

The potential for Significant Wildlife Habitat (SWH) on the subject property was assessed following criteria and thresholds outlined in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNR, 2015).

4.8. Woodland

The ELC approach for defining "forest" using canopy cover was used to delineate woodland patches that occur on or extend onto the subject property. If present, woodland patches were mapped and characterized. Woodland significance was assessed using the recommended evaluation size criteria as described in the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement (MNR, 2005).

5.0 Data Analysis

5.1. Vegetation

5.1.1. Botanical Inventory

A list of vascular plant species for the vegetation communities that extend onto the subject property has been provided for reference (Table 1).

5.1.2. Vegetation Communities

The subject property contained two (2) distinct vegetation communities (Figure 2):

1. CVR_3 Single Family Residential: Approximately 2,636 m² of maintained area encompasses the subject property. This area contained a dilapidated single-family dwelling and associated amenities (i.e., boathouse, deck, walkways, laneways, landscaping, trees and maintained lawn).
2. OA Open Water: The northern edge of the subject property bordered open water of Stony Lake. Nearshore and offshore appeared mostly unvegetated with very sparse submergent macrophytes (i.e., Eurasian water milfoil and American eelgrass).

5.2. Area of Natural and Scientific Interest

The nearest ANSI, Julia Creek Wetlands, is mapped approximately 1.6 km southeast of the subject property (Appendix B). No further analysis required.

5.3. Fish Habitat

Data extracted from the MNR Aquatic Resource Area database identified Stony Lake as exhibiting a warm water thermal regime with documented occurrences of a variety of fish species (e.g., black crappie, burbot, cisco, common carp, lake whitefish, largemouth bass, muskellunge, pumpkinseed, rainbow smelt, rock bass, sauger, smallmouth bass, walleye, white sucker, yellow perch, etc.).

The backshore located along the subject property was highly anthropogenic, consisting mostly of vertical steel and concrete. An overhanging deck and boathouse provided additional cover. Nearshore depths immediately adjacent to the subject property appeared shallow (i.e., <1 m) and was mostly unvegetated. Substrate consisted mostly of gravel, cobble and boulder. Fish were observed during field investigations (i.e., multiple young smallmouth bass).

5.4. Habitat of Endangered and Threatened Species

No endangered or threatened plant species were encountered on the subject property (Table 1).

No endangered or threatened birds were observed during the dawn breeding bird surveys nor through incidental occurrence (Table 2).

No bats were observed during the exit surveys nor through incidental occurrence.

The SAR Habitat Assessment did not identify candidate or confirmed habitat of endangered or threatened species on the subject property (Table 3). No further analysis required.

5.5. Valleyland

The topography on the subject property was not suggestive of the presence of valley or other landform depression associated with flowing water. No further analysis required.

5.6. Wetland

No wetland encountered on the subject property. No further analysis required.

5.7. Wildlife Habitat

The following wildlife observations were noted during Sumac's field investigations:

- Domestic cat (*Felis catus*);
- Northern raccoon (*Procyon lotor*); and
- Smallmouth bass (*Micropterus dolomieu*).

The SWH Assessment identified two (2) confirmed SWH as occurring on the subject property.

5.7.1. Seasonal Concentration Areas of Animals

Deer Yarding Areas: Data extracted from Land Information Ontario identifies ‘White-tailed Deer Yard (Stratum 2)’ as extending across the subject property.

5.7.2. Habitats of Species of Conservation Concern Considered SWH

Special Concern and Rare Wildlife Species: No provincially rare vascular plant species encountered on the subject property (Table 1). No provincially rare bird species observed on the subject property during the dawn breeding bird surveys nor through incidental occurrence (Table 2). Confirmed habitat of a special concern species, barn swallow, was identified on the subject property (Table 3).

Barn Swallow: Three (3) active barn swallow nests were observed under the overhanging deck in front of the boathouse on the subject property.

5.8. Woodland

No woodland patches were identified as occurring or extending onto the subject property. No further analysis required.

6.0 Project Description

The proposed development supports the construction of a new dwelling in the approximate location of the existing dwelling, new septic system, walkway, driveway, detached garage and parking area on the subject property. The impact assessment below reviews impacts associated with a development contained within the Area of Work, as depicted on Figure 3.

7.0 Impact Assessment

7.1. Vegetation

The proposed development will be contained within the CVR_3 community. The proponent is encouraged to re-vegetate all disturbed areas remaining post-development with non-invasive native trees, shrubs and groundcover, where feasible (Section 8.2.2).

7.2. Fish Habitat

The proposed development is not located in Stony Lake and as such, no direct impacts to fish habitat are anticipated. The existing building is located approximately 6.2 m to the OHWM. The

proposed building is located approximately 6.7 m from the OHWM. The proposed septic system is located more than 30 m from the OHWM.

The proposed building is set further away from Stony Lake and with consideration of nutrient loading, the new septic system will be located an appropriate distance away from Stony Lake. Site specific measures are recommended to protect fish habitat during construction (Section 8.2.3 and 8.2.4).

7.3. Wildlife Habitat

7.3.1. Seasonal Concentration Areas of Animals

Deer Yarding Areas: When assessing the potential impacts of a development on deer yarding and winter congregation areas, the following factors are considered:

1. Amount of core yarding area disturbed: No core yarding area (i.e., Stratum I) is anticipated to be disturbed to facilitate the proposed development.
2. Amount of woodlot disturbed: No portion of woodlot is anticipated to be disturbed to facilitate the proposed development.
3. Restriction of movement along shorelines or other critical areas: Movement along the shoreline of Stony Lake on the subject property is not anticipated to be further encumbered by the proposed development.
4. Residual effects (i.e., human activities and their pets): Human activities on the subject property are not anticipated to change relative to existing conditions.
5. Single-lot development vs. subdivision: The proposed development is for a single-lot redevelopment.
6. Disturbance to food sources (agriculture): No agricultural fields will be disturbed as a result of the proposed development.
7. Amount of disturbed/converted habitat relative to the amount of undisturbed habitat: The proposed development will disturb approximately 0.00006% of deer yarding area, including previously disturbed sites.
8. Size and location of the proposed development: The size of the proposed dwelling appears consistent with the size of neighbouring dwellings. Additionally, the location of the proposed coach house is generally located towards the edge of the mapped deer yarding area.

In considering all of the abovenoted factors, it is in our opinion that the proposed development will not significantly impair and/or eliminate the SWH, Deer Yarding Areas. Opportunities to offset any future-related impacts to the SWH deer wintering area should be considered accordingly (Section 8.2.6).

7.3.2. Habitats of Species of Conservation Concern Considered SWH

Special Concern and Rare Wildlife Species:

Barn Swallow: It is our understanding that the proponent wishes to replace some of the deck boards on the existing overhanging deck and as such, removal of the barn swallow nests will likely be required to facilitate the proposed development. To offset for habitat loss, the proponent is encouraged to install an artificial barn swallow nesting structure on the subject property (Section 8.2.1). To protect breeding barn swallow, nest removal and site alteration to the overhanging deck and boathouse should not occur during the general nesting window (Section 8.2.5).

8.0 Conclusion and Recommendations

8.1. Conclusion

Should the proponent adhere to the proposed development plan and follow the prescribed recommendations as noted below (Section 8.2), negative impacts to the overall form and function of the identified natural heritage on the subject property will be appropriately mitigated. Furthermore, it is our understanding that the proposed development as described herein would not contravene applicable environmental policy and regulations as described in Section 2.0 of this report.

8.2. Recommendations

8.2.1. Habitat Creation

A barn swallow nesting structure containing a minimum of three (3) nesting cups is recommended to be constructed on the subject property in an effort of offsetting for habitat loss to barn swallow. Three (3) sample design drawings extracted from the MNR Best Practices Technical Note (MNR, 2016) have been provided for reference (Appendix C).

8.2.2. Native Plantings

Disturbed areas should be re-seeded and planted with native non-invasive vegetation following construction, where feasible. The proponent should consult with the associated landscape professional supplying and/or planting the trees, shrubs and groundcover to discuss the appropriate fertilizing, watering and/or mulching schedule. Deciduous trees should be planted in the spring, following thaw, or in the fall, during leaf-off until freeze-up. Conifers should be planted in the spring until four weeks after deciduous trees have opened their leaves, or in the fall until freeze-up. Shrubs and ground cover can be planted in spring (e.g., April 15 to mid-June) and/or fall (e.g., September 1 to October 15). All conifers should be inspected for girdling roots before planting. Conifers that have extensive girdling should not be used. Nursery stock trees should be planted as soon as possible after delivery.

8.2.3. Perimeter Control

A silt fence consisting of non-woven geotextile material wire looped to wooden/metal stakes installed at 2-m intervals for support should be erected prior to the onset of siteworks to protect aquatic features. The proposed location of silt fence has been depicted on Figure 3. The silt fence should remain in place for the duration of all construction activity. The silt fence should be buried into the ground a minimum 30 cm and compacted with native materials. We recommend diligent monitoring of said fence throughout the entirety of the development to ensure the integrity of the fence does not fail.

8.2.4. Preventing Entry of Deleterious Substances in Aquatic Feature(s)

Deleterious substances should never be deposited and/or enter aquatic features. A response plan should be prepared prior to the onset of site works and an emergency spill kit should be kept on-site during site activities. All machinery should be kept in a clean condition and free of fluid leaks. Washing, fueling and servicing machinery should not occur within 30 m of aquatic features. Stockpiling of fill and/or construction material should not occur within 30 m of aquatic features.

8.2.5. Sensitive Timing Window

To protect breeding migratory birds, vegetation removal should not occur between April 1 and August 31 of any given year unless otherwise directed by a biologist or other qualified person at the time of site works.

8.2.6. Supplemental Deer Feeding

Supplemental deer feeding is strongly discouraged as this practice may negatively impact deer migration, increase risk of localized traffic hazards and contribute to disease transmission.

8.2.7. Wildlife Encounters

Any wildlife encountered during site clearing or subsequent construction activities should be allowed to exit the site on their own, via safe routes. Construction staff should not attempt to capture or handle most kinds of wildlife, unless an animal is in imminent peril or is injured and cannot wait for rescue by qualified personnel. Improper handling can result in injuries to both workers and wildlife and may in some cases contravene provincial or federal legislation. Removal and relocation of mammals, in particular, should only be done by qualified wildlife service providers working in accordance with applicable laws (i.e., *Fish and Wildlife Conservation Act*). Observation records should include the observer's name, date and time, species, location (descriptive and georeferenced), photographs, and action taken.

9.0 References

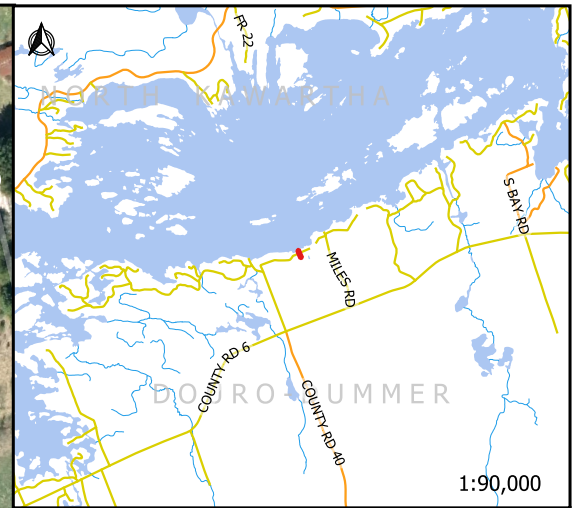
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Limitations:



This report was prepared using the most current site plan provided to Sumac's office. The conclusion and recommendations provided herein may no longer be applicable should changes be made to the site plan following submission of this report. The assessment provided herein is valid at the time of inspection.

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Legend

-  Subject Property
-  Adjacent Lands

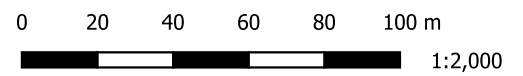


Figure 1: Subject Property

1386 Irwin Road



Designed by: N.F.
Date: 09/10/2025
Project: SEC 25-064



Legend

	Subject Properties
	Adjacent Lands
	Dawn Breeding Bird Survey Station
	ELC Vegetation Communities
CUM1	Dry - Fresh Mineral Cultural Meadow Ecosite
CUW1	Dry-Fresh Mineral Cultural Woodland Ecosite
CVR_3	Single Family Residential
FOD5	Dry - Fresh Sugar Maple Deciduous Forest Ecosite
FOM	Mixed Forest
OA	Open Water
SA	Shallow Water
SWD4	Mineral Deciduous Swamp Ecosite

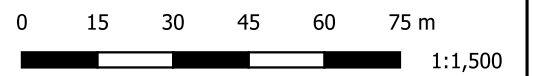
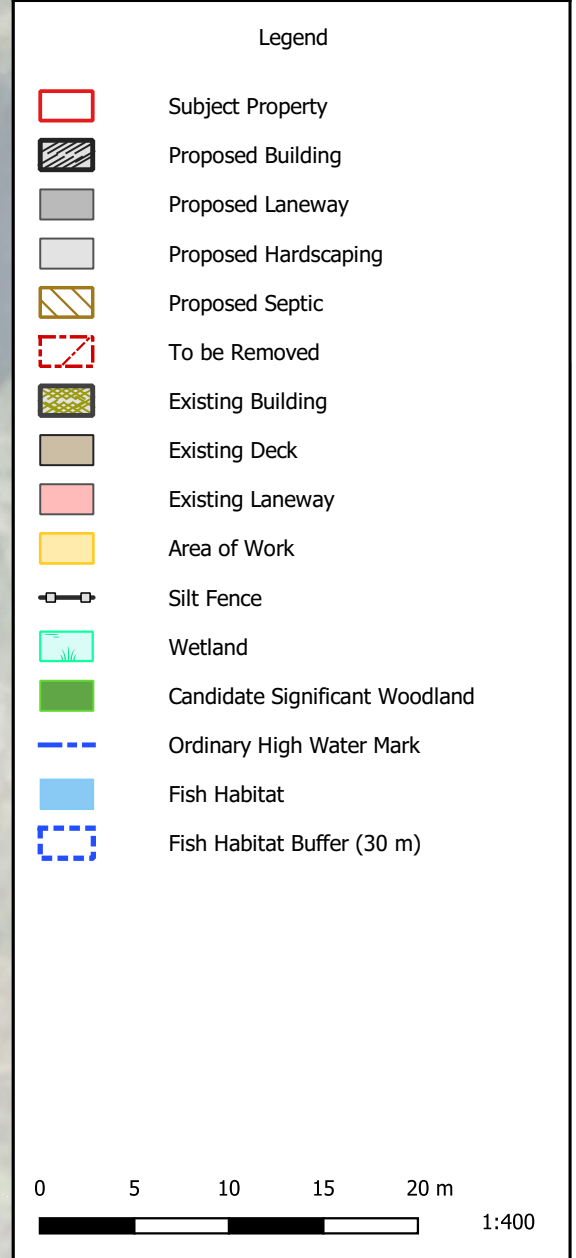
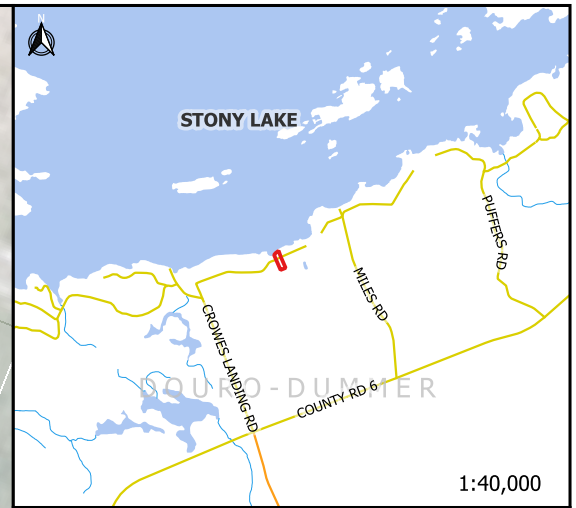


Figure 2: Existing Conditions



Designed by: N.F.
Date: 09/19/2025
Project: SEC 25-064



**Figure 3: Proposed Development
1386 Irwin Road**

Table 1: Vascular Plant Inventory

Scientific Name	Common Name	Vegetation Community ^A		S-Rank ^B	G-Rank ^C	Provincially Tracked	Species at Risk Status		Non-native Status	Coefficient of Wetness
		CVR_3	OA				Provincial ^D	Federal ^E		
<i>Acer platanoides</i>	Norway Maple	✓		SNA	GNR	N			SE5	5
<i>Acer saccharum</i>	Sugar Maple	✓		S5	G5	N				3
<i>Achillea millefolium</i>	Common Yarrow	✓		SNA	G5	N			SE5?	3
<i>Aquilegia canadensis</i>	Red Columbine	✓		S5	G5	N				3
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	✓		S5	G5	N				3
<i>Aralia racemosa</i>	American Spikenard	✓		S5	G5	N				5
<i>Betula papyrifera</i>	Paper Birch	✓		S5	G5	N				3
<i>Bidens frondosa</i>	Devil's Beggarticks	✓		S5	G5	N				-3
<i>Campanula rapunculoides</i>	Creeping Bellflower	✓		SNA	GNR	N			SE5	5
<i>Carex stipata</i>	Awl-fruited Sedge	✓		S5	G5	N				-5
<i>Chelone glabra</i>	White Turtlehead	✓		S5	G5	N				-5
<i>Convallaria majalis</i>	European Lily-of-the-valley	✓		SNA	G5	N			SE5	5
<i>Dactylis glomerata</i>	Orchard Grass	✓		SNA	GNR	N			SE5	3
<i>Daucus carota</i>	Wild Carrot	✓		SNA	GNR	N			SE5	5
<i>Eurybia macrophylla</i>	Large-leaved Aster	✓		S5	G5	N				5
<i>Fragaria virginiana</i>	Wild Strawberry	✓		S5	G5	N				3
<i>Fraxinus pennsylvanica</i>	Red Ash	✓		S4	G4	N				-3
<i>Geum canadense</i>	Canada Avens	✓		S5	G5	N				0
<i>Hemerocallis lilioasphodelus</i>	Yellow Daylily	✓		SNA	GNR	N			SE4	5
<i>Impatiens capensis</i>	Spotted Jewelweed	✓		S5	G5	N				-3
<i>Juniperus virginiana</i>	Eastern Red Cedar	✓		S5	G5	N				3
<i>Lysimachia nummularia</i>	Creeping Yellow Loosestrife	✓		SNA	GNR	N			SE5	-3
<i>Medicago lupulina</i>	Black Medick	✓		SNA	GNR	N			SE5	3
<i>Melilotus officinalis</i>	Yellow Sweet-clover	✓		SNA	GNR	N			SE5	3
<i>Myosotis sylvatica</i>	Woodland Forget-me-not	✓		SNA	G5	N			SE4	5
<i>Myriophyllum spicatum</i>	Eurasian Water-Milfoil		✓	SNA	GNR	N			SE5	-5
<i>Ostrya virginiana</i>	Eastern Hop-hornbeam	✓		S5	G5	N				3
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	✓		S4?	G5	N				3
<i>Phlox paniculata</i>	Garden Phlox	✓		SNA	G5	N			SE3	3
<i>Picea glauca</i>	White Spruce	✓		S5	G5	N				3
<i>Pilosella caespitosa</i>	Meadow Hawkweed	✓		SNA	GNR	N			SE5	5
<i>Pinus resinosa</i>	Red Pine	✓		S5	G5	N				3
<i>Pinus strobus</i>	Eastern White Pine	✓		S5	G5	N				3
<i>Plantago lanceolata</i>	English Plantain	✓		SNA	G5	N			SE5	3
<i>Poa compressa</i>	Canada Bluegrass	✓		SNA	GNR	N			SE5	3
<i>Poa pratensis</i>	Kentucky Bluegrass	✓		S5	G5	P				3
<i>Populus balsamifera</i>	Balsam Poplar	✓		S5	G5	N				-3
<i>Populus tremuloides</i>	Trembling Aspen	✓		S5	G5	N				0
<i>Prunus pensylvanica</i>	Pin Cherry	✓		S5	G5	N				3
<i>Prunus virginiana</i>	Chokecherry	✓		S5	G5	N				3
<i>Quercus rubra</i>	Northern Red Oak	✓		S5	G5	N				3

Table 1: Vascular Plant Inventory

Scientific Name	Common Name	Vegetation Community ^A		S-Rank ^B	G-Rank ^C	Provincially Tracked	Species at Risk Status		Non-native Status	Coefficient of Wetness
		CVR_3	OA				Provincial ^D	Federal ^E		
<i>Ranunculus acris</i>	Common Buttercup	✓		SNA	G5	N			SE5	0
<i>Rhus typhina</i>	Staghorn Sumac	✓		S5	G5	N				3
<i>Ribes cynosbati</i>	Eastern Prickly Gooseberry	✓		S5	G5	N				3
<i>Robinia pseudoacacia</i>	Black Locust	✓		SNA	G5	N			SE5	3
<i>Rubus idaeus ssp. strigosus</i>	North American Red Raspberry	✓		S5	G5T5	N				3
<i>Rubus occidentalis</i>	Black Raspberry	✓		S5	G5	N				5
<i>Rubus odoratus</i>	Purple-flowering Raspberry	✓		S5	G5	N				5
<i>Rumex crispus</i>	Curled Dock	✓		SNA	GNR	N			SE5	0
<i>Salix bebbiana</i>	Bebb's Willow	✓		S5	G5	N				-3
<i>Sambucus racemosa</i>	Red Elderberry	✓		S5	G5	N				3
<i>Silene vulgaris</i>	Bladder Champion	✓		SNA	GNR	N			SE5	5
<i>Solidago canadensis</i>	Canada Goldenrod	✓		S5	G5	N				3
<i>Symphotrichum cordifolium</i>	Heart-leaved Aster	✓		S5	G5	N				5
<i>Syringa vulgaris</i>	Common Lilac	✓		SNA	GNR	N			SE5	5
<i>Taraxacum officinale</i>	Common Dandelion	✓		SNA	G5	N			SE5	3
<i>Thalictrum dioicum</i>	Early Meadow-rue	✓		S5	G5	N				3
<i>Thuja occidentalis</i>	Eastern White Cedar	✓		S5	G5	N				-3
<i>Tilia americana</i>	Basswood	✓		S5	G5	N				3
<i>Trifolium pratense</i>	Red Clover	✓		SNA	GNR	N			SE5	3
<i>Trifolium repens</i>	White Clover	✓		SNA	GNR	N			SE5	3
<i>Tussilago farfara</i>	Coltsfoot	✓		SNA	GNR	N			SE5	3
<i>Ulmus americana</i>	White Elm	✓		S5	G4	N				-3
<i>Vallisneria americana</i>	American Eelgrass		✓	S5	G5	N				-5
<i>Verbascum thapsus</i>	Common Mullein	✓		SNA	GNR	N			SE5	5
<i>Veronica longifolia</i>	Long-leaved Speedwell	✓		SNA	GNR	N			SE3	5
<i>Vicia cracca</i>	Tufted Vetch	✓		SNA	GNR	N			SE5	5
<i>Viola sororia</i>	Woolly Blue Violet	✓		S5	G5	N				0
<i>Vitis riparia</i>	Riverbank Grape	✓		S5	G5	N				0

^ARefer to Figure 2 for Ecological Land Classification descriptors.

^BProvincial Ranking Status. Definitions of each S-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_SRrank.htm.

^CGlobal Ranking Status. Definitions of each G-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_GRrank.htm.

^DSpecies at Risk status as per the O. Reg. 230/08.

^ESpecies at Risk status as per the *Species at Risk Act (S.C. 2002, c.29)*.

Table 2: Bird Inventory

Scientific Name	Common Name	Point Count Station		Incidental	Location	Breeding ^A	S-Rank ^B	G-Rank ^C	Species at Risk Status	
		1							Provincial ^D	Federal ^E
		06-10-2025	07-05-2025							
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	S ^F (2) ^G			Adjacent Lands	Possible	S5	G5		
<i>Corvus brachyrhynchos</i>	American Crow	H(1)	T(1)		Adjacent Lands	Probable	S5	G5		
<i>Cyanocitta cristata</i>	Blue Jay	S(2)			Adjacent Lands	Possible	S5	G5		
<i>Dryobates pubescens</i>	Downy Woodpecker	S(1)			Adjacent Lands	Possible	S5	G5		
<i>Geothlypis trichas</i>	Common Yellowthroat		S(1)		Adjacent Lands	Possible	S5B,S3N	G5		
<i>Hirundo rustica</i>	Barn Swallow	N(3)			Subject Property	Confirmed	S4B	G5	SC	THR
<i>Icterus galbula</i>	Baltimore Oriole	S(2)			Subject Property	Possible	S4B	G5		
<i>Melospiza melodia</i>	Song Sparrow		S(1)		Subject Property	Possible	S5	G5		
<i>Mniotilta varia</i>	Black-and-white Warbler			✓	Adjacent Lands	Possible	S5B	G5		
<i>Molothrus ater</i>	Brown-headed Cowbird			✓	Subject Property	Possible	S5	G5		
<i>Poecile atricapillus</i>	Black-capped Chickadee		S(1)		Adjacent Lands	Possible	S5	G5		
<i>Progne subis</i>	Purple Martin			✓	Adjacent Lands	Possible	S3B	G5		
<i>Quiscalus quiscula</i>	Common Grackle	S(1)			Adjacent Lands	Possible	S5	G5		
<i>Sayornis phoebe</i>	Eastern Phoebe		N(1)		Subject Property	Confirmed	S5B	G5		
<i>Seiurus aurocapilla</i>	Ovenbird	S(1)			Adjacent Lands	Possible	S5B	G5		
<i>Setophaga virens</i>	Black-throated Green Warbler			✓	Adjacent Lands	Possible	S5B	G5		
<i>Spinus tristis</i>	American Goldfinch	S(1)			Adjacent Lands	Possible	S5	G5		
<i>Spizella passerina</i>	Chipping Sparrow	S(1)			Adjacent Lands	Possible	S5B,S3N	G5		
<i>Troglodytes aedon</i>	House Wren	S(1)	T(1)		Subject Property	Probable	S5B	G5		
<i>Turdus migratorius</i>	American Robin	S(1)	S(1),T(1)		Subject Property	Probable	S5	G5		
<i>Vireo olivaceus</i>	Red-eyed Vireo	S(2)	T(1)		Adjacent Lands	Probable	S5B	G5		
<i>Zenaidura macroura</i>	Mourning Dove	P(1)			Subject Property	Probable	S5	G5		

^ABreeding Evidence as per Ontario Breeding Bird Atlas: Guide for Participants (March 2001)

^BProvincial Ranking Status. Definitions of each S-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_SRrank.htm.

^CGlobal Ranking Status. Definitions of each G-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_GRrank.htm.

^DSpecies at Risk status as per the O. Reg. 230/08.

^ESpecies at Risk status as per the *Species at Risk Act (S.C. 2002, c.29)*.

^FBreeding Code as per Ontario Breeding Bird Atlas: Guide for Participants (March 2001)

^GNumber of individuals observed

Table 3: Species at Risk Habitat Assessment

Species Grouping	Common Name	Scientific Name	Provincial Status ^A	Federal Status ^B	SAR Habitat Assessment
Birds	Bank Swallow	<i>Riparia riparia</i>	Threatened	Threatened	Absent. No candidate nesting sites for bank swallow identified on the subject property.
Birds	Barn Swallow	<i>Hirundo rustica</i>	Special Concern	Threatened	Confirmed. Three (3) active barn swallow nests were observed under the overhanging deck in front of the boathouse on the subject property.
Birds	Black Tern	<i>Chlidonias niger</i>	Special Concern	Not Listed	Absent. No suitable wetland habitat for black tern identified on the subject property.
Birds	Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened	Threatened	Absent. No suitable open habitat for bobolink identified on the subject property.
Birds	Canada Warbler	<i>Cardellina canadensis</i>	Special Concern	Threatened	Absent. No suitable forested communities with a well-developed shrub layer for Canada warbler identified on the subject property.
Birds	Cerulean Warbler	<i>Setophaga cerulea</i>	Threatened	Endangered	Absent. No suitable forest habitat for Cerulean warbler identified on the subject property.
Birds	Chimney Swift	<i>Chaetura pelagica</i>	Threatened	Threatened	Absent. No chimney swift were observed during the chimney swift nesting survey nor through incidental occurrence.
Birds	Common Nighthawk	<i>Chordeiles minor</i>	Special Concern	Special Concern	Absent. No recently disturbed open areas for common nighthawk identified on the subject property.
Birds	Eastern Meadowlark	<i>Sturnella magna</i>	Threatened	Threatened	Absent. No suitable open habitat for Eastern meadowlark identified on the subject property.
Birds	Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	Special Concern	Threatened	Absent. No suitable combination of open and forested areas for Eastern whip-poor-will identified on the subject property.
Birds	Eastern Wood-Pewee	<i>Contopus virens</i>	Special Concern	Special Concern	Absent. No suitable forest for Eastern wood-pewee identified on the subject property.
Birds	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Special Concern	Special Concern	Absent. No suitable forested communities dominated by fir species for evening grosbeak identified on the subject property.
Birds	Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Special Concern	Threatened	Absent. No suitable open or edge habitat for golden-winged warbler identified on the subject property.
Birds	Grasshopper Sparrow	<i>Ammodramus savannarum pratensis</i>	Special Concern	Special Concern	Absent. No suitable grassland habitat for grasshopper sparrow identified on the subject property.
Birds	Least Bittern	<i>Ixobrychus exilis</i>	Threatened	Threatened	Absent. No suitable wetland habitat for least bittern identified on the subject property.
Birds	Loggerhead Shrike	<i>Lanius ludovicianus</i>	Endangered	Endangered	Absent. No suitable grassland habitat for loggerhead shrike identified on the subject property.
Birds	Olive-sided Flycatcher	<i>Contopus cooperi</i>	Special Concern	Special Concern	Absent. No suitable edge or open habitat for olive-sided flycatcher identified on the subject property.
Birds	Peregrine Falcon	<i>Falco peregrinus</i>	Special Concern	Not Listed	Absent. No suitable cliffs or ledges for peregrine falcon identified on or near the subject property.
Birds	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Endangered	Endangered	Absent. No suitable treed habitat with an abundance of dead/dying trees for red-headed woodpecker. Moreover, no red-headed woodpecker cavities were encountered during Sumac's investigations.
Birds	Short-eared Owl	<i>Asio flammeus</i>	Threatened	Special Concern	Absent. No suitable open habitat for short-eared owl identified on the subject property.
Birds	Wood Thrush	<i>Hylocichla mustelina</i>	Special Concern	Threatened	Absent. No suitable mature forest habitat for wood thrush identified on the subject property.
Insects	Monarch		Special Concern	Endangered	Absent. No milkweed for monarch breeding identified on the subject property. No areas containing an abundance of favorable nectar sources for foraging adult monarch identified on the subject property.

Species Grouping	Common Name	Scientific Name	Provincial Status ^A	Federal Status ^B	SAR Habitat Assessment
Mammals	Eastern Red Bat	<i>Lasiurus borealis</i>	Endangered	Not Listed	Absent. No bats were observed during either of the exit surveys, nor through incidental occurrence.
Mammals	Eastern Small-footed Myotis	<i>Myotis leibii</i>	Endangered	Not Listed	Absent. No rock or similar features with the potential of functioning as roosting habitat for Eastern small-footed myotis encountered on the subject property. Moreover, no bats were observed during the exit surveys nor through incidental occurrence.
Mammals	Hoary Bat	<i>Lasiurus cinereus</i>	Endangered	Not Listed	Absent. No bats were observed during either of the exit surveys, nor through incidental occurrence.
Mammals	Little Brown Myotis	<i>Myotis lucifugus</i>	Endangered	Endangered	Absent. No bats were observed during either of the exit surveys, nor through incidental occurrence.
Mammals	Northern Myotis	<i>Myotis septentrionalis</i>	Endangered	Endangered	Absent. No bats were observed during either of the exit surveys, nor through incidental occurrence.
Mammals	Silver-haired Bat	<i>Lasionycteris noctivagans</i>	Endangered	Not Listed	Absent. No bats were observed during either of the exit surveys, nor through incidental occurrence.
Mammals	Tri-colored Bat	<i>Perimyotis subflavus</i>	Endangered	Endangered	Absent. No bats were observed during either of the exit surveys, nor through incidental occurrence.
Reptiles	Blanding's Turtle	<i>Emydoidea blandingii</i>	Threatened	Endangered	Absent. The Stony Lake shoreline abutting the subject property is likely too rocky and unvegetated to function as suitable habitat for Blanding's turtle.
Reptiles	Common Five-lined Skink (Great Lakes/St. Lawrence population)	<i>Plestiodon fasciatus</i>	Special Concern	Special Concern	Absent. The subject property is likely too anthropogenically disturbed to function as suitable habitat for common five-lined skink.
Reptiles	Eastern Hog-nosed Snake	<i>Heterodon platirhinos</i>	Threatened	Threatened	Absent. Eastern hog-nosed snake are not anticipated to occur on the subject property due to lack of favorable foraging habitat (e.g., amphibian breeding habitat for American toad) anticipated on or near the subeject property.
Reptiles	Northern Map Turtle	<i>Graptemys geographica</i>	Special Concern	Special Concern	Absent. Northern map turtle are not anticipated to occur on the subject property due to unfavorable shoreline features (e.g., vertical steel and concrete).
Reptiles	Snapping Turtle	<i>Chelydra serpentina</i>	Special Concern	Special Concern	Absent. Snapping turtle are not anticipated to occur on the subject property due to unfavorable shoreline features (e.g., vertical steel and concrete).
Vascular Plants	Black Ash	<i>Fraxinus nigra</i>	Endangered	Not Listed	Absent. No black ash encountered on the subject property.
Vascular Plants	Butternut	<i>Juglans cinerea</i>	Endangered	Endangered	Absent. No butternut encountered on the subject property.

^AClassification of species as they appear on O. Reg. 230/08 Species at Risk Ontario list (consolidation period: January 27, 2025).

^BClassification of species as they appear on Schedule 1 of the Species at Risk Act (consolidation period: February 17, 2025).

List of Appendices

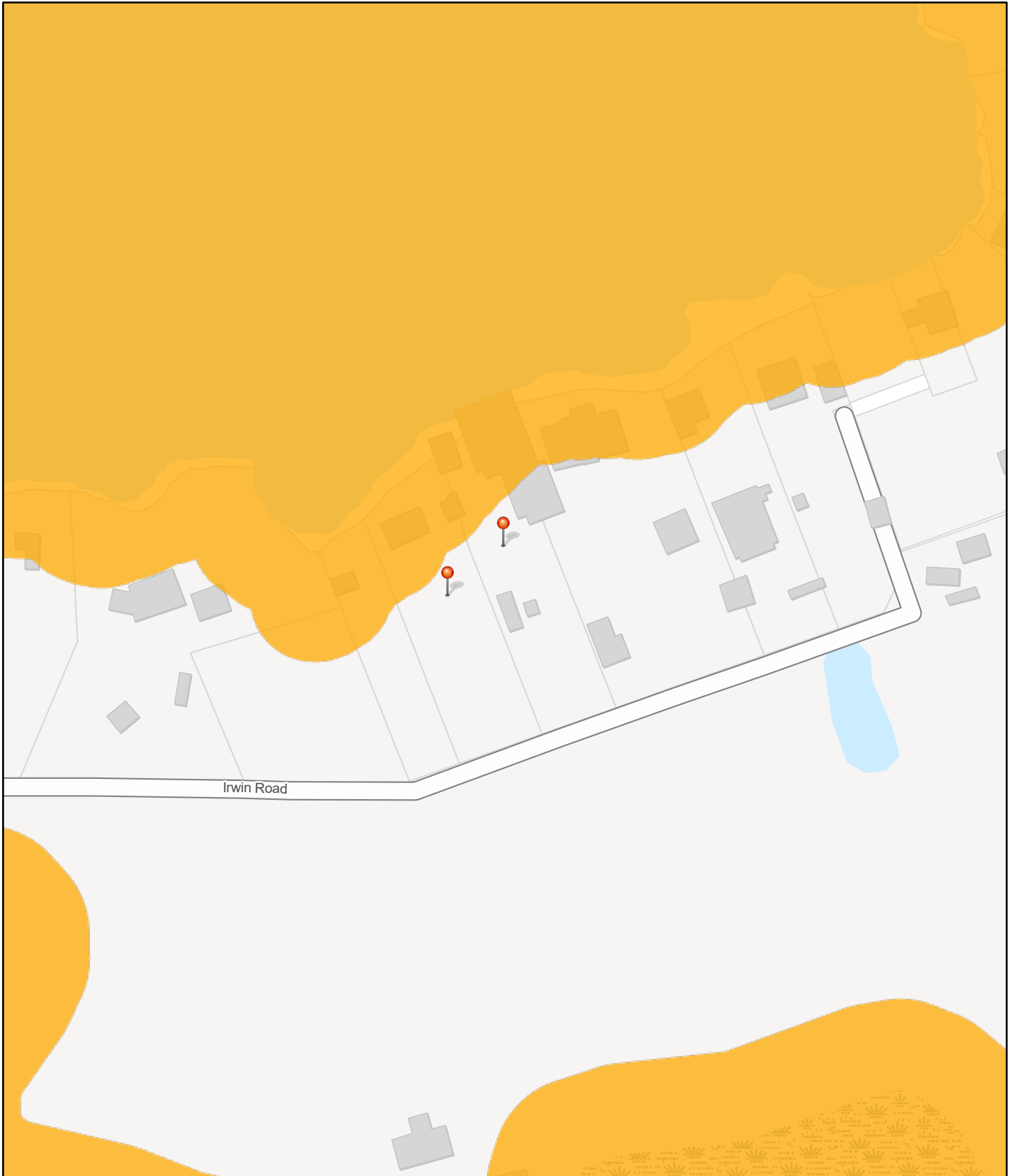
Appendix A: ORCA Regulated Areas Mapping

Appendix B: Natural Heritage Areas Mapping


Appendix C: Barn Swallow Nesting Structure Designs

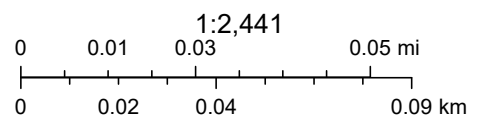
Appendix A: ORCA Regulated Areas Mapping

ORCA Mapping



9/9/2025, 10:27:02 AM

 Regulated Area








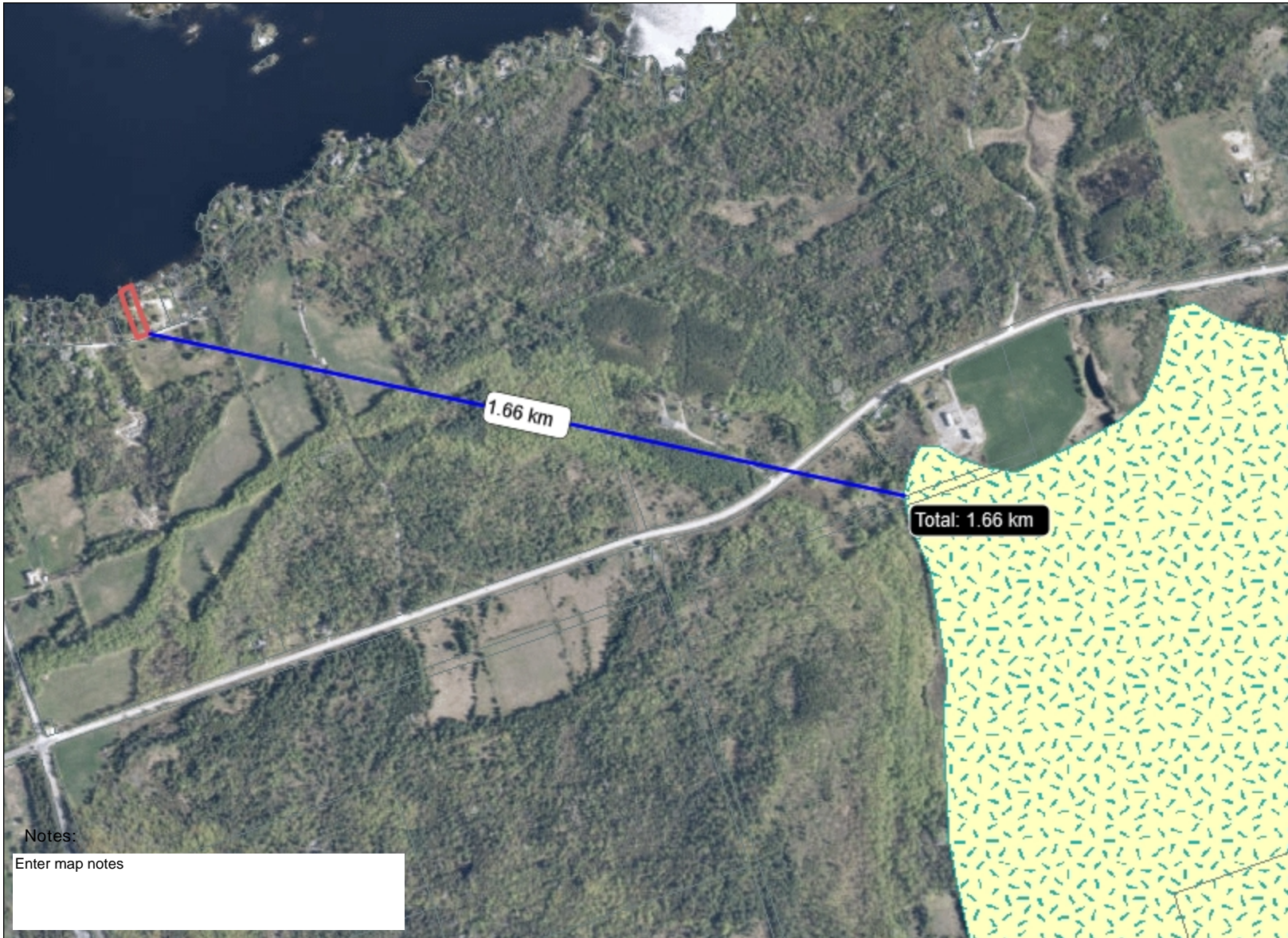
Sources: NRCan, Esri Canada, and Canadian Community Maps contributors., Sources: Esri, Maxar, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community

Printed from the Flood Mapping 2022 Web Application
Otonabee Region Conservation Authority

Appendix B: Natural Heritage Areas Mapping

Legend

-  Assessment Parcel
- ANSI**
-  Earth Science Provincially Significant/sciences de la terre d'importance provinciale
-  Earth Science Regionally Significant/sciences de la terre d'importance régionale
-  Life Science Provincially Significant/sciences de la vie d'importance provinciale
-  Life Science Regionally Significant/sciences de la vie d'importance régionale



Notes:

Enter map notes



Absence of a feature in the map does not mean they do not exist in this area.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources(OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

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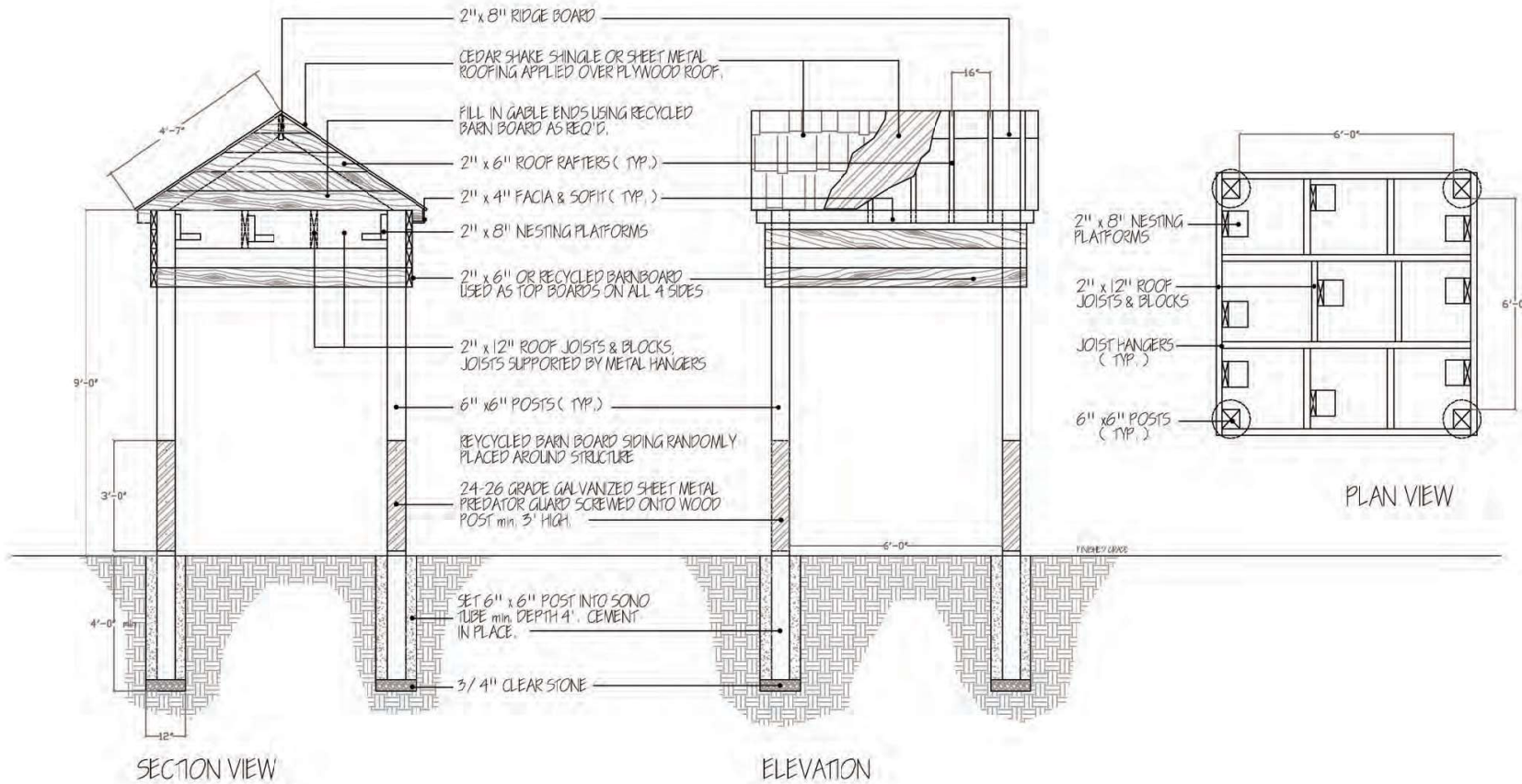


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Appendix C: Barn Swallow Nesting Structure Designs

Appendix A: Nesting Structure Design by Toronto Region Conservation Authority



PROJECT

NOTES

1. ALL WOOD TO BE ROUGH CUT HEMLOCK EXCEPT AS NOTED
PROJECT NO. 2015-001
 DATE 04/01/2015
 DRAWN BY ACAD
2. ALL FASTENERS TO BE GALVANIZED

DATE APRIL 2015

CHECKED

DESIGNED M.P.L.

SCALE NOT TO SCALE

DRAWN ACAD

DWG. NO.

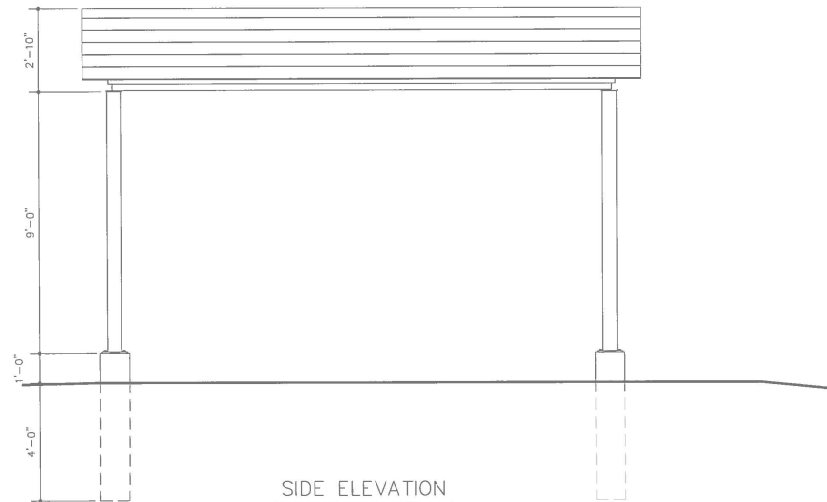
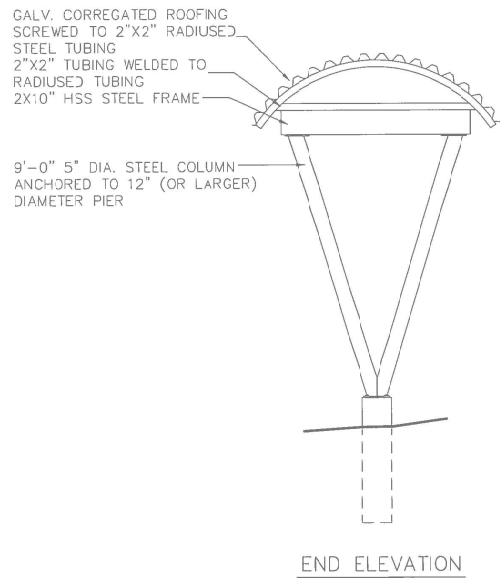
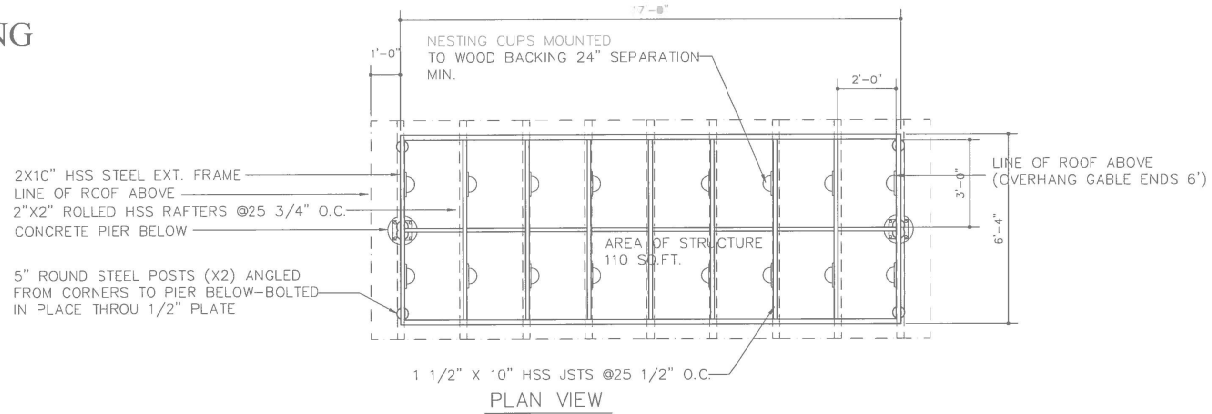
THESE DRAWINGS ARE THE PROPERTY OF TORONTO & REGION CONS. AND SHALL NOT BE USED, ALTERED, MODIFIED, REVISED OR CHANGED WITHOUT WRITTEN CONSENT OF LANDSCAPE ARCHITECT. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE AND ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT. THESE DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED AND STAMPED BY THE LANDSCAPE ARCHITECT. DO NOT SCALE DRAWINGS.



DRAWING

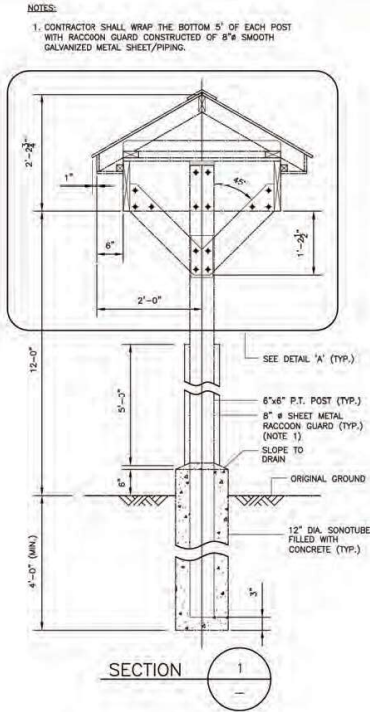
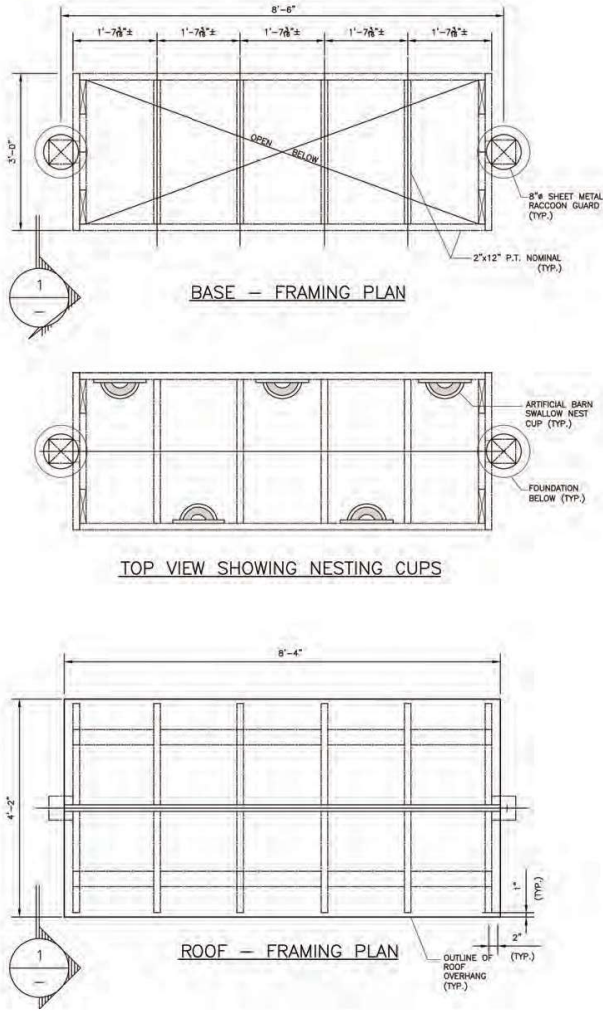
BARN SWALLOW NESTING STRUCTURE

SWALLOW NESTING STRUCTURES



Appendix C: Nesting Structure Design by Morrison Hershfield in collaboration with Ministry of Transportation (MTO)
 Larry Sarris of the MTO Planning and Environmental Office worked in collaboration with Morrison Hershfield to create this design.

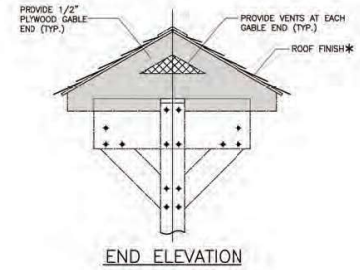
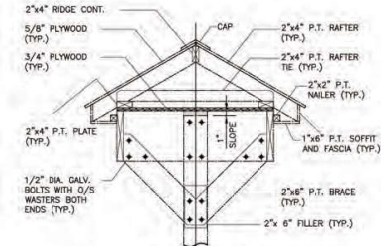
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ARTIFICIAL BARN SWALLOW NEST CUP

METRIC
 DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE SHOWN

PLATE No	CONT 2014-XXXX	
WP	4135-12-01	
BARN SWALLOW SHELTER		SHEET 1



- * **ROOF FINISH:**
- PLYWOOD + ASPHALT SHINGLES
 - PLYWOOD + CEDAR SHINGLES
 - STEEL METAL SHEATHING
 - CORRUGATED FIBERGLASS SHEATHING (SCREWED)

**BARN SWALLOW SHELTER
 OPTION A — MAXIMUM PRIVACY**

N.T.S.