DILLON CONSULTING

MINISTRY OF TRANSPORTATION, ONTARIO

Design and Construction Report (Final)

GWP #317-98-00, Contract 2020-3006, Highway 3 Widening in the Town of Essex

From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23 (Contract 2020-3006)

March 2021 – 20-2801

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Executive Summary

The Ministry of Transportation, Ontario (MTO) retained Coco Paving Inc. (Coco) and Dillon Consulting Limited (Dillon) to complete the Design-Build (DB) Contract for the Class Environmental Assessment (EA), Detail Design and construction of Highway 3 in the Town of Essex (the Project) (**Figure 1**). To allow construction to move ahead in unison with the design process, multiple construction contracts will be produced. This is the second Design and Construction Report for improvements to Highway 3.

The improvements to Highway 3 are classified as a Group 'B' undertaking following MTO's *Class Environmental Assessment (EA) for Provincial Transportation Facilities* (2000). The Class EA and Preliminary Design for the project was completed in 2016 and is documented in the 2016 Transportation Environmental Study Report (TESR) Addendum. As part of that TESR Addendum, a DCR is required to document construction details including the traffic management plan for the project. This DCR will be made available for a 30-day public review period. As outlined in Section 6.5.3 of MTO's Class EA, the DCR is not eligible for Part II Orders.

A Notice of Study Commencement was published for the overall DB contract. The Notice of Study Commencement was published in the December 10, 2020, edition of the Essex Free Press community newspaper. Eighteen comments were received with respect to the project.

Construction activities documented in this DCR include:

- Construct temporary bypass road and install temporary traffic signals at Highway 3/Victoria Avenue.
- Construct 14th Concession East Drain culvert extension on Highway 3.
- Construct Essex Outlet Drain Sewer Outlets.
- Complete Victoria Avenue Road works north of Highway 3.
- Complete Highway 3 Overpass embankment construction.
- Construct channelized island north of Highway 3 at Ellis Side Road and Highway 3.
- Construct South Talbot Road and Pinkerton Sideroad realignments.
- Construct Old South Talbot Road cul-de-sac and close South Talbot Road and Pinkerton Sideroad at Maidstone Avenue (County Road 8).
- Construct widening of Gosfield Townline W/Arner Townline at Highway 3 intersection.
- Complete Highway 3 Eastbound lanes and culvert extensions (includes Canaan Drain, East/West Townline Drain and Russell Drain culverts).

The proposed improvements are anticipated to begin in summer 2021, subject to approvals. Work associated with this DCR will be completed within MTO and municipal owned lands and the existing ROW. Property required to facilitate the work was acquired following Preliminary Design and no additional permanent property taking is needed to complete construction.

Based on the scope of work for this project, impacts to adjacent land uses are anticipated to be minimal. With appropriate mitigation measures implemented during construction, all potential impacts can be avoided, mitigated or minimized to the extent possible.

The project does have potential to impact terrestrial and aquatic natural features including species at risk and significant wildlife habitat (SWH). To avoid impacts to SAR and minimize potential impacts to SAR habitat and SWH, extensive mitigation measures will be included in the construction contract. Exclusionary fencing will be installed at work locations with potential to impact SAR species and compensation habitat will be provided for Barn Swallows impacted by construction works at culvert crossings. Fish and fish habitat impacts are anticipated to be minimal with mitigation measures implemented.

As required by the MTO Class EA, all permits, approvals and exemptions required for the project must be obtained prior to Environmental Clearance – Construction Start being issued. Design-related environmental approvals and permits required prior to construction include:

- MHSTCI acceptance of Stage 2 Archaeological Assessment (letter dated March 11, 2020).
- Notice of Activity (Barn Swallow) confirmation of registration received February 23, 2021.

To ensure the implementation and effectiveness of the environmental mitigation measures and provisions included in the construction Contract, an Environmental Management Plan (EMP) has been created for the project. The objective of the EMP is to maintain, and where possible, improve the state of the environment affected by the proposed improvements. This includes the development of appropriate mitigation measures for implementation during construction to fulfill the regulatory and contract requirements, protect the environment and meet MTO obligations.

During construction, environmental monitoring for this project will:

- Inspect and monitor pre-construction, construction and post-construction environmental work specified in the Contract.
- Thoroughly evaluate any changes proposed by the Contractor to ensure that changes meet the intent of the measures and provisions, as outlined in this DCR, and reflect prevailing conditions on site.

The implementation and effectiveness of the measures and provisions included in the Contract will be monitored and documented monthly.

1.0 Introduction

The Ministry of Transportation, Ontario (MTO) retained Coco Paving Inc. (Coco) and Dillon Consulting Limited (Dillon) to complete the Design-Build (DB) Contract for the Detail Design and construction of the Highway 3 Widening from 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23 in the Town of Essex (**Figure 1**). To allow construction to proceed in unison with the design process, three construction contracts will be produced.

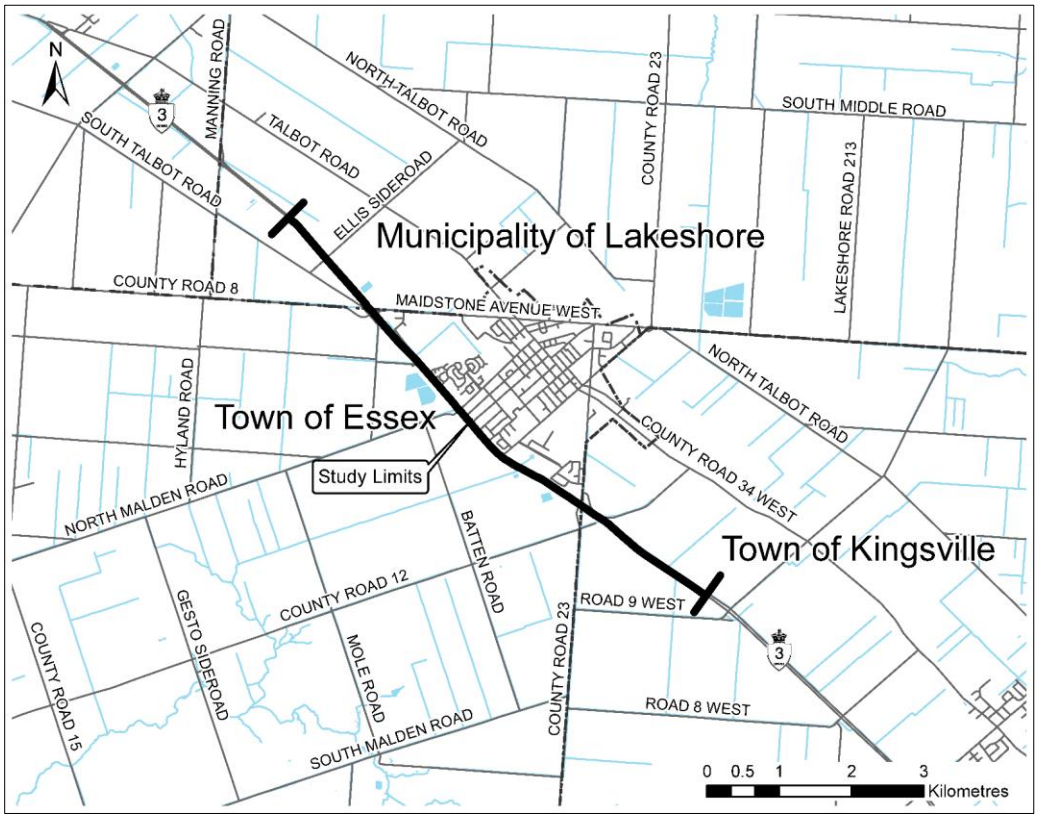


Figure 1: Key Plan

This Design and Construction Report (DCR) documents a portion of the Detail Design for the Highway 3 improvements. This DCR will be published for a 30-day public review prior to construction start.

In January 2021, a DCR was published for 30-day public review documenting the initial Detail Design for the project. The first DCR was available for 30-day public review from January 28, 2021, to March 1, 2021. A copy of the first DCR is available and will remain available, on the project website (http://www.hwy3.ca) until the project is complete. A third DCR is anticipated but not yet available and will be published for a 30-day public review period prior to being finalized. Advanced notice to the Project Contact list will be provided.

1.1 Project Study Area

The Highway 3 improvements are located in the Town of Essex and extend from 0.8 km east of Ellis Side Road easterly to 2.2 km east of County Road 23 (**Figure 1**). The western extent of the Study Area falls within the Municipality of Lakeshore and the eastern extent of the Study Area falls within the Town of Kingsville.

1.2 Project Background

In January 2006, MTO completed the Highway 3 Planning and Preliminary Design Study from Outer Drive in Windsor easterly 3.5 km to the east junction of Essex County Road 34 in Leamington (GWP 315-98-00). The Transportation Environmental Study Report (TESR) prepared for the project recommended widening Highway 3 to four lanes with a 15 m grassed median and improve all at-grade intersections. It also recommended that a more comprehensive study be undertaken to address safety, traffic and operations issues through the Town of Essex.

The more comprehensive study recommended by the 2006 TESR was completed in 2010 and is documented in the *Transportation Needs Assessment Report, Town of Essex Transportation Study.* The study looked at Highway 3 from 3.1 km west of Essex County Road 8 (Maidstone Avenue) to 1.3 km east of Essex County Road 23 (GWP 3008-06-00). To address future safety, traffic and operations issues, the 2010 study recommended a southerly shift of the Highway 3 alignment through the Town of Essex and modifications to highway intersections and the local municipal road network. The 2010 study was not completed under the Ontario *Environmental Assessment Act*.

Some of the improvements included in the original 2006 TESR, such as widening of Highway 3 to four lanes from Windsor to Leamington, received environmental clearance under the Ontario *Environmental Assessment Act* in August 2006. The changes proposed to the Highway 3 widening from the 2010 Transportation Needs Assessment Report, including the southerly alignment shift and improvements to intersections and the local road network, did not receive Environmental clearance in 2006 and a TESR Addendum was required.

In 2012, MTO initiated the Preliminary Design and Class Environmental Assessment to update the 2006 TESR and incorporate improvements identified as part of the 2010 Transportation Needs Assessment Report. The 2012 Class Environmental Assessment and Preliminary Design looked at improvements to Highway 3 from 0.5 km west of Ellis Side Road easterly to 2 km east of Essex County Road 23. The TESR Addendum was published for 30-day public review in November 2016 and recommended the following improvements to Highway 3:

- Southerly shift of the Highway 3 alignment through the Town of Essex, as recommended by the 2010 Transportation Needs Assessment Report.
- Partial Closure of the Highway 3/Ellis Side Road intersection.
- Realignment of South Talbot Road and Pinkerton Side Road.

- Overpass grade separation at Highway 3 and Victoria Avenue, with no access to Highway 3 from Victoria Avenue.
- Westerly extension of South Talbot Road across the former Canada Southern Railway right-of-way with a multi-use (pedestrian and cyclist) trail construction on the south side of the road.

The 2016 TESR Addendum received Environmental Clearance in December 2016.

In September 2020, an advanced work Detail Design and Class EA was prepared by Stantec Consulting Limited; the findings of which were published in a DCR made available for 30-day public review from September 17, 2020, to October 20, 2020. The advanced work Detail Design and Class EA included:

- Extension of South Talbot Road across the Canada Southern Railway right-of-way.
- Realignment of the Essex Outlet municipal drain, including a new centreline culvert on Highway 3.
- Preloading and surcharging of the future Highway 3 overpass approach embankments at Victoria Avenue.

The 30-day public review period for the advanced work DCR ended in October 2020. Environmental Clearance – Construction Start was issued on February 23, 2021.

Also in October 2020, MTO retained Coco Paving Inc. (Coco) and Dillon Consulting Limited (Dillon) to complete the current Design-Build Contract for the remainder of the Highway 3 Widening project from 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23 as outlined in **Section 1.0**.

1.3 Project Description, Needs and Justification

As stated in **Section 1.0** and **1.2**, the current design-build project will complete the Detail Design and construction of the Highway 3 Widening project in the Town of Essex. To efficiently complete Detail Design while moving ahead in unison with construction activities, multiple construction contracts will be produced. The first contract (Contract 1) built on the 2020 advanced work DCR (Stantec, 2020) and will begin in spring/summer 2021, subject to approvals. Subsequent contracts will build off of each previous contract until all elements of the 2016 approved plan are constructed. **Figure 2** illustrates the work approved as part of the October 2020, DCR and this current DCR. To meet the requirements of the EA for the project, separate DCRs are being produced as part of this design-build project.

Construction activities documented in this DCR include:

- Construct temporary bypass road and install temporary traffic signals at Highway 3/Victoria Avenue.
- Construct 14th Concession East Drain culvert extension on Highway 3.
- Construct Essex Outlet Drain Sewer Outlets.

- Complete Victoria Avenue Road works north of Highway 3.
- Complete Highway 3 Overpass embankment construction.
- Construct channelized island north of Highway 3 at Ellis Side Road and Highway 3.
- Construct South Talbot Road and Pinkerton Sideroad realignments.
- Construct Old South Talbot Road cul-de-sac and close South Talbot Road and Pinkerton Sideroad at Maidstone Avenue (County Road 8).
- Construct widening of Gosfield Townline W/Arner Townline at Highway 3 intersection.
- Complete Highway 3 Eastbound lanes and culvert extensions (includes Canaan Drain, East/West Townline Drain and Russell Drain culverts).

The proposed improvements are not anticipated to have impacts beyond existing MTO and municipal right-of-ways (ROWs) and all work will be contained to MTO and municipal owned lands. Construction activities for this DCR are anticipated to begin in summer 2021, subject to approvals. Construction activities related to the overall design-build project will be completed in July 2023.

1.4 Environmental Project Goals

MTO has identified four environmental project goals for the Highway 3 Widening project (**Figure 3**).

Figure 3: Environmental Project Goals

These goals will be highlighted in the relevant sections throughout this DCR to indicate where they have been specifically addressed and how construction mitigation measures have been designed to achieve these goals. The goals will be integrated into the Environmental Management Plan for the project and all environmental mitigation plans, as necessary.

2.0 Environmental Assessment Process

This project is subject to Ontario's *Environmental Assessment Act* and is being carried out in accordance with the requirements of the MTO *Class EA for Provincial Transportation Facilities* (2000) as a Group 'B' Project.

Group 'B' projects are categorized by the MTO Class EA as major improvements to existing transportation facilities. As outlined in **Section 1.2**, the Class EA and Preliminary Design for the project was completed in 2016 and is documented in the 2016 Transportation Environmental Study Report (TESR) Addendum. As part of that TESR Addendum, a DCR is required to document construction details including the traffic management plan for the project. The DCR will be made available for a 30-day public review period. As outlined in Section 6.5.3 of MTO's Class EA, the DCR is not eligible for Part II Orders. MTO will review and consider all comments received.

2.1 Consistency with Provincial Policy Statement

The Provincial Policy Statement (PPS) is issued under Section 3 of the Ontario *Planning Act*, and came into effect on May 1, 2020. Section 3 of the *Planning Act* states decisions affecting planning matters "shall be consistent with" the PPS. The consistency of the proposed improvements (defined as "infrastructure" in the PPS) with the relevant Infrastructure and Public Service Facilities policies included in Section 1.6 of the PPS is summarized as follows:

- The planned widening and access changes to Highway 3 are appropriate to address the project needs and will also allow the Provincial highway system to continue to operate in a safe, energy efficient manner, which facilitates the movement of people and goods.
- The project makes efficient use of existing and planned infrastructure.
- As required by Section 1.6.8.1 of the PPS, MTO has planned for, and protected the corridor and ROW for transportation facilities to meet current and projected needs.

Section 1.6.8.6 of the PPS, requires that MTO, when planning for corridor and ROWs for significant transportation facilities, consider the significant resources protected by Section 2 of the PPS, Wise Use and Management of Resources. Impacts to significant resources, as identified by Section 2 of the PPS, outside the current ROW are not anticipated.

3.0 Construction Staging and Traffic Management

Construction for this DCR is anticipated to begin in summer 2021. Work will include the following improvements, subject to approval as part of this DCR:

- Construct temporary bypass road and install temporary traffic signals at Highway 3/Victoria Avenue.
- Construct 14th Concession East Drain culvert extension on Highway 3.
- Construct Essex Outlet Drain Sewer Outlets.
- Complete Victoria Avenue Road works north of Highway 3.
- Complete Highway 3 Overpass embankment construction.
- Construct channelized island north of Highway 3 at Ellis Side Road and Highway 3.
- Construct South Talbot Road and Pinkerton Sideroad realignments.
- Construct Old South Talbot Road cul-de-sac and close South Talbot Road and Pinkerton Sideroad at Maidstone Avenue (County Road 8).
- Construct widening of Gosfield Townline W/Arner Townline at Highway 3 intersection.
- Complete Highway 3 Eastbound lanes and culvert extensions (includes Canaan Drain, East/West Townline Drain and Russell Drain culverts).

3.1 Victoria Avenue Intersection

The main construction activities at and near the Highway 3 and Victoria Avenue intersection include the realignment of the Essex Outlet Drain and construction of the approach embankments of the new Victoria Avenue Overpasses. This work was documented under separate cover in the 2020 advanced work DCR (Stantec, 2020). To accommodate construction of the Essex Drain Storm Outlet, as part of this DCR, the eastbound lane on South Talbot Road North will be closed on the west side of Victoria Avenue for a period of time.

To accommodate the eastbound Highway 3 left turn lane closure required to construct the Highway 3 Victoria Avenue Overpass approach embankments, the eastbound South Talbot Road North lane will be available as a signed detour route. Eastbound traffic will be shifted into the westbound lane west of Victoria Avenue, and South Talbot Road North will be closed to westbound traffic for one block west of Victoria Avenue.

Construction operations during this phase may also result in the following impacts:

- Flagging operations on Highway 3 to allow two-way travel to be maintained in a single lane.
- Potential shifting of traffic on Victoria Avenue using construction barrels as required.
- Potential closure of some or all crosswalks at Highway 3 and Victoria Avenue where conflicts with the work zone will exist.

Temporary traffic signals will be installed at the Highway 3 and Victoria Avenue intersection and will remain in place until Highway 3 traffic is routed on to the new overpass and the intersection is permanently closed. Temporary traffic signal timings will be applied to the temporary signals.

3.2 Victoria Avenue Road Works

Resurfacing of Victoria Avenue will require lane reductions north of Highway 3. One lane will be maintained for two-way traffic using flagging.

3.3 Ellis Side Road

The channelizing island on the north side of Highway 3 at Ellis Side Road will require access between Highway 3 and the north leg of Ellis Side Road to be closed during this stage. A detour route will not be signed.

Westbound Highway 3 traffic will be shifted as necessary using construction barrels. The westbound right turn lane and eastbound left turn lane will be closed off using construction barrels. Some construction may require a temporary long-term closure of the outside westbound lane using construction barrels.

3.4 South Talbot Road/Pinkerton Sideroad

The realignment of South Talbot Road and Pinkerton Sideroad, as well as the widening of Maidstone Avenue (County Road 8) on the northbound approach to Highway 3 will be completed. This work will require the following:

- Construct realigned South Talbot Road and Pinkerton Sideroad.
- Tie in the realigned South Talbot Road and Pinkerton Sideroad with the existing alignment.
- Construct cul-de-sac on existing Old South Talbot Road west of Maidstone Avenue (County Road 8).
- Remove South Talbot Road and Pinkerton Sideroad at the existing intersection with Maidstone Avenue (County Road 8).

There will be no access between Maidstone Avenue (County Road 8) and South Talbot Road/Pinkerton Sideroad to accommodate construction where the new alignment of both roads tie into the existing alignment. South Talbot Road will be accessible via Manning Road (County Road 19) or Ellis Sideroad, and Pinkerton Sideroad will be accessible via North Malden Road. The work will be scheduled so Pinkerton Sideroad will only be closed at Maidstone Avenue (County Road 8) once North Malden Road has reopened to traffic.

Existing businesses on Pinkerton Sideroad south of Maidstone Avenue (County Road 8) will be notified in advance of any closures that might affect property access.

The work to construct the new intersection along Maidstone Avenue (County Road 8), and to remove the existing intersection, may require short duration lane closures on Maidstone Avenue (County Road 8). At the existing intersection, construction barrels will be used to shift traffic. At the new intersection, lane closures will require flagging operations.

3.5 Gosfield Townline W/Arner Townline

Construction of the Arner Townline widening at the Highway 3 intersection will require Highway 3 eastbound right turn lane and through lane closures. Closures of Highway 3 through lanes will occur using flagging operations, as required.

3.6 Culvert Extensions

The construction of the 14th Concession East Drain Culvert, Canaan Drain, East/West Townline Drain extensions on Highway 3 will have no impacts to highway traffic.

4.0 Consultation

The following summarizes public and agency consultation completed for this DCR. A copy of all consultation materials is provided in **Appendix A**.

4.1 Project Contact List

A project Contact List was developed during project initiation and built using contacts carried forward from previous design phases (see **Section 1.2**). The contact list was updated to ensure current contact information for stakeholders was accurate and to identify new stakeholders. The contact list includes potentially interested and directly impacted stakeholders, provincial ministries, municipalities, Indigenous Communities, utilities, local agencies, school boards, emergency services and approximately 350 landowners who have properties adjacent to the project Study Area. The contact list was maintained as a living document throughout Detail Design.

4.2 Project Website

A project website (www.hwy3.ca) was created during Preliminary Design in 2012. The website was updated at the beginning of Detail Design to reflect current project information and ensure consistency between preliminary design and Detail Design studies by providing a continuous project information source. The website is considered a living source of information and will be updated throughout the design build project and construction.

The project website includes the Project Schedule, EA Process, Project Overview, contact information, links to relevant materials, available notices and reports, and daily traffic restrictions/detour routes and construction progress updates. The project website will be used to publish documents for public review, including this DCR for 30-days.

4.3 Notice of Study Commencement

A Notice of Study Commencement was published on December 10, 2020. The Notice advertised the start of the design-build project and noted that multiple DCRs would be prepared for the project. The Notice was published in the December 10, 2020, edition of the Essex Free Press newspaper. Comments on the project were requested by December 23, 2020. Copies of the notice were mailed to the project contact list as follows:

- A copy of the notice was sent under covering letter to the local MPP on November 30, 2020.
- A copy of the notice was sent under covering letter to stakeholders and agencies on the project contact list on December 7, 2020.
- MTO mailed a copy of the notice under cover letter to Indigenous Communities on December 7, 2020.

In total, 18 comments were received as summarized in **Table 1** and **Table 2**.

Table 1: Agency Comments

Agency	Date Received	Comment	Response
Essex Free Press Sylene Argent Editor/News Reporter	December 14, 2020	Thank you for the notice. I was wondering if you wanted to follow up with an update article on the project or if you wanted me to pass along to office as an ad?	Thank you for your email. The Notice of Study Commencement has been published in the December 10, 2020, edition of the Essex Free Press.
Hydro One Networks Inc. Amanda Crow Lines Customer Support Clerk	December 14, 2020	Please let me know if you require anything from Hydro One at this time or if the below email is for information purposes only. We can arrange a site meet or phone call with a Hydro One technician if you would like to discuss the proposed scope of work.	Thank you for your email. The notice was distributed to provide stakeholders with information and to collect comments for the Detail Design phase of the project. At this time, no further information is required from Hydro One.

Agency	Date Received	Comment	Response
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) Karla Barboza (A) Team Lead, Heritage	December 10, 2020	MHSTCI noted that they have provided comments on previous Environmental Assessments related to Highway 3 which may overlap. MHSTCI provided a list of projects and requested confirmation of whether a preliminary design was undertaken for the present notice.	Thank you for your email. A Preliminary Design and Class EA phase was undertaken for project beginning in September 2012 and ending in November 2016. Included in the Preliminary Design phase was a Transportation Environmental Assessment Report (TESR) Addendum (November 2016). This report is available through the project website (www.hwy3.ca).
Town of Essex Lori Chadwick Director, Development Services	December 16, 2020	Should you be creating an Essex Project Team, please ensure that I be kept informed and/or join meetings pertaining to the schedule of activities related to the South Talbot Road Extension, the relocation of the Rush Drain, and the acquisition of industrial land on the SW side of Hwy 3. Our Director of Infrastructure, has likely informed you, there are several development projects either currently under construction or planned to begin in 2021 and information on these topics would need to be relayed to my Managers and the Developers.	Thank you for your continued interest in this project. Monthly meetings will be scheduled with representatives from local municipalities and emergency service providers to discuss project details. You will be invited to attend these monthly meetings.
Transport Canada – Environmental Assessment Program Ontario Region	December 18, 2020	Transport Canada emailed and noted that they do not require receipt of all individual or Class EA related notifications.	No response required.

Table 2: Public and Stakeholder Comments

Date Received	Comment	Response
December 10, 2020	I'm reaching out regarding the Highway 3 widening study commencement in Essex, Contract 2020-3006. I live in the area and received the attached package by mail - however it was addressed to the previous owner. I have reviewed the materials and have no issues specific to the project work.	Thank you for your email and for sharing this information. This project is advancing following a Preliminary Design and Class EA phase. The stakeholders affected by the project or who requested to be included on the project contact list were included in the distribution of the notice for the present phase. We have updated your contact information accordingly.
December 10, 2020 & January 13, 2021	I hope you will begin construction with the construction of the South Talbot Road North extension. When this street will be done, we will be able to avoid travel on the dangerous 2 lane sections of Highway 3 while going to Windsor. It is close to my home in Essex. We know people who got hurt on this very bad 2 way of Highway 3. Do you think the South Talbot Road North connection to Maidstone Avenue W. will be completed this year (2021)?	Thank you for your continued interest in the Highway 3 widening project. Currently, construction of the South Talbot Road North extension is anticipated to be one of the first construction activities completed. Your contact information is included on the project contact list and you will be circulated on future project correspondence.
December 14, 2020	I am glad to see project moving ahead. When each stage plans are ready I will be interested in reviewing them.	No response required.
December 14, 2020	I am responding to a document received pertaining to the Notice of Study Commencement Highway #3. We would like to make sure that this project covers some type of [noise] barrier other than the current wooden fence. Our yard backs up to the highway as we are almost in the middle between the Arner Town line (Pepsi building) and the Civic Center. Many sections have blown down over the past few years and repairs have been made, however very little is done to minimize the noise, especially from the large 18 wheelers.	Thank you for your email and for sharing the updated contact information for this address. At this time, sound barriers are not included in the scope work for this project. A Traffic Noise Impact Assessment Study was completed for the project in March 2020. The Study found that noise levels for adjacent sensitive receptors (residents) are below the threshold required for sound barriers. Your contact information is included in the project contact list and you will be included on future project notices.

Date Received	Comment	Response
December 15, 2020	I live alongside the Highway 3 in Essex, and already with one lane it is quite loud, is a sound barrier being planned with the expansion to prevent noise pollution?	Thanks for your continued interest in the Highway 3 widening project in the Town of Essex. At this time, sound barriers are not included in the scope work. A Traffic Noise Impact Assessment Study was completed for the project in March 2020. The Study found that noise levels for adjacent sensitive receptors (residents) are below the threshold required for sound barriers. Your contact information is included in the project contact list and you will be included on future project notices.
December 20, 2020	As per my phone message, I was wondering if sound barriers are going to be built when the widening of Highway 3 is completed next to the Tully Meadows subdivision. The road is very noisy and the current picket fence is built in a ditch below the Highway.	Thanks for your continued interest in the Highway 3 widening project in the Town of Essex. At this time, sound barriers are not included in the scope work. A Traffic Noise Impact Assessment Study was completed for the project in March 2020. The Study found that noise levels for adjacent sensitive receptors (residents) are below the threshold required for sound barriers. Your contact information is included in the project contact list and you will be included on future project notices.
September 22, 2020 & December 16, 2020 Note: Comment was submitted as part of advanced work DCR.	I read portions of the new report especially the section on the drains by Victoria Avenue. I believe these drains and how they worked was part of the approach to dealing with the basement flooding that occurred after the realignment for the new sewage treatment plant a few years ago. I know major work had to be done to reopen some pathways and were critical to dealing with the issues and avoid the massive flooding issues many of us homeowners experienced. I'm not sure if this is the report that would address these issues but felt it was important to raise and deserves consideration in the Environmental assessment being done for	Thank you for your comment on the Highway 3 widening project and the drainage design considerations in your September 22, 2020, email. The Ministry of Transportation is working with the Town of Essex to consider your concerns and a further response will be provided once a detailed review can be completed.

Date Received	Comment	Response
	Fisheries and Animals. I've excerpted the specific drain information at the bottom of the email. I'm not an Engineer but my questions would be: 1.) Has this design been reviewed by Stantec in Windsor and the Engineers who were instrumental in addressing & resolving the flooding issues in town? This would be critical from my viewpoint to have done before the Town agrees to the new design. I see the address for Stantec in London and Stoney Creek but nowhere does it refer to the local Windsor office that I could find. 2.) Is the design only intended to replace existing capacity? Or is it being built to account for changes in road surfaces; planned development growth and changing environmental factors? With special considerations of: 2.1) these drains will be enclosed rather than open which would appear to increase the likelihood of underlying backups in the pipes as flow would be reduced and no overflow capacity would exist like it does today with the open drain? That backup impacted many homes that hadn't seen flooding in decades. 2.2) As drains are closed is the long term capacity of the new drains being installed able to handle the higher levels of water we are seeing in the last 10 years to avoid backups in drainage to the existing town of Essex. Our rain levels were breaching 25 and 100 year likelihood's when we were experiencing the flooding and we are still seeing these large rain events and the highest levels in the Great Lakes in decades as well. 2.3.) It appears that the two main drains at the end of Victoria will be filled in and replaced but the capacity appears to be capping them with a slightly reduced width capacity or the same	

Date Received	Comment	Response
	capacity with height adjustments (but that may just be my lack of Engineering knowledge). I would think given the new roadworks and adjustments to fill in existing drains that increased capacity for the bridges and extra lanes of toad would be required. 2.4.) We also are seeing increased development in town both residential and commercial especially in these areas and the loss of previous drainage locations and fields where water could sit and backup with no issues to houses. Wouldn't this need to be considered to further increase drain capacity and not to simply maintain what is existing. These issues may have already been raised by the Town or be on their radar but in reading the report I struggled to understand any of the answers to these concerns and thought it important to raise them. Do we have to submit a formal issue on this or will the Town be doing that on behalf of residents?	
	The member of the public thanked the project team for the update and provided the names of the key staff for follow up on the issues.	No response required.
December 22, 2020	RECORD OF PHONE CONVERSATION: A member of the public stated they have been involved since the planning started on this project and they have concerns with no access to Highway 3 at Victoria. They feel their comments have "fallen on deaf ears" for years and they do not understand why not access or use of roundabout. Dillon explained that the previous work ended in an approved plan that unfortunately cannot be changed to allow access. The member of the public stated they are on the mailing list and will watch for future notices.	No response required.

Date Received	Comment	Response
December 23, 2020	I live at [REDACTED] and I'm stating my concern of impact of the highway being moved south with the extra lanes as it passes through my area. I have previously stated this, if possible, I wish either building north or a buffer or other method to minimize highway intrusion.	Thanks for your continued interest in the Highway 3 widening project in the Town of Essex. At this time, sound barriers are not included in the scope of work. A Traffic Noise Impact Assessment Study was completed for the project in March 2020 following MTO's Environmental Reference for Highway Design Environmental Guide for Noise. The Study found that noise levels for adjacent sensitive receptors (residents) are below the threshold required for sound barriers. Your contact information is included in the project contact list and you will be included on future project notices.
December 23, 2020	A member of the public wrote that other intersections at Highway 3 have stop signs, similar to Ellis Side Road. They also noted that there was no communication during the activities for the TESR Addendum (November 2016) report.	Thank you for your comment on the Highway 3 Widening project. Communication for the TESR Addendum (2016) was initiated in September 2012 and was completed in December 2016 through the Notice of Study Completion. Our consultation records show that you provided a comment by phone on December 8, 2016, regarding access to Ellis Side Road and a response was provided on December 16, 2016. Your contact information is included in the project contact list and you will be included on future project notices.
January 31, 2021 Note: This was a comment received in follow-up to a previously submitted comment from November 18, 2020. It has been included in this DCR as their comments relate to improvements in	A member of the public wrote of their concerns with drainage east of the corner of Highway 3 and the Arner Town Line, including the water backing up onto their farm and drowning their crops.	RECORD OF PHONE CONVERSATION: Dillon phoned the member of the public regarding his comment on the Highway 3 project website from January 31, 2021. Dillon phoned to follow-up to his inquiry on the status of his drainage complaints/issues. Dillon informed him that they have a record of his previous comments (original comment forwarded to Dillon by MTO) on

Date Received	Comment	Response
this DCR.		the project but had not yet gotten to the details for that section of the project. He was happy to hear this and stated he simply just wants to be kept informed. Dillon told him that they would be looking at that section of the project to be included in work which they're just about to start Detail Design on. Dillon indicated they would be in touch with him over the next couple of weeks to discuss his concerns. He was thrilled to hear this and indicated he just wants to talk so he can understand what the plans are, voice his concerns and hopefully come to a solution. Dillon left him their contact information including cell number and told him they would be in touch. If he doesn't hear from Dillon by the end of February, Dillon asked him to call them. He was very happy with the phone call and looks forward to a conversation.

4.4 Municipality and Emergency Services Meeting

A meeting with Municipal staff representatives and emergency service providers was held on December 16, 2020, to review project details. The meeting was held as a video conference due to the Public Health Emergency Declaration by the Province of Ontario related to COVID-19. Representatives from the following agencies were in attendance for the call:

- County of Essex
- Town of Essex
- Municipality of Lakeshore
- Town of Kingsville
- Town of Tecumseh
- Essex Fire and Rescue Service
- Municipality of Lakeshore Fire Services
- Town of Kingsville Fire Department
- Town of Tecumseh Fire and Rescue Services
- Windsor Fire and Rescue Services

- Essex-Windsor EMS
- Ministry of Transportation, Ontario
- Coco Paving Inc.
- Dillon Consulting Limited.

The meeting was facilitated by Dillon, with a brief presentation followed by a question and answer period (**Appendix B**).

In general, meeting attendees were supportive of the project and eager to see the construction activities initiated. Many questions were raised regarding construction staging plans and communication to keep residents, municipality representatives and EMS informed. The project team indicated that advanced signage would be posted for all detours and that EMS and municipality representatives would be invited to attend monthly construction meetings. Since December 16, 2020, Municipal representatives have attended monthly progress meetings for the project (February 3, 2021). Monthly progress meetings will continue throughout the project. The Town of Essex inquired about potential municipal drain modifications resulting from development activity along South Talbot Road; specifically the Town is looking to realign the Rush Drain with a potential new crossing of South Talbot Road. Due to the coordination between development work, municipal drain requirements and the timing of work on South Talbot Road, a separate meeting will be arranged to discuss Municipal Drain Act requirements associated with the Rush Drain and 14th Concession Drain culvert work[1].

Additional monthly project meetings will be held with EMS and municipal representatives as the project proceeds through design and during construction to provide updates and to discuss project details.

4.5 Consultation with Indigenous Communities

The following Indigenous Communities were provided with notification materials by MTO and encouraged to provide comments:

- Caldwell First Nation
- Chippewas of the Thames First Nation
- Munsee-Delaware First Nation
- Oneida Nation of the Thames
- Aamjiwnaang First Nation
- Delaware Nation
- Walpole Island First Nation
- Chippewas of Kettle and Stony Point
- Metis Nation of Ontario.

[1] Improvements to South Talbot Road are documented in the October 2020 DCR prepared by Stantec as documented in **Section 1.2**.

On December 8, 2020, MTO received a request for a meeting with Walpole Island First Nation. MTO met with representatives of Walpole Island First Nation for December 11, 2020, to discuss the project. Walpole Island First Nation expressed interest in further participation in Ministry projects moving forward. Consultation will be ongoing as the project progresses.

On December 8, 2020, Chippewas of Kettle and Stony Point First Nation responded to the projects Notice of Commencement indicating they had no concerns with the project. Similarly, on December 10, 2020, Chippewas of the Thames responded to the projects Notice of Commencement indicating they also had no concerns with the project. Both First Nations requested to be kept informed of any substantive changes made to the project.

5.0 Impact Assessment and Mitigation

The proposed Highway 3 Widening improvements (see **Section 1.3**) are anticipated to begin in summer 2021, subject to approvals. Work associated with this DCR will be completed within MTO and municipal owned lands and the existing ROW. Property required to facilitate the work was acquired following Preliminary Design and no additional permanent property taking is needed to complete construction.

Based on the scope of work for this project, impacts to adjacent land uses are anticipated to be minimal. With appropriate mitigation measures implemented during construction, all potential impacts can be avoided, mitigated or minimized to the extent possible.

5.1 Highway and Traffic Engineering

5.1.1 Traffic and Emergency Services

Traffic delays due to construction are unavoidable and have been minimized to the extent possible. As outlined in **Section 3.0**, and summarized in **Table 3**, local road and highway lane closures will be required to complete construction.

Table 3: Traffic Impacts and Detour Requirements

Traffic Impact	Detour (if required)
Victoria Avenue Intersection	
The eastbound lane on South Talbot Road North will be closed on the west side of Victoria Avenue to accommodate construction of the new Essex Drain Storm Outlet. To accommodate the eastbound Highway 3 left turn lane closure, the eastbound South Talbot Road North lane will be available as a signed detour route. Eastbound traffic will be shifted into the westbound lane west of Victoria Avenue, and South Talbot Road North will be closed to westbound traffic for one block west of Victoria Avenue.	To accommodate the eastbound Highway 3 left turn lane closure, a signed detour route will be available via Maidstone Avenue and the new South Talbot Road North extension (**Figure 4**). No signed detour is required for the closure to westbound traffic on South Talbot Road North.
Temporary traffic signals will be installed at the Highway 3 and Victoria Avenue intersection and will remain in place until Highway 3 traffic is routed on to the new overpass and the intersection is permanently closed. Temporary traffic signal timings will be applied to the temporary signals.	No detour required.
Victoria Avenue Road Works	
Resurfacing of Victoria Avenue will require lane reductions north of Highway 3. One lane will be maintained for two-way traffic using flaggers.	No detour required.
Ellis Side Road	
The channelizing island on the north side of Highway 3 at Ellis Side Road will require access between Highway 3 and the north leg of Ellis Side Road to be closed during this stage. A detour route will not be signed.	No detour required.
South Talbot Road/Pinkerton Sideroad	
There will be no access between Maidstone Avenue (County Road 8) and South Talbot Road/Pinkerton Sideroad to accommodate construction where the new alignment of both roads ties in to the existing alignment. The work to construct the new intersection along Maidstone Avenue (County Road 8), and to remove the existing intersection, may require short duration lane closures on Maidstone Avenue (County Road 8).	No detour required.
Gosfield Townline W/Arner Townline	
Highway 3 eastbound right turn lane and through lane closures to construct the widening of Arner Townline	No detour required.

Road closures and detour routes may result in potential emergency service delays to incident locations. To minimize delays, emergency vehicles will be given priority access through the construction zone. Emergency Service Providers (EMS) will be updated throughout the project on construction staging, including the construction start date and any significant changes to traffic operations. EMS will be invited to attend regularly scheduled progress meetings throughout construction.

Advanced signage will be posted a minimum of seven days in advance of construction start, advising motorists of potential traffic delays. All traffic staging will be completed in accordance with the Ontario Traffic Manual (OMT) book 7 – Temporary Conditions.

5.1.2 Construction Traffic

Construction traffic will access the construction area from the existing road network at specified construction access/egress locations. Traffic control, in accordance with OTM Book 7 – Temporary Conditions, will be required during construction. The Contractor is responsible for implementing these plans.

5.1.3 Utilities

Utility relocations identified during the preliminary design phase have been initiated by MTO and will be completed prior to construction start.

No additional impacts to utilities are anticipated for this project.

5.2 Natural Features

5.2.1 Terrestrial Ecosystem

In October 2013, Dillon completed a Terrestrial Ecosystem Assessment Report (TEAR) to document terrestrial impacts anticipated for the project as part of the preliminary design and Class EA process. The TEAR was updated in October 2016, as documented in Dillon's Terrestrial Ecosystem Assessment Report Technical Update Memo. Based on the findings of the preliminary design TEAR and 2016 TEAR Technical Update, additional field investigations and targeted Species at Risk (SAR) surveys were required for the project to determine permitting requirements under the Ontario *Endangered Species Act (2007)*.
In 2020, MTO retained Parsons to complete a Terrestrial Ecosystem Assessment Report Technical Update (September 2020) and targeted SAR field investigations. Following completion of the 2020 field investigations and reporting, it was determined that SAR permitting was not required for the project.

Based on the terrestrial reports completed for the project from October 2013 to September 2020 (available under separate cover), the following potential impacts may occur as a result of the proposed construction activities. Due to timing restrictions associated with wildlife impacts, SAR and vegetation removals, Contract 1 work included the installation of SAR mitigation measures (i.e., exclusionary

fencing, Barn Swallow nesting kiosks, bird nest prevention measures) for all construction works planned for 2021. The impact section of this DCR discusses the areas where measures are needed throughout the entire project limits. **Figure 5** has been created to identify terrestrial mitigation measures required for implementation.

5.2.1.1 Vegetation Removals

The Study Area is highly disturbed and contains primarily residential, commercial and industrial uses, as well as mixed meadow and manicured lawn within the ROW. The Ecological Land Classification identified within the Study Area includes Annual Row Crops, Coniferous Plantation, Mixed Meadow, Native Deciduous Regeneration Thicket, Perennial Cover Crops, Deciduous Forest and Willow Mineral Deciduous Thicket Swamp (**Figure 5**). No vegetation communities documented in the Study Area are considered provincially rare.

Tree and vegetation removals and earth works will be required as part of the project for grading and site clearing activities. The anticipated tree/vegetation removals are not expected to impact natural features beyond the existing ROW and MTO and municipal owned lands. Potential impacts from tree and vegetation removal and earth works include:

- Increased erosion and sedimentation of lands adjacent to the construction area.
- Increased vulnerability of the areas cleared of vegetation to invasion by non-native species
- Decreased shade and cover for fish and wildlife.
- Localized temporary displacement of wildlife due to disturbance associated with construction activity.
- Potential for imported materials (e.g., gravel) to be released to adjacent riparian habitat and displace native substrates.
- Social/aesthetic impacts.
- Decrease in natural diversity.
- Decrease in ecosystem services, such as air quality regulation, greenhouse gas mitigation and stormwater control.

Vegetation removals will include removal of existing colonies of the invasive plant species European Common Reed (Phragmites). Removal of this species is considered a benefit to surrounding communities. To minimize potential spread of Phragmites as a result of disturbance, a Phragmites Control Plan will be implemented during construction.

As a result of tree and vegetation removals and earth works, erosion and sediment transport are an anticipated impact of the project.

Erosion and Sediment Control

To minimize potential erosion and capture any sedimentation, the following measures and provisions will be included in the Contract:

- Follow tree felling and grubbing procedures as outlined in OPSS 201, Construction Specification for Clearing, Close Cut Clearing, Grubbing.
- Implement an Erosion and Sedimentation Control (ESC) plan to mitigate impacts to wildlife and wildlife habitat.
- Minimize the disturbance of vegetation buffers.
- Place erosion control blanket on 2:1 slopes where height warrants its use.
- Use of mesh or netting-type stabilization material must not be used on site.
- ESC measures should be monitored regularly and/or after every 10 mm or greater rainfall event, as they could require periodic cleaning, maintenance and/or reconstruction. If deficiencies are found, they should be repaired and/or replaced promptly.
- Grading, placement of topsoil and seeding specifications to be implemented to decrease erosion potential and promote suitable native vegetation regeneration.
- ESC measures should be installed prior to vegetation removal and the site should be stabilized prior to removal of ESC measures.
- Disturbed areas along drains will be re-vegetated with species native to the area to minimize invasion and colonization by non-native species and increase shade/cover for wildlife.
- Restore all disturbed areas to pre-construction conditions with roadside seed mix and stabilize within 45 days to prevent erosion.
- Final cover, including seeding and erosion control blanket must be completed by **November 1**, of any given year.

If construction works require dewatering, a dewatering plan will be prepared in accordance with environmental best management practices.

5.2.1.2 Significant Wildlife Habitat

Significant Wildlife Habitat (SWH) for Reptile Hibernaculum was identified at the Essex Outlet Drain on the north side of Highway 3. The exact location of hibernacula was not confirmed. It is recommended that the mitigation measures identified for Eastern Foxsnake (**Section 5.2.1.3**) be followed. In particular exclusionary measures should be installed around the culvert (north side of Highway 3) by September 1 if construction is to occur during the fall/winter period. This will prevent snakes from accessing hibernacula. If snakes are observed in the area, relocation may be required to an area where they can access hibernacula, outside of the construction area. Where this is not feasible in a given year, the Contractor shall include daily monitoring at the site to search for snakes and relocate as necessary. The monitor shall also be at the culvert locations during construction activities that may impact potential hibernacula, including but not limited to any earthworks and removal of riprap. The Contractor shall take measures to avoid incidental take throughout construction,

including during the overwintering period and between April 1 and May 20 when snakes are emerging from hibernacula. Daily monitoring shall occur prior to start of work each day and regularly throughout the day during the active period. Consultation with MNRF is recommended to discuss these mitigation measures and any other regulatory requirements.

Candidate SWH for Turtle Wintering Areas and Turtle Nesting Areas is present at the 14th Concession Drain, Talbot Road South Drain and Canaan Drain. For this project, it is assumed these culvert locations support SWH for Turtle Wintering Areas and Turtle Nesting Areas. General wildlife mitigation to prevent and/or minimize potential impacts to general wildlife that may be encountered during construction include:

- Where feasible, vegetation removal should occur during winter months or outside of sensitive wildlife periods.
- Conduct visual inspections for wildlife prior to the start of construction each day and regularly throughout the day during the active season. This will include a thorough walk-through of the work area and searching any vegetation, brush piles, logs or rock piles and equipment. If wildlife are observed, work should be temporarily suspended until the species is out of harm's way.
- Immediately upon observation of an actively nesting female turtle, personnel and vehicles should clear the area within the turtle's line of sight as much as possible to allow the female to finish laying. Startling a nesting female could lead to abandonment of the partially laid nest before the eggs are concealed. A Qualified Biologist shall be consulted immediately to discuss mitigation options, including measures to take if relocation of hatchlings or egg salvage is needed.
- If a turtle or snake nest or overwintering site is discovered, work shall be temporarily suspended and a Qualified Biologist shall be contacted.
- All injured wildlife (SAR or non-SAR) will be transported to an authorized wildlife rehabilitator. Euthanasia of injured wildlife is not permitted unless conducted by an authorized wildlife rehabilitator. If an animal is unable or unwilling to flee from human presence, it is likely injured. Signs of wildlife injury include obvious wounds, broken limbs, lethargy, lameness, and difficulty standing or breathing. Injured wildlife experience high levels of stress and pain, and their behaviour is usually unpredictable and defensive, posing an increased risk to handlers. Always use extreme caution when handling injured wildlife, wear thick gloves, and limit handling as much as possible. Avoid aggravating any obvious injuries such as wounds or broken bones. Transport injured wildlife in a dark container where possible.
- Construction activities should be limited to the work area, and if necessary, sensitive features should be demarcated if they are located immediately adjacent to the work zone.
- Implement standard BMPs for erosion and sediment control.
- Implement an emergency and response management plan to address the potential for spills.
- Where feasible, minimize the extent and duration of construction noise and lighting during sensitive season.
- Avoid idling and ensure construction vehicles and machinery are kept in good repair.

5.2.1.3 Species at Risk

Butternut (*Juglans cinerea*) (Endangered)

Two Butternut (*Endangered*) trees were incidentally observed beyond the Study Area (**Figure 5**) in the vicinity of the Pinkerton Sideroad and Concession Road 14 intersection; however, they are not located near the proposed Victoria Avenue improvements and impacts are not anticipated. If additional vegetation removals are required west of Pinkerton Side Road on Concession Road 14, a qualified biologist will be consulted to confirm that Butternut species are not impacted. Standard vegetation removal requirements will be incorporated into the contract:

- If vegetation removals are required west of the existing Pinkerton Side Road intersection at Concession Road 14, a qualified biologist will be consulted to confirm that Butternut species are not impacted.
- Follow tree felling and grubbing procedures as outlined in OPSS 201, Construction Specification for Clearing, Close Cut Clearing, Grubbing.

Barn Swallow (*Hirundo Rustica*) (Threatened)

A total of 14 Barn Swallows (*Hirundo rustica*) (Threatened) were observed in six culverts (**Figure 5**) throughout the project Study Area including:

- Essex Outlet Drain (four Barn Swallow Nests).
- Essex Outlet Sewer Drain (two Barn Swallow Nests).
- Talbot Road South Drain (four Barn Swallow nests).
- East/West Townline Drain (two Barn Swallow Nests).
- Russell Drain (one Barn Swallow Nest).
- Barlow Drain (one Barn Swallow Nest).

As a result of construction activities, existing Barn Swallow nests will require removal. A Notice of Activity has been filed with the Ministry of Environment, Conservation and Parks (MECP). To protect SAR birds and comply with the *Migratory Bird Convention Act* (MBCA, 1994), the following measures will be incorporated:

- Vegetation removal will be completed outside the breeding bird period of **April 1** to **August 31** (i.e., clearing must occur between September 1 and March 31).
- Vegetation removal can occur during restricted periods (i.e., between **April 1** and **August 31**) if a qualified biologist conducts a nest search of the area prior to construction to verify nesting activity. Vegetation clearing must take place within 48 hours of the inspection.
- Preventative measures should be installed at all culvert locations with a history of nesting activity prior to **April 1** to inhibit birds from nesting within the structure. Regular inspection of the culverts during the nesting season should be completed to ensure the exclusion measures have been effective and no nests are present. If breeding birds and/or nests are encountered, construction in the vicinity of the nest must cease until the young birds have fledged or the nest

is otherwise abandoned. A setback from the nest (e.g., 30 m) should be identified and the area demarcated to ensure work does not occur within the setback limits. Works should not continue in the location of the nest until after **August 31** or as soon as it has been determined by a qualified biologist that the young have left the nest.

- Workers must be vigilant and check work areas for the presence of breeding birds and nests containing eggs and young.
- The Contractor will not destroy the active nests (nests with eggs or young birds), or wound or kill birds of species protected under the MBCA or Regulations under that Act.

Eastern Foxsnake (*Pantherophis gloydi*) (Endangered)

Eastern Foxsnake, were not observed during daily spring emergence surveys in spring 2020; however, Eastern Foxsnake are known to occur in the Study Area. The active season for Eastern Foxsnake is April 1 to October 31, with hibernation occurring between September to late May depending on weather. A Species at Risk Permit is not required; however, as the Eastern Foxsnake may incidentally be encountered during construction, the following mitigation measures will be incorporated into the Contract to prevent and/or minimize impacts:

- Removal of non-woody vegetation shall be conducted between June 1 and September 30 when snakes are active and most able to flee areas of disturbance, or between November 1 and March 30 when snakes are hibernating.
- Mesh or netting type stabilization material must not be used on site to prevent the entanglement of Eastern Foxsnake.
- During the active season when temperatures exceed 18°C, Eastern Foxsnake may find and occupy materials and equipment stored onsite. As a result, the site must be maintained in a clean and debris/clutter-free condition at all times and materials such as plywood or rubber mats must not be stored flat on the ground.
- During excavation and backfill, disturbance shall be minimized to the greatest extent possible and piling fill in fallow vegetation shall be avoided.
- Disturbance to brush piles/logs shall be avoided wherever possible during the active season, particularly between June 1 and September 30 when eggs and hatchlings may be present. If a brush/log pile must be moved or disturbed outside this window, it shall be carefully inspected for snakes. If eggs or hatchlings are present, work must cease and a Qualified Biologist and MECP must be contacted to discuss mitigation options.
- Wildlife-specific exclusionary fencing shall be installed where culvert works occur at the five locations during the active period. If Eastern Foxsnake is encountered elsewhere in the project limits, additional wildlife-specific fencing shall be installed where the species was observed, with the limits determined by a Qualified Biologist. Silt fencing, including light duty or mesh or netting-type silt fencing is not permitted for the purpose of excluding Eastern Foxsnake. Wildlife-specific fencing shall be used (e.g., ERTEC, Animex) with a recommended fence height of a minimum of 100 cm. The fence shall be buried at a depth of 10-20 cm with an additional 10 cm of fabric that extends outward at the bottom and functions as a horizontal lip to prevent wildlife

from excavating under the fencing. The fencing should be installed following the MNRF guidelines for Reptile and Amphibian Exclusion Fencing (MNRF, 2013) as summarized below:

- Exclusion fencing intended to exclude snakes should have the stakes installed on the activity side (opposite the normal requirement for sediment control fencing) to prevent snakes from using the stakes to maneuver over the fencing (see **Figure 5**)
- Fences should be inspected throughout the active season. Any damage that affects the integrity of the fence (e.g., tears, loose edges, collapses, etc.) should be fixed promptly
- Install fences with a turn-around at the ends furthest from the construction limits to assist in redirecting animals away from any fence openings (see diagram below)
- Curving the ends of the fencing inward (i.e., away from the road or construction site) may help to reduce access to these locations. The ends may also be tied off to natural features on the landscape such as trees or rock cuts.

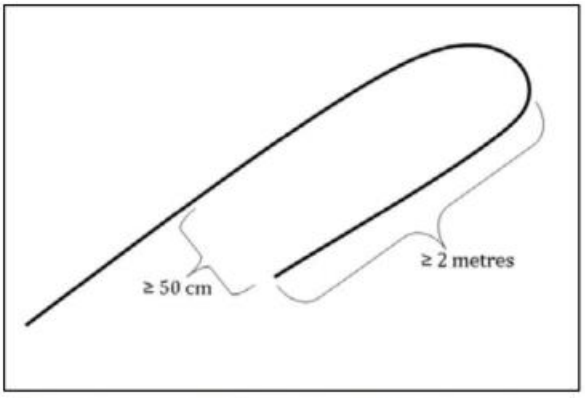
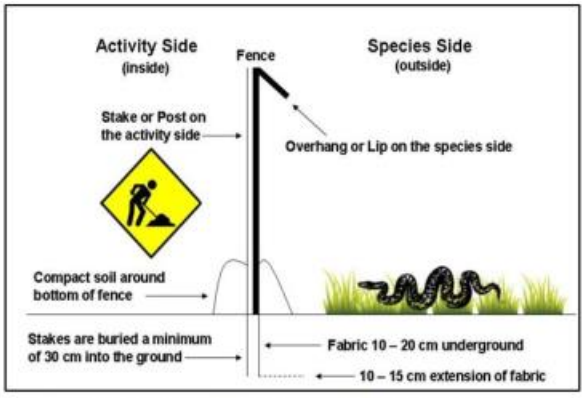


Diagram of the ends of the fence designed to curve inward in order to direct animals away from the area of exclusion (MNRF, 2013)



A side view of a basic exclusion fence including an overhang or flexible lip to deter animals from climbing or jumping over the fence. Placement of the stake on the Activity Side or on the inside of excluded area. (MNRF, 2013)

- Work occurring between September to late May has the potential to discover hibernacula, particularly in areas where there are animal burrows, rock crevices, gabion baskets or foundations are present. If Eastern Foxsnake is discovered, all work shall cease and Qualified Biologist be contacted to discuss mitigation options.
- The Contractor shall include on its team, an Environmental Inspector with SAR experience, including Eastern Foxsnake, who will provide SAR training to staff. An Eastern Foxsnake information sheet shall be provided to staff to assist with identification and measures to take if this species is encountered (**Appendix C**). All individuals working onsite must confirm (in writing) that they have received training and reviewed the factsheet.
- The Contractors' Environmental Inspector will complete a visual inspection of work areas, as well as machinery and equipment each day prior to commencement or when moving to new locations, throughout the active period. This will include a thorough walk-through of the work area and searching any brush piles, logs or rock piles.
- Construction equipment that is left idle for over (1) hour or is parked overnight between the active period must be inspected for the presence of Eastern Foxsnake before (re)ignition. This

visual examination should include all lower components of the machinery, including operational extensions and running gear.

- If Eastern Foxsnake are encountered during construction, work at that location will be temporarily suspended until the species is out of harm's way. If a hibernacula or egg-laying site is discovered, all work must cease and a Qualified Biologist will be contacted to discuss mitigation options.
- If a snake nest is discovered on the project site, MECP shall be contacted to discuss mitigation options and to obtain authorization for nest relocation or to excavate the eggs for transport to a licensed Wildlife Custodian for the remainder of the incubation period until they can be released. If this approach is taken, a Qualified Biologist, experienced in excavation and relocation of eggs shall be contacted. The Qualified Biologist will use a container with a lid with holes for ventilation, and partially filled with the substrate used for nesting or other mediums such as sphagnum moss, potting soil or vermiculite. Using their hands while wearing gloves or using a small utensil if the soil is packed down, the Qualified Biologist will gently scrape away the soil on the top of the nest to reveal the eggs. A pencil will be used to gently mark the top of each egg so that the eggs are placed in the container in the same orientation as they were in the nest. Prior to placing the eggs in the container, the Qualified Biologist will make an egg-sized indent with their finger in the container substrate for each of the eggs. This will reduce the risk of eggs rolling during transport and shifting orientation. The eggs will be carefully removed from the nest and placed in the container in the same orientation as it was laid. In case an egg is inadvertently rolled during transport, it can be re-oriented in the correct position using the pencil mark as a guide to avoid harming the embryo. If the eggs are not brought to an incubator right away, they should be stored in a warm place between 24-26℃.
- Any SAR observed must be reported to MECP within 48 hours. Species should not be handled unless it is in harm's way and in accordance with the MNRF Species at Risk Handling Manual (**Appendix C**) by qualified staff. Authorization from MECP is required if SAR are in possession or are to be relocated.
- All injured wildlife (SAR or non-SAR) will be transported to an authorized Wildlife Custodian (https://learningcompass.learnflex.net/Upload/Public/WildlifeRehabilitatorsPublicList.htm). Euthanasia of injured wildlife is not permitted unless conducted by an authorized wildlife rehabilitator. If an animal is unable or unwilling to flee from human presence, it is likely injured. Signs of wildlife injury include obvious wounds, broken limbs, lethargy, lameness, and difficulty standing or breathing. Injured wildlife experience high levels of stress and pain, and their behaviour is usually unpredictable and defensive, posing an increased risk to handlers. Always use extreme caution when handling injured wildlife, wear thick gloves, and limit handling as much as possible. Avoid aggravating any obvious injuries such as wounds or broken bones. Transport injured wildlife in a dark container where possible.

5.2.1.4 Migratory Birds

Migratory Bird nest surveys were completed by Dillon in 2012 and 2016 within the ROW in the Study Area. Migratory birds (Cliff Swallow, Barn Swallow), were observed within the Study Area during field investigations.

Destruction and disturbance of active nests (with eggs or young birds), as well as wounding and/or killing protected species, is prohibited under the federal *Migratory Birds Convention Act* (1994). To protect birds and comply with the legislation, the following measures will be incorporated into the construction contract:

- Vegetation removal will be completed outside the breeding bird period of **April 1** to **August 31** (i.e., clearing must occur between September 1 and March 31).
- Vegetation removal can occur during restricted periods (i.e., between **April 1** and **August 31**) if a qualified biologist conducts a nest search of the area prior to construction to verify nesting activity. Vegetation clearing must take place within 48 hours of the inspection.
- Preventative measures should be installed at all culvert locations with a history of nesting activity prior to **April 1** to inhibit birds from nesting within the structure. Regular inspection of the culverts during the nesting season should be completed to ensure the exclusion measures have been effective and no nests are present. If breeding birds and/or nests are encountered, construction in the vicinity of the nest must cease until the young birds have fledged or the nest is otherwise abandoned. A setback from the nest (e.g., 30 m) should be identified and the area demarcated to ensure work does not occur within the setback limits. Works should not continue in the location of the nest until after **August 31** or as soon as it has been determined by a qualified biologist that the young have left the nest.
- Workers must be vigilant and check work areas for the presence of breeding birds and nests containing eggs and young.
- The Contractor will not destroy the active nests (nests with eggs or young birds), or wound or kill birds of species protected under the MBCA or Regulations under that Act.

5.2.2 Aquatic Ecosystem

The Study Area is located in the Canard River, Belle River, Puce River and Pike River Subwatersheds and is under the jurisdiction of the Essex Region Conservation Authority (ERCA). Improvements are anticipated at the following culverts:

- Essex Outlet Sewer Drain
- 14th Concession East Drain
- Canaan Drain
- East/West Townline Drain
- Russell Drain.

Dillon completed a Fish and Fish Habitat Existing Conditions and Impact Assessment Report (2016) as part of the TESR Addendum (2016). Parsons collected new information to update site conditions in relation to the watercourse crossings and completed a Fish and Fish Habitat Existing Conditions and Impact Assessment Report (August, 2020) to supplement documentation previously completed by Dillon. A summary of the anticipated improvements and impacts to fish and fish habitat is included in **Table 4**.

Table 4: Culvert Improvements and Potential Impacts

Culvert Name	Improvements	Culvert Features	Fish & Fish Habitat Impacts
Essex Outlet Sewer Drain Sta. no. 14+777	Extension to the south. The Outlet of the extension will tie into the new diversion channel associated with the Essex Outlet Drain.	The watercourse has a warm water thermal regime and any in-water work must occur from **July 1** to **March 14**.	Low likelihood of causing the death of fish and/or a HADD of fish habitat. No SAR were identified during field investigations or the background review.
Canaan Drain Sta. no. 15+954	Extensions to the north and south	The watercourse has a warm water thermal regime and any in-water work must occur from **July 1** to **March 14**.	Low likelihood of causing the death of fish and/or a HADD of fish habitat. No SAR were identified during field investigations or the background review.
14th Concession East Drain Sta. no. 9+108	Construction of a new concrete culvert box extension on the south side of Highway 3.	The 14th Concession Drain has a warm water thermal regime and any in-water work must occur from **July 1** to **March 14**.	Significant fish habitat was not present at the 14th Concession East Drain during field investigations. No SAR were identified during field investigations or the background review. Low likelihood of causing the death of fish and/or a HADD of fish habitat.
East/West Townline Drain Sta. no. 10+016	Extension to the south.	The watercourse has a warm water thermal regime and any in-water work must occur from	Low likelihood of causing the death of fish and/or a HADD of fish habitat.

Culvert Name	Improvements	Culvert Features	Fish & Fish Habitat Impacts
		July 1 to **March 14**.	No SAR were identified during field investigations or the background review.
Russell Drain Sta. no. 10+331	Extension to the north and south. Minor drain modifications in the ROW to ensure drain flow enters and exits the culvert efficiently.	Russell Drain has a warm water thermal regime; however, it provides indirect fish habitat in the vicinity of Highway 3. In water work may proceed from **July 1** to **March 14**. If the drain is dry between March 14 and July 1, work may proceed provided the drain remains dry throughout the duration of works. If the drain starts flowing following a rain event, in-water works are not permitted between **March 14** and **July 1**. Work may proceed provided general mitigation measures are in place to prevent erosion and sediment.	Low likelihood of causing the death of fish and/or a HADD of fish habitat. No SAR were identified during field investigations or the background review.

Culvert improvements, including extensions, removal, installation and in-water work as part of the overall project may have the potential to impact fish and fish habitat in the following ways:

- Removal of bank vegetation/vegetation clearing can negatively impact water temperature.
- Grading work can change habitat structure and cover by removing bank vegetation. Exposed soils from grading can erode and increase sediment loadings to the water, creating barriers to fish movement infill in-stream habitat features and impact fish respiration.
- Bank excavation at each inlet and outlet can cause a change in baseflow, water temperature and sediment concentrations in the water and directly impact fish and fish habitat.
- Placement of materials or structures in open water can disturb and re-suspend sediments, negatively affecting fish and other aquatic organisms in the area, restrict fish passage, change substrate and aquatic macrophyte compositions and alter water flows.

- Removal of aquatic vegetation can cause changes in water temperature, food supply, habitat structure and cover, contaminant concentrations, dissolved oxygen levels and nutrient/sediment concentrations.
- Temporary changes in flow has the potential to erode banks, scour the drain bed, alter substrate composition and change sediment and nutrient input concentrations. Any permanent changes may affect local water chemistry, food supply, habitat availability and displace/prevent fish movement.
- Fish passage temporarily blocked during construction can prevent migration and access to important/critical habitats. Building structures in the water can cause incidental entrainment, impingement or mortality of fish and may cause a change in thermal cues or temperature barriers for migrating fish.
- Industrial equipment may release deleterious materials (e.g., oil, fuel, debris, grease) into the drains and any heavy equipment entering a waterbody may cause bank erosion and possibly harm or kill aquatic species.

To mitigate potential impacts as a result of construction activities at the culverts, the following mitigation measures and best management practices will be implemented during construction:

- In-water work shall only occur from **July 1** to **March 14**
  - In water work may proceed from **July 1** to **March 14**. If the drain is dry between March 14 and July 1, work may proceed provided the drain remains dry throughout the duration of works. If the drain starts flowing following a rain event, in-water works are not permitted between **March 14** and **July 1**.
- Implement a comprehensive Erosion and Sedimentation Control (ESC) plan to mitigate impacts to fish and fish habitat.
- Install appropriate ESCs (e.g., silt fence, filter rolls, check dams) prior to clearing and grading
- ESCs must remain in place until disturbed soils have stabilized naturally or covered with rock, where proposed on drawings.
- The highway embankment will be restored and stabilized immediately before removing all site isolation measures.
- Stockpiled organic material and soils will be placed away from all watercourses and protected (i.e., temporarily stabilized).
- Excavated bank material will be temporarily stored within the ROW and reused. Any extra material will be properly disposed of offsite.
- Any fish confined or trapped within the isolated areas will be removed by a qualified biologist under a licence from the MNRF prior to dewatering. Only clean materials (i.e., free of particulate matter) will be used for cofferdams.
- The size of cofferdams will be minimized to the extent possible to safely isolate the work site and allow enough room to undertake work.
- Flows will need to be maintained around each work site to prevent flooding and ensure that fish habitat downstream does not run dry. Depending on the site conditions at the time of

construction, a dam and flume, dam and pump around or a combination will be needed to temporarily bypass flows. Flow bypass/diversions will only be permitted during the in-water work timing window (**July 1** to **March 14**).

- Cofferdam dewatering will be necessary to prevent death of fish.
- Bypass pump inlets will need to be fitted with fish protection screens.
- Backfill with native material to maintain existing flow and water depth.
- Any part of equipment operating on the banks and/or over the water shall be free of fluid leaks and externally cleaned and/or degreased.
- All equipment maintenance and refueling shall be conducted at least 30 m away from waterbodies/water sources.
- The Contractor will have a robust Spill Management Plan in place during construction and the spill kit on-site should contain a supply of absorbent products, such as booms, pads and socks.

The proposed work at the Essex Outlet Drain has a medium likelihood of causing serious harm to fish due to planned infilling of the existing drain and the removal of the culvert. As per Step 6 of the Protocol, a Request for Project Review Form was completed for submission to DFO and MTO as part to Stantec's Advanced work DCR in September, 2020.

The culvert work proposed at the remaining culverts is considered to be low likelihood of causing serious harm to fish provided the mitigation measures are implemented. As per Step 5 of the Protocol, a Project Notification Form was completed for submission to MTO as part to Stantec's Advanced work DCR in September 2020.

During construction, a License to Collect Fish for Scientific Purposes will be required to salvage fish from within construction site isolation measures to prevent death of fish.

5.3 Human Health

Lands surrounding the project Study Area are primarily agricultural. Additional land uses include industrial, community service facility, parks and open space, residential, highway corridor commercial area, mobile home park, rural residential, urban fringe and woodlands. Sensitive receptors are primarily located within the residential, mobile home park, rural residential, and urban fringe lands surrounding the project location, primarily north of Highway 3 within the Town of Essex.

5.3.1 Construction Noise

Construction noise impacts are temporary in nature and largely unavoidable. With adequate controls, impacts can be minimized; however, for some periods of time and types of work, construction noise will be noticeable. The closest receptors (i.e., residential dwellings) are located along the north side of Highway 3, and range from approximately 40 m to 1 km from the construction area. The operation of construction equipment is anticipated to abide by Section 3 of the Town of Essex's Noise By-law 690 and

Section 3 of the Municipality of Lakeshore's Noise By-Law 106-2007. The majority of construction activities are anticipated to occur within these municipalities. A Municipal Noise By-Law exemption is not required for Provincial undertakings as stated in the Ontario *Legislation Act* (2006).

To minimize impacts on adjacent lands, the following best management practices related to noise will be in place during construction:

- Where possible, major construction activities will be scheduled to take place during daytime hours (7:00 a.m. – 6:00 p.m.) to avoid sensitive nighttime periods.
- All equipment will be maintained in an operating condition that prevents unnecessary noise, including non-defective muffler systems, properly secured components and the lubrication of moving parts.
- Idling of equipment will be restricted to the minimum necessary to perform the specified work.

5.3.2 Climate Change and Air Quality

In October 2013, Dillon prepared an Air Quality and Greenhouse Gas Assessment Report to evaluate the impacts of the Highway 3 improvements on local and regional air quality and greenhouse gas emissions. The assessment was prepared in accordance with *MTO's Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects (January, 2012)*.

The assessment of local and regional air quality covered the following Compounds of Concern (COCs): CO, NO_2, VOCs. These were selected because they are the most common compounds emitted from transportation sources. The GHG assessment covered CO_2, N_2O and CH_4.

As a result of the air quality and GHG assessment, the predicted maximum concentrations for all COCs at critical and sensitive receptors within the Study Areas are below their respective criteria. The impact of emissions from this project on regional air quality is predicted to be insignificant. As a result of air quality and GHG assessments completed for the project, site specific mitigation measures related to emissions are not required.

General contract provisions will be included in the construction contract including:

- Use well-maintained equipment and machinery and comply with operating specifications.
- Minimize operation and idling of gas-powered equipment and vehicles, especially during smog advisories.

5.3.2.1 Fugitive Dust

Dust generating activities during construction and general movement of construction equipment are typical with any construction project.

Fugitive dust and air quality impacts on adjoining land uses are anticipated to be minimal and short in duration. Fugitive dust impacts to the travelling public on Highway 3 from construction activities are anticipated to be negligible. Potential impacts will be minimized by general conditions during construction, including:

- Use well-maintained equipment and machinery and comply with operating specifications.
- Minimize operation and idling of gas-powered equipment and vehicles, especially during smog advisories.
- Minimize vehicular traffic on exposed soils and stabilize high traffic areas with suitable cover material.
- Avoid excavation and other construction activities with potential to release airborne particulates during windy and prolonged dry periods.
- Cover or otherwise contain loose construction materials with potential to release airborne particulates during transport, installation, or removal.
- Restore disturbed areas as soon as possible to minimize the duration of soil exposure.

5.3.3 Illumination

It is anticipated that the temporary traffic signal designs for the Highway 3/Maidstone Avenue (County Road 8) intersection and Highway 3/Victoria Avenue intersection will have illumination on joint use temporary wood poles. The temporary traffic signals will be in place for the duration of the intersection work. Potential light trespass and increased night sky pollution will be reduced by LED luminaires that emit zero up-light.

5.3.4 Source Water Protection

As outlined in the Source Protection Plan for Essex Region (October 1, 2015), the Study Area is located in the Essex Region Source Protection Area. The primary objective of the Source Protection Plan, as provided for in the *Clean Water Act*, is to protect existing and future drinking water sources.

The Study Area is within an IPZ-3 where contaminant spills (e.g., fuel spills) may reach the intake during extreme rainfall or wind storm events. The majority of the Study Area has an IPZ score of 5.4 and 4.5, which indicates the area has a low to moderate source water intake vulnerability. The southern portion of the Study Area near Cameron Side Road. W. falls within a SGRA with a vulnerability score of 4 or 2 and has medium or low drinking water threats. The Study Area is also within an Event Based Area where a spill from a specific activity could contaminate sources of drinking water.

Ancillary project activities (e.g., the application of road salt, handling and storage of fuel, etc.) may pose a low risk to local groundwater and surface water quality.

To minimize potential impacts, the following measures will be incorporated into the contract:

- All equipment maintenance and refueling shall be conducted at least 30 m away from waterbodies/water sources.

- The Contractor will have a robust Spill Management Plan in place during construction and the spill kit on-site should contain a supply of absorbent products, such as booms, pads and socks.
- Apply current best management practices (i.e., MTO's Salt Management Plan).

To handle spills and contaminated materials, the Contract General Conditions will include incident management requirements following relevant legislation, including the *Environmental Protection Act, Fisheries Act, Gasoline Handling Act,* Ontario *Pesticides Act,* Ontario *Water Resources Act* and *Transportation of Dangerous Goods Act.*

5.3.5 Excess Soil Management/Contaminated Material

Contaminated soil was identified within the Highway right-of-way and on properties acquired by MTO to accommodate municipal road realignments. All excess materials including contaminated soils, will be handled in accordance with Provincial legislation.

5.4 Cultural Resources

5.4.1 Archaeology

Fisher Archaeological Consulting (FAC) completed a Stage 1 and Stage 2 Archaeological Assessment for the proposed Highway 3 Improvements within the MTO right-of-way/fence line, as documented in a report dated December 10, 2013. The Stage 2 assessment found nothing of archaeological significance and concluded that no further archaeological work is required for the areas assessed. By letter dated August 18, 2015, the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) advised that the report was entered into the Ontario Public Register of Archaeological Reports.

In May 2014, FAC completed an additional Stage 1 Archaeological Assessment for the South Talbot Road/Pinkerton Sideroad realignment and it was recommended that a Stage 2 assessment be completed. A Stage 2 Archaeological Assessment was completed and concluded that nothing of cultural heritage value or interest was found and that no further archaeological work is required. FAC's report was filed with MHSTCI and MHSTCI advised by letter dated December 15, 2017, that the report was entered into the Ontario Public Register of Archaeological Reports.

FAC also completed a Stage 2 Archaeological Assessment of additional lands required to accommodate the realignment of Highway 3 to the south and the extension of various culverts. A report was prepared and MHSTCI advised by letter dated March 11, 2020, that the report was entered into the Ontario Public Register of Archaeological Reports.

Archaeological impacts from construction activities are not anticipated. General mitigation measures will be included in the construction contract including:

- Should unassessed buried archaeological resources be uncovered during construction, these may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario Heritage Act. Upon discovering the archaeological resources, the Contractor must cease alteration of the local site area immediately and notify the Contract Administrator who shall engage a licensed archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the Ontario *Heritage Act.*
- Any person discovering human remains must immediately notify the police or coroner and the Registrar of Cemeteries, Ministry of Government Services. Notification to the project Environmental Manager and MTO Environmental Planner will occur so that the MTO Regional Archaeologist can be informed.

5.4.2 Built Heritage

As noted in the 2006 TESR, the lands along the highway in the Town of Essex do not include any built heritage structures and the only cultural heritage resources that may be affected by the improvements are the highway intersections with roads associated with the original township surveys ("roadscapes"). As recommended by the TESR, the changes proposed as part of this project avoid all above-ground cultural heritage resources.

5.5 Drainage and Stormwater Management

The Drainage and Stormwater Management for the culverts included in this DCR is outlined below.

5.5.1 Essex Outlet Sewer Drain

The proposed improvements for the Essex Outlet Sewer Drain includes the extension of the concrete box culvert under Victoria Avenue to the south. The outlet of the extension will tie into the new diversion channel associated with the Essex Outlet Drain realignment.

5.5.2 Canaan Drain

The proposed improvements to the Canaan Drain includes extensions to the north and south. The proposed extensions will be oriented along the same alignment as the existing culvert, which will eliminate the need for the existing concrete retaining wall system at the inlet and outlet of the culvert. At the downstream end of the culvert, the Canaan Drain channel will require a 32 m realignment to direct flows from the extended culvert to the existing drain channel south of the Highway 3 ROW. Based on the proposed improvements, the following mitigation measures will be included:

- The existing culvert inlet is protected by a rip-rap apron which will be modified to suit the upstream culvert extension.
- The project flow velocities will be mitigated by the use of a standard R-50 rip-rap apron at the outlet of the proposed culvert and extended to include the bend in the channel near the south ROW limit.
- The rip-rap apron will be extended from the bottom of the ditch.

5.5.3 14th Concession East Drain

The existing 14th Concession East Drain culvert will be extended to the south and will be oriented along the same alignment as the existing culvert. Based on the proposed improvements, the following mitigation measures will be included:

- The projected flow velocities will be mitigated by standard R50 rip-rap apron at the inlet and outlet of the proposed culvert.
- The rip-rap apron will be extended from the bottom of the channel.

5.5.4 East/West Townline Drain

The existing East/West Townline Drain culvert will be extended to the south and will be oriented along the same alignment as the existing culvert. Based on the proposed improvements, the following mitigation measures will be included:

- The projected flow velocities will be mitigated by standard R50 rip-rap apron at the inlet and outlet of the proposed culvert.
- The rip-rap apron will be extended from the bottom of the channel.

5.5.5 Russell Drain

The existing Russell Drain culvert will be extended to the north and south and will be oriented along the same alignment as the existing culvert, eliminating the need for the existing concrete retaining wall system at the inlet and outlet of the culvert. At the downstream end of the culvert, the Russell Drain channel will require a 20 m realignment to direct flows from the extended culvert to the existing drain channel south of the Highway 3 ROW. Based on the proposed improvements, the following mitigation measures will be included:

- The projected flow velocities will be mitigated by the use of a standard R50 rip-rap apron at the outlet of the proposed culvert and extended to include the bend in the proposed channel near the south ROW limit.
- The upstream end of the proposed culvert extension requires an irregularly shaped rip-rap apron based on the configuration of the ditches.
- The rip-rap will be extended form the bottom of the channel.

5.5.6 Talbot Road South Drain

During detail design an assessment was completed to evaluate drainage along Highway 3. The results of the assessment indicated the proposed ditch along the south side of Highway 3 can accommodate the design flows and provide adequate drainage in the area of the Talbot Road South Drain. As a result of this assessment, the Talbot Road South Drain will be removed during construction and not replaced.

6.0 Summary of Environmental Concerns and Commitments

The proposed works are not anticipated to have significant impacts on the natural, cultural or socio-economic environment in close proximity to the Project Area. To the extent possible, adverse impacts can be avoided or mitigated by the measures and provisions outlined in **Table 5**.

6.1 Environmental Clearance and Approvals

As required by the MTO Class EA, all permits, approvals and exemptions required for the project must be obtained prior to Environmental Clearance – Construction Start being issued. Design-related environmental approvals and permits required prior to construction include:

- MHSTCI acceptance of Stage 2 Archaeological Assessment (letter dated March 11, 2020).
- Notice of Activity (Barn Swallow) confirmation of registration received February 23, 2021.

6.2 Review of DCR

A Notice of Completion for the DCR will be sent to the project Contact List. The DCR will be available for a 30-day public and agency review period. Although the report is not subject to Bump-up (Part II Order) Requests, MTO will consider all comments received. Following the 30-day review period, the DCR is considered to be cleared under MTO's Class EA.

6.3 Environmental Construction Inspection and Monitoring

To ensure the implementation and effectiveness of the environmental mitigation measures and provisions included in the construction Contract, an Environmental Management Plan (EMP) has been created for the project. The objective of the EMP is to maintain, and where possible, improve the state of the environment affected by the proposed improvements. This includes the development of appropriate mitigation measures for implementation during construction to fulfill the regulatory and contract requirements, protect the environment and meet MTO obligations.

During construction, environmental monitoring for this project will:

- Inspect and monitor pre-construction, construction and post-construction environmental work specified in the Contract.
- Thoroughly evaluate any changes proposed by the Contractor to ensure that changes meet the intent of the measures and provisions, as outlined in this DCR, and reflect prevailing conditions on site.

The implementation and effectiveness of the measures and provisions included in the Contract will be monitored and documented monthly.

DILLON CONSULTING LIMITED
LONDON, ONTARIO

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Environmental Planner

Report Reviewed by:

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Environmental Manager

Jeff Matthews, P.Eng.
Design Project Manager

References

Dillon Consulting Limited. 2013. Highway 3 Improvements Town of Essex (GWP 317-98-00) Terrestrial Ecosystem Assessment Report (Final).

Dillon Consulting Limited. 2016. Highway 3 Improvements Town of Essex (GWP 317-98-00) Transportation Environmental Study Report Addendum (Final).

Dillon Consulting Limited. 2016. Highway 3 Improvements Town of Essex (GWP 317-98-00) Terrestrial Ecosystem Assessment Report – Technical Update Memo (Final).

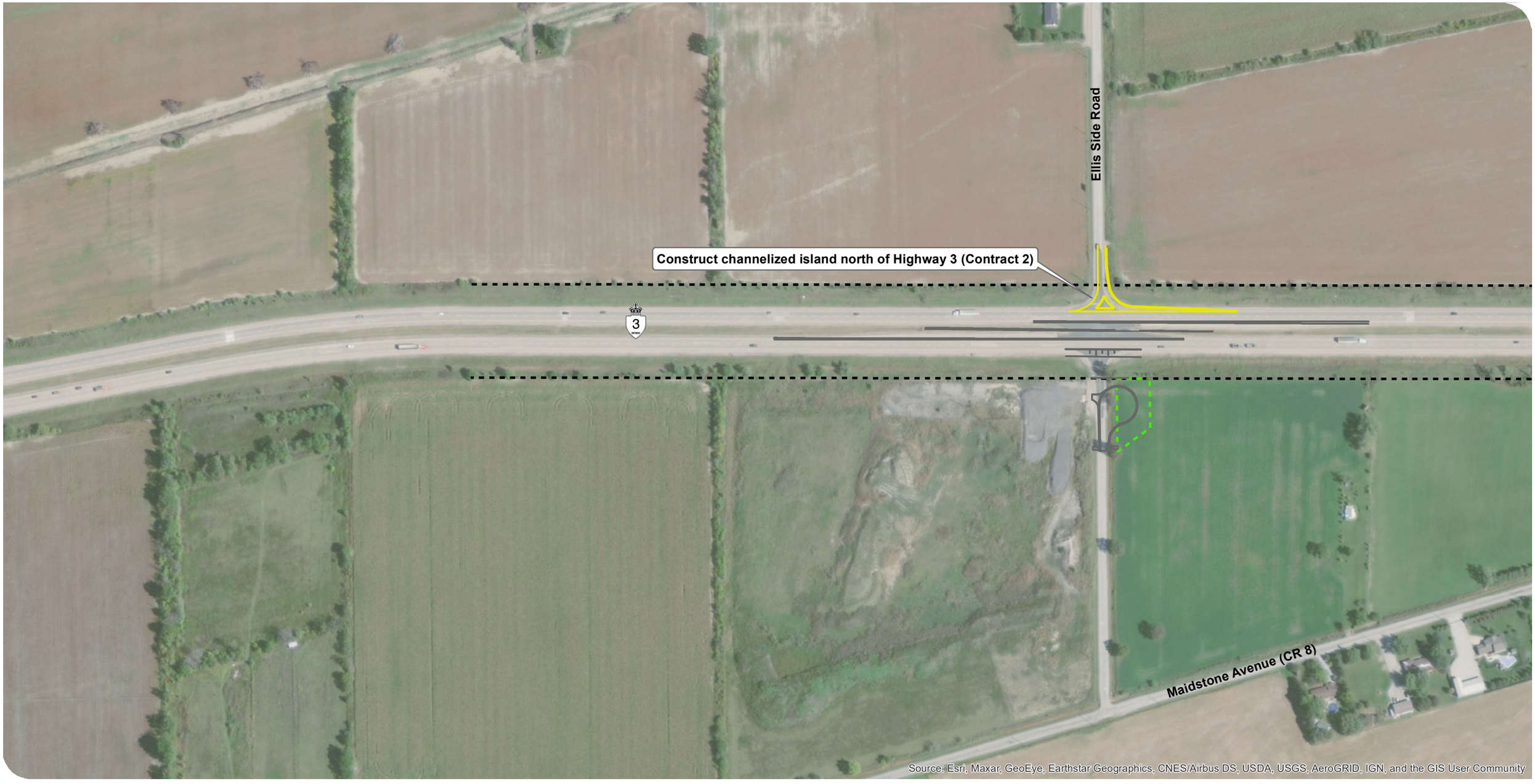
Parsons. 2020. Highway 3 Improvements in the Town of Essex (GWP 317-98-00) Eastern Foxsnake Survey Results (Final).

Parsons. 2020. Highway 3 Improvements in the Town of Essex (GWP 317-98-00) Terrestrial Ecosystem Assessment Report – Technical Update Memo (Final).

Stantec Consulting Limited. 2020. Advanced Work for Highway 3 Widening Contract 1, Town of Essex, County of Essex Detail Design and Class Environmental Assessment (GWP 317-98-00) – Design and Construction Report (Final).

Municipality of Lakeshore. 2010. Municipality of Lakeshore Official Plan (as approved by the Ontario Municipal Board). Retrieved from https://www.lakeshore.ca/en/business-and-development/official-plan.aspx#Land-Use-Schedules.

Figures



MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

CONTRACT SCOPE OF WORK
FIGURE 2a

Legend

- Newly Acquired Property ROW
- Existing MTO ROW
- Contract 2 Work
- Other Contract Work

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

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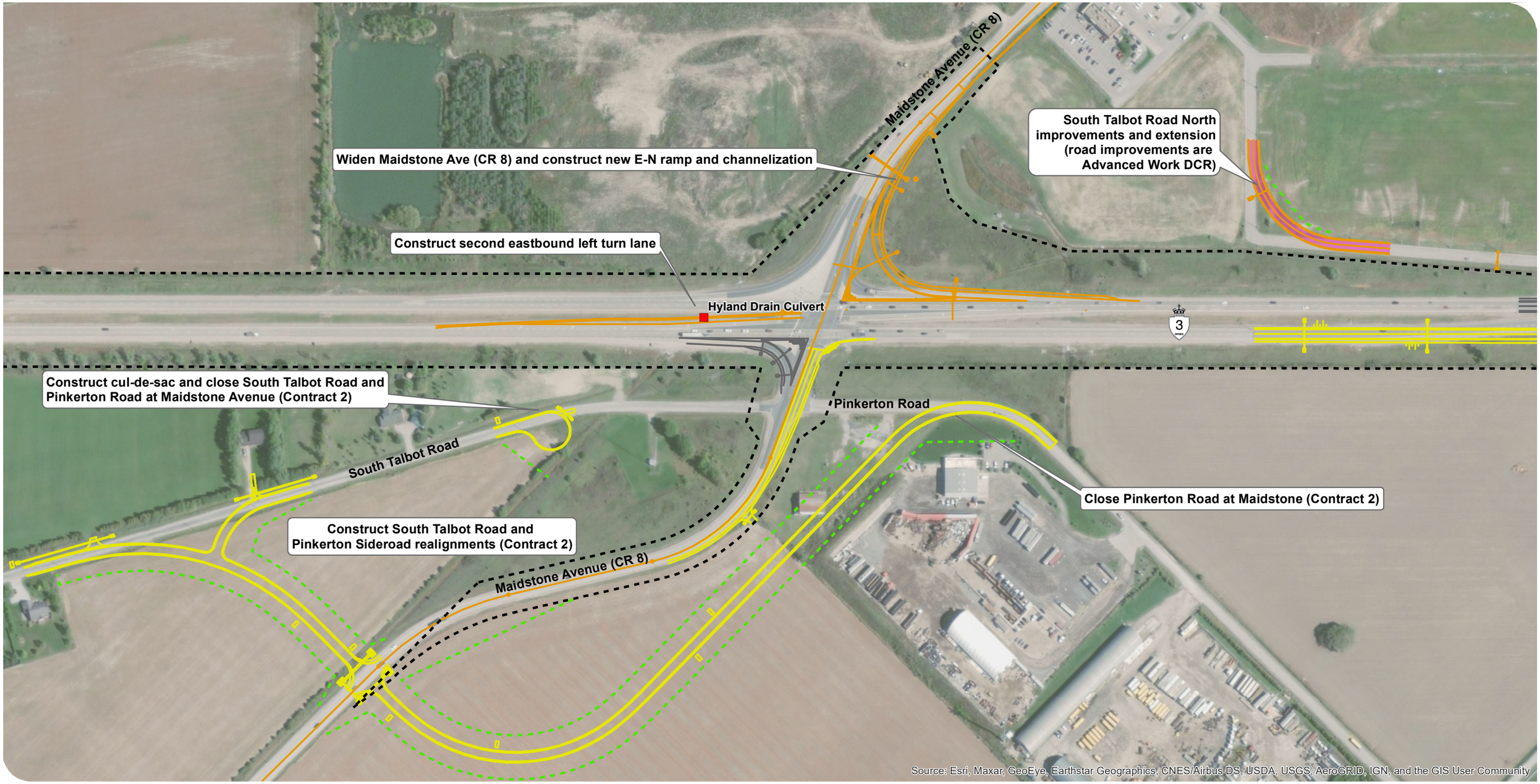
SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-03-11



MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

CONTRACT SCOPE OF WORK
FIGURE 2b

Legend

- Culverts
- Newly Acquired Property ROW
- Existing MTO ROW
- Contract 1 Work
- Contract 2 Work
- Other Contract Work
- Advanced Work DCR (Sept. 2020)

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

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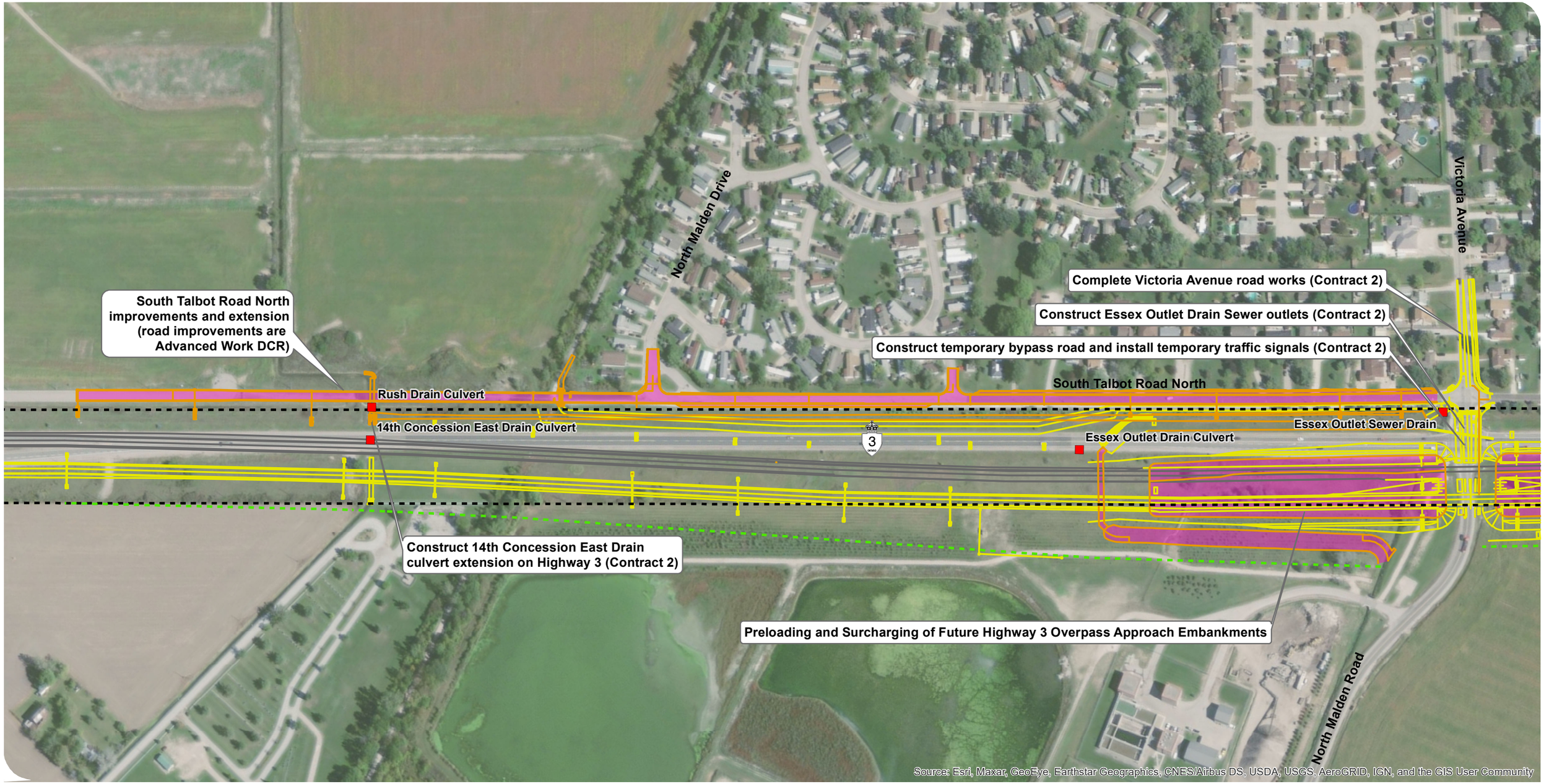
SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-03-10



MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

CONTRACT SCOPE OF WORK
FIGURE 2c

Legend

- Culverts
- Newly Acquired Property ROW
- Existing MTO ROW
- Contract 1 Work
- Contract 2 Work
- Other Contract Work
- Advanced Work DCR Sept. 2020

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

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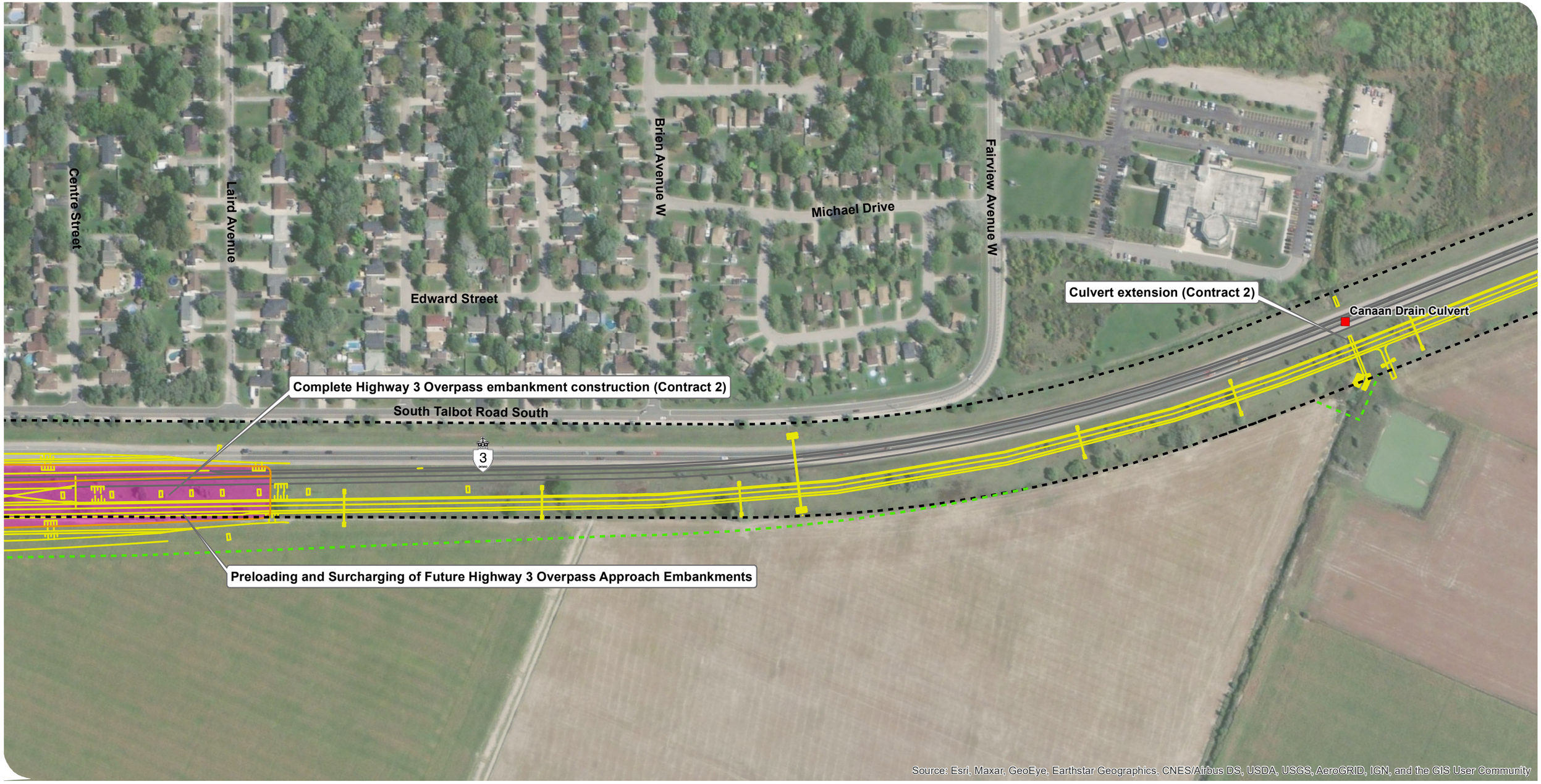
SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-03-10



MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

CONTRACT SCOPE OF WORK
FIGURE 2d

Legend

- Culverts
- Newly Acquired Property ROW
- Existing MTO ROW
- Contract 1 Work
- Contract 2 Work
- Other Contract Work
- Advanced Work DCR Sept. 2020

DILLON CONSULTING

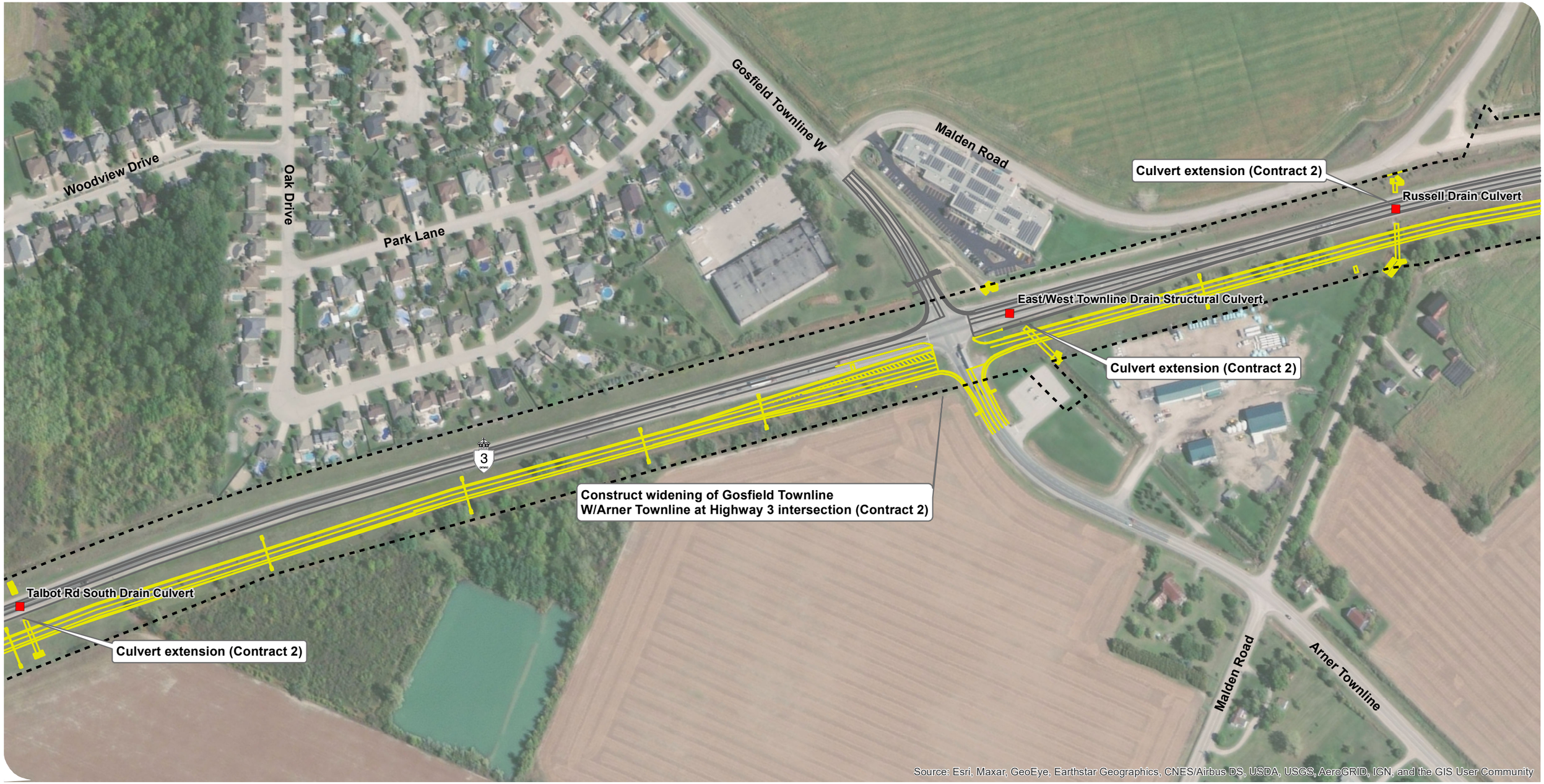
MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

50 25 0 50 Metres

SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-03-10



MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

CONTRACT SCOPE OF WORK
FIGURE 2e

Legend

- Culverts
- Existing MTO ROW
- Contract 2 Work
- Other Contract Work

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

50 25 0 50 Metres

SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-03-10

MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

CONTRACT SCOPE OF WORK
FIGURE 2f

Legend

- Culverts
- Existing MTO ROW
- Contract 2 Work
- Other Contract Work

DILLON CONSULTING

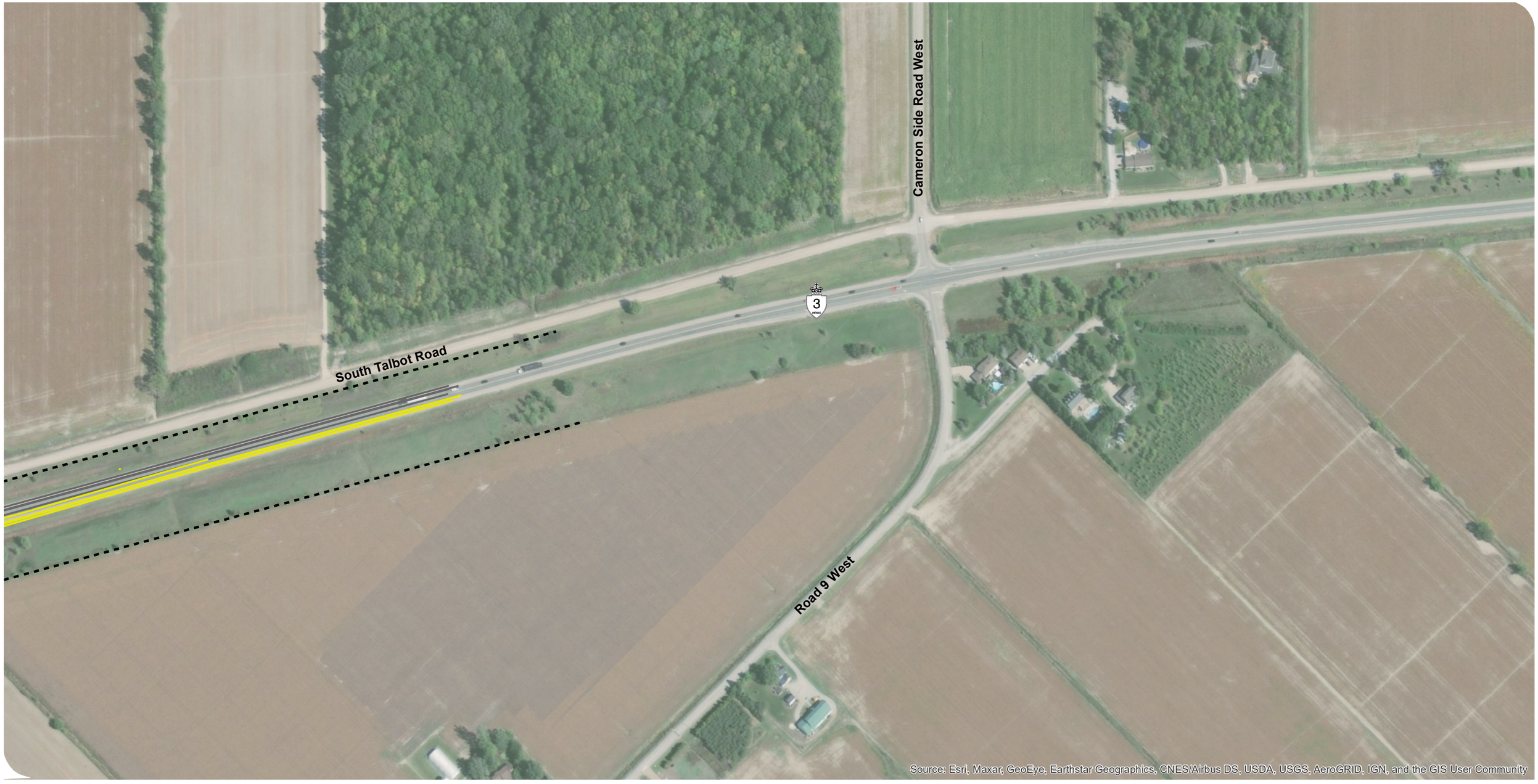
MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

50 25 0 50 Metres

SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-03-10



MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

CONTRACT SCOPE OF WORK
FIGURE 2g

Legend

- Existing MTO ROW
- Contract 2 Work
- Other Contract Work

DILLON CONSULTING

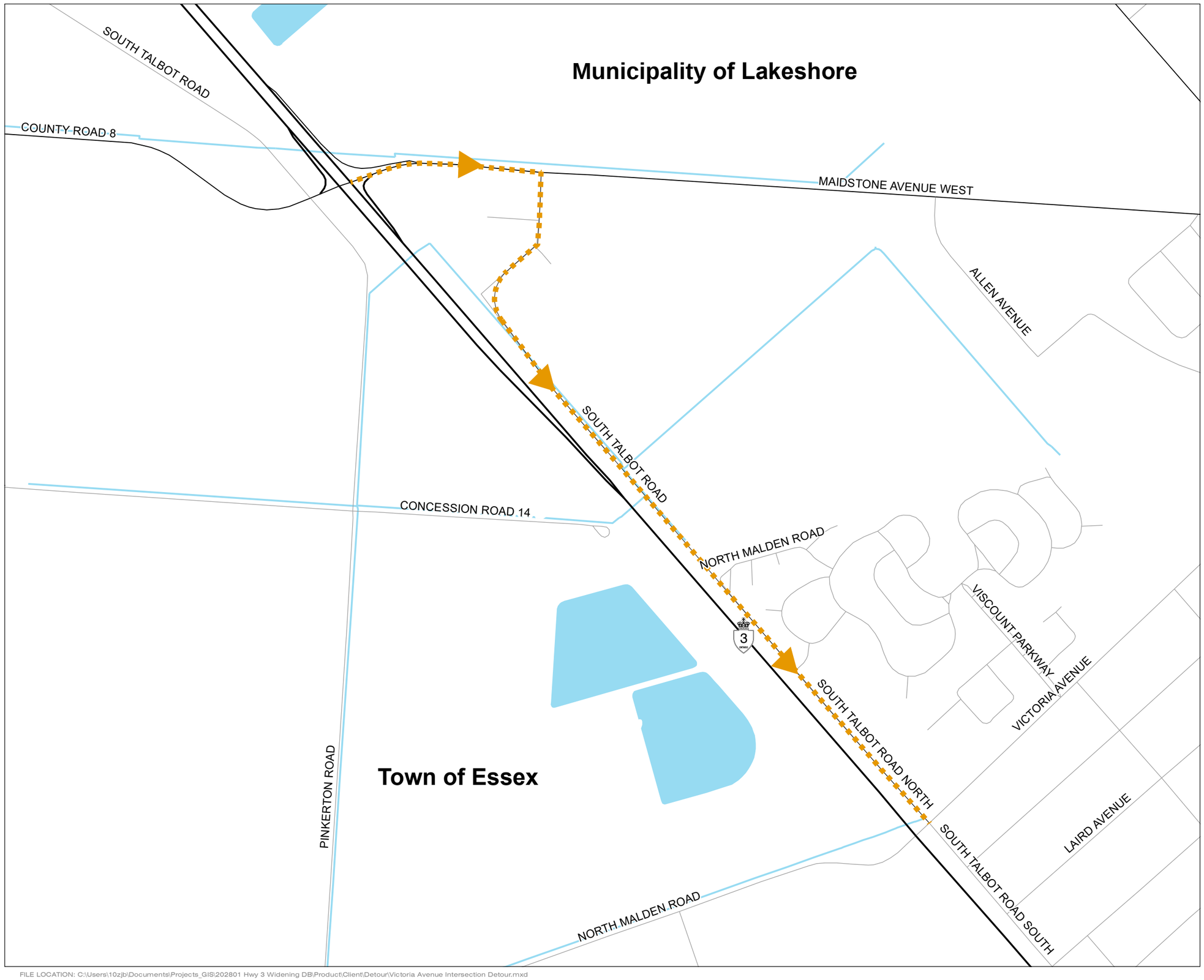
MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

50 25 0 50 Metres

SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-02-12



Ontario

MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING
CONTRACT 2020-3006

SIGNED DETOUR ROUTE - VICTORIA AVENUE INTERSECTION
FIGURE 4

Legend

- Detour Route
- Highway
- Arterial Road
- Local Road
- Waterbody
- Watercourse

100 50 0 100 Metres

SCALE 1:7,500

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

DILLON CONSULTING

PROJECT: 20-2801
STATUS: FINAL
DATE: 2021-03-24

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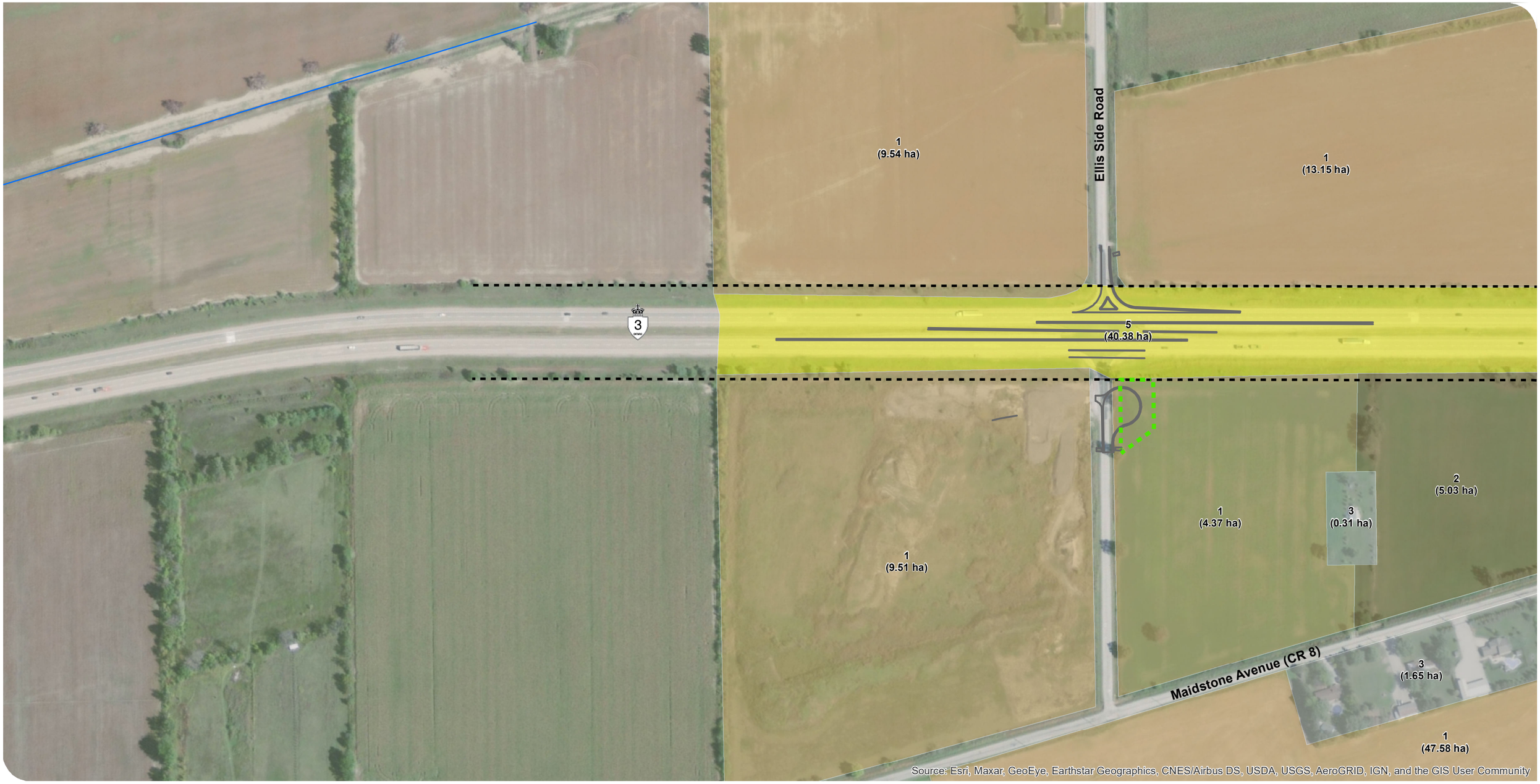


MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

ENVIRONMENTAL CONSTRAINTS AND MITIGATION
FIGURE 5a

Legend

- Watercourse
- Newly Acquired Property ROW
- Existing MTO ROW
- Contract Work

Ecological Land Classification

- 1. OAGM1 – Annual Row Crops
- 2. OAGM2 – Perennial Cover Crops
- 3. CVR_4 – Rural Property
- 5. MEM – Mixed Meadow

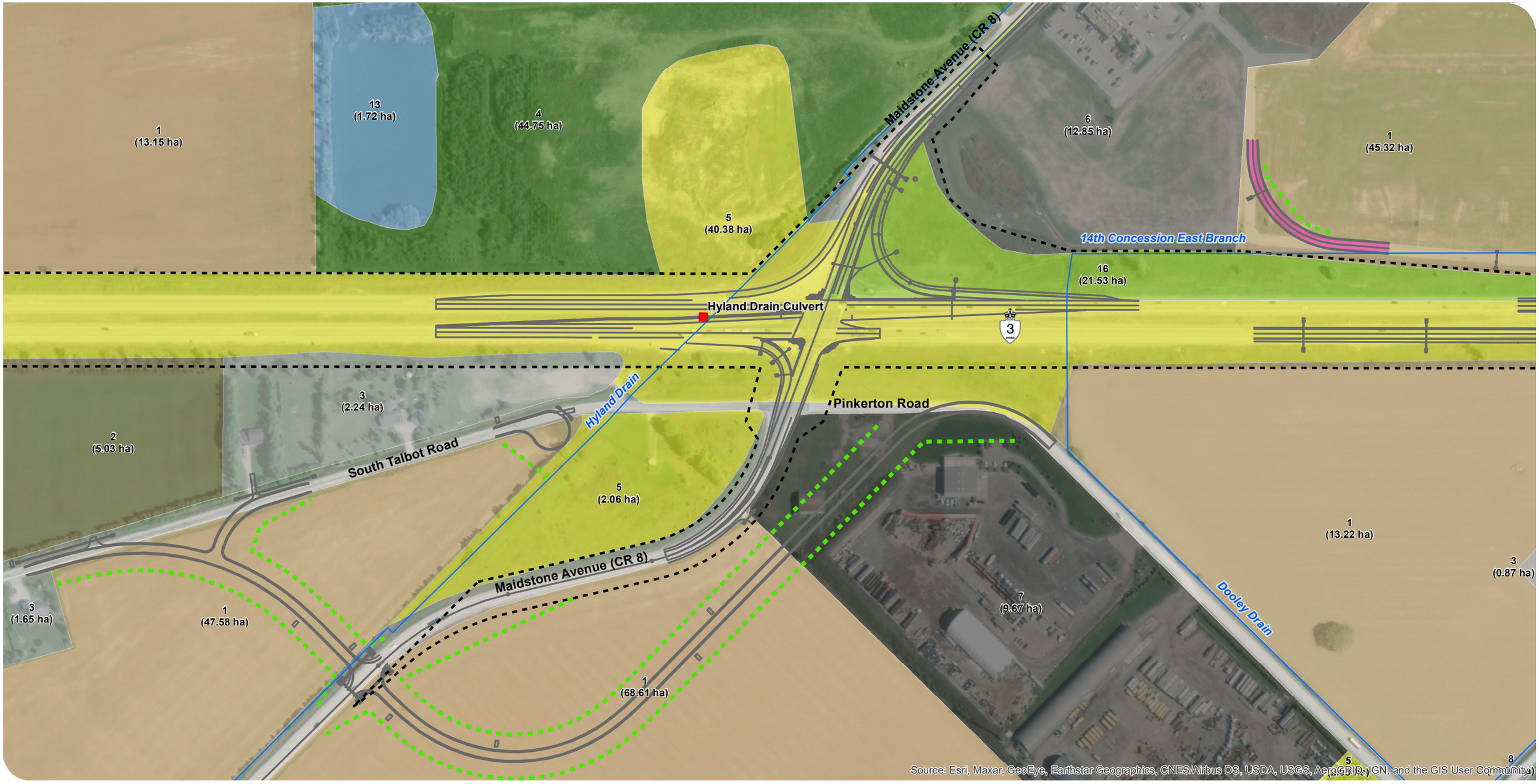
DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

50 25 0 50 Metres
SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-01-11



MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

ENVIRONMENTAL CONSTRAINTS AND MITIGATION
FIGURE 5b

Legend

- Culverts
- Watercourse
- Newly Acquired Property ROW
- Existing MTO ROW
- Contract Work
- Eastern Foxsnake Habitat
- Advanced Work DCR (Sept. 2020)

Ecological Land Classification

- 1. OAGM1 – Annual Row Crops
- 2. OAGM2 – Perennial Cover Crops
- 3. CVR_4 – Rural Property
- 4. TAGM1 – Coniferous Plantation
- 5. MEM – Mixed Meadow
- 6. CVC_1 – Business Sector
- 7. CVC_2 – Light Industry
- 13. OAW – Open Water
- 16. Manicured Lawn

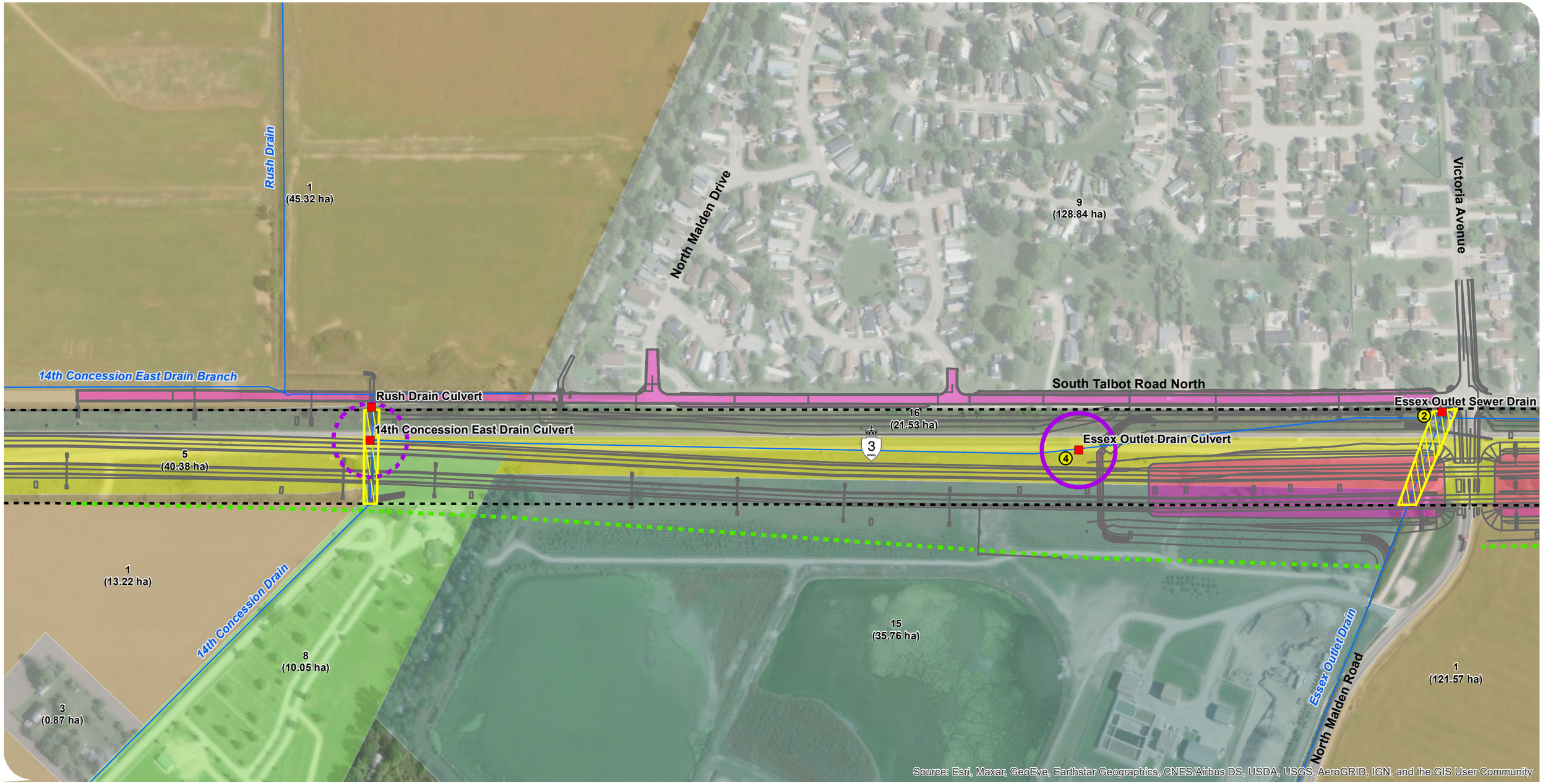
DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

50 25 0 50 Metres
SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-01-11



MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

ENVIRONMENTAL CONSTRAINTS AND MITIGATION
FIGURE 5c

Legend

Bird Nest
- Barn Swallow
- Cliff Swallow

- Culverts
- Potentially Significant Wildlife Habitat
- Significant Wildlife Habitat
- Eastern Foxsnake Habitat
- Watercourse
- Newly Acquired Property ROW
- Existing MTO ROW
- Contract Work
- Advanced Work DCR (Sept. 2020)

Ecological Land Classification
- 1. OAGM1 – Annual Row Crops
- 3. CVR_4 – Rural Property
- 5. MEM – Mixed Meadow
- 8. CGL – Constructed Greenlands
- 9. CVR_3 – Single Family Residential
- 15. CVI - Transportation and Utilities

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

50 25 0 50 Metres
SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-01-11

MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

ENVIRONMENTAL CONSTRAINTS AND MITIGATION
FIGURE 5d

Legend

- Barn Swallow Kiosk
- Culverts
- Watercourse
- Newly Acquired Property ROW
- Existing MTO ROW
- Contract Work
- Potentially Significant Wildlife Habitat
- Eastern Foxsnake Habitat
- Advanced Work DCR (Sept. 2020)

Ecological Land Classification

- 1. OAGM1 – Annual Row Crops
- 3. CVR_4 – Rural Property
- 5. MEM – Mixed Meadow
- 9. CVR_3 – Single Family Residential
- 6. CVC_1 – Business Sector
- 13. OAW – Open Water
- 14. SWTM3 – Willow Mineral Deciduous Thicket Swamp
- 16. Manicured Lawn

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

50 25 0 50 Metres
SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-01-11

11
(7.59 ha)
Woodview Drive
(128.84 ha)
Oak Drive
Park Lane
Gosfield Townline W
1
(42.26 ha)
Malden Road
6
(1.66 ha)
6
(2.48 ha)
Russell Drain
1
(98.02 ha)
Russell Drain Culvert
16
(21.53 ha)
East/West Townline Drain Structural Culvert
11
(1.59 ha)
14
(4.97 ha)
12
(1.51 ha)
Talbot Road South Drain
5
(40.38 ha)
7
(4.32 ha)
East Townline Drain
Thompson Drain
3
(0.7 ha)
1
(138.39 ha)
Talbot Rd South Drain Culvert
12
(2.86 ha)
13
(1.82 ha)
1
(121.57 ha)
1
(121.57 ha)
10
(0.83 ha)
3
(0.48 ha)
Malden Road
Arner Townline
3
(1.71 ha)
10
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

ENVIRONMENTAL CONSTRAINTS AND MITIGATION
FIGURE 5e

Legend

Bird Nest
- Barn Swallow
- Cliff Swallow
- Culverts
- Watercourse

- Existing MTO ROW
- Contract Work
- Potentially Significant Wildlife Habitat
- Eastern Foxsnake Habitat
- Advanced Work DCR Sept. 2020

Ecological Land Classification
- 1. OAGM1 – Annual Row Crops
- 3. CVR_4 – Rural Property
- 5. MEM – Mixed Meadow
- 6. CVC_1 – Business Sector
- 7. CVC_2 – Light Industry
- 9. CVR_3 – Single Family Residential
- 10. IAGM1 – Agricultural Buildings
- 11. FOD – Deciduous Forest
- 12. THDM4-1 – Native Deciduous Regeneration Thicket
- 13. OAW – Open Water
- 14. SWTM3 – Willow Mineral Deciduous Thicket Swamp
- 16. Manicured Lawn

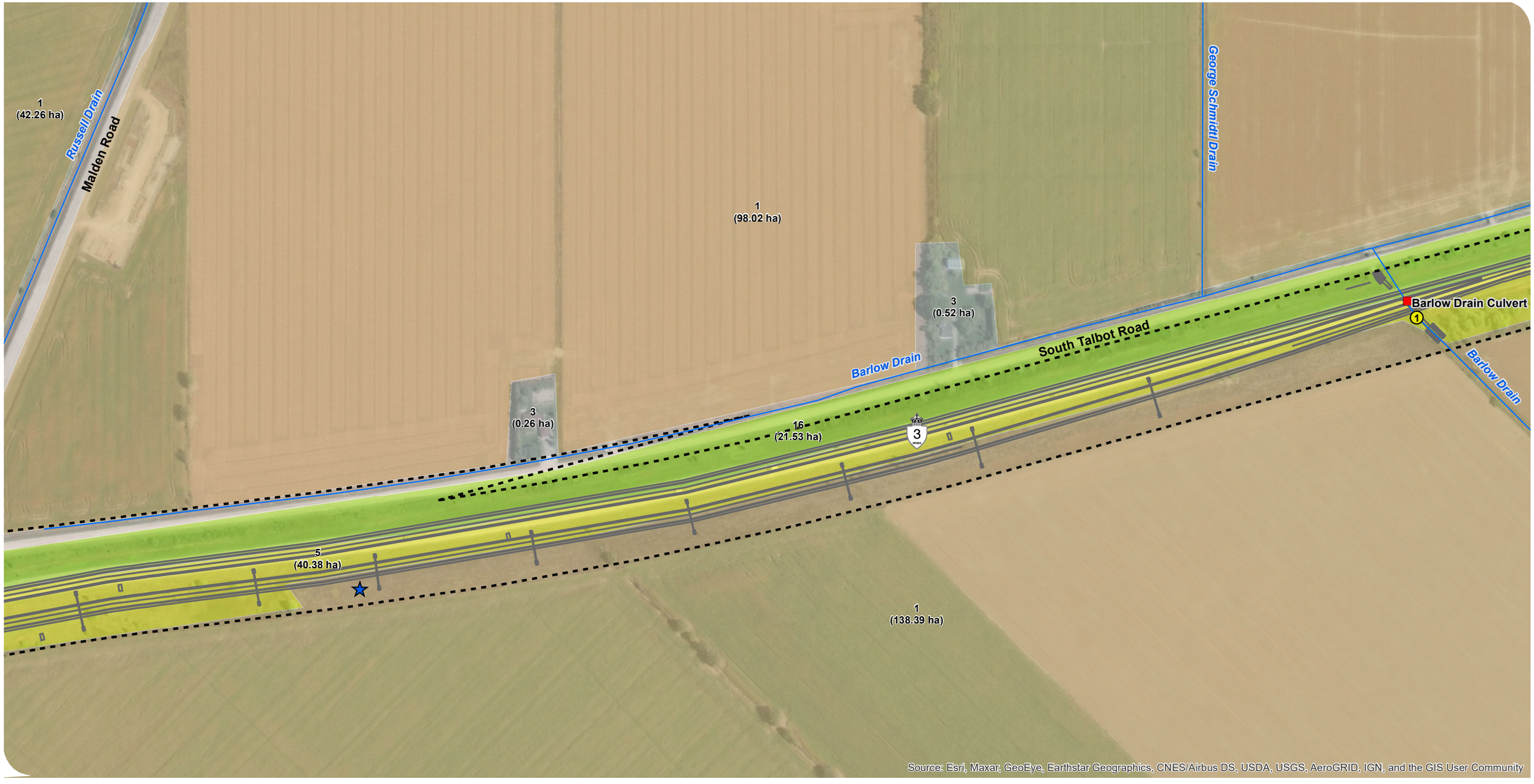
DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

50 25 0 50 Metres
SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-01-11



MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

ENVIRONMENTAL CONSTRAINTS AND MITIGATION
FIGURE 5f

Legend

Bird Nest
- Barn Swallow
- Cliff Swallow
- Barn Swallow Kiosk
- Culverts
- Watercourse
- Existing MTO ROW
- Contract Work

Ecological Land Classification
- 1. OAGM1 – Annual Row Crops
- 3. CVR_4 – Rural Property
- 5. MEM – Mixed Meadow
- 16. Manicured Lawn

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

50 25 0 50 Metres
SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-01-11

MINISTRY OF TRANSPORTATION
HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX
CONTRACT: 2020-3006

ENVIRONMENTAL CONSTRAINTS AND MITIGATION
FIGURE 5g

Legend

- Watercourse
- Existing MTO ROW
- Contract Work

Ecological Land Classification

- 1. OAGM1 – Annual Row Crops
- 3. CVR_4 – Rural Property
- 4. TAGM1 – Coniferous Plantation
- 5. MEM – Mixed Meadow
- 11. FOD – Deciduous Forest
- 16. Manicured Lawn

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR

MAP CREATED BY: ZJB
MAP CHECKED BY: ST
MAP PROJECTION: NAD 1983 UTM Zone 17N

50 25 0 50 Metres
SCALE 1:3,000

PROJECT: 20-2801 STATUS: FINAL DATE: 2021-01-11

Table

Table 5: Summary of Environmental Concerns and Commitments

I.D. #	I.D. # Sub-Issues	Potential Impacts/Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
1. Highway safety, construction traffic, and emergency service access	1.1 Traffic operations and safety	Throughout Project: • Potential traffic disruption caused by construction vehicles.	County of Essex, Town of Essex, Municipality of Lakeshore, Town of Kingsville, Emergency Service Providers and Provincial Highway Road Users, Adjacent business owners and property owners	Throughout Project: • Advanced signage will be posted at least seven days in advance of construction start, advising motorists of potential traffic delays • Emergency vehicles will be given priority access through the construction zone • Emergency Service Providers will be updated throughout the project on construction staging, including the construction start date and any significant changes to traffic operations • Emergency Service Provider contact information will be provided to the Contractor and they will be invited to attend regularly scheduled progress meetings throughout construction • All traffic control measures will be implemented following Ontario Traffic Manual Book 7 – Temporary Conditions • Construction traffic will access the construction area from the existing road network at specified construction access/egress locations
		DCR 1: • Traffic delays caused by daily lane closures to complete installation of temporary traffic signals • Traffic delays caused by construction of the second eastbound left turn lane on Highway 3 at Maidstone Avenue (County Road 8) • Traffic delays caused by widening of Maidstone Avenue (County Road 8) • Traffic delays caused by relocation of watermain, sanitary system and storm sewer services • Traffic delays caused by closure of South Talbot Road North for watermain relocation.		DCR 1: • A signed detour will be provided for construction of the southbound left turn lane on Highway 3 at Maidstone Ave. Traffic will be detoured via Manning Road (County Road 19) and Maidstone Avenue (County Road 8). Advanced signage will be provided • A signed detour will be provided for the South Talbot Road North watermain relocation. Traffic will be detoured via Hanlan Street South and Victoria Avenue. Advanced notification will be provided on the project website and to municipalities and EMS for planned detours.

I.D. #	I.D. # Sub-Issues	Potential Impacts/Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
		DCR 2: • Traffic delays caused by construction of temporary bypass road and installation of temporary traffic signals at Highway 3/Victoria Avenue • Traffic delays caused by construction of 14th Concession East Drain culvert extension on Highway 3 • Traffic delays caused by construction of Essex Outlet Sewer Drain • Traffic delays caused by completion of Victoria Avenue Road works north of Highway 3 • Traffic delays caused by completion of Highway 3 Overpass embankment construction • Traffic delays caused by construction of channelized island north of Highway 3 at Ellis Side Road and Highway 3 • Traffic delays caused by construction of Old South Talbot Road cul-de-sac and closure of South Talbot Road and Pinkerton Sideroad at Maidstone Avenue (County Road 8) • Traffic delays caused by widening of Gosfield Townline W/Arner Townline at Highway 3 intersection • Traffic delays caused by completion of Highway 3 Eastbound lanes and culvert extension (includes Canaan Drain, East/West Townline Drain and Russell Drain culverts).		DCR 2: • To accommodate the eastbound Highway 3 left turn lane closure, a signed detour route will be available via Maidstone Avenue and the new South Talbot Road North extension (**Figure 4**). • No signed detour is required for the closure to westbound traffic on South Talbot Road North.
	1.2 Emergency service access	• Potential emergency service delays to incident locations during construction.	County of Essex, Town of Essex, Municipality of Lakeshore, Town of Kingsville, Emergency Service Providers	Delays to Emergency Service Providers response times mitigated by: • Emergency vehicles will be given priority access through the construction zone • Emergency Service Providers will be updated throughout the project on construction staging, including the construction start date and any significant changes to traffic operations • Emergency Service Provider contact information will be provided to the Contractor and they will be invited to attend regularly scheduled progress meetings throughout construction.

I.D. #	I.D. # Sub-Issues	Potential Impacts/Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
2. Natural Features	2.1 Vegetation & Erosion and Sedimentation	• Increased erosion and sedimentation of lands adjacent to the construction area • Increased vulnerability of the areas cleared of vegetation to invasion by non-native species • Decreased shade and cover for fish and wildlife • Localized temporary displacement of wildlife due to disturbance associated with construction activity • Potential for imported materials (e.g., gravel) to be released to adjacent riparian habitat and displace native substrates • Social/aesthetic impacts • Decrease in natural diversity • Decrease in ecosystem services, such as air quality regulation, greenhouse gas mitigation and stormwater control.	Ministry of Natural Resources and Forestry (MNRF), Conservation Authority, County of Essex, Town of Essex, Municipality of Lakeshore, Town of Kingsville	• A Phragmites Control Plan will be implemented by the Contractor during construction • To minimize potential erosion and capture any sedimentation, the following measures and provisions will be included in the Contract: ○ Follow tree felling and grubbing procedures as outlined in OPSS 201, Construction Specification for Clearing, Close Cut Clearing, Grubbing ○ Implement an Erosion and Sedimentation Control (ESC) plan to mitigate impacts to wildlife and wildlife habitat ○ Minimize the disturbance of vegetation buffers ○ Place erosion control blanket on 2:1 slopes where height warrants its use ○ Use of mesh or netting-type stabilization material must not be used on site ○ ESC measures should be monitored regularly and/or after every 10 mm or greater rainfall event, as they could require periodic cleaning, maintenance and/or reconstruction. If deficiencies are found, they should be repaired and/or replaced promptly ○ Grading, placement of topsoil and seeding specifications to be implemented to decrease erosion potential and promote suitable native vegetation regeneration ○ ESC measures should be installed prior to vegetation removal and the site should be stabilized prior to removal of ESC measures ○ Disturbed areas along drains will be re-vegetated with species native to the area to minimize invasion and colonization by non-native species and increase shade/cover for wildlife ○ Restore all disturbed areas to pre-construction conditions with roadside seed mix and stabilize within 45 days to prevent erosion ○ Final cover, including seeding and erosion control blanket must be completed by **November 1**, of any given year. If construction works require dewatering, a dewatering plan will be prepared in accordance with environmental best management practices.
	2.2 Wildlife and Wildlife Habitat	• Potential impacts to wildlife and wildlife habitat • Temporary disruption to wildlife movement and wildlife avoidance of habitat areas adjacent to the structure during rehabilitation due to disturbance associated with construction activity.	MNRF, Conservation Authority, County of Essex, Town of Essex, Municipality of Lakeshore, Town of Kingsville	• Where feasible, vegetation removal should occur during winter months or outside of sensitive wildlife periods • Conduct visual inspections for wildlife prior to the start of construction each day and regularly throughout the day during the active season. This will include a thorough walk-through of the work area and searching any vegetation, brush piles, logs or rock piles and equipment. If wildlife are observed, work should be temporarily suspended until the species is out of harm's way. • Immediately upon observation of an actively nesting female turtle, personnel and vehicles should clear the area within the turtle's line of sight as much as possible to allow the female to finish laying. Startling a nesting female could lead to abandonment of the partially laid nest before the eggs are concealed. A Qualified Biologist shall be consulted immediately to discuss mitigation options, including measures to take if relocation of hatchlings or egg salvage is needed. • If a turtle or snake nest or overwintering site is discovered, work shall be temporarily suspended and a Qualified Biologist shall be contacted. • All injured wildlife (SAR or non-SAR) will be transported to an authorized wildlife rehabilitator. Euthanasia of injured wildlife is not permitted unless conducted by an authorized wildlife rehabilitator. If an animal is unable or unwilling to flee from human presence, it is likely injured. Signs of wildlife injury include obvious wounds, broken limbs, lethargy,

I.D. #	I.D. # Sub-Issues	Potential Impacts/Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
				lameness, and difficulty standing or breathing. Injured wildlife experience high levels of stress and pain, and their behaviour is usually unpredictable and defensive, posing an increased risk to handlers. Always use extreme caution when handling injured wildlife, wear thick gloves, and limit handling as much as possible. Avoid aggravating any obvious injuries such as wounds or broken bones. Transport injured wildlife in a dark container where possible • Construction activities should be limited to the work area, and if necessary, sensitive features should be demarcated if they are located immediately adjacent to the work zone • Implement standard BMPs for erosion and sediment control • Implement an emergency and response management plan to address the potential for spills • Where feasible, minimize the extent and duration of construction noise and lighting during sensitive season • Avoid idling and ensure construction vehicles and machinery are kept in good repair.
	2.3 Species at Risk	• Two Butternut trees are located beyond the Study Area • Potential to impact Barn Swallow entering, nesting, or roosting within the construction area • Potential to impact Eastern Foxsnake within Study Area • Temporary disruption to wildlife movement and wildlife avoidance of habitat areas adjacent to the structure during rehabilitation due to disturbance associated with construction activity.	MNRF, Conservation Authority, County of Essex, Town of Essex, Municipality of Lakeshore, Town of Kingsville	Although the two Butternut are not located within the Study Area, if additional vegetation removals are required west of Pinkerton Side Road on Concession Road 14, a qualified biologist will be consulted to confirm that Butternut species are not impacted. Standard vegetation removal requirements will be incorporated into the contract: • If vegetation removals are required west of the existing Pinkerton Side Road intersection at Concession Road 14, a qualified biologist will be consulted to confirm that Butternut species are not impacted • Follow tree felling and grubbing procedures as outlined in OPSS 201, Construction Specification for Clearing, Close Cut Clearing, Grubbing. The following measures will be incorporated into the Contract to protect SAR birds and comply with the *Migratory Birds Convention Act* (MBCA; 1994): • Vegetation removal will be completed outside the breeding bird period of April 1 to August 31 (i.e., clearing must occur between September 1 and March 31) • Vegetation removal can occur during restricted periods (i.e., between April 1 and August 31) if a qualified biologist conducts a nest search of the area prior to construction to verify nesting activity. Vegetation clearing must take place within 48 hours of the inspection. • Preventative measures should be installed at all culvert locations with a history of nesting activity prior to April 1 to inhibit birds from nesting within the structure. Regular inspection of the culverts during the nesting season should be completed to ensure the exclusion measures have been effective and no nests are present. If breeding birds and/or nests are encountered, construction in the vicinity of the nest must cease until the young birds have fledged or the nest is otherwise abandoned. A setback from the nest (e.g., 30 m) should be identified and the area demarcated to ensure work does not occur within the setback limits. Works should not continue in the location of the nest until after August 31 or as soon as it has been determined by a qualified biologist that the young have left the nest • Workers must be vigilant and check work areas for the presence of breeding birds and nests containing eggs and young • The Contractor will not destroy the active nests (nests with eggs or young birds), or wound or kill birds of species protected under the MBCA or Regulations under that Act.

I.D. #	I.D. # Sub-Issues	Potential Impacts/Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring

				The following measures will be incorporated into the Contract to prevent and/or minimize impacts to the Eastern Foxsnake:
				• Removal of non-woody vegetation shall be conducted between June 1 and September 30 when snakes are active and most able to flee areas of disturbance, or between November 1 and March 30 when snakes are hibernating;
				• Mesh or netting type stabilization material must not be used on site to prevent the entanglement of Eastern Foxsnake;
				• During the active season when temperatures exceed 18°C, Eastern Foxsnake may find and occupy materials and equipment stored onsite. As a result, the site must be maintained in a clean and debris/clutter-free condition at all times and materials such as plywood or rubber mats must not be stored flat on the ground;
				• During excavation and backfill, disturbance shall be minimized to the greatest extent possible and piling fill in fallow vegetation shall be avoided;
				• Disturbance to brush piles/logs shall be avoided wherever possible during the active season, particularly between June 1 and September 30 when eggs and hatchlings may be present. If a brush/log pile must be moved or disturbed outside this window, it shall be carefully inspected for snakes. If eggs or hatchlings are present, work must cease and a Qualified Biologist and MECP must be contacted to discuss mitigation options.
				• Wildlife-specific exclusionary fencing shall be installed where culvert works occur at the five locations during the active period. If Eastern Foxsnake is encountered elsewhere in the project limits, additional wildlife-specific fencing shall be installed where the species was observed, with the limits determined by a Qualified Biologist. Silt fencing, including light duty or mesh or netting-type silt fencing is not permitted for the purpose of excluding Eastern Foxsnake. Wildlife-specific fencing shall be used (e.g., ERTEC, Animex) with a recommended fence height of a minimum of 100 cm. The fence shall be buried at a depth of 10-20 cm with an additional 10 cm of fabric that extends outward at the bottom and functions as a horizontal lip to prevent wildlife from excavating under the fencing. The fencing should be installed following the MNRF guidelines for Reptile and Amphibian Exclusion Fencing (MNRF, 2013) as summarized below:
				  ○ Exclusion fencing intended to exclude snakes should have the stakes installed on the activity side (opposite the normal requirement for sediment control fencing) to prevent snakes from using the stakes to maneuver over the fencing (see **Figure 5**).
				  ○ Fences should be inspected throughout the active season. Any damage that affects the integrity of the fence (e.g., tears, loose edges, collapses, etc.) should be fixed promptly.
				  ○ Install fences with a turn-around at the ends furthest from the construction limits to assist in redirecting animals away from any fence openings (see diagram below).
				  ○ Curving the ends of the fencing inward (i.e. away from the road or construction site) may help to reduce access to these locations. The ends may also be tied off to natural features on the landscape such as trees or rock cuts.

I.D. #	I.D. # Sub-Issues	Potential Impacts/Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring

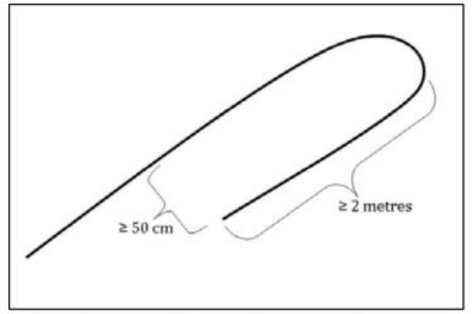
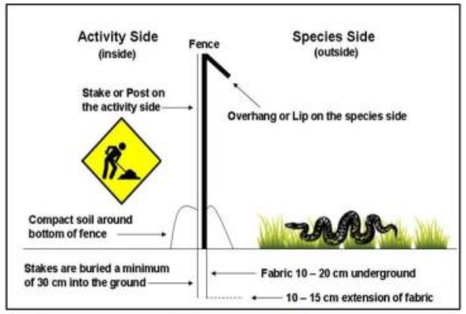


Diagram of the ends of the fence designed to curve inward in order to direct animals away from the area of exclusion (MNRF, 2013)



A side view of a basic exclusion fence including an overhang or flexible lip to deter animals from climbing or jumping over the fence. Placement of the stake on the Activity Side or on the inside of excluded area. (MNRF, 2013)

- Work occurring between September to late May has the potential to discover hibernacula, particularly in areas where there are animal burrows, rock crevices, gabion baskets or foundations are present. If Eastern Foxsnake is discovered, all work shall cease and Qualified Biologist be contacted to discuss mitigation options;
- The Contractor shall include on its team, an Environmental Inspector with SAR experience, including Eastern Foxsnake, who will provide SAR training to staff. An Eastern Foxsnake information sheet shall be provided to staff to assist with identification and measures to take if this species is encountered (**Appendix C**). All individuals working onsite must confirm (in writing) that they have received training and reviewed the factsheet;
- The Contractors' Environmental Inspector will complete a visual inspection of work areas, as well as machinery and equipment each day prior to commencement or when moving to new locations, throughout the active period. This will include a thorough walk-through of the work area and searching any brush piles, logs or rock piles.
- Construction equipment that is left idle for over (1) hour or is parked overnight between the active period must be inspected for the presence of Eastern Foxsnake before (re)ignition. This visual examination should include all lower components of the machinery, including operational extensions and running gear;
- If Eastern Foxsnake are encountered during construction, work at that location will be temporarily suspended until the species is out of harm's way. If a hibernacula or egg-laying site is discovered, all work must cease and a Qualified Biologist will be contacted to discuss mitigation options;
- If a snake nest is discovered on the project site, MECP shall be contacted to discuss mitigation options and to obtain authorization for nest relocation or to excavate the eggs for transport to a licensed Wildlife Custodian for the remainder of the incubation period until they can be released. If this approach is taken, a Qualified Biologist, experienced in excavation and relocation of eggs shall be contacted. The Qualified Biologist will use a container with a lid with holes for ventilation, and partially filled with the substrate used for nesting or other mediums such as sphagnum moss, potting soil or vermiculite. Using their hands while wearing gloves or using a small utensil if the soil is packed down, the Qualified Biologist will gently scrape away the soil on the top of the nest to reveal the eggs. A pencil will be used to gently mark the top of each egg so that the eggs are placed in the container in

I.D. #	I.D. # Sub-Issues	Potential Impacts/Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
				the same orientation as they were in the nest. Prior to placing the eggs in the container, the Qualified Biologist will make an egg-sized indent with their finger in the container substrate for each of the eggs. This will reduce the risk of eggs rolling during transport and shifting orientation. The eggs will be carefully removed from the nest and placed in the container in the same orientation as it was laid. In case an egg is inadvertently rolled during transport, it can be re-oriented in the correct position using the pencil mark as a guide to avoid harming the embryo. If the eggs are not brought to an incubator right away, they should be stored in a warm place between 24-26C; • Any SAR observed must be reported to MECP within 48 hours. Species should not be handled unless it is in harm's way and in accordance with the MNRF Species at Risk Handling Manual (**Appendix C**) by qualified staff. Authorization from MECP is required if SAR are in possession or are to be relocated; and • All injured wildlife (SAR or non-SAR) will be transported to an authorized Wildlife Custodian (https://learningcompass.learnflex.net/Upload/Public/WildlifeRehabilitatorsPublicList.htm). Euthanasia of injured wildlife is not permitted unless conducted by an authorized wildlife rehabilitator. If an animal is unable or unwilling to flee from human presence, it is likely injured. Signs of wildlife injury include obvious wounds, broken limbs, lethargy, lameness, and difficulty standing or breathing. Injured wildlife experience high levels of stress and pain, and their behaviour is usually unpredictable and defensive, posing an increased risk to handlers. Always use extreme caution when handling injured wildlife, wear thick gloves, and limit handling as much as possible. Avoid aggravating any obvious injuries such as wounds or broken bones. Transport injured wildlife in a dark container where possible.
	2.4 Migratory Birds	• Potential removal, disturbance or destruction of avian nests, eggs or young prior to and during construction.	MNRF, Environment and Climate Change Canada	• Vegetation removal will be completed outside the breeding bird period of **April 1** to **August 31** (i.e., clearing must occur between September 1 and March 31) • Vegetation removal can occur during restricted periods (i.e., between **April 1** and **August 31**) if a qualified biologist conducts a nest search of the area prior to construction to verify nesting activity. Vegetation clearing must take place within 48 hours of the inspection. • Preventative measures should be installed at all culvert locations with a history of nesting activity prior to **April 1** to inhibit birds from nesting within the structure. Regular inspection of the culverts during the nesting season should be completed to ensure the exclusion measures have been effective and no nests are present. If breeding birds and/or nests are encountered, construction in the vicinity of the nest must cease until the young birds have fledged or the nest is otherwise abandoned. A setback from the nest (e.g., 30 m) should be identified and the area demarcated to ensure work does not occur within the setback limits. Works should not continue in the location of the nest until after **August 31** or as soon as it has been determined by a qualified biologist that the young have left the nest • Workers must be vigilant and check work areas for the presence of breeding birds and nests containing eggs and young • The Contractor will not destroy the active nests (nests with eggs or young birds), or wound or kill birds of species protected under the MBCA or Regulations under that Act.
	2.5 Aquatic Ecosystems	• Removal of bank vegetation/vegetation clearing can negatively impact water temperature	MNRF, Conservation Authority	• In-water work shall only occur from **July 1** to **March 14**

I.D. #	I.D. # Sub-Issues	Potential Impacts/Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
		• Grading work can change habitat structure and cover by removing bank vegetation. Exposed soils from grading can erode and increase sediment loadings to the water, creating barriers to fish movement infill in-stream habitat features and impact fish respiration • Bank excavation at each inlet and outlet can cause a change in baseflow, water temperature and sediment concentrations in the water and directly impact fish and fish habitat • Placement of materials or structures in open water can disturb and re-suspend sediments, negatively affecting fish and other aquatic organisms in the area, restrict fish passage, change substrate and aquatic macrophyte compositions and alter water flows • Removal of aquatic vegetation can cause changes in water temperature, food supply, habitat structure and cover, contaminant concentrations, dissolved oxygen levels and nutrient/sediment concentrations • Temporary changes in flow has the potential to erode banks, scour the drain bed, alter substrate composition and change sediment and nutrient input concentrations. Any permanent changes may affect local water chemistry, food supply, habitat availability and displace/prevent fish movement • Fish passage temporarily blocked during construction can prevent migration and access to important/critical habitats. Building structures in the water can cause incidental entrainment, impingement or mortality of fish and may cause a change in		○ In water work may proceed from **July 1** to **March 14**. If the drain is dry between March 14 and July 1, work may proceed provided the drain remains dry throughout the duration of works. If the drain starts flowing following a rain event, in-water works are not permitted between **March 14** and **July 1**. ○ Talbot Road South Drain (Sta. no. 16+138) does not support fish habitat. • Implement a comprehensive Erosion and Sedimentation Control (ESC) plan to mitigate impacts to fish and fish habitat • Install appropriate ESCs (e.g., silt fence, filter rolls, check dams) prior to clearing and grading • ESCs must remain in place until disturbed soils have stabilized naturally or covered with rock, where proposed on drawings • The highway embankment will be restored and stabilized immediately before removing all site isolation measures • Stockpiled organic material and soils will be placed away from all watercourses and protected (i.e. temporarily stabilized) • Excavated bank material will be temporarily stored within the ROW and reused. Any extra material will be properly disposed of offsite • Any fish confined or trapped within the isolated areas will be removed by a qualified biologist under a licence from the MNRF prior to dewatering. Only clean materials (i.e., free of particulate matter) will be used for cofferdams • The size of cofferdams will be minimized to the extent possible to safely isolate the work site and allow enough room to undertake work • Water will need to be maintained around each work site to prevent flooding and ensure that fish habitat downstream does not run dry. Depending on the site conditions at the time of construction, a dam and flume, dam and pump around or a combination will be needed to temporarily bypass flows. Flow bypass/diversions will only be permitted during the in-water work timing window (**July 1** to **March 14**) • Cofferdam dewatering will be necessary to prevent death of fish • Bypass pump inlets will need to be fitted with fish protection screens • Backfill with native material to maintain existing flow and water depth • Any part of equipment operating on the banks and/or over the water shall be free of fluid leaks and externally cleaned and/or degreased • All equipment maintenance and refueling shall be conducted at least 30 m away from waterbodies/water sources • The Contractor will have a robust Spill Management Plan in place during construction and the spill kit on-site should contain a supply of absorbent products, such as booms, pads and socks

I.D. #	I.D. # Sub-Issues	Potential Impacts/Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
		thermal cues or temperature barriers for migrating fish • Industrial equipment may release deleterious materials (e.g., oil, fuel, debris, grease) into the drains and any heavy equipment entering a waterbody may cause bank erosion and possibly harm or kill aquatic species.		
3. Human Health	3.1 Construction Noise	• Potential noise impacts during construction.	Area residents, County of Essex, Town of Essex, Municipality of Lakeshore, Town of Kingsville, MECP	To minimize impacts on adjacent lands, the following best management practices related to noise will be in place during construction: • Where possible, major construction activities will be scheduled to take place during daytime hours (7:00 a.m. – 6:00 p.m.) to avoid sensitive nighttime periods • All equipment will be maintained in an operating condition that prevents unnecessary noise, including non-defective muffler systems, properly secured components and the lubrication of moving parts • Idling of equipment will be restricted to the minimum necessary to perform the specified work.
	3.2 Climate Change and Air Quality	• Potential fugitive dust, air quality and climate change impacts caused by construction and construction traffic.	Area residents, County of Essex, Town of Essex, Municipality of Lakeshore, Town of Kingsville, MECP	General contract provisions will be included in the construction contract including: • Use well-maintained equipment and machinery and comply with operating specifications • Minimize operation and idling of gas-powered equipment and vehicles, especially during smog advisories • Minimize vehicular traffic on exposed soils and stabilize high traffic areas with suitable cover material • Avoid excavation and other construction activities with potential to release airborne particulates during windy and prolonged dry periods • Cover or otherwise contain loose construction materials with potential to release airborne particulates during transport, installation, or removal • Restore disturbed areas as soon as possible to minimize the duration of soil exposure.

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	3.3 Illumination	• Potential light trespass and increased night sky pollution.	Area residents, County of Essex, Town of Essex, Municipality of Lakeshore, Town of Kingsville, MECP	• Potential impacts will be reduced by LED luminaires that emit zero up-light.
	3.4 Source Water Protection	• Potential for ancillary project activities (e.g., application of road salt, handling and storage of fuel, etc.) may pose a low risk to local groundwater and surface water quality.	MECP, MNRF, Conservation Authority, County of Essex, Town of Essex, Municipality of Lakeshore, Town of Kingsville	• All equipment maintenance and refueling shall be conducted at least 30 m away from waterbodies/water sources • The Contractor will have a robust Spill Management Plan in place during construction and the spill kit on-site should contain a supply of absorbent products, such as booms, pads and socks • Apply current best management practices (i.e., MTO's Salt Management Plan).

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	3.5 Spills handling and Contaminated Materials	• Potential adverse impacts of spills on environmental and natural features including release of deleterious substances.	Conservation Authority, County of Essex, Town of Essex, Municipality of Lakeshore, Town of Kingsville	• Contract General Conditions specifies incident management requirements following relevant legislation including the Environmental Protection Act, Fisheries Act, Gasoline Handling Act, Ontario Pesticides Act, Ontario Water Resources Act and Transportation of Dangerous Goods Act.
	3.6 Excess Soil Management/Contaminated Material	• Contaminated soil was identified within the Highway right-of-way and on properties acquired by MTO to accommodate municipal road realignments.	MECP, MNRF, Conservation Authority, County of Essex, Town of Essex, Municipality of Lakeshore, Town of Kingsville	• All excess materials including contaminated soils, will be handled in accordance with Provincial legislation.

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	3.7 Drainage and Stormwater Management	• Potential disturbance of existing well-vegetated drainage system.	Conservation Authority, County of Essex, Town of Essex, Town of Lakeshore, Town of Kinsgsville	• The change in the alignment will require the addition of erosion/scour protection on the outside of the bend in the channel • Based on the configuration of channel and culvert inlet, it is recommended that Type I rock protection be used on the outside of the channel bend immediately upstream of the proposed new culvert crossing South Talbot Road • An erosion and sedimentation control plan will be included in the construction contract to mitigate temporary and long term impacts to vegetation. Generally this mitigation will include placing seed and cover as quickly as possible in addition to the installation of erosion and sediment control measures, including a rip-rap apron.
4. Cultural Resources	4.1 Deeply buried cultural deposits and unmarked human remains	• Potential destruction/disturbance during construction.	Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	• Should unassessed buried archaeological resources be uncovered during construction, these may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario Heritage Act. Upon discovering the archaeological resources, the Contractor must cease alteration of the local site area immediately and notify the Contract Administrator who shall engage a licensed archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the Ontario Heritage Act. • Any person discovering human remains must immediately notify the police or coroner and the Registrar of Cemeteries, Ministry of Government Services. Notification to the project Environmental Manager and MTO Environmental Planner will occur so that the MTO Regional Archaeologist can be informed.
	4.2 Built Heritage	• Potential destruction/disturbance during construction.	MHSTCI	• Impacts to Built Heritage are not anticipated as part of this project.

Appendix A

Consultation Materials

Title	Surname	First Name	Organization	Department	Title	Address	City/Prov	Postal Code	Telephone	Fax	E-Mail
ELECTED OFFICIALS											
Mr.	Natyshak	Taras			MPP - Essex	316 Talbot Street North	Essex, Ontario	N8M 2E1	519-776-6420	519-776-6980	tnatyshak-co@ndp.on.ca
Mr.	Snively	Larry	Town of Essex		Mayor and Council	33 Talbot Street South	Essex, Ontario	N8M 1A8	519-890-2381		lsnively@essex.ca
Mr.	Bain	Tom	Municipality of Lakeshore		Mayor of Municipality of Lakeshore and Warden of County of Essex	1784 Myers Rd	Woodslee, Ontario	N0R 1V0	519-728-1975 ext 298		tbain@lakeshore.ca
Mr.	Santos	Nelson	Town of Kingsville		Mayor and Council	2021 Division Road North	Kingsville, Ontario	N9Y 2Y9	519-769-5259		nsantos@kingsville.ca
Mr.	Garon	Joe	Town of Essex		Councillor, Ward 1	33 Talbot Street South	Essex, Ontario	N8M 1A8	519-890-5653		jgaron@essex.ca
	Bowman	Morley	Town of Essex		Councillor, Ward 1	33 Talbot Street South	Essex, Ontario	N8M 1A8	519-890-4273		mbowman@essex.ca
Ms.	Verbeek	Kim	Town of Essex		Councillor, Ward 2	33 Talbot Street South	Essex, Ontario	N8M 1A8	519-890-5723		kverbeek@essex.ca
MUNICIPALITIES											
Mr.	Auger	Robert	Town of Essex	Administration	Manager of Legislative Services (Clerk)	33 Talbot Street South	Essex, Ontario	N8M 1A8	519-776-7336 ext 1101		clerks@essex.ca
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Ms.	Jabbour	Rita	Town of Essex		Town Planner	33 Talbot Street South	Essex, Ontario	N8M 1A8			rjabbour@essex.ca
Mr.	Meloche	Richard	Town of Essex		Deputy Mayor	33 Talbot Street South	Essex, Ontario	N8M 1A8	519-982-2776		rmeloche@essex.ca
Mr.	Aldridge	Austin	Town of Essex		Facility Clerk	33 Talbot Street South	Essex, Ontario	N8M 1A8	519-776-7336 ext. 1301		aaldridge@essex.ca
Mr.	Morassut	Jake	Town of Essex	Community Services	Facility Clerk	33 Talbot Street South	Essex, Ontario	N8M 1A8	519-776-8717		jmorassut@essex.ca
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Mr.	Norton	John	Town of Kingsville	Administration	CAO	2021 Division Road North	Kingsville, Ontario	N9Y 2Y9	519-733-2305		jnorton@kingsville.ca
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Mr.	Martinho	Shaun	Town of Kingsville	Public Works	Public Works Manager	2021 Division Road North	Kingsville, Ontario	N9Y 2Y9	519-733-2305		smartinho@kingsville.ca
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Mr.	Del Greco	Tim	Town of Kingsville	Municipal Services	Manager	2021 Division Road North	Kingsville, Ontario	N9Y 2Y9	519-733-2305		tdelgreco@kingsville.ca
Mr.	Bziuk	Peter	County of Essex	Design and Construction Services	Manager	360 Fairview Avenue West	Essex, Ontario	N8M 1Y8	519-796-7827		pbziuk@countyofessex.ca
Mr.	Fishleigh	Mark	County of Essex		Field Services Engineer	360 Fairview Avenue West	Essex, Ontario	N8M 1Y8	519-776-6441		mfishleigh@countyofessex.ca
Ms.	Birch	Mary	County of Essex	Administration	Director of Council Services / Clerk	360 Fairview Avenue West	Essex, Ontario	N8M 1Y8	519-776-6441 ext 1335		mbirch@countyofessex.ca
Mr.	Galloway	Mike	County of Essex	Administration	CAO	360 Fairview Avenue West	Essex, Ontario	N8M 1Y8	519-776-6441		
Ms.	Kalbol	Krystal	County of Essex	Engineering	Manager, Transportation Planning	360 Fairview Avenue West	Essex, Ontario	N8M 1Y8	519-776-6441 ext 1316		kkalbol@countyofessex.ca
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	Habiba	Sumaiya	County of Essex		EA Coordinator	360 Fairview Avenue West	Essex, Ontario	N8M 1Y8	519-776-6441 ext. 1385		shabiba@countyofessex.ca
Ms.	Mustac	Jane	County of Essex	Engineering	Director of Infrastructure Services, County Engineer	360 Fairview Avenue West	Essex, Ontario	N8M 1Y8	519-776-6441 ext 1397		jmustac@countyofessex.ca
Mr.	McBride	Truper	Municipality of Lakeshore	Administration	CAO	419 Notre Dame Street	Belle River, Ontario	N0R 1A0	519-728-2700		tmcbride@lakeshore.ca
Ms.	Newman	Kristen	Municipality of Lakeshore	Administration	Director of Legislative and Legal Services / Clerk	419 Notre Dame Street	Belle River, Ontario	N0R 1A0	519-728-2700 ext. 231		knewman@lakeshore.ca
Ms.	Ryall	Tammie	Municipality of Lakeshore	Community and Development Services	Director of Community and Development Services	419 Notre Dame Street	Belle River, Ontario	N0R 1A0	519-728-2818 ext 292		tryall@lakeshore.ca
Mr.	Wilson	Jeff	Municipality of Lakeshore	Engineering and Infrastructure Services	Manager of Operations	419 Notre Dame Street	Belle River, Ontario	N0R 1A0	519-728-2488 ext 611		jwilson@lakeshore.ca
Mr.	DiCiocco	Tony	Municipality of Lakeshore	Engineering and Infrastructure Services	Manager of Engineering Services	419 Notre Dame Street	Belle River, Ontario	N0R 1A0	519-728-2488 ext 297		tdiciocco@lakeshore.ca
Mr.	Cavacas	Nelson	Municipality of Lakeshore	Engineering and Infrastructure Services	Director of Engineering and Infrastructure Services	419 Notre Dame Street	Belle River, Ontario	N0R 1A0	519-728-1975 ext 287		ncavacas@lakeshore.ca
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Mr.	Hair	Aaron	Municipality of Lakeshore	Community and Development Services	Manager of Planning	419 Notre Dame Street	Belle River, Ontario	N0R 1A0	519-728-2700 ext. 256		ahair@lakeshore.ca
FEDERAL AGENCIES											
Mr.	Valere	Brent	Fisheries and Oceans Canada		Senior Fisheries Protection Program Biologist	867 Lakeshore Road	Burlington, Ontario	L7S 1A1	905-336-4914		brent.valere@dfo-mpo.gc.ca
Ms.	Tymoshuk	Jane	Fisheries and Oceans Canada		Fish Protection Biologist	867 Lakeshore Road	Burlington, Ontario	L7S 1A1			jane.tymoshuk@dfo-mpo.gc.ca
Mr.	Balint	David	Fisheries and Oceans Canada		Species at Risk Coordinator	867 Lakeshore Road, P.O. Box 5050	Burlington, Ontario	N6E 2V2	905-336-6237		
			Fisheries and Oceans Canada		General Contact	867 Lakeshore Road	Burlington, Ontario	L7S 1A1	905-336-4999		info@dfo-mpo.gc.ca
			Transport Canada		Environmental Coordinator	4900 Yonge Street, Suite 300	Toronto, Ontario	M2N 6A5	416-952-0230		EnviroOnt@tc.gc.ca
PROVINCIAL MINISTRIES											
Mr.	Hagerty	Thom	Ministry of Agriculture, Food and Rural Affairs	Food Safety and Environment Division	Director of Environmental Branch	Ontario Government Bldg 3rd Flr S, 1 Stone Rd W,	Guelph, Ontario	N1G 4Y2	519-826-4975		thom.hagerty@ontario.ca
Mr.	Marriott	David	Ministry of Agriculture, Food and Rural Affairs	Land Use Policy & Stewardship	Rural Planner, Western Ontario	Ontario Government Bldg 3rd Flr S, 1 Stone Rd W,	Guelph, Ontario	N1G 4Y2	519-766-5990		david.marriott@ontario.ca
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Mr.	MacKay	Neil	Ministry of Municipal Affairs and Housing	Community Planning and Development (West)	Planner (Acting)	College Park 13th Floor, 777 Bay St.	Toronto, Ontario	M7A 2J3	416-585-6421		neil.mackay@ontario.ca
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Mr.	MacKinnon	Allan	Ministry of the Environment, Conservation and Parks	Windsor Area Office	Senior Environmental Officer	4510 Rhodes Drive, Unit 620	Windsor, Ontario	N8W 5K5	519-981-9666		allan.mackinnon@ontario.ca
Ms.	Eplett	Megan	Ministry of the Environment, Conservation and Parks	Species at Risk Branch	Management Biologist	50 Bloomington Rd.	Aurora, Ontario	L4G 0L8	289-221-1794		megan.eplett@ontario.ca
Mr.	Wrigley	Rob	Ministry of the Environment, Conservation and Parks	Southwest Region	Manager	733 Exeter Road	London, Ontario	N6E 1L3	519-280-3077		rob.wrigley@ontario.ca
Ms.	Wilson	Marcelina	Ministry of the Environment, Conservation and Parks	Windsor Area Office	Supervisor (Acting)	4510 Rhodes Drive, Unit 620	Windsor, Ontario	N8W 5K5	519-562-4338		marcelina.wilson@ontario.ca
CONSERVATION AUTHORITIES											
Mr.	Lebedyk	Dan	Essex Region Conservation Authority	Conservation Services	Biologist	360 Fairview Avenue West, Suite 311	Essex, Ontario	N8M 1Y6	519-776-5209 ext 409		dlebedyk@erca.org
Mr.	Nelson	Mike	Essex Region Conservation Authority	Watershed Management Services	Watershed Planner	360 Fairview Avenue West, Suite 311	Essex, Ontario	N8M 1Y6	519-776-5209 ext 347		mnelson@erca.org
Mr.	Bryant	James	Essex Region Conservation Authority	Watershed Management Services	Interim Director	360 Fairview Avenue West, Suite 311	Essex, Ontario	N8M 1Y6	519-776-5209 ext. 246		jbryant@erca.org
Mr.	Money	Kevin	Essex Region Conservation Authority	Conservation Services	Director	360 Fairview Avenue West, Suite 311	Essex, Ontario	N8M 1Y6	519-776-5209 ext. 351		kmoney@erca.org
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			Heritage Essex		Assistant Manager Administration	87 Station Street	Essex, Ontario	N8M 2C5	519-776-9800		heritageessex@bellnet.ca
Ms.	Armstrong	Shelley	Greater Essex County District School Board		Superintendent of Business	P.O. Box 210, 451 Park Street West	Windsor, Ontario	N9A 6K1	519-255-3200 ext 10210		shelley.armstrong@publicboard.ca
Ms.	Kelly	Erin	Greater Essex County District School Board		Director of Education	P.O. Box 210, 451 Park Street West	Windsor, Ontario	N9A 6K1	519-255-3200 ext 10259		Director@publicboard.ca
Mr.	Lyons	Terry	Windsor-Essex Catholic District School Board		Director of Education	1325 California Avenue	Windsor, Ontario	N9B 3Y6	519-253-2481 ext 1201		director@wecdsb.on.ca
Mr.	Koppeser	Greg	Windsor-Essex Catholic District School Board		Manager of Construction & Engineering	1325 California Avenue	Windsor, Ontario	N9B 3Y6	519-253-2481 ext. 1211		greg_koppeser@wecdsb.on.ca
Mr.	Picard	Joseph	Conseil Scolaire Catholique Providence	Administration	Director of Education	7515 Forest Glade Dr.	Windsor, Ontario	N8T 3P5	519-948-9227		picajose@cscprovidence.ca
			Essex County Federation of Agriculture		General Inbox	360 Fairview Avenue West, Suite 320	Essex, Ontario	N8M 3G4	519-776-5159		ecfa@primus.ca
Mr.	Gallant	Martin	Windsor-Essex Student Transportation Services		Planning and Data Services Supervisor	360 Fairview Avenue West, Suite 318	Essex, Ontario	N8M 3G4	519-776-6431 ext. 204		Martin@buskids.ca marty@buskids.ca
Ms.	Meret-Dybenko	Gina	Windsor Essex Economic Development Corporation		Economic Development Officer	119 Chatham Street West, Unit 100	Windsor, Ontario	N9A 5M7	519-255-9200 ext. 2228		Gmeret@windsoressexsmallbusiness.com
Ms.	Stark	Wendy	Windsor Essex Economic Development Corporation		Manager, Business Retention and Expansion	119 Chatham Street West, Unit 100	Windsor, Ontario	N9A 5M7	519-255-9200 ext. 2225		wstark@choosewindsoressex.com
Mr.	MacKenzie	Stephen	Windsor Essex Economic Development Corporation		President & CEO	700 California Ave, Suite 200	Windsor, Ontario	N9B 222	519-255-9200 ext. 2237		MacKenzie@choosewindsoressex.com
Mr.	Naidu	Rakesh	Windsor Essex Regional Chamber of Commerce		President & CEO	2575 Ouellette Place	Windsor, Ontario	N8X 1L9	519-966-3696 ext. 222		rnaidu@windsoressexchamber.org
Mr.	Mockler	Greg	Royal Astronomical Society of Canada		Treasurer	1508 Greenwoord Road	Kingsville, Ontario	N9Y 2V7			greg.mockler@live.com
Mr.	Livingstone	Mahayarrahh-Starr	Royal Astronomical Society of Canada	Windsor Centre	Director of Public Education, Light Pollution Abatement and Councillor	1508 Greenwood Road	Kingsville, Ontario	N9Y 2V7	519-984-3572		mahayarrahh@gmail.com
EMERGENCY SERVICES											

Title	Surname	First Name	Organization	Department	Title	Address	City/Prov	Postal Code	Telephone	Fax	E-Mail
Mr.	Arnel	Rick	Town of Essex	Essex Fire & Rescue Service	Fire Chief / Community Emergency Management Coordinator	55 Alice Street N	Essex, Ontario	N8M 1C9	519-776-7132 ext. 1201		rarnel@essex.ca
Mr.	Williamson	Don	Municipality of Lakeshore	Fire Services	Fire Chief	419 Notre Dame St	Belle River, Ontario	N0R 1A0	519-728-0550		dwilliamson@lakeshore.ca
Mr.	Parsons	Chuck	Town of Kingsville Fire Department		Fire Chief	2021 Division Rd. North	Kingsville, Ontario	N9Y 2Y9	519-733-2314		cparsons@kingsville.ca
Mr.	Quennell	John	Town of Kingsville Fire Department	Office Administration and South Station	Deputy Fire Chief	2021 Division Rd North	Kingsville, Ontario	N9Y 2Y9	519-733-2314		jquennell@kingsville.ca
Ms.	Bilokraly	Lori	Town of Kingsville Fire Department		Administration	2021 Division Rd. North	Kingsville, Ontario	N9Y 2Y9	519-733-2314		lbilokraly@kingsville.ca
Mr.	Bondy	Wade	Town of Tecumseh	Fire and Rescue Services	Fire Chief	985 Lesperance Road	Tecumseh, Ontario	N8N 1W9	519-979-4041 ext 210		wbondy@tecumseh.ca
Mr.	Kavanagh	Kevin	Town of Tecumseh		Deputy Fire Chief	917 Lesperance Road	Tecumseh, Ontario	N8N 1W9	519-979-4041 ext. 205		kkavanagh@tecumseh.ca
Ms.	Kelly	Debbie	Town of Tecumseh	Fire and Rescue Services	admin	917 Lesperance Road	Tecumseh, Ontario	N8N 1W9	519-979-4041		dkelly@tecumseh.ca
Mr.	Laforet	Stephen	Windsor Fire and Rescue Services	Fire Services	Fire Chief	815 Goyeau Street	Windsor, Ontario	N9A 1H7	519-253-6573		slaforet@citywindsor.ca
Deputy	Waffle	Jamie	Windsor Fire and Rescue Services	Fire Services	Deputy	815 Goyeau Street	Windsor, Ontario	N9A 1H7	519-253-6573		jwaffle@citywindsor.ca
Ms.	Kanwischer	Jill	Windsor Fire and Rescue Services	Fire Services	Admin	815 Goyeau Street	Windsor, Ontario	N9A 1H7	519-253-6573		jkanwischer@citywindsor.ca
Mr.	Krauter	Bruce	Essex-Windsor EMS		Chief	920 Mercer Street	Windsor, Ontario	N9A 1N6	519-776-6441 ext 2654		bkrauter@countyofessex.ca
Mr.	Grant	Chris	Essex-Windsor EMS	Planning and Physical Resources	Deputy Chief	920 Mercer Street	Windsor, Ontario	N9A 1N6	519-256-1315 ext 2226		cgrant@countyofessex.ca
Mr.	Smith	Jamie	Ontario Provincial Police	OPP Traffic Management Unit, Essex County		1219 Hicks Road P.O. Box 910	Essex, Ontario	N8M 2Y2	519-723-2493		Jamie.Smith@opp.ca
Ms.	Pharand	Lise	Ontario Provincial Police		Office Administration	1219 Hicks Road P.O. Box 910	Essex, Ontario	N8M 2Y2	519-723-2493		lise.pharand@opp.ca
Insp.	Miller	Glenn	Ontario Provincial Police	Essex County Detachment	Detachment Commander	1219 Hicks Road P.O. Box 910	Essex, Ontario	N8M 2Y2	519-723-2491	519-723-2497	glenn.miller@opp.ca
FIRST NATIONS AND METIS - TO BE CONTACTED BY MTO ONLY											
Chief	Duckworth	Mary	Caldwell First Nation	Chief & Council		14 Orange Street	Leamington, Ontario	N8H 1P5	519-322-1766		chief@caldwellfirstnation.ca
Ms.	van Oirschot	Nikki	Caldwell First Nation	Chief & Council		14 Orange Street	Leamington, Ontario	N8H 1P5	519-322-1766		nikki@caldwellfirstnation.ca
Councillor	Perkins	Robyn	Caldwell First Nation	Chief and Council		14 Orange Street	Leamington, Ontario	N8H 1P5	519-322-1766		councillor.perkins@caldwellfirstnation.ca
Chief	French	Jacqueline	Chippewas of the Thames First Nation	Chief & Council		320 Chippewa Road	Muncey, Ontario	N0L 1Y0	519-289-5555		jfrench@cottfn.com
Mr.	Deleary	Mike	Chippewas of the Thames First Nation	Executive Administrator		320 Chippewa Road	Muncey, Ontario	N0L 1Y0	519-289-5555 ext. 234		mike.deleary@cottfn.com
Chief	Peters	Mark	Munsee-Delaware First Nation	Chief & Council		289 Jubilee Road, RR 1	Muncey, Ontario	N0L 1Y0	519-289-5396		chief.peters@munsee.ca
Mr.	Phillips	Stacey	Munsee-Delaware Nation			279 Jubilee Road, R.R. #1	Muncey, Ontario	N0L 1Y0	(519) 289-5396 ext. 231		consultation@munsee.ca
Chief	Chrisjohn	Adrian	Oneida Nation of the Thames	Chief & Council		2210 Elm Avenue	Southwold, Ontario	N0L 2G0	519-652-6161		adrian.chrisjohn@oneida.on.ca
Ms.	Hill	Cherilyn	Oneida Nation of the Thames	Political Office Staff	Political Office Manager	2210 Elm Avenue	Southwold, Ontario	N0L 2G0	519-652-6161		cherilyn.hill@oneida.on.ca
Chief	Plain	Christopher	Aamjiwnaang First Nation (Chippewas of Sarnia)	Chief & Council		978 Tashmoo Avenue	Sarnia, Ontario	N7T 7H5	519-336-8410		Chief.plain@aamjiwnaang.ca
Ms.	Simon	June	Aamjiwnaang First Nation (Chippewas of Sarnia)	Administration	Band Manager	978 Tashmoo Avenue	Sarnia, Ontario	N7T 7H5	519-336-8410 ext. 288		jsimon@aamjiwnaang.ca
Chief	Stonefish	Denise	Delaware Nation	Chief & Council		14760 School House Line, RR3	Thamesville, Ontario	N0P 2K0	519-692-3936		denise.stonefish@delawarenation.on.ca
Ms.	Snake	Kimberly	Delaware Nation			14760 School House Line, RR3	Thamesville, Ontario	N0P 2K0	519-692-3936		Director.operations@delawarenation.on.ca
Chief	Sampson	Charles	Walpole Island First Nation	Chief & Council		117 Tahgahoning Road, R.R. #3	Wallaceburg, Ontario	N8A 4K9	519-627-1481		Charles.sampson@wifn.org
Ms.	Blackeagle	Alicia	Walpole Island First Nation	Administration	Executive Assistant	117 Tahgahoning Road, R.R. #3	Wallaceburg, Ontario	N8A 4K9	519-627-1481		alicia.blackeagle@wifn.org
Chief	Henry	Jason	Chippewas of Kettle and Stony Point	Chief and Council		6247 Indian Lane	Lambton Shores, Ontario	N0N, 1J2	519-786-2125		KPAssistant@kettlepoint.org
Ms.	George	Valerie	Chippewas of Kettle and Stony Point			6247 Indian Lane	Lambton Shores, Ontario	N0N, 1J2	519-786-2125		Valerie.George@kettlepoint.org
		Marc	Metis Nation of Ontario								marcs@metisnation.org
Mr.	Fedyk	Mike	Metis Nation of Ontario	Head Office	Director of Communications	Suite 1100 - 66 Slater Street	Ottawa, Ontario	K1P 5H1			mikef@metisnation.org
Ms.	Norheim	Lisa	Metis Nation of Ontario	Lands, Resources & Consultations	Director	75 Sherbourne Street, Unit 311	Toronto, Ontario	M5A 2P9	416-977-9881		lindan@metisnation.org
UTILITIES											
Ms.	Sinclair	Ellen	Union Gas Limited/Enbridge		Construction Project Manager	3840 Rhodes Drive	Windsor, Ontario	N9A 6N7	519-251-6814		ersinclair@uniongas.com
Mr.	Yacoub	Hani	Enbridge Gas Inc.		Senior Advisor New Business Projects	PO Box 700, 3840 Rhodes Drive	Windsor, Ontario	N9A 6N7	519-251-6814		Hyacoub@uniongas.com
Mr.	Cincurak	Mike	Enbridge Gas Inc.		Advisor Construction & Growth Project				519-250-2200 ext. 5296729		Mike.Cincurak@enbridge.com
Mr.	Raymond	Frank	Cogeco Cable			1241 Confederation St	Windsor, Ontario				raymond.frank@cogeco.com
Mr.	Nohra	Anthony	Cogeco Cable		Network Planner	2525 Dougall Ave	Windsor, Ontario	N8X 5A7	226-345-1359		anthony.nohra@cogeco.com
Mr.	Fuerth	Tyson	Bell Canada		Manager, Network Provisioning	1149 Goyeau Street	Windsor, Ontario	N9H 1H9	519-973-4711		tyson.fuerth@bell.ca
Mr.	Kovacs	Aaron	Bell Canada			11936 Tecumseh Road East	Tecumseh, Ontario	N8N 1L7	519-979-2975		aaron.kovacs@bell.ca
Ms.	Lawrence	Lindsay	Hydro One Networks Inc.		Distribution Planning Technician				519-537-7172 ext. 2226		Lindsay.Lawrence@HydroOne.com
Mr.	Garg	Ajay	Hydro One Networks Inc.		Regional Planning Coordination	483 Bay Street	Toronto, Ontario	M5G 2PG	416-345-5420		ajay.garg@hydroone.com
Ms.	Crow	Amanda	Hydro One Networks Inc.		Lines Customer Support Clerk				519-537-7172 ext 2291		Amanda.Crow@HydroOne.com
Mr.	Dionne	Albert	Municipality of Lakeshore		Manager of Water and Waste Water	419 Notre Dame Street	Belle River, Ontario	N0R 1A0	519-728-1975 ext 291		adionne@lakeshore.ca
Mr.	Wilson	Jeff	Municipality of Lakeshore		Manager of Operations	419 Notre Dame Street	Belle River, Ontario	N0R 1A0	519-728-1975 ext 517		jwilson@lakeshore.ca
Mr.	Graf	Andy	Town of Essex		Manager of Environmental Services	33 Talbot Street South	Essex, ON	N8M 1A8	519-738-6804		agraf@essex.ca
Mr.	Jubenville	Dave	Ontario Clean Water Agency (OCWA)	Essex Regional Hub Office	Regional Hub Manager	276 Rourke Line Road	Belle River, Ontario	N0R 1A0	519-727-6256		djubenville@ocwa.com
Ms.	Budden	Susan	Ontario Clean Water Agency (OCWA)	Essex East (South) Hub	Operations Manager	276 Rourke Line Road	Belle River, Ontario	N0R 1A0	519-727-6256		sbudden@ocwa.com
Mr.	Bouchard	Rodney	Union Water Supply System		General Manager	1615 Union Ave	Ruthven, Ontario	N0P 2G0	519-326-1668		rbouchard@unionwater.ca
Mr.	MacAulay	Norm	ELK Energy		Operations Manager	172 Forest Avenue	Essex, ON	N8M 3E4	519-776-5291 ext 22		Nmacaulay@elkenergy.com
Mr.	Hartleib	Dave	MNSI Telecom		Outside Plant Manager	3363 Tecumseh Road East	Windsor, Ontario	N8W 1H4	519-985-8435		hartleib@mnsi.net
MEDIA CONTACTS											
	Argent	Sylene	Essex Free Press								syleneargent@gmail.com
	Cranston	Jennifer	Essex Free Press								essexfreepress@on.aibn.com
Mr.	Ensing	Christopher	CBC				**Windsor, Ontario**		**519-792-9004**		christopher.ensing@cbc.ca
LANDOWNER ADDRESSES - TOWN OF ESSEX (REDACTED)											
LANDOWNER ADDRESSES - TOWN OF KINGSVILLE (REDACTED)											
LANDOWNER ADDRESSES - MUNICIPALITY OF LAKESHORE (REDACTED)											
RECEIVED THROUGH WEBSITE (REDACTED)											
Comment received via email and telephone (REDACTED)											
PIC 2 Attendance - June 20, 2013 (REDACTED)											
ADDED DURING DETAIL DESIGN (CONTRACT 1) (REDACTED)											

Highway 3 Widening
Contract 2020-3006
Contact List

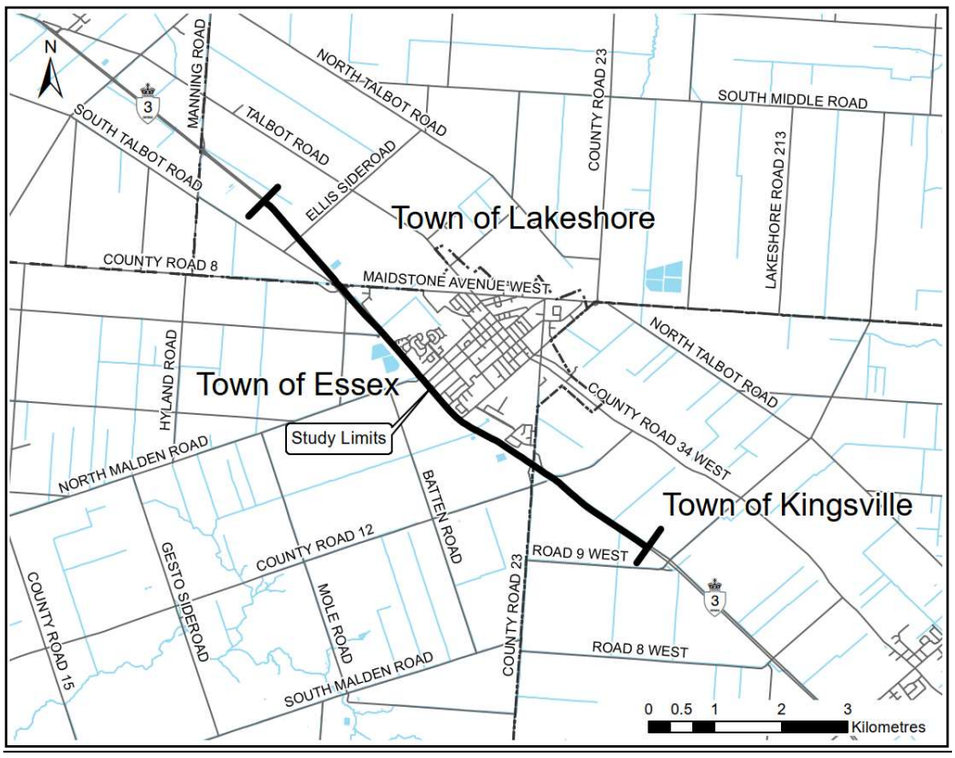
Title	Surname	First Name	Organization	Department	Title	Address	City/Prov	Postal Code	Telephone	Fax	E-Mail
ADDED DURING DETAIL DESIGN (CONTRACT 2) (REDACTED)											
TAKEN OFF LIST (REDACTED)											

NOTICE OF STUDY COMMENCEMENT
Highway 3 Widening in the Town of Essex
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23
(Contract 2020-3006)

The Project

The Ontario Ministry of Transportation (MTO) has retained Coco Paving Inc. (Coco) and Dillon Consulting Limited (Dillon) to complete the Design-Build (DB) contract for the Class Environmental Assessment (EA), detailed design and construction of the Highway 3 Widening in the Town of Essex.

Highway 3 work will be initiated in 2021 with construction being completed in 2023, subject to approvals. Additional project information and construction updates will be posted to the project website at www.hwy3.ca. The website will be updated as the project progresses.



The Process

The project is being completed following the MTO *Class EA for Provincial Transportation Facilities* (2000) for a Group "B" undertaking. Group "B" projects are considered major improvements to existing transportation facilities. This project will build upon the previously completed Preliminary Design as documented in the November 2016 Transportation Environmental Study Report (TESR) Addendum, which received Environmental Clearance in January 2017.

To allow construction to move ahead in unison with the design process, three construction contracts will be produced. Prior to each of the three construction contracts, a Design and Construction Report (DCR) will be prepared to document the scope of work, potential impacts and mitigation measures. A Notice of Completion will be issued for each DCR, advising of the start of the 30-day public review period.

Public and Agency Consultation

As part of this project, the project team is requesting your comments on the proposed work. All comments are requested by **December 23, 2020**. If you would like to speak with a project team member directly, please contact one of the team members listed below.

Dillon Consulting Limited
Jeff Matthews, P. Eng.
Design Project Manager
130 Dufferin Avenue, Suite 1400
London, Ontario, N5R 5R2
519-438-6192 Ext. 1275
Hwy3Essex@dillon.ca

Ontario Ministry of Transportation
Graydon Botsford, P. Eng.
MTO Project Engineer
659 Exeter Road
London, Ontario, N6E 1L3
519-200-4604
Graydon.botsford@ontario.ca

Information collected will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record. If you have accessibility requirements to participate in this project, please contact one of the team members listed above.

Des renseignements sont disponibles en francais en composant Sydney Tasfi, 1.888.345.5668 ext. 1005.

Notice of Study Commencement

Highway 3 Widening in the Town of Essex
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23 (Contract 2020-3006)

THE PROJECT

The Ontario **Ministry of Transportation (MTO)** has retained **Coco Paving Inc. (Coco)** and **Dillon Consulting Limited (Dillon)** to complete the Design-Build (DB) contract for the Class Environmental Assessment (EA), detailed design and construction of the Highway 3 Widening in the Town of Essex.

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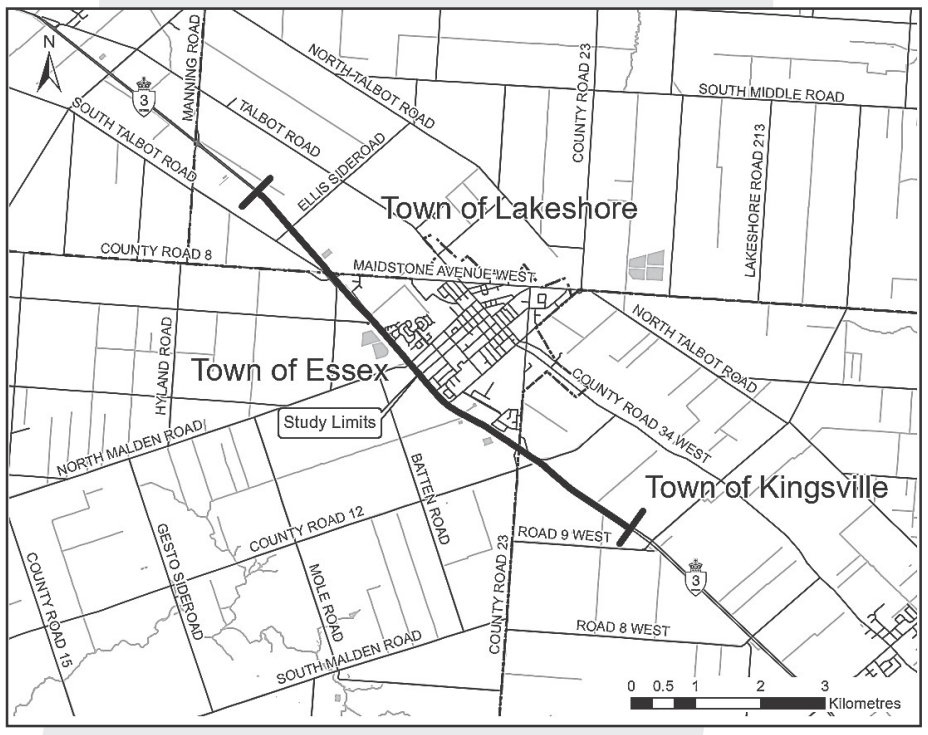
Jeff Matthews, P.Eng.
Design Project Manager
Dillon Consulting Limited
130 Dufferin Avenue, Suite 1400,
London, ON N5R 5R2
tel: 519-438-6192, ext. 1275
e-mail: Hwy3Essex@dillon.ca

Graydon Botsford, P.Eng.
MTO Project Engineer
Ontario Ministry of Transportation
659 Exeter Road
London, ON N6E 1L3
tel: 519-200-4604
e-mail: Graydon.botsford@ontario.ca



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Des renseignements sont disponibles en francais en composant Sydney Tasfi, 1 888 345-5668, poste 1005.

Avis de début d'étude

Élargissement de l'autoroute 3 dans la ville d'Essex, de 0,8 km à l'ouest d'Ellis Side Road en direction est jusqu'à 2,2 km à l'est d'Essex County Road 23 (contrat 2020-3006)

LE PROJET

Le ministère des **Transports de l'Ontario (MTO)** a retenu les services de **Coco Paving Inc. (Coco)** et **Dillon Consulting Limited (Dillon)** pour réaliser le contrat de conception-construction (CC) visant la conception détaillée et de l'élargissement de l'autoroute 3 dans la ville d'Essex en vertu d'une évaluation environnementale de portée générale.

Les travaux de l'autoroute 3 commenceront en 2021 et la construction s'achèvera en 2023, sous réserve des approbations nécessaires. Des informations supplémentaires sur le projet et des mises à jour sur la construction seront publiées sur le site Web du projet à l'adresse www.hwy3.ca. Le site Web sera mis à jour au fur et à mesure de l'avancement des travaux.

LE PROCESSUS

Le projet est en cours d'achèvement à la suite d'une *évaluation environnementale de portée générale pour les routes provinciales* (2000) du ministère des Transports pour une entreprise du groupe « B ». Les projets du groupe « B » sont considérés comme des améliorations majeures des routes existantes. Ce projet s'appuiera sur l'avant-projet préliminaire précédemment réalisé, dans sa version consignée dans l'addendum au rapport d'étude environnementale pour le transport de novembre 2016 qui a reçu l'autorisation environnementale en janvier 2017.

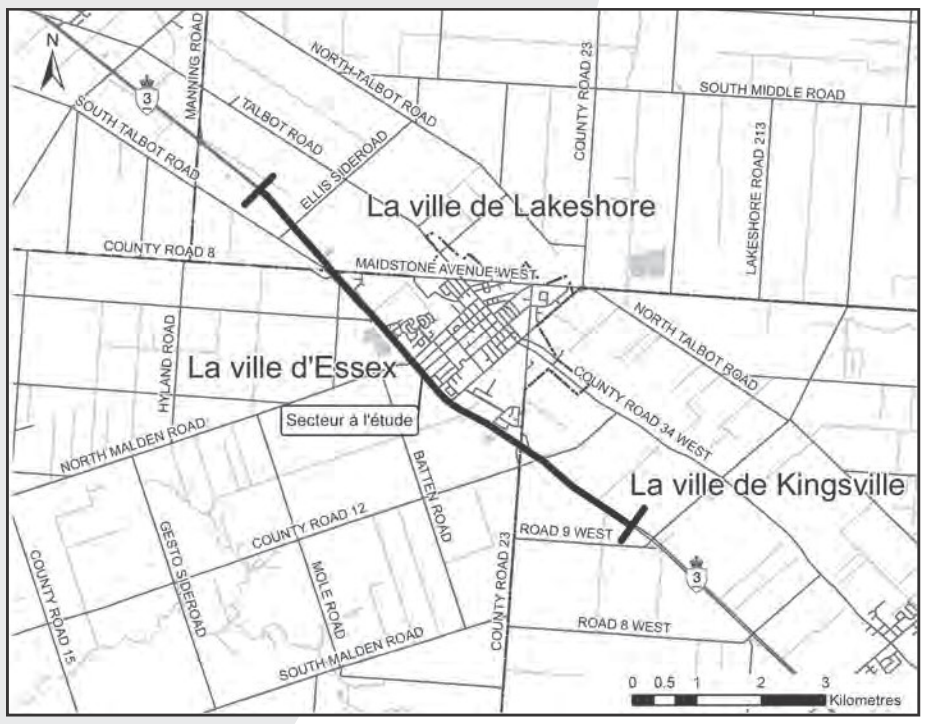
Pour permettre à la construction d'avancer en tandem avec le processus de conception, trois contrats de construction seront conclus. Avant chacun des trois contrats de construction, un rapport de conception et de construction (RCC) sera préparé pour exposer la portée des travaux, les effets potentiels et les mesures d'atténuation. Un avis d'achèvement sera délivré pour chaque RCC afin d'annoncer le début de la période d'examen public de 30 jours.

CONSULTATION DU PUBLIC ET DES AGENCES

Dans le cadre de ce projet, l'équipe de projet vous demande de lui faire part de vos commentaires sur le travail proposé. Tous les commentaires doivent nous parvenir avant le **23 décembre 2020.** Si vous souhaitez parler directement avec un membre de l'équipe, contactez l'une des personnes énumérées ci-dessous.

Jeff Matthews, ing.
Chef du projet de conception
Dillon Consulting Limited
130, avenue Dufferin, bureau 1400
London (Ontario) N5R 5R2
tél. : 519 438-6192 poste 1275
courriel : Hwy3Essex@dillon.ca

Graydon Botsford, ing.
Ingénieur de projet du MTO
Ministère des Transports de l'Ontario
659, chemin Exeter
London (Ontario) N6E 1L3
tél. : 519 200-4604
courriel : Graydon.botsford@ontario.ca



L'information recueillie sera utilisée conformément à la *Loi sur l'accès à l'information et la protection de la vie privée*. À l'exception des renseignements personnels, tous les commentaires feront partie du domaine public. Si vous avez des exigences d'accessibilité pour participer à ce projet, veuillez communiquer avec l'un des membres de l'équipe énumérés à gauche.

Vous pouvez vous procurer des renseignements en français en appelant Sydney Tasfi, au 1 888 345-5668 poste 1005.

Ontario

AVIS DE DÉBUT D'ÉTUDE
Élargissement de l'autoroute 3 dans la ville d'Essex
De 0,8 km à l'ouest d'Ellis Side Road en direction est jusqu'à 2,2 km à l'est d'Essex
County Road 23 (contrat 2020-3006)

Le projet

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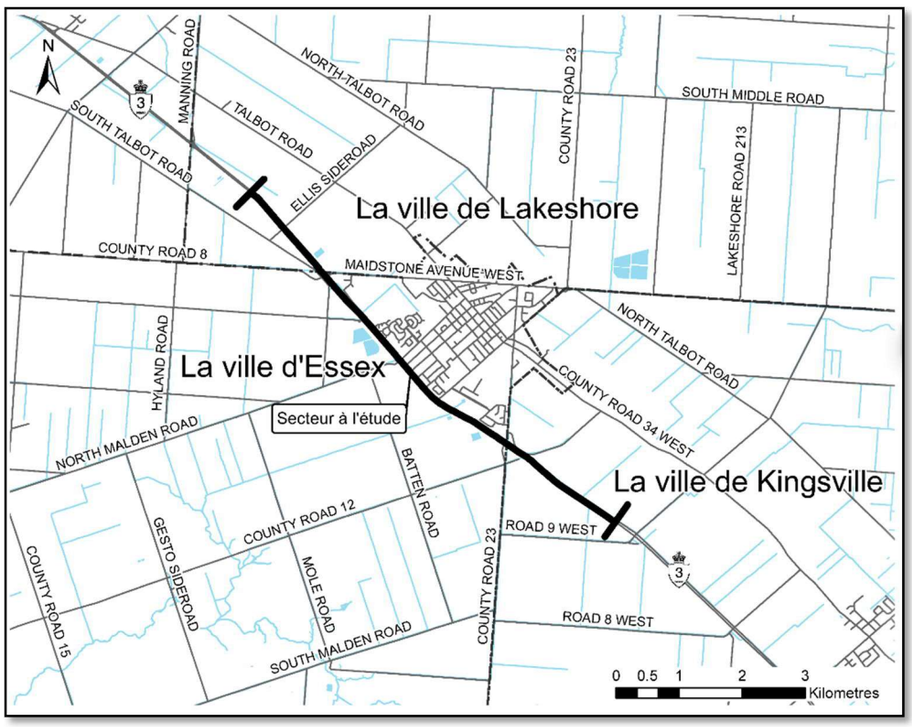

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Dillon Consulting Limited
Jeff Matthews, ing.
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130, avenue Dufferin, bureau 1400
London (Ontario) N5R 5R2
519 438-6192 poste 1275
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Ministère des Transports de l'Ontario
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Ingénieur de projet du MTO
659, chemin Exeter
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Vous pouvez vous procurer des renseignements en français en appelant Sydney Tasfi, au 1 888 345-5668 poste 1005.

MPP Notice of Study Commencement Cover Letter

November 30, 2020

Essex
Constituency office
316 Talbot Street North
Essex, Ontario
N8M 2E1

Attention: Mr. Taras Natyshak, MPP

Highway 3 Widening in the Town of Essex
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23 (Contract 2020-3006)
Notice of Study Commencement

Dear Mr. Natyshak:

As outlined in the enclosed notice, the Ontario Ministry of Transportation (MTO) has retained Coco Paving Inc. (Coco) and Dillon Consulting Limited (Dillon), to complete the Design-Build (DB) contract for the Class Environmental Assessment (EA), detailed design and construction of the Highway 3 Widening in the Town of Essex.

The project is being completed following the MTO *Class EA for Provincial Transportation Facilities* (2000) for a Group "B" undertaking. Group "B" projects are considered major improvements to existing transportation facilities. This project will build upon the previously completed Preliminary Design as documented in the November 2016, Transportation Environmental Study Report (TESR) Addendum, which received Environmental Clearance in January 2017.

To allow construction to move ahead in unison with the design process, three construction contracts will be produced. Prior to each of the three construction contracts, a Design and Construction Report (DCR) will be prepared to document the scope of work, potential impacts and mitigation measures. Each DCR will be made available for a 30-day public review period prior to the start of construction.

DILLON CONSULTING

130 Dufferin Avenue
Suite 1400
London, Ontario
Canada
N6A 5R2
Mail: Box 426
London, Ontario
Canada
N6A 4W7
Telephone
519.438.6192
Fax
519. 672.8209

Dillon Consulting Limited

If you have any comments, questions or concerns, please contact the undersigned or one of the team members listed on the enclosed notice. Your comments are requested by **December 23, 2020**.

Sincerely,

DILLON CONSULTING LIMITED

Brandon Fox, MCIP, RPP
for Jeff Matthews, P.Eng.
Design Project Manager

SET:rrk
Enclosure

cc: Mr. Graydon Botsford, MTO
Mr. Dave Colle, Coco

Our file: 20-2801

Sample of Indigenous Communities Notice of Study Commencement Cover Letter

Ministry of Transportation

Design and Engineering Branch
Environmental Delivery West

659 Exeter Road
London, Ontario N6E 1L3
Telephone: (519) 619-4086
Facsimile: (519) 873-4600
Kirstie.Houston@ontario.ca

Ministère des Transports

Direction de conception et d'ingénierie
Section de livraison environnementale de l'Ouest

659, rue Exeter
London (Ontario) N6E 1L3
Téléphone: (519) 619-4086
Télécopieur: (519) 873-4600

Ontario

December 7, 2020
ATTENTION: Chief Chris Plain via email: CPlain@aamjiwnaang.ca
Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia, ON
N7T 7H5

RE: ***Highway 3 Widening in the Town of Essex***
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23 (Contract 2020-3006)
Notice of Study Commencement

Dear Chief Chris Plain,

As outlined in the enclosed notice, the Ministry of Transportation, Ontario (MTO) has retained Coco Paving Inc. (Coco) and Dillon Consulting Limited (Dillon), to complete the Design-Build (DB) contract for the Class Environmental Assessment (EA), detailed design and construction of the Highway 3 Widening in the Town of Essex.

The project is being completed following the MTO *Class EA for Provincial Transportation Facilities* (2000) for a Group "B" undertaking. Group "B" projects are considered major improvements to existing transportation facilities. This project will build upon the previously completed Preliminary Design as documented in the November 2016, Transportation Environmental Study Report (TESR) Addendum, which received Environmental Clearance in January 2017.

To allow construction to move ahead in unison with the design process, three construction contracts will be produced. Prior to each of the three construction contracts, a Design and Construction Report (DCR) will be prepared to document the scope of work, potential impacts and mitigation measures. A Notice of Completion will be issued for each DCR, advising of the start of the 30-day public review period.

As part of this project, the project team is requesting your comments, questions and/or concerns, and confirmation of your desire to stay informed of the project. To provide information or request additional information, contact me at (519) 619-4086 or Kirstie.Houston@ontario.ca. Your comments are requested by **December 23, 2020**.

If you would prefer a meeting with ministry staff, that can also be arranged. Please contact me at your earliest convenience if you are interested in such a meeting.

Sincerely,

Kirstie Houston

Digitally signed by Kirstie Houston
DN: cn=Kirstie Houston, o=Ministry of Transportation, ou=Environmental Delivery West, email=kirstie.houston@ontario.ca, c=CA
Date: 2020.12.07 08:57:01 -05'00'

Kirstie Houston
Head (A), Environmental Delivery West

cc: Mr. Graydon Botsford, MTO
Mr. Dave Colle, Coco
Mr. Jeff Matthews, Dillon
Mr. Brandon Fox, Dillon

Sample of Agency/ Stakeholder Notice of Study Commencement Cover Letter

DILLON CONSULTING

December 7, 2020

Fisheries and Oceans Canada
867 Lakeshore Road, P.O. Box 5050
Burlington, Ontario
N6E 2V2

Attention: Mr. David Balint
Species at Risk Coordinator

Highway 3 Widening in the Town of Essex
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23 (Contract 2020-3006)
Notice of Study Commencement

Dear Mr. Balint:

As outlined in the enclosed notice, the Ministry of Transportation, Ontario (MTO) has retained Coco Paving Inc. (Coco) and Dillon Consulting Limited (Dillon), to complete the Design-Build (DB) contract for the Class Environmental Assessment (EA), detailed design and construction of the Highway 3 widening in the Town of Essex.

The project is being completed following the MTO *Class EA for Provincial Transportation Facilities* (2000) for a Group "B" undertaking. Group "B" projects are considered major improvements to existing transportation facilities. This project will build upon the previously completed Preliminary Design as documented in the November 2016, Transportation Environmental Study Report (TESR) Addendum, which received Environmental Clearance in January 2017.

To allow construction to move ahead in unison with the design process, three construction contracts will be produced. Prior to each of the three construction contracts, a Design and Construction Report (DCR) will be prepared to document the scope of work, potential impacts and mitigation measures. Each DCR will be made available for a 30-day public review period prior to the start of construction.

130 Dufferin Avenue
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Canada
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Mail: Box 426
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Telephone
519.438.6192
Fax
519. 672.8209

Dillon Consulting Limited

If you have any comments, questions or concerns, please contact the undersigned or one of the team members listed on the enclosed notice. Your comments are requested by **December 23, 2020**.

Vous pouvez vous procurer des renseignements en français en appelant Sydney Tasfi, au 1.888.345.5668, poste 1005.

Sincerely,

DILLON CONSULTING LIMITED

Brandon Fox, MCIP, RPP
for Jeff Matthews, P.Eng.
Project Manager

SET:rrk
Enclosure

cc: Mr. Graydon Botsford, MTO
Mr. Dave Colle, Coco

Our file: 20-2801

Highway 3 Widening

Sent
Thu, Dec 10, 2020 1:12 pm

Highway 3 Widening **Sent** 12/10/20 1:12PM

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Highway 3 Widening **Sent** 12/10/20 1:12PM

Overview

174 Recipients

Audience: MTO Projects (Tags: Highway 3 Widening)

Delivered: Thu, Dec 10, 2020 1:12 pm

Subject: Hwy 3 Widening - Notice of Study Commencement

0	$0.00	$0.00
Orders	Average order revenue	Total revenue

74	22	21	1
Opened	Clicked	Bounced	Unsubscribed

Successful deliveries	**153** 87.9%	Clicks per unique opens	**29.7%**
Total opens	**1,103**	Total clicks	**66**
Last opened	1/12/21 2:25PM	Last clicked	12/29/20 9:39AM
Forwarded	**0**	Abuse reports	**0**

Highway 3 Widening

Sent 12/10/20 1:12PM

Opens by location

Country	Opens	Percent
Canada	844	77.9%
USA	239	22.1%

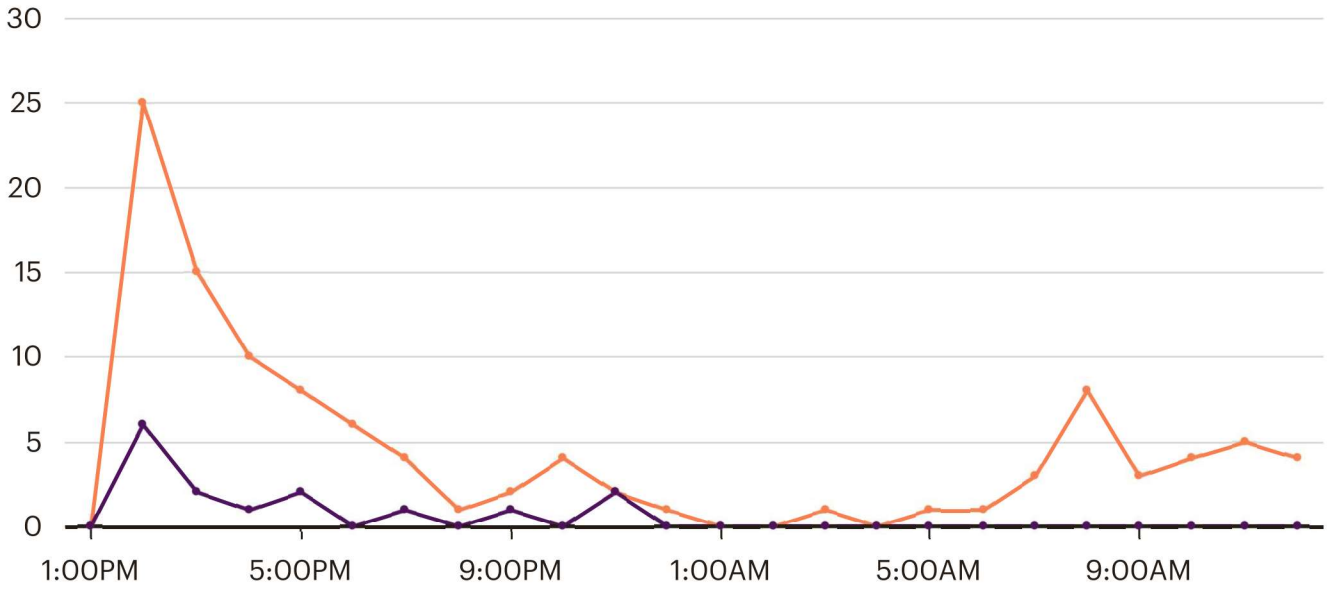
Highway 3 Widening

Sent 12/10/20 1:12PM

Subscriber activity

24-hour performance

Opens Clicks



Top links clicked

https://sites.google.com/site/highway3widening/	**66**
http://www.hwy3.ca	**0**

Subscribers with most opens

[redacted]	**58**
	46
	262

	26
	325

Highway 3 Widening **Sent** 12/10/20 1:12PM

Click performance

URL	Total	Unique
https://sites.google.com/site/highway3widening/	0	0
http://www.hwy3.ca	0	0

Highway 3 Widening

Sent 12/10/20 1:12PM

Social stats

No geographic clicks have been registered yet

No campaign URL activity to report yet.

Highway 3 Widening **Sent** 12/10/20 1:12PM

Advanced reports

Email domain performance

Domain	Email	Bounces	Opens	Clicks	Unsubs
[redacted]	15 (**9%**)	3 (**20%**)	8 (**67%**)	3 (**25%**)	0 (**0%**)
	15 (**9%**)	0 (**0%**)	10 (**67%**)	3 (**20%**)	0 (**0%**)
	13 (**7%**)	0 (**0%**)	2 (**15%**)	1 (**8%**)	0 (**0%**)
	12 (**7%**)	1 (**8%**)	9 (**82%**)	2 (**18%**)	0 (**0%**)
	11 (**6%**)	1 (**9%**)	5 (**50%**)	2 (**20%**)	0 (**0%**)
	108 (**62%**)	16 (**15%**)	40 (**43%**)	11 (**12%**)	1 (**1%**)

Re: Hwy 3 Widening - Notice of Study Commencement

1 message

Sylene Argent <syleneargent@gmail.com> Mon, Dec 14, 2020 at 10:01 AM
To: Dillon Consulting Limited <Hwy3Essex@dillon.ca>

Thank you for the notice. I was wondering if you wanted to follow up with an update article on the project or if you wanted me to pass along to office as an ad?

--
Sylene Argent
Editor/News Reporter
The Essex Free Press

January 27, 2021

Essex Free Press

Attention: Ms. Sylene Argent

Highway 3 Widening in the Town of Essex
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23
(Contract 2020-3006)

Dear Ms. Argent:

Thank you for your email. The Notice of Study Commencement has been published in the December 10, 2020, edition of the Essex Free Press.

Sincerely,

DILLON CONSULTING LIMITED

Brandon Fox, MCIP, RPP
for Jeff Matthews, P.Eng.
Project Manager

SET:rrk

cc: Mr. Graydon Botsford, MTO
Mr. Dave Colle, Coco

Our file: 20-2801

DILLON CONSULTING

130 Dufferin Avenue
Suite 1400
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Canada
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Mail: Box 426
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519.438.6192
Fax
519. 672.8209

Dillon Consulting Limited

DILLON CONSULTING

RE: Hwy 3 Widening - Notice of Study Commencement

1 message

Amanda.Crow@hydroone.com <Amanda.Crow@hydroone.com> Mon, Dec 14, 2020 at 11:41 AM
To: Hwy3Essex@dillon.ca
Cc: Brandon.Riddiford@hydroone.com, Steve.Meser@hydroone.com, Amanda.Crow@hydroone.com

Good morning,

Please let me know if you require anything from Hydro One at this time or if the below email is for information purposes only. We can arrange a site meet or phone call with a Hydro One technician if you would like to discuss the proposed scope of work.

Please advise.

Thank you,

Amanda Crow

Lines Customer Support Clerk

Distribution Work Management, WO1

Hydro One Networks Inc.

Tel: 519.537.7172 Ext 2291

Email: Amanda.Crow@HydroOne.com

January 27, 2021

130 Dufferin Avenue
Suite 1400
London, Ontario
Canada
N6A 5R2
Mail: Box 426
London, Ontario
Canada
N6A 4W7
Telephone
519.438.6192
Fax
519. 672.8209

Hydro One Networks Inc.

Attention: Ms. Amanda Crow

Highway 3 Widening in the Town of Essex
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23
(Contract 2020-3006)

Dear Ms. Crow:

Thank you for your email. The notice was distributed to provide stakeholders with information and to collect comments for the Detail Design phase of the project. At this time, no further information is required from Hydro One.

Sincerely,

DILLON CONSULTING LIMITED

Brandon Fox, MCIP, RPP
for Jeff Matthews, P.Eng.
Project Manager

SET:rrk

cc: Mr. Graydon Botsford, MTO
Mr. Dave Colle, Coco

Our file: 20-2801

DILLON CONSULTING

FW: Hwy 3 Widening - Notice of Study Commencement

1 message

Barboza, Karla (MHSTCI) <Karla.Barboza@ontario.ca> Thu, Dec 10, 2020 at 2:35 PM
To: Dillon Consulting Limited <Hwy3Essex@dillon.ca>
Cc: "Botsford, Graydon (MTO)" <Graydon.Botsford@ontario.ca>, "Kirzati, Katherine (MHSTCI)" <Katherine.Kirzati@ontario.ca>

Hi Jeff,

Thanks for sending this notice of study commencement for the detailed for Highway 3 Widening to the Ministry of Heritage, Sport, Tourism and Culture Industries.

Our ministry has provided comments on previous EAs related to Highway 3 which may overlap with this one.

We have the following on our files:

- Highway 3, Essex Road 27 to Essex Road 34, Kingsville (GWP 7-96-00) and Highway 3, Essex Road 27 to Essex Road 8, Essex/Kingsville (GWP 3074-12-00)
- Highway 3 Widening, Windsor to Leamington - Phase 3A (G.W.P. 317-98-00)
- Highway 3 Improvements between Essex County Road 23 and Essex County Road 34 (GWP 3021-18-00)
- Highway 3 Rehabilitation from Essex Road 34 to Highway 77 (GWP 3061-14-00)

Could you please advise whether a preliminary design was undertaken for this present notice?

Thanks in advance,

Karla

Karla Barboza MCIP, RPP, CAHP | (A) Team Lead, Heritage
Ministry of Heritage, Sport, Tourism and Culture Industries

Heritage, Tourism and Culture Division | Programs and Services Branch | Heritage Planning Unit

T. 416.314.7120 | Email: karla.barboza@ontario.ca

January 27, 2021

130 Dufferin Avenue
Suite 1400
London, Ontario
Canada
N6A 5R2
Mail: Box 426
London, Ontario
Canada
N6A 4W7
Telephone
519.438.6192
Fax
519. 672.8209

Ministry of Heritage, Sport, Tourism and Culture Industries

Attention: Ms. Karla Barboza

Highway 3 Widening in the Town of Essex
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23 (Contract 2020-3006)

Dear Ms. Barboza:

Thank you for your email. A Preliminary Design and Class EA phase was undertaken for the project beginning in September 2012 and ending in November 2016. Included in the Preliminary Design phase was a Transportation Environmental Assessment Report (TESR) Addendum (November 2016). This report is available through the project website (www.hwy3.ca).

Sincerely,

DILLON CONSULTING LIMITED

Brandon Fox, MCIP, RPP
for Jeff Matthews, P.Eng.
Project Manager

SET:rrk

cc: Mr. Graydon Botsford, MTO
Mr. Dave Colle, Coco

Our file: 20-2801

DILLON CONSULTING

Hwy 3 Widening - Notice of Study Commencement Comment

1 message

Chadwick, Lori <lchadwick@essex.ca> Wed, Dec 16, 2020 at 11:27 AM
To: "Hwy3Essex@dillon.ca" <Hwy3Essex@dillon.ca>

Good morning,

Should you be creating an Essex Project Team, please ensure that I be kept informed and/or join meetings pertaining to the schedule of activities related to the South Talbot Road Extension, the relocation of the Rush Drain, and the acquisition of industrial land on the SW side of Hwy 3. As Kevin Girard, our Director of Infrastructure, has likely informed you, there are several development projects either currently under construction or planned to begin in 2021 and information on these topics would need to be relayed to my Managers and the Developers.

Thank you,

--Lori.

Lori M. Chadwick, RPP, MCIP | **Director, Development Services**

Town of Essex | Development Services Department
33 Talbot Street South, Essex, ON, N8M 1A8
519-776-7336 ext 1107 | 519-919-1864

Learn more online at the links below:

essex Where you belong

January 27, 2021

Town of Essex

Attention: Ms. Lori Chadwick

Highway 3 Widening in the Town of Essex
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23
(Contract 2020-3006)

Dear Ms. Chadwick:

Thank you for your continued interest in this project. Monthly meetings will be scheduled with representatives from local municipalities and emergency service providers to discuss project details. You will be invited to attend these monthly meetings.

Sincerely,

DILLON CONSULTING LIMITED

Brandon Fox, MCIP, RPP
for Jeff Matthews, P.Eng.
Project Manager

SET:rrk

cc: Mr. Graydon Botsford, MTO
Mr. Dave Colle, Coco

Our file: 20-2801

DILLON CONSULTING

130 Dufferin Avenue
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Fax
519. 672.8209

Dillon Consulting Limited

DILLON CONSULTING

Tasfi, Sydney <stasfi@dillon.ca>

RE: Hwy 3 Widening - Notice of Study Commencement

1 message

EnviroOnt <EnviroOnt@tc.gc.ca> Fri, Dec 18, 2020 at 11:56 AM
To: Dillon Consulting Limited <Hwy3Essex@dillon.ca>

Greetings,

Thank you for your correspondence.

Please note Transport Canada **does not** require receipt of all individual or Class EA related notifications. We are requesting project proponents self-assess if their project:

1. Will interact with a federal property and/or waterway by reviewing the Directory of Federal Real Property, available at at www.tbs-sct.gc.ca/dfrp-rbif/; **and**
2. Will require approval and/or authorization under any Acts administered by Transport Canada* available at http://www.tc.gc.ca/eng/acts-regulations/menu.htm.

Projects that will occur on federal property prior to exercising a power, performing a function or duty in relation to that project, will be subject to a determination of the likelihood of significant adverse environmental effects, per Section 82 of the *Impact Assessment Act, 2019*.

If the aforementioned does not apply, the Environmental Assessment program should not be included in any further correspondence and future notifications will not receive a response. If there is a role under the program, correspondence should be forwarded *electronically* to: EnviroOnt@tc.gc.ca with a **brief description of Transport Canada's expected role**.

*Below is a summary of the most common Acts that have applied to projects in an Environmental Assessment context:

- ***Canadian Navigable Waters Act (CNWA)*** – the Act applies primarily to works constructed or placed in, on, over, under, through, or across navigable waters set out under the Act. The Navigation Protection Program administers the CNWA through the review and authorization of works affecting navigable waters. Information about the Program, CNWA and approval process is available at: http://www.tc.gc.ca/eng/programs-621.html. Enquiries can be directed to NPPONT-PPNONT@tc.gc.ca or by calling (519) 383-1863.

- ***Railway Safety Act (RSA)*** – the Act provides the regulatory framework for railway safety, security, and some of the environmental impacts of railway operations in Canada. The Rail Safety Program develops and enforces regulations, rules, standards and procedures governing safe railway operations. Additional information about the Program is available at: https://www.tc.gc.ca/eng/railsafety/menu.htm. Enquiries can be directed to RailSafety@tc.gc.ca or by calling (613) 998-2985.

- ***Transportation of Dangerous Goods Act (TDGA)*** – the transportation of dangerous goods by air, marine, rail and road is regulated under the TDGA. Transport Canada, based on risks, develops safety standards and regulations, provides oversight and gives expert advice on dangerous goods to promote public safety. Additional information about the transportation of dangerous goods is available at: https://www.tc.gc.ca/eng/tdg/safety-menu.htm. Enquiries can be directed to TDG-TMDOntario@tc.gc.ca or by calling (416) 973-1868.

- ***Aeronautics Act*** – Transport Canada has sole jurisdiction over aeronautics, which includes aerodromes and all related buildings or services used for aviation purposes. Aviation safety in Canada is regulated under this Act and the Canadian Aviation Regulations (CARs). Elevated Structures, such as wind turbines and communication towers, would be examples of projects that must be assessed for lighting and marking requirements in accordance with the CARs. Transport Canada also has an interest in projects that have the potential to cause interference between wildlife and aviation activities. One example would be waste facilities, which may attract birds into commercial and recreational flight paths. The *Land Use In The Vicinity of Aerodromes* publication recommends guidelines for and uses in the vicinity of aerodromes, available at: https://www.tc.gc.ca/eng/civilaviation/publications/tp1247-menu-1418.htm. Enquires can be directed to tc.aviationservicesont-servicesaviationont.tc@tc.gc.ca or by calling 1 (800) 305-2059 / (416) 952-0230.

Please advise if additional information is needed.

Thank you,

Environmental Assessment Program, Ontario Region

Transport Canada / Government of Canada / 4900 Yonge St., Toronto, ON M2N 6A5

EnviroOnt@tc.gc.ca / Facsimile : (416) 952-0514 / TTY: 1-888-675-6863

Programme d'évaluation environnementale, Région de l'Ontario

Transports Canada / Gouvernement du Canada / 4900, rue Yonge, Toronto, ON, M2N 6A5

EnviroOnt@tc.gc.ca / télécopieur: (416) 952-0514

DILLON CONSULTING

Contract 2020-3006

1 message

[redacted] Thu, Dec 10, 2020 at 6:09 PM

To: "hwy3essex@dillon.ca" <hwy3essex@dillon.ca>, "Botsford, Graydon (MTO)" <Graydon.Botsford@ontario.ca>

I'm reaching out regarding the Hwy 3 widening study commencement in Essex, Contract 2020-3006.

I live in the area and received the attached package by mail- however it was addressed to the previous owner. I forwarded to him, then he returned it to me laughing since it was actually for us.

I've owned this property for 5+ years, so I'm not sure which land registry or database you used for this, but it's substantially out of date.

No issues specific to the project work, just highlighting the addressee issue as I suspect there will potentially be dozens of improperly addressed notices being distributed in the affected area. This will impact who opens and sees them, responds, etc.

Good luck on the project,

[redacted]

Contract 2020-3006.pdf
2090K

January 27, 2021

Mr. [redacted]

Highway 3 Widening in the Town of Essex
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23
(Contract 2020-3006)

Dear [redacted]

Thank you for your email and for sharing this information. This project is advancing following a Preliminary Design and Class EA phase. The stakeholders affected by the project or who requested to be included on the project contact list were included in the distribution of the notice for the present phase. We have updated your contact information accordingly.

Sincerely,

DILLON CONSULTING LIMITED

Brandon Fox, MCIP, RPP
for Jeff Matthews, P.Eng.
Project Manager

SET:rrk

cc: Mr. Graydon Botsford, MTO
Mr. Dave Colle, Coco

Our file: 20-2801

DILLON CONSULTING

130 Dufferin Avenue
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Telephone
519.438.6192
Fax
519. 672.8209

Dillon Consulting Limited

DILLON CONSULTING

Hwy 3 Widening - Notice of Study Commencement Comment

1 message

[redacted] Thu, Dec 10, 2020 at 11:48 PM

To: "Hwy3Essex@dillon.ca" <Hwy3Essex@dillon.ca>

Hi i hope you will start first the completion of South talbot RD North. When this street will be done, we will be able to avoid to travel on the dangerous 2 lanes sections of highway 3 while going to Windsor, It is close to my home in Essex.
We know peoples who got hurt on this very bad 2 ways of highway 3, Please think about it,

Truly

DILLON CONSULTING

[Highway 3 DB] Contact Form - new submission

1 message

[redacted] Wed, Jan 13, 2021 at 9:19 PM

To: hwy3essex@dillon.ca, graydon.botsford@ontario.ca

[redacted] just submitted your form: Contact Form

on Highway 3 DB

Message Details:

[redacted]

Message: Hi do you think the South Talbot Road North connection to Maidstone Av W will be completed this year [2021].

[redacted]

January 27, 2021

Mr. [redacted]

Highway 3 Widening in the Town of Essex
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23
(Contract 2020-3006)

Dear [redacted]

Thank you for your continued interest in the Highway 3 widening project. Currently, construction of the South Talbot Road North extension is anticipated to begin in year one of construction. Your contact information is included on the project contact list and you will be circulated on future project correspondence.

Sincerely,

DILLON CONSULTING LIMITED

Brandon Fox, MCIP, RPP
for Jeff Matthews, P.Eng.
Project Manager

SET:rrk

cc: Mr. Graydon Botsford, MTO
Mr. Dave Colle, Coco

Our file: 20-2801

DILLON CONSULTING

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Dillon Consulting Limited

DILLON CONSULTING

Hwy 3 Widening - Notice of Study Commencement Comment

1 message

[redacted] Mon, Dec 14, 2020 at 10:16 AM
<hwy3essex@dillon.ca>
[redacted]
To: "hwy3essex@dillon.ca" <hwy3essex@dillon.ca>

I am glad to see project moving ahead. When each stage plans are ready i will be interested in reviewing them. Have a good holiday. [redacted]

DILLON CONSULTING

Highway 3 Widening in the Town of Essex (contract 2020-3006)

1 message

[redacted] Mon, Dec 14, 2020 at 2:24 PM

To: "hwy3essex@dillon.ca" <hwy3essex@dillon.ca>
Cc: "graydon.botsford@ontario.ca" <graydon.botsford@ontario.ca>

Hello Gentlemen.

I am responding to a document received pertaining to the Notice of Study Commencement Highway #3.

My information was received in the name of [redacted] He was my father-in-law and has passed away a few years ago. My wife (his daughter) and I purchased the house in 2014. I hope it is ok for us to comment on this upcoming work.

We would like to make sure that this project covers some type of barrier other than the current wooden fence. Our yard backs up to the highway as we are almost in the middle between the Arner Town line (Pespi building) and the Civic Center. Many sections have blown down over the past few years and repairs have been made, however very little is done to minimize the noise, especially from the large 18 wheelers.

We know you guys are very busy with everything going on especially during the unusually 2020 year, so thank you for your time in this matter.

[redacted]

Re: Highway 3 Widening in the Town of Essex (contract 2020-3006)

1 message

Fox, Brandon <bfox@dillon.ca> Wed, Dec 23, 2020 at 11:20 AM
[redacted]
Cc: "hwy3essex@dillon.ca" <hwy3essex@dillon.ca>, "graydon.botsford@ontario.ca" <graydon.botsford@ontario.ca>, "Evans, Chris (MTO)" <Chris.Evans@ontario.ca>, David Colle <dcolle@cocogroup.com>, "Matthews, Jeff" <jmatthews@dillon.ca>
Bcc: stasfi@dillon.ca

Hi [redacted]

Thanks for your continued interest in the Highway 3 widening project in the Town of Essex. We have updated our project records to include the updated contact information you provided. Thank you for your comments.

At this time, sound barriers are not included in the scope work for the project. A Traffic Noise Impact Assessment Study was completed for the project in March 2020 following MTO's Environmental Reference for Highway Design Environmental Guide for Noise. The Study found that noise levels for adjacent sensitive receptors (residents) are below the threshold required for sound barriers.

Thank you for your continued interest in the project. Please feel free to reach out with any additional questions or comments you may have.

Brandon Fox, MCIP, RPP
Associate
Dillon Consulting Limited
130 Dufferin Avenue Suite 1400
London, Ontario, N6A 5R2
T - 519.438.1288 ext. 1307
F - 519.672.8209
M - 226.984.9504
BFox@dillon.ca
www.dillon.ca

On Mon, Dec 14, 2020 at 2:24 PM [redacted]

> Hello Gentlemen.
>
> I am responding to a document received pertaining to the Notice of Study Commencement Highway #3.
>
> My information was received in the name of [redacted] He was my father-in-law and has passed away a few years ago. My wife (his daughter) and I purchased the house in 2014. I hope it is ok for us to comment on this upcoming work.
>
> We would like to make sure that this project covers some type of barrier other than the current wooden fence. Our yard backs up to the highway as we are almost in the middle between the Arner Town line (Pespi building) and the Civic Center. Many sections have blown down over the past few years and repairs have been made, however very little is done to minimize the noise, especially from the large 18 wheelers.
>
> We know you guys are very busy with everything going on especially during the unusually 2020 year, so thank you for your time in this matter.

DILLON CONSULTING

Sound-barrier

1 message

[redacted] Tue, Dec 15, 2020 at 8:03 AM

To: "Hwy3Essex@dillon.ca" <Hwy3Essex@dillon.ca>

To whom it may concern,

I live alongside the highway 3 in Essex, and already with one lane it is quite loud, is a sound barrier being planned with the expansion to prevent noise pollution?

Thank you for your time,

[redacted]

Re: Sound-barrier

1 message

Fox, Brandon <bfox@dillon.ca> Wed, Dec 23, 2020 at 11:17 AM
[redacted]
Cc: "Hwy3Essex@dillon.ca" <Hwy3Essex@dillon.ca>, "Evans, Chris (MTO)" <Chris.Evans@ontario.ca>, "Botsford, Graydon (MTO)" <graydon.botsford@ontario.ca>, "Matthews, Jeff" <jmatthews@dillon.ca>, David Colle <dcolle@cocogroup.com>
Bcc: stasfi@dillon.ca

Hi [redacted]

Thanks for your continued interest in the Highway 3 widening project in the Town of Essex. At this time, sound barriers are not included in the scope work. A Traffic Noise Impact Assessment Study was completed for the project in March 2020 following MTO's Environmental Reference for Highway Design Environmental Guide for Noise. The Study found that noise levels for adjacent sensitive receptors (residents) are below the threshold required for sound barriers.

Your contact information is included in the project contact list and you will be included on future project notices.

Thank you for your continued interest in the project.

Brandon Fox, MCIP, RPP
Associate
Dillon Consulting Limited
130 Dufferin Avenue Suite 1400
London, Ontario, N6A 5R2
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On Tue, Dec 15, 2020 at 8:03 AM [redacted] wrote:

> To whom it may concern,
>
> I live alongside the highway 3 in Essex, and already with one lane it is quite loud, is a sound barrier being planned with the expansion to prevent noise pollution?
>
> Thank you for your time,
> [redacted]

DILLON CONSULTING

(no subject)

1 message

[redacted] Sun, Dec 20, 2020 at 1:11 PM

To: Hwy3Essex@dillon.ca

Hi Jeff Matthews,

As per my phone message, I was wondering if sound barriers are going to be built when the widening of Hwy #3 is completed next to the Tully Meadows subdivision. The road is very noisy and the current picket fence is built in a ditch below the Hyw.

Thanks for your feedback,

[redacted]

Re:

1 message

Fox, Brandon <bfox@dillon.ca> Wed, Dec 23, 2020 at 11:23 AM
[redacted]
Cc: Highway 3 Widening DB Major - Town of Essex <Hwy3Essex@dillon.ca>, "Matthews, Jeff" <jmatthews@dillon.ca>, David Colle <dcolle@cocogroup.com>, "Botsford, Graydon (MTO)" <graydon.botsford@ontario.ca>, "Evans, Chris (MTO)" <Chris.Evans@ontario.ca>
Bcc: stasfi@dillon.ca

Hi [redacted]

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Thank you for your continued interest in the project.

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On Sun, Dec 20, 2020 at 1:11 PM [redacted]

> Hi Jeff Matthews,
>
> As per my phone message, I was wondering if sound barriers are going to be built when the widening of Hwy #3 is completed next to the Tully Meadows subdivision. The road is very noisy and the current picket fence is built in a ditch below the Hyw.
>
> Thanks for your feedback,
>
> [redacted]

DILLON CONSULTING

Fwd: FW: Advance work - Highway 3 widening Contract 1, Town of Essex, County of Essex - Design and Construction Report

1 message

From: [redacted]
Sent: December 16, 2020 9:31 AM
To: Kielstra, David <David.Kielstra@stantec.com>
Cc: Evans, Chris (MTO) <Chris.Evans@ontario.ca>; Botsford, Graydon (MTO) <Graydon.Botsford@ontario.ca>; Naylor, Amanda (MTO) <Amanda.Naylor@ontario.ca>; Hohner, Paula <Paula.Hohner@stantec.com>; Welker, Kevin <Kevin.Welker@stantec.com>
Subject: Re: Advance work - Highway 3 widening Contract 1, Town of Essex, County of Essex - Design and Construction Report

David,

Thanks for the update it is very appreciated. The key Engineers at Stantec Windsor that worked with the town on the basement flooding and drainage issues I believe were Dr. Jian Ali and Clarence Jubenville.

They would be able to provide insights on the exact drains being addressed in your reports.

Thanks,

[redacted]

Get Outlook for iOS

From: Kielstra, David <David.Kielstra@stantec.com>
Sent: Tuesday, December 15, 2020 2:47:34 PM
To: [redacted]
Cc: Evans, Chris (MTO) <Chris.Evans@ontario.ca>; Botsford, Graydon (MTO) <Graydon.Botsford@ontario.ca>; Naylor, Amanda (MTO) <Amanda.Naylor@ontario.ca>; Hohner, Paula <Paula.Hohner@stantec.com>; Welker, Kevin <Kevin.Welker@stantec.com>
Subject: RE: Advance work - Highway 3 widening Contract 1, Town of Essex, County of Essex - Design and Construction Report

Hello [redacted]

Thank you for your comment on the Highway 3 widening project and the drainage design considerations in your September 22, 2020 email. The Ministry of Transportation is working with the Town of Essex to consider your concerns and a further response will be provided once a detailed review can be completed.

Thank you,

David Kielstra M.A, EP

Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

--

--------- Forwarded message ---------
From: [redacted]
To: "Kielstra, David" <David.Kielstra@stantec.com>
Cc: "Evans, Chris (MTO)" <Chris.Evans@ontario.ca>, "Botsford, Graydon (MTO)" <Graydon.Botsford@ontario.ca>, "Naylor, Amanda (MTO)" <Amanda.Naylor@ontario.ca>, "Hohner, Paula" <Paula.Hohner@stantec.com>, "Welker, Kevin" <Kevin.Welker@stantec.com>
Bcc:
Date: Wed, 16 Dec 2020 14:30:36 +0000
Subject: Re: Advance work - Highway 3 widening Contract 1, Town of Essex, County of Essex - Design and Construction Report

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

[redacted]

Thanks for the update it is very appreciated. The key Engineers at Stantec Windsor that worked with the town on the basement flooding and drainage issues I believe were Dr. Jian Ali and Clarence Jubenville.
They would be able to provide insights on the exact drains being addressed in your reports.
Thanks,
[redacted]

Get Outlook for iOS

From: Kielstra, David <David.Kielstra@stantec.com>
Sent: Tuesday, December 15, 2020 2:47:34 PM
To: [redacted]
Cc: Evans, Chris (MTO) <Chris.Evans@ontario.ca>; Botsford, Graydon (MTO) <Graydon.Botsford@ontario.ca>; Naylor, Amanda (MTO) <Amanda.Naylor@ontario.ca>; Hohner, Paula <Paula.Hohner@stantec.com>; Welker, Kevin <Kevin.Welker@stantec.com>
Subject: RE: Advance work - Highway 3 widening Contract 1, Town of Essex, County of Essex - Design and Construction Report

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Thank you for your comment on the Highway 3 widening project and the drainage design considerations in your September 22, 2020 email. The Ministry of Transportation is working with the Town of Essex to consider your concerns and a further response will be provided once a detailed review can be completed.

Thank you,

David Kielstra M.A, EP

Environmental Planner

Direct: 905 381-3247
Fax: 905 385-3534
David.Kielstra@stantec.com

Stantec
200-835 Paramount Drive
Stoney Creek ON L8J 0B4

---------- Forwarded message ----------
From: [redacted]
To: "Garon, Joe" <jgaron@essex.ca>, "cnepszy@essex.ca" <cnepszy@essex.ca>, "kgirard@essex.ca" <kgirard@essex.ca>, "kevin.welker@stantec.com" <kevin.welker@stantec.com>, "Naylor, Amanda (MTO)" <Amanda.Naylor@ontario.ca>
Cc: "Bondy, Sherry" <sbondy@essex.ca>, [redacted]
Bcc:
Date: Tue, 22 Sep 2020 19:27:44 +0000
Subject: Response and Questions from Highway 3 Notice of Completion of Design and Construction Report

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hello,
My husband, [redacted] and I have lived in Essex our entire lives. We currently live on [redacted] in Essex.

I read portions of the new report especially the section on the drains by Victoria Avenue. I believe these drains and how they worked was part of the approach to dealing with the basement flooding that occurred after the realignment for the new sewage treatment plant a few years ago. I know major work had to be done to reopen some pathways and were critical to dealing with the issues and avoid the massive flooding issues many of us homeowners experienced.

I'm not sure if this is the report that would address these issues but felt it was important to raise and deserves consideration in the Environmental assessment being done for Fisheries and Animals. I've excerpted the specific drain information at the bottom of the email.

I've been asked to forward these question to our town officials and have included the two Engineers listed in the report as requested in the report.

I'm not an Engineer but my questions would be:
1.) Has this design been reviewed by Stantec in Windsor and the Engineers who were instrumental in addressing & resolving the flooding issues in town? This would be critical from my viewpoint to have done before the Town agrees to the new design. I see the address for Stantec in London and Stoney Creek big nowhere does it refer to the local Windsor office that I could find.

2.) Is the design only intended to replace existing capacity? Or is it being built to account for changes in road surfaces; planned development growth and changing environmental factors? With special considerations of:

2.1) these drains will be enclosed rather than open which would appear to increase the likelihood of underlying backups in the pipes as flow would be reduced and no overflow capacity would exist like it does today with the open drain? That backup impacted many homes that hadn't seen flooding in decades.

2.2) As drains are closed is the long term capacity of the new drains being installed able to handle the higher levels of water we are seeing in the last 10 years to avoid backups in drainage to the existing town of Essex. Our rain levels were breaching 25 and 100 year likelihood's when we were experiencing the flooding and we are still seeing these large rain events and the highest levels in the Great Lakes in decades as well.

2.3.) It appears that the two main drains at the end of Victoria will be filled in and replaced but the capacity appears to be capping them with a slightly reduced width capacity or the same capacity with height adjustments (but that may just be my lack of Engineering knowledge.). I would think given the new roadworks and adjustments to fill in existing drains that increased capacity for the bridges and extra lanes of toad would be required.

2.4.) We also are seeing increased development in town both residential and commercial especially in these areas and the loss of previous drainage locations and fields where water could sit and backup with no issues to houses. Wouldn't this need to be considered to further increase drain capacity and not to simply maintain what is existing.

These issues may have already been raised by the Town or be on their radar but in reading the report I struggled to understand any of the answers to these concerns and thought it important to raise them.

Do we have to submit a formal issue on this or will the Town be doing that on behalf of residents?

Thanks for everyone's consideration of these issues.

[redacted]

Excerpt from report:

			0.825 m diameter CSP **(25.17 m total new footprint or ~20.8 m²).**
14+742	Essex Outlet Drain	Highway 3	• 36.79 m long, 3.6 m wide by 1.8 m tall concrete box culvert combined with a 40.17 m long, 1.8 m wide by 1.2 m tall CSP (overflow culvert) to be decommissioned and filled-in, including approximately 18 m long by 2 m wide open channel between Highway 3 and Talbot Road South **(~312 m² drain area lost – 180 m² open and 132 m² closed).** • The new pre-cast concrete box culvert measuring 94.61 m long, 4.26 m wide by 2.44 m tall will be installed under Highway 3 approximately 300 m west of its existing location.

ADVANCED WORK FOR HIGHWAY 3 WIDENING CONTRACT 1, TOWN OF ESSEX, COUNTY OF ESSEX DETAIL DESIGN AND CLASS ENVIRONMENTAL ASSESSMENT

Environmental Issues and Commitments
September 17, 2020

Station	Watercourse ID	Highway/ Road	Proposed Work
			• A new channel will be created within the ROW on the north and south sides (~600 m long by 4 m bottom), and tie back in where the

			existing drain currently meets the ROW boundary. Two permanent rock check dams in the northern portion of the realignment to control flow and sediment loadings entering the culvert.
14+777	Essex Drain Outlet	South Talbot Road/Victoria Avenue	• 3.05 m wide by 1.7 m tall concrete box culvert under Victoria Avenue is to be extended to the south 26 m with a 3 m wide by 2.8 m tall concrete box culvert. • The outlet of the extension will tie into the new diversion channel associated with the adjacent Sta. 14+742 drain realignment.

2 attachments

Re: Advance work - Highway 3 widening Contract 1, Town of Essex, County of Essex - Design and Construction Report.eml
21K

Response and Questions from Highway 3 Notice of Completion of Design and Construction Report.eml
334K

HWY 3 Local Resident Discussion

1 message

Matthews, Jeff <jmatthews@dillon.ca> Tue, Dec 22, 2020 at 3:30 PM
To: Brandon Fox <bfox@dillon.ca>, Hwy3Essex@dillon.ca

I had a call from [redacted] regarding the project. [redacted] Dec 22, 2020

He says he has been involved since the planning started on this project. He has concerns with no access to Hwy 3 at Victoria. Feels like his comments have "fallen on deaf ears" for years and does not understand why not access or use of roundabout.

I explained that the previous work ended in an approved plan that unfortunately can not be changed to allow access.

He says he is on mailing list and would watch for future notices

Jeff

Jeff Matthews
Partner
Dillon Consulting Limited
130 Dufferin Avenue Suite 1400
London, Ontario, N6A 5R2
T - 519.438.1288 ext. 1275
F - 519.672.8209
M - 519.521.5534
JMatthews@dillon.ca
www.dillon.ca

DILLON CONSULTING

Re: Hwy 3 resident

1 message

Fox, Brandon <bfox@dillon.ca> Wed, Dec 23, 2020 at 11:22 AM
To: [redacted]
Cc: "hwy3essex@dillon.ca" <hwy3essex@dillon.ca>, "Matthews, Jeff" <jmatthews@dillon.ca>, David Colle <dcolle@cocogroup.com>, "Botsford, Graydon (MTO)" <graydon.botsford@ontario.ca>, "Evans, Chris (MTO)" <Chris.Evans@ontario.ca>
Bcc: stasfi@dillon.ca

HI [redacted]

Thanks for your continued interest in the Highway 3 widening project in the Town of Essex. At this time, sound barriers are not included in the scope work. A Traffic Noise Impact Assessment Study was completed for the project in March 2020 following MTO's Environmental Reference for Highway Design Environmental Guide for Noise. The Study found that noise levels for adjacent sensitive receptors (residents) are below the threshold required for sound barriers.

Your contact information is included in the project contact list and you will be included on future project notices.

Thank you for your continued interest in the project.

DILLON CONSULTING

CANADA BEST MANAGED COMPANIES
Platinum member

Brandon Fox, MCIP, RPP
Associate
Dillon Consulting Limited
130 Dufferin Avenue Suite 1400
London, Ontario, N6A 5R2
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F - 519.672.8209
M - 226.984.9504
BFox@dillon.ca
www.dillon.ca

On Wed, Dec 23, 2020 at 11:08 AM [redacted] wrote:

> Hi Jeff I live at [redacted] & I'am just stating my concern of impact of the hwy being moved south with the extra lanes as it passes through my area. I have previously stated this but just to say it again, if possible I wish either building north or a buffer or other method to minimize hwy intrusion. Thanks. Happy hollidays
>
> [redacted]
>
> Sent from Mail for Windows 10

DECEMBER 23, 2020

DEAR MR. MATTHEWS:

PLEASE FIND COMMENT IN REGARDS TO HIGHWAY 3 WIDENING IN THE TOWN OF ESSEX, NOTICE OF STUDY COMMENCEMENT.

OTHER INTERSECTIONS AT HIGHWAY 3 HAVE STOP SIGNS, SIMILAR TO ELLIS SIDE ROAD AND THERE WAS NO COMMUNICATION DURING THE ACTIVITIES FOR THE TESR ADDENDUM, NOV. 2016 REPORT.

PLEASE CONTACT ME WITH ANY QUESTIONS

[redacted]

C.C. [redacted]

January 27, 2021

[redacted]

Highway 3 Widening in the Town of Essex
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23
(Contract 2020-3006)

Dear [redacted]

Thank you for your comment on the Highway 3 Widening project. Communication for the TESR Addendum (2016) was initiated in September 2012 and was completed in December 2016 through the Notice of Study Completion. Our consultation records show that you provided a comment by phone on December 8, 2016, regarding access to Ellis Side Road and a response was provided on December 16, 2016. Your contact information is included in the project contact list and you will be included on future project notices.

Thank you for your continued interest in the project. Should you wish to discuss the project or have any further questions, please contact the undersigned at 519-438-6192 ext. 1307.

Sincerely,

DILLON CONSULTING LIMITED

Brandon Fox, MCIP, RPP
for Jeff Matthews, P.Eng.
Project Manager

SET:rrk

cc: Mr. Graydon Botsford, MTO
Mr. Dave Colle, Coco
[redacted]

Our file: 20-2801

DILLON CONSULTING

130 Dufferin Avenue
Suite 1400
London, Ontario
Canada
N6A 5R2
Mail: Box 426
London, Ontario
Canada
N6A 4W7
Telephone
519.438.6192
Fax
519. 672.8209

Dillon Consulting Limited

DILLON CONSULTING

Record of Phone Conversation - [redacted]

1 message

Fox, Brandon <bfox@dillon.ca> Mon, Feb 1, 2021 at 9:42 AM
To: Highway 3 Widening DB Major - Town of Essex <hwy3essex@dillon.ca>
Cc: "Botsford, Graydon (MTO)" <graydon.botsford@ontario.ca>, "Rocha, Bianca (MTO)" <Bianca.Rocha@ontario.ca>, "Evans, Chris (MTO)" <Chris.Evans@ontario.ca>, "Aseltine, Ian (MTO)" <Ian.Aseltine@ontario.ca>, "Giroux, Jeffrey (MTO)" <jeffrey.giroux@ontario.ca>, Carlo dimambro <cdimambro@cocogroup.com>, Kendra Dupuis <KDupuis@cocogroup.com>, David Colle <dcolle@cocogroup.com>

Record of Phone Conversation: [redacted]

I phoned [redacted] regarding his comment on the Highway 3 project website from January 31, 2021.

I phoned to follow-up to his inquiry on the status of his drainage complaints/issues (see copy of his comment below).

I informed him that we had a record of his previous comments (see bottom of this email for a copy of original comment forwarded to us by MTO) on the project but had not yet gotten to the details for that section of the project. He was happy to hear this and stated he simply just wants to be kept informed.

I told him that we would be looking at that section of the project to be included in Contract 2 work which we're just about to start detail design on. I indicated we would be in touch with him over the next couple of weeks to discuss his concerns. He was thrilled to hear this and indicated he just wants to talk so he can understand what the plans are, voice his concerns and hopefully come to a solution.

I left him my contact information including cell number and told him we would be in touch. If he doesn't hear from us by the end of February I have asked him to call me. He was very happy with the phone call and looks forward to a conversation.

Brandon

Comment from project website:

Message Details:

Message: We have explained our drainage problem east of the corner of number 3 highway and the Arner town line on many occasions. We have had no one address this issue. At best we have been told the problem would be passed on to someone who would deal with it. This has never resulted in any action. We doubt that a solution is already in the new plans but it would be a pleasant surprise. We believe the process is getting close to the point where it is too late to get this corrected again.

We find this unacceptable. It is frustrating to see the water from the highway backing up onto our farm drowning our crops. The water gets high enough that it flows uphill until it can drain in the opposite direction of the natural fall.

We still have hope this review is not another sham but it is getting harder to believe. We have tried over twenty years to fix this. If this sounds impatient or we are just gullible let us know. It seems the goal has been to bury us. That is a sad commentary on the consultation process but it has succeeded until now. We believe a site visit would make the problem clear. We would gladly meet to show the current state of water flow. We would like to find someone who is not passing the buck until it gets lost on someones desk. Where do we turn now. It is hard to say thankyou any more.

Original comment forwarded to us from Graydon at MTO (November 18):

Botsford, Graydon (MTO) <Graydon.Botsford@ontario.ca> Wed, Nov 18, 2020 at 4:19 PM
To: Martin Van Haren <mvanharen@dillon.ca>
Cc: "Fox, Brandon" <bfox@dillon.ca>, "Evans, Chris (MTO)" <Chris.Evans@ontario.ca>, "Fabiilli, Matthew (MTO)" <Matthew.Fabiilli@ontario.ca>, "Wilson, Jonathan (MTO)" <Jonathan.Wilson@ontario.ca>, "Aseltine, Ian (MTO)" <Ian.Aseltine@ontario.ca>, "Matthews, Jeff" <jmatthews@dillon.ca>

Hi Martin,

As part of the PIC for Contract 2 I followed up on a written comment with a call to [redacted] I have a few very rough notes here about our call for your consideration. He is concerned about the drainage along the highway by his field just west of Arner Townline. No follow up action with [redacted] is required right now, but we should consider the below comments during the drainage review and be prepared to respond to the concerns should he contract us during the DCR.

Drainage concerns along the highway side of the farm. Ditch is too small, farm is flooding, furrows are cut off by the new highway fence on the property line. ~3 years ago the county said they would help. About 20% of the length new ditch along the fence line (county) but ditch is against the fall. Ditch is adequate for the highway, but what about the farm water, take this into consideration when designing. Property is at the end of Malden Road (Arner and Gesto). Issue was not there before the highway was in.
Concerns with use of Arner - slow moving vehicles, no opportunities to pass on Arner. Only route they will have, opportunities for improvement should be considered.

[redacted]

Please feel free to give me a call if you'd like further clarification.

Brandon Fox, MCIP, RPP
Associate
Dillon Consulting Limited
130 Dufferin Avenue Suite 1400
London, Ontario, N6A 5R2
T - 519.438.1288 ext. 1307
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M - 226.984.9504
BFox@dillon.ca
www.dillon.ca

DILLON CONSULTING

Fwd: FW: Notice of Study Commencement - Highway 3 Widening in the Town of Essex (317-98-00)

1 message

From: Valerie George <Valerie.George@kettlepoint.org>
Sent: December 8, 2020 9:29 AM
To: Houston, Kirstie (MTO) <Kirstie.Houston@ontario.ca>
Subject: RE: Notice of Study Commencement - Highway 3 Widening in the Town of Essex (317-98-00)

Good morning Kirstie

I reviewed the above notice. There are no issues around this, based on the information provided, unless there are crown lands required/acquired which I would like to made aware of.

Otherwise, I do insist that you make contact with the other First Nations privy to the project lands, in particular, Caldwell First Nation.

Thank you.

Valerie George

Consultation Officer

Chippewas of Kettle and Stony Point

From: Houston, Kirstie (MTO) [mailto:Kirstie.Houston@ontario.ca]
Sent: December-07-20 5:00 PM
To: Valerie George <Valerie.George@kettlepoint.org>
Cc: Fisher Bloxam, Liane (MTO) <Liane.FisherBloxam@ontario.ca>; Wallis, Rob (MTO) <Rob.Wallis@ontario.ca>; Evans, Chris (MTO) <Chris.Evans@ontario.ca>; Botsford, Graydon (MTO) <Graydon.Botsford@ontario.ca>
Subject: Notice of Study Commencement - Highway 3 Widening in the Town of Essex (317-98-00)

Dear Valerie George:

Please find attached a Notice of Study Commencement for the Highway 3 widening project from 0.8 km west of Ellis Side Road to 2.2 km east of Essex County Road 23 in the Town of Essex (317-98-00).

Kind Regards,

Kirstie

Kirstie Houston

Head (A), Environmental Delivery West

Ministry of Transportation

--

DILLON CONSULTING

CANADA BEST MANAGED COMPANIES

Platinum member

Sydney Tasfi
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STasfi@dillon.ca
www.dillon.ca

CHIPPEWAS OF THE THAMES FIRST NATION

December 10, 2020

VIA EMAIL

Kirstie Houston
Head (A) Environmental Delivery West
Ministry of Transportation
659 Exeter Road
London, ON N6E 1L3

RE: Highway 3 Widening in the Town of Essex
From 0.8 km west of Ellis Side Road easterly to 2.2 km east of Essex County Road 23 (Contract 2020-3006)

Dear: Kirstie,

We have received information concerning the aforementioned project. The proposed project is located within the Mckee Treaty Area to which Chippewas of the Thames First Nation (COTTFN) is a signatory. The project is also within the Big Bear Creek Additions to Reserve (ATR) land selection area, as well as COTTFN's Traditional Territory.

In our screening of the information that you have presented to us at this time, we have identified minimal concern. However, we ask that if there are any changes to your project that are of a substantive nature that you keep us informed.

We look forward to continuing this open line of communication. To implement meaningful consultation, COTTFN has developed its own protocol - a document and a process that will guide positive working relationships. We would be happy to meet with you to review COTTFN's Consultation Protocol.

As per *'Appendix D'* of the Wiindmaagewin attached is invoice 0072.Please do not hesitate to contact me if you need further clarification of this letter.

Sincerely,

Fallon Burch
Consultation Coordinator
Chippewa of the Thames First Nation
(519) 289-5555 Ext 251
consultation@cottfn.com

Appendix B

Municipal and EMS Meeting Presentation

Highway 3 Design Build

0.3 km West of Ellis Side Road to
2.1 km East of Malden Road

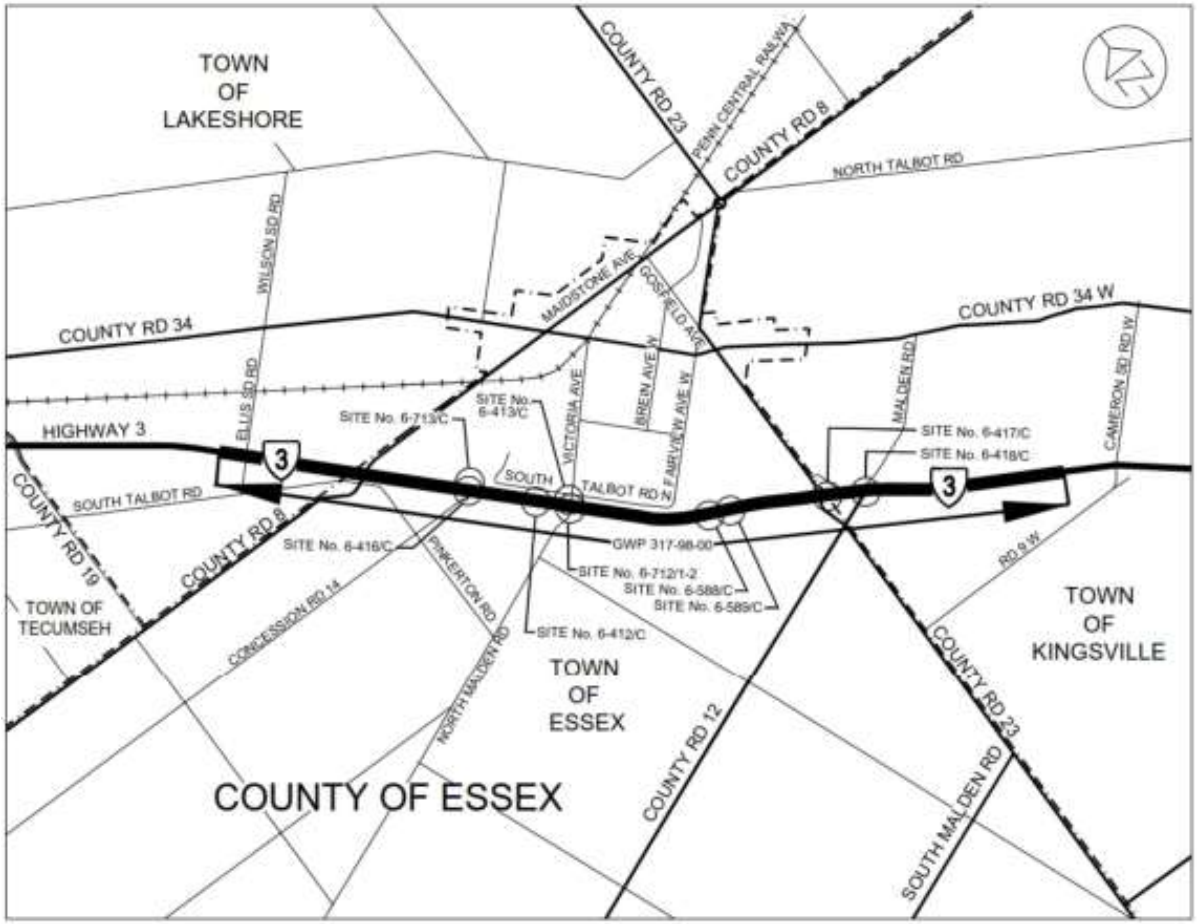
Contract 2020-3006

Municipality & EMS Start-up Meeting

December 16, 2020

Agenda

- Project Overview
- Overall Project Construction Schedule
- Construction Staging Traffic Impacts
- Open Discussion

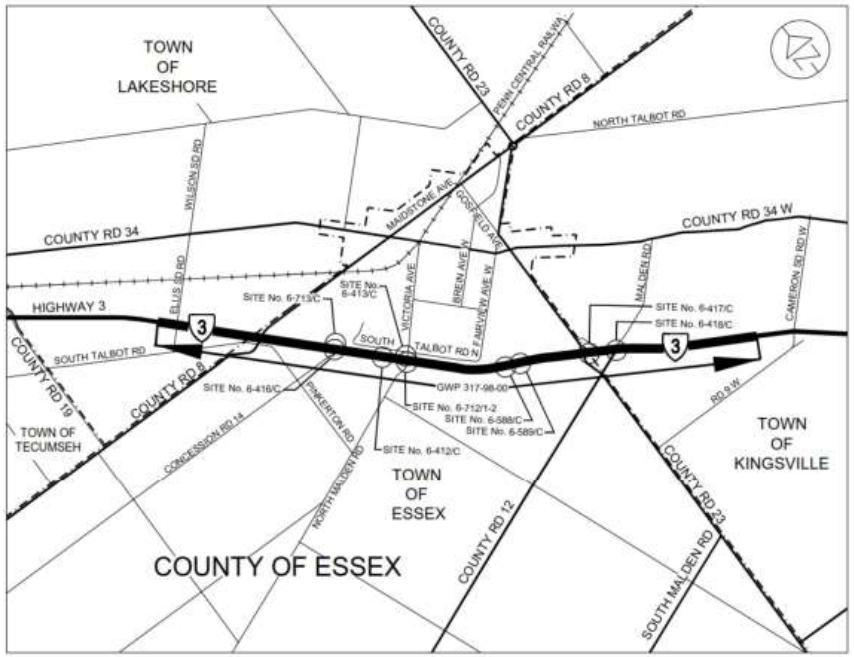


Coco Paving Inc.

DILLON CONSULTING

Project Overview - Background

- History of Class Environmental Assessments Related to this Project
- Summary of Consultation Related to this Project



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Project Overview - Background

- Highway 3 Widening (7.3 km), including:
  - Construction of New EBL
  - Reconstruction of WBL
  - New and Existing Side Road Realignments and Extensions
  - Five Intersection Improvements
  - Multi-Use Trail Improvements
  - Associated Drainage Systems
- Bridge Design and Construction:
  - Victoria Avenue Overpass EBL/WBL
    - (Site 6-712, B1&B2)
  - Rehabilitation and Extension of Five Structural Culverts
  - Replacement of One Structural Culvert (6-412/C)
  - Construction of One New Structural Culvert (6-713/C)
- Construction complete:
  - July 14, 2023

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Project Overview - Background

- Preliminary Design Completed in Spring 2020
- Design-Build Bid-Phase Completed in Summer 2020
- Detail Design Ongoing Fall/Winter 2020/2021
- Construction Start in March 2021
- Construction Complete in July 2023

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Overall Construction Schedule

Construction 2021

- Highway 3 and Maidstone Ave improvements
- South Talbot Road North improvements and extension
- Essex Outlet Drain realignment
- Placement of Highway 3 Victoria Avenue Overpass approach embankments
- Extension of Highway 3 crossing culverts
- Construction of Highway 3 EBL
- Realignment of South Talbot Road and Pinkerton Sideroad

Construction 2022 -2023

- Construction of Highway 3 Victoria Avenue Overpasses
- Construction of Highway 3 EBL (continued)
- Reconstruction of Highway 3 WBL

Design is Ongoing; Schedule Subject to Change

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Construction Schedule/Traffic Impacts

2021 Construction:

- **March to November**
- Highway 3 EBL & WBL:
  - Single Laning:
    - Maidstone Ave Intersection Improvements
  - EBL Left Turn Lane Closed at Maidstone Ave
    - Construction of Dual Left Turn Lane
- Maidstone Ave (CR8):
  - Daily Lane Closures, as Required
- South Talbot Road North:
  - Local Traffic Only:
    - Reconstruction and Extension
    - Watermain Relocation
- Highway 3
  - Traffic Shifted on Northern Widening, North Malden Road Closed as Required:
    - Overpass Embankment Preload
- South Talbot Road and Pinkerton Sideroad
  - Daily Lane Closures, as Required
  - Full Closure
    - Reconstruct Existing Road at Realignment Connection

Design is Ongoing;
Changes to Traffic Impacts to be Communicated as Project Progresses

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Construction Schedule/Traffic Impacts

2022 Construction:

- **March to November**
- Highway 3 EBL & WBL:
  - Single Lane Closures, as Required
- Highway 3 & Ellis Sideroad (tentative for 2022):
  - Access to Ellis Sideroad Closed:
    - Construct Cul-Du-Sac
    - Construct Channelized Island
- North Malden Road:
  - Lane Closures, as Required:
    - Complete Highway 3 Overpasses

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Construction Schedule/Traffic Impacts

2023 Construction:

- **April to July**
- Highway 3:
  - Lane Closures, as Required:
    - Construct WB lanes
- North Malden Road:
  - Lane Closures, as Required:
    - Complete Highway 3 Overpasses

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Monthly Design and Construction Meetings

Future Meetings – Monthly (Design and Construction)
First Wednesday of every month

Next Meeting – January 6, 2021

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Other Meetings

- Past Meetings (Municipal Impacts)
  - December 11: Utility Coordination Meeting
  - December 14: Municipal Drain Meeting No. 1

- Upcoming Meetings (Municipal Impacts)
  - December/January: Watermain/Sanitary Relocation Meeting
  - Mid-January: Municipal Drain Meeting No. 2 (If Required)
  - March: Municipal Stakeholder / EMS Meeting No. 2 (If Required)

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Roundtable Discussion

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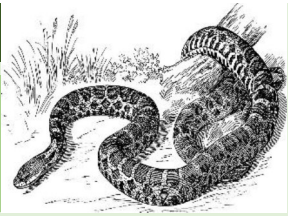
Appendix C

Terrestrial Guide & Eastern Foxsnake Identifier Sheet

Information Sheet - Species at Risk

Eastern Foxsnake (Carolinian Population) - *Pantherophis gloydi*



Provincial: Endangered **Federal:** Endangered

How to identify it...

- Colour:
  - Head: Shiny, rusty orange head
  - Body: golden to light brown covered in dark black or brown blotches
  - Underbelly: Light yellow and black.
- Length: 30 – 170 cm (12 – 67 inches).
- Juveniles are paler than adults.

Where and when it's found...

- Drainage channels, meadows, hedgerows, barns and woodland edges. They can swim.
- May seek shelter in parked machinery equipment.
- May hide in brush/log piles or under rotting logs.
- Basks (sunbathes) on roads, rock piles and/or concrete structures.
- Most likely to be seen in spring and summer (April to August).
- During fall (September to November) they move to communal overwintering sites (called hibernacula), which can be located in deep cracks in bedrock, small animal burrows, canals and man-made features.

How to protect it...

- Inspect machinery/equipment daily before starting work during active season (April 15 – November 1).
- Timing windows: Only remove non-woody vegetation between June 1 and September 30 when snakes are most active and able to flee disturbance or between December 1 and March 30 when snakes are hibernating.
- During ditching and grading, limit disturbance and avoid piling soils in natural vegetation.
- Contact the Inspector if observed and if there is risk of habitat damage or harm to this species.
- Do NOT handle, chase or harass snakes.
- Report any illegal activity to 1-877-TIPS-MNR.

Legal Protection

- Endangered Species Act (ESA)
- Species at Risk Act (SARA)

Ontario Species at Risk Handling Manual: For Endangered Species Act Authorization Holders

Table of Contents

Introduction

1. Safe Handling of Turtles

2. Safe Handling of Snakes

3. Safe Handling of the Five-lined Skink

4. Safe Handling of Amphibians (salamanders, newts, mudpuppies, frogs, toads)

5. Safe Handling of Birds

6. Reporting Species at Risk (SAR) Encounters

7. Handling and Transporting Dead Animals

8. Appendices

- I Definitions
- II References
- III Equipment and Materials Checklist
- IV Species at Risk (SAR) Notification/Contact Schedule
- V Species at Risk (SAR) Encounter Reporting Form

Introduction

Ontario's *Endangered Species Act, 2007* (ESA) protects endangered and threatened species and their habitats.

Ontario is home to over 30,000 species, about 200 of which are considered at risk. Roughly 40 per cent of the species at risk in Canada are found in Ontario.

Activities that would harm individual species at risk or their habitats are prohibited by the ESA, unless they are authorized under the act. Authorizations include permits, stewardship agreements and exemption agreements.

This manual is designed to provide guidance to those whose authorization under the ESA may require the capture, relocation, handling, and/or transport of species at risk.

Enclosed is both a DVD presentation and CD of this manual which are also available from your Ministry of Natural Resources (MNR) District Office.

For additional information and assistance with species identification, please consult MNR *Ontario Species at Risk Quick Reference Guide*, or email: esa.permits.agreements@ontario.ca.

Visit our wesite **ontario.ca/speciesatrisk** for more general information about all Ontario's species at risk.

1. Safe Handling of Turtles

1.1 Materials

a) The following materials are required for the handling, capture, temporary safe keeping and transport of turtles:

» Large plastic bin and lid with air holes, a large bucket or a cloth/burlap bag. Ensure both sides of the container/bag and the lid are well marked with "live animal". See section 1.5 to determine when it is appropriate to use a specific type of container.

» Thick work gloves

» Thermometer

» SAR Notification/Contact Schedule

» SAR Encounter Reporting Form

» Broom or broom handle with small paint brush roller attached to end.

b) Equipment must be maintained on each job site.

1.2 Safety considerations

a) Generally, there is little risk associated with handling turtles. However, all turtles can scratch and bite, and work gloves should be worn to help avoid minor injuries.

b) Snapping, Spiny Softshell and Eastern Musk Turtles cannot completely retract into their shell and are more likely to bite in defence. These species should be handled more cautiously and as follows:

I. **Always keep your hands as close to the back of the turtle's shell as possible, and always behind the midpoint of the shell**. These species have a considerable reach above their shells. Snapping Turtles can reach the midpoint of the shell, and in some cases Spiny Softshell Turtles and Eastern Musk Turtles can almost reach the back of their shell.

II. Always maintain a safe distance between the front of the turtle and other people.

c) Snapping and Spiny Softshell Turtles have a powerful and painful bite that is likely to bruise and may break the skin. However, it will almost never break bone. The damage inflicted by a Snapping Turtle bite is greatly exaggerated (such as being able to bite a boat oar or golf club in half). Forcing a Snapping Turtle to bite hard implements may result in an injury to the turtle. Wearing gloves will significantly reduce the risk of injury from these turtles.

d) If bitten by a turtle, remain calm and allow the turtle to relax and let go on its own. Pulling away from the turtle may cause further injury to you or the turtle.

e) Always wash your hands after handling a turtle. Turtles (and many other animals, including humans) carry potentially harmful bacteria in their gut. Although it is possible to contract salmonella from handling turtles, there are few reported cases of contracting these bacteria from wild turtles. Cases of salmonella poisoning from turtles are almost always limited to pet turtles, since these captive turtles are forced to live in the same small space that they defecate in.

1.3 Capture and handling of turtles

Safely handle, move or capture a turtle by following these steps:

a) Always handle turtles carefully and slowly, yet firmly. Rough handling may cause injury or stress to the turtle and/or the developing eggs and may cause the turtle to be more defensive (increased biting and scratching).

b) With the exception of very small individuals, always handle turtles with both hands. Turtles are good at freeing themselves with a bit of wiggling, kicking, clawing and biting, and a good grip is essential to ensure no harm comes to you or the turtle.

c) Never pick up a turtle by the tail. This can dislocate bones throughout the tail and is extremely painful for the turtle. For larger, heavier turtles this may result in dislocation of bones in the spinal cord as well.

d) Wear gloves when handling turtles to minimize risk from scratches and bites. If gloves are not available, handle turtles with clean hands that are free of insect repellent, antibacterial hand sanitizer, sunscreen, etc.

e) **Painted, Map, Wood, Blanding's and Spotted Turtles:** Pick up these species using both of your hands, one on each side of the shell, between the front and back legs.

f) **Snapping Turtle:** Always wear gloves when handling a Snapping Turtle and always keep your hands behind the midpoint of the top or sides of the turtle's shell. To pick up a Snapping Turtle:

I. Hold it by the back of the shell, placing your thumbs on the top of the shell and your fingers in the hind leg pockets (the space between the upper shell and the hind legs). Your hands will be at approximately 5 and 7 o'clock.

II. Or use one hand to hold the base of the tail near the shell and slide your second hand under the turtle to support its weight. Lift the turtle using the hand underneath the turtle. Never pick up a turtle by the tail.

III. Or you can move it by guiding it into a pail or garbage can with a broom.

IV. It is important to get a good, strong hold on the turtle's shell as the force that is exerted by the turtle snapping may result in an unexpected release. A good grip will ensure that both the turtle and the handler remain safe and uninjured.

g) **Eastern Musk Turtle:** Pick up Eastern Musk Turtles by the back of the shell. This turtle species can be held with one hand, as long as you ensure that you have a good grip.

h) **Spiny Softshell:** Always wear gloves when handling a Spiny Softshell, and always keep your hands well behind the midpoint of the top or sides of the turtle's shell. To pick up a Spiny Softshell turtle:

I. Use both hands, one on each side of the shell, as close as possible to the back legs.

II. Or place one hand under the turtle between its back legs (in the middle to balance its weight) and the other hand, also from behind, on the top of the turtle's shell (close to the back).

i) Turtles can be difficult to capture. If a turtle escapes or heads for cover, let it disperse on its own, ensuring it is safe from harm before allowing activities to continue. If continuing activities poses a threat to the turtle, postpone activities for up to 24 hours to allow the turtle to disperse. If it is not possible to leave the area for 24 hours, have a Qualified Member relocate the individual. Do not disturb any natural cover under which the turtle has retreated. If necessary, contact MNR for further direction using the SAR Notification/ Contact Schedule.

1.4 Moving turtles out of harm's way (distances under 50 metres)

a) If it is necessary to move a turtle more than 50 metres, refer to section 1.6 on turtle relocation.

b) Turtles should only be moved when they are in imminent, unavoidable danger.

c) If possible, allow the turtle to move on its own by walking toward the turtle in the direction that you want it to move. This will not work for Snapping Turtles, as they often turn to face a potential threat head-on rather than running away. If the turtle does not move on its own, you may have to pick it up and move it (see section 1.3).

d) When moving a turtle a short distance, such as across a road, move the turtle in the direction that it was heading, regardless of what the habitat looks like. These animals often make intentional movements to specific areas, and if you put them back where they started they may simply turn around and start their journey again. If it is not clear which direction the turtle was headed, move the turtle to the closest suitable habitat that will not be disturbed. In this case, suitable habitat includes a water body or the vegetation/forest at the edge of the road allowance, disturbed area or clearing.

e) If possible, release the turtle near a retreat site (somewhere the animal can seek shelter from the elements and avoid predators, such as water or dense vegetation) to allow it to take cover. Do not release it in the open where it could be exposed to inclement weather, extreme sunlight or predators.

1.5 Temporary safe keeping and transportation of turtles

a) You are responsible for this animal. Remember, once you have put it in a container, it depends on you to keep it safe and at the right temperature.

b) Always create air holes in the lid of a container prior to placing an animal in the container.

c) If the turtle will be in captivity for **less than one hour**, place the turtle in a cloth or burlap bag, a large bucket or a large plastic bin with a lid that has adequate air holes. Cloth or mesh bags should not be used for snapping turtles as they can become tangled and strangle themselves. Always use large plastic bins or large buckets for snapping turtles.

d) If the turtle will be in captivity for **more than one hour**, avoid the use of cloth or burlap bags. For adults, use a large plastic bin or bucket with a lid that has adequate air holes and a small amount of water (no more than an inch deep). Ensure that the turtle is not fully submerged, as it will drown if it cannot breathe. For hatchlings and juveniles, use an appropriately sized container with a lid that has air holes and line the bottom of the container with wet towels or paper towels. Never transport small juveniles or hatchlings in water.

e) It is extremely important to monitor the air temperature regularly in the container to ensure it **never exceeds 30°C or drops below 5°C**. Never leave the container in direct sunlight or in a closed vehicle parked in the sun, as this will cause the turtle to overheat and could be fatal.

f) Never put more than one turtle in a container or bag at a time, especially in the case of Snapping Turtles. This will help to minimize stress and prevent injury to the turtles.

g) Once the turtle is in the container or bag, ensure that the lid is secure or that the bag is tied tightly.

h) **Never leave the container or bag unattended** in an unsecured location (e.g., side of road).

i) If using a bag, ensure that it is in a secure location where it cannot fall if the turtle moves the bag. The movement of a turtle within a bag can easily cause the bag to fall off of a table.

j) Do not offer the turtle any food. Turtles do not have to eat as often as mammals, and it is no problem for a turtle in temporary captivity to go a few days without food.

k) Turtles should be checked periodically (every hour should suffice). Hatchlings are especially susceptible to dehydration and must be carefully monitored during transport.

1.6 Relocation of turtles

a) A turtle should only be relocated if the destruction of its habitat is unavoidable or if it is not possible to release it at the capture location.

b) Transport and release the turtle within one hour of capture in order to minimize stress on the animal.

c) Turtles should not be relocated during their over-wintering season. This varies depending on the species and location, but is generally from October to May. If you are unsure whether you should relocate the turtle or take it to a wildlife custodian, contact MNR for further direction using the SAR Notification/ Contact Schedule.

d) If it is not possible to relocate the turtle due to the time of year (October to May) or other conditions, transport the turtle to a wildlife custodian per the SAR Notification/Contact Schedule.

e) **Turtles should never be moved more than 250 metres** from the location where they were found. Only move a turtle as far as necessary to avoid potential harm to the turtle, and avoid moving turtles more than 125 metres unless absolutely necessary. If it is not possible to relocate the turtle within 250 metres of the capture location, contact MNR for further direction using the SAR Notification/Contact Schedule.

f) If hatchlings are found and must be relocated, move them to the nearest permanent body of water. Never place hatchlings directly into water. Release the turtle at the shoreline of the appropriate habitat (see below). The turtle may or may not choose to enter the water; do not force it.

g) Whenever possible, release the turtle in the same water body where it was found and in the same type of natural habitat as the capture site. To determine if the habitat is of the same type, consider the water depth, water current, substrate type (mud, rock, etc.) and vegetation type (cattails vs. lily pads vs. aquatic vegetation).

h) If possible, release the turtle near a retreat site (somewhere the animal can seek shelter from the elements and avoid predators, such as water or dense vegetation) to allow it to take cover. Do not release it in the open where it could be exposed to inclement weather, extreme sunlight or predators.

i) To release the turtle, gently pick up the turtle (per section 1.3) from the container and set it down in the new location. To release a Snapping Turtle or Spiny Softshell Turtle, you may wish to tip the container on its side and allow the turtle to move out on its own. Allow the turtle to disperse on its own at this new location.

1.7 Injured turtles

a) Use the methods outlined in section 1.3 to handle injured turtles whenever possible. If those methods are not applicable due to the turtle's injuries, use a shovel or other flat object to pick up the turtle. Ensure that any injured areas are supported.

b) Place the turtle in a large plastic bin or large bucket with a lid that has air holes. Darkness helps to reduce stress to the turtle. Do not place anything else in the container with the turtle, including water or other turtles.

c) Thoroughly wash your hands after handling injured turtles.

d) Immediately transport the turtle to a veterinarian or wildlife custodian per the SAR Notification/Contact Schedule, in order to increase its chances of survival.

2. Safe Handling of Snakes

2.1 Materials

a) The following personal protective equipment should be worn when working with Massasauga rattlesnakes:

» High-ankle hiking or rubber boots

» Thick pants (jeans) or baggy pants

» Leather work gloves

b) The following materials are required for the handling, capture, temporary safe keeping and transport of snakes:

» Pail, large garbage can or bucket (1 metre deep) with air holes in the lid. Ensure both the side of the container and the lid are well marked “live animal” or “caution rattlesnake”.

» A snake bag (for non-venomous species only). A snake bag must be cloth. (A pillowcase works well.) Plastic and non-breathable materials are not appropriate. Ensure the bag is well marked “live animal”.

» Broom or broom handle with small paint brush roller holder attached to end. Never use “snake pinchers”.

» Thermometer

» SAR Notification/Contact Schedule

» SAR Encounter Reporting Form

c) Equipment must be maintained on each job site.

2.2 Safety considerations

a) **The Massasauga is the only venomous snake in Ontario.**

The venom is an adaptation for hunting and is used to kill prey (primarily small rodents).

As a defence mechanism, Massasaugas may also bite when threatened, at which time they may or may not release venom. Camouflage, rattling and retreating are their primary defensive strategies, and they generally bite as a last resort.

Their maximum striking distance is about half of their body length. Generally, your safety zone is yourheight plus 50 centimetres away from the snake. (This accounts for the snake’s striking distance to you if you fall.)

A Massasauga bite is generally not deadly. Only two people have ever died from a Massasauga bite in Ontario. Neither person received medical attention, and both cases were almost 50 years ago.

If you are bitten by a Massasauga, remain calm and seek medical attention immediately. Do not apply a tourniquet or try to suck out the venom. Never try to capture the snake to take it to the hospital; if you were bitten by a venomous snake in Ontario, we know it was a Massasauga. Have someone else drive you safely.

b) **Never under any circumstances pick up a Massasauga rattlesnake**. Massasaugas occur in very specific regions of the province, and if you are well outside of those regions it should be safe to handle any native snake you find. If you are working within a region where Massasaugas may occur, never pick up a snake unless you are absolutely certain that it is not a Massasauga.

c) All other Ontario snakes are non-venomous and harmless. Despite being harmless, many of Ontario’s snakes will put on defensive displays to intimidate potential predators. These include:

I. Rearing up, hissing and striking.

II. Eastern Hog-nosed Snakes will flatten out their necks like cobras, hiss loudly and pretend to strike (although their mouths remain closed).

III. Eastern Foxsnakes, Milksnakes, Gray Ratsnakes and Eastern Hog-nosed Snakes sometimes vibrate their tails to imitate a rattlesnake. If their tails come into contact with rocks, dry leaves, or some other medium, they can produce a buzzing sound like that of a rattlesnake. Combined with their blotchy pattern, this mimicry is often very effective at fooling humans.

d) Holding the snake properly (see section 2.4) will significantly reduce stress to the snake and the likelihood that it will try to bite in self-defence.

2.3 Capture and handling of the Massasauga rattlesnake

Safely move a Massasauga by following these steps:

a) Put on personal protective equipment (per section 2.1).

b) Clear the area of unnecessary bystanders to lessen the stress on the animal.

c) Determine your plan for capture to anticipate where the snake may move or retreat as well as any potential hazards you may encounter.

d) If capturing injured snakes, avoid touching or manipulating injured areas.

e) Tip the 1-metre-deep pail on its side.

f) Use the broom to position the snake near the pail.

g) Gently and slowly guide the snake into the pail, being careful not to push the snake too hard or lift if off the ground. Never pin a Massasauga or use tools that constrict or pinch the snake. Quick, abrupt movements are threatening to the snake and may also cause it to make quick movements in an attempt to escape.

h) Be patient and gentle with the snake. Gravid (pregnant) females are carrying live young, and rough handling may cause damage to the developing snakes.

i) Once the snake is in the pail, slowly tip the pail upright and secure the lid.

j) Snakes can be difficult to capture. If a snake escapes or heads for cover, let it disperse on its own, ensuring it is safe from harm before allowing activities to continue. If allowing activities to continue is not safe for the snake, postpone activities for up

to 24 hours to allow the snake to disperse. If it is not possible to leave the area for 24 hours, have a Qualified Member relocate the individual. Do not disturb any natural cover under which the snake has retreated. If necessary, contact MNR for further direction using the SAR Notification/Contact Schedule.

2.4 Capture and handling of non-venomous snakes

a) If you are uncomfortable handling large, non-venomous snakes with your hands, you can use the above method for capturing venomous snakes (section 2.3). However, it is much easier to capture most non-venomous snakes using your hands. Some of the smaller species, such as the Butler's Gartersnake, are almost impossible to capture with a stick and a pail.

b) If you elect to use thick gloves, be very careful not to squeeze the snake too hard, as you can crush internal organs and kill it. Do not use gloves to capture small snakes, as the risk of accidentally crushing them is too high.

c) Clear the area of unnecessary bystanders to lessen the stress on the animal.

d) Determine your plan for capture to anticipate where the snake may move or retreat and to anticipate any potential hazards you may encounter.

e) Never grab the snake behind the head or grip the snake tightly in order to restrain it. This may injure or scare the snake, cause it to struggle and encourage it to bite in self-defence.

f) Always support the snake's body with both hands and never pick up a snake only by the tail. Holding a snake only by the tail can result in dislocated bones or other serious injury to the snake.

g) To capture a large snake (more than 30 centimetres in length):

I. Gently grab it by the back of the body to prevent it from getting away.

II. Holding the snake by the back end while it is still on the ground, slide your other hand underneath the snake to support its weight and lift it up. Do not lift if off the ground by the tail.

III. As soon as the snake is off the ground, continue to support its weight by keeping both hands under the snake, with one hand about a third of the way back and one hand about two thirds of the way back along the snake's body.

IV. As the snake tries to move forward, reposition the hand from the back of the snake to the front of the snake, and continue to rotate your hands between the front and back of the snake to allow it to continue to crawl through your hands. Calm and slow movements will help the snake relax and make it move more slowly.

V. Often a snake will stop moving once it no longer feels threatened. If the snake continues to move rapidly after a minute or so, you can try holding the back end of the snake more firmly to prevent it from continuing to move forward. Continue to support the unrestricted front half of the snake with your other hand.

h) To capture a small snake (less than 30 centimetres in length):

I. Grasp the snake gently but firmly with one or both hands. It may be necessary to gently restrain it against the ground with your hands initially to prevent it from escaping. Never use a stick, snake hook or any other object to pin a snake.

II. Hold the back end of the snake in one hand and support the front of the snake with your fingers or your second hand. Allowing the snake's front end to remain free helps the snake remain calm.

III. For very small snakes, hold the snake in the palm of your hand using your thumb or fingers to gently apply only enough pressure to prevent the snake from wiggling free.

i) Snakes can be difficult to capture. If a snake escapes or heads for cover, let it disperse on its own, ensuring it is safe from harm before allowing activities to continue. If continuing activities poses a threat to the snake, postpone activities for up to 24 hours to allow the snake to disperse. If it is not possible to leave the area for 24 hours, have a Qualified Member relocate the individual. Do not disturb any natural cover under which the snake has retreated. If necessary, contact MNR for further direction using the SAR Notification/ Contact Schedule.

2.5 Moving a snake out of harm's way (distances under 50 metres)

a) If it is necessary to move a snake more than 50 metres, refer to section 2.7 on snake relocation.

b) Snakes should only be moved when they are in imminent, unavoidable danger.

c) If possible, allow the snake to move on its own by walking toward the snake in the direction that you want it to move. If the snake does not move on its own, you will have to pick it up and move it (see section 2.4). Unlike most snake species, Massasaugas may not

move away when you walk toward them. Rather, they often adopt a defensive position (coiled), hold their ground and rattle (asking you to go the other way). To encourage a Massasauga to move away on its own, give it lots of space and observe it from a distance (ideally so the snake cannot see you).

d) When moving a snake out of harm's way, such as across a road, move the snake in the direction that it was heading, regardless of what the habitat looks like. These animals often make intentional movements to specific areas, and if you put them back where they started they will simply turn around and start their journey again. If it is not clear which direction the snake was headed, move it to the closest habitat that will not be disturbed. In this case, suitable habitat includes a rock pile or other cover that the snake can retreat under, or the vegetation at the edge of the road allowance, disturbed area or clearing.

e) If possible, release the snake near a retreat site (somewhere the animal can seek shelter from the elements and avoid predators: loose rocks, logs, rock crevices or dense vegetation) to allow it to take cover upon release. Do not release the snake in the open where it could be exposed to inclement weather, extreme sunlight or predators.

2.6 Temporary safe keeping and transportation of snakes

a) You are responsible for this animal. Remember, once you have put it in a container, it depends on you to keep it safe and at the right temperature.

b) Always use a pail, large garbage can or bucket (at least 1 metre deep) with adequate air holes in the lid for Massasaugas. Ensure the lid is properly secured, and always create the air holes before putting the snake in the container.

c) If using a snake bag:

I. **Make sure it is properly closed**. To close the snake bag, gather the material at the opening together in one hand and run your other hand down the bag to ensure that the snake is in the bottom. Twist the neck of the bag and tie it into a tight knot. Never rely on a drawstring, as snakes can wiggle out of tight holes. When tying a snake bag, make sure the snake remains in the bottom of the bag so it does not get tangled in the part you are tying.

II. **Make sure it is in a secure location** where it cannot fall if the snake moves the bag. The movement of a snake within a bag can easily cause the bag to fall off of a table.

III. If transporting the snake or holding it for a longer time (over an hour), the closed snake bag should be placed in a well-ventilated hard container (such as plastic tub) for added protection.

d) It is extremely important to monitor the air temperature regularly in the container or around the snake bag to ensure it **never exceeds 30°C or drops below 5°C**. Never leave the container or snake bag in direct sunlight or in a closed vehicle parked in the sun, as this will cause the snake to overheat and could be fatal.

e) **Never leave the container or snake bag unattended** in an unsecured location (e.g., side of road).

f) Do not offer the snake any food. Snakes do not have to eat as often as mammals, and it is no problem for a snake in temporary captivity to go a few days without food.

2.7 Relocation of snakes

a) A snake should only be relocated if the destruction of its habitat is unavoidable or if it is not possible to release it at the capture location.

b) Snakes should not be relocated during their over-wintering season. This varies depending on the species and location, but is generally from October to May. If you are unsure whether you should relocate the snake or take it to a wildlife custodian, contact MNR for further direction using the SAR Notification/Contact Schedule.

c) If it is not possible to relocate the snake due to the time of year (October to May) or other conditions, transport the snake to a wildlife custodian per the SAR Notification/Contact Schedule.

d) Transport and release the snake within one hour of capture in order to minimize stress on the animal.

e) **Snakes should never be moved more than 250 metres** from the location where they were found. Only move a snake as far as necessary to avoid potential harm to the snake, and avoid moving snakes more than 125 metres unless absolutely necessary. If it is not possible to relocate the snake within 250 metres of the capture location, contact MNR for further direction using the SAR Notification/Contact Schedule.

f) Release the snake in the same type of natural habitat as the capture site. If this is not possible, contact MNR for further direction using the SAR Notification/Contact Schedule.

g) If possible, release the snake near a retreat site (somewhere the animal can seek shelter from the elements and avoid predators: loose rocks, logs, rock crevices or dense vegetation) to allow it to take cover upon release. Do not release the snake in the open where it could be exposed to inclement weather, extreme sunlight or predators.

h) To release the snake from a pail, gently tip the pail onto its side, remove the lid, back away from the pail and allow the snake to leave on its own. If necessary, use the broom to gently guide the snake out of the pail or gently tip the pail on an angle to slide the snake out of the pail.

i) To release a non-venomous snake from a bag, untie the bag, gently tip the bag by holding one of the bottom corners (make sure you are not holding the snake) and gently slide the snake onto the ground.

2.8 Injured snakes

a) If dealing with an injured Massasauga, ensure compliance with all instructions and safety considerations provided in sections 2.1-2.3.

b) If the methods of handling snakes that are outlined in section 2.3 or 2.4 are not applicable due to the snake's injuries, use a shovel or other flat object to pick up the snake. Ensure that any injured areas are supported.

c) Place the snake in a large plastic bin or bucket with a lid that has air holes (the darkness helps to reduce stress to the snake). You can place newspaper in the container to provide cover for the snake and help to reduce its stress. Do not place anything else in the container with the snake or offer it any food.

d) Thoroughly wash your hands after handling injured snakes.

e) Immediately transport the snake to a veterinarian or wildlife custodian per the SAR Notification/Contact Schedule, in order to increase its chances of survival.

Snakes

3. Safe Handling Of The Five-lined Skink

3.1 Materials

a) The following materials are required for the handling, capture, temporary safe keeping and transport of Five-lined Skinks:

» Small plastic container with a lid that has air holes. Ensure the container and the lid are well marked "live animal".

» Thermometer

» SAR Notification/Contact Schedule

» SAR Encounter Reporting Form

b) Equipment must be maintained on each job site.

3.2 Capture and handling of Five-lined Skinks

a) There is no risk associated with handling Five-lined Skinks. They may bite, but this will not cause any substantial injury – they have small mouths and tiny teeth.

b) Safely handle, move or capture a Five-lined Skink by following these steps:

I. Always handle Five-lined Skinks gently and slowly. Rough handling may cause injury or stress to the animal. Skinks can drop their tail as an anti-predator defence and may do so if they feel threatened, even if they are not being held by the tail.

II. **Never grab or pick up a Five-lined Skink by the tail**. This may cause the skink to drop its tail (even if you are being gentle) and can be detrimental to the survival of the animal.

III. Do not pick up Five-lined Skinks by the body; exerting too much pressure by accident can result in internal injury.

IV. Capture a skink by cupping your hands over the skink while it is on the ground. (You have to be quick!)

V. Carefully close your hand(s) around the skink to pick it up. Note that they can fit through small holes between your fingers.

c) Always wash your hands after handling any wildlife.

3.3 Moving a Five-lined Skink out of harm's way (distances under 25 metres)

a) If it is necessary to move a skink more than 25 metres, refer to section 3.5 on Five-lined Skink relocation.

b) Five-lined Skinks should only be moved when they are in imminent, unavoidable danger.

c) If possible, allow the skink to move on its own by walking toward the skink in the direction that you want it to move. Skinks are fast and tend to hide whenever possible. If the skink continues to seek shelter within the area where work is taking place, it will have to be picked up and moved (see section 3.5).

d) When moving a skink out of harm's way, such as across a road, move the skink in the direction that it was heading, regardless of what the habitat looks like. These animals often make intentional movements to specific areas, and if you put them back where they started they will simply turn around and start their journey again. If it is not clear which direction the skink was headed, move the skink to the closest suitable habitat that will not be disturbed. In this case, suitable habitat includes rocks or other cover objects that the skink can retreat under.

e) If possible, release the Five-lined Skink near a retreat site, which is somewhere the animal can seek shelter from the elements and avoid predators (vegetation, rocks, logs or leaf litter). Do not release it in the open where it could be exposed to inclement weather, extreme sunlight or predators.

3.4 Temporary safe keeping and transportation of Five-lined Skinks

a) You are responsible for this animal. Remember, once you have put it in a container, it depends on you to keep it safe, moist and at the right temperature.

b) Keep Five-lined Skinks in a small container with a lid that has air holes. Always create the air holes before putting the skink in the container.

c) Skinks can move very quickly and may try to escape before the lid is on the container. Be careful that the skink does not get crushed when you place the lid on the container.

d) It is extremely important to monitor the air temperature regularly in the container to ensure it **never exceeds 30°C or drops below 5°C**. Never leave the container in direct sunlight or in a closed vehicle parked in the sun, as this will cause the animal to overheat and could be fatal.

f) **Never leave the container unattended** in an unsecured location (e.g., side of road).

3.5 Relocation of Five-lined Skinks

a) A Five-lined Skink should only be relocated if the destruction of its habitat is unavoidable or if it is not possible to release it at the capture location.

b) Transport and release the skink within one hour of capture in order to minimize stress on the animal.

c) Five-lined Skinks should not be relocated during their over-wintering season, which is generally from October to May. If you are unsure whether you should relocate the skink or take it to a wildlife custodian, contact MNR for further direction using the SAR Notification/Contact Schedule.

d) If it is not possible to relocate the skink due to the time of year (October to May) or other conditions, transport it to a wildlife custodian per the SAR Notification/Contact Schedule.

e) Five-lined Skinks should never be moved more than 100 metres from the location where they were found. Only move a skink as far as necessary to avoid potential harm to the skink, and avoid moving skinks more than 50 metres unless absolutely necessary. If it is not possible to relocate the animal within 100 metres of the capture location, contact MNR for further direction using the SAR Notification/Contact Schedule.

f) Always release Five-lined Skinks in the same type of natural habitat as the capture site.

g) If possible, release Five-lined Skinks near a retreat site, which is somewhere the animal can seek shelter from the elements and avoid predators (vegetation, rocks, logs or leaf litter). Do not release them in the open where they could be exposed to inclement weather, extreme sunlight or predators.

h) To release Five-lined Skinks, remove the lid and gently tip the container onto its side and allow the animal to leave on its own. If necessary, gently tip the container on an angle to slide the animal out.

3.6 Injured Five-lined Skinks

a) Use the methods outlined in section 3.2 to handle injured skinks whenever possible. If those methods are not applicable due to the skink's injuries, use a shovel or other thin, flat object to pick up the skink. Ensure that any injured areas are supported.

b) Place the Five-lined Skink in a small container with a lid that has air holes. Always create the air holes before putting the skink in the container.

c) Newspaper or paper towels may be added to the container to give the skink something to hide in. Do not place water, other skinks, food or anything else in the container with the skink.

d) Thoroughly wash your hands after handling injured skinks.

e) Immediately transport the skink to a veterinarian or wildlife custodian per the SAR Notification/Contact Schedule, in order to increase its chances of survival.

Five-lined Skink

4. Safe Handling of Amphibians

Important Note: Many amphibian species absorb oxygen through their skin as well as breathing with lungs; some species rely completely on their skin for respiration. If their skin dries out, they can suffocate. Therefore, careful handling of amphibians (especially salamanders) includes ensuring that their skin is kept moist.

4.1 Materials

a) The following materials are required for the handling, capture, temporary safe keeping and transport of amphibians:

- A pail, bucket or large plastic bin with a lid that has air holes (for frogs). Ensure both the side of the container and the lid are well marked “live animal”.
- Plastic kitchen-style container lined with paper towel (needs to be wet when used) with a lid that has air holes (for salamanders and toads). Ensure both the side of the container and the lid are well marked “live animal”.
- Thermometer
- SAR Notification/Contact Schedule
- SAR Encounter Reporting Form
- Net (optional)

b) Equipment must be acquired and maintained on each job site.

4.2 Capture and handling of salamanders, toads and frogs

Note: Eastern Newts have toxins in their skin and some salamanders may release a white, mildly toxic substance from their skin and tail. If ingested, these toxins may cause mild nausea. There is no risk associated with handling Ontario’s amphibians, provided you wash your hands afterwards. Toads will not give you warts.

Safely handle, move or capture a salamander, toad or frog by following these steps:

a) Always make sure your hands are clean and free of insect repellent, antibacterial hand sanitizer, sunscreen, etc. Amphibians have very wet, porous skin through which they absorb oxygen and other compounds. Harmful chemicals (such as bug repellent) are quickly absorbed through an amphibian’s skin and can cause serious damage to the animal.

b) If possible, wet your hands before picking up salamanders in order to avoid drying out their skin. Some species rely completely on their skin for respiration. If their skin dries out, they can suffocate and die. You can also ensure dampness is maintained by picking up some wet soil with the salamander.

c) Keep handling times to a minimum as oil produced by human skin can easily clog amphibian pores, causing suffocation in some species.

d) Always handle amphibians gently and slowly. Rough handling may cause injury or stress to the animal. Salamanders can drop their tail as an anti-predator defence, and may do so if they feel threatened (even if you are not holding them by the tail).

e) Never grab or pick up a salamander by the tail. This may cause the salamander to drop its tail (even if you are being gentle) and can be detrimental to the survival of the animal.

f) Capture a **frog or toad** using a net or pick it up with your hands by:

I. Cupping your hands over the frog or toad while it is on the ground. (You have to be quick!)

II. Closing your hand(s) to create a “cage” around the animal and picking it up. Note that they are slippery and can fit through small holes between your fingers.

III. If it is necessary to identify the species after picking it up, carefully allow it to partially crawl out of your hand between your thumb and forefinger and then gently tighten your grip around its back legs (near its waist), holding onto both back legs. Support its front legs with your other hand.

g) Pick up a **salamander or newt** by scooping it up in one or two hands and then closing your hands to create a “cage”. Note that these animals are slippery and can fit through small holes between your fingers.

h) Use a net, container or your hands to catch frog tadpoles or salamander larvae. A net is easiest.

4.3 Moving amphibians out of harm's way (distance under 25 metres)

a) If it is necessary to move an amphibian more than 25 metres, refer to section 4.5 on amphibian relocation.

b) Amphibians should only be moved when they are in imminent, unavoidable danger.

c) Salamanders do not move large distances and will tend to hide whenever possible. If there is the need to move a salamander, you will have to pick it up and move it (refer to section 4.2).

d) If possible, allow a frog and a toad to move on its own by walking toward it in the direction that you want it to move. If the frog or toad does not move on its own, you will have to pick it up and move it (see section 4.2).

e) When moving an amphibian out of harm's way, such as across a road, move it in the direction that it was heading, regardless of what the habitat looks like. These animals often make intentional movements to specific areas and if you put them back where they started they will simply turn around and start their journey again. If it is not clear which direction the animal was headed, move it to the closest suitable habitat that will not be disturbed. Suitable habitat includes: any shoreline habitat in the case of frogs; leaf litter, rocks or logs in a vegetated/forested area that the animal can hide under in the case of salamanders; any cover, such as rocks or vegetation, in the case of toads.

4.4 Temporary safe keeping and transportation of amphibians

a) You are responsible for this animal. Remember, once you have put it in a container, it depends on you to keep it safe, moist and at the right temperature.

b) Make sure that all containers that will be housing amphibians are thoroughly washed and rinsed and do not contain any soap or chemical residue.

c) Keep **frogs** in a pail, bucket or large plastic bin with a lid that has adequate air holes. Always create the air holes before putting the animal in the container. Fill the container with less than one inch of water. Frogs should never be fully submerged, or they will drown.

d) Keep **toads** in a pail, bucket, large plastic bin or plastic kitchen-style container with a lid that has adequate air holes. Always create the air holes before putting the animal in the container. Line the bottom of the container with wet paper towels.

e) Keep **salamanders** in a plastic kitchen-style container with a lid that has adequate air holes. Line the bottom of the container with wet paper towels.

f) Keep **newts and mudpuppies** in a pail, bucket, large plastic bin or plastic kitchen-style container with a lid, and fill the container with water. Replace water twice daily to ensure proper aeration, as these animals breathe through gills (like fish).

g) It is extremely important to monitor the air temperature regularly in the container to ensure it **never exceeds 25°C or drops below 5°C**. Never leave the container in direct sunlight or in a closed vehicle parked in the sun, as this will cause the animal to overheat and could be fatal.

h) **Never leave the container unattended** in an unsecured location (e.g., side of road).

4.5 Relocation of amphibians

a) Amphibians should only be relocated if the destruction of their habitat is unavoidable, or if it is not possible to release the animal at the capture location.

b) Transport and release it within one hour of capture in order to minimize stress on the animal.

c) Amphibians should not be relocated during their over-wintering season. This varies depending on the species and location, but is generally from October to May. If you are unsure whether you should relocate the animal or take it to a wildlife custodian, contact MNR for further direction using the SAR Notification/ Contact Schedule.

d) If it is not possible to relocate the animal due to the time of year (October to May) or other conditions, transport it to a wildlife custodian per the SAR Notification/Contact Schedule.

e) **Amphibians should never be moved more than 100 metres** from the location where they were found. Only move the amphibian as far as necessary to avoid potential harm to the amphibian, and avoid moving amphibians more than 50 metres unless absolutely necessary. If it is not possible to relocate the animal within 100 metres of the capture location, contact MNR for further direction using the SAR Notification/Contact Schedule.

f) Release amphibians as close as possible to the capture site.

g) Always release frogs and larvae in the same water body where they were found, or in the same type of natural habitat as the capture site.

h) Release salamanders and toads in the same type of natural habitat as the capture site.

i) If possible, release frogs, toads and salamanders near a retreat site, which is somewhere the animal can seek shelter from the elements and avoid predators (vegetation, rocks, logs or leaf litter in the case of salamanders; water or vegetation in the case of frogs). Do not release them in the open where they could be exposed to inclement weather, extreme sunlight or predators.

j) To release frogs, toads and salamanders, remove the lid and gently tip the container onto its side and allow the animal to leave on its own. If necessary, gently tip the container on an angle to slide the animal out of the container.

4.6 Injured amphibians

a) Use the methods outlined in section 4.2 to handle injured amphibians whenever possible. If those methods are not applicable due to the animal's injuries, use a shovel or other thin, flat object to pick up the animal. Ensure that any injured areas are supported.

b) Place the amphibian in a small container with a lid that has air holes and line the bottom of the container with wet paper towels. Always create the air holes before putting the animal in the container.

c) Newspaper or paper towels may be added to the container to give the amphibian something to hide in. Do not place water, other animals, food or anything else in the container with the individual.

d) Thoroughly wash your hands after handling injured amphibians.

e) Immediately transport the injured animal to a veterinarian or wildlife custodian per the SAR Notification/Contact Schedule, in order to increase its chances of survival.

Amphibians

5. Safe Handling of Birds

The protocol for handling birds is based on the size of the birds you may encounter.

Small Birds: e.g., Loggerhead Shrike, Prothonotary Warbler, Whip-poor-will

Large Birds: e.g., King Rail, Least Bittern, Peregrine Falcon

5.1 Materials

a) The following materials are required for the handling, capture, temporary safe keeping and transport of birds:

- Sturdy cardboard box or large plastic bin and lid with air holes. Ensure both sides of the box/ container and the lid are well marked with “live animal”.
- Sheet or blanket large enough to cover a large bird
- Thick work gloves
- Safety glasses
- Thermometer
- Digital camera (optional)
- MNR Notification/Contact Schedule
- SAR Encounter Reporting Form

b) Equipment must be acquired and maintained on each job site.

5.2 Safety considerations

a) Generally, there is little risk associated with handling birds. However, some species can scratch or bite, and work gloves should be worn to help avoid minor injuries. Safety glasses are recommended for larger birds, especially the Least Bittern.

b) Always wash your hands after handling a bird. In addition, cloths, blankets and containers used to hold or transport birds should be washed with soap and water after each use. Discard a cardboard box after using it to hold or transport a bird.

5.3 Capture and handling of birds

a) The first consideration is to determine if the bird needs handling. It may be that the bird is healthy and can fly away. To find out, approach the bird slowly and wave your arms to make it fly or move away. Ensure that the direction in which the bird will fly is clear and free of obstruction. If this occurs (i.e., bird flies away), there is no need to proceed further with trying to catch it. If it doesn’t fly and instead crouches down or wobbles, indicating that it can’t fly, then it may be injured or a young bird not yet capable of flight.

c) Determine if it is a small or large bird from the list above. If possible, take a picture of the bird so that it can be identified without having to reopen the container.

d) **Small birds:** Use your bare or gloved hands, or the cloth or blanket, if that is more appropriate. Place your hands or the cloth/blanket over the bird around its body and over its wings to keep it from escaping. Gently pick it up and place it in the cardboard box or the large plastic bin. If it attempts to escape, work it towards a corner and attempt capture again.

e) **Large birds:** Use gloves and safety goggles for protection. Take the cloth or blanket and throw it over the bird to keep it from escaping. Use both hands to clasp the body of the bird through the cloth and gently restrain it. Pick up the bird, including the cloth, and place it all in the cardboard box/plastic bin. Free the bird from the cloth, remove the cloth, and then place the cover on the box.

If the bird jabs or bites at you during capture, use your gloved hand to fend off the attacks. Ensure it does not get close to your eyes if you are not wearing glasses.

f) Always handle birds carefully and gently, yet firmly. Birds may at any time struggle in an attempt to escape.

g) Never pick up a bird by the legs alone. Always support the body by grasping it around the wings.

5.4 Moving and releasing young birds or recovered birds

a) If the bird is a young bird incapable of long flight, it may be that its parents are nearby. Check around the site where the bird was found for the parents. If you locate parents, the young bird should be moved to a nearby tree, bush or ledge where the parents can attend to it and feed it. The location should be close to the parents and removed from danger. Watch the bird for 15 minutes and see if a parent attends to it.

b) In other cases, the captured bird may recover in the container and begin struggling to escape. In this case, you may wish to try releasing it in a natural habitat near where it was found. Place it in a location where it has shelter from the elements and can avoid predators. Allow it to move into cover. Do not release it in the open where it could be exposed to inclement weather, extreme sunlight or predators.

5.5 Temporary safe keeping and transportation of birds

a) You are responsible for this bird. Remember, once you have put it in a container, it depends on you to keep it safe and at the right temperature.

b) Always create air holes in the sides or lid of the box or container prior to placing the bird in it.

c) Place the box in a sheltered environment, preferably in the dark or semi-dark. This will quiet the bird down and let it rest.

d) Contact one of the MNR staff indicated on the SAR Notification/Contact Schedule. Ask for instructions on how to care for the bird. Send a picture of the bird if necessary.

e) It is extremely important to monitor the air temperature regularly in the container to ensure it **never exceeds 30°C or drops below 15°C**. Never leave the container in direct sunlight or in a closed vehicle parked in the sun, as this could cause the bird to overheat and could be fatal.

f) Never put more than one bird in a container at a time, especially raptors (Peregrine Falcon).

g) Once the bird is in the container, ensure that the lid is secure.

h) **Never leave the container unattended** in an unsecured location (e.g., side of road) or on the edge of a car seat.

i) Do not offer the bird any food or water unless instructed to do so following consultation with MNR staff on the SAR Notification/Contact Schedule.

j) Birds should be checked periodically (every hour should suffice). Young birds are especially susceptible to dehydration and must be carefully monitored during transport.

5.6 Evaluation and disposition of captured birds

a) Contact the MNR staff person listed on the SAR Notification/Contact Schedule immediately. Inform him or her of the capture and holding of the bird and ask for advice on the next steps.

b) It may be useful to take a picture of the bird for identification purposes. Send the photo to the MNR staff person or another person as requested.

c) You may be asked by the staff person to take the bird to a wildlife custodian.

5.7 Injured birds

a) If the bird is injured, immediately request and follow instructions given by the MNR staff person listed on the SAR Notification/Contact Schedule.

b) If so instructed, immediately transport the bird to a veterinarian or wildlife custodian per the SAR Notification/Contact Schedule, in order to increase the chances of the bird's survival.

6. Reporting Species at Risk Encounters

a) Contact MNR to report the occurrence (including dead animals) within the period of time set out in the permit or agreement, or within 24 hours if not stipulated. Report injured animals to MNR immediately.

b) Complete and submit the SAR Encounter Reporting Form, which includes the following information:

I. Name of Qualified Member

II. Contact number of Qualified Member

III. Date and time of the encounter

IV. Detailed location of the encounter (with lat-long or UTM coordinates, if possible). To obtain coordinates without a GPS, zoom into the area using Google Maps, right click on the location and select “what’s here?” from the right-click menu. The coordinates (in decimal degrees) will be provided to you in the Google Maps search bar.

V. Species encountered, with photo documentation, when possible. For assistance with species identification, see MNR’s *Ontario Species at Risk Quick Reference Guide*. Detailed species accounts can be found at **www.ontarionature.org/atlas** or the “Species Guides” at **www.torontozoo.com/AdoptAPond**.

VI. Action taken

Risk Encounters

7. Handling and Transporting Dead Animals

Dead species at risk that are encountered should be reported to the MNR as soon as possible. It is possible that the Ministry will request that the individual be stored and/or transported to the MNR.

Many researchers are currently studying the genetics of wild populations in Ontario, and genetic materials extracted from dead animals can make a valuable contribution to this research.

Examining a dead animal may provide important information about the cause of death or threats affecting the population.

If the MNR asks to see the species at risk and it is not possible to transport it on the same day it was found, the specimen should be stored in a freezer.

7.1 Materials

a) The following materials must be used for the handling and transport of dead species at risk:

I. A plastic resealable bag or plastic kitchen-style container with a tight lid with label “dead SAR for transport to MNR”

II. Permanent, water-resistant marker for labelling the bag or container with additional information, such as the date and location

III. Latex gloves or thick work gloves that can be washed

IV. Cooler with cold ice packs, if possible

V. SAR Notification/Contact Schedule

VI. SAR Encounter Reporting Form

7.2 Safety Considerations

Always wear gloves or wash your hands after handling any dead animal. Turtles (and many other animals) carry potentially harmful bacteria in their gut. Handling dead, rotting animals may also expose you to bacteria that can make you sick.

Handle a dead Massasauga with extreme caution

I. The snake’s venom is still a serious biohazard even after the snake is dead.

II. Never handle a dead Massasauga with your hands. Use a broom or sticks to place it into a container with a secure lid (not a bag).

III. Although unlikely, nerves can trigger the Massasauga’s bite reflex even after the snake is dead.

IV. In some situations, it can be very difficult to confirm that a snake is dead. For example, extreme shock can make a snake appear dead for several minutes until it slowly regains its senses. Unless you can confirm that the Massasauga is dead, always treat it as though it is alive and never place any part of your body within its potential strike range (approximately half of the snake’s body length).

Dead Animals

7.3 Handling a dead animal

a) Always make sure that an animal is actually dead before handling or capturing it. In some situations, live animals can easily be mistaken for being dead:

I. Extreme shock can make a reptile or amphibian motionless and appear dead for several minutes until it slowly regains its senses.

II. Air temperature controls the metabolism, and therefore the activity level, of reptiles and amphibians. If an over-wintering snake or turtle is encountered, it will only be 4 or 5°C and may be so inactive that it will appear dead. Very cold animals in the spring or fall may also be very inactive and appear dead until closely examined.

III. Eastern Hog-nosed Snakes sometimes play dead as a defensive strategy to deter predators. This display includes rolling onto their back with their mouth gaping open and tongue hanging out, regurgitating food or defecating and emitting a foul smell. It is very difficult to determine if this species is actually dead without manipulating the snake and carefully inspecting it. If you flip the snake onto its belly, it will often roll back over and continue to play dead.

7.4 Temporary storage of dead animals

a) Place the dead animal in a plastic resealable bag or container with a tight lid that will not leak. Always use a thick container with a secure lid for Massasauga rattlesnakes.

b) Do not place anything else in the container with the animal.

c) Label the container with “dead SAR for transport to MNR” as well as the date, location and name of the observer.

d) Place the bag or container in a freezer as soon as possible. If a freezer is not immediately available, place it in a cool place, preferably a cooler with ice packs.

e) If the animal cannot be delivered to MNR on the same day that it was found, place it in a freezer until it can be delivered to MNR.

8 Appendices

Appendix I - Definitions

Species at Risk (SAR) Notification/Contact Schedule:
A contact list provided by the Ministry of Natural Resources District Office to be used when immediate guidance is required concerning species at risk (SAR) encounters. This list will include Ministry of Natural Resources staff as well as local veterinarians and wildlife custodians.

Species at Risk (SAR) Encounter Reporting Form:
A reporting form provided by Ministry of Natural Resources that must be completed any time that a species at risk (SAR) is encountered.

Qualified Member:
An individual who has received training by, in consultation with, or in a manner approved by Ministry of Natural Resources to capture, handle, move and relocate species at risk (SAR).

Appendix II - References

Ontario Ministry of Natural Resources, Parry Sound and Sudbury District. *Draft Turtle and Snake Capture and Relocation Protocol For Hwy 69/400 ESA Authorization Requirements.*
Revised January 19, 2011.

Parks Canada. *The Eastern Massasauga Rattlesnake Stewardship Guide: A Resource and Field Guide for Living with Rattlesnakes in Ontario*, Parks Canada, pp 84.

Karch, Mandy. 2008. *Standard Turtle Handling Practices and Protocols*. Prepared for the Ontario Ministry of Natural Resources and the Ontario Multi-species Turtles At Risk Recovery Team. 2008.

Unless otherwise noted, all photographs are credited to Jason Mortlock.

Appendix III - Equipment and Materials Checklist

The following materials must be acquired and maintained on each job site, and are required for the handling, capture, temporary safe keeping and transport of species at risk:

All Species (including for dead animals)

- ❑ Thermometer
- ❑ Plastic resealable bag or plastic kitchen-style container with a tight lid with label “dead SAR for transport to MNR”
- ❑ Permanent, water-resistant marker for labelling bag or container with additional information, such as the date and location
- ❑ Latex gloves or thick work gloves that can be washed
- ❑ SAR Notification/Contact Schedule (from MNR District Office – see Appendix IV)
- ❑ SAR Encounter Reporting Form (See Appendix V)

Additional Materials for Turtles

- ❑ Large plastic bin or bucket and lid with air holes, with both sides of the container and lid marked “live animal”
- ❑ Cloth/burlap bag with both sides marked “live animal”
- ❑ Broom or broom handle with small paint brush roller attached to end

Additional Materials for Snakes

- ❑ Pail, large garbage can or bucket with air holes in the lid, with side of the container and lid marked “live animal”
- ❑ A cloth snake bag (e.g., pillowcase) for non-venomous species only, marked “live animal”

For Massasaugas:

- ❑ Pail, large garbage can or bucket (1 metre deep) with air holes in the lid, with side of the container and lid marked “caution rattlesnake”
- ❑ Broom or broom handle with small paint brush roller holder attached to end

Additional Protective Gear to be Worn When Working in or near Massasauga Habitat

- ❑ High-ankle hiking or rubber boots
- ❑ Thick pants (jeans) or baggy pants
- ❑ Leather work gloves

Additional Material for Skinks

- ❑ Plastic kitchen-style container and lid with air holes, marked “live animal”

Additional Materials for Amphibians (Salamanders, Newts, Mudpuppies, Frogs, Toads)

- ❑ Pail, bucket or large plastic bin with a lid that has air holes (for frogs), both side of container and lid marked “live animal”
- ❑ Plastic kitchen-style container and lid with air holes, marked “live animal”
- ❑ Paper towels (to be moistened and put in plastic kitchen-style container)
- ❑ Net (optional)

Additional Materials for Birds

- ❑ Sturdy cardboard box or large plastic bin and lid with air holes, with both sides of box/container and lid marked “live animal”
- ❑ Sheet or blanket large enough to cover a large bird
- ❑ Safety glasses
- ❑ Digital camera (optional)